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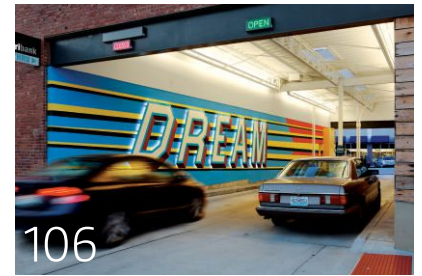
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A timeline of the 11-year process of the renovation of Queens Theatre in Flushing Meadows Park in Queens, N.Y.

Blaine Brownell's Mind & Matter blog looks at products and materials in development and on the market.

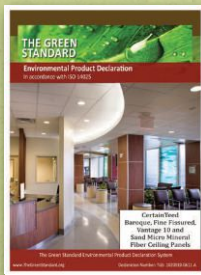
Aaron Betsky's Beyond Buildings blog comments on how design affects our society and culture.

And there are constant updates: breaking news, new products, slide shows, extra images of the projects in the issue, and more ...

ON THE COVER
A MODEL OF TOD WILLIAMS AND BILLIE
TSIEN'S NEW BARNES MUSEUM IN
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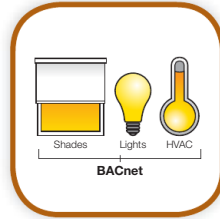
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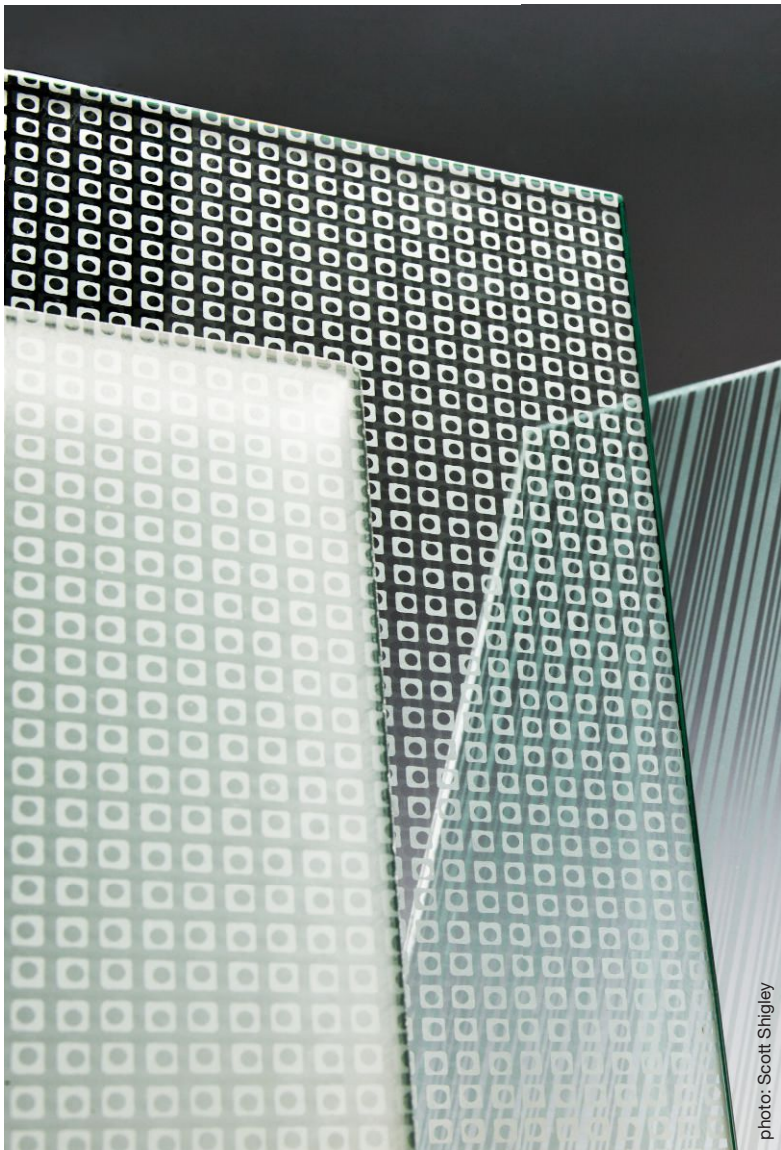


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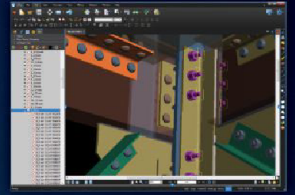
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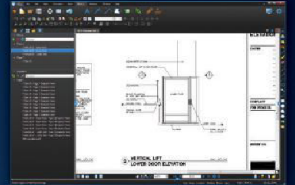
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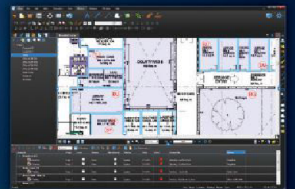
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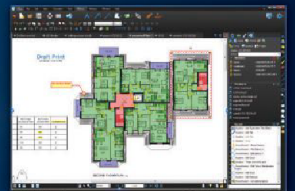
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THERE IS A RELATIONSHIP BETWEEN THE XENOPHOBIC PLANNING FORMULA OF GATED COMMUNITIES AND ONE RESIDENT'S DEADLY REACTION TO A PERCEIVED OUTSIDER.



The Retreat at Twin Lakes

WALK AT YOUR OWN RISK

HERE ARE THE FACTS: On the evening of Feb. 26, George Zimmerman, a 28-year-old resident of the Retreat at Twin Lakes in Sanford, Fla., pursued and shot to death an unarmed black teenager named Trayvon Martin. Martin, 17, was returning to his father's fiancée's townhouse in the gated community after a trip to 7-Eleven, where he had purchased an Arizona iced tea and a bag of Skittles for his little brother. He was talking on his cell phone with a girlfriend.

No one questions that Zimmerman shot Martin, yet as this issue of ARCHITECT went to press he had not been arrested. Florida's 2005 Stand Your Ground law allows people to defend themselves with deadly force if they "reasonably believe" that they are under threat of death or extreme bodily harm in a public setting. Naturally, a lot rides on what you define as "reasonable." The girlfriend says that Martin told her during their call that someone was following and then approached him; Zimmerman told police that he had gotten out of his car to read a sign, at which time Martin jumped him.

Meanwhile, local police face widespread accusations of botching, or even of soft-pedaling, the investigation. After weeks of growing criticism, the FBI and Justice Department have announced plans to investigate, and the state attorney general has called a grand jury hearing for April 10 to determine whether Zimmerman should be charged.

The shooting has sparked debates about race, gun control, law enforcement, and vigilantism. These are critically important issues to consider in coming to terms with what happened that night. But missing from the discussion is another potentially contributing factor: urban planning and its role in the polarization of American society.

There can be no doubt that our public discourse has become oppositional and vituperative. Social and mass media exacerbate the situation by blurring traditional distinctions between partisan commentary and objective reporting, and by creating informational ghettos where dissent is unwelcome.

Gated communities are the urbanistic equivalent of sites such as WorldNetDaily and Media Matters—places designed for homogeneity, where individuals can feel safe and avoid the unfamiliar. Yet the promise of security offered by gated communities is an illusion. Those walls and gates provide little more than product packaging and brand positioning for the developer.

In a 2010 blog post, Kaid Benfield, director of sustainable communities at the Natural Resources Defense Council, wrote, "Subdivisions secured by gates intended to exclude outsiders may not be safer than

those that are fully public. This is because they can lack the social cohesion and interaction with the larger community that for millennia have served as deterrents to crime and other antisocial behavior."

Violence occurs in all sorts of places, for many different reasons: prejudice, greed, jealousy, desperation. The Retreat at Twin Lakes didn't kill Trayvon Martin any more than that 9mm gun killed him—a human being pulled the trigger. But just as there is a relationship between Florida's gun-control policies and Zimmerman's legal possession and seeming misuse of a lethal weapon, there is a relationship between the xenophobic planning formula of gated communities and one resident's deadly reaction to a perceived outsider.

If race was a factor, as so many argue, so too was class. Martin was traveling on foot, Zimmerman by car. A drive through a boomtown such as Phoenix or Atlanta demonstrates the obvious—that greenfield developments and even many urban redevelopments privilege the driver over the pedestrian. What's less obvious is that such planning strategies constitute a form of discrimination. The Retreat follows this pattern: It has few sidewalks and is completely isolated from its surroundings, lacking through streets to foster physical and social connections with adjacent neighborhoods.

Many local governments have relinquished their traditional role in determining the configuration of streets. In Sanford, as elsewhere, the municipally ordained street grid is on an obscenely large scale, and developers have far too much license to fill in the blanks however they want, which usually means enclaves that turn their backs on one another and have little if anything to offer in the way of public space and other common amenities. Martin would have been less of a target had he been strolling down an active sidewalk in a cohesive neighborhood.

In our society, a car is a sign of economic prosperity, like a burgher's protruding belly in a Dutch old master painting. Except in well-preserved older cities and some enlightened new towns, pedestrians who aren't pushing a stroller or pulling a dog on a leash are plainly suspect—potential undesirables. In far too much of America, walking is socially taboo, logistically harrowing, and, in the case of Trayvon Martin, deadly.

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LETTERS

59TH ANNUAL PROGRESSIVE ARCHITECTURE AWARDS, February 2011

Your cover reminds me of my cell tower, erected in 1995 for "Airtouch" in Ann Arbor, Mich. *Gunnar Birkerts, Wellesley, Mass.*

I was appalled at the lack of substance and depth exhibited by the projects in this program. Is this a function of the lack of substantive submittals? I remember when the real P/A design awards still existed (published in the now-defunct *Progressive Architecture*). There was always controversy, but there was also always a range of submittals (except in the days of Postmodernism) worthy of consideration. Our current crop speaks nothing to the major issues that face architects and architecture today. Architects should have no fear about being taken seriously in the future. In the words of the late Jane Jacobs, "There is no there, there." *Thomas M. Anglewicz, FAIA, Boulder, Colo.*

Ned Cramer's "My Generation" Dialogue introduces the Gen-Xers, stuck between two groups: The baby boomers, who reject traditional values, and Gen-Yers, who seem to be arrogant and self-centered. All three seem to be

responsible for these P/A Awards. Every winner is a stand-alone project that makes a self-sufficient and arrogant statement that rejects traditional values. A white cement pillbox in a stand of trees? A Quonset hut in the middle of the prairie? Our sustainable future lies within existing communities. Are there no architects who dare to enhance a neighborhood? Are Jane Jacobs books banned from universities? *Sherwood Stockwell, FAIA, Denver*

Many of the award winners only had a one-page spread without floor plans. Who ever heard of documentation without a floor plan? *W. Geoff Gjertson, AIA, Lafayette, La.*

OBJECT: METROPOLIS II, February 2012

Cool model. Brings out the kid in me. But I had to chuckle at this odd claim: cars "race past buildings down 18 roads, including a six-lane freeway at 240 scale miles per hour—simulating L.A.'s notorious traffic and congestion." A more appropriate simulation would fill the entire roadway with cars, all moving at pace with the slowest rate, with some occasionally jumping off the elevated tracks in futile desperation to acquire some sort of motion even if fleetingly and suicidally downward. *Michael Poloukhine, AIA, Pacific Palisades, Calif*

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Corrections

In our February Products section, we used a photo of InsulFoam's R-Tech for a story about InsulFoam's HD Composite. Above, find a photo of HD Composite.

In our February Typology story, "Plains, Trains, and Automobiles," we should have credited the firm SSOE Group as the designer of the BMW South Carolina plant and as the architect and construction manager for the VW Chattanooga campus.

Due to a printer error, in place of our March Editor's Choice Products department that was supposed to run on page 52, most of ARCHITECT's print copies ran an advertisement. You may find the correct page with the complete product lineup in our digital issue at bit.ly/Az15vX.

We regret the errors.

Contributors



Eric Wills

Eric Wills joined the staff of ARCHITECT magazine as the senior editor for features and research last June. He worked previously at *Preservation* magazine, published by the National Trust for Historic Preservation. Raised in East Windsor, N.J., he attended Princeton University and received a master's degree in journalism from Columbia University. He has written about architecture, archaeology, and history for such publications as *Smithsonian*, *Runner's World*, and *Washington City Paper*. His *Preservation* story, "Field of Forgotten Dreams," about a Negro League baseball stadium in Paterson, N.J., was cited in *Best American Essays 2010*.

→ See Eric Wills's feature on the Barnes Foundation redesign on page 80.



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NEWSWIRE

EDITED BY KRISTON CAPPS



BOSTON HERALD

Fenway Park gets historic recognition

The Red Sox owners could score \$40 million in federal tax credits with Fenway Park's inclusion in the National Register of Historic Places, following the ballpark's \$285 million renovation.



LOS ANGELES TIMES

Japan, one year after disastrous tsunami

The *Los Angeles Times* reports that Japan's government has largely failed to support the reconstruction of the northeast, led by architects such as Toyo Ito, Hon. FAIA, and Kazuyo Sejima.



THE DALLAS MORNING NEWS

City celebrates Calatrava bridge opening

Dallas celebrated the opening of the Margaret Hunt Hill Bridge designed by Santiago Calatrava with presentations by dignitaries and a concert by Texas country legend Lyle Lovett.

Congress Investigates Eisenhower Memorial Design

In recent months, members of the design community and living descendants of President Dwight D. Eisenhower have split over the proposal by Frank Gehry, FAIA, for the Dwight D. Eisenhower Memorial. Now, the U.S. House of Representatives has entered the fray.

On Feb. 29, Rep. Darrell Issa, R-Calif., issued a letter to Rocco Siciliano, chairman of the Dwight D. Eisenhower Memorial Commission, noting "serious concerns with the current memorial design—including objections from Eisenhower family members." In his capacity as chairman of the House's investigative arm, the Committee on Oversight and Government Reform, Rep. Issa requested documentation from the Eisenhower Memorial Commission on a number of fronts.

Rep. Issa isn't the only representative who has taken an interest in the memorial. On March 20, the House Subcommittee on National Parks, Forests and Public Lands will have held an oversight hearing on the Eisenhower Memorial. The debate over the design spurred the interest of the subcommittee's chairman, Rep. Rob Bishop, R-Utah, according to a spokesman for the Natural Resources Committee.

Still other House Representatives have spoken up against the Eisenhower Memorial Commission. Rep. Dan Lungren, R-Calif., asked the National Capital Planning Commission to reconsider the design. So did Rep. Aaron Schock, R-Ill.

Congressional interest may not necessarily lead to congressional action. A spokesperson for the Natural Resources Committee said that it's certainly possible for the committee to legislate on the matter. But the spokesperson adds that any congressional action on the matter is a long way off. KRISTON CAPPS

Wang Shu Wins Pritzker Prize

WANG SHU of the People's Republic of China is the 2012 Pritzker Prize laureate. With the \$100,000 award and bronze medal, the 49-year-old Shu takes his place among such architectural luminaries as Frank Gehry, FAIA (1989), and Zaha Hadid, Hon. FAIA (2004).

Shu received architectural degrees from the Nanjing Institute of Technology in 1985 and 1988. Prior to establishing his Hangzhou-based practice in 1997, Shu worked with craftsmen to learn the art of building. "I decided to work outside the system," Shu says, noting that within the Chinese technical institutes, "they don't touch real things. I did renovations where I had to work with materials and craftsmen. I wanted to know everything."

Amateur Architecture Studio, the 10-person firm led by Shu and his wife, Lu Wenyu, has produced a substantial body of work in just a decade and a half, including the Ceramic House in Jinhua; a Xiangshan campus for the China

Academy of Art in Hangzhou; the Ningbo History Museum in Ningbo; and a six-tower complex for the Vertical Courtyard Apartments in Hangzhou.

Shu's work often incorporates recycled and natural materials, developing distinctly modern buildings that are unique to their place and culture. "Modern architecture is very abstract; it's pristine when it's new, but then it decays," Shu says. "Traditional building is dirty and rough, but it makes you feel better." He places his work in a context with those modern, Western architects who have most influenced him, including Louis Kahn, Le Corbusier, and Adolf Loos. "I build on the masterworks, but my experience is Chinese," Shu says. "Craftsmen in China do things by memory."

American I.M. Pei, FAIA, who won the award in 1983, is the only other Chinese-born individual to be so honored. The prize will be formally presented on May 25 in Beijing. EDWARD KEGAN, AIA

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REVENUE GENERATED BY IPAD SALES FOR APPLE IN Q4 2011
SOURCE: THE NEW YORK TIMES

15 million

IPAD UNITS SOLD BY APPLE IN Q4 2011
SOURCE: THE NEW YORK TIMES

3.1 million

PIXELS IN THE IPAD 3 DISPLAY
SOURCE: APPLE

20:1

RATIO OF SALES OF COMPUTERS TO TABLETS, 2011
SOURCE: THE NEW YORK TIMES

6:1

RATIO OF SALES OF COMPUTERS TO TABLETS, 2011
SOURCE: THE NEW YORK TIMES

200,000

APPLE STORE APPS MADE FOR IPAD
SOURCE: APPLE

46

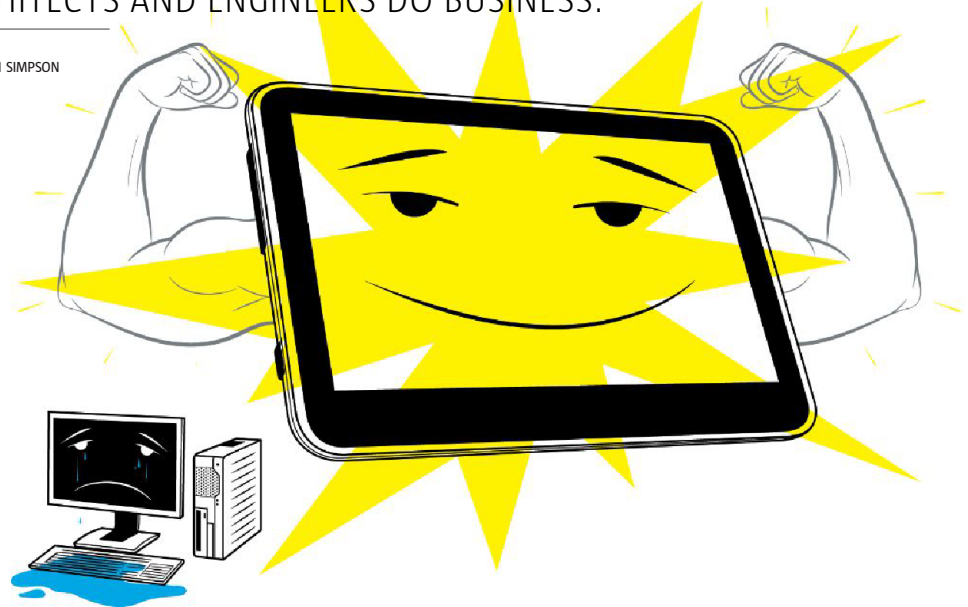
PERCENTAGE OF SURVEYED IPAD 3 CONSUMERS BUYING THEIR FIRST TABLET
SOURCE: UBS

→ NUMBERS

What's Appening

THE APP ECONOMY PROMISES TO CHANGE THE WAY THAT ARCHITECTS AND ENGINEERS DO BUSINESS.

TEXT BY KRISTON CAPPS
ILLUSTRATION BY JAMESON SIMPSON



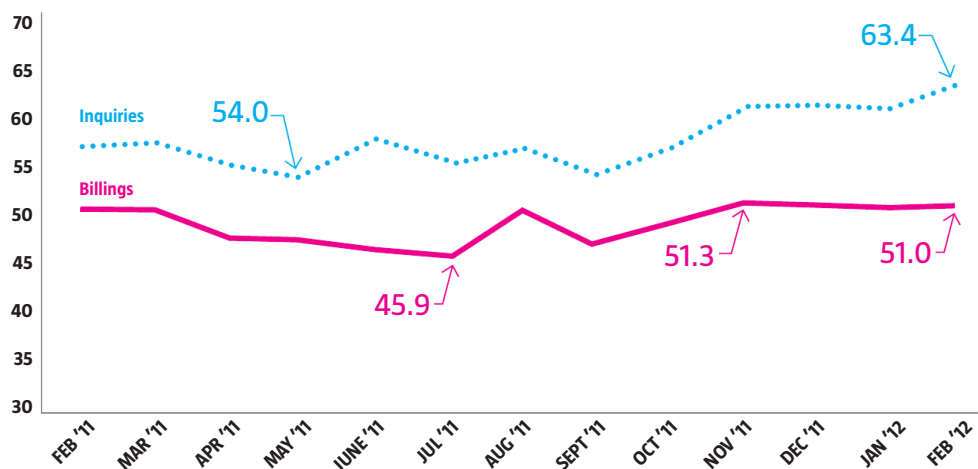
BEEN TO A RESTAURANT LATELY? Did the host take down your party's name with pad and pen, or with an iPad? More and more, the answer is proving to be the latter.

The explosive growth of the tablet computer has sparked an entire new industry—an app economy, writes Reihan Salam in a March op-ed for *The Daily* (a tablet-only newspaper). The numbers speak for themselves: Some 75 million tablets have been sold since their introduction in 2010, driven by sales of the iPad. Apple alone may sell 60 million tablets in 2012. The key to the tablet's success is its versatility—which is fostered through apps.

Salam describes the app economy as “a form of knowledge-intensive service work,” as opposed to, say, manufacturing. But the apps themselves appeal to a broad set of users. The productivity company ecoInsight, for example, designs building-audit apps for the hard-hat set. Some 2,000 users rely on ecoInsight's Mobile Audit app to collect and analyze performance data previously gathered by hand. A new blueprints app by Plangrid, a startup, allows users in the field to manipulate plans, avoiding the costs and time associated with reprinting expensive blueprints.

The Windows 8 app store, which launched in February, currently features free apps by invited developers. If it's a success, it will add another forum to the app marketplace—one that may augur big changes to the way that architects, engineers, and builders collect, create, and communicate data. □

BILLINGS AND INQUIRIES INDEXES



FEBRUARY 2012 ARCHITECTURE BILLINGS INDEX

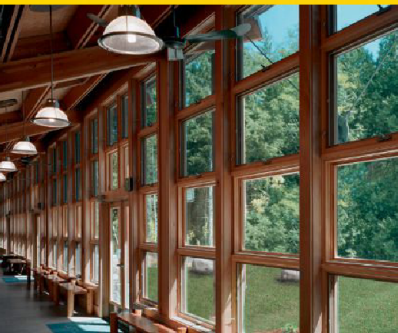
↑ 51.0

- ↑ 55.1 commercial
- ↓ 50.3 institutional
- ↑ 46.3 mixed practice
- ↑ 53.3 multifamily residential

SOURCE: AIA



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On the Boards

TEXT BY KATIE GERFEN



Kimball Art Center

BIG

Copenhagen-based BIG's new addition to the Kimball Art Center in Park City, Utah, expands exhibition space for the center, which serves as both a community hub and a theater for Sundance House, a screening venue for the 10-day Sundance Film Festival. "They wanted a landmark, but it [Park City] is, at the same time, a very tight-knit community," says project leader Leon Rost. "We really needed to find a way to resonate with the history." The addition comprises two stacked gallery spaces that can be used as screening rooms during the festival. The lower volume is oriented along the original city grid, but the upper volume is angled toward Heber Avenue, the newer gateway to the city. The addition's walls are formed from stacked timbers—salvaged from a defunct trestle that crossed, and then collapsed into, the Great Salt Lake—that twist to accommodate the shift. "It has a textural quality," Rost says of the wood. The building is targeting LEED Platinum, and has an expected completion date of 2015.



Patricia and Phillip Frost Museum of Science

GRIMSHAW ARCHITECTS

Ground broke this February on the new Patricia and Phillip Frost Museum of Science in Miami, designed by the New York office of Grimshaw Architects, with local firm Rodriguez and Quiroga Architects Chartered serving as executive architect. Located in the downtown Museum Park District, the 250,000-square-foot museum is centered around a living core of terrestrial and aquatic exhibits, including a 600,000-gallon tank that can be viewed from a rooftop observation deck and from interior galleries, where the tank appears to emerge from the ceiling. "You don't have a sense of boundary and perimeter to the tank; you feel immersed in it," says Grimshaw

partner-in-charge Vincent Chang, AIA. Other facilities include a planetarium, exhibition and education wings, an education center, and a café. "One almost has to try to assemble five or six unique projects in one coherent building," Chang says. "Understanding the gradient by which you placed them together was very important." The building is designed to take advantage of Miami's temperate climate, allowing daylight and prevailing breezes to permeate portions of the interior (some areas do require careful climate control). The building has a green roof, a rainwater-reclamation system, and solar panels to generate on-site power. The museum will open in 2015.



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Location: New Orleans, LA

Architect: Voorsanger Mathes,
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PHOTO: RICK OLIVIER

AIA VOICES

DEEP DIVE | TRACING AN ARCHITECT'S LEGACY

Ellen Weiss, an architectural historian and professor emerita at Tulane University's School of Architecture in New Orleans, lectures on and writes about American architecture and community planning. Her recent book, Robert R. Taylor and Tuskegee: An African American Architect Designs for Booker T. Washington (NewSouth Books, 2011), chronicles Taylor's contribution to Tuskegee Institute (now University) in east central Alabama where he designed most of the campus buildings during his 40-year career, and managed the grounds and infrastructure.

I was living near Tuskegee and I became fascinated by the campus. I mean, this is Tuskegee, after all—it's an important place. Then I heard that these buildings were designed by a black architect—Robert R. Taylor—and I thought this is a story that has to be told.

Robert R. Taylor had an excellent grammar and high school education in Wilmington, N.C., his birthplace, at an American Missionary Association school for the children of slaves. Taylor's father was legally a slave, even though, as the son of his white master, he was allowed to live on his own in the distant city and prosper as a carpenter and merchant. He could afford to give his son a college-level education at MIT.

At MIT, Taylor worked all the time—like any architecture student today. MIT was an international institution then as it is now, and there were students from Latin America, the Near East, Europe, and

Asia. So it was a very open environment—progressive and diverse—although Taylor may have been the only enrolled African-American at the time he was there. He is MIT's first black graduate. Booker T. Washington courted Taylor soon after graduation to come work at Tuskegee because there were no other academically trained black architects anywhere, only some skilled builders.

Taylor appeared at Tuskegee in November 1892, after graduating—and he began designing buildings for the campus and region. But he also taught architectural drawing—basic drafting for everyone in the building trades and in many other trades as well. So he was also developing a starter architectural design program as well as his own practice in the mid-1890s.

The campus (built by black carpenters and masons who could draw a little) was already 10 years old when Taylor arrived. One of Taylor's predecessors was Booker T. Washington's brother, who had some construction experience. But these buildings didn't have the eloquence or character of buildings designed by a classically trained architect. Washington saw the difference. He had been trained at Hampton Institute in Virginia, for which Richard Morris Hunt designed several buildings. Washington would have seen Hunt's work and he understood what architecture could mean for a sense of place.—As told to William Richards **AIA**

AIA 2012 NATIONAL CONVENTION AND DESIGN EXPOSITION

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KEYNOTE PRESENTATIONS

David McCullough — Thursday, May 17

Award-winning historian and author of *The Greater Journey*

Hon. Shaun Donovan — Friday, May 18

Architect and the Secretary of the U.S. Department of Housing and Urban Development

Architects of Healing — Saturday, May 19

Join us in honoring the architects involved in the rebuilding and memorials at Ground Zero, the Pentagon, and Shanksville, Pennsylvania. They sought to help our nation when we all needed their unique gifts. Now, it's your opportunity to say "thank you."

In addition to the inspiring stories of the rebuilding and memorial at the Pentagon and the Flight 93 National Memorial, six architects who offered their experience to help rebuild and memorialize Ground Zero will share emotions and anecdotes, including Daniel Libeskind, FAIA; David Childs, FAIA; Michael Arad, AIA; Craig Dykers, AIA; Steve Davis, FAIA; and Santiago Calatrava, FAIA.

Add your applause as they receive a specially-cast medal and express your heartfelt thanks directly to the honorees at the reception immediately following.

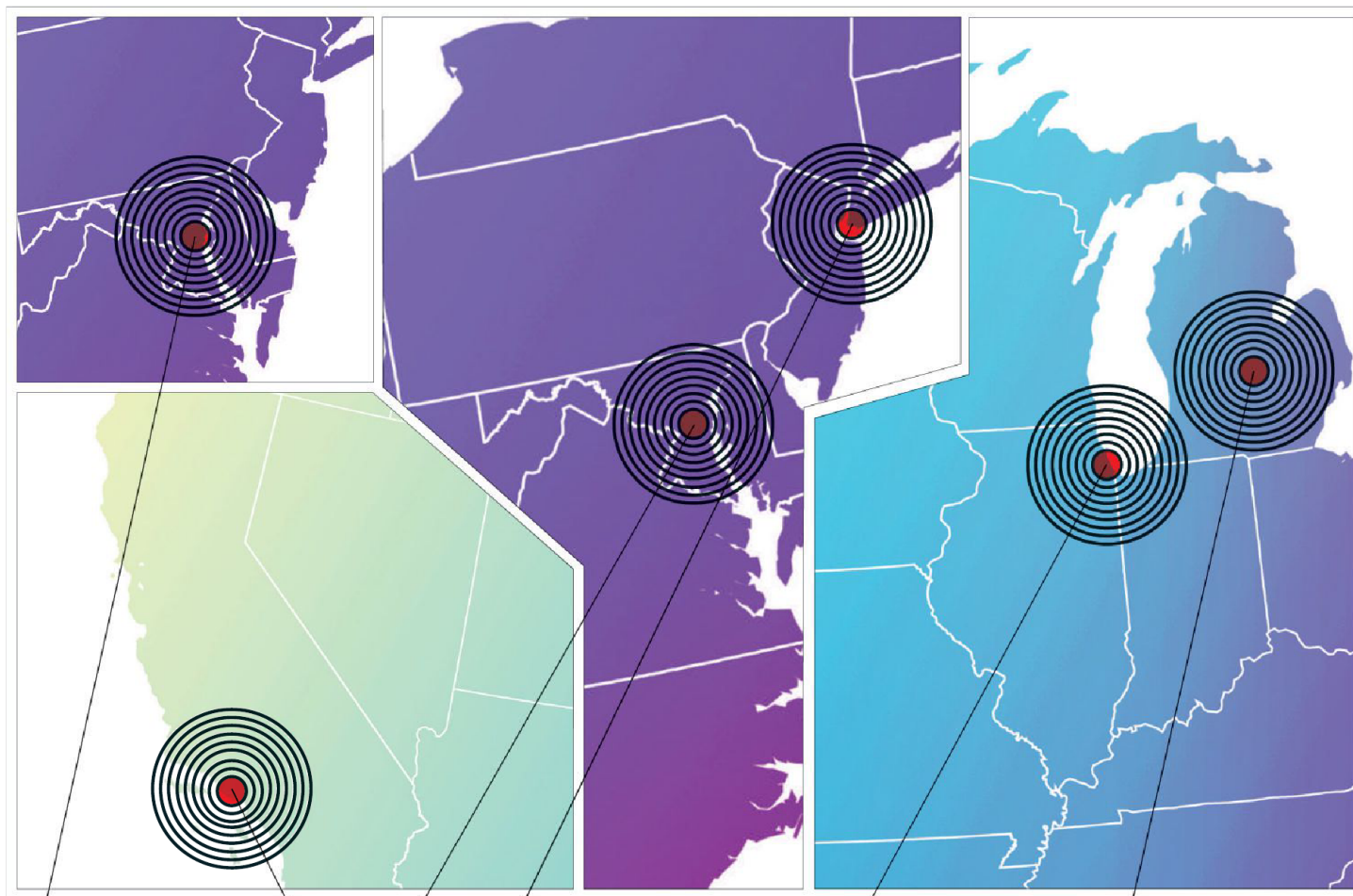


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Value Added

The intrinsic value of good design is about quality of life. If architecture demonstrably improves our health, it's a value proposition that trumps all others. Starting next month, the AIA's Young Architects Forum (YAF) calls for entries in its annual Ideas Competition, which takes up the theme of wellness as it relates to social and environmental sustainability. YAF, jointly administered by the AIA's National Component and the AIA College of Fellows, highlights issues facing recently licensed architects. As always, the competition is open to architects, interns, students, and allied design professionals.

➔ Learn more and register at aia.org/ideascompetition.

WASHINGTON, D.C.; LOS ANGELES; NEW YORK

Peak Potential

Unbuilt projects hold a special place in the public imagination, which helps explain why "Unbuilt Washington" at the National Building Museum has been popular—be sure to catch the exhibit before it closes on May 28 (nbm.org). This fall, Los Angeles's Architecture and Design Museum will debut "Never Built: Los Angeles (1940–2010)" on Oct. 4 (aplusd.org). On your way to these exhibitions, open up the iPhone app Museum of the Phantom City: Other Futures, which plots New York projects that never quite made it (phantomcity.org). Or, just reread Italo Calvino's *Invisible Cities*, which celebrates 40 years in print this year. Architecture doesn't always have to be built to matter.

VIRTUAL

Field Work

This month, upwards of 80,000 architects, interns, and educators will be asked to take the 2012 National Council of Architecture Registration Boards (NCARB) Practice Analysis of Architecture Survey. The survey, which is conducted every five to seven years, identifies the tasks, knowledge, and skills necessary for the independent practice of architecture. It was developed in cooperation with the AIA, the American Institute of Architecture Students (AIAS), the Association of Collegiate Schools of Architecture (ACSA), and the National Architectural Accreditation Board (NAAB).

➔ Learn more at ncarb.org.

CHICAGO

Social Studies

The architecture seed is often planted early for architects. Knowing that, the Chicago Architecture Foundation launched the program "Discover Design: A Student Design Experience" to foster curricular interest among teenagers using a building type they all know well—the high school. The program chronicles the design challenges for several recent schools and outlines a series of sample projects, such as a school food stand or a new technology wing. Teens interested in architecture can connect through the site and share their work. Importantly, "Discover Design" doesn't pander; it begins with the premise that everyone has design intelligence.

➔ Learn more at discoverdesign.org.

DETROIT

Koraboration

Balthazar Korab, Hon. AIA, holds a special place in the pantheon of architectural photographers. Trained as an architect at the École des Beaux-Arts, he documented Modernism with an insider's eye. Of course, stints with Le Corbusier, Hon. FAIA, and Eero Saarinen, FAIA, didn't hurt either. Korab used color with the same aplomb that photographer Ezra Stoller used black and white, offering posterity a cache of vivid documents about the everyday life of buildings. To commemorate his career, 100 select images (out of approximately 360, dubbed "the Modern Collection") were exhibited in Michigan at Lawrence Technological University's UTLC Gallery last month, in a show made possible by LTU and the AIA.



NOTICE



THE AMERICAN INSTITUTE
OF ARCHITECTS

OF AIA CANDIDATES AND CONVENTION BUSINESS ITEMS

CANDIDATES FOR INSTITUTE OFFICERS

Elections for the Institute's 2013 First Vice President/2014 President-elect, two 2013-2014 Vice Presidents, and 2013-2014 Secretary will be held at the AIA 2012 National Convention and Design Exposition, which will take place May 17-19, 2012, in Washington, DC. If no candidate for First Vice President or Secretary obtains a majority of the votes cast during the initial round of voting on May 17-18, a run-off election will take place on May 19, 2012. The following members have declared themselves candidates for national office.

2013 First Vice President/2014 President-elect



Helene Combs Dreiling, FAIA
(AIA Blue Ridge)

2013-2014 Vice Presidents (two will be elected)



Peter G. Kuttner, FAIA
(Boston Society of Architects)



Donald C. Brown, FAIA
(AIA Montgomery)



Susan Chin, FAIA
(AIA New York)

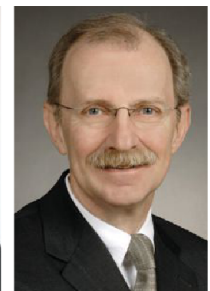


Thomas V. Vonier, FAIA
(AIA Continental Europe)

2013-2014 Secretary



Frederick Butters, FAIA,
Esq.
(AIA Detroit)



Richard DeYoung, AIA
(AIA Pittsburgh)

THE INSTITUTE'S ANNUAL BUSINESS MEETING WILL BEGIN PROMPTLY ON SATURDAY, MAY 19, AT 8:15 A.M. DELEGATES WHO FAIL TO CLAIM THEIR VOTING KEYPADS AND TO USE THEM TO REGISTER THEIR PRESENCE AT THE START OF THE MEETING WILL NOT BE ABLE TO VOTE AT THE MEETING.

PROPOSED BYLAWS AMENDMENTS

The AIA Board of Directors is sponsoring several amendments to the Institute's Bylaws, and those amendments are scheduled for consideration by the delegates at the annual business meeting in Washington, DC, on May 19, 2012. Bylaws amendments require approval by an affirmative two-thirds vote of the delegates at the meeting, determined in the manner prescribed in Section 9.011 of the Bylaws.

Bylaws Amendment 12-A – Eligibility for Emeritus Membership

This amendment would revise the eligibility requirements for Emeritus membership.

Bylaws Amendment 12-B – Authority to Form International Region and Allocation of Regional Directors

This amendment would authorize the formation of an International Region for AIA members living and working outside the United States and its territories. It would also adjust the manner in which apportionment of Regional Directors on the Board of Directors is determined.

RESOLUTIONS

The delegates at the AIA 2012 National Convention and Design Exposition will also be asked to consider resolutions, which require approval by a majority vote of the delegates present and voting.

To view the candidate speeches, visit <http://info.aia.org/aiarchitect>. For candidates' statements, and the full text of the proposed Bylaws amendments and resolutions, visit the AIA Convention Web site, <http://convention.aia.org/event/convention-home.aspx>.

AIA KNOWLEDGE

BEST-LAID PLANS



ILLUSTRATION: SARAH HANSON

Energy modeling is for everyone and all buildings benefit.

WHEN THE AIA COMMITTEE ON DESIGN HOSTS “THE AIA PRACTICE Guide to Integrating Energy Modeling in the Design Process” at the AIA National Convention next month, its principal challenge will be dispelling energy modeling’s fear factor.

Computer-based models that simulate energy consumption and production in buildings have become increasingly popular with architects. But the connection between these tools and everyday practice has not been as easily made. The intent of the AIA’s practice guide is to help architects gain a better understanding of energy as a design topic, and to assist with bridging the communications gap between what architects call design and what many engineers and energy modelers call geometry. The includes architect-rated evaluations of many of today’s energy modeling interfaces and engines. It also includes links and a map documenting which tools work best with various CAD and 3D modeling programs.

Energy modeling represents a major paradigm shift, creating a new value proposition and a new level of service for the architectural profession. It’s about the health, safety, and welfare trinity, but it’s also about performance. Spiraling energy costs and the environmental stresses of climate change have made energy modeling more relevant. The USGBC’s LEED program and other green-rating systems have made energy modeling a requirement for earning renewable-energy credits that count toward certification.

More and more government agencies, retail developers, and universities (which drive urban and rural development) include energy modeling requirements in their RFPs. More and more state and local energy building codes contain energy modeling disclosure requirements, and, of course, the AIA’s 2030 Commitment requires energy measurements and controls.

“With energy modeling, the architect can have a longer-term role as trusted adviser to the client, counseling post-occupancy on energy consumption and performance measures that reflect back on the original energy modeling analysis done before occupancy,” says Rand Ekman, AIA, Cannon Design’s Chicago-based director of sustainability and president of AIA Chicago. “It lets us own more of the design process and expands our value.”

Ekman serves on the Energy Modeling Working Group that helped to develop the AIA’s new guide. The 10-member working group toured three U.S. Department of Energy laboratories—National Renewable Energy Laboratory, Lawrence Berkeley, and Pacific Northwest—to learn about the new collaborative energy modeling tools that are in development and to provide input on what tools may be available in the future. “Energy modeling is becoming part and parcel of what it takes to get a job done,” Ekman says.

“Early modeling analysis is graphical in nature, and what gets done later by engineers is more data-driven on spreadsheets and texts,” says Oregon-based Darren Lewis, AIA, sustainable-design technology consultant at HDR and a member of AIA’s Technology in Architectural Practice Knowledge Community. “The opportunity is for architects to get over the business-as-usual mind-set and put all the available technology to full use.”

Amidst all of the new energy tools, one thing seems clear: Energy modeling elevates the details of building science to the same level as artistic design, requiring architects to become equally skilled in both. “Firms that are incorporating energy modeling,” Lewis says, “are seen as more substantive in their commitment to providing high-performance buildings.” —By Mike Singer **AIA**



AIA FEATURE

DESIGN DOCTRINE



PHOTO: TAYLOR LEDNUM, GSA DESIGN EXCELLENCE PROGRAM © GSA

Fifty years strong, GSA's "Guiding Principles" are a working theory on good design.

THE EFFECT OF ARCHITECTURAL THEORIES ON EVERYDAY PRACTICE is hard to pin down. On one hand, Vitruvius's holy trinity of firmness, commodity, and delight are foundational to why architecture matters in the largest sense. On the other hand, his theoretical trinity is a little inscrutable when it comes to change orders or building codes.

Nevertheless, the most powerful theories—from Vitruvius to Venturi—have connected architecture's purpose to provide shelter with its potential to inspire its inhabitants. It may surprise you to learn that the General Services Administration (GSA) has operated since 1962 according to its own homegrown architectural theory: the "Guiding Principles for Federal Architecture." Fifty years later, these principles have forged stronger links between theory and practice than other architectural philosophies, which too often perpetuate the enormous gap. More importantly, these principles still guide some of this country's most adventurous works of public architecture.

In 1949, President Truman created the GSA, which assumed the authority to commission and construct federal buildings from the Treasury Department. But, by 1959, the government had not kept pace with its own internal growth. President Kennedy formed a committee on federal office space to investigate how to expand inside (and beyond) the Beltway as well as tackle critiques of banal federal architecture. Daniel Patrick Moynihan (who later became a senator from New York) chaired the committee, and the rest is, well, history. In what was a simple report on the narrow question of office availability, Moynihan declared a broad architectural theory that he

Five Decades, Five Buildings Clockwise from above: Department of Housing and Urban Development (Washington, D.C.), Klucznski Federal Building (Chicago), San Francisco Federal Building, Toldeo Federal Building and U.S. Courthouse (San Juan, Puerto Rico), and Low Federal Building (Savannah, Ga.).

humbly titled "Guiding Principles for Federal Architecture." He did it in just over 500 words.

"The 'Guiding Principles' provide a vision and rationale for us to deliver legacy-quality architecture," says Edward Feiner, FAIA, former GSA chief architect.

"There's a pragmatic side of theory," says Julie Snow, FAIA, whose firm, Julie Snow Architects, has worked on several projects with the GSA. "And, for me, that doesn't exclude the aspirational side of Moynihan's comments—the idea that architecture has the ability to reflect the aspirational side of democratic life and culture."

Written in the spirit of urbane optimism, the "Guiding Principles" established public architecture's functional and symbolic roles. Moynihan references the Vitruvian need for firmness and commodity, and then calls for delight by stating that design "must provide visual testimony to the dignity, enterprise, vigor, and stability of the American Government." All told, it is much more than a call for "good design"; it is a call for smart design that is economic, contemporary, contextual, and accessible. By connecting public building and our national character, Moynihan's words became the architectural conscience of the federal government by couching architecture as the art of building rather than merely a design service. "Major emphasis should be placed on the choice of designs that embody the finest contemporary American architectural thought," writes Moynihan, pointing out that this emphasis must "flow from the architectural profession to the Government, and not vice versa."

“Amongst architects, the GSA is looked upon as a great client—not least because they are seen as being at the forefront of how architecture and social space can be developed,” Snow says. “I’ve actually started lectures by telling people to go read the Moynihan principles because he articulates what architects do—and should do.”

At mid-century, when Beaux-Arts Classicism dominated public buildings in Washington, D.C., and elsewhere, American designers were also building boldly for the future in structures such as Washington’s Dulles International Airport, completed in 1962 and designed by Eero Saarinen, FAIA. Moynihan, for his part, did not mandate traditionalism, or flinch from placing the responsibility for “delight” on the shoulders of the architect—a remarkable commitment to art as well as an abdication of control.

Congress approved the Brooks Act in 1972, which allows the federal government to commission architecture firms through a two-tier procurement process, rather than limiting itself to the lowest bidder. In 1973, the GSA reinstated the Art in Architecture Program, which mandates a percentage of construction costs for art and emphasizes careful coordination between building and artistic design. In 1994, the GSA initiated its Design Excellence Program, which commissions leading architects and relies on a wide group of private-sector peer reviewers to comment upon both new design and the restoration or renovation of existing structures. Moynihan’s principles, written at a time of perceived dullness in federal design, served as the theoretical basis for the Design Excellence Program, founded to reinvigorate the GSA’s architectural inventory.

Over the past 50 years, Moynihan’s “Guiding Principles” have been interpreted to accommodate the most pressing design concerns of the age. In the first few decades, structures such as the Robert C. Weaver Federal Building in Washington, D.C. (the headquarters of the U.S. Department of Housing and Urban Development, completed in 1968 and designed by Marcel Breuer, FAIA), and Chicago’s Kluczynski Federal Building (completed in 1974 and designed by Ludwig Mies van der Rohe, FAIA), blended efficient corporate Modernism with a call for distinctive public spaces.

As architectural trends shifted, the “design freedom” edict of Moynihan’s principles allowed it to adapt. The Juliette Gordon Low Federal Building in Savannah, Ga., completed in 1986, fits snugly into one of the city’s historic squares through the use of appropriate scale, even if its exterior subway-tile cladding has been called a misstep by architectural critics. In addition, the restoration of the Jose V. Toledo Federal Building and U.S. Courthouse in San Juan, Puerto Rico, in 2002



PHOTO: © GSA, GREAT LAKES REGION

by Maurice Finegold, FAIA, is an excellent example of regionalism, historic preservation, and adaptive use—three important tenets of sustainability. More recently, passive heating and cooling has become another important tenet of sustainability, inspired, in part, by historic structures and enabled by evolving technologies. The poster child of this movement among recent GSA buildings is the San Francisco Federal Building, completed in 2007 and designed by Thom Mayne, FAIA, principal of the Los Angeles firm Morphosis. Not only did Mayne’s team advance passive systems by showing that they could be used on a large scale, but the team integrated high-security measures in the process.

Moynihan did not intend for his white paper to evolve into a theory; but, as the GSA has continued to execute his vision and adapt to changing trends, the “Guiding Principles” have become a coherent set of tested propositions. The evidence speaks for itself.

—By Elizabeth Milnarik **AIA**

➔ On May 16, the GSA will host the Moynihan Symposium on Public Design in Washington, D.C., which is free and open to the public, in conjunction with AIA National Convention. To register, visit convention.aia.org; to read more about the buildings discussed here, visit aia.org.



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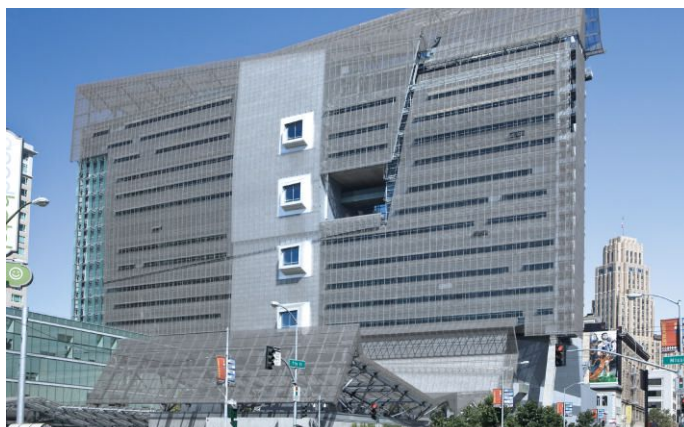


PHOTO: TAYLOR LEDNUM, GSA'S DESIGN EXCELLENCE AND THE ARTS



AIAPERPECTIVE

POWER PLAY



PHOTO: WILLIAM STEWART

“I SKATE TO WHERE THE PUCK IS GOING TO BE, NOT WHERE IT’S BEEN.”
That’s how Wayne Gretsky described his skill on the ice.

Lately, I’ve been reading commentators who have in effect penned obituaries about the future of the architectural profession. Their forecasts have been so consistently dark—often using the same words—that I’m beginning to wonder if we’ve been locked in an echo chamber where the next person speaking simply repeats the last thing they heard. Are these writers in fact predicting where the profession is going, or are they fixed on where it is now?

Even though recent reports from many AIA members and current stats from the AIA Billings Index suggest that the economy is beginning to show signs of life, we have been through a difficult period. Many firms are still hurting, and newly graduated students are feeling it in particular. I understand the toll it’s taken. I’ve been there.

When I left architecture school, the going interest rate for construction loans was 14 percent. The high cost of borrowing scuttled a lot of projects or value-engineered them almost beyond recognition. A few years later, my home state, Texas, was hit first by the Savings and Loan debacle, and, right after that, the oil bust. Some firms had to shut their doors. Those that did survive—and many did—learned some tough lessons about how to keep treading water during our industry’s periodic boom-and-bust cycles.

If I had I taken stock of my prospects based on what was happening around me, I might have sought employment at a booming company such as Polaroid or Eastman Kodak. At the time, they were the bluest of the blue chips. But now they are on the ropes. As they say in the fine print at the bottom of every stockbroker’s prospective: Current conditions are no guarantee of future returns.

Our profession is traveling down a road few if any of us are familiar with. In a February 2012 article in *Fast Company*, the reporter

Robert Safian wrote: “The pace of change in our economy and our culture is accelerating—fueled by global adoption of social, mobile, and other new technologies—and our visibility about the future is declining.” Safian went on to say that the only certain things are uncertainty and flux. Are these necessarily things to fear? Are we slowly (some would say rapidly) being marginalized; or are we, in fact, on the cusp of a transformative and revitalized future?

That’s how Thomas Fisher, Assoc. AIA, sees it. The dean of the University of Minnesota’s College of Design, and contributing editor for *ARCHITECT*, writes in a February blog post on the *Metropolis* magazine site: “There remains so much work for architects that we should see the decline of traditional jobs not as a ‘meltdown’ of architecture, but as the beginning of its rebirth.”

He’s not alone. In a new four-hour PBS television series, *Designing Healthy Communities*, former AIA public director Richard Jackson discusses the connection between bad community design and burgeoning health issues. If he’s right—and I think he is—identifying design as sound medicine is a new approach to a growing problem that architects will play a key role in solving.

Next month at the AIA’s National Convention, architects old and young, recent graduates, and educators will have a unique opportunity to hear a variety of perspectives about the future of the profession. Who should we be listening to? Where’s the puck going?

As you listen to these presentations, I would pay particular attention to those who counsel adaptability and celebrate the opportunities of change. In the meantime, don’t count out architecture as a richly rewarding career. **AIA**

➔ Join our conversation at aia.org.

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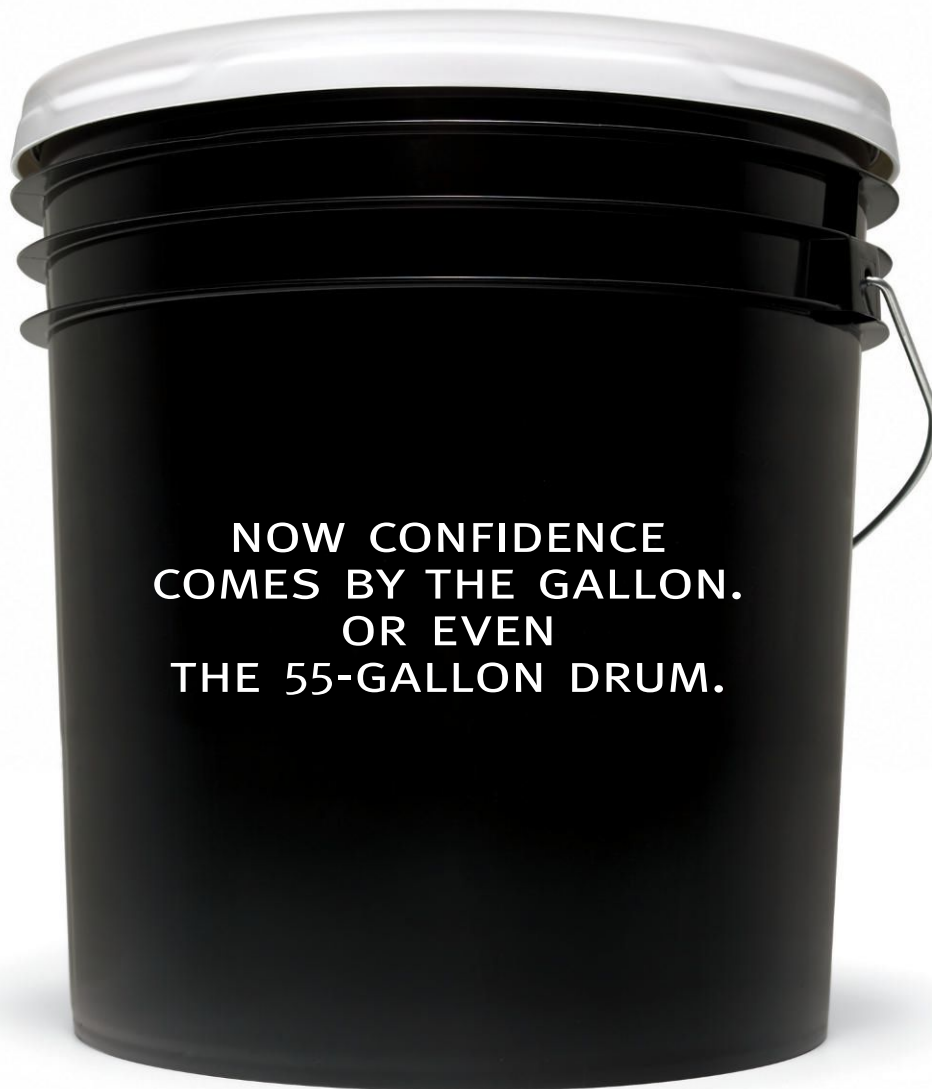
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ATTORNEY **STEPHEN DEL PERCIO**
SPELLS OUT THE LETTER OF THE LAW
REGARDING SUSTAINABLE DESIGN.

INTERVIEW BY ERNEST BECK
PHOTO BY SIOUX NESI





WITH THE NUMBER OF sustainably designed buildings rising, architects are not only dealing with new design and energy issues but also the potential legal ramifications. Green design raises questions about legal liability and risk management for projects big and small—and architects, engineers, construction companies, and owners are working with lawyers to create a framework for assigning responsibility and contractual obligations. This is uncharted territory, says Stephen Del Percio, 33, a New York–based lawyer for the global engineering-services firm URS Corp., who suggests “keeping your eyes wide open” when negotiating contracts. Del Percio, who tracks green legal issues at the Green Real Estate Law Journal (greenrealestatelaw.com), spoke with ARCHITECT about what architects should keep in mind concerning the evolving field of green law.

“THE SKY-IS-FALLING SCENARIO WAS PROBABLY OVERSTATED, WHICH IS A GOOD THING. BUT I ALSO THINK PEOPLE ARE TAKING RISK MANAGEMENT FOR GREEN PROJECTS MORE SERIOUSLY. THEY ARE DEALING WITH THE RISK RELATED TO SUSTAINABLE DESIGN IN A PROACTIVE WAY BEFORE THEY GET INVOLVED OVER THEIR HEADS.”

Take risk seriously.

Many observers predicted an explosion in litigation related to sustainable design. It hasn’t happened yet. “The sky-is-falling scenario was probably overstated, which is a good thing,” Del Percio says. One reason is the downturn in the economy, the decline in architectural billings, and the credit crunch, which made it hard to start new building projects. “But I also think people are taking risk management for green projects more seriously. They are dealing with the risk related to sustainable design in a proactive way before they get involved over their heads.”

Suing green.

That said, there are certainly more legal cases related to LEED certifications and green-building projects than there were a few years ago, including cases challenging energy-efficiency codes. But whether that’s due to more LEED-certified buildings or the mood for litigation more broadly in the design and construction industry isn’t clear to Del Percio. “As long as there is a design and construction industry, there will be lawsuits,” he says.

Think liability.

There are two separate lines of risk to think about. One is project specific: the risk apportioned and allocated between an owner, who expects delivery of a project within certain parameters, and the designer and

contractors. Then there is the regulatory environment. That’s when the local, state, or federal government enacts a law related to sustainable design that requires architects and owners to comply. It could be related to LEED or perhaps Energy Star ratings. “This poses a challenge to the industry, and it’s where most of the legal activity is taking place,” Del Percio says.

Disputing LEED.

“LEED doesn’t have legal power, nor is it a building code without some enabling mechanism like a statute, a resolution, or a contract,” he says. LEED is a tool to help transform the market—to set the bar for the top of the market. So complaints about LEED itself should go to the U.S. Green Building Council or the Green Building Certification Institute. An architect who promises LEED Gold but doesn’t quite deliver could appeal to these organizations, which handle these issues internally. And the USGBC will arbitrate disputes over LEED certifications for projects, helping the parties involved find a resolution. “There is a good mechanism in place to fix that,” Del Percio says.

Defend yourself.

There are very few standard contracts tailored specifically for green-building projects. But industry organizations, including the AIA, have a good scope of work documents that can be used as a model to start the conversation. The Design-Build Institute of America has a green projects document—one good way to start thinking about risk allocation, though it has to be adapted for each project. Any such contract should define “green” as specifically as possible, because it can mean something different in midtown Manhattan than it does in downtown Phoenix. A primary consideration is to match expectations in the contract, which is why LEED and energy-efficiency goals should be clearly spelled out. “These are important weapons in your arsenal,” Del Percio says.

The future isn’t written.

Anything could happen in this field. A designer might be sued for breach of contract or for negligence for failing to do what was promised. There could be a statutory cause of action because a local ordinance required an owner to satisfy a LEED or similar requirement and this didn’t happen. Damages could be assessed against the designer or the contractor. “The bad news is that this could become a Pandora’s box,” he says. “The good news is that it hasn’t happened yet.”

Go green.

But all projects are risky. Some are just more risky than others. Adding sustainability considerations can add a level of complexity, and that risk is evolving along with the field—but that risk is manageable. There are good risk-management tools in construction law, and the law is now clearer on sustainable design. “I’m not cheering on a full-steam-ahead approach without thinking things through,” Del Percio says. “But sustainability should not be a no-go situation.” □



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TEXT BY LISA OWENS VIANI



Newton Creek Wastewater Treatment Plant • Brooklyn, N.Y. • Ennead Architects •

The plant's eight stainless steel-clad, egg-shaped digesters process some 1.5 million gallons of sludge each day, converting the waste into water, carbon dioxide, methane gas, and fertilizer.

SINCE THE 1970s, the federal government has spent billions of dollars on wastewater-treatment plants to bring them up to snuff, or at least to meet federal mandates. Much of this money has come in the form of Clean Water Act grants for states, municipalities, universities, and nonprofits. No amount of money, however, can change the perception that wastewater treatment belongs out of sight and out of mind.

Architects have taken up the unlikely burden of making water treatment more visible—as treating wastewater and returning clean water to users, or “closing the loop” in technical parlance, is a critical way to preserve freshwater and protect headwaters. Three recent projects of different scales demonstrate not only progress in the treatment of wastewater, but also new opportunities in the design of treatment plants.

Regulation, as it turns out, can serve as a source of inspiration. The U.S. Environmental Protection Agency has tightened regulatory limits on nutrient discharge levels, prompting municipalities on sensitive watersheds to overhaul their water-treatment procedures. For example, a nonprofit consortium of municipalities in Washington state—the cities of Lacey, Olympia, and Tumwater, as well as Thurston County (LOTT)—was required to add nutrient removal to its wastewater treatment program before discharging into Budd Inlet, part of the Puget Sound, in the '90s; the regulations were tightened in 2005 and Budd Inlet was deemed impaired for aquatic life.

Under the new dispensation, the LOTT Treatment Alliance commissioned Seattle's Miller Hull Partnership to design the new 32,000-square-foot Regional Services Center—which was built in 2010 and has since earned LEED Platinum certification—as part of the existing treatment plant on site. For the plant, Scott Wolf, FAIA, and Robert Hull, FAIA, converted an older lab and administration building into a state-of-the-art water-quality testing lab.

LOTT managers further decided to produce and sell Class A recycled water. Class A recycled water is treated to a high safety standard: It can be used to irrigate crops for human consumption. Their first customer for that water is the plant's service center, which is just downstream of the plant and consolidates all of LOTT's administration and operations staff (formerly spread out between two buildings in different locations) in one building.

Miller Hull helped LOTT install a cogeneration plant within the wastewater-treatment plant, which also serves the Regional Services Center. It takes another waste product of the treatment plant—methane—and uses it as fuel to fire generators. The cogen plant produces additional electricity and helps fire the boilers that in turn produce additional heat for the low-temperature water loop. “We recognized that there was this waste product amenity on the site such that we were able to pull off another line from that loop to serve a new



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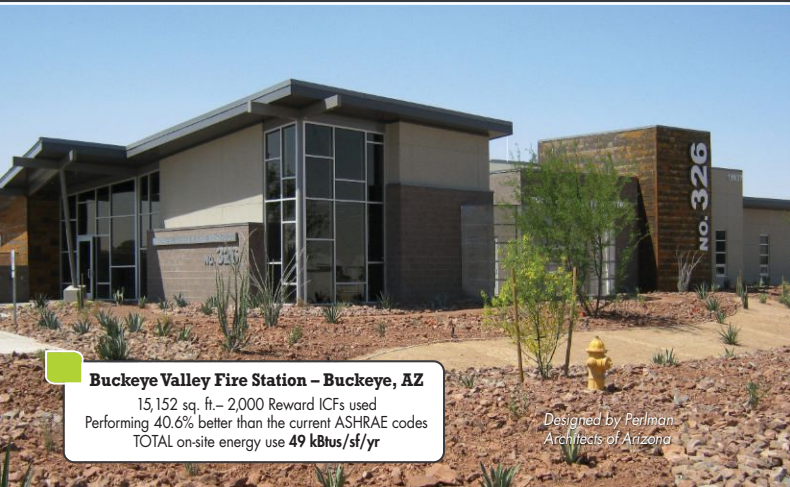


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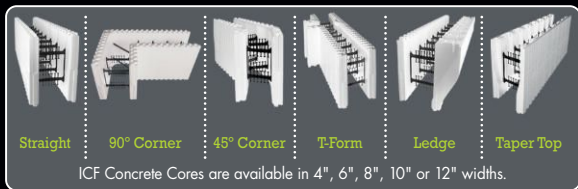
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LOTT Clean Water Alliance Treatment Center • Olympia, Wash. • The Miller Hull Partnership • Class A reclaimed water that is treated and recycled at the plant facilitates the building's toilet-flushing and irrigation needs.

→ children's museum on an adjacent parcel," Wolf says.

The services center building also houses the Water Education Technology Center (WET). WET is an interactive museum focused on water use and conservation. One computer-assisted map encourages visitors to "flush" toilets on site and see how far wastewater travels from their home to the treatment plant. "To a lot of people, water and wastewater systems are invisible—water is the 6 inches between the faucet and the drain," Wolf says. "We're making the invisible visible."

On a smaller scale, the San Francisco Public Utilities Commission (SFPUC) decided that its new headquarters—still under construction in the city's Civic Center area—should practice what the agency preaches. "We're asking our customers in a big way to conserve water," says Rosey Jencks, who is with the SFPUC's Urban Watershed Management Program. "Our commissioners wanted us to walk the talk."

In 2001, KMD Architects, working then with Stevens & Associates, had originally won a request for proposals in San Francisco to design a 227,500-square-foot public building that met LEED Silver requirements; however, the project was put on hold in 2002 as a result of the dot-com bust. In 2006, when the San Francisco PUC began looking for a new headquarters building of that same size, the project was reborn. The 15-story building, which won an AIA San Francisco 2010 Excellence in Unbuilt Design award, features built-in wind turbines and solar panels and is predicted to use 55 percent less energy than a building of a comparable size. An almost completely closed-loop water system will treat close to 5,000 gallons per day of wastewater generated by the building.

The SFPUC headquarters becomes a treatment plant in itself. The building's wastewater is collected from throughout the building and stored in a below-grade primary tank. "That tank is really meant for screening foreign objects like plastic that people may flush down the toilets, to give them a chance to settle out," explains KMD designer and project lead Michael Rossetto. From there, the water is pumped into the so-called Living Machine system for treatment.

The Living Machine system, which has also been installed recently at the Port of Portland, is an engineered acceleration of natural tidal wetlands processes, Rossetto says. Wastewater is piped up into a series of divided cells, or planters, containing treatment wetlands. Bacteria and

microcrustaceans in the aggregate consume the wastewater products, says Rossetto, “converting nasties to non-nasties” (e.g., converting ammonia to nitrogen to nitrogen gas, completing the natural nitrogen cycle). Each time the wastewater is pumped from one cell to another, the water gets a little cleaner. “Out in the marshes, the tides go up and down, oxygenating the soil several times a day,” Rossetto says. “This system accelerates that—pumps will raise and lower the level of the wastewater in the treatment cells several times a day, oxygenating it.”

On the other end of the scale is a plant that opened recently in Brooklyn, N.Y. There, architect Richard Olcott, FAIA, of Ennead Architects has been working with the New York City Department of the Environment since 1991 on a \$4.5 billion phased upgrade of nine different buildings that make up the Newtown Creek Wastewater Treatment Plant. A 53-acre site, the Newtown Creek plant treats wastewater from a staggering 1.5 million people per day, discharging the effluent into the East River. Like many older treatment plants around the country, this one (built in the late 1960s) had not been meeting Clean Water Act requirements for many years. Plant superintendent Jim Pynn explains that the plant was only removing 65 percent of the pollutant load coming into it; the Clean Water Act requires at least 85 percent of the load to be treated.

In 1990, a master facility plan was drawn up that called for a design that would bring treatment up to the 85 percent load requirement. New York City’s then-chief-architect for the Department of Environmental Conservation, Michael Cetera, recommended Olcott, James Polshek, FAIA, and Timothy Hartung, FAIA, of Ennead Architects—then known as the Polshek Partnership—as the architectural team that would work on the project with three engineering firms.

The designers are renovating the buildings on a phased schedule, as the plant must remain operational—an unusual challenge. “You can’t turn this plant off,” Olcott says. “The project has required a whole game of musical chairs where you build a part of the system and put it online, then shut down an old part and take down a building.”

The plant’s large, egg-shaped digesters, which treat the residual material that is removed from the wastewater—also known as sludge—are a signature feature of the building design. But the design for them wasn’t obvious, in particular the enclosures and catwalks connecting them. “We knew there was going to be an egg,” Olcott says. “We had to figure out what it would look like, the enclosure and the catwalks connecting the eggs.”

Today, the Newtown Creek plant is averaging removal of 93 percent of its pollutant loads—more than that required by the Clean Water Act, Pynn says. Unlike the San Francisco or Washington State projects, Newtown Creek does not produce gray- or recycled water. Pynn says that it would be extremely expensive to retrofit an older city such as New York to use gray- or recycled water.

Olcott says that designing wastewater infrastructure represents a huge opportunity for architects. “Wastewater treatment has always been a neglected part of our culture that no one wants to think about. But, one by one, these plants are all going to have to get fixed.”

In the long run, Miller Hull’s Wolf says, the ultimate goal of all new wastewater-treatment projects—and where technology will lead in the future—is water treatment and reuse. “We have the technology to do it, but the public health agencies are not quite there yet. With all of the pressures on global resources, closing the loop is going to be essential.” □

“TO A LOT OF PEOPLE, WATER AND WASTEWATER SYSTEMS ARE INVISIBLE—WATER IS THE 6 INCHES BETWEEN THE FAUCET AND THE DRAIN,” SAYS THE MILLER HULL PARTNERSHIP’S SCOTT WOLF. “WE’RE MAKING THE INVISIBLE VISIBLE.”

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EXPANSION INDEX VALUE, JACKSON

The Expansion Index from Reed Construction Data is a 12- to 18-month look ahead at the construction marketplace. A value of 1.0 or higher signifies growth.

SOURCE: REED CONSTRUCTION DATA

173,514

POPULATION, 2010

SOURCE: U.S. CENSUS BUREAU

-5.8%

POPULATION CHANGE, 2000-2010

SOURCE: U.S. CENSUS BUREAU

7.9%

CITYWIDE UNEMPLOYMENT, DECEMBER 2011

SOURCE: BUREAU OF LABOR STATISTICS

-4.3%

JOB GROWTH, 2000-2010

SOURCE: MONEY MAGAZINE

8.9 MILLION S.F.

OFFICE INVENTORY

SOURCE: PARKWAY REALTY SERVICES

19%

OFFICE-SPACE VACANCY RATE, Q4 2011

SOURCE: PARKWAY REALTY SERVICES

\$139,500

ESTIMATED MEDIAN HOME SALE PRICE, 2011

SOURCE: JACKSON ASSOCIATION OF REALTORS

→ LOCAL MARKET

Jackson, Miss.



TEXT BY MARGOT CARMICHAEL LESTER
 AND CLAIRE PARKER

WHEN WE THINK ABOUT architecture in the South, we tend to envision Greek Revival double-gallery mansions, Gothic Revival churches, and Italianate and Beaux-Arts commercial and government structures. But architects in Jackson, Miss., are now threading modern lines and materials into this historic fabric.

“Vernacular Southern architecture holds a nostalgic sway that yields both good and faithful replicas as well as strange translations into modern materials,” explains Anne Marie Decker, AIA, a principal of Jackson-based Duvall Decker Architects. “The best influence of vernacular architecture is an understanding of how to capitalize on the range of Southern light and shadow, and how to shape buildings for the climate.”

Though 200 miles inland from the Gulf, Jackson still gets plenty of tropical rainstorms and loads of heat and humidity, all of which have to be taken into account when designing roofs, building envelopes, and cladding. And then there’s the local Yazoo clay, an expansive soil that makes foundation and stormwater design critically important. It can add to the per-square-foot cost for proper design, according to Wayne Timmer, AIA, principal with local firm WFT Architects.

As the recession caught up with the Crossroads of the South, private development stalled and most new projects began to be financed with public funding. “Jackson Public Schools is completing the final projects for the second of two large recent bond issues, and all the

surrounding suburbs have had major school construction projects,” says J. Carl Franco, AIA, of local firm JH&H Architects. “The University of Mississippi Medical Center has been undergoing a major expansion and upgrade for the past five to 10 years, and long-range plans are to continue with this growth and expansion.”

Even with public financing clearing the way for what few projects are moving forward in Jackson, architects are nevertheless pulling off progressive design feats.

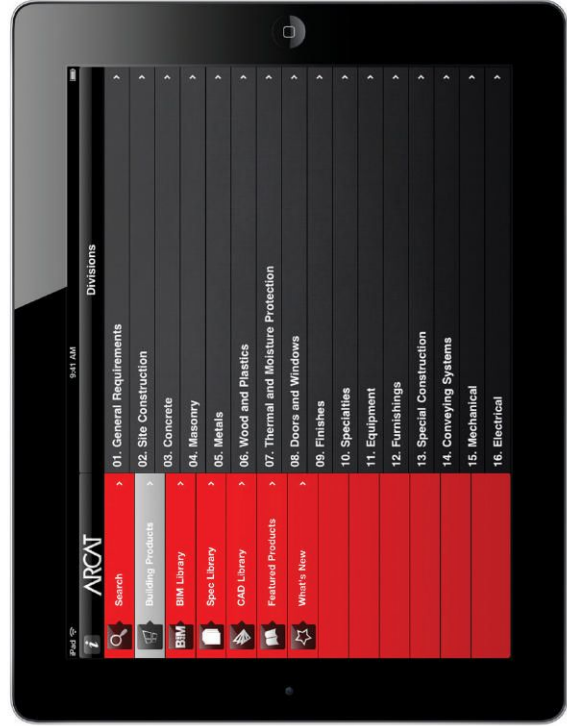
At Tougaloo College, the \$7.7 million Bennie G. Thompson Academic & Civil Rights Research Center was funded by private donors and the U.S. Department of Education Historically Black College & University Loan Program. The facility won a 2011 Honor Award from AIA Mississippi. And a \$9.7-million University of Mississippi Medical Center School of Pharmacy building used university and U.S. Health Resources and Services Administration funds.

The new \$136 million U.S. Courthouse was wholly federally funded by the General Services Administration. Slated for LEED-NC Silver, it won the 2011 AIA National Academy of Architecture for Justice Award of Merit.

“The best design work here is not decorative or flashy, but substantial and timeless,” Decker says. “It requires creative combinations of funding sources, grassroots efforts and public-private partnerships. It is an opportunity for creativity in both design and development.” □

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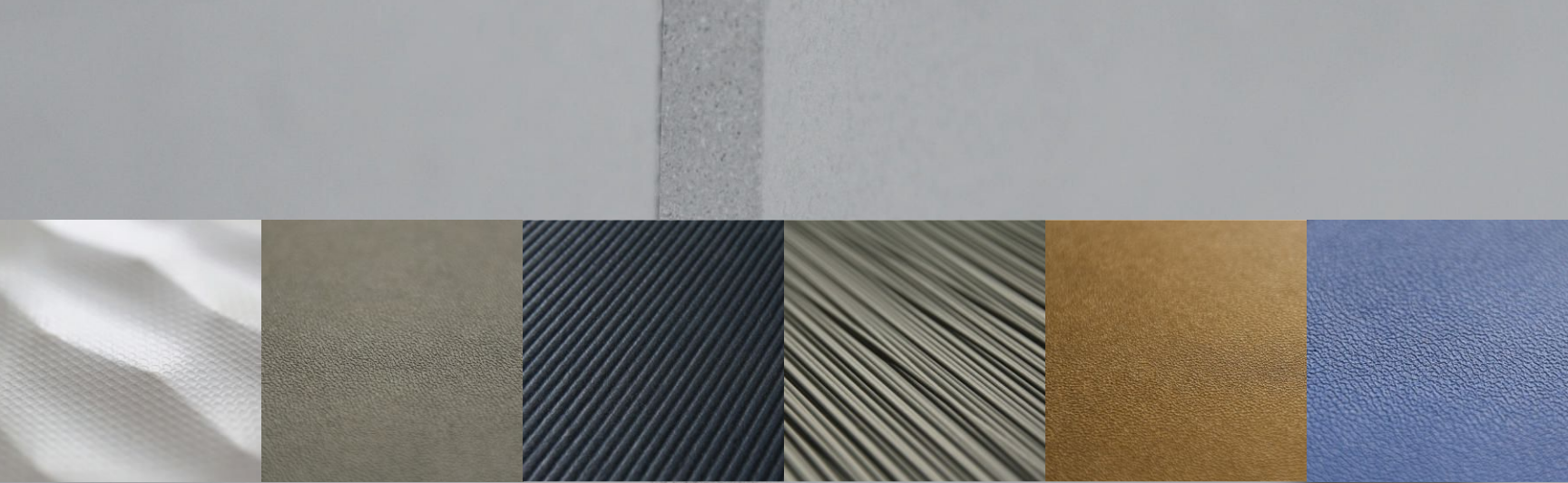
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TECHNOLOGY



→PRODUCTS

Faucets

TEXT BY WANDA LAU

With a design inspired by the Arts and Crafts movement, the **Fairfield Collection** by U.K.-based **Samuel Heath** features plated and hand-polished solid-brass construction. The deck-mounted, high-spout, three-hole basin filler with pop-up waste (shown) is 6 $\frac{1}{4}$ " tall with a 5 $\frac{1}{2}$ " reach; wall-mounted configurations are also available. The Fairfield faucet comes in four finishes (chrome plate is shown), and offers many handle designs, including levers and cross tops (shown). • samuel-heath.com • Circle 100

The **Solimar** widespread lavatory faucet by **California Faucets** has an all-brass construction and quarter-turn ceramic disc valves. Its 3"-tall lever handles accommodate 8" to 16" centers; its 7³/₄"-tall spout extends 6¹/₄". Available in more than 30 finishes, including satin nickel (shown), the 1.5 gpm Solimar is ADA-compliant. • calfaucets.com • Circle 101

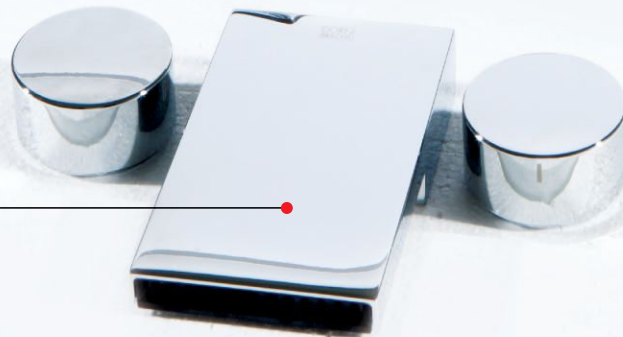
Pyke, a collection of bathroom faucets and accessories by **Jado**, an American Standard brand, includes a cast-brass lavatory faucet (shown) with a maximum flow rate of 1.5 gpm and integrated pressure-compensating aerators. The 6¹/₂"-tall spout extends 5¹/₂". Also available in a monoblock configuration, the faucet comes in three finishes, including brushed nickel (shown). • jadousa.com • Circle 102

The **Edge** widespread faucet by **Watermark Designs** features a 6¹/₈"-tall spigot with a 7" reach. The deck-mounted handles attach to valves using rare-earth magnets and may be specified as solid (shown), with geometric cutouts, or with Swarovski crystal inserts. Edge can also be wall-mounted and comes in 38 finishes, including polished chrome (shown). • watermark-designs.com • Circle 103

With a maximum flow rate of 1.5 gpm, **Danze's Eastham Collection** widespread lavatory faucet carries the EPA's WaterSense label. Its 6"-tall spout has a 4³/₄" reach, and its 3⁹/₁₆"-tall handles can be installed 6" to 12" apart. The Eastham Collection faucet comes in three finishes, including tumbled bronze (shown), and is also available in a center-set configuration. • danze.com • Circle 104

Milwaukee-based **Graff** collaborated with the Italian studio Angeletti Ruzza Design to create **Sento**, a collection of minimalist bath faucets. The widespread lavatory faucet comprises a 2⁵/₁₆"-tall spigot with a 4³/₄" reach and deck-mounted sink handles that sit 8" apart; a single-lever mixer configuration is also offered. The faucet comes in polished chrome (shown), white, or black. • graff-faucets.com • Circle 105

Deque by **Dornbracht** has a geometric, cantilevered spout that delivers a waterfall-style flow. The wide, low-profile spout projects 110mm and has a maximum flow rate of 4L per minute (1.06 gpm). The spout and cylindrical control knobs stand 30mm tall. Available in polished chrome (shown) or matte black, Deque can be wall- or deck-mounted; a single-lever mixer configuration is also offered. • dornbracht.com • Circle 106





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→IT

Under the Hood

SOFTWARE IS CRUCIAL TO DESIGN, BUT A PROGRAM IS ONLY PART OF THE STORY. PLUG-INS, UPDATES, AND OTHER CUSTOMIZATIONS ARE KEY TO GETTING WORK DONE.

TEXT BY BRIAN LIBBY
ILLUSTRATIONS BY PETER ARKLE

Few software platforms work without updates, whether they're in the form of occasional add-ons or continuous tinkering. Luckily, the culture of continuous improvement led by users has permeated the software industry, even for some proprietary programs that do not offer open-source code. As a result, architects—already in a profession requiring multifaceted skills—are following suit, taking on a new role as developers of their own tools. In the words of the Maker's Bill of Rights, a credo for open-source hacktivists: "If you can't open it, you don't own it." Four designers speak about the updates that enable them to own their software.



Marc Syp, NBBJ

Since joining NBBJ's Seattle office two years ago after teaching parametric modeling at Ohio State University, designer Marc Syp has seen a shift in how architects and software developers interact: User feedback guides the development of even proprietary products. He cites **Grasshopper (Mainsoft, free)** as one example. "It's currently in beta, not a released software version," Syp says. "But the development is very responsive to user feedback because of that. The speed at which that software updates is mind-boggling in some cases."

On one recent healthcare project, Syp and NBBJ used Grasshopper to develop the building with the client's interest in natural daylighting in mind. "I began to develop a tool for how we could think about how, when you move a building profile on a site, the daylight interacts with that profile in real time," he says.

Syp contributed to the 0.8.0064 version. "I made a suggestion to change a certain behavior of a component that would greatly improve my ability to sort data. The update actually went live within six days," he says. "It's a design process in its own right to make these tools. Even within a single project, it evolves."



Robert Petty, ZGF Architects

Like many large firms, ZGF Architects in Portland, Ore., has an in-house model shop that employs sophisticated digital-fabrication methods—a leap forward from wood and glue. Robert Petty of ZGF and his department recently updated to **Rhinoceros (Robert McNeel & Associates, \$995)** version 4.0 service release 9. The shop further supplements the tool with additional RhinoCAM, Rhino Terrain, and Grasshopper plug-ins.

"The model shop at ZGF has pioneered Rhino's use and that has permeated out into the design group," Petty explains. "Rhino is so great as middleman software. You can open up SketchUp files and it maintains materiality. It doesn't open a Revit file directly, but you can export into Rhino and it looks beautiful. It's very clean. You can preserve real curves and that kind of thing. We use Rhino to take any Autodesk AutoCAD or Google SketchUp or even Photoshop or Illustrator models and make our models off of that. We can run our laser cutters directly from it. Rhino's also been good at letting us export back out. We're bringing something in for the team, working on it, and handing it back."



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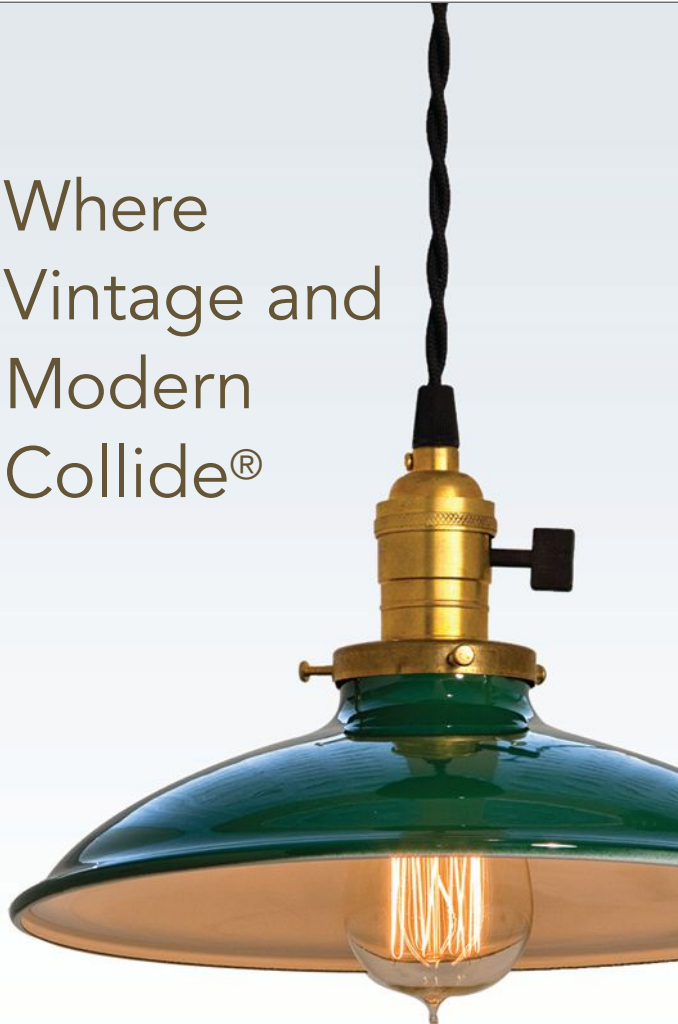
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technology



Arne Henneberg, Cooper, Robertson & Partners

The **V-Ray for SketchUp (Chaos Group, \$800)** rendering engine is an example of how ubiquitous 3D rendering is, says designer Arne Henneberg of New York's Cooper, Robertson & Partners. "Architects understand 2D drawings, but the clients prefer 3D," he says. "In the past it was seen as an additional cost and time consuming, but the technology has evolved quickly. We almost never have a project without 3D anymore."

V-Ray, he says, allows architects to quickly, and in countless variations, show clients how a design will look even before it's finished. "You can really put in details and show the client the progress. And you can use it further to advance your design. It's not a dead end anymore. It's almost like a piece of clay modeling."

The latest version of V-Ray is more user friendly, Henneberg says. "Before, you had to go deep into the menu settings in order to create details like people, landscape, or trees. Now it's just a couple of clicks to produce basic or even sophisticated graphics," he says. "Before, you had BIM models, but you couldn't use them in the presentation. Now the rendering level has caught up."



Kevin Boots, RBB Architects

Forget thinking outside the box. For RBB Architects in Los Angeles, opportunity comes increasingly from inside the cave. In partnership with a university and two other private software companies, RBB creates virtual-reality environments through what's called cave technology. The firm uses Revit to build virtual models, Autodesk 3ds Max for lighting and finishes, and a 3ds Max plug-in, **Flat Iron (3d-io, \$1,900)**, to "bake" the textures onto the models to be read by the cave.

"You're standing inside the model," says RBB's Kevin Boots, AIA. "The military has been using cave technology for a while. It's basically a 10-foot cube you stand inside with 3D goggles, and whatever direction you look, the computer recalculates the view."

Boots explains that the firm's cave technology is still a work in progress. "It used to not be able to happen without costly mock-ups," he says. "We're looking to export from Autodesk 3ds Max directly into the cave, but it's not an easy process. There's some export issues we're working through to get our models into the cave."

Cave technology fits RBB's do-it-yourself approach to software, such as when the firm developed post-occupancy-evaluation software for the iPad to measure caregivers' routes in order to identify inefficiencies. "We've always had add-ons and customized the software we used, even with AutoCAD back in the '80s," Boots adds. "We've always tried to make the software do what we want it to do." □



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TEXT BY IAN VOLNER

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Learning Objectives

1. Describe the state of the demolition industry.
2. Describe why many recyclable or reusable building materials are sent to landfills rather than recycled or salvaged.
3. Describe the missions and services of three organizations that are increasing awareness of recycled and salvageable building materials.
4. Describe two incentive programs for using recycled and salvaged building materials in new construction.

→ CONTINUING EDUCATION

Architecture's Afterlife

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Wisconsin Institutes for Discovery



AS W.B. YEATS COULD HAVE PUT IT, ours is no country for old buildings. Each year, countless aging and outdated structures are dispatched by our \$4 billion demolition industry. Even the recent economic retrenchment has hardly altered the nation's out-with-the-old, in-with-the-new mind-set. In 2010 alone, an estimated 104 million tons of materials flowed in from project sites all over the country, accounting for as much as 40 percent of the U.S.'s annual solid-waste stream. The garbage comprises not only rubble and rotting beams, but also countless odds and ends from new construction such as cast-off nails and packaging. So whether they're putting something up or taking something down, architects are indirectly making a mess.

What happens to buildings that we've replaced? The general procedure for clearing a site has remained more or less consistent for decades: Client contracts with architect, architect contracts with general contractor, who hires a demolition firm that turns refuse over to hauling company, and hauling company drops it off at the dump. Salvageable building parts, such as floorboards, tile, and windows, that could be pulled from the wreckage are often not, since few people know who might buy them and for how much, or where to stow

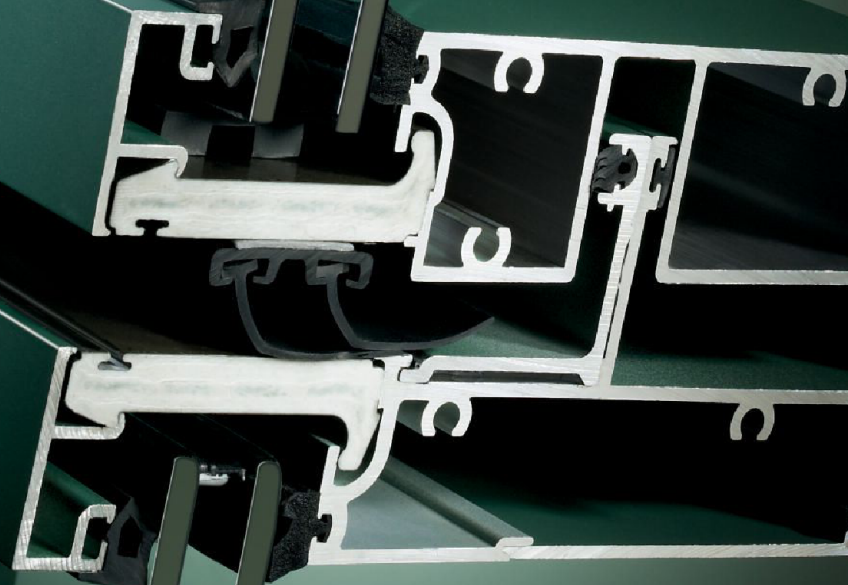
them in the meantime. Likewise, taking the recycling route—in which materials are broken down into their constituent parts, reprocessed, and resold as new and, most likely, different products—could introduce a swarm of logistical challenges that builders have little incentive to pursue, particularly with so many cheap landfills nearby. As a result, with the exception of scrap metal, structural materials such as concrete (which can be recycled) often end up in the trash as well.

A Rebirth in Recycling

We are moving away from the status quo of how we handle our construction and demolition waste for many reasons. Dumping has become more expensive and thus less appealing for contractors and clients, says William Turley, executive director of the Construction Materials Recycling Association (CMRA), a national umbrella organization based in Eola, Ill., that represents 245 waste-management companies that give a second life to concrete, wood, and steel. Compared to Europe, which recycles an estimated 46 percent of its construction and demolition waste, the U.S. recycles at a rate of



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30 percent. “Landfill prices [here] are still very low, but they’re getting higher,” Turley says.

At the same time, the design profession’s growing environmental consciousness has led architects to look for new uses for old materials—a shift that has been a long time coming. Our past enthusiasm for all things new in construction stemmed largely from the Industrial Revolution, when improvements in manufacturing flooded the marketplace with freshly fabricated materials. More than a century later, necessity helped us curtail our prodigal practices. Turley notes, “Think of the end of World War II: In Berlin, they crushed up the debris and used it as the basis for new cities. That’s where it [recycling] took off in modern times.”

Technological advances are also spurring the more recent emphasis on recycling. Recycling plants can now process more material types faster and at less cost. Recent years have seen substantial improvements in on-site equipment—extractors that carefully pull apart rather than pulverize buildings, and mixed demolition shredders that automatically sort materials by type and grade, before cutting them down to size to be transported to the recycler. “Everything is dumped in willy-nilly and sorted,” says Matt Griffis, project manager at Stanford University’s Department of Land, Buildings, and Real Estate. The technology is worlds away from war-weary Germans carting bricks around in wheelbarrows.

Above: For the Tyler residence in Leawood, Kan., El Dorado Architects used Sinker Cypress recovered from Louisiana swamps for the wood cladding and flooring of a new playroom addition above the garage.

Previous page: More than 20 percent of the construction materials in the LEED Gold Wisconsin Institutes for Discovery, designed by Ballinger, contained recycled content.

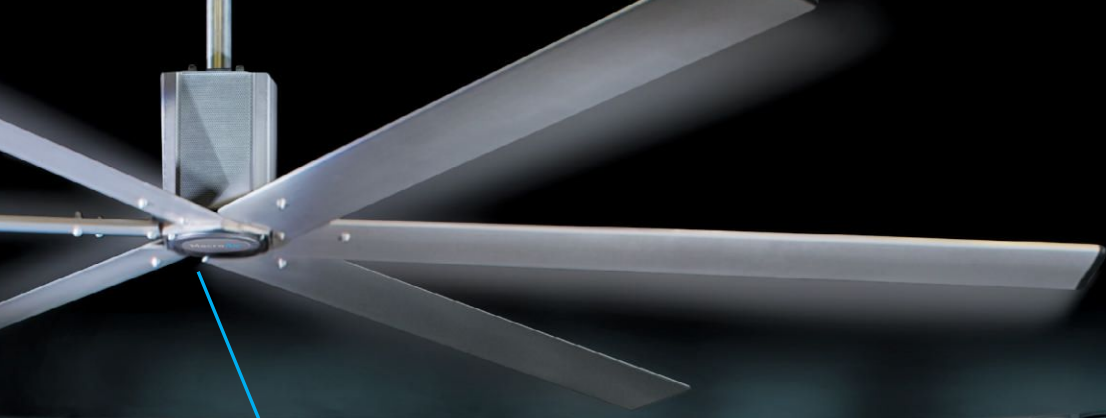
Griffis observed a shredder in action during the demolition of Stanford’s Frederick E. Terman Engineering Building. The 1978 classroom and office space had outlived its usefulness years ago and was rendered obsolete by state-of-the-art facilities on a nearby science campus. With no new building slated to go up on the site, the university created a public park that is now rising in place of—and with the help of—the defunct structure. A portion of Terman’s concrete walls and foundations, ground on the spot by the mobile processors, instantly became the backfill for the park’s sloping landscape. Altogether, 99.64 percent of the former building is being recycled on site or off. “It’s like animals on the Serengeti,” Griffis says. “Very little goes to waste.”

Efficiency is paramount in the new demolition culture; the more material that can be retrieved with the least hauling and hassle, the better. The USGBC’s LEED rating system has influenced this trend, granting a suite of points for the responsible handling of materials during building dismantling and design phases. LEED v3 lists seven potential credits in the Materials & Resources (MR) category; the award threshold for recycled materials is 10 or 20 percent of a project’s total materials cost for one or two points, respectively. “LEED recognizes and encourages strategies that consider materials and resources from a long-term, life-cycle perspective,” says USGBC spokesperson Ashley Katz. This holistic approach includes a point for regional materials sourced within 500 miles of the project site to reduce energy consumed in transport. That’s a good incentive to find on-site uses for demolition debris.

The Environmental Protection Agency (EPA) has also launched a number of programs to encourage the building industry to look more closely at sourcing and disposal. Its Lifecycle Building Challenge, for example, invites architects to “design for disassembly” and compete in creating structures that not only deploy reused or recycled materials, but are themselves primed for recycling when the buildings are eventually scrapped. The EPA’s Construction Initiative encourages builders to look outside the typical sourcing channels to find recycled industrial materials. That process can go in reverse as well, with industry members looking to recycled construction materials for manufacturing materials; old wood pulled from aging structures, for instance, can be used to make biomass fuel.

Still, new buildings remain the prime destination for recycled materials, particularly as pre- and post-consumer waste products rise in demand among architects and clients. The recently completed Wisconsin Institutes for Discovery, a 300,000-square-foot LEED Gold hub for technological research and education in Madison, Wis., surpassed LEED’s 20-percent mark for recycled building content. Getting there wasn’t much of a challenge, according to project architect Rob Voss, AIA, of Philadelphia-based Ballinger. “The difficulty ... [of using recycled materials] is so minor,” he says. “The only thing that can happen is that something you specify turns out not to meet the requirement. Then





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With in-house expertise on where to look for quality recycled resources, Ballinger only has to confirm that its contractors hold up their end of the material-handling bargain. “The benefit is so great, and the challenge is so little,” Voss says.

The increasing prevalence and volume of recycled materials are supported by CMRA’s Turley, who, citing a USGBC Technical Advisory Group member, says that MR credits are the most claimed points in the LEED schema. With local governments also getting into the act—Seattle, for one, offers an expedited permitting process for deconstruction projects that meet specific guidelines—even more designers will turn to recycled products.

Save It for Salvaging

Recycling is only one half of the waste-not strategy. “We say it [recycling] is all very well and good, but we also say many of these [materials] could simply be salvaged,” says Anne Nicklin, executive director of the Building Materials Reuse Association (BMRA). As CMRA’s counterpart on the reuse side of the materials equation, BMRA advocates for putting building components back into the resource pool without preliminary treatment by a recycler.

Architects are listening. In 2009, the Kansas City, Mo., office of BNIM completed work on the Omega Center for Sustainable Living, a 6,250-square-foot learning space on a rolling campus in Rhinebeck, N.Y. The LEED Platinum project extensively uses reclaimed woods pulled directly from former farm and factory buildings in the region, along with plywood planks from the 2009 inauguration platform of President Barack Obama. “We made an impromptu decision to use them,” project architect Brad Clark says. In the reuse marketplace, getting the right materials is often a matter of timing. For a school in Kiowa County, Kan., completed in 2010, BNIM included wood salvaged from the wreckage of Hurricane Katrina.

“We’re really starting to get plugged into, in a much more architectural way, the stream of these materials,” says David Dowell, AIA, a principal of El Dorado Architects, also of Kansas City, Mo. Since expanding to include general contracting services, the firm has been working reuse deeper into its practice. For the Finn Lofts, a 2010 mixed-use residential and retail renovation and addition in Wichita, Kan., the firm didn’t have far to look for high-grade scrap: the old wood floors of the existing structure were turned into interior cladding, achieving just the right look for the project’s lighting and spatial plan. Once the initial design is in place, “you can weave in the sustainability story,” Dowell says, reassuring the

RECYCLING “IS ALL VERY WELL AND GOOD, BUT MANY OF THESE [MATERIALS] COULD SIMPLY BE SALVAGED.”

—ANNE NICKLIN,
BUILDING MATERIALS
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technology



client that the reused materials will serve the project and the environment well.

For a residence in Leawood, Kan., El Dorado went to the same source that BNIM used for its projects: PlanetReuse, a Missouri-based, for-profit consulting and brokering firm that has connected designers to salvaged and excess components since 2008. "We don't own a forklift or a warehouse," explains principal and founder Nathan Benjamin. "We just stay in the middle and coordinate details." In an industry that includes about 1,100 reuse centers across the country, he says, the problem is shortening the distribution pipeline and raising awareness.

To that end, PlanetReuse is on the cusp of launching PlanetReuse Marketplace, a real-time online database and e-commerce site of salvaged and excess materials that could provide one-stop shopping for designers nationwide. The database, along with the BMRA's efforts and other resources—such as the *Design for Reuse Primer*, available online from the design advocacy group Public Architecture—is part of the growing ferment to bring reuse into the mainstream.

But a steep climb lies ahead. For the most part, reuse remains the province not of professional design firms, but of private contractors and do-it-yourselfers: "The majority of our clients are just like you and me [individuals and remodelers]," says Leslie Kirkland, director of the Loading Dock, a Baltimore-based reuse center.

A Price for Everything

Cost is an issue for deconstruction. While Benjamin cites prospective savings of as much as 30 to 40 percent on select reused items such as access flooring, he admits, "I would be



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miscommunicating if I said you could save every time.” And then there’s the simple question of the applicability of used components in high-end commercial projects. As CMRA’s Turley puts it: “My question is always: How many 10-year-old toilets do we want to reuse?”

More questions remain about the fiscal implications of the deconstruction and dismantling processes that are the sine qua non for Turley’s recyclers. The 2004 Northeastern University study “An Analysis of Cost and Duration for Deconstruction of Residential Buildings in Massachusetts,” noted by the blog *Real Life LEED*, found that deconstruction can cost between 17 and 25 percent more than the demo-and-dump model. The EPA has issued conflicting reports that show at times a net gain, and at others a net loss. A report in trade magazine *Remodeling* (which, like ARCHITECT, is published by Hanley Wood) concluded that “there is no rule of thumb” in the economics of deconstruction.

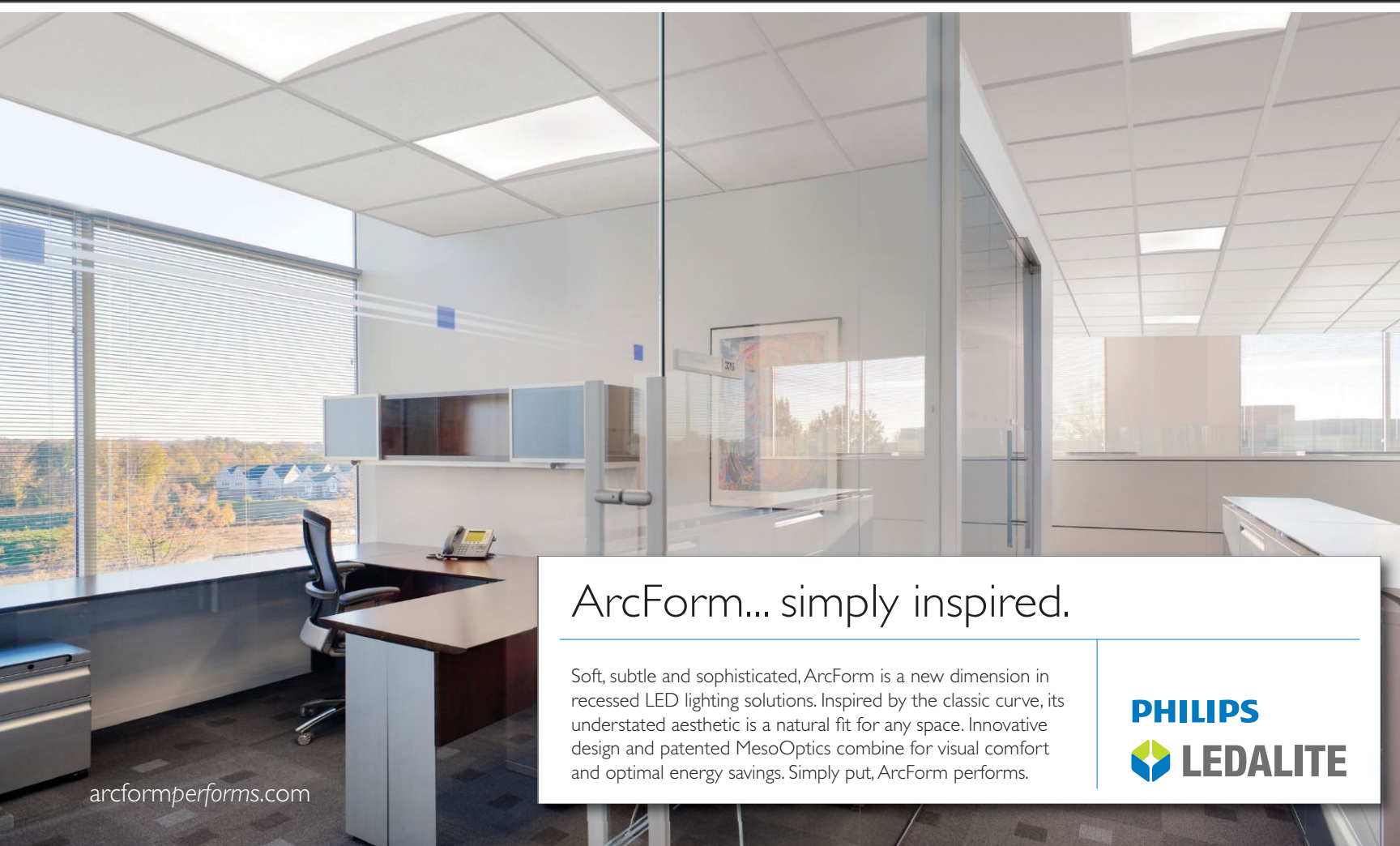
While the relative labor and time costs of deconstruction vary widely among projects, in general, the more material one tries to pull from a site, the longer it will take and the more expensive it will become. On average, full deconstruction of a residential structure—in which nearly everything is salvaged—proceeds at the pace of 1,000 square feet per week, per five-to-seven-person crew, says Lorenz Schilling, president of the

nonprofit organization Deconstruction & Reuse Network. Meanwhile, a complete tear-down via traditional machine demolition typically occurs at 1,000 square feet per day—a 3,000-square-foot house could be gone, foundations and all, in less than three days. However, Schilling adds, if machines cannot be used, as may be the case in gut renovations, the traditional demolition approach may only reduce project times by one and a half days per 1,000 square feet, versus deconstruction.

“The cost can be many times higher than traditional demolition work,” notes Dan Costello, a CMRA board member and the owner of Costello Dismantling in Middleton, Mass. Though he keeps his firm competitive by utilizing a more selective dismantling process, price remains the ultimate factor for whether a client awards a contract to his company or a conventional demolition firm wins. When it comes to demolition, he says, “It’s the low bid that counts.”

When people ask about cost, Schilling turns to his go-to case study, the demolition of a 2,500-square-foot Southern California residence. He estimates that the up-front labor and disposal costs associated with conventional demolition are substantially lower than that of laborious, complex deconstruction—\$15,000 versus \$37,000. But after tax deductions, the bottom line actually favors deconstruction by more than \$10,000.

The LEED-Platinum Omega Center for Sustainable Living (opposite) in Rhinebeck, N.Y., designed by BNIM, uses cypress salvaged from mushroom farms, beech reclaimed from former factories, and planks from the 2009 inauguration platform of President Barack Obama.



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El Dorado salvaged materials from the existing warehouse on the project site for use as interior finish materials for the Finn Lofts, a 30,757-square-foot, mixed-use residential and retail development in Wichita, Kan.

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That's a cheery prospect for reuse proponents, but even Schilling hesitates to take the hypothetical breakdown as rote fact. Too many mitigating factors, from local dumping costs to home value to labor practices, can intervene to wipe out or reverse the nominal savings of salvage.

Eco-Metric Sense

As with much of the burgeoning green-design practice, the search for a viable metrics continues on not only the financial side of the ledger, but also the ecological. The prospective advantages of recycling and reuse seem obvious enough. A 2008 report by the Boston-based Tellus Institute suggests that, in concert with other efficiencies in the waste stream, a 75 percent diversion rate could result in the carbon equivalent of taking 50 million cars off the road. But with LEED criteria changing every few years, and designers increasingly looking to go "beyond LEED" with programs such as the Living Building Challenge's Net Zero Energy Building Certification, a best-practices standard for environmental construction remains in contention.

On at least one subject, however, the USGBC does take a stand that seems to be fairly definitive. The Materials & Resources credit offering the most potential points—up to five in LEED Core & Shell—comes not from the inventive deployment of previously used materials, but from the adaptive reuse of entire existing structures; that is, leaving original walls, floors, and roof intact. The message is well-taken: If architects really want to look out for the ecosystem, they should start by making the most of what they already have. □

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QUIZ

1. An estimated 40 percent of the U.S. solid-waste stream—or _____ tons of waste—was generated from building demolition in 2010.

- a. 50 million
- b. 104 million
- c. 245 million
- d. 4 billion

2. Why are salvageable materials not salvaged more often?

- a. Few people know who would buy them or what they are worth.
- b. It can cost more to salvage them than to discard them.
- c. Building owners demand a lot of paperwork.
- d. Salvaging can be a logistical nightmare.

3. True or False: Though U.S. landfill prices are rising, they are still low compared to those in Europe.

4. The Construction Materials Recycling Association:

- a. Represents 245 waste-management companies.
- b. Receives contracts for all major demolition jobs in the U.S.

c. Focuses recycling efforts on wood, steel and concrete.

d. Developed a shredder that sorts and shreds recyclable building materials.

5. Our preference for new materials in construction likely stems from:

- a. Technological innovation.
- b. The Industrial Revolution.
- c. The cost to recycle or salvage materials.
- d. All of the above.

6. True or False: The rule of thumb states that salvaging materials is more economically efficient.

7. Full deconstruction of a residential structure proceeds at the pace of _____ per five-to-seven-person crew.

- a. 1,000 square feet per day
- b. 1,100 square feet per day
- c. 1,000 square feet per week
- d. 2,500 square feet per week

8. The EPA's Lifecycle Building Challenge encourages designers and builders to:

- a. Create structures with 75 percent recycled materials.
- b. Create structures with half salvaged (reused) materials.
- c. Use new materials that are easily recyclable at the end of the building's service life.
- d. Design for disassembly.

9. The Building Materials Reuse Association (BMRA):

- a. Advocates putting materials back into the resource pool without treatment by a recycler.
- b. Offers the *Design for Reuse Primer*.
- c. Created Planet Reuse.
- d. All of the above.
- e. Only A and B.

10. True or False: Reused materials are largely sought by private contractors rather than professional design firms.



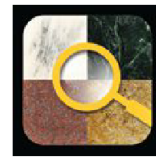
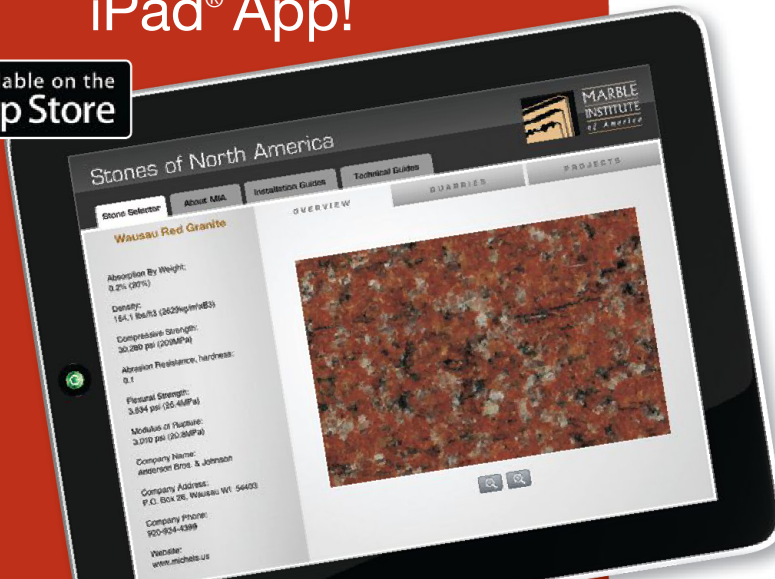
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THE ARCHITECT

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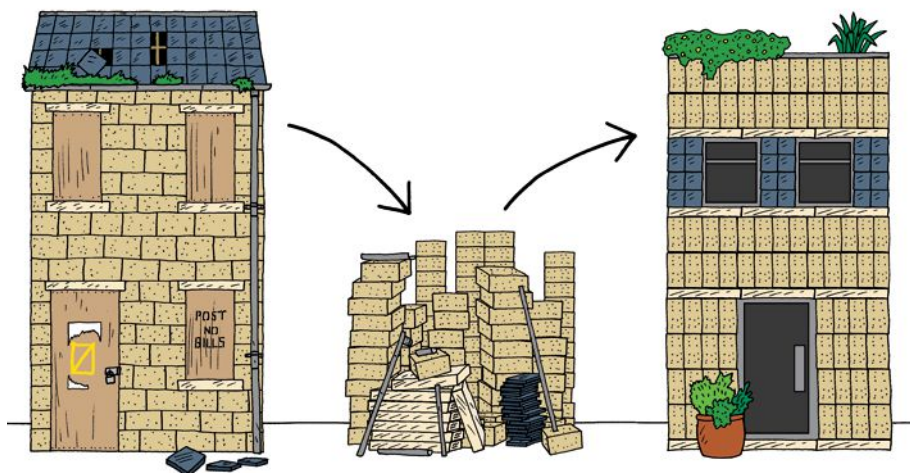
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→ MIND & MATTER

Deconstruction, Reconstruction

WANG SHU'S USE OF MATERIALS BOTH EXPLOITS AND EXPOSES CHINA'S RECKLESS APPROACH TO BUILDING.



1million

APPROXIMATE NUMBER OF SALVAGED BRICKS AND TILES EMPLOYED IN THE CONSTRUCTION OF THE NINGBO HISTORICAL MUSEUM

SOURCE: CNN

THE LIVES OF BUILDING MATERIALS are not fixed conditions, but rather part of a continually evolving enterprise. The Romans pilfered construction materials from older edifices to build new monuments, just as medieval populations later pillaged Roman monuments for their own building blocks. Given the profound material changes that architecture experiences over time, futurist Steward Brandt has suggested that we define architecture not as “the art of building,” but rather as “the design-science of the life of buildings.”

Chinese architect Wang Shu, this year's winner of the Pritzker Prize, exemplifies a profound understanding of the shifting material flows in the constructed environment. Shu and his partner Lu Wenyu of Amateur Architecture Studio have created a series of bold, visually arresting projects that demonstrate the reuse of repurposed building materials in provocative ways. The 2012 Pritzker jury describes the outcome of Shu's intense collaborations with construction workers as having “an element of unpredictability, which in his case, gives the buildings a freshness and spontaneity.”

An example is seen in the highly textured cladding of the Ningbo Historical Museum, which was inspired by wapan tiling—a construction practice that evolved as a method for building walls rapidly using available materials in a region subject to frequent typhoons. For the museum, Shu specified the reuse of various types of bricks and tiles that remained after the city government razed dozens of villages to make way for a new central business district. He gave masons a large degree of freedom in laying the dissimilar blocks. The rich detail

provided by the hand-laid tiles complements the hulking mass of the museum, and the randomly placed, various-sized apertures embrace the wapan approach.

In today's rapidly developing China, the image of brick and tile rubble left over from hastily razed structures is unfortunately an all-too-common sight. The recent demolition of the house of prominent architects Liang Sicheng and his wife Lin Huiyin in Beijing, for example, is indicative of the rapid and careless destruction of Chinese architectural heritage. “There's so much demolition,” said Yan Lianke, the notable Chinese author who was recently evicted from his home to make way for new building. “If all the demolitions were reported, maybe there wouldn't be enough space in all the newspapers, television and radio stations in China.”

Shu adamantly denounces the replacement of important historic structures with the typical cheap developments that fill the contemporary Chinese landscape, declaring that “we must not demolish history in order to develop.” Yet Shu's extraordinary works owe much of their notoriety to their use of architecture spoils generated by the destruction he condemns.

In this way, Shu's buildings are as unsettling as they are stimulating, for they remind us of China's reckless extermination of its own architectural legacy at the same time that they inspire us with their clever use of repurposed materials. The walls of the Ningbo Historical Museum thus serve as a haunting reminder of the past, encapsulating the bones of vanished villages in a monument that pays its respects to history, at the same time that it has come to supersede it. □

TEXT BY BLAINE BROWNELL, AIA
ILLUSTRATIONS BY PETER ARKLE



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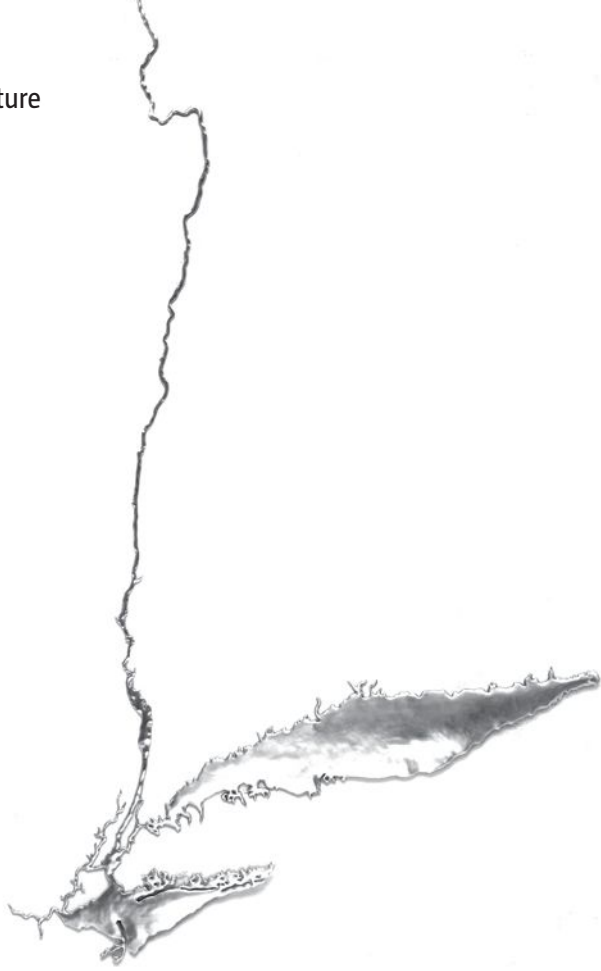


→ **OPERA**

Frank Gehry's Walt Disney Concert Hall—described by critic Blair Kamin as “a musical ark with silver sails”—will host **Don Giovanni**, May 18–26, with one intriguing twist: Gehry himself will design the stage set. The opera is the first by the Los Angeles Philharmonic in a three-year trilogy, *Mozart/Da Ponte*. Gehry describes his design (shown) as a “moving still-life” with the orchestra raised 3½ feet above the action, unifying the look of the orchestra and soloists. Two as-yet-unannounced architects will design the sets for *The Marriage of Figaro* and *Così fan tutte*. All three operas—“three of the greatest operas ever written,” the orchestra says—were collaborations between librettist Lorenzo da Ponte and composer Wolfgang Amadeus Mozart, and will be conducted by Gustavo Dudamel. • laphil.com

EDITED BY LINDSEY M. ROBERTS

culture



→ EXHIBIT

The sculptures and drawings in **Maya Lin's** self-titled exhibit at the Heinz Architectural Center in Pittsburgh are notable for their sinuous shapes and spare beauty. But they also invite us to contemplate our relationship with the natural world, as the pieces are all representations of environmental features, including a recycled-silver sculpture of the Hudson River, called "Silver River" (shown), and a plywood version of the Caspian Sea that reveals the extent of the water's depths below the surface. Lin created one installation just for the show: a series of pins mounted on a wall that depict Pittsburgh's three rivers—the Ohio, Allegheny, and Monongahela. That Lin wants to reveal nature's often-obscured beauty comes as no surprise, given her reputation as an environmental advocate. Through May 13. • cmoa.org

→ EXHIBIT

Pedro E. Guerrero's favorite image that he captured of Frank Lloyd Wright was one he didn't have permission to take: a candid shot of the architect enjoying a tea break in 1953, on the site of the future Guggenheim (below). As Wright's friend and principal photographer, Guerrero generally shot photos exactly as Wright wanted, showing exteriors of entire buildings, end to end. "I don't want to see details that you think are cute," Wright told him. The now-95-year-old went on to shoot the work of Eero Saarinen, Alexander Calder, and others. Still, Guerrero says, "I don't imagine that anything could be better than working with Wright." **Pedro E. Guerrero: Photographs of Modern Life**, an exhibition of 70 years of architectural photography, is now on view at the Julius Schulman Institute at California's Woodbury University School of Architecture through April 25. (For more anecdotes about Wright, see our interview with Guerrero online.) • architecture.woodbury.edu



→ INSTALLATION

The Hirshhorn Museum and Sculpture Garden in Washington, D.C., designed by architect Gordon Bunshaft and known affectionately as Bunshaft's Bunker, will become a giant makeshift television screen starting March 22. That's when **SONG 1**, a video installation by artist Doug Aitken, will first be projected onto all 360 degrees of the Hirshhorn's exterior. Approximately 11 projectors will light up the museum's exterior from dusk till midnight for the duration of the exhibit. Visitors should expect a party vibe: Aitken's video features spliced-together renditions of The Flamingos' hit "I Only Have Eyes for You," performed by the likes of Beck, LCD Soundsystem, No Age, and others. The piece is an example of the prominent role that buildings can play in the realization of contemporary art today—both inside and outside the building. Starting in 2013, the Hirshhorn will also host the so-called Bubble, a temporary outdoor pavilion designed by Diller Scofidio + Renfro, which will be inflated at least twice a year, through the donut-shaped building's courtyard. **SONG 1** runs through May 13. • hirshhorn.si.edu

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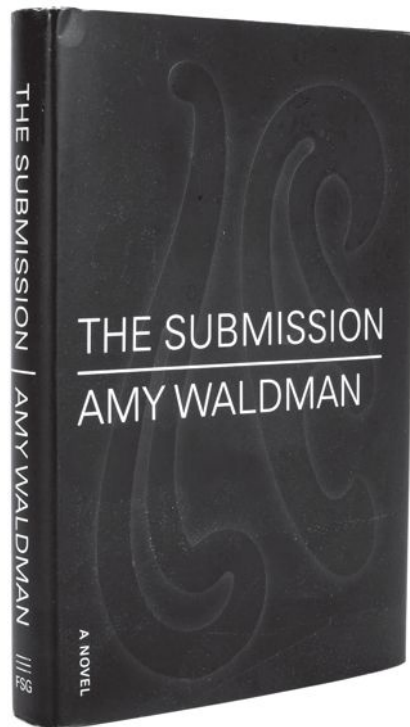
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→ CRIT

The Rejection

A JOURNALIST'S NOVELISTIC TAKE ON GROUND ZERO DOESN'T ADD WEIGHT TO THE DEBATE.



TEXT BY JESSA CRISPIN
PHOTO BY NOAH KALINA

WHEN ARTHUR KOESTLER wrote *Darkness at Noon* in 1940, the events he was fictionalizing had just barely moved from the present tense into the past. The Moscow show trials of 1936–38, wherein Leon Trotsky and his associates were accused of assassination plots merely as a way to justify their murders, not only shocked the world, but shocked the Hungarian writer—who had been such a dedicated communist that he went to Berlin in 1933 and Spain during the Spanish Civil War to act as a spy. He saw the deep corruption of the communist movement, turned his back on the political philosophy, and began writing a scathing portrayal of a government that would execute the architects of the revolution's theoretical structure. By the end of 1940, the manuscript was completed, translated from the German, and published for an English-speaking audience. Now, the book resides securely in the canon.

I kept thinking about *Darkness at Noon* as I was reading Amy Waldman's debut novel, *The Submission* (\$26; Farrar, Straus and Giroux, 2011) but unfortunately I do not mean that as a compliment. There are problems with *Darkness at Noon*, problems that frequently plague

the journalist who tries his or her hand at fiction. Koestler was able to transcend those flaws, through the ferocity of his writing and the moral struggle of a writer confronting his own mistakes. Waldman, a former journalist and co-chief of the New Delhi bureau for The New York Times, is ultimately sunk by them.

The story behind *The Submission* could have been ripped from the very headlines that Waldman used to write. A panel of judges selects a tasteful walled garden with trees both real and built out of rubble as the winner of the 9/11 memorial at the World Trade Center site—only for it to be revealed that the proposal was submitted by a young Muslim architect named Mohammad Khan. Controversy ensues. Some of the panel members attempt to distance themselves from the decision. The governor finds that pandering to the racist and the ignorant benefits her reelection campaign. Families of the victims take to the airwaves and to the streets to protest the “Islamic martyr paradise” being built at the site of the attack. Khan, a secular, American-born Muslim, finds himself questioning his identity, his religion, and his way of life.

Now, the problem of the journalist-novelist is a product of the fact that journalists deal primarily in information. For a writer in journalism mode, everything in the story services the information that the author believes he or she must convey to the reader. Characters can become stand-ins for the viewpoint they express, and the prose can be merely a method to spit out facts. The prison guards in *Darkness at Noon* parrot communist propaganda until they seem more like lifeless automatons than human beings. And in *The Submission*, Waldman's prose suffers under the weight of all of the facts and figures. In one particularly, although not uncharacteristically, clunky section, she tries to convey how ill-educated your average American is about the ways of the world by writing, “Eighty percent of Muslims were not Arab: this was one of



Jessa Crispin is the founder and editor of Bookslut.com. She currently resides in Berlin.





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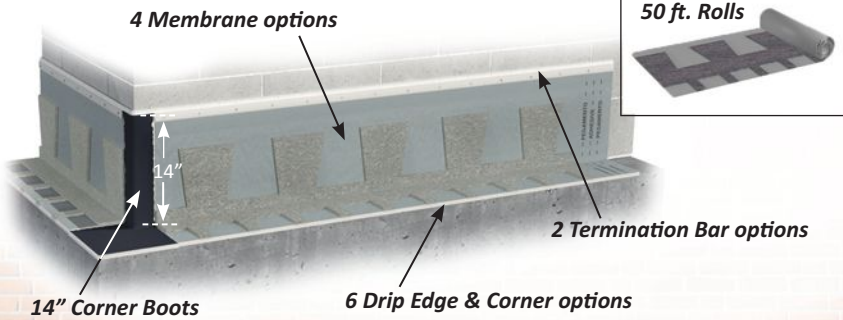
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→ those facts many learned and earnestly repeated in the wake of the attack, without knowing exactly what they were trying to say, or rather knowing that they were trying to say that not all Muslims were as problematic as the Arab ones, but not wanting to say exactly that." There are many such asides, as Waldman leads the reader into thinking what she wants them to think.

The greater problem of *The Submission* is that there is not a single character who feels genuine. Waldman's agenda would be easier to accept if there was someone in the novel who felt like a human being. Each character is playing a type, and that has little to do with believability or nuance. There is the immigrants' son, a secular Muslim out of touch with his roots. There is the sexy, all-American 9/11 widow, whom every man in the story is inexplicably in love with. There is the other 9/11 widow, the wife of an illegal immigrant working in the buildings as a janitor, who is innocent and pure and good. There is the brother of the 9/11 victim, not well educated and prone to fits of rage and racist slander. There is the politician who has no moral backbone and is swayed only by polling numbers. I could go on.

And then there is the proposed memorial itself. Waldman, not being a designer or an architect, presents a simple design idea for the memorial—a walled garden. This design services the information Waldman wants to convey: Walled gardens appear in Islamic countries throughout time (something she is all too happy to let a character explain, as though giving a history lesson). Once someone in the book realizes that, the tension can explode, and the plot can move along. And yet the author appears to know that this is not a brilliant proposal. She combats any disbelief by the reader that this would ever be the 9/11 memorial by making this design the favorite of the widow, not any of the art experts on the panel. The widow gets her way by flirting and exploiting that incomprehensible love she inspires in men. No one in the book truly believes this is a memorial worth fighting for. The result of this bit of self-deprecation by the author—I'm just a writer, no need to pretend I'm coming up with the best proposal here—leaves readers with no one whose judgment they can trust, and no justification for why all this fuss is being made over such a mediocre design and such a mediocre person (Khan).

There are two real-life reference points that Waldman pulls from heavily for the story of *The Submission*. One was the controversy over the 2010 proposal to build a mosque and community center several blocks from the World Trade Center, in the former space of a building damaged during the attacks. Much of the rhetoric of the 9/11 victims' families in *The Submission* echoes the rhetoric aired primarily on Fox News and on talk radio during

THE GREATER PROBLEM OF *THE SUBMISSION* IS THAT THERE IS NOT A SINGLE CHARACTER WHO FEELS GENUINE. WALDMAN'S AGENDA WOULD BE EASIER TO ACCEPT IF THERE WAS SOMEONE IN THE NOVEL WHO FELT LIKE A HUMAN BEING.

the heated protests. Both the real mosque and Waldman's fictional memorial become symbols of Islamic victory in the eyes of the protesters, as if the ground was razed in the attacks specifically to build a monument to Islamic strength to spite the American infidels. And in both cases, the attacks on the proposed structures were fueled by conservative media, as it became clear that stoking the fury of the public through misinformation and outright fabrication is good for ratings and good for business.

The other reference point is the 1981 selection of Maya Lin's design for the Vietnam Veterans Memorial. Lin was condemned by many of the families of fallen soldiers simply for her Asian background, despite the fact that she was of Chinese heritage (and not of Vietnamese). Her struggle after the revelation of her identity, including her testimony in front of the United States Commission of Fine Arts, is merely rewritten into Waldman's plot line. Khan's design is selected by the jury in the same way that Lin's was, and both are pressured to withdraw their proposals to keep the peace. And, should you miss the obvious similarities between the two designers, characters show up at various points in *The Submission* to state baldly how reminiscent all of this is to the Maya Lin controversy—starting on page 17, as a judge on the panel intones, "It's Maya Lin all over again. But worse."

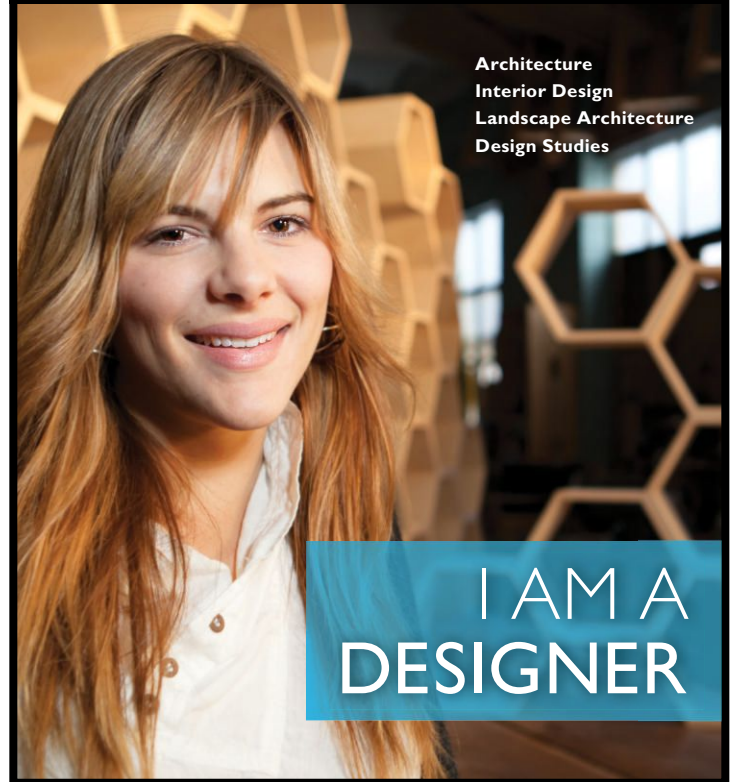
Framing these issues inside a discussion about a memorial was a smart impulse, even if it was poorly executed. They are weighty things, memorials. They are there to give a sense of permanence to the ephemeral, a stony reminder of lives that ended too quickly. Literature based on historical events can act in the same way, from the poets of World War I to modern day 9/11 fiction. But ultimately, where the memorial is reductive—distilling complexity down to an allegorical statement of This Happened, and It Happened Here—novels should be expansive. They should reinstall the humanity behind the facts and figures. Waldman, by sticking with the facts and figures of the case, fails to give the reader the flesh and blood of the events. There is no pathos here, just another stony reminder that the Twin Towers fell.

The reason I reach for *Darkness at Noon* again and again has nothing to do with wanting to remember the show trials of Moscow. It works as a memorial to those men who fell precisely because it takes down their names from the plaque and turns them back into people. It also works as a grand examination of how men are felled by their ideals, and how unmanageable revolutions are after the shooting stops. But reading Waldman is like replaying talk shows from a few years back. Its scope is ultimately so very small. How we choose to remember the day of September 11, 2001, is a foundational issue. It is only a shame that Waldman was not up to building a solid structure on that foundation. □



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→ STUDIO VISIT

Eskew+Dumez+Ripple

SIX YEARS OUT FROM KATRINA AND SIX YEARS AWAY FROM NEW ORLEANS'S TRICENTENNIAL, ESKEW+DUMEZ+RIPPLE IS REBUILDING THE CITY THAT CARE FORGOT.

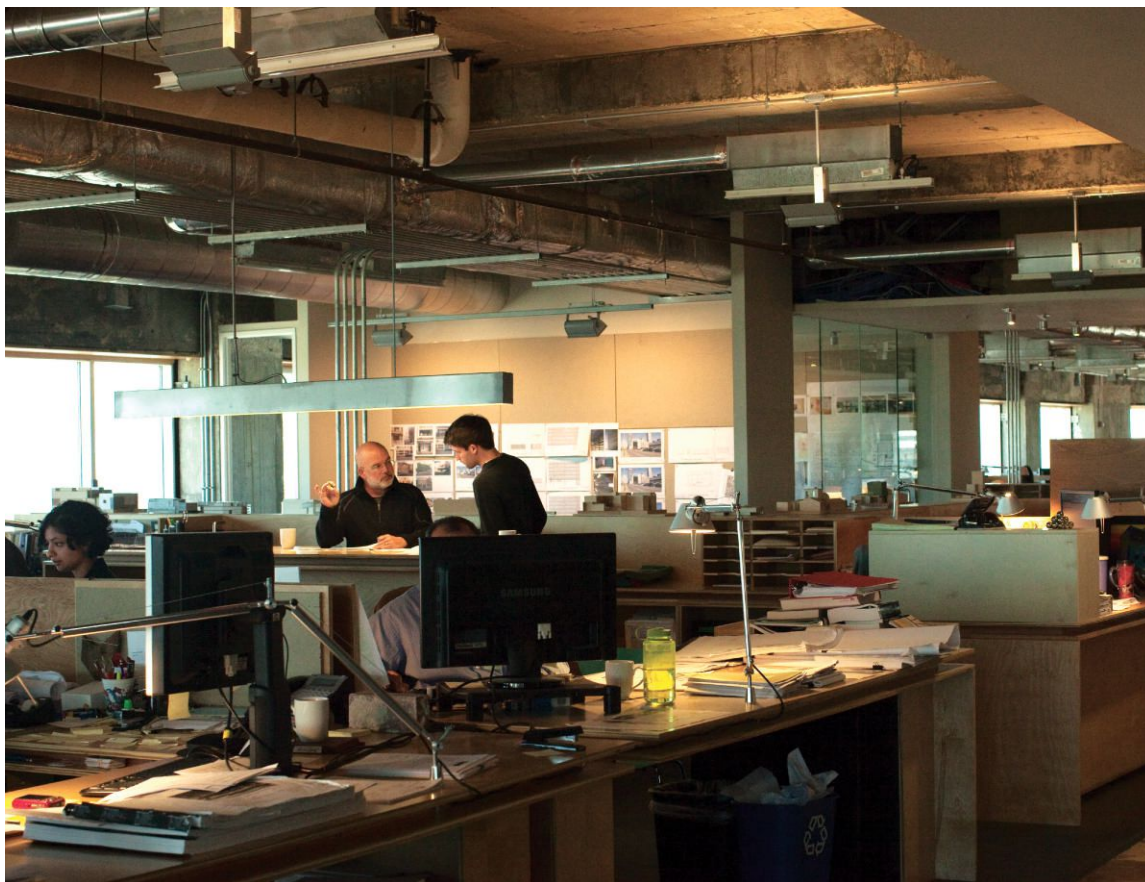
TEXT BY KRISTON CAPPS
PHOTOS BY JASON FULFORD

Eskew+Dumez+Ripple enjoys some of the best—and most unlikely—studio space in New Orleans. The firm established its studio on the 31st floor of an office building in 1999. Before that, Eskew+Dumez+Ripple occupied the third floor of a riverfront building on the edge of the French Quarter. The difference between a French Market walk-up and Class A office space is smaller than one might think, says Steve Dumez, FAIA (bottom right). “We really connected to the street and the activity of the French Quarter. We felt the pulse of the city directly. We heard it. We could smell it,” he says. “We spent a long time looking for a corresponding environment in the French Quarter we could grow into. We’re immediately adjacent to the French Quarter. We’re right next door to all the same culture and restaurants. That was an important consideration.”

Established in 1989, the New Orleans firm now employs 49 people, including seven owners and partners and a group of nine associates. Hurricane Katrina marked a major transformation for the studio, says Allen Eskew, FAIA (above right). “Katrina was a major catalytic event for us,” he says. “We were able to focus on a lot of projects in the recovery.”

From its 31st-floor perch, the studio commands a view of New Orleans and its waterfront. Mark Ripple, AIA (bottom left), says that the view affords sights of at least a dozen active Eskew+Dumez+Ripple projects. “From this vantage point, we can point to activity we have in almost every neighborhood,” he says. Seeing projects in the context of the city matters, Eskew says. “Our connection to the city increased in the high-rise position.”





Eskew+Dumez+Ripple finished a studio expansion last year—at 4 p.m. on the day the firm was hosting a party for the AIA 2011 National Convention and Design Exposition, which was held in New Orleans. With that out of the way, the partners have no intention of building out again any time soon. “If we were to get larger than this, the question would be not how it affected the studio, but the institutional culture of the firm,” Eskew says.

In 2018, New Orleans will observe its tricentennial birthday, making it one of the nation’s oldest cities. Perhaps uncharacteristically for the city, New Orleans isn’t simply throwing a massive party. Eskew+Dumez+Ripple is working with Mayor Mitch Landrieu to plot out ideas for the occasion, Eskew says—an opportunity to take stock and finish outstanding building projects. “We’re framing the right format to go into the spring of 2018,” he says. More than half of the rebuilding is done, but work remains. “This will help us put a final commemorative marker on Katrina and move forward.”



Eskew, Dumez, and Ripple all look at the tricentennial in different ways:

“The core riverfront is emerging as a major piece of the tricentennial personality,” Eskew says, noting renovations for the Superdome and NBA complex. “The core of our city is going to be in good shape for the tricentennial.”

“When we shift scales—from the storm to the tricentennial—we’re looking at our storm systems,” Ripple says. “It’s brought a much more national visibility to our wetlands erosion and how the wetlands protect our relatively fragile city. We hope six years is enough time to finish the infrastructural improvements marshaled by the Army Corps [of Engineers].”

“Part of what Katrina helped the city to do was hit a reset button and address some intransigent social ills,” Dumez says. “That was reflected in our failing schools and political institutional intransigence toward change. Those who chose to come back were significantly invested in the future city. The civic activism that emerged following the storm has been our greatest reward.”





Wendy's skin features nylon fabric treated with titanium-oxide nanoparticles that neutralize airborne pollutants.

→ BEYOND BUILDINGS

The Next Big Thing

HWKN'S "WENDY" AT MOMA PS1 DOESN'T DO MUCH. BUT ONE ASPECT OF THE INSTALLATION HAS A LOT TO OFFER.

THE DEATH STAR HAS ARRIVED. Or at least it will, this summer, as the winner of the Museum of Modern Art PS1 Young Architects Program competition to design a party space and entrance treat for its Long Island City, N.Y., location. Its name is Wendy, so maybe it is supposed to be a friendly alien body. Whatever the case, its spikiness will offer a contrast to previous, more touchy-feely entries.

Work AC, for instance, installed an urban farm in 2008. Last year, Interboro set up ping-pong tables under awnings. Still others have made the concrete courtyards, through which you navigate to get to the renovated schoolhouse, softer and more accommodating.

But New York-based HWKN is eschewing the idea of spreading entertainment through the whole area in favor of making an object: Wendy. It is blue, and it will be covered with a smog-eating fabric that will supposedly negate the pollution of the equivalent of 260 cars during the course of the summer.

I don't doubt the science on that. Though appreciated, this is a miniscule amount of pollution. And I must say, it reminds me of certain Décosterd and Rahm projects in which the designers claimed that the paint they were using would make you fall in love or the lighting would stimulate altitude sickness.

But Wendy's main point seems to be that it's an object—it has no particular function other than spouting water off some of its spikes, I assume to cool down summer visitors. The functional part of the program finds a home in the scaffolding that will surround the sculpture. There, performers and DJs can perch, lighting can be attached, and whatever other

equipment that is necessary to activate the space can find a station.

I should note in passing that HWKN represents the cutting edge of how young firms see themselves. Partners Marc Kushner and Matthias Hollwich claim that they are not just architects, but also "inventors," and are involved not just with architecture and urbanism, but also "branding" and "development." In Koolhaasian fashion, they espouse an "optimistic design approach." These are not just words: Kushner and Hollwich helped found the site Architizer, and their projects, few of which seem to have been realized, include party pavilions and some product design.

Out of this approach comes this conceptual thing. I note an amazing similarity to a project for the Venice Architecture Biennale in 2008, as part of the "Uneternalcity" exhibition that I curated. It was called "Superstar: a Mobile China Town," a massive alien craft created by MAD Architectural Design Studio, and intended to land in cities around the world. I am not sure why the New York version of this object is needed.

I have long been interested in the potential of scaffolding, which can create a space in between the private realm of buildings and undefined public space; which represents the act of making (or un-making); and which is the backbone of the temporary constructions and festivals that are the sites of much more creativity than you find in the discipline of architecture.

So I actually hope they run out of money over there at PS1 and build just the scaffolding—with room to spare without Wendy—and let the party begin. □

TEXT BY AARON BETSKY
ILLUSTRATION BY PETER ARKLE



→ Read more of Aaron's design observations at ARCHITECT's Beyond Buildings blog: go.hw.net/betsky.

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THE BURDEN OF HISTORY

IS IT POSSIBLE TO APPRECIATE TOD WILLIAMS AND BILLIE TSIEN'S NEW BARNES MUSEUM IN PHILADELPHIA ON ITS OWN MERITS? OR WILL THEIR DESIGN BE FOREVER BURDENED BY THE MEMORY OF COLLECTOR ALBERT BARNES AND HIS IDIOSYNCRATIC HOUSE-MUSEUM?

TEXT BY ERIC WILLS
PORTRAITS BY NOAH KALINA

SUPPOSE YOU WERE a partner of a respected New York architecture firm with an enviable résumé of projects to your credit, including the American Museum of Folk Art in New York City and the Phoenix Art Museum expansion. Suppose you heard from a potential client with a \$150 million budget and aspirations to build a museum of international repute to house perhaps the finest collection of Post-Impressionist paintings in the world, including 181 Renoirs, 69 Cézannes, 59 Matisses, and 46 Picassos, the collection's value estimated at \$15 billion but priceless in its collective majesty. Suppose that, with a handful of other esteemed firms, you made the short list for the project, to be built along the Benjamin Franklin Parkway in Philadelphia—the city's museum row, the site of the Rodin Museum and the Philadelphia Museum of Art.

Then one day, you got the call. You had been chosen. Imagine the thrill. It would be a career-defining coup, a chance to design a significant cultural icon.

Suppose now that the client in question happens to be the Barnes Foundation. For the last decade-plus, this institution has been embroiled in a contentious dispute about moving its collection from the original location in the nearby suburb of Merion, Pa.—a move that historian Robert Zaller of Drexel University has dubbed the greatest art heist since World War II.

Albert C. Barnes, the foundation's late founder, started amassing his collection in 1912 and collaborated with Paul Philippe Cret, a French-American architect and design professor at the University of Pennsylvania, to build a limestone Beaux-Arts structure in Merion to house it. But in the late 1990s, as the foundation chartered by Barnes floundered financially, a group of institutions (including the Pew Charitable Trust and the Lenfest and Annenberg Foundations) organized a de facto takeover to commandeer the collection and bring it to Center City—or so argues *The Art of the Steal*, a 2009 documentary about the relocation.

Only the “steal” happens to be legal because Judge Stanley Ott of the Montgomery County Orphans Court, entrusted with the case, already ruled in 2004 that the move was permissible because there was no viable alternative that could have ensured the foundation's survival. The foundation stipulates that the galleries in the new museum must replicate the scale, proportion, and configuration of the original ones.

Suppose you were entrusted to design this new museum. It would be “a beautifully perverse” project, as one short-listed firm described it—the architectural equivalent of performing a high-wire act over the Grand Canyon sans safety net. How might you navigate the politics of this commission? Would it be possible to design a building that could transcend the controversy? How would you create a contemporary piece of architecture that echoed the artworks' original setting without resorting to kitsch? Ethically, should you even have accepted the commission in the first place?

In early March, I first saw the response to this monumental challenge: the new Barnes, designed by Tod Williams, FAIA, and Billie Tsien, AIA, the husband-and-wife partners of their eponymous New York architecture firm. It was a breezy, glorious day, the temperature in the low 70s. Workers were busy landscaping the grounds. The building itself, which was nearing completion for its scheduled opening in May, remained fenced in, access monitored by a guard sitting behind glass panels in a makeshift concrete vestibule. (The additional layers of security protecting the priceless art within seemed to rival a presidential detail.) The sound of drilling echoed through the central court, where tables and chairs were being set up for a private dinner that evening for the project team.

The scene was a study in rising anticipation, for here was the building, its limestone exterior bathed in sunlight, about to be offered up to the public, enabling the critics to begin the complicated and tortuous task of assessing its success. Not that the most vocal of the naysayers hadn't already taken their shots, dubbing the misadventure the “McBarnes” and comparing the building to two shoeboxes topped with a giant glow stick. Given such rhetoric and the multitude of swirling questions, it's probably best to start at the beginning.

The Medici in Merion

Albert C. Barnes's life has inspired no shortage of adjectives: eccentric, irascible, litigious, progressive (at least when it came to women and blacks). Barnes was born in 1872 in the Philadelphia slums and became a rich man in part through force of will and impeccable timing. He helped fund his education at the University of Pennsylvania Medical School by tutoring and boxing. Teamed up with Hermann Hille, a German scientist, he went on to make a fortune in the

pharmaceutical business, developing a product called Argyrol that helped prevent blindness in infants. Barnes eventually brought a suit against Hille to dissolve their partnership, outbid his now-adversary for the rights to the company, and then cashed out—for \$6 million—in the summer of 1929, just a few months before the markets crashed, making him a very rich man.

Barnes's interest in art, inspired by his friend William Glackens, the painter, had by then turned into an obsession. Thanks to frequent art-buying trips to Paris, he filled his Cret-designed building with piece after piece. And the economic climate in the 1930s afforded new opportunities for him to expand his holdings. “I just robbed everybody,” Barnes bragged. “Particularly during the Depression, my specialty was robbing the suckers who had invested all their money in flimsy securities and then had to sell their priceless paintings to keep a roof over their heads.”

Bluster aside, Barnes did have an eye for art, and when he couldn't sleep at night was an inveterate tinkerer, spending hours rearranging his paintings on the gallery walls. He didn't group the works by period, but rather by color, texture, and composition. And he not only displayed large numbers of paintings in close proximity—radically different from contemporary curation standards—but also displayed them alongside metalwork, African sculpture, and jewelry.

“One of the most striking things in America is the Barnes collection,” said Matisse, whom Barnes commissioned in 1932 (for \$30,000, a song) to paint one of the foundation's signature works, *La Danse*. “There the old master paintings are put beside modern ones, a Douanier Rousseau next to a primitive, and this bringing together helps students understand a lot of things the academies don't teach.” The only “sane place in America” for the display of art, he declared it.

When Barnes was killed in a car crash in 1951, at age 79, his indenture spelled out his wishes for the foundation's future. Inspired by his friendship with John Dewey, the English philosopher, Barnes's mission was primarily pedagogical: He wanted his foundation and collection to educate black students and common factory workers alike, to spread the principles of democracy. He kept his collection largely locked away from wealthy patrons who courted access. Le Corbusier was rebuffed; other luminaries received notes signed by Barnes's dog, Fidèle. Indeed, his relationship with the art establishment was famously strained: the Philadelphia Art Museum he called “a house of artistic and intellectual prostitution.”

His indenture had stipulated that the galleries never be moved or altered, and that access to his collection be limited to students, the public allowed inside for just six hours each Saturday. But slowly those terms began to be undone following court cases, first in 1961, when the public gained additional access, and then in 1991, when the paintings were allowed to travel in a worldwide exhibition. During the tour, the foundation commissioned Venturi, Scott Brown and Associates in Philadelphia to do a \$12 million restoration of the Cret building (completed in 1995), in which the firm installed new mechanical and electrical systems and improved the lighting, among other projects.

The foundation's financial situation grew untenable, however, because of poor management and Barnes's stipulation that the endowment could only be invested in federal, state, and municipal bonds; inflation had

“ALTERING SO MUCH AS A MOLECULE OF ONE OF THE GREATEST ART INSTALLATIONS I HAVE EVER SEEN WOULD BE AN AESTHETIC CRIME.”

—PETER SCHJELDAHL,
NEW YORKER CRITIC



Clockwise from left: Evelyn Yaari, a local resident and one of the members of the Friends of the Barnes group, which filed two lawsuits challenging the judge's ruling allowing the collection to move; a gallery in the old museum (Cezanne's *The Card Players* is at the center); and the 1925 Beaux-Arts building that Paul Philippe Cret designed for Barnes in Merion.





From top to bottom: Renderings of the new Barnes, which depict the distinctive light canopy that runs across the top of the building; Derek Gillman, the Barnes Foundation's director and president, who helped oversee the selection of Williams and Tsien for the project; the central court of the new museum, with hand-chiseled limestone slabs and a carpet of wood salvaged from the old Coney Island boardwalk; and a semi-public garden along the Benjamin Franklin Parkway that marks part of the processional entrance to the museum.

slowly chipped away at the capital. Barnes, so savvy with his business affairs during his lifetime, unintentionally helped create the conditions for an epic battle over the fate of his collection.

The Controversy and the Architects

Derek Gillman, the foundation's executive director and president, appears very much at ease during my visit in early March. He's just heard that day—much to his delight—that the Philadelphia Commission of the Arts has approved a 40-foot-high, stainless steel totem, designed by Ellsworth Kelly, to be installed near the building's entrance. As a photographer tries to position Gillman for a portrait in the new conservation center, he grabs one of the ventilation hoods hanging from the ceiling and poses with it above his head. "Gillman, about to be sucked into the ether," he quips.

The Oxford-educated Gillman joined the foundation in 2006, not long after the judge's ruling, which is when the controversy grew in intensity. Pew and the Annenberg and Lenfest Foundations had agreed to help raise the funds necessary to construct the new building, but only if the collection came to Philadelphia. The foundation has maintained that the Center City location, about eight miles from the old site in Merion, will improve visitor access to the collection and ensure the institution's financial stability.

But a local group, the Friends of the Barnes Foundation, fought the move, filing two lawsuits challenging Judge Ott's ruling. (Both suits were dismissed, though the group may appeal the most recent decision, handed down in October.) Evelyn Yaari, one of the group's leaders, contends that the financial difficulties could have been solved without moving the collection from Merion, where the art, hung in the building designed for it, and situated in the arboretum that Barnes's wife, Laura, developed, constituted a national icon that deserved to be preserved in situ. As Peter Schjeldahl, the *New Yorker* critic, wrote after first visiting the Barnes in 2004: "Altering so much as a molecule of one of the greatest art installations I have ever seen would be an aesthetic crime."

Gillman, thrust into this controversy, was hired in part because his résumé included four building projects from his previous art-world jobs, including a stint as Keeper of the Sainsbury Centre for Visual Arts, where in the 1980s he worked with Norman Foster, the building's original architect, to design an addition.

At the Barnes, Gillman and his colleagues hired Martha Thorne, the executive director of the Pritzker Architecture Prize, to help spearhead the search for a firm that could design, in Gillman's words, "an urban version of the Barnes that would have resounding integrity as a piece of architecture." The foundation posed a series of questions, Gillman says: "Could they [the architects] do the project and replicate the galleries? Could they make a welcoming building, polite but not necessarily deferential to its neighbors? Could they work with a landscape architect and think coherently in terms of integrating the landscape into the building? Could they create a space physically and architecturally satisfying—not only for architects, but for the people who use it?"

The Barnes building committee contacted an initial list of about 35 architects and received about 25 positive responses, with only one architect rejecting the commission outright, Gillman says. Eventually, the foundation narrowed the list to six firms: Diller Scofidio + Renfro, Thom Mayne,

Rafael Moneo, Tadao Ando, and Kengo Kuma. And, of course, Tod Williams and Billie Tsien. Widely praised for the sensitivity of their work, they were a felicitous choice to navigate such a politically charged commission.

The two partners met in 1977, when Williams hired Tsien, and have been lauded for their playful and innovative use of materials, their reputation bolstered by projects such as the Neurosciences Institute in La Jolla, Calif., and C.V. Starr East Asian Library in Berkeley, Calif. Williams and Tsien concluded many years ago—in 1986, when they formed their full partnership—that their overarching ambition was to have all of their buildings outlive them. Which requires a certain degree of selectivity when it comes to choosing projects. “Tod says that often you’re defined by what you choose not to do more than by what you do,” Tsien says.

So what does it mean that they chose to do the Barnes? The foundation first contacted them in spring 2007. “We were embarrassed that we had never been there and high-tailed it out to Merion,” Williams says. “And lo and behold, there were other architects”—other contenders for the job—“that were doing the exact same thing.” Williams and Tsien were overwhelmed by the visual delight of the gardens and the scope of the art, but remained skeptical of the project’s ambitions.

“I didn’t feel confident that I really believed in what was happening. We had to understand for ourselves what was right and what wasn’t right,” says Williams. “When we realized that we weren’t going to change the [project’s parameters], we could have refused the commission. But the more we looked at it, the more we actually believed that this would be exactly the right thing to save the collection and restore Dr. Barnes’s vision in Philadelphia.”

The site for the new building—bordered by the Benjamin Franklin Parkway, the Cret-designed Rodin Museum, the Free Library (Moshe Safdie is currently designing a new wing), and a Whole Foods—was a gathering place for the homeless and home to a juvenile detention center, which was demolished starting in 2009 after a ceremony punctuated by fireworks. And Williams and Tsien went about developing their core concept: a gallery in a garden and a garden in a gallery, inspired by the importance of the arboretum to the original site.

It’s no surprise that Williams and Tsien admit to struggling initially with the constraints imposed by the project. For starters, unlike the recently completed project at the Isabella Stewart Gardner Museum in Boston, in which Renzo Piano designed a modern addition onto the historic museum, creating a dynamic interplay between old and new, Williams and Tsien were effectively charged with re-creating the old museum’s galleries. They had to strike a delicate balance between designing a mere replica and straying too far from Barnes’s intent, which would have proved an aesthetic transgression. And then they had to merge their interpretation of those historic galleries with space for a café, library, offices, shop, and proposed new amenities not found in the old Barnes (temporary exhibition space, additional classrooms, an auditorium).

The situation called for no shortage of dexterity, and understandably, Williams and Tsien’s initial concept evolved rather dramatically over time. The architects had first conceived of housing the galleries in a separate building, but ultimately they decided to merge everything into one two-story structure, the galleries

contained in a block that evokes Cret’s original building, and the other amenities in a more contemporary L-shaped pavilion. The two sections form the perimeter of a central court, which is capped by a massive translucent rectangle called the light canopy, which obliquely filters light. The western corner, where the canopy cantilevers over an outdoor terrace, is the building at its most dramatic. Lined on top with photovoltaic panels that will provide 8 percent of the building’s energy, and largely hollow inside, the canopy will gently glow at night, Williams says, as a kind of beacon to the city.

Elsewhere, the architects incorporated subtle references to Barnes’s vision. The exterior, conceived as a kind of stone fabric wrapping the structure, was inspired by the pattern of a West African liar’s cloth, paying homage to Barnes’s championing of African art. The sheets of limestone, exported from a quarry in the Negev, south of Jerusalem, are attached to a stainless steel building envelope using a clip system, itself a nod to the hanging artwork inside. Williams gushes about the “magical quality of the stainless steel relating to the sky” and the limestone’s nod to Philadelphia’s Neoclassical heritage, as well as to the Cret-designed Barnes.

In what some critics might find an audacious undertaking (how do you improve upon perfection?), the architects have attempted to enhance the original, “to simplify and intensify” the experience, as Tsien puts it. A visit they paid to the Sainsbury Wing of the National Gallery in London, known for its abundant natural light, helped convince them to incorporate clerestories into all the second-floor galleries. (Fisher Marantz Stone, a New York-based architectural lighting firm, worked on the Sainsbury Wing and was also commissioned for the Barnes project.) Gillman can’t help but marvel, he says, at how much better the art looks with the improved quality of light. (The galleries were off-limits to me in early March; the foundation limited access and photography prior to a media blitz in late April.)

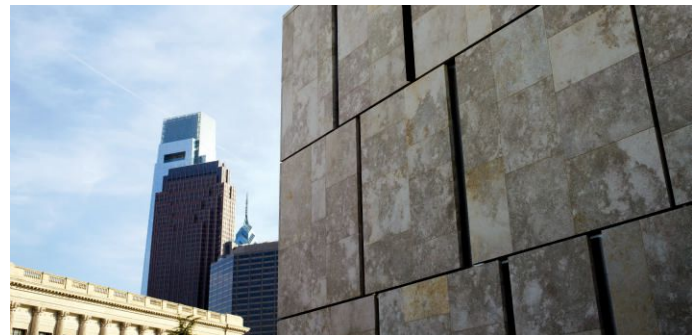
Moreover, the architects say, a light-measurement system that modulates the exterior solar shades and interior electric light, in addition to shaded glass, will keep outside views less obstructed than at the old Barnes, with its heavily curtained windows. Which means that visitors will have a more intimate connection to nature, they contend. Working with the Olin Studio, a Philadelphia-based landscape architecture firm, they designed a raised plinth in front of the first-story galleries to accommodate a garden. And they inserted an open-air garden in the galleries, another connection to nature visible through gallery windows, as well as a block of classroom space. Critics have argued that these two insertions actually disrupt the visual intensity one experienced at the original Barnes. But these pauses, a common design feature in contemporary museums, will give visitors a much-needed chance to recharge, the architects maintain.

At the end of my tour, I stand with Williams and Tsien near the entrance, where a black-and-white African-inspired mosaic designed by Tsien decorates the floor. “Only in the last few months have we come to realize how amazing this building is. Honestly, it has come out better than we imagined it,” Williams says. “I think the thing we worried about most with this project is that the spotlight is more on us than we ever would have imagined it to be or wanted it to be. I think when the spotlight really shines on you, your soul kind of turns to dust.”

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Clockwise, from this image: The light canopy at the western corner of the new museum, where it cantilevers over an outdoor terrace; the galleries in the new museum overlook a raised plinth that will be landscaped to give museumgoers a sense of being connected to nature; the limestone exterior on the north side of the building, which houses all the modern amenities, has been configured in a more contemporary fashion; and Tod Williams and Billie Tsien, in the outdoor terrace under the light canopy.



To which Tsien jokes that Williams has recently joined a cargo cult, a tribal society that fetishizes modern technology such as cameras, eliciting a laugh from her husband.

Nevertheless, accepting a project with such high stakes has signaled an evolution in the firm's reach, Williams says. Along with their recently completed David Rubenstein Atrium at Lincoln Center, the Barnes project has "taken us into an arena where we can have a real effect on a city, on the life of a city," he says. "The fact is that few people could come to see it [the Barnes collection] before. Now it will be part of the city of Philadelphia. It will preserve the art and bring the element of education to the fore. I think that's going to be a great gift."

A Complicated Legacy

Inga Saffron, the *Philadelphia Inquirer's* architecture critic, was glowing in her praise of Williams and Tsien's design: "Even critics who feel the Barnes is wrenching the collection from its historic womb will have to work to find reasons to hate this building. The architecture is that good." But that hasn't stopped the criticism from coming, fast and furious. Christopher Knight, the *Los Angeles Times* art critic, has lamented that Matisse's *Joy of Life*, hung in a stairwell in the old Barnes, was relocated to its own mini-gallery in the new building—a change permitted because the architects argued that the staircase wasn't handicapped accessible. And the grand dame herself, Ada Louise Huxtable, has deemed the attempt to reproduce the galleries "an exercise in patronizing and self-delusory sophistry"—dismissing the effort to somehow keep alive a place that has already been lost.

"I think the people who are ready to kick it [the new museum] as the McBarnes or the Disney version or the kitsch version," Gillman says, are channeling a purist preservationist ethic. In hushed, sarcastically reverent tones, he equates their perception of the old Barnes with a historic English house museum: "This was a fixed country estate left to the nation in perpetuity, it's been there for generations, Edmund Burke's spirit is hanging over it, and nothing should ever be changed. To do anything different is inherently a heresy." Barnes, he says, opposed tradition for tradition's sake.

Still, it's undeniable that something has been lost by the move. The intimacy and eccentricity of the old Barnes, with its creaky floorboards and burlap wall coverings, the way the art and the building and the gardens were an interconnected whole that conferred a powerful sense of place, proved magical to the Barnes's devotees. Those who made frequent pilgrimages to Merion may well experience a disquieting sense of déjà vu alongside an ineffable feeling of loss when they visit the new site. The art will be hung in the same configurations, yes, but the experience won't be the same.

The Barnes move well may herald "the end of an era in American cultural history," Nicholas Ouroussoff, *The New York Times's* former architecture critic, has argued. Citing not only the Barnes but also the Piano addition to the Gardener, and the Machado and Silvetti Associates renovation of the Getty Villa in Pacific Palisades, Calif. (completed in 2006), Ouroussoff rues the transformation of those eccentric museum spaces—characterized by the intensely personal and idiosyncratic agendas of their founders—into corporate, anesthetized tour stops. Barnes was a rebel; the new foundation

leaders, he says, largely conform to the establishment.

As much as the foundation wants to close that contentious chapter, a few lingering questions remain: What will happen to the old Barnes? Gillman says that the foundation has had conversations with the Pennsylvania Horticultural Society about partnering to establish an education hub for horticultural study at the Merion site. The foundation has restored Cret's teahouse on the property, is upgrading the grounds, and may move the Barnes archives from an administrative structure into the gallery building, he says. A more important question, perhaps, is whether there was a more elegant solution to the institution's financial woes than moving the collection.

Williams and Tsien, for their part, have managed to balance the monumental character expected of a world-class museum with a domestic intimacy that makes standing inside the soaring central court of the new Barnes—at 93,000 square feet, nearly eight times the size of the old building—a simultaneously uplifting and grounding experience. It's not the old Barnes—it never could be. But for many visitors who never saw the Merion site, the new building will undoubtedly be a delight, the art collection itself a revelation. "Of course, there's a big backstory," Tsien says of the project. "In 10 years, five years ... I don't know ... 20 years, it won't be about the backstory. I think it will be about protecting the collection and putting it in a public place. I think that's what people will think about."

For the foundation, the challenge now is to ensure its own continued financial viability, given the stagnant economy. A spate of cultural organizations overreached during the most recent construction boom, commissioning starchitects to produce signature buildings and ending up drowning in debt. Williams and Tsien are no strangers to this phenomenon: the critically acclaimed building that they designed for the Folk Art Museum in New York was sold last year by that cash-strapped institution, raising fears that the new owner, the neighboring Museum of Modern Art, may make substantive changes, if not raze it.

As any museum director will tell you, with expansion comes increased operating costs. Pew and the Lenfest and Annenberg Foundations have promised to help the Barnes Foundation build an endowment of \$50 million. The endowment is currently \$25 million, with another \$25 million pledged, according to a foundation spokesman. The new building, Gillman says, will enable the institution to attract a larger funding base.

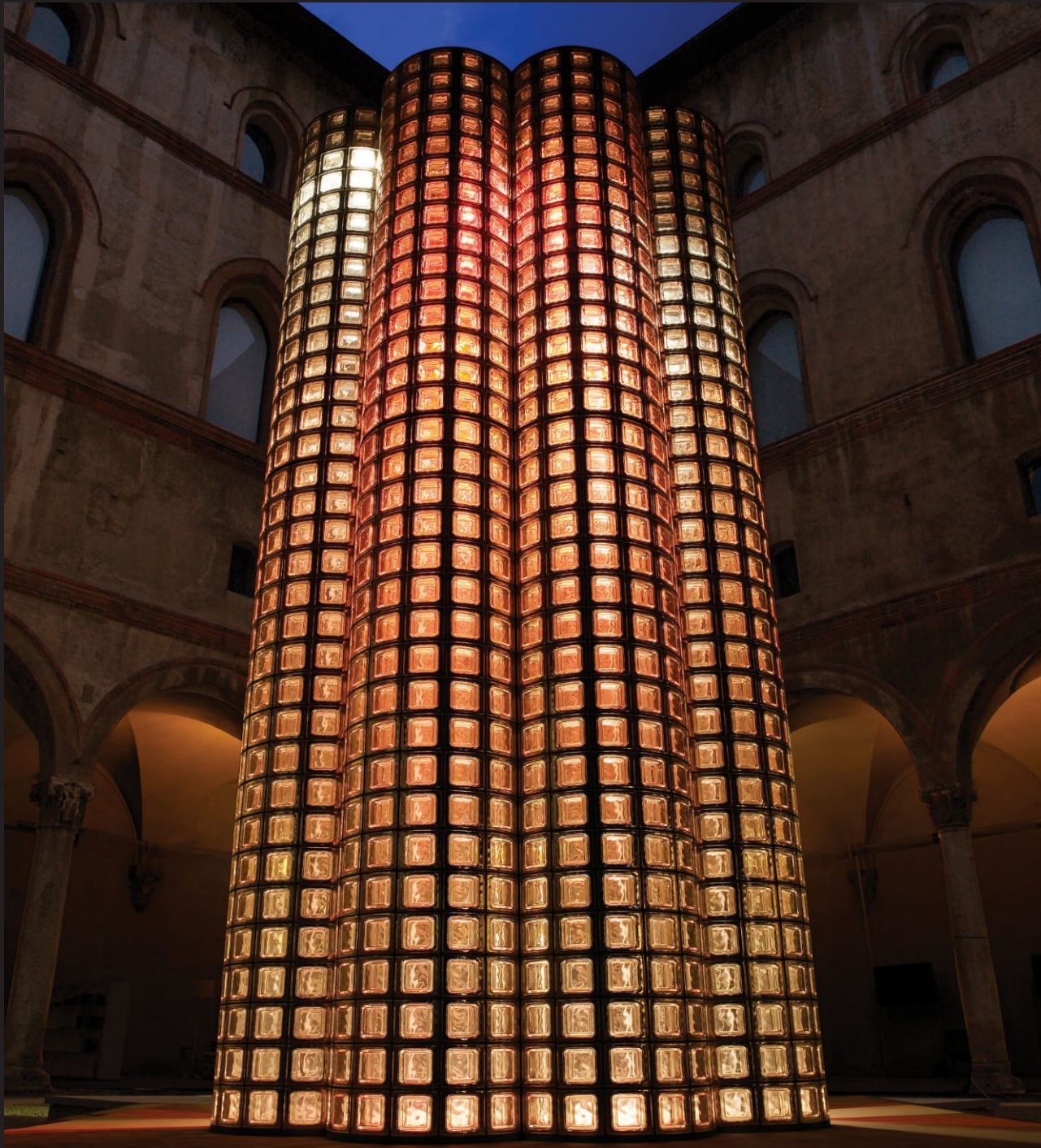
The more significant challenge, as Gillman puts it, is "What will people say about what we achieved in two decades? What will we have done that is significant and will make the Barnes Foundation an important part of the American cultural fabric, in a way Barnes would have been really proud of?" He emphasizes the foundation's arts programs for inner-city children, who have seen public-school funding for such activities massively cut.

For this is how the project will ultimately be judged, the tragedy of losing the old Barnes aside. Williams and Tsien, confronted with such a fraught commission, have navigated it with considerable grace. Now, after the opening galas and black-tie soirées, the foundation needs to make good on its promise that the new building will help increase its engagement with the underprivileged and common man, which is one thing Dr. Barnes most assuredly would have wanted. □

"THE FACT IS THAT FEW PEOPLE WOULD COME TO SEE IT [THE BARNES COLLECTION] BEFORE. NOW IT WILL BE PART OF THE CITY OF PHILADELPHIA. IT WILL PRESERVE THE ART AND BRING THE ELEMENT OF EDUCATION TO THE FORE. I THINK THAT'S GOING TO BE A GREAT GIFT."

—TOD WILLIAMS

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→ DESIGN

DESIGNED BY ERICK VAN EGERAAT 90
CAPLES JEFFERSON ARCHITECTS 98
HELIX ARCHITECTURE + DESIGN 106



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VERSHINA TRADE AND ENTERTAINMENT CENTRE

SURGUT, RUSSIA

DESIGNED BY ERICK VAN EGERAAT

TEXT BY JOHN GENDALL
PHOTOS BY ALEXEY NARODITSKIY

AT JUST OVER A YEAR OLD, the Vershina Trade and Entertainment Centre, designed by Rotterdam-based Erick van Egeraat, is not much older than its home city of Surgut, which sprung up out of the then-USSR's harsh Siberian landscape 40 years ago. This city of just over 300,000 owes its existence to nearby oil and gas resources, and it serves as a home base for people working in those industries. But a subarctic climate (icy temperatures and short days in the winter) renders the city inhospitable to those who don't have work as a reason to keep them there. At its core, Vershina is meant to add some welcome amenities to this industrial area.

"It's a rough, urban context," Erick van Egeraat says. It's characterized by "housing blocks for workers in the oil and gas industries. It's as though Soviet times never stopped. And because it's so cold, there's not a lot to do, so people spend a lot of time in their houses."

The trade and entertainment center includes shopping, of course, but also restaurants, a children's area, a climbing wall, and a nightclub. "We really wanted to maximize

the interior possibilities since it's so cold for most of the year," van Egeraat says. "We really pushed as many square meters into the building as we could."

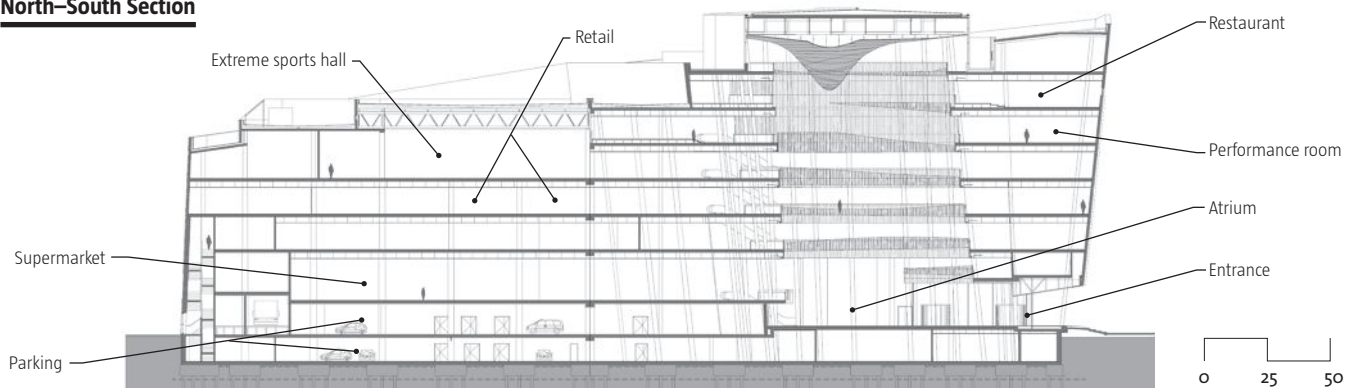
Organized around a full-height atrium that dominates the southern half of the structure, the eight-story building is meant to provoke interactions between community residents, and to encourage the kind of casual spending that large-scale retail projects demand. "The atrium really helps with orientation," van Egeraat says. "Visitors can circulate, and they will always know how to get around and discover new places in the center." It should come as no surprise that early experiments in broadly programmed retail space—such as Minneapolis's Mall of America—continue to get developed in subarctic climates. In Surgut, Vershina functions as an interiorized public space overlaid on a capitalist bubble.

"The building is really inward-looking since there's really no need to look out," explains van Egeraat, citing the bleak urban fabric and lack of sunlight (in December, there can be as little as five and a half hours of sunlight





North-South Section



The Vershina Trade and Entertainment Centre provides an indoor space where residents of Surgut, Russia, can escape the Siberian landscape and still-nascent urban context (previous spread). Because the days are often dark and desolate, van Egeraat focused on creating apertures in the façade to break up the elevation, rather than to allow for views. He cut vertical strips of glazing (this image) into the façade, which reinforce the irregular geometries of the building envelope. Integrated lighting in recessed lines that cut across the façade activates the building at night.



per day). Openings in the envelope take the form not of ribbons of windows, but rather of sharp, glazed cuts through the building's skin that provide occasional sight lines from inside the space. The façade is further crisscrossed by a series of coves with an integrated lighting system; at night, the fixtures create a network of lines of light on the surface.

The white panels that form the skin can also be used to display custom advertisements that fit like puzzle pieces over the whole building's façade, bringing some dynamism to Surgut's relatively nonexistent skyline. "We wanted to create a building that was something entirely new for the community, and something that would be recognizable," van Egeraat says. The playful geometries are carried through to the 37,050-square-meter (398,802-square-foot) interior, where many walls and columns are slanted in an effort to carve out unique spaces from the vast building volume.

The client, a civil contractor, began construction on the project in 2004, but became dissatisfied with the design as it had been conceived by a local architect. They paid a visit to van Egeraat—who maintains an office in Moscow to oversee ongoing projects in Russia—to inquire about taking over the project, which he agreed to do. But because of this arrangement, the firm was handed a predetermined footprint that it could then author in section and elevation.

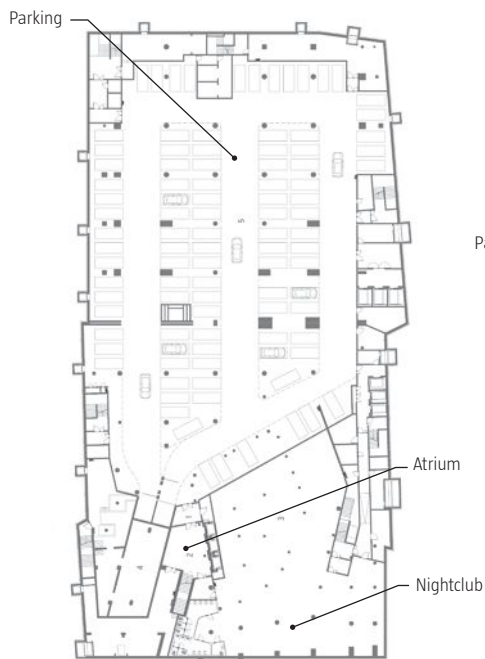
Though the form and façade are themselves unprecedented to this particular context, the program, too, is a novelty. "People know shopping centers, and people know entertainment facilities, but most people here have not seen them combined," van Egeraat says. "People go there to just spend the day. It's not really like the American models where people are necessarily shopping actively. People are just using the space to get together and have fun."



The southern end of the building is dominated by a full-height atrium (opposite), which is capped by a vortex-like lighting installation that descends from the ceiling. A typical retail floor (this image) has storefronts and kiosks, paired with places to sit and meet people, as many of Surgut's residents use the space less for directed shopping, and more as a community hub.



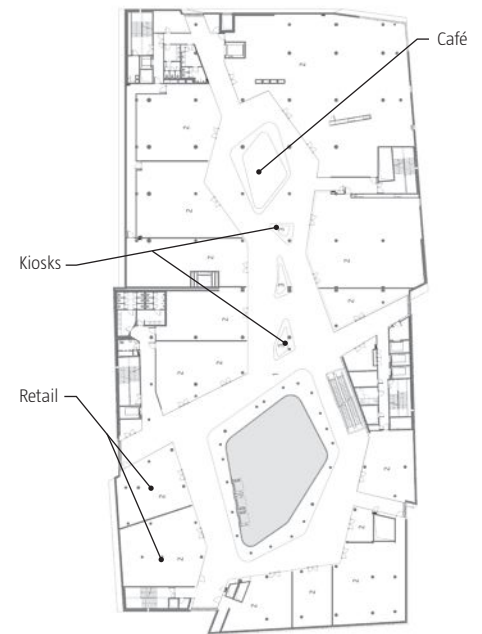
Basement-Level Plan



Ground-Floor Plan



Third-Floor Plan





Visitors enter the center either via the parking levels, or through the ground-floor street entrance (below), which brings them into the atrium space at the southern end of the building. A lobby (this image) in the base of that atrium contains shop directories and elevator and escalator access to the upper levels.



Project Credits

Project Vershina Trade and Entertainment Centre, Surgut, Russia

Client SKU

Architect Designed by Erick van Egeraat, Rotterdam, the Netherlands—Erick van Egeraat, Roemer Pierik, Balázs (architects); Roemer Pierik (associate); Alda Jesus, Cláudia Valadinhas, Sanne van der Burgh, Daniel Rodrigues, Tanya Albertoe, Nick Searle (project team, conceptual design); Adorján Portik, Andrea Kopár, András Dobos, Anikó Petőcz-Tóth, Anna Döbrössy, Cock Peterse, Csaba Rajnai, Edina Péli, Enikő Korompay, Eszter Kajdócsi, Flóra Kőszeghy, István Balogh, János Tréki, Karol Schultz, Krisztián Kelner, Lóránt Perényi, Lukasz Skorek, Maria Garcia Serdio, Piroska Igaz, Polina, Renato Machado Silva, Roman Kristesiashvili, Sanne van der Burgh, Zoltán Bozsik, Zoltán Németh, Zsófia Fülöp (project team, project and working documents); Roman Kristesiashvili (aesthetic supervision); Steven Simons, Pintér Tamás (renderings)

Project Manager SKU—Rustam Mirsayapov

Structural Engineer MTM Budapest

Mechanical and Electrical Services Engineer SMG-SISU Budapest

Retail Consultants Ricci—Ilya Shuravin

Landscape Architect Designed by Erick van Egeraat

Interior Architect Designed by Erick van Egeraat

Renderings and Visualizations DPI

Models Model Workshop

Size 37,050 square meters (398,802 square feet)

Cost €74.1 million (\$96.86 million)

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QUEENS THEATRE

QUEENS, N.Y.

CAPLES JEFFERSON ARCHITECTS

TEXT BY SARA HART
PHOTOS BY ALBERT VECERKA



FLUSHING MEADOWS CORONA PARK, in the borough of Queens, N.Y., is larger than Manhattan's Central Park, and this former swamp and ash dump now provides an array of cultural and sports activities. Which is why, in this vibrant urban green space, a collection of enormous architectural ruins—the graveyard for New York State's contribution to the 1964–65 World's Fair—is, at best, an unexpected sight. The glory has long since faded from the once awe-inspiring structures designed by Philip Johnson with Richard Foster and structural engineer Lev Zetlin. The decrepit remains include the Tent of Tomorrow, Astro-View Towers, and Theaterama. Adding insult to neglect is the proximity of the modern U.S. Tennis Association Billie Jean King National Tennis Center, host of the U.S. Open every August and September, and Citi Field, the new home of the New York Mets.

The contrasts are stunning, and one wonders why the remains of the World's Fair haven't either been repurposed or removed. Economics and bureaucratic inaction notwithstanding, the relevant answer is that there's still life there. Theaterama, which Johnson envisioned as a venue for avant-garde art at the fair, was a technological marvel when it opened because of its use of slip-form concrete construction. Recognizing its commercial value, the city converted the cylinder, measuring 44 feet tall and 100 feet in diameter, into the Queens Theatre in the Park in the early 1980s, then commissioned a major renovation of the space in 1993.

In the early 2000s, the theater's growing success and popularity created a critical need for more space and accessibility. The city commissioned Long Island City, Queens-based Caples Jefferson Architects to undertake modernization and expansion of the theater for the limited price tag of \$20 million. The program called for a renovation of some existing spaces, new offices and a 75-person cabaret in an addition that wraps around the existing theater building, and a mechanical system overhaul. The most noticeable new space, however, is a reception center, which provides a 600-person preperformance gathering area and leasable venue for non-theater-related events.

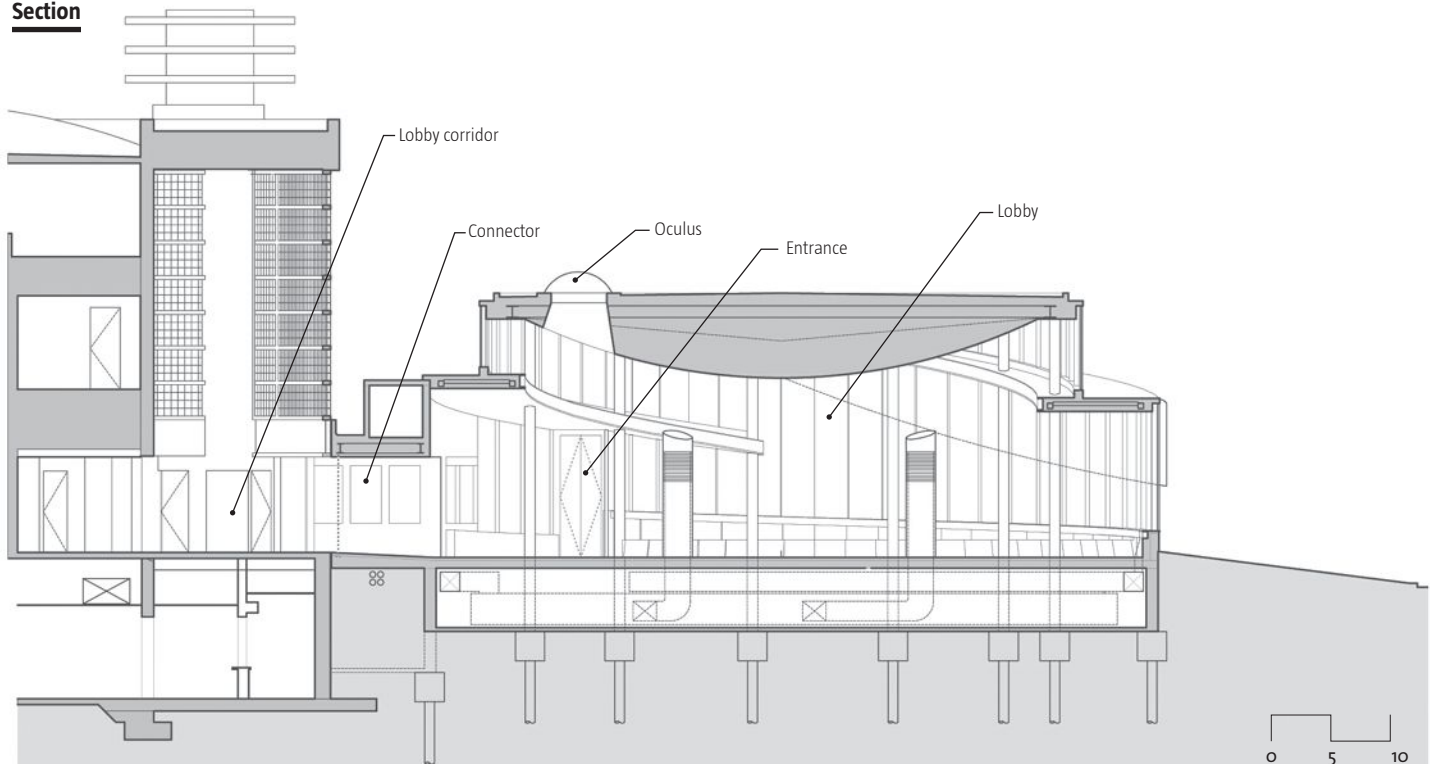
Caples Jefferson designed a glass cylindrical structure to complement the circular geometry of the existing theater. It's a translucent form that subtly juxtaposes Johnson's opaque one. The two volumes are conjoined at the 1993 theater entrance, but the reception hall is sited on axis with the skeletal remains of the gargantuan Tent of Tomorrow, with a view of the rusted observation towers—a move that cleverly concedes the visual clutter of the site, and frames it as strange beauty from another era.

"The challenge was to create the impression of round spiraling forms with large, flat, structurally glazed units," explains principal Sara Caples, AIA. The architects designed a unitized curtainwall made of 5,000 unique glass panels to suggest a perfectly round cylinder. Aluminum fins at the vertical joints in the system intensify the perception of a vanishing perspective as the fins move (and disappear from view) around the curving wall, and 2-inch-deep aluminum tubes on the interior surface of the glass breaks trace horizontally around the curving form. The project did not pursue LEED certification, but the architects diligently sought to make the building energy-efficient. They accomplished this by installing gas-filled insulated glazing units with low-E coatings to reduce solar heat gain, and by using silicone sealant joints rather than metal mullion caps. Laminated outer glass lites allowed for a larger unit size and help protect against vandalism.

Inside, the ceiling plane is an inverted gypsum dome, clad in acoustic plaster over sound insulation, with three skylights rendered by deep round voids—a composition inspired by artist Barbara Hepworth's sensuously carved marble sculptures. The ceiling and oculus walls are tinted orange and set the space ablaze when the sun passes over. At night, colored, cold-cathode lighting fixtures, muted behind a translucent acrylic fascia, spiral upwards around the perimeter.

Caples Jefferson demonstrates that additions, even to sites as loaded as this one, don't need to mimic the past. The new pavilion doesn't ape the site's architectural relics, but neither does it dismiss them; more importantly, it brings new life to the site.

Section



In the shadow of the remnants of Philip Johnson's 1964 World's Fair Observation Towers and Tent Of Tomorrow, Caples Jefferson Architects' renovation to Queens Theatre included the addition of a new reception venue (previous spread). Cylindrical in form to reference the geometries that typified Johnson's works on the site, the addition is glazed and lit with colorful cold-cathode lighting (this image), creating a bright counterpoint to the dark relics nearby.

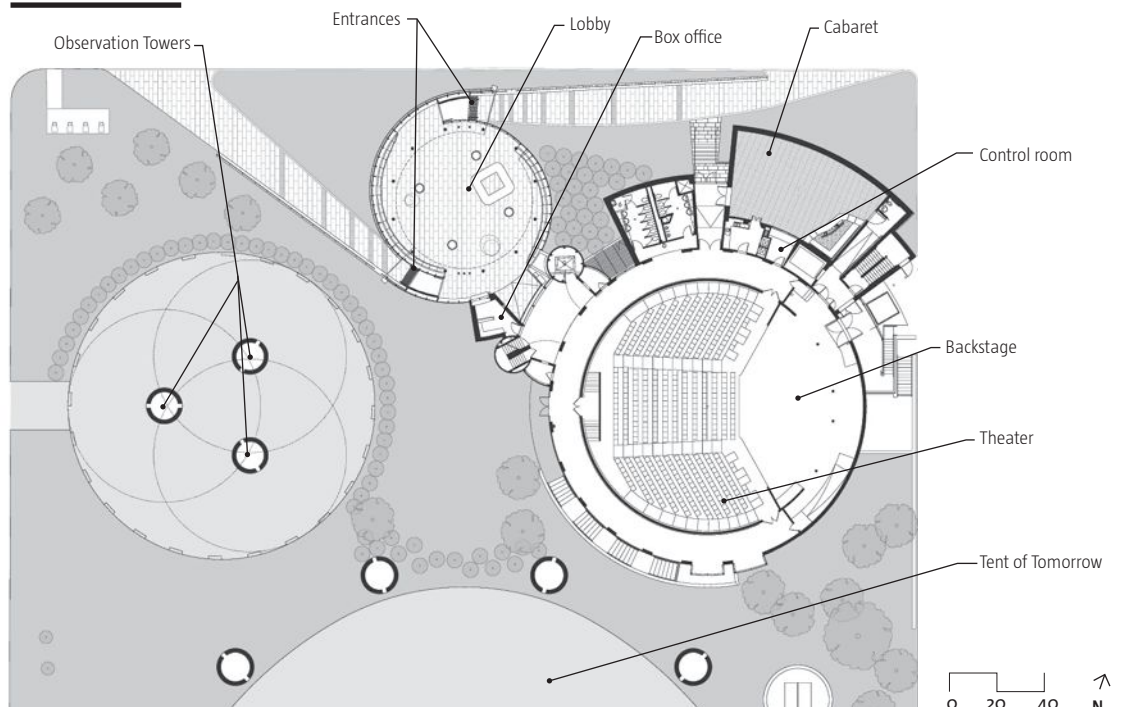




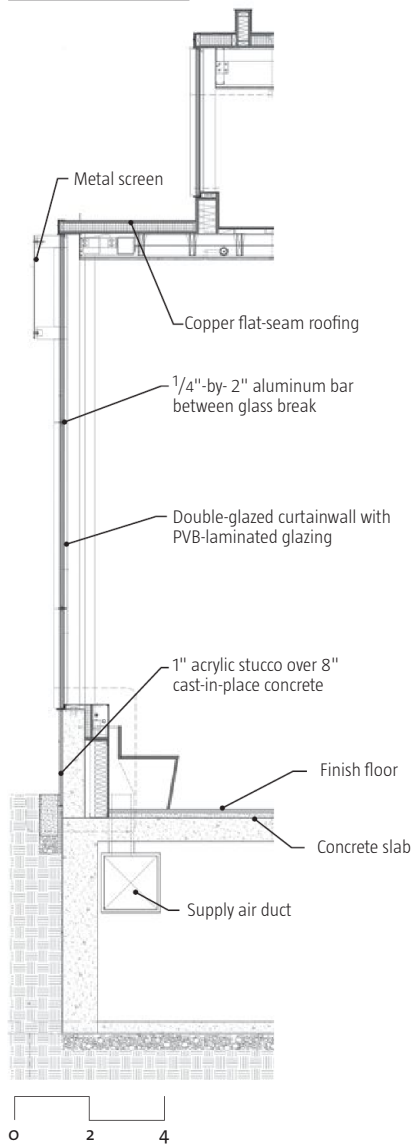
One of the largest new program elements is a new reception venue (this image), which features an orange, inverted-dome ceiling plane and bronze-clad air trees that provide ventilation to allow a 600-person occupancy. This new space was created to serve as pre-show space for the theater (opposite), and to hold independent events.



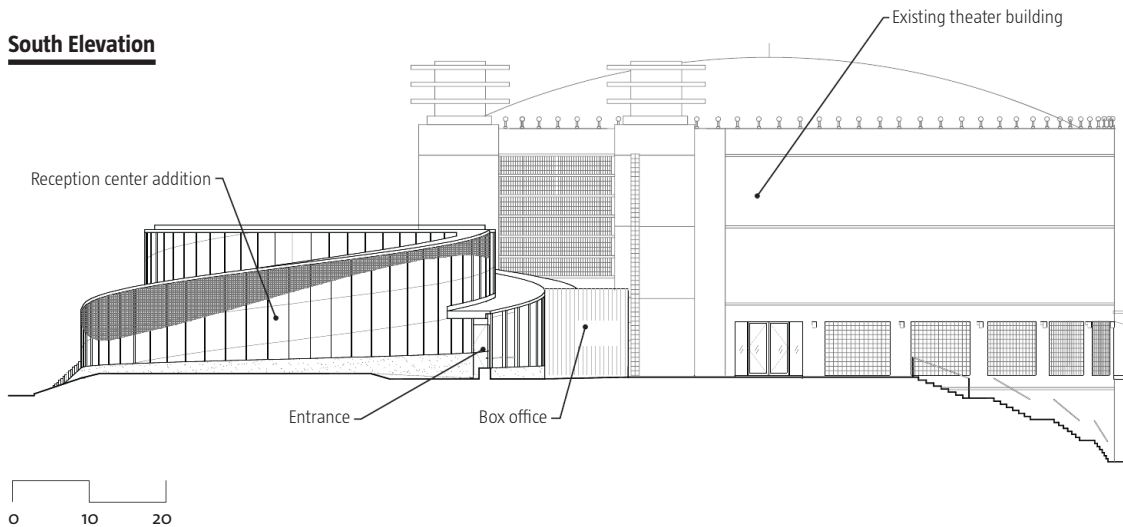
Ground-Floor Plan



Curtainwall Section



South Elevation



Project Credits

Project Queens Theatre, Flushing Meadows Corona Park, Queens, N.Y.
Clients Queens Theatre-In-The-Park; NYC Department of Cultural Affairs; NYC Department of Design and Construction
Architect Caples Jefferson Architects, Long Island City, N.Y.—Sara Caples, AIA, Everardo Jefferson, AIA (principals)
Joint-Venture Architect John M.Y. Lee/Michael Timchula
Construction Manager Hill International
General Contractor C & L Contracting
Curtainwall Zimmcor; Gordon H. Smith Corp.
Mechanical Contractor Northstar
Plumbing Contractor Aspro
Electrical Contractor Interphase
Structural Engineers GACE Consulting Engineers
M/E/P Engineers Joseph R. Loring & Associates (phase 1); Shenoy Engineering (phase 2)
Civil Engineers Langan Engineering and Environmental Services
Geotechnical Engineers Robert Alperstein (phase 1); Louis Berger (phase 2)
Lighting Design L'Observatoire International (nebula); Berg Howland Associates (cabaret)
Landscape Architect EKLA
Food Service Pascoe-Jacobs
Cost Estimating VJ Associates
Acoustics and Audio-Visual Consultants Shen Milsom Wilke
Theatrical Consultants Auerbach Pollock Friedlander
Building Department Consultants Metropolis Group (phase 1); Berzak Schoen Consultants (phase 2)
Specifications Aaron Pine
Size 11,000 square feet (new additions)
Cost \$20 million (additions and renovations)

Materials and Sources

Acoustical System Baswa Acoustic baswa.com
Adhesives and Sealants Thoro Consumer Products thoroproducts.com
Carpet Lees themohawkgroup.com
Exterior Wall Systems Thoro Consumer Products thoroproducts.com
Flooring Dex-o-tex dex-o-tex.com
Glass Viracon viracon.com
Gypsum USG Corp. usg.com
Lighting Control Systems Lutron Electronics Co. lutron.com
Lighting National Cathode Corp. nationalcathode.com
Masonry and Stone A. Ottavino Corp. hstrial-melkordy1.homestead.com
Paints and Finishes Benjamin Moore benjaminmoore.com
Roofing Revere Copper Products reverecopper.com
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MISSOURI BANK BRANCHES

KANSAS CITY, MO.

HELIX ARCHITECTURE + DESIGN

TEXT BY CHARLES LINN, FAIA
PHOTOS BY MIKE SINCLAIR
(UNLESS OTHERWISE NOTED)

GRANT BURCHAM, THE CEO and president of Missouri Bank, is adamant that his Kansas City, Mo.-based financial institution is different—a point that is driven home when he flashes a photo of himself and two other bank officers attending the company's annual costume party, dressed, quite convincingly, as punk rockers. The bank is different. It loans money to odd entrepreneurs. It puts on huge rock-paper-scissors tournaments for customers. And it's not afraid to embrace its differences: During the recent financial crash, Burcham thought of putting up a billboard with his own personal commentary on one of the banking industry's more unsavory elements. The mock-up reads: "Dear Goldman Sachs, Because of you, we're embarrassed to tell people we're a bank."

When his father bought the business in 1984, "we had no parking, no drive-through, no ATMs, \$15 million in assets, and a \$100,000 loan limit," Burcham says. Over time the bank found itself succeeding by developing relationships with small-business owners that most commercial banks would never grant loans, and quirky entrepreneurs. These include artists, a pet-food store, gallery owners, and even architecture firms. One such firm was local Helix Architecture + Design, which has gone on to design Mo Bank's (as its customers call it) last three projects: two branch banks and its headquarters renovation.

Before starting, Helix got Burcham's blessing to conduct three daylong workshops with a select group of bank employees. "We've found that leaders often think they know the brand, and where the company is going. But employees also have great ideas about ... what the core of their business is," said project designer Kathy Kelly. "When we asked the bank's employees what they thought the bank should be like, they said, 'an art bus ... a farmers market ... a sidewalk café.'"

From these offbeat notions emerged a design direction for Helix, defined by characteristics not often associated with a financial institution: transparency, openness, lightness, and plenty of one-on-one contact with customers. A common thread in all three projects,

besides the fact that they are all renovation-and-adaptive-reuse projects, is that there are few interior walls. Even in the downtown headquarters, which is a former dry-goods store, handrails at the mezzanine are supported by glass so that customers on the main level can see into offices and conference rooms above. No bullet-proof Plexiglas cages here: "Pretty much if someone said, 'that's what banks do,' we said, 'then we don't want that,'" Burcham says.

When the bank decided to open a new branch in 2008, Burcham wanted the kind of location where the customers it has courted for years live and work. "The most obvious spot was the Crossroads," said Helix's principal-in-charge Jay Tomlinson, AIA, speaking of a once rough-and-tumble zone of old warehouses and light industrial buildings that has emerged as Kansas City's arts district.

Burcham set his heart on a 1920s-era brick auto repair shop there. "We told him it would be much cheaper to tear it down, but he insisted on reusing the garage," Tomlinson says. The resulting LEED Gold space has a green roof, restored roof monitors, flooring milled from local barn wood, and storefront soffits and trim made from vinegar vats. The building spans a city block, so customers can enter the bank from either of two parallel streets. "There is a drive-through window, but we're proud of the fact that 95 percent of the customers walk into the branch to bank," Burcham says.

In 2010, the Brookside neighborhood became Mo Bank's latest conquest. It is home to the city's growing group of urban professionals and one of the city's oldest suburban shopping centers. An underutilized 1930s car dealership was perfect for a combination walkup-drive-through branch. Helix repurposed the dealership's central service bays as a drive-through, and, in keeping with the theme of transparency, drivers view tellers through large glass windows, as opposed to tiny video monitors.

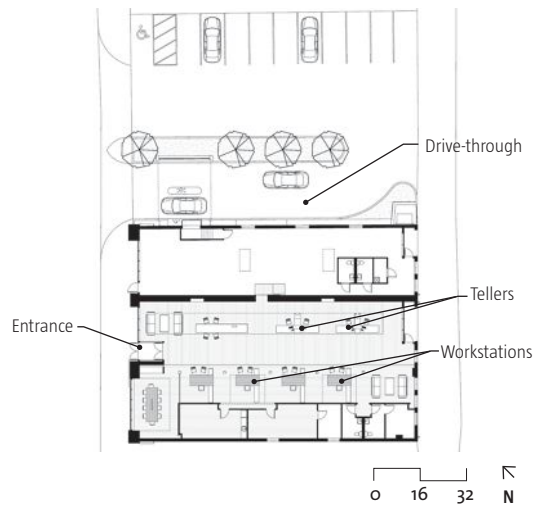
Mo Bank's success is due in no small part to its use of architecture to attract customers and build loyalty. "We think that you don't have to hate your bank," Burcham says. "Some people think that's just the deal. But you don't."



CROSSROADS

Sited in Kansas City's burgeoning arts district, the Crossroads branch of Missouri Bank is located in a former auto-repair shop that dates back to the 1920s. Instead of tearing it down, the team from Helix turned it into a sleek new bank branch that caters to many of the artists and gallery owners that comprise the bank's client base. Integrating art into these projects is a priority for Missouri Bank; bank CEO Grant Burcham purchased a pair of back-to-back billboards (above)—that have towered over the building for many years—and has changed them into art-boards. Working with local group the Charlotte Street Foundation, Burcham and a team of employees choose from submissions by local artists. Winners are displayed on the art-boards and changed every three months. Inside, local artist Adam Jones milled flooring (right) out of pine salvaged from a barn in Polo, Mo., and boards for the storefront from staves salvaged from holding tanks at a defunct Speas Vinegar plant.

Floor Plan



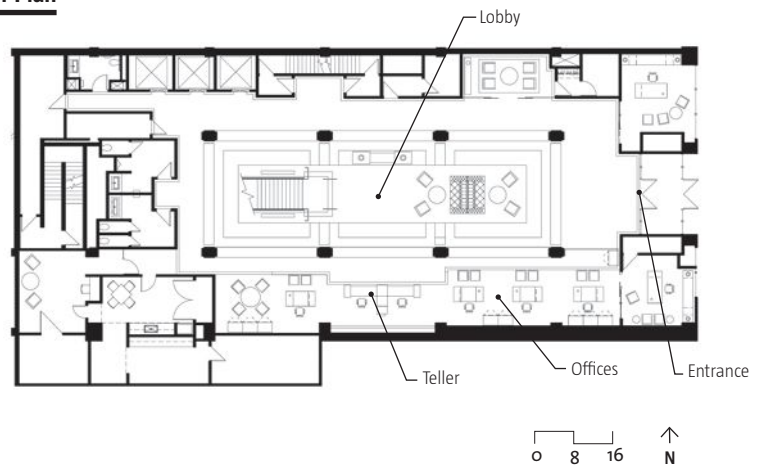


DOWNTOWN

Missouri Bank has been located in the same downtown Kansas City headquarters building for 27 years. Helix renovated the former dry-goods store in 2008 (above), creating a space composed of a ground-level customer area, with offices and conference rooms on the mezzanine level above.



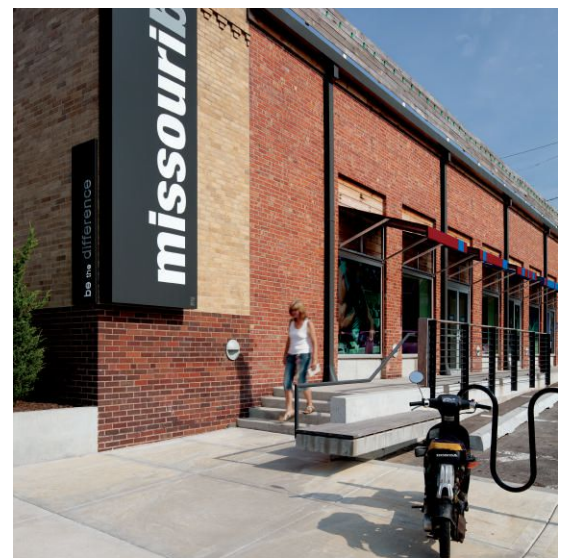
Floor Plan





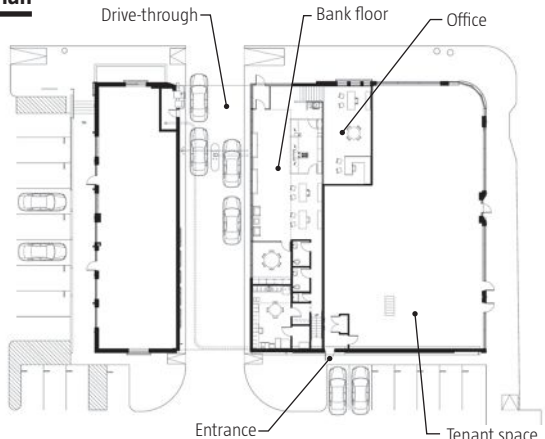
BROOKSIDE

The Brookside branch, which opened in 2010, is the most recent project that Helix has completed for Missouri Bank. It adapted another auto-related building (this time a car dealership dating to the 1930s) into a combination walk-up–drive-through banking center (right), turning the former service bays into a thoroughway for cars that runs down the center of the building (above). Inside, a skylight provides natural light to the teller area (opposite), and where there are interior walls, Helix used glass partitions that promote the idea of transparency that has been central to the company's mission.

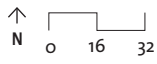




Floor Plan



AARON DOUGHERTY





TOOLBOX

Kansas City's art and architecture community is an integral part of Mo Bank's identity, having served as the core of the bank's customer base for years—and supporting the arts is important to building loyalty. The bank's branches often exhibit the work of local artists (either inside, or on rooftop billboards), but for the company's Brookside branch, the bank wanted to work directly with a local artist. It turned to Art Through Architecture (AtA), a program sponsored by arts organization the Charlotte Street Foundation and AIA Kansas City, to help facilitate that relationship. AtA provides resources and support to any business interested in integrating local artists' work into building projects.

Kansas City artist Archie Scott Gobber won an AtA competition to create the art installation for the Brookside branch. Sited in the car-dealership-service-bay-turned-bank-drive-through that runs

through the center of the bank branch building, his 90-foot-long piece is composed of oversized, backlit, and hand-painted aluminum letters that spell out "dream" mounted over a backdrop of blue, black, and yellow stripes.

Gobber's work centers around wordplay and supergraphic presentations of letters. "I had been working on the theme of 'dream big, American dreams,'" he says. "Missouri Bank is all about dreams—making dreams come true. I knew this would work here."

Helix's Jay Tomlinson, AIA, says that the sign has become so well-known throughout Kansas City, that people often gather in front of it for graduation and wedding pictures—an unusual service for a bank drive-through to provide the neighborhood. "The bank loves having that connection to the community through its art and architecture," he says.

Missouri Bank Crossroads

Client Grant Burcham | Missouri Bank and Trust
Architect Helix Architecture + Design, Kansas City, Mo.—Jay Tomlinson, AIA (principal-in-charge); Bryan Gross, AIA (project manager, project designer); Jacob Palan (project architect)
Interior Designer, Landscape Architect, Lighting Designer Helix Architecture + Design
Collaborating Artists Adam Jones and Jesse Small
Collaborating Architect El Dorado Architects (furniture design and fabrication)
Mechanical/Electrical Engineer Sys-Tek
Structural Engineer Structural Engineering Associates
Civil Engineer Taliaferro & Browne
Geotechnical Engineer and Materials Testing Terracon
General Contractor HarenLaughlin Construction
Recycled Materials Sourcing Adam Jones
Size 7,500 square feet
Cost \$1.9 million (\$80,000 for furniture)

Materials and Sources

Concrete Intec Construction Co. intecconstruction.com; Gerdau Corp. gerdau.com/longsteel; HarenLaughlin Construction harenlaughlin.com; Pia Designs (concrete countertop aggregate) piadesigns.com
Flooring Adam Jones (salvaged pine flooring)
Furniture El Dorado Architects eldo.us
Glass Carter Glass Co. carterglass.net; ITI Glass (insulated glass) itiglass.com
Gypsum USG Corp. usg.com
Millwork Adam Jones (salvaged cypress soffit and storefront trim)
Roofing GreenGrid (green-roof system) greengridroofs.com
Walls Daltile (wall tile) daltile.com
Windows, Curtainwalls, and Doors Carter Glass Co. carterglass.net; Eggers Industries (wood doors) eggersindustries.com; Adam Jones (salvaged sliding freight door); SunGlo Skylight Products sungloskylights.com

Missouri Bank Downtown

Client Grant Burcham | Missouri Bank and Trust
Architect Helix Architecture + Design, Kansas City, Mo.—Jay Tomlinson, AIA (principal-in-charge); Bryan Gross, AIA (project manager); Kathy Kelly (project designer); Jacob Palan (project architect)
Interior Designer Helix Architecture + Design—Mia Lechlitrner
Mechanical/Electrical Engineer Sys-Tek
Structural Engineer SEA
General Contractor Haren Laughlin
Lighting Designer Derek Porter Studio
Size 15,300 sf total (8,800 sf at first floor; 6,500 sf at mezzanine floor)
Cost \$1.4 million (\$250,000 for furniture)

Materials and Sources

Carpet Bentley Prince Street (Iconic broadloom) bentleyprincestreet.com
Furniture Tuohy (workstations and casegoods) tuohyfurniture.com; Allsteel (task chairs) allsteeloffice.com; Vitra (conference room chairs) vitra.com; Bright Chair Co. (lounge chairs and sofa) brightchair.com
Glass C.R. Laurence Co. (1/2" tempered-glass railing system) crlaurence.com
Lighting Chris Ferguson (custom fixture)
Millwork SquareOneStudio (walnut and back-painted glass, painted MDF and Corian countertop) sqonestudio.com
Windows, Curtainwalls, and Doors Dirtt (interior glazed wall system and doors) dirtt.net

Missouri Bank Brookside

Client Grant Burcham | Missouri Bank and Trust
Architect Helix Architecture + Design, Kansas City, Mo.—Jay Tomlinson, AIA (principal-in-charge, project designer); Brad Kingsley (project architect); Joe Jimenez, AIA (project manager)
Interior Designer Helix Architecture + Design
Collaborating Artist Archie Scott Gobber
Collaborating Architect El Dorado Architects (furniture design/fabrication)
Mechanical/Electrical Engineer Lanford and Associates
General Contractor Haren Laughlin
Size 5,000 square feet
Cost \$340,000

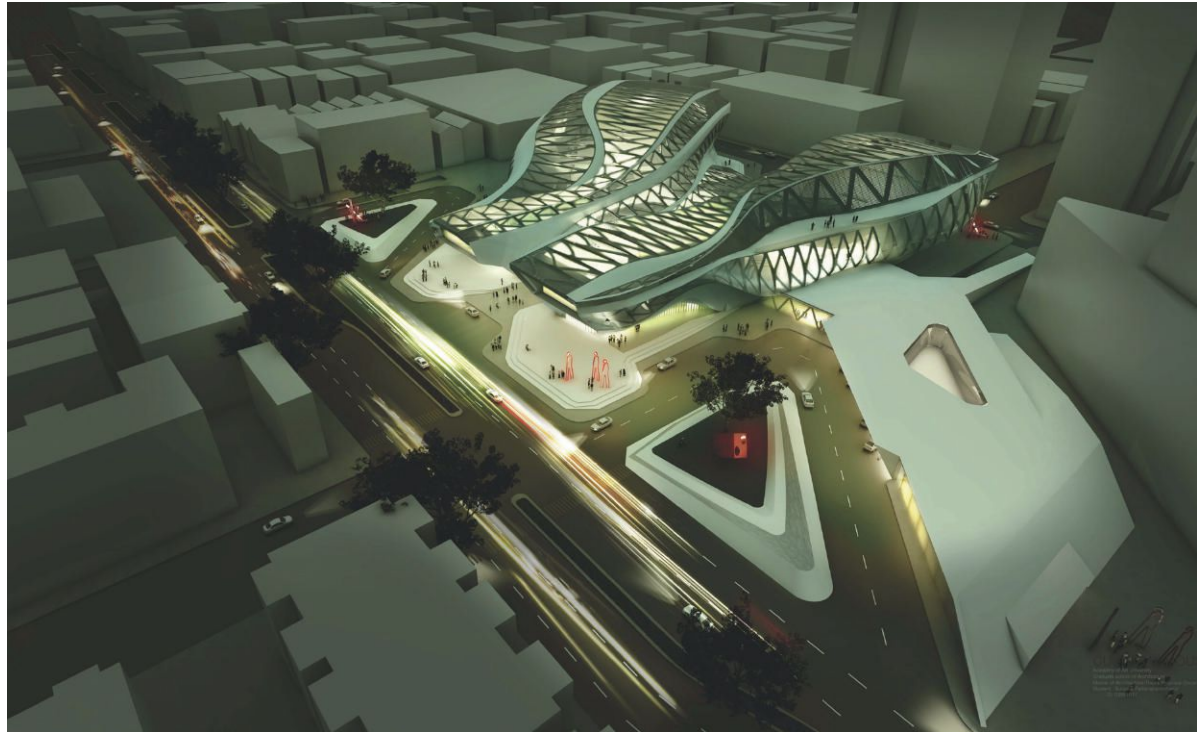
Materials and Sources

Adhesives, Coatings, and Sealants Diversey (JonCrete Superior Adhesion Sealer) diversey.com
Appliances Whirlpool Corp. whirlpool.com; Sharp Electronics Corp. sharpusa.com
Carpet InterfaceFlor interfaceflor.com
Ceilings CertainTeed Corp. (ceiling tile) certainteed.com; Chicago Metallic Corp. (ceiling grid) chicagometallic.com
Furniture El Dorado Architects eldo.us
Glass Oldcastle BuildingEnvelope oldcastlebe.com
Gypsum National Gypsum Co. nationalgypsum.com
Insulation Owens Corning owenscorning.com
Paints and Finishes Kwal Paint kwalpaint.com
Seating Allsteel (stools and chairs) allsteeloffice.com; American Leather (Luxe chair and loveseat) americanleather.com
Walls Daltile (wall tile) daltile.com
Wayfinding Star Sign Co. starsigncompany.com
Windows, Curtainwalls, and Doors Efcocorp. (aluminum storefront) efcocorp.com; Eggers Industries (wood doors) eggersindustries.com; Commercial Openings (hollow metal doorframes) commercialopenings.com



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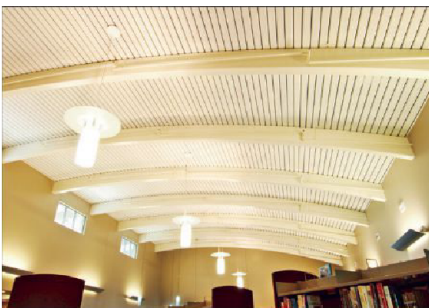


Project: Fort Belvoir Community Hospital
Architect: HDR/Dewberry



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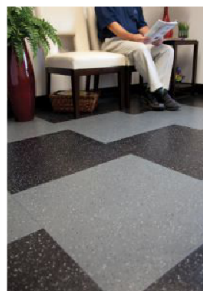
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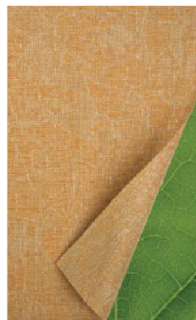
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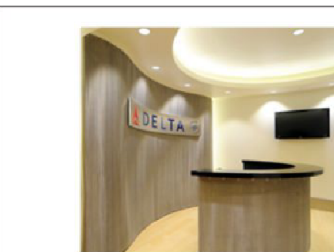
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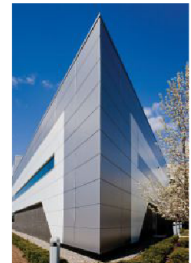


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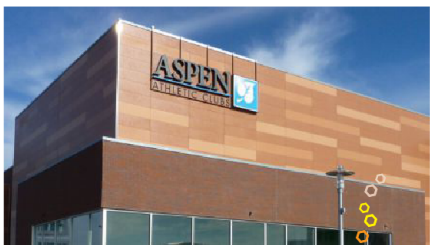


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TEXT BY THOMAS FISHER, ASSOC. AIA



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UNLIKE THE FAUX festival quality of so many North American waterfront redevelopments, the three-mile-long, 131-acre promenade along the old port of Montreal—designed by architect Peter Rose, AIA, of Cambridge, Mass.-based Peter Rose + Partners, and Cardinal Hardy et Associés (now Groupe IBI | CHBA Architecture)—has a directness and honesty about its past that make it one of the very best of its kind. Winner of an urban design citation, the scheme does not erase the industrial functions of the place. Instead, it retains the rail line that separates the promenade from the city and the working piers along the water's edge, while providing ample open space where grain elevators and industrial sheds used to stand. Opposite the historic Bonsecours Market, an artificial island offers a range of

recreational opportunities, with a pavilion and bridges that echo the area's industrial character, and with the foundations of a former pier providing traces of the past.

Urban designs rarely get realized as initially envisioned, but this one remains remarkably true to the original design and true to original qualities of the port. "Most waterfronts," observed juror Gregory Baldwin, "suffer from people trying to do too much and be too cute ... this project rationalizes the port's early 20th [c]entury past ... and does not apologize for or obliterate it." Jorge Silvetti added that people "will interpret it in any way they want—no particular 'scene' is imposed on them." The old port of Montreal proves that we can respect the past without nostalgia and successfully combine functioning waterfronts with public access. □



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Clean lines. Clean look. Clean conscience. It's a lot to expect from an ordinary piece of glass. Then again, Solarban® R100 solar control, low-e glass is about as far from ordinary as you get – thanks to a Solar Heat Gain Coefficient of .23 and a neutral-reflective appearance that lets your building put its best face forward. And you'll really be surprised by the extraordinary energy savings you can expect with Solarban R100 glass. To get your copy of the white paper, go to ppgideascales.com/SBr100.



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