# The Architect's Newspaper

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#### September 2021

Student shelters rise at Arcosanti page 14



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Where's the front door at OMA's Wilshire Boulevard Temple?

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### BEER goggles and misLEEDing readings

The proliferation of greenbuilding rating systems and the varying grades they confer raise the question of what's being measured.

On August 3, the New York–based architecture writer John Hill posted a photo of the entrance to Seven Bryant Park on Twitter. In the image, a LEED Gold plaque and a C grade (60 on a 0 to 100 scale) from the city's Building Energy Efficiency Ratings program are displayed side by side. Critics of the LEED program, and of the green-building certification movement generally, seemed to have their suspicions confirmed. Surely, the discrepancy between the building's LEED Gold status and its energy grade implies that the standards applied by the U.S. Green Building Council (USGBC) aren't rigorous enough for Silver, Gold, or Platinum certifications to be meaningful.

Such an image, if interpreted out of context, can play into assorted rehearsed criticisms, whether it's reducing the LEED system to a marketing tool or calling the entire energy measurement process into question. But it's also true that challengers will be needed if the green-building rating complex is ever going to evolve. Is the city's budding ratings program such a challenger?

#### New York prefers strong BEER

The Building Energy Efficiency Ratings system was introduced in 2019 as part of Local Law 95 (amending Local Law 33) and is formatted to resemble familiar restaurant-sanitation letter grades. (Regrettably, "BEER" is not in general use; most people call it the Energy Grading Law.) It is part of a suite of local laws (LL) under the Greener, Greater Buildings Plan encouraging energy performance and public disclosure. In the first year of letter grades, according to estimates prepared by Steven Winter Associates, using public data, 38 percent of the city's buildings with data available scored a D (an Energy Star score below 55), with another 20 percent exempted or uncounted. Grades A (85 or higher), B (70 to 85), and C (55 to 70) accounted for 14 percent each. Direct grade distributions using the continued on page 10

### Rethinking *Rethinking New York*

Written in the wake of 9/11, the critical anthology of essays and designs passionately advocated big changes in the way the city operated. It's just as timely and relevant as ever. Read on page 41.



### **Architectural Autofiction**

An experimental biography of Minoru Yamasaki, the architect of the original World Trade Center, constructs a version of the man that runs counter to the more familiar—and tragic appraisals of his long and productive career. Read on page 39.



### **Dean's List**

In a moment of uncertainty, heads of architecture and design schools tell *AN* about the changes in thinking and behaviors they hope to cultivate at their respective institutions.

During an exceptionally difficult and tumultuous year, architecture and design schools across North America were forced to adapt—conducting studio courses online, migrating events and reviews to the virtual sphere, and implementing COVID-19 testing and distancing policies on campus. A number of institutions also underwent shifts in leadership, introducing deans whose tenure will be marked, at least in part, by how they lead their schools beyond a global crisis. *AN* spoke with several of these incoming academic leaders about their new positions and the direction of design pedagogy as they see it.

The Architect's Newspaper: What would

you say are the primary differences between the institutions where you have studied or taught and the one you're entering as department head? What excites you most about the new context?

Sekou Cooke, University of North Carolina at Charlotte College of Arts + Architecture: Location may be the biggest difference. I've mostly been associated with schools in the Northeast [Syracuse, Cornell, Harvard] that represent a kind of architectural literati. I've also taught briefly at CCA [California College of the Arts] in San Francisco, but most of my colleagues there were educated in the same northeastern schools that I was. Entering UNC Charlotte, I'm aware that the American South is a very different region historically. The physical along with the cultural, racial, and political landscapes will present a whole set of new challenges—some I'll be able to anticipate, others not.

Stephanie Lin, The School of Architecture: We have the strongest culture of hands-on and experiential learning that I have encountered, augmented by the intimate scale of the school's community. Students, along with a number of continued on page 16

### Back to Scho<mark>o</mark>l

AN highlights products that seek to make the transition back to in-person learning as smooth as possible. Read on page 44.





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### **Photographs from the Edge**



The World Trade Center on September 11, 2001, as captured from Park Slope, Brooklyn

The 20th anniversary of 9/11 is upon us. In anticipation, I unearthed eight photos I took that morning from my rooftop in Park Slope, Brooklyn. They are black-and-white, which just happened to be the sort of film I had in my camera. I snapped them with trembling fingers, a dry mouth, and wobbling knees six exposures as the towers burned, two after they had fallen and Lower Manhattan had vanished in a billowing cloud of dust and smoke—ashamed to be, touristlike, capturing images I knew contained thousands of people suffering terrifyingly violent deaths. Like Dante, voyeur of the Inferno, I was recording their moments of horror and obliteration, but to what end?

Maybe it's that the photos are blackand-white or that they were taken from a distance of a little over two miles or that the foreground is so banal—just another morning across the Brooklyn rooftops-or maybe it's the two decades that separate us from that momentous and terrible day, but looking at the photos now I find them to be peaceful, irresistibly sublime. They have none of the clash and agony of the video footage from the base of the towers, none of the pathos of the stills of first responders and citizens covered in ash with eyes hollowed out. At a glance, and without knowledge of what they depict, one could mistake them for smokestacks from the Industrial Revolution or a fog bank in the harbor. If it's possible to have a Zen perspective on the events of 9/11, these images might get you there. There's little in them to suggest that they're pictures of the world changing, but that's what they are.

The geopolitical landscape shifted on that day. Less than four weeks after the attacks, the United States invaded Afghanistan, initiating a war and occupation of a foreign land that we have only just now drawn to a painful close. The architectural landscape also changed. High-rise construction in New York City, for one, underwent a revision. Soon to be gone were the days of high-modernist open lobbies and delicate, latticelike structural frameworks (though perhaps it could be said that postmodernism had already put an end to that). The new skyscrapers boasted robust hybrid structures with three-foot-thick, 12,000-psi concrete cores designed to continue standing throughout a 9/11-scale event, their lobbies set behind bollards and enclosed in blast-resistant glazing. The increasingly fortresslike nature of these buildings challenged architects to make them as transparent, beautiful, and pleasant to occupy as possible. The public discussion about what to do with

Ground Zero raised awareness of and interest in architecture generally and attracted the attention of the world. A flock of new publications (including the one in which I am writing) came on the scene to cover the flurry of design proposals and development activity. International architects, many of whom received commissions for the rebuilding, opened offices in New York, which grew into a global epicenter of architectural discourse and production in a way it hadn't been since the early 20th century.

Not all of the big changes we've seen in the city's built environment since 2001 can be attributed to 9/11. The neoliberal winds were already blowing, the tech industry already in its ascendancy. Without the destruction of the towers, the Bloomberg era could still have happened in more or less the same way: a development-friendly billionaire mayor and his energized planning commission harnessing the design community, zoning regulations, and a public-private partnership to recast the city as a safe, amenity-laden cradle for the super wealthy, major corporations, and the young professionals who serve them. We'd probably still have bike lanes, waterfront parks, and renovated pools, not to mention the ever-thickening forest of so-called luxury housing, which seems to be inexhaustibly in demand. We'd still have widening economic disparities, racial and cultural strife, climate change, and the COVID-19 pandemic-all problems demanding solutions from the design community.

Destruction is often followed by rebirth, mass extinctions by explosions of diverse forms of life, but the values of regeneration are never fixed, and good and evil always seem to walk hand in hand. It could be that one reason I find the photos I took of the towers burning so absorbing now is that they remind me of another change that occurred that day: Almost instantaneously, as awareness of the attacks spread through the city. New York became a friendlier place. Groups of people who were historically opposed suddenly found common ground and sought each other out for comfort and solidarity. It was revelatory, and it didn't last. It took an attack from outside to galvanize that unity, which was expressed nationwide, and it is dispiriting that its primary issue was an act of war; but however it arose, for a window of time, it was possible to see a city as big and diverse as New York pulling together to heal and grow back stronger-a common purpose that would benefit us as much now as it did 20 years ago. Aaron Seward

President and Publisher Diana Darling

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General Information: info@archpaper.com Editorial: editors@archpaper.com Advertising: ddarling@archpaper.com Subscription: subscribe@archpaper.com Reprints: reprints@parsintl.com

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#### Correction



In *AN*'s June 2021 issue, a description of PK-30 System's Folding Walls misconstrued the product information. The operable partitional wall solution can

accommodate panels up to 40 inches wide and 12 *feet* high (not the 12 inches stated in print). Moreover, the product offers trouble-free and flexible solutions to closing room openings of up to 19 feet-8 inches or 39 feet-4 inches with opposed installations. An image of Folding Walls is to the left.

The article "Curved reflections" in the July/August 2021 issue mischaracterized the Pendry Manhattan West. The hotel is not located within Hudson Yards; rather it is part of the adjacent Manhattan West development. The article also misspelled the name of SOM associate director Christoph Timm. *AN* regrets these errors.

# 7 Diary

#### East



In New York, Brooklyn borough president and presumptive mayor Eric Adams signaled his support for Mayor Bill de Blasio's sweeping rezoning of Gowanus—under the caveat that New York City Housing Authority (NYCHA) projects in the neighborhood receive hundreds of millions of dollars in long-overdue repair funding. Elsewhere in Brooklyn, at a public hearing to discuss a controversial development, Adams voted down a proposal to build two 39-story towers just blocks from the Brooklyn Botanic Garden, which would cast a shadowy pall over the cherished institution. The two potentially consequential decisions give some indications of Adams's priorities, and the line of continuity with his predecessor he will strike. Meanwhile, Kathy Hochul was sworn in as governor of New York State, replacing the disgraced Andrew Cuomo. Hochul has directed her lieutenant governor Brian Benjamin to assemble and lead a task force to help identify and solve NYCHA's problems and revenue woes. In Manhattan's Chinatown, where tensions over the displacement of long-term residents and businesses have risen considerably over the past decade, a municipal grant to a local museum sparked outrage among some members of the community, who argued that the money should instead be distributed among neighborhood businesses still hurting from the pandemic. A giant pop-up Ferris wheel landed in Times Square, cranking up the site's chaotic, carnivalesque atmosphere a considerable notch. And finally, it was announced that the former Manhattan flagship of defunct upscale department

store Barneys New York at 660 Madison Avenue will be converted into Art House, a first-of-its-kind fine arts platform described as "an extraordinary new hub for art galleries, philanthropy, and ideas" that will "support the revitalization of the city's creative economy." The overhaul, which is being handled by WHY Architecture, is expected to open in early November. At Penn State University, work kicked off on the new home for the Palmer Museum of Art, a nearly 50-year-old State College institution that ranks as the largest art museum between Philadelphia and Pittsburgh and the most significant academic art museum in the Keystone State; Allied Works Architecture is behind the project. In Washington, D.C., the National Building Museum awarded its 2021 Vincent Scully Prize to Mabel O. Wilson, the Nancy and George Rupp Professor of Architecture, Planning, and Preservation at Columbia University. Wilson had a big hand in the design of the Memorial to Enslaved Laborers (2020) at the University of Virginia in Charlottesville. Down south in St. Petersburg, Florida. the Museum of the American Arts & Crafts Movement (pictured) opened its doors, marking the arrival of a major new presence in St. Pete's buzzy Waterfront Museum District. Finally, in Surfside, the ground on which the Champlain Towers South once stood officially hit the market. The 1.88-acre site of the Florida condo tower collapse that left 98 dead is officially for sale, with a floor of \$120 million.

**Midwest** 



In Chicago, Kanye West held a third and final listening event for his latest release, Donda. For the spectacle, West created a faithful replica of his childhood South Side home smack-dab in the middle of historic Soldier Field; the artist purchased the home in 2020 and is in the process of renovating it. A few months after announcing its 2021 individual grant recipients, the Graham Foundation revealed its 2021 organizational grantees. The Chicago-based non-profit dedicated to fostering "the development and exchange of diverse and challenging ideas about architecture and its role in the arts, culture, and society' distributed a total of \$471,500 in project-based funding to 45 globe-spanning publications, public programs, art and media projects, and exhibitions (such as American Framing: US Pavilion, 17th International Architecture Exhibition, pictured above). The firm belonging to the late Helmut Jahn filed for bankruptcy; the filing comes just months after the architect was killed at a traffic intersection while riding his bicycle in the western Chicago suburb of Campton Hills. The Chicago Architecture Center (CAC) and Chicago Architectural Club have unveiled the seven finalists in the Chicago Prize Competition, which for its 2021 edition, sought out design proposals that would breathe

new life into the Thompson Center. The beloved postmodernist landmark, designed by Jahn and completed in 1985, was put up for sale earlier this year by the State of Illinois and is at risk of being demolished to make way for new development. The seven finalist proposals were selected by the competition jury-jurors include Carol Ross Barney, Mikyoung Kim, Peter D. Cook, and Thomas Heatherwick—from a total of 59 entries submitted by a diverse range of seasoned design professionals, young architects, and students hailing from five countries. Along with the other six finalists, the winning proposal, to be announced September 14, will join the ongoing CAC exhibition Helmut Jahn: Life + Architecture, as a special pop-up exhibit within the larger show, which is on view through October. Finally, in the city's Jackson Park, the Tod Williams Billie Tsien Architects-designed Obama Presidential Center broke ground in mid-August. The project's total cost has ballooned to about \$700 million, \$500 million of which is reportedly for "hard costs" such as construction. The City of Chicago formalized turning over 19.3 acres of the Olmsted and Vaux-designed, National Register of Historic Placeslisted South Side park to the Obama Foundation only on Friday, August 13. A more ceremonial groundbreaking event is expected to take place later this fall.

# 8 Diary

West



The board of directors of AIA California declared a climate emergency, calling for the immediate acceleration of decarbonizing the built environment, stating that "The time for debate is over." Meanwhile, the California Energy Commission voted to mandate solar photovoltaic systems for all newly constructed and renovated high-rise residential and commercial buildings. If adopted by the California Building Standards Commission the rule would go into effect January 1, 2023. San Diego's Mingei International Museum and the Santa Barbara Museum of Art are reopening after major renovations, the latter by LUCE et studio, the former by Kupiec Architects. The San Diego Symphony opened Rady Shell at Jacob's Park, an outdoor concert venue on the city's Ebmarcadero designed by local firm Tucker Sadler Architects. Frank Gehry turned out his most understated design in recent memory with the Judith and Thomas L. Beckmen YOLA Center, the permanent home for the LA Phil's Youth Orchestra Los Angeles in the Civic Center of Inglewood. The opening concert was canceled owing to the spike in COVID-19 cases, but classes are now being held at the facility. Farther north, in San Francisco, foundation work was halted on the Handel Architects-designed Millennium Tower (completed in 2009) because the sinking that has troubled the project since 2016 sped up, dropping the 645-foot-tall residential skyscraper by as much as an inch in one month. Portland updated its land use regulations to allow for ADUs, infill projects, and denser housing in wide swaths of the city.

South West



Hurricane Ida made landfall in Louisiana on the same day that Hurricane Katrina did 16 years ago. While a full assessment of the damage will take time, the levees and other storm defenses around New Orleans held, though the city did lose power. Aus-tin, Texas-based ICON finished the largest 3D-printed building in North America, a barracks for the Texas Military Department at the Camp Swift Training Center in Bastrop. Mexico City firm PRODUCTO-RA completed its largest structure in the U.S., a low-cost housing project in Denver comprising eight units in four blue-clad gabled structures on a single-family lot two miles from downtown. The federal government declared the first-ever water shortage at Lake Mead, the reservoir held back by the Hoover Dam just east of Las Vegas, due to an extended period of drought and

unchecked development in the desert, triggering cuts in water supply across the region. The Robert L.B. Tobin Land Bridge at Phil Hardberger Park in San Antonio opened. Designed by Cambridge-based STIMSON and local landscape firm Rialto Studio, it connects portions of the park across the Wurzbach Parkway, providing a safe crossing for humans and wildlife. Michael Hsu Office of Architecture and Habitat for Humanity showed off a collection of 11 affordable townhomes in Austin's Mueller development. And in Fort Worth, a sinuous, 62-foot timber footbridge, designed by Portland, Oregon-based artist Volkan Alkanoglu, now spans a dry creek bead in the South Hills neighborhood. Titled Drift, the artwork/public utility was created with parametric software.

#### The Social Listening Network



In August, Vice reported that global design and engineering consultancy HDR, which among its manifold business verticals designs jails, has been monitoring the social media accounts of activists who oppose its clients' projects. According to Vice's reporting, HDR's STRATA team provides a "social listening" service to identify protesters and their messages, then sends that information to the authorities and uses it to craft "strategic communications" campaigns to counter the dissent. When Eavesdrop asked for a comment, HDR sent the

following prevarication: "HDR uses industry best practices to seek community input. In this effort, we use public data to gain a better understanding of the concerns faced by our audiences. This information helps us build strategies to seek broad-based community engagement. Awareness of public sentiment helps us amplify all voices that need better access to public processes. We stand by our commitment to deliver on our promise and work together to improve the communities where we live and work."

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## BEER goggles and misLEEDing readings

The proliferation of green-building rating systems and the varying grades they confer raise the question of what's being measured.

**continued from front page** city's total of 24,071 "borough, block, and lot" identifiers, including sites submitting no data, differ slightly: 13 percent A, 13 percent B, 13 percent C, 36 percent D, 9 percent F for no data, and 16 percent N, covering cases where benchmarking occurred but Energy Star Portfolio Manager could not provide a score, sometimes because the EPA found too few similar buildings for comparison.

Because Portfolio Manager considers a building's energy use, size, occupancy, program, and climatic context, comparing it with similar buildings nationwide, an Energy Star grade of 50 represents the national median, explained New York City Department of Buildings (DOB) press secretary Andrew Rudansky. But New York's letter-grade system, he noted, was designed to be especially stringent. "Any Energy Star score from 0 to 54 will get a D. Meaning even if your building is 'average' when it comes to energy efficiency, you will still get a D."

Some of the differences between the city grading system and the USGBC's are obvious. A LEED rating, at least in the Building Design + Construction (BD+C) or Interior Design + Construction categories, is a one-time snapshot incorporating energy modeling and predictions, not an assessment of ongoing operations. It reflects the LEED version and regulations in effect at the time of the rating. It is also voluntary. The Energy Grade, meanwhile, "is based on actual operations," said Gina Bocra, chief sustainability officer for the DOB, "so that takes into account the day to-day operations and energy consumption of a building all year long." It is a legal mandate, revised annually to encourage ongoing upgrades. "USGBC instituted a policy a few years ago that owners have to report their annual energy efficiency," Bocra continued, but "they're not going to come make them take their plaque down."

Sometimes the systems harmonize, and sometimes they don't. The city's top-rated LEED Platinum building, One Citi NY (aka 388 Greenwich Street) scores an A. The second, 450 Park Avenue, gets a B. For some high-profile buildings, failing to disclose certain information to the DOB means a black eye: 35 Hudson Yards (500 West 33rd Street), rated LEED Gold, gets an F. Its Platinum neighbor 10 Hudson Yards (501 West 30th Street) gets a C. The tetrahedral "courtscraper" VIA 57 West (625 West 57th Street), the winner of multiple 2016 and 2017 skyscraper-of-the-year awards, may have been built to LEED Gold standards, but it scores a D.

### Quantitatively or qualitatively green

Wisecracks about greenwashing, however, may be premature, perhaps even reductionist. LEED also assesses a broad range of environmentally relevant variables along with energy use. Melissa Baker, USGBC's senior vice president for technical core, cites the mitigation of a building's climate impact as the system's primary goal. She cited the program's "energy and atmosphere" category, which accounts for the highest proportion of points (roughly a third in LEED 4.1 BD+C). Yet a building can accrue points for other priorities—material choices, lighting, indoor air quality, location and orientation, vegetation and shade, innovative technologies, and encouragement of low-impact transportation (including bicycle racks)—making it possible to earn a plaque without excelling in energy metrics. Energy performance, the USGBC seems to be saying, is the primary but not the only way to be green.

Of course, gaps between modeling-based predictions and real-life performance have long been apparent to sustainability specialists. "When you look at these two things that seem to be unharmonious, they're actually pointing to what we refer to as the performance gap," said Billie Faircloth, partner at KieranTimberlake. "That ranges from the very modeling practices that we use while we're predicting energy use all the way to our ability to predict how people actually inhabit and use space. It's why I really like to see these two things as being incredibly important and complementary, rather than in contrast to each other, and actually indicative of the work that we need to do across the entire life cycle of a building." She views commissioning, measurement, and performance verification as components of a process that does not end when a building attains LEED certification. "Maybe you could consider the LEED plaque like a trophy, and the Building Energy Efficiency Ratings] label is more like a report card. You've won a trophy, but you've got to keep working."

Despite LEED's role in bringing a building's environmental performance into the public consciousness, "LEED bashing has become fairly popular," said Lance Hosey, FAIA, chief impact officer at HMC Architects in San Diego. "I'm always careful to look at both sides of that coin. One is, there's a chance we might not have had this conversa tion if it weren't for the USGBC and LEED."

Backlash positions have different motives and levels of merit. Some critiques have been traced to astroturfing organizations such as the so-called Environmental Policy Alliance, the work of a notorious lobbyist, Richard Berman, and linked with nested networks of front groups defending the tobacco industry, polluters, opponents of food-safety policies, and similar interests. Other analyses are more open and scientific, such as physicist John Scofield's contention, using energy data released under LL84, that many of New York's Gold LEED buildings actually underperform non-LEED buildings. The New Building Institute, commissioned by the USGBC and the EPA to analyze a sample of 121 LEEDnew construction buildings in 2008 using quadrennial Commercial Buildings Energy Consumption Survey (CBECS) data for comparison, found encouraging correlations between LEED status and energy use intensity (EUI). But critics such as Scofield remain unpersuaded and repeatedly second-guess the USGBC's methods and findings.

"There are studies that show that it's all over the map," Hosey said, "that there are LEED Platinum buildings that perform much better than anticipated, and there are LEED Platinum buildings that perform much worse than anticipated to the point where some of them actually don't even meet the energy code. Now, that's not a fault of LEED; it's a fault of the accuracy of the programs we use to model with energy ahead of time, and what we've learned is that when you actually measure it in reality, there are all kinds of subtle-



A telling juxtaposition? New York's Building Energy Efficiency Ratings and LEED, side by side

ties and complications." Occupants' energy use can be unpredictable, particularly in buildings with trading floors, where plug loads are extreme. The popularity of green buildings may even be a factor in inflating their metrics, Baker suggests. "We found anecdotally that people really like green buildings, so often they get used more," attracting tours, meetings, and rentals that boost energy use.

Citing a Harvard study of indoor air quality and cognitive function, Hosey notes that green buildings defined more holistically-i.e., emphasizing a range of features that constitute indoor environmental quality (daylight, thermal comfort, acoustics, fresh air, connection to the outdoors)-are healthier and more popular, independent of energy performance. In contrast, with insufficient air changes, mold buildup, and excessive particulates, "you could have the most energy-efficient building in the world, [yet] it's also bad for people to occupy." In other words, the progress of green design and construction reflects a dialectic between performance and habitability rather than a linear pursuit of a single measurable aim.

### Flak magnets and catalysts for progress

One high-profile Manhattan building crops up again and again in discussions of prediction/performance discrepancies: the Bank of America Tower at One Bryant Park, the first skyscraper to be rated Platinum by LEED, now graded C by the DOB. Paula Zimin, director of sustainable building services at Ste ven Winter Associates and a member of AIA-NY's Committee on the Environment, raises multiple questions about how the DOB's process could lead to such a discrepancy: whether the building reported energy use and square footage accurately; whether the EPA's reliance on source EUI rather than site EUI skews the calculations against buildings that use higher ratios of electricity; whether CBECS data based on average national building sizes misrepresent important aspects of New York buildings' scale and proportions. "Why are we being compared to buildings that really aren't anything like us?" she asks.

One Bryant Park is unique both in its well-publicized green features and in its high-plug-load data center. "Let's say that the threshold for cooling performance wasn't super high," Zimin speculated. "And I would imagine One Bryant Park was using the best of the best in terms of cooling, knowing that they had this huge data center that they had to cool, so it's very possible that they could claim—for LEED purposes—that much savings. It's all about where your baseline is." Metrics in constant refinement, she added, inevitably collide with "what the state of the art was when this building was developed."

Apoorv Goyal, associate in the design analytics group at Elementa Consulting and

another member of AIANY's Committee on the Environment, also cites One Bryant Park and its neighbor, the LEED Gold-certified Bank of China tower at Seven Bryant Park, as salient cases of non-correlation between EUI and LEED status. "It's really an apples-to-oranges comparison," he said, adding that scrutiny should really be placed on greenhouse-gas (GHG) emissions rather than electrification. "The building grades and LEED status, both of them, are not talking about GHG emissions at all," he continued. Comparisons with CBECS data on what buildings of this size use yield an Energy Star rating that disregards a key component of the building: its data center. Any energy model includes assumptions about equipment power densities, he said.

For this reason, Goyal favors "reassessing the LEED model after two years' or three years' time and basically calibrating your equipment power densities, calibrating your occupancy and user schedules, and reassessing what you report." Moreover, he underlines the necessity of moving to an evaluation model that uses carbon metrics, which LEED 4.1 already does. "I think both these systems need to actually go into tons of carbon onsite saved, because that's a direct A-to-A, apples-to-apples comparison," he said.

In part through work on their own headquarters in Philadelphia (converted in 2015, coincidentally, from a former beer-bottling plant), Faircloth and her colleagues at KieranTimberlake have developed a set of digital tools to assist with design and operations. The wireless sensor network Pointelist collects highly granular data on temperature and relative humidity measurements that helped the architects identify areas of potential comfort or discomfort from season to season. The postoccupancy survey tool Roast provides data on thermal comfort during seasons when the building runs in a mixed mode. And the whole-building life-cycle assessment application Tally helps monitor "the total carbon picture," both operational and embodied carbon, including emissions associated with building materials and interior finishes. Tally was transferred last May from KieranTimberlake to Building Transparency as part of the Embodied Carbon in Construction Calculator platform of tools, adding to the resources that architects can use to predict the outcomes of design decisions with more precise information than any single rating can provide.

"The plaque doesn't necessarily lead to action," Faircloth said by way of summing up. "It points to action [that] has already happened. The letter grade points to the current state, but also action that could happen in the future to increase the performance of that building."

Bill Millard is a regular contributor to AN.

### **New Front Yahd**

Work progresses on Sasaki's extensive renovation of Boston City Hall Plaza.





Top: A rendering of the revitalized Boston City Hall Plaza. Above: A comparison of the original plaza (left) and Sasaki's reworking (right).

When Boston City Hall first opened in February 1969, replacing a confined Civil Warera facility just down the street, New York Times architecture critic Ada Louise Huxtable lauded the weighty Brutalist structure for conferring "an instant image of progressive excellence" on an aging, enervated city. She noted how the "rugged," all-over concrete-and-brick construction was "meant to be impervious to the vicissitudes of changing tastes and administrations."

In this aim, architects Gerhard Kallmann and Michael McKinnell can be said to have mostly succeeded. City Hall, a building generally unloved by Bostonians, has weathered attempts by multiple mayoral administrations to alter, disfigure, or demolish it. But the 7-acre plaza outside ultimately proved more vulnerable. At present, whole swaths of the plaza's red bricks have been ripped out as part of a \$75 million improvement project initiated by former mayor Marty Walsh. The paving will eventually be restored, but there will also be new additions, including seating, playscapes, platforms for public artwork, and rows of trees.

In 2015, Walsh's office commissioned a

report (led by design firm Utile and landscape firm Reed Hilderbrand) to transform the city's "front yard" into "the thriving, healthy, innovative space that it should be." The report resulted in a 30-year master plan for the site, the first phase of which is being executed by multidisciplinary design firm Sasaki and construction management company Shawmut.

For Sasaki principal Kate Tooke, the project presents a singular opportunity to reinvigorate Kallmann and McKinnell's original design intentions, "to provide necessary upkeep to one of Boston's most beloved civic spaces and to really focus on making it welcoming and accessible."

In its initial form, the competition entry submitted by Kallmann and McKinnell featured a sloping plaza that evoked the form and function of Piazza del Campo—the famous fan-shaped central square of Siena, Italy. Tooke describes the realized space, which used terraces to handle 26 feet of grade change, as "a carpet of brick that connects the sidewalks [on Cambridge Street] with the lower, public concourses of City Hall." But while Siena's piazza benefits from an active perimeter lined with museums, stores, cafés, and apartments, as well as a de facto amphitheater with regular impromptu street performances, Boston's version provided few ground-level enticements and offered next-to-no protection from the summer sun or winter winds.

A large fountain across from City Hall, which provided seating space and mitigated seasonal heat, was permanently shut down in 1977 after inspectors discovered that water leaked into the train tunnels below, leaving passersby with little reason to linger in the plaza. The expanse grew increasingly desolate with the relocation of street vendors to nearby marketplaces. Few attempts to rectify the space's dereliction ever came to fruition, except for Chan, Krieger and Associates' 2001 designs for a new transit headhouse and wooden arcade along Cambridge Street, both outgrowths of a series of economic studies and design recommendations put forth by the now-defunct nonprofit Trust for City Hall Plaza.

Responding to public input from an extensive community engagement process begun in 2015, Sasaki's design team integrated amenities and spaces for a wide variety of dedicated and open-ended uses. The firm's overarching aims to increase comfort and accessibility are addressed through 100 new trees and enlarged plantings, substantially more seating space, clearer wayfinding features, lighting solutions, and universally accessible ramps and entry points. Up to 12,000 square feet of the plaza will be dedicated to children's playscapes, with 11,000 square feet for public art, and a central open space that can accommodate up to 12,000 people for large-scale events and gatherings.

On Congress Street, which abuts the eastern edge of the Government Center, a new pavilion will provide space for maintenance and mechanical facilities, restrooms, and a potential performance stage. Perhaps even more critically, Sasaki's design scheme includes a glass vestibule that expands the north entrance of City Hall itself, which has been closed for security reasons since the 9/11 attacks. The newly operable, illuminated access point will reanimate both the streetscape and the building's interior atria while restoring Kallmann and McKinnell's original entry sequence.

For iconic civic spaces like Boston City Hall Plaza, maintenance and programming can be as central to the long-term vitality of a project as the design itself. According to Tooke, Sasaki collaborated extensively with the Boston Public Facilities Department and other agencies that will eventually take charge of the site's upkeep and public programming: "We wanted to design spaces that can be easily cleaned up, reconfigured, and redeployed as something else, in a way that doesn't cause any damage to the structure. That kind of thinking has been baked into all of the details." Integrating that level of adaptability into a square that sits on top of some of the nation's oldest operational train tunnels required several careful structural enhancements, all of which markedly improve the space's capacity to host intensive events like concerts, political rallies, and protests, as well as ice skating and other recreational activities.

Given the historic and symbolic nature of Boston City Hall, though, the need for design sensitivity extended well beyond the site's subterranean infrastructure. Sasaki's team worked with the architect, professor, and conservation planner Mark Pasnik to develop a design that brought Kallmann and McKinnell's scheme into the 21st century. "With projects like City Hall Plaza," Pasnik told AN, "I don't think we should be casting things in amber. It's about stewarding our existing resources and managing change in a way that engages both original intent and new voices."

Kallmann and McKinnell themselves regarded City Hall as a robust yet malleable composition, open to the additions and amendments of future generations—much like democracy itself. For Fiske Crowell, a former partner at Kallmann McKinnell & Wood Architects and now a principal at Sasaki, the ongoing work on Boston City Hall Plaza is a natural extension of that narrative, one that will continue to evolve after the first phase's completion next year. "This project," Crowell said, "does not complete the entire restoration and renovation of the plaza, but it gets it very far along." **Aaron Smithson** 

### **Truss the Process**

Carpenters and students replicate an original timber structure from Notre-Dame de Paris using centuries-old techniques.

A full-scale replica of one of the oldest timber trusses destroyed during the ruinous April 2019 fire at Notre Dame de Paris cathedral recently concluded a several-week showing at the National Building Museum in Washington, D.C.

As part of an effort organized by educational nonprofit organization Handshouse Studio, the architectural facsimile was produced in strict adherence to plans drafted by French architects Rémi Fromont and Cédric Trentesaux and with support from Charpentiers sans Frontières (Carpenters Without Borders), a nonprofit that unites carpenters from around the world for culturally significant restoration projects.

The 45-foot-wide, 35-foot-tall replica of Notre-Dame's truss number six was hewn, cut, and assembled by a team of professional timber framers and architecture students and faculty who came together this summer at the Catholic University of America (CUA) in Washington, D.C., for the initial stage of the so-called Notre-Dame de Paris Truss Project.

Kicking off in late July, the ten-day build workshop, which was hosted by CUA's School of Architecture and Planning and culminated in a truss-raising event on the University Mall in front of the Basilica of the National Shrine of the Immaculate Conception, is the latest in a series of research-based collaborative initiatives, or "dynamic learning environments" per Handshouse Studio cofounder Rick Brown, conducted by the Massachusetts-based nonprofit. Past projects have included constructing replicas of, among other things, a Revolutionary War–era one-man submarine and an 18th-century Polish bell tower.

"What we do is we replicate historic objects as accurately as possible, using the same tools, the same technology, and the same methods as they were originally built," explained Brown, who, like his wife and Handshouse Studio cofounder, Laura Brown, is a longtime sculpture professor at the Massachusetts College of Art and Design in Boston.

"We bring in professional builders, but then we also bring in students. The students are very excited to get a chance to work with professionals—side by side, shoulder to shoulder—and learn new skills. And at the same time, the builders get a chance to share their skills and their knowledge with young people."

After establishing an alliance with Charpentiers sans Frontières (which had already embarked on its own truss-replicating effort) and inspiring early enthusiasm by the National Building Museum when it displayed the completed truss, the Handshouse team connected with Tonya Ohnstad, visiting assistant professor and interim associate dean of graduate studies at the School of Architecture and Planning at CUA. In conjunction with the Notre-Dame de Paris Truss Project, Ohnstad led a special course open to CUA students and alumni as well as other interested parties that took a deep dive into both the architecture of the Parisian landmark and the building methods employed in its construction, which began in 1163. Experts from various fields, including medieval history and timber construction, participated in a public lecture series that was part of the course. Per the university, the full curriculum explored "French protocol passed down from the Middle Ages for timber harvesting, fabricating, assembly, tools, and raising techniques.'

With this new knowledge in mind, a team





**Top:** A historically accurate replica of a wooden truss destroyed by fire at Notre-Dame de Paris cathedral on view at the National Building Museum's Great Hall

of 70 CUA students and faculty members, timber framers, Handshouse representatives, and others converged on the University Mall to transform Virginia-harvested white oak logs into structural timbers with nary a power tool. The resulting structure was then hand-raised during an August 3 event that included a blessing by Cardinal Wilton Gregory, the archAbove: The August 3 truss-raising event at the Catholic University of America

bishop of Washington, D.C.

Following this, the roughly three-story truss was transported and hand-hoisted again on the National Mall for a one-day public exhibition held in cooperation with Preservation Maryland and the National Park Service's Historic Preservation Training Center.

The truss was then transported, yet again,

to the National Building Museum and installed in the soaring (and recently revamped) Great Hall, where it will be on view through September 16.

After its exhibition in D.C., the truss will be bestowed upon France as an "object that serves as a sign of solidarity among carpenters around the world, and a gesture of goodwill," Brown said. While the truss constructed at CUA and displayed at the National Building Museum will not be used in the reconstruction of the flame-ravaged cathedral, Brown relayed that project architects Fromont and Trentesaux have said it's "highly likely" that Handshouse will be tapped to replicate a second truss—and that one could play a role in the rebuilding of La Forêt, the world-famous Gothic cathedral's 25-truss roof structure.

"We don't know yet," Brown said of a follow-up truss. "We don't want to get ahead of the game and do it too soon, because we want to be sure that the next one is the right dimensions. We're working with them [the reconstruction architects] and we'll proceed as they advise us."

Though work on a second truss may not be set in stone, what's been accomplished to date by the Notre-Dame de Paris Truss Project is, Brown said, "a great success story."

"So many students have been involved as well as so many professionals and institutions," he explained. "We've also learned so much and exhibited in three high-profile venues—it's already been a dynamic learning environment come true." Matt Hickman

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### **New Digs**

The School of Architecture settles into Arcosanti with its first generation of student-built thesis shelters.



Azrien Isaac's Arch-i-Part is built using foam castoffs coated in expoxy.

Following its tumultuous 2020 departure from Taliesin West in Phoenix suburb Scottsdale, the School of Architecture (SoA) has hit the ground running at its new home in Arcosanti, 76 miles north. There, at the experimental desert mesa town developed by architect Paolo Soleri, SoA recently unveiled the first generation of thesis projects at its new campus.

The thesis projects are a continuation of SoA's long-standing program developed by Frank Lloyd Wright in 1932: Over the course of three semesters, graduating students, with the guidance of the faculty under the new leadership of Dean Stephanie Lin and President Chris Lasch, develop and construct small shelters of varying permanence and materiality. The shelters are the proofof-concept for a written thesis that explores discourses of wider contemporary issues within the field.

"The realization of the shelter project echoes a kind of professional building process in that students go through a form of research and design phase, coming up with schematic designs and developing them further, leading to a form of review by the Shelter Committee," Lasch said. "The drawings and schemes are vetted for life and safety issues, for constructability, as well as budget and schedule feasibility before receiving the green light; it is a bit more supportive and nurturing, than, say, the New York City De-partment of Buildings, but is more comprehensive and rigorous than a typical studio project." On-site, the projects are also supported by a construction manager as well as a construction adviser.

Arcosanti is over an hour's drive north of Phoenix, which posed problems for sourcing materials as well as volunteer labor: Architects could more easily pop by for a few hours to lend a hand at Taliesin West, and forays to The Home Depot were less of an expedition. However, the remoteness of the new campus encourages students to formulate their projects in a collaborative manner. Additionally, Arcosanti is home to a resident community of approximately 60 people, which fosters greater opportunities for interdisciplinary dialogue, like that with the Arco Agritecture agricultural program.

"If everyone needs to pour concrete, they collectively decide what day that concrete is going to be delivered in a single truck, which allows the students to share resources across projects, and the construction mentor facilitates these conversations," Lin said. "The projects are also doubling as both shelters to live in as well as pieces of infrastructure for the Arcosanti community."

The shelters developed by students demonstrate curious material investigation as well as impressive construction know how. Jessica Martin's Cinder is a monolith of rammed earth with weaving striations of soil and sand sourced from the surrounding area. Biopod 01, designed by Solomon Edelman, is an almost Paleolithic thin-shell concrete dwelling that bears some resemblance to the sand-cast and concrete structures that populate Arcosanti. Shiro, a collaboration between student Michele Yeeles and Arcosanti's agriculture program, seeks to minimize environmental impact through measures such as the use of mycelium for insulation panels. Resembling a cluster of minerals, Azrien Isaac's Arch-i-Part investigates a kit-of-parts approach to shelter de-sign through a system of rigid foam devices coated in an epoxy typically used for truck bed lining and held together by friction-fit fasteners. Lastly, Shelby Hamlet's Scuttlebutt explores the ephemerality of inflatable construction with a structure composed of sewn ripstop nylon.

All the shelters were imported into a 3D digital environment dubbed Shelter World by teaching fellow Leah Wulfman, in collaboration with Some Place Studio partner Bika Rebek. The platform allowed for a participatory format for the final reviews and for student-led video tours.

There will be some changes in the years ahead, such as the development of separate paths for different shelter typologies. But for now, so far, so good. **Matthew Marani** 



Shelby Hamlet's Scuttlebutt inflatable dome, pictured nested within the iconic vaults of Arcosanti



Jessica Martin's Cinder employs rammed earth walls. She sourced the soil and sand from the surrounding area.

### Safe Passage

The Los Angeles Department of Transportation invests in a gender-equity study and its implementation.



A Los Angeles bus driver

Public transportation is a contentious subject in Los Angeles. In a city shaped by the automobile, the bus and subway systems are not only insubstantial in scope but limited in response to the needs of its 3.9 million residents, whose demographics vary widely across its 503 square miles. Those systems have often been treated as a last resort.

A 2019 study commissioned by the Los Angeles Department of Transportation (LADOT) and conducted by Kounkuey Design Initiative (KDI) showed those feelings of reluctance are disproportionately felt by women. According to *Changing Lanes: A Gender Equity Transportation Study*, women are far more likely to report poor sidewalk conditions, perceptions of danger at night, and other concerns.

Working in coordination with Toole Design Group, Cityfi, Investing in Place, and UCLA-affiliated researchers, KDI collected data in three separate corners of the city with high proportions of Black, Indigenous, and people of color (BIPOC) residents and women workers living in zero-car households: Sun Valley in the north. Watts in the south, and Sawtelle in the west. The 74 travel interviews and 412 community surveys the initiative conducted within those neighborhoods focused on scales of mobility rarely considered in public transportation design. "Transportation plans start the second you're out the door," said Naria Kiani, senior planning coordinator at KDI's Los Angeles office. "In the spaces between their homes and the nearest bus or train station, we learned that there was a common lack of crosswalks, street lighting, signalized intersections, and bus amenities.

These impediments to pedestrian navigation, which Kiani describes as "infrastructure deficiencies," have made the use of public transportation feel more dangerous than it might otherwise. "We learned that safety is a huge part of the calculus women have to consider when traveling," Kiani said. "And because they take more trips than men for household and caregiving responsibilities, that fear of safety is multiplied by public transportation systems that do not consider their unique requirements."

In addition to gender inequities, the report states, "BIPOC women face racial barriers to safe and accessible transportation, maneuvering factors like historic underinvestment, racist housing and zoning practices, and economic disenfranchisement."

Despite the varying densities and wealth distributions of the neighborhoods involved in the study, it reported that women were more likely than men to use multiple transportation modes in a day and have long-duration grocery store trips, meaning that they disproportionately navigate a public transportation system that was not designed for them. "We're the ones carrying the bags of groceries, riding with our children, and running errands, and that's just during the day," said Los Angeles City Council president Nury Martinez at a press conference in front of City Hall this past July. "For those who can't afford a taxi or their own car, this program can be the difference between walking two blocks in the dark and ten feet to one's doorstep.'

Finding solutions to these problems re-

quires navigating the city's densely interwoven public entities, including the Bureau of Street Services, the Bureau of Street Lighting, and the Los Angeles County Metropolitan Transportation Authority. By tracking down these entities and their claims to the city in a comprehensive diagram, referred to as a "responsibility matrix," Changing Lanes was able to suggest a path forward for implementing citywide improvements, from the repair and widening of sidewalks in anticipation of women traveling with strollers or dependents to increasing street lighting and placing bus stops near active businesses to create a visibly and actively safer transit system.

Following the publication of *Changing Lanes*, the next steps will be guided by the same community outreach that led to the initial data collection. "My desired outcome for the next phase is for the city to work with low-income communities of color to consider the suite of implementation strategies that would best work for each neighborhood," Kiani said. "This would allow countless women to reach their full potential through a public transportation system that provides greater and more efficient access to jobs, education, and recreation." **Shane Reiner-Roth** 



# 16 Q&A

### Dean's List

In a moment of uncertainty, heads of architecture and design schools tell AN about the changes in thinking and behaviors they hope to cultivate at their respective institutions.

continued from front page faculty and staff, live on campus together, which fosters a real sense of closeness between different roles at the school where typically there is more distance. This in turn produces many more informal contexts for sharing knowledge and resources within the school as well as with the larger community of Arcosanti, where the school is located. I am most excited about how these conditions can inspire new, fresh formats for learning and making.

- Igor Marjanović, Rice University School of Architecture: Houston is an amazing urban laboratory with a confluence of many pressing global issues—climate crisis, urbanization, globalization, and migration. But Houston has some very specific conditions, too. As the most diverse city in the country in terms of its demographics, Houston is the center of a new multicultural world. This positions Rice Architecture at the forefront of global discourse on architecture and identity, allowing the school to engage the universality and diversity of Houston—and the world—all at once.
- Malo A. Hutson, University of Virginia School of Architecture: The primary difference is UVA's unique history as an institution founded by Thomas Jefferson. This history is evident in the A-school's strong focus on the significance of place, meaning, history, culture, and democracy. I am most excited about the academic, professional, and creative practice among our four departments-architecture, architectural history, landscape architecture, and urban and environmental planning. Together they emphasize the interconnectedness of the built and natural environments, addressing issues such as urbanism, climate resilience, social and racial equity, environmental protection, preservation, and adaptive reuse.
- Juan Du, University of Toronto Daniels Faculty of Architecture, Landscape, and Design: The curriculum of the Daniels Faculty of Architecture, Landscape, and Design is exceptionally diverse, even compared to the great variety of schools of architecture that I have studied and taught at in the U.S., Europe, and Asia. The visual arts, curatorial, architecture, landscape architecture, and urban design programs are further enriched by the recent joining of forestry. I am truly excited by the opportunity this presents-to bring together the studies of the built environments with the natural environments, to study and research our cities and our world as one environment.
- **AN:** What would you say is the general pedagogical approach to architecture and urbanism at your respective institution?
- B. Stephen Carpenter II, Pennsylvania State University College of Arts + Architecture: At Penn State, architecture is approached as a professional practice within a space of art-informed possi-

bilities. Many students in the Department of Architecture are surrounded constantly by art students and whose architectural practices are informed by the visual arts. The pedagogy is informed by that idea. At the undergraduate level, our architecture degree also has a required study-abroad component, which is built upon the idea of embedded urban education. Because our campus is located in quite a rural area, we believe this balance allows for a wider sense of what architecture can be, better preparing our students to innovate and lead the future progression of ideas in the discipline. And that also supports the idea that architecture is a global practice, so there are different styles of regional architecture that enable our students to understand that architecture exists within a global context.

- **Cooke:** The Urban Design program at UNC was founded on a series of New Urbanist principles and later evolved to include a more international focus. It may be obvious that my own work and pedagogical foci are anathema to New Urbanism. Regardless of the mandate for change with which I enter the program as director, I intend to continue the parts of the program that work well —international connections, local/regional application, etc.—while decisively confronting those that don't.
- Marjanović: Rice Architecture has many forms of engagement for such a small school, and although I have a lot to learn about my new academic home, one thing seems clear: The school has constantly invested itself in situating architecture in the larger world. These engagements include local outreach through Rice Design Alliance and the Construct [student design-build] projects in the community, as well as the international ambit of Rice Architecture Paris. The Preceptorship program places seniors in architecture offices worldwide, while the legendary Architecture at Rice publication series situates the research by architects within the public realm. As such, the school produces both practicing architects and public intellectuals-or what I would call "scholar-practitioners," who are equally inspired both by artifacts and arguments of architecture.
- Du: The Daniels Faculty aims to advance the disciplines of architecture, landscape architecture, visual arts, urban design, and forestry, promoting them as major fields of intellectual knowledge and professional practices. The Daniels Faculty educates scholars and professionals with rigor, criticality, innovation, and creativity. Through various courses of study and research programs, we prepare students for advanced studies, professional development, and lifelong learning. Our community of faculty, students, and alumni is further supported by allied design and forestry professionals. And a well-established program of public lectures, symposia, exhibitions, and

publications contribute to the educational and cultural lives of the school, as well as the University of Toronto campus and communities beyond.

- Lin: Our pedagogy is centered around learning by doing, and this has carried through since the school's founding by Frank Lloyd Wright [in 1932]. Much like our previous locations at Taliesin and Taliesin West, our campuses at Arcosanti and Cosanti are teaching tools, both in their built forms as well as in their environment and landscape that students learn to build with. Most prominently, our MArch program culminates in a design-build project in which students design and construct a shelter to be lived in as a built proofof-concept for their thesis work and research. They gain a new understanding of their project by confronting the process and constraints of construction. Outside of the thesis program, we continue to develop opportunities to teach studios and courses through projects and formats that encourage interactive approaches. This includes projects in and for communities where students interact with local stakeholders and professionals on design-build projects, in collaboration with community-serving nonprofits.
- **AN:** How have your past experiences—educational, professional, research—informed your approach to design education and administrative leadership?
- Marjanović: I loved being an architecture student, so I stayed in school for as long as possible. I pursued bachelor's, master's, and doctoral degrees, always savoring the immense breadth of architectural education-be it in Belgrade, Moscow, Chicago, or London. In Belgrade, I studied at a time of war when students led many antiwar protests. As architecture students, we made posters and roadblocks that prevented police movement. I was lucky to have mentors who encouraged me to bring this political angle into my own work, teaching me that the worlds of architectural and political imagination are not separate, but indeed one; that our ability to draw can help visualize both beautiful buildings and more-just societies.
- Du: My approach to design education and leadership is informed by my experiences of professional practice and scholarly research. Schools of architecture provide nurturing environments for bold ideas that benefit the professional communities of design and planning. Integrating experiential workshops and courses that bring students to real-time challenges of the community and city at large is crucial for study and research programs to keep evolving and innovating. Academic research updates the knowledge foundations necessary for innovations in design and practice, and in turn, this generation of students explore impactful solutions to today's urgent challenges.

Lin: My professional design practice Pres-

ent Forms has developed through an exploration of process-oriented tools and techniques for material experimentation that can lead to new forms of architectural knowledge and craft. This has developed in tandem with Office III [a design collective Lin formed with Sean Canty and Ryan Golenberg] that embodies an openness to alternative forms of collective, nomadic work in an evolving contemporary context. Both share core values with The School of Architecture, which is deeply rooted in material understanding and fosters multiple scales of collaboration. Because of the small scale of both the practice and the school, I have also found a common mindset between the two of taking on responsibilities that are not typical to the role, such as teaching studios and seminars in addition to administrative leadership. It's very exciting.

- Carpenter: There are four ways in which my background as an art educator has informed what I do as dean. The first is my background in curriculum theory. Curriculum comes from the Latin root currere, which means "to run," so the curriculum can really be thought of as a verb-moving through a set of ideas. My background in interpreting educational experiences gives me the perspective to weave through various discourses—architecture, graphic design, music, art education, and so on. The second is my grounding in art practice and materiality-the idea that we make things that exist in the world and change the ways people interact with objects and space, whether the medium is clay or music or art historical arguments. The third is rooted in pedagogy-that nexus of the theory and practice of teaching. As I work with faculty across the college, I'm fascinated by the range of pedagogical histories that we have, and I always try to position my own experience in relation to others. The fourth is social engagement and, more specifically, the act of using disciplines that are not necessarily art- or design-related as the media through which we generate art or social experiences.
- Hutson: I became an academic because I believe that institutions can positively impact societies. Higher education is no exception. As academics we are promoted based on our research, teaching, and service. Throughout my career I have had the privilege of working in places that recognize the connection between these three dimensions of academia and support scholars working with governments, organizations, businesses, and communities to address global challenges. As the dean of UVA's School of Architecture, I want to collaborate with our faculty, staff, students, and alumni to ensure that we are well-positioned to train the next generation of diverse scholars and professionals to have a measurable impact on complex issues ranging from building more climate-resilient cities and communities, to addressing

# 17 Q&A

racial and ethnic injustices, to making strides in design innovation. This requires us to focus not only on providing our students with a well-rounded, comprehensive education but also to afford them opportunities to develop their technical and leadership skills in a real-world setting.

- *AN:* Given the intersecting crises of the COVID-19 pandemic, systemic racism, and racial violence in the U.S., what shifts would you like to see during your tenure at your new institution?
- **Carpenter:** Very early on in the pandemic, we pitched big canopies in some of the spaces outside the arts buildings so that students could rehearse or engage in studio work more safely. To have the arts and design visible and audible to public audiences and passersby was transformative. Reactions were extremely positive, forcing us to question why we hadn't been doing that all along. So certainly, there are some things we will try to keep as COVID-19 moves into the rearview mirror.
- **Du:** In some ways, we learned from the pandemic that we could travel less and do more with technology and virtual spaces of interaction. Our digital platforms allowed for more international, and at times more inclusive, outreach of educational and public programs. However, we have also come to realize the unequal distribution of access to digital technologies in our communities. I believe we should see COVID-19 as a wake-up call that much of the ways we have designed, built, and lived are no longer sustainable. Going forward, the Daniels Faculty will work with our community at the university to seek new ideas and practices to improve the sustainability of our built and natural environments.
- **Cooke:** I'm looking forward to creating a program that is a model of free, uncompromising investigations into the biggest challenges that affect contemporary urban environments. The list of challenges may seem finite and easily prioritized in this current moment social justice, environmental justice, mobility, economic sustainability. However, we can all agree that these issues and their priority levels can change more rapidly than we can anticipate. As they shift, the program has to be nimble enough to respond using human-centered value systems.
- Lin: We have some significant adjustments ahead to further the school's commitment to addressing social inequities elucidated by these ongoing crises. As a school that fosters a hands-on approach, we will be enhancing our efforts to ensure that our program and projects are inclusive and accessible to a diversity of participants that are a better reflection of our social landscape. The school has initiated a series of service-learning projects carried out in collaboration with Land Rich, an organization working on land loss

issues and heirs' property connected to historically African American family property throughout the Southeast. Finally, the school will be initiating a requirement for students to organize and participate in semesterly discussions around decolonizing design education in order to gain the necessary language and tools for enacting change.

- Marjanović: There is no question that we live in a historic moment that is ripe for social, environmental, and cultural change. Yet history has taught us that change is a multigenerational process. Emancipation was halted by segregation, the Great Society was eclipsed by neoliberal capitalism, and so on. As I reflect upon the shifts that we need to make today, I think that we need to build intellectual and political stamina so our institutions can be true agents of change over many years and generations. This, I believe, is a challenge not only for Rice Architecture but for educational and cultural organizations worldwide.
- Hutson: We are confronted with a number of significant challenges-climate change, environmental degradation, challenges to our democratic institutions, health inequities exacerbated by a global pandemic and systemic racism, and racial and ethnic violence. The design professions are at the center of these discussions. We must rise to the occasion, but to do so our faculty and students need to be in the best position possible to address these complex challenges. I aim to work in partnership with faculty, staff, students, alumni, and friends of the university to build on our collective work around climate resilience and climate justice. We must also integrate equity, diversity, and inclusivity as parts of our institutional culture so that we can build a more diverse faculty, staff, and student body.

Another priority is to make higher education more affordable and accessible. We can't be one of the world's leading public institutions and be inaccessible to students from less privileged backgrounds or have our students being crushed by student debt. It limits their opportunities once they graduate. Finally, to maintain the highest standards in research, teaching, service, and creative practice we must support our faculty in the tenure and promotion process and attract the most innovative faculty across a wide array of disciplines.

Sekou Cooke, the new director of the Master of Urban Design (MUD) program at UNC Charlotte, is a Jamaican-born practitioner, educator, and curator based in Syracuse, New York. He is a founding member of the Black Reconstruction Collective and author of the recently published monograph *Hip-Hop Architecture*.

Stephanie Lin is the dean of The School of Architecture based at Arcosanti. She is also the founder of her own studio, Present Forms, and a member of the design collective Office III, alongside Sean Canty and Ryan Golenberg. Igor Marjanović is the new dean of the Rice University School of Architecture. Previously, he was the JoAnne Stolaroff Cotsen Professor and chair of the undergraduate architecture program at the Sam Fox School of Design and Visual Arts at Washington University in St. Louis. He is the codirector of the design practice ReadyMade Studio, alongside Katerina Rüedi Ray.

In addition to serving as the dean of Penn State's College of Arts and Architecture, B. Stephen Carpenter II is a professor of art education and African American studies at the same university. He is the co-editor of *The Palgrave Handbook of Race and the Arts in Education* (2018), as well as a practicing mixed-media and performance artist.

Juan Du is dean and professor at the Daniels Faculty of Architecture, Landscape, and Design at the University of Toronto. She previously held teaching positions at Hong Kong University and the Massachusetts Institute of Technology and is the founder of the Hong Kong-based practice IDU\_architecture.

Malo A. Hutson is the incoming dean of the University of Virginia School of Architecture. He is a cofounder of the community engagement and professional services consultancy NIAM Group and author of *The Urban Struggle for Economic, Environmental, and Social Justice: Deepening Their Roots* (2016).

#### Read more at archpaper.com.

# **18 Dispatch**

### **Meandering the Anatolian Fault**

Turkey's turn to Islam and continued attachment to neoliberal economics are registered in its architecture.



Totu

Last month, images of resigned tourists boarding yachts to escape the forest fires raging across southern Turkey hit the front pages of newspapers around the world and social media news feeds. The attempt to provide a hedonistic Mediterranean utopia to middle-class workers traveling from more septentrional latitudes metamorphosed into a sort of ancient Greek drama. The Intergovernmental Panel on Climate Change quickly linked the fires to global warmingrecent temperatures in the region have been the warmest of the past 50 years. The most fervent critics of the neoliberal turn that has characterized Turkish politics since the 1980s blamed the pressure urbanization has put on natural resources, as well as the rampant privatization of public land. Laws inherited from the Ottoman Empire and the emigration of minority populations during the Turkish War of Independence (1919-1923) provided the newborn republic with ownership of almost two-thirds of Turkey's land. According to the Center for Spatial Justice (Mekanda Adalet Dernegi, or MAD) and the collective data-compiling and mapping project Mülksüzlestirme, the depletion of state assets has not only been tarnished with corruption scandals but also dispossessed the public of a powerful tool to fight ecological challenges and provide affordable housing. At the same time, there has been no shortage of rumors and fake news accusing Kurdish separatists and other "enemies of the people" of starting the fires. Not for nothing did the eastern Aegean coast witness the first arsonist in recorded history. The Greek geographer Strabo (c. 63 BCE-c. 24 CE) explains how in the Fourth century BCE, lowborn Herostratus set fire to the Temple of Artemis at Ephesus, one

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of the Seven Wonders of the World, for the

sole reason of becoming famous. The ancient civilizations of Asia Minor have contributed as much or more to Western culture as their neighbors in the southern Balkans. Fifth-century BCE king Croesus of Lydia is credited with instituting the first standardized monetary system. Its golden mines gave birth to the myths of the Golden Fleece and King Midas. The river Maeander, "which, taking its rise from its own fountain, seems to run back to its own head," became synonymous with anything exceedingly winding. The Fourth-century BCE tomb of the Persian satrap Mausolus in Halicarnassus, in present-day Bodrum (another of the Seven Wonders), gave rise to the word mausoleum. But, as they say, the winners write history. The Argives conquered Troy and their progeny wrote about it, giving the Greeks an edge that has established them as the fountainhead of Western civilization.

First to amend this misconception was German self-instructed archaeologist Heinrich Schliemann (1822-1890), who decided it made more sense to read Homer than 19th-century scholarship. Following his instinct. he discovered the site of Troy near Hissarlik, which led to the reassessment of the Iliad and other ancient texts as historical sources. While his excavation tech-niques. which included the use of dynamite, would today be considered barbaric, visitors' experience of the site has been extremely improved by the recent construction of a museum. Completed in 2018 and designed by Yalin Mimarlik, it is a Corten steel-clad cube with crenellated edges, aiming to resemble both an "excavated artifact" and a fortress. The downward access ramp gives visitors the feeling of entering an archaeological excavation. It includes, in addition to the permanent collection of artifacts found in situ, storage, conservation and restoration labs, a café, and retail facilities.

Perpetuating historical misconceptions, 476 CE is still considered, in the West, as the date of the fall of the Roman Empire, even if its second, third, fourth, and fifth most important cities (Constantinople, Antioch, Ephesus, and Alexandria) continued to thrive under the same rule for centuries to come. Some scholars argue that the empire survived under the Ottoman sultans after Mehmed the Conqueror took the city of Constantinople in 1453 and claimed the title Kaiser-I Rûm, "Caesar of the Romans," for himself and his descendants. The Roman Empire after the fall of Rome managed to build Hagia Sophia, the Sixth-century church dedicated to the wisdom of the emperor, the most technologically advanced structure ever built until Brunelleschi built the Florence cathedral dome almost a millennium later. Considered to be the first dome built atop pendentives, allowing for a spherical surface to sit upon a square space, the Byzantine structure was also the first building to be designed by geometers rather than builders, Isidore of Miletus and Anthemius of Tralles. predating without question the Italian Renaissance divorce between design and construction and hence the beginning of architecture as a liberal art. It was built initially as an imperial church, and its beauty not only saved it from demolition and substitution as a mosque but became the prototype for mosque building thereafter. If the palmtree courtyard of the Prophet Muhammed was the inspiration for the early hypostyle mosques, such as those in Córdoba, Kairouan, and Samarra, the domed space surrounded by minarets is today synonymous with the Muslim temple around the Islamic world and beyond. Established as a museum by the secular Turkish Republic in 1935, it reopened as a mosque in 2020, which reignited the debate about President Recep Tayyip Erdogan's commitment to secular values and caused a great wave of condemnation across the West. However, while the reversion to a mosque has deprived Istanbulites and tourists alike of the pleasure of viewing the Ninth-century mosaics (which replaced those destroyed during the Eighth to Ninth-century Byzantine iconoclast crises and are now covered by white drapes), the city has recovered an extraordinary interior public space. Without an entry fee, the monument is experienced in a completely different way from when it was a "secular museum." The architectural, historical, and political significance of Hagia Sophia cannot be overstated. Its importance is simply unparalleled elsewhere in the world.

Nevertheless, if one monument within the borders of the modern Republic of Turkey surpasses the importance of Hagia Sophia, that is Göbekli Tepe. Dated around 9000 BCE, it is the world's oldest known stone building, preceding by seven millennia the Step Pyramid of Djoser in Egypt. It consists of several circular enclosures surrounding twin carved stone pillars in the middle that reach up to seven meters (23 feet) in height. Several theories indicate its use as a cult temple, as no signs of habitation have been found nearby. Among the most revolutionary is that of English archaeologist Steven Mithen, who argues that the construction activities at Göbekli Tepe created the need for grain to feed workers,

# **19 Dispatch**

**Right:** Istanbul's Küçük Çamlica TV Radio Tower by Melike Altinisik Architects

Far right, top: The city's Kuştepe neighborhood

Far right, bottom: Göbekli Tepe, the world's oldest known stone building, dates to around 9000 BCE.



leading the way to the first domestication of plants. In other words, monumental architecture heralded agriculture, and not the other way around, challenging the whole hypothesis of the Neolithic revolution and the Tower of Babel story. Paradoxically, the adjacent interpretation center inaugurated in 2018 and designed by Kreatif Mimarlik shies away from the everlasting virtues of stone construction, as it is built with mud and wood. The result is a sustainable structure, requiring little air-conditioning in an area usually scorched by heat, that does not disturb the view commanding the surrounding landscape. However, the statement "We built Göbekli Tepe 6,000 years before Stonehenge" that appears in one of the films continuously played inside the visitors' center raises some intriguing questions about whom "we" refers to.

What undoubtedly has been built with the taxes of present-day Turkish citizens is the nearby Atatürk Dam, one of the world's largest, and Sanliurfa Tunnels, the biggest ever built for irrigation. Whereas the reservoir lake has inundated archaeological sites of extreme significance, such as Nevalı Cori, smaller than but contemporaneous to Göbekli Tepe, it provides an irrigation system that has doubled cotton production in the region. It also offers a diplomatic weapon against neighboring Syria and Iraq, which have suffered water shortages since the dam was filled in 1992. The impact is most visible in satellite imagery. The otherwise "geographically artificial" straight-line border between Turkey and Syria becomes starkly defined by the difference between irrigated land to the north and nonirrigated land to the south.

Turkish borders have also become a diplomatic weapon for the current administration. It is said that around five million Syrian refugees remain in Turkish territory, and many Afghan refugees attempting to reach Europe through Iran and Turkey are predicted to arrive in the coming weeks. While the local population was welcoming during the beginning of the Arab Spring, in the wake of the 2018-2021 currency and debt crisis, made worse by a pandemic that has dried up income from tourism, refugees are seen more and more as a menace to public stability. Meanwhile, Turkish incursions on Greek and Cretan maritime boundaries probing for hydrocarbons have provoked little if any response from the European Union, which fears Turkey loosening its grip on the refugees within its boundaries. Nonetheless, not all foreigners are regarded as poor migrants. Since Turkey is the only nation in the Middle East to grant citizenship to those who have been legal residents for a while or make a minimum fixed capital investment of \$500,000, it has attracted well-to-do nationals from former regions of the Ottoman Empire and beyond.

One of the recent real estate developments known for housing immigrants and other cosmopolitan expats is Istanbul's new Trump Towers. Designed by Brigitte Weber, an Austrian-born architect practicing in Turkey, the towers sit between a high-traffic arterial road and Kustepe, a former gecekondu (literally, landed-at-night) neighborhood inhabited by Roma communities originating from central Anatolia. While the public spaces seem livelier and better enjoyed there than inside the Trump Towers' shopping mall, one can quickly ascertain the anxieties provoked by the sudden appear ance of this transnational investment real estate. Whether we like it or not, it is known that most of the small-contractor apartment blocks that replaced the shantytowns of the *gecekondu* will collapse whenever the next great earthquake hits Istanbul. What will remain are these towers, emblazoned with the name of the former U.S. president who apparently allowed Turkey to attack U.S.-allied Kurdish militias in Syria in order to secure the \$1 million to \$5 million he receives in royalties from the project.

Whereas Trump failed to promote the neoclassical style for new federal buildings across the U.S., his counterpart in Turkey has succeeded in cladding Anatolia-and other territories such as Bosnia and Kosovo-with a gleaming mantle of neo-Ottoman mosques. The Çamlıca mosque, the largest one in Turkey, was designed by female architects Bahar Mızrak and Hayriye Gül Totu and is inspired by the designs of 16th-century Ottoman state architect Mimar Sinan, yet built with concrete and clad with white Anatolian marble and Iznik tiles. It houses a large underground parking lot and a child-care space and can hold up to 63,000 worshippers. Its proportions are dictated somewhat arbitrarily, with its minarets standing 107.1 meters high (351 feet) to celebrate the Turks' victory against the Byzantine Empire in 1071 CE. Its 34-meter-high (111-foot) dome symbolizes the car-plate number of Istanbul, 34. But the building that probably better epitomizes the cultural schizophrenia that affects architecture over the fault line dividing Istanbul between its European and Asian continental plates is the nearby Küçük Çamlıca TV Radio Tower. Designed by female architect and former Zaha Hadid employee Melike Altınışık and inaugurated in 2021, with a total height of 369 meters (1,210 feet), it resembles "a tulip that has not bloomed yet." While Turks claim to be the first to have domesticated the tulip—a wildflower native to Central Asia—whether its height has an esoteric numerical meaning or serves as a metaphor for the country has been left unsaid.

Bellerophon, "the greatest hero and slayer of monsters [...] before the days of Herakles," thought that killing the Lycian Chimera (near current-day Antalya) would grant him membership among the Olympian gods. Yet Zeus had him fall back in Cilicia (southern Anatolia), where he ended his days blind and in misery. Turkey applied to join the European Union in 1987. It historically belongs to the Mediterranean world and has been a NATO member since 1952, with the alliance's second-largest army. But, tired of being brushed aside by its neighbors to the west, today the country is orienting itself elsewhere. With the decision to abandon the secular policies of his predecessors while maintaining a neoliberal and investment-friendly economy, Erdogan aspires to lead the Islamic world and legitimately become a counterweight to European predominance in the Mediterranean basin. By choosing the neo-Ottoman style for his mosque building program, inherited from the Eastern Roman imperial basilicas, rather than exploring the possibilities of early Islamic architecture, Erdogan has ensured that Turkish global ambitions are recorded in stone. Only time will tell if Atatürk's republic suffers the same fate as Bellerophon or not. Fortunately, there are many other mythologies outside the West to choose from.

Ibai Rigby is an editor at urbanNext. He lives in transit.

# 20 In Construction

### **Big Passive**

At Sendero Verde, Handel Architects brings Passive House design to high-rise affordable housing.

Architect: Handel Architects Location: New York City Passive House consultant: Steven Winter Associates

Envelope consultant: Vidaris

MEP engineer: Cosentini Associates Structural engineer: DeSimone Consulting Engineers Mineral wool: Rockwool Thermal breaks: Armatherm and Schöck HVAC: Swegon EIFS facade assembly: Dryvit Windows: INTUS

When Via Verde opened in the South Bronx in 2012, the 222-unit affordable housing complex revived hopes that New York City would jumpstart housing construction in communities that needed it the most. Nearly a decade later, the housing affordability crisis has only grown worse, just as a second, more existential crisis–climate change–has made its presence in the city increasingly felt. But a would-be sequel from Jonathan Rose Companies, the developer behind Via Verde, promises to pick up the mantle.

Sendero Verde in East Harlem is on target to be the world's largest Passive House project. The completely affordable 709-unit complex, designed by Handel Architects, with further backing from L+M Development Partners and the nonprofit Acacia Network, is rising on a full-block site on 112th Street. Existing community gardens were preserved and embedded in the new configuration, flanked to the east by the elevated Metro-North tracks and just a few blocks from the northern stretches of Central Park. Sendero Verde offers a gradient of scale in three volumes: a high-rise corner tower (Sendero A), along with a mid- and a low-rise building (Sendero B). The tower is expected to open in 2024, while the

latter set is due for completion in April 2022. The massing and design of the project are, according to Handel Architects partner Blake Middleton, inspired by complex rhythms of music and harmonics: "A percussive pattern of colors in stucco and masonry echoes the underlying design concept and is used as a mechanism to break down the forms into a pattern of subtle colors that weaves throughout the facade." The syncopated window openings, he added, have "underlaying structure rooted in the Fibonacci sequence."

Incorporating Passive House design principles can be a costly decision and is sure to affect overall project budgets. For this reason, the design team relied on Passive House consultant Steven Winter Associates (SWA) and envelope consultant Vidaris, among others, to develop best-practice detailing procedures that also kept costs down.

First, SWA developed a Passive House Planning Package that established the performance criteria for the project. The consultants then evaluated the building design against these criteria, running THERM analyses on the facade assemblies and modeling individual thermal bridges. The design team reentered the picture and "studied each THERM analysis to determine if the thermal performance conformed to the project requirements or if there was any condensation potential," explained Handel Architects associate Louis Koehl. "Each detail was refined until the individual conditions were satisfactory and the overall building Passive House criteria met."

Sendero B employs the block-and-plank form of construction; in short, precast concrete slabs act as ceiling and floor and are placed atop load-bearing concrete masonry blocks. The relatively straightforward structural system allowed the application of a budget-friendly, liquid-applied continuous weather barrier. The facade is field-assembled, and there are two primary enclosure systems. The shorter southern building is clad with a 6-inch-deep field-applied exterior insulation finishing system, and a 3.5-inch mat of mineral wool insulation was applied to the back of the concrete masonry units, which are foil-faced to prevent interior water vapor from penetrating the facade system. The midsize building to the north is clad with a 4-inch-deep exterior insulation finishing system, and Handel was able to forgo interior insulation owing to the thermal mass afforded by the larger building size and the high performance of the windows.

Except for the storefront glazing found at the podium, all windows across Sendero B are triple-glazed insulated glass units (IGUs) placed within punched window systems. Here, too, performance was measured against the Passive House Planning Package. The project team assessed the U-values and Psi-values of the IGUs; for the former, they captured the values of each unit's center and frame, while for the latter they clocked the Psi-values within the units and at their perimeter.

The energy-efficiency features of Passive House design are more than skin-deep, and that quality is certainly the case here. The buildings utilize a variable refrigerant flow for heating and cooling, and, thanks to the thermal performance of the facade, they do not require heating at the building perimeter. "Each apartment has a floor-mounted evaporator unit in a centrally located closet, and the air supply is ducted to each bedroom and living room," Koehl said. "The evaporators are supplied refrigerant through vertical risers that extend to the rooftop condenser farms, and a major challenge was sourcing evaporator units small enough to support the minimal loads required by the airtight residential units."

Similarly, the team had to identify energy-recovery ventilation units that could both handle the air distribution requirements and maintain a level of electrical efficiency in line with the project's Passive House targets. It's this attention to detail and performance that has put Sendero Verde on track for success. Matthew Marani

14.0° 20.8° 27.5° 34.3° 41.0° 47.8° 54.5° 61.3° 68.0°



**Concept:** Shelf angle with intermittent Armatherm attachments

Left: At Sendero Verde, Handel Architects used a blockand-plank structural system to keep costs down, which also allowed for the application of a budget-friendly, liquid-applied continuous weather barrier. DD: Shelf angle with Armatherm attachments and spray foam courtesy HANDEL ARCHITECTS

Above: The project's high-energy performance relies on the use of THERM analyses that rigorously evaluate detailing conditions.



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# **22 Studio Visit**

# The Straight and Narrow?

MOS, the New York-based architecture studio, coaxes the unexpected out of the everyday.



The work of MOS easily appeals. Much of the attraction has to do with the design vocabulary that Hilary Sample and Michael Meredith have cultivated since forming the architectural studio in 2003. Straightforward and playful, but also painfully aware of itself, MOS's visual language endears because it captures—anticipated?—a certain cultural mood whose antecedents lie in the 1990s. It's trendy, fashionable without being disposable (for now), basic as in basics. There is also evidence of humor of the wry-and-dry variety, though the work might be too self-involved to ever really be funny. Probably for the best, as architecture is not a medium well-suited to comedy.

Repetition, or the resignation to it, is another conspicuous feature, as is clear in the assorted gables, chimneys, primitive solids, and parallelepipeds that recur, and quite literally pile up, in MOS's catalogue. We might chance that it's this same Freudian analytic that underlay Sample and Meredith's early desire for MOS "to be horizontal and fuzzy, as opposed to tall and shiny"—horizontal as in supine. It also alters how their work, a mix of built and unbuilt architectural projects and multimedia installations, is received. The immediacy that draws observers in develops, upon further observation, into a palpable strangeness. Sharply defined, "hi-res" geometries begin to soften and blur at the edges, while solid volumes are revealed to be thin envelopes. As Sample put it to *AN*: "Simple, straightforward things can produce unexpected things."

But though they are committed to expanding the limits of practice, she and Meredith are, first and foremost, architects. The goal is not merely to produce work that is visual, or even spatial, but also economical, Sample said. "That's an internal goal we set for ourselves. But it helps in designing a building. We want it to be very clear to someone looking at one of our [buildings] how it comes together. It's not a mystery."

Some might argue that projects such as Petite École, a one-room nursery school without walls, or Laboratorio de Vivienda, a welcome pavilion (only partially closed and conditioned) for a low-income housing complex in Mexico, could stand to benefit from a little more mystery or sleight of hand. Both offer shelter in an elemental sense that, depending on the angle of observation, appears provisional. But this view would reveal more about an anxiety at the core of the discipline than anything about MOS's idiosyncratic tendencies. Architecture, and most architects, insist on control, even if the rhetoric of contingency has become incorporated into its discourse. "We're accustomed to thinking of architecture as a closed space," Sample said. "We want closed windows and doors, [to] make sure the

sealants are tight to keep water out, weather stripping—all important considerations. But the conversation is exclusively about those as opposed to how we open things up."

If MOS pursues an agenda of open-endedness, it often does so literally. The design of the following projects, Sample said, "does not constrain the function of their spaces. Instead, they offer up exposure to the outside." Courtyards and gardens are treated as catalysts, which draw architectural volumes into close–sometimes awkwardly close–relation. She hopes that the experiences of the past year, both of lockdown and of remote work and study, have instilled a "ruggedness" in people so that "we don't always need to be in air-conditioned spaces where things are so controlled. That would be a wonderful outcome from all of this." Samuel Medina

# **23 Studio Visit**









#### 1 School No. 1: Krabbesholm Højskole campus 2012

MOS's work is, to a great degree, preoccupied with narratives of art and art-making. For the Krabbesholm Højskole, an arts high school in Skive, Denmark, Sample and Meredith concentrated the art, architecture, graphic design, and photography studios on a single site. Each discipline is given its own building volume, though in material (the outer shell comprises industrial cement rainscreen panels) and form (linear and with high-pitched roofs) they are nondescript. Linked at the corners by covered patios and a central courtvard, the buildings form a small community. Large windows ensure that "everyone can see into and out of the buildings and know what everyone is working on," said Sample.

#### 2 Installation No. 15: And Benches, Platforms, Partitions, Shelving, Activity Books, Uniforms 2016

As the first part of this work's name indicates-following a numerical convention that MOS maintains in its books and website and reproduced here-the office has done a lot of installation work. The second half of the name suggests its use, which was evidently manifold. Conceived for the now-defunct Brooklyn art space A/D/O, And Benches... comprised vertical and horizontal elements that could be stacked into stadium risers. laid adjacently to form a platform, or made into shelving, among other configurations. A cast of gallery attendants and volunteers, wearing reflective uniforms that matched the finish of the componentry, periodically manipulated the installation's shape.

#### **3 School No. 3: Petite École** 2019

Though humble in scale, this open-air classroom for a school in Versailles, France, encapsulates much of MOS's thinking. The project has the virtue of an apercu, and illustrates, Sample said, just how little architecture needs in order to be architecture. "At Petite École, you just need a table, some chairs, and coverage," and nothing else, not even walls. Of course, MOS designed that table and those chairs using the same folded aluminum that makes up the columns, roof, and stacked beams. Light yet durable, the various constitutive elements can be recycled or reassembled elsewhere. The simplicity of the construction and its inviting pose (the eaves "droop" like the ears of a basset hound) are teachable moments in themselves.

#### 4 Housing No. 8: Laboratorio de Vivienda 2019

The phrase "laboratory for living" is bound to excite no one except architects (and, perhaps, the venal rich who make use of them). But this 32-building complex currently under construction in Apan, Hidalgo, Mexico, promises to be different. Meant for low-income residents, the dwellings take cues from the vernacular traditions of Mexico's nine climatic zones. MOS provided the master plan and helped to curate the roster of architects charged with the individual housing designs, which both celebrate and reformulate the terms of low-income housing. Sample and Meredith also contributed an entrance pavilion at the east of the site. The linear multipurpose building, which contains classrooms and other community spaces, forms the only edge of the otherwise-fenceless development. In the plan, the compact, autonomous houses appear scattered, pell-mell, in a vast garden laboratory. Here, pedestrian pathways, outdoor furniture, and trees form the basis of community, with architecture stepping into the role of giant garden gnomes.

# Religion, Reading, Reading, Reading, Structure of the set of the s

OMA's addition to the Wilshire Boulevard Temple in Los Angeles; Mecanoo and Beyer Blinder Belle's update of a New York branch library; and Allied Works Architecture's Corvallis Museum in Oregon.



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Religious

## Not Strictly Sacred

OMA's first built work in Los Angeles expands the Wilshire Boulevard Temple.





#### The Audrey Irmas Pavilion at Wilshire Boulevard Temple

Architect: OMA Location: Los Angeles

Executive architect: Gruen Associates Landscape architect: Studio-MLA Structural/MEP/Facade Engineering: Arup Civil Engineering: Rhyton Engineering General Contractor: MATT Construction Lighting: L'Observatoire International GFRC cladding: Stromberg Facade contractor: Performance Contracting Lamination glass: Goldray Mesh interlayer: SEFAR Glass Contractor: Steel City Glass Inc. Mesh Ceiling: Lindner Acoustic Veneer Panel: Navy Island

For the Audrey Irmas Pavilion at Wilshire Boulevard Temple, Rabbi Steve Leder, senior rabbi of the Los Angeles synagogue, commissioned Rem Koolhaas and Shohei Shigematsu to design a mezuzah to grace the doorways of the new 55,000-square-foot building, a cockeyed honeycomb caught between the historic temple and Brutalist St. Basil Church. As this was OMA's first religious structure and first mezuzah, neither architect was particularly familiar with the ritual object: a reliclike enclosure for a small scroll inscribed with a praver. They set about fabricating a design from colored resin and aluminum foam, a material familiar to the office and used to great effect at Fondazione Prada in Milan.

Jewish custom dictates that *mezuzot* (plural of *mezuzah*) should be placed at entryways and thresholds to honor a commandment from Deuteronomy: "Write the words of God on the gates and doorposts of your house." Koolhaas and Shigematsu's engagement with this rather architectural bit of Judaica suggests a project steeped in intimacy with cultural practices. Attention to the detail, however, begets a broader urbanistic question: Where is the front door?

Decorated with 1,230 hexagonal panels and confetti-like slit windows, the pavilion is designed to draw congregants and the public from across the county to the Wilshire Boulevard Temple's Koreatown campus. Shigematsu describes it as a "machine for gathering," yet there's no direct entrance from one of Los Angeles's major boulevards. A tall and substantial steel fence greets pedestrians. While the southern facade pitches dramatically toward Wilshire—to the traffic, a bus stop, and unhoused Angelenos tucked into other doorways—the building is decidedly off limits.

The usual architectural gestures of openness pose an inherent tension for a religious institution that aims for wide welcome but, considering continued anti-Semitic violence, must institute security protocols. A topping-off ceremony took place at the pavilion just a month after the 2018 mass shooting at a Pittsburgh synagogue, and according to crime-report data from the City of Los Angeles, hate crimes targeting Jewish people have doubled in the past three years.

Thresholds, then, are complicated. The roughly 350,000-square-foot campus simultaneously offers services and programs to the surrounding neighborhood while acting as a block-square enclave.

Visitors rarely enter through the ceremonial porch of the 1929 Byzantine Revival synagogue, which yawns open to the street for the annual High Holiday services. More likely, they pull into the parking garage at the rear of the block, get a pass from an attendant sporting a bulletproof vest under his polo shirt, and then find their way past the daycare playground to the new structure—a variation on Wilshire Boulevard's reverse-mullet typology: party in the front, parking in the back.

Of course, OMA's edifice has an actual front door—a portal recessed into the western flank of the trapezoidal prism (a respite from



Facing page, clockwise from top: The new pavilion is situated opposite a 1929 Byzantine Revival synagogue; blue defines the sunken garden on the top floor; OMA cut geometric voids at the top and sides of the main volume; the building is clad with 1,230 hexagonal GFRC panels. Above: The project is laterally divided into programmatic bands, which include a chapel, grand event space, a center for aging Angelenos, and a rooftop garden.

**Right:** The Wilshire Boulevard Temple campus in Koreatown spans 350,000 square feet.









the bright, palm-lined courtyard between the existing and new buildings). And it has an oversize arched window (27 feet from floor to apex) facing the street. OMA claims the shape echoes the synagogue's copper dome. If one were feeling particularly generous, the window could be read as a symbolic gateway peeking over the security fence. Its twin on the opposite side looks onto an existing internal courtyard.

The pavilion program is, in Shigematsu's words, "not strictly religious." More modish than the old sanctuary, which with its elaborate dome is primarily used for services, the new building assembles a grand event space, a chapel, a center for aging Angelenos, and a rooftop garden. Stacked together, all are given their own formal signifiers: arch, trapezoid, circle. From the outside, they manifest as "voids" in the facade—places where the hexagonal patterning of 6-foot-wide GFRC panels gives way to geometric shadow.

Inside, each space takes on a startlingly distinct character: ruddy terrazzo under a

sassandra wood veneer vault for bar mitzvah parties and Hollywood set-and-repeat soirees; green chairs, green expanded metal mesh ceiling panels, and green SEFAR glass-laminated mesh windows to echo the verdigris of the copper dome framed by floor-to-ceiling windows. Such intense coloration in both the rosy ballroom and the viridian chapel immerses the visitor, woos with saturation. A world away from the white walls and polished natural woods that marked my own experiences in Reform Judaism, it's an approach drawn more from the pages of OMA's portfolio than from any midrash.

Blue defines the sunken garden on the top floor—ultramarine concrete made a bit powdery in the L.A. glare. The circular "void" cuts through the roof to create a deep skylight for the chapel; from the chapel floor to the garden is a whopping 61 feet. That move also brings daylight into the offices and community rooms of the Wallis Annenberg GenSpace, an initiative of the Annenberg Foundation to bring wellness and activity to L.A. seniors.

"The building creates a new energy to the campus," said Shigematsu. Indeed, the chromatics dazzle. The architecture makes a handsome addition to Wilshire Boulevard's growing assembly of notable structures, like Renzo Piano's spherical Academy Museum and Peter Zumthor's blobby bridge for LACMA. And yet, bound by the constraints of the Wilshire Boulevard Temple campus, it's hermetic by programmatic nature, if not by design: a precious jewel box aching for a front door.

Mimi Zeiger is a Los Angeles-based journalist, critic, and curator.

Top: Visitors can't actually enter the building from Wilshire Boulevard. (A steel fence separates the campus from the busy thoroughfare.) Instead, entrances are located on the west and north ends of the parallelepiped.

Bottom left: A sassandra wood veneer ceiling vaults over the almost 14,000-square-foot event space.

Bottom right: The pattern created by the confetti-like slit windows was derived from the inner, decorative face of the extant synagogue dome.



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#### Mid-Manhattan Library Branch

Design architect: Mecanoo Location: New York City

Project architect: Beyer Blinder Belle Architects & Planners

Landscape architect: MNLA Construction manager: Tishman Construction Corporation

Structural engineering: Silman Electrical engineering: Kohler Ronan, LLC Civil engineering: Langan Lighting design: Renfro Design Group

Standing seam metal roofing: Merchant & Evans/Zip

Rib wood ceilings: ACGI Wood Acoustic ceilings: Rockfon Interior glazing partitions: Maars Living Walls Wood flooring: Madera Surfaces Ceramic tile: Mosa and Daltile New York City has its fair share of grim public buildings. Until a few months ago, the Mid-Manhattan Library, a relic of grittier times, could be counted among them. Compared with Carrère and Hastings's central library (now called the Schwarzman Building), from which it is kitty-corner, the Mid-Manhattan branch was a ramshackle orphan, unbecoming for the linchpin of the New York Public Library (NYPL) circulating system.

And so the bar for the success of a renovation, announced in 2017, was set rather low. Yet one strains to find enough superlatives to convey what the restoration architects—Mecanoo and Beyer Blinder Belle—have achieved. Rechristened the Stavros Niarchos Library, the \$200 million overhaul soars where the older branch wheezed. Formerly, carceral checkpoints greeted you upon entering and exiting, and circulation was inscrutable. The closedoff stairwell was dismal, elevators lurched, and one mysterious escalator (a remnant of the building's original retail function) seemingly led to nowhere.

Now there are clean axial walkways and zero clutter. On the ground floor, a new set of stairs leads to the basement, which has been converted into an inviting space housing the children's and young adult collections. Go up to the second level and walk straight to the back for the library's biggest surprise, an airy daylit atrium that shouldn't be there. The architects excised portions of floors 2 through 4 to fit library stacks for 400,000 volumes. Viewed head-on, the exposed stacks are a marvel of scenography, even if they can't all be taken in by the eve at once. Haval Pozanti's wonderful painted fiberboard mural Instant Paradise unspools overhead. It charts the evolution of the written word in a manufactured runic script. You don't need to decode to enjoy.

As the stacks show in filmic fashion, storage systems can themselves act as architectural components. Mecanoo, a Dutch firm that undertook a renovation of the Mies van der Rohe-designed Martin Luther King Jr. Memorial Library in Washington, D.C., in parallel with the NYPL project, clearly picked up a lesson from the master's playbook. But while its interventions at the D.C. library felt somewhat forced-perhaps an inevitable outcome when emending the Miesian vocabulary-the Mid-Manhattan branch is looser, cooler, more at ease with itself.

Many of New York's recent grand projets make an initial splash but fade upon closer examination (Moynihan Train Hall and the Oculus being the most prominent examples). Browsing the Mid-Manhattan branch, however, reveals several impressive details. Small writing surfaces terminate some of the bookshelves in the stacks. Primary walkways and reading areas are set off by rib wood ceilings, which act like indoor pergola. The design team even turned the building's forest of girthy, square-off columns into a plus, using them to anchor tables and benches and so obviating the need for leg supports in many instances. Finally, in the basement, a looking glass affords children a glimpse into the book circulation area, revealing the very workings of the library.

Civic







Colors are well-balanced throughout, with as many as five shades contrasting white walls, black steel elements, and warm woods. Elements of the renovation feel quite contemporary, but considerable efforts have been made to create links to the branch's esteemed neighbor, from travertine and terrazzo surfaces to the large-format ceiling mural. These nods are subtle but enough to establish a kind of continuity.

The renovation involved some shuffling of parts and programs: The children's library and business elements arrived from elsewhere; the picture collection departed. A third entrance to the Schwarzman Building is underway on 40th Street, to provide a simpler route between the two.

The architects spruced up the building's facades, which remain unchanged. You'll need to cross Fifth Avenue and look back to see the project's most dramatic intervention—a rooftop extrusion that Mecanoo principal Francine Houben likens to a wizard's hat. This Merlinian flourish—a wink at nearby Beaux Arts toppers conceals mechanicals, but also tops the only free public rooftop in Midtown.

The only real downside is the obligatory name change. The real-life métier of Stavros Niarchos, a Greek shipping magnate whose foundation contributed \$55 million in funding to the project, may have inspired the verdigris bauble. Another donor put forward a much smaller gift: large-scale photographs depicting the world's great libraries. Not a one inspires a desire to be anywhere else.

Anthony Paletta is a freelance writer in New York City. He has contributed to *The Wall Street Journal, The Guardian, Metropolis, Architectural Record, CityLab,* and other publications. Above: The building section reveals the triple-height atrium as well as a new subterranean space for children's and young adult collections. A faux-copper rooftop addition concealing mechanicals invites interpretations. (They could range from a sail and shark fin to a wizard's hat.) It rests atop a programmatic bar containing a conference center and café.

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## **Small Wonder**

High design meets folksy tastes in a small Oregon college town, with surprising results.







#### **Corvallis Museum**

Architect: Allied Works Architecture Exhibit designer: Renate Location: Corvallis, Oregon

Builder: Gerding Builders

Civil and structural engineering: Devco MEP/FP systems engineering: Glumac Tile cladding: Design and Direct Source Envelope installer: Morrison Hershfield Curtain wall system: Kawneer

Wall panel systems: Kingspan Insulated Panels

Acoustical wall paneling: Unika Vaev Flooring: Castle Bespoke Uptown Collection - Mosaic

Gallery track lighting: LumeLEX

His name is Bruce. The gregarious stuffed moose who looks about as real a Bullwinkle as you could find greets visitors at the Corvallis Museum in Oregon's Willamette Valley and sets the tone for what's to come. The new institution brings the collections of the Benton County Historical Society and Oregon State University under one roof, offering a bewildering array of objects: historical quilts and textiles, crockery and ceramics, Civil War-era paraphernalia, costumery of all sorts, commemorative coins, salvaged signage, antique dolls, rickety toy trains. and a vintage Erector set.

But the contents of this exceptional small museum, situated just one block from the banks of the Willamette River among historic storefront buildings in downtown Corvallis (population 60,000), are only half the story. The building, by Allied Works Architecture, is in line with the firm's work for prominent art centers around the country, only here light filled spaces and a Japanese-like reverence for natural materials are put in the service of a modest if

#### charmingly eclectic collection.

Longtime Benton County Historical Society director Irene Zenev first became enamored with Allied after seeing pictures of the firm's 2008 transformation of the midcentury Huntington Hartford building by architect Edward Durell Stone into New York's Museum of Art and Design. "It was the most beautiful thing I'd ever seen," she recalled. "And when I read that he"— Allied founder Brad Cloepfil—"had moved the elevator from the center of the building off to make the galleries more accessible, I thought, 'This guy knows what he's doing.'"

Cloepfil, who splits his time between the studio's Portland, Oregon, base and New York outpost, readily accepted the commission. "We knew we had to do something simple and elegant within a modest budget," he told *AN*, "but we tried to make it aspirational too." The nature of the collection allowed for certain opportunities. Whereas paintings need to be shielded from daylight, ephemera can better stand up to the sun's rays (within limits). And

where fine art calls for restraint—a whitewashed neutrality that sometimes borders on inanity—memorabilia and folksy curios stand to gain from pluck and variety.

The 19,000-square-foot museum is wrapped in glazed ceramic tile, each piece hand-raked, which helps create varying arrays of reflection and shadow. Inside, the building is divided into four simple bays, with a small courtyard occupying the place of the third. The lobby and multipurpose event space, faced in glass, open onto the small but generous court, and from the event room the glass can slide away to create a hybrid indoor/outdoor space. Galleries are not sized for auras, but for people and objects, and full-size windows invite the street inside to a degree unthinkable for an art museum.

"I don't think Allied Works could have done this ten years ago," Cloepfil said. "The architecture [at Corvallis] was not compromised. It reflected a kind of discipline that we have now. We can conceive things that can be built



Cultural

Facing page, top: The Corvallis Museum is clad in glazed, hand-raked ceramic tile. "We were drawn to the hand-crafted quality of the rake texture and how the glaze dips into the valleys," Allied Works principal Chelsea Scott explained

Facing page, bottom left: The museum's taxidermy moose, known as Bruce, welcomes visitors to the museum and has become a kind of mascot for the new institution.

Facing page, bottom right: The museum is divided into four bays, with a small courtyard comprising most of the third.

This page, clockwise from top: The building's serrated silhouette and glazed tile cladding contribute to its curb appeal; the ground floor features a small atrium ringed by mezzanine exhibit space; in a room devoted to historic photography, exhibit designer Renate created custom iPad holders made from molds of museum donors' hands; and in addition to light from sawtooth skylights, floor-to-ceiling windows at the corners fill upstairs gallery spaces with natural light.



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economically but feel powerful."

Perhaps the biggest surprise is how exhibit designer Renate brings the Benton County Historical Society's collections alive yet also gives their eclecticism clarity. Historical photographs are mounted in frames that turn away from the walls on hinges, revealing text boxes behind them. Curators clearly had fun with juxtapositions, as in a "Hats and Chairs" room that is exactly that. Elsewhere, giant lumberjack saws sit beside vintage early computers, model train sets beside a human-goat suit used by an early nature photographer to clandestinely take pictures of mountain goats. The collection is presented with the simplicity and delight of a children's museum, which only occasionally bumps up against the architecture.

"The demographic of Corvallis, while a college town, also has a large retired population and lots of families with children-that was top of mind as we did our design," explained Renate principal Anne Bernard. "In this manner the museums we work on become multigener-

ational spaces and hence community spaces. We did this all within one material palette that complemented the Allied Works design so that the whole thing was fluid and had lots of interstitial moments."

No wonder Bruce seems to be smiling. This could have been a strange union of world-class design and an overwhelming accretion of stuff, of urban museum and small town, interlopers and locals. That the Corvallis Museum largely avoids this outcome demonstrates that good architecture can take root anywhere. It just needs a little coaxing.

Brian Libby is an architecture and arts journalist, a podcast host, and a photographer-filmmaker based in Portland, Oregon. Above: The museum's courtyard opens directly onto Second Street in downtown Corvallis, which creates a sense of giving back to the city and inviting the public inside.

Right: The museum is sensibly scaled for its context (Corvallis's population is 60,000).
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### We remember the Twin Towers' architect, reconsider post-attack New York, and check on the new World Trade Center's performance.







### **Architectural Autofiction**

Feature

An experimental biography of Minoru Yamasaki, the architect of the original World Trade Center, constructs a version of the man that runs counter to the more familiar—and tragic—appraisals of his long and productive career.

Sandfuture is ostensibly a book about the World Trade Center. This is what we can glean from the cover, which features Fred R. Conrad's ravishing 1977 picture of sunbathers lying on a beach in front of the recently completed Twin Towers. The irony is deeply felt as this picture captures a moment of pristine elegance at odds with a city on the brink of financial ruin. The beach that became the setting for the image was a contrivance, a cenote of dredged sand that paused development on the site that would soon become Battery Park City. And vet the book's title takes on a mysterious and elegiac aspect, as if that sandy spit on the western edge of the World Trade Center site were a vision of a future that never came to be. frozen in the amber of a bewitching photograph. There are no subtitles. no indicators of a higher agenda. In a field of architecture books that range from coffee-table doorstops to specialized scholarly monographs and obscurantist histories, Sandfuture appears mysterious, even fully formed. What is it? Why did Justin Beal, an artist, write this book?

With tousled hair and of rumpled sartorial bent, Beal appears affable and confident. His kilowatt smile is Dickie Greenleaf-vintage, right up there with the Doug Aitken and Tom Sachses of the world. And yet his work sits uneasily at the intersections of sculpture, industrial design, and architecture. Even the most cursory of glances at his wide-ranging works demonstrate a kind of frenzied connectivity among the design disciplines that would turn Rosalind Krauss's famous 1979 diagram of "The Expanded Field" of sculpture into a pile of pickup sticks or I Ching reeds. His writing, especially the catalogue essays for exhibitions such as SOFTMATTER (2015) and TOUCHPIECE (2017) is knowing. Still, Sandfuture is the first work of Beal's that tackles architectural history's canon directly. And it does so with the kind of brio and panache that seems absent from architectural writing these days.

Articulate and searching, Beal modulates between autobiography and architectural history fluidly and with authority. He begins with an epigram from Filarete's Treatise on Architecture (1464). It is customary ritualistic, an opportunity for Beal to shed his artistic mantle and announce his intention to be historical. And vet we learn how his interest in architecture was formed preternaturally as a seven-year-old. Travels with his grandfather in and out of Logan Airport in Boston helped him see Yamasaki's Eastern Airlines Terminal in a different light, not as a building, but as something grander. It "was the first building I remember recognizing as architecture," Beal writes. "It looked new in a way that buildings in Boston seldom did." Like his grand-father, the terminal "seemed out of place in such a taciturn city.

These are the kinds of moments

that show how Sandfuture is a personal book. Beal takes criticism of Yamasaki's work to heart, and his own examinations of the architect's output, from the Reynolds Metals Regional Sales Office (1955-59) and onward, are not just deeply felt but solipsistic. In the book's opening pages, he takes us to the base of the World Trade Center, and we are there with him looking upward and seeing the endless aluminum shafts reaching into the sky. "They were alpine-a pair of aluminum mountains," Beal writes of the Twin Towers. 'They induced vertigo. They exceeded haptic experience. They failed as buildings, but they were brilliant as objects." He repeats this technique throughout Sandfuture. He leans on personal accounts of his career and encounters with architectural history to construct a version of Minoru Yamasaki that runs counter to the more familiar-and tragic-appraisals of his long and productive career.

Yamasaki had the dubious distinction of having two of his signature works destroyed on live television. The images of the (second) demolition of the Pruitt-Igoe housing complex on April 17, 1972, have been the source of continual debate about architectural modernism's failures. The footage of the 9/11 attacks and the destruction of the World Trade Center is nothing short of collective trauma. Beal revisits familiar terrain about these buildings, from the acrimonious debates about interior circulation at Pruitt-Igoe to the eleventh-hour deals and legal peccadilloes that preceded the construction of the World Trade Center. Beal does not question their significance. Instead, he writes around detractors such as Ada Louise Huxtable, Vincent Scully, Martin Filler, and others, whose negative assessments of Yamasaki's work typically focus on his flair for designing ornamental motifs or overscale buildings and lump him with the likes of Philip Johnson, Paul Rudolph, and Edward Durell Stone. Beal wants to expand the narrative of Yamasaki's life and work to account for the absence of an architect who once appeared on the cover of *Time*, had more AIA commendations than Eero Saarinen or Skidmore, Owings & Merrill, and built 79 buildings during his career. And to do this, he becomes a kind of George Smiley, an artist hunkered down among piles of boxes at Cambridge Circus, looking for that paper trail that will confirm his gut instinct that Yamasaki was an architect who wanted his buildings to do good for everyone. In short, Beal becomes a historian of sorts. He surveys literature and visits archives-a necessary task that augments what little we know about Yamasaki's work from the handful of articles he penned for various magazines and his overlooked self-critical autobiography, A Life in Architecture (first published in Japan in 1979 and



**Top:** American photographer Peter Hujar captured this image of the original World Trade Center at night in 1976.

**Bottom:** The World Trade Center's architect Minoru Yamasaki inspects a scale model of the design. Feature

edited to exclude Pruitt-Igoe and other works). Sandfuture is also a diligent biography as it builds on the material from A Life. We come to know about the trials and tribulations of Yamasaki's career, from his encounters with racism growing up in Seattle to his early stints working in the offices of Shreve, Lamb & Harmon and Harrison & Abramovitz; then Hellmuth, Yamasaki & Leinweber, a firm that eventually split in two to form Hellmuth, Obata + Kassabaum (later HOK); and finally, of course, Yamasaki & Associates. Unlike Dale Allen Gyure's 2017 monograph Minoru Yamasaki: Humanist Architecture for a Modernist World. Sandfuture intentionally veers away from being comprehensive.

Instead, Beal accomplishes one of the greatest sleights of hand in recent architectural writing. He does more than just give a firsthand account of his own experiences with Yamasaki's work. He places himself in the middle of this historical reckoning and exists as someone who is more than a witness or narrator. Perhaps he is like Ishmael, the narrator from Herman Melville's Moby-Dick (1851), who ends the novel with a testamentary act, quoting the book of Job ("And I only am escaped alone to tell thee") and escaping the foundering remains of the whaleship Pequod, observes, ' was then, but slowly, drawn towards the closing vortex." It is a description that will resonate with readers who remember the early morning of October 29, 2012, when Hurricane Sandy arrived in New York. We are with Beal as he shows us stormwaters flooding basements and art storage areas, a force majeure event that turns the chain of galleries below 27th Street into archipelagoes of detritus, small vortices of flotsam and jetsam that persist as everything else is washed away and scuttled along the surging undertow. These images locate Beal's narrative within recent memory, and they are beguiling, even familiar. (Besides Melville, Robert Musil's description of a "barometric low" that moves across Europe and settles over Vienna in The Man Without Qualities also springs to mind.) The images of storms, eyes, vortices, and hurricanes central to Sandfuture are captivating. Moreover, they give the book its narrative structure. Like a Spirograph toy weaving curves and lines only to leave a shaped, defined void in the middle, or cyclonic winds giving the eye of a hurricane its familiar form, Beal churns his own encounters with Yamasaki's work with autobiographical ruminations on topics large and small. The result is a book that trades in voids, from Beal's own experience with loss and Yamasaki's absence from canonical accounts of modern architectural history to the broken and smoldering remains of his former buildings.

Architectural autobiographies are not new. I suppose that *Sandfuture* is

born under the sign of texts such as Frank Lloyd Wright's An Autobiography (1932), Sigfried Giedion's Architecture, You, and Me: The Diary of a Development (1958), Le Corbusier's Journey to the East (1966), Aldo Rossi's A Scientific Autobiography (1981), and even Yamasaki's A Life. By my reckoning, however, Sandfuture is autofiction in the guise of architectural criticism. Like Rachel Cusk or Karl Ove Knausgård, Beal weaves autobiographical elements into his storytelling. Sandfuture is indebted to Ben Lerner's Leaving the Atocha Station (2011), 10:04 (2014), and The Topeka School (2019), each notable for a central narrator who is a (verv) thinly disguised version of the author. 10:04 seems especially important, not only for the ways in which the formation of hurricanes and their subsequent aftermath shape the narrator's own purviews but also for the way Lerner confronts death and sickness. Anticipating the title of Beal's book, Lerner's narrator writes: "I'll project myself into several futures simultaneously.... I'll work my way from irony to sincerity in the sinking city, a would-be Whitman of the vulnerable grid." In works like these, there is never a question about the author's literary intent. We can read works of autofiction without mistaking them for biographies or autobiographies.

Sandfuture is different. By inserting himself into the narrative, Beal situates himself against Minoru Yamasaki. And in doing so, he creates a version of the architect that is not historical, but biographical. In other words, Yamasaki is not a historical actor, but an actor in a world constructed by Beal. In this sense, Sandfuture joins a long and broad current of literature that elides the distinction between history, biography, and fiction, works that range from Plutarch's Parallel Lives to Jorge Luis Borges's A Universal History of Infamy, Alfonso Reyes's Real and Imagined Portraits, and Roberto Bolaño's Nazi Literature in the Americas. Each of these works uses the biographical format to explore different narrative possibilities. While reading Sandfuture, I thought about Marcel Schwob, the French symbolist writer experiencing a bit of a resurgence thanks to a brand-new translation of his compilation of fictional biographies, Imaginary Lives (1896). In his introduction, Schwob writes: "The book that describes a man in

all his irregularities will be a work of art....The history books remain silent on these things." Schwob writes as if he were addressing a need that was somehow ignored by literature, longing for writing that focused on lives otherwise forgotten and, by doing so, elevated them to something higher.

Sandfuture may be aiming for something of this magnitude. Beal writes, "Humble as it may have been, A Life in Architecture was Yamasaki's final attempt to regain control of the narrative of his career and profess



Fred R. Conrad's photo of Battery Park Beach graces the cover of Sandfuture

his steadfast belief in architecture's ability to do good." Beal is also controlling the narrative in such a way as to show that Yamasaki's beliefs were well-founded. As a writer and reader, I found Beal's writing absorbing, often electrifying. I cannot think of an architectural monograph that weaves the physiology and etiology of migraines, stories about the art scene in New York, and Minoru Yamasaki's archives, all while rightly vilifying Rafael Viñolv's 432 Park Avenue-within the span of a few pages, no less. I imagine that architectural scholars and historians may find Sandfuture's literary ambitions somewhat off-putting. Let them! Writing about architecture can be scholarly and erudite. even as it exists in multiple spheres. and is available to as many audiences as possible.

Returning to the issue of historical ontologies and autofiction, *Sandfuture* is satisfying because it is entirely human and relatable. I learned the importance of this kind of writing early in my academic training, when I realized that the only way to move forward with writing was to do so from my own point of view, to be unabashedly and confidently personal. This is why September 3, 2001, is a day I always go back to. On that morning, I was in the middle of the World Trade Center plaza. Like Beal, I stared up at the twin

aluminum shafts that reached into the sky, noticing the cloudy whorls that collected in the air between. Many memories of that morning are lost to time, occluded by the shock of what would happen in a week's time. But there are some things I hold on to. I remember that it was a humid morning, the kind that sticks to you like a vaporous shroud. My transit geography was horrible-still is-but I must have taken the 1 or 9 train to Cortlandt Street Station. I went aboveground, bought a coffee, and walked into the Borders bookstore at 5 World Trade Center. I took the escalator to the second floor and hovered in the music section, where I bought a copy of Hot Shots II, the latest album by Scotland's the Beta Band. In my undercaffeinated haze, I noticed the cover art. The words "The Beta Band" and "Hot Shots II," drawn as pieces of studded, gilded jewelry, floated in a field of stars. They bent and spun into a vortexlike shape surrounding an explosion. I stared and stared at this hurricane, not knowing that the very place where I stood would become hallowed ground.

Enrique Ramirez is a writer and historian of art and architecture. He teaches at the Yale School of Art.

### **Rethinking Rethinking New York**

Feature

Written in the wake of 9/11, the critical anthology of essays and designs passionately advocated big changes in the way the city operated. It's just as timely and relevant as ever.

In April 2002, when the architect Michael Sorkin and I gathered a group of distinguished left-of-center urban scholars and published a book titled After the World Trade Center: Rethinking New York City, critics in the local architectural and urban design community scoffed that it was "too soon" to take account. (Editors at The New York Times had a different opinion, naming it one of the best architecture and design books of that year.) Twenty years after 9/11, the war that the U.S. unleashed in response to the attack and the tragic loss of 3,000 lives is drawing to a close, and another governor who wanted to build Manhattan offices and control the city has gone, but the question we raised remains: How can we rethink New York?

Unlike the dominant discourse in which "heroes" abounded and the gaping wound at Ground Zero became a monument to American liberty, we did not assume the U.S. to be innocent. We presented democracy as an ongoing fight for social justice rather than a fait accompli. And nowhere was this clearer, we showed, than in Lower Manhattan, a historic site of contestation between the forces of power-Dutch colonists, Wall Street banks, real estate developers-and the communities that they successively displaced to build their city, from the Munsee Lenape and early residents of African origin to the wholesale vegetable vendors of Washington Market, the Lebanese Christian restaurant owners of Little Syria, and the electronics sellers of Radio Row. We felt like Susan Sontag, whose short New Yorker essay about 9/11 drew a venomous response after she wrote: "Let's...grieve together. But let's not be stupid together."

Not being stupid meant calling out the required performance of patriotism that stuck American flag pins in every politician's lapel and plastered decals of the same flag on all New York City subway cars—symbols you still see today in the official portraits of President Biden and Vice President Harris and throughout the Metropolitan Transportation Authority's mobile domain. It meant questioning the logic of rebuilding the World Trade Center (WTC) the way it was before 9/11-despite a citywide oversupply of chronically unrentable office space, a continual flow of subsidies to rich corporations like Goldman Sachs because they threaten to move to Jersey City, and the sanctimonious hubris of imposing ever-taller sky-scrapers on "sacred ground."

We also sketched elements of both a rebuilding plan for Lower Manhattan and a comprehensive plan for New York. *Begin* by rethinking the global hegemony of financial capital and the city's role—especially Lower Manhattan's role—as its enabler. *Place* a berm at Ground Zero by filling the crater with earth from every country, creating, as Michael wrote, "an Elysian Field in perpetual memory of the fallen." *Transform* public authorities like the Port Authority of New York and New Jersey (owner of the World Trade Center site), the Lower Manhattan Development Corporation (appointed by then governor George Pataki to make all decisions and coordinate funding for both the WTC and the surrounding area), and the New York City Economic Development Corporation from autonomous organizations insulated from public scrutiny and control into transparent governmental agencies that would integrate meaningful public participation into all development projects. Build a regional public transportation network that would prioritize accessibility to decentralized business hubs throughout the city and suburbs. Support local manufacturing for jobs and sustainability. These goals became even more relevant after the 2008 financial crisis and then the COVID-19 pandemic.

Truth be told, though, we wrote those words as New York teetered on the edge of a dangerous precipice. The terrorist attacks on 9/11 ushered in an economic recession whose regional losses in employment and real estate deepened the effects of a dot-com crash that had already emptied office buildings along "Silicon Alley," from 23rd Street down to Wall Street. Politically and culturally, the Giuliani era of tough talk and even tougher policing, catering to the white population of the Upper East Side and the outer boroughs, appeared to have damaged any hope for civility. No one yet realized that the worst ravages of the crack epidemic and the pervasive street crime it had encouraged were receding, although whether this was due to more efficient policing or incarceration of the innocent along with the guilty as long as they were Black was not widely discussed. New York's future looked hopeless.

Gradually, the city recovered its luster. Mayor Michael Bloomberg exerted a calming influence. He made New York seem rational in a way that appealed to business leaders who respected his billionaire fortune. His administration supported historic preservation and the expansion of green space and cultural amenities, issuing plans that could appear progressive because they spoke to both environmental and spiritual needs. New Yorkers who loved the city did not object to more trees, fewer cars, and funding for the arts even if much of it came from Bloomberg's own pockets

In 2009, after the global financial crash caused by the big banks' rush to sell rotten securities on just about everything, the Bloomberg administration introduced, for the first time ever in New York, an economic development strategy. Luckily, in contrast to earlier official neglect, it supported digital technology and media production, helping to build facilities from Steiner Studios in the Brooklyn Navy Yard to Cornell Tech on Roosevelt Island and subsidized





**Top:** View east across the Hudson River from Exchange Place, Jersey City; July 4, 1978.

Bottom: View west from the Manhattan Bridge, Brooklyn, New York; November 1979. The Chilean-born essayist, photographer, and urban documentarian Camilo José Vergara documented the original World Trade Center from its inception to its collapse and rebirth. *The Towers of the WTC: 51 Years of Photographs by Camilo José Vergara* is currently on view at the National Building Museum in Washington, D.C. workspace for start-ups even though this created an "innovation complex" with claims of its own.

But, from 2002 to 2014, during the three terms of his mayoralty-with Bloomberg pushing that third term through the city council despite a twoterm limit already decided on by the city's voters-the greener and more peaceful city also became a horrifically expensive one. Neighborhoods were torn apart by almost 200 zoning changes that opened them to developers of market-rate or "luxury" housing. Manufacturing was restricted to ever-smaller districts and even banished from the Garment District in Midtown Manhattan to the Bush and Brooklyn Army Terminals. Rezoning that was initially connected to an aborted bid for the 2012 Olympics laid the groundwork for the expansion of the corporate city to the Lower West Side (Hudson Square), the Far West Side (Hudson Yards), Downtown Brooklyn, and Long Island City. The WTC site itself became a flagship location for tech and media companies (Condé Nast, Spotify) and privately funded tentpole attractions (the National September 11 Memorial & Museum, the Perelman Performing Arts Center).

In Bloomberg's indelible formulation, there was no shame in positioning the city as a "luxury product." "New York offers tremendous value, but only for those companies able to capitalize on it," he said. For residents who were pushed out of their low-rent apartments, though, or even those who sold their homes at great profit but could not afford to remain nearby, the city had lost its soul.

Like Bloomberg, his successor, Bill de Blasio, changed the mayoral tone. He campaigned in 2013 by pledging to fight against the "tale of two cities" where the rich lived so much better than the poor. Four years later, he vowed to create "good jobs for all." He achieved notable successes, with the rapid expansion of pre-K classes and universal free lunch in the public schools, holding the Rent Guidelines Board to zero and then low increases on rent-stabilized apartments, and providing free legal aid to low-income renters facing eviction. His administration expanded the supply of rent-regulated apartments.

But there is still not enough housing, and it is still too expensive for many "native" New Yorkers. No mayor can close the gap between stagnant wages and rising rents. Yet de Blasio continues Bloomberg's strategy of steamrollering zoning changes through angry neighborhoods, striking a devil's bargain with real estate developers for Mandatory Inclusionary Housing that creates at least seven new apartments at "luxury" rents for every three that are rent regulated.

Even worse, there seems to be little method behind his policies. There's no comprehensive plan for homelessness or renovating public housing. The city planning department pays little attention to communities' demands. The economic development corporation does not submit to public scrutiny and even less to public control. As the massive but ultimately rejected subsidies to Amazon showed, the city's and state's political leadership is still in thrall to corporate blackmail. It has no alternative to BigTech.

Neither does the city have a plan to deal with climate change or aging infrastructure. Instead of rethinking the Brooklyn-Queens Expressway, elected officials dither and delay. The financial expense of needed change would be enormous, but more damning still, there is no vision. Few architects or planners offer ideas to counter the self-promotion of their public and private patrons. Continued real estate development on the waterfront leads to the ultimate irony of building a Little Island in the Hudson River. a Vessel at Hudson Yards, and an environmental research center, buttressed by hotels, stores, and offices, on Governors Island.

The COVID-19 pandemic exposed not only the city's vulnerability but its dependence on a fragile web of vulnerable workers, public health services, and social welfare agencies. It also revealed the dysfunction of ceding large parts of the city to the globally mobile rich, tourists, and companies whose offices have shifted to work-from-home. The as-yet-unbuilt 5 World Trade Center is slated for residential rather than office use, yet structurally, little has changed since 2001.

Gladiatorial conflict between the mayor and governor is still conditioned by "home rule," the city's legal vassalage to the state as defined by the state's constitution, if not also by the two officials' egos. Real public input in development plans is still rejected. Subsidies are handed out to companies for bogus relocations without enforcing the promised job creation. The city's deep economic losses during the pandemic-half a million jobs, a 20 percent vacancy rate in the central business districts of Manhattanchallenge its reliance on a wobbling base of property taxes and a small number of very rich people who pay a significant share of aggregate personal income taxes.

In the last chapter of *After the World Trade Center*, the historian Mike Wallace called for a "New York New Deal." He envisioned not only federal government funding for public-sector jobs but also more support for local manufacturing and an end to city tax breaks for corporations. Twenty years later, now is the time.

Sharon Zukin is professor emerita of sociology and of earth and environmental sciences at Brooklyn College and the CUNY Graduate Center, and the author of Naked City: The Death and Life of Authentic Urban Places and The Innovation Complex: Cities, Tech, and the New Economy.







**Top:** View east from downtown Newark, New Jersey (in the foreground from left to right: the Lefcourt Newark and National Newark Buildings); 1992.

**Middle:** View west from the Brooklyn Bridge capturing the annual September 11 "Tribute in Light"; 2017. **Bottom:** View north across New York Harbor to Lower Manhattan from The Staten Island Ferry; 2021.

### A Flight to Quality

Shared amenities and access to public space may help usher the World Trade Center office complex into a brighter future.

Feature



In 2020, SOM's New York office moved into two floors of 7 World Trade Center.

Once it became clear in early summer 2020 that workers were unlikely to return to offices for the foreseeable future, the press wasted no time painting an apocalyptic scene. In New York, a city with a glut of office space, giant real estate developments such as the World Trade Center appeared at risk of permanently losing tenants.

Rumors swirled around Condé Nast, 1 World Trade Center's flagship tenant, and whether the media company would pick up sticks for Jersey City. In January 2021, the developers of 5 World Trade Center announced the tower would pivot from offices to luxury residences. (After numerous delays, the project has yet to break ground.) Meanwhile, financial turmoil forced the 9/11 Museum, a focal point of the wider complex, to cancel its 20th-anniversary programming. Would the site founder before building works had even concluded?

The panic was not wholly unwarranted: The New York Times reported that as of July, almost 19 percent of Manhattan offices were without tenants, a high point for the city since the 1970s. But though the World Trade Center did see a dip in occupancy over the course of the pandemic (2 percent in the case of 1 World Trade Center), the site is overall poised for growth. The companies that lease the floors within its buildings and the building landlords themselves aren't worried. The office towers still embody what tenants are looking for: architecturally significant, well-ventilated, daylight-optimized office space with amenities and public space near all the major transit lines.

For Skidmore, Owings & Merrill (SOM), spending its first year in 7 World Trade Center with a social distancing protocol hasn't been ideal, but the thoughtful design of its new office space spanning the 27th and 28th floors of the 52-story building has helped its employees ease into work there. The firm completed the interior project last summer, and up to 30 people now occupy the office daily.

Kenneth A. Lewis, managing partner in the New York office, goes into work up to four times a week. "Moving into 7 World Trade Center was a dream for us," he said. For two decades, the firm was based out of 14 Wall Street, a 109-year-old skyscraper and city landmark. In search of a fresh start, Lewis's team surveyed other firm projects and historic buildings downtown, but in the end they found the sustainable appeal and open plan of the SOM and David Childs–designed tower too good to resist.

To Lewis, 7 World Trade Center aligns the firm's ethos with its new generation of partners. "We wanted a space that reflected the way in which we're working today and how we see ourselves working in the future—in a collaborative environment with daylight, quality air filtration, and transparency," he said. "In many ways, it was an obvious choice."

When all employees return to work, over 300 people will be spread out over the two floors, which SOM currently subleases from the largest tenant within the building, financial risk assessment firm Moody's Corporation. Other tenants in 7 World Trade Center include wedding registry site Zola, Moët Hennessy USA, and Fast Company and Inc. magazines, as well as design firm Jeffrey Beers International. According to Silverstein Properties, the landlord and developer, the 1.7-million-square-foot building is consistently fully leased, in part because of timing: It was the first tower to open on-site (starting construction in 2002, completed in 2006) and to attract tenants. It also received a special designation as the first tower in New York City to achieve a LEED Gold certification from the U.S. Green Building Council.

The other completed towers under Silverstein's purview include 3 World Trade Center, a 2.5-million-square-foot office building finished in 2018, as well as 4 World Trade Center, a 2.5-million-square-foot office tower built in 2013. The buildings are currently 80 percent and 100 percent leased, respectively. Tenants include advertising firm GroupM and tech companies like Spotify and Uber, as well as Casper Sleep and management consulting firm McKinsey & Company.

One World Trade Center, the crown jewel of the site, is separately owned by the Durst Organization and the Port Authority of New York and New Jersey. When it opened in 2014, it was 55 percent leased. The Twin Towers, for reference, were a hard sell for decades and full occupancy didn't happen until just prior to 9/11. Before the start of the pandemic, 1 World Trade Center was 92 percent leased.

Durst's struggle to fully lease the tower has been widely reported over the years. Its latest battle involved Condé Nast, and the publishing company's parent, Advance Publications, which threatened earlier this year to move some of its operations to New Jersey in an effort to cut costs. Bloomberg first reported that Advance was withholding rent money as it reevaluated its need for such large swaths of office space with so many of its employees now working from home. By early August, however, Advance decided not to break Condé Nast's 25-vear lease in 1 World Trade Center and paid \$10 million in overdue rent to the Durst Organization with a plan to continue subleasing some of its 1.2 million square feet of space, a number totaling nearly one-third of the building.

Shareable amenities and mixeduse workspaces are another reason why tenants have been unwilling to pull out of the World Trade Center. In Silverstein's buildings, tenants have access to amenities from the developer's entire portfolio, including the terrace on the 17th floor of 3 World Trade Center and the café and lounge on the 10th floor of 7 World Trade Center.

"It's part of this larger trend we're seeing of a flight to quality," said Jeremy Moss, executive vice president at Silverstein Properties. "As companies rethink the importance of collaborative workspaces, things like flexibility, functionality, and quality of design and programming are all things that new buildings can offer."

The 16-acre World Trade Center campus was built with some of these things in mind. Designed by Daniel Libeskind, the master plan featured room for retail, restaurants, office space, contemplation, and connection to the rest of the city via the Oculus Transportation Hub. Kohn Pedersen Fox, the architects behind 5 World Trade Center, recently revealed a new mixed-use design utilizing all of this programming, including 1.2 million square feet of residential space, or 1,325 apartments.

Most of the amenities within the other World Trade Center office buildings, though, are exclusively for employees. The types of foundational amenities included in other recent New York office projects—lobby-area lounges, cafés, and meeting spaces on the ground level—just aren't possible here.

"As a response to the initial crisis and the then-present threat, 1 World Trade Center, in particular, was built very defensively," noted Peter Knutson, chief strategy officer of A+I, an architecture firm that specializes in office design and development. The lobby is a very controlled environment for both the building workers and the visitors to One World Observatory.

"Buildings at the World Trade Center will always have to contend with the fact that they are occupying a living memorial and the reality is that there aren't many places in the world that have to contend with that," Knutson said. Certain things like heightened security were integrated as a form of precaution. Despite this, for many visitors—and office workers—what was once Ground Zero is now an inviting public space. It's only within the office portion of each tower that exclusive access is a must.

One of the main reasons why the World Trade Center may be doing better with its commercial vacancy rates compared with the rest of the city is, in large part, the Financial District's recent growth as a residential enclave. As more young professionals moved to the neighborhood post-9/11, so did creative companies following in the footsteps of Condé Nast. Today, the mixed-use, compact nature of Lower Manhattan is attractive to people who want everything in their backyard, including work.

"The lines where we live and work are increasingly blurring," said Moss. "The World Trade Center has become a place of constant creative energy, much like a college campus, with virtually every industry imaginable represented here."

Sydney Franklin is a journalist based in New York and a former *AN* associate editor. She recently wrapped up a real estate reporting fellowship at *The New York Times*.

Students, teachers, and administrators welcomed yet another school year with a general feeling of unease. COVID cases tripled in August, even as the share of vaccinated among eligible Americans rose to 60 percent. In an effort to beat back the revived threat of the virus, schools rushed to implement mask-wearing protocols (swiftly denounced by a few state leaders). The Centers for Disease Control and Prevention (CDC) continues to stress physical distancing, hand-washing etiquette, and frequent-cleaning regimens—behavioral patterns helped or hampered by school layouts and building systems. Clearly, design has a big part to play.

In this issue, AN highlights projects and products that seek to make the transition back to in-person learning as smooth as possible. Manufacturer solutions range from the baseline (hygienic surfaces) to the unorthodox (outdoor classroom setups). New HVAC offerings attend to ventilation, which remains near the top of the CDC's school guidelines for virus containment. Additionally, case studies focus on educational facilities that have opened in the midst of the pandemic. They'll continue to be put to the test in the coming months. By Adrian Madlener

# Back to School



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### Harvard Science and Engineering Complex

Architect: Behnisch Architekten Location: Boston, Massachusetts

Landscape architect: Stephen Stimson Associates Landscape Architects General contractor: Turner Construction

Company Structural engineer: Buro Happold Climate engineer: Transsolar LEED consultant: Thornton Tomasetti

Facade: Knippers Helbig, GmbH Facade contractor: Josef Gartner GmbH and Permasteelisa North America Corp.

Lighting design: Bartenbach GmbH and Lam Partners

Laboratory planning: Jacobs Laboratory Planning Group

Perforated metal ceilings: Steel Ceilings Flush wood door and interior glazing: Panello and feco-feederle GmbH

Acoustic ceiling panels: Rosso Acoustic Exterior balance doors: Dawson Doors Stainless steel mesh: Carl Stahl Operable partitions: Hufcor

Revision and tweaking are central to the architectural process, but it is not often that a practitioner gets the chance to design the same project twice. When the Stuttgart, Germany-based firm Behnisch Architekten first won the commission for a new biomedical research facility at Harvard University, George W. Bush had just started his second presidential term and the university's expansion into Allston, a Boston neighborhood just across the Charles River from Cambridge, had yet to concretize. The new research building would be its centerpiece.

With an already wide-ranging portfolio of institutional research facilities, which included Cambridge's own Genzyme Center, the first building of its size to earn LEED Platinum certification, Behnisch originally conceived of the Allston project as a group of four discrete structures. But by early 2010, with foundations excavated and early construction underway, the ongoing global financial crisis forced the project onto the back burner. Behnisch helped seal the site's new basement and waited for the call to return.

It took four years. When Harvard invited the firm back, administrators had already decided to reconfigure the project to house large portions of the School of Engineering and Applied Sciences faculty, renaming it the Science and Engineering Complex (SEC). The architects devised a new plan to integrate the often-divergent spatial needs of students, educators, and researchers under a single roof. "It didn't look close to what we originally designed," Stefan Behnisch, the firm's founding partner, recalled.

The result is a highly adaptable, LEED Platinum-certified facility with 544,000 square feet of classrooms, offices, laboratories, and lounges methodically divided among eight total floors, two of which are subterranean. "Research usually requires more stability than teaching spaces can provide," project head Matt Noblett told AN, "so we concentrated student activities in the lower, more public levels of the building.' These stacked floor plates recede as they ascend, accommodating a central atrium and vegetation-filled terraces at the edges of the structure. Seven reconfigurable classrooms, four large-capacity lecture halls, makerspaces, and smaller seminar and meeting rooms are strategically interspersed within a matrix



of open gathering spaces, facilitating social interaction among the building's users.

The laboratories, by contrast, are housed in three outwardly distinct volumes that appear to float above the lower terraced floors, insulating them from the more dynamic and high-traffic parts of the program. The architects grouped wet labs in a single sector of the building to take advantage of the infrastructural and energy-related efficiencies that come with proximity. The interstices between volumes are again dedicated to communal lounge spaces that lend themselves to the occasional chance encounter.

The laboratory volumes are set off by a shimmering mass of 14,000 boomerang-shaped panels, constituting the world's first hydroformed stainless-steel shading screen. The fabrication technique, which relies on high-pressure hydraulic fluids to deform metals into complex shapes, enabled Behnisch to significantly reduce material waste. The panels block the radiant effects of sunlight during the warmer months of the year but allow daylight to passively heat the interior during Boston's frigid winters.

Sustainability at the SEC, though, goes far beyond these window dressings. Rainwater captured on the building's roof and in its ground-level landscaping is processed through biosoils and stored in three 75,000-gallon tanks in the basement, then recycled for irrigation and toilet flushing. Conscious of the energy-intensive ventilation systems normally required to safely operate a laboratory, Noblett and his team opted for a series of radiant heating and cooling systems to reduce energy consumption throughout the SEC. When natural ventilation through the structure's operable windows proves insufficient, temperatures in the more interactive spaces are regulated through the floor slabs. Meeting rooms, offices, and laboratories use either chilled ceilings or chilled beams, while a uniquely efficient glycol-based coil system recovers heat energy in the complex's roof.

Behnisch Architekten also worked closely with Harvard's own researchers to analyze 6,000 interior finishes and select only those that were compliant with the Living Building Challenge's Red List recommendations on chemically detrimental materials. For Stefan Behnisch, the collaboration with the university's experts made all the difference: "Many developers treat sustainability as little more than a sales gimmick. But Harvard committed real resources, knowledge, and people to ensuring that this building would be sustainable, practical, and long-lasting." Aaron Smithson





Facing page, top: Harvard's new Science and Engineering Complex (SEC) anchors the university's expansion into the Boston neighborhood of Allston.

Facing page, bottom: The laboratories sport brises-soleil made from hydroformed stainless steel. The complex scrim was precisely modeled to block sunlight in the summer but to let it in during the winter months.

Above: The massive, 544,000-square-foot SEC complex consists of three laboratory volumes that rest atop lower terraced floors, which contain classrooms, seminar spaces, lounges, and more.

Left: The interstices between the lab blocks are given over to circulation and gathering spaces.

### Wadham College, the University of Oxford

Architect: AL\_A Location: Oxford, England

Landscape designer: Churchman Thornhill Finch

Construction manager: Bidwell Structural, electrical, and civil engineer: Arup

Facade engineer: Eckersley O'Callaghan Facade cladding and contractor:

Colorminium Lighting design: Arup Stairway manufacturer: Barn 6

With a history spanning nearly a thousand years, the University of Oxford is the oldest English-speaking institution of its kind. One might not be surprised, then, that its campus architecture has over time been subject to the buffeting winds of fashion. While the overriding mood may be Merrie Olde Englande or Jacobean-the best bits of which include Nicholas Hawksmoor's neoclassical Queen's College and Christopher Wren's late-Gothic Tom Tower-the university also boasts a fascinating collection of 20th-century buildings.

Modernism at Oxford, even that which passes for Brutalism, adopted a mostly polite demeanor. A pair of new buildings at Wadham College picks up the thread but disavows the concrete fetish from which so many English modern architects have suffered. (Midcentury campus additions by Arup Associates and others shared a yen for the gray stuff.) In place of concrete, the William Doo Undergraduate Centre and the Dr. Lee Shau Kee Building, also known as the Access Centre, arrange glass and anodized aluminum in a pleasingly scaled, unified composition. The two buildings, which were designed by London architecture firm AL\_A, form the northwestern edge of the college's roughly \$25 million Back Quad development. They are joined in an L-shaped plan that centers on a welcoming entrance

space visible from the opposite end of the quad through floor-to-ceiling windows.

According to AL\_A director Ho-Yin Ng, the design "maximizes natural daylighting and ventilation to provide visitors with a valuable first impression of the campus." The interiors are intentionally minimalist, particularly the ground-floor seminar rooms of the Doo Undergraduate Centre, "to ensure the spaces feel light and airy at the same time," Ng added. Neutral colors predominate-the architects even whitened the cross-laminated timber ceilings-with one exception: a startlingly red staircase that snakes through the triple-height entrance hall. Aside from the stairway, personality comes through in small bursts, as in the pastel-colored furnishings in the café, e-hub, and other social spaces.

The chilly sophistication of the undergrad wing is mitigated by warm wood surfaces in the Access Centre, whose top two floors are given over to student dormitories. This function is communicated on the facade, more opaque than that of its neighbor. The tall, narrow windows in the dorm rooms "are set back within the facade to create self-shading openings, again providing daylight and natural ventilation to create a space that feels both aspirational and comfortable," explained Ng.

The buildings, which are finalists for the Prix Versailles, are respectful of their collegiate surroundings without being toadying. There are moments of citation—as when etched glass at the Access Centre mimics the variegated tones of limestone, the primary cladding material on campus—but the architects largely refrain from kitsch. That same restraint is missing from some of Oxford's modernist oddities, especially Alison and Peter Smithson's fanciful Garden Building (1970) at St. Hilda's College. Instead, the new buildings' clean lines, sumptuous materials, and open layout feel right at home. **Shane-Reiner Roth** 





**Clockwise, from left:** The London-based firm AL\_A recently completed two buildings at Wadham College, University of Oxford; drawing showing a section through the the William Doo Undergraduate Centre and elevation of the Dr. Lee Shau Kee Building; a crimson-red staircase connects the two wings; the facade of the undergraduate center is more transparent than that of the Kee Building, whose upper floors contain dormitories.







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### Daphne Cockwell Health Sciences Complex at Ryerson University



Left: The podium of the Daphne Cockwell Health Sciences Complex at Ryerson University mixes custom metal cladding, glazing, and storefronts.

Facing page, clockwise from top left: The 28-story complex reinterprets the tower-on-podium typology; a vertical band of public space moves up the podium; a makerspace sits on the lowest level, attracting passersby on the sidewalk; the vertical campus brings together the Schools of Nursing, Midwifery, Nutrition, and Occupational and Public Health.

Architect: Perkins&Will Location: Toronto

Landscape architect: DTAH Construction manager: Eastern Construction Company Structural engineer: WSP Electrical engineer: Crossey Civil engineer: MMM Group and WSP Mechanical engineer: MCW Facade engineer: WSP Lighting design: Crossey Cladding: Sound Solutions Custom metal paneling: Gage Metal Cladding

Of the 40 or so buildings operated by Ryerson University, a rapidly growing public university in Toronto, no others reach as high as the Daphne Cockwell Health Sciences Complex. The 28-story building spans roughly 300,000 square feet and accounts for a sizable chunk of the 800,000 Ryerson has added in the past decade as part of an ambitious 2008 master plan. The Health Sciences Complex houses facilities for four academic departments, including the Schools of Nursery and of Nutrition, as well as 330 student residences. Amenities abound, from a ground-level fab lab (complete with ominous robot arm) to a rooftop garden. A cross section through the building reveals a dense layering of programs, but also an openness, thanks to several airy, multistory courts.

Obtaining that spatial variety followed from contradictory desires. Perkins&Will, whose Toronto and Vancouver studios were behind the design, wanted to set the project off from its downtown neighbors, a patchy mix of commercial and residential towers, and a lowly filling station. At the same time, the firm prized neighborliness. "We wanted to differentiate this building through the expression of public space," said Toronto studio design director Andrew Frontini.

But first he and his team would have to wrestle with the prevalent form of development on tight downtown Toronto lots like this one: the tower on a podium. By treating the two as quasi-independent components, they were able to slice and dice their way to a pleasing parti. In diagrams, bands representing "public" space burrow underneath the podium and up through the tower block.

These massing studies prompted a closer consideration of the pedestrian experience. The architects set the building back from the property line, widening the sidewalk along Church Street, and located an attention-grabbing fab lab on the ground level. They also created a through-block connection to other parts of campus. "This public arcade," said Ryan Bragg, principal at Perkins&Will's Vancouver studio, "encourages the building to form part of accepted pedestrian routes in the neighborhood."

Storefronts and interstitial glazing indicate these connections. Vibrant orange panels further delineate public routes within the complex. Accounting for the vertical organization of spaces, the architects incorporated study lounges and rest points between floors—what Frontini called "hopping atria"—to encourage users to take stairs when possible. Elevator banks follow a similar flow of traffic, ensuring that regardless of accessibility needs, all users could enjoy the sense of arriving and departing.

Perkins&Will devoted just as much thought to the building's environmental impact. The airtight exterior envelope, which largely comprises panelized aluminum cladding, was designed with a low window-to-wall ratio to minimize heat loss and gain. (Anticipating changes over the building's 100-year target life span, the architects devised a "super grid," enabling orderly alterations to the fenestration.) Frontini pointed to the intensive specification process. in which his team screened more than 250 building and interior products for their toxicity levels, choosing those with few or, ideally, no toxic materials. In these ways, the Health Sciences Complex caters not just to the needs of the Ryerson community but also to the wider urban context. Kellie Zhao









# Furniture & Equipment

From movable writing surfaces to stackable chairs and adjustable desks, these durable furnishings are suitable for use in classrooms at all levels. Carefully considered seating and work tops promote a sense of focus, engagement, and flexibility that is further enhanced by bright colors and clean geometries. One design offers a more comprehensive solution, shifting the locus of study from indoors to out, where there is less anxiety about air quality and virus spread. By Adrian Madlener





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# **Acoustics & Textiles**

Making schools hospitable for returning faculty, staff, and students is not just a question of safety and cleanliness. Learning environments—so austere in the U.S.—also need to mitigate noise and soften hard edges. Fabrics are a cost-effective means of achieving these ends. The following selection pairs geometric and three-dimensional acoustic tiles with durable upholsteries and carpets. All meet the highest technical standards and do it with panache. The cold, utilitarian, and ramshackle classrooms of the past stand to be transformed into truly inspirational spaces for study. By Adrian Madlener





Double Exposure Collection Carnegie carnegiefabrics.com



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ECOUSTIC Unika Vaev unikavaev.com



EchoEdge Kirei <sup>kireiusa.com</sup>

## 54 Case Studies in Brief

#### Hans Rosling Center for Population Health, the University of Washington Seattle

Architect and interior designer: Miller Hull Partnership

General contractor: Lease Crutcher Lewis Civil and structural engineer: KPFF Consulting Engineers

Facade manufacturer: Elicc Group Products: Glass panels and facade fins

The Hans Rosling Center at the University of Washington is a boon not just for the campus but also for the school's Population Health initiative, founded in 2016 to tackle climate change, global poverty, and, more recently, COVID-19. In addition to classrooms and offices, the building's flexible layout accommodates collaborative areas for thinking about these pressing topics.

The 290,000-square-foot structure was designed by the Miller Hull Partnership, in collaboration with project contractor Lease Crutcher Lewis. But the project's most conspicuous element-the angled 3-footdeep glass fins affixed to the west side of the building-required more expert hands. Curtain-wall specialists at Elicc Group manufactured and installed the fins, as well as the 13-foot-tall, 5-foot-wide glass panels that make up the bulk of the building envelope. The milky, densely arranged fins, each one angled between 50 and 80 degrees, create a gradient across the facade that is as functional as it is aesthetically pleasing. (Shallower concrete fins on the obverse east exposure shade against morning light.)



#### Harold Alfond Athletics and Recreation Center, Colby College Waterville, Maine

Architect of record: Sasaki Design architect: Hopkins Architects General contractor: Consigli Construction Structural engineer: Arup Equipment manufacturer: Gared Flooring manufacturer: Mondo Lighting manufacturer: Holophane Pool manufacturer: Holophane Pool manufacturer: Hyrtha Pools USA Seating manufacturer: Hussey Seating Squash court manufacturer: ASB Squash Products: Glass, insulated metal panels, polycarbonate, sheened gray brick

In late 2020, Colby College in Waterville, Maine, welcomed a massive addition in the form of a 350,000-square-foot health and athletics facility. At the time of its construction, the Harold Alfond Athletics and Recreation Center was the largest building project in the state, and its presence on Colby's campus signals a shift in priorities.

Designed by Sasaki with Hopkins Architects, the complex affords space for all manner of sporting activities, from track and rock climbing to swimming and hockey. A spacious, sunlit lobby fronts the three-story complex, and a central courtyard brings light into the bulk of the building. The architects were keen to break down the project's incredible scale, varying the massing to emphasize discrete facets of the complex program. The varied facade accomplishes the same goal: Glass, metal panels, polycarbonate, and sheened gray brick are all deftly employed.



#### Murchie Science Building, the University of Michigan-Flint Flint, Michigan

#### Architect: HED

General contractor: Commercial Contracting Civil engineer: Rowe Engineering Acoustical consultant: Novus Engineering Building Envelope commissioner: Fishbeck

Exterior envelope consultant: SGH Curtain wall: Kawneer Glass: Guardian Glass Flooring: Forbo and Nora Corporation Casework: Mott Products: Cantilevered floor systems, glass curtain wall, opaque solid walls

Embracing STEM as a pathway to growth, the University of Michigan–Flint found itself looking for a facility that could keep up with changes in pedagogy and research. The existing Murchie Science Building wasn't cutting it, so the school tasked architecture and engineering firm HED with designing an expansion.

At 61,000 square feet, the new wing abandons conventional classrooms in favor of a student-centered learning environment that breaks down barriers and fosters meaningful collaboration. Shared study spaces are dispersed throughout, while sprawling green spaces and an outdoor lab engage the broader campus community. The effect of these moves has been to transform the building into a spacious hub and an inviting home-awayfrom-home for the school's community-student majority.



#### The Pavilion, The University of California, Merced Merced, California

Architect and structural engineer: SOM Landscape architect: Hargreaves Associates General contractor: Webcor Builders MEP engineer: Interface Engineering Energy consultant: Stok Net Zero Energy Sustainability consultant: Atelier Ten Geotechnical consultant: Langan Acoustical consultant: Arup Lighting designer: Auerbach Glasow French Facade access solutions: Olympique Metal roof and wall panel manufacturer: Morin Corporation

Metal roof and wall panel installer: Graham Prewett

Products: Cantilevered beams, corrugated metal, glass, perforated panels

At the University of California, Merced, the center of campus isn't a classical quad or administrative building, but a mess hall. At least, that is becoming the case as the university continues its expansion southward. Bearing this in mind. SOM, the architec-

ture firm behind the new dining hall, sited the project on a concrete plinth overlooking the grounds, which include Little Lake. (The much larger Yosemite Lake is just north of the university's property line.) On the shaded lake-facing west side of The Pavilion, as it's known to students, the architects employed an economical use of glass. Everywhere else they opted for straightforward materials such as corrugated and perforated metals that recall the materiality of the agricultural sheds found nearby.



# Surfaces

Surfaces are the unsung heroes of school design. Because of their ubiquity, we tend to discount their impact on the overall bearing of a classroom, auditorium, or corridor. The following selection spot-lights floors that deliver on durability and aesthetics, tabletops that can withstand the most aggressive wear and tear, and easy-to-install wall applications that facilitate serious learning and inspire play. Some, like colorfully imaginative silk-screened appliqués, surprise, while others, like high-contrast tiles, dazzle. All make the grade. By Adrian Madlener





Hemsworth Cambria cambriausa.com



High Performance Flooring Sherwin-Williams industrial.sherwin-williams.com

Floormations FLM Honeycomb Construction Specialties c-sgroup.com



Walscape Arden Studio ardenstudio.com



Arche Noah by Sonnhild Kestler Maharam maharam.com

# Lighting

The pedagogical metaphor of illumination is not lost on those lighting brands seeking to tailor their wares to schools and comparable facilities. Whether stand-alone task lights or integrated architectural solutions, these luminaires rely on the latest technologies to improve light levels while also helping alleviate the strain that comes from long hours of study. They don't skimp on aesthetics either. By Adrian Madlener





Oblique Flos flos.com



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Alven
BrainLit
brainlit.com
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FLAT Vibia vibia.com



Acuo light Cerno cernogroup.com



Lumencove 2.0 Lumenpulse lumenpulse.com



Quantum Lutron Iutron.com

# **HVAC & Plumbing**

The pandemic has made us more conscious than ever before of the quality of air we breathe. This realization has been a boon for HVAC and plumbing manufacturers, whose products can help curb the spread of COVID-19 in crowded interior settings like class- and assembly rooms. From robust heat-pump and air-source systems that are making school cool again to top-of-the-line taps, hand dryers, and sanitary hardware, they've got this whole "reopening" thing covered. By Adrian Madlener





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### **58 Resources**

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Ethnicraft ethnicraft.com

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Kvadrat kvadrat.dk

Luum luumtextiles.com

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TURF turf.design

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unikavaev.com

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Blu Dot bludot.com

BuzziSpace buzzi.space

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Landscape Forms landscapeforms.com Levantin Design levantindesign.com

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Teknion teknion.com

Versteel versteel.com

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Wilkhahn www.wilkhahn.com

#### **HVAC & Plumbing**

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### **59 Resources**



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Hansgrohe hansgrohe-usa.com

LG lg.com

Mitsubishi Electric mitsubishielectric.com

Newport Brass newportbrass.com

Uponor North America uponor.com

#### Lighting

&Tradition andtradition.com

Amerlux amerlux.com

Artemide artemide.com

Astro Lighting astrolighting.com

BrainLit brainlit.se

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Flos usa.flos.com

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Pholc pholc.se

Stellar Works stellarworks.com

Tobias Grau tobiasgrau.com

Usai Lighting usailighting.com

Vibia vibia.com

Wästberg wastberg.com

#### Surfaces

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# **60 Marketplace**





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# **62 Highlights**

#### Ernesto Neto: SunForceOceanLife

**Museum of Fine Arts, Houston** 1001 Bissonnet Street, Houston Open through September 26, 2021



It's a Texas tradition: Every summer, the Museum of Fine Arts, Houston, installs a massive work within the soaring central gallery of the Mies van der Rohe-designed Cullinan Hall. In nearly every instance, the immersive work forms an interesting contrast with the less-is-more Miesian context. On this score alone, the 2021 iteration more than succeeds. Created by renowned Brazilian artist Ernesto Neto, *SunForceOceanLife* is a cat's cradle of riotous color—yellow, orange, green. Neto's trademark hand-crocheted netting is here suspended from the ceiling and can support the weight of people. A walkway (its "floor" is made from plastic balls) spirals up several feet in the air, enveloping visitors in color. **Keren Dillard** 

#### Chicago Architecture Biennial: The Available City

Outdoor locations in eight Chicago neighborhoods September 17 to December 18, 2021



In a break from previous outings, the fourth iteration of the Chicago Architecture Biennial will downplay the authorial hand of the architect in favor of community-led, collaborative design. Director David Brown has made changes to the format as well in a bid to extend the festival's programming, typically concentrated within the Loop, across the city. Under the banner of *The Available City*, event proceedings will unfold in empty lots, community gardens, and other outdoor sites in eight Chicago neighborhoods. Of course, plenty of the typical biennial fare will still be on offer (the participant roster is stocked with wellknown names, including Atelier Bow-Wow and Hood Design Studio), but the change of venue, from concentrated to diffuse, could make all the difference. For Brown, the goal is to celebrate the creative work already being done by advocacy groups while also seeing how architects might contribute to and not override—these efforts. **Keren Dillard** 

#### Survival Architecture and the Art of Resilience

Museum of Design Atlanta 1315 Peachtree Street NE, Atlanta Open through October 24, 2021



Conversations about the climate crisis tend to devolve into pessimism and hand-wringing. When this lens is applied to architecture—a field that accounts for a good chunk of annual global carbon emissions—the results are no different. But a new show at the Museum of Design Atlanta puts a positive spin on architecture at the end of the world. Curated by Randy Jayne Rosenberg, the founder of the nonprofit Art Works for Change, Survival Architecture and the Art of Resilience argues that design methods should begin looking to strategies of adaptation and growth. Moreover, this is already taking place, as the work of William McDonough + Partners, Toyo Ito Architects, and others demonstrates. The show turns on the concept of resilience and the hope that it will encourage new thinking around our ideas about shelter. It may be that nothing else is as urgent. **Keren Dillard** 

### Reuse, Renew, Recycle: Recent Architecture from China

**The Museum of Modern Art** 11 West 53rd Street, New York City September 18, 2021, to July 4, 2022



Four years ago, curators from the Museum of Modern Art went to China looking for cutting-edge developments in architectural practice. They were not in pursuit of the sort of "weird" contemporary architecture that Xi Jinping memorably denounced in 2016. Rather, the team sought out strategies for making new old materials and building techniques. As the curators dug deeper, they discovered how compelling works by the likes of Pritzker Prize laureate Wang Shu and firms like Atelier Deshaus can spark economic rejuvenation while tying communities—rural, in many cases—closer together. *Reuse, Renew, Recycle: Recent Architecture from China* neither shies away from brilliant displays of form nor privileges them. And the show may be all the better for it. **Keren Dillard** 

### 63



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## 64 Review

### New Middles: From Main Street to Megalopolis, What Is the Future of the Middle City?

Exhibit Columbus | Columbus, Indiana | Open through November 28, 2021



Left to right: Future Firm's Midnight Palace; Dream the Combine's Columbia, Colombo, Colon; Joyce Hwang's To Middle Species, with Love

On the four-hour drive from Chicago to Columbus, Indiana, romance and romanticization were squarely on my mind. I had heard about the Columbus mythos, in which corporate generosity made the place into a modernist mecca of the Midwest. For an architect of Eero Saarinen's standing, or his protégé Kevin Roche, Columbus presented itself as an incubator for experimentation. I tried not to buy into the fanfare; I put up my guard, because to romanticize a place is to ignore its adversities, its faults, its muddied histories. I was traveling to the south Indiana town for the opening of Exhibit Columbus, the biennial architecture and design festival hosted in and among nice, modern buildings by Saarinen, Roche, and I. M. Pei, and had a suspicion that the event would function as window dressing for these same nice, modern buildings. What was on display instead were public spaces and an eagerness to reveal, uncover, and remix public histories.

For curators Mimi Zeiger and Iker Gil, Columbus presented itself as an incubator for thinking—namely, about the future of "middle" places. As I previously wrote in AN, the pair's definition of the middle is intentionally evocative, a frame through which to view not just the Midwest but the entire Mississippi River watershed and beyond. The works of photography fellows Virginia Hanusik and David Schalliol, whose photos address Louisiana's water management infrastructure and industrial food production around the Great Lakes, respectively, make this resonance explicit. Less direct are the 15 displays and installations by architects, photographers, and local high school students Zeiger and Gil have assembled at site-specific outdoor locations around downtown Columbus.

Some exhibitors opted to examine the middle's future by looking backward or getting down to basics. The Minneapolis design practice Dream the Combine even investigated the town's name. Partners Jennifer Newsom and Tom Carruthers installed 58 flagless flagpoles in Mill Race Park (Mi-

chael Van Valkenburgh Associates, 1993), all representative of places called "Columbus"-hence the piece's title, Columbia, Colombo, Colòn. The poles are inscribed with texts that pertain to the ways that colonization-arguably Columbus's greatest legacy-manifests as laws, events, and communiqués, including stories of lynchings in Columbus, Texas, and laws surrounding landownership in British Columbia. At close range, these texts spiral around the poles, forcing the reader to spin until dizzy. From afar, the cluster of poles brings to mind Walter De Maria's The Lightning Field, another sparse installation comprising steel rods whose purpose is to direct powerful, energy-charged strikes at the earth.

Olalekan Jeyifous also turned his attention to history, mining the archives of Columbus's Cleo Rogers Memorial Library (I. M. Pei, 1969) for artifacts and ephemera from its 1970 exhibition of African American art. From this material Jeyifous, a visual artist based in Brooklyn, New York, developed a series of colorful hybrid structures he installed in the library plaza out front. Formed using wood risers and painted sculptural elements, each structure is also outfitted with augmented reality codes that, when scanned with a phone, reveal the source material.

Working through histories, these public installations don't speak to the past as much as they reveal hidden, buried, or assumed ideologies. Dream the Combine recognizes that Columbus, as a toponym, is so prevalent in our understanding of geography that we forget the horrific legacy of colonization it should connote; Jeyifous, on the other hand, gives a significant yet archived exhibition new life and relevance to a tech-savvy generation. Through revealing and appearing, these concepts have the potential to push Columbus residents to reconsider their civic identity as both observers and participants. Middles here aren't made new; we are.

As an exhibition of public spaces, many of the installations call attention to these

spaces' overlooked features and users. Elsewhere in Mill Race Park, Joyce Hwang's totemic To Middle Species, with Love constructs habitats for little-seen nonhuman visitors. Bat houses crown the wooden pillars, whose stone gabion base invites toads and small lizards. Anthropocenic visitors can sit on the stacked rocks or gaze at the sky at dusk while bats congregate overhead. Continuing the nocturnal theme, Future Firm's Midnight Palace-a three-dimensional mural of snaking electrical conduits and LED bulbs-improvises an outdoor movie-screening space for graveyard shift workers. Situated on a wide stretch of sidewalk along the Cummins Sears Building (Gruen Associates, 1971) and Brown Street, the piece hopes to make visible an often-invisible labor force in a city where almost 40 percent of workers are employed in manufacturing. Whether the installation will be used by this set is questionable, but watching speeding cars slow down on the busy road to gawk at the twinkling lights hints at whom else the installation may make visible.

The most engaging projects were not just placed in public but created new types of places for the public. Less successful works, while thematically compelling, failed to capitalize on public space. Take Ersela Kripa and Stephen Mueller's Spectral, a loose assemblage comprising infrared-obscuring materials that block surveillance technologies. Building on research the pair is conducting at Texas Tech University, the piece foregrounds the heavy-handed actions of police, including closely surveilling and menacing street protesters. But installed in the parking lot of the now-defunct Crump Theatre (facade by Alden Merenda, 1941), it is reduced to a curio.

The festival's most effective work also comes with the lightest touch. Mason White and Lola Sheppard, the twosome behind the Toronto-based Lateral Office, required very little to make the most of an empty, grassy lot on Washington Street. *This Appearance Is\_* consists of lenticular plastic sheets—not unlike the Lisa Frank holographic notebook covers popular in the 1990s—fitted within twisting, bending orange metal frames. The plastic sheets act as a camouflage tool: Standing close behind the plastic, onlookers can see the outline of a person standing on the other side, but take a few steps back and that person appears to vanish into a blur. If I had to construe a greater message from this game of peekaboo, it would be that the middle also mediates.

Though lacking nuance, the project captures a particular way of thinking about hiding and appearing in public spaces. I joked with other attendees that the installation might provide opportunities for public make-outs or other types of rendezvous that require a little discretion. A certain type of magic takes place in public, and to pay special attention to public spaces is, as Hannah Arendt wrote, to create places of political negotiation and conversation and where one's unique identity is formed.

To spotlight Columbus's historic buildings, as I've tried to avoid here, would be to romanticize this unique place; to bring to light buried histories or unseen populations in an artful public space is, contrarily, an act of romance. As in romance, in public spaces we negotiate with others; we are invited to navigate our beliefs and desires to discover precisely who we are and how we want to be appreciated, touched, argued with, and celebrated. We romanticize, maybe, by allowing our "architectural gems" to wink at us while we take a photo and say, "They don't build 'em like they used to!" At Exhibit Columbus, the buildings step aside; they are not romanticized. Creating a visionary future for middle places necessitates critical hindsight and attention to what has been made invisible-people, ecologies, ideas-making way for self-discovery, place-knowing, and formation of civic identities.

Anjulie Rao is a Chicago-based editor and journalist.

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### 66 Review

### Noguchi: Useless Architecture

Noguchi Museum | Long Island City, Queens | Open through May 8, 2022



Three sculptural studies by the Japanese-American artist, including one of Capital at center

In 1962, Isamu Noguchi created Floor Frame, a minimalist bronze sculpture that appears to sink into the ground. It resurfaced in the public eye in late 2020, deep into the pandemic, when the Trump administration installed it in the White House Rose Garden. The piece is the first by an Asian American artist in the White House Collection, and officials characterized its inclusion as a progressive achievement for the Asian American community. But many in the community were not swayed by the strained optics. Marci Kwon, codirector of the Cantor Arts Center's Asian American Art Initiative, noted the "shameless hypocriy" of using Noguchi, who died in 1988, to drum up good publicity for an administration widely criticized for stoking anti-Asian sentiment. Kwon didn't mince words, calling out the act as "racist framing."

In August, the Noguchi Museum in Long Island City, Queens, issued a call for the borough's AAPI artists to design antiracism banners to adorn its exterior walls. The initiative mobilizes Noguchi's Japanese heritage in a show of solidarity with those acting against "Asian hate." For a figure known to break the boundaries of identity and artistic practice, it may seem that race is a frame he has not be able to escape.

Inside the Noguchi Museum, a new exhibition does not weigh in on these issues, but instead aims to resituate the man in his own time. *Noguchi: Useless Architecture* opens on the second floor of the museum, whose tranquil interiors still hew closely to the artist's original intentions for them. Spread across three galleries, the show has a relatively small footprint that can barely contain the ambition of curators Dakin Hart, Matthew Kirsch, and Kate Wiener. By narrowing their focus to Noguchi's flirtations with architecture, they add a fresh dimension to a household name. Theirs is a different kind of framing.

In the central gallery, tall columns instill something of the militant quiet of the classical Grecian orders. Swirling marble clouds mounted atop plain steel shafts replace the decorative capitals of yore. Noguchi completed *Capital* (1939) on the cusp of World War II, during a time suffused with anti-Japanese sentiment. *Capital #2* followed in 1942, the same year he voluntarily entered an internment camp for Japanese Americans. Both the pseudo-architectural work and the racial prejudices that gave rise to it have survived, with the former memorializing endurance against repeated history.

Sculptures such as these bear all the sophistication of Noguchi's idol and mentor Constantin Brancusi, only they emanate a more inviting glow. This affectionate warmth permeates the museum galleries, thanks to strategically placed Akari lanterns, which Noguchi designed in the early 1950s. In a restaging of Space of Akari and Stone, a 1985 display designed by the artist's architect friend Arata Isozaki, the paper lamps appear like alien life-forms crash-landed onto foreign soil. Their bulbous bodies stand on little metal "feet" so that they seem to sit and squat, dither and dawdle-strangers navigating a strange land. Some wayfarers are jailed in steel cages.

By contrast, a gallery devoted to Noguchi's playscapes promises freedom. Children carefully scaled a full-size replica of a terrace intended for the "Riverside Playground" (c. 1961, fabricated 2020), an unrealized collaboration with architect Louis Kahn for Riverside Park on Manhattan's Upper West Side. A bronze model miniature is laid adjacently and offers a bird's-eye perspective of the choreographed movement imbued in the composition's layered triangular forms. (Noguchi drew inspiration for architectural terracing from Machu Picchu, the 15th-century Inca citadel located in present-day Peru.) Although the park project took years to plan, residents eventually called for its halt owing to failures to involve them in the process.

Noguchi most likely did not see these efforts as wasted, as impracticality appealed to him. The exhibition takes its title from his description of the Jantar Mantar, five royal astronomical observatories constructed in Jaipur, India, in the 18th century. Built to measure the movements of the moon, stars, and other cosmic bodies, these stone instruments have since deteriorated into obsolescence but still exude a sense of poetic mystery. From them Noguchi derived the conclusion that "useless architecture" made for "useful sculpture."

Shorn of its use, and separated from its social context by hundreds, if not thousands, of years, architecture could finally come into its own, as line and form. In this, antiquity offered the greatest lesson. Noguchi first began visiting Greece in the 1950s, having found a reliable marble dealer there. and soon "started a custom of stopping in Greece on my various trips to and from Japan," he later wrote. His photographs of sacred temples and hillside amphitheaters in Athens and Delphi, in which eroding columns rise like totems and dilapidated marble appears whiter than white, reveal an optimism for what can be salvaged from social ruin. One photograph shows his wife at the time, Yoshiko Yamaguchi, standing in front of the Erechtheion. Always attentive to performative staging, Noguchi frames her just below its famed caryatids; perhaps attempting to further the likeness to the stone women, outfitted in Phidian drapery, Yamaguchi wears a striped skirt and a loose

shawl. The real-life muse is misidentified with an object and vice versa. It's a theme that carries into midcareer pieces like *Small Torso* (1958–1962) and unfinished marble studies, whose dimpled and jagged edges betray a deep appreciation of human form. Although Noguchi found early commercial success in his realistic portrait busts, he preferred to dwell on the ambiguities of stone *becoming* flesh.

For Noguchi, sculpture was "useful" not in any purposeful sense, but rather as a means to stimulate thought. Whether it was stairs that led nowhere (Model for Slide Mantra, 1966) or heraldic scaffolding (set design for Seraphic Dialogue, 1955), a work was left for the viewer to complete. Nowhere is this more the case than in Noguchi's ethereal theater set pieces. Though emptied of performers and deceptively simple in their construction, they retain their operatic aura. In his set design for Martha Graham's ballet Frontier (1935), Noguchi placed a lone section of log fencing at stage center. Behind it, he attached a taut length of rope from stage to ceiling in the form of a V. In its original edition, this perspectival vector pointed behind and above audiences, effectively extending the stage past the limits of the theater.

Useless architecture, Noguchi observed, "contain[s] an appreciation of measured time and the shortness of life and the vastness of the universe"—to which can be added "the impermanence of empire." In one of the exhibition's more inspired gestures, the curators counterpose Noguchi's photographs and studies of ancient ruins with small marble maquettes whose orderly, orthogonal geometries evoke metropolitan skylines. These, too, shall pass. What useful sculpture might they leave in their wake?

Danielle Wu is a writer and curator based in Brooklyn, New York.



Noguchi's stage set for Martha Graham's Seraphic Dialogue (1955)

### **67 Culture**

### **Viewing Machine**

David Hammons's *Day's End* is a towering structure of nearly impossible svelteness. But it fails to live up to the impossible hopes of a previous generation of New York artists.

When David Hammons's Day's End (2021) opened on the southern end of the Gansevoort Peninsula in New York's Hudson River Park earlier this year, critics skirted the thornier questions surrounding its realization. Many were quick to commend Hammons's daring, and they were not entirely wrong to do so. The 52-foot-high, 325-footlong Super-Duplex steel sculpture, likely the largest permanent public artwork in New York City, required years of study to ensure its structural stability. In addition to withstanding river winds, the project had to shoulder the weight of historical baggage: 2021's Day's End reinterprets Gordon Matta-Clark's canonical 1975 work of the same name. Then there was the price tag: \$18 million.

Missing from notices in *The New York Times* and *The Art Newspaper*, however, was any mention of the piece's ambivalent relationship to ownership and historical erasure. While this is perhaps due to limited space, another likely explanation is a general attitude that sees culture as an unmitigated good, a solvent for cleansing the wrongs of the past. Why slog through the origins of things when the present is so pleasant? *Day's End* doesn't disavow history as much as it selectively engages (and ignores) it.

The Gansevoort Peninsula was once home to Pier 52, a warehouse belonging to the Baltimore and Ohio Railroad Company before it was demolished in 1979. Built in the 1870s, the edifice had long outlived its usefulness by the time Matta-Clark made his signature cuts in its corrugated steel walls. Already by the early 1960s, New York's ports were losing out to rival municipal ports, a fact owing to technical innovations in shipping and the city's own economic decentralization. Realizing there was no turning back the clock, Mayor John Lindsay pushed to convert the Chelsea waterfront into a site of public recreation, though these efforts mostly came to naught. By the mid-1970s the crumbling Chelsea piers had become a meeting site for gay men living nearby in the West Village, imbuing the dilapidated area with a sense of liberation and community.

Matta-Clark created Day's End over the course of two months in the summer of 1975. After "securing" the site from "S&M cruisers," as he put it, the artist spent most of July and August carving five monumental voids into the building's floor and walls; the position of these cuts was calibrated to the sun's daily trajectory, with the surface of the river—visible through the cuts in the floor—acting as a reflective agent. Matta-Clark, who was initially drawn to the warehouse because of its "basilical light and proportions," had transformed an anonymous cruising haven into a postmodern cathedral. Not everyone was appreciative of his efforts. An attempt to stage an "open-ing" for the work was quickly shut down by the Economic Development Administration, and Matta-Clark was later required to defend himself against the threat of litigation, which he did by claiming the work was a public monument to New York's decay.

By contrast, Hammons's *Day's End* had the full backing of municipal and federal agencies, not to mention the Whitney Museum of Art, whose Renzo Piano–designed facility overlooks the Gansevoort Peninsula. Guy Nordenson and Associates provided structural expertise, advising that 150-foot steel piles be driven into the bedrock (where





Top: Gordon Matta-Clark's 1975 Day's End

construction workers hit the remnants of the original wharf's timbers) in order to secure the unwieldy artwork. Hammons desired that the steel tubes of the superstructure be as thin as possible—a request that proved especially challenging to the engineering team—and selected a matte-gray shade of steel to evoke a careful balance of solidity and delicate gleam. As built, the project bears an impressive resemblance to the single preliminary line drawing the artist submitted to the Whitney in 2014. **Bottom:** The artist David Hammons referenced *Day's End* in his 2021 sculptural work of the same name.

The stoic simplicity of *Day's End*, so characteristic of Hammons's sculptural practice, invites onlookers to read into it what they wish. But if critics obliged him, they largely circled the same pool of references—primarily Alvin Baltrop's series of photographs documenting the cruising scene that Matta-Clark's work temporarily displaced. Emily Colucci, in a review published on *Filthy Dreams*, ventured further afield, pointing to the work of photographers Shelley Seccombe and Frank Hallam, which captures a Pier 52 on the rebound. While Baltrop's and Seccombe and Hallam's works are certainly worthy of attention, we might consider another artistic intervention that perhaps better gets at the conceptual and historical implications of Hammons's monument. The derelict buildings along Chelsea's piers crop up in David Wojnarowicz's photographic series Arthur Rimbaud in New York, which he shot from 1978 to 1979. In these pictures, the artist dons a photocopied Rimbaud mask and wields a pistol, striking various poses against walls of graffiti that he scrawled himself. Wojnarowicz, who was also a poet, took Rimbaud as a direct model, and so the photos constitute an anachronistic compounding of art and life. So too with Hammons's *Day's End*.

Notably, in the 1980s, Wojnarowicz was part of a group of mostly gay artists (many of whom, including Wojnarowicz, later fell victim to the AIDS epidemic) who took over the abandoned Pier 34 and transformed it into an art space. "We are all responsible for what it currently is and what it will become," Wojnarowicz and fellow artist Mike Bidlo wrote in their statement for the inaugural show. "This is something possible anywhere there are abandoned buildings. This is something possible everywhere."

It's worth bearing in mind when we consider the ethics of *Day's End.* Hammons has kept mum about his intentions, but even if we were to give him the benefit of the doubt, there's no mistaking what his installation does: dissolve what was once a derelict cathedral of proscribed carnality down to skeletal remains. There is little in this that comments on the plutocratic takeover of New York's waterfront and still less that addresses the homophobic implications of Matta-Clark's inciting work.

Hammons's Day's End fares better, however, when viewed as an act of framing. If we take the steel tubing as boundary lines, rather than the focus of the work, Hammons's primary medium is revealed to be time itself. The installation thus becomes a vessel through which to read and reevaluate the site's history. Of course, a consideration of the work from this vantage necessitates a specific awareness of the conditions of the present. With time itself as the primary conceptual content, we may, for instance, consider yesterday's dockworkers and cruisers as uncredited performers. Invoking this same spirit of generosity, the Whitney Museum has claimed that Hammons's work is owned "by everyone and no one." To think that any place in Manhattan could go without proprietary ownership is naive in the extreme. (That ship sailed in 1624.) Day's End, like its neighbor Little Island, is pitched as a "gift" from the city's wealthiest, for which we are expected to be grateful.

But Hammons' deft obliqueness allows for a more backhanded reading. Looming over the waterfront like a headstone, *Day's End* at once commemorates and forecloses on the possibilities spoken of by Wojnarowicz. The open-endedness it espouses, both materially and metaphorically, may be applied to the site's past as well as its future, appearing, depending on one's proximity, by turns ethereal and ossified.

Kathleen Langjahr is a writer and researcher living in Brooklyn, New York.

## **68** Pictorial

### **Replace or Renovate?**

A preservation petition at the University of Oklahoma raises the question of what exactly is best for the environment.

At the University of Oklahoma, a student-led preservation initiative is underway to save three 12-story dormitories slated for demolition under a new freshman-housing master plan. Even as an OU graduate and Norman native, my appreciation for these buildings or what they mean for the campus and community—is admittedly next to nil. Like many college dorm buildings, these are qualitatively one step away from penal institutions. Most preservation battles involve culturally significant buildings, so what, then, is the impetus for saving these structures?

But for OU architecture graduate student Connor Hopper, who started a Change.org petition in the spring to preserve the dorms, it's imperative that we weigh the environmental ramifications of administrators' plans (and others like them). "Demolishing and replacing three twelve-story buildings rather than renovating them runs counter both to OU's push for sustainable building projects and student views of protecting the Earth," the petition states. "Saving the planet takes more than switching to reusable straws. It takes standing up and holding big institutions accountable as well." Hopper also developed conceptual renderings to illustrate what renovations could look like.

The university argues that the 1960s structures are outdated and cites the February 2021 polar vortex, which forced 200 of 900 students out of their rooms because of bursting pipes. The buildings have also drawn numerous complaints of mold in recent years. A draft report of programming and a master-plan report for administrative review will be developed in the fall and completed by winter. (The architect has yet to be revealed.) In addition to providing an additional 3,350 beds, the plan explores alternative configurations that could result in a villagelike configuration of smaller housing modules—a far cry from the current towersin-a-park scheme.

Still, the argument for reuse and reduction in construction waste is an important one; after all, we often hear that the most sustainable building is the one already built. But the all-too-stark realities of resilience and human health and safety in the face of climate crisis must also be taken into account. Many of our buildings, particularly those of midcentury stock, simply don't pass muster. Designing smaller-scale, more humane spaces to support human health and connection is a far more sustainable strategy. When buildings are imbued with positive emotional significance, they become embedded in the cultural memory of a community, making them far more likely to be cared for and preserved for generations to come.

Anastasia Calhoun is an Austin, Texas-based writer and experience strategist at Gensler.











The Ronald O. Perelman Performing Arts Center at the World Trade Center Design Architect: REX Executive Architect: Davis Brody Bond



Franklin D. Roosevelt Four Freedoms Park Design Architect: Louis I. Kahn, FAIA Architect of Record: Mitchell Giurgola Architects Photograph © Paul Warchol



The Frick Collection Design Architect: Selldorf Architects Executive Architect: Beyer Blinder Belle



Guggenheim Museum Exterior Restoration / MEP Upgrade Architect: WASA Engineer: Robert Silman Associates



Roy and Diana Vagelos Education Center Columbia University Medical Center Design Architect: Diller Scofidio + Renfro Executive Architect: Gensler Photograph: © Nic Lehoux



The Shed NYC Diller Scofidio + Renfro (Lead Architect) Rockwell Group (Collaborating Architect) Photograph: © Timothy Schenck



New Museum Expansion Design Architect: OMA Executive Architect: Cooper Robertson Rendering: OMA



The Cooper Union for the Advancement of Science and Art -New Academic Building Architects: Morphosis Architects and Gruzen Samton Architects Photograph: © Iwan Baan



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