THE ARCHITECT'S NEWSPAPER

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ST. ANN'S WAREHOUSE FINDS A NEW HOME IN A CONVERTED TOBACCO DEPOT ON THE BROOKLYN WATERFRONT

REFURBIN' RENEWAL



DAVID SUNDBERG/ESTO

After 15 years of producing shows in temporary spaces, venerable performance venue St. Ann's Warehouse gets a permanent home in DUMBO this month. Marvel Architects has converted a 19th-century tobacco warehouse into a 25,000 square foot space for radical theater and music.

Over the years, odd **continued on page 8**



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CHICAGO'S RIVERFRONT GAINS THREE NEW TOWERS AND A NEW REPUTATION

DOWN BY THE RIVER

With the recent opening of Ross Barney Architects' public Riverwalk, Chicago is taking a much harder look at its "second shoreline." Unlike the Lake Michigan public shoreline however, improvements to the riverbanks rely on developers, as most of the land is private. Unfortunately, since the city laid out its "Chicago River Corridor Design Guidelines and Standards" in 2005, there has been so little development along the river that only now is the city is getting a glimpse of its **continued on page 6**

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ROBERT KIRKBRIDE

THE MORBID ANATOMY MUSEUM EXPLORES MACABRE SCIENCE

Not Dead Yet

The Morbid Anatomy Museum stands out among its drab neighbors on a commercial strip in Gowanus, Brooklyn. A three-story, matte-black curio cabinet for the strange and wonderful, the space is a 19th-century **continued on page 5**

OHIO RECEIVES A NEW COPPER-CLAD ADDITION TO THE COLUMBUS MUSEUM OF ART

Less Rust Belt, More Patina



BRAD FEINKNOPF/COURTESY CMA

Museums and their additions have become an important part of reimagining Rust Belt cities in the post-industrial middle section of the country. Cities like Milwaukee, Cleveland, and Akron have all invested, to great effect, in new art wings that push the boundaries of museum design. Now Columbus, Ohio, a city historically more stable than its neighbors, is also getting its own trademark museum wing in the form of a copper clad tube.

This October saw the opening of a new 50,000-square-foot wing to the Columbus Museum of Art, part of a multi-stage master plan conceived by Tod Williams Billie Tsein Architects and Michael Bongiorno, principal of Columbus-based DesignGroup. Until this point, the museum has not been able to host many of the larger traveling exhibitions or even display **continued on page 15**

HOW INTERACTION DESIGN IS CHANGING IMMERSIVE ENVIRONMENTS. SEE PAGE 24



COURTESY ROCKWELL LAB

AN ENVIRONMENTAL ISSUE

AN INVESTIGATES THE LATEST IN GLASS TECHNOLOGY AND FACADE SYSTEMS THAT ARE GIVING ARCHITECTS EVEN MORE CONTROL OVER THE ENVIRONMENTAL QUALITIES OF THEIR SPACES. WE ALSO SHOW FIVE CASE STUDIES THAT UTILIZE THESE GLASS PRODUCTS IN NEW WAYS. SEE PAGE 30.

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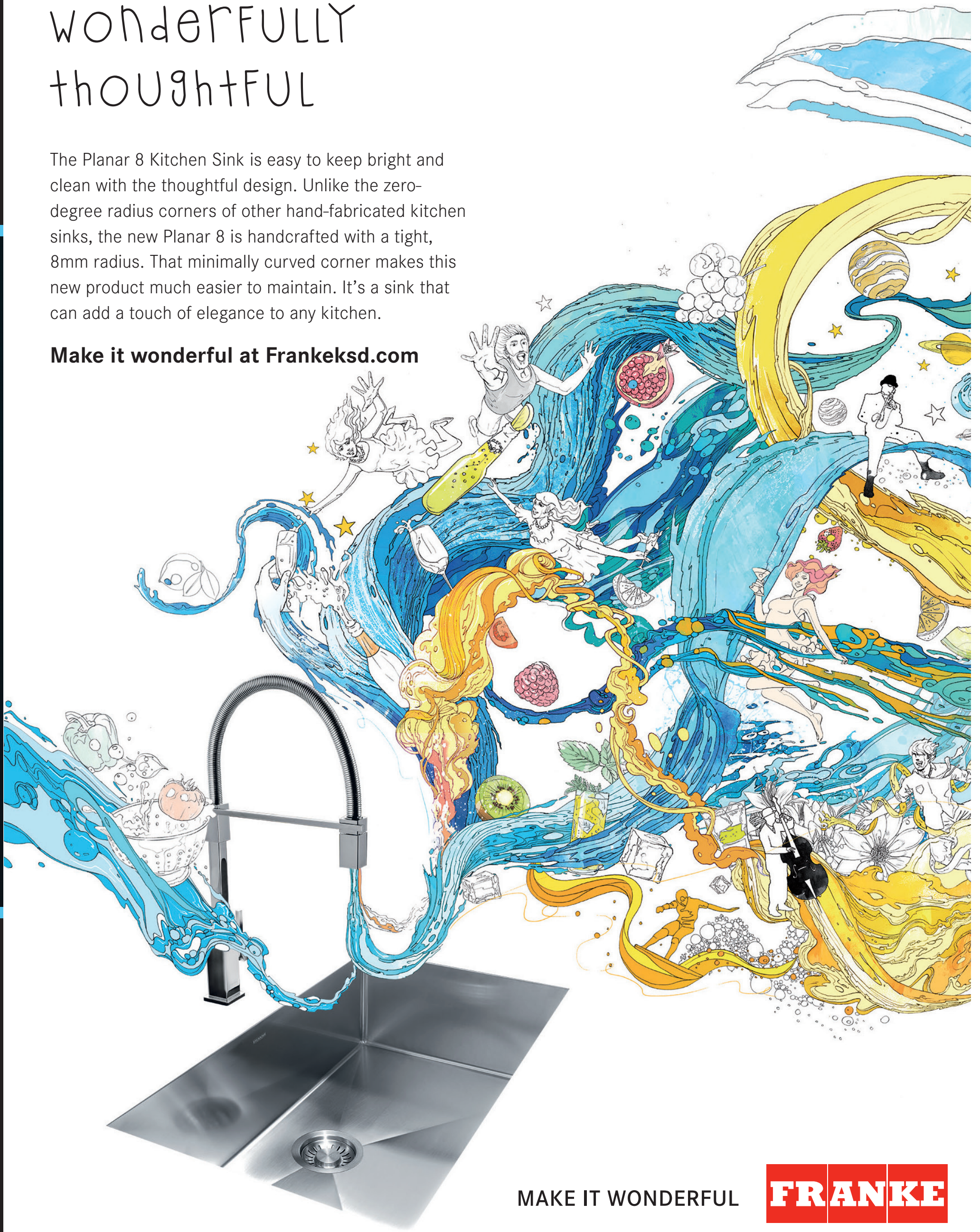

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WHERE WE STAND

This being my first issue as the Midwest editor of *The Architect's Newspaper*, I find myself reflecting on what Midwest architecture might be, or if there is such a thing. And more importantly why we might need a newspaper for it. Perhaps the answer is somewhere in this very issue. As a combined East/Midwest issue, one region can be held up against the other, but maybe this is just the completely wrong way to look at the situation. A Chicagoan will be the first to tell you not to compare their city to New York, as much as almost any other Midwesterner will tell you that Chicago is not the whole Midwest. This wish to define one's self, or practice, with more specificity, or individuality, is not limited to the question of locality though. It is the defining characteristic of our field today.

The plurality of practice, project, and pedagogy is palpable. As much as some people would like there to be, there is no unifying movement, no zeitgeist-defined aesthetic. At most, we can find loose groups of overlapping sensibilities and ideological scenes. Just the discussion of this plurality has dominated much of the criticism, for and against, the current Chicago Architecture Biennial, an exhibition with the express mission of surveying the global field.

I, for one, find this atomizing of architectural thought intriguing, if not exciting. For better or for worse, it would seem that architecture has begun to respond to the greater tendencies of contemporary culture. Those same tendencies err on the side of the individual, the one-off, the on-demand, and the parametrically calculated skin, all without a single identical member.

So with no ideological center to point toward an organization of the field, perhaps locality is a viable way to grasp what is happening. In a time when technology allows for the instant and thorough transfer of knowledge, regardless of location, being physically in place still has not been usurped by the digital world. This is to say, one can know what it looks like to stand in the canyon of towers along the banks of the Chicago River, but one cannot know what it is like unless they are physically there. Until, if ever, that aspect of built architecture is overcome, location is going to matter. And even if paper architecture disassociates itself from site, it still is unavoidably taking a stand on the subject.

So what of a Midwest architecture, and a paper to report on it? Maybe there once was an architecture of the Midwest. Perhaps in the proto-architecture of the Ojibwa wigwams or soddies built by settlers when the Midwest was the frontier. Though the spaces designed today might not be quite so tied to their location as those first homes on the prairie, there is still a tie between space and place, despite any trends, movements, and polemics. And though we may not be able to point to a Midwest architecture with absolute certainty, the Midwest, as a place for design and building is going through changes. My hope as I assume this position is to chart that shifting field, foster new conversations, and just maybe start a debate or two. **MATT MESSNER**

WXY AND HESTER STREET COLLABORATIVE FACILITATE LOCAL PLAN

Planning East Harlem

In the coming years, wide swaths of New York will land on the city's drawing board for comprehensive rezoning. In September 2015, the New York City Department of City Planning (DCP) released the East New York Community Plan. The plan, now in its public comment period, calls for increased density and affordable housing via mandatory inclusionary zoning in a largely low-income Brooklyn neighborhood. A city initiative, the planning process was organized by the DCP with input from local groups.

In East Harlem, however, residents, community groups, and facilitators flipped the script. Stakeholders are collecting residents' feedback on their neighborhood for the DCP's input. The group's project, the East Harlem Neighborhood Plan, began in May 2015 and targets the area governed by Community Board 11 (CB 11). The project's meticulous approach to community-based planning has the potential to impact neighborhood planning citywide.

The project partners are city council speaker (and area representative) Melissa Mark-Viverito, CB 11, the Manhattan borough president's office, and social justice advocacy group Community Voices Heard. New York's WXY Studio and Hester Street Collaborative are facilitating the development of a draft of the East Harlem Neighborhood Plan. Other participating organizations include a charter school, labor unions, a tenants' association, the New York Restoration Project (NYRP), and El Museo del Barrio. These groups lead steering committees that help draft and approve recommendations.

To all parties, planning goes beyond zoning to encompass the individual and social context. Adam Lubinsky, WXY's managing principal, emphasizes that the planning is entirely community driven, and is not about showcasing the vision of a particular designer or firm. So far, hundreds of residents have participated in the process. Ultimately, Lubinsky hopes that East Harlemites "put together key principles and ideas so city planning will look at that and understand that" for the official zoning ultimately adopted by the DCP.

The process starts with a series of community visioning workshops for residents to voice what they love and what they would change in East Harlem. Workshops include a discussion of policies that affect the neighborhood. A session on zoning and land use, for example, uses participatory visioning strategies that "get people thinking about the nature of the area," said Lubinsky.

Ideas from the workshops are taken up by 11 subgroups, each facilitated by a different stakeholder. Topics include open space and environment, culture, education, childcare, housing preservation, affordable housing, NYCHA, economic and workforce development, senior citizens, health and safety, and transportation. A proposal from a committee headed by the NYRP, for example, suggests that "developers [should] provide green infrastructure within and/or adjacent to new developments" to fortify East Harlem against "threats from climate change."

The subgroups create proposals that are refined in a public comment period. The final plan will be presented in early 2016 to the DCP to inform the final neighborhood rezoning.

Will WXY and Hester Street be involved in the design? Hopefully, Lubinsky states, the "capacity-building process is self-perpetuating. I don't know if they'll need us."

AUDREY WACHS

KOOLHAAS AND CO. TAPPED TO REMAKE RFK STADIUM IN D.C.

PITCHING IN

D.C.'s run-down RFK Memorial Campus, home to soccer team D.C. United and the Armory, Maloof Skate Park, and Festival Grounds, is finally edging closer to development as OMA is commissioned for master plan concepts.

After almost 60 years of service, the stadium is now long overdue for development work. Selected by Events DC and the Washington Convention and Sports Authority, OMA will also work with management firm Brailsford & Dunlavey to develop long- and short-term concepts for the future usage of the site.

The project will be headed by OMA's New York office with the intention of creating a "holistic conceptual plan" that "resonates with the surrounding community," forming axis and public meeting points while acting as a social hub for residents. Partner Jason Long said the scheme will seek to play an "important role in reconnecting the city to the Anacostia riverfront."

OMA also plans to further integrate the stadium into the 190-acre site, a vast expanse that is currently interrupted only by the stadium, surrounding road, and a car park that appears as though it was deserted since its construction in the 1960s.

"The goal of the project," said Laura Baird, associate at OMA, "is to develop conceptual masterplans for the entire campus that complement the site, benefit the community, and create access points and public areas of convergence for residents and visitors."

Plans and concepts for the project will be released in January 2016.

JASON SAYER

EAVESDROP> THE EDITORS

EVERYONE'S A WINNER?

What is it about architect **Mitchell Joachim** that he cannot let go of his Oedipal desire to go after his former "father' employer **Michael Sorkin**? Not happy about the direction of Sorkin's non-profit Terreform, Joachim went out and founded his own 501C3 Terreform One. Most recently, Sorkin co-organzied and sponsored The Next Helsinki, a protest "call for ideas" to the high profile Guggenheim Helsinki Design Competition. This alternative competition received hundreds of entries and allowed multiple voices to critique the official Guggenheim one. With Sorkin's project about to publish a book of its entries, Joachim has now posted online a page of his own where he declares Terreform One the winner of "The New Official Alternative Award Winners of the Guggenheim Helsinki architecture and urban design counter-competition." It is hard to tell how Mr. Joachim wants us to take the competition. His 'winning' design features a bare rear-end with windows. Also, the "competition" seems not have had jurors and or even a call to submit. He claims it was co-sponsored by Anonymous Finland, the Libertarian Anti-Ellsworth Toohey League, Occupy Helsinki, and Eco-communalism. This anti-anti-competition seems to believe it is showing up Next Helsinki, but who can save Sorkin from Joachim?

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ROBERT KIRKBRIDE

NOT DEAD YET continued from front page

factory turned nightclub turned serious archive, scholarly salon, and community space for those intrigued by the history of science and medicine.

Appropriately for a 21st-century institution, the museum started as a blog in 2007 before assuming a physical form. Joanna Ebenstein, now the museum's creative director, responded to the blog's popularity by showing her collection of postmortem photographs and gothic artifacts in person, first in a Gowanus gallery. Her success prompted her to search for a permanent space.

Though some of the objects in the Morbid Anatomy Museum (in the lobby, stuffed chipmunks ride on a miniature Ferris Wheel) are, at first, pure kitsch, each demonstrate the way knowledge about the body is constructed in the past and present. Robert Kirkbride, associate professor of architecture and product design at The New School's Parsons School of Design, partnered with architect Anthony Cohn to design the museum. The project timeline and budget were tight. Ebenstien approached Kirkbride in December 2013, the plan was in contract by January, and the museum officially opened June 2014. It cost $350,000 to transform the 4,200-square-foot space.

The design is influenced by Kirkbride's research on the 15th-century Italian *studioli*—rooms created to train the memory. Designed to induce awe, these richly fabricated and precisely curated *studioli* attracted learned individuals curious about natural science, history, and geography. It was in these spaces, Kirkbride notes, that "prototypes for classification of knowledge, virtuosity, and propaganda" were created. It was up to the viewer to make meaning from what he or she saw.

Consequently, the design responds (both to a limited budget and) to history, drawing out the building's story to create a layered space for display and study. Obsolete coal chutes and staircases that dead end into the wall are fashioned into mourning shrines. Kirkbride opened the facade on the ground floor with ceiling high custom-steel windows. The windows maximize the building's corner lot to brighten the open plan cafe, gift shop, and lecture space.

Programming that keeps archaic arts alive is core to the museum's mission. When *AN* visited, 12 aspiring taxidermists were dissecting rabbits in the basement. The windowless space is configured so light from ground story filters through an open stairwell.

The building's previous stint as a nightclub left an overabundance of HVAC systems, tracks for lighting, and electrical outlets. Some excess was removed, while others were converted into light fixtures. Salvaged doors, chandeliers, and cabinets add to the eclecticism.

Exhibits follow a similar aesthetic. One second floor gallery hosts exhibitions, while the other houses the permanent collection of 19th-century medical instruments, rare books, pickled specimens, skulls, and divination tools. Unlike most museums, there is no wall text. It's possible, though not explicitly encouraged, to reach into open glass cases to touch jars of preserved insects, or pull books from the shelves to read. Kirkbride explained, that, like in the *studioli*, the idea is to "come in [and] pause on items that catch your attention." In a museum designed for the sublime (and the totally weird), that's an easy task. **AW**



AUDREY WACHS

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> PRINTED MATTER

231 Eleventh Avenue
Tel: 212-925-0325
Architects: Handel Architects

Beloved local bookstore and art nonprofit Printed Matter recently moved to a 3,836-square-foot space in a former 1912 freight train terminal. Handel Architects, who designed the store pro bono, wanted to create a "cathedral of books" in the vertical, 30-foot-tall store. To do so, they carved out a "well" into the first floor, and then wrapped a black steel staircase up to the second floor. Elevated shelves create storage for overstock books and a series of steel filing units house posters and prints.

Whereas the old space was charmingly cluttered and a little scrappy, the new space carries out the utilitarian approach in a more straightforward way. "People would get confused [when they came in] because we carry unusual publications and serve a lot of functions," Max Schumann, director of Printed Matter, said. "In this new space we can delineate our different focuses—visual art books, art, magazines, exhibitions, and office space—and, most importantly, can better present and take care of our books." **OLIVIA MARTIN**



COURTESY SHOP ARCHITECTS

UNVEILED

SITE SANTE FE

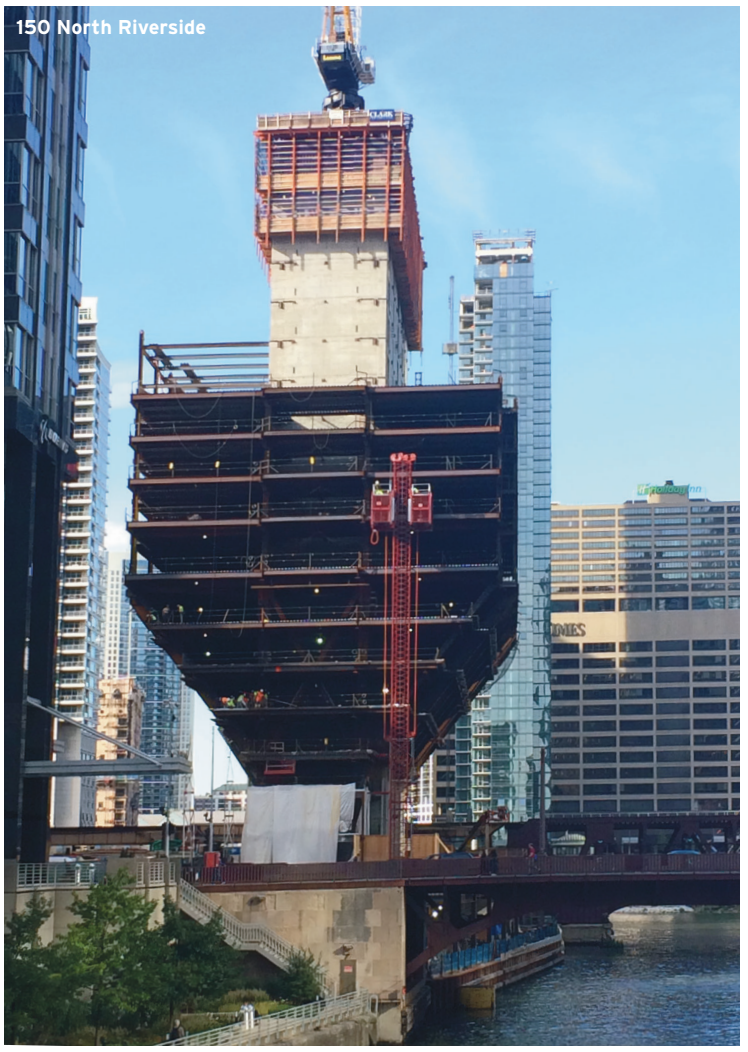
Since it opened in 1995, SITE Santa Fe has mixed permanent exhibitions with an international contemporary art biennial, pushing the limits of expression in the sleepy New Mexico town. In 2014, the museum tapped New York–based SHoP Architects to expand its 20,000-square-foot home, incorporating the art experience into surrounding parks and public spaces. The resulting machined and muscular structure will break ground in August 2016.

SITE sought to create "an iconic new spatial presence" with its addition. SHoP delivered with a low-slung form that responds to the flat desert topography while using slanting forms to lend a sense of movement. The highly articulated, perforated metal facade is layered to give the structure depth and respond materially to the area's railroad heritage. If you squint, the entire structure appears to be a locomotive steaming across the desert terrain.

"Art doesn't have to be experienced in isolation," Christopher Sharples, principal at SHoP, said in a statement. "The building itself opens up to the neighboring park, the life of the Railyard district, and gives SITE a greater presence in the landscape of the city as a whole."

SHoP's addition will bring 15,000 square feet of new interior and exterior spaces that flow visually with expanses of glass. The projecting envelope creates a monumental entry court and rear porch punctuated with sculpture. Inside, SHoP stressed flexible spaced. The main SITElab exhibition hall will be expanded, a lecture hall doubles as an event space, and an education lab will bring art to local students. **BRANDEN KLAYKO**

Architects: SHoP Architects with Allegretti Architects
Location: Santa Fe, NM
Completion Date: Summer 2017





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DOWN BY THE RIVER continued from front page possible benefits. With the last two major projects along the rivers edge being the Trump Tower and 300 N. LaSalle, both finished in 2009, the city anxiously watches as private development along the river once again picks up. Now with three riverfront towers well under construction, and two more planned all around the convergence of the north, south, and main branches, the river is looking to be a much different place one year from now.

Already in full form is bKL Architecture's Wolf Point West tower. The 500-foot-tall, 48-story residential tower is the smallest structure in the master plan by Pelli Clarke Pelli Architects and includes two taller towers and an improved public river walk. With 510 units, ranging from studios to three bedroom apartments, the balcony-laden tower is destined to become highly sought-after housing stock. Positioned on a small piece of land jutting out into the river, views to and from the tower are uninterrupted from almost all directions. Substantial completion is planned for years end, and it is already becoming hard to remember, or believe, that there was once a flat parking lot on the site.

Also occupying a former riverfront parking lot is the quickly rising Pickard Chilton-designed River Point tower at 444 W. Lake Street. Across the river from Wolf Point, the 730-foot-tall office tower sits on axis with the main branch of the river looking east. Bucking the recent trend of concrete towers in the city, River Point is a steel structure that finds its form in intersecting parabolic curves. "The curves are a response to the river and the train tracks that run below the building, as well as the building's relationship to 333 Wacker across the river," Pickard Chilton design principal and Chicago native, Anthony Markese said. With both Ogilvie and Union train stations directly to the south, the site sees some of the busiest train traffic in the city. Now thanks to the building's new plinth covering the tracks, the public will soon be able to access the river in front of the building on the recently finished 1.5-acre riverfront plaza. Markese described the project as something of a "tower in a park, in the middle of the city." The west side of the building, along Canal Street, will also have public programing, including a triple-height glazed lobby, retail space, and the entrance to a two story restaurant that will extend through the plinth to the river-side of the building. The city will not have to wait long see the final form of the building, as it is scheduled to top out before years end.

At 732 feet tall, the tallest of the three towers is the 150 N. Riverside Tower by Goettsch Partners, just to the south of River Point along the South branch of the river. Also a mostly-steel tower, Riverside comes down to the ground on an extremely slender site. Taken up mostly by the same rail tracks that traverse the River Point tower site, the lot has been vacant for nearly 50 years. Continuing with the theme of enhancing the river's edge, a large green-roofed plinth will cap the tracks and hold a restaurant and public plaza. For the majority of the 51 stories, floor plates are cantilevered off of both sides of the elevator core to the east and west. In what will be possibly the largest of its kind, a 110-foot-tall glass fin wall will enclose the lobby on the west side of the building, sheltered under the cantilevering floorplates above. Besides the public outdoor space along the river and at the base of the tower, setbacks allow for private outdoor terraces at its upper levels.

With no building allowed on the lakeshore, developers have finally seemed to realize that if they want to be near water, then the river is their best bet. With remediation underway to clean up the polluted water and extensive city-funded shore improvements, the river is quickly becoming the focus of the downtown. No longer are buildings turning their backs on the water, and more and more the public is being given easement across private plazas to get to its banks. With so much attention on the river, it is only a matter of time before people remember that the old symbol of Chicago, the circle inscribed Y found on so many public buildings and bridges, represents the branches of the river that were once so integral to the city. **MM**



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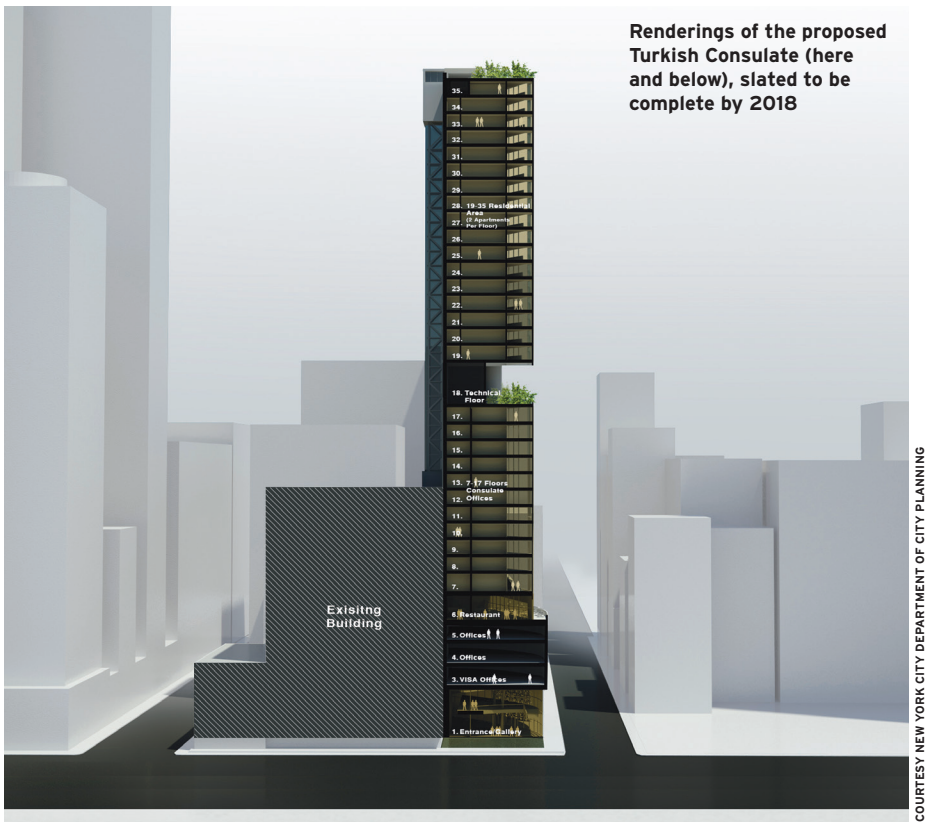

Renderings of the proposed Turkish Consulate (here and below), slated to be complete by 2018

COURTESY NEW YORK CITY DEPARTMENT OF CITY PLANNING

THREE YEARS, AND STILL NO NEW HOME FOR THE TURKISH CONSULATE IN NEW YORK

TURKISH REWORK

Earlier this month, New York real estate blog *6sqft* reported that New York's Chelsea Atelier Architects would be designing a new 35-story home for the Turkish Consulate, at 46th Street and Third Avenue. Perkins Eastman was listed as the architects of record.

It turns out the project went to Perkins Eastman, not Chelsea Atelier. Chelsea Atelier's principal, Ayhan Ozan, confirmed that the Turkish government had passed on his firm's proposal. Expressing disappointment, Ozan explained his design's features and benefits, that included new offices, a restaurant, and apartments for visitors and the consulate's permanent staff. He noted the "articulation of the building complements the UN," right across the street. His design, Ozan explained, takes advantage of (unspecified) "zoning loopholes" and the plaza bonus that enables taller buildings in exchange for publicly accessible ground floor green space.

When *AN* contacted Perkins Eastman for comment, an associate curtly explained that the firm is "taking legal action" against Chelsea Atelier, and can't comment on the project. *AN* asked the associate if he would like to set the record straight for his firm; he promptly hung up.

The quest to build a permanent home for the consulate has been in the works since 2012. A September 2015 RFP issued by the Turkish Consulate General lists Perkins Eastman as the architect. According to the RFP, construction will be complete by 2018. The consulate already owns, and operates out of, properties across three lots, grouped as 821 United Nations Plaza, on the site of the future building.

As of this time, renderings, but no project summary, are up on Chelsea Atelier's website. There is no information on the consulate project on Perkins Eastman's site.

AW





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Marvel Architects created St. Ann's Warehouse in historic DUMBO to preserve the historic facade and to alleviate noise from the Brooklyn Bridge, which is almost directly above the building. Charcoalblue and BuroHappold Engineering further finessed the acoustics in the space.

STAGE CRAFT continued from front page renovations and demolition by neglect reduced the five-story warehouse to a trapezoidal shell: two stories tall, devoid of walls, and roofless. Marvel Architects' challenge was to preserve the facade (St. Ann's Warehouse sits on two overlapping historic districts.) while creating a flexible space for St. Ann's innovative programming.

In the $31.6 million renovation, simple geometries prevail. Marvel divided the warehouse into two interior rectangles and an exterior triangle. Inside, an envelope on three sides protects historic doors and windows, while allowing cross axis views from the main stage to the garden. The larger interior volume is the main stage, a double-height space fitted with movable curtains for a re-arrangeable program that can accommodate 703 theatergoers. The smaller space is for community programing, and can be transformed into a lobby via a sliding acoustic divider when needed. A mezzanine holds the theater's offices.

The 8,000-square-foot outdoor space, designed by Brooklyn's Michael Van Valkenburgh Associates (MVVA), is accessible from the theater and the street. The space softens the gradient between public and private, while complementing MVVA's Brooklyn Bridge Park, right across the street.

To keep the visual focus on the warehouse, Marvel created an unobtrusive glass brick roof that extends approximately seven feet above the historic facade. Perched almost underneath the Brooklyn Bridge, noise from overhead traffic was a major concern. New York's BuroHappold Engineering and theater acoustics consultants Charcoalblue designed duct work and air-handling units on the roof to buffer external sound.

The design responds consciously, if not explicitly, to natural threats. Hurricane Sandy flooded the warehouse during the design process, filling the space with three feet of water. To minimize the impact of future floods, the team placed wall outlets higher than normal and moved electrical and mechanical equipment to the glass-bricked roof and mezzanine. Outside, storm-water design will capture and divert 170,000 gallons of rainwater annually to irrigate Brooklyn Bridge Park. MVVA associate Alec Spangler noted that the designers chose salt-tolerant plants and eliminated loose elements that could cause damage in a flood.

St. Ann's first show in the new space will be Phyllida Lloyd's production of Shakespeare's *Henry IV*, Set in a women's prison with an all-women cast, Lloyd's progressive piece should take ample advantage of the flexibility that the warehouse provides. **AW**



COURTESY RAD STUDIO



COURTESY RAAD STUDIO

SUBTERRANEAN HORTICULTURE FLOURISHES ON THE LOWER EAST SIDE

LOWLIFE

Even the worst gardener knows that a plant needs light to grow. And yet, in defiance of basic biology, a lush garden grows inside a windowless warehouse on the Lower East Side.

The Lowline Lab is an experiment in subterranean horticulture, a "living lab" for the Lowline, the planned one-acre underground park on a disused trolley terminal (visible from the J/Z platform) at Manhattan's Delancey-Essex Street station. To lead architect James Ramsey of raad studio, the core mission of the Lowline Lab is to "drive people to think about innovative urban design."

The science of growing light-loving plants underground is relatively new. Configuring a specific light pattern for 3,500 individual plants—without killing any of them—is the project's primary technical challenge. The Lowline Lab, explains Ramsey, is a place to "sort out hurdles and kinks surrounding daylighting technology" before scaling the project up. The team has time to experiment: Lowline Lab co-founder and executive director Dan Barasch says the Lowline will be complete by 2020.

Here's how the lab gets its natural light: on the roof, two solar panels send sunlight into three curved parabolic mirrors that concentrate light at thirty times its normal strength. That super-light is funneled into three tubes that descend into the building, piping sunshine onto three central reflectors that disperse light over a sculptural steel canopy suspended from the rafters, sixteen feet above the concrete floor. The canopy's construction is influenced by solar telescope design (Ramsey was once a satellite engineer at NASA). Comprised of interlocking hexagons, the undulating canopy delivers light, at varying intensities, onto plants.

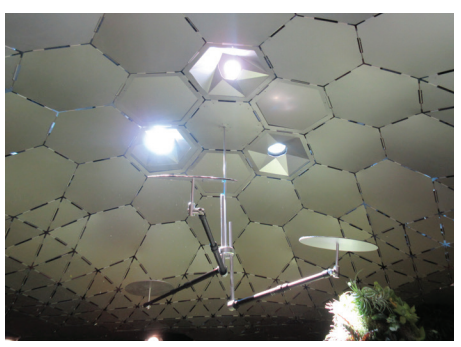
Before installing the canopy, the design team created a 3-D model of the light intensity and positioned plants accordingly. Depending on their biological preferences, plants receive strong, medium, or low light. The team is still experimenting with the optimal configuration. The Lowline Lab hosts a young designers program that invites Lower East Side students in grades K-12 to take part in the discovery process.

To Ramsey, the garden's exuberant arrangement evokes "an undulating, sci-fi cave-scape." Sixty plant species, all from the southern hemisphere, are planted in rolling raised beds and on stalactites protruding from the canopy. Air plants, ferns, moss, and exotic flowers vie for space with edibles, including pineapples, mint, and mushrooms. The garden's wavy, roughly U-shaped outline lets visitors get close to the plants from all angles.

For those who want to see the future of horticulture in person, the Lowline Lab will be open through March 2016. **AW**









ABOVE LEFT: COURTESY RAAD STUDIO; ALL OTHERS: AUDREY WACHS



Architect: **Skidmore, Owings & Merrill**
Structural Engineer: **WSP Cantor Seinuk**
Photograph: **Tex Jernigan**

World View

While the world watched, **One World Trade Center** grew in both height and symbolism, its 1,776-foot crystalline form bringing unmatched views back to Lower Manhattan. A redundant structural steel frame, the result of creative collaboration between **Skidmore, Owings & Merrill** and **WSP Cantor Seinuk**, ensures that its safety is as substantial as its stature. Read more about it in **Metals in Construction** online.

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LETTER> PAUL SEGAL

WHERE WE'VE BEEN AND WHERE WE'RE GOING

Ready for some tough love, some bitter medicine? Looking back, we architects got our profession into some bad places with some serious mistakes. We were often so eager for fame and celebrity that we sometimes behaved irresponsibly. We did not use design in its best sense; we gave away our treasure. We were not always reliable regarding time and money. We handed over the leadership role in building to others who lacked the necessary skills and training, and who held no responsibility or liability. Left with less authority and control, architects instilled fear and distrust in our clients. We aided and abetted clients with unrealistic and unworthy ambitions. Specifically, when clients proposed projects where the scope, budget, and schedule didn't fit together, we were so eager for the assignments that we did not blow the whistle, but jumped in feet first.

I can think of three fine institutions with worthy missions and stellar reputations that committed virtual suicide. Those institutions (almost) betrayed their missions by creating inappropriate, overpriced Silly Buildings. The architects and the leadership of those institutions were coconspirators and bad stewards. Their actions in pursuit of fame and recognition did irreparable harm to their institutions.

We foolishly participated in competitions, an insulting process for selecting architects. What wise partnership was ever created by such a superficial beauty pageant? What smart client chooses an architect simply by how a building looks, without knowing what that architect is like to work with, or if they can execute the project well? What other profession gives its work product away for free? What bettor places a two dollar bet when the prize is two dollars? (And here often there is NO prize!) The field is littered with competition winners who end up losers: no built project, no fee, no valuable relationship. Competitions may have been a reasonable selection process in another time and place. They don't work here and now. Competitions are abusive and counterproductive for everyone.

The lack of self-worth actually begins with poor professional habits. Hiring young professionals without pay, or calling them consultants rather than employees, is illegal and unethical. We are not properly compensated for our services: we provide unpaid speculative designs for clients to try to secure assignments. We are not being paid on a timely basis. (These are circumstances under which no client would expect their contractor to continue working, but we do. Are we richer or dumber than the contractors?) We compete for projects by simply offering to do them for the lowest fees. This practice is unsustainable: if we continue to undersell ourselves, the profession will become a commodity.

We allowed, even encouraged, the media to publicize projects whose main value is novelty and eccentricity, not quality. Maybe novelty is easier to spot and sell. While pandering to the public's desire to stare ghoulishly at a highway accident, novelty hasn't improved the work or the profession. Encouraging this bad behavior leads clients to ask for more silly buildings, which they (and society) often can't afford.

As young professionals, we are often eager to get a fast start, to break out of the gate early. We start before we have fully mastered the complex task of making buildings. It takes time to learn how to deal constructively and fairly with parties who have other agendas or financial interests.

From these errors, we can learn what will lead us to a better future. First, let's use design in its best, most holistic sense. Design is not simply about how the building looks on the outside (for that is simple). Design dictates how buildings are planned, and how they use resources (materials, energy, space, money, and time). Design informs efficiency, durability, and beauty.

Let's get the design and construction of our projects done on time and on budget. Let's return to being our clients' trusted advisors and partners. Let's be more creative, not just about designing what we are asked to design, but in making new building types for the present and the future, not just the past.

Let's be inventive about the process of building, the largest segment of the American economy. The way we build now is antiquated and doesn't work well, which leaves room for major improvements. Can you imagine a car produced the way we make buildings? You'd hire a designer, while another company puts together the components of body, engine, brakes, transmission, all made by other companies. You'd end up with a $3 million car that has never been prototyped or tested, and it wouldn't run as well as a $20,000 Volkswagen. Yet this is how we make buildings!

Let's demand the fees that it takes to do great design. It does cost more to study more alternatives to get the very best one. It takes money to create better, more thorough, and accurate documents to build our designs, and to provide strong services in the construction phase. The client benefits. Better services result in better buildings, lower construction costs and fewer extras. Clients will learn that paying for increased services will make the buildings they own more appropriate and more durable. When we received the fees we deserve, we run better offices, with better staff and equipment, and fewer worries about money.

Let's sell these more relevant building types and these construction and fabrication processes not just to our clients, but to crowd-funding and to venture capitalists. Instead of working for a one-time fee, we would maintain ownership of our ideas and the income streams they produce.

Our professionalism should be recognized. Why are we intent on measuring the energy a building uses (not even the energy materials and the building process consume), rather than the professional practice that created the metric? Let's start a professionalism rating system to gauge architects' service: firms would be rated by the appropriateness and usefulness of their designs, the timeliness and cost-effectiveness of their process, and the reduced risk to their clients.

Let's take back the leadership we once had in the building process, and again become our clients' trusted, and compensated, partners.

PAUL SEGAL FAIA, ARCHITECT; COLUMBIA UNIVERSITY ADJUNCT PROFESSOR, AUTHOR OF *PROFESSIONAL PRACTICE: A GUIDE TO TURNING DESIGNS INTO BUILDINGS*.

LETTER> FRANCOIS ROCHE



COURTESY CITY OF CHICAGO

In our last issue (*AN* MW/SW 07_10_21_2015), we published an excerpt from Patrik Schumacher's now-infamous Facebook post which he also sent to *AN*. In response, Thailand-based architect Francois Roche sent us the following letter from his Facebook; an edited version was also posted on Dezeen. Here is part of Schumacher's text, and Roche's unedited response:

"The State of the Art of Architecture" delivered by the Chicago Architecture Biennial Exhibition must leave lay-visitors bewildered by one overwhelming subliminal message: Contemporary architecture ceased to exist, the discipline's guilt and bad conscience has sapped its vitality, driven it to self-annihilation and architects have now en masse dedicated themselves to doing good via basic social work. A less charitable interpretation sees the hijacking of the newly created Chicago Architecture Biennial by a marginal but academically entrenched ideological tendency within the discipline that has abandoned their societal remit of innovating the built environment at the world technological frontier and instead pours its allocated resources into concept-art style documentation and agitation of behalf of underdeveloped regions and milieu. -Patrik Schumacher

From inside / a review far away from the Neo-Liberal Jealousy and last Übermensch libertarian Patrik Schumacher jiggering... this past week / but within the ideological and political Tabula rasa that operated on the situation / Chicago Cultural Center was (is) before everything a social center... the last homeless spot in downtown Chicago / With a tacitly organized passive violence, during the Biennial opening days only "members" with authorized badges were admitted / Rejecting the regular "trashy-freak" users / To quote Bourdieu ... *Taste is an affair of business, exclusion, and social class...* contemporary museums widely betray the emancipating hypothesis of their origin and foundation / At the Biennial all architects were participating to this "hygienist" strategy / But the most absurd ... was to listen to their speeches about bio-politics, greenish-color and bottom-up slummy romanticism, saving Willy and the world with Joseph Grima (the curator in charge of this specific Activism Carnival) on the throne of those selves-complaisance-indulgence... at the spot and the time where the Cultural-Social Center became "bunkerized".

... Between Patrik and Zaha, who are ignoring with cynicism the workers' dramatic condition of servitude in Abu Dhabi, and who participated to the biggest brainwashing enterprise of these past ten years: technologies as a strategy of ignorance-arrogance-positivism (pleonasm), and symmetrically the participants of this Biennial who "naively and innocently" excluded the damaged bodies and disordered minds, while wearing their black Penguin suits to moralistically enact political entertainment... WHO are the most criminal?

Simply the two faces of the same coin or bitcoin... feeding themselves as a reciprocity simulacrum, as Ping-Pong between the Cynical and the Clown... the history of intellectual Tabula rasa... of architecture discipline...

Could we find a crack between the techno-fetishism and at its opposite the techno-regression? It is so comfortable to choose one of these chapels... there are many advantages to reduce or to falsify consciousness and knowledge... Techno-sciences shouldn't be an Object any more.... but a Subject that we have to re-appropriate in "democratic anthropo-technic" strategies... **FRANCOIS ROCHE**


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COURTESY SHIFT_DESIGN

A rendering of Shift_Design's vision for Moravian Street in Philadelphia, given a middle ranking as part of an initiative by Center Cities Residents' Association and one intrepid blogger.

PHILADELPHIA ALLEYWAYS GET RANKED A-F AS THEY ARE SET FOR A MAKEOVER

PHILL'D IN

"Abandon All Standards, Ye Who Enter Here" is the message that should precede Philadelphia's alleyways, according to Center City blogger William West. In a Center City Residents' Association (CCRA) newsletter, West described the alleyways as an "inartful jumble of architectural afterthoughts."

Of the alleyways in question, Waverly Street (which sits in between Addison and Pine Streets) was the target of West's wrath when he described as a "mess". However, in his opinion, it was not the worst cases that should be tackled first. Rather, he suggests we select those in the middle ground and make them an example of what could persuade others to follow suit.

West employed a grading system to quantify his observations, giving alleyways a grade from A to F. 'A' rated alleys were deemed actually attractive, while, down the scale, an 'F' was for functional with "no redeeming qualities."

Subsequently, Moravian Street was selected as the best middle-ground contender. Moravian was also appropriate due to its location—it is situated between two of the most popular retail blocks in the city.

Cue Shift_Design. Thanks to CCRA board member Andy Nicolini, a few Moravian Street residents, and a few other small businesses including Shake Shack, development on the average alley is underway. Shift_Design has worked with Shake Shack before and proposed numerous simple green installations, most of which involve clusters of planting and small flower beds being attached to the once-grimy walls.

These simple green plantings with shrubbery and bushes create a sense of place, while murals integrated with green walls, hanging lights and bird boxes round out the design. Now, one can easily imagine this as a place that has grown over time, not just an alleyway with some plants hastily chucked in.

Transforming an alley into a passage that can evoke feelings of topophilia is no mean feat. Shift_Design however, broke the journey into six separate zones to break up what could potentially be monotonous passage of green (not that this wouldn't be a drastic improvement). Zones are color-coded with these colors being painted on the road surface. Each zone also has a distinct theme. Zones One and Six focus on encouraging pedestrians in from the street; Zone Two places precedent on the mural; Zone Three is about the flora and fauna; Zone Four features chain trellising with lighting and an outdoor movie theater; and Zone Five focuses on hanging planters.

Founder and CEO of Shift_Design, Mike Gentile said that the murals will involve the Mural Arts Program. Elements like the hanging lights were a feature before the alley fell into disrepair.

Subtle lighting installations will also radically transform the space, especially at night. What was once an area to avoid during such hours now has the potential to be a place of genuine attraction, be it a romantic stroll or just a pleasant detour from the streets.

Gentile explained that the future of the space was also considered, there will be a year-long maintenance service and evergreen plants were chosen so the alley stays attractive during the winter.

Furthermore, Gentile added that the dumpsters on display violated city codes that weren't being enforced, something Shift_Design and the city authorities plan to crack down on.

Moravian Street now however, isn't the only alley that is set for a face-lift. Groundswell Design Group, who has a strong place making track record in Philadelphia, has proposed a similar overhaul of Pearl Street.

The outlook for Philly's alleyways, for now, seems promising. In almost Obama-esque fashion, it appears West was correct in when he said, "Progress is possible folks." **JS**

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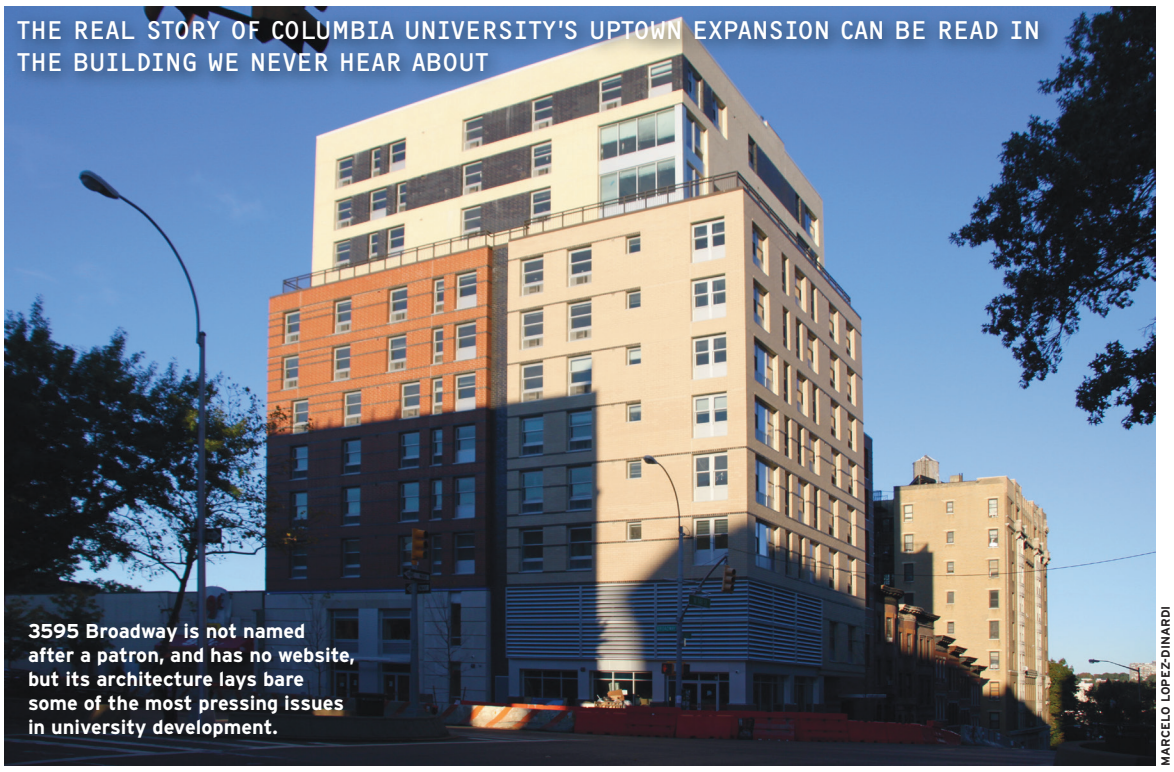
CRIT> 3595 BROADWAY

THE REAL STORY OF COLUMBIA UNIVERSITY'S UPTOWN EXPANSION CAN BE READ IN THE BUILDING WE NEVER HEAR ABOUT



3595 Broadway is not named after a patron, and has no website, but its architecture lays bare some of the most pressing issues in university development.

MARCELO LOPEZ-DINARDI

Designed by Renzo Piano, the Jerome S. Green Science Center at the new Columbia University Manhattanville Campus along 125th street and Broadway is basically a square and less expressive version of the Whitney Museum. The Columbia University Medical Center and Graduate Education building at 104 Haven Avenue between 171st and 172nd streets was designed by Diller Scofidio + Renfro. It epitomizes the architectural expression of continuity that was characteristic of the late 1990s and early 2000s and is intended to "foster connection and collaboration" among students, faculty and the medical community.

However, it's Columbia's 3595 Broadway, a massive, twelve-story concrete structure on the southwest corner of 148th street, that can help us ask questions about the role of the university and its expansion plans. This building is designed by a "specialized" local architectural firm to create "sustainable communities" through "well-designed and high-performance architecture" projects. These designations are highly questionable.

3595 Broadway is not named after a patron or an academic figure, it is only a series of numbers. The numbers are the product of a lot of consolidation, programmatic swapping, development air rights, easement acquisition, and a site strategy that included the demolition of a townhouse built in 1901. 3581-87 Broadway, 3595 Broadway, 3591-3599 Broadway and 600 W 148th Street are all numbers involved in the real estate and architectural operations.

3595 Broadway doesn't even have a dedicated web page like its uptown companions.

The new building will host the Meeting with God Church Inc., currently next door (occupying 3581-87 Broadway since 2007), formalizing the vacating and lot consolidation with 147th street for a future numbered project (also owned by the university). It proposes to construct and manufacture affordable housing 20 blocks north of the Manhattanville Campus as a measure to supply housing to "some residents" who were displaced by the larger operation on 125th street.

3595 Broadway is a massive opaque structure broken in two main volumes with a distinct brick cladding: Red terra cotta and sand-cream are the agents of contextualism. A third color of brick—black—is used to articulate the space between the two main volumes toward Broadway to formally give the impression that there are two buildings instead of one. A third, setback volume atop is fully clad in sand-cream color with black-brick details. A dark-brown cast-stone base fixes the building with to the ground.

3595 Broadway followed its legal capacities to build to the very edge of the plot line, permanently blocking two windows per floor of the adjacent 100-year-old brownstone on the west, condemning those units to gloomy interiors. The site's previous retail building—built around 1969—had a typical eight-to-ten foot easement space for light and ventilation to the building next door. That space gained adds roughly 3,000 square feet to the first four floors, a drop in 3595's 150,000-square-foot bucket. It seems that the domestic living environment of at least four units with three to five people each (12 to 20 total) was not enough of a reason to keep the light and ventilation patio for the mental sanity of all; it was not enough of a community.

The building is said to have three green roofs. I have seen one from my building rooftop and it's adorned with mechanical air handling units and exhausts. There is already a surveillance system in place, as well as exterior lighting that produces yellow light typical of the 1990s, Most importantly, it is vandal-proof.

I am glad Columbia University will divest from for-profit prison companies (they should eliminate all their ties with them), but perhaps they should also revise the legibility and legality frameworks for their expansion plans. They could re-evaluate what their architecture can be: provocative, controversial, agonistic, or radical. They could at least clarify what "high-performance" means for the new building, and which "sustainable community" they are sustaining. Unfortunately, they fall into the "well-designed" project rhetoric that lacks a proposition. I believe a research university at the highest level should also have highest design ambitions and competencies.

To what "community" does this building serve by implementing these architectural strategies characteristic of the neoliberal propositions of the 1980s? 3595 Broadway's apparent non-confrontational formal language visualizes critical conditions about how the university positions itself when speaking to their ivy-league-educated audience in their Manhattanville and Medical Center buildings in comparison to the public around their 3595 Broadway building at 148th street. The building in Hamilton Heights is evidence of how architecture is manipulated and treated with different standards (nothing new here) and how their formal, material, visual, programmatic, and even legal strategies (this is the only project where there is no executive architect separated from the design architect) are a concrete infrastructure for impressing and perpetuating what this seemingly innocuous building is doing: patronizing, marginalizing, and stigmatizing a neighborhood with the this-is-what-you-deserve-community-building proposition. Here, both the legible and legal framework clarify the role of architecture as a media for formulating ambitions, or lack thereof.

What is being manufactured is probably something different—something that will not speak to two-tone bricks compositions or legal compliance of construction codes. It makes legible some of the hard realities of the local and global expanding American university, where the school is both a real estate developer and an educational facility. Can or should the university aim for less apparent legibility in order to truly embrace progressive modes of building the future following its academic mandate? Can or should the university stop contributing as an inane city developer with their apparent mundane buildings? 3595 Broadway should not be a bland and insipid sample of physical reality. I am sure the university aims for an improved future for all, but it cannot fail in communities where it may be needed more.

The selection of the architect as designer and the executive architect also supports the problematic legibility all these projects are communicating willfully or not. The hiring of a "specialist" firm to work on 3595 Broadway reaffirms both the lack of "specificity" that a project may require (and questions the idea of specialization itself) and the problem of disciplinary knowledge in an architectural commission.

All the university's expansions will for sure score the "green points" needed for institutional validation including that of the Enterprise Green Communities, although I am still struggling to find the "high" and the '"performance" in 3595 Broadway. Perhaps it is only in the less apparent numbers that no one in the neighborhood will see or experience with exception of rent hikes. There is much to discuss about the Manhattanville Campus and the Medical Center, their content, and the role of the university in them. Unfortunately, 3595 Broadway is a mute conversation.

MARCELO LÓPEZ-DINARDI

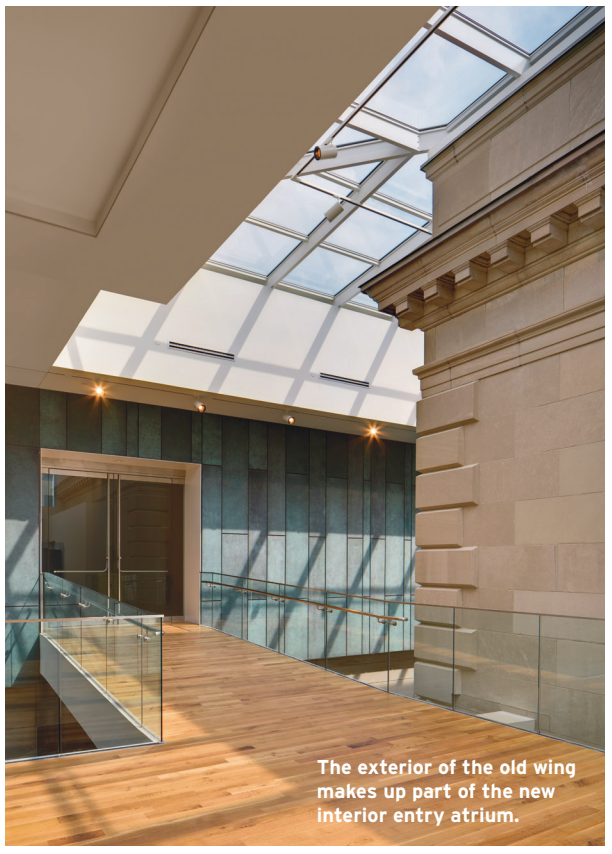


Renzo Piano's Jerome S. Green Science Center



The Columbia University Medical Center by Diller Scofidio + Renfro

COURTESY OF RPBDW (FAR LEFT) DILLER SCOFIDIO + RENFRO IN COLLABORATION WITH GENSLER (NEAR LEFT)



The exterior of the old wing makes up part of the new interior entry atrium.

LESS RUST BELT, MORE PATINA continued from front page big portions of its own collection. This is due to the fact that it was limited to its original ten galleries built in 1931. With the addition of nearly 24,000 square feet of gallery space, the museum effectively doubles the size of its exhibition capacity, as well as its ability to add numerous new programs. Now able to host larger events and gatherings, the museum is hoping the addition will help tighten ties with the greater Columbus community.

Bongiorno described the design as, "a reflection of the museum's ambition to be more visible, relevant, and connected to the community as a meeting point among art, the public, and the physical city." To help meet these goals, DesignGroup focused on producing bright flexible spaces. These include an atrium between the new wing and the original 1974 Ross Wing that can be used for events and serves as the main entry to the new wing. The main gallery space is encapsulated in a long copper-clad tube cantilevered at each end over a new sculpture garden in the rear and the front lawn of the museum. The glass base and ends of the new wing look out into the city, as well as allow the city to look in. Also of note is a special gallery constructed specifically to hold the large "Spirit" art installation by Mel Chin, an epic wooden barrel seemingly suspended above the gallery floor balanced on a single rope.

As the final stage of a three-stage campaign, which included renovations to the original museum and repurposing of another building, the $64 million addition is the culmination of over eight years of planning and building. In that time, the museum's investment has already started to pay dividends in awards and an expanding collection. Now with more space to exhibit and more diverse amenities, the museum is finally able to fully serve a community anxious to gather around art.

MM



A glass-faced cantilever looks out into the neighborhood.



The lower glass facade allows for a close link between the street and gallery spaces.

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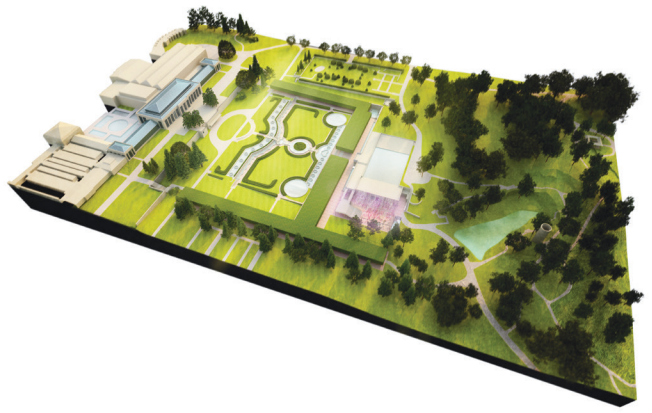
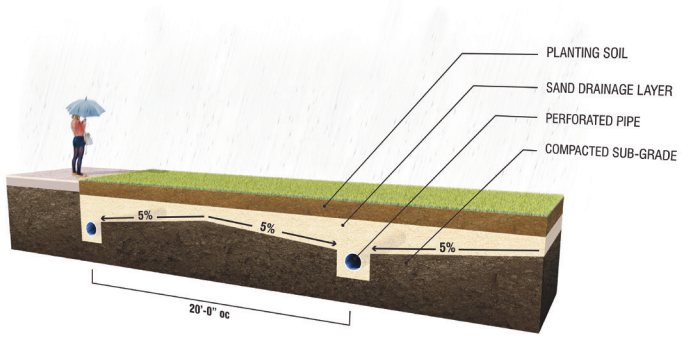
Restoring Pierre S. du Pont's Longwood Gardens in Kennett Square, Pennsylvania, requires more work underneath the ground than above.





Pierre S. du Pont's Longwood Gardens was once a complex that seemed like it would be more at home in the rural aristocratic lands of Europe than Pennsylvania.

With a taste for ornate and opulent styles, du Pont, a Philadelphian businessman of French descent, was determined to emulate his ancestors' grandeur.

Since construction finished on Longwood in the 1930s, du Pont had one of the most dazzling and decorated fountain systems at his disposal. However, after 80 years of existence, the time has come to restore Longwood's main fountain garden with a comprehensive makeover both above and below ground.

Dan Lepore & Sons, the firm in charge of stone restoration, had the painstaking task of returning over 4,000 unique pieces back to their former glory. To complete the task, each stone element was given a barcode so it could be individually tracked with all changes and processes being logged on the way.

Kate Brown, an architectural conservator at the firm, spoke of the "shell inclusions" in the limestone that had caused it to "deteriorate in unique ways." During the repair process, which involved extensive cleaning, the stones' intricate detailing can finally be realized once again, while retaining their aged authenticity.

At the center of the garden are *allées*, a French term for "driveways" and a nod to the surrounding Baroque masonry that du Pont no doubt discovered on one of his many trips to France.

Here, West 8, who master-planned the project and are in charge of landscaping, has lined the *allées* with *Tilia cordata* "PNI 6025" Greenspire little leaf linden trees. An abundant bloomer, these trees produce small fragrant flowers appearing in late June and July and are known for attracting bees. The French theme is also continued here with these trees being pollarded (a typical technique used to square off trees in France) to create a neatly sculpted aesthetic.

Boxhead bushes in the middle of the gardens have been remolded too, and the new billowing, braided forms are much closer to the 1920s original design.

While on the surface, the project may appear to focus on extravagant planting, fancy fountains, and blue-blooded vistas, it is below ground where the renovations really begin to make a difference. In fact, over 50 percent of the changes to be made are underground.

Here, the project by numbers is impressive: 1,400 linear feet of tunneling is being installed to improve access to the system, which boasts 51 tons of electrical wiring and some 54,000 feet of pipework. Within this piping framework, geothermal wells, which average a depth of 450 feet, will utilize the Earth's constant temperature as a cooling device; as part of a closed loop system, they will generate the power equivalent to air-conditioning units in 30 houses.

In terms of the fountains themselves, 379 legacy jets will be restored with updated nozzles, plumbing, and pumps. 1,340 additional jets and streams will be powered by 68 pumps that will be able to power water 175 feet into the air, 45 feet higher than it is currently able.

Three reservoirs will be used to gain better control of the system. If one goes down, the remaining two can still function, preventing complete outages. Meanwhile during winter, sections can be isolated to keep water running. A new strainer will also be in place to filter harmful debris that can damage fountain nozzles.

If that wasn't enough, state-of-the-art LED lighting will also be integrated to facilitate the production of what will be a spectacular array of synchronized light and water—with audiences hopefully being just as amazed as du Pont was back in 1893 when he marveled at the display on show at the Chicago World Columbian Exposition, the event that reportedly inspired his endeavors. **JS**



COURTESY LONGWOOD GARDENS (TOP IMAGE) OTHERS COURTESY WEST 8

RESOURCES

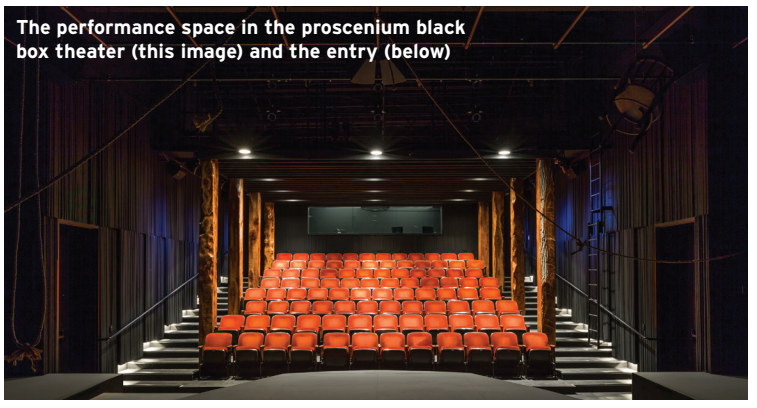
Stone Restoration
Dan Lepore & Sons
danlepore.com

Lighting Design
L'Observatoire International
lobsintl.com

Water Feature Design
Fluidity Design Consultants
fluidity-design.com

Plumbing & Electrics
Urban Engineers
urbanengineers.com





The performance space in the proscenium black box theater (this image) and the entry (below)

TWO BUILDINGS ON ONE SITE WITH TWO CLIENTS—DESIGNED BY ONE OFFICE IN TWO LOCATIONS

Black and Blue in Omaha

One would be hard-pressed to find an office quite like Min|Day. Split between the ever-expanding design market of San Francisco and the decidedly quieter Omaha, E.B. Min and Jeffrey L. Day take every project as a chance to explore new design strategies. "We are often trying to change the conversation to not be about architecture as a product," explained Day in a conversation with *AN*. "We try to make it about a process or experience of space, how it is used." This particular approach attracted the Blue Barn Theatre and Boxcar 10, the clients and namesakes of the office's recent adjoining Omaha projects.

What started as a single project, commissioned as part of the Blue Barn Theatre's 25th anniversary, turned into a second building project for Boxcar 10 and the administering of the Green in the City competition to design a public space on the remainder of the block. With their hands in every aspect of the full city block's development, despite each project having separate clients, Min|Day was able to weave programs and materials into a cohesive, though layered, organization.

For Blue Barn, a proscenium-black box theater hybrid allows for the flexibility needed by the ever-experimenting theater. Much of this flexibility comes from a buffer in the form of the Green in the City Project— designed by the competition winners el dorado inc.—which can be expanded into and reconfigured as part of the theater when needed.

"The great thing about working with the theater company is they understand the creative process, they are not just buying a product. They have confidence in the process," Day said. Taking a cue from the improvisational nature of their client, Min|Day released some of their own control over the project and flipped the client-architect relationship. "It was a very loose process, we were breaking away from the sole authorship model of architecture." Using some of their design fee, four artists were commissioned to design and build specific elements for the project. A brick vestibule, interior lighting fixtures and furniture, sinks, and the epic backstage door were integrated in the architecture.

The neighboring Boxcar 10 project acts as the mixed-used component to the planned arts hub. A restaurant on the lower level, which continues the material elevation from the neighboring theater, supports a large black mass of three loft apartments. The apartment block shares the size and proportions of the void that is the performance space in the theater: a nod to the massing design process, and the color of the black box from which the form was derived.

It seems only appropriate that an office that describes itself as "one office split between two locations (not a practice with two offices)" would be able to negotiate the complex relationship of a multi-client single location project. **MM**



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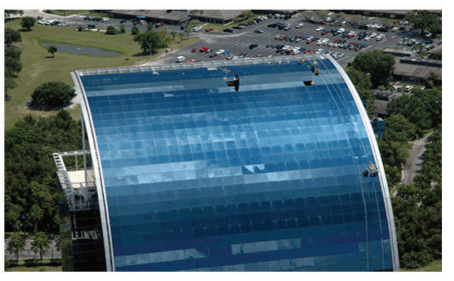

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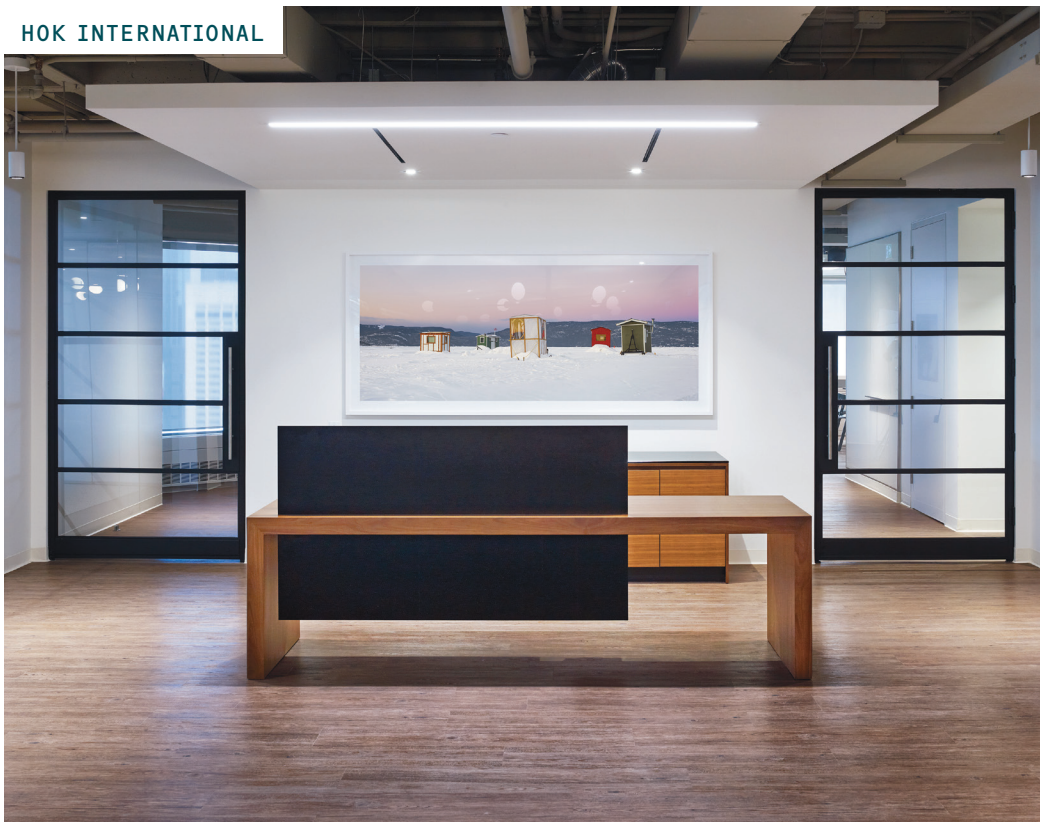
DESIGN AT WORK> HOK TORONTO OFFICE

HOK INTERNATIONAL







HOK's new Toronto office combines open space design with designated "oases" like the kitchen and supply rooms to foster connectivity and "head's down" areas to provide privacy.

It's all well and good to extol the virtues of the "new workspace"—open layouts, flexible seating, standing desks, collaboration areas—but as with any building, it is difficult to pinpoint precisely what will or won't work until people use it. In February, HOK International moved into its new Toronto office designed by the firm itself, a process that, from conception to completion, allowed the team to experience the methodologies of their practice firsthand.

For their new digs, HOK selected the 22nd floor of a 1971 downtown tower with 360-degree views overlooking City Hall. The existing space was in good condition, but had been stripped bare, so the firm had flexibility to create a new space inside the shell. "We pretty much took ourselves through the same process as we would with clients," said vice president Lisa Fulford-Roy. "How can we best support our employees? What functionality do we need the space to have? How can we create a positive, collaborative, close-knit culture?"

After surveying their staff and holding many meetings, Q&A sessions, and designing multiple iterations, the solution was an open, circular 1,485-square-meter office with ample nooks and spaces for working privately and a unique, flexible desk system for the locations 110 employees. Desks previously took up the bulk of their old office, so to create more room in the new one, approximately 30 employees who aren't in the office on a daily basis, have "agile desks," or non-dedicated seating. The remaining desks are slightly smaller than the previous ones and grouped together, with open standing desks at the end of each row. Integrated technology throughout makes it simple to pick up and move around the office as needed. As a result, even though the new office is slightly smaller than the previous one, and they've added new staff in the past six months, the office feels spacious.

"Honestly, I've had more meaningful conversations in the new office than I had in all three years at the old one," Fulford-Roy said. "Shrinking the footprint and creating oases like the kitchen, singular places where people will run into each other and say hello, really does help everyone connect."

The firm opted to retain a loft-like environment even though the building is not brick and beam. Exposed ceilings in the main areas increase spatial volume, while dropped ceilings in conference rooms promote a sense of intimacy and offer better acoustics.

The two private offices and conference rooms are clustered in the center of the layout so that all employees can enjoy being near the windows and have equal access to natural light. Bouroullec Liane pendants and myriad white surfaces lend the space a bright, clean aspect, cushioned by wood-look laminate tile flooring that offers an acoustic buffer, and outfitted with classic furniture from the likes of Herman Miller. Seamlessly alternating between "public" and "private" spaces creates a continuous flow and puts clients and employees alike at ease.

"We wanted the space to reflect who we are as a company, but we also wanted it to be comfortable to our clients—to feel hospitable. From the minute you walk in from the elevator, it is very welcoming," Fulford-Roy said.

Aiming for LEED Gold certification by early next year, HOK installed a highly-efficient HVAC system, insulated glazed walls, low-energy lighting, Energy Star appliances, and low-emission surfaces. The building's location was also chosen in part based on its proximity to the subway to ease employees' commutes. "It's all about promoting and fostering good design principles," Fulford-Roy said. "All the natural light is good for mental health and well-being, and honestly the views are incredible, some of the best sunsets I've seen in my life have been from here. We'll all stop working to watch the sunset together and chat."

Safe to say that six months in, the firm stands by their ideal workspace philosophy. "These were all principles that I knew to be true when it came to increasing connectivity in the office," Fulford-Roy said. "But now that I've lived it, I can see how it works and speak to it passionately. OM

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The multi-generational Necklace Residence in Long Island, New York.

MILWAUKEE'S COVETED MARCUS PRIZE IS AWARDED TO JOSHUA PRINCE-RAMUS OF REX

WINNING IN WISCONSIN

Milwaukee, Wisconsin, might not be the first place one thinks of when thinking about major architectural prizes, academic or professional. But for the past 12 years, the Marcus Corporation Foundation (The philanthropic branch of the Milwaukee-based entertainment company, the Marcus Corporation) and the University of Wisconsin-Milwaukee School of Architecture and Urban Planning have awarded the biannual Marcus Prize to practices around the world. The prize, one of the largest in architecture, awards $50,000 to run a studio at UWM as well as a $50,000 cash prize to the office. Former winners include MVRDV, Diébédo Francis Kéré, and most recently Sou Fujimoto. The goal of the prize is to support emerging practices "on a trajectory of greatness" and bring those voices to Milwaukee.

In its sixth iteration, the Marcus Prize has been awarded to Joshua Prince-Ramus of REX.

The choice of Prince-Ramus was driven by his office's ambitious, yet practical, approach to architecture in an urban setting. "We understand the Marcus Prize as not just a commitment to the school, but to the city of Milwaukee," explained Prince-Ramus in conversation with *AN*. "They symbolize and help drive the millennial generation's rediscovery of the city," jury member and architecture critic Blair Kamin said. With an emphasis on performance over function or form, no particular style or movement can be pinned to the Price-Ramus' work. This attracted the jury, who praised the "broader cultural significance" and "typological invention" of the work.

Prince-Ramus discussed some preliminary ideas for the graduate-level studio with *AN*. "We have a particular position on sustainability. We plan on focusing on how

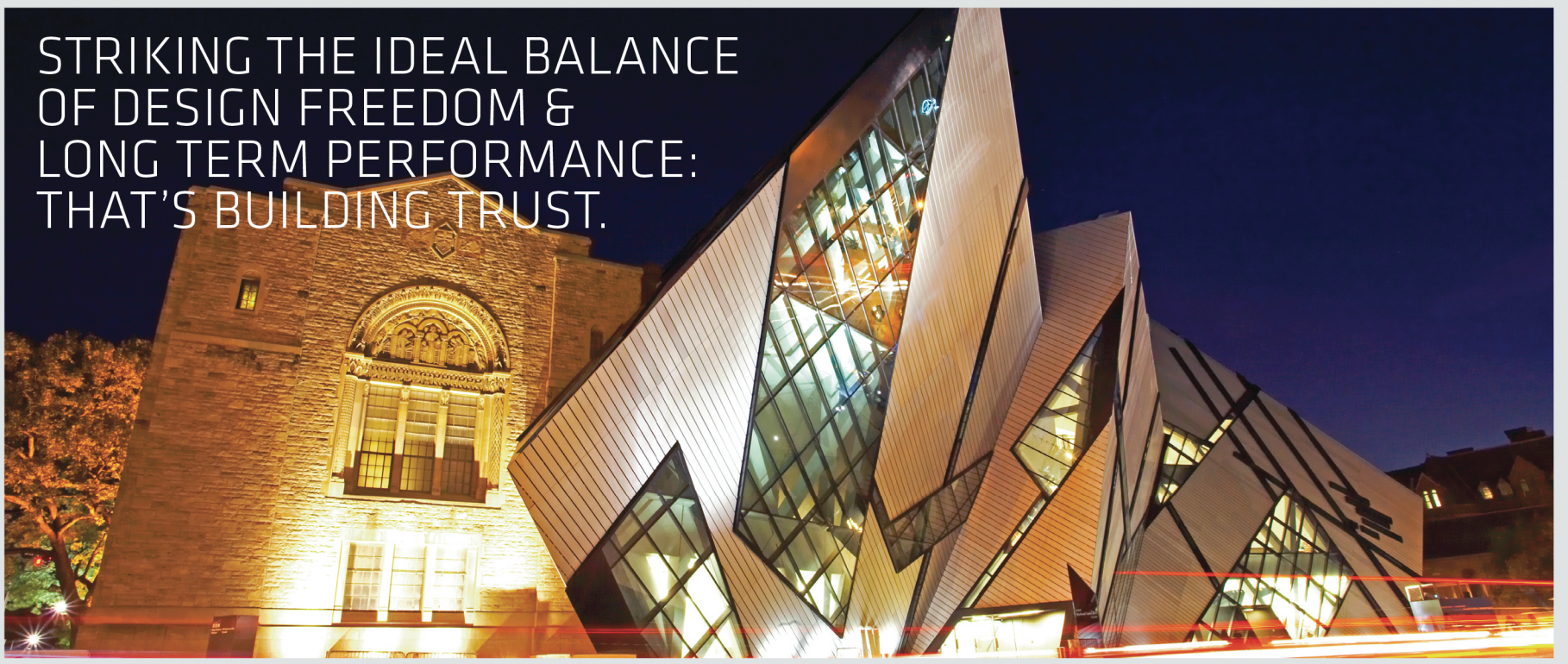


Competition winning design for the expansion of the Mercedes-Benz campus in Stuttgart, Germany.

LUXIGON

density and diversification can help rehabilitate urban centers and take advantage of existing buildings and infrastructures." Speaking on the role of adaptive reuse: "The reality of the future of architecture is in adaptive reuse."Prince-Ramus plans on having the students work in groups covering a variety of programs to test possibilities in a handful of vacant buildings in downtown Milwaukee. "We are not going to look at beautiful 19th-century buildings, but rather the more ordinary empty buildings from the 1950s and 60s." These types of buildings are surprisingly common in downtown Milwaukee.

The Marcus Prize studio will be held in the 2016 spring semester, and will be led by Prince-Ramus along with UWM adjunct associate professor Matthew Jarosz. Prince-Ramus will also be invited to lecture, as well as participate in public workshops. **MM**



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LEFT: JOSHUA YETMAN; RIGHT: RONBLUNT / ALL COURTESY RENWICK GALLERY.

WHAT'S OLD IS NEW AGAIN IN WASHINGTON, D.C., AS THE RENWICK GALLERY, THE "AMERICAN LOUVRE," REOPENS IN NOVEMBER

RENWICK READY

The Renwick Gallery in Washington, D. C., called the oldest "purpose-built art museum" in the U. S., will reopen to the public on November 13, following a two-year, $30 million renovation.

The event is a highlight of the fall 2015 arts season in Washington. There will be a black-tie gala dinner on November 8, three new books on the museum, and an inaugural exhibition featuring nine prominent contemporary artists.

Then there's the building itself, which opened in 1863 and was designed in the Second Empire style. With the project's completion, Washington gains a thoroughly renovated landmark with restored historic features and an entirely new infrastructure that will enable it to continue serving as the home of the Smithsonian American Art Museum's (SAAM) Contemporary Craft and Decorative Arts program.

The 156-year-old building, which stands across from the White House at Pennsylvania Avenue and 17th Street NW, was saved from the wrecking ball in the 1960s at the urging of First Lady Jacqueline Kennedy. The original architect was James Renwick, Jr., for whom the building was later named. John Carl Warnecke and Hugh Newell Jacobsen worked on it in the 1960s. Westlake Reed Leskosky is the architectural design and engineering firm for the latest renovations.

"The Renwick Gallery is the first purpose-built art museum in America and an architectural masterpiece. We are delighted to renew this great historic building for the next half-century," said Elizabeth Broun, the director of SAAM.

Renwick drew architectural inspiration from the Louvre in Paris, Broun noted. "When the building first opened," she said, "it was hailed as the 'American Louvre,' symbolizing the young nation's aspirations for a distinctive culture."

"It's important architecturally because it helped launch the Second Empire style in the United States," said Charles J. Robertson, deputy director emeritus of SAAM and author of *American Louvre: A History of the Renwick Gallery Building*, available in December.

As part of the project, contractors removed false ceilings to reveal two long-concealed ceiling vaults on the second floor. They restored the original 19th-century window configuration throughout and repaired original moldings. They upgraded art storage areas, repointed exterior brick, repaired stucco, remodeled restrooms and replaced mechanical systems.

Public spaces are now illuminated entirely with LED lighting. The Grand Stair has a new red carpet by French architect Odile Decq—another sign of French influence in the building.

Of the three books, Robertson's *American Louvre* traces the building's history and innovations. *Craft for a Modern World, The Renwick Gallery Collection*, by Nora Atkinson, focuses on the permanent collection. *On Wonder,* by Nicholas Bell, documents the debut exhibition.

The refurbished "Octagon Room" will contain an exhibit about the building's history.

Wonder, the inaugural exhibition, features installations by Jennifer Angus, Chakaia Booker, Gabriel Dawe, Tara Donovan, Patrick Dougherty, Janet Echelman, John Grade, Maya Lin, and Leo Villareal.

EDWARD GUNTS AND JAMES RUSSIELLO



PRAKASH PATEL PHOTOGRAPHY/COURTESY RENWICK GALLERY



ROBERT KNUDSEN/COURTESY JRK PRESIDENTIAL LIBRARY

Above right: Leo Villareal's installation complements a lighter, more contemporary color palette and gilded details in the Grand Staircase looking toward the Octagon Room. Below, Jacqueline Kennedy examines plans for the Renwick.


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BELAY



PLEATED HOUSE



STUDIO FOR A COMPOSER



TOPO HOUSE



TOPO HOUSE



COURTESY JOHNSEN SCHMALING ARCHITECTS

"We never consciously decided on it," explained Sebastian Schmaling of Milwaukee's Johnsen Schmaling Architects, while discussing why the office has focused on mostly single family homes in the last 12 years of practice. "We're never specifically thinking about program when taking jobs, rather we try to find whatever's interesting, but as a young firm it is easier to get these things built."

And building is what partners Brian Johnsen and Sebastian Schmaling have been doing. Their award-winning houses are highly detailed, materially rich forms designed for a clientele "interested in a journey of discovery." Their process involves an iterative series of conversations with the clients about form, the site, and materials investigated through hand drawings and study models. "We always make a point to show our clients a series of models."

But single-family housing is not all that Johnsen Schmaling is focused on right now. In a shift in scale for the office, their current project, Belay, is a multi-unit project that integrates a canyon-like climbing facility. At the other end of the spectrum, the office has designed and built projects as small as a stand-alone single room studio for a country western musician. "The clients that hire us are usually interested in the arts." Addressing a possible misconception about the part of the country they chose, Schmaling said, "There is a real contingency of people here willing to take risks and experiment, and now half of our clients aren't even from Wisconsin." As the office's market grows with recognition, Schmaling reflects on what it means, or doesn't mean, to work in a medium-sized Midwest city.

"We are often asked 'Why Milwaukee?' Our answer? 'Why not!'" Although admitting that there is an economic advantage to being in a smaller city like Milwaukee, Schmaling is also quick to point out how things have changed in his time in there. "When I was a student here in the late 90s, it was difficult to get information—you'd have to order a book about Zumthor that wouldn't show up for two weeks. Now with technology, everything is available at all times. The whole conversation has really become irrelevant to us."

And the reach of the office has definitely been growing. With projects like their Topo House and Pleated House continually receiving attention from press and award juries nationally and internationally, Johnsen Schmaling is quickly establishing themselves as a critical practice to watch.

BELAY
MILWAUKEE, WI

Currently under construction, Belay sits in the heart of Milwaukee on a remediated brownfield. Maintaining some of the roughness of the former industrial site, careful attention is paid to materials and form, with the main interior space designed as a canyon-like climbing club. "We construct a narrative of what the building looks like, and then grind away, perhaps sometimes too much, down to the details," laughed Schmaling explaining their approach to larger projects.

PLEATED HOUSE
DOOR PENINSULA, WI

Nestled in Wisconsin's picturesque Door Peninsula, the Pleated house blends with the form of the landscape and the surrounding trees with its articulated cladding. This ambiguous boundaries between man-made and nature, interior and exterior, is a negotiation between the bright white interior and the shaded dense forest that surrounds the project. Exterior patios and large sliding glass thresholds further this delicate interaction between the building and the site.

STUDIO FOR A COMPOSER
SPRING PRAIRIE, WI

A limited pallet of sober materials comes together to form a rural writing and recording studio for a country western musician. Shrouded by a rusting steel skin, the main single room space of the studio looks out from the steep hill the project is born into. Carved into the hill, acting as the base for the studio is a concrete storage space. Separated from this solid foundation by a glowing frosted clerestory, the upper studio volume stands ever so slightly off the ground.

TOPO HOUSE
BLUE MOUNDS, WI

Situated in the dramatic pre-Ice Age landscape of Wisconsin's "Driftless Region", the Topo House is formed by a green roof emerging out of one of the many rolling hills that defines the area. Conceived as a blurring of landscape and architecture, the home was designed for a couple moving out of the city to get closer to the nature they enjoyed biking through. A glass look-out is perched atop the long linear form of the house, looking out, as much as it is looking back at itself sliding into the landscape.

BELAY



PLEATED HOUSE



STUDIO FOR A COMPOSER



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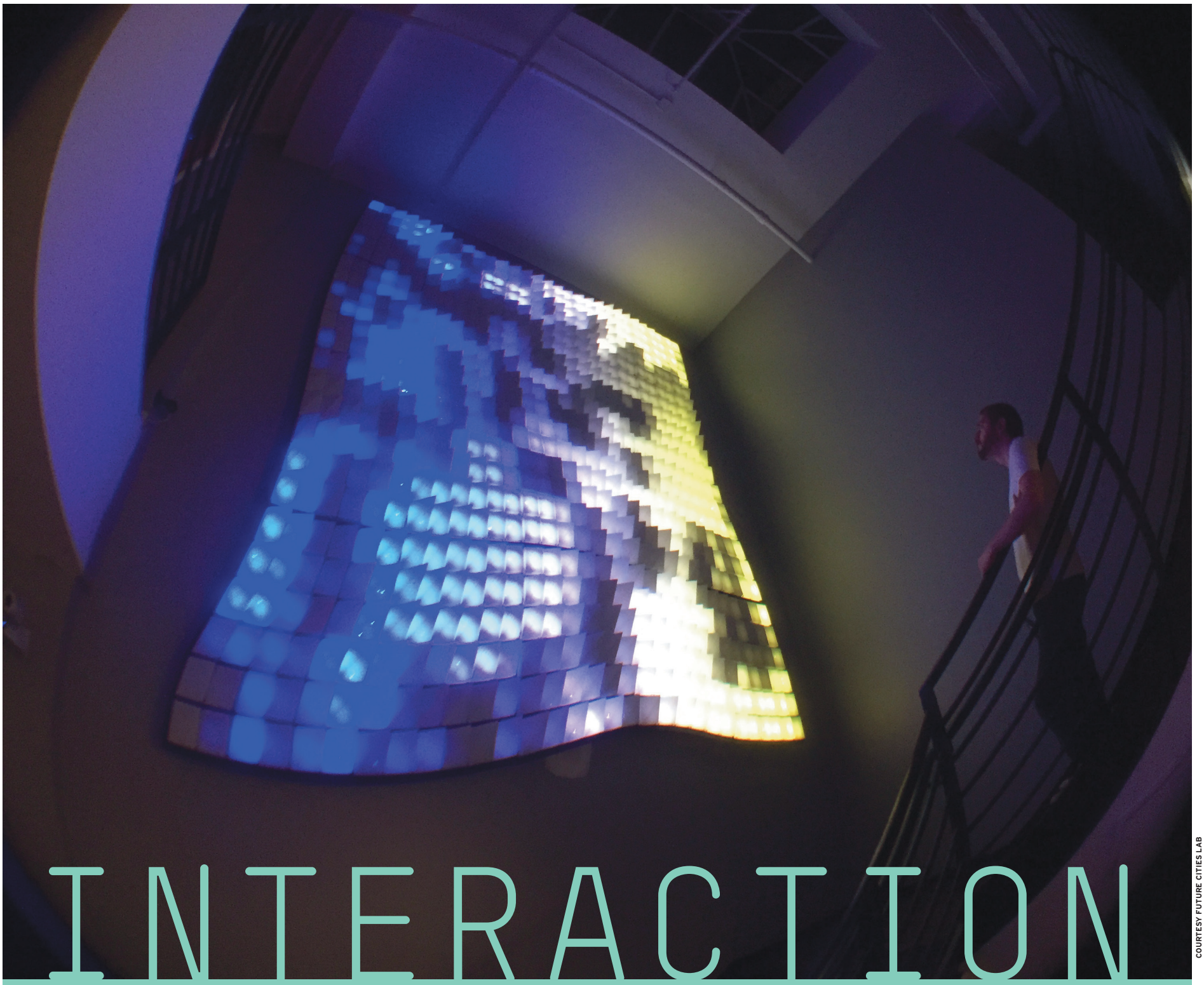


COURTESY FUTURE CITIES LAB

INTERACTION PACKED

HOW INTERACTION DESIGN AND IMMERSIVE ENVIRONMENTS ARE CHANGING HOW WE RELATE TO ARCHITECTURE AND OURSELVES.

BY MATT SHAW



COURTESY ROCKWELL LAB

This page: Rockwell Lab's installation, *Luminaries*, will illuminate New York's Brookfield Palace starting December 1 with 650 interactive LED-filled cubes that can be controlled by visitors via "wishing stations." **Facing page:** In Bitly's New York office, San Francisco-based Future Cities Lab crafted a light sculpture that reflects real-time data on the usage of the company's shortened URLs.

October 21, 2015—the future date that Marty McFly traveled to in *Back to The Future II*—was two weeks ago.

What did *Back to the Future II* predict and what did it get wrong? While the flying cars and ubiquitous fax machines didn't quite turn out, fingerprint sensors and video chats definitely did. But one scene isn't too far from our current future: Marty walks through the town square, bewildered by what his town looks like 30 years in the future and he comes across *Jaws 19* on the marquee of the movie theater (the same theater from 1955 and 1985). The movie is playing, and a holographic shark leaps from the building to eat Marty, who is thoroughly scared.

How close are we to this reality, where buildings and people interact through immersive, sensorial environmental features?

This technology, including light and sound components, as well as interactive hardware and software, is increasingly included in installations, exhibitions, branded environments, entertainment venues, and elsewhere. Like the *Jaws 19* shark, it brings spaces closer to us through physical and sensorial interactions. These spaces rely less on traditional architectural effect and more on actively evolving a kind of engagement with space. It includes lights, sounds, smells, touchscreens, interactive content embedded in buildings, and even the integration of social media into space.

Could interactive technologies and the lessons of immersive spaces begin to offer new ways for architecture to operate in culture writ large? As this technology-architecture combination evolves, will it offer new forms of collectivity through design?

Interactive Holidays

Starting December 1 in New York City, the 2015 holiday season will kick off with an installation at the Brookfield Place Winter Garden—an Archigram fantasy applied to a classic piece of '80s tropical historicism. Cesar Pelli designed the Crystal Palace–like space and Rockwell Lab is installing *Luminaries*, an interactive light sculpture composed of 650 suspended cubes that will float among the palm trees. The LED-filled cubes, or "luminoids," as they are called in-house, will be mostly ambient until visitors control them. Visitors "make a wish" by interacting with touch-sensors embedded in three Corian wishing stations that send pulses of color-change through the installation above. The Corian touchscreens are a traditional surface material embedded with technology to augment the physical experience into an interactive one. Designers can also control the cubes individually to program a sequence, making a more choreographed performance.

The installation is designed to be downtown's version of a holiday spectacle in the vein of Rockefeller Center's tree-lighting, but Rockwell Lab hopes it will be an ongoing gathering place though the holidays. As users send their "wishes" through the cubes, they will interact with the environment and also with each other—they can watch others control the panels and work together to create new patterns. "Rockwell Lab is about using interior space to bring people together and ask, 'How do people connect in space?'" said Rockwell Lab studio leader Melissa Hoffman.

Rockwell Lab has four architects, three strategists, and over 20 tech people who are working to blur the physical and digital in a myriad of situations. "In our projects, content lives in a space. We think of it often as live, digital wallpaper. It is architectural."

Inside the Rockwell Lab at Union Square, New York, small-scale prototypes are scattered around a studio-like space. It is an ongoing physical experiment with mock-ups and prototypes littering the area, from color-changing glass to LED screens flashing GIFs. These experiments linger and offer a glimpse into the lab's iterative design process. On one table there are tiny projectors that kiss scale models with light; elsewhere sits an Oculus Rift device that allows designers and clients to really see what the experience of their proposed spaces will be like. "We use it internally to understand, but also to have the client understand," said Hoffman.

Design through Auralization

At Arup's SoundLab, they are simulating sound in the same way that Oculus Rift is simulating visuals. The SoundLab is a hi-fidelity (literally), spaceship-like space with the most cutting-edge sound, visualization, and 3-D-modeling technology integrated into a presentation space that would make most corporate executives proud. Their "auralization" system allows users to hear the acoustic qualities of an imagined space in real-time, through a 3-D simulation. For example, I was treated to a video tour of Brooklyn's new National Sawdust performance venue. As the tour twisted and turned, it ended on the balcony, where I could turn my body in real space, but the sound was coming from the same place in the virtual space. The "real me" was moving, but not the virtual stage. It is the sound equivalent of the Oculus.

While the simulation is a great tool for showing off the new building, it is also very useful on the front end for making design decisions.

The SoundLab was conceived in 2001 as the latest in the evolution of sound visualization technology that had been developing for nearly 50 years. The internal metrics that acoustic engineers were using were almost incomprehensible to outsiders. Visualization made visually tracking waves and their reflections possible, but it still didn't accurately represent the sound in a space to clients. The "auralization" was built using anechoic chamber music that was recorded in an acoustic reflection-less space at Bell Labs in New Jersey. This reverberation-free music is then digitally combined with data collected from a space using a "pulse" with an omnidirectional loudspeaker and microphone, or is extracted from a 3-D model given to them by the architects. The result is an acoustic virtual reality, or a map of how a sound travels in space. These audible acoustic sceneries allow designers to make architectural decisions based on qualitative factors rather than prescriptive objectives.





Building as Instrument

Brooklyn design studio Bureau V and Arup SoundLab worked closely on National Sawdust, a new music venue in Williamsburg. From the outset, Sawdust was the brainchild of attorney, organist, and philanthropist Kevin Dolan, who had a specific vision for a space that would accommodate a variety of types of live music, without compromising any. In addition, he wanted to make the space a forum for performance, recording, broadcast, and experimentation in composition—a tall task for the design team.

"[Dolan] could say what he liked, but he couldn't design it or talk about it," explained Arup's head of acoustics, Raj Patel. "To get the intimate experience he wanted, we had to have the right reflection patterns." In the end, SoundLab technology let them fine-tune the performance space of National Sawdust so that clarity, loudness, intimacy, reverberation, envelopment, and timbre could be adjusted by the artists in sound check. Dolan got what he wanted, which is a space that can be altered for both acoustic and electric performance without physically transforming the visuals in the space.

The vision plays out as an intimate venue that has the ability to shift for different exceptional sound qualities, but does not change its appearance; the architecture is the acoustics. "At the SoundLab, we see the



ABOVE: DAVID ANDRAKO / LEFT: FLOTO + WARNER

relationship of architecture and acoustic engineering as seamless," said Patel. "For National Sawdust, we really wanted to think of the venue as an instrument that could be tuned like any other."

National Sawdust is located in an old sawdust factory, where a large, brick industrial structure sits over the L subway line. The performance space is acoustically isolated from the outside to keep all vibrations out and minimize background noise. Arup helped develop a box-in-a box construction that is suspended on spring isolators so that there is no shared structure between the two boxes. The rectangular space was modeled in the SoundLab to achieve ideal proportions for the types of performances Dolan requested; he was in the facility at Arup's Financial District office from the start.

The interior box is a large, steel structure with inset laser-cut aluminum panels covered in fabric—a system designed to let sound through to the CMU wall behind. "It was important that we did not lose sound as it passed through the first layer," said Matthew Mahon, a senior consultant on acoustics and audiovisual at Arup. However, in between the two walls is a curtain system that can be tuned for specific performances. For instance, jazz typically requires less reverberation and a dryer sound, while chamber music usually requires more sound reflection and thus a brighter, enveloping sound.

"As the audience passes through the familiar, rough, post-industrial exterior, the space reveals a pristine, jewel-like volume formed by a sculptural composite skin of patterned, perforated metal and fabric," said Bureau V principal Peter Zuspan. "This acoustically transparent, but visually translucent skin unifies the space by collapsing the variable acoustic systems, vibration isolation system, and audio-video infrastructure into one scenographic element, thus eliding technology and aesthetics into a seamless experience for a wide variety of repertoire."

Each wall of the interior box has a curtain that can be adjusted by hand with a pulley system during sound check, fulfilling what Patel described as the "venue-as-instrument" concept. The upper balcony also serves to increase the reflection and reverberation at the top corners of the performance space. A second series of six curtains wraps the back of the balcony space, allowing for even more control. SoundLab designed several settings that can be used depending on the type of music.

Bureau V and SoundLab were able convey the qualitative experience of being in different parts of the space. On paper, two different design schemes might be very similar, but in actuality, they could have very different experiential properties.

Small nuances in the shape of the room, the materials, and the proportions of the room or variations such as balconies make for huge differences in sound. The auralization helped Arup and Bureau V create a space that can morph into whatever the artist needs.





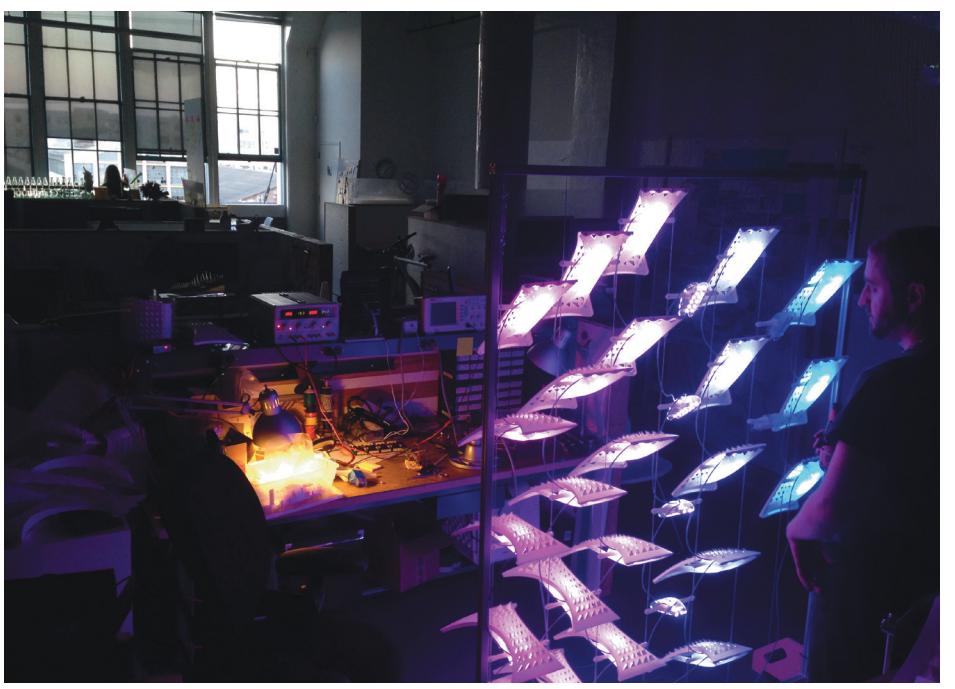
PETER PRATO PHOTOGRAPHY / COURTESY FUTURE CITIES LAB

Facing page, bottom: National Sawdust with some panels removed to expose the operable acoustic drapes that allow different configurations for different types of music, while maintaining a visual appearance. **Top:** Embedded and ceiling mounted lights allow variations on the interior surfaces.

Top: Inside the fabrication studio with Future Cities Lab. For Murmur Wall, on view at Yerba Bueana Center for the Arts in San Francisco, steel and acrylic tubing composes the structure, which is lit by colored LEDs.

Above: The Murmur Wall engages visitors by allowing them to see what people in the area are saying on social media. LED pulses turn into "murmurs" of text, when they reach the digital display units.





Future Cities Lab

If National Sawdust is a classical instrument that can be tuned, then Future Cities Lab is an open mike night mixed with a drum machine circle. Working in similar realms as SoundLab and Rockwell Lab—experimental, immersive environments that are produced by augmenting traditional architecture with interactive technology—San Francisco–based Future Cities Lab is led by design principals Jason Kelly Johnson and Nataly Gattegno. Their work integrates physical computing into architecture and represents an even more experimental realm of interactive architectural design and fabrication; as a result, it is also at a much smaller scale

Above left and right: Future Cities Lab working with prototype and experimental hardware. These full-scale mock-ups become the basis for their public installations.



Below: In Arup's SoundLab, a double-width projection screen displays a space, while the speakers surrounding the visitor project sound as it would be in real life. The spatial simulation can also be augmented with an Oculus Rift, the visual equivalent of the SoundLab.

COURTESY ARUP; FACING PAGE: COURTESY ARUP

than Rockwell and Arup.

For Bitly's New York office, Future Cities Lab was commissioned to build a light sculpture that would reflect the company by visualizing its data. The design was conceived in collaboration with Bitly. Programmers built an API (a small piece of code) that linked data derived from Bitly's shortened URLs directly to FCL's responsive installation. Each day, millions of web links are channeled through Bitly via Twitter; FCL set out to visualize this data in space.

FCL built the data visualization piece in the lobby so that the immense data set feeds LEDs inside of folded, laser cut, translucent paper diffusers. It is a living sculpture that changes in real time so the CEO can look at the sculpture and see what is happening—when, where, and how much data is being produced. 24 rows and five columns represent 24 hours in a day and five high-traffic locations. "It is a really advanced data scape of the company's inner workings," said Johnson. "A lot of our work is interconnected like that with the internet. We give expression to sets of data that are nested in the internet. We are not as interested in freezing forms in architecture, we are interested in letting data begin to animate and inform and become a poetic element in a building or a surface. The data is always evolving."

Public Interaction

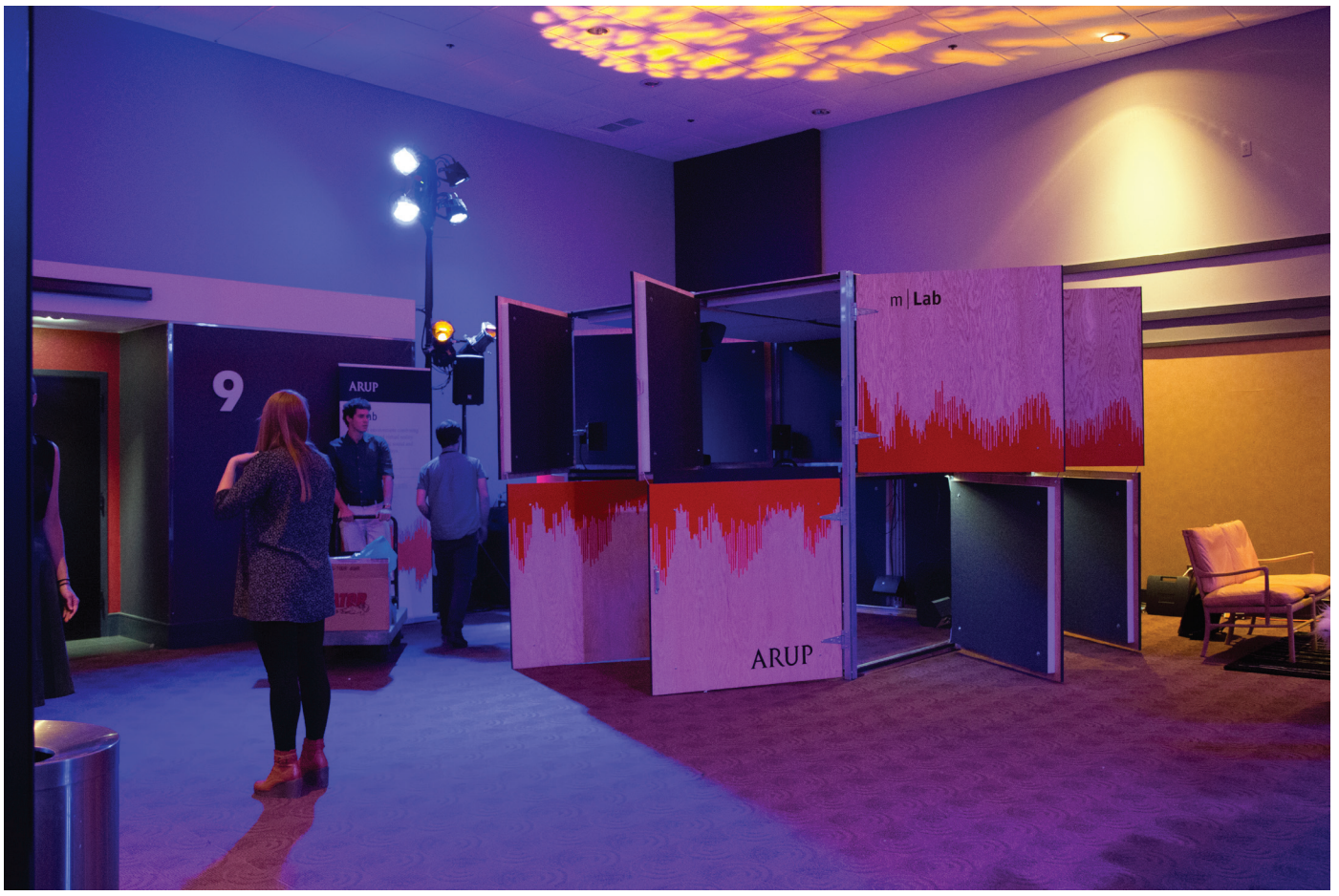
"We are interested in architecture that is responsive, changing and shifting, and has an ongoing relationship with people and technology in a broader context. We see that attitude in every other allied profession around us," Johnson said. "We see it in the automotive industry, fashion, music, video. We are interested in taking."

He also cites Superstudio's Continuous Monument as one of many radical '60s and '70s technocratic projects from which their responsive building systems have taken inspiration. In the famous set of collages, a horizontal, totalizing, gridded white architecture tears across the horizon, with nomads plugged into the landscape. "We like these utopian ideas, like, 'How can interior public space and civic space be altered by these technologies?'"

For Future Cities Lab, the best spaces are where architecture, landscape, and interaction design are starting to fuse. "When architecture begins to engage with tech, it becomes more potent," Johnson said. "Our cities are being handed over to engineers who don't always understand what architecture can bring. We want to bring that ethic that has been in architecture for thousands of years, and use that as a beginning point for new ways of working."

Their project "Murmur Wall"—on view now at Yerba Buena Center for the Arts in San Francisco—might well be a glimpse into the future of integrated design. The steel and acrylic tubing structure sits outside the Yerba Buena Center, collecting data from nearby users. Data is displayed as light pulses that become text on digital displays as they pass through, showing in real-time what people are posting on social media. It is a public installation that they think of as a monument or a fountain would have been in Ancient Rome. Their goal is to make the city more transparent by data participating in the public realm rather than hide nested in a phone. An iOS app also allows visitors to post things directly, too.





Top: The Arup SoundLab goes mobile at the Architecture and Design Film Festival at Chelsea's Bow Tie Cinemas. The mission of the m | Lab is to turn the speakers "outward" and help the public visualize spaces and hear what they would sound like.

Above: A man is immersed in the Oculus experience at the m | Lab. Arup hopes that one day this technology will have a variety of uses at larger scales and in more public environments.

These immersive environments are evolving from simple interior spaces that envelop and engage those on the inside, into larger, more complex architectural projects that alter the ways in which we relate to buildings, and ultimately each other. In Rockwell's case, they are using media-rich architecture to enhance the experience of their spaces and make temporary content-rich space. For Arup, the National Sawdust project showcased their ability to use technology to make design decisions for a more sensorial experience, as well as to convey that experience. Future Cities Lab is attempting to connect the spaces we encounter in the everyday even further, bringing them to life with new technologies. For all of them, immersive and interactive experience is a way forward in connecting us to architecture and the world around us.

MATT SHAW IS *AN*'S SENIOR EDITOR.

Glass

Published by The Architect's Newspaper www.archpaper.com



A long-standing symbol of modernity, transparency, and progress, glass is a true classic. And thanks to new technology and installation methods, the material continues to stay cutting-edge: responding to changes in light, providing a sound barrier, and offering thermal insulation. The following selection of project case studies and products displays the wide range of possibilities and uses for this high-performing material.

Reported by Leslie Clagett and John Stoughton

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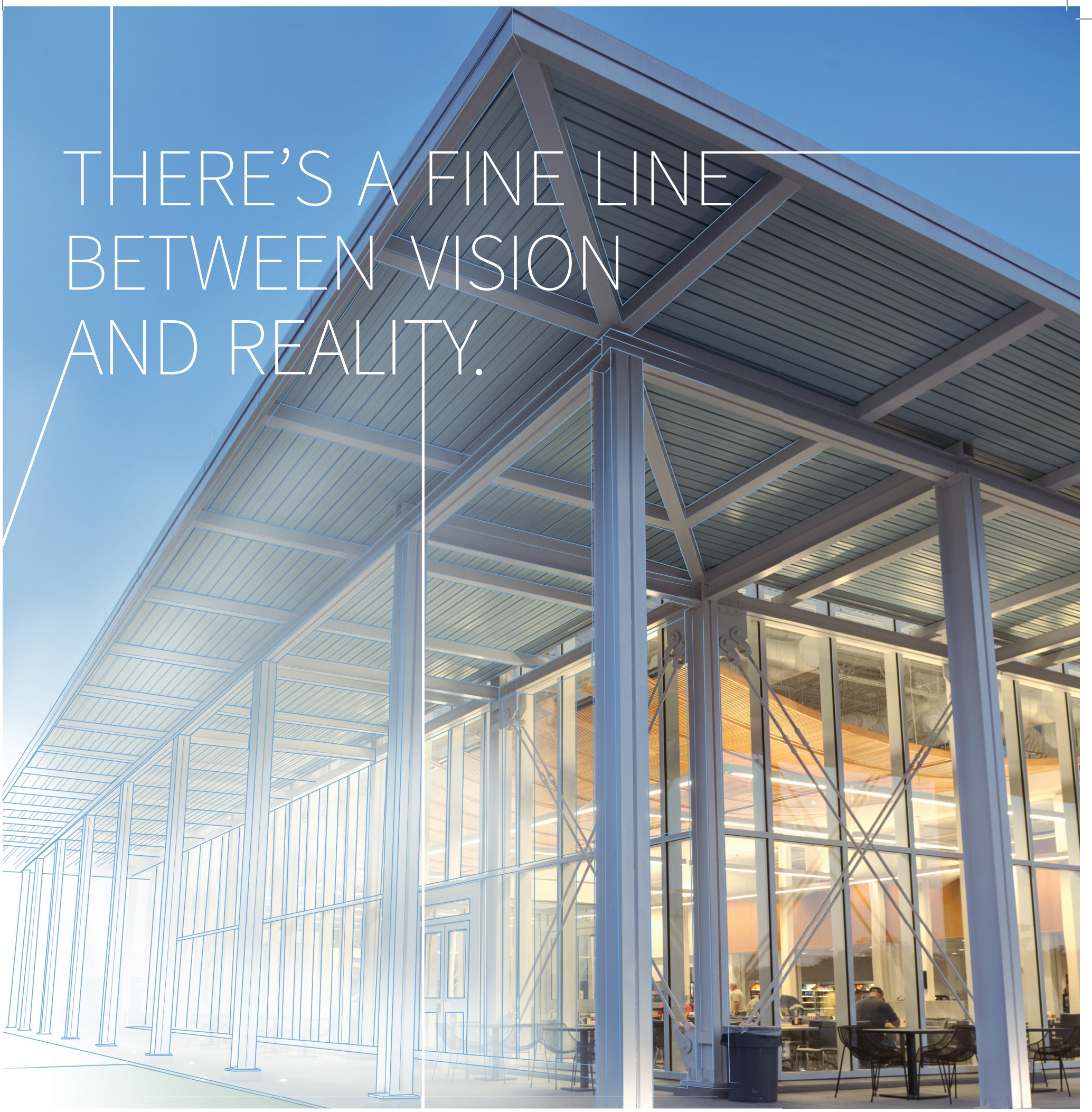

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ARCHITECT: MARVEL ARCHITECTS
FABRICATOR: J.E. BERKOWITZ
ACOUSTICAL CONSULTANT: AKRF
GLAZING CONTRACTOR: ALUCOBOND PANEL INSTALLER

PROFILE

BROOKLYN, NEW YORK

PIERHOUSE

The Pierhouse development—part of the recently transformed Brooklyn Heights waterfront and an intrinsic element of the 85-acre Brooklyn Bridge Park, which offers more than a mile of waterfront—faced a uniquely urban hurdle: noise.

"The location of this project meant we had to consider a variety of outside noise sources," Dennis Vermeulen, director at Marvel Architects, said. "For the units facing the East River and the Brooklyn Bridge Park, noise comes from park activities—including live music performances—as well as from helicopters flying to and from Lower Manhattan. On the Brooklyn side of the project, we had to contend with the Brooklyn-Queens Expressway traffic noise and industrial noise coming from DUMBO. Our primary design intent was to minimize the noise, while at the same time deliver maximum light and view."

In order to meet the acoustic isolation requirements, the architects initially investigated the use of double-laminated insulating glass. However, by using Trosifol SC, they were able to specify monolithic glass on the outside and laminated glass on the inside with the air space in-between, adding to both the sound and heat control properties of the panels.

Trosifol SC is used in multiple insulating glass applications and combines outstanding sound protection with the advantages of a conventional PVB film. Even in monolithic laminated safety glass, Trosifol SC reveals its exceptional sound protection performance. Its monolayer construction also makes it easier for laminators to process compared to multi-layered alternatives, which are normally used in much larger glazing applications facing more stringent safety demands and testing.

Investigating the use of double-laminated insulating glass. However, by using Trosifol SC, they were able to specify monolithic glass on the outside and laminated glass on the inside, with the air space in-between adding to both the sound and heat control properties of the panels. **LESLIE CLAGETT**



COURTESY MARVEL ARCHITECTS



ARCHITECT: MARVEL ARCHITECTS
FABRICATOR: J.E. BERKOWITZ
ACOUSTICAL CONSULTANT: AKRF
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LESLIE CLAGETT

PROFILE

NEW YORK, NEW YORK

JEROME L. GREENE SCIENCE CENTER

ARCHITECT: RENZO PIANO BUILDING WORKSHOP
CONSTRUCTION MANAGER: LENDLEASE
FACADE MANUFACTURER AND INSTALLER: ENCLOS
FACADE CONSULTANTS: ISRAEL BERGER & ASSOCIATES (FACADE CONSULTANT), WSP CANTOR SEINUK (ENGINEER)

Renzo Piano Building Workshop (RPBW) is designing four buildings to be built over the upcoming years as a first phase of Columbia University's Manhattanville campus expansion. The first of these four projects to break ground is the Jerome L. Greene Science Center, a research facility used by scientists working on mind, brain, and behavior research. The facility is ten stories wrapped in nearly 176,000 square feet of building envelope, consisting of transparent floor-to-ceiling glazing.

"Columbia's existing buildings are sited massively on the ground, and the campus—for many reasons—is gated. However, the new Manhattanville campus will express the values of this century: tolerance, openness, permeability, and transparency. It's a new generation of campus design," said Antoine Chaaya, the RPBW partner in charge of the Columbia project.

An elevated subway track along the east facade generated 88 dB of noise, which needed to be significantly reduced for occupant comfort. To achieve this, the architects created a double skin facade system that was sealed from the outside. It represents the fourth double skin facade developed by RPBW, and the first to include active air circulation, according to Chaaya. "What helped us to create this fourth typology of double skin is the constraint: The fact that it cannot be permeable to the outside. It has to be sealed, and at the same time we have to fight against potential condensation. We solve the problem by active air circulation from the bottom to the top of the building." The resulting facade system provides superior blast resistance and thermal properties, while reducing sound transmission by 45 dB.

The cavity of the facade assembly is 18 inches deep, sized just large enough for maintenance access. Highly purified and dehumidified air is filtered three times and slowly cycled up vertically through the cavity at two feet per minute, a rate that ensures quiet operation and no disturbance to shading devices within the cavity. Air in the cavity cycles at a rate of six air changes per minute, managing heat gain and condensation buildup in the cavity.

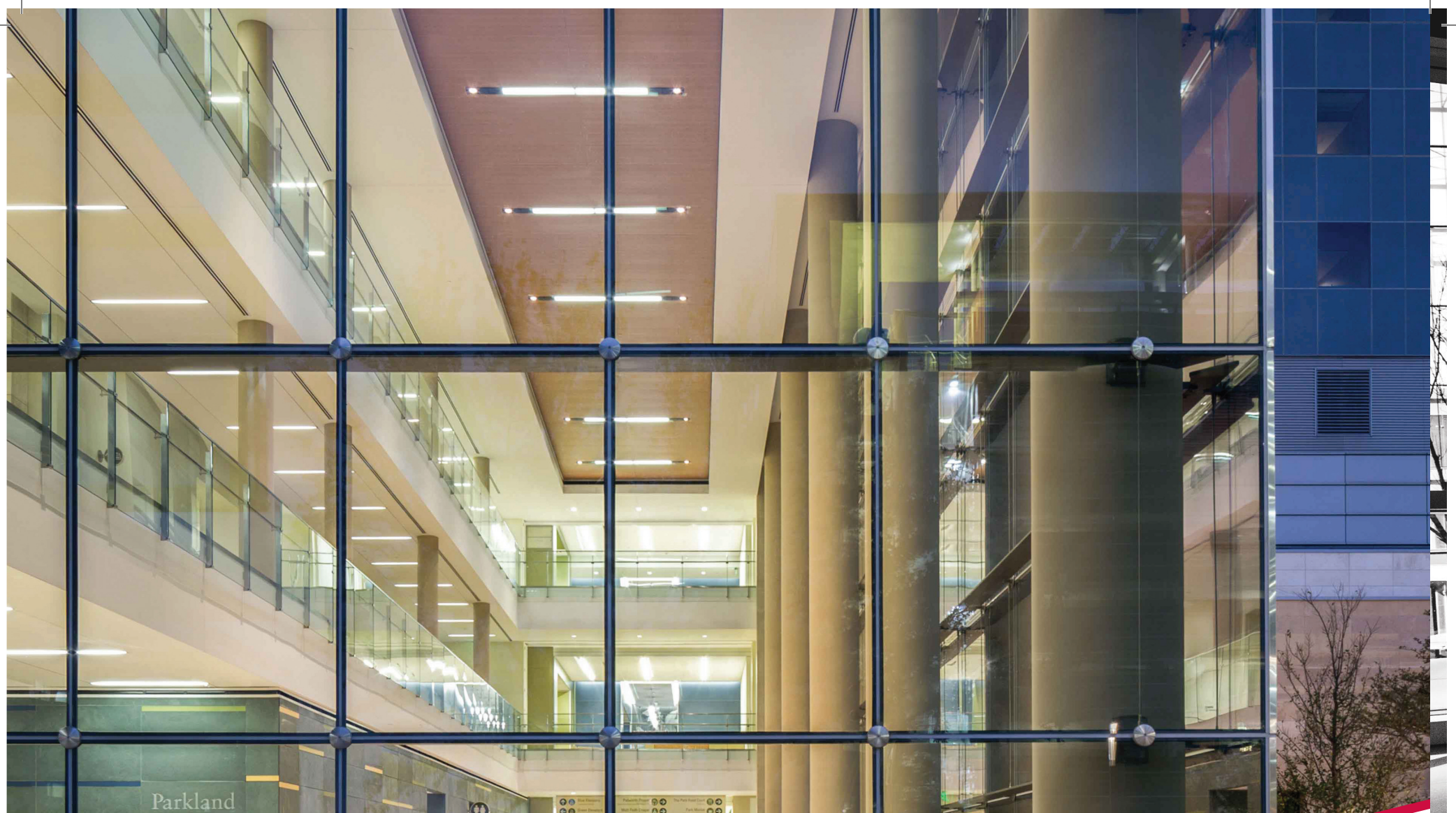
Variations in the facade are generated from functional responses to solar orientation, honestly expressing the interior functions of the building. The result is a sophisticated building enclosure, abiding by a rigorously minimal design aesthetic while nimbly adapting to environmental criteria.

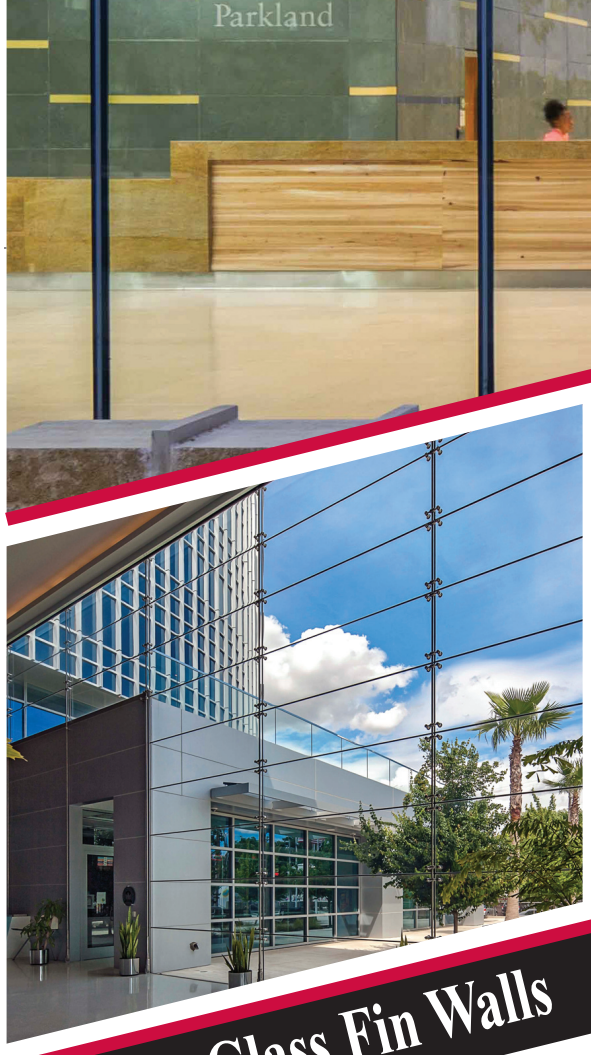
JOHN STOUGHTON





COURTESY RENZO PIANO BUILDING WORKSHOP









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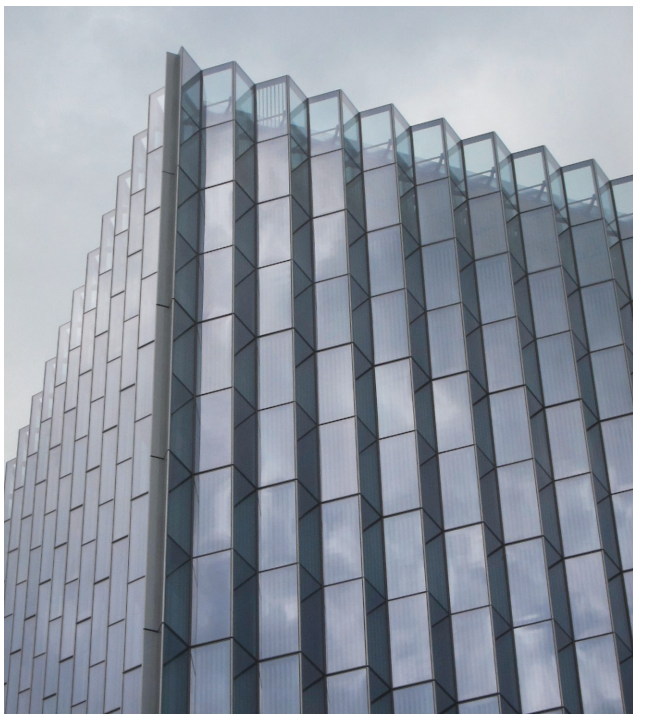

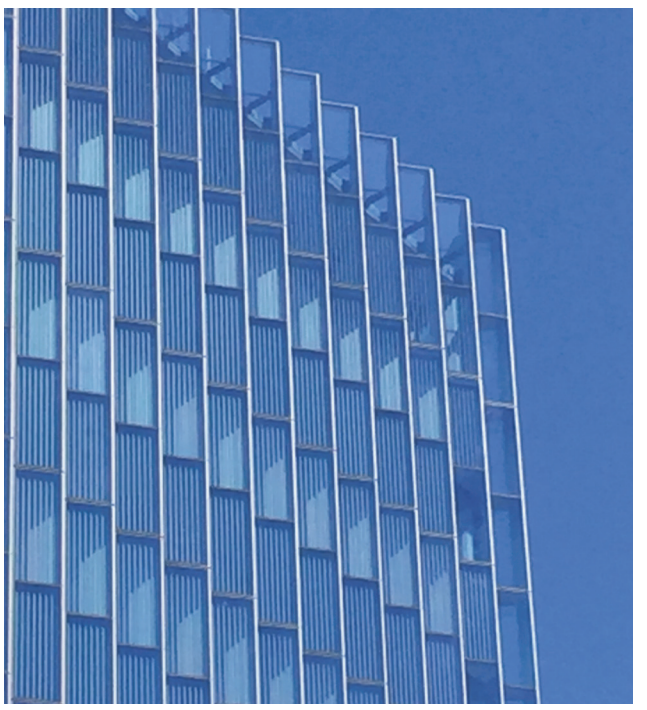

PROFILE

LOS ANGELES, CALIFORNIA

UNITED STATES COURTHOUSE

ARCHITECT: SKIDMORE, OWINGS & MERRILL
WALL PANEL SYSTEM: PANELITE

PANEL INSTALLER: LEHR CONSTRUCTION

Skidmore, Owings & Merrill created a "floating" glass cube above a large stepped civic plaza on a sloped site in downtown Los Angeles for their United States Courthouse project, scheduled to open July 2016. The 633,000-square-foot, 220-foot-tall facility includes 24 daylight-filled courtrooms and 32 judges' chambers.

José Luis Palacios, design director at SOM Los Angeles, said this structural configuration was integral to the success of the project: "Our challenge was how to make a transparent building, both metaphorically and structurally."

In addition to being LEED Platinum, the project is being promoted as one of the nation's safest buildings in regards to bomb threats and earthquakes. An innovative structural engineering concept allows a large volume to "float" over a stone base protected with hardened-concrete shear walls. The outer 33 feet of the cantilevered building are suspended from a steel hat truss system, freeing the need for columns at the perimeter and ground level. The trusses are efficiently designed through an optimization process that resulted in a material savings of over 15 percent when compared to conventional trusses.

The facade is comprised of a unitized 6-by-20-foot tall panel, organized into a pleated zigzag surface. By reconciling the downtown Los Angeles street grid, which runs 32 degrees east of true north, with optimum solar angles, the facade manages to reduce solar heat gain, harvest natural daylight, and maximize views in and out of the building. The pleated facade allows for a reduction in the radiant heat load of the building by 47 percent compared to a flat surface.

Signage to the building is applied as a ceramic frit pattern to the glass. The two-dimensional graphic, the Great Seal of the United States, is projected onto the three-dimensional facade, reinforcing the civic plaza and a frontal approach to the main entrance.

As a result of the pleating, facade panels were broken down into two sides: a "hot panel" and a "cold panel." Additional variation was introduced through internal program requirements, such as the Broadway and Hill Street facades where courtrooms consist of three internal layers of shades that manage daylight from both sides of the courtroom.

The modular, shop-built panel assembly is something Palacios says SOM is incorporating into an increasing amount of their projects today: "This gives us long-term durability and seismic responsiveness: a great flexibility and resiliency." **JS**

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PROFILE

SILICON VALLEY, CALIFORNIA

SAMSUNG NORTH AMERICAN HEADQUARTERS

ARCHITECT: NBBJ
FACADE CONSULTANTS: ARUP
LOCATION: SAN JOSE, CA
DATE OF COMPLETION: 2015

Samsung's new North American headquarters, designed by NBBJ, is a landmark facility in Silicon Valley embracing new urban guidelines developed by San Jose officials to prioritize active streets and environmental sensitivity. The project creates a sense of lightness with a transparent, environmentally responsible facade, and has been used as a case study project within NBBJ's international network of offices.

The compound is composed of two ten-story towers designed around an interior courtyard and floating open-air gardens. The architects adopted the diagram of a semiconductor as inspiration for the building, defined by an energized void space between separated slabs. Connecting stairs located at every two floors establish a centralized "3-D Main Street" linked by pocket parks. The ground floor extends an open public program into the adjacent city, providing a connection to the tech community. Despite working in a ten-story office tower, Samsung employees are never farther than one story from outdoor space.

Utilizing a courtyard typology to maximize daylight and natural ventilation into a flexible open office layout, the project anticipates LEED Gold certification. The facade system for the facility plays a significant role in the project, achieving three key functions: encouraging social interaction, communicating a brand identity, and sensitively responding to the environment by incorporating renewable energy and managing solar conditions.

Rather than designing an all-glass facade, NBBJ developed a white metal, glass, and terra-cotta exterior with an undulating gradient of punched window openings responsive to environmental criteria. For example, the building orientation is aligned to San Jose's city grid, which is rotated off a north-south axis, causing direct heat gain to be managed across multiple facades. This assisted with solar heat gain concerns and established an aesthetic identity for Samsung's headquarters. The interior facade is noticeably more transparent, utilizing a floor to ceiling glazing system.

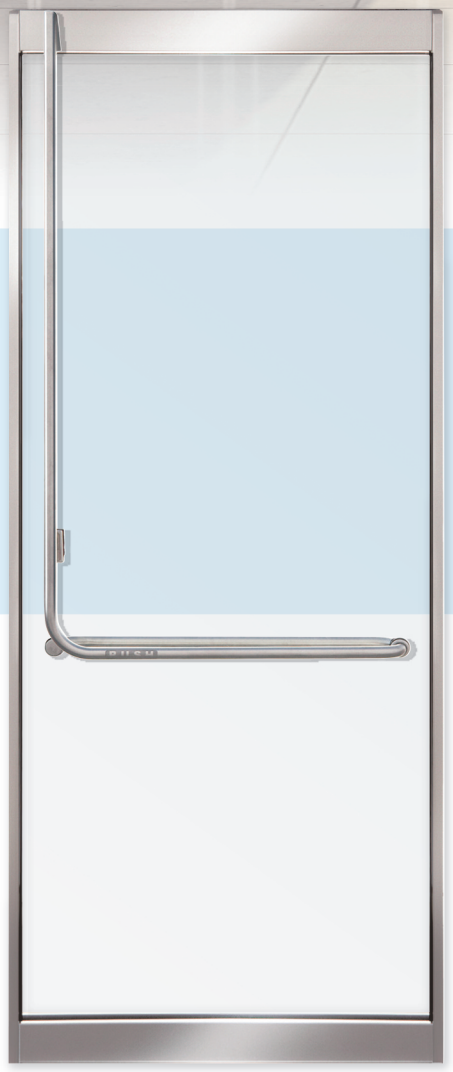
Collaborating with ARUP, NBBJ designed the facade to be a shop-built assembly—it was craned into place, ensuring a high-quality, controlled assembly process. The architects teamed with Benson, who fabricated the facade panels.

The building is formally very simple, but becomes activated by people, fostering a collaborative environment. This is a "generative" building, designed for flexibility to allow for as many new ideas as possible. A collaborative, interactive spirit drove the project's design from the start. The outcome is an open, tolerant, flexible structure that enables possibilities and drives innovation. **JS**



COURTESY NBBJ





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PROFILE

THE TOWER AT PNC PLAZA

DESIGN ARCHITECT:
GENSLER (PITTSBURGH OFFICE)
GLASS FABRICATOR: J.E. BERKOWITZ
GLAZING CONTRACTOR:
PERMASTEELISA
STRUCTURAL AND MEP ENGINEER:
BUROHAPPOLD
SUSTAINABILITY CONSULTANT:
PALADINO & COMPANY



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In its design for the Tower at PNC Plaza, Gensler and its partners devised a low-energy strategy to heat and cool the building, setting a high standard for sustainable skyscrapers.

The 32-story structure features a double-skin facade (one of the first of its kind in North America) that is engineered to help the building naturally ventilate for more than 40 percent of the year. A motorized outer layer and a manually operable inner layer of louvers work together to draw fresh air across the floors of the building. The air warms inside, then rises through two shafts in the structure's core before it exhausts through the roof.

The double-skin facade gives occupants the ability to open windows. On nice days, air gates on the exterior open mechanically to signal that the tower is "breathing." Air fills the cavity, and dampers in the inner wall admit fresh air into the offices.

The inner and outer curtain walls incorporate Starphire glass that is laminated or fabricated into dual insulating glass units (IGU). Due to its low-iron formulation, Starphire is an exceptionally transparent float glass.

Combined with Starphire glass in a standard one-inch IGU, Sungate glass has visible light transmittance of 80 percent, along with a solar-heat-gain coefficient of 0.68 and a winter nighttime U-value of 0.28. Sungate glass maximizes the environmental performance of buildings in northern climates by harvesting solar heat in the winter. The harvest diminishes furnace loads while emitting high levels of daylight year-round to reduce lighting costs. Narrow floor plates and highly transparent glasses enable natural light to penetrate 92 percent of the building's work spaces.

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ART GLASS

A veritable kaleidoscope of colors, patterns, and textures, decorative glass enlivens any interior. By Leslie Clagett

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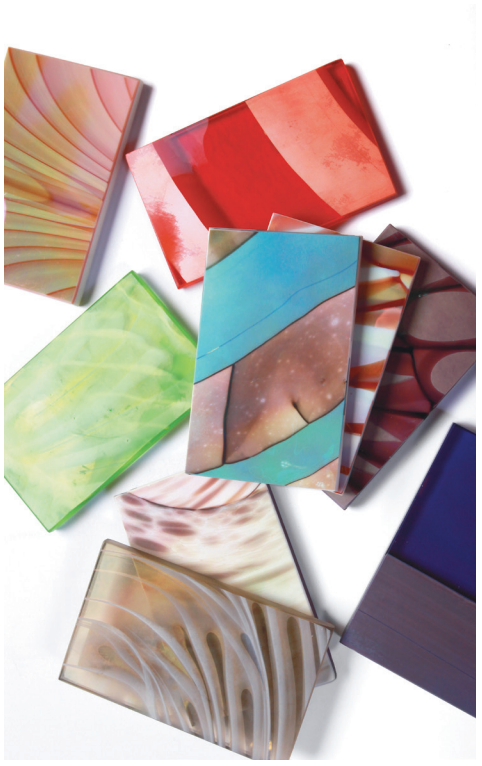

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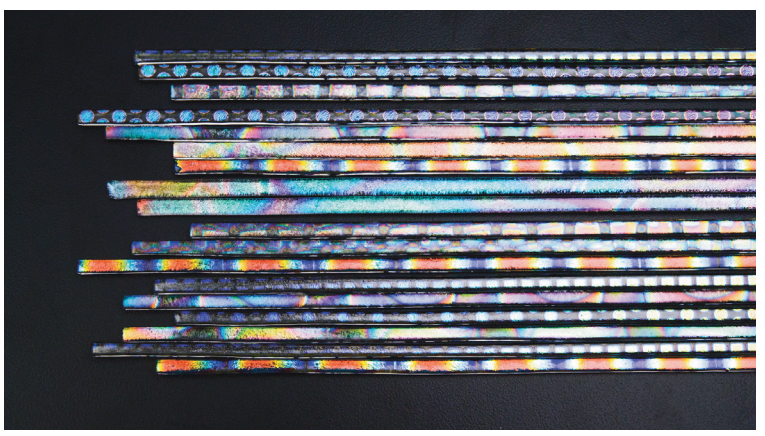
soliusa.com



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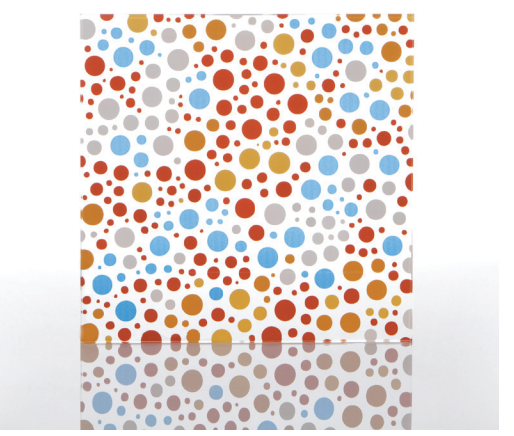
bullseyeglass.com



ALICE
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generalglass.com





WILLOW
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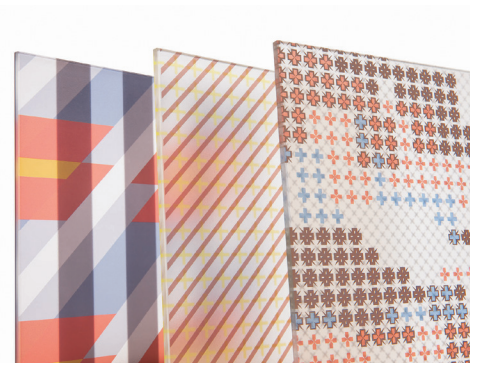
A kiln-formed patterned glass that is texture-free, Willow is equally sinuous and structured. It is available tempered or laminated, and comes in several tints and colors.

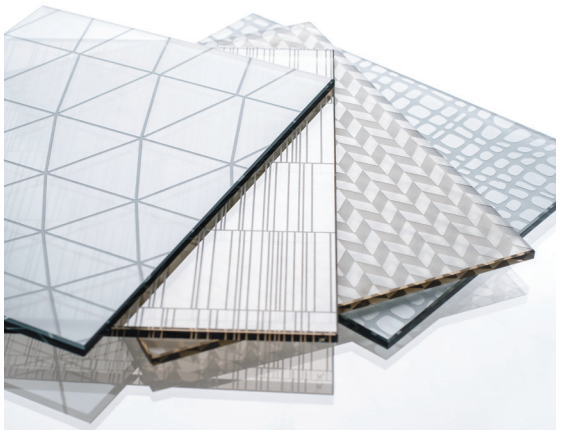
nathanallan.com



CIPHER, OVERLAY, CHECK
SKYLINE DESIGN

The three patterns in this collection are characterized by repeating, layered motifs in colors printed on both sides of the glass. The images can be executed in a variety of techniques, in opaque, translucent, and transparent options, allowing for different degrees of translucency and privacy. Designed by Patricia Urquiola.

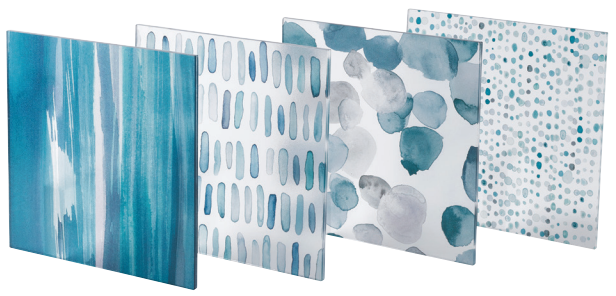
skydesign.com



C1 COLLECTION
CARVART

Taking hand-drawn lines as inspiration, these 12 geometric patterns are available in small and large scales, positive and negative designs, and single- and double-sided etched formats. Designed by Ferreira Design Company.

carvart.com



PAINTERLY COLLECTION
3FORM

Original hand-painted compositions are photographed and encapsulated into the Infinite Glass material. The collection comprises five designs in five complementary colorways.

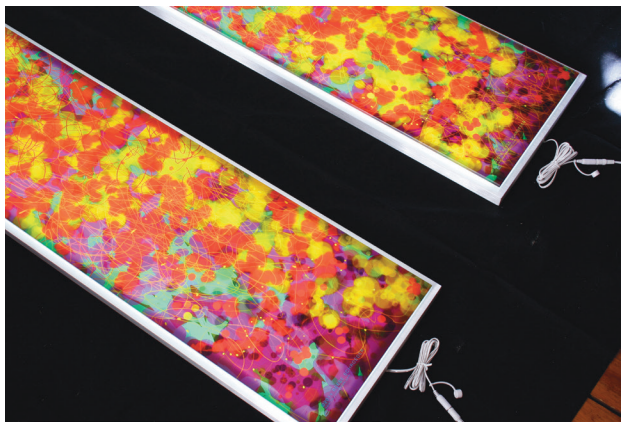
3-form.com



ALIGHT
PULP STUDIO

Alight is not just a bas-relief glass product, but can be specified as a fully engineered wall system, inclusive of structural steel and other components. Created by Amses Cosma Studio.

pulpstudio.com



ILLUMINATED ART GLASS
LIQUIDORANGES STUDIO

These panels are created using two layers of low-iron PPG Starphire glass laminated with a high-resolution artwork interlayer. The edges are polished and the panels are face-mounted to aluminum frames and backlit with dimmable Fawoo Lumisheet LED panels.

liquidoranges.com



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PITTSBURGH CORNING

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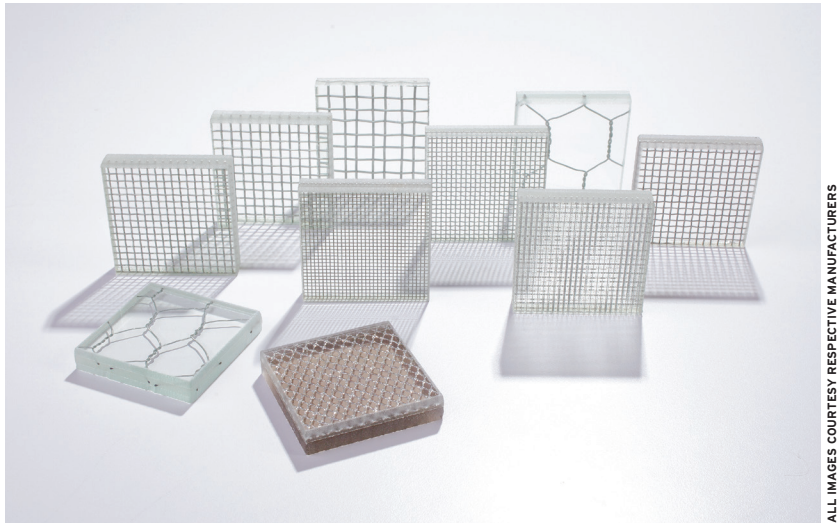
pittsburghcorning.com



WIRE IN GLASS
RUDY ART GLASS

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rudyglass.com

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Marriott Envoy Hotel-Boston, MA
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Pictured above is the DRS 2-1/2" Rail with tapered profile.
Shown below is the square profile with DORMA lock cylinder

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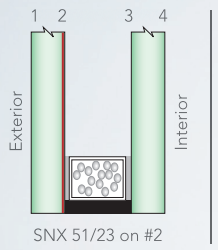

SNX 51/23 on #2

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GLASS

Clear Visions

Transformative technologies are challenging the very nature of glass and its role in architecture. By Leslie Clagett

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jeberkowitz.com



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polytronixglass.com



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walkerglass.com



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viracon.com



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PPG

SOLARBAN 90 glass is a low-emissivity glass that combines industry-leading solar control performance with a true neutral-reflective, clear-glass aesthetic. Solarban 90 glass has a solar heat gain coefficient of 0.23, visible light transmittance of 51 percent, and a light-to-solar-gain ratio of 2.22 with clear glass in a one-inch insulating glass unit.

ppgideascapes.com



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emd-performance-materials.com



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viewglass.com



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This noise-attenuating PVB acoustic film offers an improvement of up to three dB in sound insulation values. Additionally, it has 88 percent light transmittance and a low yellowness index.

trosifol.com



MIRROVIEW 50/50
PILKINGTON

This digital display mirror features increased visible light transmittance, which makes it suitable for use in high-light environments. The material appears as a normal mirror until it is switched on, at which point the video screen becomes visible.

pilkington.com



GLASCENE
ASAHI GLASS COMPANY

A combination of glass and screen, this material allows images to be projected onto clear glass without blocking the view beyond. Available in a range of thicknesses and screen sizes of 100-inches and larger, the product can accommodate front- and rear-projection designs.

agc.com



SUNGUARD SNX 51/23
GUARDIAN

Designed to offer the most light with the lowest heat, triple silver SunGuard SNX 51/23 is a commercial low-e glass product with visible light transmission at 51 percent and a solar heat gain coefficient at .23 on clear float glass.

guardian.com



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These glass block units install like traditional windows with built-in nailing fins, so there is no additional assembly required. They provide privacy, security, and light-control while meeting Energy Star requirements.

pittsburghcorning.com



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mcgrory.com

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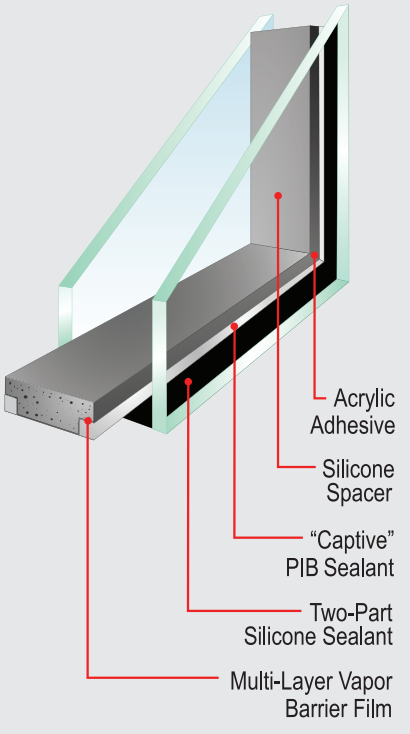

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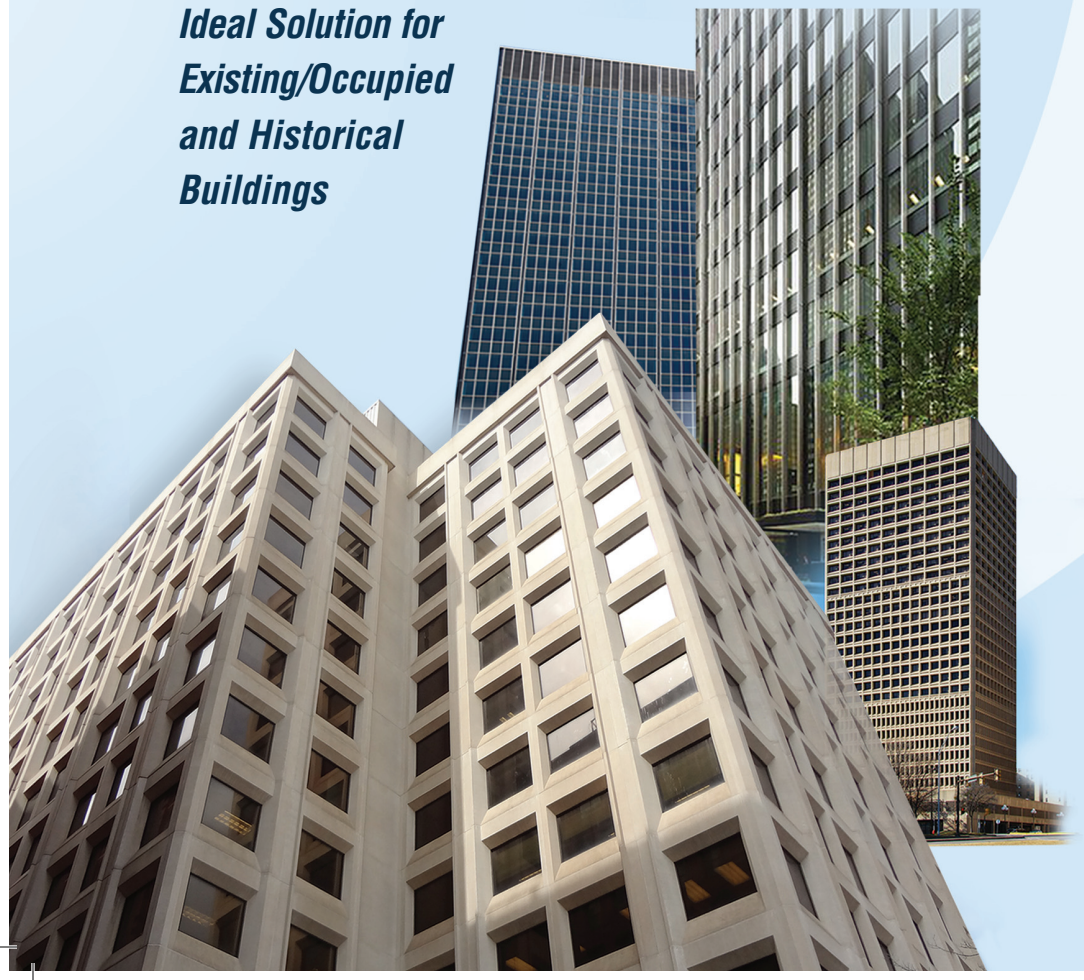

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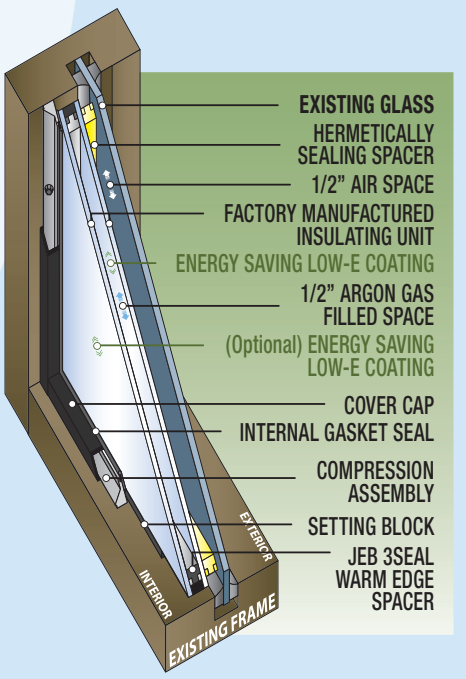

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NOVEMBER/DECEMBER 2015

NOVEMBER

FRIDAY 6
LECTURE
Nicholas Boyarsky et al.
Drawing Ambience: Panel Discussion
6:30 p.m.
Foundation Building
7 East Seventh St., New York
cooper.edu

EVENT
First Friday: HOK
6:30 p.m.
Office of HOK
5 Bryant Park
1065 Avenue of the Americas, 6th Floor, New York
archleague.org

MONDAY 9
LECTURES
Lisa Iwamoto
Scales
6:00 p.m.
100 Rapson Hall
89 Church St. Southeast
Minneapolis
events.umn.edu

TUESDAY 10
LECTURES
Juan Moreno, Miguel Aguilar
Here Comes the Neighborhood: Place-making & Transforming Neighborhoods
6:00 p.m.
Chicago Cultural Center
78 East Washington St.
Chicago
chicagoarchitecturebiennial.org

Camilo José Vergara
The City at Night
1:00 p.m.
Room 114, Avery Hall
Columbia University GSAPP
1172 Amsterdam Ave.
New York
events.gsapp.org

Judith Gura, Kate Wood
Interior Landmarks: Treasures of New York Book Talk
6:30 p.m.
39 Battery Pl., New York
skyscraper.org

WEDNESDAY 11
LECTURE
Leaning out III I On Women in Architecture
6:30 p.m.
Center for Architecture
536 LaGuardia Pl., New York
cfa.aiany.org

THURSDAY 12
LECTURE
Carol Ross Barney
Come to the Table
6:30 p.m.
Chicago Architecture Foundation
224 South Michigan Ave.
Chicago
architecture.org

FRIDAY 13
LECTURES
Florian Idenburg/SO-IL
4:30 p.m.
Ethel S. Abbot Auditorium
Sheldon Museum or Art
12th St. and R St.
Lincoln, NE
architecture.unl.edu

EXHIBITION OPENING
Building Connections 2015
6:00 p.m.
Center for Architecture
536 LaGuardia Pl.
New York
cfa.aiany.org

SUNDAY 15
FILM
Peter Bo Rappmund, 2015,
63 min.
Topophilia
7:30 p.m.
UnionDocs Center for Documentary Art
322 Union St.
Brooklyn
events.gsapp.org

MONDAY 16
LECTURE
Jacque Herzog
Mies Crown Hall Americas Prize
6:00 p.m.
IIT College of Architecture
S. R. Crown Hall
3360 South State St.
Chicago
chicagoarchitecturebiennial.org

WEDNESDAY 18
LECTURES
Michael Meredith
MOS Architects
5:30 p.m.
Austin E. Knowlton School of Architecture
275 West Woodruff Ave.
Columbus, OH
knowlton.osu.edu

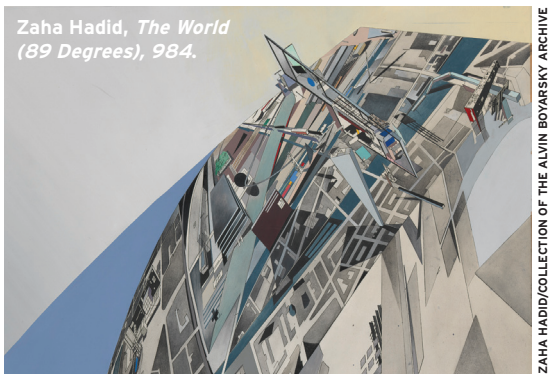
FRIDAY 20
LECTURES
Jimenez Lai/
Bureau Spectacular
4:30 p.m.
Ethel S. Abbot Auditorium
Sheldon Museum or Art
12th St. and R St.
Lincoln, NE
architecture.unl.edu

DECEMBER

TUESDAY 1
LECTURE
Jean-Louis Cohen,
Theo Prudon
Designing Better Affordable Housing
6:30 p.m.
Museum of the City of New York
1220 Fifth Ave., New York
mcny.org

Matt Shaw, Beverly Fresh & UrbanLAB
Figural Moments and the Image of the 21st Century Midwest City
6:00 p.m.
Chicago Cultural Center
78 E Washington St., Chicago
chicagoarchitecturebiennial.org

FRIDAY 4
EVENTS
Designed to Eat
6:30 p.m.
Chicago Cultural Center
78 East Washington St.
Chicago
chicagoarchitecturebiennial.org



ZAHA HADID/COLLECTION OF THE ALVIN BOYARSKY ARCHIVE

DRAWING AMBIENCE: ALVIN BOYARSKY & THE ARCHITECTURAL ASSOCIATION
Cooper Union
30 Cooper Square, New York, NY
Through November 25, 2015

Boasting a remarkable array of artwork from both past and contemporary architectural figures such as John Hejduk, Michael Webb, Daniel Libeskind, Frank Gehry, Zaha Hadid, Rem Koolhaas, and Bernard Tschumi, *Drawing Ambience* reflects and encourages the late Alvin Boyarsky's assimilation of architectural drawings.

During his tenure at the Architectural Association in London, Boyarsky developed a profound appreciation of these drawings. Known as a man with a keen eye for talent, Boyarsky fostered many young architects who would later dominate the field. He urged his students to investigate contemporary issues and use the evolving global culture as a vehicle to develop their own architectural agendas.

These agendas manifested in the students' visual work that Boyarsky regarded as equally important to the physical structures they depicted, viewing them as pieces of architecture in their own right.

Visitors can expect to see works ranging from Hadid's chaotic and crisp visualizations of her un-built projects to Koolhaas' playful, almost Gameboy-esque *The Pleasure of Architecture*.

The exhibition is currently on view at the Cooper Union in the Arthur A. Houghton Jr. Gallery and closes on November 25.



Green Futurism *In Vitro*

The Underdome Guide to Energy Reform
Janette Kim and Erik Carver
Princeton Architectural Press, $24.95

When a radical idea emerges, mockery is easy. One measure of its gravity is that taking it seriously enough to critique it, extrapolate from it, and apply it can take nearly as much disciplined creativity as generating it.

The Underdome Guide presents ideas from the Underdome Sessions, a panel series held in 2010 by the Van Alen Institute New York Prize Fellowship, Columbia's Urban Landscape Lab, and Studio-X, where participants considered multi-systemic responses to anthropogenic conditions, metaphorized as variations on an implausible scheme.

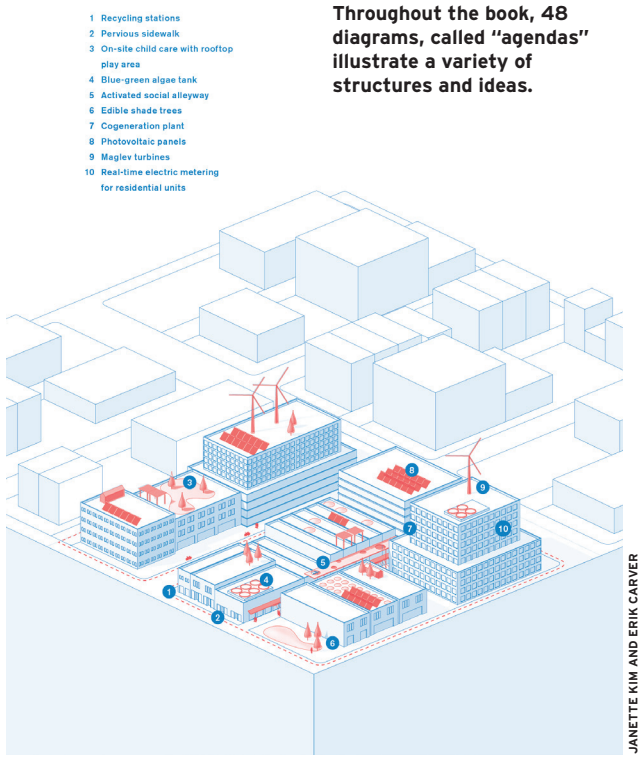
For example, Buckminster Fuller and Shoji Sadao's 1960 proposal to encase midtown Manhattan under a two-mile-wide glass hemisphere was "breath-taking in its reductivist ambition to solve many complex problems with a single architectural gesture," but was a serious enough thought-experiment to become an archetype, notes Georgeen Theodore in the *Guide*'s section introduction on "Territory" (one of the four organizing concepts, alongside "Power," "Lifestyle," and "Risk").

Bucky's dome spurred systems-based thinking about inputs, flows, and outputs. Authors Janette Kim and Erik Carver and their colleagues recognize the challenge of scaling up from closed-system scenarios to open systems that include political power as well as renewable power, social interactions as well as economic exchanges, mimetic implications as well as material transformations. Facing tension between local problem fixing and systemic ambition, the contributors grapple with it gamely—and shrewdly enough to recognize when the challenges cease to resemble a bounded game.

After provocative table-setting essays by the Underdome Sessions' moderators, each section includes a set of agendas (brief, elegantly diagramed overviews of 48 site-specific actions, real or conjectural, capitalism-compliant or resistant, scaled from a "personal responsibility" children's game up to geo-engineering), followed by panel transcripts. The book's format is logically organized—but enough so, one wonders, to overcome an inherent vice of futurist manifestos, an internal coherence too tight to map real-world conditions purposefully?

Aware of that hazard, the moderator-essayists address questions of scale and network complexity early and frequently. Reinhold Martin's "Power" introduction provides an essential backstory on the rise of the anthropogenic concept in the writings of biologist Eugene Stoermer and climatologists Paul Crutzen and Will Steffen, among others. Martin emphasizes that the planetary crisis reflects a convergence of multiple accelerating variables, not just the global temperature measurements of Michael Mann's famous hockey-stick graph. Jonathan Massey on "Lifestyle" highlights the social transformations Fuller envisioned in the Dymaxion system—not just a prefab housing design, but a component of an entirely reworked domestic economy that would liberate workers from scarcity and debt bondage just as deliveries by dirigible would liberate their mobile, replaceable houses from specific sites. Michael Osman, considering "Risk," stresses definitional distinctions to ground risk analysis in objective recognitions of hazards requiring collective action, apart from any one organism's subjectivity. One observation that deserves to be shouted from rooftops, incidentally, appears in the "Risk" panel transcript: J. Scott Holladay notes that top economists, though widely considered fatalistic about social action against anthropogenic damage, share "a strong consensus that the risks of climate change were several orders of magnitude greater than the cost of reducing emissions... The unpriced externality is so significant that it wipes out all profits."

The relation between the agenda diagrams and contributors is unspecified, though some schemes match areas of expertise ("Make Do: Work with Sprawl," a "Territory" item on the mixed-use adaptation of a 1950s North Seattle mall around a light-rail station, presumably reflects input by *Retrofitting Suburbia* co-author June Williamson; in the "Risk" section, "Decouple: Individual Response," on Mormon resource-storing practices, matches historian Jonathan Levy's interest in religious, mathematical, and societal frameworks for understanding risk). Tension persists, particularly in the "Territory" discussion, between a focus on the achievable (e.g., the glass-half-full observations of America 2050's Petra Todorovich Messick on the efficiencies catalyzed by regional rail networks and PlaNYC-scale retrofits) and on rewiring **continued on page 53**



Throughout the book, 48 diagrams, called "agendas" illustrate a variety of structures and ideas.

JANETTE KIM AND ERIK CARVER



Venturi, Scott Brown, and Associates' Franklin Court, featuring an outline of the historic but demolished Franklin House

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BEST OF BAIRD

Writings on Architecture and the City
By George Baird
Artifice Books on Architecture, $29.95

Writings on Architecture and the City by Canadian architect George Baird is a six-chapter long compilation of his texts published between 1969 and 2013.

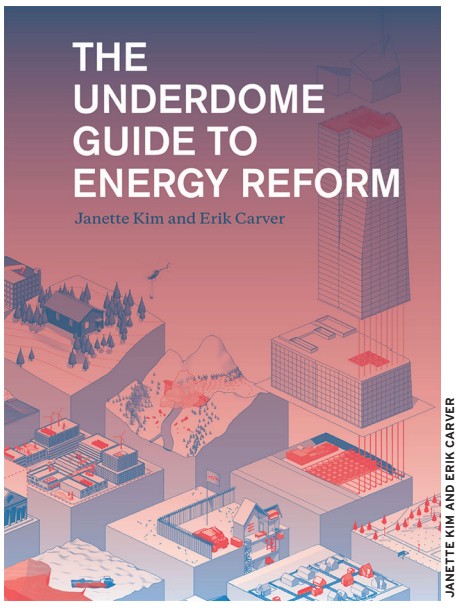
Baird begins with the discussion of architecture and semiotics in his texts "La Dimension Amoureuse in Architecture" (1969) and "The Dining Position: A Question of Langue and Parole" (1976) that document his search for "a deeper and more articulate illumination for the social and cultural consequence of built-form than has previously been possible." In "A Critical Reflection on the Theory and Practice of Architectural Symbolism in the Work of Venturi, Rauch and Scott Brown, and their Colleagues" (1976), Baird declares the "undervalued efforts of the remarkable group of American architects around Robert Venturi" as "the consequential object of critique." He concludes in "Semiotics and Architecture" (1998) that the impact of neo-avant-gardist and phenomenological attacks on postmodernism had left architecture criticism unable to "any longer sustain substantial new design creativity."

In the second chapter, "Architectural Theory Between Structuralism and Phenomenology," Baird recalls Alvar Alto's work in his 1970 essay on Alto's "profundity and seriousness" as a "real historical anomaly." In "Rome and Modern Architecture: A Personal Reminiscence" (2000), Baird reflects on his first visit to Rome and concludes that if his "hypothesis on the closure of modernity in our time has any merit…we might well be ready again to learn 'some lessons of Rome.'" Finally in the text "On the Phenomenology of Spatial Sequences: Frank Gehry's Disney Hall and Hans Scharoun's Berlin Philharmonic" (2012), Baird announces his renewed "commitment to a mode of criticism that is resolutely personal, first-hand, and experiential; in short: phenomenological."

With the third chapter Baird focuses on his research on urban morphology and building typology at Harvard's Graduate School of Design and the University of Toronto in the text "Theory: Vacant Lots in Toronto and in Studies on Urban Morphology in North America" (1988). Then with "Mutant Urbanity: Revising Las Vegas" (2004), Baird analyzes Las Vegas's contemporary architectural urban form and urban design as public policy and presents "Thought on 'Agency,' 'Utopia,' and 'Property' in Contemporary Architectural and Urban Theory" (2013), a synthesis of his "apparently diverse interest in urban form and in political theory."

In the fourth chapter, Baird presents a critical biography of four of his colleagues reflecting first on Rem Koolhaas's critical method as well as on their personal relationship starting with "Les Extremes Qui se Touchent" (1977), and ending with the "Open Letter to Koolhaas." Subsequently he analyses Ignasi de Solà-Morales's methodological combination of post-structuralism and phenomenology and then concludes in "Oppositions in the Thought of Colin Rowe" (1997) that the "larger intellectual and historic project of Rowe's that is not only still incomplete but also not completable." Finally in "A Promise as Well as a Memory: Towards an Intellectual Biography of Joseph Rykwert" (2002), Baird explains Rykwert's effort to "bring to the conscious awareness of his contemporaries, the implications and potential consequences of the assumptions lying within the beliefs, social forms and artifacts that form their horizon of existence, however individualized or however collective those forms at first seem to be."

In the fifth chapter, Baird focuses on public space, **continued on page 53**



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GREEN FUTURISM IN VITRO continued from page 52 of entire systems (Denise Hoffman Brandt's extension of biological sources-and-sinks analysis into the socio-economic realm as well as the carbon cycle). Likewise, the "Lifestyle" panel airs author Heather Rogers's arguments from *Green Gone Wrong* about the limits of solutions within a market framework, in bracing contrast to cases that are often isolated, under scaled, or merely symbolic. However, one, Bjarke Ingels Group's W57, offers an encouraging mix of hedonistic amenities and high-performance technologies operating beyond the single-building level.

Certain case choices imply more provocation, or perhaps desire to de-emphasize the usual suspects, than purpose. The Citadel in Benewah County, Idaho (erroneously rendered as "Beneway" in the "Power" section) is a strange representative of "smash the state" alternativism: it's a walled settlement of gun enthusiasts (assault-rifle ownership isn't just allowed: it's *mandatory*), screened for extreme-right ideological purity and supported by a firearms firm. Its proprietor, not mentioned here, is a felony-level extortionist; it may never exist beyond the fevered websites of militiamen who speak in code of sheeple, Threepers, and SHTF (look 'em up, though you may not want to accept these people's browser cookies). Arguably Arcosanti, Twin Oaks, or even Drop City would be more credible heterotopias, certainly greener though shorter on shock value.

A few quibbles—Masdar City's diagram, for example, shows "driverless electric-car drop-off sites" beneath its podium, a feature trimmed from its post-Foster iteration—do not seriously compromise the impression of widespread action on multiple fronts. In some respects, this manifesto addresses the already-well-informed more effectively than it expands its potential readership; the essays condense considerable debate, and a reader may be excused for wishing contributors would explicate entire icebergs rather than just their tips (a full-scale bibliography would help). Still, *The Underdome Guide* is both a handy overview of improvisations against accelerating crises and a cogent set of arguments why no sane inhabitant of Earth can consider conditions anything but critical.

BILL MILLARD IS A CONTRIBUTOR TO *AN*, OCULUS/E-OCULUS, ARCHITECT, LEAF REVIEW, ICON, CONTENT, AND OTHER PUBLICATIONS.



Bauhaus Dessau with its characteristic projecting balconies

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With *Writings on Architecture and the City*, George Baird has created a critical architecture autobiography that aims to make a deeper argument for the larger project of socially and culturally responsible architecture theory and practice.

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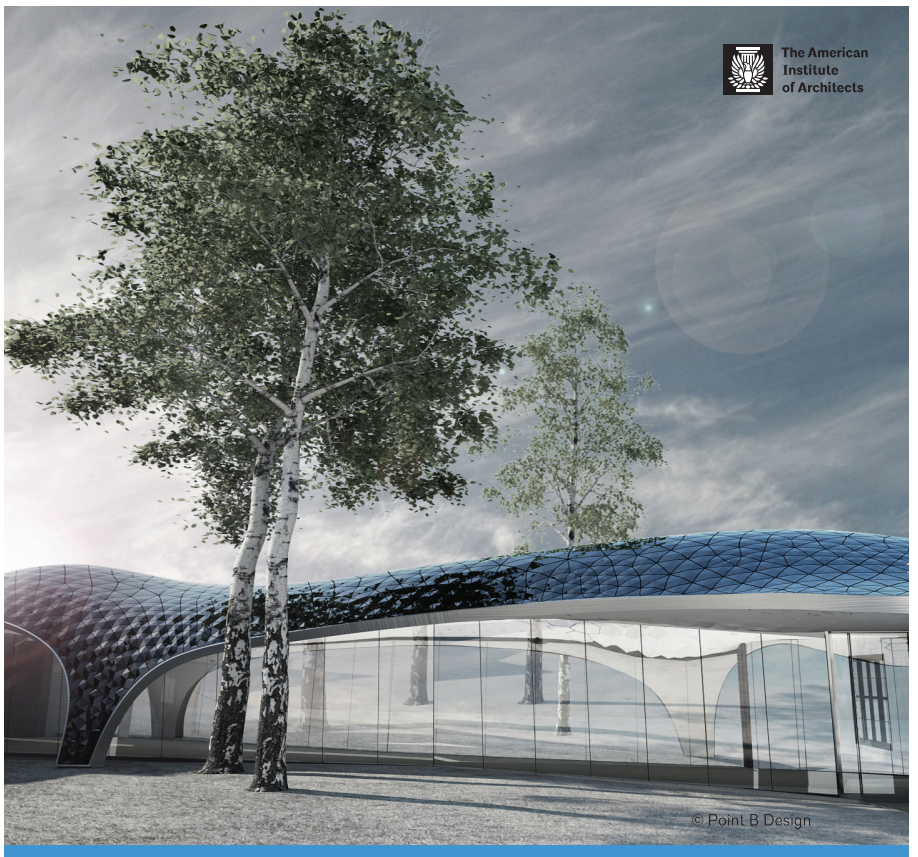

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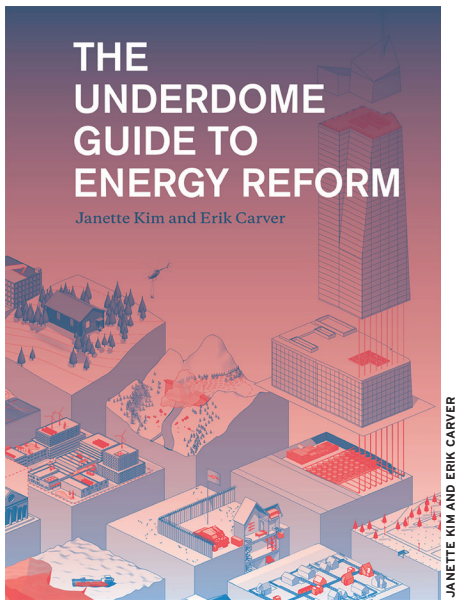

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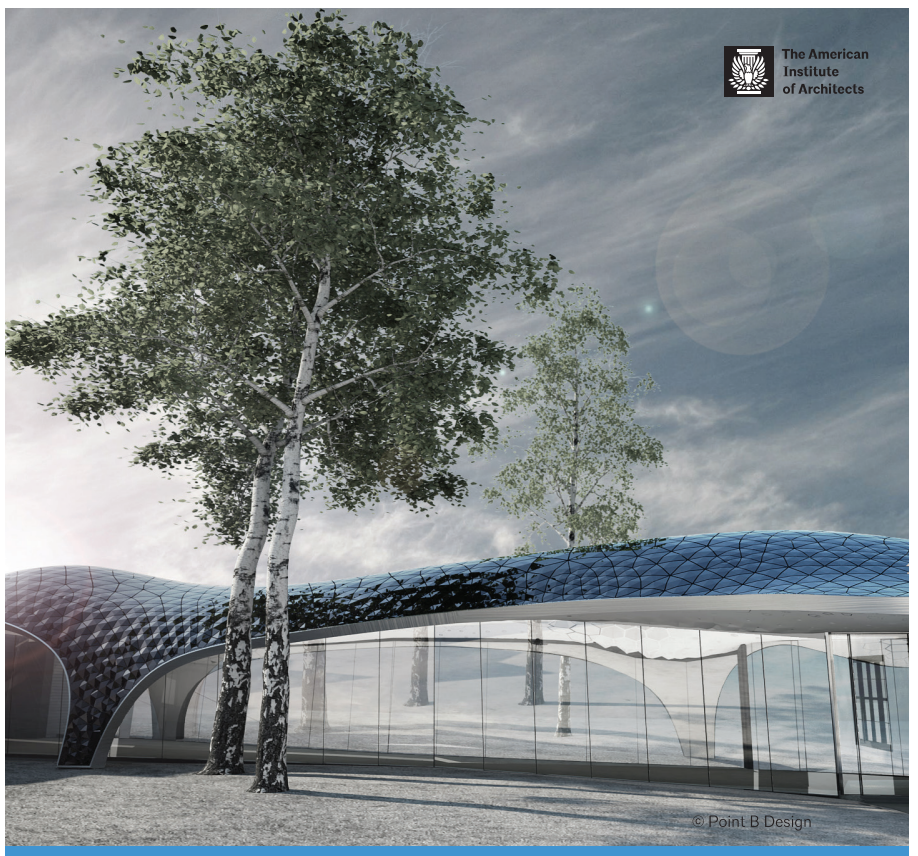

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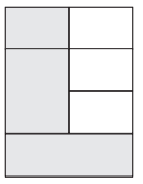



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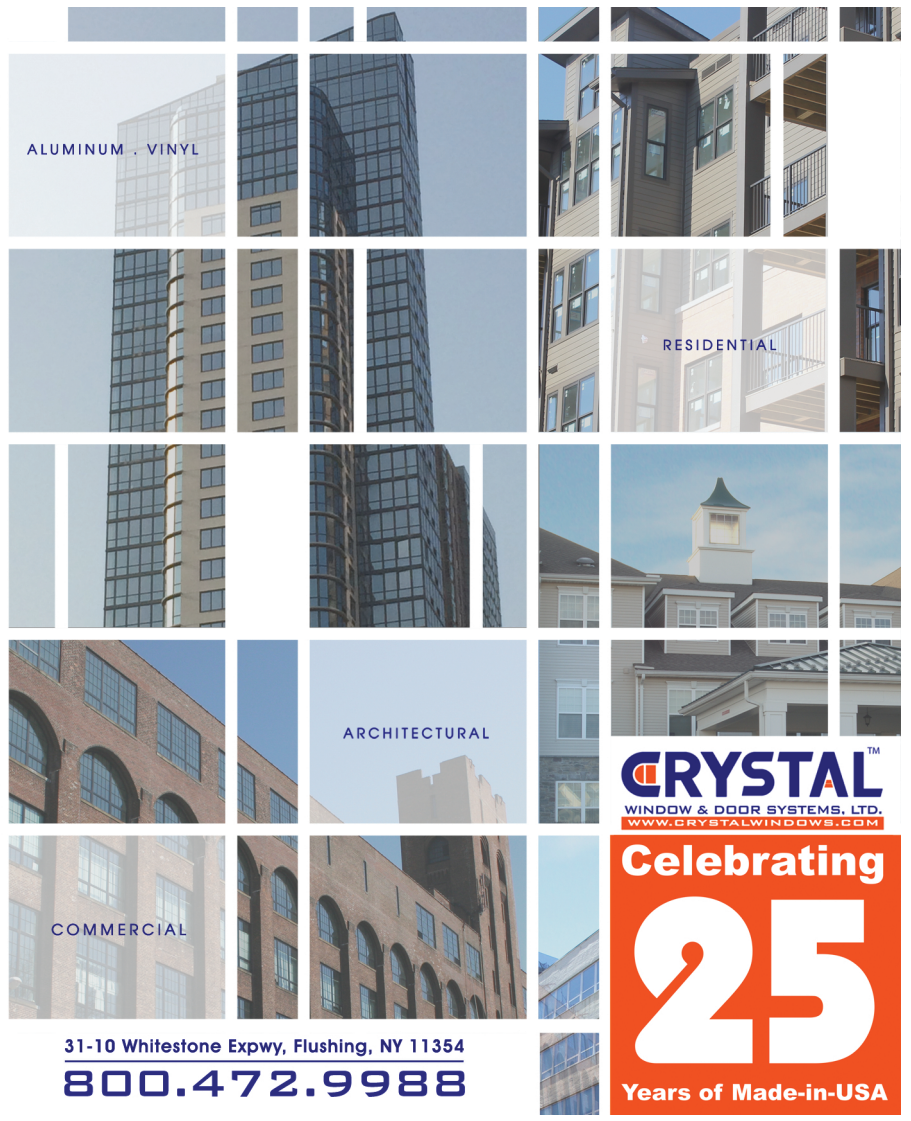

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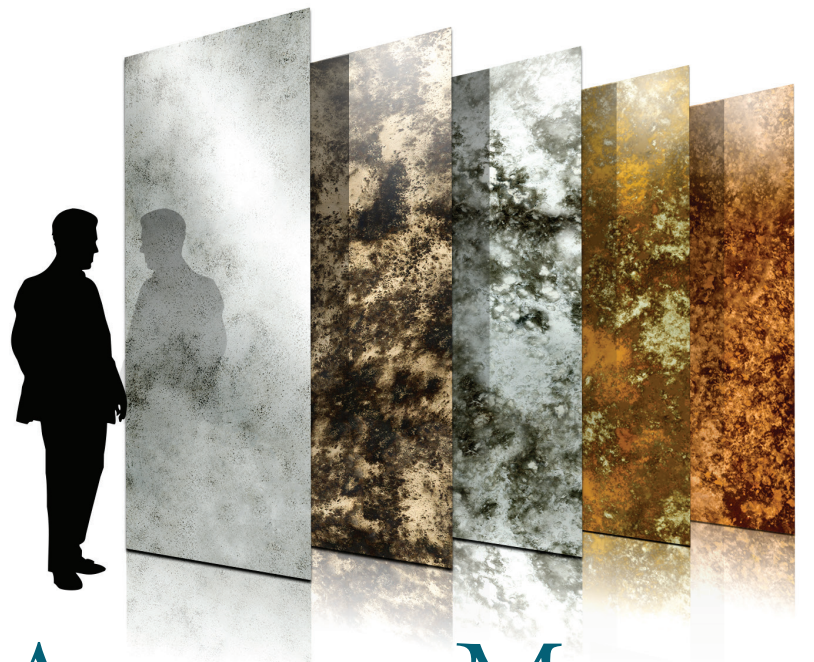

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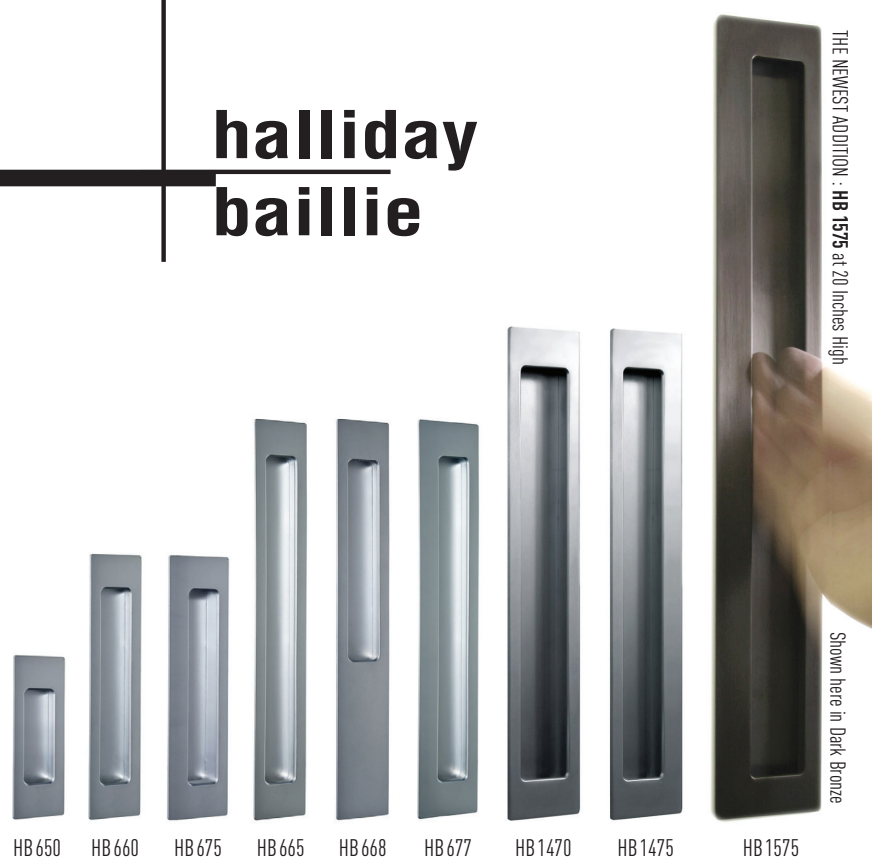

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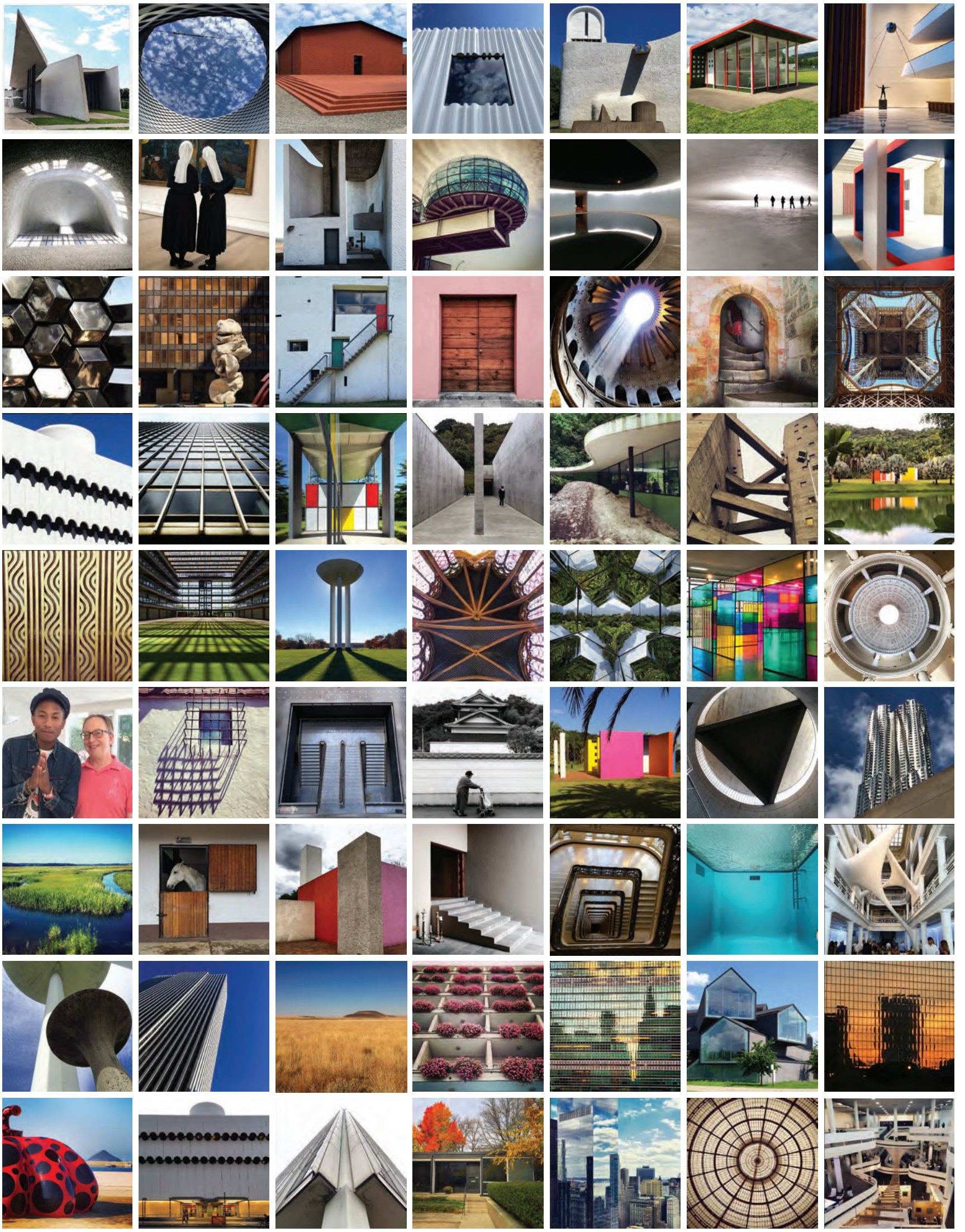

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