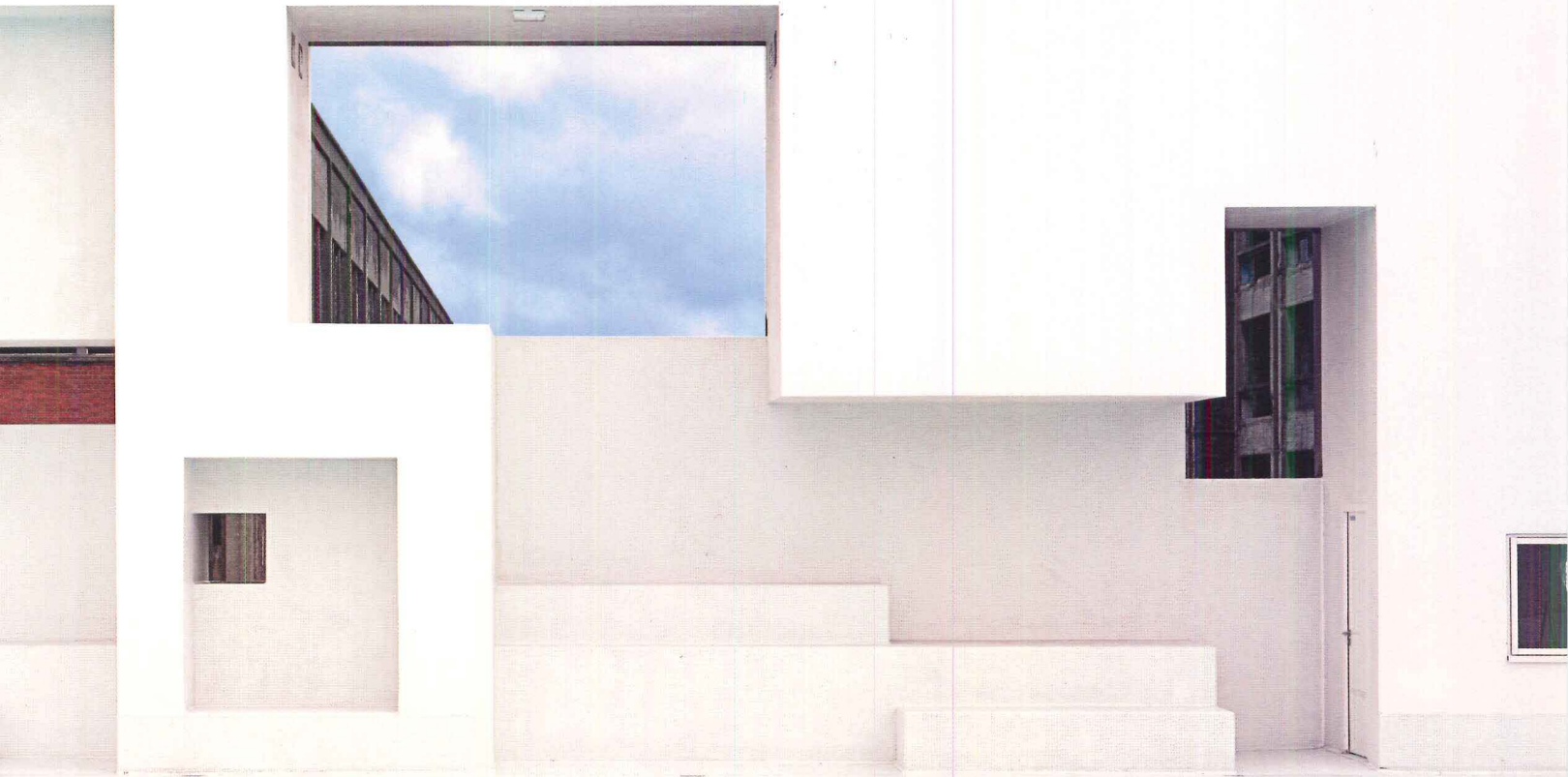


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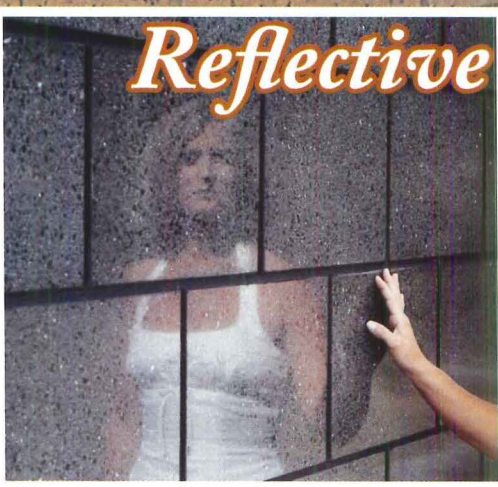
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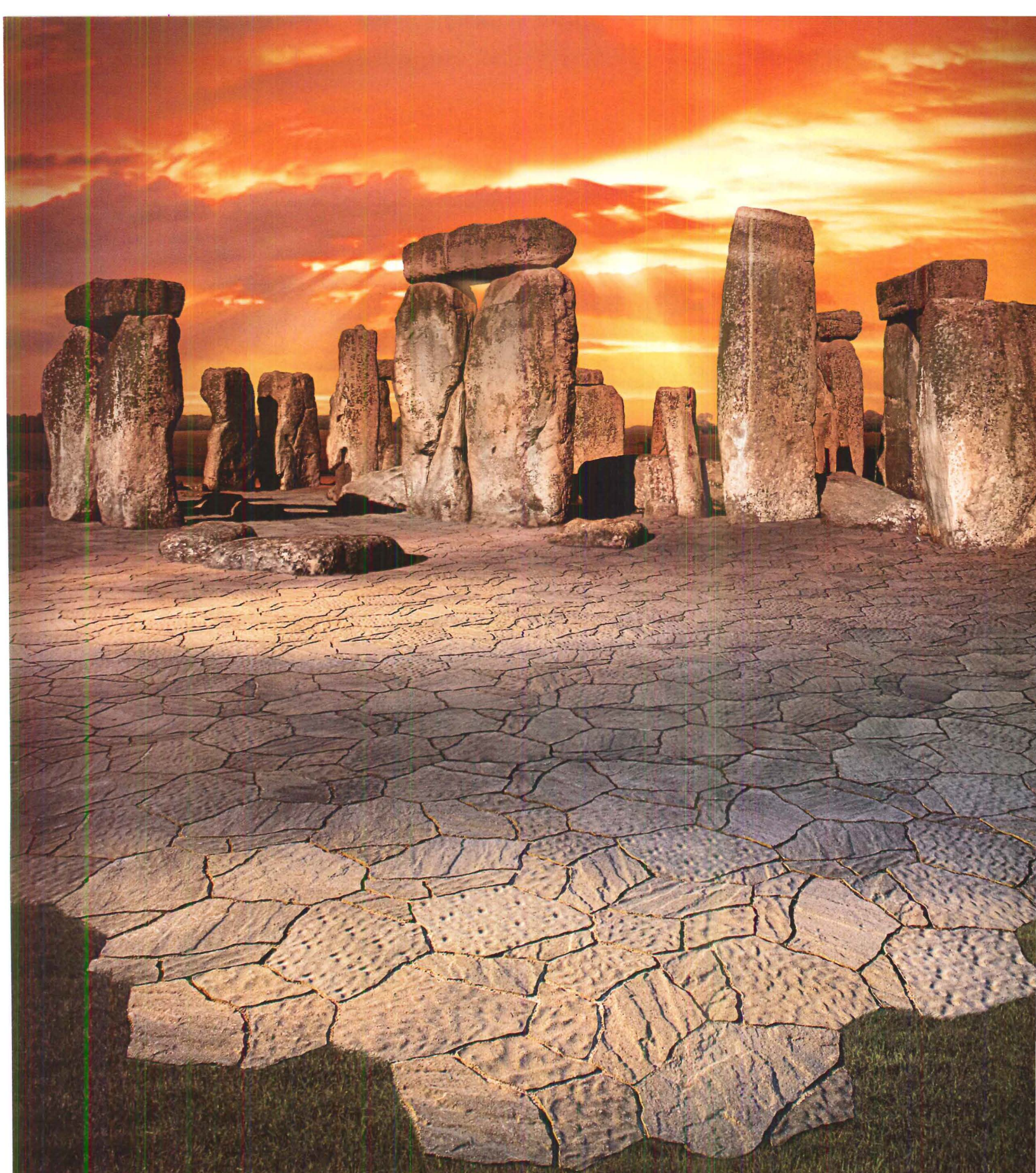
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On the Cover: *Les Bains des Docks* by Ateliers Jean Nouvel, photo by Roland Halbe.
Clockwise from top: *The Art Institute of Chicago—The Modern Wing*, photo by Chuck Choi;
Foscarini's Fly-Fly lamp; *Ray Kappe*, FAIA, photo by Jeff Corwin.

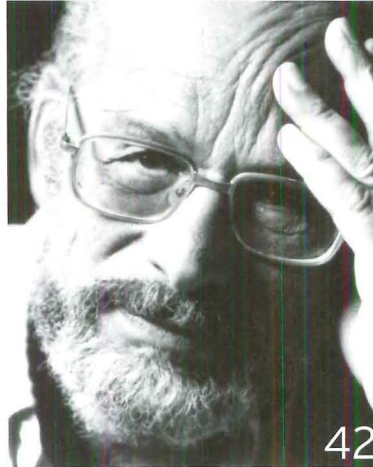


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 Expanded coverage of Projects, Building Types Studies, and Web-only features can be found at architecturalrecord.com.

08.2009
On the Web 


This month on the Web, we have several new additions related to our print coverage, including **video tours** of **Ray Kappe's house** and **The Art Institute of Chicago's Modern Wing**, as well as a Web-exclusive **Frank Gehry** interview.



Reader Photo: This image of a house in Sotogrande, Spain, by HB Design is one of more than 2,000 reader-submitted images in ARCHITECTURAL RECORD's online galleries.

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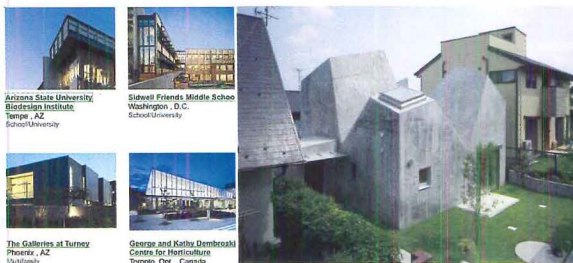


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Your Comments

“As for all the people supporting or bashing the Romanticist or Modern style, at the end of the day, the contrasting and eclectic architecture in cities like Paris, New York, and Chicago is what makes them beautiful.”

– Anonymous, on “Two Views: Lord Rogers vs. Prince Charles”

Record TV

Art Institute of Chicago director James Cuno takes us on a video tour of the museum's new Renzo Piano–designed Modern Wing.

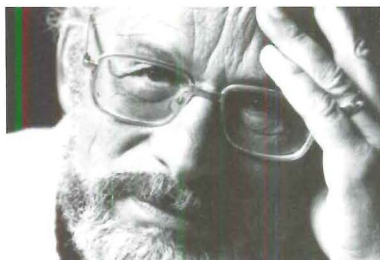
Green Project Database

Search thorough, data-rich case studies of sustainable buildings published in RECORD's sister publication, *GreenSource* magazine.

House of the Month

Shaped like a cluster of barnacles, this house in Yokohama, Japan, by Torafu Architects, doesn't exactly blend in with its neighbors.

Expanded Coverage



Features

Read an extended interview with revered California architect Ray Kappe, take a video tour of his home, and view photographs of his work.



Project Portfolio

We speak with Frank Gehry, Art Gallery of Ontario director Matthew Teitelbaum, and others involved with the AGO's new building.



AR2

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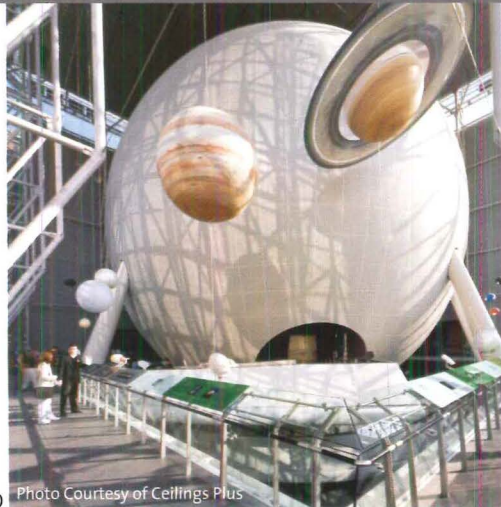
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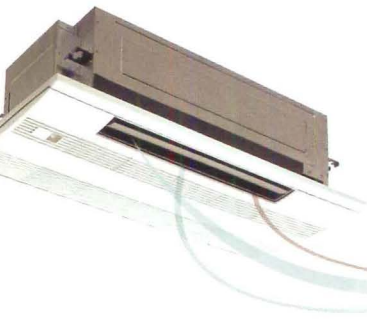
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Editorial

By Robert Ivy, FAIA

For generations of American architects (generations, not years), Julius Shulman idealized the built world. Born in 1910, and active until recently, Shulman's eye framed essential architectural imagery and recorded it for the world. His passing on July 15 marks a shift in how we appreciate architecture today and suggests we pause to reflect on architectural photography.

First, Julius. This irrepressible personality, lacking formal training in either architecture or photography, but with an upwelling enthusiasm for good architecture, found his calling when he saw Richard Neutra's California houses in 1936. Shulman subsequently mastered the craft of the architectural photograph, using the basics, none more than light. In his iconic images, real and artificial lighting fill space like ether, allowing us to imagine in two dimensions how three-dimensional reality feels. Light paints surfaces; highlights details; provides strong, shadowy contrast, and consequently provides depth and mass.

Architects love the fact that in Shulman's best black-and-white pictures, the architectural elements, crisp as fresh chipboard, pop from the page. At the same time, he invariably and intentionally sets the work deeply in the context of its (usually) Southern California setting. In a Shulman photograph, we know exactly where we are, whether perched high in the Hollywood Hills above Laurel Canyon Boulevard—scene of his riveting, dramatic image for Arts and Architecture magazine of Case Study House Number 22, by architect Pierre Koenig for Carlotta and Buck Stahl in 1960—or architecture melded into the landscape, where walls between interior and exterior disappear in a color image—as in Richard Neutra's Samuel and Luella Maslon house, in Rancho Mirage, California, of 1962.

By enhancing our appreciation of the depth of field, the photographer managed to engage us beyond the picture plane. The basics of fore-, middle-, and background, so numbingly simple as a principle, yet often overlooked, establish a kind of perspective reminiscent of the craft of quattrocento Italian painters. Who can overlook the twin chairs at Neutra's Edgar Kaufmann house in Palm Springs of 1946–47, the glowing house behind the pool shot through with light at midrange, and the lumbering insistence of the dark mountains behind? Great architecture; great image.

Craft lay in the photographer's attention to detail, not leaving the basics to chance. For the Koenig house, Shulman opened his lens on the cosmos of the Los Angeles night for 7.5 minutes with his 4x5 camera, at the same time that a flash highlighted two women standing inside the primary space. Serendipity came from the repeated reflection of a hanging orb that stepped into space, multiplying the spatial effect with that of time: The image ascends from the literal to the metaphorical or philosophical. Craft laid the

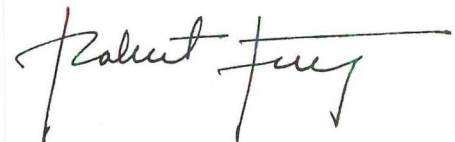
groundwork that chance compounded; historically, much art has relied on such formulation.

Shulman's work described the work of ordinary, good, and great architects, for a variety of media, but none more emphatically than the midcentury architectural journals, including ARCHITECTURAL RECORD. His clientele included a who's who of practitioners in his own backyard, from Frank Lloyd Wright, Richard Neutra, Rudolph Schindler, Charles Eames, Eero Saarinen, Albert Frey, Harwell Hamilton Harris, John Lautner, and Mies van der Rohe. His own photographs described the flowering of contemporary American architecture, introducing us to it through his lens. Shulman was not alone. His peers included the late Marvin Rand in Southern California, the Hedrich Blessing firm in Chicago, Balthazar Korab in Detroit, and the late Ezra Stoller in New York.

Today, architectural photographers continue to do what Julius did, though with some changes. Most have jettisoned the 4x5 for digital cameras, taking multiple pictures of the same scene, rather than relying on the staged shot, which might take three hours to execute. Like architects, many travel beyond their home territories, following the trail of contemporary work as far as Outer Mongolia, if talent has built there. They know the airports well.

Today's architectural photographers continue to idealize architecture, but sometimes catch the entire urban or rural scene, including the stuff that makes up real life, including wires and people and cars and potholes. They shoot, almost exclusively in color, broadcast their work electronically, and e-mail their images to clients and publications, whether magazines or books. They see a large volume of new work, and shoot multiple projects.

Seeing constitutes a form of making. Like Julius Shulman, Iwan Baan and Timothy Hursley, Roland Halbe and Christian Richters, Peter Aaron, Alan Karchmer, and Jeff Goldberg act as our surrogates. They travel for us, see the new architecture, and remake the world each month. We know contemporary architecture first through their eyes. As long as there are journals or monographs or Web sites, we need their curatorial expertise, to catch the shot, to choose the best, and describe the work. How this highly refined craft will evolve, as we transition toward new technologies, including three-dimensional media, remains to be seen. Once seen, will we appreciate this world as fully as we have enjoyed it through eyes of Julius Shulman? Ever optimistic about the next generation, he would have laughed away the doubt.



Letters

Drawing on language

I just finished reading Robert Ivy, FAIA's July editorial, "Drawing, ca. 2009" [page 15]. How welcome to see something in praise of nuance. I think it was Ricoeur who wrote with particular incisiveness about how, despite some arguments for so-called "scientific language," words actually have multiple meanings that continually change. Might the richness of real language be akin to the richness of real drawing? Ivy's editorial hits all the right notes – notes that seem to be growing more and more faint as the screeches, clanking, and high-frequency whirring sounds of so much else grow louder.
*Todd Phillips, AIA
Middleburg, Va.*

Recycling content

Congrats on the wonderful articles on

adaptation and preservation in your June 2009 issue. With the exception of Arizona, which has had legislation in place for the past six years to mandate a study of the potential to extend the life of existing government buildings before they can be replaced, I can think of no other legislation in the U.S. that is really holistically engaged in this important concept. Isn't it about time that they were?

*J.A.J. Anderson
Phoenix*

It's the economics, stupid

In response to Ted Landsmark's May essay, "Prescriptions for Change" [page 80], I offer the following: The lack of diversity in the practice of architecture is about a lack of commitment to our profession to build a stable, vital, and financially remunerative profession far more than it

is about any lack of commitment to amplifying diversity. Why would minorities, who presumably have had more difficulty with upward mobility, want to chance a commitment to a profession that is, ultimately, likely to yield a relatively low return on investment, so to speak?

*Theodore L. Grabarz, AIA
Bridgeport, Conn.*

A final dig

Knocking Lincoln Center has been almost a cottage industry since the day it opened, and Martin Filler's June Critique, "After 50 years, Lincoln Center still offers plenty to criticize" [page 37], adds a few more choice stories. Still, I think the best and briefest comment was Pauline Kael's, in a review of a film festival there: "I always find it depressing to go to anything at Lincoln Center. Its

architecture looks like something Mussolini would have ordered over the telephone."

*Christopher Adams
Via e-mail*

Corrections

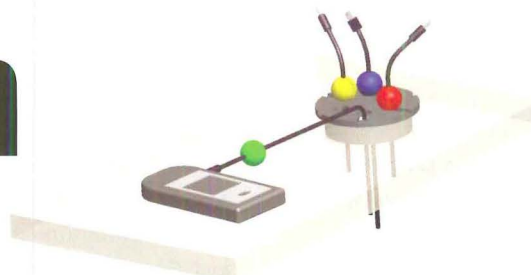
The caption identifying the photo on the July cover indicated the wrong project. The project pictured is the Promenade Samuel-de Champlain in Quebec by Daoust Lestage, Williams Asselin Ackaoui, and Option Aménagement, not the Inujima Art Project. Wendy Evans Joseph Architecture should have been credited for the design of the installation for the exhibition *Frank Lloyd Wright: From Within Outward* in the July Exhibitions column [page 43], and in the Critique in the same issue [page 33].

Send letters to rivy@mcgraw-hill.com.

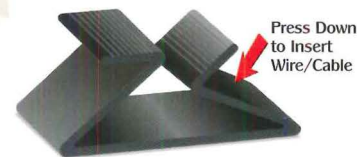
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CIRCLE 14

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Pitt's Make It Right unveils new designs



A duplex by Los Angeles-based GRAFT is among the 14 new designs.

With this second round of schematics, MIR is offering residents the opportunity to rebuild affordable du-

plexes in addition to the single-family schemes introduced in 2007. "We always wanted to expand the design catalog, and doubles is a typology that's used throughout New Orleans and the Lower Ninth Ward," says MIR

executive director Tom Darden. "It's a demand we were eager to meet."

The duplexes are by 14 architecture firms, including eight that are new to the MIR program. The studios include Atelier Hitoshi Abe, Bild Design, Billes, buildingstudio, BNIM, Constructs, Elemental, Gehry Partners, GRAFT, Kappe Architects, MVRDV, Pugh + Scarpa, Waggonner & Ball Architects, and William McDonough + Partners (a longtime consultant to MIR and responsible for its Cradle-to-Cradle criteria).

Most of the new designs feature pared-down geometries that

harmonize with traditional regional expression. Exceptions, such as the schemes created by buildingstudio and GRAFT, take on a sleeker appearance, while MVRDV's splayed houses and the angular asymmetry of Pugh + Scarpa's design are more exuberant. For the most part, the designs have flexible floor plans, forge a close relationship with street life, and integrate outdoor and landscaped spaces with architecture. MIR expects to break ground on two duplexes this month. *David Sokol*

[View additional images online.](#)

On July 1, actor Brad Pitt's organization Make It Right (MIR) released 14 new designs that will be among the 150 houses reconstructed in the Lower Ninth Ward of New Orleans in the wake of Hurricane Katrina.

Work to begin on long-delayed Louis Kahn park

After decades of false starts, one of architect Louis Kahn's final works, a 4.5-acre park in New York City to honor President Franklin D. Roosevelt, is scheduled to break ground this month.

Called Four Freedoms Park, the memorial will be built on the southern tip of Roosevelt Island, a 2-mile-long sliver of land in the East River. Kahn designed the project shortly before he died in 1974.

On June 25, the nine-member board of the Roosevelt Island Operating Corporation, which runs the island, voted 7 to 1 in favor of the proposal, with one member not present. Plus, the \$45 million project has secured the \$14.7 million in public and private money it needs for the first phase of construction, along with the two-dozen necessary approvals from 18 city, state, and federal agencies, says Gina Pollara, who is supervising the project on behalf of the Franklin and Eleanor Roosevelt Institute, the sponsor. "I'm thrilled," says Pollara,

who trained as an architect. "We're definitely moving forward."

The park's dart-shaped design features stone-paved promenades that edge a sloping lawn fringed with linden trees. At the tip will sit a 3,600-square-foot enclosure ringed with 28 tall granite blocks inscribed with snippets of the famous "Four

Freedoms" speech, which Roosevelt gave to Congress in 1941.

Though some steps in the enclosure will give way to accessibility ramps to bring it up to snuff with modern codes, the end result will be remarkably similar to Kahn's original, says Paul Broches, AIA, a principal at Mitchell/Giurgola Architects, the lead architect. "We wanted to retain, as literally as possible, everything

in that design," says Broches, whose firm helped draft the original construction documents in 1975. (Funding woes scuttled the project in the 1970s; a revival of the scheme in the 1990s met political resistance.)

The first phase entails construction of the enclosure and adjoining sculpture court. Phases two and three still await funding.

The park would be Kahn's premier project in New York City, in a state with just two of them: Temple Beth El, in Chappaqua, and First Unitarian Church, in Rochester. It will also be the first Roosevelt memorial in New York, the president's native state, which would please Kahn, who designed housing projects in Philadelphia during the Depression through Roosevelt-created jobs programs, says Sue Ann Kahn, the architect's daughter. "My father was supported by the W.P.A.," Kahn says. "I remember listening to reports of Roosevelt's death on the radio during dinner." *C.J. Hughes*



Four Freedoms Park will be built on Roosevelt Island in the East River.

[View additional images online.](#)

AR TWO VIEWS

Lord Rogers vs. Prince Charles



The British architect Richard Rogers recently made headlines when he lambasted Prince Charles for meddling in the democratic planning process. Specifically, Lord Rogers was displeased with the prince's involvement in scuttling one of his major commissions, Chelsea Barracks, which called for a series of glass-and-steel buildings in west London. The prince, a traditionalist, reportedly contacted the project's principal backer, the Emir of Qatar, to express his disappointment in the design. Soon after, Rogers's plan was scrapped. Here, two prominent U.K. critics share their views on the controversy.

Pro Prince Charles

By Meredith Etherington-Smith

There was jubilation among the locals buying organic vegetables in the Chelsea Farmers' Market in London as news spread that the Qatari royal family had sacked starchitect Richard Rogers and canceled his scheme for Chelsea Barracks because – it was said – of a letter Prince Charles had written to the Emir of Qatar expressing his disquiet at the plan.

To read in English newspapers about the resulting storm is to mistakenly think that Prince Charles was alone and old-fogeyish in his concern about Rogers's steel towers and their relationship with the adjacent Royal Hospital, built by that Modernist of his

day, Christopher Wren. In fact, a legion of residents was against the plan.

This wasn't a Modernist-versus-Traditional debate, as Rogers and his allies tried to turn it into. It was more basic than that. The 118-foot-high towers – mini skyscrapers – would have cut out sunlight. The plan was far too dense, housing 3,000 new people with no infrastructure to support them. Current narrow roads would have had to take 1,500 more vehicles, and there were no streets in the Rogers development to reduce the strain. Open spaces? Hardly. Only 1.3 acres on the 13.5-acre site. Not enough residents' parking, limited public transport. The advocacy organization Chelsea Barracks Action Group had very good local-interest points.

But the rationale, and a petition with 50,000-plus signatures, were not good enough for Westminster Planning, which was about to rubber stamp the Rogers plan. At the last minute Prince Charles stepped in, putting forward his own candidate, the traditionalist Quinlan Terry. The prince told the site's owner, Qatar Diar, a development company controlled by the Qatari royal family, he thought Rogers's plan was "unsympathetic" and "unsuitable" and "would clash with the architecture of the area." All hell immediately broke loose in the starchitect establishment.

Himself a resident of Chelsea, where he lives in two early-19th-century houses that he has completely gutted, Lord Rogers told a British newspaper that the prince's intervention was an unconstitutional abuse of power. The royal family is not meant to air its political views publicly, so in trying to turn the turn-down into a political debate, Lord Rogers was playing a shrewd endgame. It did not work. In spite of a stern letter to *The Times* – signed by Frank Gehry, Zaha Hadid, Norman Foster, and Renzo Piano – decrying Charles's "private comments and behind-the-scenes lobbying," the residents of Chelsea are breathing great sighs of relief. Anything, visitors to the farmers' market said, will be better for the neighborhood.

And Lord Rogers? A bad loser. "I think [Prince Charles] pursues these topics because he is looking for a job," Rogers reportedly said. "He is actually an unemployed indi-



Rogers's design for the Chelsea Barracks in London incited fierce debate.

vidual, which says something about the state of the royal family."

Meredith Etherington-Smith, former Art Review editor, is editor in chief of *Christie's Publications*.

Pro Lord Rogers

By Hugh Pearman

The Chelsea Barracks farrago in London – Prince versus Lord, Charles versus Rogers – is more about density than style. And now that the brief has changed, Rogers deserves a second chance.

I am anti-Charles because I do not believe that important decisions on what gets built in London should be based on letters sent between princes, which is what happened here. Those who say it was the local protestors who defeated Rogers are deluded. Without Charles's intervention, this project, which already had been heavily modified in response to local opinion, would not have been withdrawn.

But being anti-Charles does not mean I am full of praise for the Rogers design. Lord Rogers said it is one of the best things his office has produced. I think that he, too, is deluded. He has done far better architecture than this. His office is not particularly noted for residential work, though to his credit, he designs "affordable" homes as well as the upmarket stuff. At Chelsea, his way of achieving the high densities demanded resulted in a rather diagrammatic series of long slabs and stumpy towers plus – following an early 2009

redesign – landscaped open space. The detailing looked promising, but the scheme was not exactly great.

So when I support Rogers, it is for other reasons. I believe, for instance, that when the site is redesigned (a plum consultancy role for the Prince's Foundation, though unpaid) the required density will be reduced. The foundation's director, Hank Dittmar, has already hinted at this. Overdensity was the real problem in the first place. That goes back to the colossal price of the site – £1 billion, pre-credit crunch – which the developers obviously wanted to claw back. The protests, and reports of the protests, confused the matter of style with the matter of density.

The new design, which will be on the mansion-block principle, with several architects involved, will be produced on a different brief than the one given to Rogers. The developers will be prepared to take a hit on unit numbers in order to avoid further controversy. It will thus not be fair to compare the Rogers project with its replacement.

There is an easy way to test this. Once the new brief is drawn up, let Rogers be invited to resubmit along with other architects. Let's see how he compares. In all the talk of democracy in this debate, that would be a fair and equitable way to move forward. But will it happen? Of course not. The prince hates Rogers, Rogers hates the prince. It's as simple and as crude as that.

Hugh Pearman is architecture critic for *The Sunday Times* in London and editor of the RIBA Journal.

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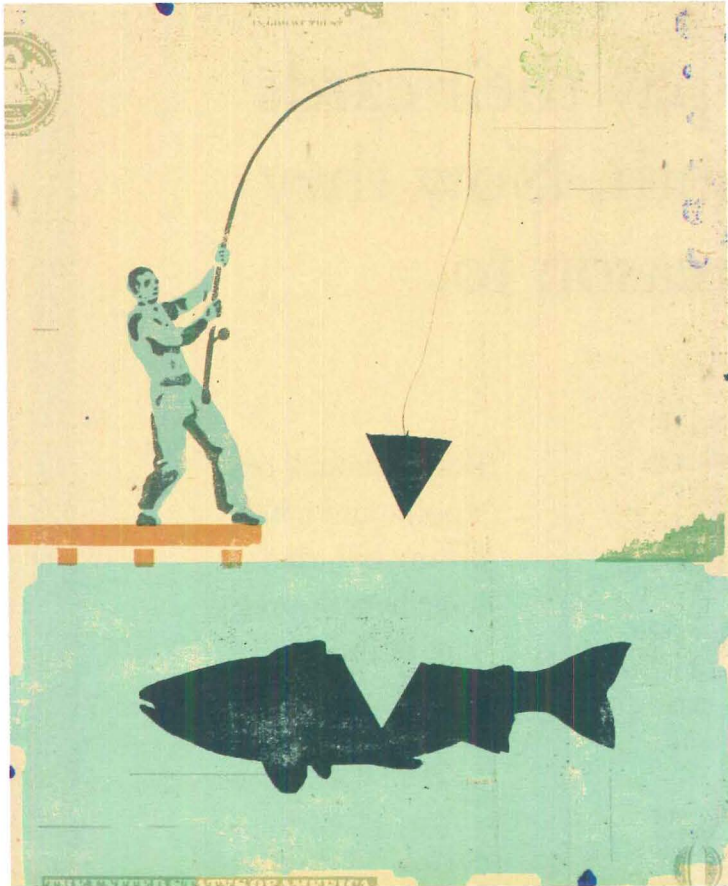
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Architects get a slice of stimulus pie

The “shovel-ready” focus of projects funded under the American Recovery and Reinvestment Act (ARRA) has provided limited stimulus to the design community at large. Many architects say they have yet to feel a boost. Still, firms with well-established experience in the public sector are finding opportunities, whether it be the revival of stalled projects or entirely new commissions. For some, the ARRA is keeping their practice afloat.

Ready to go

“Our federal practice is swamped,” says Gus Ardura, HDR Architecture’s national director for federal practice. “State, local, and private are down, but we’ve been able to shift a lot of our focus over to federal.” The Omaha-based firm was selected to be part of the new \$500 million Department of

Homeland Security headquarters project at St. Elizabeth’s campus in Washington, D.C. Meanwhile, the firm is also using its existing indefinite delivery/indefinite quantity contracts with agencies, such as the U.S. General Services Administration, to sweep up smaller renovation and energy-upgrade projects, according to Ardura.

HOK of St. Louis also is aiming at a broad range of work. Vice chairman Clark Davis, FAIA, says the firm expects to pick up multiple contracts for small renovation jobs in markets where it has established relationships with agencies, such as Florida, where it works with the Department of Veterans Affairs. “If we have an IDIQ contract and a team in place,” he says, “we’ll be ready to help them get this work done.”

HOK is also targeting the transportation sector, as well as science and technology jobs through the Department of Energy and the National Institutes of Health (NIH). This spring, the firm helped several universities prepare grant proposals for stimulus funding available through NIH, in the hopes that those efforts will translate into new commissions.

Transit work

Although the bulk of the \$50 billion in transportation funding will go to roads and bridges, there are opportunities for architects. For instance, HOK was selected to create an automated people-mover system planned for Phoenix Sky Harbor International Airport, which Davis says will receive stimulus funding.

In other cases, shelved transportation work is being dusted off by design firms. RATIO Architects of Indianapolis was called in this spring to work on construction documents for a multimodal facility in Normal, Illinois, that had been put on hold. The company is also looking to play a role in some stimulus-funded road projects. As portions of Interstate 69 are developed in Indiana with stimulus funds, RATIO is hoping to provide urban-planning services.

“We’d be a subcontractor to an engineer, so it’s somewhat tangential stuff for us,” says Bill Browne, Jr., FAIA, president of RATIO. “In this economy, we’re looking for different kinds of opportunities that might not have been front and center before, but you’ve got to find things to keep you busy.”

Housing boost

With \$4 billion in grant money available through the U.S. Department of Housing and Urban Development (HUD), states are accelerating their capital plans and reviving deferred projects. This is good news for mom-and-pop shops, as public housing is one of the first sectors to feed work to smaller architecture firms.

Glen Childers, founding principal of Childers-Childers, Architects & Associates in Ada, Oklahoma, has worked with 10 housing authorities around the state since 1991 and expects to gain work through all of

them. By early May, the firm was already working on energy-upgrade and renovation projects for five authorities. Typically, this type of work accounts for 20 percent of his firm’s workload; this year he expects it to be up by 65 percent.

“This will be the biggest year we’ll ever have since I started in business on my own in 1979,” says Childers, who recently added a fourth architect at his seven-person office. “Beyond the stimulus, we’re not taking any more new work.”

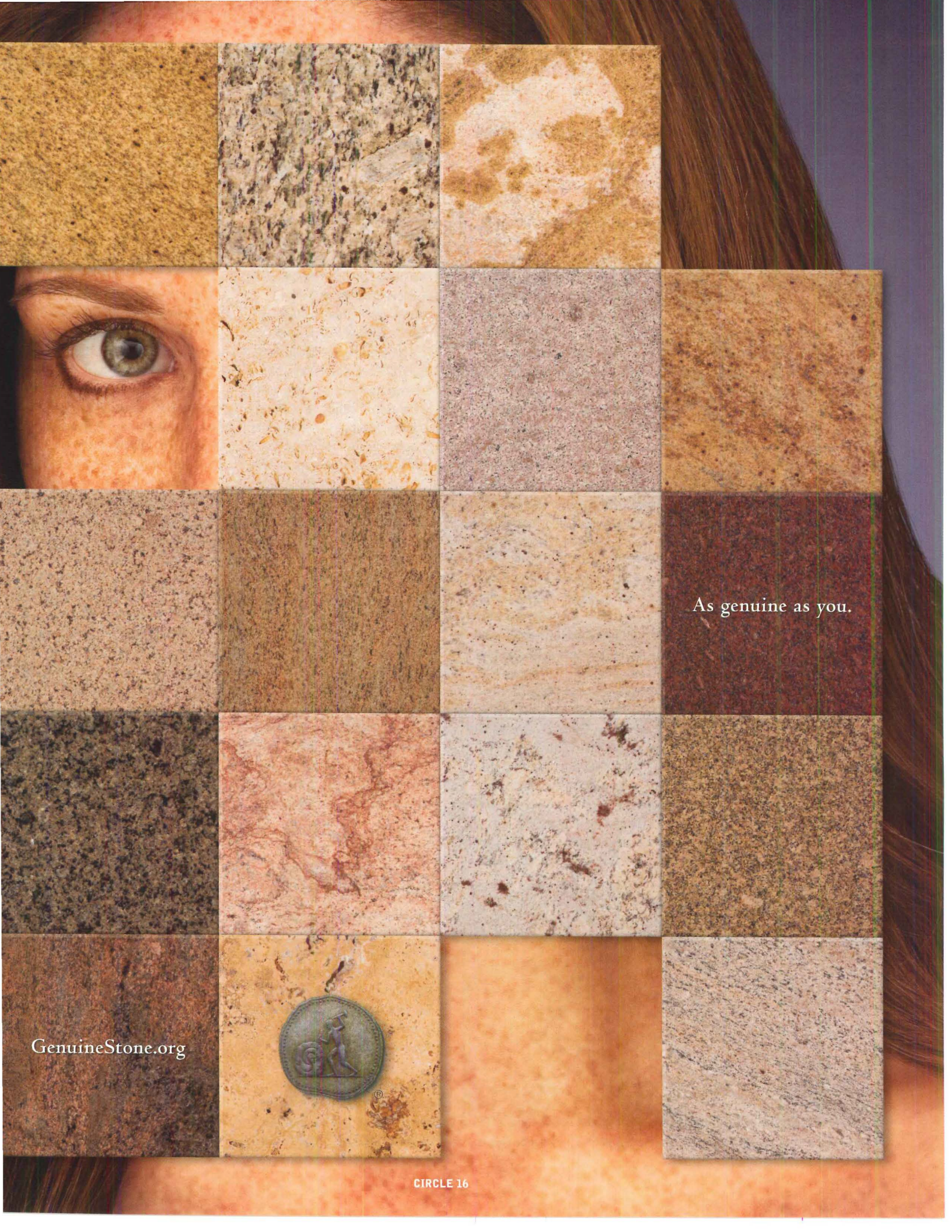
It’s a similar situation at Jones-Zander in Grenada, Mississippi. Partner Robert Zander, AIA, says his firm is already working with six housing authorities around the state on interior renovations, roof replacements, and energy-efficiency upgrades. “About half of our work is HUD housing improvement jobs annually, but with the work we’re picking up from the recovery act, I expect [revenues from HUD projects] to be 180 percent over last year,” says Zander, past-president of the Mississippi Chapter of AIA. Although once-shelved projects account for about 10 percent of Zander’s work, the balance is coming from projects that had been scheduled for 2010 and beyond, but are being accelerated to take advantage of the ARRA.

Downside to upturn

While keeping designers busy now, some are concerned that speeding up these public-housing projects may leave fewer opportunities on the horizon.

Wayne Stogner, president of Stogner Architecture in Rockingham, North Carolina, says he fears that as projects are moved up to a 2009 start, additional projects may not be added to future capital-improvement plans. This year, his 11-person firm was able to hire one additional staffer and keep two others that would have otherwise been laid off due to the slumped private market. But that could soon change.

“It’s good to have these projects, but they aren’t very profitable, certainly not like the private jobs,” he says. “We’re glad to have the work, but if the market doesn’t turn around, we could be sitting here in six months saying, ‘Now what?’” *Bruce Buckley*



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Bernard Zimmerman, outspoken architect, dies



Bernard Zimmerman, FAIA, wore many hats in the Southern California architectural community. He was an architect, planner, educator, preservationist, mentor, and curator. But friends and colleagues say he will be best remembered as the conscience of his profession, a passionate advocate for architecture and design who wasn't shy about voicing opinions about what he loved and what he loathed.

Zimmerman died June 4 at his Los Angeles home after a long illness. He was 79.

"He was utterly convinced of the rightness of a stringent brand of Modernism – its social as well as its formal principles – and didn't hold back from chastising any designer he felt had fallen short of its ideals," says Frances Anderton, host of *DnA: Design and Architecture*, a monthly program on Santa Monica public radio station KCRW.

Zimmerman helped found the architecture department at California State Polytechnic University, in Pomona, and he taught there for more than 30 years. In 2001, he

cofounded the Los Angeles Institute of Architecture and Design, and he helped launch L.A.'s Architecture + Design Museum. As a curator, he organized a number of exhibitions on the work of Los Angeles architects and designers, including *New Blood 101* at the Pacific Design Center. In 1991, he founded the annual Masters of Architecture lecture series at the Los Angeles County Museum of Art.

He was president of Zimmerman Architects & Planners. He had previously been associated with Richard Neutra Architects, Welton Beckett & Associates, Victor Gruen Associates, and several other Los Angeles firms. As a preservationist, he was involved in efforts to save a number of threatened Los Angeles landmarks, including the Hollywood Sign, the Schindler House, and Watts Towers. In 1999, he was honored with a Lifetime Achievement Award from AIA Los Angeles.

Architect Joe Addo recalls his friend and colleague as an "activist architect" who believed the purpose of architecture was to change the world. He was contemptuous of architects whose work didn't live up to his ideals. "Bernard always went to the heart of the matter," Addo says. "He'd ask, 'Why does this building look the way it does? What is it doing for society?'" Architect Ray Kappe, FAIA, a longtime friend, adds, "He was always in everybody's face. But his main cause was good design." *David Hill*



Zimmerman's work includes the Leland & Marian Zeidler Residence (1962).

Remembering Blake Hughes, a noble publisher

Blake Hughes, a longtime publisher at McGraw-Hill – most notably of ARCHITECTURAL RECORD magazine, which he headed from 1968 to 1981 – died in Charleston, South Carolina, on June 11. He was 94.

Hughes was known in international planning circles for his particular concern with the housing and infrastructure problems of developing countries. During his years at RECORD, he founded the International Architectural Foundation, which he led from 1973 to 1978. The organization was dedicated to alleviating living conditions in Third World slums, as addressed in an ambitious design competition it sponsored for Greater Manila, which won admiration among specialists but was never implemented by the regime of Philippines president Ferdinand Marcos, who preferred to build more grandiose monuments to his rule.

Hughes was born in New York City on June 24, 1914, to Ferdinand Holme Hughes and Inez de Cordova Hughes, and graduated from Dartmouth College, where he was elected to Phi Beta Kappa, in 1936. He then received a degree from the Sorbonne, and studied business administration at Dartmouth's Amos Tuck School and Columbia University.

He served in the U.S. Navy from 1940 to 1945, and during World War II rose to the rank of



lieutenant, received a commendation from the Secretary of the Navy, and was decorated for his service to the Soviet Union with its Order of the Fatherland War.

At McGraw-Hill, he was publisher of *House and Home* and *Housing* magazines before becoming publisher of ARCHITECTURAL RECORD, where he also launched Architectural Record Books, a highly successful imprint that issued an extensive series of illustrated books on domestic architecture, as well as anthologies of writings first published in the magazine. These included essays by the architecture and social critic Lewis Mumford, and Frank Lloyd Wright's nine-part "In the Cause of Architecture" series, which RECORD had commissioned during a low point in the architect's career in 1927.

A trustee of Trinity College in Maine from 1965 to 1975, Hughes is survived by his wife, Betty; a daughter, Diane Young, of Red Lodge, Montana; a son, Brian, of Houston; and six grandchildren. *Martin Filler*

RECORD NEWS NOTED

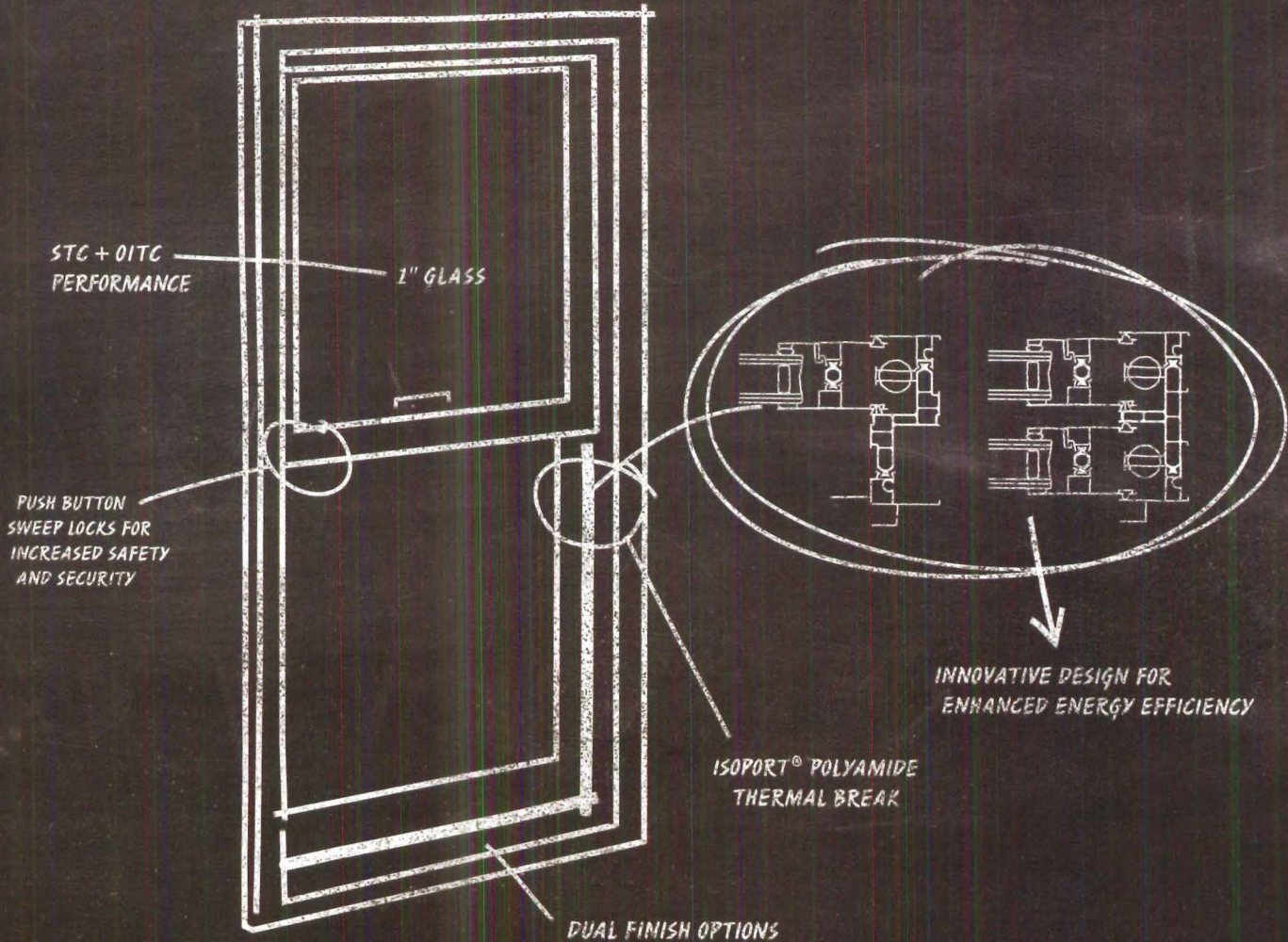
Caroline Baumann has been named the acting director of the Smithsonian's **Cooper-Hewitt, National Design Museum**, in New York City. She replaces Paul Warwick Thompson, who has taken a job as rector at London's Royal College of Art.

Jeffrey L. Bruce, a Missouri-based landscape architect, is the new chairman of **Green Roofs for Healthy Cities**. The Toronto-based

group, founded in 1999, aims to increase awareness about the economic, social, and environmental benefits of "living architecture."

The AIA is accepting proposals through September 1 for its **Upjohn Research Initiative**, a program that provides funding for applied research projects. Four grants, between **\$15,000 and \$30,000**, will be awarded. Visit aia.org/practicing/research/ for more information.

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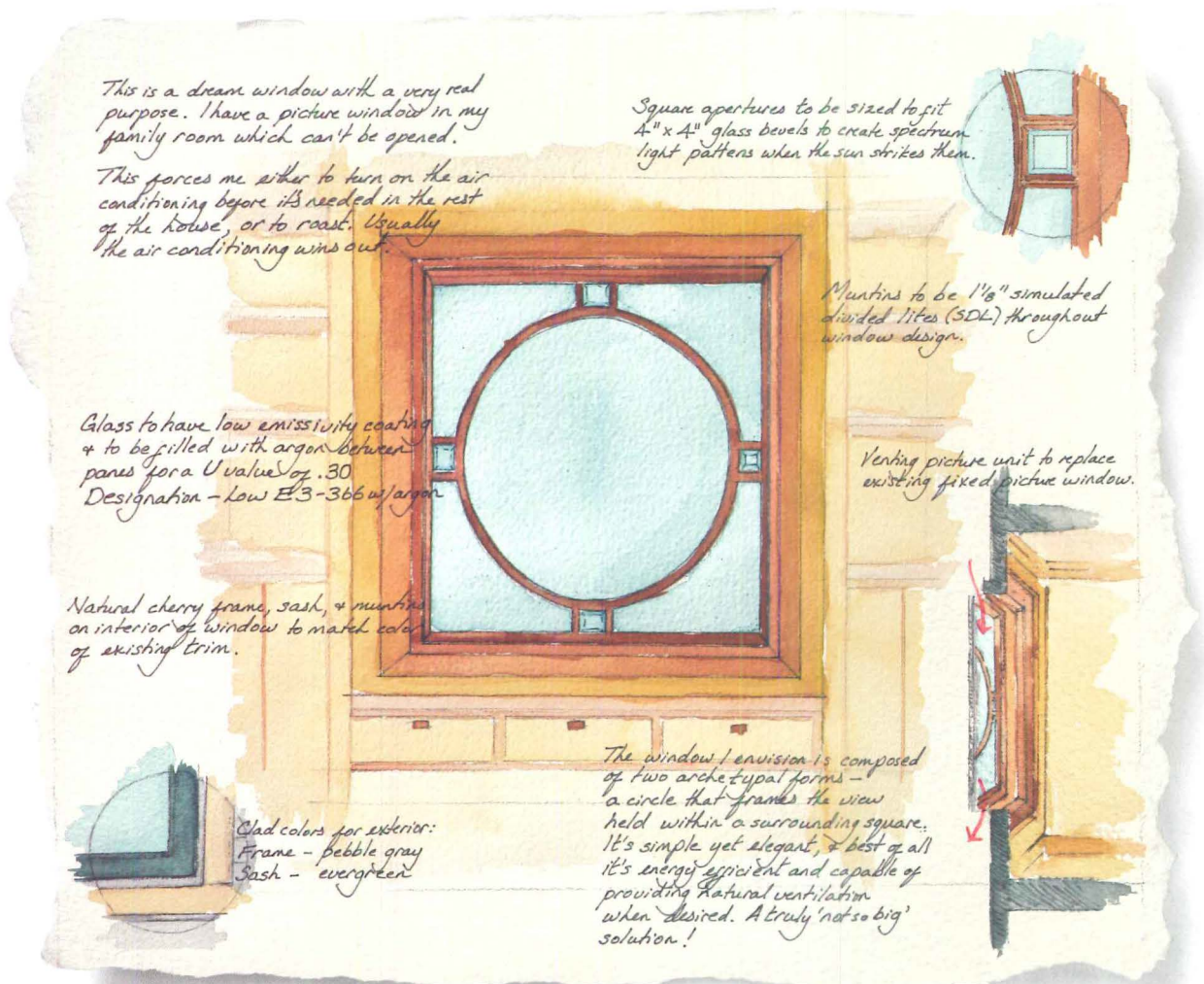
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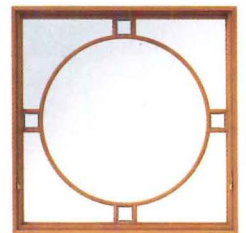


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It appears that **Frank Gehry** is finding fertile ground in New Orleans. In addition to designing a duplex for Brad Pitt's **Make It Right** project, Gehry has teamed with urban planner and artist, **Robert Tannen**, to create a modular shotgun house (above). The duo's concept, dubbed Mod Gun, is an expansion of a one-room, emergency-housing prototype that Tannen designed in 2008 as an alternative to the typical FEMA trailer. *Shawn Kennedy*

On July 8, the AIA Chicago Foundation announced that Chicago-based **David Woodhouse Architects** has won a competition to create a memorial for Daniel Burnham. The project is part of the **Burnham Plan Centennial Celebration** honoring the legacy of Burnham and his 1909 Plan of Chicago, the first comprehensive planning document guiding the growth of an American city. While the memorial still needs public approval, it is slated to be built on Chicago's Museum Campus, just north of Burnham's Field Museum. *Mae Ryan*

Fueled by programs begun in the Great Depression, **sprawl has been the dominant mode** of residential development in the U.S. for decades. But the current recession and credit freeze, coupled with high-energy prices, have prompted a reassessment. *Ted Smalley Bowen*



The AIA is regaining stewardship of a national architectural treasure: the **210-year-old Octagon building** (left) in Washington, D.C. In

an agreement announced on July 9, the building's current owner, the **American Architectural Foundation**, will transfer the deed to AIA Legacy, the nonprofit arm of the institute. The AAF will remain in the three-story brick building for the foreseeable future. *Jenna M. McKnight*

Each year, the **Serpentine Gallery** in London's Kensington Gardens invites an internationally known architect with no prior work in the U.K. to

design a temporary pavilion. The Japan-based **SANAA** designed this year's installation; it opened on July 12 and will be up through October 19. *Aleksandr Bierig*

Amanda Leveté, the former wife and business partner of the late Czech architect **Jan Kaplický**, has formed a new firm that will carry on the exploratory spirit of their celebrated Future Systems office. The U.K.-based **Amanda Leveté Architects** has 35 employees and commissions

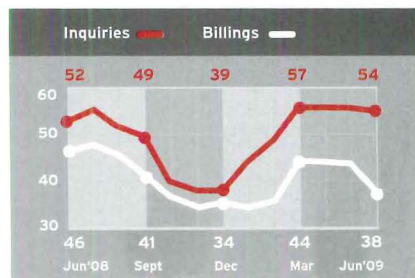


ranging from the new London headquarters for Rupert Murdoch's media empire to a mammoth luxury hotel and shopping mall in Bangkok, Thailand (left). *David Dillon*

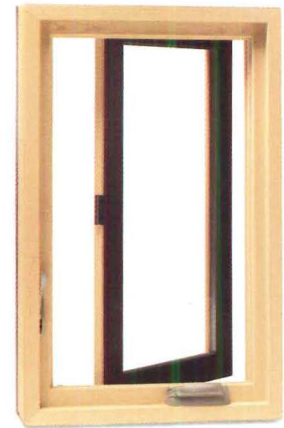
F&S Partners, a Dallas-based firm that specializes in the design of educational, recreational, and religious projects, has merged with SmithGroup. No jobs will be eliminated at the 40-person Texas firm, which was founded in 1962 as Fisher and Spillman Architects. *Jenna M. McKnight*

On June 29, the **AIA**, along with the International Code Council and the American Society for Testing and Materials, announced their intent to create an **International Green Construction Code**. The new code aims to cover all aspects of sustainability in the built environment, from roofing to ventilation strategies, drawing from existing standards to create one universal code. *Bruce Buckley*

After showing gains in recent months, the Architectural Billings Index **dropped to 37.7** in June. The inquiries score was 53.8. "It appears as though we have not yet reached the bottom of this construction downturn," says **Kermit Baker**, the AIA's chief economist. *Jenna M. McKnight*



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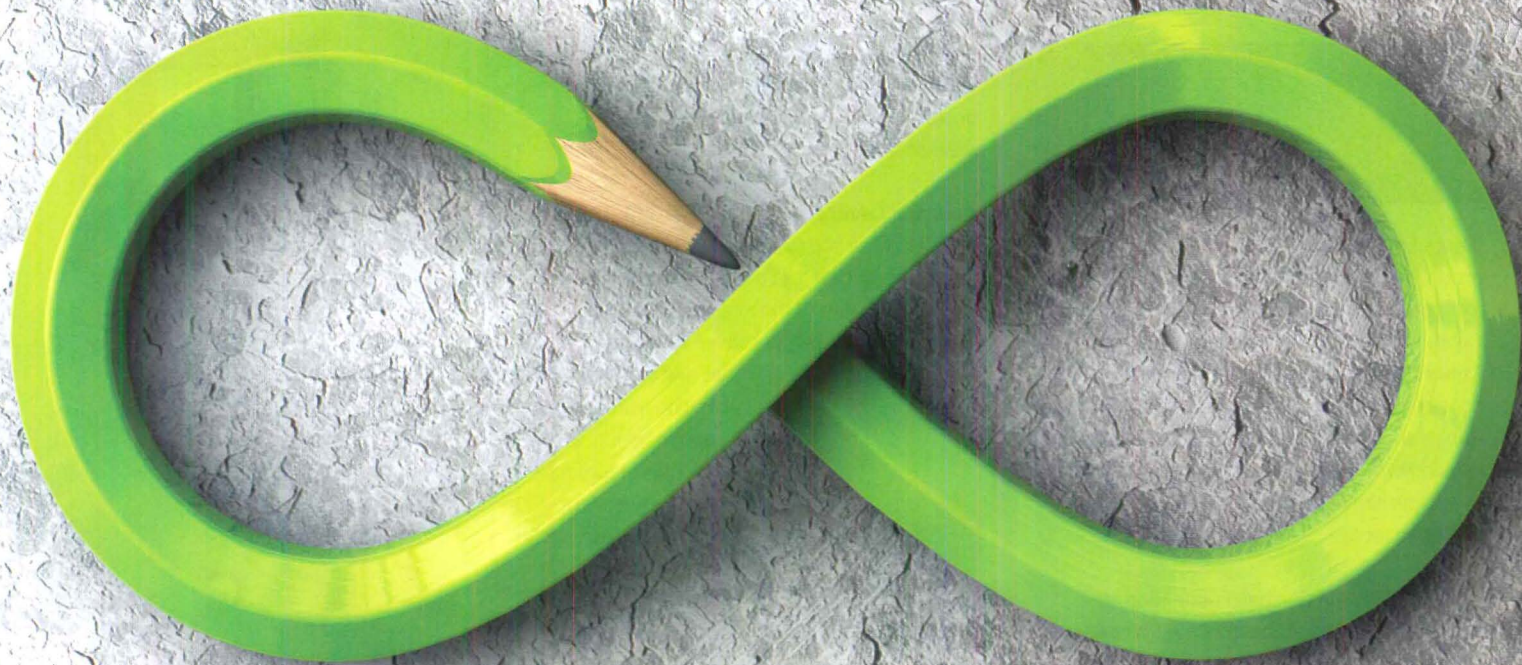


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Tacklebox

Finding the tools to create enticing environs for the art and design world, and then some

Growing up in Roanoke, Virginia, Jeremy Barbour says architecture was never on his radar. Now the principal of three-year-old New York City–based firm Tacklebox, as well as a teacher at Columbia’s School of Architecture (where he received his master’s) and Parsons The New School For Design, he lives and breathes it. He credits one professor in particular for taking him from experimenting with architecture to obsessed. “I took a class at Virginia Tech with Pia Sarpaneva,” says Barbour, “and she really inspired me to understand that the possibilities with architecture, despite the parameters, were endless.”

If one professor put him on the path to design, it was the whole educational experience that kept him going. “The reality is that I never wanted to leave school,” says Barbour. “But I couldn’t afford to stay there.” Barbour did stay in New York City, and ended up working for two small firms in succession. “I knew I wanted to eventually work for myself, though. I wanted to be in the position to set up my own constraints.”

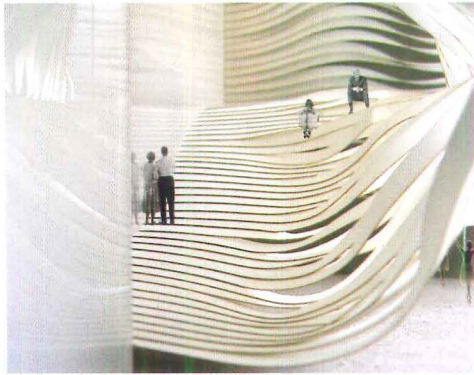
As luck would have it, a fashion designer friend needed a small apartment renovation. Barbour jumped off the diving board, as he says, and took on the project under the name Tacklebox. “For me,” he says, “your tacklebox is the place you keep your tools. It seemed fitting.”

His next project, the flagship boutique for clothing designer Phillip Lim in New York City’s SoHo, really launched Tacklebox into the design realm. “If I had known who he was, I would have been too nervous,” says Barbour, who admits that Lim didn’t really know who Barbour was, either, but trusted him. “He’s opened a few stores around the world now,” Barbour notes, “and he always hires untested architects to design them. I think he appreciates that spark of creativity that comes with just starting out. For me, he said, ‘This is your project, don’t mess it up.’” The shop, with its wall of stacked flooring, machined and precisely placed, juxtaposed with old SoHo elements, such as a cast-iron railing and white plaster walls, is just the right venue to feature Lim’s Modern yet classic design aesthetic.

“I’ve been so lucky to have clients in the design world,” says Barbour, noting that such clients often believe in the vision of another creative person, and trust it. He mentions a current project, a small shop in Red Hook, Brooklyn, for a couple of soap manufac-

3.1 Phillip Lim, New York City, 2007 *This 3,000-square-foot boutique juxtaposes old and new, includes a continuous wall of stacked oak flooring, a double-height lower showroom reached by a concrete stair, white laminate surfaces, and a cast-iron railing.*





turers who call their business Saipua. "They do everything by hand, and inspired by that, I've created a box within a box for them where they can play." Knowing people in the New York design world has given Barbour another edge. Despite the fact that Tacklebox, which has employed as many as five people but is currently down to two, is working on a couple of commercial projects, it hasn't been enough work to keep Barbour busy during the economic downturn of the past year. "I found myself with some time on my hands, so I took a look at what I had around me, and who I could collaborate with," he says about rummaging in his proverbial tacklebox. Barbour found that he had an in with the design press, and a talented artist friend who, like Barbour, was interested in "finding the surprising in the commonplace." With Andrew Woodrum, Barbour started an accessories business called Box and Flea. "We make silk-screened bags and accessories that are

Palimpsest, New York City, unbuilt

A constructed field of nested units balances the verticality of this dance-performance space (entryway, left). Performers and audience interact in this volume of suspended movement.

both useful and beautiful." Will Box and Flea bring Barbour away from architecture? "Not a chance," he insists, saying that the accessories line is a "meditative thing to work on on the weekends. First and foremost, it's architecture that gets me up in the morning." In fact, he says that by making the rounds with his Box and Flea products, he's met potential clients in other designers and store owners. A useful box of tackle, indeed. *Ingrid Spencer*



work

M1/dtw

Mixing architecture and graphics

Detroit-based architectural designer Christian Unverzagt was doing interdisciplinary work before he knew the phrase. As a skateboarding teenager in the 1980s, he says, "We had to create our own landscape, so I would design and build backyard ramps. And I would design the flyers to raise money for them. I was producing a brand."

The do-it-all-yourself attitude accompanied him to academe. In his senior year at the University of Michigan College of Architecture and Urban Planning, Unverzagt coedited the in-house journal *Dimensions* and learned typography from a fellow staffer. The following year, 1995, the college launched the *Michigan Architecture Papers* (MAP), which documents important annual lectures. Unverzagt, still living in Ann Arbor, served as the founding designer. Even during a five-year stint in Los Angeles – he would return as a member of the faculty in 1999 – he has always had some involvement in that book series, and today he serves as the advisor to *Dimensions* and creative director of the college, renamed for donor A. Alfred Taubman also in 1999. "For me, print work, whether it was a poster or a book, was an opportunity to get something made," Unverzagt says of incorporating graphic work into his career. "The material quality of the paper, the ink, the manufacturing process – there was a desire to learn from people who could make the stuff, I was figuring out where I could intervene, and it set a tone for working with fabricators later on."

As at Taubman College, Unverzagt embraces graphic design at M1/dtw, the studio he founded with now-former-partner Chris Benfield in 1999. *MAP 10: Diller + Scofidio*, printed in 2004, represents one high point of Unverzagt's materialist approach to graphic design. The imposition, or the folding of a press sheet, inspired Unverzagt to design *MAP 10* as a press sheet rather than a book; it can be unfolded and read according to each user's wishes.



Unverzagt bridges the disciplines, too. M1/dtw's first architecture project, a Detroit radio station's reception and conference spaces built entirely by hand, demonstrates that fearless attitude to fabrication. The renovation of the local athletic facility Northwest Activities Center centers on an intuitive wayfinding system requiring only red



A poster for a conference on the 10th anniversary of the fall of the Berlin Wall shows an image of construction cranes cropped by a yellow band, much like a temporary wall around a building site (above).



For Pekoe & Joe, a café in Waterford, Michigan, M1/dtw transformed a former KFC (left) into a modern social hub (above), complete with brand identity and graphic elements such as signage and menus.

paint and pictograms, while a more recent transformation of a Kentucky Fried Chicken into the café Pekoe & Joe included the new company's graphic identity.

To architects considering leveraging themselves by working in related disciplines, Unverzagt will point out that typography is intrinsically linked to architectural drawing (think of labeling). In that vein, he explains, "We don't just ask, Is this an architecture project or a graphics project? We try to use design to explore certain issues, and to add value to our clients' missions." *David Sokol*

For more work by these designers visit, architecturalrecord.com/archrecord2.

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Connect the dots: Dubai, labor, urbanism, sustainability, and the education of architects

Critique

By Michael Sorkin

DEPARTMENTS

Earlier this year, I was in the Emirates to give a lecture and was invited to visit the school of architecture where one of my hosts taught. Segregated by gender, the place was a Foucault fantasy made concrete. On one side of the building lay the studios and classrooms for women students and on the other – in mirror image – the rooms for the men. Between them were faculty offices, all of which had two doors, one to each side. The dean – natty in Armani – explained to me (as if the whole thing made sense) that the office doors were locked on the women's side on Mondays and those on the men's opened so male students could enter for meetings. On Tuesdays, the configuration was reversed. When my colleague proposed an academic exchange, I demurred, unwilling to contemplate the discriminatory logistics.

In June – the 40th anniversary of my college graduation – I thought back to those halcyon days and remembered that one of the reasons I chose the college I did was for its “co-education.” As a progressive-minded teen, I thought it was absurd that places like Yale and Princeton were simply for boys: I couldn't imagine living in such a weird environment for four years, marinating in a pool of upper-crust testosterone. This recollection arrested my *bien pensant* liberal bile at the Gulf school's setup, reminding me that it wasn't long ago that our

Contributing editor Michael Sorkin directs the urban design program at City College of New York.



No, this is not a model; it's the view from a high-rise hotel of a sprawling new development in Dubai where odd juxtapositions abound.

most prestigious universities were predicated on an even more extreme form of gender separation. A little of my self-righteousness ebbed, not at the thing itself but at the idea that such an arrangement was cast in stone and intractable. Indeed, we use such notions to demonize the Muslim other, as unsusceptible to change, forever fixed in its ways.

The bubble has burst

The Gulf states offer profligate lessons in uneven rates of modernization and change and serve as a museum of the weird cultural forms that come from their extreme hybridity: The Guggenheim and the mosque; the megamall and the burka. You know the drill. Dubai is, of course, the *locus classicus* of this over-the-top style, and my recent visit was both jaw-dropping and

depressing. The bubble has burst in a big way and craning towers – including a fairly fabulous-looking rendition of the world's tallest – stand incomplete and empty, blowing zillions of BTUs to keep the square miles of carpet cool to off-gas undisturbed. And yet, down the road in Abu Dhabi, Masdar city rises, as lavish an experiment in urban sustainability as any on earth.

While the planetary implications of the region's potlatch of (mostly) antisustainable practices are clear, the fallout from the crash has far sadder implications. The economies of the Gulf are enabled by imported labor, and most of these states have populations that are at least 80 percent foreign. And when jobs disappear, so must their holders. We've all read the tales about the laid-off ex-pats abandoning their

leveraged Mercedes in the airport parking lot as they split for home. The story making the rounds during my visit was about the Bangladeshis and other South Asians who form the backbone of the construction industry and who work in conditions of near servitude. Made redundant in massive numbers, many are too humiliated and desperate to let their home villages – dependent on their regular remittances to survive – know that they are unemployed and are too fearful to reappear empty-handed. While it may be an urban legend, the tale being told was about workers standing by the highway, waiting for the approach of a fast and expensive car, and throwing themselves under the wheels in the hope that some of the insurance might find its way back to their families.

Intimate links

I repeat this story not to belabor the cruelties of the Gulf's capito-feudal system but to evoke its ragingly complex dynamism, the intimate links so visible between culture, environment, development, and human success. The segregated architecture school in the midst of the most fabulous display on the planet of what currently passes for architectural “invention,” and the downside miseries this volatility engenders, suggest more fundamental issues for the condition of architecture, how we conceive of it, and how we convey its values. This is not a random collection of observations raised to clarity by the designated weirdness of this particular place, but a summary of the expanded site

Critique

of architecture's production: education, finance, construction, culture, place, sustainability, history, politics.

We have not moved swiftly enough to embody such consciousness and knowledge in architectural education, and Dubai stands as a particularly clear object lesson in our own confusion: This is an environment designed by the world's best and brightest, and for many, a paradigm of global inevitability. The fetish for form that has characterized the profession and the schools for the past few decades has slighted much more urgent matters, and it will come as no surprise to regular readers of this column that issues of the environment and social justice (linked inextricably) are those I feel must foreground both the ideology and the pedagogy of contemporary architecture. Just as gender-segregated education must be interrogated, so the received organizational formats of architectural education need to be questioned and revised. Having taught in dozens of schools and visited hundreds, I remain struck by the antique model of the design disciplines that still informs education: variations on the trivium of architecture,

planning, and landscape. These ossified rigidities seem increasingly incapable of coming to grips with the real state of the planet.

There are some small signs of movement, especially in the stirrings of fungibility on the part of planning and landscape. Although I run a program in urban design, I have a fundamental disbelief in any unitary discourse of the city and try to offer access to many. Originally conceived as a way of recuperating physical design from a planning profession that had fallen in thrall to the social sciences, urban design is often taught simply as big building and fixates excessively on his-

toric patterns. But urbanism's most desperate needs devolve on the new morphologies of sustainability and equity that an exponentially urbanizing world so urgently needs. The urban population increases at the rate of a million people a week and, to me at least, that means that we need to create numerous new cities on an urgent basis, cities that are able to provide for themselves and provide rich lives to diverse populations.

The emergence of "landscape urbanism" as a position, if not a discipline, is a hopeful sign. Not simply does the conceit represent the rejection of a hard boundary between the practices of landscape architecture and urban

Dubai (left) presents visitors with a still-evolving skyline of the latest and sometimes craziest architectural forms.

design and planning; it stands, in theory, for a more holistic view of the environment and the indispensability of an integrated perspective in thinking about projects that exceed the architectural scale. And it suggests a strategy of inclusion, rather than an endless consideration of what the disciplines are not. Still, from the perspective of education, it feels a little like rearranging the deck chairs while preserving distinctions that have outlived their usefulness. As environmentalism becomes more and more the central authority for all design, why retain any boundaries at all?

I've been dreaming about a school of design that takes the unity, not the autonomy, of disciplines as its predicate, a way of opening the field to the real possibility of its diversity. Our boldest experi-

ments haven't gotten us too far. The Bauhaus focused, in varying degrees, on social production but retained disciplinary compartments and continued to see architecture as the eternal mother. It had indifferent ideas about the city and virtually nothing to say about the environment. More idiosyncratic, home-grown experiments like Taliesin or Arcosanti also fixated too much on the leading role of architecture (and the infallibility of their particular popes), and were passionately unscientific, though they did have deep commitments to craft and the earth. Alas, architecture's historic and dangerous conflation of megalomania with the big scale led them to social and organizational dead ends.

Our divided professions tenaciously guard their turf and look disdainfully at neighboring disciplines. How tiresome this is! While I am not suggesting that each designer be an impossibly learned polymath, I am arguing that the common ethical and environmental basis for design is becoming more and more apparent and more and more urgently part of the necessary

equipment of anyone who aspires to take an active role in shaping the planet. One solution is to give each student entering a school of design a common grounding on which to build later specialization. This would include rigorous introductions to the environment and natural systems, deep immersion in the social and economic modes of production of the built world, and a vivid grounding in the global histories of physical responses to the question of habitation at every scale.

New kinds of schools

Providing this foundation will take time. Just as so many undergraduate architecture programs are formulae for fundamental illiteracy (too much time spent learning structures and CAD, none on Shakespeare, Oceanic art, or *The Tale of Genji*), so this reform of the design curriculum carries risks. If the years devoted to education aren't expanded, then something crucial must be eliminated. Or we can begin to think that design education might be dedicated to producing activists who are prepared either to step into the design environment in a literate and engaged way or to continue to deepen a particular specialization. I don't argue that the professions must die as autonomous pursuits, rather that we recognize – with new kinds of degrees and new kinds of schools – their deep common basis and the need for new and refreshed syntheses.

Received writ prescribes isolating the men from the women at that school in the Gulf without any particularly satisfying arguments – beyond obedience or human frailty – and so does it keep our own practices and people apart. Witness the appalling state of the earth; we clearly need to educate designers differently. This will mean focusing on what brings us together rather than what keeps us apart. Designers should be equipped with the knowledge of what makes a building sustainable, what drives construction workers to despair, what makes the city humane, what deepens our connection to the landscape, what gives us a sense of real connection to each other. ■



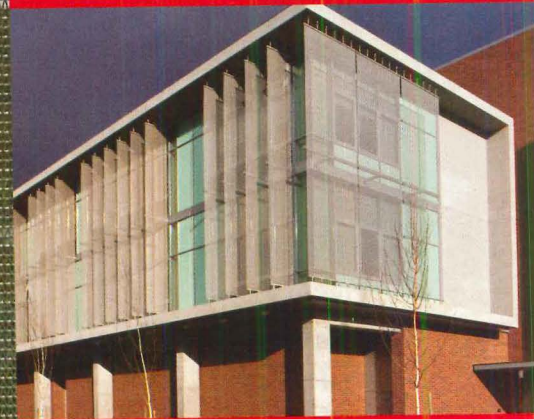
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Three ways of looking at contemporary China

Books

In the Chinese City: Perspectives on the Transmutations of an Empire, by Frederic Edelman. Barcelona: Actar, 2008, 300 pages, \$50.

Architecture of Modern China: A Historical Critique, by Jianfei Zhu. New York: Routledge, 2009, 336 pages, \$63.

Caochangdi: Beijing Inside Out, by Robert Mangurian, Mary-Ann Ray, Pi Li, Darien Williams. Hong Kong: Timezone 8, 2009, 389 pages, \$40.

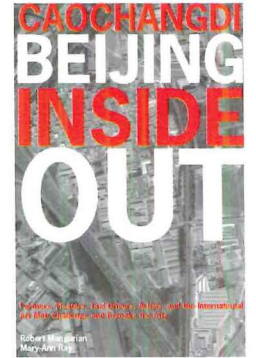
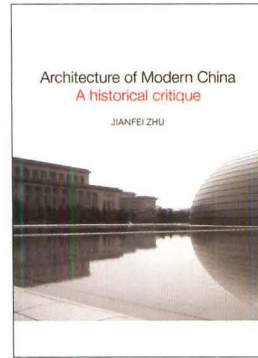
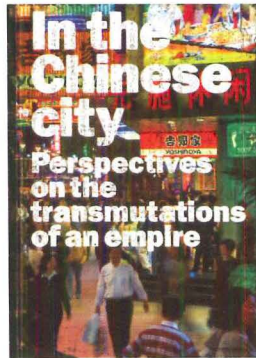
From different time zones and distinct epistemologies, these three recent books narrate China's experiments with architecture and city building. Jianfei Zhu, addressing China's continuing search for meaningful architecture from Melbourne, blends theory with the insight of a local. Edelman presents glimpses of the different moving parts that make up China's urban culture. Mangurian and Ray, et al, set up shop in an urban village and let the city speak for itself.

Defining China is not unlike being lost and asking for directions until you get close to your destination. Each of these books asks questions, but whom do they ask, and do they ask the right questions?

Edelman's guiding query is, "What is the *real* China?" as opposed to what he defines as the "inaccessible" China promulgated by sinologists. They put this question to like-minded thinkers all interested in the illusive "real." The question the reader should ask is, what are the credentials of these contributors? Should we Google them?

While the content may have worked as an exhibition – its previous incarnation – it raises more questions than it answers as a bound volume. Statements like, "In fact, urban planning is a new concept for the Middle Kingdom," make sinologists wince (that term was last used seriously in the 19th century, when China was part of the "Orient"). Did the author intend to produce this exotic distance? Jianfei Zhu's 2004 book *Chinese Spatial Strategies: Imperial Beijing 1420–1911* confirms that urban planning had been advancing in China since the formation of its oldest imperial cities. Edelman's collection erects a theoretical facade to validate generalizations by non-China experts. But just for added legitimacy, there are a few specialists thrown in, and their footnoted chapters with references to Chinese source materials stand out.

Zhu's *Architecture of Modern China: A Historical Critique* is self-described as "a formalized response to this demand to know and explain the phenomenon that is modern Chinese architecture." Consisting of essays developed since the 1990s, Zhu's book concludes that the modernity of the West played a pivotal role in that of China, but emphasizes how modernity's transformative powers affected China in site-specific terms. Aptly, Zhu weaves throughout his text traces of Deleuze and Guattari's *A Thousand Plateaus: Capitalism and Schizophrenia* (1987), a critique



of modernity. Zhu employs their conception of nomadism to demonstrate how discrete changes in notions of spatial perception and materialization emerge to express broader shifts within the intricate fabric of Chinese culture.

The rewards for getting through all this theory are the charts at the end of the book. As Zhu writes, "The intention here ... is to visualize and spatialize history" Translation: These are really cool graphs. They brilliantly clarify tendencies particular to modern Chinese architecture – evidence of an alternative Modernism we are just beginning to understand.

Caochangdi: Beijing Inside Out is a perfect example. Like 500-plus other urban villages in and around Beijing, Caochangdi exists and thrives under the radar of planning authorities. According to residents of the village, the authors included, this precarious floating city within a city is the perfect locale to build your dream house. This is the informal China, which, by the way, is not new to Chinese urbanity. Many of these urban villages were historically semiautonomous and slightly outside the gaze of officialdom. With the

introduction of market policies under Deng Xiaoping in the 1980s, many of these areas reverted to their more spontaneous natures. Mangurian and Ray, et al, conclude, while living in this "shadow city" (Neuwirth 2006), that it may "contain the DNA for creative and unexpected alternatives to the normative forms of city growth and change."

A chapter entitled "Mounds" tells the story of the piles of dirt, sand, and gravel that make up Caochangdi. Junkspace is so 1990s. Welcome to *moundspace*: All of Caochangdi is one giant construction site. When the authors reposition our gaze away from Architecture, they reveal multiple *architectures* – often informal and built without permits. Someday soon this epoch of constant construction will be over; the mounds will be gone. We still have no idea what the end result will be, what the architecture will look like, or even how architecture as a profession will be involved. Mangurian, Ray, et al, as architects, have largely documented the complete absence of professional architecture, stressing the more prevalent, informal street architecture of the people. *Guy Horton*



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Understanding megatrends helps firms plan for the future

Practice Matters

By B.J. Novitski

DEPARTMENTS

"It's tough to make predictions, especially about the future," wisely opined Baseball Hall of Famer Yogi Berra. In these days of economic turmoil, construction industry observers may wish they had made better predictions. Might there have been ways to avoid the downturn, or at least mitigate its effect on architecture firms? According to McLean, Virginia-based consultant Raymond Kogan, AIA, looking ahead by projecting major industry trends can help firms avoid being fatally blindsided by future events. Better yet, anticipating what's coming can reveal new opportunities for profitable work.

Most of the trends that Kogan suggests firms should be alert for are driven by demographic factors. Looking at population statistics, both at home and abroad, can yield insights about how to run your practice and where your next job might come from. For instance, if you know there was a baby boom 60 years ago, you can guess there will soon be retirements in your firm and a higher demand for elder housing. (But some trends Kogan advises firms to become familiar with depend less on population changes – sustainability, integrated project delivery, and building information modeling.)

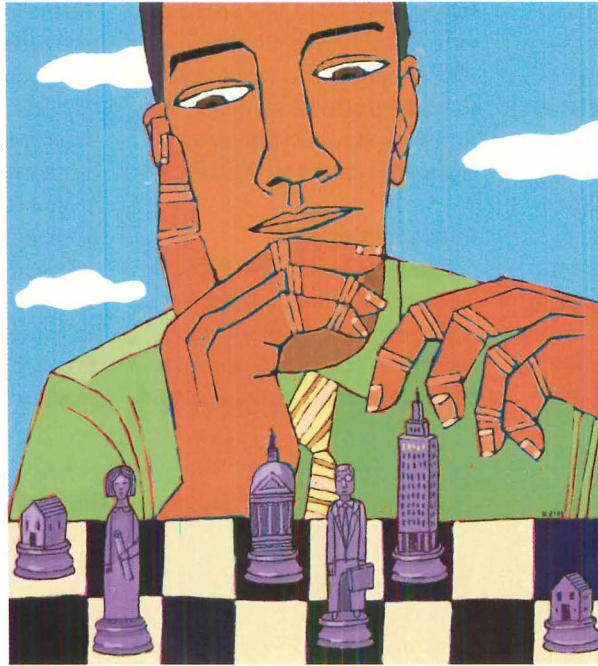
Changing firms

On the home front there are disturbing statistics about the demographic makeup of U.S. architecture

B.J. Novitski writes about architectural practice and sustainability. She can be reached at bjn@efn.org.

firms. Fully one third of today's AEC workforce are 50 or older, Kogan reports. In the next 15 years, those in the 55- to 64-year age range will increase by nearly 50 percent, while those in the 33- to 54-year range will decrease by 6 percent. Exacerbating this boomer bulge is the fact that younger architects are usually the first to be laid off during recessions, and others are shying away from the relatively low-paid profession. Some of the entry-level work, traditionally the domain of interns, has been relegated to overseas drafting factories. Consequently, there's a smaller pool of well-trained, midcareer architects ready to take the helm when today's boomer principals retire.

And the younger architects have not necessarily been encouraged to develop business and leadership skills. Kogan observes: "A founder-principal may be an entrepreneurial person who has held things pretty close to the vest and hasn't done an adequate job of grooming successors." One recourse is to sell the firm; another is to hire an outsider to lead the firm. But putting the reins of power in the hands of someone not familiar with the firm can be risky. Kogan knows of firms that hired a C.E.O. from the outside who turned out to be a poor



fit. Equally disruptive, he says, is leadership falling to a committee.

To avoid these problems, current firm leaders should think ahead to developing the skills in junior staff that will ensure the future of the firm. Sometimes this might involve a decision to skip a generation and target the youngest individuals for leadership development. In addition to explicitly budgeting time and money for training, such a program requires an understanding of what makes the younger generations tick [see "Making the Most of Your Firm's Millennials," *RECORD*, August 2008, page 65]. To make a firm attractive for young people to inherit, there may need to be shifts toward greater technical sophistication, sustainable design as the norm, and a commitment to socially respon-

sible or pro bono work. Ironically, it is just this pool of potential future leaders that is suffering the most from current layoffs.

To tap the underappreciated pool of talented women for advancement, a firm would do well to note gender differences uncovered by the "Future Leaders Focus," a survey conducted by the human-resources consulting firm HR Advisors Group. While men are motivated by pay rate, a 401K plan, and the opportunity for ownership, the sur-

vey found women care more about coworkers, the commute, paid time off, office amenities, and schedule flexibility. To make a firm attractive for future women leaders, then, it may need to consider what benefits it offers workers.

Changing opportunities

Just as firm principals are retiring, so too are millions of other baby boomers. Many of them, who populated sprawling suburbs while raising families, are choosing to relinquish maintenance-intensive suburbia and commute-intensive lifestyles in favor of urban living. Inner cities all over the country are experiencing gentrification, and architects are finding work redeveloping formerly industrial areas, such as the Pearl District in Portland, Oregon, adding

Practice Matters

attractive upscale lofts and condominiums. This shift of the older population into the urban cores will also require an increase in health-care support and assisted-living facilities. This might suggest a firm will find more future work in gerontological facilities than in schools. At the same time, large-scale retailers are beginning to abandon suburban malls and "big boxes," which will cry out for creative repurposing.

The organization America 2050 has identified eleven "mega-regions" in the United States where they predict most of the nation's population and economic growth will be concentrated over the next 40 years. Rural life will become increasingly rare as cities expand, blurring boundaries between them, and forming "large networks of metropolitan regions, each covering thousands of square miles." The

Southern California megaregion, for instance, will stretch continuously from San Diego to San Luis Obispo. Except for the Great Lakes and Northeast regions, populations will concentrate in the south and west. The National Committee for America 2050 is predicting about 130 million additional Americans by then, challenging architects and planners to make thoughtful land-use decisions that will respond to future population pressures while protecting the environment. Firms looking ahead to this future landscape might want to hone their skills in high-density, sustainable design, for instance.

Changing the globe

The global population is also becoming more urban. Last year, for the first time in human history, over half of all people lived in cities. But because the birth rate is dropping in

industrialized nations, the greatest growth can be expected in developing countries. The key to finding international job prospects in a global economy, according to Kogan, is to find those places where population growth and available resources intersect. China has a very low birth rate due to its one-child policy, while India's remains high. He expects future opportunities to be found in Mumbai and Delhi, not Shanghai or Beijing. Support for U.S. architects interested in breaking into overseas work is available from the AIA's International Committee and the International Union of Architects.

Even firms working strictly on domestic projects can be affected by globalization. Kogan reports that about one in five firms have outsourced low-cost, low-level work offshore, primarily to accommodate workload fluctuations. Might there be a future danger of clients looking abroad for higher-level services as well? The global exchange of architectural services works both

ways, and who works where will depend, in part, on how fast various countries recover from the current recession. Kogan is beginning to see foreign-funded public-private partnership projects in the United States. For instance, a county courthouse in California is being funded by a deep-pocketed foreign investor and designed by an American architecture firm. On completion, the developer will lease the building to the county government. "As long as local and state governments are short on funds, it will be an expedient way for them to get things built," Kogan explains.

In advising clients, Kogan encourages a long view on how a changing world will affect their firm. He says: "Too many firms tend to keep their heads in the sand. Some have been blindsided by this economic downturn. Lifting your head up and looking at these major trends is not only a self-protection mechanism, but it allows you to see and capitalize on opportunities." ■

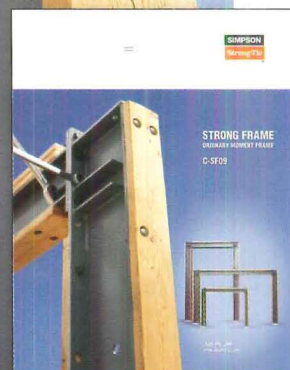


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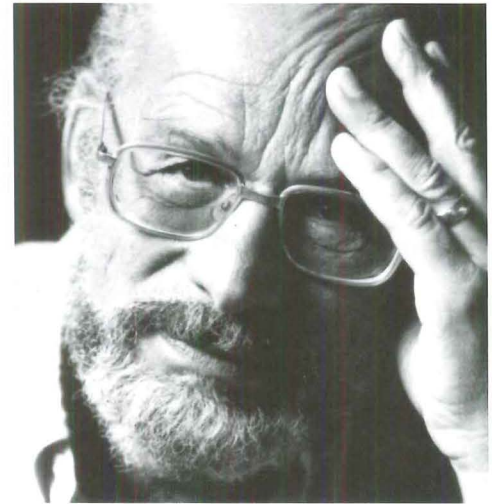
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CIRCLE 27

RECORD's editor in chief Robert Ivy talks with Ray Kappe, FAIA, a master of California Midcentury Modernism who has shown resilience in recent years, adapting to advances in prefabrication and sustainable building

AN UNSUNG MODERNIST MASTER



BY ROBERT IVY, FAIA

Ask who has built the essential Southern California house, and the answer for many California architects will be Ray Kappe. His own 1967 home in Pacific Palisades consists of seven levels perched on a hillside with a running stream, capturing the air and light of a green canyon sited blocks from the ocean. I met the 1951 graduate of the University of California at Berkeley and his wife Shelly on a spring day to talk about Kappe's remarkable career, which has combined residential architecture, urban design, education, and the pragmatics of design and construction.

Kappe has served as a mentor to generations of California architects through his role as a teacher and educational leader. Despite not having planned to become a teacher, he founded two architectural programs: California Polytechnic State University (Cal Poly) at Pomona, where he started the architecture department in 1968; and SCI-Arc, the Los Angeles school that he initiated in 1972 and headed until 1987.

After a career of achievement – which, for Kappe, includes the AIA/ACSA

1990 Topaz Medal – his restless mind continues to produce new work. With LivingHomes, Kappe has designed the first modular, prefabricated LEED Platinum house, built in 2006. Other Kappe designs for LivingHomes have followed. He has also taken part in Brad Pitt's "Make It Right" program for the Ninth Ward in New Orleans.

(The following interview was edited by contributing editor Andrea Oppenheimer Dean, who expanded the transcript after follow-up telephone talks with Kappe.)

Was prefabbing the LEED-Platinum house your idea, or was it part of a LivingHomes concept?

RAY KAPPE The prefab and modular ideas were mine. We've got another dozen houses, similar to the one in Santa Monica, ready to go but held up by planning agencies.

What about the Santa Monica house's costs? They seem pretty high.

RK I only do the preliminary design. Someone else calls around for materials, which I

incorporate into my design and approve. According to LivingHomes, the ecofriendly features added about 20 percent to the \$250-per-square-foot cost of the house. But the prefab construction reduced stick-built building costs by 20 to 30 percent. Prefab also offers savings in construction time, which means money. But the only way prefab can become really economically competitive is if you build in large volumes.

People are beginning to equate prefab and green construction. Is prefab inherently green?

RK When you build in the factory, you have much less waste of materials than in on-site construction. It's possible to have better quality control, and there can be fewer risks to the laborers.

How did you first become interested in modular design and the ability to replicate architecture?

RK I was always interested in multiple housing, and so when I started my own practice in 1953, it was about trying to figure out systems that



In the seminal 1968 Kappe House, staggered exterior massing (bottom left) reflects a complex interior that rigorously divides spaces into different programmatic zones (left and below). This articulated openness, combined with climate and site sensitivity, embodies Kappe's particular genre of "warm" Modernism.



would be more economical. I was just building responsible architecture. I was one of a group of young architects who were out to change the mentality of people after World War II. We were more interested in doing new things than competing with each other. Those were different times.

I was more involved with construction than many architects, and with subcontractors. The AIA frowned on it, arguing that if you handled both design and construction you couldn't give the client adequate service. I thought just the opposite. Design-build places you closer to the process.

How did the environmental movement of the '70s affect the design of your houses?

RK Under the prescriptive standards here in California, initially you could only have a 20 percent ratio of glass to floor area. My houses had 60 to 70 percent glass and hardly any insulation. As a test, I asked some of the owners to save energy bills for a year, and I found my houses were more energy efficient than louver houses with much less glass.

I experimented with building environmentally responsible houses that were almost opposite from the one-mentality type you find in New Mexico and Arizona, where they built into the ground with thick walls. They all looked alike. I was building on different terrain; I rotated various portions and used active solar ingredients with a passive solar system. Designing energy-conserving buildings didn't really change the look of my buildings. I was just building responsible architecture; that's the way I always felt about it.

Can you describe the process of starting the program at Cal Poly and founding SCI-Arc?

RK I had been teaching at USC for a couple of years by 1967 when Bernard Zimmerman, a landscape architect at Cal Poly, asked me to start an architecture program there. I figured I'd be there for five years; I had no intention of making a career of education. I'm a pragmatist. I don't spend a lot of time contemplating what I'm going to do next. I just liked the idea of setting up a program

and seeing what would happen.

The program, as I set it up, had landscape planning in architecture, and we taught the two disciplines together. I thought architects should understand the land and the environment better. I brought Thom Mayne and Jim Stafford on to teach that approach. Later, when we were moving in that direction, Thom insisted you can't do good design and energy stuff at the same time. Today, of course, he's come full circle.

You left Cal Poly in a dustup with the dean in '72 and founded SCI-Arc. What were your original goals for SCI-Arc?

RK When the dean asked me to resign from Cal Poly in '72 – after I called him a liar and worse – it caused a brouhaha at the school. The faculty had meetings with the students and decided, "Why not start our own school?" It was like a happening. Of the 350 students, 150 signed up for what we at first called the New School. Once the parents got wind of things, that number dropped to 50, but by the fall 25 more students – who were interested in

a free, open school – had signed up.

I wasn't a crazy maverick. I wanted to encourage invention, exploration, and criticism so that students would create better projects. I threw out the usual curriculum and tried to see what it would be like if we started wide open. During the first few years, the school explored social and behavioral aspects of architecture and architectural education.

Did the school evolve from the original goals?

RK I'd say that in two years it evolved back to a fairly normal program. I found that people go back into their old ways. At the beginning, I thought I had a group that could become interested in the things I cared about: urban issues, number one; technology, of course; and environmental-response concerns. And that worked great for about eight years, until Postmodernism started to dominate architecture. Some of our faculty, Eric Moss and Thom Mayne, jumped ship, and then it became a battle because I wasn't willing to go that way. By the late '80s, I felt I wasn't going to win the fight and didn't want to head a school that I no longer believed in, so I stepped down as director. I continued

"You have to find your own center. It's important to do architecture that's comfortable for you, that you feel is a part of you, not what someone else is doing."

to teach there and at USC, which was more interested in urban issues than SCI-Arc.

Looking back on your career today, do you have regrets, unfulfilled desires?

RK I'm essentially totally content. If I weren't, I'd be crazy. But timing is everything, and unfortunately for our firm, 1980 was a killer. Our city took a turn away from planning and urban design toward just wanting implementation. So as a planning firm, we no longer had work. We'd done a gymnasium for Loyola University, which was also stopped. That project would probably have moved us into bigger-scale work. And by 1981, we broke up the firm. I could do houses on my own, but I was never able to get the one building type I wanted to do, community buildings.

As an observer of the current architectural world, do you see any great failings?

RK I don't think we've ever had as great

designers as we do now. But in a capitalist society, I don't think you can get great planning.

I wish we had the hand of a strong planner to create cities that are just slightly differentiated yet have an excitement about them. That's something they do well in Holland and the Scandinavian countries. Thom Mayne is doing some planning stuff at UCLA, but the solutions are like the old Soviet Union.

We've got two streams today: systems thinking and form-making. What's your thinking about the latter?

RK To me, form without all the other aspects isn't total architecture. What bothered me about Postmodernism was not that it criticized Modernism, but that its responses weren't good enough. Now, we're going through a similar process. It's too much "me, me, me." Everyone wants to be a prima donna, to have a big idea – because who pays attention to small ideas? I think that's our biggest problem. Frank Gehry is what I call an additive formalist, by which I mean he does a dumb building inside and attaches a piece of something on the outside. Why would you want to create huge waste just to make a building do odd formal things? Buildings like his just don't grab me the way those of masters like Corb, Wright, and Aalto do.

Forced by necessity, the world is coming around to your way of thinking again. You've been able to fuse form-making and environmental concerns. What advice would you have for young architects today?

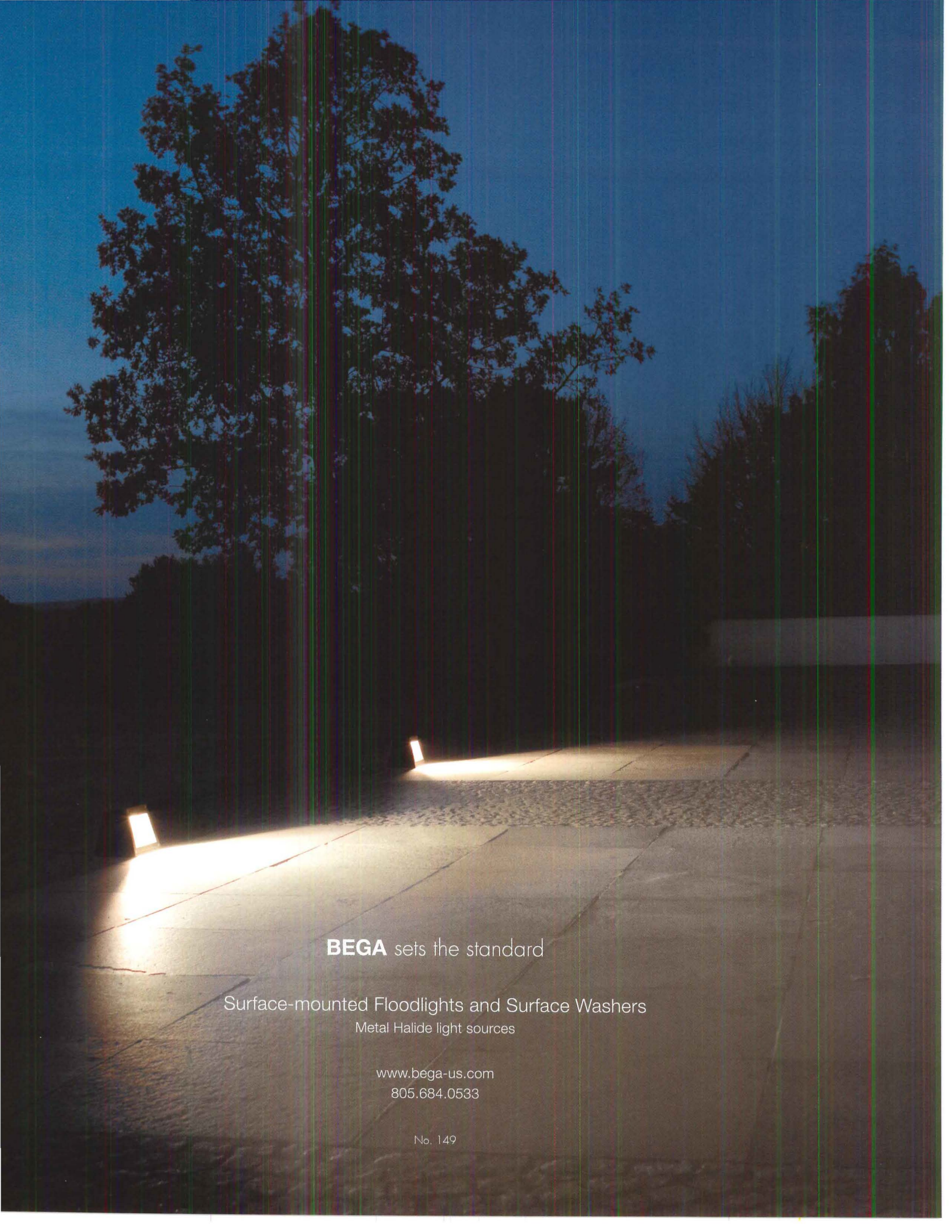
RK You have to find your own center. It's important to do architecture that's comfortable for you, that you feel is a part of you, not what someone else is doing. The green thing should be a given in the design process. The dollar shouldn't be the driving force of your work; it should be a residual. ■



Designed for LivingHomes founder Steve Glenn, this house was built over eight hours on April 13th, 2006, from 11 prefabricated modules – each weighing an average of 10,000 pounds.

View extensive additional material online at architecturalrecord.com/features, including:

- Extended interview text.
- A slide show mapping Kappe's career.
- Excerpt from a forthcoming Checkerboard Productions documentary on his work.



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No. 149

With **Les Bains des Docks**, a serene oasis on Le Havre's gritty waterfront, **Ateliers Jean Nouvel** reinvents the public pool



The Olympic-size pool, kept at a constant temperature, offers open-air swimming year-round. A channel of warm water allows wintertime bathers to paddle from the interior directly into the pool.



Passengers arriving by ferry or ocean liner in the French port of Le Havre have, for decades, satisfied the urge to step on the gas pedal and speed away. This ancient industrial harbor, along the English Channel, has long had a reputation as a dreary, gritty place. After the city's devastation in World War II, it was rebuilt on a tight budget, largely by architect Auguste Perret, adhering to his famous dictum: "Concrete is beautiful." Despite Perret's talents, travelers—on trans-Atlantic crossings or en route between the U.K. and Paris or elsewhere on the Continent—rarely felt inspired to linger.

But that may be changing. With the city's diminished role as a ferry transfer point since the Chunnel's completion, and the obsolescence of its aging port infrastructure, Le Havre has been energetically reinventing itself. The current revitalization aims to transform some of France's oldest docks into a leisure, cultural, and residential district, with both new construction and the adaptive reuse of low-lying warehouses.

On and near Le Havre's historic Quai de La Réunion, once aromatic with coffee cargo, will be two anchor projects by Ateliers Jean

Architecture writer Sarah Amelar is a contributing editor at RECORD.

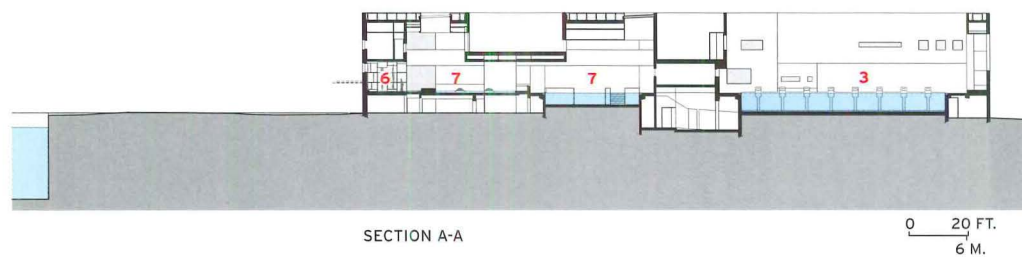
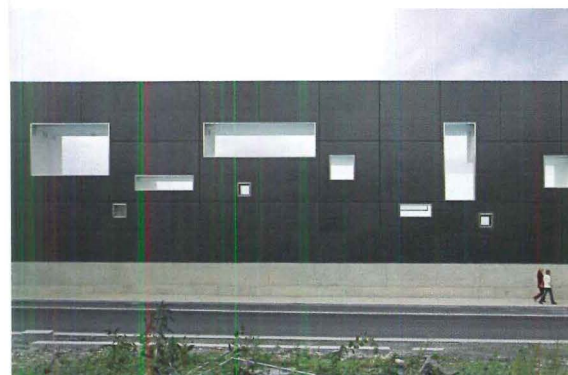
Nouvel. The Sea and Sustainable Development Center, anticipated for 2010, will feature a 328-foot-tall tower, and exhibition spaces devoted to the historic, economic, and environmental significance of this maritime region. It will also house a meteorological station and a restaurant with panoramic views. But the architect's companion project, Les Bains des Docks, directly across an inlet, is already finished, and with spectacular results—truly, as the French would say, a tour de force.

The \$29 million Les Bains des Docks aquatic center, reimagines the concept of a public pool. On the exterior, the boxy precast-concrete shell, painted gun-metal gray, echoes the scale and simple massing of surrounding warehouses. Only the playful composition of rectangular apertures hints at an interior transcending the ordinary or functional.

Inside the front door and up a run of blached terrazzo steps, the pure white interior—animated by daylight, water, and a quasi-Cubist composition of blocky three-dimensional forms—begins to reveal itself, and the effect is dazzling. Beyond the reception desk, atop the entry stairs, you catch your first oblique glimpse of a pool, behind glass. The ultra-white interior (flowing seamlessly into protected exterior spaces within the enveloping shell) features mosaic floors, ceilings,



SITE PLAN



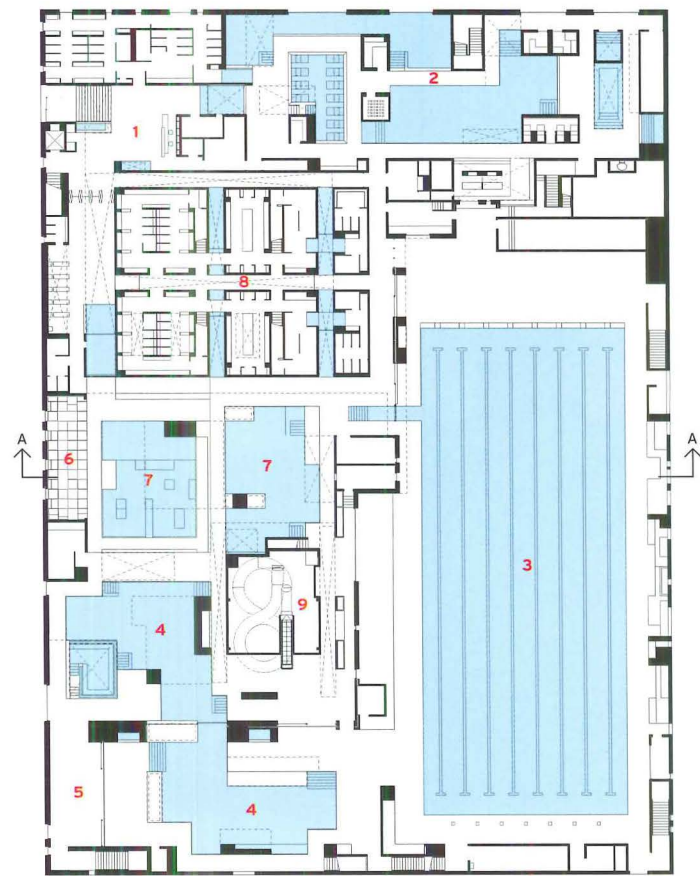
SECTION A-A

0 20 FT.
6 M.

- A. *Les Bains des Docks*
- B. *Sea and Sustainable Development Center*

The poured-in-place concrete building, clad in gridded gun-metal-gray precast panels, echoes the scale and simple massing of the surrounding structures. Only the playful openings hint at the interior milieu.

1. Lobby
2. Aqueous spa
3. Olympic-size lap pool
4. Leisure pools
5. Solarium
6. Play area
7. Children's pools
8. Changing area
9. Waterslide



FIRST FLOOR

0 20 FT.
6 M.

and walls of 20-by-20-millimeter (about ¾ inch) vitreous tiles. These luminously translucent *pâte de verre* squares establish spatial continuity and a module for the 92,570-square-foot building: No tile was cut.

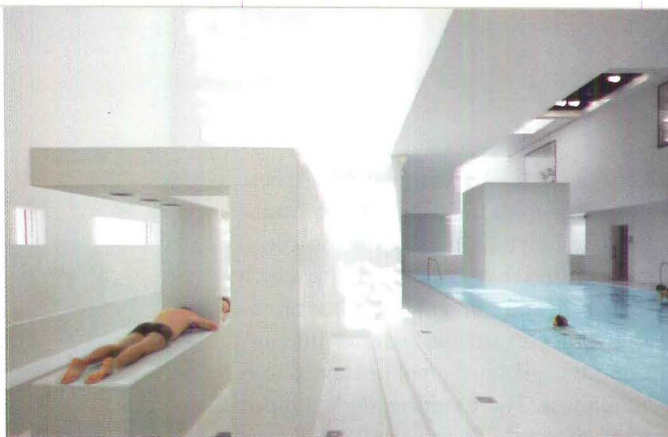
The same small-scale grid textures the exterior cladding, which Nouvel originally intended to leave pale and unpigmented. But prototype panels quickly convinced him “to accentuate the [exterior/interior] contrast, exploiting the particular and surprising light of Le Havre,” says Mirco Tardio, principal project architect. The resulting, dark-skinned monolith evokes a geode—its stony exterior hiding a partially hollowed inner realm, lined in geometric crystals.

The radiant, double-height reception zone leads to changing areas, equally white and bathed in sunlight, confirming the initial impression: Miraculously missing are the familiar traits of public pools—booming echoes; reeking chlorine; and grungy, windowless, institutional locker rooms. Instead, Nouvel took poetic inspiration from natural lagoons and Roman baths, offering myriad ways to experience water.

Once you’ve relinquished your shoes, suited up for swimming, and crossed the disinfecting-footbath threshold, you’re ready to explore the possibilities. Les Bains offers three major options: recreational pools,



The only splashes of color in the all-white interior come in the children’s area (right) and with the blue cast of water reflecting the sky. Fine geysers spout water in this zone. Outdoors, a rushing waterfall (above) offers hydro-massage.



A stretched, shiny white membrane, forming dropped ceilings of varying heights (top left), provides acoustic absorption. The blocky spatial composition, creating intimately scaled zones, in the spa area (left) and throughout the interior, also limits sound reverberation. A transparent film, bearing patterns of light flickering across water, lines some skylights, casting lively shadows on the interior surfaces (top right).

an aqueous spa, and dry cardio-fitness areas.

The sequence unfolds through spaces inhabited by water, light, shadow, and moving bathers. Water and swimmers flow from inside out and back again. An Olympic-size pool—open to the sky and surrounded by tiled decks and walls carved with cubic niches and apertures to the docklands—offers outdoor use year-round. (In winter, a warm-water channel wafts swimmers between indoors and out.) A waterfall, a superb hydro-massage, rushes into another outdoor pool.

Inside, following the Roman model, a dozen different options exist: hot and cold baths, whirlpools, saunas, a Turkish bath, fountains, sprays, soothing “rain,” turbulent jets, and pools spilling into one another. In the area for children and families, a hidden, tortuous slide offers an exhilarating plunge, while nearby, a veil of water surrounds a pool, and fine geysers shoot up from a floor. Here, the only splashes of color appear: wall, ceiling, and floor cushions resembling giant Starburst chews.

Nouvel’s team carefully limited reverberation. Glossy, stretched-fabric ceilings of varying heights mute noise, as does the blocky geometry, articulating intimately scaled areas. Mostly you hear sounds of water: trickling, gushing, roaring, trilling, or lapping.

Les Bains appeals simultaneously to the senses of sound, touch, and sight. Shafts of sunlight filter in, flicker off the water and shiny ceil-

ings, and refract through the translucent tiles. (Nighttime illumination subtly glows from underwater or semihidden sources overhead.) Sight lines and apertures offer oblique views between pools, to the sky, or out to the dock and harbor. In this sanctum of serenity, you never lose touch with the outside world.

But lest you think you’ve died and gone to swimming heaven, a few glitches remain. Maintenance of all-white spaces poses obvious challenges—especially with 700 to 2,000 users daily. In high-traffic zones, not all underfoot grout is pristine, and some floor tiles have come loose. (Nouvel’s and the center’s teams are currently devising solutions.)

That said, the experience here is extraordinary—firmly anchored in Le Havre, yet luring you to float blissfully away. ■

Project: *Les Bains des Docks, Le Havre, France*

Architect: *Ateliers Jean Nouvel—Mirco Tardio, Julie Fernandez, Felix Medina*

Consultants: *SERO (engineering);*

AIK/Yann Kersalé (exterior lighting); AVEL (acoustics)

SOURCES

Windows: *Pilkington*

Mosaic tiles: *Trend*

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90 cm

120 cm

Les Bains offers pools of different sizes, temperatures, and configurations. Some feature fountains, sprays, soothing jets, or are surrounded by veils of water.

A curved, sloping
bridge contrasts with
the simple, boxlike
volumes of the new
Modern Wing, with its
flat, overhanging roof.



Renzo Piano Building Workshop bridges a historic structure and a grand public space with its trademark Classicism at **The Art Institute of Chicago's Modern Wing**



By Josephine Minutillo

Here we go again—another art museum, another building by Renzo Piano. With the completion of the Broad Contemporary Art Museum in Los Angeles last year and plans for an overhaul of the Harvard Art Museum in Boston and a new branch of the Whitney Museum in New York City proceeding, the Pritzker Prize–winner has enjoyed a near monopoly among architects for the highly coveted building type, especially here in the U.S. So much so that interest in the buildings themselves has begun to wane. Ten years in the making, the new wing at The Art Institute of Chicago has been caught in the middle of that dwindling enthusiasm. Commissioned in 1999, the same year Piano was hired for the High Museum expansion in Atlanta [RECORD, November 2005, page 130], the Modern Wing finally opened its doors in May. But given the sheer size of it, and its prime location between the Art Institute’s landmark structure on Michigan Avenue and the public paradise of Millennium Park, the new wing is not just another building.

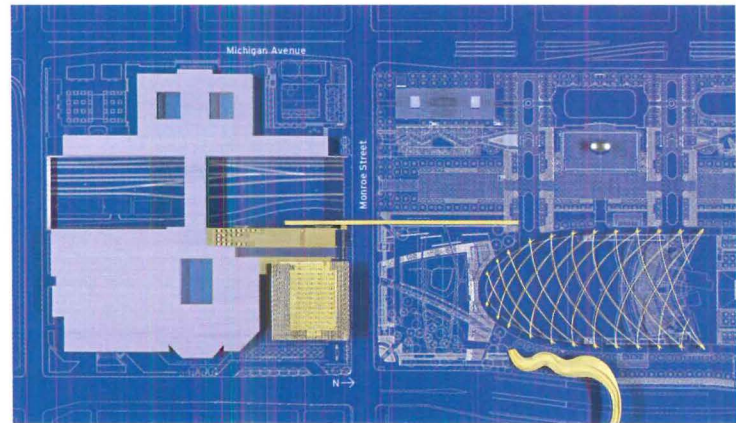
Originally intended as a small addition on the southern end of the museum’s site, as plans for Millennium Park firmed up, the building’s location shifted to Monroe Street, across from the new civic center and directly facing the Pritzker Pavilion, Frank Gehry’s billowing outdoor concert venue. “Having seen the Menil Collection and his other museums, we knew Piano could make great spaces for art,” recalls James Wood, the Art Institute’s former director. “But he also had a record as a planner beyond individual buildings. The Modern Wing needs to bind the Art Institute to the heart of the city.”

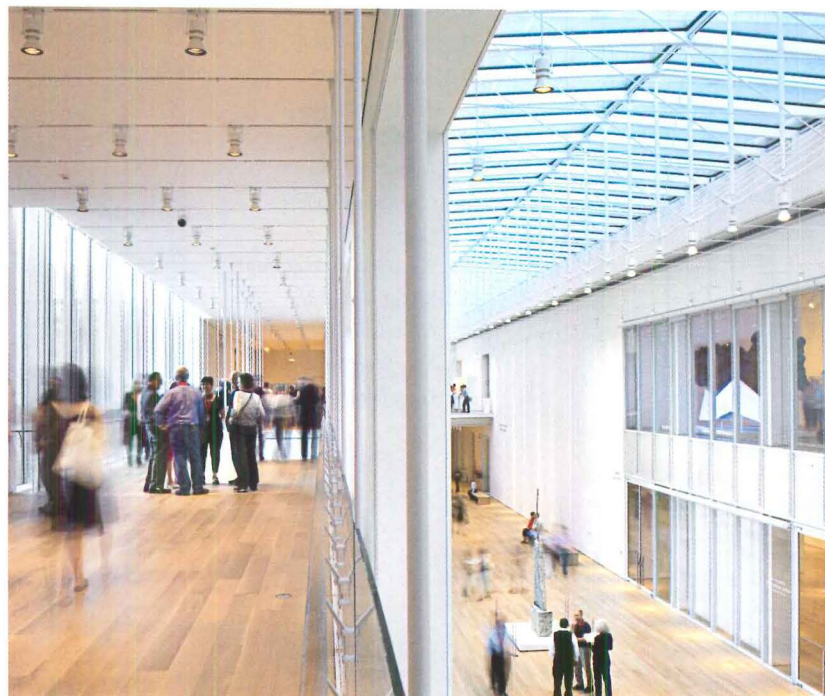
Along with the move came a much grander building scope, more than tripling in size, to 264,000 square feet of pristine galleries and a sprawling education center, housed within a series of boxy, glazed volumes beneath Piano’s familiar, natural-light-diffusing canopy, or “flying carpet.” Opposite the sculpture terrace and upscale, rooftop restaurant (amusingly called *Terzo Piano*, a nod to the architect and Italian for *third floor*), the Nichols Bridgeway—the first large-scale footbridge designed by Renzo Piano Building Workshop (RPBW)—reinforces the

visual connection to Millennium Park with a physical access.

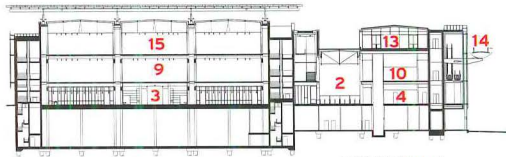
RPBW also creates a strong connection to the historic buildings—the original structure designed by the Boston firm Shepley, Rutan and Coolidge for the 1893 World’s Columbian Exposition, and later additions—pulling off a seamless interior transition between old and new despite vast differences in material and scale. On the exterior, the new wing’s Classicized Modernism pays homage to the Beaux-Arts building without upstaging it.

Museumgoers who enjoy losing themselves in the art, and in the museum itself, are best advised to visit the older buildings, whose galleries were completely reorganized and thoughtfully renovated with the expansion. Piano’s highly rational, modular galleries are too compartmentalized to allow for that sort of aimless wandering. But the new building does take cues from its predecessors. The atriumlike Griffin Court matches, in spirit at least, the Grand Staircase that welcomes visitors at the Michigan Avenue entrance. It far surpasses it, though, in breadth. Running the length of the new building, the soaring, double-height, skylit volume serves as the main artery of the Modern Wing, providing access to first-floor galleries, visitor services, the museum store,

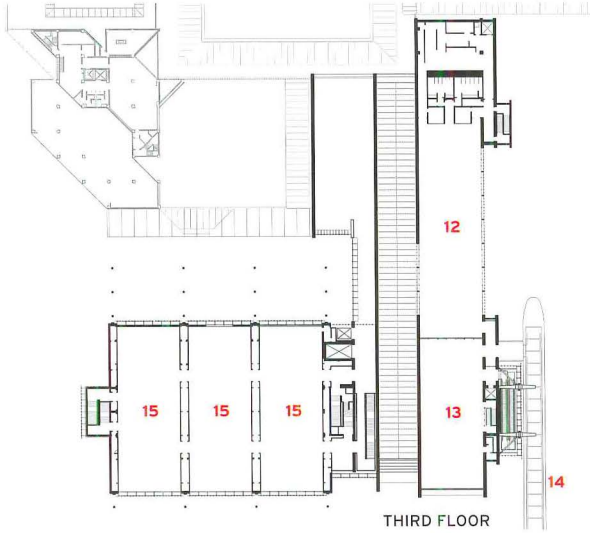




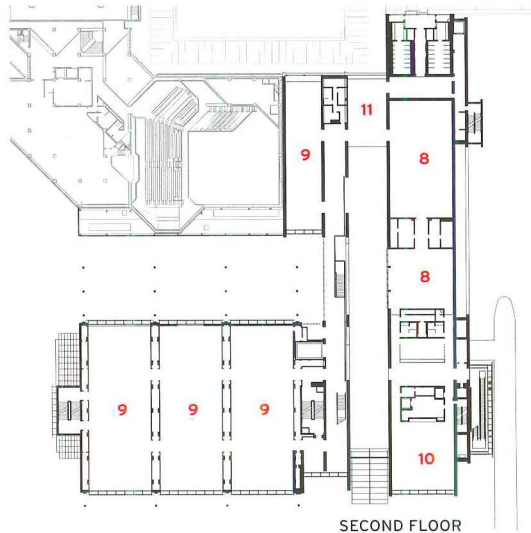
The Modern Wing's luminous box sits directly across from the exuberant architecture of Millennium Park (site plan, opposite), and is dominated by its "flying carpet" canopy (opposite, bottom). The silvery, domelike trellis of Frank Gehry's Pritzker Pavilion is visible from inside Griffin Court (above). The skylit, double-height space is the main artery of the new building (left), its staircase the preferred means of access to upper floors (far left).



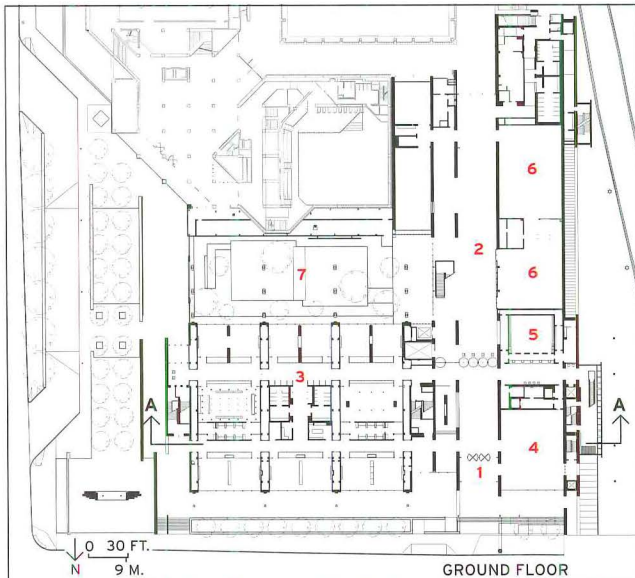
SECTION A-A



THIRD FLOOR

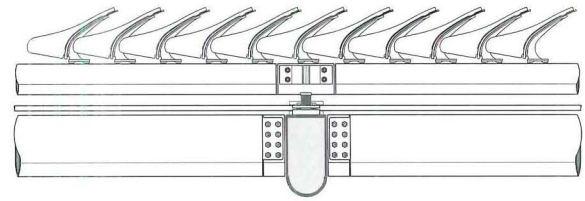
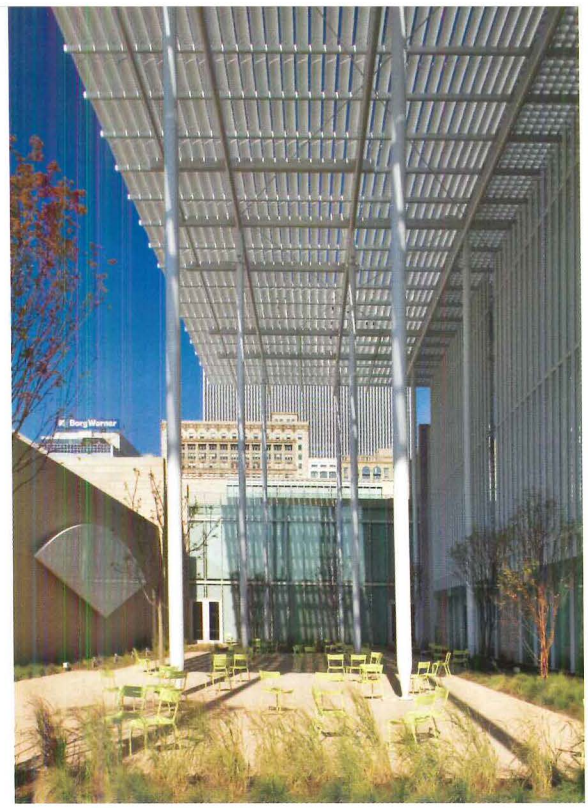


SECOND FLOOR

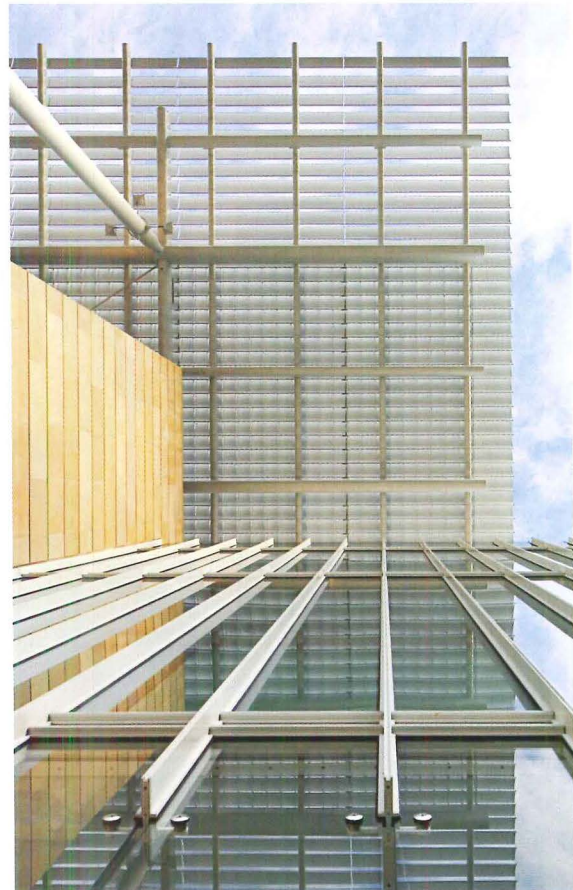


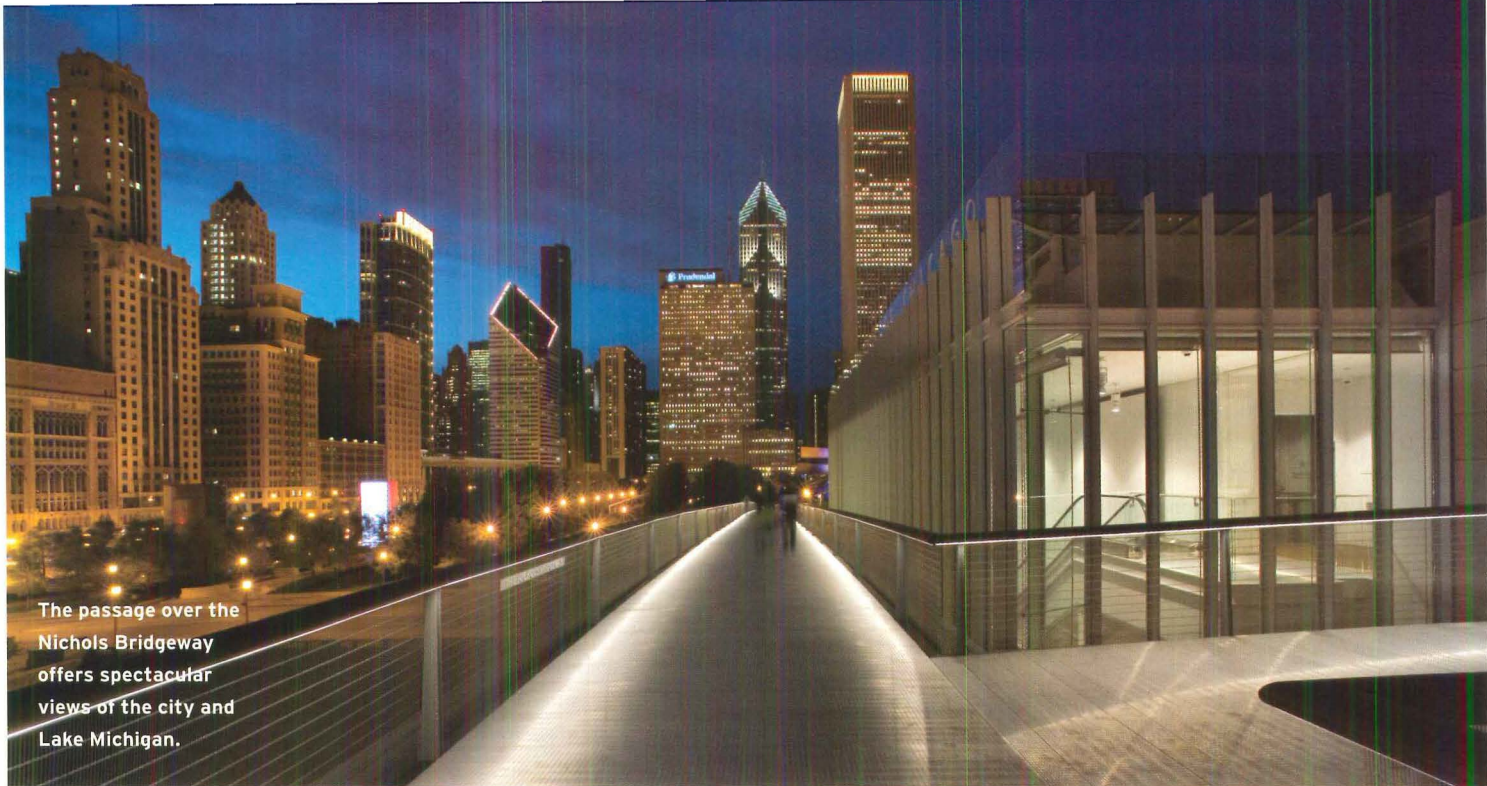
GROUND FLOOR

The Pritzker Garden features a specially commissioned sculpture by Ellsworth Kelly on its south wall (right). The “flying carpet” rests atop the third floor’s glass ceiling. Its aluminum blades, running east–west above and beyond the main volumes, act to diffuse natural light (below).



1. Monroe Street entrance
2. Griffin Court
3. Education center
4. Museum store
5. Coat/baggage check
6. Special exhibitions
7. Pritzker Garden
8. Architecture & Design galleries
9. Contemporary Art galleries
10. Conference rooms
11. Café
12. Terzo Piano restaurant
13. Sculpture terrace
14. Nichols Bridgeway
15. European Modern Art galleries





The passage over the Nichols Bridgeway offers spectacular views of the city and Lake Michigan.

The Modern Wing: Where a Familiar Type Soars By Blair Kamin

Renzo Piano's Modern Wing at the Art Institute of Chicago isn't simply the best new building to hit Chicago in years. It represents the triumph of a type – the art museum with parallel masonry walls, generous expanses of glass, and an oversailing roof that serves as a louvered sunshade for galleries below. When Piano introduced this type at his Beyeler Foundation Museum near Basel, Switzerland, in 1997, it was overshadowed by the hoopla surrounding Frank Gehry's eruption of titanium in Bilbao. Yet time has revealed the Beyeler model to be both durable and flexible. It has now winningly reappeared in his diminutive Nasher Sculpture Center in Dallas as well as the large-scale Modern Wing, which, at an imposing 264,000 square feet, makes the Art Institute the nation's second-largest art museum.

These similar but distinct iterations, which effortlessly synthesize Classical repose and Modern translucency, naturally offend critics for whom architecture is a never-ending quest for novel shapes. But Piano is unafraid to reuse and reimagine his type. His genius is to adapt it to distinct

Blair Kamin is the Chicago Tribune's architecture critic.

conditions of function, scale, and site, which in Chicago includes a choice spot across from Millennium Park, the city's new town square. Millennium Park is packed with attention-getting architecture and public sculpture, including Frank Gehry's exuberant Pritzker Pavilion and its headdress of stainless steel. The last thing the park needed was another self-aggrandizing "wow" building on its borders. Instead, Piano wisely endeavored to produce an accumulation of ever-shifting, sensory delights – a journey that would ward off museum fatigue by entrancing the viewer at every step.

That journey begins with the Modern Wing's handsome proportions and exquisite details, from its "flying carpet" of light-filtering, aluminum blades to the pencil-shaped steel columns that support the roof. Like other Piano buildings of this type, the Modern Wing reads as an X-ray that reveals its structure and its contents. Here, Piano simultaneously channels – and writes a new chapter in – the interrelated Chicago traditions of structural expressionism and curtain-wall transparency. And he proves equally adept at negotiating and knitting together the disparate architectural statements around him.

The Modern Wing uses the same Indiana limestone that faces all of the Art Institute's earlier structures, including its 1893 Beaux-Arts building, yet it is clearly in tension with them – a temple, yes, but a Modern temple of steel, aluminum, and glass. Piano demonstrates equal skill in addressing the Pritzker Pavilion and its dome-like trellis, equipped with suspended speakers, that sails over a great lawn. Against Gehry's "umbrella for sound,"

PIANO'S GENIUS IS TO ADAPT HIS BUILDING TYPE TO DISTINCT CONDITIONS OF FUNCTION, SCALE, AND SITE.

he juxtaposes his own "umbrella for sight." The result is not a starchitect smackdown, as some commentators have characterized it, but a genuine dialogue between 21st-century masters. It makes a vibrant civic place where just five years ago there was nothing but commuter railroad tracks, a surface parking lot, and an undistinguished rear entrance to the museum. Piano seals the connection with a gently sloping, 620-foot-long pedestrian bridge that leads visitors directly from Millennium Park to the wing's popular rooftop restaurant.

Many critics have rightly noted a similarity between Piano's Classicizing

Modernism and that of Mies van der Rohe, but the comparison breaks down inside the Modern Wing. Piano doesn't do Miesian universal space. He particularizes his interior, whether it be the Modern Wing's skylit, streetlike atrium, the main galleries devoted to European Modern and contemporary art, or the architecture and design galleries, which boast more square footage than their counterparts at New York's Museum of Modern Art. The

result is a splendid showcase, in which architecture's presence is always felt, but never dominates. The natural light, ever changing due to shifting weather conditions, is the Modern Wing's glory, continuing the Art Institute's century-old tradition of exhibiting works of art in diffuse natural light. True, as Piano and his clients have acknowledged, the light and other aspects of the wing need "tuning." But the Modern Wing's exemplary adaptation of an existing type evokes Herman Melville's poem *Greek Architecture*: "Not magnitude, not lavishness/But Form – the Site;/ Not innovating willfulness/But reverence for the Archetype."

and the 20,000-square-foot education center, which replaces a basement one half its size. A suspended staircase—whose all-glass railings make it appear to float within the immense space—seems to be the preferred means of access to the second- and third-floor galleries, though the ride in the glass-enclosed elevator offers views over the Pritzker Garden, an outdoor seating area.

Despite the heavy traffic through these spaces in the weeks following the opening, the Modern Wing achieves an unexpected serenity, due in part to its acoustical strengths, but more than that, to an overall design that seems effortless in its simplicity. Circulation, on the other hand, is not always as effortless. Those arriving via the footbridge descend three flights by escalator to enter the museum through the tight coat-check area. From the opposite end, with no direct access between the third-floor galleries and the sculpture terrace and restaurant, visitors are forced to travel back down through Griffin Court and up a single elevator, which, given early crowds, can lead to a wait.

Most visitors, however, are in no hurry to leave those third-floor galleries, the highlight of the new building. It is here that the flying carpet works its magic. Beneath this canopy of aluminum blades designed to capture north light, the Brancusi, Picassos, and Giacomettis on display glow within a luminous box. The veiled translucency—a scrim hovers beneath the glass ceiling—imbues these spaces with a celestial aura, even on overcast days or during a downfall, though according to Piano, “the sun gives it life.”

Piano has incorporated light-filtering canopies in many of his museums, including such small art galleries as the one atop his Lingotto Factory Conversion in Turin, Italy, its flying carpet perhaps most similar to the one at the Modern Wing. “The advantage in Chicago is that the city was laid out according to the cardinal directions; north is true north,” Piano says. He also admits that other changes in the design of

these canopies evolved due to increased attention to sustainability. “That was not as much of a focus years ago, and some of the earlier galleries experience heat gain.” Though the Modern Wing is seeking LEED Silver certification, it has drawn criticism for not being green enough, especially for an architect, and a city, known for their sustainable practices. Visitors have expressed their aversion to the vertical shades, which the museum has so far kept drawn over the glass walls until evening hours.

Where the Modern Wing succeeds most, like Millennium Park across the street, is as a civic space. At \$300 million, it may, sadly, be the last of its kind for a while. And as different as the Modern Wing is from Piano’s first museum—Paris’s revolutionary Pompidou Center, designed with Richard Rogers—it plays a similar role as a magnet for the masses. Even the Nichols Bridgeway, which when seen from afar may appear as an awkward appendage or an afterthought, has its merits. Generously scaled, the experience of walking over it is a thrilling one in Chicago, with incredible views of Lake Michigan and the city’s famous skyline. Its muscular profile, together with the templelike building, is a fitting addition to that skyline, responding to Chicago’s rich architectural heritage, and setting the stage for its future. ■

Project: *The Art Institute of Chicago—The Modern Wing, Chicago* lighting, acoustical); Gustafson Guthrie Nichol (landscape)

Architect: *Renzo Piano Building Workshop—Renzo Piano, Hon. FAIA, Joost Moolhuijzen, partners*

Architect of record: *Interactive Design, Inc.*


Consultants: *Arup (structural,*

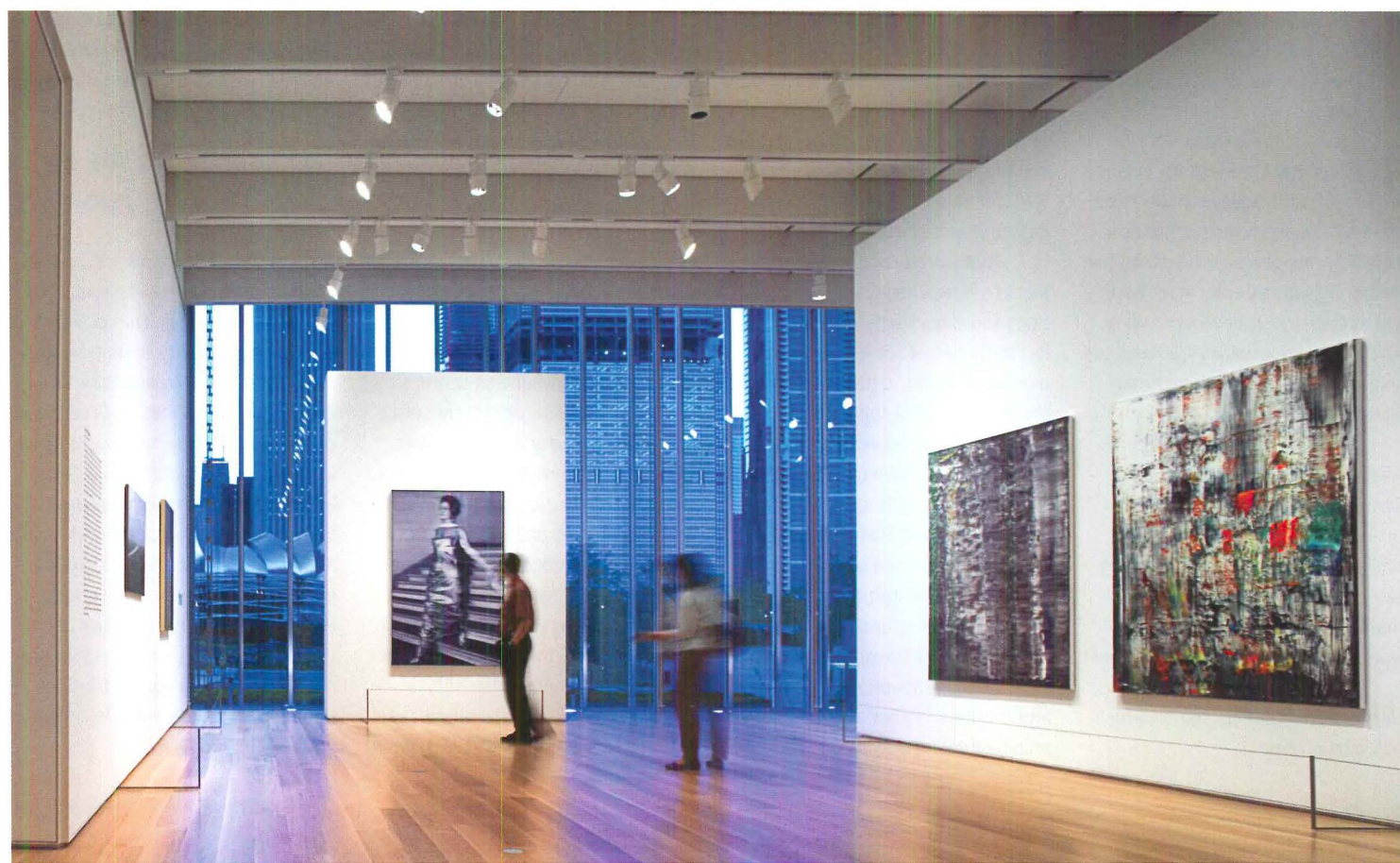
SOURCES

Curtain wall: *Josef Gartner GmbH*

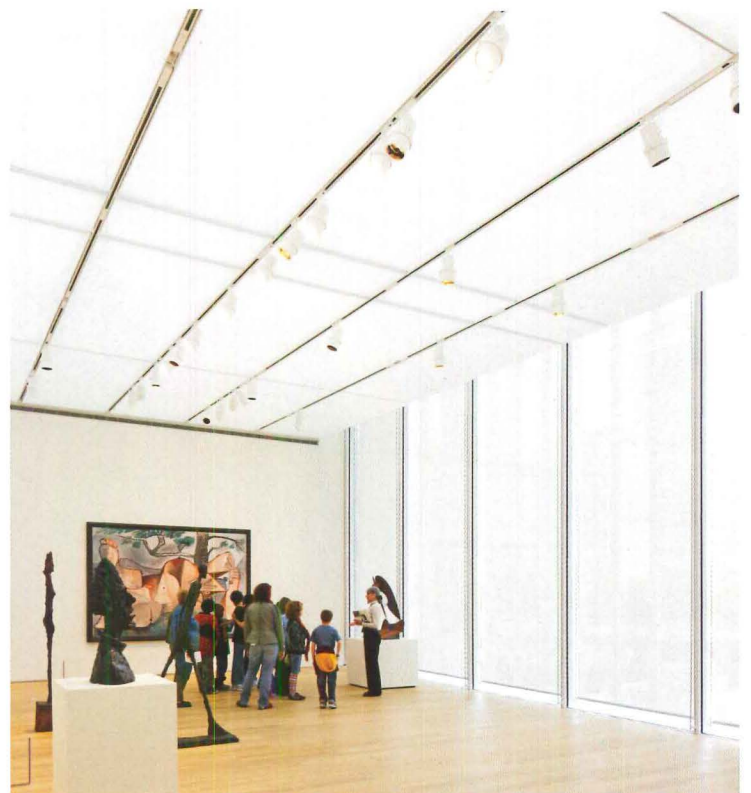
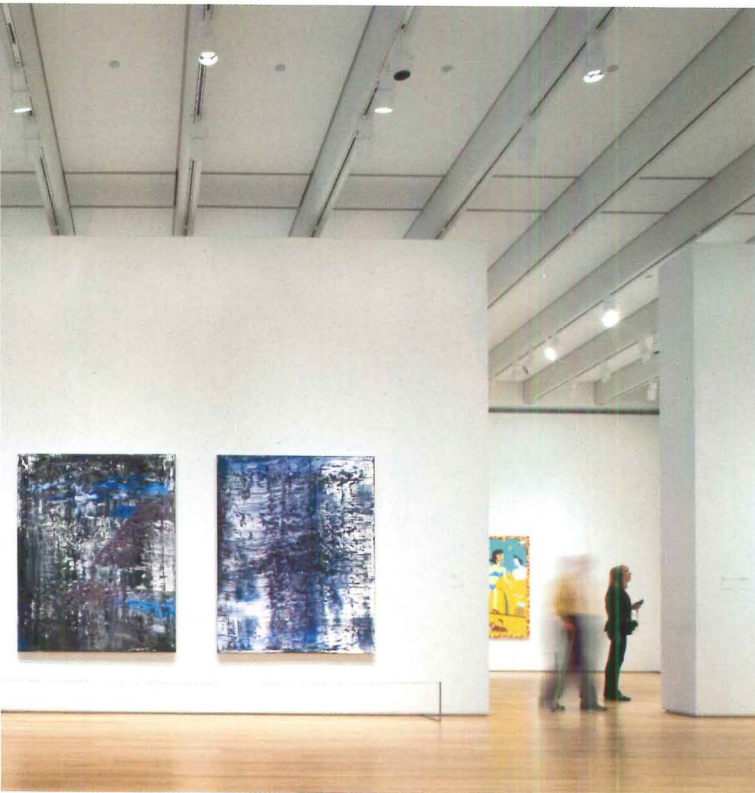
Ceilings: *Armstrong*

Furnishings: *Fritz Hansen; Unifor; Poltrona Frau; Vitra; RPBW Design*

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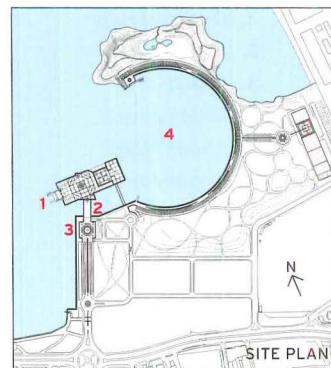
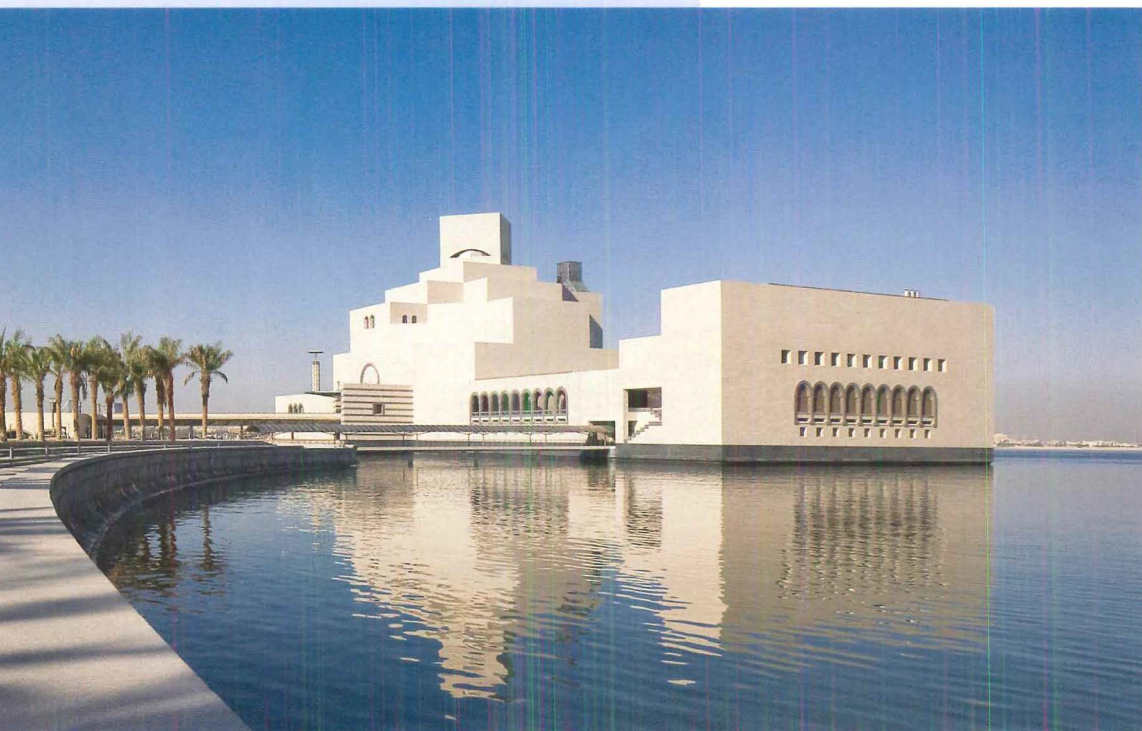


Piano refers to the third-floor sculpture terrace, opposite the restaurant, as a piazza, or gathering space (right). The second-floor galleries feature several works by Gerhard Richter (opposite), including *Woman Descending the Staircase* (1965), which is set against the north facade's double-glass wall (opposite). A scrim over the third-floor galleries filters in natural light below the glass roof and flying carpet (below right).



I. M. Pei pairs Islamic tradition with monumental
Modernism in the **Museum of Islamic Art** in Doha
for an opulent collection of art and artifacts





1. Museum of Islamic Art
2. Entrance bridge
3. Entrance plaza
4. Peninsula cove

The Museum of Islamic Art sits on an artificial island connected to the mainland by bridges (opposite and left). A peninsula curls around the building (above).



PHOTOGRAPHY: © IWAN BAAN, EXCEPT AS NOTED; COURTESY MUSEUM OF ISLAMIC ART (TOP)

By Paula Deitz

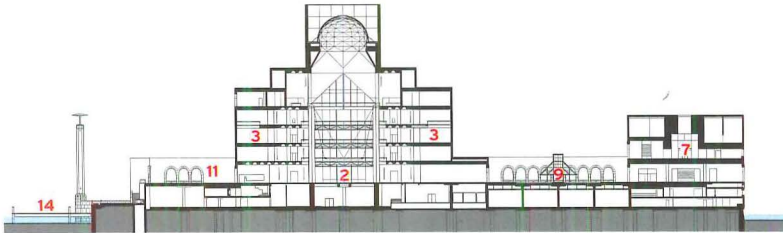
Unlike the heads of neighboring cities along the Arabian Gulf on the architectural fast track to build office buildings and iconic cultural institutions, the Qatari Royal family, headed by the Emir, His Highness Hamad bin Khalifa al-Thani, has been deliberate in the planning of its emirate. The capital city of Doha is a patchwork of old quarters with a traditional bazaar, or souk; neighborhoods from the 1960s; and an emerging commercial district with glittering towers. Finally, there are patches of dusty desert, the terrain that served its disappearing Bedouin culture before the country's newfound wealth in natural gas.

When Ieoh Ming Pei's Museum of Islamic Art was inaugurated last fall in Doha, the occasion was more than a star-studded event of celebrities from the art and auction world. In her opening remarks as chairman of the Qatar Museums Authority, the Emir's daughter, Her Excellency Sheikha Al Mayassa bint Hamad bin Khalifa al-Thani, dressed in a traditional black *abaya* and *shayla* (robe and head scarf), elucidated the museum's mission as an investment in the education of Qataris through the investigation of Islamic culture throughout the world. Those in attendance felt the pulse of a cultural renaissance that joined a rich past with a hopeful future.

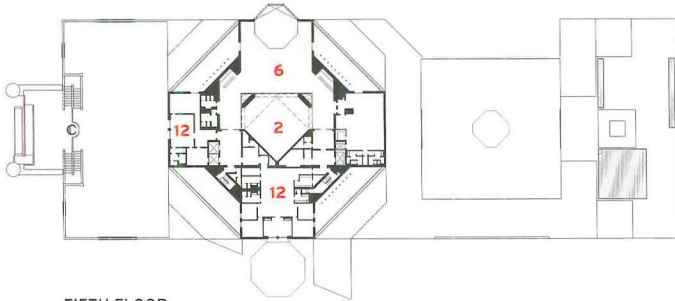
With this mission, the museum had set aside the original choice of Lebanese architect Rasem Badran, made by a jury in 1997. It offered the commission to I.M. Pei, who had been recommended by the general manager of the Aga Khan Trust for Culture, Luis Monreal. From the beginning, Pei says, he conceived of this new venture as completing a triumvirate of his museums that required specific cultural allusions because of their locations. The other two examples are the 1997 Miho Museum in Shiga, Japan, configured like a hilltop village, and the 2006 Suzhou Museum in his family's ancestral city of

Paula Deitz is editor of The Hudson Review. Her book Of Gardens: Selected Essays is forthcoming from the University of Pennsylvania Press.

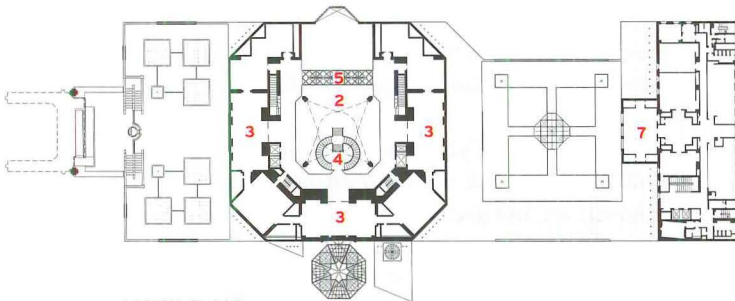
- 1. Entrance bridge
- 2. Atrium
- 3. Gallery
- 4. Main staircase
- 5. Atrium bridge
- 6. Restaurant
- 7. Education wing
- 8. Auditorium
- 9. Central courtyard
- 10. Arcade
- 11. West courtyard
- 12. Office
- 13. Prayer room
- 14. Boat dock



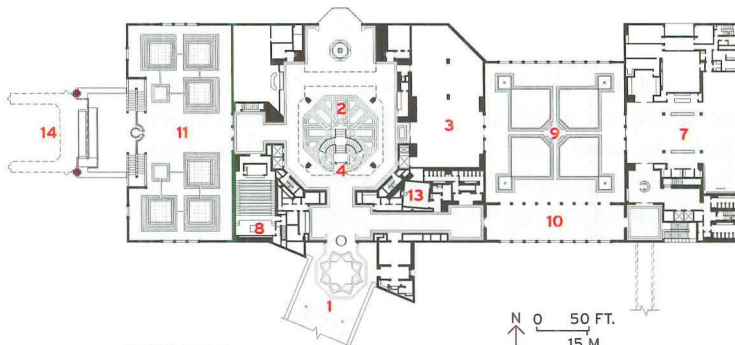
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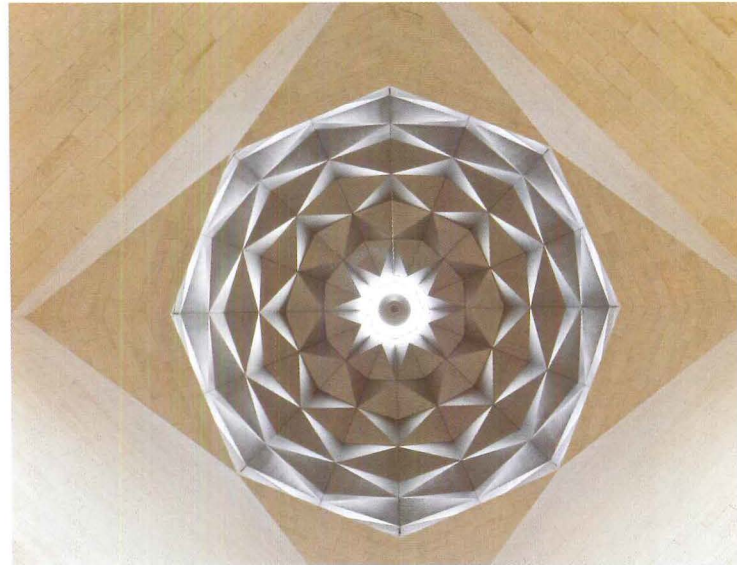
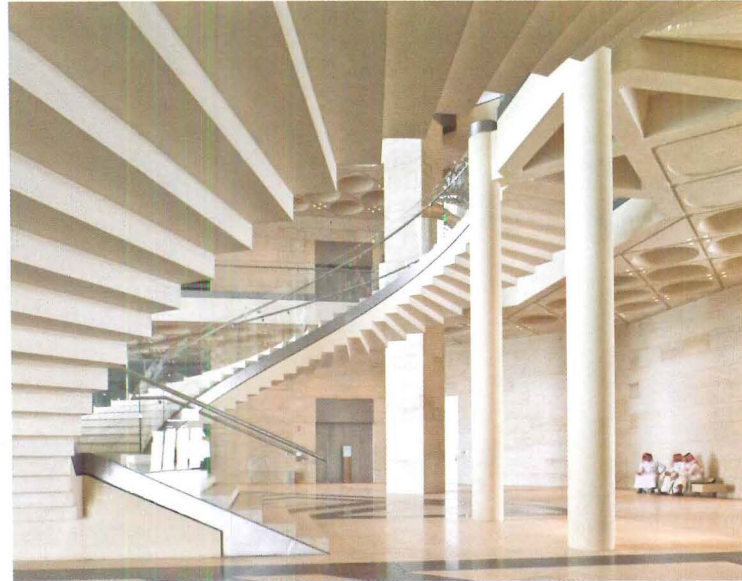
FIFTH FLOOR



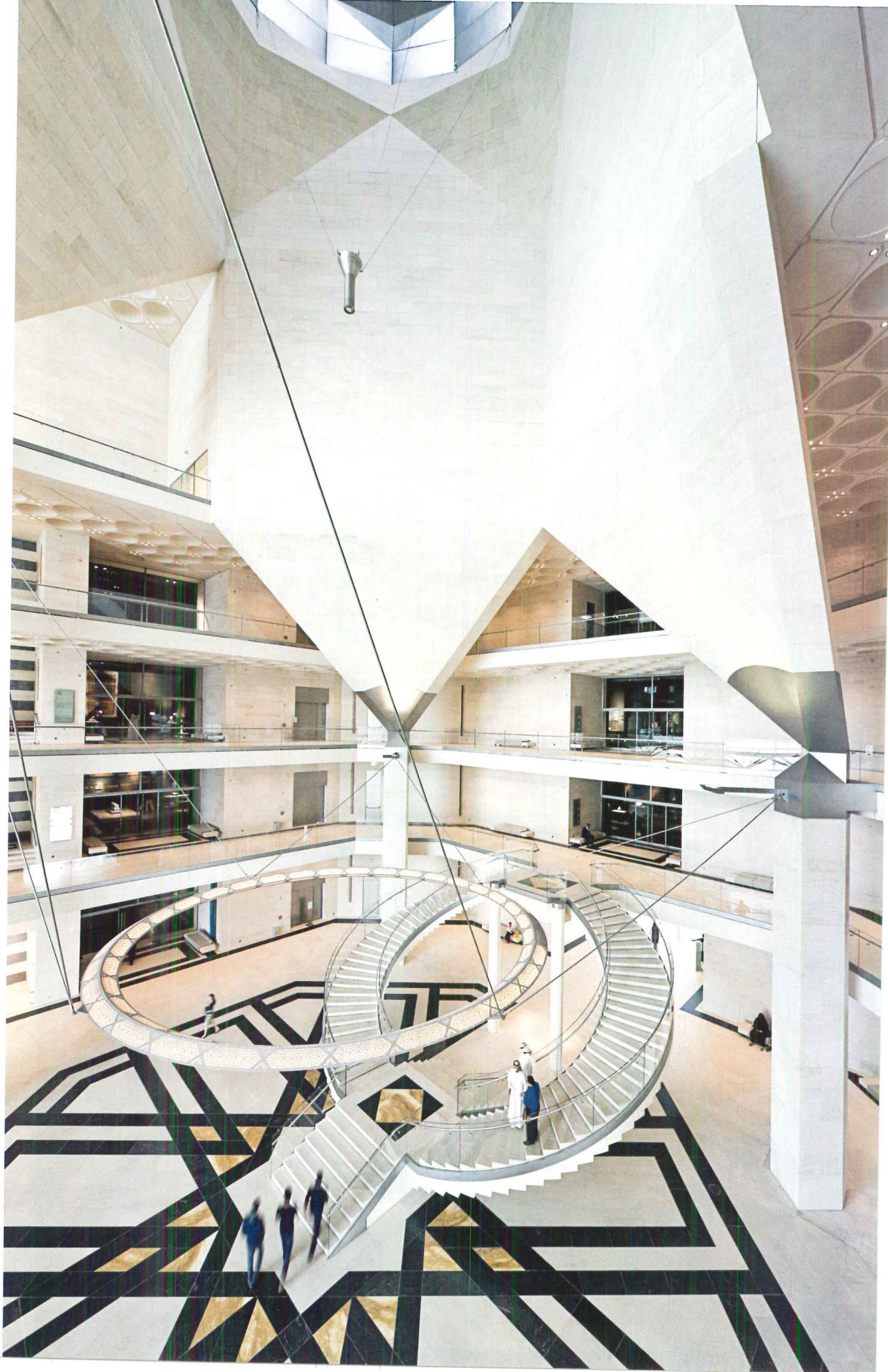
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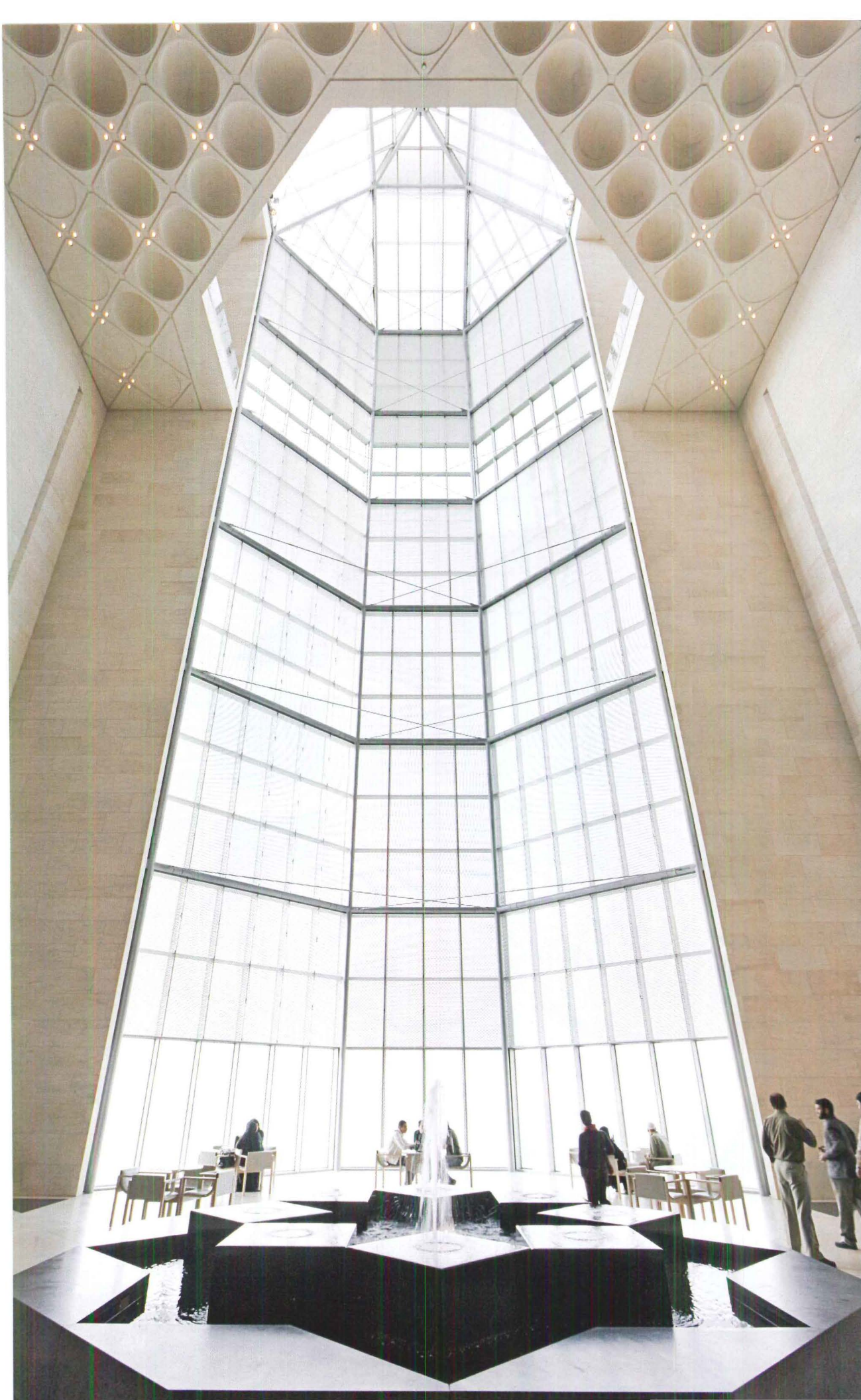


FIRST FLOOR



Inside the atrium, light pours through an oculus and glitters off the faceted stainless steel lining a dome (opposite, middle). In Pei's geometric progression, the octagonal perimeter of the circular dome is supported by pendentives (right) above a dramatic horseshoe-shaped central staircase (opposite, top). An arcade (opposite, bottom) connects the main building with a two-story study and education center, part of the museum's scholarly mission to engage in research.





On the north side of the atrium, a 148-foot-high glass wall (left and above) looks out to the West Bay from each level of the museum. To the side of the five-story museum proper, a water terrace with spouting fountains (opposite, above middle), evokes a Mughal garden and also offers views across the Gulf. The library and education center (opposite, middle) helps fulfill the museum's didactic goal, while 18 solemn, luxurious galleries house more than 800 opulent works from the permanent collection (opposite, bottom).



Suzhou, China [RECORD, May 2007, page 186], rendered in the traditional whitewash with gray granite roof tiles. In both cases, he built up the walls volumetrically into the geometric forms characteristic of his architecture, at least since the East Building of the National Gallery in Washington, D.C. (1978).

Pei conducted an extensive geographic search for the essence of Islamic architecture only to discover the wide range of regional differences separating, for example, the Grand Mosque in Córdoba, Spain (begun in the 8th century), from the mosque in Fatehpur Sikri in India (completed in 1574). Finally, in the arcaded courtyard of the Mosque of Ahmad Ibn Tulun in Cairo, he found inspiration in the 13th-century domed ablution fountain with its arched base that steps up in severe block forms, where sharp angles are delineated by sunlight and shadow.

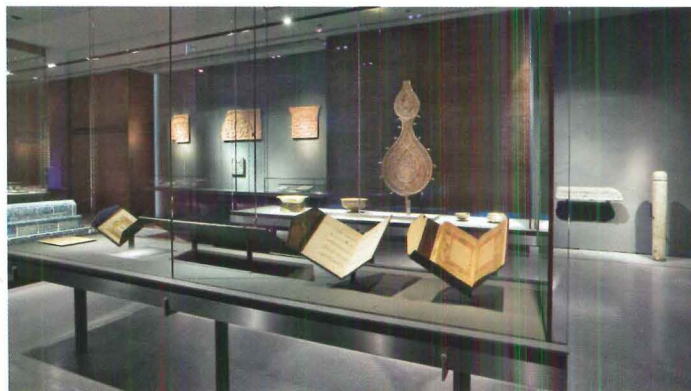
Presented with suggested building sites along Doha's Corniche, or headland, along the Gulf, Pei feared the possible encroachment of the city. He ultimately established the museum 195 feet from the mainland on an artificial island connected to the shore by three bridges. Shortly after the island was created in December 2003, construction of the concrete structure began, and it was finished in late 2008. The museum was financed by the Qatar Petroleum Engineering Department, and the Qatar Museums Authority oversees its management.

The 376,740-square-foot building's formation of angular volumes hiding a central dome within a tower gives the impression of a great fortress separated from land by a narrow moat. To complete the setting, Pei extended the Corniche into the Gulf, and the resulting landfill appears as a jutting crescent that embraces the museum. It also provides a promenade complete with an avenue of palm trees and other tropical flora.

With all their angularity, the museum's blocks of creamy French limestone reflect blinding sunlight, contrasting with deep shadows that shift continually throughout the day. As with his buildings in Japan and China, Pei has successfully married motifs of indigenous architecture to his clean monumental Modernist style.

Placed around the perimeter of the museum's central atrium, the first suite of galleries displays objects according to genre: calligraphy, ceramics, metal, glass, ivory, scientific instruments, textiles, and precious stones. In the second suite, the displays are organized geographically and historically to demonstrate the influential sweep of Islamic culture in a journey through three continents—from Córdoba to Samarkand—from the 7th to the 19th century. The objects glow against surfaces of gray porphyry stone and Louro Faya, a Brazilian lacewood that has been bush hammered and treated to give it a metallic appearance.

The secret to Pei's creativity in his later years is the nonagenarian's abiding curiosity and his selectivity as a means of ongoing personal growth through new challenges. Within this context, he has designed a museum that is both international in scope and design and local with respect to architectural customs inherent in the indoor/outdoor manifestations of Islamic design. Each element expresses the strength of his design concept to incorporate experiences from the past into a vision for Qatar's future. Is this Pei's last building? Don't bet on it. ■



Project: *Museum of Islamic Art, Doha, Qatar*

Architect: *I.M. Pei Architect— I.M. Pei, FAIA, Hiroshi Okamoto, AIA, Perry Chin, Toh Tsun Lim, AIA, Aslihan Demirtas, project team*

Consultants: *Leslie E. Robert-*

son Associates (structural); Jean-Michel Wilmotte (gallery design); Fisher Marantz Stone (lighting)

SOURCES

Limestone: *Francepierre*

Glass: *Saint Gobain; Shinko Glass*

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Frank Gehry transforms the
Art Gallery of Ontario in part by
rediscovering his (and its) past





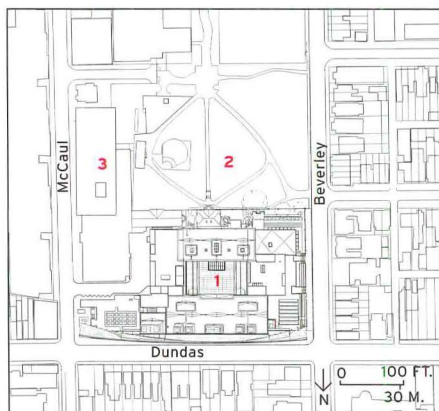
The two ends of the new Dundas Street facade (opposite) offer places to hang banners. This curving glass, steel, and wood elevation addresses the scale of houses across the street (below). A “barnacle” stair cantilevers off the facade overlooking Grange Park (left).



By Clifford A. Pearson

At the Art Gallery of Ontario (AGO), Frank Gehry plays hockey with architecture, turning it into a game of speed and balance. From a curving glass entry facade that catches the motion of streetcars trundling along Dundas Street to a switchback ramp in the lobby and then a corkscrew stair in the museum’s central courtyard, Gehry—a hockey fan—gets things moving, slows them down, then picks them up again. At the same time, his extreme makeover of the venerable Toronto institution reasserts the original 1918 building’s north–south axis as a stabilizing force and the primary path for visitors to follow as they enter the museum and orient themselves.

Gehry’s first building in the city where he was born and grew up (he has done a couple of interiors there, too), the AGO brings the notion of time and memory into subtle play. The architect’s maternal grandparents lived just a couple of blocks away, and he often played in Grange Park adjacent to the museum. He vividly remembers his first visit to the AGO (then called the Art Gallery of Toronto) when he was eight years old and speaks fondly of seeing a John Marin seascape in Walker Court, the colonnaded space at the center of the museum’s original building, by Darling & Pearson. Over the years, though, the prominence of Walker Court in the overall scheme had diminished as the museum expanded piecemeal. In an expansion that opened in 1993, Barton Myers moved the museum’s main entry to the east side of the block, away from the historic axis running through Walker Court and the Grange, the 19th-century mansion that served as the institution’s first home. While the Myers design brought the entrance close to the busy intersection of Dundas and McCaul Streets, it introduced



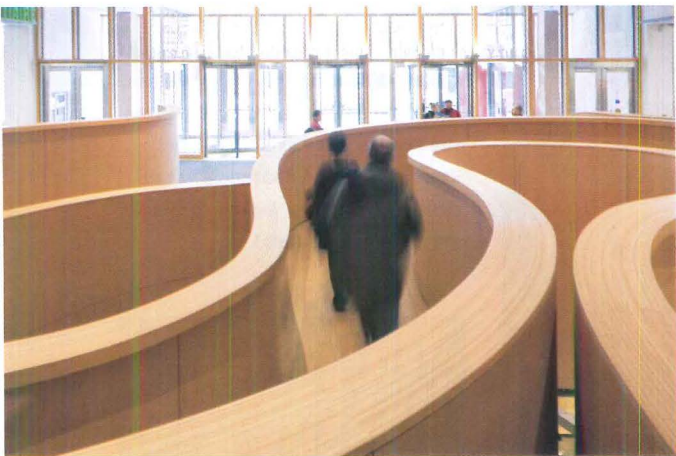
1. AGO
2. Grange Park
3. Ontario College of Art & Design

a new circulation pattern that was less direct and more confusing. One of Gehry’s first decisions was to return the museum’s entry sequence to the axis he remembers from his childhood, albeit one

that now starts at an entirely new Dundas Street facade and lobby.

By bending wood in various ways throughout the project, the architect evokes in an abstract way the feeling of hockey sticks and the boards that envelop every rink’s skating surface. His new Dundas Street elevation stretches over the sidewalk to embrace pedestrians in a two-story-high glass, steel, and wood canopy that frames views of the houses across the street and curves overhead to bring the sky into the composition. At the east and west ends of the building, Gehry “tore off” pieces of the canopy to interrupt the 450-foot-long expanse and create surfaces angled toward the street intersections that can be used for banners announcing exhibitions. Although the facade’s web of curving, glue-laminated-wood beams injects a dynamic note onto the street, the exposed structure has a rugged, decidedly Canadian, quality to it. Nothing precious here. “I wanted to create a proscenium experience,” says Gehry, describing how the entry canopy frames views of the scenery and action along Dundas Street. The sweeping facade certainly engages the fabric of the city in a way that earlier incarnations of the AGO never did, but the narrow concrete steps and lack of benches make sitting and lingering here less enticing than it could be.

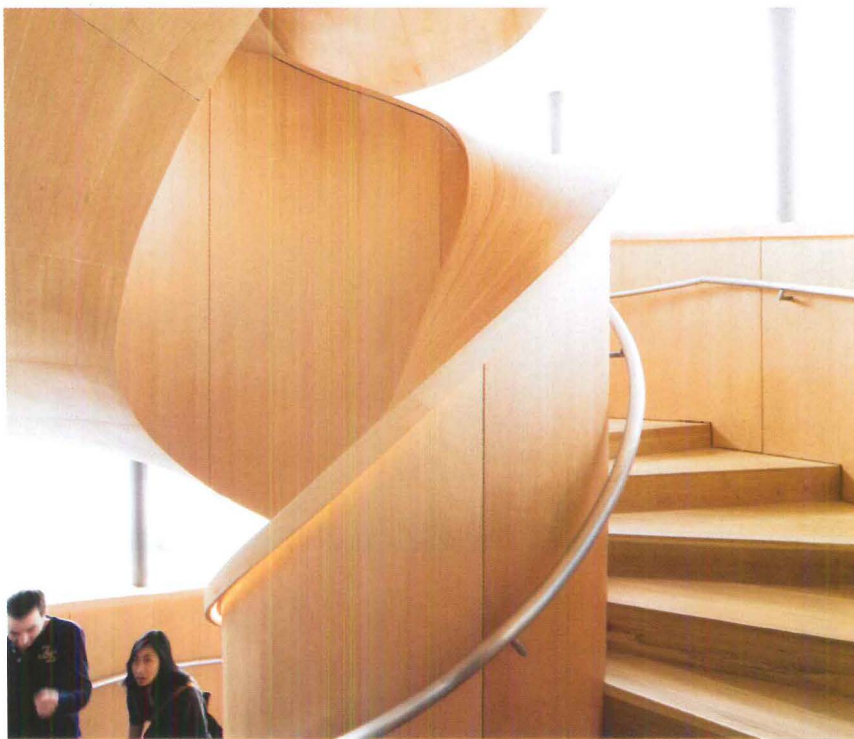
In his initial scheme for the project, Gehry envisioned a series of towers on Dundas Street housing most of the new gallery spaces.



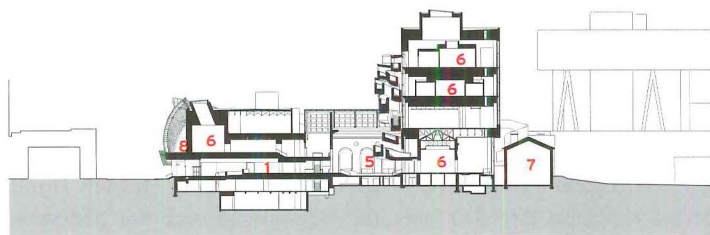
A switchback ramp dominates the entry lobby (left) and offers opportunities to peek down to the ship-

model gallery (bottom left). A corkscrew stair (below) was fabricated in pieces at a factory, then assembled on-

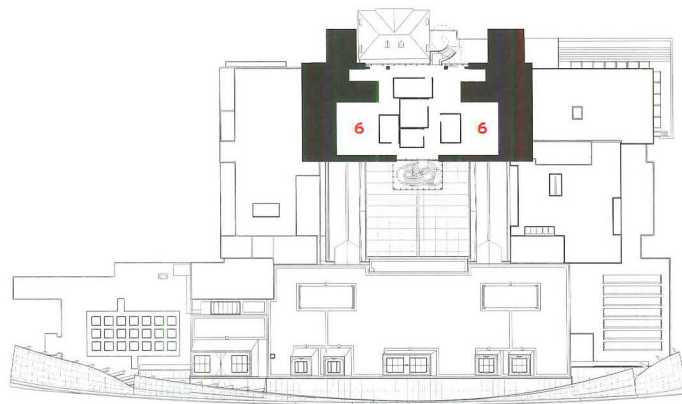
site. It rises through a new glass roof over Walker Court (opposite), the historic heart of the museum.



- 1. Lobby
- 2. Coat check
- 3. Retail
- 4. Restaurant
- 5. Walker Court
- 6. Exhibition
- 7. Grange House
- 8. Sculpture gallery



SECTION A-A



FOURTH FLOOR



GROUND FLOOR



SECOND FLOOR





Gehry took different approaches to designing galleries for contemporary art and those for the Thomson collection of European art. In the new south tower, he used height and daylight to shape spaces for Modern art (near and far left). For the European art, he renovated old galleries, creating intimate rooms (top left).

But this design proved too expensive, so he created the curving facade—which reviewers and locals alike have greeted with cheers—and added a large gallery block on the back of the building, fitting steel columns through the existing structure and stacking new floors above the old ones. On the second floor of the long front addition, he created a 50-foot-high sculpture gallery that serves as one of the museum’s “wow” moments. Douglas fir louvers run along the top portion of the curving wood ribs, creating an animated play of light and structure. Gehry wants the louvers to come all the way down to the floor to make the space “less pompous,” but the museum likes the way they are now because they reveal more of the double layer of wood elements shaping the Dundas Street facade and allow extra light to enter from the north.

The 88,000-square-foot tower on the back of the building looms over the diminutive redbrick Grange, establishing a juxtaposition of scales and materials that is a bit jarring at first. Gehry says he “painted” his blocky new structure with blue-titanium cladding, which “works beautifully on gray days.” And he massed his tower so it roughly matches the height of Will Alsop’s addition to the Ontario College of Art & Design [RECORD, August 2004, page 124] hovering on the east side of Grange Park. Along with an apartment tower to the south and the Alsop building, the Gehry tower does indeed help define the park at a bigger, more urban scale and works better the longer you look at it.

Inside the new Dundas Street addition, Gehry designed a lobby with a snaking accessibility ramp made of 5-foot-high panels of Douglas fir. With the ramp, he not only turned a necessity into an attraction, but offered visitors walking on it sneak peeks into galleries one story below where donor Kenneth Thomson’s collection of ship models is displayed

in Gehry-designed vitrines. In Walker Court, Gehry covered the space with a new glass roof and used the daylight to direct visitors through the museum. He also inserted a mezzanine level around the court to provide access to temporary exhibition spaces and galleries for Thomson’s collection of Canadian art (his European art collection is on the ground floor). Walking from the second to fifth floors, visitors take a wood-clad corkscrew stair that ascends right through the court’s glass roof and is suspended from the new tower on the back of the museum. To connect the top two floors, Gehry designed a curving “barnacle” stair that cantilevers out from the south face of the tower and offers dramatic views of the park. “Frank created a journey through the building,” states Matthew Teitelbaum, the AGO’s director and C.E.O. “His design is about the experience of moving from one space to another.” Rather than grabbing attention just with its forms (both inside and out), the AGO seduces by creating an athletic tension between motion and repose. ■

Project: Art Gallery of Ontario, Toronto, Canada

Architect: Gehry International—Frank Gehry, FAIA, design partner; Brian Aamoth, AIA, partner in charge; Craig Webb, AIA, partner, project designer; Jeffrey Wauer, project architect, manager

Engineers: Halcrow Yolles (structural);

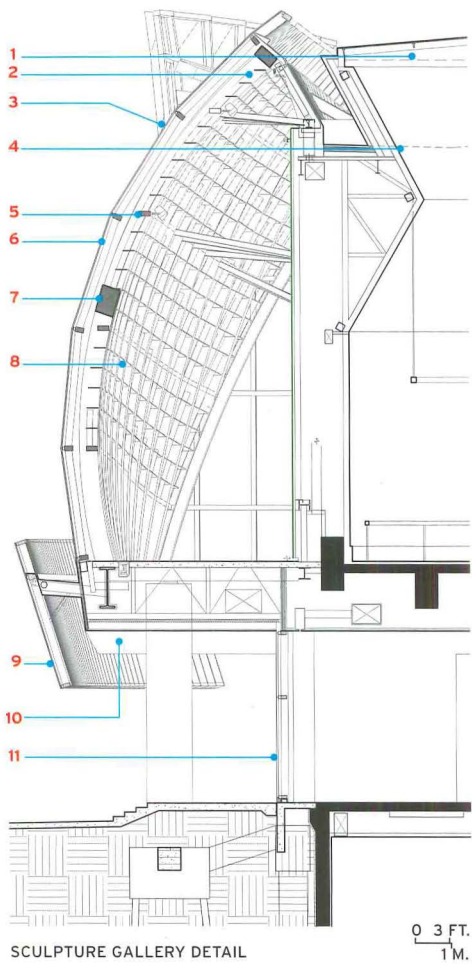
H.H. Angus (mechanical); Mulvey + Banani (electrical); R.V. Anderson (civil); Brook Van Dalen (facade)

General contractor: EllisDon

SOURCES

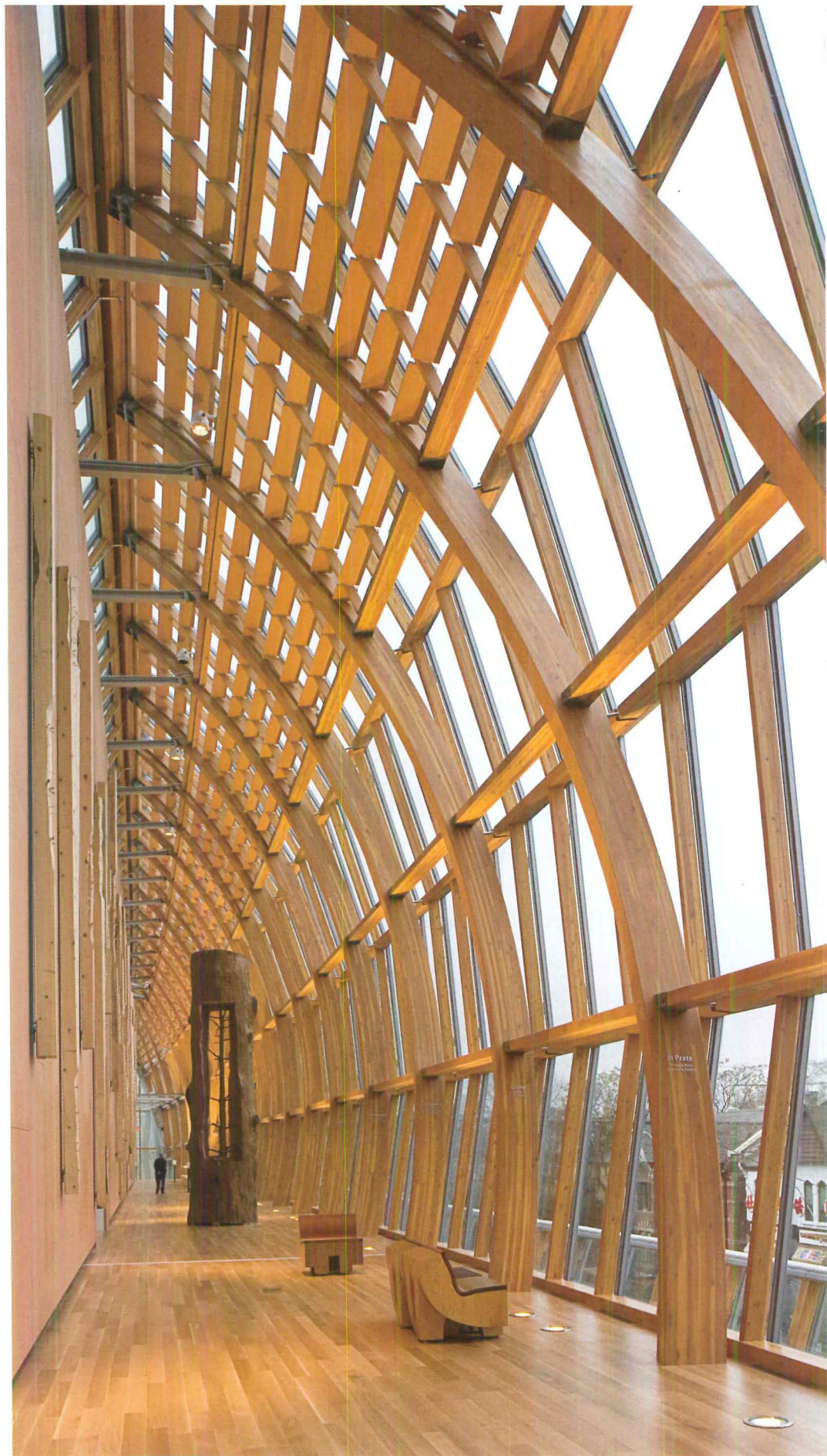
Glass curtain wall: Antamex
Glazing: Guardian; Pilkington; Viracon
Glue-laminated wood: Structurlam

Read an interview about the AGO with Frank Gehry at architecturalrecord.com/projects.



1. Motorized vinyl roller shade
2. Glue-laminated Douglas fir beam
3. Glass-and-aluminum curtain wall with glulam mullions
4. Painted gypsum wallboard
5. Glulam header
6. Glulam mullion
7. Glulam radial support
8. Douglas fir louvers
9. Glass-and-aluminum curtain wall with glulam mullions
10. Glulam and aluminum soffit
11. Triple-glazed aluminum storefront

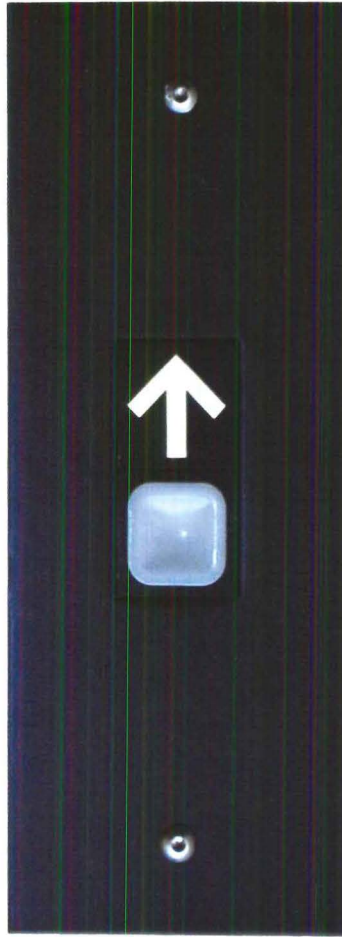
A 50-foot-high sculpture gallery (right) runs the length of the second floor overlooking Dundas Street.



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New Road to Wellville

The principles of evidence-based health-care design have improved the architecture and ambience of many different hospitals completed in recent years. The recession could alter that.

By Suzanne Stephens



OSPEDALE DELL'ANGELO Venice, Italy

Emilio Ambasz & Associates and Studio Altieri have designed a hospital in which landscaping for an atrium and the exterior terraces results in a literally green architecture for health care.



JACOBI MEDICAL CENTER, **AMBULATORY CARE** **BUILDING**

The Bronx, New York
Pei Cobb Freed, led by design partner Ian Bader, brings dramatic architecture with light and views to a 1955 institutional setting.



METHODIST STONE OAK **HOSPITAL**

San Antonio, Texas
HOK's strongly rectilinear design recalls early Modernist architecture while adhering to current goals for creating contemporary, homelike settings.

Until late last fall, the health-care industry needed and wanted architecture: According to *World Health Design* magazine, some \$200 billion was planned for the next 10 years in the U.S. alone. McGraw-Hill Construction's forecasting department reports that 54 million square feet of hospital construction was initiated in 2008. But then came you-know-what. Now with the recession, estimates for hospital construction in 2009 show an 18 percent decline—to 44 million square feet.

As projects get canceled and go on hold, or plans are pared down, architects and medical professionals fear that the current trends in improved health-care design could be jettisoned.

These trends result from the increased adoption of evidence-based design in recent years, where studies undertaken by health-care professionals working with architects and designers have determined significant features that positively affect the health of the hospital patient—and the morale of the staff. The findings are hardly surprising to those who have spent any time in hospitals: For example, housing two or more patients in rooms separated only by curtains not only contributes to the spread of germs but also adds to the patients' stress, lack of sleep, and depression. Furthermore, patients get well faster in settings with ample daylight and view, in addition to privacy, little noise, and such practical considerations as placing sinks near patient's beds to facilitate hand-washing by the staff.

Interestingly, some of this research benefits from that undertaken by the hospitality industry, as Roz Cama points out in *Evidence-Based Healthcare Design* (Wiley, 2009). Hotels have increasingly studied means to reduce travelers' stress through design, which might explain why some hospitals are looking more like hotels these days.

The selection of hospitals on the following pages and on our Web site generally adheres in spirit if not in actual methodology to principles of evidence-based health-care design promulgated by such U.S. organizations as the Center for Health Design and the American Institute of Architecture's Academy of Architecture for Health. With the plethora of scientific studies, it has been easier to prove the value of architecture in fostering patients' well-being. In spite of the recession, we should remember that patients who get well faster ultimately cost less to the health-care system.

 View five additional health-care projects at architecturalrecord.com/bts.

One: Ospedale dell'Angelo

Venice, Italy

Emilio Ambasz & Associates and Studio Altieri turn to nature and the sun for an innovative hospital environment.

By Paula Deitz

Architect: Emilio Ambasz & Associates—Emilio Ambasz, principal; Peter Norris, project manager; Bradley Whitmore, design team

Architect of record: Studio Altieri—Lucas Fornari, Luca Cerutti, Giulio Altieri, Valentina Altieri, Alessandro Melotto, Francesco Viero, Chiara Urso, Giulia Andreotti, design team

Client: Regione Veneto

Engineer: Studio Vitaliani (structural); GEMMO (electrical)

Contractor: Astaldi, Mantovani, Mattioli (civil engineering); OCAM (hall steel structure); Cordioli (hospital steel structure)

Size: 1,265,000 square feet

Cost: \$697 million

SOURCES

Glass, steel, and aluminum for atrium skylight: Teleya

Metal-and-glass curtain wall: Novelis; Permasteelisa Group

 Rate this project and access additional sources at architecturalrecord.com/bts.

At the time that Alvar Aalto completed the Paimio Sanatorium in a forested area of Finland in 1933, sunshine and fresh air offered the only known cure for tuberculosis patients. Hence Aalto designed the narrow terraces facing east for those afflicted with this disease. Even though medical care now relies on pharmacological or surgical treatments for a range of illnesses, exposure to nature, including landscaping, is again considered both a physical and psychological boost for hospital patients.

Owing to Emilio Ambasz's long-standing reputation for fusing architecture and landscape into a single entity, it made sense that the Argentina-born architect would design (in association with the Studio Altieri) a green hospital near Venice, Italy—the Ospedale dell'Angelo (the Guardian Angel's Hospital) in Mestre.

Program

The development consortium Regione Veneto undertook the project with the expectation that in time it would recap its investment and hand the 1,265,000-square-foot hospital over to the regional government. The building, with 335 double-occupancy rooms and 10 single ones, sought to provide a sense of optimum well-being to its patients, plus offer sophisticated research and technological services. Complementing the hospital is the Banca dell'Occhio (Eye Bank), an ophthalmological laborato-

Paula Deitz wrote "Machine in the Garden," for *RECORD's* July issue.

ry specializing in eye transplants and stem-cell research, which is located on a corner of the property (see www.architecturalrecord.com).

Solution

Unlike urban hospitals, Ospedale dell'Angelo stands isolated in a landscaped park of its own, with its striking, seven-story, slanted-glass facade sheltering an interior palm court. Circumnavigated by ring roads, the park includes two lakes for runoff water and irrigation, and merges with the building's bermed perimeters that obliterate sounds of nearby trains for those convalescing within.

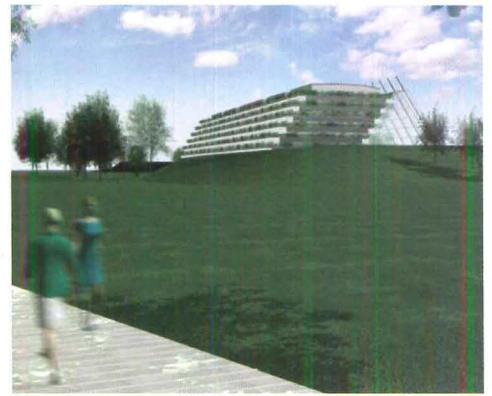
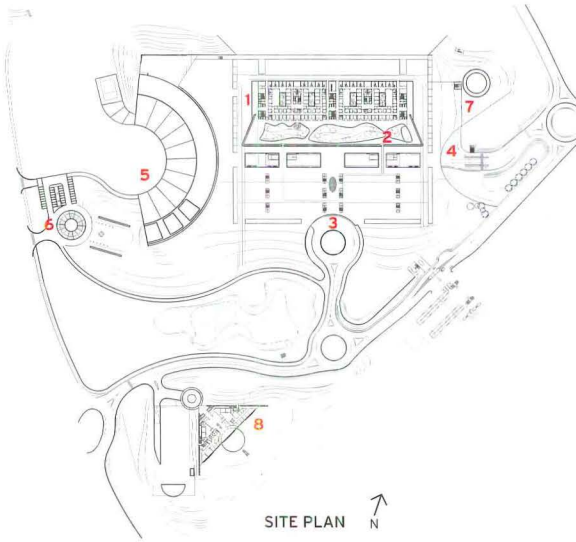
Once a visitor passes through the Venetian-red entrance facade of the main hospital, he or she arrives in the garden among island beds bisected by a serpentine wood walkway. Like its 19th-century predecessors, Ambasz's winter garden is also a social space: an urban piazza, with a shop, restaurant, and chapel on the ground floor, and a balcony walkway above leading to the open waiting room for outpatient services. Luxurious plantings (nonallergic)—including palm and banana trees, magnolias, begonias, geraniums, ferns, and variegated grasses—create a moist fragrance perceptible even on the balcony and in the waiting room.

An inverted ziggurat section allows floors of patient rooms facing southwest to overlook this interior landscape, while additional rooms on the northeast side are edged by planted balconies arranged in a stepped-back formation. The patient

PHOTOGRAPHY: © ENRICO CANO

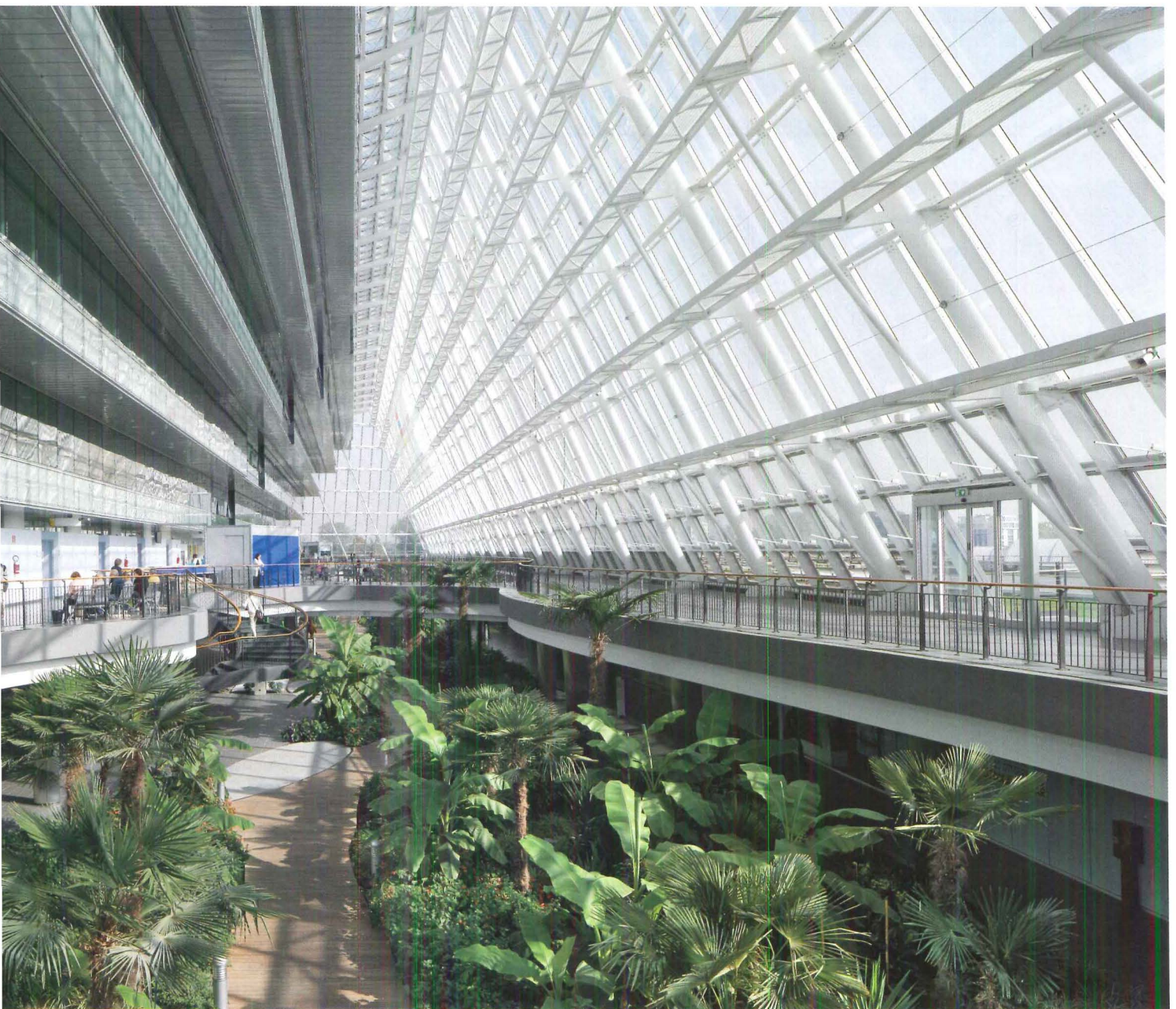


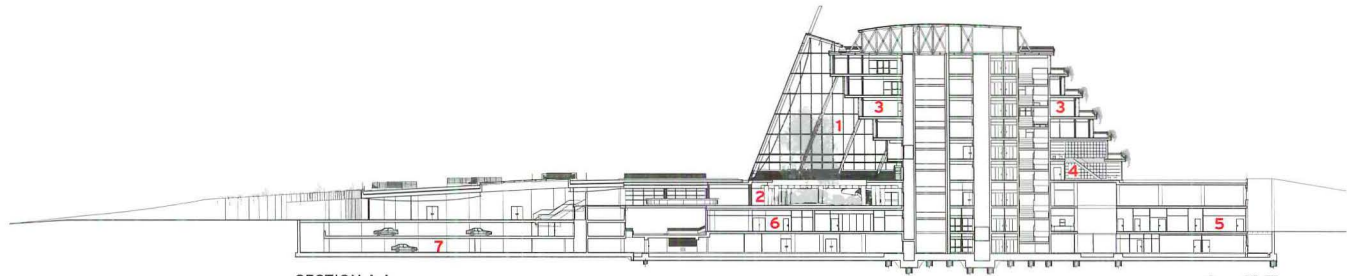
1. Lab and staff
2. Atrium and lobby
3. Visitor entrance
4. Staff entrance
5. Emergency entrance
6. Chapel
7. Helicopter port
8. Eye Bank



The interior atrium (below) can be seen at the far right of the rendering (above),

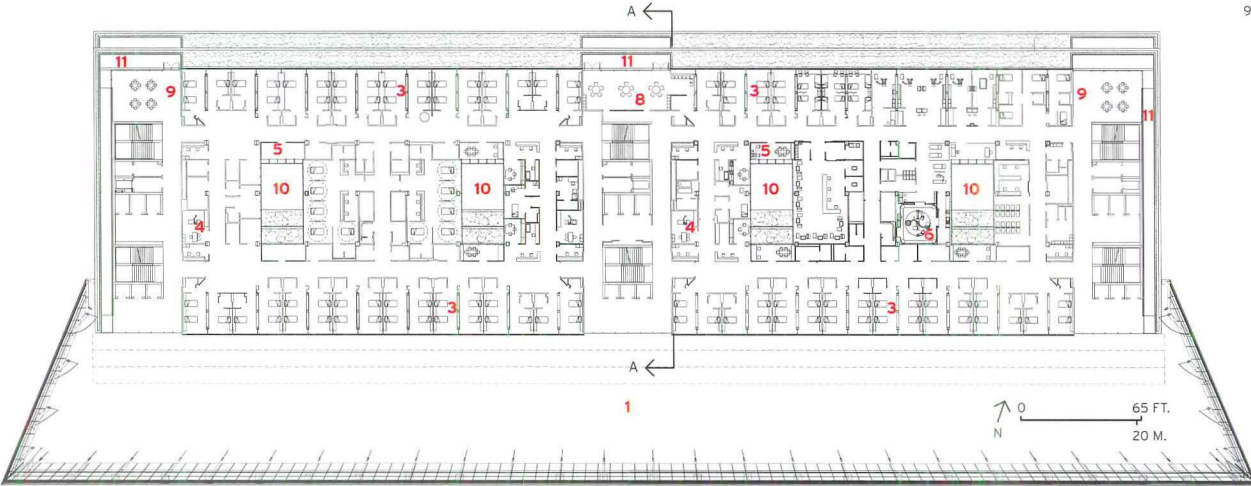
which depicts the hospital's northeast facade with its terraced balconies.





SECTION A-A

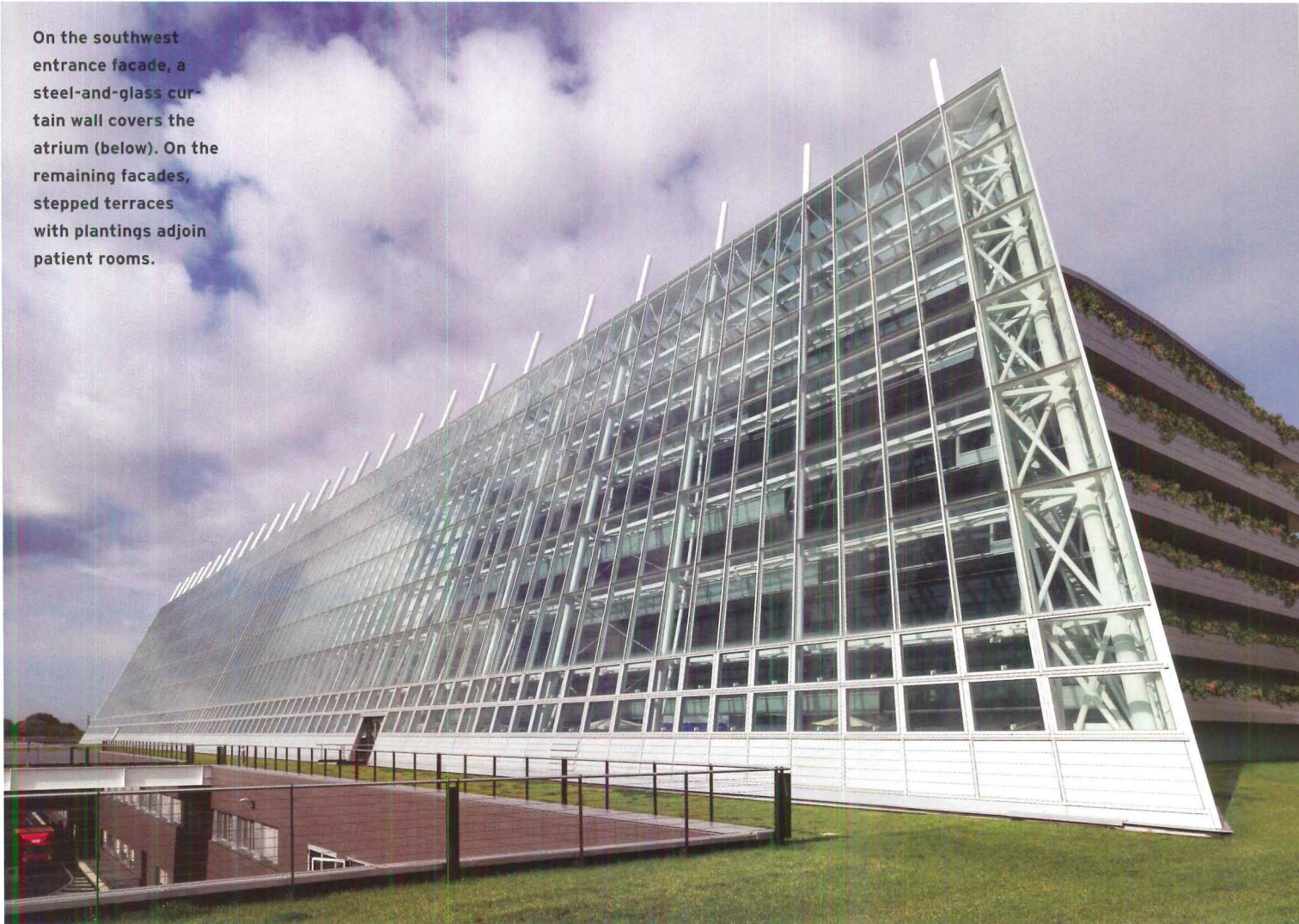
0 30 FT.
9 M.



1. Atrium
2. Visitors' lobby
3. Patient rooms
4. Doctors' offices
5. Health-care staff
6. Operating rooms
7. Staff parking
8. Lounge
9. Family lounge
10. Small atrium
11. Terrace

THIRD FLOOR

On the southwest entrance facade, a steel-and-glass curtain wall covers the atrium (below). On the remaining facades, stepped terraces with plantings adjoin patient rooms.





The atrium's ground level (left), partially covered by an undulating balcony, contains diagnostic and treatment services. Many patient rooms overlook the atrium (above). The approach to the hospital (below) is through an opening in the bermed base.



rooms occupy opposite sides of a central core housing operating and treatment rooms and punctuated by small, skylighted interior atriums. Framed in steel and precast concrete, these floors sit on a platform of poured-in-place concrete containing car parking, administration, operating rooms, and laboratories.

The 660-foot-long southwest facade, dubbed the "glass sail," is composed of 11,000 trapezoidal panes of different dimensions, held in aluminum frames over a gridded steel structure. To save on energy by making the most of natural ventilation, 700 mechanized openings, connected to temperature

sensors, are placed at the bottom and top of the glazed facade.

In all of the patient rooms, full-height window walls are fitted with a "smart glass" system that regulates ventilation and heat dispersion. The windows not only suffuse the rooms with natural light, but allow patients to look out on the atrium's palm trees or the cotoneaster and yellow primrose on the exterior balconies.

Fostering this sort of direct relationship between patients and horticulture, says Dr. Giorgia Marcato, director of medicine for the hospital, can both diminish pain and reduce the duration of hospital stays.

Commentary

Given that hospitals usually maintain basic design standards to fulfill their mission, Ospedale dell'Angelo has gone beyond that, taking a major step forward in connecting its patients with the natural world. But while patients luxuriate in daylight and green surroundings, the doctors' own offices, tucked under the five levels of patient rooms, are somewhat in the dark, according to Dr. Marcato.

In addition, the plantings of the palm court, selected locally for variety and long-term survival, could be more attractive if arranged like

underplantings in a forest rather than garden swaths of one plant after another. For that matter, the surrounding park is a lost opportunity, with only sparse plantings of individual trees and no overall design. Although the site was originally completely rural, since construction began, signs of commercial buildup are increasing.

Still, decades after Emilio Ambasz exhibited his Arcadian Berm House at the *Houses for Sale* show in New York City's Leo Castelli Gallery in 1980, this large-scale work expresses his architectural goal "to give poetic form to the pragmatic." ■

Two: **Jacobi Medical Center** **Ambulatory Care Building** The Bronx, New York

Pei Cobb Freed & Partners creates a light, elegant ambience for a wing of a large city hospital.

By Suzanne Stephens

Architect: Pei Cobb Freed & Partners—Ian Bader, FAIA, design partner in charge; Michael D. Flynn, FAIA, technology partner; George Miller, FAIA, management partner; Ivan Kreitman, AIA, project manager; Kerry Sheehan, Tom Woo, AIA, Kevin Forrester, Woosang Yoo, Jian Hei, Sabrina Zimmerman, team

Associate architect: daSilva Architects—Charles Calcagni, AIA, principal; Susan Romano, Paul Whitson, team

Client: New York City Health and Hospitals Corporation

Engineers: Edwards & Zuck (m/e/p); Ysrael A. Seinuk (structural); Muser Rutledge Consulting Engineers (geotechnical); Dewberry-Goodkind (civil)

Consultants: Medical Planning Research International (medical); Renfro Design Group (lighting); Cerami & Associates (acoustical)

Size: 119,650 square feet, plus 14,750 square feet (renovated space)

Cost: \$49 million

SOURCES

Exposed steel trusses:

Lintell Steel Company

Metal-and-glass curtain wall,

aluminum frames: Zimmcor

Masonry exterior cladding:

Glen-Gery Brick

Skylight: Architectural Skylight

Glass (curtain wall): Viracon

 Rate this project and access additional sources at architecturalrecord.com/bts.



Although Pei Cobb Freed & Partners is not established as a specialist in hospital design, it has been making significant incursions into the field. Its Bellevue Hospital Ambulatory Care Building [RECORD, October 2006, page 146] demonstrated how the firm's sense of material and craft and exploitation of daylight contributes immeasurably to an often nondescript building type. Now the firm's expansion of the Jacobi Medical Center in The Bronx, New York, offers a compelling example of hospital architecture that defers to precepts of evidence-based design.

The largest public hospital in the borough, the Jacobi Medical Center occupies a 64-acre site on the Pelham Parkway that was once the home of the fashionable Morris Park Racetrack. Long after fire destroyed its grandstands, the property was purchased

by the New York City Department of Hospitals, which commissioned architects Pomerance and Breines to design a 1,640,000-square-foot hospital in 1955, a generically Modern, white-brick facility, softened by a parklike setting of (now) mature trees. Then in 2006, Cannon Design added a 365,000-square-foot inpatient building (Phase I) on the east. Soon after, Pei Cobb Freed tackled the opposite end, completing a design (Phase II) for an ambulatory-care wing on the west in 2008.

Program

The program called for 215 clinical examination rooms and 18 treatment rooms, plus reception areas, waiting rooms, medical stations, and related support spaces. They would be housed in a new 119,650-square-foot addition, with another 14,750 square feet renovated where the new wing connects to the older building. To foster the smooth connection between new and old construction, the architects avoided changes in floor heights.

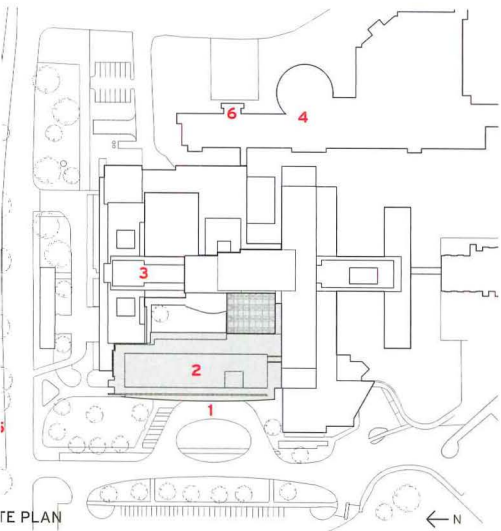
Solution

The design team, led by Pei Cobb Freed partner Ian Bader, FAIA, placed the ambulatory-care functions in a four-story elongated bar in front of the existing building, leaving space for an interior garden. On the south edge of the garden, a curved, skylighted atrium, square in plan, provides a ground-floor link from the new wing to the 1955 hospital. While adhering to the original Modernist vocabulary

and its orthogonal plan, Pei Cobb Freed introduced certain curvilinear elements to vary somewhat the unremitting rectilinear geometry. In addition to a segmented barrel-vaulted atrium, Bader and his team designed a slightly bowed glossy curtain wall for the entrance facade, which imparts a soigné glamour faintly evocative of 1950s South American hotels. Its low-E glass sheathes the three upper floors of the new wing, stopping above the ground level, where an open-air porch is tucked under the overhang. Defined by massive piloti reminiscent of Le Corbusier's Unité projects, the porch/walkway offers visitors an expansive place to fraternize in warm weather.

Inside, creamy beige travertine walls and terrazzo floors dominate the ground-floor lobby and continue into the glazed atrium overlooking the garden. The atrium's four bowed trusses and increasingly dense, fritted glass (for solar protection) generate a certain visual dynamism: The trusses' inner and outer chords seem to converge as they arc upward from their pinnings at the base to sliding connections at the top.

The interior garden, edged on one side by the beige brick wall of the new wing and on the opposite by the 1955 building, provides the main focus for the atrium and "relieves the sense of confinement from being between two buildings" says Bader. The inclusion of this interior open space also affords the rear of the new wing ample daylight and views. The wing itself, a steel-frame structure with

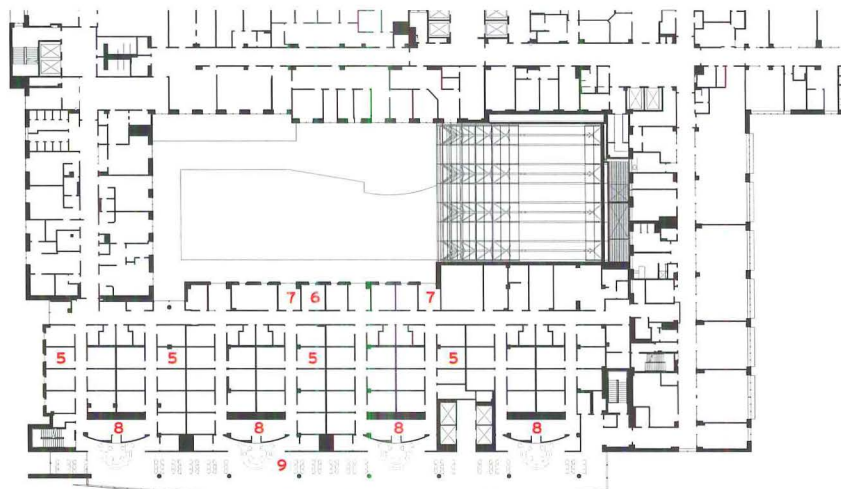
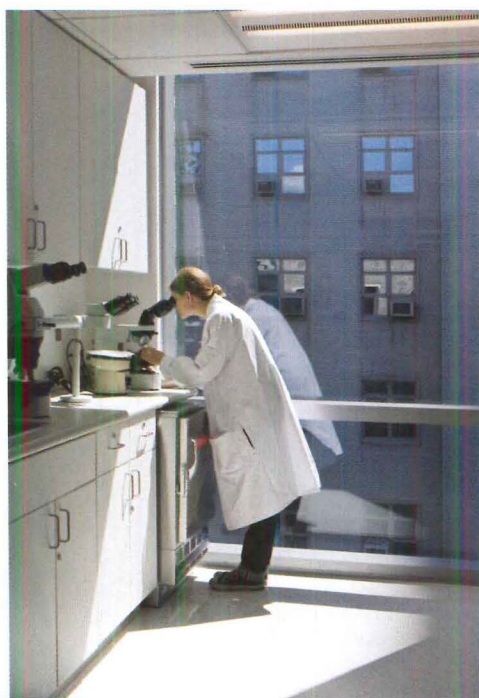
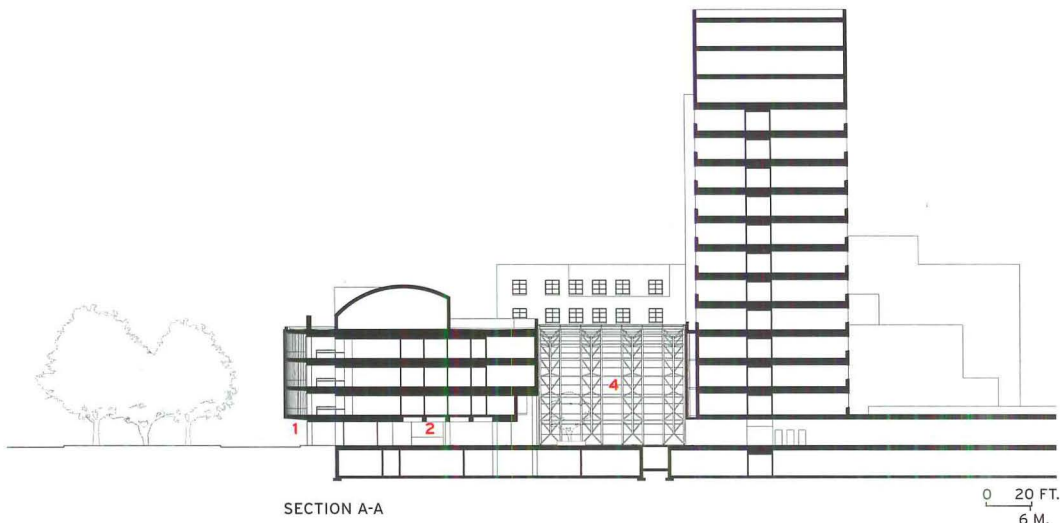


- 1. Entrance/drop-off, Phase II
- 2. Phase II wing, 2008
- 3. Original 1955 hospital
- 4. Phase I, 2006
- 5. Pelham Parkway
- 6. Main hospital entrance/drop-off

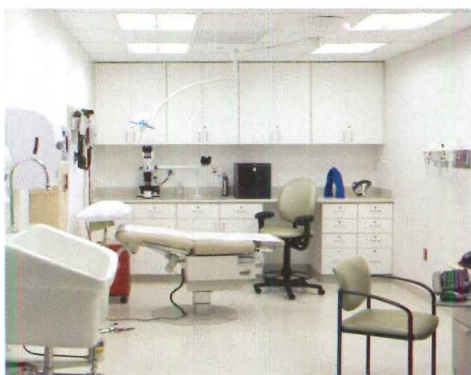
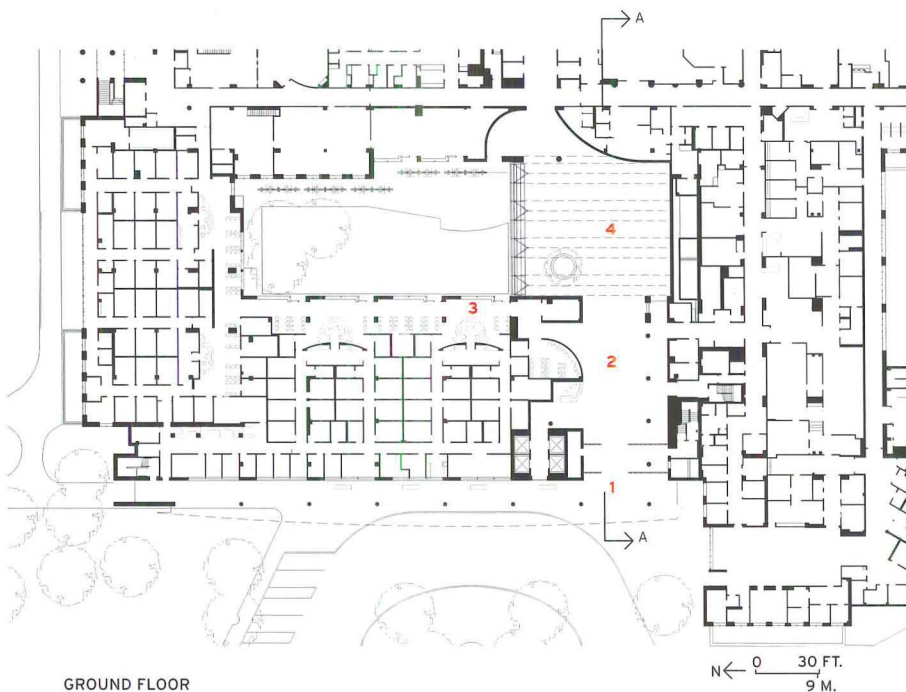
The bowed, glazed facade (right) stops at the ground floor to create a porchlike walkway (opposite). On the upper floors, the columns separate circulation paths from the waiting areas (above right).

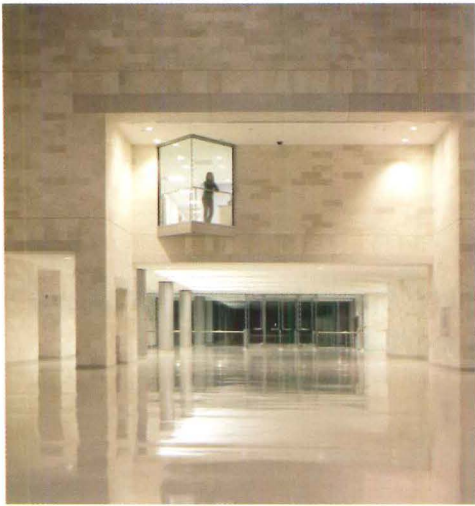


1. Entrance vestibule
2. General reception
3. Waiting areas
4. Atrium
5. Exam room
6. Office
7. Lab
8. Medical station
9. Upper level waiting area

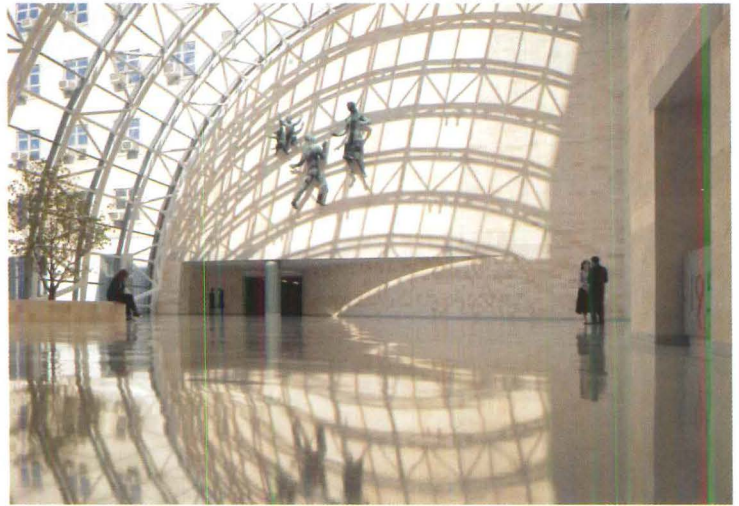


Although the clinical modules of examination and consulting rooms (below) are embedded within the new wing, many medical stations (above) have views and daylight along its east elevation.





The curved glass atrium links the new wing (left) to the 1955 building. A bronze family group, *Untitled*, by Milton Hebard (1952), dating to the hospital's early days, is mounted on the wall above access to the old structure (right). A marble bas relief by Donald De Lue (1954), another historic artifact (below), is set into the atrium's east wall.

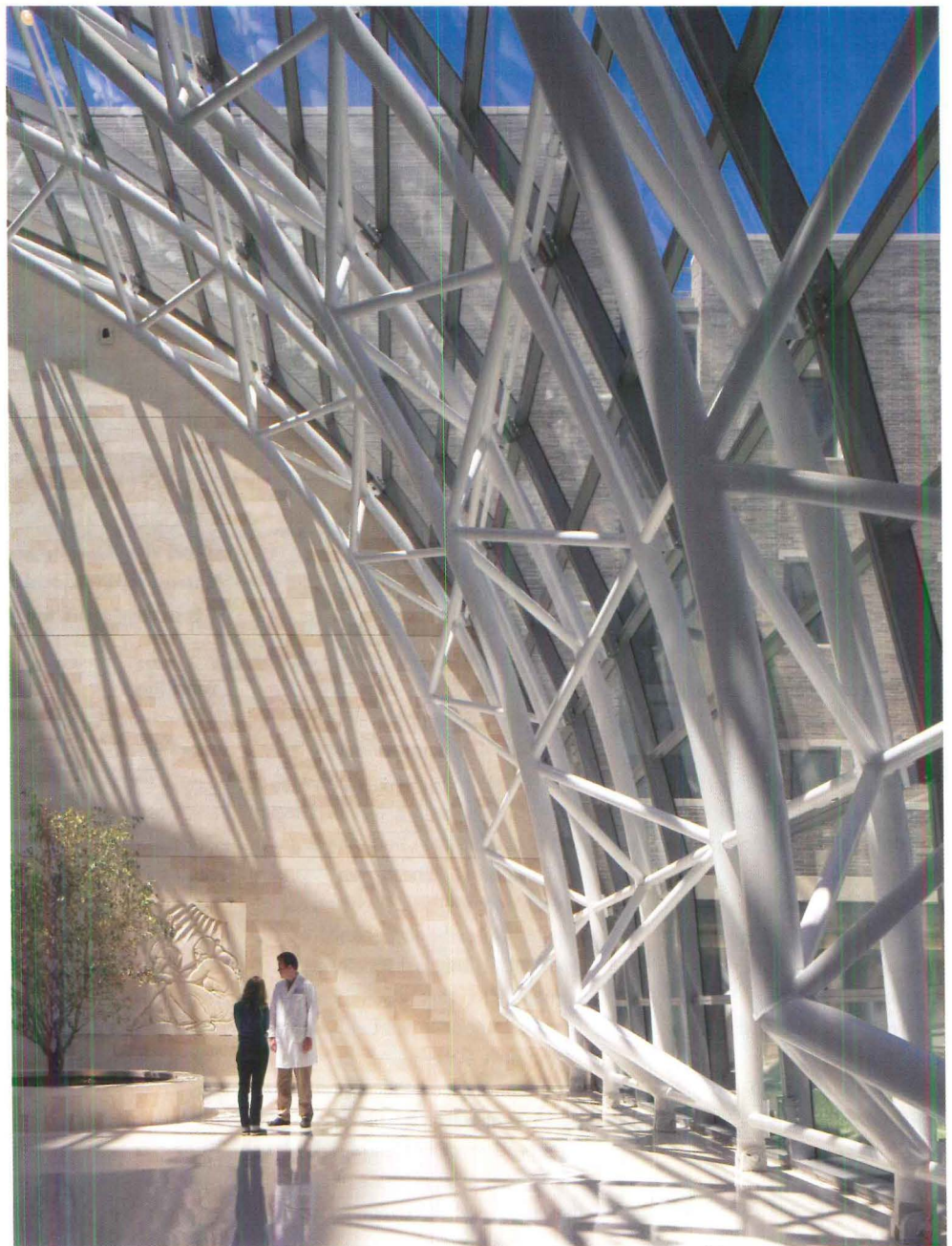


concrete-on-metal-deck floor plates, can be flexibly partitioned and arranged in clinical modules. Although little daylight permeates interior examination rooms and certain medical stations, patients are only there briefly, and the staff has constant access to the glazed perimeter spaces.

Commentary

The Pei Cobb Freed expansion to the Jacobi Medical Center offers a sleek new visage to the community and provides luminous, immaculate spaces for the visitors and staff who spend so much time there. To be sure, the new wing cannot change the bulky gestalt of the entire 2,125,000-square-foot complex, a problem endemic to ever-expanding hospitals. Similarly, the garden, enclosed by the new and old wings, cries out for the fully developed landscaping seen in the grounds outside. Still, owing to the ample daylight and view, along with the generous use of creamy travertine and terrazzo, the place is a far cry from a municipal hospital. (The shock comes in passing through the atrium into the old building, where dark, subwaylike corridors and gloomy six-bed rooms await.)

The leitmotif of curves, starting with a bowed facade, continuing inside to the reception desks, then reappearing as a partial barrel vault in the atrium, comes to an end with the zinc barrel-vaulted roof atop the wing. It could be one motif too many, except the actual experience of the building doesn't force this perception. Calm, clarity, and elegance reign. ■



Three: Methodist Stone Oak Hospital

San Antonio, Texas

HOK and its clients took advantage of a rare opportunity to improve patient care – building a new hospital on a greenfield site.

By Charles Linn, FAIA

Architect: HOK—Charles Siconolfi, AIA, principal in charge; Kenneth Drucker, FAIA, design director; Arnold Lee, AIA, project designer; Chris Korsh, project director; Michael Murno, AIA, project architect; Michael Thoma, AIA, project manager; Georgine Ilesco, medical planner; Renaldo Pesson, Rika Gunawan, interior design
Client: Methodist Healthcare System of San Antonio and Hospital Corporation of America

Engineers: CCRD (m/e/p); Structural Design Group (structural); Littlejohn Engineering (civil)
General contractor: Skanska

Size: 400,000 gross square feet
Construction cost: \$110 million

SOURCES

Acoustical ceilings: Armstrong
Glass: Viricon
Windows: Kawneer
Masonry: Glen-Gery Brick
Metal panels: Reynobond
Paints and stains: Benjamin Moore; Sherwin Williams
Resilient flooring: Armstrong
Solid surfacing: Dupont Corian
Wooden doors: VT
Entrances: Stanley
Locksets and closers: Assa Abloy
Lighting: Cooper
Paneling: Marlite; Interlam
Ornamental metal: Forms + Surfaces
Elevators: Otis

 Rate this project and access additional sources at architecturalrecord.com/bts.

When a taxi driver said of Methodist Stone Oak Hospital, “It’s a very Modernist building, reminds me of some things Mies did at the Bauhaus” (particularly when he did not have a clue as to the occupation of his passenger), it was obvious HOK had succeeded in giving the new hospital curb appeal. But facades are easy. It was far more difficult to transform what goes on behind its glass, random ashlar stone, and brick surface.

Program

The architecture of hospitals must acknowledge and accommodate user demographics, the latest trends in the way that care is given, and staff recruitment and retention. HOK won this project when the Healthcare Corporation of America and the Methodist Healthcare System of San Antonio held a competition for “the hospital of the future.” The firm’s entry was based on several key ideas. One was that in a region where patients have many health-care facilities to choose from, and salaries for skilled nurses and health-care workers are very competitive, spending the money to provide a work and treatment facility that is distinctly pleasant compared to other hospitals, and also conveniently located, would yield a competitive edge well worth the investment. From a financial and operational perspective, the building would offer patients more treatment options than most hospitals, lease doctors office space, and be extremely compact and efficient to run.



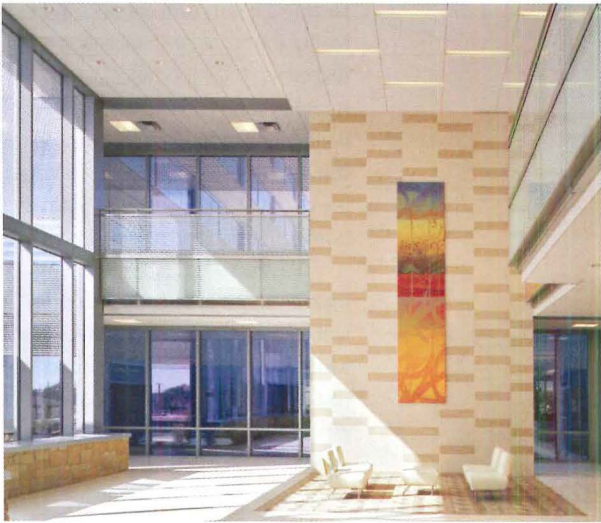
Entries for individual medical departments along a daylighted concourse aid patient orientation. Each department has its own reception and waiting area.

Solution

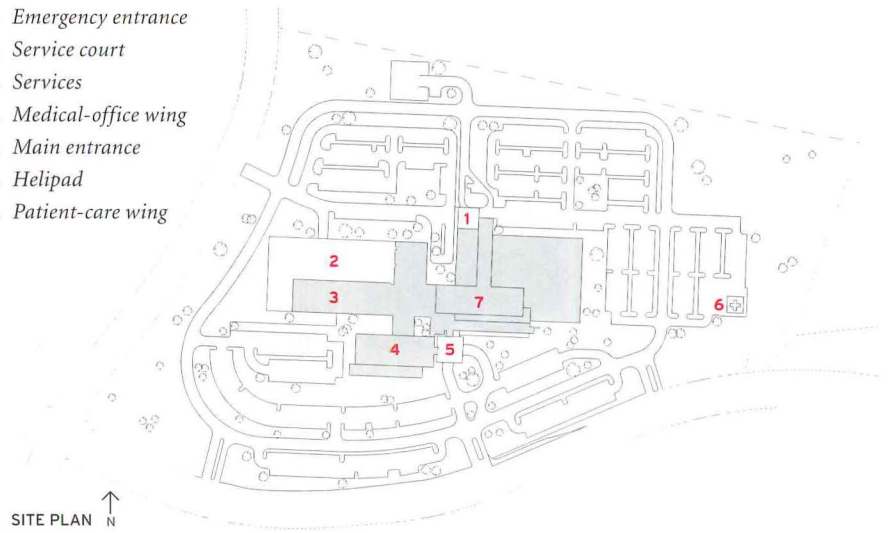
According to Stone Oak C.E.O. Dean Alexander, “People want their health care to be in more intimate settings and close to where they live.” Stone Oak’s site, several miles north of central San Antonio, was chosen because it is a growth area, and ideally located near the intersection of a highway leading out of downtown and a loop road circling the city.

At 132 beds, this steel-framed hospital is of a modest size for the region (another nearby is being expanded to 700). Yet it is a complete acute-care facility with cardiology, general surgery and neurosurgery, oncology, obstetrics and gynecology, and a large emergency department.

The layout of the building is straightforward. A canopy at the main entrance – where valets await should you wish to have your car parked – covers two entries. One leads to a medical office wing. This convenience was added to attract top physicians who are the gatekeepers for many of the hospital’s patients. The second entry leads to the patient-care wing, where admissions take place for those who have come for procedures that will require at least an overnight stay, or for less-invasive procedures, which take a day or less. This kind of ambulatory treatment is quite profitable, yet over time most hospitals have stopped offering it; Stone Oak endeavors to reverse the trend. The emergency de-



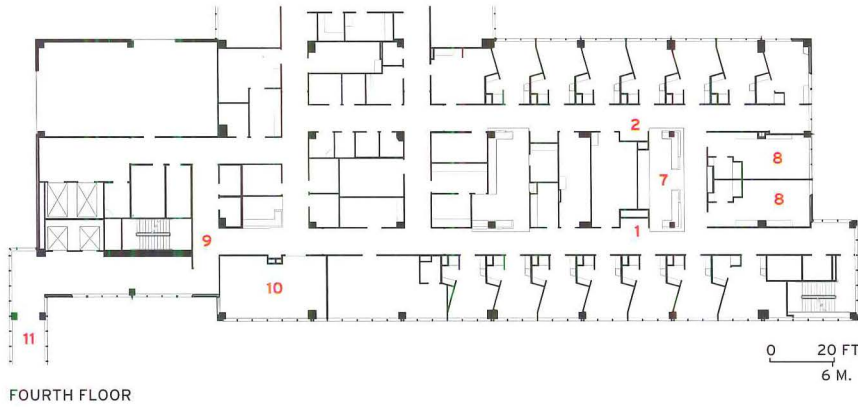
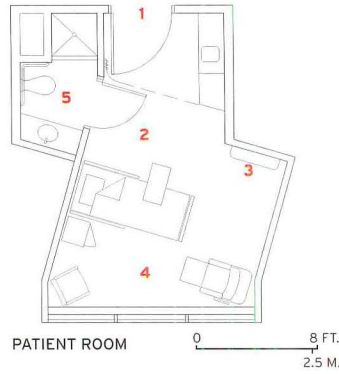
1. Emergency entrance
2. Service court
3. Services
4. Medical-office wing
5. Main entrance
6. Helipad
7. Patient-care wing



The entry to the medical office wing (below, at far left) also leads to the patient services concourse (at the right). The sunlit lobby of the concourse (above) is welcoming.

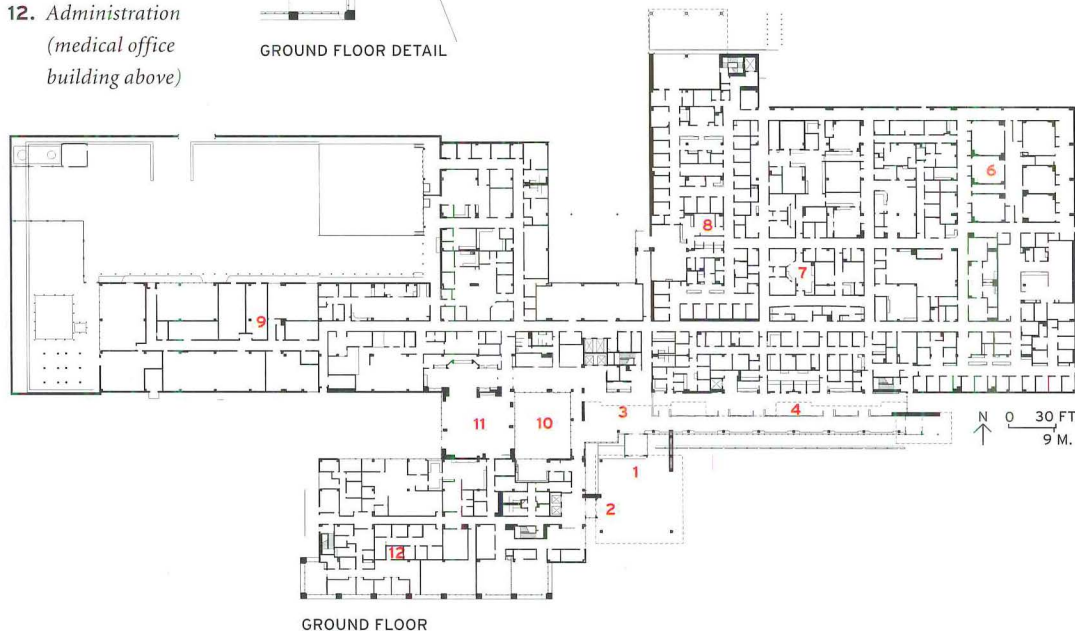


Canted headwalls in rooms allow patients to have better eye contact with nurses in corridors and views outside. Minimizing the distance between bed and bath reduces slips and falls. A hand-washing sink is just inside the door.



1. Corridor
2. Caregiver zone
3. Charting area
4. Family zone
5. Bathroom
6. Private room
7. Nurses' station
8. VIP room
9. Reception
10. Waiting room
11. Bridge to medical-office building

1. Main entrance
2. Entrance to medical-office building
3. Entry lobby
4. Patient services concourse
5. Reception areas
6. Surgery
7. Diagnostics/imaging
8. Emergency room
9. Services
10. Courtyard
11. Dining room
12. Administration (medical office building above)



partment has its own entrance at the rear of the building. This location is not to diminish the importance of the ER: Approximately two thirds of the patients who are admitted to the hospital come in through there, but placing it at the back separates ambulance access from pedestrian and parking-lot traffic.

Patients who come into the main entrance to be admitted or for ambulatory care find themselves in a two-story, glass-enclosed concourse that runs the length of the patient-care wing. Each medical department has its own check-in area, and wood-trimmed, small-scale waiting rooms avoid the airport-terminal feel common to mega-hospitals. The ambulatory care, surgical, and ER suites are clustered beyond these public spaces, allowing such things as imaging equipment to be shared. This organization also reduces the time patients and staff spend moving between departments.

Obstetrics is located on the second floor, accessed via a dedicated elevator. Its waiting area occupies a balcony that overlooks the concourse, allowing it to be spacious and daylit while remaining private. Extremely compact patient rooms are located on the floors above. Their unusual, canted-headwall design allows patients to easily see outdoors and to make eye contact with staff walking the single-loaded corridors. The small distance between the bed and bath minimizes the risk of falls; charting and hand-washing are isolated from the patient bed. All of the patient rooms at Stone Oak are private.

Commentary

One of the first things one notices here is that the flooring is not inlaid with color-coded directional arrows, a sign at other hospitals that there are probably lost patients wandering around – possibly doctors, too. The designers of most other medical buildings, while attempting to elicit comfort by borrowing from the hotel industry, have erred toward the mauve plastic laminate of Days Inns as opposed to the textiles of the Plaza. That is not the case here. Stone Oak's warmth and clear layout help to banish anxiety, every hospital visitor's constant companion, and that is one good measure of its success. ■

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CIRCLE 29

An End in Sight for a Centuries-Old Building Project?

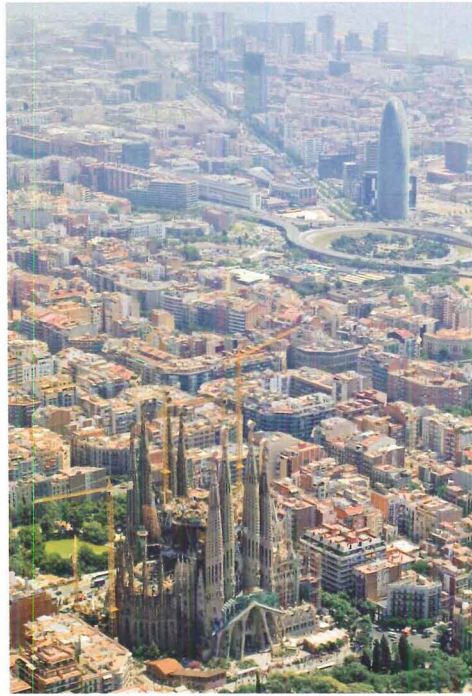
IN RECENT YEARS, RAMPED-UP EFFORTS AND STATE-OF-THE-ART TECHNOLOGY HAVE SPED UP CONSTRUCTION AT BARCELONA'S FAMOUSLY UNFINISHED SAGRADA FAMÍLIA CHURCH

By Josephine Minutillo

Chartres Cathedral's imposing spires, rising heroically above the wheat fields in the countryside southwest of Paris, are a testament to the interminable construction that went into Medieval churches. While the shorter spire was begun in the 12th century, its taller, more flamboyant neighbor was not completed until some 400 years later. The campaniles of Barcelona's Sagrada Família (Holy Family) church are equally impressive, and along with the cranes that hover above them, represent the most visible elements of an unmissable construction site in the center of a bustling metropolis—a unique, modern-day example of a complex building more than 125 years in the making.

Unlike Romanesque and Gothic cathedrals, in which the master builder remains largely unknown, the Sagrada Família is the vision of one very well-known architect—the eccentric Catalan Antoni Gaudí, whose *Modernista* buildings created a sensation in fin-de-siècle Barcelona. But much like Chartres, which battled destructive fires on numerous occasions, construction of the Sagrada Família suffered huge setbacks during the devastating Spanish Civil War in the decade after Gaudí's death in a streetcar accident in 1926. Crucial drawings and building models were lost during the conflict, making Gaudí's ultimate vision for the temple less clear for his successors. Efforts to interpret that vision have been the source of controversy ever since. (Manifestos are presented every few years urging a halt to construction, claiming the building as it exists today is just a caricature of Gaudí's work.)

While progress on the building in the decades that followed may have seemed slow, less than 10 percent of the planned church had



actually been built during Gaudí's lifetime. (The first stone was laid in 1882, a year before Gaudí was appointed architect.) The continuation of construction depended on several factors, not least of all funding. As an expiatory church, the Sagrada Família relies entirely on private donations; no money is received from the government or Catholic Church. When more towers began to rise, slowly revealing what would be Gaudí's most radical design, the construction site gained increasing appeal as a tourist destination. The donations of a steady stream of visitors—nearly 2.5 million annually—coupled with advances in construction technology, have brought astonishing progress to the building in recent years.

Among the technological advances is a “file-to-factory” construction system. Since the usual trinity of plan, section, and elevation was not sufficient to translate Gaudí's unusual forms to the stone masons who would create the building elements by hand, intricate scale models were needed to illustrate the compo-

ponents' irregular structure and fanciful shapes. Today, complex computer drawings feed information to a stone-cutting machine and other fabricators, thus eliminating one of the most time-consuming aspects of the building's earlier construction.

But the surviving pieces of those early models proved invaluable for determining—beyond a doubt, in the opinion of some—Gaudí's audacious design. “If the Casa Milà had been left half-built and the models partially destroyed, there would be no hope whatsoever to restore it according to Gaudí's wishes because it was a free-form building,” says Mark Burry, referring to Gaudí's famous apartment complex in Barcelona's Eixample district, begun in 1905. Burry, a professor at the Royal Melbourne



CONTINUING EDUCATION

Use the following learning objectives to focus your study while reading this month's ARCHITECTURAL RECORD/AIA Continuing Education article. To earn one AIA learning unit, including one hour of health, safety, and welfare credit, turn to page 92 and follow the instructions.

LEARNING OBJECTIVES

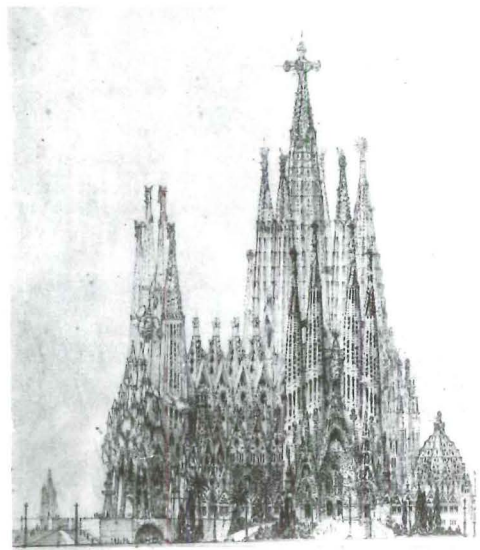
After reading this article, you should be able to:

1. Describe how Gaudí's earlier architectural projects influenced his design for the Sagrada Família church.
2. Become familiar with the unique design of the Sagrada Família church, and church architecture in general, including specific terminology for various spaces.
3. Describe recent technological advances—in both design and construction—that have expedited building progress on the Sagrada Família.
4. Describe the different tools used by current builders of the Sagrada Família to carry out Gaudí's vision for the building.



The Sagrada Família's towers are among the tallest in Barcelona (opposite). Gaudí used hanging models to determine the reversed catenary structure for the Colònia Güell chapel, incorporating his findings in the designs for the Sagrada Família (above). A drawing by

Lluís Bonet, one of the architects charged with reconstructing Gaudí's models after they were burned during the Spanish Civil War, shows his vision for the church (below). The hyperboloids of the nave ceiling use traditional Catalan vaulting techniques (right).



Institute of Technology (RMIT), in Australia, has written and lectured extensively on the Sagrada Família. His involvement with the project began 30 years ago, when in a student thesis project he himself questioned the contemporary builders' authority to continue construction.

According to Burry, Gaudí began to use a codex of very rich geometries in his last years. Some model fragments contain important information, like the intersection of three surfaces, or triple points. Enough of these triple points exist, along with photographic documentation of lost models, to provide strong evidence for the final design. "Gaudí came up with a language which allows us to readily assimilate the role of his successors," Burry explains. "If he hadn't used this language, we would have been inventing for ourselves, and the criticism that the building gets

from time to time would be valid. But what has been built after his death has come directly from this evidence, so there's no question of its being somebody else's interpretation of what Gaudí would have done."

Up until the early 1980s, architectural work at the Sagrada Família was overseen by former collaborators of Gaudí's, who were well past retirement age by then. The current head architect, Jordi Bonet, was also privy to firsthand accounts of Gaudí's design process from his father, Lluís, another collaborator. But Bonet says that kind of intimate knowledge of the project is not necessary to continue with construction in the future. "Gaudí knew it would be impossible to finish the church within his lifetime," Bonet explains. "So he developed a new architecture that was different from his previous work. It is a synthesis of form and

structure based on geometry. And because geometry is an exact science, we can build it today precisely the way Gaudí pictured it in his head.”

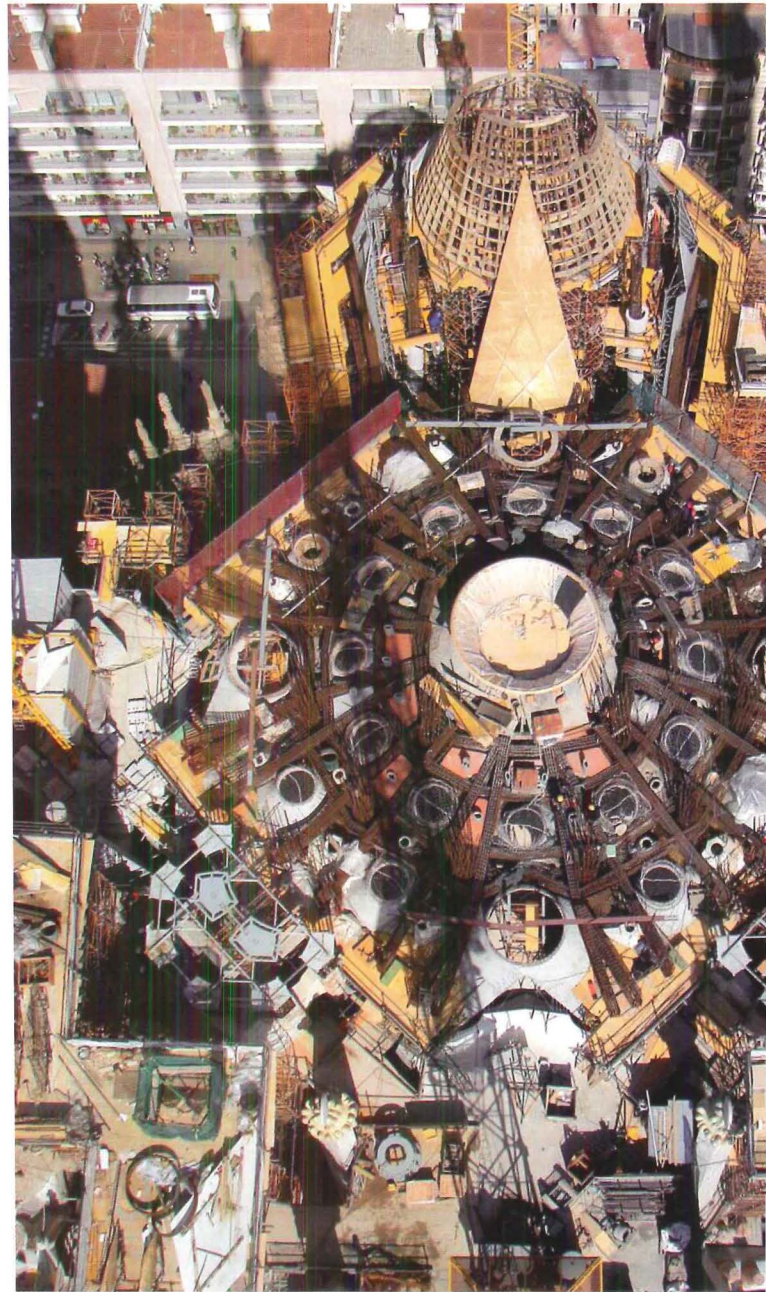
Gaudí did, however, draw on the knowledge he gained from earlier projects: in particular, the crypt for the Colònia Güell chapel, another unfinished religious structure built for a worker’s village outside Barcelona. It was for this project that Gaudí developed his famous hanging model—one of the first known adaptive or parametric models—using small bags of birdshot attached to an adjustable web of string. His invention allowed gravity to inform the structural design. But while Gaudí created the somewhat irregular, circular plan for this chapel, he had to work within a Gothic Revival Latin Cross plan already in place at the Sagrada Família. “If you liberated the design to allow gravity to truly inform it, it wouldn’t necessarily conform to bays of equal length, and the proportional system of the Sagrada Família would have been compromised,” says Burry. “But Gaudí used the same principle, relying on the static resolution of forces. The lessons he learned from the Colònia Güell chapel were applied to the Sagrada Família to the extent that the columns, where possible, are aligned to take forces axially, and that accounts for the branching.”

It also accounts for the fact that none of the columns in the Sagrada Família are completely vertical. Even the soaring, treelike columns that run the length of the central nave (reaching heights of close to 150 feet) are slightly inclined. While none of these columns were built before Gaudí’s death, existing plaster models show Gaudí’s experiments with counter-rotated columns (whose profile transforms from circular to square to star-shaped along its length) and structural trees (whose upper branches carry and distribute the load from the vaults, thus eliminating the need for exterior buttressing like most Gothic cathedrals). Just prior to branching, the column forms a node, or knot, which is based on a variety of forms varying from ellipsoids to more abstract formations.



The columns’ upper branches also serve to connect with the ceiling vaults in a novel way. “Gaudí sought a continuity between the columns and vaults in parabolic and spiral column forms,” says Jordi Faulí, assistant head architect. “He did not achieve this with total success until he created the counter-rotated double-helix and adopted the hyperboloid for the skylights of the vaults.” The vault is organized in concentric circles around a large central hyperboloid which is 13 feet in diameter. Columns and skylights alternate in these concentric circles. In planning the vaults of the central nave, which were built during the 1990s, Gaudí used regular surfaces based on hyperboloids to form the oculi and capitals, and hyperbolic paraboloids for the transitional elements between them.

The hyperboloid is one of several ruled surfaces—surfaces, like cones and cylinders, generated by connecting line segments between corresponding points—Gaudí employed at the Sagrada Família. (Similar geometries can be found at Colònia Güell, where he used hyperbolic paraboloids extensively.) But Gaudí was working without precedent, never having seen a building with a significant array of ruled surfaces. He also did not explain in sufficient detail how he intended to trans-

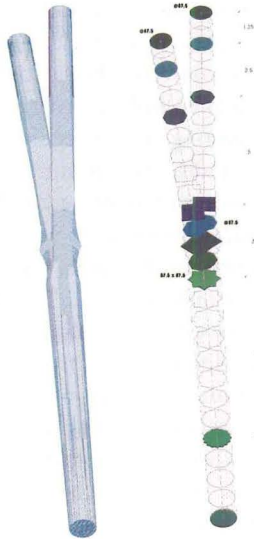
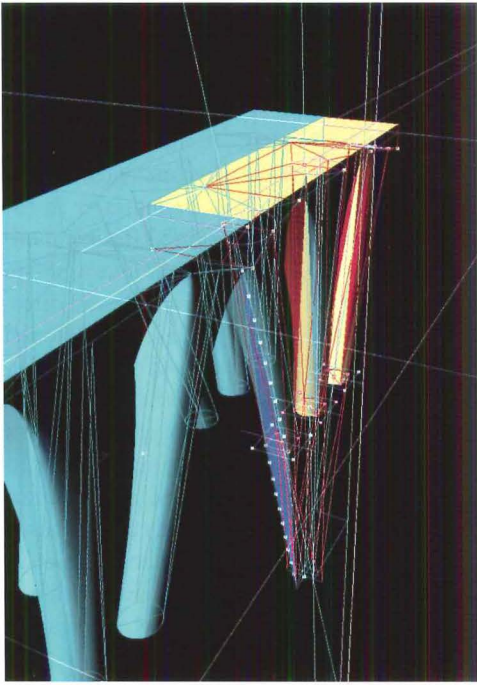


Architectural director Jordi Bonet, whose father, Lluís, collaborated with Gaudí, oversees design and construction (above left). The building site comprises an entire block within Barcelona’s Eixample, the 19th-century extension of the city (above).

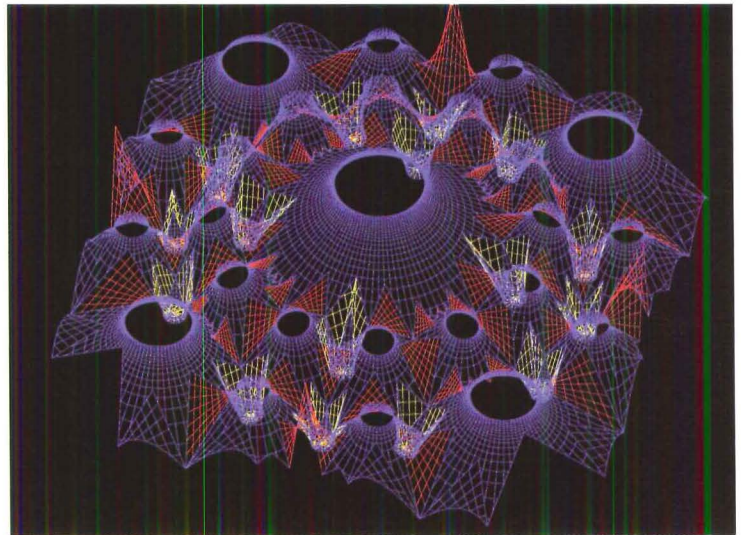
late them into built form, leaving his successors with a substantial challenge—one that has been met by the use of parametric modeling.

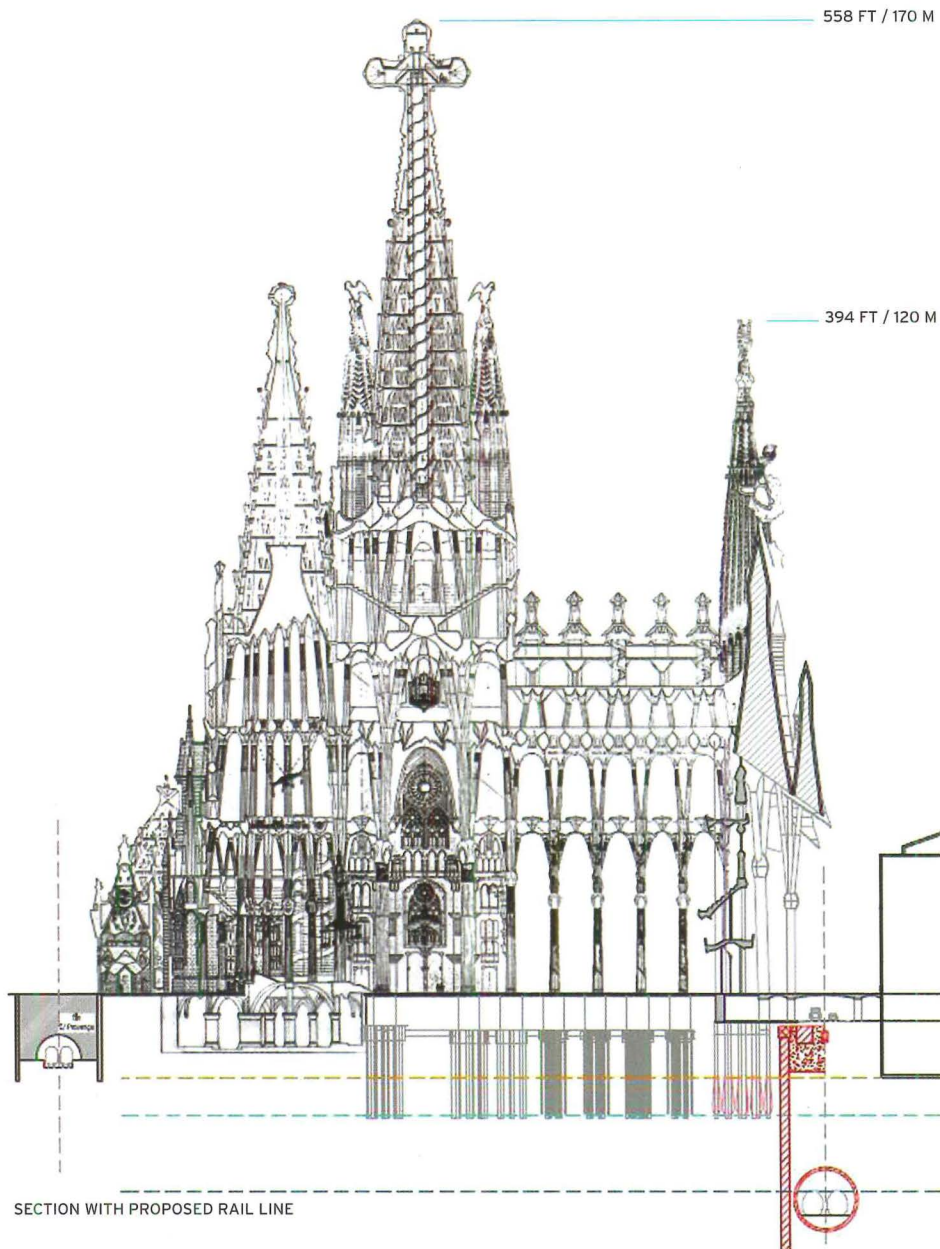
The Sagrada Família’s incorporation of such complex forms lent itself to the emerging digital technology of the late 1980s, an undertaking spearheaded by Professor Burry. “Trying to draw Gaudí buildings is a very thankless task,” Burry says from experience. “I have become the only person on the project to work on both analog drawings and digital modeling.”

The first digital model was produced in 1989, but architectural software proved insufficient for resolving Gaudí’s interweaving geometries. By the next year—and concurrently with Frank Gehry’s office—Burry’s team was creating models using advanced surfacing software designed for the aeronautical industry. (Today, the team of architects



A model of the triforium was made with sophisticated parametric design software (top left). A column's geometry transforms as it ascends (middle left). Wood formwork is used in construction of the apse skylight (top right). Large steel pieces are placed at the base of the apse tower (left). A rendering shows the hyperboloids of the nave's ceiling (right).





and engineers in Barcelona uses a combination of programs including CATIA, Rhino, and Mechanical Desktop by Autodesk, and several of Burry's Melbourne-based collaborators at the Spatial Information Architecture Laboratory at RMIT use Gehry Technologies' Digital Project.) Used early on as a time-saver in the process of "reverse engineering," flexible modeling software later provided an opportunity to experiment iteratively, backtracking and direction-changing with relative ease, and allowed the ready assembly of libraries of parts. The Sagrada Família was also one of the first projects to experiment with rapid prototyping, but it is a combination of digital and physical models, as well as sketches, that inform design even today.

The building materials currently used are in keeping with those selected by Gaudí. They include stone columns and windows (made with granite, basalt, porphyry, and stone from the nearby Montjuïc), vaults of exposed reinforced concrete and flat brick (made using a traditional Catalan technique of superimposed layers of mortared tile and brick), stone roofs, and Venetian-glass mosaics. Steel-reinforced, high-resistance concrete allows some of the larger columns to be built according to Gaudí's design while meeting current regulations.

The models were traditionally made of gypsum plaster, but more recently have also been mechanically produced using polystyrene or polyurethane. Polyester and fiberglass are also used for making molds. The formwork for the large hyperbolic paraboloids is made of a metal skeleton that is subsequently lined with medium-density-fiberboard paneling. The metal formwork for the smaller paraboloids is covered with a combination of epoxy resins and sand. The skylight hyperboloids are produced with wooden ribs.

Despite 7,000 daily visitors, many of these elements are fabricated on-site and hoisted into position by both traditional methods and specially created machinery. While there are those who are concerned for the safety of visitors, concern for the safety of the building has arisen recently since the Spanish govern-

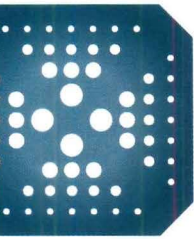
SUPPORTERS OF THE SAGRADA FAMÍLIA CALL PLANS TO BUILD A HIGH-SPEED RAIL LINE BELOW THE CHURCH RECKLESS.

ment approved plans to build a high-speed rail line linking Madrid and Barcelona. That line would pass below grade near the church foundations (already flanked by two subway lines). New controversy has since erupted over the already much-debated building.

According to Bonet and his supporters, boring tunnels for the new train would almost certainly wreak havoc on the building; he calls the plan to have a train run so close to its structure irresponsible and reckless. Just this past March, a similar construction project for a metro line in Cologne, Germany, is said to have caused the devastating col-



Proposals for a high-speed rail line to run directly below the church (above) have sparked heated controversy. Also controversial are the sculptures by Josep Maria Subirachs on the Passion Facade (left), construction of which began in 1954. Their contemporary style is in sharp contrast to the Nativity Facade sculpture, executed mostly during Gaudí's lifetime.



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The ceiling is highlighted with green and gold Venetian-glass mosaics.

lapse of the city's archives building, resulting in the loss of life and irreplaceable historic documents, and generating discussion throughout Europe about such construction projects.

Although the Sagrada Família was included on UNESCO's list of World Heritage Sites, the World Heritage Committee, which met this summer in Seville, Spain, went against recommendations from the International Council on Monuments and Sites and decided not to place the building on its endangered list, saying it was not in danger of suffering damage from construction of the rail line. Though bor-

ing has not started, preliminary work has begun just a mile away from the church as the debate continues in Spanish courts.

While controversies persist, one lingering question remains: Will the building ever be complete? Gaudí used to say that his client "was in no hurry." In the decades following Gaudí's death, the running joke was that the Sagrada Família would get finished "in 10 years." But now there are real dates. For the past several years, construction has been going on in every part of the building, and has reached a point where there does in fact seem to be a light at the end of the tunnel.

Plans call for all interior spaces to be completed and domes sealed by this time next year. The finished, 48,000-square-foot enclosure would make it possible to open the church for worship. But much work is still left to be done. The biggest project yet to be undertaken is the construction of additional towers—taller than existing ones—including an enormous, 550-foot-tall central one (that would exceed in height most high-rise buildings in the city), and the Glory Facade (the last of the three facades). Still, if you ask the current team if the Sagrada Família will ever get finished, their answer is a resounding yes. A potential target date may even be set—2026, the centennial of Gaudí's death. ■

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INSTRUCTIONS

- Read the article "An End in Sight for a Centuries-Old Building Project?" using the learning objectives provided.
- Complete the questions below, then fill in your answers on the next page.
- Fill out and submit the AIA/CES education reporting form on the next page or take the test online at continuingeducation.construction.com to receive one AIA learning unit.

QUESTIONS

- Which of the following does the Sagrada Família have in common with most Medieval churches?
 - its architect is unknown
 - its construction has spanned centuries
 - its construction began during the Middle Ages
 - none of the above
- Which of the following occurred at the Sagrada Família during Gaudí's lifetime?
 - the nave columns were erected
 - 20 percent of the overall construction was completed
 - sculpture on the Nativity Facade was under way
 - none of the above
- All of the following have sped up church construction except which?
 - consistent funding
 - redrawn plans, sections, and elevations
 - a file-to-factory building process
 - increased tourism
- Which earlier Gaudí design most influenced the Sagrada Família?
 - Casa Milà
 - Casa Batlló
 - Colònia Güell chapel
 - Palau Güell
- Which of the following is true of the plan for the Sagrada Família?
 - it is a Latin Cross
 - its form was determined before Gaudí became the architect
 - the nave is flanked by treelike columns
 - all of the above
- Gaudí's structural innovations include all except which?
 - the use of parametric models
 - inclined columns
 - structural trees
 - reinforced-concrete columns
- The Sagrada Família has all of the following building elements in common with most Gothic and Gothic Revival churches except which?
 - soaring ceiling heights
 - a central nave
 - exterior buttressing
 - a rich sculptural program
- Which is not an example of a ruled surface?
 - a cone
 - a hyperboloid
 - a sphere
 - a hyperbolic paraboloid
- A traditional Catalan building technique incorporating layers of brick and tile was used for which element?
 - clerestory windows
 - vaults
 - columns
 - formwork
- Which facade is the last to be built?
 - the Nativity Facade
 - the Passion Facade
 - the Glory Facade
 - the Sacramental Facade

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- Robert L. Lewis, AIA, LEED AP**, Director of Architecture, Robert L. Lewis Architects, San Francisco, CA

Lighting

SMALL SPACES

- 94** Marni, New York City
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Academy, Germany
gmp
- 103** Char No. 4, Brooklyn, N.Y.
Berman Horn Studio
- 107** Lighting products

According to lighting designer Howard Brandston, "A system for achieving any objective should be tailored to the realities of the problem. We can overdesign too easily, when simplicity and attention to the immediate objective is all that is required." Such an economy of means informs the unique lighting schemes that follow – all for cramped quarters. Designed by architects, these simple yet bold solutions not only illuminate and visually "open" the long, narrow spaces effectively, they are essential to the architectonic quality of each one. Linda C. Lentz



The top-floor ceiling of the Madison Avenue Marni boutique is dominated by large-scale geometric luminaires (opposite and right). Subtle alterations to the French Neoclassical-style building allow for a glimpse inside (below).



Sybarite designs a gallerylike setting for the new Marni Madison Avenue shop in New York City

By Linda C. Lentz

Color, texture, a refined yet offbeat sense of materiality, and above all, a subtle irreverence are staple elements of fashion designer Consuelo Castiglioni's collections for Marni, the upscale Milanese label she founded in 1994 with her husband, Gianni, the company's C.E.O. A favorite of confident, creative women, Castiglioni's exuberant designs are intended to reflect her customers' persona and style as much as her own. Likewise, the 38 independent and the numerous shop-in-shop Marni retail outlets worldwide—designed by Castiglioni in collaboration with the London-based architectural firm Sybarite—speak to both the brand's image and the locales in which the stores reside.

Completed in April, Marni's second New York City flagship store occupies a former art-gallery space on the first two floors of a five-floor town house (circa 1900) on East 67th Street, just west of Madison Avenue and close to some of the city's most exclusive boutiques and galleries. Picking up on the neighborhood's verve, Castiglioni and the architects created a stylized interpretation of a modern art gallery—for clothing and accessories—leaving the building's French Neoclassical-facade virtually intact. The only exterior alterations—replacing a small display window and traditional paneled door with full-height glass versions—provide passersby with a glimpse of what's inside. These contemporary elements also supplement the daylight from three existing casement windows on the second floor above a newly devised 2-story lobby entrance.

Castiglioni's eclectic aesthetic informs the interior of the quirky, 2,700-square-foot split-level shop. Intentionally rough, roller-painted white swaths on drywall contrast with a delicate lilac carpet and folded, origami-inspired white lacquered-steel panels that meander along the walls and behind various displays. Dynamic polished-stainless-steel racks undulate throughout the space. Meanwhile, light acts as one of the driving forces behind the entire design. Architect Simon Mitchell,

Sybarite's director, notes that he decided from the start to respond to the 88-by-18-foot, multilevel space by creating large geometric shapes in light and opening up the store with structural cutouts.

Demolishing an existing stair enabled Mitchell and his design team to make a diagonal incision between the two floors to create a nearly 18-foot-high foyer. A cluster of diaphanous fiberglass mannequins sporting Castiglioni's whimsical ensembles floats in this double-height space, which is toplit by the first of four super-size ceiling luminaires that brighten and visually expand the upper floor. The designers used the same device in the back of the shop, where a treelike clothes rack on the first floor rises through a trapezoidal hole beneath a giant illuminated circle. Glass knee walls, ranging from 30 to 37 inches high, border these openings and line the stair to maintain the desired sense of openness.

Carved into the ceiling, the large luminaires are custom fabrications with warm 2700K fluorescent T5 and T8 lamps installed in the plenum and staggered in plan at least 12 inches above a formable, nonflammable stretch ceiling material chosen for its light weight, translucence, and ability to cover expansive areas. Chamfered edges around the perimeters produce fine shadow lines that define the forms etched within the flat ceiling. Downstairs, similar but smaller round fixtures, in varying diameters, are fitted with opalescent glass diffusers set flush with the ceiling. The lighting on both levels emits





Track-mounted PAR30 halogen lamps are installed around a circular fluorescent luminaire and adjacent to the stair to highlight individual items (left and bottom). Large, round luminaires with opalescent glass diffusers illuminate the first-floor galleries (above).

a pleasing theatrical glow with a good color rendering and a minimum of shadows.

“Fluorescents are getting much better,” says Mitchell. In addition to improved color temperatures, they generate less heat, he notes. So the deep, narrow shop, with only three operable windows, requires less air-conditioning than is typical for an establishment with such a configuration, reducing operating costs already lowered because this cooler light source consumes less energy than its incandescent counterparts.

The designers did use incandescent lamps where they wanted sparkle and finely tuned direction. “We have only about 35 halogen lights in the entire shop,” says Mitchell.

These include PAR30 downlights on a track system adjacent to the stairs that direct light to the treads, the tiers of handbags along the opposite wall, and the path between them. The same fixtures ring the circular fluorescent luminaire upstairs to highlight the garments hung on the stainless-steel rail that surrounds the trapezoidal cutout in the floor. In addition, 20-watt dichroic halogen spots cast a gentle glow on lingerie displayed in sumptuous leather-lined boxes.

The project’s successful lighting scheme supplies surprisingly even and glare-free illumination, providing an artful, vibrant backdrop for the shop’s fashionable merchandise. “I love this light,” says Castiglioni. “It’s like daylight,” she adds. “And it gives a freshness to this new boutique.” ■



Project: Marni, New York City
Architect: Sybarite—Simon Mitchell, Torquil McIntosh, Giorgia Cannici
Architect of record: Studio Morsa—Donato Savoie
General contractor: Modus Arredamenti—Massimiliano Tiezzi, Walter Morini

SOURCES
Lighting: Lighting Services Inc. (downlight fixtures); Barrisol (stretch ceiling material)
Furnishings: Sybarite (design); Soozar (fabrication)
Leather: supplied by Marni (upholstery, display boxes)

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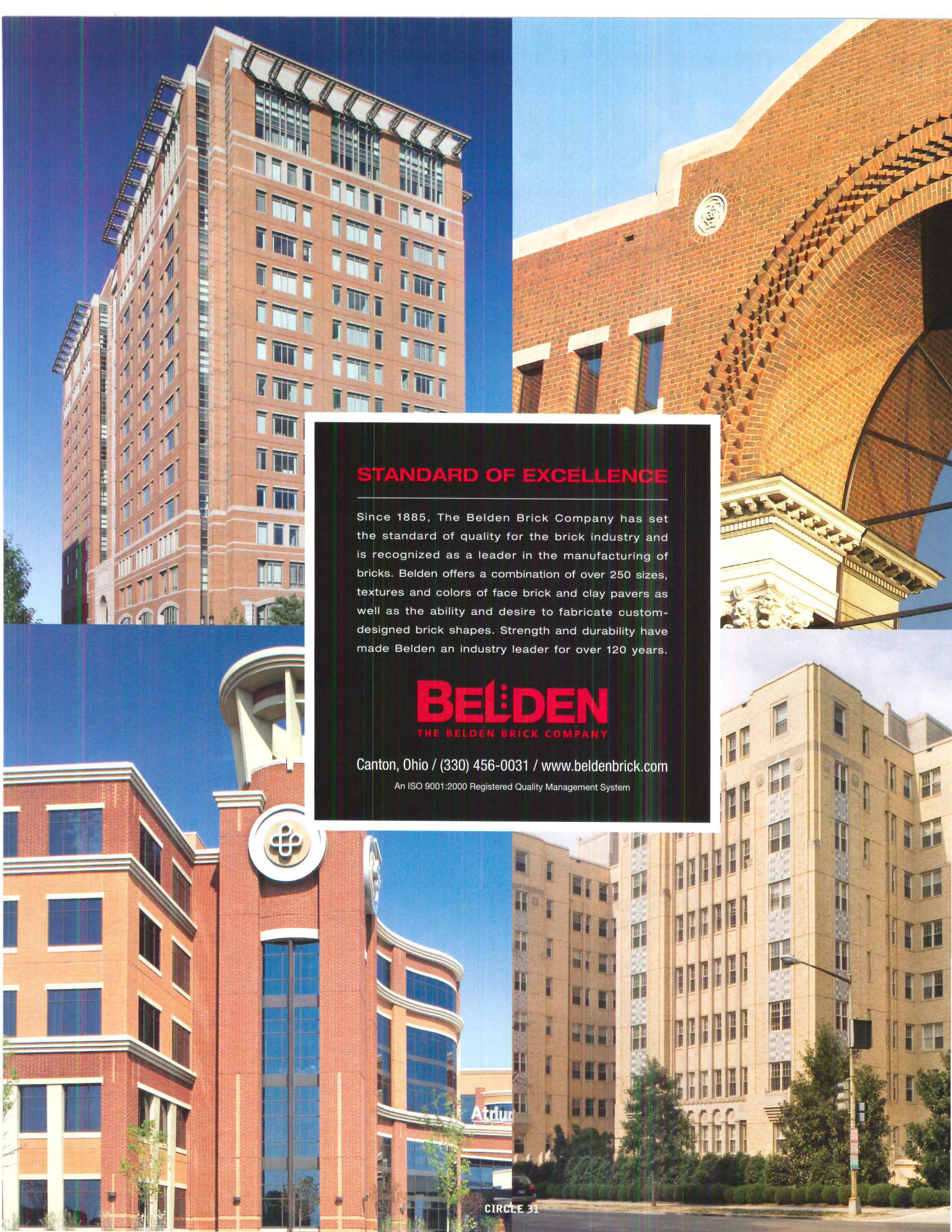
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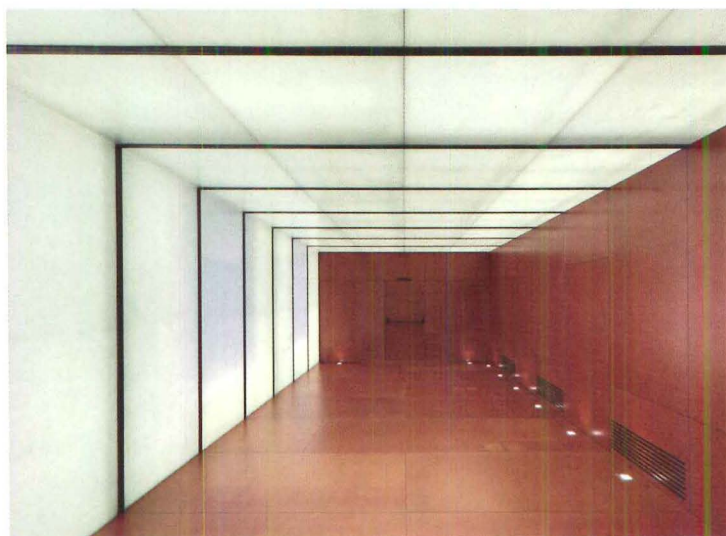


gmp pares the **Chapel of the Evangelical Academy** to its luminous core in Hofgeismar, Germany

By Michael Dumiak

With nine offices in Germany and abroad, von Gerkan Marg und Partners (gmp) is known for such major architectural works as the Berlin Central Station (2006) and numerous other buildings and developments throughout Europe, Asia, and South Africa. But its recent renovation of a simple seminary chapel for the Evangelical Academy in Hofgeismar, Germany—a sleepy town some 137 miles northeast of Frankfurt—demonstrates that this international firm also produces modest projects with equal attention to detail. A small jewel, this serene, 650-square-foot single chamber is striking in its utter materiality and translucence.

Located on the ground floor of the 230-year-old academy's library and dormitory building—a former spa dating from 1770—this 31½-by-13½-foot space within a space serves as a quiet room for teaching and reflection, enveloped by luminous, iridescent ceiling and wall surfaces, illuminated from behind. There are no windows visible from within it, and no distractions. One does not notice the rolling Hessian

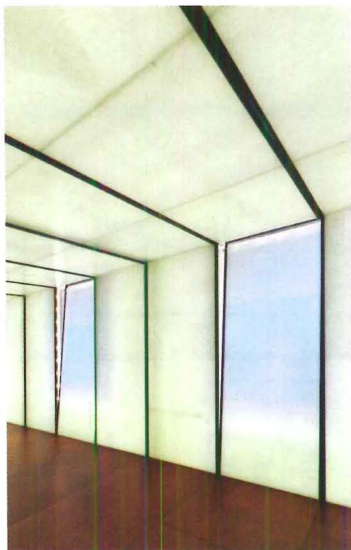


A clever backlighting system installed behind recycled-glass-ceramic panels envelops the chapel in a warm, ethereal glow (top and above).

Michael Dumiak is a Berlin-based freelance writer for *RECORD*.

hills outside or the people strolling along the wooded campus talking among the 18th-century dormitories and classrooms. More specifically, one does not notice that the new chapel was built inside a preexisting one on a newly erected, freestanding steel structural frame—a kind of cage set on a concrete base.

According to gmp co-founder Meinhard von Gerkan, “The main idea was to make a box within a box: to take away everything that was existing, and to disturb normal sensory reactions.” Von Gerkan and gmp project leader Joachim Zais achieved this by honing the sanctuary to what they deemed to be its essence: a Minimalist rectilinear volume surfaced with two disparate materials—both lustrous, yet humble—in dialogue. So the floor and three walls merge, simply clad in phenol-resin-coated birch-plywood sheets normally used for concrete form boards. The suspended ceiling and adjacent wall—which appear to float, covering the building’s exterior windows from inside—are fitted with jade-hued, recycled-glass-ceramic panels reinforced by light-permeable, glass-fiber honeycomb boards. An ingenious lighting sys-



The translucent panels tilt open in front of existing windows (above).

tem backing the panels casts an ethereal glow that dominates the space.

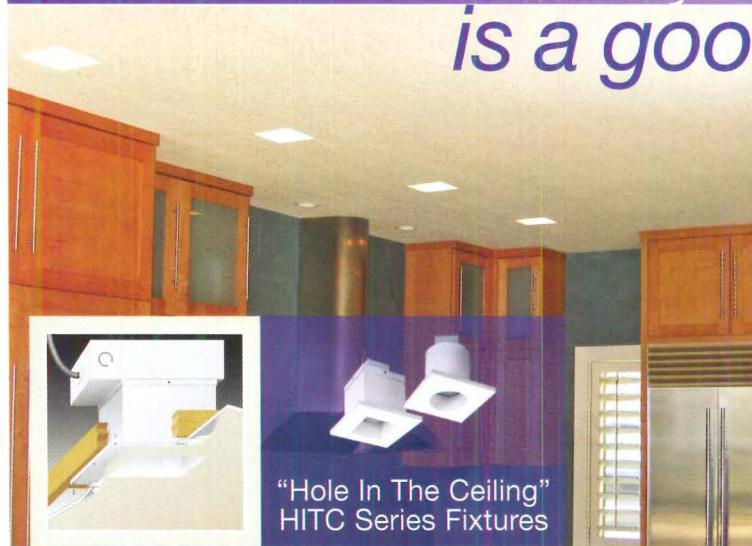
To create it, the architects specified two discreet sources of light. These are installed about 10 inches behind the glass, surrounding—not obstructing—the existing windows. The first light source is a series of incandescent tubes that line the internal steel frame, masking its skeleton from view. Indeed, the only evidence of the structure is an equidistant set of thin horizontal ribs, which secure the glass panels. The second source is composed of an array of 950 incandescent, 25-watt A-lamps, the sockets bolted to iron sheets fitted into the frame, behind the glass. The panels tilt open on the walls and can be removed from the ceiling to facilitate swapping out the lamps and to allow for natural ventilation at the windows. Floor-mounted wall washers lining the perimeter around the base of the wood walls highlight the rich brown finish.

When illuminated, the chapel is wrapped in a homogeneous bright light that radiates a spiritual warmth appropriate for the room’s function. “It is smooth and inviting, totally different from the light coming in from the outside or anywhere else,” von Gerkan says. “And it is extraordinary for the people assembling there.” ■

Project: Chapel of the Evangelical Academy, Hofgeismar, Germany
Architect: von Gerkan, Marg und Partners (gmp)—Meinhard von Gerkan, Joachim Zais, design; Monika van Vught, design team
General contractor: Deutsche Werkstätten Hellerau

SOURCES
Glass: Indupart (Structuran glass ceramic)
Wood: Carl Götz (concrete form boards)
Lighting: Osram (Linestra incandescent tubes)
Chairs: Fritz Hansen

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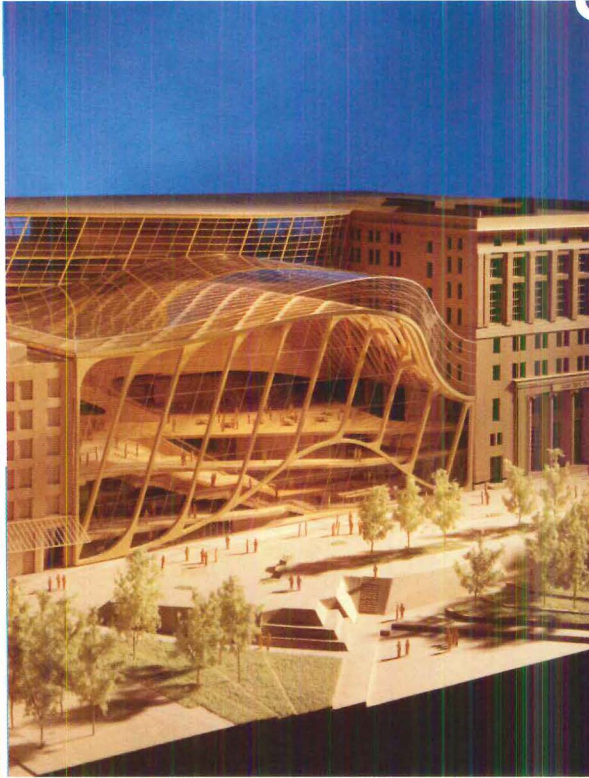
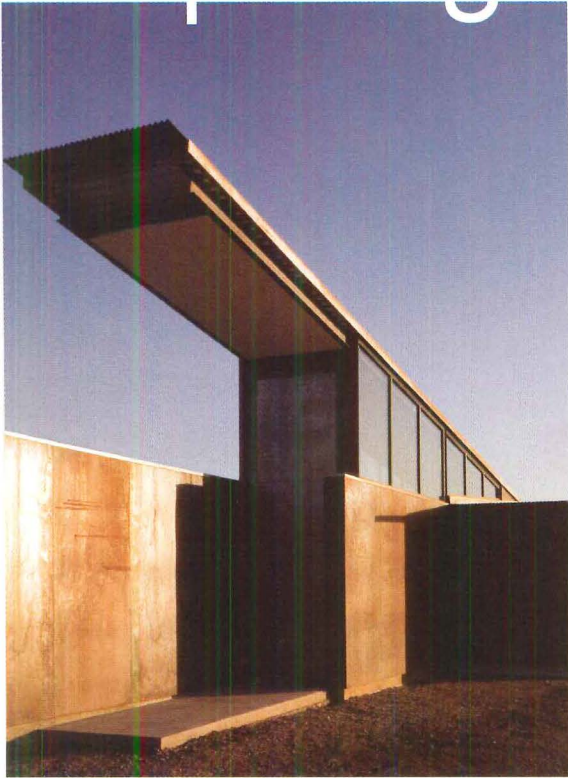
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(from left to right) Montecito Residence. Photo by Tim Bien.; Calgary Performing Arts Centre. Photo by Colin Goldie; L'Agape Cafe in Val d'Europe, France. Photo by Dhiru

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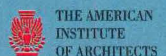
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Custom craft-paper pendants and sconces cast a tawny glow while LEDs showcase the impressive whiskey collection.

Berman Horn Studio distills the essence of Southern comfort at **Char No. 4**, a bourbon bar and restaurant

By Beth Broome

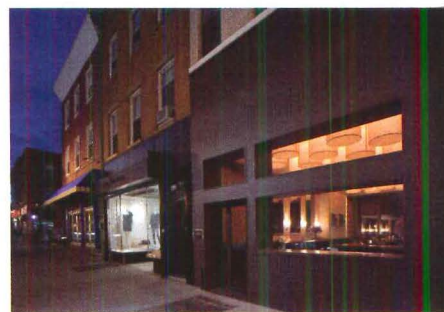
Smith Street, in Brooklyn, New York's Carroll Gardens neighborhood, has evolved over the course of the past decade from a rugged urban commercial strip peppered with family shoe stores, bodegas, and windowless Italian social clubs, to the area's restaurant row, playing host to a mix of both serious and theme-heavy establishments, from top-ranked restaurants run by ambitious chefs to a tiki bar named the *Zombie Hut*. When Sean Josephs, a sommelier, and Michael Tsoumpas, a bourbon collector, decided in 2007 to open a bourbon bar and restaurant serving refined comfort food in a 19th-century row house here, they approached the Manhattan-based firm Berman Horn Studio and expressed their desire for an environment influenced by the Southern whiskey-making tradition. Unlike some of their neighbors, however, the restaurateurs wished to accomplish this with a light touch, without being overtly referential or kitsch.

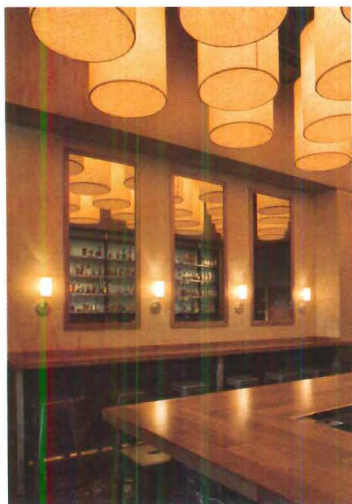
In the spring of 2008, the two owners and the design partners, Brad Horn and Maria Berman, headed down to Kentucky, commonly known as bourbon's birthplace, to explore the Bluegrass State's urban enclaves and rural scenery and visit a couple of distilleries. "We became inspired by the landscapes and the textures and colors of the process of distillation," says Horn, "and decided our design should capture that

spirit." Named Char No. 4 after the practice of burning the insides of oak bourbon barrels prior to aging (with No. 4 being the most intense level of charring), the restaurant opened in September 2008. Abstract references begin on the facade, which is

clad in water-jet-cut steel that resembles barrel staves, and continue inside—enhanced by a rich aroma rising from a basement smoker—to a palette of warm materials, such as the oatmeal-colored grass cloth that lines the walls and alludes to grain mash.

Lighting became a central architectural element for the project, largely because the long and narrow, 1,100-square-foot space was not conducive to creating separate zones of intimacy. "It was not an afterthought," says Horn. "Much of our design circulated around the lighting," adds Berman. "It allowed us to create a space that's bigger than its size."





A soft amber light floods the space.

Inspired by the geometry of bourbon barrels, the team came up with an abstraction of their shape, based on their actual dimensions, and repeated the cylindrical form (36 inches tall and 24 inches in diameter) over and over in the front bar area with 32 custom pendants made of craft paper mounted on Mylar and illuminated by 100-watt incandescent A-lamps on dimmers. This sculptural arrangement continues the datum of the lower-ceilinged back dining room and the soffit that runs around the perimeter of the front room, equalizing the difference in height between the

two spaces. Using the fixtures to create a “soft ceiling,” the designers give diners a sense of the soaring, 16-foot height of the bar area while not oppressing them. This soft ceiling also acts as a baffle between the lively restaurant and the apartments directly above, and bathes the space in a tawny light that bounces off bronze-tinted mirrors.

Custom brass sconces illuminated by 40-watt incandescent A-lamps are mounted at eye level adjacent to the bar in the front and a little lower alongside seating in the dining room at the back, and reference the pendants. More overtly historic than their larger counterparts, the sconces use a paper with a smaller-scaled grain. The third and final

lighting elements are the LEDs that illuminate walnut shelves behind the bar displaying Char No. 4’s pièce de résistance: more than 150 whiskeys (that started out as one of the owners’ personal collection). Horn and Berman, who did not work with a lighting designer, note that they experimented with a range of LED intensities and sizes to get the desired effect: a somewhat cool quality of light that contrasts with the golden luminescence of the incandescent fixtures and highlights the subtle variations in color among the array of bottles.

Berman Horn Studio’s deft handling of simple materials and its creation of a lighting scheme that performs on multiple levels responds—in a language that is firmly contemporary while being respectful of the location’s traditional roots—to the owners’ desire to subtly capture the spirit of Southern comfort while meeting the challenges of the small, almost cavelike space. In the aging process, it is the charring of the barrels that produces bourbon’s rich amber hue. Here, the designers have employed controlled lighting focused on the honey-toned part of the visible spectrum to harness the drink’s essence and flood Char No. 4 in its warm glow. ■

Project: *Char No. 4, Brooklyn, New York*

Architect: *Berman Horn Studio—Brad Horn, Maria Berman, partners; Perry Randazzo, intern*

SOURCES

Lighting: *Broome Lampshade (pendant fabrication); Olampia*

Studio (wall-sconce fabrication)

Paints and stains:
Benjamin Moore

Grass cloth wall covering:
Donghia

Whiskey display: *Matt Crane*

Custom woodwork: *Karl Glave*

Seating: *Marais Stool and Kyoto Chair, from Design Within Reach*

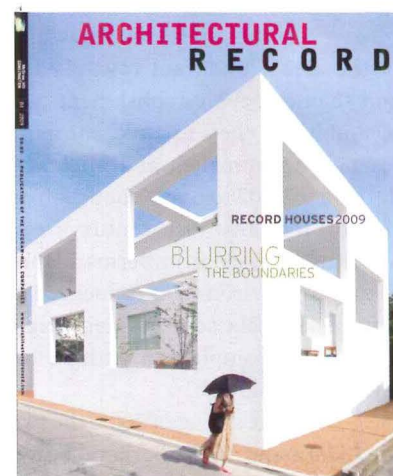
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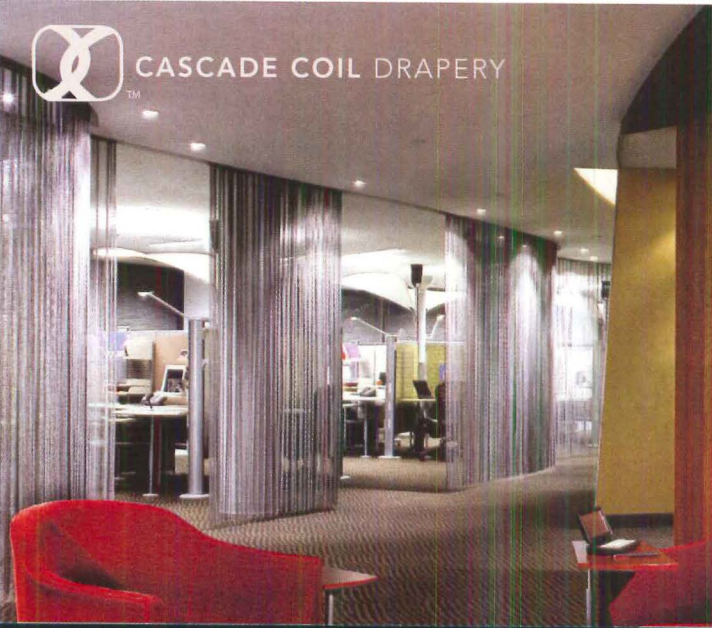
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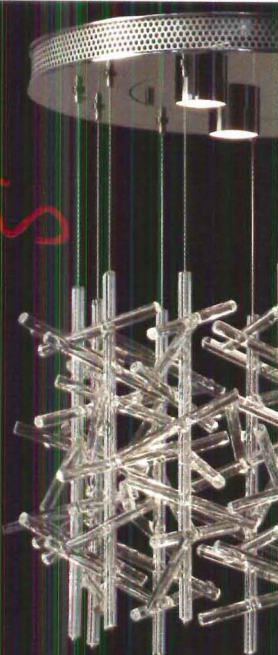
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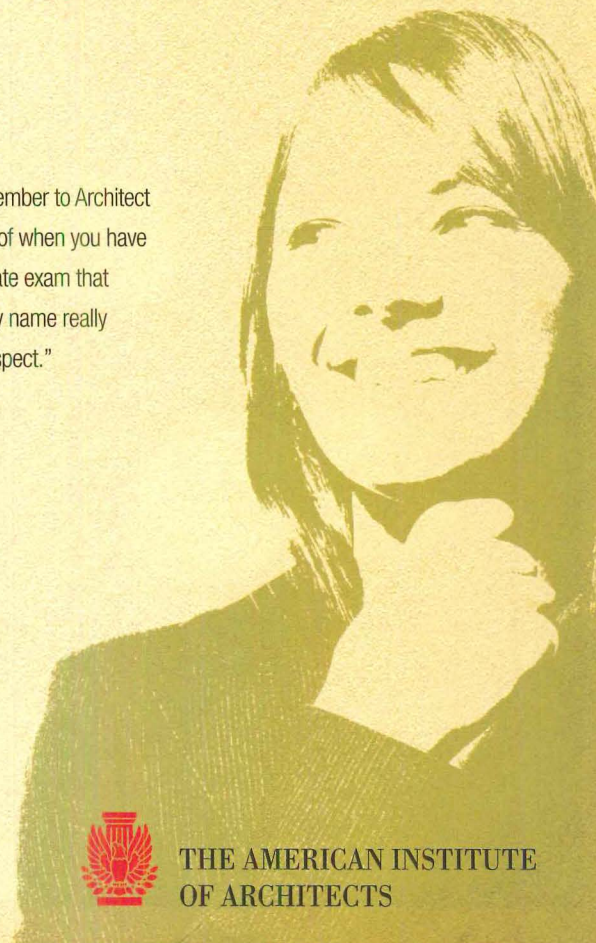
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Lighting Products

The biennial **Euroluce lighting show** took place this April alongside Milan's Salone del Mobile. Though decorative luminaires were on the decline, **some fixtures had forms that were way out there.** *Josephine Minutillo*

1 Taking flight Ludovica and Roberto Palomba wanted to express lightness of a different kind in their design for Foscarini's Fly-Fly. The wings of this suspension lamp appear weightless as they hang from ultrathin cords. One 300-watt halogen bulb provides 360-degree illumination beneath the large polycarbonate diffuser, which is also available in orange. DDC Domus Design Collection, New York City. www.foscarini.com **CIRCLE 200**

2 Making waves Vases is a modular suspension lamp by German designers Jehs+Laub for Nemo. The stacked, opal-blown-glass elements are available in several diameters for various configurations. Lightology, Chicago. www.nemo.cassina.it **CIRCLE 201**

3 Heavenly body Ross Lovegrove's concept for Cosmic Angel was to capture the rippling effect of air rolling over a thin sheet. The 6'-long undulating surface captures and distributes light from optional sources either above or below the surface (or both). Also available in smaller floor, table, and suspension versions, and as a wall-mounted fixture that uses OLED technology. Artemide, New York City. www.artemide.us **CIRCLE 202**

4 Tube top Tu.be Two is among the latest designs from German lighting innovator Ingo Maurer. Inspired by an earlier chandelier he designed, called Tu.be, the 22"-high table version is composed of five aluminum tubes and steel. A ball joint makes it possible to turn and tilt the lamp in all directions. Ingo Maurer, New York City. www.ingo-maurer.com **CIRCLE 203**

5 Breaking the mold Philippe Starck has designed a number of memorable luminaires for Flos. His latest is K-Ray, a sculptural fixture that defies conventional notions of table lamps. Its unusual shape is formed from injection-molded polycarbonate. The halogen light source is screened by an opalescent glass filter. Available in gloss white or gloss black. Centro Modern Furnishings, St. Louis. www.flos.com **CIRCLE 204**



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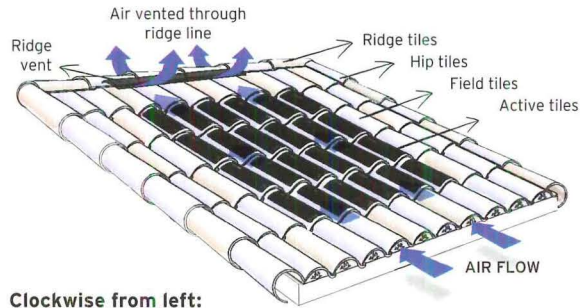
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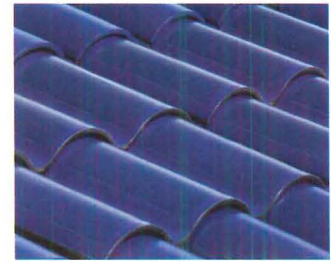
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Product Focus Roofing

Our roundup includes an architectural fabric that was a **highlight of this year's Wimbledon match**, the latest photovoltaic and cool roof products, and a **roof hatch that is claimed to be 250 times more efficient** than standard models. *Rita Catinella Orrell*



Clockwise from left: Approximately 300 square feet of Solé Power Tiles were used on this residence in Bermuda Dunes, California; the curved design of the tiles allows for greater air circulation under and around them; a detail of the building-integrated photovoltaic tiles.



A new curved photovoltaic-tile option energizes a centuries-old roofing style

The timing was serendipitous last September when SRS Energy director of marketing Abby Feinstein contacted US Tile to determine the company's interest in adding a solar option to its line of Mission-style clay tiles. "We were evaluating several different roofing manufacturers to work with, while they were also evaluating solar people to work with," says Feinstein. Just one week later, SRS Energy paid a visit to US Tile's headquarters in Corona, California, and the partnership for the Solé Power Tile was born.

Launched last May at the AIA Expo in San Francisco, Solé Power Tile is the first building-integrated photovoltaic roofing product in the U.S. designed for curved roofing systems. The electricity-generating

"barrel-style" tiles are specifically designed for installation in steep slope roofs alongside US Tile's traditional clay roofing, and are offered as an upgrade to a traditional roofing purchase. In addition to applications in new construction, the tile has potential in historic retrofits that want to promote sustainability without compromising aesthetics.

In addition to their seamless integration into the roof line, the tiles employ cutting-edge amorphous silicon thin-film technology embedded into the tile manufactured by Uni-Solar. "They produce triple-junction silicon – three layers of semiconductor material," explains Feinstein. "Each layer absorbs a different spectrum of light, so overall their technology can convert a

broader spectrum of light into electricity. It makes our tiles less picky about the spectrum of light that can be converted." The technology adds about 10 to 15 percent more energy per year than incumbent crystalline-silicon panels of the same rated power; however, it takes up more square footage. The system also utilizes a ridge vent and 3 inches of airflow beneath the tiles to keep them cooler during peak sun hours.

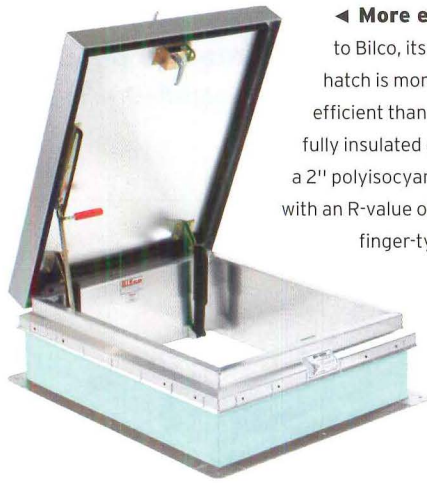
The blue Solé Power tiles measure 32 1/4" wide x 18" long and weigh 240 pounds per 100 square feet. They are constructed with durable performance polymers commonly used in outdoor applications such as car bumpers. The UL-listed tiles have been rigorously tested by SRS Energy under harsh conditions

including long-term UV stability, colorfastness, wind-resistance, and other durability issues; they are currently undergoing testing to match US Tile's potability certifications.

Currently available in select West Coast markets, a national rollout for the tiles is planned to start in Spring 2010, followed by an introduction into foreign markets. In the meantime, Feinstein says that SRS is already developing new solar roofing products in additional styles and profiles. US Tile, powered by SRS Energy, Philadelphia. www.ustile.com, www.srsenergy.com **CIRCLE 205**

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

Products Roofing



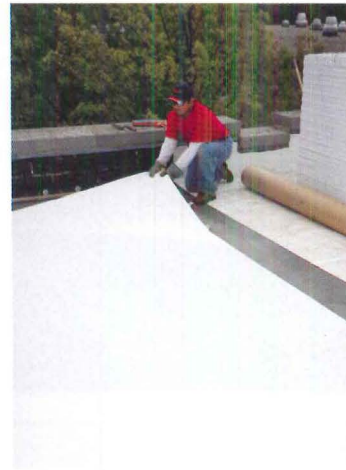
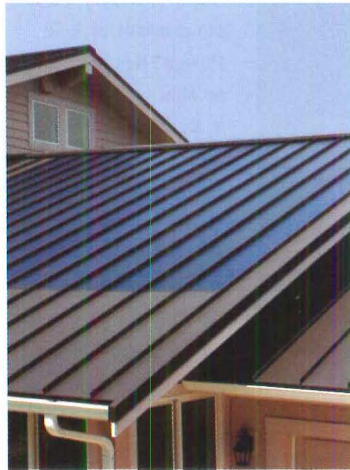
◀ **More efficient hatch** According to Bilco, its new thermally enhanced roof hatch is more than 250 percent more energy efficient than standard models. Designed with a fully insulated cover and curb, the hatch features a 2" polyisocyanurate thermal insulation board with an R-value of 12. The specially designed EPDM finger-type gasket ensures a positive seal between the cover and curb. The hatch is fabricated from aluminum that is milled primarily from recycled content. The Bilco Company, New Haven. www.bilco.com **CIRCLE 206**



▲ **Winning roof** Roger Federer's historic win at last month's Wimbledon took place under a new retractable roof made of Gore Tenara architectural fabric. Selected for its translucence, durability, and ability to flex and fold without wear, approximately 5,200 square meters of the fabric was integrated into the concertina-design roof. Two styles of fabric were used: one allowing 20 percent light transmission and the other allowing 40 percent. W.L. Gore & Associates, Elkton, Md. www.tenarafabric.com **CIRCLE 207**

► Turn-key solar system

FusionSolar from Custom-Bilt Metals is a more affordable rooftop solar-power system integrated within a standing-seam metal roof. Sheet-metal and roofing professionals are able to install the standing-seam roof just as they would a standard metal roof, eliminating the need for a specialized solar installer. The system visually blends in without penetrations in the roof and achieves a higher relative efficiency under high temperatures and low light than solar glass. Custom-Bilt Metals, Chino, Calif. www.custombiltmetals.com **CIRCLE 208**



◀ **Reflective membrane** Ideal for projects where fully adhered membrane systems are specified, Firestone's RubberGard EcoWhite EPDM is available in a 60-mil overall thickness for UL- and FM-rated systems, and exceeds ASTM D-4637 standards. When tested in accordance with the Cool Roof Rating Council program, the membrane's initial solar reflectance is .80 and its solar reflectance index is 99, making it one of the industry's most reflective white membranes. Firestone Building Products Company, Indianapolis. www.firestonebpc.com **CIRCLE 209**



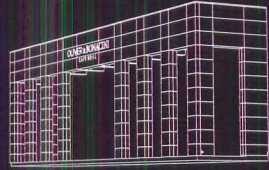
▲ **Supporting role** Silverback Solar, an offshoot from the roof-screen specialists at RoofScreen Mfg., offers an engineered racking solution that utilizes stronger materials to span longer distances, creating fewer penetrations. Compatible with nearly all PV modules, the system mounts to commercial rooftops by way of a patented watertight attachment system. Its modular design – consisting of just five components and three fasteners – allows it to easily span over rooftop protrusions such as pipes, fans, ducts, and skylights. Silverback Solar, Santa Cruz, Calif. www.silverbacksolar.com **CIRCLE 210**

► Darker cool shingles

CertainTeed's Landmark Solaris shingles feature roofing granules that reflect solar energy and radiate heat far better than traditional asphalt roofing shingles, says the manufacturer. While traditional cool-roofing products are limited to a white color, the Landmark Solaris color palette features five rich brown and dark gray hues. The shingles are designed to withstand up to 130-miles-per-hour winds while installed with CertainTeed starter products and hip-and-ridge accessories. CertainTeed, Valley Forge, Pa. www.certainteed.com **CIRCLE 211**



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DYNAMIC LANDMARKS

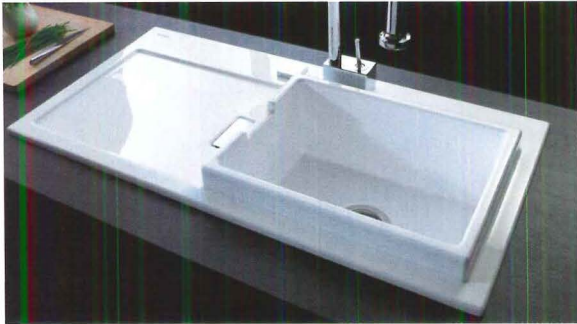
An 80 ft. long x 25 ft. high patio structure of steel framing and break-formed aluminum fascia panels with a custom powder coat finish and LED reveal lighting. The roof is a removable custom sloping fabric membrane with integrated water management system.

Fabrication: Eventscape Inc.
Design: Anacleto Design Associates
Location: Oliver & Bonacini Café & Grill, Oakville, ON

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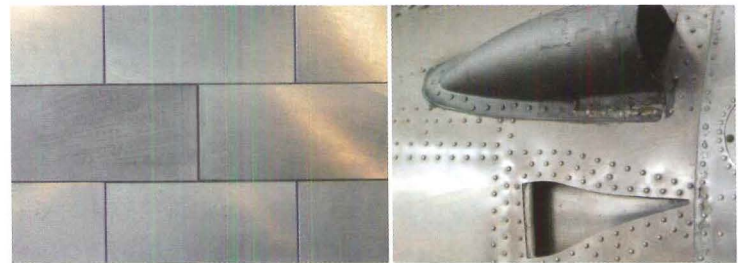


Product Briefs



▲ **Sunken surface** Philippe Starck adds a kitchen sink to his extensive design portfolio with Duravit's Starck K. The ceramic sink's large basin (16 $\frac{7}{8}$ " x 12 $\frac{1}{4}$ " x 7 $\frac{1}{2}$ ") juts out of the rectangular ceramic form. This basin is connected to an extensive, smooth draining surface by way of a recess that protects against overflow. When the water level reaches the recess, the excess water cascades onto the draining surface and into the drain. Duravit USA, Duluth, Ga. www.duravit.com **CIRCLE 212**

► **Refreshing change** Recently installed on the campus at U.C. Berkeley, the Hydration Station isn't a drinking fountain, but an entirely new water-dispensing category. Eliminating the waste associated with bottled water, the semirecessed dispenser supplies NSF-certified filtration in a touch-free hygienic design that accommodates a variety of water containers. The unit uses antimicrobial additives to key plastic components to protect them from mold and mildew build-up. Haws, Sparks, Nev. www.stayhydrated.net **CIRCLE 213**



▲ **Transatlantic tiles** Made from aircraft aluminum retrieved from decimated military sites, Bio-Luminum tiles, from surfacings manufacturer CoveringsETC, are both 100 percent recycled and 100 percent recyclable. Airplane parts are melted into blocks and then sliced to create a lightweight tile with a textured surface in 3" x 12", 6" x 12", and 3" x 6" dimensions. Appropriate for both indoor and outdoor cladding applications. CoveringsETC, Miami. www.coveringsetc.com **CIRCLE 215**



◀ ▼ **Cool cab** Launched at the AIA show in May and awarded a 2008 Good Design Award, the Kone Design Collection is a new series of interior elevator cab design offerings that focus on lighting, wall, and ceiling schemes, as well as next-generation signalization and regenerative drive technology. Designed by architects and based on Kone's 2006 Four Seasons Concept, the Design Collection comes in colored laminate, wood laminate, stainless steel, or glass. Car-operating panels available in full-height and mid-height. Kone, Moline, Ill. www.kone.com **CIRCLE 214**



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



◀ **Understated urns** Adding to its roster of building-product collaborations, Robert A.M. Stern Designs has partnered with Haddonstone to create two new lines of ornamental garden urns. Appropriate for both formal and romantic gardens, as well as interior use, the Athenian collection includes tall, medium, and low urns (and their bases) in two designs (Athenian Bowl shown), inspired by the pure forms of Art Deco or Art Moderne ornaments of the early 20th century. Haddonstone, Pueblo, Colo. www.haddonstone.com **CIRCLE 216**

► **Keep warm in denim** Made from recycled denim and cotton fiber, UltraTouch natural cotton-fiber insulation contains no harmful airborne particulates, no formaldehyde, and does not itch or irritate the skin. The insulation comes in four different R-values (R-13, R-19, R-21, and R-30) and is manufactured from 85 percent postindustrial denim and cotton fibers. UltraTouch, Chandler, Ariz. www.bondedlogic.com **CIRCLE 217**





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Dates & Events

New and Upcoming Exhibitions

Ron Arad: No Discipline

New York City

August 2-October 19, 2009

Over the past 25 years, the influential architect and designer Ron Arad has produced a wide array of innovative works, including a crystal and LED chandelier, carbon-fiber armchairs, and polyurethane bottle racks. This exhibition, the first major retrospective of Arad's design work in the United States, presents some 140 pieces, including design objects, architectural models, and videos. At MoMA. For more information, call (212/708-9400 or visit moma.org.

Ongoing Exhibitions

Design High

London

Through August 30, 2009

A collaborative exhibition featuring some of the most important and innovative artists in the field of contemporary design. The show addresses tensions between craft and fine art. At the Louise Blouin Foundation. Call +44 (0) 20 798 509 620 or visit www.ltbfoundation.org.

Unbundling the Housing Crisis: Investigations, Interpolations, Interventions, Instigations

Minneapolis

Through September 5, 2009

This thematic exhibition brings together artists, architects, designers, scientists, and writers in response to the housing foreclosure crisis and its effects on communities and families. At Form + Content Gallery. For more information, call 612/436-1151 or visit www.formandcontent.org.

Green Community

Washington, D.C.

Through October 25, 2009

The organizers of this exhibition argue that the health of our communities, our planet, and ourselves depends on how we plan, design, and construct the world between our buildings. *Green Community* explores the origins of our precarious ecological situation and introduces communities large and small where citizens, political leaders, planning and design professionals, developers, and government agencies are working together for a more sustainable future. At the National Building

Museum. For more information, call 202/272-2448 or visit www.nbm.org.

Lectures, Conferences, and Symposia

Devil in the White City Bus Tour

Chicago

August 4, 9, 13, 23, and September 1, 6, 2009

This bus tour and slide presentation is based on Erik Larson's best-selling novel that chronicles the 1893 World's Columbian

Exposition and the emergence of America's first mass murderer. Call 312/922-3432 or visit www.architecture.org.

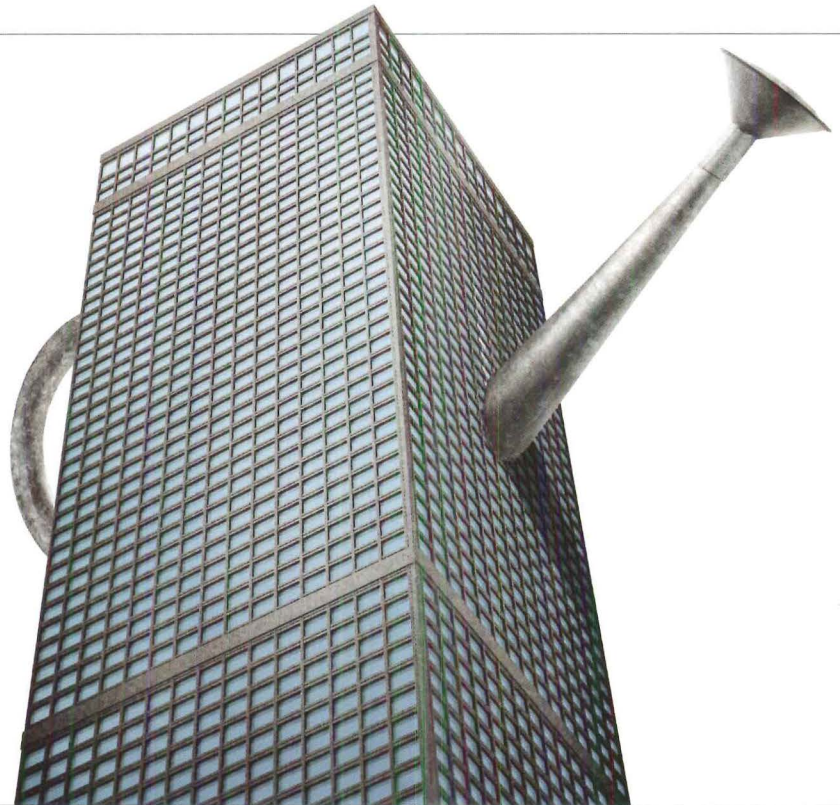
Cityscape Dubai World Architecture Congress: A Survival Guide for Architects, Recession, and Recovery

Dubai

October 5-7, 2009

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**Urban Waterfronts 27:
Sustainable Solutions**

Seattle

October 22-24, 2009

Providing a comprehensive and in-depth view into quality developments in waterfront cities, the conference's ultimate goal is to assist communities and professions in making the wisest and best long-term uses of waterfront resources for maximum public benefit. Call 202/337-0356 or visit www.waterfrontcenter.org.

**Designing Learning Environments
to Rebuild Urban America**

New York City

October 23-25, 2009

Design professionals and educators will explore common ground and emerge with strategies to create learning environments that are both practical and inspiring. Visit www.aia.org/cae.

**GreenBuild International Conference
and Expo**

Phoenix

November 11-13, 2009

GreenBuild is the world's largest conference and expo dedicated to green building. Thousands of building professionals from all over come together for three days of educational sessions, renowned speakers, green-building tours, special seminars, and networking events. For more information, visit www.greenbuildexpo.org.

Competitions

Design It: Shelter Competition

Deadline: August 23, 2009

A global, online initiative that invites the public and professionals to use Google Earth and Google SketchUp to create and submit designs for virtual 3D shelters for a location of their choice. For additional information, visit www.guggenheim.org/shelter.

**First Annual Uncharted Waters
Design Competition**

Deadline: August 31, 2009

Open to residential and commercial interior designers, the competition seeks to recognize and reward an interior designer who has pushed the boundaries of interior design. For more information, visit www.cifialusa.com.

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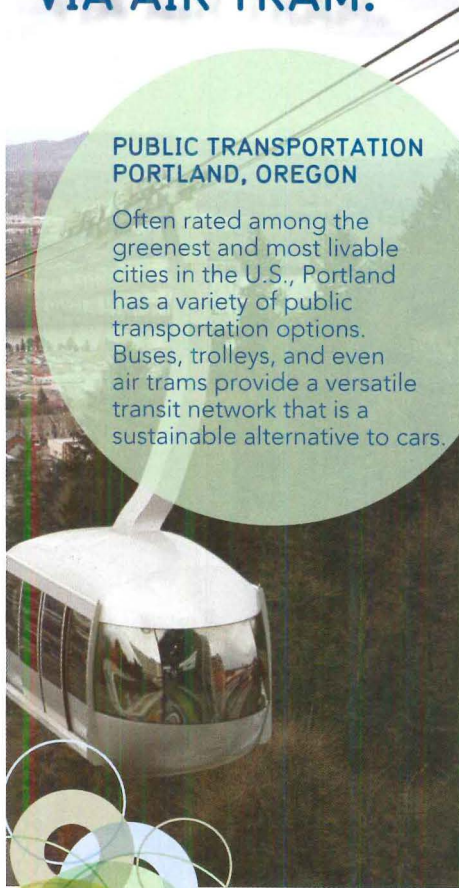


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Dates & Events

Up to 35

Deadline: September 7, 2009

Architects up to 35 years old are called on to submit proposals for the construction of an affordable student-housing complex in Kerameikos and Metaxourgeo (KM), an area in the historic center of Athens, Greece. The aim of the competition is to encourage creativity among the next generation of designers while supporting architectural research and the implementation of contemporary architecture projects in Greece. The competition seeks designs exploring new ideas on urbanism and housing. Visit www.upto35.com.

The Deutsche Bank Urban Age Award

Deadline: September 11, 2009

This award recognizes creative solutions to the problems and opportunities that face more than half of the world's population that now lives in cities. Accordingly, it focuses on projects that benefit communities and local residents by improving their urban environments. For more information, visit www.urban-age.net.

The AIA Diversity Recognition Program Call for Submissions

Deadline: September 16, 2009

The program seeks exemplary efforts to diversify the architecture profession. The jury will select up to 12 submissions each year as diversity best practices. For more information on the program, call 202/626-7352 or visit www.aia.org.

BSA Research Grants in Architecture

Application deadline: September 18, 2009

Designed to expand the architectural knowledge base, grants may be awarded to individuals, collaborative teams, students, or organizations and institutions. Visit www.architects.org/grants.

Advanced Architecture Contest

Deadline: September 28, 2009

Under the theme of "Self-sufficient Cities," the third annual International Architecture Contest emphasizes the importance of innovation for future environments. The jury will look for compelling innovations that reflect the ecological and technological needs of our future. Visit www.advancedarchitecturecontest.org.

E-mail information two months in advance to sebastian_howard@mcgraw-hill.com. For more listings, visit architecturalrecord.com/news/events.

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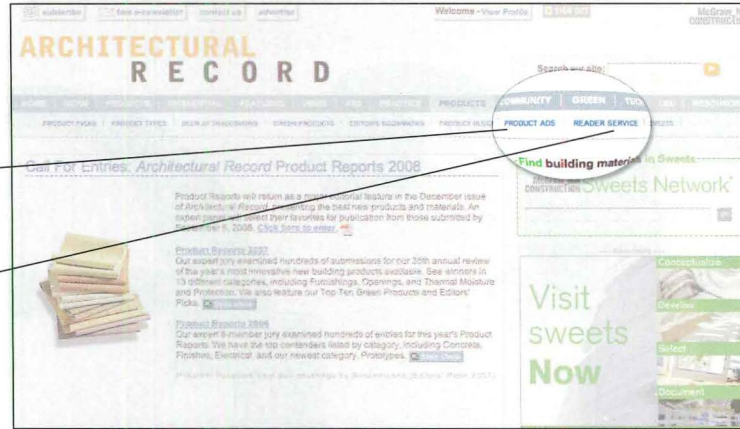
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August 28, 2009



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call for entries

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PHOTO: Faneuil Hall Marketplace, Boston; 2009 AIA National Twenty-five Year Award recipient; architect: Benjamin Thompson + Associates; photo: © Steve Rosenthal

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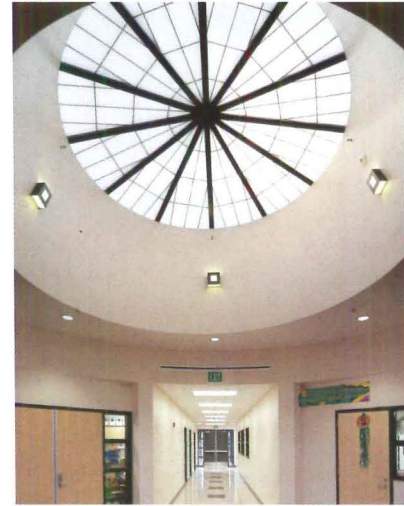
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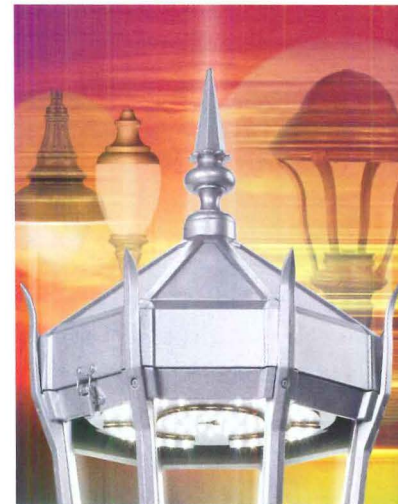
▲ UNRIVALED™ decorative outdoor LED lighting provides energy savings in excess of 50%.

Product Application:

- University of Notre Dame, Notre Dame, IN

Performance Data:

- Approximately 70,000 hours of system life (16 years)
- Energy consumption can be reduced by over 50% with comparable photometric performance



www.sternberglighting.com

800.621.3376

Contact: Peter Schreiber

on sweets.com

SNAP 155

ELECTRICAL, LIGHTING

LED FIXTURE

\$\$ | G | NEW

MP Lighting

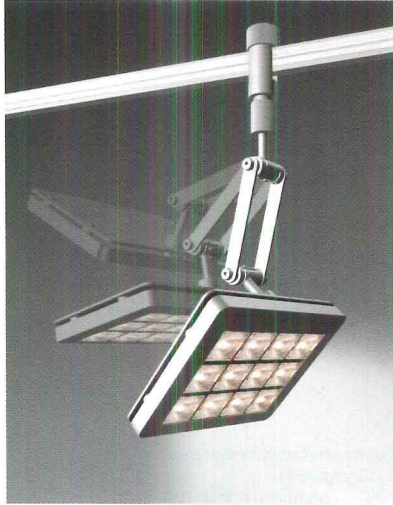
▲ With a 30% increase in luminous flux, the L72 light output is now equivalent to a 50W MR16 source.

Product Application:

- Accent, decorative, general, and down lighting
- Canopy and rail system mounting options

Performance Data:

- 50,000 hours lifetime
- Energy efficient and environmentally friendly



Circle 156

www.mplighting.com
604.708.1184

Contact: David Brick

ELECTRICAL, LIGHTING

LUMINAIRES

\$\$\$ | G | NEW

Teka Illumination

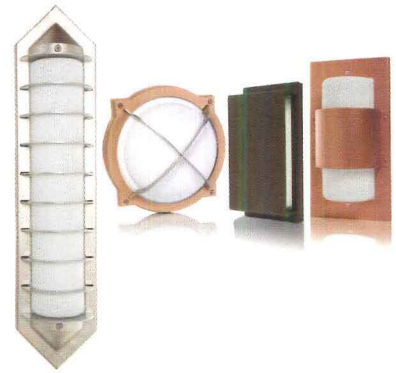
▲ The Arcade Series: four elemental designs manufactured from enduring metals of copper, bronze, stainless steel, and brass.

Product Application:

- High-end homes
- Commercial
- Outdoor living environments

Performance Data:

- Constructed from lifetime materials
- Utilizes 4W and 8W LED with BKSSL technology for superior thermal management and significant energy reduction



www.tekaillumination.com
559.438.5800

Contact: Becky Carlson

Circle 157

ELECTRICAL, LIGHTING

UNIVERSAL POWER MODULE

\$\$\$ | G

B-K Lighting

▲ UPM is a robust, water-tight housing option for transformers and ballasts. Patented knockouts can be re-inserted after removal again and again.

Performance Data:

- Tree-strap mounting system facilitates non-invasive installation.
- Surface mount includes stainless steel mounting brackets.
- Monument Mount provides a clean concrete water-tight installation for ground-level luminaire applications. Designed with a stability flange for easy installation and an ASV (anti-siphon value).



Circle 158

www.bklighting.com
559.438.5800

Contact: Becky Carlson

INTERIOR FINISHES, FURNISHINGS

LIFE'S ALL ABOUT CHANGE

\$\$

Walker Display

▲ Walker Display provides an efficient system for exhibiting artwork anywhere.

Product Application:

- Residential or commercial use
- Office buildings, shopping malls, airports, restaurants, hospitals etc.
- Schools, libraries, museums, galleries etc.

Performance Data:

- Versatile art hanging system
- Interchangeable for easy adaptation to various projects
- Not limited to art hanging



www.WalkerDisplay.com
800.234.7614

Contact: Richard Levey

Circle 159

INTERIOR FINISHES, FURNISHINGS

REFLECTORS/DIFFUSERS

G

Gordon Incorporated

▲ Light Shelf harvests natural light, reducing the demand for artificial lighting and lowers energy costs.

Product Application:

- Straight and curved walls

Performance Data:

- Panels - structural twin wall polycarbonate, MILLENNIUM® 3-D panels, corrugated metal
- Aluminum brackets align with mullions, custom spacing available
- ACROGUARD®, REVELATION®, and luminescent powder coats and Kynar®
- LEED credits available



Circle 160

www.gordonceilings.com
800.747.8954

Contact: sales@gordonceilings.com

INTERIOR FINISHES, FURNISHINGS

ORNAMENTAL PLASTER CEILING TILES

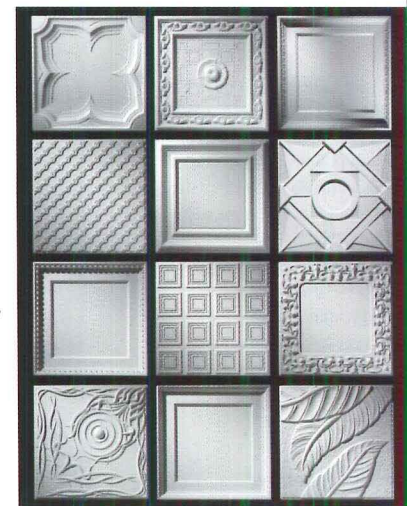
G

Above View Mfg., By Tiles, Inc.

▲ Ornamental plaster ceiling tiles fabricated from a non-toxic, non-combustible, proprietary composition.

Performance Data:

- The tiles drop into any standard 15/16-in. T-Bar grid system.
- The design line consists of more than 60 standard designs.
- Custom design work, custom colors, and faux finishes are available.



www.aboveview.com
414.744.7118

Circle 161

INTERIOR FINISHES, FURNISHINGS

PAINT

\$\$ | G

The Sherwin-Williams Company

▲ ProGreen 200 offers professionals a green solution, easy-application benefits, and lasting performance.

Product Application:

- Ideal for commercial and residential spaces

Performance Data:

- Helps hide surface imperfections
- Available in a complete paint line
- Durable formula for long-lasting performance
- Low-odor, low-VOC formula meets green standards



www.sherwin-williams.com
800.321.8194

Contact: Terry Makowski
on sweets.com

Circle 162

INTERIOR FINISHES, FURNISHINGS

AUTOMATED SOLAR-SHADING SYSTEM

WR | NEW

MechoShade Systems

▲ The automated SunDialer™ solar-shading system tracks the sun and sky conditions, adjusting the shades throughout the day.

Performance Data:

- Optimizes daylight
- Maximizes occupants' view
- Reduces artificial lighting
- Saves money
- Assures highest levels of comfort



www.MechoShadeSystems.com
718.729.2020

Contact: William L. Maiman
on sweets.com

Circle 163

INTERIOR FINISHES, FURNISHINGS

VANITY BRACKETS

NEW

Rangine Corporation/Rakks

▲ Rakks Vanity Brackets simplify and reduce the cost of installing sinks with millwork enclosures.

Performance Data:

- Manufactured to order; can be easily customized to meet specific project or accessibility requirements
- Supplied with wooden strips on the front faces to provide convenient mounting, or removal, of laminated or solid surface panels
- Manufactured from TIG-welded structural aluminum
- Can support loads up to 450 lb. and counter depths up to 30 in.



www.rakks.com
800.826.6006

Contact: sales@rakks.com
on sweets.com

Circle 164

ARCHITECTURAL NATURAL STONE

\$\$\$ | G

Vermont Structural Slate Company

▲ Quarrier and fabricator offering select slates, quartzites, sandstones, limestones, marbles, granites and basalts.

Product Application:

- Rosenfield Campus Center, Grinnell College
- Architect: Pelli Clarke Pelli Architects
- Unfading Green Slate wall cladding



www.vermontstructuralslate.com
800.343.1900

Contact: Craig Markcrow
on sweets.com

Circle 165

MATERIALS

CARVED METAL PANELS

\$\$\$ | G | NEW

The Gage Corporation, Int.

▲ Each sheet of GageCarve® is individually crafted of .125-in. or .160-in. 50% recycled aluminum.

Product Application:

- Elevator doors, Fisher Island, FL
- Column covers, Bank of America, Charlotte, NC
- Elevator panels, Parc 55 Hotel, San Francisco, CA

Performance Data:

- Class A ASTM E-84
- Anodized for interior and exterior applications



www.gagecorp.net
800.786.4243, 608.269.7447

Contact: gage@centurytel.net

Circle 166

MATERIALS

FIRE-RATED VERSION

G | NEW

Technical Glass Products

▲ Technical Glass Products offers a valuable course for AIA HSW credit: "Burning Issues: Understanding Today's Fire-Rated Glass and Framing."

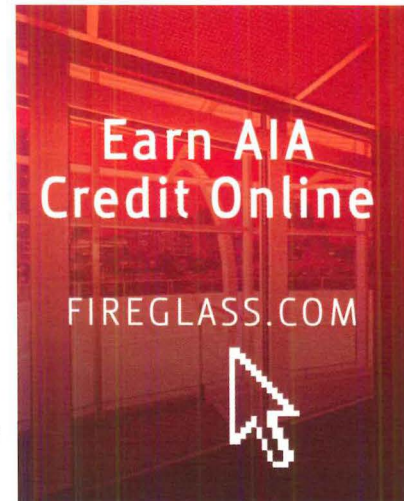
Products featured:

- FireLite® family of fire-rated glass ceramics
- Pilkington Pyrostop™ safety-rated glass firewalls

Also contains:

- New trends in fire-rated glazing materials
- Assessment and liability issues
- Recent code changes and how they impact design

www.fireglass.com
800.427.0279



Circle 167

MATERIALS

STAINLESS SHEETS & TILES

\$\$ | G

Millennium Tiles LLC

▲ Stainless sheets or tiles from Millennium Tiles LLC in various colors ensure elegance that endures.

Performance Data:

- Whether you cover walls or roofs, you can be sure that color will not fade for the life of the stainless.
- Design limits are set only by your imagination.



www.millenniumtiles.com
262.723.7778

Contact: Walter Hauk

Circle 168

MECHANICAL SYSTEMS, HVAC, PLUMBING

SOLAR HOT WATER

WR | G

Heliodyne Solar Hot Water

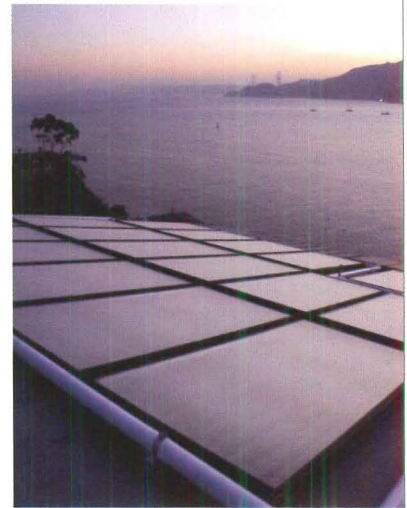
▲ Heliodyne, Solar Hot Water since 1976. Innovative design, superb product lines. Made in the USA.

Product Application:

- Commercial: Fenway Park, Boston, MA
- Commercial: Stanford University, Palo Alto, CA
- Single family to residential developments

Performance Data:

- Collectors with sleek design and outstanding durability
- Unique plug & play components for ease of installation



www.heliodyne.com
888.878.8750

Contact: Alexandra Wexler

Circle 169

ROOFING, SIDING, THERMAL & MOISTURE PROTECTION

ARCHITECTURAL TERRA COTTA

WR | G

Boston Valley Terra Cotta

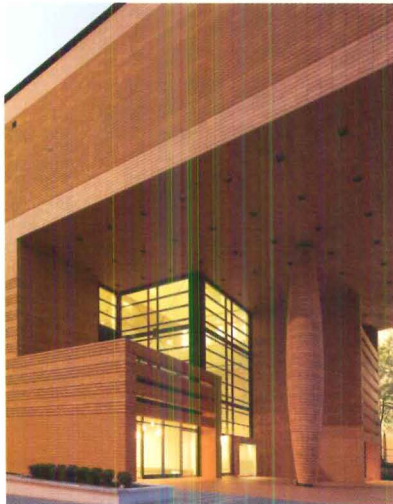
▲ TerraClad is a natural terra cotta product formed into a high-performance ceramic rainscreen panel.

Product Application:

- Arizona Disability Service Campus, Phoenix, AZ
- Bechtler Museum, Charlotte, NC
- Colburn School of Performing Arts, Los Angeles, CA

Performance Data:

- LEED points for recycled content and regional material use
- Designed to withstand freeze-thaw



www.bostonvalley.com
888.214.3655

Contact: Gretchen Krouse

Circle 170

ROOFING, SIDING, THERMAL & MOISTURE PROTECTION

SUSTAINABLE METAL ROOFING & WALL SYSTEMS

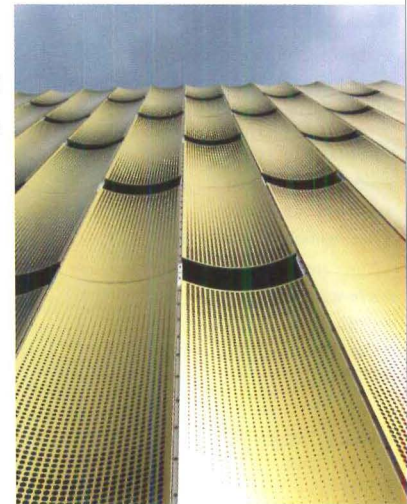
WR | G | NEW

Fabral, Inc.

▲ Fabral, a premier supplier of metal roofing and wall systems, brings a new vision to architectural metal with a new array of specialty colors and finishes on aluminum.

Performance Data:

- The natural beauty of aluminum in a wide range of color tints
- Semi-transparent clear coats and extraordinary metallics
- Iridescent finishes that combine the reflection and refraction of light
- Varying patina, natural wood, stone, and nature-inspired designs



www.fabral.com
800.884.4484

Contact: Donna Berryhill

on sweets.com

Circle 171

ROOFING, SIDING, THERMAL & MOISTURE PROTECTION

WALL CLADDING SYSTEMS

Thin Stone Systems

▲ Thin Stone Systems' thin lightweight natural stone wall cladding systems offer economical answers for exterior cladding and interior paneling.

Product Application:

- New construction, recladding, or overcladding

Performance Data:

- Reinforced with high-strength glass fiber nettings
- Fascia panels of natural granite, marble, or limestone 3/8-in. thick



www.thinstonesystems.com
973.882.7377

Contact: Francis R. Cox

on sweets.com

Circle 172

SPECIALTY PRODUCTS

COLUMNS, BALUSTRADES & CORNICES

Architectural Columns & Balustrades by Melton Classics

▲ Melton Classics provides the design professional with an extensive palate of architectural columns, balustrades, cornices, and millwork. They invite you to call their experienced product specialists to assist you with the ideal products for your design, application, and budget. Columns are available in fiberglass, synthetic stone, GFRC, and wood. Their 80-plus durable maintenance-free balustrades feel substantial yet have reduced weight. Also, ask about their low-maintenance fiberglass and polyurethane cornices and millwork.



www.MeltonClassics.com
800.963.3060

Contact: Mike Grimmert

on sweets.com

Circle 173

SPECIALTY PRODUCTS

COPPER CHIMNEY POTS

\$\$\$ | G

European Copper

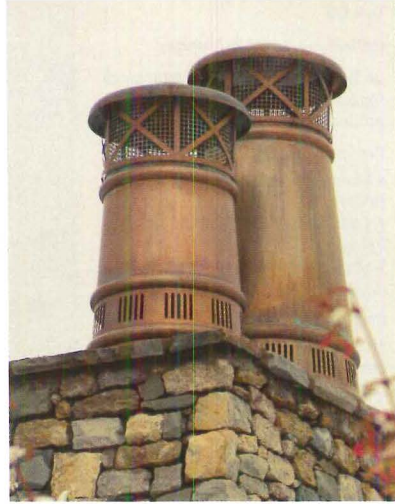
▲ UL-listed, 100% recyclable chimney pots fit all leading fireplace systems.

Product Application:

- Utica Place, Tulsa, OK
- Cacia Hall Preparatory School, Tulsa, OK
- Private residence, Tulsa, OK

Performance Data:

- UL-listed for both masonry and pre-engineered fireplaces
- Certified by OMNI Testing Laboratories



www.europeancopperchimney.com
800.391.0014

Contact: Pat Keegan

Circle 174

SPECIALTY PRODUCTS

CUSTOM TRANSLUCENT CANOPIES

G

CPI Daylighting Inc.

▲ CPI canopy systems provide excellent shelter and allow glare-free daylight into the area below.

Product Application:

- Holiday Inn entry canopy, Tallahassee, FL

Performance Data:

- Attractive Pentaglas Nano-Cell glazing system is affordable
- Suitable for green construction requiring LEED certification
- Tested as new after 10 years of South Florida exposure
- Maintenance-free



www.cpidaylighting.com
800.759.6985

on sweets.com

Circle 175

SPECIALTY PRODUCTS

SAUNAS

WR

Finlandia Sauna Products, Inc.

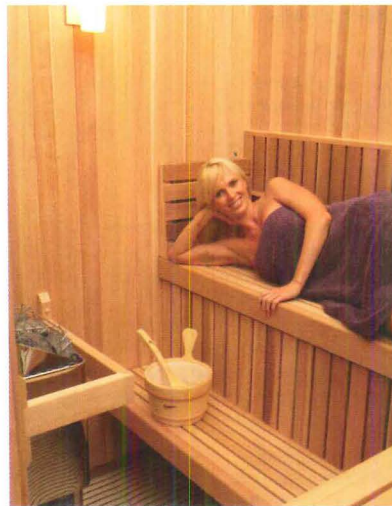
▲ They manufacture authentic saunas, no infrareds. They offer precut packages, modular rooms, and heaters.

Product Application:

- Any available space
- Residential or commercial
- New construction or remodeling

Performance Data:

- Uses 1-in. x 4-in. paneling
- Markets four all-clear western softwoods



www.finlandiasauna.com
800.354.3342

Contact: Tim Atkinson or Reino Tarkiainen

on sweets.com

Circle 176

SPECIALTY PRODUCTS

SUN CONTROL DEVICES

WR | G

Ruskin Air & Sound Control

▲ Custom-built extruded aluminum sun control devices, unlimited designs with Kynar or anodize finishes.

Product Application:

- K21 Heath Care Pavilion, Warsaw, IN
- War Memorial Library, Daly City, CA
- Maryland Heights Government Ctr., St. Louis, MO

Performance Data:

- SSAFH8 specification sheet
- SSLBH specification sheet



www.ruskin.com
816.761.7476

Contact: John Sens & James Livingston
on sweets.com

Circle 177

SPECIALTY PRODUCTS

TRANSLUCENT WALL SYSTEMS

WR | G | NEW

Kalwall Corporation

▲ Verti-Kal™ is a unique variation on Kalwall translucent wall systems, but with vertical emphasis to increase aesthetic options.

Product Application:

- Can be supplied in panels to 5-ft. wide and 10-ft. high, minimizing the number of joints

Performance Data:

- U-value options from .53 to .10
- Light transmission of 3% to 50%
- Shading coefficients from 1.0 to under 0.4



www.kalwall.com
800.258.9777

on sweets.com

Circle 178

DOORS, WINDOWS

GUIDE TO ENERGY-SAVING TECHNOLOGY

8PP | PDF | G

AZON

▲ Thermal barriers for energy-saving windows and constructing efficient aluminum fenestration.

Products featured: Warm-Light insulating glass spacer and Azon structural thermal barriers for windows and glazing

Also contains:

- Project case studies
- Window and glazing material performance
- The role of thermal barriers in fenestration

A guide to Azon energy-saving technology



thermal barriers for windows and glazing



www.warmedge.com
800.788.5942

Circle 179

POSITIONS VACANT

MAGNET FOR TALENT

JR Walters 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.SMPS CAREERCENTER.ORG

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

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ARCHITECTURAL RECORD

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TRAINING



GG \$ CI

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Good Design is Good Business

The 3rd Biannual 2009 BusinessWeek/Architectural Record China Awards

CALL FOR ENTRIES

This program honors architects and clients who best utilize design to achieve strategic business and civic objectives in projects in China, Hong Kong, Macau, and Taiwan. Submissions should show measurable benefits of the project's design on the client's business or mission.

Deadline: September 15

For instructions and to download the entry form, visit architecturalrecord.com/call4entries.

ARCHITECTURAL RECORD

BusinessWeek

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Reader's Gallery

To share images in our galleries, visit architecturalrecord.com and click on Community.



Andra Miliacca, AIA, took this photo of Santiago Calatrava's Milwaukee Art Museum and submitted it to our online galleries. Miliacca, a Detroit-area architect, shot the space from a low vantage point to capture both its full height and the liquid sheen of the floor. "All of the elements that needed to be seen together to describe the space were visible," she says, adding, "During architecture's slow times, I have turned to photography as creative expression. In this recent downturn, I started a photo blog with commentary in the form of haiku for each photo, and I began going on photo excursions to feed the blog."


Responsible Lighting Defined:



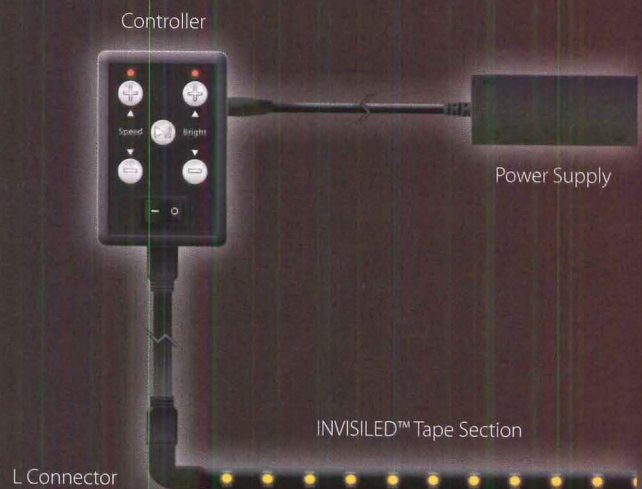
INVISIBLED™ PALETTE – color changing LED tape

WAC Lighting introduces INVISIBLED™ PALETTE, a color changing, energy efficient LED tape light system that is versatile and extremely low profile. Its user friendly controller adjusts the color changing speed, pauses at any color and dims the light level at your fingertips. Each tape section is backed with 3M™ construction adhesive tape, allowing for quick and easy permanent installations. Perfect for any accent or display lighting application that will be enhanced with vibrant color changing effects. Five year warranty.

Learn more, visit waclighting.com
or call 800.526.2588.

 **WAC LIGHTING**
Responsible Lighting

CIRCLE 40





June 21st | 11:00 a.m.

Lutron shades automatically position to let in useful daylight - Lights near windows dim to save energy



December 21st | 11:00 a.m.

Shades automatically lower to block harsh low-angled winter sun

intelligent shading

Hyperion™ automatically adjusts Lutron® shades based on the position of the sun

Save energy by optimizing daylight with intelligent automated shading that responds to the sun's changing position throughout the day and year.

- Increase comfort and productivity, while reducing dependency on electric light
- Reduce electric lighting load by up to 60% by integrating with Lutron's Quantum Total Light Management to control both shades and lights

save
energy
with
Lutron™ 

 **LUTRON**®
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Explore the online demo of Hyperion and Quantum Total Light Management at www.lutron.com/quantum or call 1.866.289.7073