RETURN TO REUSE

KRAANSPoor RISES ON THE FOUNDATION OF HOLLAND’S SHIPBUILDING HISTORY
When you specify a Ceiling-2-Ceiling™ panel from Armstrong, you get reliable performance, clean visuals, and the industry's highest level of post-consumer recycled content. To date, our Ceiling Recycling Program has turned 100 million lbs. of old ceiling panels into new Ceiling-2-Ceiling panels – diverting over 50,000 tons from landfills. Close the loop – include Ceiling-2-Ceiling panels and ceiling recycling in your next specification.

armstrong.com/recycling   1 877 ARMSTRONG
RBC Centre
Origami
by Artist
Robert Lang
this envelope changes everything

Oldcastle Glass® is now Oldcastle BuildingEnvelope.™

More than a name change, this is a sea change in how the building envelope is realized. Like an envelope created from a single piece of paper, we approach the building envelope the same way. Not as pieces and parts—instead—we design, engineer, test and manufacture curtain wall, windows, storefronts, skylights and glass as one seamlessly integrated unit. Why do we do it? Everyone in the design and construction chain is asking for it—from visionary architects to owners, engineers, consultants and construction managers. To see the future of the building envelope, call 866-OLDCASTLE (653-2278) or visit us online at oldcastlebe.com.

Finally there is one integrated system where all the elements necessary to enclose the building are engineered to work together seamlessly.

RBC Centre by architect Kohn Pedersen Fox Associates.
Building envelope by Oldcastle BuildingEnvelope™

Oldcastle BuildingEnvelope™
Engineering your creativity™
Intuit GoPayment.
Now you can turn your phone into a credit card terminal.
It's the simpler way to get paid on the go.
We do the legwork so you can do what you love.

Intuit
Small business, rejoice.
CONSIDER THE POSSIBILITIES

Reflective Series

An Architectural Concrete Masonry Unit with a highly reflective finish, resistant to fading, that is unsurpassed in the industry. With the economical value of concrete masonry, the Reflective Series has an elegant look similar to polished granite or marble.

For more information or to locate a dealer near you please contact us at (800) 234-8970 or visit our website www.edillon.com
IMAGINATION IS A DRIVING FORCE

Creativity is always about perspective—being alert, noticing what others don’t. At VT, if it lives in your mind, we can help give it life. VT custom wood and laminate doors offer exceptional performance and design, produced by our exclusive edge-before-face method, creating a continuous flush appearance. VT stile and rail can be completely customized by panel configuration, sticking and veneer. VT Heritage and Artistry doors offer virtually endless options for design expression. With VT as your partner, you’ll discover that when inspiration hits, we’re there.

VT Architectural Wood Doors

©2011 VT Industries, Inc. All rights reserved.
The SteelBuilt Family of Products from Technical Glass Products allows for taller free spans and larger glass sizes with less framing than traditional aluminum curtainwall. Our innovative framing systems have narrower profiles and reduced back member depths for unobstructed views. Think big and open up your design options.

These photo renderings are based on typical glass sizes and frame dimensions. Designs may vary. For specific data on these systems, please contact us at sales@tgpamerica.com.
Sustainability – it’s serious business.

CertainTeed Gypsum is committed to preservation of natural resources, recycling, waste management, and reclamation in our operations.

We are part of Saint-Gobain, the world’s largest gypsum wallboard manufacturer. Our innovative, sustainable building materials can contribute to the built environment’s indoor environmental quality, acoustics management, fire resistance, and materials recycled content.

To see how sustainability suits you, visit: www.CertainTeed.com/Sustainable
NEW ONLINE AT ARCHRECORD.COM

Bamboo in a Sustainable Design Environment
Credit: 1.00 HSW/SD

ALSO ONLINE AT ARCHRECORD.COM

Sustainable Buildings on Demand
Credit: 1.00 HSW/SD

Preservative-Treated Wood: Copper Azole Treatment
Credit: 1.00 HSW

Sliding Hardware Systems: More than Utilitarian Engineering
Credit: 1.00 HSW

Sustainability: An Everyday Practice, Not Just an Idea
Credit: 1.00 HSW/SD

Cool Metal Roofing
Credit: 1.00 HSW/SD

How to Specify Resilient Flooring
Credit: 1.00 HSW

Fiberglass Windows—A Sustainable Choice in Non-Residential and Multi-Family Buildings
Credit: 1.00 HSW/SD

First In Their Class: Innovative Design Solutions for Schools of the Future
Credit: 1.00 HSW/SD

EIFS Update: Pick the Right Substrate
Credit: 1.00 HSW/SD

*All Architectural Record articles and presentations count toward the annual AIA continuing education requirement*
The announcement that RECORD's editor in chief, Robert Ivy, will be departing the magazine to become CEO of the AIA generated a lot of feedback from our readers. The letter to the editor here is just one example. Join the ongoing discussion about what this move means for the AIA and this magazine on our website.

Dear Editor,

The loss of Robert Ivy by Architectural Record is equal to a tremendous gain for the American Institute of Architects. Ivy’s leadership at McGraw-Hill publications has favorably impacted both architects and the entire real estate development community. With architects and the development community hit hard by the recession, it is fundamental that Ivy continue to be a voice of reason in his new role.

Architects badly need work, and the AIA must be an assertive leader in Washington for designers and the development community. For example, federal tax policy has been a major ingredient in promoting real estate development. If an army runs on its stomach, the development business runs on lenders who have confidence in an expanding economy. But the federal regulatory agencies supervising lenders have strongly advocated that they make no loans for real estate development. Our population continues to grow. Our GDP continues to grow. The Dow Jones Industrial Average’s price has surpassed its price before the market collapsed in 2008. Yet there has been an absence of new real estate products by both public and private developers. At previous points, when there has been no new product for a sustained period, unfulfilled demand has caused the price of new products to escalate widely. Is this the goal of these regulators of lenders? We need to show all who are concerned that unfulfilled demand exists. I am confident that Robert Ivy will effectively deliver this message and help restore development when he takes over at the AIA.

Don Tishman
Tishman Group
Introducing the C/S Acrovyn® 4000 PVC-Free Door. It's not only the industry's most durable door, but now we offer a wide array of sustainable design combinations to meet your "Green and LEED™ requirements. All Acrovyn Doors feature our durable New Acrovyn 4000 material that is completely free of PVC and PBTs as required by Practice Greenhealth and GreenGuide for HealthCare. Acrovyn Doors can be constructed from FSC wood and recycled components, rapidly renewable agrifiber and CARB compliant cores with no added urea formaldehyde. Easily cleaned, rugged Acrovyn 4000 Doors are available in 64 colors and 15 woodgrain patterns. To learn more, visit www.c-sgroup.com/door, call (800) 972-7214 or find Construction Specialties on facebook, twitter or youtube.

Acrovyn® Doors
PELLA ADVANTAGE NUMBER 47:
HISTORIC RENOVATION EXPERTISE

Draw from Pella's generations of historic renovation expertise. Call 888-21-PELLA to request your FREE Pella® Commercial Products Guide, or visit pellacommercial.com/cpg, and see how we've helped leading commercial architects and general contractors meet their project, application and budget needs since the 1940s. The wood, fiberglass and vinyl products, plus the technical support you need for your renovation project. That's The Power Of Yellow.
From the Promenade, Part Two
Design matters, whether in Gotham or small-town America.

The View From the Promenade near my longtime home in Brooklyn Heights may be New York’s finest. The city and its waterfront snap into perspective from across the river. Manhattan’s proud towers cluster, then crash toward the water’s edge, their juncture fragmented into a splayed collar of docks and piers, cafés, and bubble-topped tennis courts. From this distance, the city looms whole and iconic, the culmination of heroic materialism. The architecture takes your breath away.

Just at my feet, the riverfront is changing, morphing before our eyes from a gritty, on-the-waterfront industrial zone into Brooklyn Bridge Park. Exit, Brando; hello, Mommy. Day after day, I follow the changes at the former docklands: Pier One, from a flat cipher into a rolling meadow and hillside; down the East River, from cargo containers to howling kids hanging from the swings and climbing gyms of Pier Six. On balmy evenings this past summer at the newly opened Pier One, a soprano from the Metropolitan Opera, Susanna Phillips, held an audience of thousands silently enthralled as her arias carried a hundred feet up the bluff to my home, where her lifting voice reached an editor and his wife perched above, conveyed to another plane. I was there.

The transformation of New York’s waterfront, which we have written about extensively at Architectural Record, although seeming to come with the wave of a wand, actually engaged scores of professionals, including the landscape architecture firm Michael Van Valkenburgh Associates, the City Planning authorities, and legions of neighborhood advocates. Architects, engineers, and scientists have taken part. The park composes only one element in a city softening itself for a new, more humane way of living, opening its heart to new sensibilities—all powered by design and civic will. Design professionals and planners have been at the forefront, articulating a new urban vision.

The view from the riverside park in my hometown, Columbus, Mississippi, is more languid. It is amazing that the river is apparent at all, below another bluff. For 50 years, the water’s edge lay hidden behind scrubby undergrowth and the scattered debris, unapproachable and walled off below a wonderful, rumbling bridge. People feared flooding; rivers rise down South. Things began to change when a friend of mine, a local architect, stared down at the clutter, rolled up his sleeves, and helped improve the community’s perception of itself.

The park did not happen overnight; the idea percolated slowly in one person’s consciousness. The genesis of that idea emerged 35 years ago, after my friend had moved back to Columbus from a successful partnership in an urban firm. He did what many architects do—he established a small practice, joined the civic clubs, acquired clients, sat on tedious zoning and planning boards, made buildings, fought for historic preservation and for his downtown. He also realized, with a singular vision, that the riverfront, which lay 90 feet below the main street, deserved to be shared.

Someone else got the job, but the service he performed was just as vital: He framed the debate that made it possible, then fought for the improvements. What began with an individual’s commitment broadened into shared vision and collaboration. Today, the park has enjoyed years of completion. Each time I return to my hometown, I walk and run along a pathway through mythic trees bordering the river on a two-mile stretch of managed wilderness near a small town’s heart. The ideas that began over a decade ago have taken root, prompting a community to stroll, bike, walk the dog, push the wheelchair, take the babies out at all hours of the day and evening on a pathway that could lead to a place called Oz. Both the dreaming and the political moxie worked.

There is differentiation of scale, but no hierarchy of values between the two riverfronts. Both count. The small-town story is unambiguous; the city’s, exceedingly complex. Whether in sparsely settled mid-America or across the East River, by one architect or a larger group, small actions are additive, weaving together into a seamless community, uniting those who care about and are committed to the built environment. The little park, as much as the great riverfront, bears witness to design’s transformational power.

In the almost 15 years that I have been privileged to observe and reflect at Architectural Record, after writing 171 regular editorials and traveling the country and the larger world, despite the difficulties presented by natural and human-provoked disasters, despite the wrath unleashed by hurricanes or the disparities of the human condition, I am as convinced as I was when I arrived of the power of design. Properly employed, design conveys our nuances and bold hopes, and can improve the human condition if we become watchful, creative, and committed stewards of the natural world we have inherited.

It is seductive, from the Promenade, to marvel at the city’s buildings, the monumental artifacts of human ingenuity and will. However, sometimes the overlooked story is not what architects build, but the influence their ideas, commitment, and efforts have, in my hometown or your own.

Robert Ivy

This editorial, his last as editor in chief, updates and expands the first editorial Robert Ivy wrote for Architectural Record, in the December 1996 issue, pictured above.
PAC-CLAD® Panels and Flat Sheet in Zinc Metallic transformed the New Hampshire Institute of Art into a Masterpiece...

"Metal is a contemporary material that allowed us to differentiate the form with the same material and finish, and yet create different textures: the varying width, vertical standing-seam form versus the metal shingles form. It also provided a hand-crafted character using an industrial material that seemed appropriate for an art college."

— Dennis Mires, PA, The Architects, Manchester, NH
A Restored Landmark, a Beacon of Hope

ONE YEAR AFTER a massive earthquake struck Haiti, many areas remain in shambles. Yet in the throbbing center of Port-au-Prince, there is at least one success story: the resurrection of the Iron Market, a striking historic landmark that reopened on January 11.

The building's remarkable, $12 million restoration was overseen by the U.K.-based architect John McAslan and funded by the Irish billionaire Denis O'Brien (his company, Digicel, is one of the leading cell-phone providers in Haiti). Determined to give the anguished city a symbol of hope, O'Brien wanted to complete the project by the quake's first anniversary, on January 12, 2011. "It was a massive undertaking," he says. "We had 1,000 people working on it. In the last month, we went 24 hours a day."

The gleaming green and red building comprises two 20,000-square-foot halls. Rising 35 feet at their highest points, the halls are linked by an unusual clock tower featuring four 75-foot-tall minarets. Prefabricated in France, the iron structure initially was destined to serve as a railway station in Cairo. For unknown reasons, it ended up in Haiti, where it was inaugurated in 1891.

The building, known locally as the Marché Hyppolite, served as a vital retail hub for more than a century. In May 2008, however, a fire gutted the north hall, shutting down half of the site. Last year's quake caused further damage, and killed several vendors.

Working with the Haitian group Institute for the Protection of National Heritage, McAslan and his team devised a rehabilitation scheme that called for restoring original iron components that were in decent shape, and using steel to reconstruct elements that were beyond repair. For instance, the clock tower's unstable legs were mostly rebuilt with steel, yet its top portion was carefully refurbished by Haitian craftsmen. The clock itself was shipped to France and reconditioned by the original manufacturer.

While the north hall had to be completely reconstructed, the team was able preserve much of the south hall, as its iron frame had endured the quake quite well. Both halls got new corrugated steel roofs, along with features like column anchors and X-bracing to ensure that the structures could withstand earthquakes and hurricanes. The entire complex now meets International Building Code requirements.

O'Brien has agreed to manage the market for 50 years. Plus, he's considering building smaller-scale bazaars in other parts of the city. "We have to get people off the streets, out of the sun," he says. "They make more money under a roof, and their products don't perish." Certainly there are many needs to be met in this traumatized country. With aid drying up and major rebuilding initiatives in limbo, the restoration of this towering landmark signals that all hope is not lost. Jenna M. McKnight
What does the AIA Gold Medal mean to you?
I spent my formative years in the 1950s and '60s in the United States. Since then I have continued to visit quite frequently, initially to participate in academic activities but later to work on architectural projects. Since I've had a very long association with the United States, I might call it my second home country. For this reason, it is a great honor to receive this award.

What projects is your firm, Maki and Associates, based in Japan, working on now in North America?
We are constructing the Aga Khan Museum in Toronto. And our Tower 4 at the World Trade Center site is coming along. Then we are designing a new pharmaceutical research building in East Hanover, New Jersey, for Novartis. And we had a project at 51 Astor Place, just north of Cooper Union, in New York, that stopped after the Lehman shock (in 2008). I understand that the developer will resume activities, but we don't know how soon the project will be realized.

At the outset of your career, did you expect that your practice would become so international in scope?
Not so much. But fortunately, when I was teaching at Washington University in St. Louis, I had a chance to design the first building of my career, as well as my first project in the United States: Steinberg Hall, completed in 1960. The same year, I had the opportunity to design my first commission in Japan: Nagoya University's Toyota Hall. So my first two buildings were institutional projects in the U.S. and Japan. After 50 years, I was asked to expand Steinberg Hall. And I was also asked to renovate Toyota Hall. Since I started very young, I was able to design the second phases for both buildings.

What was the impact of your study and work experience in the U.S. on your practice in Japan?
Well, learning in the U.S. as a stu-
Maki designed the Mihara Performing Arts Center (2007), in Mihara City, Japan.

I always like to test something new in spatial composition or architectural expression. But before we decide on the design, I ask whether it's really new or good for users. Such conservation may not result in overly daring design. I understand that, today, some developers are asking architects to design eye-catching, iconic buildings. Fortunately, I've not had that kind of client so far.

Construction practices in the U.S. are quite different from Japan's. How do you accommodate your high standards to this situation? The selection of the associate architect is very, very important. They must be capable and also understand what we are trying to do. In the case of the MIT Media Lab (RECORD, June 2010, page 148), our exterior details were very elaborate and needed good fabricators. The general practice is that architects and engineers design or make up the construction documents for bidding purposes. Often we ask the client for stronger, closer coordination with the fabricators, even at the design stage. And in some cases, like MIT, the client understood and allowed the Japanese and U.S. manufacturers to work with us to complete our construction documents, which ensured quality.

Looking ahead, what are your goals and aspirations? What would you like to do next? I'm now over 80, so I do not have an unlimited number of years. But I am in good health, so I am looking forward to doing a number of things.

Any specific building types that you would like to design? No. Any kind will be challenging. Every time we start from carte blanche, it is always exciting to see how the design develops and how it will be evaluated by time. It is a very challenging but satisfying activity.

Visit us online to see the full list of this year’s AIA Honor Award winners.

Are you ready to make the leap?

Jump™ is the first high performance architectural luminaire to integrate LEDs with innovative optics and advanced controls. Subtle textures and rhythmic patterns combine with revolutionary technology to create a seamless continuum of luminance.

areyoureadytojump.com
ON THE BOARDS

Project: Kaohsiung Port Terminal
Location: Kaohsiung, Taiwan
Architect: Reiser + Umemoto

Last year, Reiser + Umemoto took first place in a competition to design the Taipei Pop Music Center. Now the small New York firm has won another significant competition in Taiwan, this one calling for the design of a new port and cruise service center in the southern city of Kaohsiung. The project includes a long main hall with a tower component on one end; the hall is partitioned into three linear lobes that connect to different shipping routes and an elevated esplanade. Groundbreaking is scheduled for 2012.

Project: Cairns Institute
Location: Cairns, Australia
Architect: Woods Bagot, RPA Architects

Located in northern Queensland on the James Cook University campus, the Cairns Institute will be a 43,000-square-foot hub for researchers focused on the tropics. The proposed design by Woods Bagot and RPA takes its cue from the surrounding rain forests. The two-story building features a “trellis” skin made of metal that the architects describe as “layered and revolutionary.” The program includes labs, an auditorium, and an exhibition area. Construction of the $25 million project is slated to begin later this year.

Project: Broad Museum
Location: Los Angeles
Architect: Diller Scofidio + Renfro

In January, the Broad Museum unveiled the much-anticipated design of its forthcoming home in downtown Los Angeles. Conceived by New York-based Diller Scofidio + Renfro, the three-story building features a dramatic concrete exoskeleton and a glass-encased ground-level lobby. The top floor will be occupied by a column-free gallery, while archives will be housed on the second level. The $130 million, 120,000-square-foot project is being funded by philanthropists Eli and Edythe Broad.
Emergency Aid for Threatened Sites

Two preservation groups – the World Monuments Fund, a New York-based nonprofit, and Prince Claus Fund, an Amsterdam-based entity supported by the Dutch government – have teamed up to launch a $1 million global initiative to protect historic sites damaged by natural or man-made disasters. The Cultural Heritage Emergency Response program, as it’s called, will focus initially on safeguarding four sites, three of which have suffered earthquake damage: a monastery and fortress in Bhutan (pictured); gingerbread houses in Haiti; and a mosque and monastery in Indonesia. The fourth site is in Pakistan’s Indus River Valley, which will be flooded once the Diamer-Basha Dam is erected; the two groups hope to document and save thousands of ancient rock carvings in the valley. The new program is an expanded version of the Dutch organization’s Cultural Emergency Response program, established in 2003. David Sokol

Good-Bye, Wayland High

Designed by The Architects Collaborative (TAC), the firm cofounded by Walter Gropius, Wayland High School was an instant emblem of educational innovation and Modern design when it opened in 1960. Now its days are numbered.

In 2009 the school’s building committee found that the complex, located just outside of Boston, was in need of major, costly renovations. The committee voted to tear down all but one of the eight buildings to make way for a new facility designed by HMFH Architects. Construction has begun, and the TAC buildings will be razed next year. The looming demolition has stirred little controversy. The original complex comprised five academic buildings and a spectacular domed field house (which will be saved); TAC later added two structures. Each building was devoted to a subject area, a pioneering concept at the time. Christine Cipriani

Billings Index Upswing

Good news: The Architectural Billings Index has climbed above 50 for two straight months, hitting 52.0 in November and 54.2 in December. (A score above 50 denotes an increase in activity and below 50, a decrease.) The inquiries score also is on the rise – it has registered above 60 for four consecutive months, landing at 62.6 in December.

Introducing a roof that can bathe a student in glare-free daylight, comfort an employee through advanced thermal and moisture protection, and envelop a customer in noise-attenuated serenity, Tensotherm lifetime roofing creates inspired environments proven to enhance human potential. Sustainable, durable, functional Tensotherm.

It’s what Roofing for Living™ is all about.

Learn more today at www.TensothermRoofing.com
The beauty of a 10
Built for a Category 4

Sentrigard™ is the perfect combination of beauty and beast. Each of our 30 versatile colors comes with a 30-year warranty and our panels meet the strictest building codes in the country including Miami-Dade Product Control and Green Sustainable Certifications. Sentrigard panels can be incorporated into LEED specified architecture and have earned Energy Star® designation.

Sentrigard is exclusively distributed through N.B. Handy and Morris Ginsberg, market leaders in architectural sheet metal products and machinery for more than 100 years.
Glasgow Neighbors: Mackintosh versus Steven Holl

IN DECEMBER 2009, the Glasgow School of Art celebrated its centenary. At a symposium on Charles Rennie Mackintosh’s venerated masterpiece, I delivered the keynote address, “Materials of the Imagination,” a close reading of the building, its many levels of meaning, its diverse sources, and its continuing influence. The Glasgow School of Art has never fitted the crude stylistic categories imposed upon it by historians, whether Modernist or Scottish nationalist in persuasion. It is one of those rare buildings to transcend time, resolving diverse agendas to do with modernity and tradition, industrialism and nature, in a synthesis of a high order. It combines an inspiring framework for the day-to-day activities of an art school with a living lesson in the use of light, space, structure, and material. It is like a constructed poem.

The centenary was also the moment for the Glasgow School of Art to advertise the New York-based firm Steven Holl Architects’ winning entry for the 121,094-square-foot extension. Holl’s scheme was revealed in a series of crude sketches showing stacks of studios facing north, and both studios and offices facing south toward the Renfrew Street facade of Mackintosh’s building opposite. In the vertical atrium between the studios, Holl inserted tilted tubes intended to bring daylight to the lower levels. Light rays at different angles and times of the year were indicated, suggesting that the distribution of daylight was the driving force of the scheme. Official announcements implied that this was not a project as such, but the conceptual basis for an ensuing dialogue.

So it was a surprise when in September 2010 much the same scheme (done in collaboration with JM Architects of Glasgow and Arup Engineering) was announced as the actual proposal: a cartoonlike diagram coated in skins of glass with varying degrees of translucency and transparency. Glaring problems of the initial concept were even amplified. The Holl scheme is hopelessly out of scale with Mackintosh’s building, the external volumes are clumsy, the surfaces of glass are monotonous and without relief, and there is little the human figure can relate to. For all the talk about light, the tilted tubes are likely to turn into dim wells in the winter, while the glass exteriors could reflect too much daylight onto the north studio windows of the old building in the summer. At night, when the extension is illuminated inside, its vast glass surfaces risk cancelling out the subtle Japanese-lantern effects of Mackintosh’s apertures across the street.

Mackintosh’s Renfrew Street facade, with its interaction of solids and voids, stone and glass, frame and wall, abstract volumes and tensile metal ornament, is one of the most sophisticated compositions to be found anywhere. The unrelieved areas of glass in the new building may neutralize the counterpoint of window and wall in the old one opposite. Rather than a dialogue between new and old, there is mute assertion; rather than poetic articulation, there is bland geometry; rather than tectonic clarity, there is a thin glazed skin with indiscernible details. Holl has failed to grasp the urban grain of Glasgow with its hierarchy of facades from the domestic, through the commercial, to the civic. In his obsession with natural light, he has oversimplified the task and ignored the problems of cultural and institutional representation.

Where was the client during these intervening months? The unsatisfactory state of Holl’s proposal perhaps reveals what may happen when a star architect drops in from another planet and blinds a building committee with the “smoke and mirrors” of popularized phenomenology. Some good old Scottish common sense would have been in order to insist on greater rigor and a more appropriate response to the context. But then Holl is not particularly known for the subtlety of his urban interventions (e.g., that stranded whale, the Kiasma Museum in Helsinki, which clogs up a key transition in the city’s public space) or for human scale in his facades (e.g., the monotonous waffle grid of the Simmons student dormitory at MIT). Holl’s proposal for Glasgow fails to achieve the level of a convincing architectural work. It is far from being a worthy neighbor to a universally admired masterpiece.

Author William J.R. Curtis wrote Modern Architecture Since 1900, among other books.
When Modern Meant the Good Life


The late, great photographer Julius Shulman brought midcentury Los Angeles architecture to world attention. Author Gary Gand hopes this book will do the same for Chicago’s midcentury Modernism. The book offers a high-resolution glimpse of Midwest Modernism via stunning color images of long-overlooked residences designed by 11 of the era’s best architects, including Harry Weese, Bertrand Goldberg, Ralph Rapson, and Keck and Keck. Gand’s text is slight. He doesn’t pretend to offer a “final” study; he provides, instead, a first look at an overdue photographic collection by Shulman, who died in 2009.

When Harry Weese died in 1998, the Chicago Tribune wrote that he “shaped Chicago’s skyline and the way the city thought about everything from the lakefront to the treasure trove of historical buildings.” In clear language, Robert tells us all about Harry – for starters, that Mies and other 20th-century rationalists influenced him but less than such Nordic masters as Asplund and Aalto. Bruegmann covers Weese’s new Midwestern structures; his restoration of pivotal historic buildings; his creation of Washington, D.C.’s Metro transit system; and the civic activism that prompted the Tribune to call Weese the “Conscience of Chicago.”

In 1964, with Chicagoans fleeing to the suburbs, Bertrand Goldberg completed the so-called “corn cob buildings,” his attempt to save the city. The two 65-story mixed-use towers offered residents a self-contained world and made Goldberg an instant architectural superstar. The authors’ lively essays and black-and-white images describe the buildings’ design achievements and the political maneuvers that made the buildings possible. Andrea O. Dean


Design Research was founded as a shop near Harvard Square, in Cambridge, in 1953 by Ben Thompson, a partner with Walter Grophius in the Architects Collaborative. Frustrated that he couldn’t find compatible furnishings for the Modern houses he was designing, Thompson had a brainstorm: Why not start his own store and stock it with examples of good design wherever it could be found?

From its beginning in a wooden row house, D/R, as it came to be known, grew to create an awareness of Modernist design for the U.S. home. This book is a big, loving scrapbook of images and memories of the D/R era, coauthored and assembled by Jane Thompson, Ben Thompson’s wife and partner. It’s a welcome reminder of a period – perhaps just a bit elitist – when many people believed there was such a thing as good design and that if you acquired it, it would say something about your taste and your life. D/R sold whatever Thompson liked, from Peruvian mountain sweaters to sophisticated chairs by Aalto, Breuer, Saarinen, Hoffmann, Jacobsen, and Charles and Ray Eames.

Thompson retained Modernism’s clarity and simplicity but added sensuality. He wouldn’t have liked the term, but he was selling a lifestyle. Robert Campbell, FAIA


The three books, in which midcentury Modernism plays a starring role, bear similarities to coffee-table books, even if, for various reasons, they are not. Historian Thomas S. Hines’s encyclopedic history (all 755 pages of it) comes with lots of white space, photos, and small sans-serif type – a designer’s ideal coffee-table book for intellectuals. You are meant to aesthetically revel in reading Hines’s informative history of L.A. Modernism from Greene & Greene to the corporate types, Welton Becket and William Pereira, with stops along the way for major figures such as Irving Gill and Richard Neutra, Rudolph Schindler, Gregory Ain, Raphael Soriano, and Ray Kappe, among others. But all that white space means more pages. It’s heavy lifting for the coffee-table crowd.

Architect Deborah Desilets’s book on Morris Lapidus, the much-maligned progenitor of glitzy Miami Modern hotels, could pass as a coffee-table book. But it doesn’t make the grade. There are far too many black-and-white photos. In spite of the large-format, captionless presentation (with appendices at the end), Lapidus’s over-the-top interiors scream for lurid color reproduction.

If you want to find out about Lapidus, his influences, and the sociocultural and architectural context within which he arrived at his hyped-up Modern architecture, it’s better to turn to historian Alice T. Friedman’s American Glamour. This serious architectural history analyzes a form of Modernism many were loath to acknowledge – the sexy side. Its coffee-table-book look artfully deceives the reader into following Friedman’s examination of the range of architects working at midcentury within the burgeoning consumer society. Suzanne Stephens
The face of masonry. No matter where you are, chances are we’re somewhere close by. In fact, you’ve probably seen us many times before in the places you shop, work, play, learn, and live. We manufacture the brands and products used in the interiors and exteriors of civil, commercial, and residential construction projects across the nation. We leave our mark with satisfied customers and clients who have chosen North America’s largest manufacturer of building products to simplify the process of making buildings happen. We’re Oldcastle Architectural. We are the face of masonry.
Soane's Enclave: A Progress Report

THE LEGENDARY SIR John Soane's Museum, at Number 13 Lincoln's Inn Fields in London, has been undergoing an intensive expansion and restoration program that is expected to be completed in 2013. With the help of public and private funds, already one significant piece has been finished: In early 2008, the museum opened a restored and remodeled structure at Number 14, which Soane designed but never used – as he did Number 12, his first residence, and the more lavish Number 13. In the latter, he fully developed his idiosyncratic Romantic-Classical living and working quarters and a museum, whose encrusted, skylighted galleries would run through the backyards of the three buildings. (Disclosure: This writer serves on the voluntary board of the New York-based Sir John Soane's Museum Foundation.)

Between 1792 and 1826 Soane purchased three properties on Lincoln’s Inn Fields, demolishing their structures and rebuilding town houses. Although the facades of Numbers 12, 13, and 14 form a triptych, with Number 13 as the prominent centerpiece, Soane bought Number 14 in 1823 to make over for rental income. It was ultimately sold in 1873. Since Soane did not intend to live in it, the interior was neither as lavish nor as intricate as Numbers 12 and 13; indeed, he never furnished it. But his plaster decoration and fitted joinery remained intact over the years. In 1996, with the help of lottery funds, the museum acquired Number 14. Now it is home to a much-needed education center (basement), seminar room (ground level), research library (first floor), and the Robert Adam Study Centre (second level), with offices on the two floors above.

At Number 14, Julian Harrap Architects replaced the slate and lead roof, inserted steel beams in the floors, tore down partitions and false ceilings, and installed new plumbing and wiring. Harrap also reorganized the ground floor according to Soane’s original plan and reinstated a large arched recess in one wall of the front room. The team restored the original mahogany floors, windows, and doors in the house, along with the stair rail. Over the central stair, it replaced the post-Soane skylight with a new one of Soanian influence.

The highlight, however, is the now restored lath-and-plaster dropped starfish ceiling in the research library. Colors throughout approximate ones favored by Soane, including the Pompeian red walls in the front room. With regard to the furnishings, the architects chose to have the library and study center look domestic as well as toned-down, says project architect Lyall Thow.

Since the arrival in 2005 of museum director Tim Knox, a battery of renovations and remodelings have advanced into the other two buildings. A special exhibitions gallery designed by Caruso St. John Architects is to open in 2012 on the first floor of Number 12. It replaces the smaller gallery on the ground floor of this house that Eva Jiricna executed in 1995, which is giving way to a reception area, coatroom, and shop.

The most significant undertaking in this series of significant adjustments is the reconstitution of Soane’s own bedroom and the morning room for Mrs. Soane on the second floor of Number 13. In addition, the model room is being brought back to this floor, where it existed in Soane’s time. These changes have allowed (and encouraged) the relocation of many of the museum’s offices to the top floors of Number 14. The diminutive aeries are still full of character – and architecture – adding to this incredible ensemble, although they are not on public view.
The face of education. No matter where you are, chances are we’re somewhere close by. In fact, you’ve probably seen us many times before in the places you shop, work, play, learn, and live. We manufacture the brands and products used in the interiors and exteriors of civil, commercial, and residential construction projects across the nation. We leave our mark with satisfied customers and clients who have chosen North America’s largest manufacturer of building products to simplify the process of making buildings happen. We’re Oldcastle Architectural. We are the face of masonry.
HOUSE OF THE MONTH SUZANNE STEPHENS
EERO SAARINEN'S MILLER HOUSE AND GARDEN

THE HOUSE THAT architect Eero Saarinen completed in 1957 for J. Irwin Miller and his family in Columbus, Indiana, easily qualifies as a paragon of residential midcentury Modernism. Amazingly, the glass and steel, 6,838-square-foot pavilion, with interiors by Alexander Girard and landscaping by Daniel Kiley, has remained intact all these years. Since the Miller family gave the one-story house, the grounds, and most of the furnishings to the Indianapolis Museum of Art (IMA) in 2000, the property has undergone a $2 million restoration and will open to the public this May. Sightseers can now add this National Historic Landmark to the long list of architecture that Columbus offers, owing to a program instigated in the early 1950s by Miller. As head of Cummins Engine, Miller brought in significant Modern architects to create civic and institutional buildings and transform the town, about 45 miles from Indianapolis, into a hub of inventive design. At the glass and gray-blue-slate-paneled Miller house, supported by steel cruciform columns and illuminated by a grid of skylights, visitors can admire Girard’s vivid colors and the living room’s conversation pit. They can also inspect the dining area where Saarinen placed his sculptural white pedestal chairs, or walk around the property on which Kiley formed open rooms with hedges and trees.

To help keep up the house museum, the Miller family and the Irwin-Sweeney-Miller Foundation have donated $5 million, and the IMA is raising more funds.

See more photos and a video of the house at architecturalrecord.com and on your iPad.
The face of masonry. No matter where you are, chances are we’re somewhere close by. In fact, you’ve probably seen us many times before in the places you shop, work, play, learn, and live. We manufacture the brands and products used in the interiors and exteriors of civil, commercial, and residential construction projects across the nation. We leave our mark with satisfied customers and clients who have chosen North America’s largest manufacturer of building products to simplify the process of making buildings happen. We’re Oldcastle Architectural. We are the face of masonry.
“We preserved history by specifying a thoroughly modern cladding.”

Charged with converting a century-old power plant into luxury condominiums, the architectural design firm of Karl Fischer Architects, based in New York City, chose to combine original elements with a contemporary look. The PowerHouse Condominium of Long Island City now has striking façades clad with Reynobond® to complement carefully preserved original elements. “We specified Reynobond ACM because we wanted a lightweight material that would give the building a modern look but, at the same time, blend in with existing masonry,” according to Karl Fischer. From inspiration to implementation, no one’s dedicated to your success like the people of Alcoa Architectural Products.

Dedicated to your Success

Alcoa Architectural Products • 50 Industrial Boulevard • Eastman, GA 31023-4129 • Tel. 478 374 4746 • reynobond.com
©2011 Alcoa Architectural Products. Reynobond® is a registered trademark of Alcoa Inc.
PRODUCT FOCUS ROOFING
A walkable roof tile made of PV glass, a roof-garden stone made of 100% postconsumer content, and a pollution-fighting roof tile (below), are a few of the new solutions in this month’s roundup. RITA CATINELLA ORRELL

MonierLifetile
Smog-Eating Tile

THE PHOTOCATALYTIC PROPERTIES of titanium dioxide allow the manufacturers of building products such as paints, cements, windows, and ceramic tiles to offer customers a “self-cleaning” benefit that is claimed to substantially reduce concentrations of airborne pollutants such as VOCs and nitrogen oxides. The latest entry into this category is a new concrete roof tile from Boral Roofing Company’s MonierLifetile division, known simply as Smog-Eating Tile.

“This is ‘normal’ concrete roof tile,” explains Bob Pacelli, Boral Roofing’s marketing communications manager. “Its only difference is that it has a surface made from purely inorganic minerals that reduces the formation of smog and does not promote organic growth.” Although the technology was first developed in Japan, the roof tile is claimed to be the first of its kind in the United States. The tile contains a specially prepared catalyst embedded in the upper part of the tile body; when exposed to sunlight, the catalyst speeds up the oxidation process, resulting in reduced pollution.

“The titanium dioxide is applied as a coating on the surface of the tile’s micro-mortar, which makes it less porous than a conventional colorthrough tile,” says Pacelli. This gives the tile the added benefit of being mold- and algae-resistant. The technology, marketed as BoralPure, is available on the manufacturer’s high- and medium-profile and flat tiles in 11 colors.

Currently, the product is manufactured in Boral Roofing’s California and Nevada manufacturing plants, but there are plans to expand production into the manufacturer’s eastern plants throughout 2011, enabling the tiles to be shipped nationwide.

Smog-Eating Tile is featured on five “green” prototype homes by builder KB Home for its Alamosa community in West Lancaster, California, the first of which debuted at an event last July. KB Home collaborated with the City of Lancaster and the Chinese green-tech company BYD, which provided the homes’ solar, battery, and LED systems.

“We are inspired by innovation and constantly seek out new technologies that reduce our homeowners’ overall impact on the natural environment and improve their quality of life,” says Craig LeMessurier, KB Home’s director of corporate communications. “The benefits of Boral’s smog-neutralizing tiles are quite dramatic, and we view this product as a revolutionary way to fight air pollution.”

While some design professionals may need more time to warm up to the new technology, the company has convincing numbers that demonstrate the roof tile’s potential for reducing pollution.

“Over a period of a year, 2,000 square feet of the tile can destroy approximately the same amount of nitrogen oxide as the average car produces driving 10,800 miles,” says Pacelli, “making this product one real way builders and owners can reduce the smog footprint and the diseases directly attributed to it.”

MonierLifetile, a Boral Roofing Company, is based in Irvine, California. borainna.com

1. The “smog-eating” BoralPure Technology works via a catalyst embedded in the upper portion of the roof tile.
2. 3. The first project to use the tile was a solar-powered residence built last year by KB Home in partnership with the Chinese green-tech company BYD and the City of Lancaster, Calif.
CFR-42 Roof Panels
Metl-Span metlispan.com
Approximately 60,000 square feet of Metl-Span insulated panels clad the roof and walls of an indoor water park at Hope Lake Lodge in central New York. The 4"-thick CFR-42 roof panels were finished in Cool Forest Green on the exterior and Polar White on the interior. To deal with the high humidity and chlorine-laden atmosphere, the steel members were galvanized and then powder-coated to resist corrosion. CIRCLE 201

Opus Roof Blanket
Propex Operating Company opusroofblanket.com
Manufactured in the U.S., Opus Roof Blanket creates a new category of roofing that can be used in place of felt paper and plastic sheeting underlayment beneath all types of steep-slope roofing materials. The material is safer to walk on, is Miami-Dade-compliant, offers a Class-A fire rating, and contributes to a more weather-resistant roofing system. CIRCLE 202

Securock Glass-Mat Roof Board
USG usg.com
Ideal for use in low-slope commercial roofing systems, Securock is a high-performance, non-combustible, moisture- and mold-resistant roof board for mechanically attached, fire barrier, and thermal barrier applications. Its specially treated core and high-performance glass-mat face help it protect against mold and moisture. It comes in 4' x 8' boards in 3/8", 5/8", and 7/8" thicknesses. CIRCLE 203

Onyx Photovoltaic Walkable Roof
Onyx Solar onyxsolar.com
Based in Spain, Onyx Solar claims to offer the first photovoltaic glass specifically designed for installation in buildings. The photovoltaic properties allow the glass to generate electricity even in buildings where the orientation and inclination are not optimal. Still in development, this walkable roof system (shown) features a-Si glass, a material ideal for extended periods of exposure. CIRCLE 204

Stained Glass Stone
Carlisle SynTec carlisle-syntec.com
Made of 100% postconsumer recycled content, Carlisle's Stained Glass Stone is available in 12 colors to help enhance the design of roof gardens or plazas. To install, the glass stone is hoisted to the rooftop and deposited over a 1" or thicker drainage composite, such as Carlisle's MiraDRAIN G4, and then applied at a minimum of 10 pounds per square foot. CIRCLE 205

DensDeck Roof Boards
Georgia-Pacific gp.com
DensDeck is used in a variety of roofing systems as cover boards, overlainments, and underlayment. The enhanced surface of DensDeck Prime makes it ideal for cold mastic, torch-applied modified bitumen, and fully adhered single-ply systems. The low-perm, integrated coating of DensDeck DuraGuard makes it ideal for self-adhered and hot-mopped membrane systems. CIRCLE 206

For more information, circle item numbers on Reader Service Card or go to architecturalrecord.com/products.
The RITE Door.

So well designed it hangs in museums.

Project: The Collections Resource Center
The Field Museum, Chicago IL
Architect: Skidmore, Owings and Merrill
Chicago Office

It's a masterpiece of modern design and engineering – a fire door that actually looks as good as it performs. With an incomparable selection of colors, textures and finishes combined with technically perfect pre-installed hardware, The RITE Door® is a triumph of form meeting function... making it one of the only museum-quality fire doors available.

www.rittenoor.com

ASSA ABLOY, the global leader in door opening solutions
CIRCLE 02
PRODUCTS IN BRIEF

Each of these new products takes a fresh approach to an old material, design, or technique. RITA CATINELLA ORRELL

---

111 Navy Chair
Emeco emeco.net
When Coca-Cola challenged Emeco to re-create the aluminum Navy chair out of recycled plastic bottles, the two companies teamed with BASF to develop a formula that would be strong enough for commercial use. The resulting material — 65% rPET and 35% glass fiber and pigment — is the first rPET chair to pass BIFMA and CA 133. Each chair is made with at least 111 recycled Coca-Cola plastic bottles. CIRCLE 207

Hurricane-Resistant Windows and Doors
Kolbe Windows & Doors kolbe-kolbe.com
Kolbe provided a range of traditional-style windows and doors for the restoration of the historic Ocean House hotel in Watch Hill, Rhode Island. A total of 530 K-Force windows and a combination of aluminum-clad Ultra Series and all-wood Heritage Series door products were used. In addition to hurricane impact resistance, all products come standard with an energy-efficient low-E coating. CIRCLE 208

Banana-Trunk Veneer
FiBandCO fibandco.com
The banana "tree" is in fact an herbaceous plant (the stem does not contain true woody tissue) that dies after producing fruit. A new interior finish that makes use of this plentiful natural resource is Green Blade (shown top and bottom), a decorative veneer sheet made from 100% banana-trunk fiber. Harvested and processed on a banana plantation on the island of Martinique in the French West Indies, the material has a good aptitude for bending and cold post-forming and is available in sizes up to 51" x 138". Sheets come in multiple thicknesses and four color options, and can be applied to a range of substrates, including paper, MDF, and plywood. CIRCLE 209

Modern Mosaics
New Ravenna Mosaics newravenna.com
Based in Virginia, artist and New Ravenna Mosaics founder Sara Baldwin works with a team of artisans in the same materials and techniques as the ancient mosaicists to create contemporary interpretations of classic designs. Her team cuts marble into tesserae (small squares), then tumbles them to achieve the weathered look of an ancient surface while maintaining a rich color palette. CIRCLE 210

Cellular PVC Trim
Azek Trim azek.com
Azek's cellular PVC material played a big role in the restoration of the clock and bell tower of the Juniata County Courthouse in Mifflintown, Pennsylvania. Using historic photos and working closely with CH&E Construction, Crabtree Rohrbaugh & Associates Architects were able to design the tower with reinforced bracing while replicating the original's wood columns, volutes, and arches. CIRCLE 211

---

For more information, circle item numbers on Reader Service Card or go to architecturalrecord.com/products.
LIMBURG Collection
LED Downlights
surface, semi-recessed and pendant mounted

BEGA sets the standard

www.bega-us.com
(805) 684-0533

No. 149
INTRODUCING ALUCOBOND® COOL

From the makers of the world’s leading ACM comes a new, cool paint finish technology offered in a broad spectrum of colors that provides higher solar reflectivity, potential energy savings and reduced air conditioning costs.

With proven environmental advantages over non-cool finishes and products, cool technology already qualifies for LEED credits in roofing applications, and similar certifications are expected for its use in vertical applications.

For more information or to request samples, call your Alucobond representative or visit AlucobondUSA.com.

ALUCOBOND®
Alucobond® is a registered trademark of 3A Composites USA, Inc.
©3A Composites USA, Inc. 2011. All rights reserved.
The Fun in Functional.

Fun is the sight of stainless mesh panels weaving across the exterior of an open parking structure. It whispers in the ear of an apprehensive child, "Everything’s gonna be alright."

Functional is the mesh’s ability to provide fall protection, enhanced ventilation and visibility and sometimes – even a smile.

---

Project: Cincinnati Children’s Hospital
Location: Cincinnati, OH
Architect: DNK Architects, Cincinnati, OH

PARKADE™ Architectural Mesh System
CAMBRIDGE ARCHITECTURAL
CAMBRIDGEARCHITECTURAL.COM
AGA KHAN AWARD FOR

ON WEDNESDAY, NOVEMBER 24, in a ceremony held at the pristine Museum of Islamic Art designed by I.M. Pei in Doha, Qatar, His Highness the Aga Khan presented the 2010 Award for Architecture. Unique among awards worldwide, the Aga Khan award program follows a three-year cycle overseen by a steering committee – from nomination, through evaluation by trained professionals, to selection by a master jury. This year, for the 11th cycle of the awards program, out of 401 entries 19 projects achieved shortlisted status and warranted full evaluation by experts and five eventually emerged as winners. Subsequent seminars explored the implications of the awards. The Aga Khan established the program in 1977 to promote broader understanding of the role of architecture within Muslim cultures, but this year’s winners included a chairman’s award to the Islamic scholar Oleg Grabar, currently a professor at Princeton University, and projects outside the expected venues, with works in China and Spain. Faryar Javaherian (left), a historian and architect who cofounded Gamma Consulting in Tehran, served as a member of this year’s master jury. Her insights ("The Making of a Jury") offer an insider’s view of the process and appear at architecturalrecord.com.
3, 4: Small in scale but with a large idea, this bridge spans a creek, connecting both halves of the village. Dramatically, the contemporary structure counterpoises between paired toulou, or traditional, circular Chinese fortresses. Functionally, the project serves a number of uses: as a village school set within a pair of steel trusses covered in bamboo siding; and as a footbridge suspended below, which allows pedestrian passage. Realized on a tiny budget of roughly $100,000, the project contains a library and doubles as a community entertainment/puppet theater space.
PROJECT: WADI HANIFA WETLANDS
LOCATION: RIYADH, SAUDI ARABIA
DESIGNER: MORIYAMA & TESHIMA PLANNERS & BURO HAPPOLD IN JOINT VENTURE

LEFT: Water purification might seem outside the purview of an architectural awards program, but the Wadi Hanifa Wetlands project is among this year’s most far-reaching in terms of planning and human amenity. The project team devised an ingenious system to cleanse the waters of Saudi Arabia’s primary natural drainage course, which had become polluted and burdened by an expanding population. In an ambitious and coordinated effort that began in 2001, leaders and planning-team members have transformed a blighted resource into a public parkland for Riyadh, with enhanced recreation and tourism opportunities.

PROJECT: IPEKYOL TEXTILE FACTORY
LOCATION: EDIRNE, TURKEY
DESIGNER: EMRE AROLAT ARCHITECTS

Although factories in this part of the world often provide the bare minimum, this textile manufacturing facility places workers and management under a single roof, punctuated by five internal courtyards and enhanced by daylight. Gardens and views to nature offer a pleasant visual background for workers concentrating on their tasks. The structure employs sustainable design strategies, such as natural ventilation and water collection. In a video interview, a worker here exclaimed that the building was so pleasant that she now enjoyed spending time at work.
HP DESIGNJET eMFP

GOOD ARCHITECTURE COMES FROM INSPIRATION.
GREAT ARCHITECTURE COMES FROM COLLABORATION.

INTRODUCING THE WORLD'S MOST COLLABORATIVE PRINTER:
The HP Designjet T2300 eMFP with ePrint & Share. Now you can scan documents to
the cloud directly, print from the road instantly and reduce review cycles by sharing
files with partners around the world. Nothing else lets you collaborate with your team
as seamlessly, while also laying the foundation for the world's next great structure.
Visit HP.COM/GO/COLLABORATE

CIRCLE 20

0 Hewlett-Packard Development Company, L.P. 'Upgradable functionality will be available in spring 2011. 'Internet connection is required.
In the rush to dissociate themselves from their colonial pasts, contemporary societies frequently neglect their historic building fabric. Not so in Tunis, where a vigilant preservation group has revitalized the city's old medina as well as its 19th- and early 20th-century heritage. The results of their efforts shine in the Ville Nouvelle of Tunis as well as in specific buildings, including the Théâtre municipal de Tunis, the Marché central, and the Cinema Palace. Today, Tunis reflects the rich interchange that occurred between the northern and southern Mediterranean.
LEVELe™ Wall Systems & VividGlass™

VividGlass and LEVELe unite the best of two worlds: architectural glass and a wall system designed to accommodate it. VividGlass pairs tremendous design flexibility—including numerous ways to use colors, graphics and text—with the performance benefits of safety glass. LEVELe is a highly sophisticated wall system that readily transitions from the monumental scale of a building entry to the intimate setting of an elevator interior. Together, LEVELe and VividGlass are a perfect match, offering beauty and functionality in a configurable, cost-efficient format.
Belden

STANDARD OF COMPARISON

Belden Brick continues to meet your needs by creating new colors, sizes, textures, and special shapes. Belden Brick manufactures more than 20 different sizes of face brick and clay pavers, more than 300 colors, 10 different textures and hundreds of special shapes.

With more than 125 years of experience the Belden Brick Company has set the standard of comparison.
Makes anything look good.

With the proven HALFEN HK4 brickwork supports, your brickwork façade will look its best for a long time to come.

HALFEN HK4 brickwork supports transfer the dead load of the outer skin of brick to the building load-bearing structure: a modern and efficient construction principle developed with the experience from over 70 years of fastening technology.

Adjustment
The HALFEN HK4 brickwork supports have continuous height adjustment of +/- 1/16" and are therefore perfectly suited for compensating existing tolerances of the structure or installation inaccuracies of wall anchors.

Economical
Through the classification into load levels 785 lbs, 1,570 lbs and 2,360 lbs, the HALFEN HK4 brickwork supports allow extremely efficient anchoring of brickwork façades in connection with HALFEN cast-in channels.

Quality
By using HALFEN HK4 brickwork supports, you profit from a type-approved anchoring, excellent adjustment options and a complete product program covering all aspects of facing brickwork.

Many advantages with one result:
HALFEN provides safety, reliability and efficiency for you and your customers.

Halfen Anchoring Systems · Meadow Burke Products · PO Box 547 Converse, TX 78109 · Phone: 800 323 68 96 · www.halfenusa.com · info@halfen.com
When it comes to choosing the right coating for your project, do you want it to be a question mark or an exclamation point?

Your project, your reputation. So don’t settle for any coating but Fluoron. For over 40 years, Fluoron coatings have been the first choice of architects and builders. No wonder, since Fluoron coatings are field proven with outstanding resistance to UV rays, exceptional color retention and resistance to chalking and chemical degradation. Whether your project is a long-life monumental high-rise or a pre-engineered building, Fluoron is the name you can trust. And Fluoron coatings are available in a variety of energy-efficient solar-reflective colors, so you’ll find exactly what you want. Check out Fluoron today, because when your project looks good, you look good. Fluoron PVDF. 100% trusted.

 Getty Center, Los Angeles
 Completed 1997
 Finish: Fluoron White
 Architect: Richard Meier and Partners

© 2011 Valspar Corporation

Visit valsparcooil.com
THE RETURN TO REUSE

Although economic recessions have little redeeming social value, they do discourage thoughtless tear-downs of worthwhile architecture. They also encourage scrutinizing anew scuzzy piles of steel, concrete, and masonry with an eye to their reuse, restoration, and even expansion. This issue of RECORD demonstrates how architects have inventively reworked the programs and design solutions for a series of overlooked structures—a former shipbuilding pier, an indoor swimming pool, an auto repair shop, a theater, and an exposition pavilion. Added to the mix is one august monument: Boston's Museum of Fine Arts. Surprisingly, in its renovation and expansion, Foster + Partners reinstated the original entrances as part of its scheme instead of redirecting all museum traffic to its new addition (as is often done by big-name architects). Another project, the Arena Stage at the Mead Center for American Theater in Washington, D.C., demonstrates an unexpected approach to restoration, renovation, and expansion: Bing Thom Architects saved two theaters by engulfing them in a curvilinear glass case. In all examples the innovative transformations make a convincing argument for salvaging the old while adding the new. Suzanne Stephens
1. The front facade engages the street with its open lobby, anamorphic sign, and large second-floor window that doubles as a projection screen.

2. Laminated blocks of glass are lodged into the masonry of the south and east walls. The glass transmits some light but not the sun's heat.
THE UBIQUITOUS "Keep Austin Weird" movement seems more defined by what it's against – big-box stores, Mediterranean-style buildings, Hummers – than what it's for. This kind of excess and a mainstream, cookie-cutter aesthetic the slogan's proponents think Austin can do without. Going by this very unscientific exhortation, it would seem that the Arthouse at the Jones Center building in downtown Austin, newly renovated and expanded by the New York City-based firm Lewis Tsurumaki Lewis Architects (LTL), should be heralded by Austinites as happily weird and wonderful enough to grace their downtown. And it is.

More than 4,000 people attended the four days of opening events in October, confirming that Austin is hungry for more cultural as well as visual arts venues. Arthouse may be Austin's oldest arts organization – it was founded in 1911 as the Texas Fine Arts Association (TFAA) – but it has never been old-fashioned. As an independent, privately funded nonprofit contemporary arts institution, Arthouse shows the work of new artists but does not collect like a museum or represent artists for profit like a gallery. Its programs create opportunities for showing contemporary art and involving the community.

"Having a physical structure that has some meaning was crucial to our mission," says Arthouse executive director Sue Graze. "We had a building in a great location, and wanted to preserve its history. But we also wanted the renovation to be as expressive as the art we show."

In a city still smarting from the blow that occurred in 1999 when Herzog & de Meuron resigned the commission to design the $84 million Blanton Museum – subsequently given to Kallmann McKinnell & Wood, which resulted in the not-so-weird (or wonderful) building that opened in 2006 – Arthouse's redo shines.
Or, more accurately, it glows from the light of the 177 punched-out 4-by-16-inch LED-lit glass blocks that perforate the south and east walls. The seemingly random placement of rectangular elements is a bit of an LTL signature move—the firm has used similar perforations in its designs for Lozoo and Xing restaurants in New York City, for example. “We’re interested in the accumulation of discrete parts,” says LTL principal Paul Lewis. “In this case, it’s not so much that we’re inserting forms, but that we’re extruding from the whole.” The blocks are just one of several strategic additions and adjustments that LTL used to intensify the amalgamation of history in the existing three-story brick structure, built in 1851. It did this while tripling the usable space to 20,830 square feet and radically revamping the building as an inviting presence for contemporary art on Congress Avenue, only a few blocks from the Texas State Capitol.

The building began its life in Austin as the Queen Theater, a large, open space with a balcony and proscenium stage. In 1956 it became a department store—Lerner Shops—and a second floor was added, as well as storefront windows and a new facade on Congress Avenue that included an awning extending over the sidewalk. TFAA bought the building in 1995, changed its name to Arthouse at the Jones Center, and gave it a slight renovation that closed off the second floor, which was not up to code. “There were a number of factors that the history of the building set up for us,” says Lewis. “For most historic preservation projects, there’s a single moment in the building’s history where it was at its best, and you want to get it back there. But with this project, it was a trajectory. The architecture was pulled in two directions—as a theater toward the stage at the west side, and as a store it engaged the street at the east. We decided not to whitewash any of that but to honor it all.”

1. Traces of the building’s past life—frescoes and ceiling trusses—were kept in the single-volume second-floor gallery, and a 16,000-pound movable wall was added to create a white-box exhibition space if needed.

2. Behind the central stair, a more traditional gallery space was inserted, as well as a visual arts room.

3. The lobby’s sitting area is dominated by a stacked-feet sofa and the lower portion of the central stair, which is made of precast concrete planks. The upper stair is composed of 21 L-shaped ipé treads, each 500 to 700 pounds.
EXPLODED AXONOMETRIC

1 ENTRANCE
2 CENTRAL STAIR
3 STAIR AND ELEVATOR
4 AWNING
5 SCREENING
6 MOBILE GALLERY WALL
7 MECHANICAL
8 ROOF DECK
9 TWO ARTIST STUDIOS
10 GALLERY
11 GALLERY/LOUNGE

CREDITS
ARCHITECT: Lewis.Tsurumaki.Lewis Architects – Paul Lewis, AIA, Marc Tsurumaki, AIA, David Lewis, principals; Jason Dannenbring, project manager
ENGINEERS: MJ Structures (structural); Kent Consulting Engineers (m/e/p); Garrett-Ihmen (civil)
CONSULTANTS: Lumen Architecture (lighting); Blue House Design (media)
CLIENT: Arthouse at the Jones Center
SIZE: 20,830 square feet
COST: $4.4 million
COMPLETION DATE: October 2010

SOURCES
METAL PANELS: Rimex Metals Group
(Granex stainless steel)
PRECAST CONCRETE: Advanced Cast Stone
GLASS: Oldcastle BuildingEnvelope
CUSTOM GLASS BLOCKS: LTL with M3 Glass Technologies and Dupont SentryGlas Plus
SKYLIGHTS: Skyline Sky-Lites; Solatube
STUCCO: LaHabra Wall
LOCKSETS, CLOSERS, EXIT DEVICES: Stanley
The building is in a historic district but is not designated a historic building, so nothing was sacred. Still, preservation was critical to the organization and to the architects. Inserted within the envelope are an entry lounge, a video/projects room, a large open gallery, multipurpose room, two artist studios, and art preparation areas. The architects added a 5,500-square-foot ipé-wood roof deck for open-air performances, with a 17-by-33-foot screen that can be set up for films. Administrative office areas on the first floor were largely left alone.

The lobby, wrapped in floor-to-ceiling glazing, opens the building up to the street. LTL resurfaced the awning in plaster, shearing and stretching its geometry to continue it inside and to create an anamorphic sign proclaiming "Arthouse" on the street. A central stair with 21 L-shaped ipé treads over a diamond-polished cast-concrete base connects the lobby to the main second-floor gallery, and is designed so the first wood tread extends to the side to form a reception desk.

Rather than create a white-box gallery space on the existing second floor, the architects chose to let traces of the past – frescoes on the south wall, remains of the theater balcony, ornamental plaster work, and paint from the building’s days as a department store – remain, while the glass blocks lodged into the masonry bring light into the interior. Practicality suggested that the south wall be used for art, so a 16,000-pound movable wall was added inside the room to give the space more flexibility. The building’s original structure is a concrete frame with a steel-truss roof into which a concrete and steel deck floor was inserted during the Lerner years. When LTL decided to add a flat roof on top of the existing pitched-roof frame, the firm supported the new roof with steel members attached to the top chords of the trusses. To further help carry the load of the new roof, the team stiffened the trusses’ bottom chords with I-beams. This strategy allowed the architects to use the flanges of the I-beams as tracks for the movable wall, which is operated by two motors.

Every space, from the elevator to the rooftop, is a place where an artist can interact with the building. The first show in the upstairs gallery did just that with the movable wall, which was pushed to the north side to display a huge drawing of 177 family recipes submitted by the public for artist James Middlebrook’s exhibit, More Art about Buildings and Food.

“The building reflects us completely,” says Graze. “As an organization we are nimble, flexible, responsive. We’ve never wanted to be monumental. We think this structure expresses the nature of contemporary art, and we think it’s a game changer for contemporary art in Austin and beyond.”
1. The glass-enclosed courtyard, part of the MFA's new wing, includes a sleek limestone end wall with a deep recess that acts as a foyer to the galleries beyond.

2. Of the several different pieces comprising the MFA, the first was a 1909 Beaux-Arts structure facing Huntington Avenue and designed by Guy Lowell.

3. Foster + Partners' master plan included reopening the MFA's colonnaded Fenway entrance, which had been closed since the early 1980s.
TO FIRST-TIME VISITORS to Boston's Museum of Fine Arts (MFA), it might appear that the fruits of its $345 million capital project are limited to the recently opened Arts of the Americas Wing at the building's eastern end, designed by London-based Foster + Partners. Its powerfully spare glass-enclosed courtyard and 53 thoughtfully organized galleries showcase everything from art to musical instruments to textiles. However, Foster's still ongoing work involves more than the 193,000 square feet of high-profile new construction. The project includes the renovation and subtle reconfiguration of spaces all over the now 617,000-square-foot museum and reestablishes the building's little-used historic entrances—a move that reinvigorates the venerable Boston landmark.

The museum sits along the Back Bay Fens, part of the city's linear network of parks by Frederick Law Olmsted, and consists of several interconnected parts by numerous designers. The oldest piece is a 1909 Beaux-Arts structure designed by Guy Lowell facing Huntington Avenue to the south. The most recent major piece, not counting the Foster intervention, is I.M. Pei and Partners' West Wing, which opened in 1981. The latter provided space for special exhibitions and an auditorium, among other amenities, behind a smooth-skinned granite facade, as well as a new entrance immediately adjacent to a parking area. Ironically, the success of this addition, combined with the subsequent closings of the Huntington Avenue entrance and another one axially opposite it facing the Fenway, completely "skewed the building's center of gravity," says Michael Jones, a Foster partner. Visitors rarely made it to the building's easternmost galleries, according to Jones, even after the Huntington entrance was reopened in the mid-1990s. The trip from one end of the museum to the other was a "slog," he says. "The route was convoluted."
The pristine limestone-clad wall contains a cantilevered stair and acts as a multistory foyer to the four levels of galleries. The glazed entry reveals some of the art on view, providing a visual magnet.

Foster's office collaborated with curators to determine the location of many key works and create displays that are refreshingly accessible. Galleries are not typically devoted to a single medium, but instead include a variety of types of objects from the same period. In addition, white walls are the exception rather than the rule. For example, a gallery focusing on the work of John Singer Sargent has flocked wallpaper. The goal was to create environments sympathetic to the collections and evoke the eras in which the pieces were created.

More fundamental to the success of the new wing are its connections to the surrounding context. One such link is the planted swath that runs in the 20-foot-wide gap between the addition and the existing building. The gap, which doubles as an exhibition space for sculpture, seemingly brings the Fens into the museum’s interior and helps satisfy seismic codes that required the addition be structurally independent.

Visual access to the outside is also available through a few gallery windows carefully positioned to shield art from the sun’s damaging rays. In a pair of pavilions that flank the core gallery structure and contain reconstructed rooms from historic New England houses, the architects have located openings in the exterior walls so that they align with windows of the older rooms inserted within. When environmental conditions allow automated scrimbs to be opened, visitors can see the surrounding landscape through the historic windows. The designers have also created corridors at the eastern edge of the core gallery building that run behind a curtain wall with the

1. The addition includes a pair of pavilions with expressed steel frames that act like reveals between panels of granite cladding.

2. Glazed corridors at the addition’s eastern edge provide visual access to the museum’s surroundings. Work on display here, including a 1923 bronze of Diana by Anna Hyatt Huntington and Erwin Hauer-designed screens commissioned by the MFA, are visible from the outside, especially at night.

3. A gap between the existing building and the new courtyard, necessitated by seismic codes, allows a 20-foot-wide planted swath that seemingly brings the Fens into the museum’s interior.
CREDITS

DESIGN ARCHITECT: Foster + Partners - Norman Foster, Spencer de Grey, Michael Jones, Kate Murphy, William Castagna, John Small, project team

ARCHITECT OF RECORD: CBT/Childs Bertman Tseckares

ENGINEERS: Buro Happold, Weidlinger Associates (structural); Buro Happold, WSP Flack + Kurtz (m/e/p)

CONSULTANTS: Gustafson Guthrie Nichol (landscape); George Sexton Associates

(lighting); Acentech (acoustics)

CLIENT: Museum of Fine Arts, Boston

SIZE: 193,325 square feet (new construction)

COST: $345 million (new construction and renovation)

COMPLETION DATE: November 2010

SOURCES

EXTERIOR CLADDING: Phoenix Bay State Construction (masonry); Maddison Associates (metal panels); Seele (metal/glass curtain wall);

J.L. Marshall & Sons (precast concrete)

INTERIOR GLASS AND GLAZING: Ipswich Bay Glass

DOORS, FRAMES, AND HARDWARE: Partition Systems

FLOOR TILE: Port Morris Tile & Marble

WOOD FLOORS: Becht

ELEVATORS: Otis
most minimal of mullions. In addition to functioning as circulation space, the zones contain interactive exhibits that explore how the museum conserves and selects the objects in its collection. These areas look out onto the Fens and provide a means of navigation and orientation as well as a respite from the more intense viewing experience of the galleries.

The only disappointment of the project is the new eastern elevation. The granite-clad pavilions' windows, placed to correspond with the layout of the historic rooms they house, have an almost random air that seems at odds with the symmetrically arranged volumes. In addition, the restraint of the overall composition borders on excessive. Nevertheless, the scale of the addition seems appropriate, and a high level of precision and craftsmanship is evident throughout, but most notably in the glazed perimeter corridor. The visual permeability it provides is an especially welcome counterpoint to the building's other, almost impenetrable facades.

1. The new wing provides space for large pieces that had long been in storage, including Thomas Sully's 1819 painting of Washington crossing the Delaware.
2. The architects worked with curators to create roomlike vignettes that include furniture, paintings, and utilitarian objects.
3. Ceiling baffles in the top floor's skylit central gallery are similar to those in the glass-enclosed court. However, the gallery system has two additional layers of sun control above the louvers, including operable blackout shades.
4. Artwork is often displayed against deeply colored walls in the new wing. Some galleries, including one featuring 19th-century American artists working abroad (foreground) and another focusing on John Singer Sargent (background), have flocked wallpaper.
PROJECT: 990 OFFICES
LOCATION: TUCSON
ARCHITECT: ROB PAULUS ARCHITECTS
BY: JENNA M. MCKNIGHT
LIKE MANY METROPOLITAN areas in the West, Tucson has its share of generic strip malls and sprawling subdivisions. As a native of the desert city, architect Rob Paulus has long aspired to buck the development trend, focusing instead on urban infill, adaptive reuse, and sustainable design. His recent project, 990 Offices, exemplifies this ethos. It also marks the third step in an impressive endeavor to breathe new life into Millville, a vapid industrial zone near downtown.

To fully understand 990 Offices, one must first rewind to 2002, when Paulus took a major leap of faith in urban revitalization. He and his wife, Randi Dorman, president of the Tucson Museum of Contemporary Art, teamed up with two investors to purchase a vacant 80-year-old cold-storage facility in Millville. The architect then embarked on transforming the warehouse into condos – a novelty in Arizona at the time. “This was the first residential loft conversion in the state,” says Dorman. The couple also acquired a roughly 1-acre parcel across the street, where they set out to construct a series of metal-clad, single-family dwellings designed by Paulus.

Both projects were completed in 2005. The 51 “Ice House Lofts” were quickly snatched up (one went to Paulus and Dorman, of course); the nine “Barrio Metalico” homes also sold fast.

The same year, the duo expanded their empire, this time acquiring an adjacent half-acre lot occupied by an auto shop. The shop closed in 2008, and Paulus decided to convert the 30-year-old facility into an office building for his firm and a tenant. “It was a great opportunity to ‘walk the walk’ and create an energy-efficient, naturally lit office with some intriguing landscape features,” he explains.

The building got a major overhaul. Paulus retained the steel framing but otherwise stripped the structure clean. He replaced the walls with an aluminum-clad rainscreen system; heavy insulation helps block heat, thus minimizing energy costs. To bring in natural light, Paulus inserted a clerestory on the building’s south side; on the north – the entrance facade – he replaced roll-up garage doors with glazing that overlooks a

1. Constructed in 1978, the building housed an auto shop until 2008.
2. While its steel frame was retained, the boxy facility was reclad in aluminum panels. Glass replaced roll-up garage doors.
3. In the architect’s office, operable windows on the north and south provide cross ventilation. An undulating ceiling made of pine plywood strips softens the space; its height ranges from 10 to 14 feet, but it feels much higher.
CREDITS

ARCHITECT: Rob Paulus Architects – Rob Paulus, principal in charge; Liz Farkas, project architect; Andrew Hesse, Bill Mackey, team members

ENGINEERS: Schneider & Associates (structural); GLHN (electrical)

CONSULTANTS: Chris Winters & Associates (landscape)

CLIENT: Randi Dorman & Rob Paulus

SIZE: 4,292 square feet

COST: $343,360

COMPLETION DATE: April 2010

SOURCES

EXTERIOR WALL SYSTEM: Novels (anodized aluminum); MBCI (corrugated panels); VaproShield (air barrier, battens)

ROOFING: Versico (thermoplastic polyolefin membrane); Insuform (insulation)

WINDOWS: PPG (Solarban low-E glass); New World West (storefront aluminum); Milgard (aluminum, fixed and operable)

DOORS: New World West (entrance); Steel Dor Tucson (metal); Arizona Sash & Door (wood)

EXTERIOR LIGHTING: Progress Lighting (cylindrical wall lanterns); Focus Lighting (landscape spotlights)

1 ENTRANCE
2 OFFICE
3 MEETING AREA
4 RECEPTION
5 KITCHEN
6 RESTROOM
7 OPEN OFFICE AREA
8 LIBRARY
9 STORAGE
10 COURTYARD
11 SCULPTURE
12 ORGANIC GARDEN BEDS
13 RAINWATER TANKS
courtyard. The building's northern orientation helps minimize heat gain during the sizzling summer months.

Paulus conceived clever ways to repurpose nearly all remnants of the original structure: Metal garage doors became fencing; broken pieces of concrete were used for paving; and steel beams were made into raised garden beds (yes, this office has an organic vegetable garden).

Inside, the building was divided in half — one side for Paulus, the other for his tenant, Epstein Construction — with a shared bathroom at the core. For his firm, Paulus opted for an open floor plan. With the exception of the walled-off kitchen, furnishings delineate program areas (reception, meeting area, work stations, a library). His tenant, however, wanted enclosed rooms, so the architect created a central corridor lined by traditional offices. “It's by far the most functional office we've ever had,” says Mike Epstein, owner of Epstein Construction.

What is common to both spaces is the undulating wood ceiling, which warms up the grayish interior. “It started out as, let's do something to break down the sound and get light coming in,” Paulus says of the design intent. “I also play the violin, and I thought it would be nice if we could mimic its sensuous curves.” The ceiling system comprises pine plywood strips affixed to a suspension grid made of fused sheets of plywood. Skylights allow natural light to pass through the slats and into the work areas below.

Although the project was completed last April, the firm will have its official grand opening party this month, on February 11. To hear Paulus tell it, passersby likely will see guests sitting around the fire pit in the courtyard, listening to someone strum a guitar. They might even spot his 6-year-old daughter roasting marshmallows. “Since we live across the street,” he says, “the office courtyard has become an extension of our outdoor living area.” Through his remarkable efforts in Millville, this Tucson architect is proving that even a gritty, lifeless urban area can be delightfully transformed. ■

A landscaped courtyard features garden beds, a fire pit, and a jet cowling repurposed as sculpture. Irrigation is provided by rainwater stored in two underground tanks.
1. The insertion exists as a building within a building. The two structures touch only at their northern end (background), where the new penetrates the wall of the old.

2. A café occupies a cantilever at the structure's concrete base. A theater lobby sits below, while galleries surround it on the ground floor of the original building.

3. The museum's Erector Set-like towers rise above the surrounding Santa María la Ribera neighborhood.

TOWARD THE TURN of the 20th century, the world’s fair as galvanizing cultural phenomenon had long been capturing the collective imagination, while its more demure cousin, the regional expo, busily proliferated in its shadow. It, too, left enduring artifacts in its wake. The fanciful cast-iron and glass structure that today houses the Chopo Museum in Mexico City, which Mexico- and New York-based TEN Arquitectos recently renovated and expanded, is one of these vestiges. Designed by German architect Bruno Möhring, who was known for the Art Nouveau bridges and stations he created for Berlin’s elevated tramway, the building was constructed in Oberhausen, Germany, as a pavilion for the 1902 Exhibition of Art and Textile Industry in Düsseldorf. Upon the conclusion of the fair, the Mexican Company of Permanent Exhibitions acquired three of the building’s four halls.
They were dismantled, shipped, and reassembled using locally sourced masonry in Santa María la Ribera – at the time a fashionable residential neighborhood in Mexico City – where the structure soon earned the moniker the Crystal Palace because of its resemblance to Sir Joseph Paxton’s hall for London’s Great Exhibition of 1851. In 1913 the building became the home of the National Museum of Natural History, but by 1964 deterioration led to its closing. It remained abandoned until 1973, when the National Autonomous University of Mexico (UNAM) rehabilitated it and, a couple of years later, inaugurated it as the Chopo Museum (named after its street, Chopo, or “Poplar”), a center for experimental art and avant-garde performance. In 2004 the university initiated the process of updating and expanding the institution.

UNAM selected TEN Arquitectos through an invited competition and, in addition to charging them with the restoration, outlined two principal goals. The first was to introduce a program into a largely unprogrammed building, including greatly expanded exhibition space, plus storage, workshops, classrooms, and a theater, cinema, and café. The second goal was to create climate-controlled areas where previously there were none, in hopes of attracting visiting exhibitions to complement the relatively modest permanent holdings of contemporary art.

Local preservationists argued for a straightforward renovation. As an exercise, the architects investigated what it would take to condition (for temperature, humidity, air circulation, and security requirements) the whole volume, and quickly determined it was not a viable alternative. “The building is like a document,” notes TEN Arquitectos principal Enrique Norten. “It’s a testament of a moment of architecture that obviously we all believed needed to be preserved. But the structure was basically useless – it’s a shell. The question became, What do we do

CREDITS
CONSULTANTS: Colinas de Buen (structural engineers); HH+T Iluminación y Diseño (lighting); Omar Saad (acoustics); Restauradora Rycolsa, SA de CV (restoration)
CLIENT: UNAM
SIZE: 34,714 square feet (new construction)
COST: $12.5 million
COMPLETION DATE: May 2010
SOURCES
METAL FRAME WINDOWS AND ENTRANCES: Grupo Laresgoiti
MILLWORK AND FINISHES: Dacon
LIGHTING: Bellani
ELEVATORS: Schindler
INFORMATION CENTER CHAIRS: Vitra
EXHIBITION CHAIRS: Mauricio Valdés
with it?" While most exhibitions require specialized conditions, not all pieces demand them, especially among contemporary artworks. Understanding the extent of required enclosed space helped determine the scheme. The team, rather than proposing a separate building or extension that would sacrifice the small garden to the west, envisioned an intervention occurring completely within the existing structure. "We became interested in the relationship between the two buildings – the proximities, detachments, and penetrations," says Norten. "We started thinking. This institution deals with all of the different art expressions: theater, music, film, painting, sculpture – what about architecture? So we started looking at how to make this amazing artifact become part of the aesthetic procession of the overall building and how to bring people closer to the different original elements."

Construction started in 2006. The structure was sound, explains partner in charge Salvador Arroyo, so the team merely cleaned it and replaced the original green and yellow glazing with translucent white panes throughout – with the exception of transparent glass on the north facade, where the insertion bursts through the original wall. To create a 90-seat cinema and 200-seat performing arts auditorium, the team conducted a painstaking excavation down two levels, installing slurry walls and tunneling to avoid touching the old foundation and to prevent the watery ground that is typical of Mexico City from coming into contact with the new excavation and foundation. Above the theaters and surrounded by galleries on the existing structure's ground floor, the insertion rises from a concrete base that juts off to the south as a large cantilever housing a café. Ramp galleries with exposed white painted steel tube structure along their perimeters guide visitors up through the exhibition spaces and are bathed in a gauzy light that penetrates the translucent glazing of the insertion’s upper levels. Throughout the
1 ENTRY
2 GALLERY
3 RAMP GALLERY
4 TERRACE GALLERY
5 THEATER
6 LOBBY
7 CINEMA
8 OPEN TO BELOW
9 MUSEUM STORE
10 BOOKSTORE
11 RESTROOM
12 LOADING/SERVICE
13 CAFÉ
14 MEZZANINE
15 INFORMATION CENTER/ARCHIVE
16 VAULT
17 BACK OF HOUSE
18 HALLWAY
1. Poured concrete floors with white epoxy resin, exposed white steel tube structure, and translucent glass lend a lightness to the gallery spaces. A plywood-clad shear wall holds the elevator shafts and supports the building seismically.

2. Three sets of fire stairs march in a line across the eastern side of the insertion and serve its various levels.

3. The arched cast-iron trusses and other elements of the original structure are reflected in the insertion's glass-clad upper reaches.

4. The information center and archive occupies the insertion's top level, offering dramatic views of the soaring, cathedral-like space.
floating volume, the rugged, original structure is ever present: It pushes its riveted arms through galleries and asserts itself 42 feet up, at the top level's information center and archive, an exhilarating platform that nearly brushes the wooden roof beams and arched cast-iron trusses.

Using glass and steel in very different ways from the original application, the architects achieve continuity between the two structures. With this palette they also hoped to render the insertion light and ethereal. But the project bears the scars of a difficult construction process. The discovery of compromised steel tubing led to a series of site audits, the departure of the original construction company, and a halt to construction for about a year. Additional construction and cost issues affected the original design and numerous details, such as critical dimensions for the load-bearing shear wall, among other things; imperfect architectural concrete that had to be masked with plywood panels; and the value-engineering-out of ceilings in the galleries that result in an unfinished, rather than edgy, feel. These problems are magnified by the weak vital signs of the institution. A recent Friday morning visit revealed sleepy galleries, a gift shop with empty shelves, and a café bereft of tables and chairs, let alone a barista.

With a smart scheme and sensitive material choices, TEN Arquitectos' insertion for the Chopo Museum continues the tradition of innovation represented by the original structure and positively highlights architecture in the roster of art expressions that are showcased at the institution. But the project lacks the refinement of detail that the architects had surely intended or that might have been possible elsewhere. With many years of experience practicing both in New York and Mexico City, Norten appreciates the benefits of each locale. "New York provides opportunities to work globally in much more sophisticated conditions," he notes. "I love working in Mexico," he goes on. "I love that condition that is sometimes a little bit messy, a little bit more spontaneous."
PROJECT HERMÈS RIVE GAUCHE
LOCATION PARIS
ARCHITECT RENA DUMAS ARCHITECTURE INTÉRIEURE
BY ERICH THEOPHILE AND STEVEN YEE
HERMÈS'S NEWEST emporium has an unassuming facade and a pair of store windows with displays of furniture and flowers that fit neatly into the bourgeois row of shop fronts on the rue de Sèvres in Paris's 6th arrondissement. They little prepare the visitor for what lies inside: the dazzling renovation of an Art Deco space that once housed a swimming pool, the Piscine Lutetia, next to the fabled and still extant Hotel Lutetia.

The historical elements of the skylit Olympian-scale three-story atrium, with its rich mosaic tiling and balconies edged with elegant iron fretwork balustrades, vaguely recall the luxury and scale of grand department store interiors. The bold introduction of three 27-foot-tall huts – varied in size and made of an open lattice of organically shaped ash wood – suggests a contemporary museum space. This same wood elegantly flanks the new staircase structure that brings the visitor from street level down to the historic pool level – some 12 feet below.

In this adaptive reuse converting an indoor swimming pool into a store, Denis Montel, the architect and managing and artistic director of Rena Dumas Architecture Intérieure (RDAI), which has designed a number of Hermès stores, created the undulating structures. These intimate yet permeable display pavilions are intended to "inhabit and divide the space" of the 16,000-square-foot main floor, Montel emphasizes, and establish a dialogue with the rectilinear lines of the 1935 pool interior originally.

1. A grand stair leads from the street level down to the retail floor, where three huts occupy a space that was formerly a swimming pool.
2. A recent illustration by Martin Veyron recaptures the pool in its heyday, imagining the pool raised to street level to enhance the comic conceit.
3. The exterior of the Piscine Lutetia, designed by Lucien Béquet in 1935, was restored with shop fronts added.
1 FLORIST
2 SCARVES
3 LEATHER GOODS
4 BOOKS
5 CAFÉ/TEA SHOP
6 KITCHEN
7 CASHIER
8 LOWER FLOOR
9 STAIR
10 POOL CAVITY

CREDITS
ARCHITECT: Rena Dumas Architecture
Intérieure – Denis Montel, artistic and managing director; Dominique Hébrard, assistant artistic director and interior architect; Sybil Debu.
ENGINEERS: Bollinger + Grohmann Sarl (structural)
CONSULTANTS: L’Observatoire International
CLIENT: Hermès Sellier, France
SIZE: 23,197 square feet
COST: Not available

COMPLETION DATE: November 2011

SOURCES
METAL FINISHES AND SPECIAL HARDWARE: Société Gendre
PLASTER CEILING FINISHES: Blanch’Art
PAINTS AND STAINS: Alesia Peinture
FLOOR AND WALL TILE: Européenne de Marbre
designed by Lucien Béguel. The new biomorphic insertions also successfully mediate the scale between the atrium's volume and the smaller display counters and merchandise.

Since the site is a registered "monument historique" but is not classified, the law allowed some stylistic leeway in its restoration. "It is rare for a listed building in France to be developed exclusively into a commercial retail space," Montel notes. Mosaics composed of ceramic and glass tiles in different dimensions and colors constitute a key surviving historic feature of the interior. RDAI restored many of the mosaics and designed new ones for certain areas. Indeed, the floor laid on top of the pool is composed of new ceramic and glass tiles, as well as broken old ones. "The mosaic pattern covering the pool cavity was designed to evoke the movement of waves and shimmering water," says Montel. "The random approach and use of graduated tones create effects of depth accentuated by the play of light," he adds.

In the cavity itself the architects inserted steel framing on which the new mosaic floor was laid. The footprint of the former pool is evident from the shallow "gutters" around the perimeter of the main retail floor. The gutters, which are surfaced in these new tiles, were required to be preserved. In the event that Hermès or a future tenant wanted to reinstate the pool, the flooring and its underlying supports can be removed, and the historic gutter locations remain in place.

The small changing cabins, or vestiaires, on the two upper, balconied floors were removed before the site was registered in 2005; now the uninterrupted white walls behind these narrow balconies provide a handsome foil for the original black iron balustrades. But they do make the upper atrium floors appear mysteriously uninhabited, while elsewhere on the entrance level the café/tearoom, a florist, and a bookshop proclaim the new Hermès "experience" — programmatic elements that are hyperdistilled variations of those experiences offered by hip Paris boutiques and shops elsewhere.

This store, the company's 334th, showcases a line of home furnishings, including most notably the company's reissues of Jean-Michel Frank's furniture designs for Hermès, as well as its signature scarves, ties, leather goods, and ready-to-wear clothing. The success of this two-year renovation and restoration project is consonant with the carefully managed Hermès brand itself — a mix of tradition, contemporary craftsmanship, and an ever-evolving definition of luxury.

Erich Theophile, trained as an architect, and Steven Yee are coprincipals of H. Theophile, a New York architectural hardware company.

1. The cavity of the 1935 pool was filled in and covered with a slab on which mosaic tiles are laid.
2. The freestanding huts of ash wood are supported by wood laths with double radius curves. LEDs installed inside the huts give them a lanternlike quality, while three skylights dramatically illuminate the space during the day.
1. In the postwar heyday of the shipping industry, huge ships were constructed alongside this concrete kraanspoor, literally "crane track," after which the project is named. The architect maintained the structure but added a light box of glass and steel that appears to float above the harbor basin.

2. Kraanspoor has a double-glass facade: an outer layer with mechanized louvers and an inner one with doors that open out onto a buffer zone in between.

3. The architect designed three floors of offices that perch on top of a thin concrete slab and steel columns, which rest on the existing concrete structure.
ON A BRIGHT Sunday morning, the Dutch designer Trude Hooykaas rode her bike to the ferry to the northern part of Amsterdam, across the sea arm called the IJ. She was looking for a new location for her firm, OTH (Ontwerpgroep Trude Hooykaas), now called OTH Office for Architecture and Interior Architecture, and thought there might be an interesting derelict industrial building in the former harbor area. She found something that until then she hadn't even known existed: a huge concrete structure to which ships had been moored while being assembled.

"I knew right away that this was it," she says. "Nowhere in town were there panoramic views of the water and the city like there are here. I thought: I'll put a glass box on top of it that will be as light and transparent as the base is heavy and solid." It took 10 years of persistence, but she did it.

The original structure was built in 1952 in the water of the harbor basin as part of the Dutch Dock and Shipbuilding Company's facilities. Two cranes moved up and down tracks on top of it, hence the name Kraanspoor, meaning "crane track." The concrete pier was the final stage of a shipbuilding "assembly line" that spanned the entire harbor basin. More than a thousand luxury passenger ships were built at the wharf, as well as bridges, sluice doors, and even radiators. In 1984, however, the company went bankrupt. The track with two cranes on top of it stood there for many years, a powerful but obsolete expression. The city never expected to find a new use for it and had already signed off on a demolition permit.

The size and type of structure for the top was determined by the load-bearing capacity of the base. The concrete had deteriorated with time and needed to be restored and reinforced in some places. For the sake of both lightness and transparency, Hooykaas designed a three-story box of glass and prefab steel with floors of concrete slabs only about 2 ¼ inches thick. "We tried to make architecture by making as little architecture as possible," Hooykaas explains.

The 886-foot-long, 38-foot-high, and 43-foot-wide box, with a volume of approximately 423,700 cubic feet, is supported by slender steel H-profiles, which in turn rest on the concrete columns of the original structure. "There is a 10-foot-tall gap between the two structures," says project architect Julian Wolse. "That is essential to mark both the contrast and the coming together of old and new." While the entire concrete structure stands in the water, one side abuts the quay, where Hooykaas added wooden decks to facilitate access into the building. Here again, new follows old - the box stands asymmetrically on the base, with slightly more overhang on the water side, miming the concrete base, which is also heavier on the water side to compensate for the weight of the cranes that swung material onto the ships being assembled there.

Although Hooykaas succeeded in preserving the structure, the two cranes had to be blown up to make way for the new addition. The metal walkways along the water side that gave the workmen access to the ships are still there but have been re-created in modern materials with the function of fire escape routes.

The building is still accessed through the four original entrances, with oak stairs wrapped around the core of the glass elevators leading up to four separate lobbies. Into each of these access points Wolse sunk prefab steel frames with trusses to guarantee stability in strong winds. A striking feature becomes visible from the circulation pathway - one has a view of the octagonal openings in the concrete slabs that provide lateral stability. That sensation of peering into an optical illusion of receding openings gives the massive structure a surprisingly airy feeling - the heavy lifter and the ballerina.

Ever since Mies, glass boxes have
1. In its new incarnation as an office building, Kraanspoor uses the four original access points it had when it served as a ship assembly pier. The areas have been glazed, with glass elevators and oak stairs inside and wooden decks that connect them to the quay.

2. Television production company IDTV located its corporate restaurant on the top floor so employees could enjoy the view.

3. Fully glazed walls fill meeting rooms with abundant light, which reflects off the textured concrete ceilings and makes the spaces bright and welcoming.
presented challenges with respect to controlling daylight and temperature. Kraanspoor is heated and cooled by water pumped up from 26 feet below in the harbor basin. The water is brought to a constant temperature by a heat exchanger, then pumped through pipes in the concrete floor slabs. The outer skin of the facade on the land side is fritted with charcoal-gray dots to reduce glare and heat. “The entire glass box has a double skin,” Wolse explains. “The outer facade is made of motorized glass louvers; the inner one is floor-to-ceiling glass panels and doors in wood frames. The zone between facades acts both as a buffer against outdoor temperatures and wind, as well as a source of natural ventilation through the hollow floors. And the window washers can get to both layers from here.”

Does it work? Susanne van der Klugt, manager of communications at IDTV, a television production company that rents half the building, speaks from experience. “The building is beautiful and the view is magnificent,” she says. “The daylight is not a problem. Thanks to the glass louvers, we can modulate the light so that it does not create glare on our computer screens. On one side of the building, we did hang up roll-down blinds for when the sun is low. The climate control could be better. It can be too cold in one part of the office and too hot in another.”

In the end, the project had only one disappointment for Hooykaas. She retired while it was still under way, and her successors decided not to move in after all. Instead, eight media companies occupy the building. Altogether, it has served as a cornerstone for redevelopment – thanks to projects like Kraanspoor, Amsterdam-North is gradually blossoming into a locale for Amsterdam’s creative economy.

Transformed from a relic into an icon of Amsterdam’s industrial heritage, Kraanspoor presents a striking addition to the skyline, especially at dusk when the glass box, lit from within, seems to float weightlessly above the water.

CREDITS
ARCHITECT: OTH Office for Architecture and Interior Architecture – Trude Hooykaas, design director; Julian Wolse, project architect; Steven Reisinger and Gerald Lindner, team
ENGINEERS: Aronsohn Raadgevende Ingenieurs (structural); Facade Consulting & Engineering (façade)
CONSULTANTS: Huygen Installatie

Advisors (lighting); M.J. de Nijs en Zn. and Bot Bouw (contractors); Groenmij (project management); Lichtveld, Buis & Partners BV (acoustics)
CLIENT: ING Real Estate Development
SIZE: 134,549 gross square feet
COST: $32.95 million
COMPLETION DATE: November 2007

SOURCES
CURTAIN WALL: Brakel Atmos BV
FLOORS: Prefab Limburg
STEEL WINDOWS: Scheldebauw
GLAZING: Permasteelia
DOORS: Scheldebauw
ACOUSTICAL CEILINGS: Slimline Buildings
LIGHTING: Zumtobel Lighting
The main entrance, on Sixth Street, abuts the Kogod Cradle. INSET: the complex in 1971, with the Fichandler (left in photo) and Kreeger (upper right) theaters.
ARCHITECTS ASSIGNED TO create an addition to an existing structure often face a delicate task. The original work is revered not only for its history but for its craftsmanship, materials, and quality of design. Happily this was not the case with the $135 million Arena Stage at the Mead Center for American Theater in Washington, D.C. The two theaters at Arena Stage—the 683-seat Fichandler (1961) and the 514-seat Kreeger (1971), both designed by Chicago architect Harry Weese—provided significant theatrical contributions to the nation's capital. But they could not be described as Weese's shining moment, on the level of his concrete coffered, vaulted Washington Metro stations that opened in 1976.

It can definitely be said that the 200,000-square-foot Arena Stage, just renovated and expanded by Bing Thom Architects, improves upon what was found. Thom's swallowing up the lumpy late Modernist theaters in a glass case may have concerned some preservationists, but it helped tie the two together on this triangular site in the Southwest part of the city—initially part of an urban renewal area that may be further uplifted by a waterfront redevelopment plan. Yet the overall scheme does deploy some quixotic design gestures that ignore certain notions of scale, proportion, and the use of a consistent architectural vocabulary. But more about that later.

Considering the success of the nonprofit organization founded in D.C. in 1950 to promote regional theater, the Arena Stage's current artistic director, Molly Smith, saw the need to add a third, 200-seat experimental theater to the existing ones. She didn't want the usual "black box," and Thom's vine-covered Chan Centre for Performing Arts in Vancouver, Canada (1997) appealed to her. The Hong Kong-born, Vancouver-based, Berkeley-trained architect was selected from 150 contenders.

Since the Fichandler and the Kreeger theaters had acoustical problems (mainly jet noise from a nearby airport), bringing the three
CREDITS

ARCHITECT: Bing Thom Architects – Bing Thom, AIA, and Michael Heaney, principals; James Brown, project director
ENGINEERS: Fast & Epp (structural); Stantec in association with Vanderweil Engineers (electrical); Yoneda & Associates (mechanical); Wiles Mensch Corp. (civil)
CONSULTANTS: Talaske (acoustics)
CLIENT: Arena Stage
SIZE: 200,000 square feet (gross)
COST: $135 million

COMPLETION DATE: October 2010

SOURCES
ROOF: Firestone (TP0)
ACOUSTIC CEILINGS: Armstrong
PAINTS AND STAINS: Benjamin Moore and Pittsburgh Paints
ACOUSTIC FABRIC PANELS: Z-Best Wallcoverings
DIRECT APPLIED FINISHING SYSTEM: BASF Wall Systems (Senergy Acrylic)
together under one swerving, 500-foot-long roof and encasing the two older structures behind a 45-foot-high glass curtain wall proved to be a viable solution.

Eighteen parallel strand lumber columns of Douglas fir going up as high as 56 feet support the roof’s steel trusses, girders, and rafters. This structure, enabling dramatic cantilevers, is topped by a thermoplastic polyolefin (TPO) membrane and edged by a white acrylic stucco knife-edged canopy.

The entire enclosure hooks into a swirling poured-in-place concrete hub – the newly added third theater, named the Arlene and Robert Kogod Cradle. This beehive provides the center’s “massive ballast,” in Thom’s words, since it shares some of the structural load of the roof, in addition to accommodating wind shear and resisting rotation.

Theatergoers enter the complex from Sixth Street, where stairs lead from the ticketing area up to a main lobby connecting the three theaters. A large undulating window wall allows visitors to look out to the Washington Channel and catch a glimpse of the Jefferson Memorial in the distance. From this level they also enter Weese’s original Fichandler, jutting up like some giant slumbering sea creature with its scales (brownish brick and seamed metal roof) intact. Inside the theater, the architects kept the Fichandler’s boxing ring plan, only removing back rows of seating to insert acoustical reflectors.

The semicircular Kreeger, now with a café on its top and ramps around its outer walls, is embedded in new construction. But it nicely establishes a counterpart to the

1. From the main lobby, theatergoers enter Harry Weese’s Fichandler Stage (1961) or gaze out the glass window wall to the Washington Channel.
2. The elevation along Maine Avenue emphasizes the center’s glassy amoeboid shape with a cantilevered roof sailing over an upper-level terrace.
3. The main entrance to the center, along Sixth Street, is embedded in the glass wall topped by a white canopy, which is supported by timber columns.
4. The Fichandler kept its arena plan, although it was reduced by 200 seats for acoustical modifications.
nearby spiraling ramp that takes theatergoers into the Kogod Cradle, whose concrete walls are 4 degrees off the plumb line, as are the timber columns. The experience, intentionally reminiscent of entering a Richard Serra Cor-Ten steel sculpture, is pure theater – especially when arriving at the interior of the Kogod, where the oval room is sheathed entirely in stained-black poplar slats woven to solve acoustical problems inherent in the rounded shape (see page 108).

The backstage areas of the theaters are labyrinthine, but connect to expansive and light-filled scenery and costume shops on the lowest level. In addition, administrative offices below are visible from the lobby on the south side where the floor is pulled away from the outer wall.

Uniting three theaters under one roof seems to have created a vibrant, humming, dramatic center. As an architectural entity, however, the combination of elements generates syntactical and semantic peculiarities. While the curves follow an organic flow, the combination of the swirling canopy, the glass-paneled and cable-suspension curtain wall, and the timber columns introduce convergent associations: They range (in order) from Miami Modern hotels to high-tech offices designed by Norman Foster and finally to civic structures in the Northwest woods.

The three elements lack consistency and tectonic unity, exaggerated by the structure’s large size and ambiguous proportions. When a curtain wall extends bilaterally to a point at which it is cut off suddenly by the lid of the overhanging roof, even abstractly Modern forms can seem lacking in human scale. To be fair, Thom wanted to counter the rectilinear, stolid limestone blocks of the city’s architecture with a transparent, free-form shape. And he did.

Yet the sense of scale and proportional principles of traditional architecture needn’t be jettisoned entirely. More than a hundred years ago, in RECORD’s pages, Montgomery Schuyler criticized eclectic architecture of the late 19th century for its solemnism, or lack of grammatical consistency. Schuyler may have been referring to columns and capitals mixed with gables and gargoyles, but Thom’s approach could be described by this term too. Even if the Kogod achieves an integration of structure and form, and the interior plan unifies all, the overall enclosure is too much of a jingle-jangle.
There is simply no better snow retention system than **S-5!® ColorGard®**!

Often imitated, never duplicated. Our patented S-5!® clamps, with their round-point setscrews, make ColorGard the strongest, easiest to install, and best priced solution for standing seam metal roofs. They never pierce the paneling... and there is no messy glue! Unlike all other snow retention products, the perfect color-match of ColorGard ensures your snow retention system will always look great, and will last as long as your roof.

To find out more, visit [www.S-5-ColorGard.com/ar](http://www.S-5-ColorGard.com/ar) or call 1-888-825-3432.


---

**Got Protection?**

Don't let your steel get sacked by corrosion.

**PROTECT YOUR STEEL.**

**PROTECT YOUR ENVIRONMENT.**

**GALVANIZE IT!**

[www.galvanizeit.org/protection](http://www.galvanizeit.org/protection)
Specifier ALERT

Mortar Net® with Insect Barrier

Change Your Spec Today!

All 0.4", 1" & 2" Mortar Net® now has Insect Barrier

Simply insert “with Insect Barrier” into Mortar Net® specifications

Insect Barrier Fabric adds another layer of defense - inside the wall cavity.

Engineered Patented PROVEN

Our Patented Masonry Drainage Products are engineered for just one purpose: To give forward-thinking architects and contractors a strong competitive edge.

- Ultra dependable drainage.
- Big savings in time & labor.
- Jobs come in under budget & ahead of schedule.

Call today for information & samples.

See our complete line of Masonry Drainage & Ventilation Systems, including HouseNet®, BlockNet®, Stone&StuccoDrain & Weep Vents.

The Future of Flashing in Cavity Walls

TotalFlash®

1. 5-1/2 ft. Panels of PRE-CUT FLEXIBLE FLASHING
2. Built-In NO-CLOG DRAINAGE MATTE
3. Built-In TERMINATION BAR
4. Built-In EDGE DAM
5. Built-In NO-CLOG WEEP TABS
6. Built-In STAINLESS STEEL Drip Edge
7. Clearly Specified LAP JOINTS

“All-in-One” Cavity Wall Drainage System. Multiple drainage elements (plus installation hardware) arrive factory-assembled onto handy-sized panels of sturdy flexible flashing. Installs in a single pass (one man can do it). Can cut Time & Labor costs by up to 75%.

- Every moisture control element built into each lightweight, easy-to-use panel.
- Everything arrives in one order. Just open the carton and start installing!
- Available in sizes for new construction, restoration, renovation, or remediation.

800-664-6638 www.MortarNet.com

The Future of Flashing in CMU

Blok-Flash®

Blok-Flash® delivers the surest, most cost-effective control of moisture and mold growth in exterior single-wythe CMU wall systems. It provides 10 times greater bond at the exterior bed joint than a membrane through-wall system, with no water penetration, no by pass, and rapid expulsion of moisture.

Blok-Flash® is a tough, lightweight, embeddable flashing system, suitable for use at all flashing/weep vent locations, including base of wall, above door and window openings, above bond beams, in parapet walls, and wherever flashing is necessary.

800-664-6638 www.MortarNet.com

Mortar Net® USA LTD.
300 New Jersey Avenue
WASHINGTON, D.C.

RSHP teams with lighting consultant MCLA to illuminate three generations of office buildings. By David Sokol

MAUREEN MORAN, WHOSE studio, MCLA, counts among the four largest lighting consultancies in the nation’s capital, can design an office for a Washington attorney in her sleep. “Coves, everything concealed,” she describes without a moment’s hesitation. “[D.C.] law firms like dark wood, but it looks great only under halogen,” Which, she adds, is difficult to use due to increasingly stringent sustainability mandates.

Against this white-shoe experience, Moran was admittedly incredulous when Dennis Austin, a project architect at the London-based Rogers Stirk Harbour + Partners (RSHP), began to describe a project they would be collaborating on in D.C. As Austin sketched the design, she recalls, she couldn’t help wondering if the project would really pass muster in Washington.

The work in question is a new 10-story office mid-rise and an atrium that connects it to the adjacent six-story Acacia Building – a 1935 structure designed by Shreve, Lamb & Harmon that was expanded in 1953 and is now largely occupied by the respected law firm Jones Day. Commissioned in 2004 by Chevy Chase, Maryland-based developer the JBG Companies, this is RSHP’s first commercial office in the United States.

The new building provides flexible tenant space for Jones Day and potential future tenants. The accompanying 12,000-square-foot atrium is the bond that integrates the disparate parts into a unified campus with undeniable character. Central to RSHP’s scheme is a yellow structural steel tree that contains vertical circulation and links office spaces.

ABOVE: A series of glass bridges, backlit by lines of T5 lamps, link office spaces.
OPPOSITE: The bold structural core of the atrium that integrates the three buildings is simply illuminated by exposed T5 fluorescents.
RIGHT: In-floor metal halide uplights with linear-spread lenses graze the limestone facade of the Acacia Building.

BELOW: Metal halides also light the atrium’s floating cantilever.

via frosted-glass bridges. This core sprouts yellow boomerang trusses that brace the atrium’s cantilevered floating glass roof and appear as giant stitching. According to Austin, “The ambition of the project was to unite the buildings and reorient them toward the tree structure,” adding that the exposed and color-coded systems provide legibility. It is this easy-to-read anatomy that Moran responded to. “I thought bare fluorescents were the right thing to do,” she says.

“It’s great that people would see [the lamps] and appreciate them for what they’re worth,” Austin recalls, referring to Moran’s proposal. Today T5 tubes are tucked within yellow flanges, outlining the tree’s structure. In addition, two through-wired lines of the lamps edge the underside of every interior bridge.

Celebrating such muscular architectural vocabulary also helped to satisfy issues of functionality. “I knew everybody was going to be focused on getting enough light on those bridges,” Moran explains. Because atriums are so infrequent in Washington, D.C., building owners like JBG adhere to strict light-level requirements. For instance, the steps had to be illuminated to a level of one foot-candle. To achieve this, Moran applied the same fluorescent lamps beneath the edges of each of the tree’s trapezoidal landings.

Likewise, Moran strapped two luminaires along the length of one of the three tree trunks. Powerful metal-halide lamps, lined with an optical light film that helps to distribute the illumination more uniformly, are installed at the top and bottom of these multistory cylinders. This strategy creates a core of light around which the stairways wrap. Moreover, the lighting design team installed metal-halide par 30s at the top of the Acacia Building that point toward faceted reflectors suspended from the atrium ceiling, resulting in a diffuse luminance throughout the space.

Indeed, Moran – a native Washingtonian with a fondness for the early building’s architecture – not only employs the Acacia Building as a means of intensifying the atrium light; she celebrates it. Yet “it had to be treated differently from the tree,” she notes. So while she made the tree a focal point, she inserted metal halide uplights with linear-spread lenses into the ground floor to graze the old limestone facade. She then continued this approach to the exterior of the Acacia Building. Outside, metal halides light the underside of the atrium roof. An elevator core, expressed on the exterior of the new office in frosted glass, is grazed by LEDs.

A sense of balance – keeping the historic from being overpowered by the new – informs Moran’s entire lighting plan. She illuminated the major structural elements of the atrium tree, because “the colors make a statement.” She even installed lighting controls for special events. Entire branches can go dark to direct attention to specific areas in the complex. Employees and visitors, however, benefit most of all. The T5s are dimmable, says Moran, “so people actually look good under these fluorescents.”

David Sokol is a Washington, D.C.-based contributing editor for RECORD.
inspire and de(light)

These are the emotions of innovation and change. Prudential’s brand new, luminous homage to the cool design culture of the California coast and the rhythm of the ocean. Prudential shines with the new pulse of innovation. See the inspiration, Pulse fixture and facts online at prulite.com/pulse.
The Juilliard School
NEW YORK CITY

Diller Scofidio + Renfro, FXFOWLE, and L’Observatoire turn the Brutalist 1960s Juilliard building into a glittering staging ground for young performers. By Linda C. Lentz

THE DRAMA OF Diller Scofidio + Renfro’s (DSR) master plan for the redevelopment of the Lincoln Center campus has been unfolding like a grand opera — with bold, crowd-pleasing gestures over several acts. Early in 2009, Phase One — Alice Tully Hall — reopened to rave reviews for its welcoming, daylit public spaces, its elegant theater notable for the brilliant acoustics by Jaffe Holden, and state-of-the-art lighting by L’Observatoire (RECORD, June 2009, page 62). A collaboration of DSR and FXFOWLE, the 150,000-square-foot project was part of the larger renovation and expansion of the Juilliard School building, completed later that year.

One of the world’s foremost performing arts conservatories, Juilliard had outgrown the physical and aesthetic limits of the 500,000-square-foot Brutalist structure designed by Pietro Belluschi (with Eduardo Catalano and Helge Westerann) in the 1960s. Like a travertine fortress, the building sat back from the street, with a remote, secondary main entrance accessible by way of a monumental stair on Broadway to the east or from the Lincoln Center plaza on the south via a wide bridge that overshadowed West 65th Street. Inside it was cramped and oppressive, with little sunlight. Its facilities were outdated, and much of the lighting hadn’t been upgraded since the building opened in 1969.

To engage Juilliard with its urban community, and vice-versa, the architects created a glazed four-level east wing extension that reaches over the Alice Tully Hall lobby like a luminous cantilevered proscenium, aligning with — not backing away from — Broadway. They infused the public areas with daylight by continuing the glazing along two levels of the south elevation, where it reveals a new street-side entrance, complete with a playful stair-cum-built-

in grandstand seating. And they removed the bridge, replacing it with a crosswalk at grade, and a glass-walled balcony outside the second floor lobby/student lounge, which provides unimpeded views of Lincoln Center.

While the expansion adds approximately 39,000 square feet of classroom, studio, and office space, the architects’ introduction of transparency and light is what really impacts the tenor of the school. Working closely with DSR, FXFOWLE, the acoustician, and the Juilliard maintenance crew, the New York office of L’Observatoire developed a lighting scheme that is both pragmatic and dramatic.

According to lighting designer Jason Neches, the newly glazed south- and east-facing facades eliminate the need to turn lights on within adjacent interior spaces during the day, saving energy in the process. In the evening, however, the L’Observatoire plan lets the building shine. Linear fluorescent uplights, inserted into floor channels along the Broadway curtain wall, wash the fritted glass with a shimmering gauze of illumination. Directly beneath it, Neches and his team enlivened a vitrinelike dance studio — which juts out over the sidewalk — by edging the top of its longitudinal walls with T5-backlit panels of frosted glass. The result is a diffuse clerestory effect that keeps the 14-foot-high ceiling free of fixtures, a client specification.

ABOVE: The new dance studio has clerestory-like backlit panels.
OPPOSITE: Once dark and insular, Juilliard now faces Broadway with a transparent illuminated facade that treats passersby to the inner workings of one of the world’s foremost performing arts conservatories.
1. Juilliard’s manuscript reading room features indirect ambient lighting and customized LED task fixtures.

2. T5s installed behind a base of frosted glass panels illuminate the box office.

3. L’Observatoire worked closely with the acoustician to create a vibration- and buzz-free lighting system for the orchestra rehearsal room.

Another request from Juilliard was mood lighting. The school’s president, Joseph Polisi, often hosts dinners in this highly visible location. So Neches added dimmable rope lights behind the panels as an alternative to the T5s.

The lighting designers also transformed the box office next to the West 65th Street entrance into a “light box,” using a similar treatment of T5s behind frosted glass. Nearby, they lit the entry grandstand/stair as if it were a stage by directing ceramic metal-halide lamps, discreetly mounted into a tuck in the ceiling, onto the aspiring performers seated below. The stair appears to float, thanks to rows of T5s mounted on the back that bounce light around either side and through an opening at the stair’s base.

“We love uninterrupted planes of ceiling, and try not to penetrate them with too many downlights,” says Neches. When there is no option, he explains, “we try to make very small apertures.” For instance, he notes that his team used halogens in some lobby spaces for warmth and for their ability to dim and create multiple scenes. The acoustician specified halogens for the orchestra rehearsal room as well, in this instance to avoid interference with recording equipment. Moreover, to prevent buzzing, he stipulated a special lamp filament and dimming system. Special fixtures, modified for vibration, hang from the room’s structural ceiling and poke through – without touching – openings in a dropped, scrimlike acoustical panel ceiling.

Of all the project’s features, one of Neches’s favorites is a wood-lined reading room for viewing rare manuscripts. Here he and the architects tucked T5 lamps into coves that edge a central white ceiling band, indirectly illuminating the room. They then configured the room’s long table with custom LED task lights, deemed safe for the valuable documents.

Like a well-designed stage set, L’Observatoire’s strategy informs the work of DSR and FXFOWLE without dominating it. That’s because, Neches concludes, “we try to elevate the architecture without drawing attention to the lighting.”
neo®

The neo® is a new generation of luminaires constructed of glass and polished aluminum. The patented, awards winning design provides total design freedom and specification flexibility. The neo®'s utilization of light is the key to the luminaire philosophy. It has pure aesthetics in design, material, and technology.

selux.com/usa
(800) 735-8927

For neo video, scan here
IT'S TIME FOR INNOVATION

YES, WE CHOOSE SPANISH CERAMIC

Yes, we choose Spanish ceramic tiles because of the industry's boundless creativity and ability to innovate. In an increasingly competitive marketplace, the Spanish ceramic tile industry's distinguishing features are the modern designs, the constant technological innovation and the industry's commitment to the environment. Tile of Spain, a quality product that brings you new trends, applications and architectural uses to create spaces with a more human dimension. Why don't you go for Spanish tiles too?

Tile of Spain - Trade Commission of Spain Voice: 305 446 4387 F: 305 446 2602 miami@mcc.es www.spaintiles.info

CIRCLE 46

VIDEO CONFERENCE LIGHTING SO GOOD... you'll wish you were there!

Our Video Conference and Distance Learning lighting systems are used all over the world to put you in the best light for image transmission.

• Meets critical I.E.S. performance standards!
• Beats strict California Title 24 energy standards!

Don't be fooled by inferior imitations. These premier fixtures are only available from these quality manufacturers.

FIND OUR PRODUCTS AT:
www.elplighting.com
www.videssence.tv
OR CALL US TODAY:
626.579.0043

CIRCLE 16
The Morgan Library & Museum
NEW YORK CITY

A stunning restoration casts new light on the interiors of the historic Charles McKim building. By James Murdock
ADIMIRERS OF THE 1906 Morgan Library & Museum who felt that Renzo Piano's 2006 expansion overshadowed the historic rooms of J. Pierpont Morgan's former study and library housed in an Italianate marble building designed by McKim, Mead & White principal Charles McKim can banish the lingering ghosts of restoration. A dazzling interior restoration, realized by Beyer Blinder Belle Architects & Planners in collaboration with the lighting firm Renfro Design Group, has renewed and enhanced its previous luster.

According to museum director William Griswold, the recently completed overhaul was inevitable, but museum leadership excluded it from the brief of Piano's expansion (RECORD, October 2006, page 93). Fortunately, Griswold was able to proceed in mid-2010 when an opportunity was created by generous trustees and favorable construction pricing.

The $4.5 million project marks the first significant cleaning of the 14,700-square-foot landmark's interior since the early 1990s. Beyond creating additional exhibition areas, the work included updating the wiring and outdated lighting, as well as restoring early fixtures. The building now displays more than 300 items from the Morgan's permanent collection of rare books and art (a tenfold increase) in rooms with vastly improved lighting.

“Our goal was to hide the lighting and reveal the great architecture,” notes lighting designer Richard Renfro, AIA. The building's landmark status, which prohibits visible and irreversible changes, proved less of a challenge than it might have seemed. Technological innovations allowed Renfro to insert smaller, more efficient fixtures into existing spaces. He removed decades-old track lights from a 16th-century wood ceiling in Mr. Morgan's former study, called the West Room, and replaced them with discreet tracks and low-voltage MR16 halogen lamps powered by remote transformers.

In the East Room, Morgan's library, The team relamped and rehung an original chandelier, removed in the 1940s. Renfro replaced glaring fluorescent tubes, installed in pockets above and below each of three levels of original bookcases, with customized LEDs. These cast a glare-free, even light with no spillover onto adjacent areas. To eliminate irritating bright spots, Renfro lit the bottom bookcases from above and the two upper levels from below. This shields the eyes of visitors gazing at the richly painted ceiling and leather volumes displayed behind nonreflective acrylic glazing.

Wanting to simulate daylight in the same room without making insertions into a hard-to-access plenum between its glazed ceiling and the blocked skylight of the vaulted roof, Beyer Blinder Belle's Cleary Larkin, AIA, and the Morgan's director of facilities, Thomas Shannon, covered the vault's underside with a white synthetic rubber membrane (EPDM). Renfro then added T8 fluorescent strips to bounce indirect light off this highly reflective material down into the room.

With similar intent, Renfro transformed a covered oculus into a light source for the adjacent domed rotunda, the former grand foyer. To do this, he and Larkin suspended panels of low-iron, stippled rolled-glass (which transmit unaltered light rays) above the existing glass lens. A new shed roof conceals supports for the panels, as well as ART11 halogen lamps that focus beams of light on the displays. Halogen lamps illuminate the contents within the cases, including a copy of the Declaration of Independence.

“The McKim building is, in many ways, the heart and soul of the Morgan,” observes the Morgan's Griswold. “This project allowed us to burnish that part of the campus. Now the balance between new and old is where it should be.”

James Murdock is a writer and filmmaker based in New York City.

CREDITS

ARCHITECT: Beyer Blinder Belle Architects & Planners – Frank Prial, AIA, Cleary Larkin, AIA, project architects
LIGHTING DESIGNER: Renfro Design Group – Richard Renfro, AIA, principal
ENGINEERS: Robert Silman (structural); JFK&M (electrical)
CONSULTANTS: Stephen Saitas (exhibition design)

SOURCES
LIGHTING: Visual Light Technologies (LED); Elliptapar (fluorescent); Edison Price Lighting, Nulux (fixtures); Lutron (controls); Aurora Lampworks (antique fixture restoration)
THE SKY IS THE LIMIT...

First Canadian Place (FCP) is an iconic 72-storey office complex located in the centre of Toronto’s financial district. FCP is the tallest building in Canada, 11th tallest in North America and serves as a multi-purpose hub in Canada’s largest city.

A complete re-cladding of the building’s 375,000 square foot façade is underway entailing the replacement of 45,000 pieces of white marble with 7,800 glazed spandrel panels. The unitized spandrel assembly is comprised of laminated glass with ceramic frit, clear and opaque interlayers patterned and designed to give a modern elegance and luminosity to the façade while bronze laminated glass applied to the recessed corners accentuates the building’s height.

Sota Glazing Inc. worked in close co-operation with Brookfield Properties, Moed de Armas & Shannon Architects/B+H Architects, Clifford Restoration Ltd. and EllisDon Corporation to develop a custom glazing system and overcome complex access requirements without interruption to the building occupants. We are proud of our contribution to the team realizing the renewal of this landmark Canadian project.

www.sotawall.com
SOTA GLAZING INC.
ENGINEERED CURTAINWALLS
LIGHTING PRODUCTS
What was old is new again with this group of lighting solutions for projects that call for a touch of the past. RITA CATINELLA ORRELL

Lampe Gras
Holly Hunt lampegrasusa.com
Referred to as “The Original Architect’s Lamp,” Lampe Gras was created in 1921 when engineer Bernard-Albin Gras designed a series of lamps for use in offices and industrial locations. Held together without screws or welded joints, the Lampe Gras became a favorite of architects such as Le Corbusier. Production stopped at the outbreak of World War II, but the fixtures are now being made by hand in France and sold exclusively through Holly Hunt. Available in table, floor, and wall versions. CIRCLE 212

LED and Solar Panel Retrofit
Visible Light Solar Technologies visiblelightsolar.com
More than 80 gaslight-style fixtures illuminate Old Town Albuquerque, the city’s historic and cultural center. Visible Light Solar created a custom LED insert to replace the 100-watt metal-halide and 200-watt incandescent bulbs formerly used in the park lights and streetlights. Many of the retrofitted gas lamps will also incorporate unobtrusive solar panels. CIRCLE 213

Gas-Style Industrial Lighting
Rejuvenation rejuvenation.com
Drawn from the design of original turn-of-the-century acetylene gas fixtures, this family includes a single wall bracket, single pendant, and 24"- and 32"-wide double pendants, all with glass globes and wire cages. Handcrafted from brass components, the fixtures maintain the look of the originals down to the now purely decorative gas cocks. Each is made to order; specify length, shade, and lamping. CIRCLE 215

Victorian Chandelier
Meyda Custom Lighting meyda.com
As part of an ongoing major restoration project for Michigan’s Traverse City Opera House, Meyda crafted this new chandelier based on a conceptual design by Quinn Evans Architects of Ann Arbor. Eight arms support hand-blown etched glass globes (currently illuminated by incandescents) that complement globe sconces and pendants throughout the building. CIRCLE 214

Teardrop LED Series
Holophane holophane.com
Ideal for historic districts, parks, campuses, parking lots, and other applications, the LED teardrop luminaire allows specifiers to combine the visual appeal of a historic-looking luminaire with LED technology. The luminaires are designed for use with existing Holophane teardrop units and pole locations to reduce purchase and installation costs. Available in multiple styles and sizes. CIRCLE 216

For more information, circle item numbers on Reader Service Card or go to architecturalrecord.com/products.
VERTICAL URBAN FACTORY
through June 2011

Book Talk: February 7
Kenneth T. Jackson
The Encyclopedia of New York City, 2nd edition

39 Battery Place, New York | Wed - Sun, Noon - 6 pm | www.skyscraper.org
Introducing VELCRO® Brand Carpet Protection

- **Reusable**—less waste and more environmentally friendly
- **No adhesives**—no risk of residue or damaged carpeting
- **Easy to install, reposition and reuse**—saves money
- **Breathable**—allows carpet adhesives to cure properly

Today's aggressive construction schedules are causing trades to overlap, with finishes installed sooner than you would like. Minimize risk, make job sites more environmentally friendly by reducing waste and adhesive use, and avoid costly last minute delays and claims. Specify VELCRO® Brand Carpet Protection for your next project.

VELCRO® Brand Carpet Protection secures to loop carpeting with our patented hook technology. It can be installed immediately without risking carpets, schedules or reputations. Make it part of your plans.
1. ACOUSTIC REFLECTORS
2. BLACK NYLON SCREEN
3. CONCEALED FASTENER
4. 3/4" POPLAR SLAT SYSTEM
5. 1/4" POPLAR SHELVES
6. ACOUSTIC INSULATION
Virtual but Vivid

A sonic rendering technique known as auralization helps acousticians make the sound of even unrealized spaces tangible.

By Joann Gonchar, AIA

ACOUSTICS HAVE THE ability to influence our appreciation of a space, perhaps as much or even more than other physical properties, including shape, the amount or type of illumination, and the colors and textures of finishes. But since sound is not at all visual, and is arguably the least tangible attribute of an architectural environment, understanding what makes a room acoustically successful can be challenging for the nonengineer. Even for technologically savvy architects and acoustically acute clients, data describing absorption, reflection, or diffraction is often inadequate for communicating what a proposed space will sound like.

However, an acoustical rendering technique known as "auralization," enabled by faster computer processors and the increasing sophistication of software for analysis and simulation, has been gradually gaining ground over the past decade, allowing project teams and owners to experience the sound of an unbuilt room. Even though these sonic renderings are often created long before the first wall is erected, proponents insist that well-devised auralizations are more than rough approximations. "The process has scientific rigor behind it," says Ben Markham, a senior acoustical consultant at Cambridge, Massachusetts-based Acentech.

The process of auralization (a neologism that combines "aural" and "visualization") begins with a so-called "impulse response"—an acoustical signature unique to a particular room, sound source, and listener location. In an existing space this signature can be captured: Acousticians emit a brief, sharp signal from an omnidirectional loudspeaker and record it with a specialized microphone placed at the listener's location, documenting the original impulse and subsequent reflections from all angles and surfaces. Engineers can analyze this signature to better understand the correlation between perceived acoustical qualities and architectural characteristics.

For spaces that aren't yet built, engineers must create an impulse within a virtual acoustical model based on the architect's 2-D or 3-D digital files. Acousticians then estimate the response to the signal at locations throughout the room. Finally, they combine, or "convolve," this signature with music, speech, or other sound typically recorded in an anechoic, or reflection-free, environment. The computer adds the reflections and time delays to simulate the acoustical qualities specific to the proposed space.

With the audible output of this process, acousticians can then virtually adjust geometry or finishes and listen to how this will alter the sound. Or they can compare the sound of the still-unbuilt room to an existing one with sought-after acoustics. "We can easily move from space to space, and

Continuing Education

To earn one AIA learning unit, including one hour of health, safety, and welfare (HSW), complete the test online at no charge at ce.construction.com. Upon successfully passing the test, you will receive a certificate of completion and your credit will be automatically reported to the AIA. Additional information regarding credit reporting and continuing education requirements can be found online at ce.construction.com under "resources and requirements."

Learning Objectives

1. Understand key acoustical concepts.
2. Explain the simulation process known as auralization.
3. Describe the acoustical design challenges presented by several recently completed projects.
4. Discuss how auralization helped inform decision making for these projects.

AIA/CE Course R1102A

scenario to scenario," says Raj Patel, an acoustician and principal based in the New York City offices of Arup.

Acousticians can present auralizations via headphones. But a few auralization practices, including Arup and Acentech, have purpose-built rooms in their offices where they can review these sonic renderings and present them to a group. The goal is to allow project decision makers to experience the sound of a proposed space collectively in an immersive setting. Such controlled environments typically include audio processing systems with multiple speakers working together to simulate the directional and three-dimensional qualities of sound.

The specialized rooms in acousticians’ offices usually have a projection system for displaying architectural and acoustic visualizations. And in order to avoid coloring the listening experience, these spaces are designed to be acoustically neutral: They are relatively non reverberant, with attention to isolation from mechanical noise and other disruptive sounds, but in general they are not anechoic. Even though an echo-free room would provide a more faithful rendition of the virtual space, it would be physically unpleasant, says Patel: “You would hear your own blood flow.”

Focusing form
Regardless of whether auralizations are presented via headphones or in a tailored listening room, the technique can help project teams and owners weigh various acoustic options. It can also be used as a means of demonstrating the sound of a nearly final design to confirm that the properties of a proposed space will meet client expectations. The process was deployed in this way for the Arlene and Robert Kogod Cradle, a 200-seat experimental theater in Washington, D.C. The performance space is one of three sheltered by the swoopy roof of the Arena Stage at the Mead Center for American Theater, just revamped and expanded by Vancouver, Canada-based Bing Thom Architects (for more on the Arena, see page 84).

The Kogod, the only completely new Arena venue, presented a particularly sticky acoustical challenge: It has an elliptical plan, emblematic of artistic director Molly Smith’s desire to nurture new playwrights. Without the right acoustical solution, this shape would focus sound instead of distributing it over the entire seating area, explains Richard Talaske, president of the eponymous Oak Park, Illinois-based firm that served as the project’s acoustical consultant.

In order to neutralize the focusing effect, the design team developed an inner wood skin that peels away from the theater’s poured-in-place concrete structure. The resulting spiraling path leads theatergoers from the lobby and serves as a sound-and-light lock. The two walls in combination help diffuse low-pitch sound, while the inner wood-sheathed wall, made of horizontal dark-stained poplar slats, 7/8 inches thick, helps distribute high-pitch sound. The slats, which vary in height from three to six inches, were field bent and secured to underlying studs to give each a wavy shape, combining concave and convex radii.
Although the interior wall surface seems randomly composed, it is the product of a process that included computer modeling combined with testing of a 1:10 scale model built by the acousticians and of a mock-up of an approximately 30-foot-square section of wall constructed by the architects. To identify the sound-diffusive properties of the design, Talaske projected signals from speakers at the walls from several angles and then documented the reflections. With data garnered from these tests, acousticians calibrated the computer model and performed analyses that included an examination of the reflections’ timing, strength, and distribution to ensure that speech would be intelligible in all parts of the seating area.

Once the scheme was acoustically optimized, Talaske and his team created an auralization by convolving the space’s impulse response with speech they recorded in an anechoic environment. After presenting the simulation to the architects and client, the only adjustment deemed necessary was the addition of plywood-and-gypsum panels to the bottom of catwalks to provide more reflection from the ceiling and improve the localization of sound.

**Calm and clear**

At Boston’s Museum of Fine Arts (MFA), the acoustical issue was not an unorthodox shape but a large volume enclosed by highly sound-reflective finishes. Here, acousticians from Acetech began working with the London-based Foster + Partners in 2003, soon after the concept for the 121,000-square-foot Art of the Americas Wing solidified (for more on the MFA project, see page 58). Both museum trustees and the architects were concerned that the 63-foot-tall, 12,000-square-foot enclosed courtyard conceived as the addition’s centerpiece would be acoustically unsuitable for the varied programming envisioned to take place there. The monumental space – enclosed by glass, stone, and brick – would need to serve as the setting for social functions and special events such as receptions or banquets, and to provide acoustics conducive to listening to a string quartet, a swing band, or a lecture. During normal museum operating hours, designers hoped the courtyard would be calm and contemplative, even though it would house a café.

The addition of sound absorption would be key. Without that, the hard-suraced space would be uncomfortably reverberant, making music muddy and speech unclear. But determining just how much acoustical material would be

---

**GRAPH:** As part of their analyses, MFA acousticians studied the reflection patterns generated in the courtyard for particular sound sources and listeners.
7. The mostly hard-surfaced grand space serves as the setting for a variety of events, including large banquets.
8. Elements that control heat gain and glare incorporate sound-absorbing material.
AURALIZATION ALLOWS ACOUSTICIANS TO VIRTUALLY “MOVE FROM SPACE TO SPACE, AND SCENARIO TO SCENARIO,” SAYS ARUP PRINCIPAL RAJ PATEL.

needed, and deciding how to include it without compromising the courtyard’s planar purity, would be tricky.

Acentech started by documenting several atria in and around Boston. The engineers took measurements of the rooms and then calculated or estimated various characteristics, including volume, surface area, and reverberation time.

From those spaces, they chose one—an atrium included in a Moshe Safdie and Associates-designed expansion of the Peabody Essex Museum in Salem—as a benchmark for the MFA. It wasn’t excessively loud and was comfortable for conversation and general use. As part of the documentation process, they also discovered that the average absorption coefficient (a ratio of sound absorption to surface area) was the most useful metric for evaluating the existing spaces. It was even more telling than reverberation time. The phenomenon can be attributed to occupant expectations that large rooms be at least somewhat reverberant, says Acentech’s Markham. “We want our ears to match our eyes.”

After completing its survey, Acentech digitally modeled Safdie’s court and virtually “populated” the space with various scenarios, including the sounds made by 500 diners at a banquet, with people conversing and dishes clinking. Since it was impractical to make a recording of such a source in an anechoic chamber, the acousticians recorded a much smaller group in a relatively nonreverberant restaurant. They mathematically adjusted the model to compensate for the recording environment and processed the sounds to simulate a large number of diners occupying tables situated around the room making noise at different volumes.

With auralization of Peabody Essex serving as a point of reference, the consultants constructed an acoustic model of the MFA scheme. They studied the information garnered from the model to understand the effect of the proposed geometry and materials. They repeated the auralization process, simulating the sound of the unbuilt space with various sound sources and levels of acoustical treatment.

As a result of this benchmarking, analysis, and simulation process, the museum’s trustees and the architects reached a consensus that the room would need an average coefficient of absorption of 0.3 at midrange frequencies and a total absorption of about 16,500 sabins (one sabin represents the amount of absorption provided by one square foot of perfectly absorptive material). The ultimate solution included incorporating most of the required acoustic
material in the ceiling as part of elements that also help control heat gain and glare: a central band of perforated V-shaped metal baffles running through the center of the space and into the galleries, with translucent panels made of two layers of microperforated vinyl on either side. Glass fiber concealed within column enclosures (where sophisticated speakers are also hidden) and wood fins on an existing masonry wall provide additional sound absorption.

**Tolerable transmission**

Though most often used to render room acoustics, auralization can also be deployed in other areas of concern to architectural acousticians, including sound isolation between adjacent spaces. Auralization played such a role at Kroon Hall, a building for the Yale School of Forestry completed on the university’s New Haven, Connecticut campus in the spring of 2009.

Designed by London-based Hopkins and the Connecticut firm Centerbrook, with Arup providing multidisciplinary engineering, the long and thin four-story structure is organized around a slot-like stair that cuts through a narrow, skylit atrium. The LEED Platinum-certified building contains many coordinated, aggressively green features, including a mixed-mode ventilation system that supplies fresh air through a raised-floor ventilation system and, depending on the season, operable windows. The system exhausts return air passively through the central atrium, creating a potential privacy issue, since telephone calls or faculty-student conversations might travel from private offices flanking the atrium through vents positioned over doors.

In response, the architects devised a custom U-vent for the office-door transom. However, the proposed assembly allowed an unacceptable level of sound transfer. As an alternative, Arup suggested an advanced off-the-shelf vent, roughly equal in price to the custom solution. The device still allowed some sound to travel through the partition, but it significantly improved the assembly’s sound transmission class, or STC, a rating of how well a building component attenuates airborne sound. An auralization convinced Yale officials that the sound of voices coming from offices would be barely audible to anyone standing nearby.

Auralization can similarly be applied to curtain-wall design, helping designers evaluate an assembly’s ability to block the noise of a busy highway or a nearby airport. Or it can be used as an aid for evaluating noise-control options for a particular piece of mechanical equipment. But regardless of the application, practitioners of the technique say that it is a powerful decision-making tool. “To both architects and users, auralization conveys the efficacy of an acoustical strategy,” says Markham. “It allows them to understand what we are recommending and why.”

---

**Take the CEU Quiz online for free at ce.construction.com.**

---

**for the GREENER GOOD conversations that will change the world**

An innovative program series examining the impact of sustainability on the built environment.

**Life After Plastic**

As a petroleum based product, many believe that as the price of oil rises, the cost of plastic building materials will rise. What is the future of alternate products for the construction industry?

**Thursday, February 17, 2011**

**Historic Preservation vs. Sustainability**

**Thursday, March 24, 2011**

**Passive House**

**Monday, April 18, 2011**

a lecture series at the NATIONAL BUILDING MUSEUM

401 F Street NW Washington, DC 20001 | 202.272.2448 | www.NBM.org

For the Greener Good lecture series is presented by The Home Depot Foundation.
DATES & EVENTS

New and Upcoming Exhibitions

The Extraordinary Joseph Urban
Palm Beach, Florida
February 1–April 17, 2011
This exhibition explores the life and work of Joseph Urban (1872–1933), a prolific and innovative Gilded Age artist who, the New York Herald-Tribune observed, “did more than any other man to revolutionize the American sense of design.” With more than 100 objects from Urban’s extraordinary body of work, the exhibition is at the Flagler Museum. For more information, visit www.flaglermuseum.us.

The Emperor’s Private Paradise:
Treasures from the Forbidden City
New York City
February 1–May 1, 2011
This is a loan of some 90 paintings, architectural elements, and decorative and religious works created for an elaborate two-acre private retreat built deep within the Forbidden City in 1771 as the retirement residence of one of China’s most extravagant monarchs – the Qianlong Emperor (r. 1736–95) – who presided over China’s last dynasty, the Qing, at the zenith of its power and wealth. Visit www.metmuseum.org.

Plywood: Material, Process, Form
New York City
February 2, 2011–Ongoing
Plywood is an important modern material that has given 20th-century designers greater flexibility in shaping Modern forms at an industrial scale. This installation features examples, drawn from MoMA’s collection, of Modern designs that take advantage of the formal and aesthetic possibilities offered by the material, from around 1930 through the 1950s. Archival photographs illuminate the process of design and manufacture in plywood. Iconic furniture by Alvar Aalto, Charles and Ray Eames, Eero Saarinen, and Arne Jacobsen appears. Visit www.moma.org.

Frank Lloyd Wright: Organic Architecture for the 21st Century
Milwaukee
February 12–May 15, 2011
Experience more than 150 objects designed by “America’s greatest architect,” Frank Lloyd Wright. This exhibition features 33 never-before-shown drawings by the Wisconsin legend, as well as rare home movies. Examining every type of project that Wright designed, along with his plans for suburban communities and American System-Built Homes, the exhibition includes drawings, models, photographs, videos, furniture, and more. Visit www.mam.org/frank-lloyd-wright.

Ongoing Exhibitions

Ezra Stoller
New York City
Through February 12, 2011
The preeminent photographer of Modern architecture, Ezra Stoller (1915–2004) was commissioned by architects such as Frank Lloyd Wright, Paul Rudolph, Eero Saarinen, I.M. Pei, Marcel Breuer, and Richard Meier because of his unique ability to capture a building according to the architect’s vision and to lock it into the architectural canon. Many of his gelatin silver prints will be on display at the Yossi Milo Gallery. For more information, visit www.yossimilo.com.

Las Vegas Studio: Images from the Archives of Robert Venturi and Denise Scott Brown
Chicago
Through February 19, 2011
This exhibition presents original research materials from the archives of the Philadelphia firm Venturi, Scott Brown and Associates. In 1968, American architects Robert Venturi, Denise Scott Brown, and Steven Izenour, with students from Yale University, embarked on a groundbreaking investigation of the Las Vegas Strip. Their fresh way of looking at the city: The influence of popular culture, advertising, film, and the experience of the built environment from a moving automobile extended the categories of the ordinary, the ugly, and the social into architecture. Their research methodology became as revolutionary as their findings, which were published in the legendary 1972 book Learning from Las Vegas. At the Graham Foundation; for more information, visit www.grahamfoundation.org.

Journeys: How Traveling Fruit, Ideas, and Buildings Rearrange Our Environment
Montreal
Through March 13, 2011
Featuring 15 narratives, this exhibition questions and debates architectural concerns raised by increased global movement. Stories range from the vagabondage of seeds and how this transforms the landscape to the rearrangement of communities that unexpectedly changes society and the built environment. At the Canadian Centre for Architecture; visit www.cca.qc.ca.

Ozark Modern
Fayetteville, Arkansas
Through February 16, 2011
This exhibition features midcentury Modern furniture designed by Edward Durrell Stone in the Fine Arts Center Gallery at the University of Arkansas. It will underscore the distinctive characteristics of the furniture and illuminate the particular circumstances of its development. For more information, visit www.uark.edu.
Landscapes of Extraction
New York City
Through February 26, 2011
This exhibition at the Cooper Union features the impressive photographic works of J. Henry Fair and provides an eye-opening look at the increasingly extreme industrial processes used to extract fossil fuels, including mountaintop removal, deep-sea drilling, and hydro-fracking. For more information, visit www.cooper.edu.

Lectures, Conferences, and Symposia

Beyond the Fringe Lecture Series
Los Angeles
February 7, 2011
François Roche explores architectural work that is simultaneously organic, biological, and critical. Roche founded R&Sie(n) in 1989 with Stéphanie Lavaux; the Paris-based practice unfolds protocols through the restaging of different kinds of contemporary relationships: aesthetic, machinist, computational, and even artificial. For more information, visit www.aud.ucla.edu/beyondthefringe.

Benedetta Tagliabue: Recent Work
Los Angeles
February 9, 2011
Under the directorship of Benedetta Tagliabue, Miralles Tagliabue EMBT works with architectural projects, open spaces, urbanism, rehabilitation, and exhibitions. Conserving the spirit of the Spanish and Italian artisan architectural studio tradition, which espouses collaboration rather than specialization, its architectural philosophy and practice dedicates special attention to context. Visit www.sciarc.edu.

Black Women in White Johannesburg: Domestic Workers’ Spatial Strategies Under Apartheid
New York City
February 16, 2011
This is the second lecture in a series on African architecture and urbanism organized by the Museum for African Art, Columbia University’s Institute of African Studies, the Committee on Global Thought, and the Center for African Education. University of Illinois professor Rebecca Ginsburg explores the ways domestic workers’ mobility was severely limited under apartheid-era legislation and how these women responded and overcame these restrictions. Visit www.ias.columbia.edu.

Ideas Economy: Intelligent Infrastructure
New York City
February 16–17, 2011
United States Chief Information Officer Vivek Kundra, world-renowned architect Frank Gehry, and others will participate in the Economist’s conference on green architecture, geotechnology, smart systems, and connectivity will allow countries and governments to create a smarter and stronger infrastructure. It will also focus on how cutting-edge development in this area can leverage the speed and vitality of private markets while at the same time including smarter government regulation. For more information, visit http://ideas.economist.com.

Polytopes, the Architecture of Soundscapes: A MediaSCAPES Symposium
Los Angeles
February 23, 2011
Through his work with Le Corbusier, composer Iannis Xenakis catalyzed a radically new sound universe and sound architecture for 20th-century music. Staging new electronic and visual music to a discussion with composers and performers, this symposium links the relations of sound experience, sound-inherent structures, and mathematics to architecture and space. Visit www.sciarc.edu.

A New Order: Re-appropriations of Space and Life
New York City
February 24, 2011
Bringing together a team of artists, architects, and scientists, including Felix Burricher, editor in

THE ROVAL™ COLLECTION IS EXPANDING!

ASI raised the bar when they introduced the Royal Collection. And they’re doing it again. Now the elegant and highly functional collection includes automatic paper towel dispensers as well as hand dryers and even more mirrors.

Visit americanspecialties.com/roval for the updated ROVAL™ Collection catalog
<table>
<thead>
<tr>
<th>Reader Service #</th>
<th>Advertiser</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>3A Composites USA, Inc.</td>
<td>40</td>
</tr>
<tr>
<td>02</td>
<td>Adams Rite Manufacturing Co.</td>
<td>37</td>
</tr>
<tr>
<td>03</td>
<td>Alcoa Architectural Products</td>
<td>34</td>
</tr>
<tr>
<td>04</td>
<td>AluFlam USA</td>
<td>114</td>
</tr>
<tr>
<td>05</td>
<td>American Galvanizers Association</td>
<td>90</td>
</tr>
<tr>
<td>06</td>
<td>American Specialties, Inc.</td>
<td>115</td>
</tr>
<tr>
<td>07</td>
<td>Armstrong World Industries</td>
<td>1, Cov2</td>
</tr>
<tr>
<td>149</td>
<td>BEGA</td>
<td>39</td>
</tr>
<tr>
<td>08</td>
<td>Belden Brick</td>
<td>48</td>
</tr>
<tr>
<td>09</td>
<td>Birdair</td>
<td>24, 25</td>
</tr>
<tr>
<td>10</td>
<td>Boston Architectural College</td>
<td>119</td>
</tr>
<tr>
<td>11</td>
<td>Cambridge Architectural</td>
<td>41</td>
</tr>
<tr>
<td>12</td>
<td>Cascade Coil Drapery</td>
<td>119</td>
</tr>
<tr>
<td>13</td>
<td>CertainTeed Gypsum</td>
<td>12</td>
</tr>
<tr>
<td>14</td>
<td>Construction Specialties</td>
<td>17</td>
</tr>
<tr>
<td>15</td>
<td>E Dillon &amp; Company</td>
<td>7</td>
</tr>
<tr>
<td>16</td>
<td>Engineered Lighting Products</td>
<td>100</td>
</tr>
<tr>
<td>17</td>
<td>Forms &amp; Surfaces</td>
<td>47</td>
</tr>
<tr>
<td>18</td>
<td>Halfen Anchoring Systems</td>
<td>49</td>
</tr>
<tr>
<td>19</td>
<td>Headwaters Resources</td>
<td>123</td>
</tr>
<tr>
<td>20</td>
<td>Hewlett-Packard</td>
<td>45</td>
</tr>
<tr>
<td>21</td>
<td>Intuit</td>
<td>4</td>
</tr>
<tr>
<td>22</td>
<td>Intuit</td>
<td>5</td>
</tr>
<tr>
<td>23</td>
<td>Kallwall Corporation</td>
<td>117</td>
</tr>
<tr>
<td>24</td>
<td>Landscape Forms</td>
<td>6</td>
</tr>
<tr>
<td>25</td>
<td>Landscape Forms</td>
<td>22, 23</td>
</tr>
<tr>
<td>26</td>
<td>Lutron Electronics Co., Inc.</td>
<td>Cov4</td>
</tr>
<tr>
<td>27</td>
<td>McGraw-Hill Construction</td>
<td>118</td>
</tr>
<tr>
<td>28</td>
<td>Modern Fan Co., The</td>
<td>119</td>
</tr>
<tr>
<td>29</td>
<td>Mortar Net USA, Ltd.</td>
<td>91</td>
</tr>
<tr>
<td>30</td>
<td>National Building Museum</td>
<td>113</td>
</tr>
<tr>
<td>31</td>
<td>National Building Museum</td>
<td>122</td>
</tr>
<tr>
<td>32</td>
<td>National Building Museum</td>
<td>123</td>
</tr>
<tr>
<td>33</td>
<td>Oldcastle Architectural, Inc.</td>
<td>29</td>
</tr>
<tr>
<td>34</td>
<td>Oldcastle Architectural, Inc.</td>
<td>31</td>
</tr>
<tr>
<td>35</td>
<td>Oldcastle Architectural, Inc.</td>
<td>33</td>
</tr>
<tr>
<td>36</td>
<td>Oldcastle BuildingEnvelope™</td>
<td>2, 3</td>
</tr>
<tr>
<td>37</td>
<td>Pella Corporation</td>
<td>18</td>
</tr>
<tr>
<td>38</td>
<td>Petersen Aluminum</td>
<td>20</td>
</tr>
<tr>
<td>39</td>
<td>Pinecrest Doors</td>
<td>123</td>
</tr>
<tr>
<td>40</td>
<td>Prudential Lighting</td>
<td>95</td>
</tr>
<tr>
<td>41</td>
<td>Rocky Mountain Hardware</td>
<td>15</td>
</tr>
<tr>
<td>42</td>
<td>S-5-ColorGard.com</td>
<td>90</td>
</tr>
<tr>
<td>43</td>
<td>Sentrigard</td>
<td>26</td>
</tr>
<tr>
<td>44</td>
<td>Skyscraper Museum, The</td>
<td>105</td>
</tr>
<tr>
<td>45</td>
<td>Skyscraper Museum, The</td>
<td>122</td>
</tr>
<tr>
<td>46</td>
<td>Sliding Door Company, The</td>
<td>106</td>
</tr>
<tr>
<td>47</td>
<td>Sota Glazing</td>
<td>103</td>
</tr>
<tr>
<td>48</td>
<td>Technical Glass Products</td>
<td>10</td>
</tr>
<tr>
<td>49</td>
<td>Tile of Spain</td>
<td>100</td>
</tr>
<tr>
<td>50</td>
<td>Trespa</td>
<td>Cov3</td>
</tr>
<tr>
<td>51</td>
<td>Valspar Corporation</td>
<td>50</td>
</tr>
<tr>
<td>52</td>
<td>Velcro USA Inc.</td>
<td>107</td>
</tr>
<tr>
<td>53</td>
<td>VT Industries, Inc.</td>
<td>8, 9</td>
</tr>
<tr>
<td>54</td>
<td>Wausau Tile</td>
<td>105</td>
</tr>
</tbody>
</table>

To access PDFs of all full-page or larger ads appearing in this issue, go to ArchRecord.com > Products tab > Product Ads

Get more info at www.sweets.com
chief of *Pin-Up* magazine; Eva Franch, director of Storefront for Art and Architecture and Improv Everywhere; and Leonard Matin, pioneer of the neuromathematical model for spatial perception, this event presents case studies for reimagining our environments and, in turn, reimagining the ways we live. Visit www.madmuseum.org.

**Subtropical Cities 2011 Conference – Subtropical Urbanism: Beyond Climate Change**
Fort Lauderdale, Florida
March 8–11, 2011
The international collaborative conference will discuss the future of development in subtropical cities around the world. Key themes include: subtropical cities in the urban age, sustainable practices and decision making for resilient cities, and adaptation to climate change. At Florida Atlantic University. For more information, visit www.subtropicalcities2011.com.

**Permanent Change: Plastics in Architecture and Engineering**
New York City
March 30–April 1, 2011
“Permanent Change” sheds new light on plastics and their implications for the fields of architecture and engineering. Materials that forecast easily molded, reformed shapes have become a permanent measure and control point in design. This conference explores the boundaries between architecture, engineering, and materials science by mobilizing symposia, studios, exhibitions, books, and films in an intensely focused investigation. Architect Greg Lynn is the keynote speaker. Visit www.arch.columbia.edu/permanentchange.

**Competitions**

**American Society of Landscape Architects**
Deadline: February 25, 2011, for professionals; May 6, 2011, for students
Each year, the ASLA Professional Awards honor the best in landscape architecture from around the globe, while the ASLA Student Awards give us a glimpse of the future of the profession. Award recipients receive featured coverage in Landscape Architecture, the magazine of ASLA, and in many other design and construction industry publications and general interest media. For more information, visit www.asla.org.

E-mail information two months in advance to recordevents@mcgraw-hill.com. For more listings, visit architecturalrecord.com/news/events.
Finding the Right Product Is a Must.

Wasting Time Searching For It Isn’t.

Browse. Compare. Select.

FIND IT AT

SWEETS.COM

84,000 Building Products - 80,000 Content Components

BIM | CAD | SPECS | GREEN | 3D | CATALOGS

www.sweets.com
Distance M.Arch
Practice in Anchorage... earn your master's in Boston.

78% of all May 2010 BAC graduates are currently employed in design fields. Earn your degree in two years of academics and practice while living and working anywhere.

the-bac.edu | 617.585.0202

Woven Wire Fabric
Projects include multi-story wire mesh draperies for hotels, auditoriums, and casinos; curved dividers for visual merchandising; window treatments for private homes; safety & blast mitigation screening; sculptural forms for urban gardens; decorative interior/exterior wall coverings; solar shading for buildings and parking garages; avairy screening for animal habitats, and see-through appealing barriers for commercial security. Whatever the application, let us help you realize your creative vision.

www.cascadecoil.com | 800-999-2645
PRODUCT SPOTLIGHTS

DOORS, WINDOWS

ALUMINUM (STEEL ALT.) WINDOW & DOOR

SSS | NEW

Panda Windows & Doors LLC

Superior in design to classic steel windows but with same appearance. Features an ultra-slim profile for maximum glass to frame ratio.

Product Application:
- Historic renovation
- Custom residential
- Commercial

Performance Data:
- Tilt & turn configuration available
- Extra large sizes available

www.panda-windows.com
702.643.5700

Circle 150

DOORS, WINDOWS

DYNAMIC DAYLIGHTING & SHADING

G

CPI Daylighting

- The IntelaSun high-performance glazing system gauges the sun’s position, then adjusts to provide the desired sunlight transmission and shading.

Product Application:
- Evans-Harvard High-Performance Classroom, daVinci Arts Middle School, Portland, OR
- Green construction requiring LEED certification

Performance Data:
- Soft diffused light, no glare
- Any desired level of light transmittance: 3 - 70%
- U-values from .20 - .23, SHGC as low as .09

www.cpidaylighting.com
800.759.6985 | Contact: Taila Vinograd

Circle 154

DOORS, WINDOWS

FIRE-RATED GLAZING SOLUTIONS

WR | G

SAFTIFIRST

- Leading US manufacturer of fire- and safety-rated glazing and framing systems: 20 min. to 2 hr. Fire-rated doors, windows and openings, wall systems.

Performance Data:
- Meets UL, NFPA, and ASTM test standards
- NFRC-certified make-ups available

www.safti.com
888.653.3333

Circle 152

DOORS, WINDOWS

SINGLE-TRACK SLIDING SYSTEM

WR | G | NEW

NanaWall Systems, Inc.

- NanaWall announces the new VSW65 single-track sliding system with center swing doors.

Product Application:
- Residential, commercial, educational applications
- Indoor and outdoor systems

Performance Data:
- A four-panel single-track sliding wood system with center swing doors
- Pocket option available
- High performance levels for air, water, structure, and security

www.nanawall.com
800.873.5673

Circle 153

DOORS, WINDOWS

ARCHITECTURAL CEILING FANS & LIGHTING

G

G Squared Art

- San Francisco ceiling fan—a GOOD DESIGN Award winner. Whisper quiet, powerful, reliable energy saver.

Product Application:
- Suitable for sloped ceilings up to 30°, can be used on 8-ft. ceilings or on cathedral ceilings

Performance Data:
- Light kit and other finishes available
- Lifetime warranty

www.g2art.com
877.858.5333 | Contact: info@g2art.com

Circle 154

DOORS, WINDOWS

ELECTRICAL, LIGHTING

LED

SS | G | NEW

The Wagner Companies

- Wagner Lumensair® ETL-listed luminaries produce brilliant cool or warm white light. They may be wall, ceiling, or under-cabinet mounted.

Performance Data:
- ETL listed for wet and dry locations
- Photometric data and IES files available on request

888.243.6914 | Contact: Jay Woggan

Circle 155

U.S. Patent Infringement

DOORS, WINDOWS

TECHNICAL أجل

SINGLE-TRACK SLIDING SYSTEM

WR | G | NEW

NanaWall Systems, Inc.

- NanaWall announces the new VSW65 single-track sliding system with center swing doors.

Product Application:
- Residential, commercial, educational applications
- Indoor and outdoor systems

Performance Data:
- A four-panel single-track sliding wood system with center swing doors
- Pocket option available
- High performance levels for air, water, structure, and security

www.nanawall.com
800.873.5673

Circle 153

DOORS, WINDOWS

ARCHITECTURAL CEILING FANS & LIGHTING

G

G Squared Art

- San Francisco ceiling fan—a GOOD DESIGN Award winner. Whisper quiet, powerful, reliable energy saver.

Product Application:
- Suitable for sloped ceilings up to 30°, can be used on 8-ft. ceilings or on cathedral ceilings

Performance Data:
- Light kit and other finishes available
- Lifetime warranty

www.g2art.com
877.858.5333 | Contact: info@g2art.com

Circle 154

DOORS, WINDOWS

ELECTRICAL, LIGHTING

LED

SS | G | NEW

The Wagner Companies

- Wagner Lumensair® ETL-listed luminaries produce brilliant cool or warm white light. They may be wall, ceiling, or under-cabinet mounted.

Performance Data:
- ETL listed for wet and dry locations
- Photometric data and IES files available on request

888.243.6914 | Contact: Jay Woggan

Circle 155

DOORS, WINDOWS

RECYCLED RUBBER FLOORING

SS | G | NEW

ECOsurfaces Commercial Flooring

- ECOs bonds ECOsurfaces’ wear layer and underlayer materials into one homogeneous product.

Product Application:
- Wawa, DE

Performance Data:
- Wear layer composition: recycled SBR tire rubber and ColorMill EPDM
- Underlayer composition: recycled SBR tire rubber

www.ecosurfaces.com
877.236.7873

Circle 156

DOORS, WINDOWS

INTERIOR FINISHES, FURNISHINGS

EXTERIOR/INTERIOR GREEN WALL SYSTEM

SS | G | NEW

Tournesol Siteworks

- Wide range of commercial living wall systems and trellises. On-structure or freestanding solutions.

Product Application:
- Living wall modules for complete coverage, edible walls
- Commercial trellis for green facade
- Hybrid—living wall coverage at trellis prices

Performance Data:
- Commercial quality, low maintenance
- Grown and installed by local contractors, uses recycled content

www.tournesolsiteworks.com
800.542.2282

Circle 157

DOORS, WINDOWS

LANDSCAPING, SITEWORK
PRODUCT SPOTLIGHTS

ARCHITECTURAL NATURAL STONE

Vermont Structural Slate Company

- Quarrier and fabricator offering select slates, quartzites, sandstones, limestones, marbles, granites and basalts.
- Product Application:
  - Project: Memorial Sloan-Kettering - Mortimer B. Zuckerman Research Building
  - Architect: SOM
  - Heathermoor Slate Coursed Sculptings

www.vermontstructuralslate.com
800.343.9300 | Contact: Kristen Hadeka

Circle 158

BEAUTY OF A 20 BUILT FOR CATEGORY 4

Sentrigrad Metal Roofing Systems

- Architectural metal roofing systems.
- Product Application:
  - St. Anne’s Belfield School, Charlottesville, VA
  - Cary Street Gym, Richmond, VA
  - Northumberland School, Heathsville, VA
- Performance Data:
  - Miami-Dade Product Control approved—green sustainable
  - State of Florida HVHZ Product Control approved

www.sentrigrad.com
877.495.7663 | Contact: Chris Payne
METALCON Booth #838
Circle 159

ROOFING, SIDING, THERMAL & MOISTURE PROTECTION

BREATHABLE CEMENT FINISH FOR EIFS

Formulated Solutions LLC

- TESS® finish offers the design freedom of synthetic stucco with the durability and color retention of a flexible cement finish.
- Performance Data:
  - Thinset cementitious finishing system for EIFS and one-coat stucco, no VOCs
  - 10-year antimicrobial protection with non-toxic Duracide®; 48 standard colors, 4 textures
  - Flexible: withstands substrate movement and vibration
  - Meets or exceeds AC235 and AC11 ICC-ES

www.TESSFinishes.com
718.257.6380 | Contact: Diane Burmeister
Circle 160

TRANSPERED SOLAR COLLECTOR

ATAS International, Inc.

- To provide supplemental heating, the InSpire system utilizes solar energy to preheat fresh air using perforated metal wall panels.
- Performance Data:
  - Lowers heating costs by $3-$5 per sq. ft. of panel per year
  - Converts up to 80% of solar energy
  - Heats fresh air and utilizes free solar energy
  - Qualifies for LEED® credits
  - Payback generally within 4 to 7 years

www.atas.com
800.468.1441
Circle 161

WIRE MESH SYSTEMS

The Gage Corporation, Int.

- GageWoven® is an innovative collection of 23 architectural wire mesh designs.
- Product Application:
  - Calgary Zoo, Canada
  - State Street Bank, North Quincy, MA
  - 217 17th St., Atlantic Station, Atlanta, GA
- Performance Data:
  - Class A ASTM E-84
  - Durable, low-maintenance stainless steel

www.gagecorp.net
608.269.7447, 800.786.4243
Circle 163

CUSTOM WOOD FIREPLACE MANTELS

Anthony Lombardo Designs Inc.

- Anthony Lombardo Designs, with over 30 years of experience, is recognized as preeminent in the art of creating fine, authentic custom fireplace mantels and boiserie. They have over 20 antique models to choose from; their master carvers can also reproduce any mantel from your photo or drawing without loss of integrity in any size or species, including walnut, mahogany, cherry oak, poplar, maple, and pine. Visit their website.

www.anthonylombardodesigns.com
917.945.9206 | Contact: Anthony Lombardo
Circle 164

SOUND-ISOLATION ROOMS

NEW

Wenger Corporation

- Improved acoustical performance and enhanced aesthetics are key features of new Soundlok™ rooms. Active acoustics technology available for music practice. Advanced engineering guarantees sound isolation.
- Product Application:
  - University of Iowa, Iowa City, IA
  - Timber Creek High School, Keller, TX
  - Boston University, Boston, MA
- Performance Data:
  - Modular, relocatable rooms offer flexibility

www.wengercorp.com
800.493.6437
Circle 165

All products in this section are accessible on sweets.com.
BUILDING DESIGNER
CIVE CONSULTING INC. (HOUSTON, TX)
Integrate elements in designs; Prep contract docs; prep scale drawings; plan layout; admin construction contracts; conduct on-site supyn. Bach. deg in Architecture or foreign equiv. & 5 yrs of progr. exp req. 40hrs/wk. Prev. wages paid. Resume: Steven Williams, 11200 Westheimer, Ste. 800, Houston, TX 77042.

MAGNET FOR TALENT
JR Walter Resources, premier A/E/C recruiting firm, can help you grow your company and your career. Review current opportunities at www.jrwalters.com or call 269-925-3940.

WWW.SMPSCAREERCENTER.ORG
Find marketing/BD professionals with A/E/C experience. Call 800-292-7677, ext. 231

ARCHITECTURAL RECORD
To view Architectural Record online visit: www.architecturalrecord.com

THE SKYSCRAPER MUSEUM
VERTICAL URBAN FACTORY
through June 2011

Book Talk: February 7
Kenneth T. Jackson
The Encyclopedia of New York City, 2nd ed.

The McGraw-Hill Companies
Find us online at www.construction.com

McGraw-Hill CONSTRUCTION

POSITIONS VACANT

Connect with more than 310,000 architectural professionals & potential candidates

Employers, recruiters, colleges and universities look to our Career Center for recruiting solutions

• Promote your firm as a great place to work
• Recruit top faculty for your college or university

Use our Classified Advertising section to promote your product or service

• Promote to categories including official proposals, software, special services, seminars/training & business opportunities
• Targeted coverage of owners, engineers, specialty consultants, design team members and international professionals

Architectural Record offers exclusive reach to every member of the AIA, plus non-member architects, offering you more architects than any other publication

• Increase your visibility: Combine your ad in Architectural Record with our online recruitment - offer 700,000 user sessions per month

To obtain information or to reserve space contact:
RECRUITMENT ADVERTISING
Diane Solster at Tel: 212-904-2021/Fax: 212-904-2074 Email: diane_solster@mcgraw-hill.com
Ruthann Lubrano at Tel: 212-904-2815/Fax: 212-904-2074 Email: ruthann_lubrano@mcgraw-hill.com

CLASSIFIED ADVERTISING
Brian Sack at Tel: 609-426-7403/Fax: 609-371-4401 Email: brian_sack@mcgraw-hill.com
HOW TO combat global warming, reduce the production of greenhouse gases, and build a stronger infrastructure.

SPECIFY FLY ASH (a recovered resource) as a replacement for cement in concrete.

When you specify fly ash as replacement for cement in concrete, you help reduce CO₂ emissions from cement production, conserve landfill space, and decrease water usage. You also enhance workability and chemical attack resistance, increase strength and produce more durable concrete.

Contact Headwaters Resources for free technical literature and information on how fly ash use benefits the environment and produces better concrete.

HEADWATERS RESOURCES

www.flyash.com | 1-888-236-6236

I HAVE SEEN TOMORROW

DESIGNING TOMORROW
AMERICA’S WORLD’S FAIRS OF THE 1930s
OCTOBER 2, 2010–JULY 10, 2011

INCOMPARABLE SELECTIONS SINCE 1954 • LOWEST PRICE ALWAYS •
FINESST DESIGNS • CUSTOM QUALITY • DOORS • MANTELS • GRILLES •
SHUTTERS • SHOJI • LOUVERGRID • TIN CEILING • CORNICES •
LANDSCAPE LIGHTING • 1000+ CATALOG PAGES • FAST PAGE TURNING FORMAT •
WWW.PINECRESTINC.COM 800-443-5357

Rakks L Bracket system provides unparalleled design, flexibility and strength.

SENSIBLE SHELVING

We create shelving systems that seamlessly integrate into creatively designed environments. Fresh, dramatic, inspired. It’s not surprising that top architects and designers turn to us when they want to express their style. Visit us at www.rakks.com, or call for a catalog.

Rakks®
CIRCLE 38

In supporting roles everywhere

Ringine Corporation | 330 Reserve Street | Needham, MA 02494 | 800-826-6096 | www.rakks.com
ON THE BORDER of Slovenia in southern Austria, Germany-based architecture firm terrain:loenhart&mayr designed the 80-foot-high Murturn Nature Observation Tower to lift hikers and other visitors above the nature preserve’s tree canopy. There, they have a clear view of the Mur River, which isn’t possible from the thick woods below. "This is one of the few points where you can actually see something," says Klaus Loenhart of terrain. "You can understand where you are."

 Naturschutzbund, the Austrian Nature and Biodiversity Conservation Union, asked Loenhart and his partner, Christoph Mayr, to create a place from which to observe the ecological restoration of the river, once part of the Iron Curtain and now in the European Green Belt. The architects didn’t want to interrupt the flow of the pathway through the woods. After climbing the tower’s 168 steps, visitors descend a second, intertwined staircase. Steel girders joints connect welded steel pipes in the double-helix structure. The pipes decrease in diameter toward the top of the tower, "like the branching pattern of a tree," says Loenhart. (He and Mayr were inspired by the flights of steps leading to a 1499 castle in nearby Graz.) The architects clad the stairs in aluminum to reflect the sky, a trick they learned from designing small garden pavilions. The mayor of a nearby village has been visiting almost every day since the tower opened in March 2010, says Loenhart. "Now he’s totally into the atmospheric difference." Laura Raskin

Expanded coverage of the tower can be found at architecturalrecord.com.
For personal patterns, think Trespa

Design a new Rhythm to create the unexpected
Fascinating rhythms in shapes, lines and patterns can portray a range of emotions. These patterns change as light plays across a facade... highlighting an unexpected array here, a surprising texture there.

Intricate patterns and thoughtful color choices amuse the eye and help connect with people on an emotional level. The Rhythm concept from Trespa fosters an exciting diversity of possibilities leading to classic and timeless design that will last forever.

For more information: www.trespa.com/na
Lutron®—save energy and reduce operating costs

NEW Quantum® light management solutions can SAVE 60% of lighting energy used in your building, respond to peak pricing and demand response signals, AND improve comfort and productivity by utilizing dimming, occupancy sensing, automated shading and daylighting.

**Fluorescent Dimming**
- Light level is proportional to energy use
- Dim your lights and you’ll use less energy
- Dimming lights by 50% uses only 60% of the energy—saving 40%

![Fluorescent Dimming Diagram]

**Occupancy Sensors**
- Sensors automatically turn lights off when a room is vacant
- Easy to retrofit with wireless communication and 10-year battery life
- Can provide up to 20% lighting energy savings

![Occupancy Sensors Diagram]

**Automated Shades**
- Hyperion™ solar-adaptive shading can save 10% on HVAC

**Summer Days:** close shades to keep heat out and provide soft, even light, for an enjoyable work environment

**Winter Nights:** close shades to keep heat in

**Year Round Days:** close shades to reduce glare and increase employee productivity

![Automated Shades Diagram]

**Smart Grid Integration**
- Automatically or manually reduce energy usage to avoid peak pricing penalties by adjusting lights and shades
- Allows your facility to easily participate in demand response or peak pricing programs

![Smart Grid Integration Diagram]

For more information on what Lutron Quantum solutions can do for you—or to schedule an on-site lighting energy assessment—call 1.888.LUTRON1 or visit www.lutron.com