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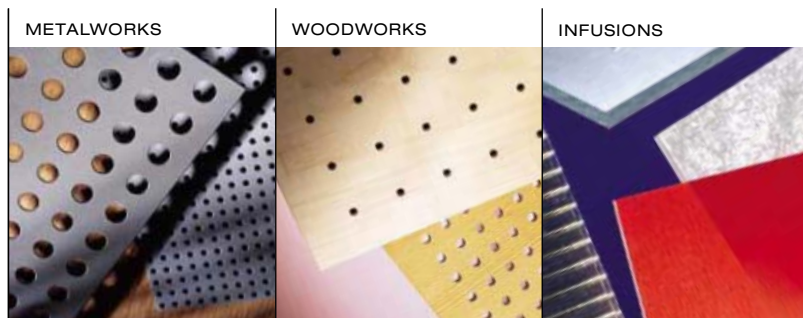


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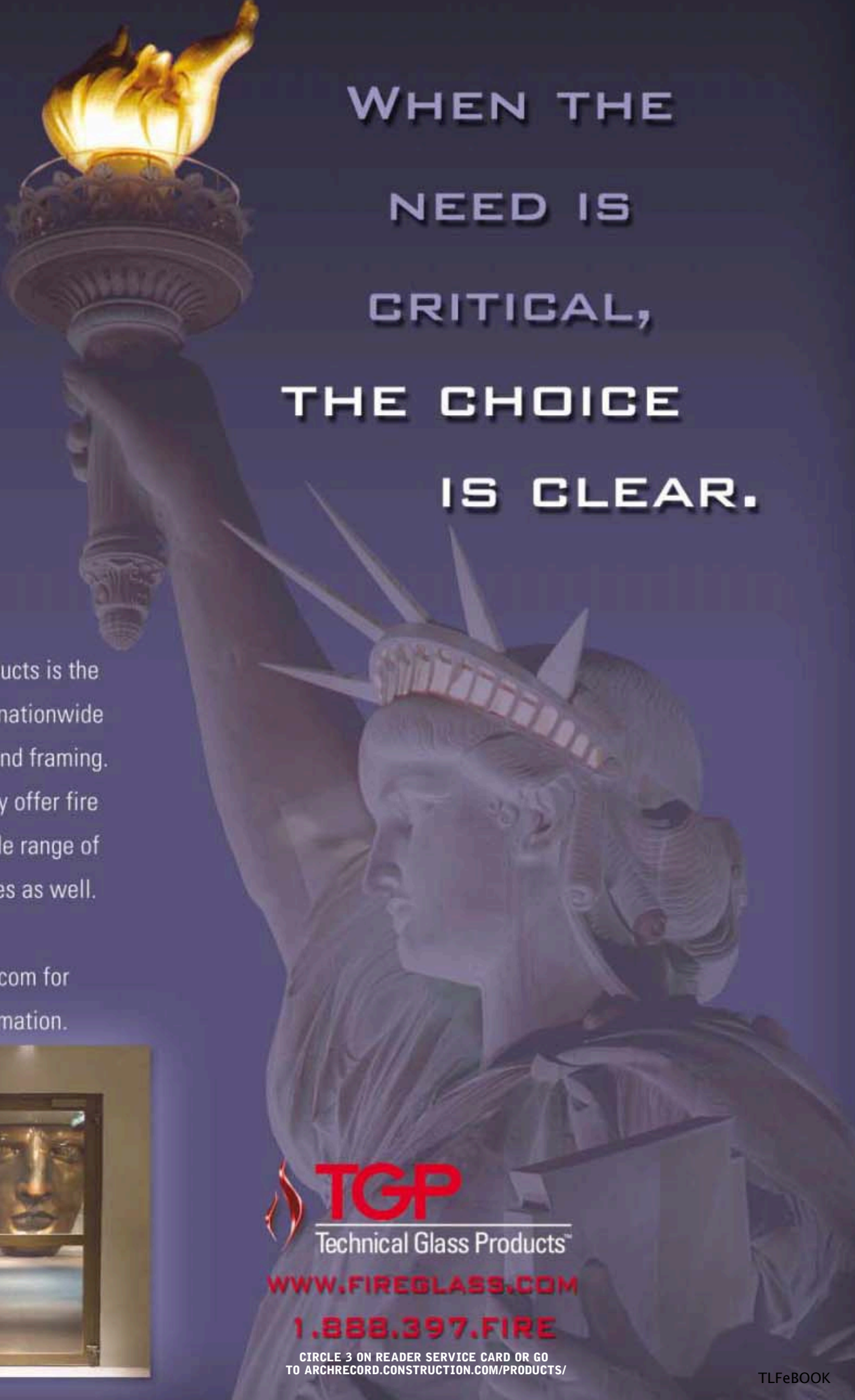
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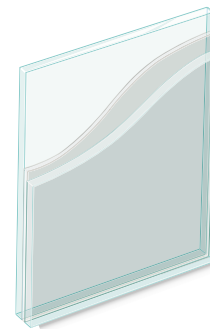


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**On the Cover:** *Museum of Modern Art*, by Taniguchi Associates. Photograph by Tim Hursley  
**Right:** *Clinton Presidential Library*, by Polshek Partnership. Photograph by Tim Hursley



### News

- 25 Calatrava to take home 2005 AIA Gold Medal**
- 30 Glare prompts future Disney Hall changes**

### Departments

- 17 Editorial: Who Won?**
- 21 Letters\***
- 53 Dates & Events\***
- 63 Archrecord2: For the emerging architect** by Randi Greenberg\*
- 67 Critique: What's Wrong with MoMA?** by Robert Campbell, FAIA
- 71 Books: Developing America**
- 77 Snapshot: Tour de Moron** by Robert Such
- 255 Record House of the Month** By Sarah Amelar

### Features

- 82 Are We Exporting Architectural Jobs?** by Nancy B. Solomon, AIA, and Charles Linn, FAIA  
A critical look at the controversial practice known as offshoring.

### Projects

- 94 Museum of Modern Art, New York** by Suzanne Stephens\*  
Taniguchi Associates  
Following a \$425 million overhaul, MoMA comes of age.
- 110 Clinton Presidential Library, Arkansas** by Clifford A. Pearson\*  
Polshek Partnership Architects  
The 42nd president builds his bridge to the 21st century.
- 120 Caltrans Headquarters, California** by Joseph Giovannini\*  
Morphosis  
An experimental new civic building helps L.A. find its center.


### Building Types Study 841

- 133 Introduction: Performing Arts** by James S. Russell, AIA
- 136 Jay Pritzker Pavilion, Chicago** by Blair Kamin\*  
Gehry Partners
- 146 Jazz at Lincoln Center, New York City** by Sam Lubell\*  
Rafael Viñoly Architects

- 152 Hollywood Bowl, California** by Deborah Snoonian, P.E.\*  
Hodgetts + Fung Design Associates
- 156 Zankel Hall, New York City** by William Weathersby, Jr.\*  
Polshek Partnership Architects
- 162 SMCC Performing Arts Center, Arizona** by Ingrid Spencer\*  
Jones Studio

For additional performing arts projects, go to Building Types Study at [architecturalrecord.com](http://architecturalrecord.com).

### Architectural Technology

- 175 Concrete Gets Glamorous in the 21st Century**   
by Sara Hart\*  
Not your grandmother's concrete: ancient material enters the future.
- 184 Tech Briefs** by Alan Joch\*

### Residential

- 187 Introduction**
- 188 House on Pilgrim's Lane** by Lucy Bullivant  
Eldridge Smerin
- 194 Coach House** by Lee Bey  
John Ronan Architect
- 198 T Residence** by Jane F. Kolleeny  
Studio Rinaldi
- 206 Vertical House** by Allison Milionis  
Lorcan O'Herlihy Architects
- 212 New York Town House** by Sam Lubell  
Alexander Gorlin Architects
- 219 CEDIA Review** by Rebecca Day
- 220 Residential Products** by Rita Catinella

### Products

- 225 Tile, Stone & Concrete**
- 229 Product Briefs**
- 236 Product Literature**
- 224 Reader Service\***
- 240 AIA/CES Self-Report Form\***

\* You can find these stories at [www.architecturalrecord.com](http://www.architecturalrecord.com), including expanded coverage of Projects, Building Types Studies, and Web-only special features.



The AIA/ARCHITECTURAL RECORD

Continuing-Education Opportunity is "Concrete Gets Glamorous in the 21st Century" (page 175).



Clinton Library, Little Rock, AR. Photography © Tim Hursley

## Projects

This month's projects include the return of MoMA to Manhattan, the opening of Little Rock's Clinton Library, and the new headquarters of Los Angeles' Caltrans.

## Residential

Our quarterly residential section takes a look at yet another alluring element to city life—townhouses that provide sophisticated urban dwelling.

## Daily Headlines

Get the latest scoop from the world of architecture.

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## Products

This month's focus is on the latest in tile, stone, and concrete. Discover the newest products to clad exteriors and interiors. You'll also find updates to our Green Product Guide and our Product of the Month.



Jay Pritzker Pavilion, Chicago  
Photography © Roland Halbe

## Building Types Studies

We present performing arts buildings, such as the Hollywood Bowl and Carnegie Hall, that have beat the odds to find a way to develop within an art world with diminishing financial support.



New York City Residence  
Photography: Courtesy D+FORM Architecture

## archrecord2

This month's featured architects are all about change. D+FORM Architecture has moved from state to state while creating projects with local sensibilities, while Christopher Deam has reimaged and redesigned the iconic Airstream.

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# Who Won?

## Editorial

By Robert Ivy, FAIA

**T**he turning of the year brings a flurry of awards cascading through the media. At the same time, some critics accuse architectural culture of being self-congratulatory and superficial. Despite the naysayers, positive attention is warranted, for this year's winners include admirable choices by distinguished juries representing the Aga Khan Award for Architecture and the AIA (the Pritzker and the Praemium Imperiale come later in the year). Likewise, the announcements demand a moment's pause: While we architects may build our buildings well, if left to our own resources, we have a hard time; our own words and pictures routinely fail to tell the tale.

Few sponsors understand that fact better than the Aga Khan Award for Architecture, which bases its judgments each three years on a complex matrix of criteria. A rigorous process determines the winners, including site visits and analysis by a skilled reviewer, and final determination of the winners by a master jury. This year seven projects were chosen from around the world, having satisfied the criteria of social utility, craft, even iconic value, and design excellence. One choice among the seven, which consists of only three rooms, illustrates the complexity inherent in the selections, and why we need programs like this one.

The village of Gando, in the African republic of Burkina Fasso (formerly Upper Volta, on Africa's Ivory Coast), lies far off the tourist map. Its first citizen to acquire a higher education abroad, the architect Diébédo Francis Kéré returned from Germany to design a locally constructed, contemporary primary school for his birthplace. The award by the master jury recognized its "clarity," "humble means and materials," and "transformative value."

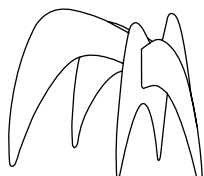
Left, however, to float in the larger sea of newsprint, critics would likely ignore the project for its modesty and obscurity. Fortunately, the Aga Khan group has elevated and honored this tiny structure, explaining the Gando school to the larger world, along with six other prizewinners with compelling stories to tell. Traditional publicity would have left most of these projects unsung.

One award for an individual's lifetime contributions to architecture should be an easier message to communicate. When that individual is Santiago Calatrava, recipient of the AIA's Gold Medal for 2005, the evidence lies around us, in places as multidimensional as Valencia's City of Science and Athens's Olympic complex, or as singular as the architect's latest bridges in the Netherlands. The polymath Calatrava, combining art, engineering, and architecture, has emerged as a designer at the height of his powers admired for sculptural structures that, like him, blend art and science.

A visit to one of his projects, which are almost surreal in their poetic realization, affects the visitor emotionally and intellectually, provoking myriad deeper associations and internal dialogue. The Milwaukee Museum of Modern Art, for example, spans the area between the city and the lake-front in an engineering and imaginative leap that defies the printed page.

Awards can open the door to experiencing architecture. The AIA Gold designation should excite inquiry and scrutiny by people who might never catch a train at Calatrava's Zurich railway station, and perhaps persuade others to seek his work out. While visitors may not clamber to reach remote locations in Yemen or sub-Saharan Africa, sites of two of the Aga Khan Award recipients, by publishing books and encouraging film and digital media, the awards demonstrate that architecture populates a real, three-dimensional universe, and that design changes not only the landscape, but human lives. Yes, awards can be superficial, self-referential, or uninspired. Architecture, however, runs deeper, and this year, in a superb cluster, the awards prove it.

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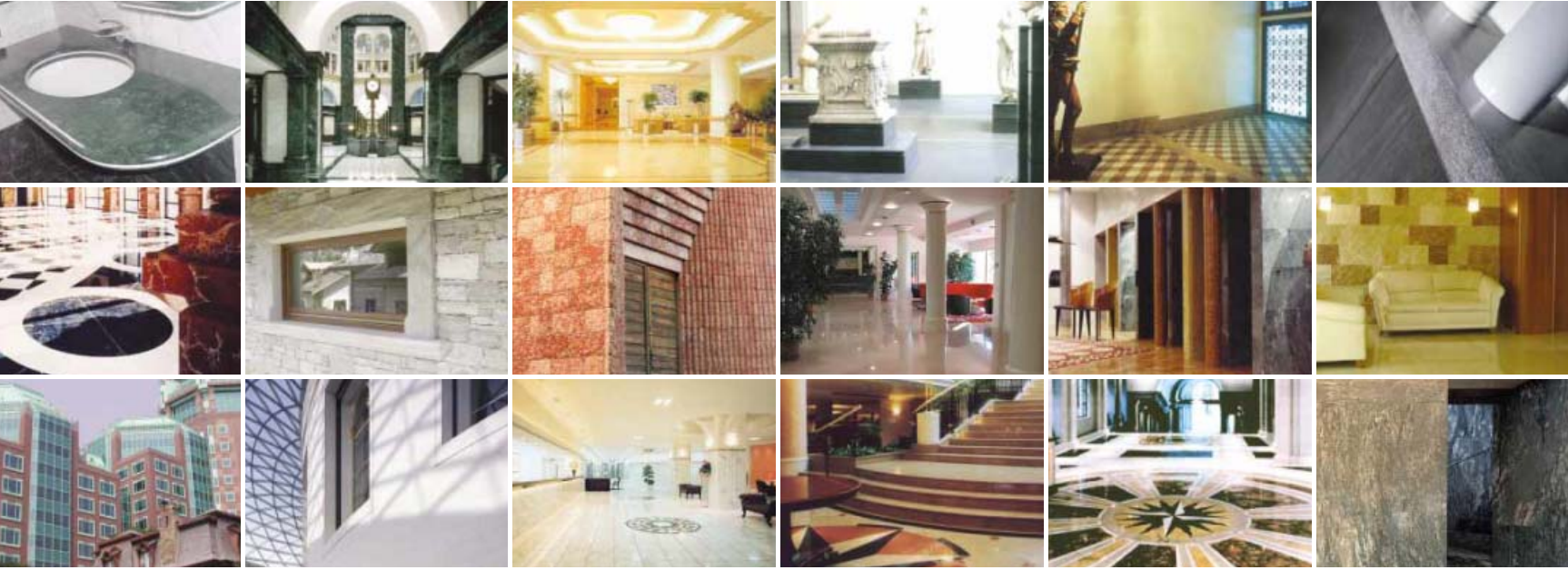
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# Letters

## Today's youth

I was very interested in much of the work in December's Design Vanguard section [page 111]. As a teacher and professional, I was excited to see these young architects—the future of the profession—engaging in building at such a high level of thinking. However, as I realized that the majority of the projects shown were sited outside of the United States, I wondered why we, as a culture, seem unable to support innovative work by the new generation. I hope that ARCHITECTURAL RECORD finds its way into the hands of those who commission buildings, and that they will ask the same question.

Mark Shapiro, AIA  
BNIM Architects  
Kansas City, Mo.

## Cuban currents

Kudos to Michael Sorkin for his December Critique on "Cuban Modernism's short moment in the revolution's sun" [page 67]. It is, however, necessary to clarify that what Sorkin calls "Cuban Modernism" was not a "cultural riposte to Yankee designs on the island." As in many other countries, some Cuban architects were bewitched by the strong current of the Bauhaus and its derivatives. But years before the so-called revolution took place, enlightened Cuban architects were creating genuine "Cuban Architecture." Eugenio Batista, Mario Romanach, Aquiles Maza, Frank Martínez, Emilio Del Junco, and Ricardo Porro were powerful advocates of a genuine Cuban architecture; an architecture deeply rooted in the legendary tradition of its

construction techniques; the country's gentle climate and lush vegetation; the melodic rhythm of spatial arrangements; and the indomitable joy and clean sensuality of the Cuban spirit.

Porro's work was not the result of any political antithesis. Years before the National School of Plastic Arts was designed, his architectural genius had been expressed through some of his residential work. The house he designed in Nuevo Vedado in 1955 was inspired by Gothic cathedrals spouting water through gargoyles, which were the precursors of the water-squirting sculpture referred to in Sorkin's Critique. To borrow from his article, the ongoing search for a genuine Cuban architectural identity was aborted by the suppression of diversity and a scler-

otic bureaucracy. Ricardo Porro's pioneering efforts in discovering a "cubanismo arquitectónico" requires that Cuba's future must be protected against the cloning of prefabricated pseudo-Cuban solutions in architecture, and also in urban planning.  
Alfredo D. Echeverría, AIA  
Bethesda, Md.

## Modern in Boston

I was very pleased to read your December editorial "Thoroughly Modern," about the new MoMA by Yoshio Taniguchi. I agreed wholeheartedly with it. The "skill and subtlety" of MoMA's architecture is not, unfortunately, apparent to the readers of *The Boston Globe*, as described by your fellow "cognoscenti." We are grateful, at least, for *The New York Times*

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TlFeBOOK

# Letters

reviews by Nicolai Ouroussoff and Michael Kimmelman that reached a segment of the Boston reading public and presented the new MoMA in a more positive light. *Constantine L. Tsomides, NCARB, AIA Tsomides Associates Architects Planners Newton Upper Falls, Mass.*

## Architectural politics

I found a remark made by Jane C. Loeffler in her October feature entitled "Mission Accomplished" [page 104], about the new Oklahoma Federal Building, offensive and unrelated to the topic of her article. She wrote, "In a remarkable display of bipartisan unity, led by staunch Republicans, who ironically represent a constituency that harbors strong antigovernment sentiments, Oklahoma's elected officials backed a new federal building as a much-needed symbol." I took

her statement to mean that Republicans sympathized with the terrorists who committed that heinous act. I am a Republican architect who harbors no such sentiments, nor do I know any Republicans here or anywhere else who do. ARCHITECTURAL RECORD is supposed to be a professional journal, not a forum for political sniping. *Randy Bright, AIA Tulsa, Okla.*

## A bridge is a church is ...

It is ironically amusing that you included Santiago Calatrava's canal bridges [November 2004, page 156] in the same issue with Renzo Piano's Church of Padre Pio [page 184]. I was struck by how Piano's church is eminently more bridgelike than Calatrava's bridges, and the bridges more churchlike than the church.

I can hardly imagine having a religious experience in a church

whose sight lines to the altar dais are interrupted by 14 mammoth arches. Granted, the sanctuary must accommodate 8,000 visitors, but could one imagine a sports arena similarly and so utterly ill-designed? It is as though Piano had found vestiges of a Roman aqueduct on the site and incorporated them into this odd design.

And Calatrava is wearing terribly thin; his spirelike cabled masts are so overwrought. It appears that one of the bridges spans a whopping 45-foot canal, but it looks as if it has enough engineering to span San Francisco Bay. At least you treated the piece as a "photo essay," as even a good writer would have been hard-pressed to come up with 750 words to describe these works. *James Bradberry Bryn Mawr, Penn.*

## Freedom fighter

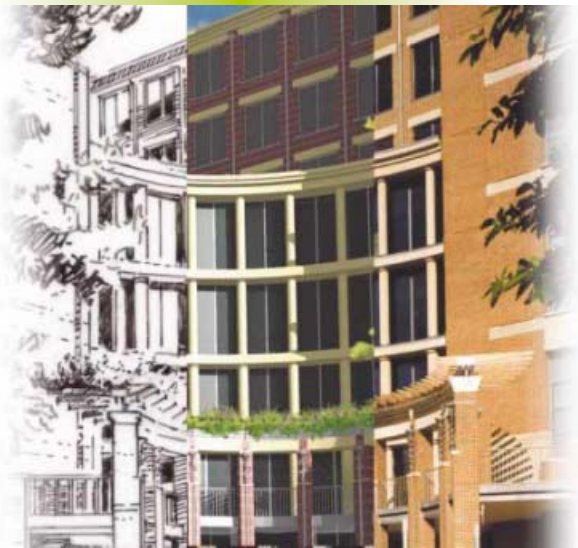
Thank you for your December Record News item, "Architect Sues SOM Over Design of Freedom Tower" [page 26]. I know Thomas Shine to be a thoughtful and nonconfronta-

tional architect and ceramic artist, and whatever the merits of his legal case—and the similarities do appear to be striking—I applaud him for his courage in bringing this issue to light. *Hank Abernathy, AIA Shepley Bulfinch Richardson and Abbott, Boston*

## Clarifications:

For Business Week/Architectural Record award-winner Britomart Transport Centre [November 2004, page 131], Mario Madayag Architecture should have been referred to as the design architects, in collaboration with JASMAX. KEO International is project manager/construction manager for all of Education City, not just the Liberal Arts and Science College in Qatar [November 2004, page 174]; Arup was the consulting engineer in schematics only, while C.E. Anderson & Associates and McGuire Engineers were the engineering consultants during succeeding stages.

Write to [rivy@mcgraw-hill.com](mailto:rivy@mcgraw-hill.com).



Illustrations courtesy of Lord, Aeck & Sargent

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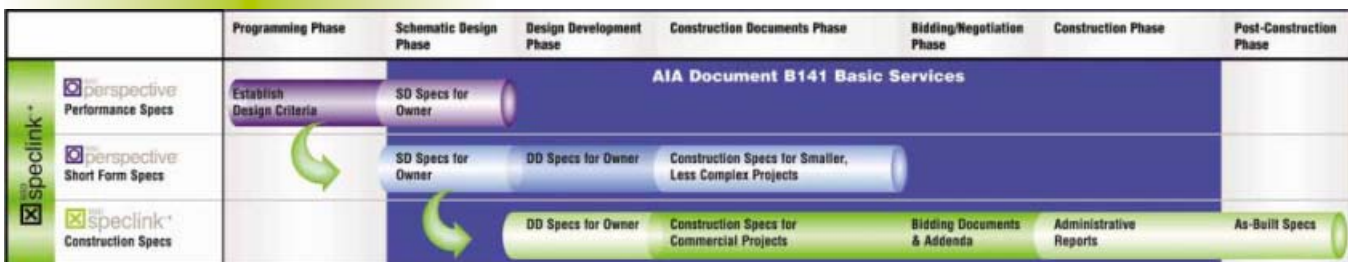
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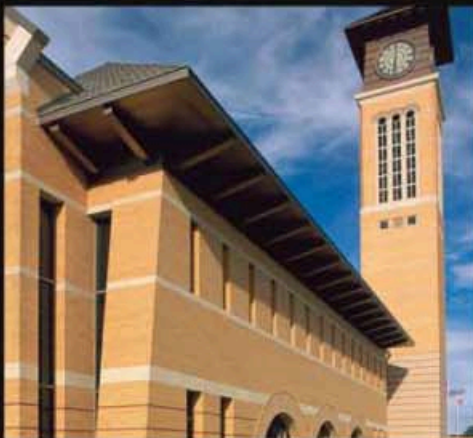
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TLFeBOOK

- p. 28 Cambridge may close architecture school
- p. 30 Glare to prompt Disney Hall changes
- p. 32 Louvre planning annex in northern France
- p. 40 Olympic 2012 bid roundup

## Calatrava will be awarded 2005 AIA Gold Medal



Calatrava's (right) high-profile works include an extension to the Milwaukee Art Museum (left) and the Olympic Stadium roof (center).

Santiago Calatrava, FAIA, renowned for designs that test the limits of engineering, has been selected as the 61st recipient of the AIA Gold Medal. The architect, born in

Valencia, Spain, and now based in Zurich, Switzerland, has long been designing simple and graceful, yet sculptural, forms, dominated by steel, glass, and concrete. His work, often involving a complicated interplay between design and structure, might not be possible without the architect's background as an engineer: Calatrava has a Ph.D. in engineering from the Federal Institute of Technology in Zurich.

"Engineering helps me understand the essence of architecture," he says, and points to "materiality" as the key element of his craft.

The architect's visibility reached its peak this year with the commission to design a Transit Hub at the World Trade Center, and with the completion of his Olympic Sports Complex in Athens, Greece, which included the soaring Olympic Stadium roof and the Olympic Velodrome. Other works include the much-lauded Milwaukee Museum of Art expansion; a group of refined,

cable-stayed bridges in the United States and the Netherlands; a twisting skyscraper in Sweden; major rail stations throughout Europe; and a collection of cultural buildings, called the City of Arts and Sciences, nearing completion in Valencia. He is now designing a skyscraper in Lower Manhattan.

Calatrava's many awards traverse the world: the Spanish Gold Medal for Merit in the Fine Arts, the Gold Medal of Architecture of L'Academie d'Architecture in Paris, the Sir Misha Black Medal from the Royal College of Art in London, and the Leonardo da Vinci Medal from Florence, Italy. "It is a tremendous honor, particularly because it comes from your colleagues," says Calatrava of the Gold Medal. "I have been reading the list of people awarded before, and it is a tremendous challenge to honor those architects, and the institution, and to continue working at that level." *Sam Lubell*

## Murphy/Jahn to take home AIA Firm Award

A firm whose work has spanned the last seven decades, but most notably evolved from Postmodernism in the 1980s to sleek Modernism at the start of the new century, Chicago's Murphy/Jahn has been named recipient of the 2005 AIA Architecture Firm Award.



According to the AIA, its Firm Award "is the highest honor the AIA bestows on an architecture firm," recognizing a practice "that has consistently produced distinguishing architecture for at least 10 years." Helmut Jahn, FAIA, who leads the firm, was the poster boy of Postmodern architects in the

1980s, after completing the State of Illinois Building (now James R. Thompson Center). For a time, when his firm went out of fashion and the economy slowed in the U.S., he won large projects abroad, particularly in Germany.

There, Murphy/Jahn completed the Munich Airport Center, Sony Center, Deutsche Post Tower, and the headquarters for Bayer. The firm's latest work combines environmentally sustainable building and unique engineering innovations. A competition win gave the Murphy/Jahn its first significant project in Chicago in years: the State Street Village dor-

mitories at the Illinois Institute of Technology, completed in 2003. The 65-member firm won three national AIA Honor Awards in 2004.

"We value this award very much," says Jahn, whose practice has won over 60 AIA Chicago Chapter awards in its more than 60 years. "It recognizes the history of this firm, and at the same time singles out the present work on the cutting edge of a new interdisciplinary architecture."

The firm will be honored at the American Architectural Foundation's Accent on

Architecture Gala on February 11, to be held at the National Building Museum in Washington, D.C. *John E. Czarnecki, Assoc. AIA*



Murphy/Jahn's United Airlines Terminal at O'Hare Airport (above), and Deutsche Post Tower (right).



IMAGES: COURTESY MILWAUKEE ART MUSEUM (TOP LEFT); © AP/WORLDWIDE PHOTOS (TOP CENTER); © SUZANNE DECHILLO/NEW YORK TIMES (TOP RIGHT); COURTESY MURPHY/JAHN (BOTTOM LEFT); © TIM HURSLEY (BOTTOM CENTER); © ANDREAS KELLER (BOTTOM RIGHT)

## Kahn's Yale Center For British Art wins AIA 25 Year Award

On December 7, the AIA announced it would give its annual 25 Year Award to Louis Kahn's Yale Center for British Art in New Haven, Connecticut. The award honors architectural landmarks completed at least 25 years ago that have "stood the test of time."

Begun in 1973, the center, which opened in 1978, is renowned as one of the architect's finest structures. Built largely of concrete and light oak, the restrained space uniquely employs natural light—piercing the building by means of strategically placed windows and skylights—to

create serene architectural moments. The geometrical interior is designed around two courtyards: one four-story main entrance housing a huge concrete cylinder concealing a spiral stair, and a library courtyard. Subtle spatial interconnection allows for smooth circulation and surprising glimpses throughout. Elegance and warmth are added with travertine flooring, linen wall coverings, white oak woodwork, and stainless-steel panels and ducts. The exterior's matte-steel and reflective-glass surface is highly sensitive to the elements. "On a gray day, the



The main hall includes a cylindrical staircase.

building looks like a moth; on a sunny day, like a butterfly," noted Louis R. Pounders, FAIA, and James F. Williamson, AIA, both on the jury that

awarded the building the 1978 AIA Honor Award. The jury also called it "a gentle urbane masterpiece."

The building houses the most comprehensive collection of British art outside the United Kingdom. Kahn's other significant structures include the Kimbell Art Museum in Fort Worth, Texas; the Salk Institute for Biological Studies in La Jolla, California; the Phillips Exeter Library in Exeter, New Hampshire; and the Yale University Art Gallery, also

in New Haven. Amazingly, all have won the AIA's 25 Year Award, making Kahn the recipient of five of these awards, tying Eero Saarinen. S.L.

## The \$20 problem: Opposition still rages against MoMA ticket prices

More than a month after the completion of its \$425 million renovation and expansion (page 94), the Museum of Modern Art continues to draw ire regarding its weighty \$20 entry fee.

Museum officials stress the new rates are a necessary evil, mostly due to construction and operating costs. But several protesters maintain that the fee will price out the majority of potential visitors, including students and those without weighty wallets.

"Great works can be bought and sold, but they belong to everyone," says Dan Levenson, a 32-year-old painter from Park Slope, Brooklyn, who has created a Web site, [www.freemoma.org](http://www.freemoma.org), that outlines complaints and alternatives and encourages readers to send MoMA a

"gentle" reminder to change the price. The site has received almost 12,000 visits, he says. Levenson stood outside the museum on its opening week wearing a \$20 bill sandwich board. "I'm sympathetic to the problems of funding a museum, but I just don't see how the price is necessary. They could appeal to donors to help solve this problem," adds Levenson, who wonders if the new price isn't part of a branding strategy to target a more upscale audience. "It's a dangerous precedent that a museum could decide to disregard any kind of social responsibility," he notes.

Filip Noterdaeme, founder of the Homeless Museum, an art project intended to raise questions about homelessness and the meaning of cultural institutions, has also been leading protests. On November 21, he and 20 volunteers paid their \$20 admission in pennies, totaling 40,000 cents. Noterdaeme also broke into a MoMA party to hand out his leaflets mocking the museum's "Manhattan is Modern Again" slogan, changing it to "Manhattan is Robbed Again." Taking a pragmatic approach, Noterdaeme recently wrote an open letter to Glenn Lowry

requesting that a full day, instead of just Friday evening (sponsored by Target), be free to the public, while also proposing an ambitious exhibition made of glycerin (which would degrade with neglect, like the city's poor), in the museum's courtyard.

"Modernism was never meant to be elitist; now they've turned it into a sort of a private club," complains the artist.

Protesters, accompanied by scholars, journalists, and museum experts challenging the fees, have made some progress, with the deluge of exposure putting the museum on the defensive about its pricing. Levenson says about 100 people have written the museum letters of complaint via e-mail from his site. "Hopefully, the next museum thinking of raising its rates will think twice," Noterdaeme adds.

The museum maintains that protesters don't understand the financial challenges it faces. "We worked and worked and worked at this. The \$20 was just a realistic look at what our costs were," says MoMA C.O.O. James Gara. "There's only so far we can go with fund-raising." Gara points to little government sup-



Noterdaeme's protest brochure.

port, increased insurance costs after 9/11, and a desire to stay solvent as some of the reasons for the new price. He adds that children under 16 get in free, while others can do so on Friday nights. Meanwhile, he says the museum does not charge for special exhibitions or movies, making its price comparable to similar museums that do.

Meanwhile, MoMA isn't the only local institution to raise rates in recent months. The Guggenheim Museum is ratcheting up the cost of an adult ticket to \$18 from \$15 for its new exhibition on the Aztec Empire, while the Brooklyn Museum recently raised its suggested donation rate to \$8. S.L.



Protester Dan Levenson makes a large statement on museum prices.

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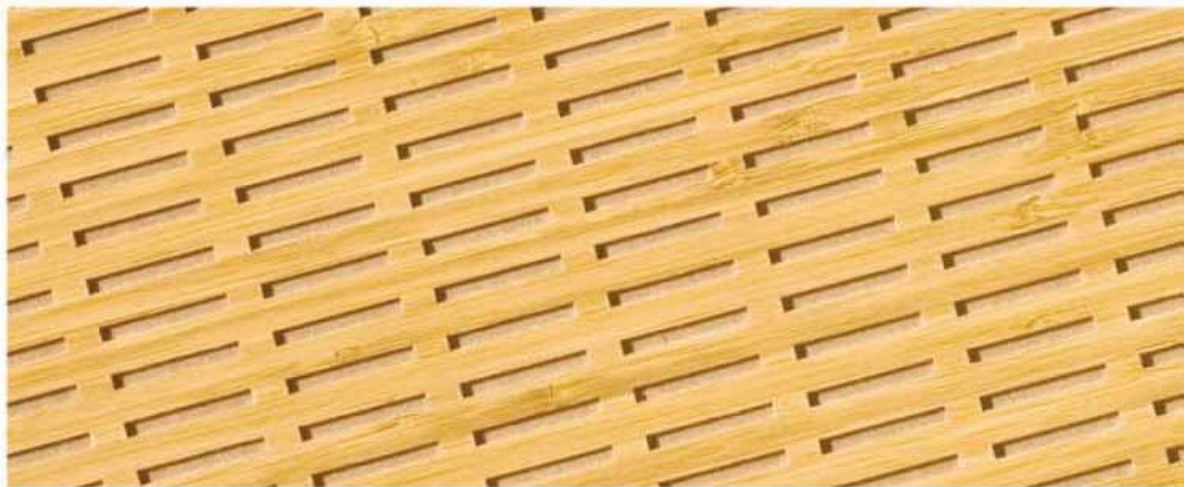
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### Hundreds protest Cambridge's plans to close Architecture School

More than 500 students rallied at the Senate House in the center of Cambridge, England, on November 29 to protest Cambridge University's recommendation to close its school of Architecture—a widely acknowledged jewel in its crown—just a few years short of its hundredth anniversary. The controversial plan, which has shocked the U.K.'s architectural profession, follows the school's downgrading in a 2001 government Research Assessment Exercise (RAE) as a basis for funding.

Surrounded by buildings symbolizing the university's stature, eminent architects, local politicians, leading architectural teachers, and students addressed the crowd. The mood was upbeat as each presented arguments. Sunand Prasad, a leading architect and policy maker said, "You shouldn't have to make cost arguments in relation to key tools of civilization." Cambridge architecture education, begun in 1912, dates back to the leadership of Colin St. John Wilson, author of *Architectural Reflections*, a benchmark work of theory, pointed out Rowan Moore, director of the Architecture Foundation. He added that the school had long played an active role in making the urban realm more humane and receptive.

The decision to close the school was recently made by Cambridge's General Board, which monitors academic requirements, after reviews in 2001 and 2003 into research quality. The RAE has demoted the architecture school from a 5, the top



Protesters in Cambridge spell out their displeasure.

grade, to a 4. But architectural teachers throughout the U.K. insist the measurements are flawed, with RAE and decision makers at Cambridge overlooking the excellence of the school's research-based teaching. Architecture is the most popular subject at the university, with one in eight candidates securing a place. Meanwhile, the university is cutting costs across the board.

Lobbying has led to a petition with thousands of signatures, including those of Denise Scott Brown and Robert Venturi, as well as academics from around the country. The *Guardian* newspaper published a letter from distinguished architects such as Norman Foster, Richard Rogers, Terry Farrell, and Nicholas Grimshaw condemning as "an act of extraordinary folly" the potential dismantling of the school.

A Web site established by graduates, [www.scroope.co.uk](http://www.scroope.co.uk), outlines the issues and provides the contact e-mail address of Alison Richard, the university's vice chancellor, for those wishing to write in protest against the plan. *Lucy Bullivant*

### On second try, Silverstein wins Trade Center insurance case

On December 6, a federal jury decided that the two planes that crashed into the World Trade Center towers on September 11, 2001, were two separate attacks, entitling Larry Silverstein, the leaseholder, to a total of \$2.2 billion from nine different insurance companies. Had the jury, in U.S. District Court in Manhattan, decided the planes constituted only a single attack, Silverstein would have received \$1.1 billion. The decision was Phase II of a trial that began earlier this year. The first decision, which involved other insurance companies, found that the attacks were one occurrence. The latest decision means that Silverstein could ultimately collect \$4.6 billion for the 9/11 attacks.

While the decision may still be overturned on appeal, the promise of more money may attract private investors to the site or help Silverstein attract tenants for the two World Trade Center buildings he is erecting, including 7 World Trade Center, where workers completed the steel frame in October, and at the 1,776-foot-tall Freedom Tower. Neither of the buildings has a tenant yet. Silverstein noted the settlement "will ensure a timely and complete rebuilding of the World Trade Center," while Lower Manhattan Development Corporation president Kevin Rampe said the funds would "replace the economic engine we lost that fateful day." *Kevin Lerner*

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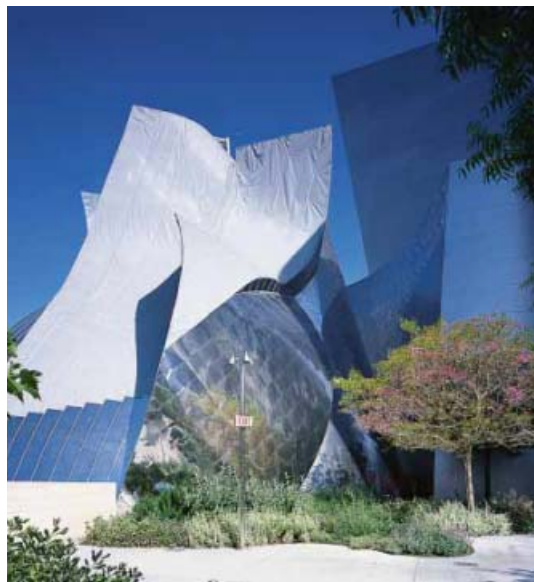
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## Record News



**A temporary covering (left) wasn't enough to stop the hall's "hot spots."**

panels were put in place on the north side of the building. Nearby Promenade Towers residents reported not only a temperature increase in their apartments, but also an uncomfortable light refracted off the concert hall in the latter part of the afternoon. Other reports claim that glare caused by the CalArts Theater Marquee on the southwest corner of the building distracted drivers and pedestrians at an adjacent intersection.

The report describes visual and photographic surveys of the hall, as well as computer simulations run at regular daylight intervals in December, March, September, and June. While the study revealed that the polished surface does create a heating effect, the hall's glare ratio is still relatively low—about 2.24—compared to surrounding glass towers,

### Glare report prompts alterations to Disney Concert Hall

In November, just weeks after Los Angeles's Disney Concert Hall celebrated its first anniversary, a study of the effects of glare from some of the building's steel panels [RECORD, May 2004, page 44] was completed. Research conducted by consulting firm Schiler & Associates confirmed earlier recommendations that panels on the building's Founder's Room be sandblasted as a way to diffuse the glare directed at neighbors in an adjacent residential tower. In addition, the survey found other hot spots on the building and recommended similar solutions.

Troubles began shortly after the polished steel

which range from 6.6 to 14.2. Schiler & Associates director Marc Schiler explains that this is due to the convex surfaces that reflect sunlight in different directions. Still, "even if reflection is not terribly high," says Schiler, "the concave surfaces cause problems," producing focused reflections.

If sandblasting is approved by the Los Angeles County Board of Supervisors, work will begin in June and is expected to take about two weeks. Terry Bell, partner at Gehry Partners and project manager on the hall, said the firm was satisfied with the report and final solution. *Allison Milionis*

### Board named to fund and lead Trade Center Memorial

New York leaders on December 1 announced the formation of the board of directors for the World Trade Center Memorial Foundation, a nonprofit corporation that will build, own, and operate the memorial and raise money for its construction. The board, whose temporary chair is Lower Manhattan Development Corporation (LMDC) chairman John C. Whitehead, will meet first in January and begin its fund-raising campaign in the spring. The foundation will also raise money for the Memorial Center, an interpretive museum under the memorial, and help collect funds for the cultural institutions at Ground Zero.

The foundation expects to raise about \$500 million. The memorial, designed by Michael Arad and Peter Walker, is made of reflecting pools within the sunken voids that make up the former Twin Towers. At press time, final designs for the memorial were scheduled to be released at the end of December, said LMDC officials.

Board members include politicians, among them honorary members Bill Clinton and George H.W. Bush; business leaders such as JP Morgan Chase C.E.O. William B. Harrison, Jr.; victims' family members, such as September's Mission's founder Monica Iken; art leaders, like MoMA president emeritus Agnes Gund; media leaders, including Michael Eisner and Robert De Niro; and well-known philanthropists. No neighborhood leaders have yet been named to the board. "You won't find a board of any higher caliber anywhere in the city," said Mayor Michael Bloomberg. "There isn't a more noble cause." *S.L.*





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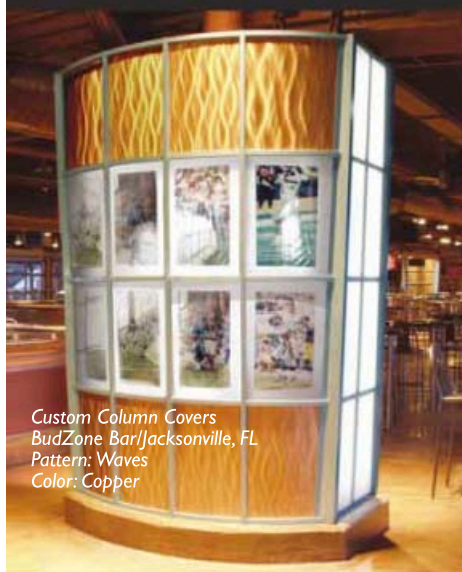
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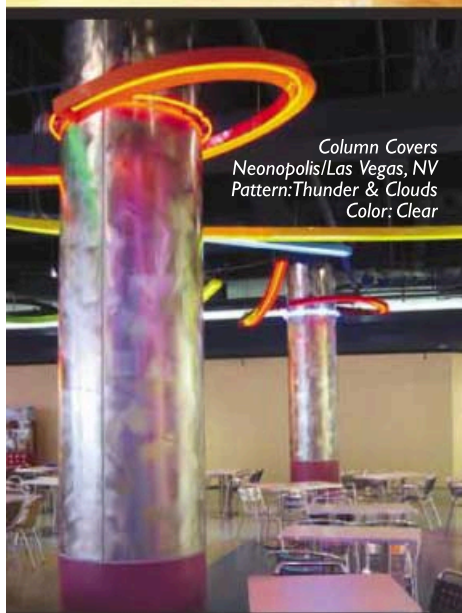
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## Record News

### Louvre planning annex in northern France

With more art in storage than it could ever hope to display, the venerable Louvre is planning an annex, dubbed the "Louvre II," to open in 2008. Announced in late November, the complex will be located in Lens, in northern France.

The plan for the project, which will receive 500 to 600 works from the Louvre's stores, stems from a government effort to decentralize the nation's cultural institutions, now mostly located in Paris. It is also an attempt to use culture as an impetus to regional growth. The Louvre is not the only museum making the move. The Centre Pompidou is also planning a satellite arts center in Metz, in eastern France, designed by a team including Shigeru Ban. Lens is in the heart of the Pas de Calais, a once-important industrial region which today suffers from high unemployment and population loss. Receiving the Louvre II is, according to Lens Mayor Guy Delcourt,



A preliminary vision for Louvre II.

"a glimmer of hope in this land of courage and misfortune."

Symbolically, the sprawling site chosen for the complex covers a disaffected coal mine. Local newspapers have expressed hope that the museum will remember the site's industrial past in its design.

The project architect will not be chosen until spring 2005, but Louvre director Henri Loyrette ambitiously notes the building will be "an architectural creation of grand importance capable of permanently transforming the

character of the city." Project costs are estimated at \$97 million for the 220,000-square-foot complex, which will include galleries, temporary exhibition space, an educational center, and a park where sculpture can be displayed. The museum hopes to welcome 500,000 yearly visitors, but still it's a gamble. The region already boasts 45 museums, more than any other area of France. *Claire Downey*

### Preservationists' report criticizes Landmarks Commission

It is no accident that New York City has some of the best-preserved architecture in the United States. The modern preservation movement began here some 40 years ago, and the city has some of the country's most stringent landmark laws. But now a coalition of seven of the city's leading preservation organizations has released a report entitled "Problems Experienced by Community Groups Working with the Landmarks Preservation Commission." The report, endorsed by 27 preservation groups in total, was presented at a city council hearing in late November and charges that the city's architectural heritage is threatened because of changes in the municipal government's approach to preservation.

The New York City Landmarks Preservation Commission (LPC) is responsible for identifying, designating, and regulating historic buildings, districts, and interiors. Currently, the LPC oversees approximately 23,000 buildings. According to the report, however, the LPC not only inadequately protects properties, but also fails to identify historically important buildings facing demolition or alteration. The preservationists further charge that the LPC makes major decisions in an arbitrary manner. Many of the LPC's reviews, which once included public hearings, are now handled at a staff level, they contend. "Over the past 10 or 15 years the process has become less transparent and more bureaucratic—that is where a lot of the frustration came from," says Simeon Bankoff, director of the Historic Districts Council, one the preservation organizations behind the report.

Robert Tierney, chairman of the LPC, rejects the report's criticisms. "The idea that somehow this is some secret operation strikes me as bizarre," he says, adding that the commission holds 8,000 to 9,000 public hearings a year, and that adding more would be impractical. While community input is important, the commission ultimately depends on a staff of trained preservationists to make decisions, says Tierney, adding, "It is not a popularity contest to see what gets designated a landmark." But Anthony Tung, chairman of the LPC from 1978 to 1988, says the commission has significantly loosened its preservation standards. "There is a very marked loss of historic architectural detail across the whole cityscape," says Tung, who testified at the hearing on behalf of the preservation groups, "and it has been going on for the past decade. Sometimes it's the loss of major features, sometimes it's small things like the windows in a historic district." *Alex Ulam*

IMAGE: COURTESY MUSÉE DU LOUVRE/MAIRIE DE LENS

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## Record News

### Fresh off MoMA completion, Taniguchi gets Houston commission

On the heels of his much-heralded expansion and renovation of New York City's Museum of Modern Art, Japanese architect Yoshio Taniguchi has been chosen to design Asia House, a 30,000-square-foot museum complex for the Asia Society Texas (AST) in Houston's Museum District, with a proposed budget of \$30 million. While the MoMA expansion was Taniguchi's first project outside Japan, Asia House will be the architect's first freestanding building outside his native country. Taniguchi was chosen from three finalists, including Tod Williams Billie Tsien and Associates and Kyu Sung Woo.

The project will sit on a 1-acre site surrounded by a diverse assortment of cultural institutions. It will feature two galleries, one for works from the New York-based Mr. and Mrs. John D. Rockefeller III Collection of Asian Art, and one for temporary exhibitions. The facility will also include an auditorium, an education center, a garden, spaces for lectures

and social events, a café and teaching kitchen, a shop, a library, and administrative offices.

Taniguchi, renowned for his elegant, austere museums in Japan (see sidebar, page 106), is now working on an addition for the Kyoto National Museum. Asia House will be the permanent home for the Asia Society Texas, one of eight centers in the U.S. and Asia for the Asia Society, a nonprofit organization founded in 1956 to promote communication between Americans and the peoples of the Asia-Pacific region.

Asia House's ground breaking is planned for 2006. Other recent Asia Society projects include the \$40 million expansion of its New York City headquarters by New York-based Voorsanger & Associates Architects, completed in late 2001, and a new project planned for the Hong Kong chapter to be designed by New York-based Tod Williams Billie Tsien and Associates. *Ingrid Spencer*

### Almost 80 years later, a Wright project is completed

Back in the 1920s, Darwin Martin, a key executive of the Larkin Soap Company, asked Frank Lloyd Wright to design a mausoleum for his family at Forest Lawn Cemetery in Buffalo, New York. Martin—Wright's client, patron, and friend—commissioned the design between 1925 and 1928.

However, due to the Great Depression and other events resulting in Martin's loss of wealth, the structure was never built during his lifetime.

After extensive research into Wright's designs, notes, and correspondence with Martin, Forest Lawn has undertaken construction of the memorial. The recently completed Blue-Sky Mausoleum, made of white granite and concrete, was unveiled in October.

The project is one of only three memorials designed by Wright and is considered to be his most innovative. In place of four walls and a roof, Wright designed broad terraces that climb from the edge of a lake up a gentle hill, along which steps cap 24 double-tiered crypts. At its peak, perpendicular to the crypts, is a single monolith.

Wright's note to Martin explained, "This is



Wright's Forest Lawn mausoleum is finally built in Buffalo.

burial facing the open sky—a dignified great headstone common to all." He saw "a nice symbolism in the stepping terraces ... a compromise between the grave and the mausoleum," noting, "It may have the better points of both." He confidently predicted, "The whole could not fail of noble affect."

In addition to the satisfaction of bringing the design to fruition, the cemetery views the execution of Wright's plan as an inventive marketing approach to the challenge of perpetual care.

The mausoleum is the first of three previously unexecuted Wright designs being built in Buffalo. The other two projects, a boathouse and a gasoline filling station, are said to be very close to ground breaking. *Barry A. Muskat*

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## Record News



**Franck Lohsen McCrery's towers use curving roofs (left). Thomas G. Smith's has an Italian palazzo design (below) as its base.**



### Journal proposes classical skyscrapers for New York's West Side

As debate about the feasibility of a new football stadium and business district rages on Manhattan's West Side, one local magazine has focused its attention on an unexpected place: the past.

For its autumn issue, New York's *City Journal* gathered six architects to design classical skyscrapers for the possible new district, planned by the city on more than 60 blocks from Seventh to Twelfth Avenues, and from 30th to 43rd Streets.

Myron Magnet, the magazine's editor, explains that the compilation grew out of his disgust with local clients' "herd mentality" toward commissioning Modern-looking buildings, typified by what he considers bland and soulless developments at Ground Zero. He prefers that developers return to what he

calls New York's "authentic" style.

"New York brought the Beaux-Arts and Art Deco skyscrapers to perfection. This is our vernacular tradition; it's just astonishing that we've completely abandoned it at behest of a few Europeans."

The proposed skyscrapers, designed to be made of materials like limestone and glass, include traditional tripartite separation, Classical-inspired motifs, and intricate masonry. British architect Robert Adam's building is a giant column, rising out of copper-domed pavilions at its base, and capped with a pyramid. Another British architect, John Simpson, sketched a 60-foot glass columnar tower topped by a zigguratlike temple and supported by Classical-style sculptures. The design by Indiana architect and Notre

Dame professor Thomas Gordon Smith, FAIA, includes a multitiered tower with an Italian Baroque-style palazzo as its base.

"Many say that Modernism is the only way to move forward, but we're all intending to develop our work and our understanding," notes Smith.

Magnet adds that the proposals may also be more economically feasible than today's Modern towers, given the widespread taste for traditional building in suburban housing, and even the interiors of many Modern office buildings. "Very few of the developers and corporate chiefs who rent space in skyscrapers actually live in Modernist houses," he writes in the issue, "because they don't much like the style." S.L.

### AIA C.E.O. Norman Koonce announces plans to retire

Norman L. Koonce, executive vice president and chief executive officer of the AIA, announced on December 2 that he will retire at the end of 2005. Koonce, who has been C.E.O./E.V.P. of the AIA since 1999, admits to needing a "break" (he says he has logged over 2.5 million miles on his favorite airline) and says he wishes to turn his attention to architectural issues like "exploring the power of architecture to elevate and enrich the human experience." He also wishes to spend more time with his family.

During his tenure, Koonce has worked particularly hard to establish closer relationships between local, regional, and national components of the AIA. He's also helped bolster AIA membership. Under Koonce, AIA membership has increased by 12 percent, to 74,000, in 2004. Finally, revenues from the national component of the AIA grew 56 percent, from a budget of \$32 million to \$50 million.

"I would describe it as a wonderful and unbelievably energizing experience," says Koonce of his time with the AIA. Prior to joining the AIA, Koonce was president of the American Architectural Foundation for 10 years. He practiced architecture for more than 25 years, mostly at his firm Knight Koonce Howe and Associates in Louisiana, while serving as a volunteer with the AIA's regional component. A search committee will be formed early next year to identify Koonce's successor, who will be named on January 1, 2006. S.L.



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### Spertus Institute will make a splash in Chicago

A new \$30 million home for the Spertus Institute of Jewish Study was approved by Chicago officials in mid-November. Local architects Krueck & Sexton designed the 10-story structure, whose faceted facade will be created with folded glass planes. The proposed building, one block north of Spertus's current facility, will contain Spertus College, the Asher Library, and the Spertus Museum. Amenities include a 400-seat auditorium, the only kosher café in downtown Chicago, an education center, a bookstore and shop, and a rooftop garden.

The design will be by far the most daring in the Historic Michigan Boulevard District, which the city created in 2002 to protect the character of the mile-long street wall along Grant Park.

The crystalline composition will provide a counterpoint to stately neighbors that include Louis Sullivan's Auditorium Building and D.H. Burnham's Railway Exchange. Chicago has yet to enact legislation governing infill sites like the one on which the project will be built. Spertus's current home is a nine-decade-old structure that was remodeled in the 1950s with an International Style skin. Ground breaking is expected in spring 2005, with completion in 2007. *Edward Keegan*



### "Sail" in Singapore designed to make waves

NBBJ is designing a residential tower complex in Singapore called The Sail, a reference to the buildings' curving exteriors and their location on the water. The 800-foot-tall complex, with two buildings 62 and 70 floors high, respectively, will be located on reclaimed land in Singapore's business district, which the city recently opened to residential development.

The project, says NBBJ principal Tim Johnson, is the centerpiece of an area that will include at least 50 new buildings over the next 25 years. "Singapore has to keep attracting people to this island. This

complex is an expression of a country that wants people to know it is moving forward and is not being stopped by what's going on in China."

The buildings' exteriors will be dominated by greenish glass and marked by vertical fins to stress height and dynamism. Their curving shape, notes principal Peter Pran, will give residents on upper floors the illusion that there is nothing beneath them. "You have the sense of floating in space," says Pran, who adds that the location on the water, and next to a large park, will prohibit views from being blocked in the future. *S.L.*



### New Alvin Ailey home to be among largest dance spaces in U.S.

The Alvin Ailey American Dance Theater's new home, the Joan Weill Center for Dance, by Iu + Bibliowicz, opens this March. The 77,000-square-foot complex is double the size of the company's current headquarters and could be the largest building dedicated to dance in the U.S.

Principal Natan Bibliowicz says he and partner Carolyn Iu intended the building to be a blank canvas, containing only spaces dictated by the company's needs. "There really is

nothing that doesn't belong," he says.

The center encompasses 12 dance studios, a 5,000-square-foot black-box theater, dressing rooms, administrative offices, and public spaces. Given the building's narrow Midtown Manhattan footprint, every space will have to perform double, even triple duty. The lobbies, Bibliowicz says, will also function as dancers' warm-up areas. In keeping with the architects' Modernist sensibilities, the building's glass-and-aluminum curtain wall, augmented by brick, presents a largely neutral facade. The entrance marquee and rooftop service areas, though, are decked with undulating Teflon fabric, a feature inspired by *Revelations*, Ailey's famous dance piece. *James Murdock*



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TLFeBOOK

Cities have long used the Olympics to reinvigorate their infrastructure and image. Barcelona revamped itself for the 1992 games with a recovered waterfront, new highways, and stadiums by masters like Rafael Moneo; Athens built new roads, subways, and grand stadiums by no less a figure than Santiago Calatrava for the 2004 games; and Beijing is putting together a dazzling mix of new architecture, such as Herzog & de Meuron's nestlike stadium, for 2008. Architecture is also being used as a powerful tool to win the games themselves. The competition for the 2012 Olympics has engaged some of the world's most renowned architects, engineers, and landscape designers bent on wooing the attention of the International Olympic Committee. Architects' bids were submitted in late November, and the winner will be chosen in July 2005. In the meantime, design teams have created possible venues, parks, and master plans that should raise eyebrows among the Olympic powers that be, not to mention Olympic fans. Visit [www.architecturalrecord.com](http://www.architecturalrecord.com) for expanded 2012 Olympic bid coverage. S.L.

## New York's bid would transform boroughs, bring huge project to Manhattan

Though many consider New York City's bid to host the 2012 Summer Olympics a long shot, NYC2012, the City's nonprofit spin-off founded by Deputy Mayor Daniel Doctoroff, submitted its 600-page *Bid Book* on November 11 to the International Olympic Committee (IOC). The ambitious plan is to be privately funded and is estimated to cost \$7.6 billion.

NYC2012's bid consists of a dizzying array of projects, many already existing, many to be improved, and a handful of large-scale new construction. The plan calls for some 27 sports venues in all five boroughs, as well as New Jersey and Long Island, all within a 20-mile radius of an Olympic Village. Each venue would be connected to the village, media centers, and hotels via an expanded network of public transportation: new rail stations, augmented subway service, special ferries, and buses.

Planned permanent and temporary venues include a massive \$185 million complex of sites within Flushing Meadows-Corona Park in Queens for canoeing, kayaking, rowing, water polo, tennis, and archery; a \$77 million Bronx Velodrome and Arena for cycling and badminton; a \$145 million Olympic Aquatic Center in the yet-to-be-built Williamsburg Waterfront Park, in Brooklyn, for swimming and beach volleyball.

The crown jewel is the Olympic Village on the east bank of the East River, directly opposite the United Nations, in a quiet industrial area of Long Island City, Queens. Plans for

the 61-acre site were submitted and reworked by Morphosis after the Santa Monica-based firm won a design competition. The plan would cost over \$1.6 billion and would house 16,000 athletes, trainers, and officials in about 4,400 apartments. Morphosis describes the residential component as a "dense, undulating, ribbonlike structure that gracefully wraps around the edges of the site." Amid the curving buildings would be 43 acres of parkland, including a central dining hall, a waterfront promenade, a 1,100-foot-long pier



with restaurants, three acres of beach, a marina, an urban forest and lawn, playing fields, and a wetland estuary that would absorb storm runoff and filter the water before releasing it into the East River. Following the Olympics, the site would be converted into conventional housing.

The two largest and most critical sports venues both happen to be controversial mega-projects already



The Olympic Complex in Queens (top) would accommodate canoeing, kayaking, and rowing. New York's bid focuses on the Olympic Stadium (left), and the Olympic Village (right).

in development and unrelated to the Olympics: a \$657 million downtown Brooklyn "Atlantic Yards" Arena for the NBA's Nets, a Frank Gehry-designed 19,000-seat basketball arena that would double as the Brooklyn Olympic Stadium; and a highly divisive plan for a 75,000-seat Olympic Stadium—aka the Jets Stadium—on Manhattan's West Side, estimated at \$1.5 billion. The stadium, designed by Kohn Pedersen Fox, has been opposed by a

number of local community and business interests, though it enjoys high-powered political support. It has yet to clear major planning hurdles. Doctoroff and other key bid members admit that New York has little chance of selection without the stadium, but Doctoroff remains positive, declaring that he wants "shovels in the ground" before the IOC makes its final choice. *Ilan Kayatsky*

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## Paris 2012 concentrates venues, focuses on the city's natural lure

In November, Paris revealed its “one village, two poles” plan for the summer 2012 Olympics. Passed over for 2008, the French have learned from their mistakes. Instead of spreading sporting venues around the city, they’ve concentrated on two poles of activity that together would host 75 percent of events. Most symbolically, they’ve brought the Olympic Village inside the city limits, so that the athletes can enjoy the City of Lights.

The primary Olympic pole would be located just north of the city around the Stade de France, the open-air stadium built to host the 1998 Soccer World Cup and to accommodate track and field. New construction, including the media center and new sports venues, would be built nearby. To the west, a second, largely existing pole includes Roland Garros Stadium, site of the French Tennis Open, the Parc des Princes soccer stadium, and the horse racing tracks and expansive grounds within the Bois de Boulogne park.

Located between the two poles, on one of the last zones of land to be developed in Paris, would be the Olympic Village. The land, largely covered by tracks, is owned by the state railroad. The city was already planning to develop the area, building low-cost housing, student housing, retail, offices, and a 25-acre park. The

area’s historic brick warehouses, until recently used by the Paris Opera to store sets and costumes, would become the Olympic canteen. In January, a temporary tower made of helium-filled, Olympic-colored rings, a viewing platform, and an information booth, were scheduled to open on the site. In all, the city’s bid benefits from \$4.2 billion already slated for urban renewal and infrastructure improvements throughout the city.

Additional projects include six temporary pavilions (preventing cost overruns by avoiding structures that won’t be sustainable once the Olympics leave) built with reusable materials that would house events like weight lifting and handball. Permanent structures would include an amorphous Aquatic Center, and the Super Dome, a 22,000-seat indoor stadium built at the northern edge of Paris to host gymnastics.

While the bid committee has presented detailed renderings of the unbuilt projects, no architects have been officially chosen. Of course, the real star of the bid is Paris itself; for instance, organizers have placed beach volleyball in the shadow of the Eiffel Tower. After a proposed investment of \$5.33 billion to host the games, Paris will be looking to solidify its standing as the world’s most visited city. *Claire Downey*



The Olympic Village (top) would be built over railyards. The amorphous aquatic center (above) would flank the Olympic Stadium (left), to be called Stade de France; and the Superdome (below) would host gymnastics.



PHOTOGRAPHY: COURTESY PARIS 2012

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## Modern London plan would transform a needy area of town

An 80,000-seat stadium by Foreign Office Architects anchors London's Olympic 2012 bid, which officials plan to site within a 500-acre Olympic Park in Lower Lea Valley, 3 miles from London's center. The stadium's design, say its architects, is inspired by the human form, the roof wrap-



The stadium's roof (left) wraps around the interior. The park (right) meanders through the Lea Valley.

ping around the venue like muscles supporting the human body. The compact Olympic Park that contains it will include an aquatics center, velopark, indoor sports arenas, training facilities, and athletes' and officials' accommodations.

"We are not creating another Olympic Park that is just a series of nice white Modern buildings on flat

land. We are creating something that will grow out of the specific conditions and form of the Lea Valley. This will be part of the lasting legacy for the local community," says Alejandro Zaera-Polo, chief stadium architect.

Unveiling their vision on November 19, the London 2012 bid team pledged that it would bring permanent facilities, including an

institute for sports and an athletes' village turned into affordable housing once the games are over.

The bid promotes proximity of activities, with many events planned to be held in existing London venues: the triathlon in Hyde Park, gymnastics in the Dome at Greenwich, archery at Lord's Cricket Ground, modern pentathlon in Greenwich Park, shooting

events at Woolwich Arsenal, and tennis on Wimbledon's Centre Court.

The regeneration of the neglected Lower Lea Valley, one of the poorest areas in the U.K., is a major focus. A master plan for the area was commissioned in August 2003 by the London Development Agency (LDA), the planning arm of the city government, and was developed by a team including EDAW, Foreign Office Architects, Allies and Morrison, HOK

Sport, and Fluid. The LDA is already buying and decontaminating parts of the land, largely fragmented by waterways, roads, subways, and heavy-rail lines. Even if the bid is not successful, the LDA is committed to the purposeful, long-term transformation of the area, including the building of 35,000–50,000 new housing units. *Lucy Bullivant*



## Madrid plan would show off a modern city and ambitious designs

Madrid's bid to host the 2012 Olympics has little in common with Barcelona's landmark effort of 1992. Barcelona used the games as a catalyst for major urban improvements, such as the recovery of its industrial waterfront and the construction of a ring highway. Madrid, on the other hand, has already carried out major improvements in terms of transporta-

tion, mass housing, and community services. And despite Mayor Alberto Ruiz Gallardón's efforts, Madrid lacks some of the drive for recognition that mobilized the northern city. A Madrid Olympics will thus serve mainly to show off one of Europe's most well-equipped capitals, with spotless new highways, and train and subway lines crisscrossing a new urban periphery



Madrid's plan includes the Olympic Village (left) and an updated stadium (right).

of housing developments. Most events will be held in refurbished locales on this periphery, including the Olympic Stadium, a composition of concrete planes and arcs built on the city's eastern edge in 1994 by Seville architects Antonio Cruz and Antonio Ortíz, who will enlarge it from 20,000 to 66,000 seats.

The Olympic ring will be located around the stadium, and will include a new Center for Aquatic Sports, designed by Juan José Medina, and a covered sports pavilion and velodrome. The Olympic Village, across a highway from the ring, would house 16,800 and would be transformed after the games

into housing, hotels, and offices.

The architecture can be previewed from two facilities already awarded in competitions, the Olympic Tennis Center, south of the city, by Dominique Perrault, and the Gavia Park, to the southeast, awarded to Toyo Ito, for whitewater events.

Perrault's "Magic Box" of steel, wood, and glass will feature, in his words, "a protective skin

composed of various fabrics: filtering, reflective, and opaque by day, sparkling at night." Ito's park features lakes and channels of a fractal geometry that use recycled water from a sewage treatment plant. Such sustainable design is a major theme, and Olympic venues will be linked by a green belt and accessible by public transportation. Olympic Village housing will include solar collectors, recycled water, and passive cooling and heating. The swimming facility uses ozone instead of chlorine, ammonia as a refrigeration fluid, and has a photovoltaic array on its movable roof. *David Cohn*

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## Record News Olympics 2012



The futuristic \$500 million Olympic Village, media hub, and press center (left) would be the games' most ambitious project. The Luzhniki Olympic Complex (below), built for the 1980 games, will receive major additions. A new fanlike stadium (bottom), for soccer, will also rise in the Otradnoe suburb of Moscow.

### Moscow touts its river, new facilities, and the city's Olympic track record

Among the remaining contenders for the 2012 Olympics, Moscow was the most recent host to the games. Political tensions overshadowed the 1980 Olympics, as most Western nations boycotted them. The desire to hold a full-fledged Olympics has been cited by Russian officials as a major stimulus to the current bid. The sporting events of 1980 also left a wide-ranging infrastructure in place that will contribute the essential components in 2012.

During the formal bid presentation in November, the plan outlined a vision of a compact Olympic quarter, located entirely within the city limits. Most venues are spread out in five complexes within the radius of about 6 miles along the sinuous Moskva (Moscow) River. A group of planners and architects from Studio #2 of Mosproekt-4 Institute is responsible for the concept. The river contributes not only the spatial axis to the scheme, but also serves as the main transportation artery, where spectators can be ferried to sites from 70 passenger piers. The so-called "Olympic River Concept" is also an effort to showcase the city. The Moskva meanders for about 45 miles from the northwest to the southeast of the city, unfolding along the historic center around the Kremlin to the edifices of the Soviet period.

Another selling point of Moscow's bid is the readiness of more than two thirds of the necessary infrastructure. As in the 1980 Olympics, the Luzhniki Olympic Complex and its Olympic Park will be at the core of the games, hosting opening and closing ceremonies and many sporting events. The structure of the Luzhniki Stadium was built in 1957 and renovated in 1979 and 2000. Major additions are planned from 2009 to 2011.



A number of complexes built for the 1980 games will be refurbished, including the Krylatskoe racetrack and the CSKA soccer/track-and-field stadium.

While new venues will go up in the Tushino area of Moscow, the single most ambitious new project includes a planned set of buildings for the Olympic Village, media hub, and press center. This gleaming complex, each building with a terracelike descent toward the river, will rise in the northwest of Moscow at a cost of more than \$500 million.

The financial estimate for the games is a modest \$2.5 billion. Planners tout Moscow's experience with major sporting events and the value of holding the games in the "New Russia." 2012 will also mark the hundredth anniversary of Russia's participation in the Olympics. It is only ironic that IOC inspectors are unlikely to experience the vital "Olympic River Concept" during their planned February visit. The waterways are likely to be barely navigable, covered in snow and ice. *Paul Abelsky*

PHOTOGRAPHY: © MOSCOW 2012 BID COMMITTEE



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## News Briefs

### Major changes planned at LAX

On December 7, after a decade of development and promotion, a modernization plan for the Los Angeles International Airport was given approval to move forward by the Los Angeles City Council. This would be the first remodel of the airport since the 1984 Los Angeles Olympics, and the largest in its history. The primary reason, say officials, is increased security. The \$11 billion plan faces stiff protest. Opponents accuse the city of violating state environmental laws and argue the plan will increase traffic and plane noise and that a separate check-in facility would concentrate crowds of airline passengers, creating a terrorist target. The county Board of Supervisors plans to sue to stop the plan.

First-stage projects include a

consolidated parking structure, an intermodal transportation center, a consolidated rental car center, and people-mover infrastructure. The next stages, such as the demolition of Terminals 1, 2, 3, and the north end of the Tom Bradley International Terminal, will be implemented later. Construction is expected to begin



A more Modern look for LAX.

next year. DMJM is the prime consultant on the advanced planning, and according to Los Angeles World Airport (LAWA) spokesman Paul Haney, projects that require a high

level of design will go through an RFP process. A.M.

### Goldberger hosts new series at Parsons

On November 9, Paul Goldberger, dean of Parsons School of Design in New York, initiated a new series of public conversations, called "At The Parson's Table," with an interview with Frank Gehry, FAIA. It included insights from Gehry on his building's contextualism (it exists), the public's conception of concert halls (outdated), his new house (it will have no curves or titanium), and his ability to afford his firm's work for that house (not really).

"I really love this format. It provides so much more than a lecture," says Goldberger, who once hosted a similar series at the 92nd Street Y uptown. "Audiences like it because it's more unpredictable; it allows for more spontaneous give and take; participants like it because it is less formal and doesn't entail hours of preparation." Future sessions will occur infrequently and feature prominent members of all the design fields. S.L.



Goldberger "at the table" with Gehry.

### AIDS memorial seeks entries

How does one memorialize the tragedy and cumulative loss of AIDS? An open competition launched by the directors of the AIDS Memorial Grove offers architects, landscape architects, artists, and others the opportunity to explore this question. The competition site is the wooded landscape of the Grove, a 7-acre site nestled in a quiet corner of Golden Gate Park in San Francisco. The competition brief calls for a new feature that complements the existing Grove, while adding to the visual and spiritual experience of those who visit. Entries are due January 7. The jury, including Walter Hood, Mary Miss, Toshiko Mori, and Joe Rosa, will meet in mid-January. Lisa Findley

IMAGES: COURTESY LOS ANGELES OFFICE OF PUBLIC AND COMMUNITY RELATIONS (LEFT); PARSONS SCHOOL OF DESIGN (RIGHT)

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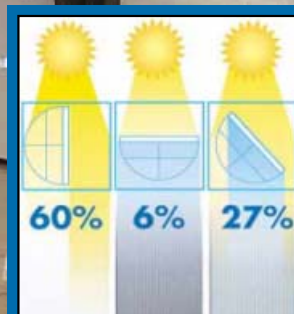
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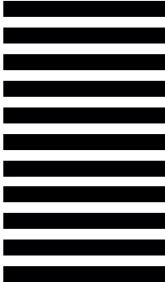
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**Fenway renovating again** A World Series trophy at last on the shelf again, the Boston Red Sox have stepped up the ballpark renovations, now a part of the team's off-season routine, along with free-agent negotiations and ticket-price hikes. Having replaced the Fenway Park diamond and drainage system after the 2004 season, the team announced in November plans to remodel one of Fenway's main entrances, widen fan concourses, expand the home team clubhouse, add workout facilities and a batting cage, and bring the league's oldest ballpark (built in 1912, rebuilt in 1934) up to code. The Sox are also looking to boost capacity, now about 35,000. The team will also renovate a 1920s light-industrial building adjacent to the ballpark and convert it into a bar and restaurant, according to vice president of planning and development Janet Marie Smith.



**Fenway renovations will include increased capacity.**

Somerville, Massachusetts, architects D'Agostino Izzo Quirk will handle the design projects. The club, along with area businesses and the city, will also make improvements to Lansdowne Street, one of the main streets bordering Fenway, widening the sidewalks, planting trees, and adding historical light fixtures. *Ted Smalley Bowen*

**Canstruction returns** In November, the New York Design Center hosted its annual CANSTRUCTION competition. Organized by the AIA and the Society of Design Administration, the competition gathers teams of architects, engineers, and contractors, who are given one night to build structures designed entirely out of canned and boxed food. Objects are viewed and judged, then disassembled and donated to the

Food Bank of New York City, an umbrella organization for nearly 200 food banks nationwide. For the first time, the public was invited to vote



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for their favorite structure. Top vote-getters included *An American Classic*, a huge hot dog made by Butler Rogers Baskett Architects; *Manhattan Can Chowder*, a seashell made by Platt Byard Dovell White Architects; and *A Call to Arms*, an octopus by Fox & Fowle Architects. Similar competitions take place nationwide (another octopus, above, was made in Springfield, New Jersey), with local AIA chapters sponsoring each event. *S.L.*

**ENDNOTES** On December 6, Douglas L. Steidl, FAIA, took office as the 2004–2005 AIA president, becoming the 81st AIA leader. Norbert W. Young, Jr., FAIA, president of McGraw-Hill Construction, was selected winner of the 2005 Edward C. Kemper Award by the AIA board of directors, recognizing outstanding contributions to the profession through service to the AIA. Edward Allen, FAIA, has been chosen as the 2005 AIA/ACSA Topaz Medallion winner for contributions to architectural education. Boston's Isabella Stewart Gardner Museum has tapped Renzo Piano to design a 50,000-square-foot expansion. Madison Square Garden has selected Toronto-based Brisbin Brook Beynon to execute a complete renovation of its 36-year-old facility. Susan Chin, FAIA, has been elected AIA New York Chapter president. She becomes the first Asian-American architect to take the position. The U.S. Green Building Council's "Greenbuild" conference in Portland, Oregon, highlighted the international spread of its LEED program. *S.L.*

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# Dates & Events

## New & Upcoming Exhibitions

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### **Sacral Space: Modern Finnish Churches New York City**

January 18–February 19, 2005

Churches and chapels were built in exceptional numbers in Finland after World War II; their construction brought together prominent architects, artists, and designers, resulting in extraordinary buildings and interiors. This exhibition features drawings, photographs, videos, and models. At Scandinavia House: The Nordic Center in America. Call 212/879-9779 or visit [www.scandinaviahouse.org](http://www.scandinaviahouse.org).

### **Mexico City Dialogues: New Architectural Practices New York City**

January 27–May 7, 2005

The first international exhibition organized by the Center for Architecture, *Mexico City Dialogues* is part of *mexicoNOW*, a citywide festival celebrating contemporary Mexican culture. Jose Castillo, a Mexico City–based architect, educator, and associate editor of *Arquine* magazine, serves as guest curator of the exhibition. The show examines the changing fabric of Mexico City through 17 selected projects by young Mexican architects. At the Center for Architecture. Call 212/683-0023 or visit [www.aiany.org](http://www.aiany.org).

### **Strangely Familiar: Design and Everyday Life Scottsdale, Ariz.**

January 29–April 24, 2005

Examining the latest and hottest contemporary

developments in design from around the globe, this exhibition includes 45 innovative projects in architecture, product design, furniture, fashion, and graphic design. At the Scottsdale Museum of Contemporary Art. Call 480/994-2787 or visit [www.smoca.org](http://www.smoca.org).

### **Johnsen Schmalig Architects: Extending the Surface Chicago**

February 4–26, 2005

Featuring Johnsen Schmalig's award-winning design work in models, photos, and conceptual drawings, this exhibition illustrates the architectural potential that lies within the idea of the "extended surface," a concept that questions the notion of a building's envelope as a thin material layer, and instead proposes that the surface of a building can assume spatial qualities. At I-Space. For more information, visit [www.johnsenschmalig.com](http://www.johnsenschmalig.com).

### **Groundswell: Constructing the Contemporary Landscape New York City**

February 25–May 16, 2005

The exhibition presents 23 landscape design projects that reclaim and transform urban spaces—many derelict and in need of rehabilitation—into public parks and gardens. *Groundswell* features examples of the new artistic richness and critical debate in the design of public spaces, from small urban plazas to large parks for postindustrial sites, to long-range plans for entire urban sectors. At the Museum of Modern Art. Call 212/708-9431 or visit [www.moma.org](http://www.moma.org).

### **Building the Impossible: Architecture in Motion St. Thomas, Minn.**

February 28–April 4, 2005

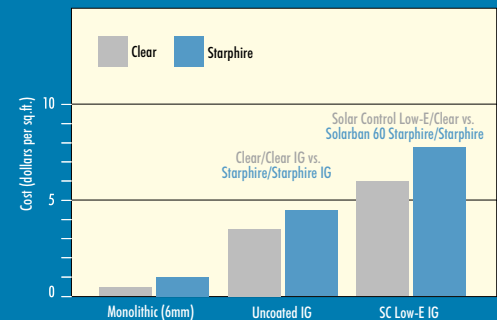
This exhibition will showcase a historical selection of important engineered buildings while focusing on recent works with movable components. The exhibition will be complemented by two symposia: one for professionals and academics, and another for students. The keynote talk will be given by architect and educator Peter Eisenman, designer of the Arizona Cardinals Stadium in Phoenix, which features a fully movable playing surface. At the O'Shaughnessy Educational Center, University of St. Thomas. Call 651/962-5560 or visit [www.stthomas.edu](http://www.stthomas.edu).

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## Ongoing Exhibitions

### **Gunther Dominig: Structures That Fit My Nature** New York City

*Through January 8, 2005*

With a career dating back to the 1960s, architect Gunther Dominig has achieved cult-figure status among peers internationally for public and private commissions—from houses and interiors to hospitals, banks, and university centers in Austria and Germany—displaying an intensely personal building language. The first American show to focus on the architect, it features his two most personal and revealing works: The New Documentation Center of the National Socialist Party Rally Grounds in Nuremberg, Germany, and the Steinways (Stone House). At the Austrian Cultural Forum. Call 212/319-5300 or visit [www.acfny.org](http://www.acfny.org).

### **Bridging the Drive: Pedestrian Bridge Designs for Lake Shore Drive** Chicago

*Through January 9, 2005*

Some of the world's best-known architects and engineers have submitted designs for the pedestrian bridges across Lake Shore Drive. At the ArchCenter. Call 312/922-3432 or visit [www.architecture.org](http://www.architecture.org).

### **Mehrlicht: James Turrell and Targetti Light Art Collection** Vienna

*Through January 16, 2005*

"MAKlite," a unique permanent light installation by American artist James Turrell, provides the MAK building with a new dimension of visibility, accentuating the architecture's overall impact. The technology for the project was developed by the Florence-based Italian architectural lighting specialist Targetti, whose Targetti Light Art Collection, Mehrlicht, will be on view in the MAK Upper Floor Exhibition Hall. Visit [www.MAK.at](http://www.MAK.at) for further information.

### **Projecting Reclamation in Design** Cambridge, Mass.

*Through January 17, 2005*

In the United States alone, new mining will create over 100,000 square miles of land needing reclamation by the year 2230, as well as 500,000 abandoned mines requiring reclamation. The exhibition focuses on current and future directions for landscape architects and designers engaged in reclamation to consider. At the Harvard Design School. Call 617/495-5453 or visit [www.gsd.harvard.edu](http://www.gsd.harvard.edu).

### **Michael Wesely: Open Shutter at the Museum of Modern Art** New York City

*Through January 2005*

This exhibition presents a unique photographic project inspired by the construction of the new Museum of Modern Art. At the Museum of Modern Art. Call 212/708-9400 or visit [www.moma.org](http://www.moma.org).

### **Glamour: Fashion, Industrial Design, Architecture** San Francisco

*Through January 17, 2005*

The concept of glamour is based on a notion of excess and has been glorified in the discipline of fashion. Conversely, glamour has been marginalized in industrial design and even reviled in architecture, where the pared-down aesthetics of Modernism and Minimalism have prevailed since the middle of the 20th century. On view are haute couture by Dior and Versace, autos from Jaguar and Bentley, architectural works by Philip Johnson and Herzog & de Meuron. At the San Francisco Museum of Modern Art. Call 415/357-4000 or visit [www.sfmoma.org](http://www.sfmoma.org).

### **The Furniture of Poul Kjaerholm and Selected Art Work** New York City

*Through January 22, 2005*

The first major American survey of this important Danish designer. The exhibition will combine Kjaerholm's spare, elegant furniture with selected contemporary works of art in an exploration of the vibrant dialogue that has existed between contemporary art and Modernist furniture collectors throughout the 20th century. At Sean Kelly and R 20th Century. Visit [www.skny.com](http://www.skny.com) or [www.r20thcentury.com](http://www.r20thcentury.com).

### **Liquid Stone: New Architecture in Concrete** Washington, D.C.

*Through January 23, 2005*

A survey of cutting-edge architecture in which the use of concrete is an essential aspect of the design. The exhibition demonstrates that architects are using concrete to achieve incredibly varied—sometimes even diametrically opposed—aesthetic objectives. At the National Building Museum. Call 202/272-2448 or visit [www.nbm.org](http://www.nbm.org)

### **Brininstool + Lynch: Process** Chicago

*Through January 29, 2005*

This show on the work of the Chicago architecture firm includes drawings, models, photographs, and installations of building details, portraying projects that are in progress, as well as those that have recently been completed. At I Space. Call 312/587-9976 or visit [www.ispace.uiuc.edu](http://www.ispace.uiuc.edu).

### **Nine Museums by Yoshio Taniguchi** New York City

*Through January 31, 2005*

This opening exhibition presents the new Museum of Modern Art in the context of the other extraordinary art museums that Taniguchi has designed over the last 25 years and will address four integral themes in the architect's work—materials, proportion, natural light, and movement. At the Museum of Modern Art in Manhattan. For information, call 212/708-9400 or visit [www.moma.org](http://www.moma.org).

### **SocioPolis: Project for a City of the Future** Vienna

*Through January 31, 2005*

A new and unique city is arising on the periphery of Valencia. Fulfilling the three prerequisites of enabling social interaction, the linking of architecture with nature, and the integration of new information technology in the living space, 12 internationally active teams of architects have formulated responses—based on Vicente Guallart's master plan—to the most pressing topics for current and future urban planning. The exhibition provides an overview of the planning zone and an introduction to the architects' designs. At Architekturzentrum Wien. Call 431/522-3115 or visit [www.azw.at](http://www.azw.at).

### **Light Structures: The Work of Jorg Schlaich and Rudolf Bergermann** New Haven

*Through February 4, 2005*

Organized by Frankfurt's Deutsches Architektur Museum, this exhibition focuses on the structural engineering firm Schlaich Bergermann and Partner and its work. At the Yale School of Architecture. Call 203/432-2296 or visit [www.architecture.yale.edu](http://www.architecture.yale.edu).

### **Arti & Architettura, 1900/2000** Genoa, Italy

*Through February 13, 2005*

The exhibition documents forays into the field of architecture made by artists as well as architects who have trespassed into pictorial exploration spanning the 20th century. The protagonists, artists and architects ranging from Kazimir Malevich to Vladimir Tatlin, Antonio Sant'Elia to Giuseppe Terragni, Ludwig Mies van der Rohe to Piet Mondrian, Le Corbusier to Frederick Kiesler, Frank Gehry to Claes Oldenburg, have designed ideal spaces, volumes, and pathways based on forms and colors, born of pure creativity that is visual and plastic. At the Palazzo Ducale. Call 010/557-4004 or visit [www.palazzoducale.genova.it](http://www.palazzoducale.genova.it).

**34 Los Angeles Architects  
Los Angeles**

*Through February 22, 2005*

An exhibition illustrating the spirit and enterprise of a group of 34 Los Angeles architects and the issues that they feel are important in their current work. At the Architecture + Design Museum. Call 310/659-2445 or visit [www.AplusD.org](http://www.AplusD.org).

**The Pei Architectural Legacy  
Sarasota, Fla.**

*Through February 25, 2005*

An exhibition of renderings, photographs, and working drawings of the stunning designs created by Pei Partnership Architects (PPA). The event will pay tribute to renowned architect Chien Chung Pei, who founded PPA in 1992 along with his brother Li Chung. Among Pei's achievements as designer in charge and project architect are the Grand Louvre in Paris with its emblematic 70-foot-tall glass pyramid and the West Wing extension of Boston's Museum of Fine Arts. At the

Museum of Asian Art. Call 941/954-7117 or visit [www.museumasianart.com](http://www.museumasianart.com).

**ARCHLAB: New Experiments  
in Architecture,  
Art and the City  
Tokyo**

*Through March 13, 2005*

The exhibition explores revolutionary designs by international architects from the 1950s to the present, uncovering the origins of radical and visionary approaches to building design and urban planning that have changed the way we look at the city. At the Mori Art Museum. Call 813/5777-8600 or visit [www.mori.art.museum](http://www.mori.art.museum).

**Huyghe + Corbusier: Harvard  
Project  
Cambridge, Mass.**

*Through April 17, 2005*

Pierre Huyghe celebrates the Carpenter Center in conjunction with the 40th anniversary of Le Corbusier's only North American building. The multimedia project

explores Le Corbusier's vision for the Carpenter Center, including multiple components that respond to the design history and its relationship to Harvard. At the Carpenter Center. For information, call 617/495-9400 or visit [www.artmuseums.harvard.edu](http://www.artmuseums.harvard.edu).

**Peter Eisenman: Barefoot on  
White-Hot Walls  
Vienna**

*Through May 22, 2005*

This show encompasses all aspects of Eisenman's oeuvre—his work as architect, theoretician, writer, teacher—with an emphasis on his most recent projects. At the MAK Exhibition Hall. Call 43 1/712-80 00 or visit [www.MAK.at](http://www.MAK.at).

**454 Projects for Paris 2012  
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rescent ring compositions, stretched canvas towers, diversion of cranes, forest of urban periscopes are among the 454 projects from over 80 countries for the realization of the Olympic Landmark in Paris that will be on view at the Pavillon de l'Arsenal, the center for information, documentation, and exhibition for urban planning and architecture of the City of Paris. Call 01/42-76-33-97 or visit [www.pavillon-arsenal.com](http://www.pavillon-arsenal.com).

**Lectures,  
Conferences, and  
Symposia**

**Maya Lin: A Strong Clear  
Vision**

**Washington, D.C.**

*January 8, 2005*

Winner of the 1995 Academy Award for Best Documentary, the film examines the provocative architecture and sculpture of architect Maya Lin. At the National Building Museum. Call 202/272-2448 or visit [www.nbm.org](http://www.nbm.org).



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## Dates & Events

### **Tod Williams and Billie Tsien Washington, D.C.**

January 11, 2005

This husband-and-wife design team will discuss their recent projects, which include the Museum of American Folk Art in New York, the Mattin Art Center at Johns Hopkins University, and The Neurosciences Research Institute in La Jolla, California. At the National Design Museum. Call 202/272-2448 or visit [www.nbm.org](http://www.nbm.org).

### **Built in Brazil: A Lecture Series Houston**

January 12–February 9, 2005

Presented by the Rice Design Alliance, the lecture series will explore the tradition of audacious and exquisite architecture in Brazil. The lectures will be given by leading contemporary architects from Rio de Janeiro and São Paulo: Marcio Kogan, Ciro Pironi, and Thiago Benardes. A documentary film on Lucio Costa will preface the series. At the Museum of Fine Arts. Call 713/348-4876 or visit [www.rice.edu](http://www.rice.edu).

### **Rafael Viñoly Washington, D.C.**

January 13, 2005

Architect Rafael Viñoly will discuss the public spaces he has created around the world, including the Tokyo International Forum, the Kimmel Center for the Performing Arts in Philadelphia, a proposed new plaza at the John F. Kennedy Center for the Performing Arts, as well as his vision for the World Trade Center site. This lecture complements the exhibition *OPEN: New Designs for Public Space*. At the National Building Museum. Call 202/272-2448 or visit [www.nbm.org](http://www.nbm.org).

### **Seminar at Boffi's Showroom Los Angeles**

January 19, 2005

The event will consist of a technical seminar on the basic criteria in selecting and sourcing natural stone, as well as covering important kitchen and bath design criteria for architects and interior designers. At the Boffi Showroom. Visit [www.boffi.com](http://www.boffi.com) for more information.

### **The Pentagon Athletic Center's Sustainable Design Washington, D.C.**

January 25, 2005

Mark Erdly, AIA, and Yee Tak (Edith) Lau, both of HNTB Architecture, will discuss the 250,000-

square-foot underground, multipurpose facility and the innovative sustainable design strategies and credits they employed to earn LEED certification for it. At the National Building Museum. Call 202/272-2448 or visit [www.nbm.org](http://www.nbm.org).

### **Spring Lecture Series Boston**

January 31–March 28, 2005

The Northeastern University Monday lectures will include Eric Mumford, Architectural Historian from Washington University; Antoine Picon, Architectural Historian from Harvard Design School; Joan Busquets, Urban Designer and Professor from Harvard Design School; and Paul Lewis, Architect from LTL Architects, New York City. In the Raytheon Amphitheater. Call 617/373-4673 or visit [www.architecture.neu.edu](http://www.architecture.neu.edu).

### **HKS: People Making an Impact in Architecture College Station, Tex.**

February 4, 2005

With completed projects totaling more than \$27 billion in 400 cities located in 45 states and 19 foreign countries, HKS will be the focus of the 2005 Rowlett Distinguished Firm Lecture Series. The lecture will feature HKS representatives candidly discussing the makings of a great architectural firm at the Presidential Conference Center on the Texas A&M University campus. For information, call 979/847-9357 or visit [www.rowlett.tamu.edu](http://www.rowlett.tamu.edu).

### **The Interior Design Show Toronto**

February 10–February 13, 2005

In its seventh year, the Interior Design Show (IDS) features thousands of products and services for the residential market from more than 250 exhibitors, including manufacturers, distributors, retailers, and designers. The show is open to both trade professionals and consumers. At the National Trade Centre. Call 416/599-3222 or visit [www.interiordesignshow.com](http://www.interiordesignshow.com).

### **BDX Expo & Conference Chicago**

February 15–17, 2005

Building and Design Exchange (BDX) is a new regional conference and exposition designed to foster collaboration between the design and construction sides of the commercial building industry. Sponsored by the American Builders

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## Dates & Events

and Contractors Association (ABCA). At McCormick Place. Call 888/821-0767 or visit the ABCA Web site at [www.abcaevents.org](http://www.abcaevents.org)

### 2005 ICC Codes Forum Cincinnati

February 21–March 6, 2005

Code development hearings, an education program, and an expo will be featured. For further information, visit [www.iccsafe.org/codesforum](http://www.iccsafe.org/codesforum).

### MoMA Perspectives: Reimagining The Modern New York City

Through February 23, 2005

This program features MoMA's chief curators, who will discuss the ideas that informed the reinstallation of their respective departmental collections. Terence Riley, The Philip Johnson Chief Curator of Architecture and Design, will speak at the Museum of Modern Art. Call 212/708-9431 or visit [www.moma.org](http://www.moma.org).

### Birds and Buildings Conference: Creating a Safer Environment Chicago

March 11, 2005

This event will be the first public meeting anywhere to address the building design features that are associated with the deaths of almost one billion birds each year in the United States. At the Illinois Institute of Technology. Visit [www.birdsandbuildings.org](http://www.birdsandbuildings.org).

### Global Shop 2005 Las Vegas

March 21–23 2005

With over 900 suppliers under one roof, the Expo includes Retail Marketing Services, the Store Fixture Show, Digital Store, and Operations Flooring and Lighting, as well as the Visual Merchandising Show where participants will see the very latest product innovations in the industry. In the Las Vegas Sands Expo at the Venetian. Visit [www.globalshop.org](http://www.globalshop.org).

### Paul A. Kennon Memorial Symposium: Modulations Houston

April 1, 2005

The fourth Kennon Symposium gathers an international and multidisciplinary roster of scientists, designers, theorists, and engineers to reassess the history of the Module in mid-20th-century architecture and examine the implications of its

revitalization in current design practice. At the Rice University School of Architecture. Visit [www.rice.edu](http://www.rice.edu).

### Build Boston's 1st Annual Spring Residential Design Convention and Tradeshow Boston

April 6–7, 2005

This residential offspring of Build Boston will include two days of intense professional development opportunities and workshops for design and construction professionals along with an exhibition hall filled with the latest building products and materials. At the Seaport World Trade Center. Call 800/544-1898 or visit [www.architects.org](http://www.architects.org).

### Traditional Building Exhibition and Conference Philadelphia

April 27–30, 2005

Previously titled the *Restoration & Renovation Exhibition and Conference*, the *Traditional Building Exhibition and Conference* will deliver a broad mix of educational seminars and offer unique products and services for professionals working in this market. At the Pennsylvania Convention Center. Call 800/982-6247 or visit [www.traditionalbuildingshow.com](http://www.traditionalbuildingshow.com).

### The UIA 2005 Istanbul Congress Istanbul

July 3–7, 2005

The UIA 2005 Istanbul Congress will be organized under the theme of "Cities: Grand Bazaar of Architecture" as a multidimensional event including meetings, conferences, interviews, exhibitions, competitions, tours, an architectural fair, as well as social and cultural activities. Visit [www.uia2005istanbul.org](http://www.uia2005istanbul.org) for additional information.

### GreenBuild 2005 Atlanta

November 8–12, 2005

In its fourth year, the conference and expo includes extensive educational programming, workshops, an exhibition floor, and networking events. At GreenBuild, learn about the leading edge of the building and construction industry including the latest updates and expansions of the LEED Green Building Rating System. For further information visit GreenBuild at [www.greenbuildexpo.org](http://www.greenbuildexpo.org).

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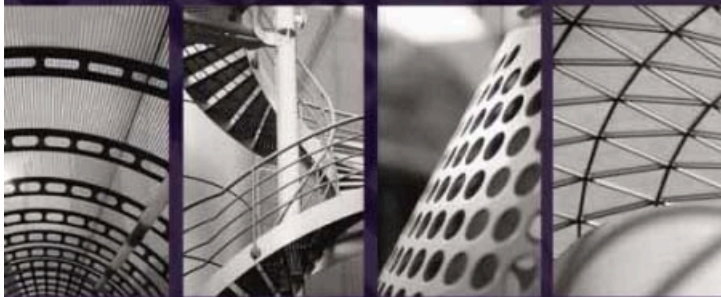
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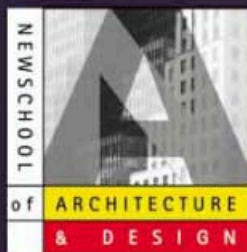
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Luke Wang, Executive Masters graduate, 2001

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## Dates & Events

### Competitions

#### Flight 93 National Memorial Design Competition

*Deadline for Entries: January 11, 2005*

The response to the violent acts in the skies over southwestern Pennsylvania on September 11, 2001, will be a National Memorial to the people who died in what has become known as the first civilian act of defense in the war on terrorism. The design competition welcomes all submissions of ideas that will commemorate the 40 heroes of Flight 93. For further information visit [www.flight93memorialproject.org](http://www.flight93memorialproject.org).

#### Ceramic Tiles of Italy Design Competition

*Deadline: January 30, 2005*

North American architects and interior designers are invited to submit residential, commercial, or institutional projects featuring Italian ceramic tile completed between January 2000 and January 2005. Visit [www.italiatile.com](http://www.italiatile.com) or [www.italytile.com](http://www.italytile.com).

#### Metropolis Next Generation Competition

*Deadline: January 31, 2005*

The Metropolis Next Generation Design Prize recognizes and encourages today's rising stars in design. The proposed idea must benefit people and the environment, and challenge design professionals to create human-centered products, environments, and communication systems. Call 212/886-2535 or visit [www.metropolismag.com](http://www.metropolismag.com).

#### 2004-2005 Young Architects Forum

*Deadline: February 4, 2005*

Open to architects and designers 10 years or less out of undergraduate or graduate school, winners will receive a cash prize, exhibit their work, and present lectures at the Architectural League of New York.

Call 212/753-1722 or visit [www.archleague.org](http://www.archleague.org).

#### The 2005 Latrobe Fellowship

*Deadline: February 4, 2005*

The purpose of the fellowship is to support research that will increase the knowledge base of the architecture profession. Sponsored by the AIA College of Fellows. Visit [www.aiai.org/fellows\\_latrobe\\_2005](http://www.aiai.org/fellows_latrobe_2005) for detailed information.

#### 2005 Prism Stone in Architecture Awards

*Deadline: February 18, 2005*

The competition is open to architects and other design professionals whose projects demonstrate creativity and achievement in the use of natural stone, with particular interest in original or unusual uses. The grand prize winner will be announced at the opening General Session of Coverings 2005 in Orlando. For further information, visit [www.coverings.com](http://www.coverings.com).

#### Buzzards Bay Design Competition Bourne, Mass.

*Deadline: April 19, 2005*

A single-phase, open International Design Competition seeking proposals for a 17-acre park with extensive frontage on both Cape Cod Canal and Main Street, Buzzards Bay. The main objective is to create an intergenerational recreation area and cultural amenity for the use of residents, while encouraging downtown economic redevelopment. For more information, go to [www.buzzardsbayvillageassociation.org](http://www.buzzardsbayvillageassociation.org).

*E-mail event and competition information two months before event or submission deadline to [elizabeth\\_broome@mcgraw-hill.com](mailto:elizabeth_broome@mcgraw-hill.com).*



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### ***Intellectual Property***

Get Smart About Intellectual Property . . . . .Chicago, IL • April 18, 2005

### ***Negotiations***

Seven Steps to Negotiating Success . . . . .Seattle, WA • September 20, 2005

### ***Project Delivery***

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# For and about the emerging architect

## archrecord2

This month, we talk to two architects who both know something about adaptation. In **Design**, James Harkrider explains how he worked on both coasts and settled in between, while making sure all his projects reflect the style of their locale. In **Work**, we take a closer look at the newly evolved interior of the Airstream mobile home by Christopher Deam. Find more projects done by these architects on our Web site.

### Design

#### Left, Right, and Center



There's a saying, something like "go to New York, but leave before you become too hard; go to California, but leave before you become too soft." After trying both coasts, architect James Harkrider has

found his happy medium almost back where he started, in Texas. Now based in Austin, Harkrider's firm, D+FORM Architecture, has completed both harder-edged projects in New York, such as the Spike Gallery and the headquarters of Chandler Chicco Agency, a public relations/ad agency with offices worldwide, and projects with a more West-Coast feel, including the agency's Los Angeles office, as well as several residences. "It's fun to be in the middle, with projects on both coasts," says Harkrider. "It's never the same experience. Personalities of people I work with, such as contractors or zoning people, are totally different in New York than they are in California. Local materials are different, and attitudes are different. I'd like to think my work can adapt."

Designing place-appropriate architecture, according to client needs and availability of vernacular materials, is what D+FORM was created to do. Like many young architects, Harkrider began his own business with a single project. In this case, it was a New York City gallery owner who trusted Harkrider to merge and transform an infamous S&M club and a shipping warehouse into an upscale art showplace, one whose first exhibition would feature paintings by such artists as Jean-Michel Basquiat. Using materials including salvaged brick, steel, and glass, Harkrider created a warm, open space unlike the usual stark galleries in the area. The owner was pleased, the gallery was a success, word spread, and D+FORM began to expand its client base. A loft apartment renovation followed, then a clothing store in the Meatpacking District, then the owners of the Chandler Chicco Agency approached Harkrider to revamp their New York office, followed by their office in Los Angeles. Suddenly, D+FORM was actively designing on both coasts.

With the desire to move away from renovation work and build new construction in his native Texas, Harkrider moved his practice to Austin. Picking up



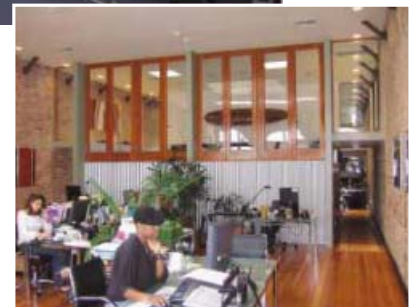
**Spike Gallery,  
New York City, 2002**

Located on the ground floor of a former industrial building in Chelsea, the gallery uses salvaged brick, steel, and glass to give it a warm atmosphere, with large storefront windows. The open plan allows for the installation of a variety of exhibitions and programs.



**Chandler Chicco Agency,  
New York and Los Angeles  
Offices, 2004**

The West Coast office (right) of this public relations/advertising agency required a more laid-back work environment than its New York counterpart (above).

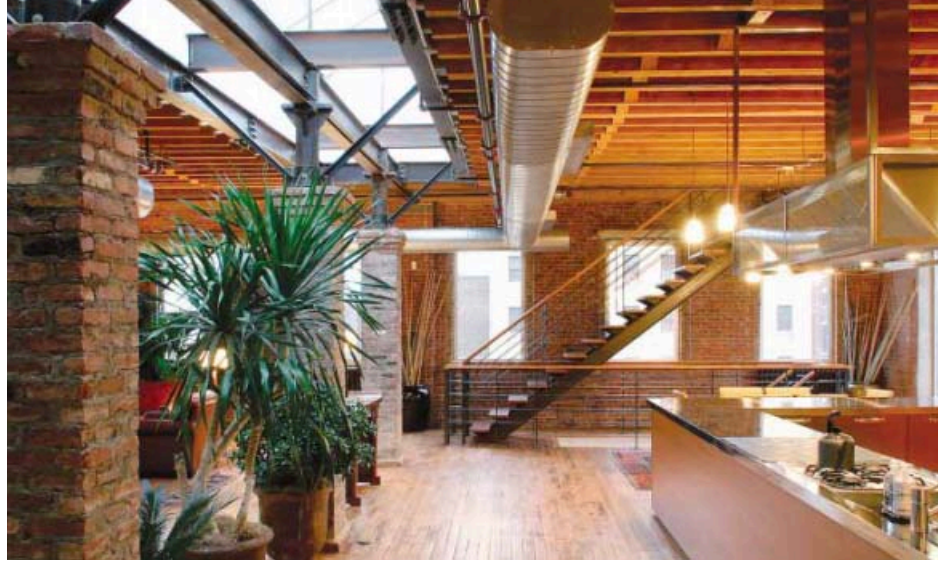


DEPARTMENTS

PHOTOGRAPHY: © LYDIA GOULD BESSLER PHOTOGRAPHY (TOP TWO);  
COURTESY D+FORM ARCHITECTURE (BOTTOM TWO)

**Tomales Residence,  
Tomales, California, 2005**

*Located in the coastal hills of Northern California, this house will derive a portion of its energy from wind power.*



**Private Residence  
New York City, 2003**

*Some of this former industrial building's original features were*

*used in conjunction with contemporary elements in the adaptive reuse. Two floors were converted to create a single open home.*

collaborators along the way has allowed him to stay solo in his firm, yet merge with skilled and talented independent contractors for various projects. Creative partners also help to oversee his coastal projects when he can't be at the site, although he says technology lets him stay very much involved day to day. Architect Robert Skolnik, who Harkrider met while taking art classes at Parson's School of Design in New York, is one frequent collaborator. From his home in Northern California, Skolnik is working with Harkrider on several projects, including a sustainable house in Tomales, California, to be built off the local power grid and run on its own wind-powered energy, using materials from the region.

As a self-proclaimed "flexible Modernist," Harkrider says he's open to more types of collaboration, including the possibility of working with developers, or teaming up with other small firms to create a group office. Still, word-of-mouth marketing is keeping him very much involved in the work, with less time for him to expand his firm. For now, it's safe to say he's coasting.

*Ingrid Spencer*

To see more of D+FORM Architecture's work, go to [archrecord.construction.com/archrecord2/](http://archrecord.construction.com/archrecord2/)

PHOTOGRAPHY: COURTESY D+FORM ARCHITECTURE

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## Work

### Rethinking the recreation vehicle

The iconic Airstream mobile home's interior has changed little over its 75-year history, but since 2003, some models that are rolling off the assembly line are not your grandparents' Airstream, and Christopher Deam is the designer to thank for that. For many years, this San Francisco-based architect and founder of Christopher C. Deam Architecture + Furniture Design produced his own line of award-winning furniture. But that venture proved limiting. "I realized I was only able to design one piece of furniture per year," explains Deam, "so I shut down my workshop to focus on architecture as well as product design for other companies."

Shortly thereafter, he designed a 675-square-foot house for his brother in the hills of Berkeley, California. Due to its spatial constraints, Deam used the cramped interiors of trailers and boats as his inspiration. "The architecture and furniture of the house blurred into one unified whole," Deam says. The house's design garnered an award from the AIA, as well as media coverage, which christened the house the "Airstream Cottage."

Familiar with his Modern-design stylings, the laminate company, Wilsonart, approached Deam to design its booth for the 2000 International Contemporary Furniture Fair. "I decided to create a reusable trade-show booth that would be a real built space to show off their product," says Deam. The final design, which blended the ideas of transportation, furniture, and interior, was a big hit at the convention. In fact, there was so much interest in the exhibit booth fashioned within the interior of an Airstream that it eventually led the C.E.O. of Thor Industries, who manufactures Airstreams, to look at Deam's design and later commission him to update the interior of one line of their mobile homes.

The new line offers a low-maintenance, Modern, and well-proportioned interior. The walls are faced in aluminum that reflects colors from the outdoors,



Attention to details such as the cabinetry's long, horizontal lines serves to emphasize the length of the trailer and create a more spacious feeling.

bringing it inside. The newly designed line accounts for 40 percent of Airstream's overall sales. The architect believes the new design does not simply appeal to young consumers. Deam states, "There's a psychographic shift. The people who buy these models are free-spirited, nonconformist, and more connected to the idea of adventure." *Randi Greenberg*

For more images of the revamped RV as well as other projects created by Christopher Deam, go to [archrecord.construction.com/archrecord2/](http://archrecord.construction.com/archrecord2/)

PHOTOGRAPHY: COURTESY CHRISTOPHER C. DEAM ARCHITECTURE + FURNITURE DESIGN

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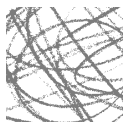
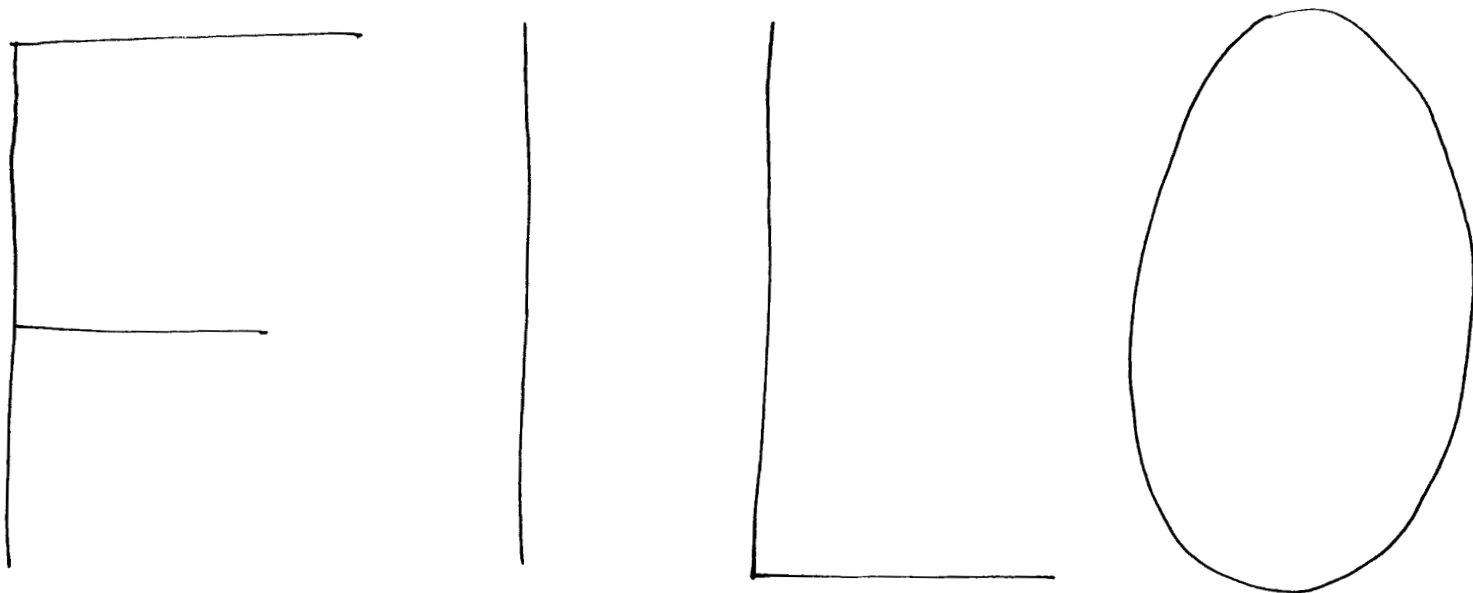
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TLFeBOOK

# What's wrong with MoMA: Disappearing architecture and a sense of the unreal

## Critique

By Robert Campbell, FAIA

A critic is supposed to stimulate a dialogue, not be one. So wrote the great Clement Greenberg.

I seem to be one of only a few critics around who isn't crazy about the new Museum of Modern Art in New York. Maybe I'll change my tune after a few more visits—Greenberg reversed his judgments sometimes, and it's greatly to his credit—and if I do, I'll perform a mea culpa. But for now ....

It isn't that MoMA's bad. There's nothing bad about it. It's just that it isn't good enough. It's elegant, but it lacks life and imagination, and those are qualities we used to associate with Modernism.

New museums often open with a blizzard of hype. It's hard for critics not to be caught up in the excitement. Years ago, that happened with I.M. Pei's East Building for the National Gallery in Washington, D.C. More recently, it happened with Herzog & de Meuron's Tate Modern in London. I didn't like either of them at the time, and I still don't. And I think a consensus opinion, over the years, has borne me out. I say this despite the AIA's recent Twenty-five Year Award to the East Building. I recall when the East Building opened, the architect Jean Paul Carlhian, who founded the AIA's Committee on Design, said: "It is an airline terminal." It was and it is, with most of the art crammed into residual spaces around the edges of a

*Robert Campbell is the architecture critic of The Boston Globe and received the 2004 Award of Honor from the Boston Society of Architects.*

vast, self-regarding, nearly empty concourse.

Anyway, here are my problems with MoMA:

*There isn't any architecture.* The design architect, Yoshio Taniguchi, was quoted more than once as saying that if MoMA gave him enough money, he could make the architecture disappear. Unfortunately, he's succeeded. Most of the museum consists of an endless rabbit warren of more or less identical white-walled galleries with track-lit ceilings. Every attempt is made to remove any sense of the presence of architecture. A typical gallery wall, for example, appears not to touch the ceiling, the floor, or the adjacent walls. Instead, all surfaces are divided from one another by a thin recessed shadow line. The effect is to make the wall appear to be floating, without substance. It looks not like a wall, but like a white projection screen. The paintings on it, as a result, begin to feel like projected images. You are in the placeless, timeless world of the slide lecture. Because the wall doesn't feel real, neither does the artwork. You begin to feel unreal yourself. Architecture has failed to create a place that either the paintings or you yourself can inhabit with a sense of presence.

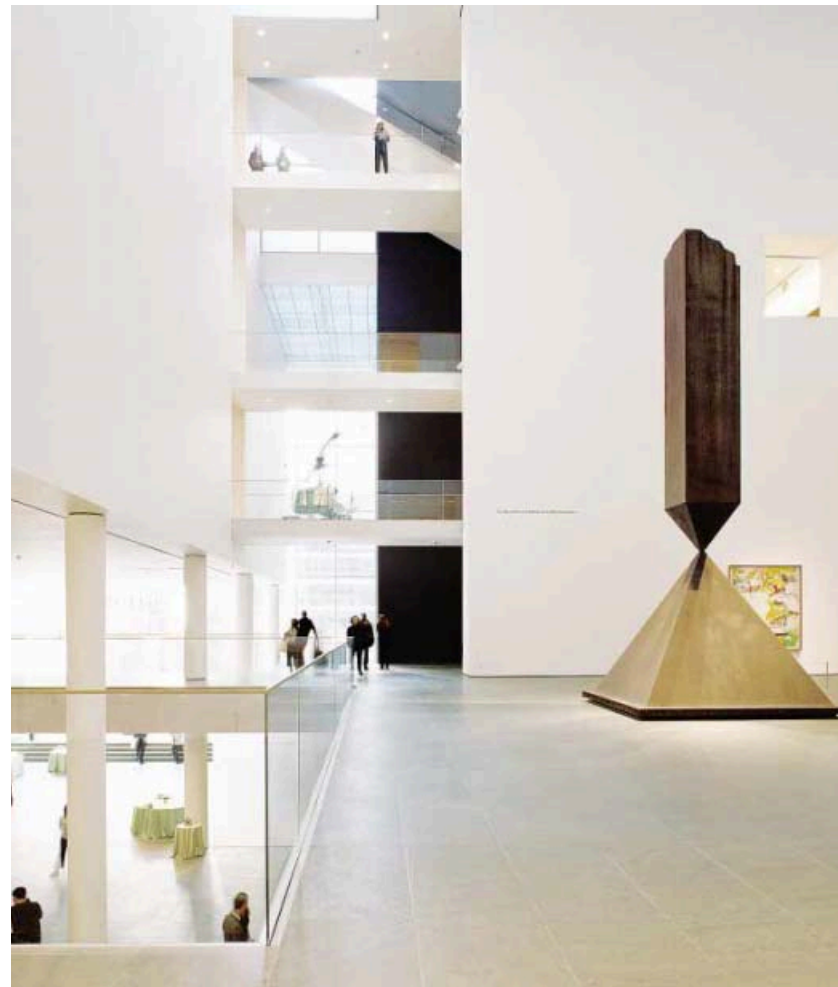
MoMA argues that it was trying to avoid creating a "destination building," like Frank Gehry's Bilbao, the kind of building that can upstage its contents. "It's all about the art," one curator told me. But this is a false dichotomy. The choice is not between no architecture and too

much architecture. What's wanted is the right amount of architecture. Many museums—to cite a few, the Kimbell and Mellon by Louis Kahn; the Maeght and Miro by Josep Lluís Sert; the De Menil, Beyeler, and Nasher by Renzo Piano; the Bregenz by Peter Zumthor; the Pulitzer by Tadao Ando; the Dia:Beacon by Robert Irwin and OpenOffice—all find ways to articulate space clearly

enough to give the artworks a place within which to exist. And they all do it without overwhelming the art.

### Lost in space

Besides the walls, a similar game is often played with the floor. Sculptures, chairs, or other objects stand on white platforms that seem to float above the floor like rafts or ice floes. Like the projection-screen



The 110-foot-high atrium tries to hold the huge museum together.

## Critique

walls, the floes remove the objects from the world and the viewer and make them a kind of disembodied media experience.

*There's no parti.* There's nothing wrong with white-walled galleries up to a point. It's fine to step off the sidewalk in Chelsea or 57th Street, wander through three or four gallery rooms, and return to the street, the trees, and the cars. Something happens, though, when you multiply those few rooms into a few dozen. The change becomes not merely one of quantity, but also one of quality. At that point, you need a new and bolder architectural idea to generate order. It's lacking at MoMA. The only attempt to create a center that can magnetize the galleries into some kind of perceptible whole is a multistory atrium that begins at the second level and stops short of the roof. Holes are cut into the sides of the

atrium, so that you can sometimes overlook it from a gallery. It's a sort of miniature, rectangular Guggenheim. It's wholly inadequate as a parti idea. It's insufficient to orient you in a museum that at times feels like a trackless waste of white tundra. The museum's curators and architects have taken the old MoMA and multiplied it sideways and upward, without feeling the need to for an organizing concept.

*The air-to-art ratio is too high.* The volume of empty air is enormous in places like the entry lobby, the atrium, and the second-floor and top-floor galleries. As a result, artworks intended to confront or absorb you with their bold size and scale—Pollocks, Miros, Kellys, Monets, and others—now find themselves in spaces that are tailored to fit them. In proportion to the space they occupy, these big paint-



Like everything else, the sculpture garden has been expanded.



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**Nearly identical white-walled galleries can seem placeless.**

ings are now the same size as smaller works in smaller galleries. They've been tamed.

*There's no daylight.* If there's one thing architects have learned to do since Kahn's masterpiece in Fort Worth, it's to introduce natural light into museums. Natural light has to be baffled, it has to be indirect, but as Kahn showed us, it can still create subtle changes of atmosphere that make the very air of the museum come alive, and make you aware of a larger universe outside. MoMA has the problem, of course, of being a large

object that's been shoe-horned into a midblock location in Manhattan. On this site, it had no choice but to be multistory. But even at the top-floor gallery, only two modest and conventional skylights acknowledge the presence of the sky. Just down the block, Tod Williams and Billie Tsien's American Folk Art Museum draws light down through several stories. I'm not necessarily prescribing that. But something more inventive could have been done at MoMA.

The obvious alternative would have been to find another site, where the museum could have spread itself out like laundry in the sun. I was told that this was considered, but that the museum decided it didn't want to relocate too far from the homes and offices of its donors. That's a fair argument, and in any case there's much to be said for the busy midtown site.

*It's rude to the city.* No building has the right to be contemptuous of other buildings around it. MoMA has two facades,

one on 53rd Street and one on 54th. On 53rd, the museum looks okay, largely because the Philip Goodwin/Edward Durell Stone facade of 1939 has been restored. Its presence gives this frontage a human scale and a sense of having grown over time. 54th Street is another story. MoMA makes no gesture in response to the fact that it's on a busy residential street in Manhattan. Here the museum is an endless, nearly block-long blank wall that varies only in material. It's black or white or glass, but always forbidding, articulated only by the museum entrance and a truck dock. Even where you know the Philip Johnson garden is right behind the wall, you're not privileged to see it. You might as well be walking past a convention center.

*It makes Modern art into a period piece.* Part of the excitement of Modernism was that it was edgy and exploratory. Maybe we're all tired of the 20th century's obsession with avant-gardism—I certainly am—but those are still essential

qualities. MoMA's architecture, however, is Miesian high Modernism of the middle of the last century. It's revival architecture, a replication of the old MoMA at a larger scale. A considerable effort was even made to match the exact shade of white of the older museum's gallery walls, in the manner of a preservation technologist on an archaeological site. An unintended message is broadcast: *Modern art was then, not now.*

There's a lot to like about MoMA. I like the way it locks into the city. I like the way the lobby is intended to be a public, ticket-free, through-block passageway, with a restaurant that opens off it and looks out on the restored Philip Johnson sculpture garden. Taniguchi's diaphanous surfaces and spatial transparencies can be seductive. The artworks are beautifully lit, even if the projection-screen aesthetic tends to isolate and disembody them. As I said at the beginning, MoMA is far from bad. It's just not as great as we'd hoped. ■



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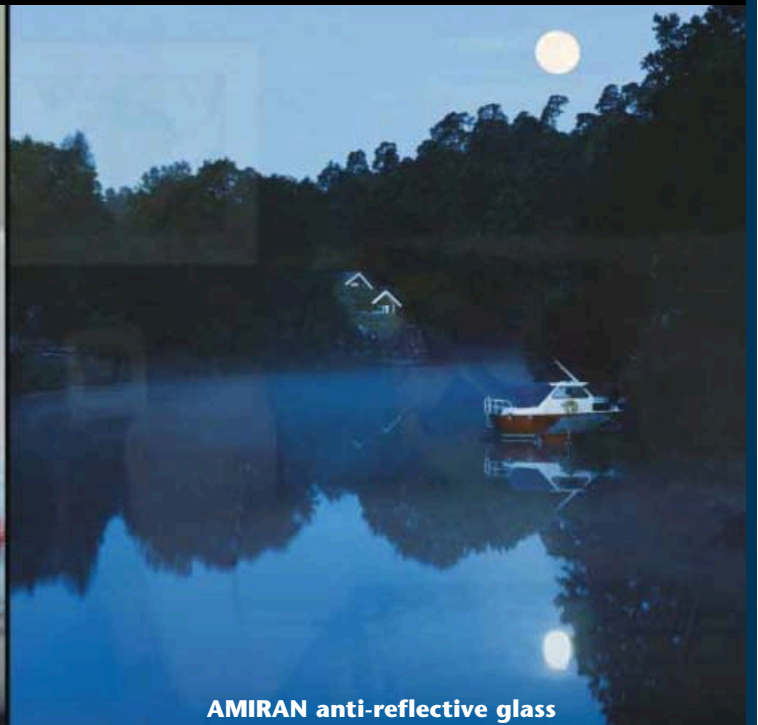
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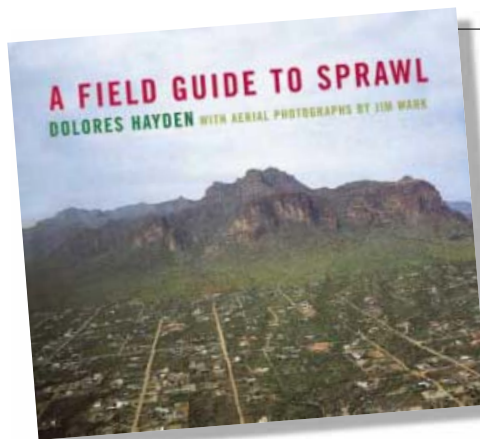
# Developing America: From suburbs to festival marketplaces to river deltas

## Books

**A Field Guide to Sprawl**, by Delores Hayden. New York: W.W. Norton, 2004, 128 pages, \$25.

If a condition or problem has no name, how can we talk about it intelligently or take action for or against it? We know sprawl takes different forms, but because we haven't defined and distinguished its different conditions, it remains a vague, sprawling thing. Delores Hayden's field guide gives us a "devil's dictionary," as she describes it, that classifies sprawl's varied attributes from A to Z. It begins with Alligator (an investment that eats cash flow) and ends with Zoomurb (a suburb on steroids, illustrated here by Arizona's mushrooming Sun City).

Who better to undertake this task than Hayden, the maven of everyday American cultural landscapes? She has given us *Building Suburbia: Green Fields and Urban Growth* (2003); *Redesigning the American Dream: Gender, Housing, and Family Life* (revised edition, 2002); and *The Power of Place: Urban Landscape as Public History* (1995). Hayden's monikers for sprawl define different types of housing developments—leapfrogs, porkchop lots, privatopias, sitcom suburbia. She flags different types of commercial sprawl, such as logo buildings (trademarks visible from the highway) and power centers (groupings of big-box outlets). She gives us tank-farm sprawl, power-



grid sprawl, noise-wall sprawl, litter on a stick sprawl (billboards), LULU sprawl (locally unwanted land use), and rural slammer sprawl (remote prisons). And she earmarks new housing types (the snout house, starter castle, and tract mansion). Why use slang? Most of these terms derive from scholarly sources or real estate jargon. Most notably, says Hayden, "knowing the slang phrases for everyday places sharpens observation."

Hayden does more than name names. She assigns blame for sprawl, in its many manifestations, to federal supports for development, societal priorities, and America's consumer economy. Because a mass-consumption economy is based on rapid obsolescence and waste, she points out, it goes hand-in-hand with careless uses of land, overflowing landfills, and visible environmental deterioration. What's her ultimate purpose? She writes, "While a devil's dictionary of sprawl may be controversial, it is intended to stimulate observation, discussion, and organizing."

Andrea Oppenheimer Dean

**Better Places, Better Lives: A Biography of James Rouse**, by Joshua Olsen. Washington, D.C.: Urban Land Institute, 2004, 367 pages, \$35.

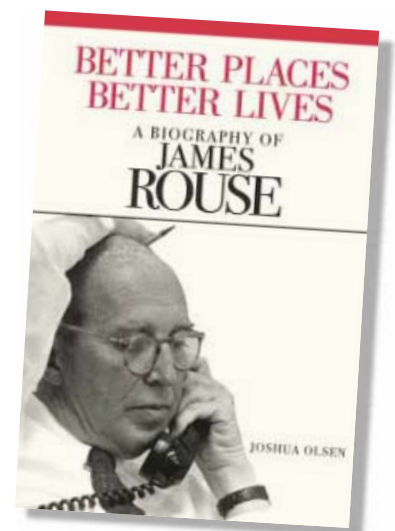
Driven by big visions and high ideals, James Rouse was a developer willing to take risks. As head of the Rouse Company, he made news by building the new town of Columbia, Maryland (which, despite shortcomings, has attracted 100,000 residents since it began in 1963), and then pioneered the so-called festival marketplace with projects such as Faneuil Hall in Boston, Harbor Place in Baltimore, and South Street Seaport in New York City. A risky venture, Faneuil Hall almost died at conception because the big Boston banks refused to provide financing. But Rouse pushed ahead, working with husband-and-wife architects Benjamin and Jane Thompson, and when the project opened in 1976 it became an instant success.

Joshua Olsen puts such projects in context with a full accounting of Rouse's successes, missteps, and failures, some of which took a heavy toll on his personal life. Olsen's objective and comprehensive rendering of Rouse's life and work succeeds in large part because the developer left an exhaustive archive of source material. Olsen also researched five decades of speeches and interviewed dozens of Rouse's contemporaries, including Ed Bacon, Frank Gehry, Grady Clay, and others who shared his determination to mend America's downtowns and heal

some of its social ills.

The most inspiring portion of *Better Places, Better Lives* details Rouse's efforts on behalf of inner-city poor people. The deeply religious Rouse was largely motivated by the ethical teachings of his Christian faith. In the early 1980s, shortly after retiring from the Rouse Company, he founded the nonprofit Enterprise Foundation, which absorbed his energies until poor health forced him to retire. Rouse's impossible hope was to rid America of its deficient housing stock in a single generation. One of Enterprise's accomplishments was to devise a way for nonprofits to sell depreciation rights for cash, which led to congressional passage of the Low-Income Housing Tax Credit of 1986. By its 12th year, Enterprise had aided 300 groups in 100 cities, creating more than 20,000 units of low-income housing.

But Olsen doesn't sentimentalize Rouse or extol the virtues of the free market as an urban cure-all. "If



## Books

anything, his vision was not large enough for a world that consistently proved to be messier than he initially thought, or hoped," writes Olsen.

Rouse had the cunning of a tycoon and the zeal of a missionary. His life represents the struggle to fuse both talents for the benefit of cities and all their inhabitants. Perhaps Rouse's most winning trait

was his refusal to ever give up. *Martin Zimmerman*

**IDEO Method Cards**, *William Stout Architectural Books, Palo Alto, Calif., 2003, 51 pages, \$49.*

**Delta Primer Playing Cards**, *by Jane Wolff. William Stout Architectural Books, San Francisco, 2003, \$12.*

**Delta Primer, a Field Guide to the California Delta**, *by Jane Wolff, with introduction by Kevin Starr. William Stout Architectural Books, San Francisco, 2004, 196 pages, \$50.*

Cards have been around for hundreds of years. Originating in ancient China, they were transformed and brought to Europe by Muslims in the 14th century. There cards were used for gaming and telling fortunes, and they were objects to be coveted and collected. In the 1470s, a Franciscan

Monk, Thomas Murner, developed a deck to be used in the teaching of the elements of logic. As learning tools, cards, unlike books, do not convey information in a serial fashion. With cards, information is condensed and ordered in multiple ways. Cards are still useful learning tools, as demonstrated by two recent publica-

tions available from William Stout Architectural Books—the *IDEO Method Cards*, and the *Delta Primer Playing Cards*.

*IDEO Method Cards* originated from the corporate culture of IDEO, the iconoclastic, multidisciplinary Silicon Valley design firm that brought us the computer "mouse" as well as a multitude of products, both high- and low-tech. The IDEO cards, originally assembled for in-house use, propose design as a rational process grounded in engineering, but also informed by the free-wheeling, post-1960s design ethos that founder David Kelley absorbed in Stanford University's Product Design Program, which he now directs.

The IDEO cards come in a box marked "Open for Interpretation," and the pun gives us an insight into IDEO's spirit as we are invited to shuffle and tour a deck of 51 (not 52) cards organized into four suits: Learn, Look, Ask, and Try. Each card's text consists of a How, a Why, and a brief example or case study. The deck embodies IDEO's



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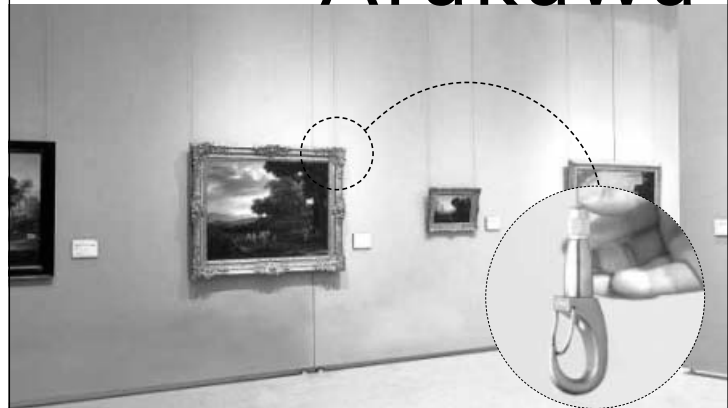
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## Books

people-centered values. Design process is informed by social research methods and emerges through teamwork. For IDEO, design theory is user-centric and based in the pragmatics of everyday experience. If form does indeed follow function, the ultimate function is user satisfaction. There is no card that tells us to reach for our Heidegger, or try an algorithm to generate a form, as might be expected in some architectural schools. For IDEO, form making is problem solving that comes from disciplined observations of real people in real contexts.

The graphics of the *IDEO Method Cards*, mostly high-gloss photographic images, further the techno-populist agenda. They are friendly visual sound bites, casually slice-of-life, neither composed nor contrived. They acknowledge the clutter and messiness of everyday

life, and celebrate the ordinary in order to design the extraordinary. Why are there 51 cards in the deck and not 52? In the spirit of user-centered design, IDEO wants to encourage the user to ask—the 52nd question.

The deck of the *Delta Primer Playing Cards*, by Jane Wolff, has 52 cards, and unlike the *IDEO Method Cards*, they can be used for playing games. However, the deck serves primarily as a thought-provoking instrument for understanding the little-known landscape of the California Delta. There, where the Sacramento and San Joaquin Rivers meet, lies a unique and often surreal environment where islands exist below water level, and oceangoing cargo ships appear to traverse fields of asparagus. The landscape is bounded by two major freeways and crossed by a mammoth aqueduct supplying water to the lawns of

Southern California. Wetlands hosting migratory birds contend with encroaching Central Valley suburbia. This environment is the result of a land reclamation process, with a complex infrastructure of levees and pumps, begun in the 1860s, that turned this vast region of California into an inland “Zuider Zee,” today California’s most contested real estate.

Wolff analyzes and describes the California Delta through a dissection process of mapping. A sectioned USGS map of the California Delta conceptually organizes a critical inventory of topics described in the cards. These topics form four suits: Machine, Garden, Toy, and Wilderness. There is a wealth of both information and artistry in Wolff’s meticulously hand-drawn images, which are both illustrative and diagrammatic. The methodology is one of abstraction, though it is not reductive. The cards can be perused or played. The informed random nature of the card game is a poetic metaphor for the

process of exchange, negotiation, winning, and losing, as water and land are manipulated by the real-life multiple stakeholders.

*The Delta Primer Playing Cards* can be acquired along with the book *Delta Primer, a Field Guide to the California Delta*. Here the cards are reproduced one-third larger than the deck size along with the USGS map sections and photography. This is a welcome accompaniment since the card’s exquisite graphics and text are sometimes difficult to read clearly. Essays by Wolff and Kevin Starr, a historian of the state of California, provide useful historical context for the many issues raised in the deck. And in the deck, the Jokers ask the big question: What will become of the Delta as conflicting groups negotiate its use and aqueducts take more water to the city?

With the multitude of ways that information enters our lives today, the *IDEO Method Cards*, and the *Delta Primer Playing Cards* demonstrate the timeless nature of Father Murner’s innovation. *John A. Loomis*

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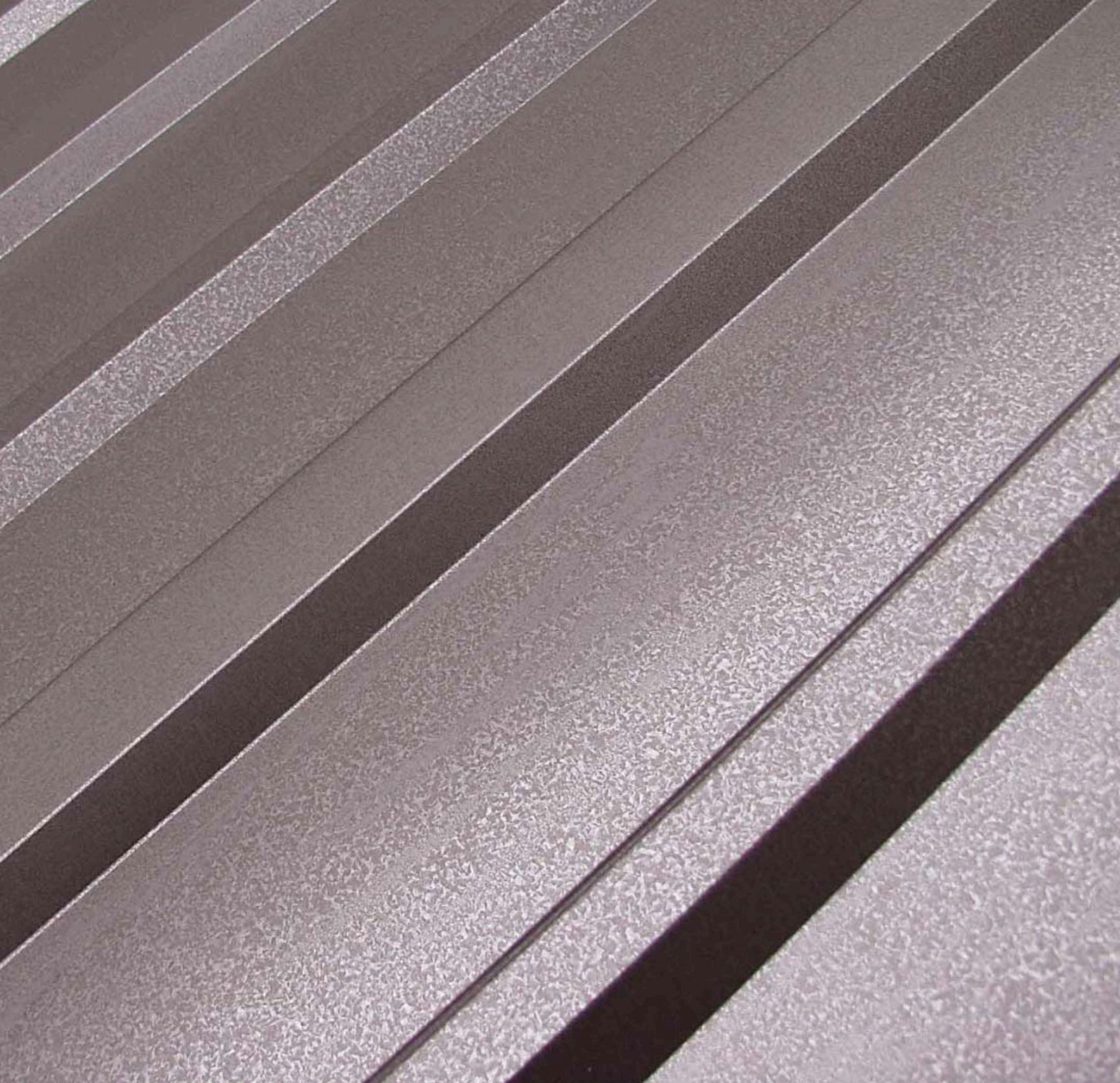
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# Snapshot



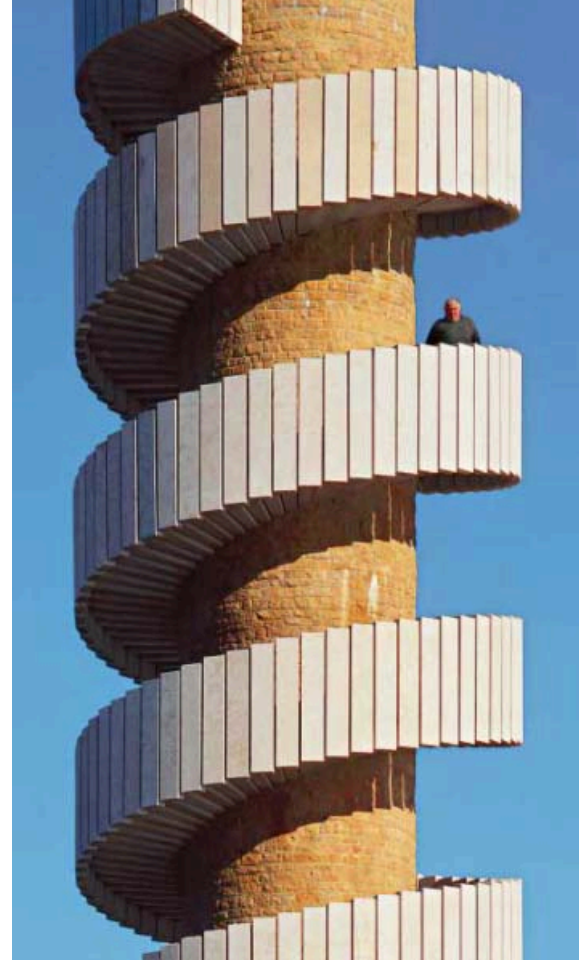
**By Robert Such**

Named for the mountain range in which it is located, the Tour de Moron stands on the edge of a forested slope in French-speaking Switzerland. Designed by Swiss architect Mario Botta, the stone-and-metal tower was realized by local apprentice stonemasons. “The construction of this belvedere tower,” says Botta, “was inspired by the desire to create an image that would give visibility to the work done by several hundred apprentices in the region as part of their vocational training to become stonemasons.” Some 700 apprentices worked on the project, which took four years to complete.

Described by the architect as “an arrow driven into the terrain,” the tower, which was completed in 2004, stands 4,441 feet above sea level. To take advantage of the surrounding vistas, a cantilevered staircase of 191 stone steps spirals around the 10-foot-wide core. The double-walled masonry of the central support is faced with yellow Corton limestone, shipped from France’s Burgundy region, and filled with reinforced concrete. Steps and railing are made from

## Botta’s belvedere salutes the local stonemason

## Snapshot



Those willing to make the long journey to the top of Botta's tower are rewarded with a 360-degree view of the idyllic Swiss countryside.



blocks of gray limestone. The tower itself resembles a stone column, deeply carved in a spiral pattern to reveal its yellow center. A steel-framed roof clad in zinc caps the viewing platform, which rises 85 feet above ground level. Information panels at the top help visitors to identify landmarks in the dramatic landscape.

Born in 1943 in Mendrisio, Switzerland, Mario Botta was influenced early in his career by Louis Kahn and Carlo Scarpa. The Riva San Vitale House in Ticino, Switzerland (1972–73), the Evry Cathedral in France (1995), and the San Francisco Museum of Modern Art (1995) are among his most significant architectural works. Though it exists on a much smaller scale, the Tour de Moron, like Botta's other projects, expresses solidity and permanence. It is also a testament to his interest in artisanal construction techniques, and his use of simple geometry—the cylinder is a recurring form in his buildings. “Geometry,” he says, “creates equilibrium in the space.”

Photographs, in which slices of landscape are visible through nearby trees on the northern side of the tower, only hint at the spectacular sight awaiting those willing to climb the Tour de Moron, which is reached by way of a winding path through dense forest. The 2-hour journey begins from the village of Mallerey or from one of several car parks that lie en route to the foot of Botta's belvedere. In the final part of the ascent, visitors climb a ladder inside the stone column—as you might climb into a church belfry—to access the viewing platform. The physical effort is rewarded with an awe-inspiring panoramic view from Botta's lofty aerie of blue mountains, white peaks, and a jagged horizon. ■



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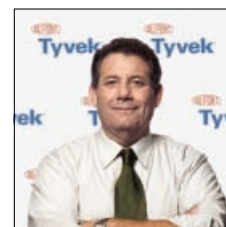
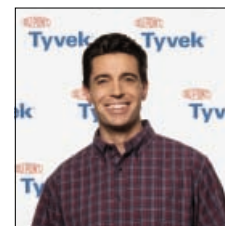
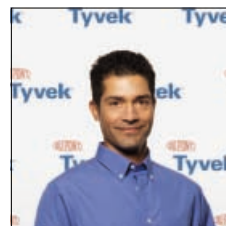
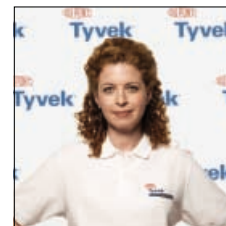
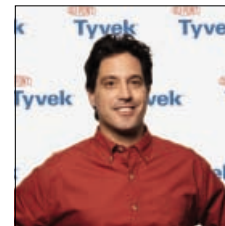
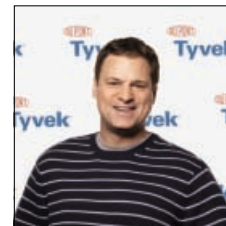
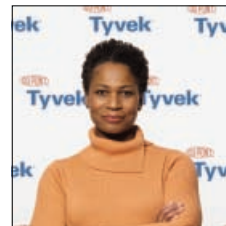
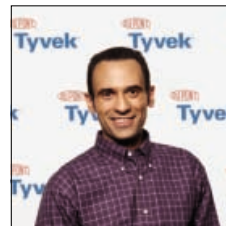
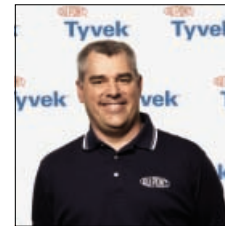
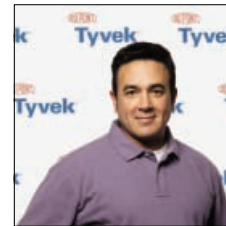
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By Nancy B. Solomon, AIA, and Charles Linn, FAIA

**A**rchitects usually can't say enough about what they've been up to. But when the subject turns to offshoring, the volume of the conversation often drops to a whisper. That's because the practice of paying less-expensive workers located beyond the borders of the U.S. to do tasks once done here by architects and interns is extremely controversial.

When one of the largest firms in the country was contacted for this story, its media-relations director responded, "We do not do any offshoring." Despite that declaration, the firm's title block can clearly be seen on a working drawing in a Powerpoint promotion produced by an offshore drafting and design company. A principal of another large firm was willing to talk, but only on the condition of anonymity. Even some service providers are ambivalent about implications of sending work abroad. A representative of a U.S.-owned drafting service that sends some of its work abroad spoke extensively to ARCHITECTURAL RECORD about the practice, but several days later asked that the company not be named in this article. Other offshore providers were willing to speak about the practice, but said they couldn't reveal the names of the architecture firms for whom they work.

Like many of his colleagues, HOK's C.E.O. Patrick MacLeamy, AIA, has serious concerns about what he calls "traditional" offshoring: Contracting "someone in India for the purpose of saving money may be an idea that has some merit, but it can lead to unintended problems," he says. He adds that HOK has no plans to venture into this form of offshoring—although it does share work among its multiple international offices—and warns other firms to be very careful. "You get what you pay for," he says succinctly.

Not all practitioners, however, feel the need to cover up or avoid the practice. Kimberly D. Patton, AIA, a partner at GBBN Architects, a 100-person firm in Cincinnati, dismisses the inflammatory connotations that have come to be associated with the term *offshoring*. Says Patton, "Architects are skittish about all sorts of things. There is a shame in making money in this industry." He encourages his colleagues to look at the larger picture: "This transformation will be bigger than the computer. We will see radical changes in process and delivery." Patton sees the engagement of overseas workers as an

*Contributing editor Nancy B. Solomon, AIA, writes about computer technology, building science, and topics of interest to the architectural profession.*

efficient application of resources and believes that the documents his firm now delivers through offshoring are better because of the extra preparation, organization, and communications his firm gives in an offshored project. He suggests that offshoring may provide even better quality than work done here because it allows architects more time for quality control. "The dirty little secret is that no one has time to check," says Patton of documents made here.

### The gains, losses, and tough questions

To be fair, U.S. architects have made millions selling their services abroad for decades. It has taken the emergence of the World Wide Web and a generation of experienced, highly educated foreign architects to allow architectural work to start flowing back to the U.S. For some architects, the promise of high-quality services like overnight CAD drafting and rendering beckons like a siren—it might be the key to survival in an environment where clients are squeezing fees, and labor and overhead costs are on the rise.

But questions regarding the downside are also immediately apparent, and they have caused firms to be leery about publicizing the fact that they are even flirting with the practice: Will sending work abroad cause architects to lose jobs at home? Will the entry-level jobs that have always been the training ground for the profession disappear? Can architects honestly say that documents created offshore were produced under their direct supervision? How will clients react, if indeed they find out?

In fact, at the present time, it is not clear whether architects who are already using offshore labor are necessarily telling their clients about it. Some worry that clients will ques-

# Are We Exporting

tion the quality of foreign work, or wonder if the practice will cast an unpatriotic shadow on their reputation. Joan Capelin, president of Capelin Communications in New York, doesn't think clients really care: "If the standard of performance is agreed upon at the start, it shouldn't matter to anyone. If the architect sees no moral conflict with it, the practice should be viewed simply as a business decision."

Others fear that their clients may want even more tasks to be offshored to reduce schedule times and design fees even further. And some architects might want to preserve their



# Architecture Jobs?

profits and competitive edge as long as possible. According to Michael Jansen, a Chicago-born entrepreneur who a few years ago founded Satellier, an Indian production shop, “None of our clients want to be open, because they are making a lot of money by working with us. They don’t want anyone else to.” Jansen says his firm charges about \$150,000 for production work that would cost a U.S. firm \$400,000 to do in-house.

### The difference between outsourcing and offshoring

The terms *offshoring* and *outsourcing* are frequently used interchangeably, but this is misleading. *Offshoring* refers to work being done beyond our borders, no matter who is doing it—branch offices, associated architects located offshore, or offshore service providers. *Outsourcing* refers to work being done by people who are not employees of the architecture firm. For the purpose of this article, *offshoring* is defined as the practice of relying on people or firms based outside of the U.S. to undertake some portion of a project that would be built on U.S. soil.

There are several variations of the offshoring model, including firm-owned branch offices located in other countries, and long-term partnerships with foreign architecture firms. Services can also be contracted through direct relationships with one or more offshore specialty consultants who provide services as needed, or through U.S. brokers who act as middlemen between U.S. firms and overseas workers. Some firms seem to use more than one model, or at least have tested out a few different approaches.

The services offered run the gamut, from rendering, animation, and model making to elementary CAD drafting, on up to complete sets of construction documents. GBBN’s Patton believes that, depending on the project, team skills, and

communication established between the U.S. firm and foreign consultant, as much as 40 percent of a project can be done offshore, “from renderings to door schedules.”

Of all the models discussed, those involving firm-owned branch offices, and partnerships with foreign associate firms, seem to be less controversial than those in which work is offshored to foreign services providers or to services brokers. Branch office and foreign partnership arrangements are typically initiated because of the promise of work abroad, so there is some chance that over the long term there will be a financial quid pro quo. So, while foreign employees can contribute work to a project that will be built on U.S. soil, the offshore office could also be awarded work in its country that would enable U.S. designers involved in it to be hired here. Presumably, the offshore workers will be familiar with the U.S. firm’s CAD standards, and the offshore work will be subject to the firm’s quality controls.

Work involving service providers and brokers seems to be much more controversial. There seems to be little chance that a U.S. firm that sends a job offshore, either directly to a contractor or through a U.S. broker, will in return ever be hired by those companies. This creates a kind of professional-services trade imbalance that is easy to criticize if American architects start losing jobs on account of offshoring—as have software engineers, for example. Quality control is another issue. The U.S. architect is at least one step removed from the people doing the work, so direct supervision during the creation of the product is difficult if not impossible. Another concern is that American architects have no control over the working conditions of their foreign counterparts. As companies like Nike can attest, the slightest hint that an American company is exploiting foreign workers can be a public relations nightmare.

## ARCHITECTURAL RECORD’S Offshoring Questionnaire

In August, 2004, ARCHITECTURAL RECORD sent a confidential questionnaire to each of the top 25 architecture firms listed in the 2004 *Engineering News Record Top 500 Design Firms Sourcebook*. It asked, “Are you offshoring (i.e., relying on people or firms based outside the U.S. to fulfill work on projects that will be built in the U.S.), or have you ever done so?” Nancy Solomon, one of the authors of our story, did the polling, making an effort to identify a person in each firm who could answer the survey with some authority.

### Here are some of the results:

- Eight firms said that they are or have sent work offshore. Eleven said that they have never sent work abroad,

although five of these said that they would consider doing so under certain conditions in the future. Six did not reply to our questionnaire.

- Of the eight firms that offshore, five contract directly with service providers; four send work to their own offices; one uses foreign architecture firms with which it has an ongoing relationship; and one said it went through a broker. (The total adds up to more than eight because some firms have tried more than one arrangement.)
- Three out of the six firms who answered our question about the kind of work they are sending offshore said 100 percent of it is construction documents. One said 100 percent is

presentation drawings and models.

The other two firms are offshoring schematic design, design development, and presentation work, in addition to construction documents.

- Firms that said they are sending work offshore say work is going to China, India, Canada, Mexico, Britain, the Philippines, Romania, and Colombia.
- Four firms responded to a question about whether offshoring saved money. Three said yes.
- Three firms responded to a question about whether offshoring saved time. Two said yes.
- Three responded to a question about quality. Two said it is problematic; one found it good.





**Stephen A. Fiskum, AIA, of Hammel, Green and Abrahamson, says these renderings made in China cost about one sixth of those made here.**

The offshoring of renderings and presentation models seems to be least controversial, and people interviewed for this article were very open about doing it. Many architects already outsource this work anyway, so sending the work abroad is just a matter of getting the best price, and the perception is that their employees will probably not lose jobs on account of it. Workers for U.S. rendering and model shops may feel differently.

#### **How much work is going abroad?**

At this point it is impossible to determine how much work is being sent offshore, but several informal surveys conducted over the past year suggest that a surprising number of firms have or are considering doing it. Kermit Baker, Hon. AIA, the AIA's chief economist, wrote in the May 17, 2004, issue of *AIArchitect* that 11 percent of the approximately 200 U.S. architecture firms responding to a Work-on-the-Boards business survey in early 2004 said they had sent work at least once to independent offshore providers. An additional 14 percent had seriously considered it.

Tom Larsen, AIA, of Larsen Associates, a Milford, Connecticut-based design-management consulting firm, conducted other surveys in 2004. With help from AIA chapters, he polled 86 members in Connecticut and another 77 in Chicago and found that 2 percent were currently engaged in the practice and 5 percent were exploring it. In August, he surveyed 122 people through the Boston Society of Architects and found that 20 percent were engaging in offshoring and 25 percent were exploring it.

Last fall, ARCHITECTURAL RECORD sent confidential questionnaires to 25 of the largest U.S. architecture firms (see sidebar, opposite) and found that eight of them acknowledged offshoring to some degree, although typically in small amounts to test the waters. Five had not yet used services offshore but seemed open to doing so in the future; six said they had never used them and gave no indication that they ever planned to; and six firms declined to answer the questionnaire or did not respond. Of the eight firms that said they sent work abroad, two of these only sent work to overseas offices they owned, two sent to both firm-owned offices and other types of providers, and four had sent work to individuals or offices that were independent of the U.S. firm.

Admittedly, these surveys are extremely limited, both in their sampling sizes and methodological rigor, but at a minimum they suggest that the rumors of people sending work outside the U.S. do have basis in fact. The appearance of offshoring seminars at national and local conferences also suggests that practitioners are curious about the phenomenon.

#### **Why firms are offshoring**

Of course, it all boils down to time and money. U.S. architects who have engaged offshore providers indicate that the turnaround time is quick for any number of reasons: It can be because foreign workers are more efficient, are accustomed to working longer hours, or can work when U.S. workers are asleep. Since lower wages are being paid, more workers can be



The above rendering and presentation model were made in China for the Hillier Group. Architects report that even with handling charges, high-quality models cost 15 to 20 percent of what they would if made in the U.S.

put on a given task. In any event, U.S. practitioners say that with faster production, they can spend more time fine-tuning designs, ensuring quality control, and pursuing new work.

A couple of years ago, when staff at RTKL's U.S. offices were all busy, chairman Paul Jacob III, AIA, says the large firm decided to enlist the services of an Indian drafting company, both to relieve time pressure and to satisfy a curiosity about the novel practice. He says that the endeavor was "moderately successful," although RTKL has chosen not to actively pursue this form of offshoring.

Small firms can also benefit from quick turn-around times. Paul Krause Architects, a five-person firm in Katonah, New York, does residential additions and renovations. As a result, it often needs to convert existing drawings from paper to CAD. Partner Michael Tierney says that about two years ago, "We ran into a time crunch. It would have been too time-consuming for our guys to do this." They tested out a U.S.-based drafting service that sends some of their work abroad: Pleased with the quality of the work, the turn-around time, and the cost, they have been using the drafting service ever since. Tierney estimates that the service can reduce by about three months the time required to complete a project that previously would have lasted six to twelve months.

There can be financial savings, as well. Tierney says the work he sends out "costs about one third of what we would have paid to do it in-house." Stephen A. Fiskum, AIA, chief operating officer of Hammel, Green and Abrahamson in Minneapolis, says that the high-quality renderings generated by its Chinese

provider cost about one sixth the price of renderings made here. And Thomas K. Fridstein, FAIA, the chief executive officer of the Hillier Group, reports that a set of construction documents produced by an Indian firm for a small trial project cost \$12,000 initially—plus \$4,000 to fix. But even with the added cost of revisions, Fridstein says, "it was quite successful," largely because it would have cost about \$54,000 to outsource the production to another U.S. firm, and about \$150,000 to accomplish in-house.

Whether U.S. firms are large or small, balancing staff workloads is another reason commonly cited for offshoring. This is the primary reason why HOK sends work to its branch offices abroad, says MacLeamy. The surplus work is sent to Canada or Mexico: Canadian staff costs about two thirds to three quarters of its U.S. staff, and Mexican staff costs a little less than half.

Another reason why architects are looking to offshore is that "most firms in the country are dealing with labor shortages," says Robert G. Packard, Assoc. AIA, who is a partner at the Zimmer Gunsul Frasca Partnership in Portland, Oregon, and chair of the AIA Large Firm Roundtable. Packard explains that many U.S. firms had been complementing their U.S.-born staff with foreign architects in recent years, but since 9/11, foreign employees and students have had greater difficulty obtaining visas.

Some firms feel their competition is forcing them to try offshoring. The chief operating officer of a large Midwestern firm, who did not want to be named for this story, believes that his firm is being underbid—particularly within the hospitality sector—by competitors who are relying on overseas firms. He says, "There is no question in my mind that we are competing with India," and indicates that his firm will have to use offshoring if they want to remain competitive within that particular market.

#### Foreign workers are experienced and motivated

Although the term *offshoring* seems to evoke the image of a sweatshop full of anonymous workers, the reality can be far different, at least in the architectural world. Several American architects commented that they are impressed by the work ethic of service providers abroad, and caution U.S. architects not to underestimate their skill level. According to Patton, the Chinese architects he has come to know are "intelligent, very well trained

**"THEY ARE INTELLIGENT, VERY WELL TRAINED PEOPLE, WILLING TO WORK AT A PACE WE CAN'T MATCH."**

people who are willing to work at a schedule and pace that we can't match."

Robert W. Vanech, chairman of CADFORCE, a drafting service headquartered in Marina Del Rey, California, believes that the overseas career draftsman is far more dedicated to his or her particular tasks than the typical American architectural intern. Referring to the foreign drafters, he states, "They love what they do and want to do more and be better, as opposed to young architects who want to be designing award-winning projects."

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The most common—and most promising—way U.S. firms have started offshoring is through already-established relationships. Sometimes the work goes to a former employee who came to the U.S. to study and work before returning to his or her home country. The former U.S. employer is not taking much of a risk by sending tasks to this person overseas, because the employer is familiar with their capabilities. Another avenue taken by many U.S. firms is to nurture ties with a foreign architecture firm that they may have worked with on a design they did for an overseas location. “That relationship may open doors for additional work in the foreign region for the U.S. firm,” notes Packard.

Offshore firms that claim they can do different aspects of production work at cut-rate prices are bombarding U.S. architects. Most risky are those potential suppliers the architecture firm has never heard of, with whom it has never worked, or for whom it has no recognizable references. Obviously, potential suppliers must be carefully vetted.

**Management challenges for firms that offshore**

Clearly, the economic pressure to offshore work must be balanced with the many serious challenges presented by the process—especially when the task in question is the production of working drawings. Hillier’s Fridstein sees that there can be a value in using overseas workers to draft and pick up red-lines while architects sleep. “But send all the contract documents? That is a little bit scary.”

It is critical, for example, that firms find someone they can trust. Patton suggests that after the initial qualification process

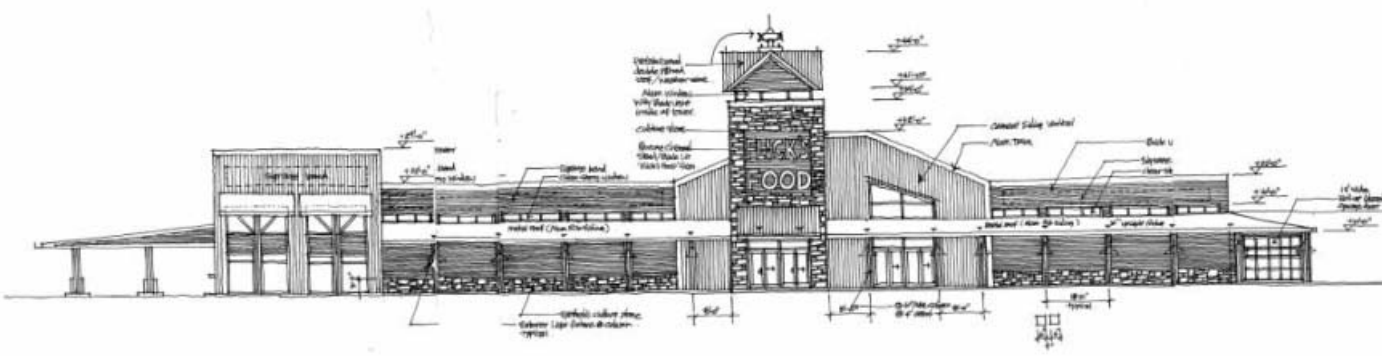
that one would typically do for any consultant—reviewing their work, contacting references, and the like—initially, architects should view the offshore office as an intern. It must be monitored closely, and assignments must be doled out to it incrementally in keeping with its level of expertise. Patton has identified tasks—ranging from simple to complex—at every

**MOST U.S. FIRMS HAVE STARTED OFFSHORING THROUGH ALREADY-ESTABLISHED RELATIONSHIPS.**

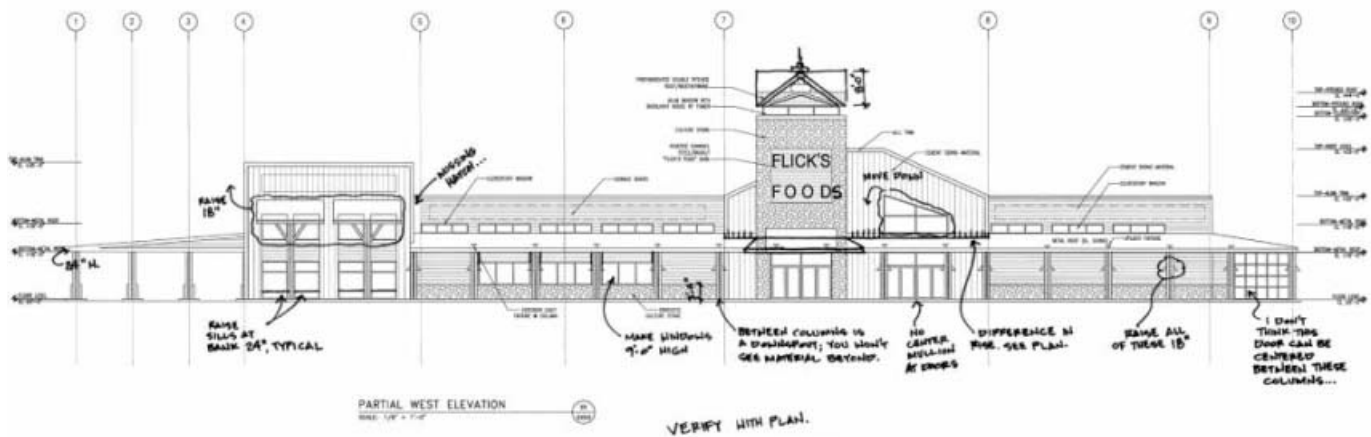
phase of a project that can be handled offshore once the provider demonstrates its mastery of a particular skill.

Then there is the need to establish and maintain standards. Fiskum says that if HGA were to offshore contract documents to India, the firm “would send one of our key architects over for two weeks to teach the unique ways we customize our software, including our standard details.” And the firm would dedicate one person in the States to review and mark-up what was done offshore on a daily basis. After all, the U.S. firm is ultimately responsible for the finished product, no matter where it is drawn. James Katz, president of CADFORCE, says architects need to understand the limits of a drafting service. “You can’t ask us to do your decision making for you,” he says.

Moreover, the project must be managed long-distance across not only time zones but also linguistic and cultural divides. Such differences may require anything from hiring interpreters to training providers in the American way of doing business.



GBBN architects sent the above design-development sketch to an offshore drafting firm, which returned the CAD drawing below in a day. The hand-lettered notes on the CAD version indicate revisions and corrections GBBN made to the CAD drawing before it was sent back for completion.





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Satellier's offices look just like those of any American firm—except that they're in India. The company employs about 125 architects and engineers there.

### Long-term challenges to the entire profession

Assuming a firm has no ethical or political reluctance about hiring foreign workers, it would seem that the principals could size up pretty quickly whether the opportunities are worth the risks. Professionwide, however, offshoring poses more complex questions. At the top of the list is whether entry-level work, which has always been done by interns, will be shipped overseas. Says Fridstein: "Typically, schools of architecture focus on theory and design and count on an architect-intern's first few years in an office to learn the nuts and bolts. If that part of the profession disappears, how can you train them? I think people are looking for ways of saving money without thinking it all the way through. I don't think it is really healthy in the long term." Many top leaders in the profession are currently struggling with this dilemma.

Different people have entertained different scenarios. Will American schools of architecture be forced to teach the "nuts and bolts" in the future, instead of assuming that firms will do it? Or, as a speaker on a panel at *Engineering News Record's* Top 500 Leadership Conference held in New York last November asked, "What are we going to do? Send our graduates to India to train by working on our own jobs?"

Tom Larsen theorizes that, if the offshoring of documents catches on, U.S. architects in the future would handle design as well as the "face-to-face" portions of the work—marketing, contact with the client and contractor, and site visits—but that little document production would be done here. He suggests that there will be fewer jobs for U.S. graduates, so competition in the schools will be fierce. Communication skills will be more highly valued than the ability to generate construction documents. Those who are talented and lucky enough to land jobs will pass very quickly through repetitive tasks and onto design and fieldwork. Small firms will be of two types: boutique firms that will take on unique or highly specialized projects, and firms that handle straightforward designs, manage offshore document production, coordinate with consultants, and administer contracts. Firms that do large-scale commercial, government, and institutional projects and do not do repetitive design will prosper. Larsen warns that medium-

size firms will be hit very hard by the change.

Some echo Larsen's beliefs. According to Fiskum, "The real value that design firms bring to their clients is in the more intellectual aspects of the work—design, programming, strategic facility planning. Good construction documents are becoming more of a commodity. It has less of a future than the more up-front services." But others disagree: "The production of drawings is not a commodity," argues Fridstein. "A lot of skill and art are required to develop drawings. We sell the skills and talents of the people we have."

Alexander Wu, director of marketing and business development at Kaplan McLaughlin Diaz (KMD) in San Francisco, says, "One inherent problem with [international] outsourcing is that architectural ideas and designs are not translated through the construction document, so the project doesn't end up being what was intended in the beginning. There are better ways to service clients than buying cheaper labor."

### The bottom line, maybe

Obviously, many conflicting and complicated issues swirl around the practice of sending abroad architectural work that had previously been handled in the U.S. But ultimately, the debate seems to boil down to one's fundamental view of architectural practice. If one regards buildings as commodities that can be dissected into basic generic parts, then it seems that there is little to be lost—other than thousands of U.S. architecture jobs—by sending work offshore. Firms that do so will learn to harness the global machine effectively in order to efficiently turn out repetitive, and therefore prosaic, commercial and industrial buildings. Residential builders, and modular-home and metal-building manufacturers, are already well along in doing just that, mostly without the help of U.S. architects or foreign workers.

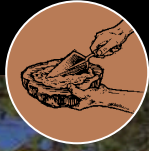
If, however, one regards buildings as creative solutions to site- and client-specific needs, then it seems that there is a great deal at stake. How can a structure adequately respond to the complexities of environment, function, and culture unless the design and construction documents evolve together and are

**"WHAT ARE WE GOING TO DO?  
SEND OUR GRADUATES TO INDIA  
TO TRAIN ON OUR OWN JOBS?"**

refined holistically in real time? How can so many construction-document tasks be ceded to overseas workers without the American architectural profession risking the loss of at least some of the skills required to shape authentic, poetic, and compassionate forms? And if those skills are no longer needed here, will there be anyone left in our schools of architecture who can teach them? It appears to be a slippery slope.

There isn't any doubt that offshoring is here to stay. But at this point, only time will tell what it will do to our profession. ■

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MoMA's new galleries define the west edge of the sculpture garden (this page). The museum now has entrances on 54th Street as well as 53rd (opposite, bottom), down the block from the original Philip Goodwin and Edward Durell Stone entrance (opposite, top) and just west of the Museum Tower by Cesar Pelli (opposite, bottom).



# CRITICISM With Yoshio Taniguchi's design, New York's MUSEUM OF MODERN ART finally becomes what it wanted to be all along

By Suzanne Stephens

**B**y now, enthusiastic depictions of the new Museum of Modern Art in New York (pristine, elegant, immaculate, and weightless) have been bruited about in the press, along with more negative assessments (corporate, unexciting, and overscaled). Indeed, MoMA's new quarters, designed by Japanese architect Yoshio Taniguchi, with Kohn Pedersen Fox (KPF) as the executive architects, is all of the above. It presents itself confidently as a supremely refined, neutral space for showing art, and its moments of cool elegance and transcending clarity can astonish. Yet its cavernous size, in places where the building's smooth rectilinear planes never seem to stop, can feel monotonous. The construction reaches an impressive precision in certain areas, such as in the glass-and-metal curtain walls; but borders on ragged in others, for example where the drywall ripples by the escalators. Taniguchi and museum director Glenn Lowry have made it clear they weren't after the wow of Gehry's Bilbao Guggenheim or the organic oomph of Cooke and Fournier's Kunsthalle in Graz. This museum is too subtle to be sexy—but it seems so appropriate for the Modern, almost inexorably so. As a reflection of its institutional, cultural, and architectural history, Taniguchi's renovation and expansion, a monumentally scaled, serene series of cubiform volumes and slabs, seems to have evolved naturally out of the institution's own architectural unconscious. It's what the Modern always wanted to be.

The museum's desires to be both a repository of historically Modern art and a divining rod of the best in contemporary art, as well as a financially self-sufficient private entity, shaped its physical growth (page 104). The International Style marble-and-glass building designed by Philip Goodwin and Edward Durell Stone in 1939 adroitly expressed the Modern's youthful identity. Yet it was the financial powers in the museum (mainly the trustees, including a young Nelson Rockefeller), more than the artistic leaders, that determined the choice of the architects. Founding director Alfred H. Barr, Jr., had hoped for Mies van der Rohe, Walter

**Project:** Museum of Modern Art renovation and expansion, New York

**Client:** Museum of Modern Art—Glenn Lowry, director

**Design architect:** Taniguchi Associates—Yoshio Taniguchi, principal; Brian Aamoth, project architect; Peter Hahn project manager; Keiji Ogawa, Taichi Tomuro, Junko Imamura, design team

**Executive architect:** Kohn Pedersen Fox Associates—Gregory Clement, managing principal; Thomas Holzmann, Stephen Rustow, senior associate principals, project direction

**Other architects:** Cooper, Robertson and Partners (programming); Alspector Anderson Architects (conservation laboratories); Gluckman Mayner (retail); Bentel and Bentel (restaurant, café)



PHOTOGRAPHY: © TIM HURSLEY, EXCEPT AS NOTED

PROJECTS



The new lobby (opposite) is oriented to the garden, viewed through an elegant 55-foot-high curtain wall with painted steel mullions only 2½ inches wide and 7½ inches deep. A grand stair leads to the 110-foot-high atrium on the second floor (below).



Gropius, or J.J.P. Oud. He lost. While the Goodwin and Stone collaboration may not have produced the world's most avant-garde statement, its machine-made, crisp, linear forms soon emblemized what it meant to be Modern—or, better yet, what it meant to be The Modern.

Now Taniguchi's planar amalgam of black granite, anodized aluminum panels, and gray, clear white, and fritted glass both brilliantly manifests and discreetly masks a series of sometimes-conflicting desires about the Modern's role and image that have emerged over its 75-year history: Can MoMA be a museum *and* be modern, to paraphrase Gertrude Stein? Is it possible for a museum funded by corporations to be truly avant-garde? Taniguchi's architecture begs these questions with a cool aplomb. Yet if the Modern is still too big, and in some places too stark, it seems inconceivable that another architectural expression would have been the right one. Critics can scream and shout about its not being avant-garde or spectacular, but one thing's for sure—you know you're at MoMA.

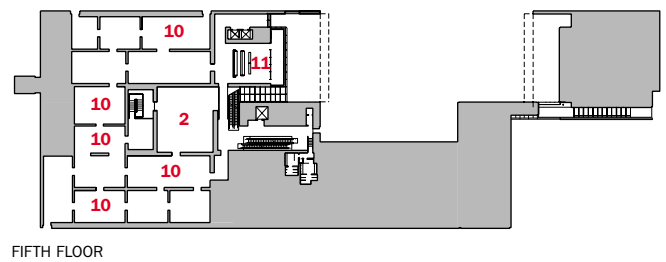
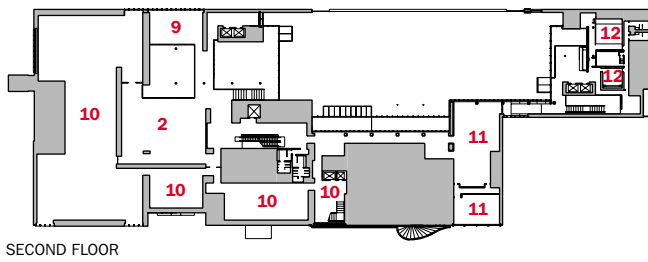
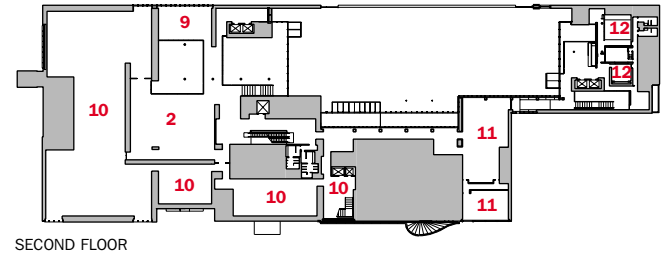
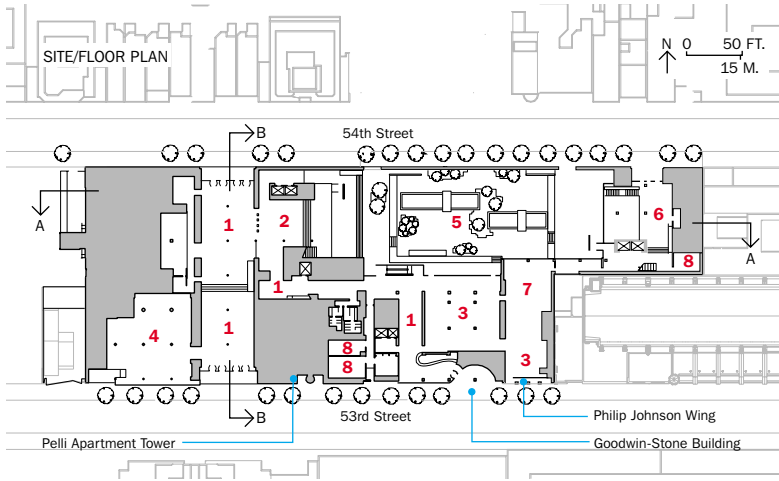
Taniguchi's steel-framed and concrete deck addition, at 630,000 square feet, swallows the old 109,100-square-foot Goodwin-Stone museum. In so doing, it becomes that which it absorbs, extrapolating on the design with updated materials and construction techniques. Gone, however, are the old museum's sense of intimacy and domestic scale in which one could contemplate the art in a neutral, loftlike setting. In many ways this is a serious loss. But then, that intimacy was dissipated years ago, with the 1984 expansion by Cesar Pelli & Associates. We got used to MoMA at a plus size. We now have to visit museums with more modest aspirations to experience the ideal act of contemplation so valued between the observers and the art; we must search for museums with different missions, financial setups, leaders,

and heritage. With the factors of its provenance taken into account, and in light of the limitations of constructing a crafted building in this imperfect city, it is almost shocking that Taniguchi, KPE, and their consultants were able to pull together the museum so well physically and symbolically.

### The thing itself

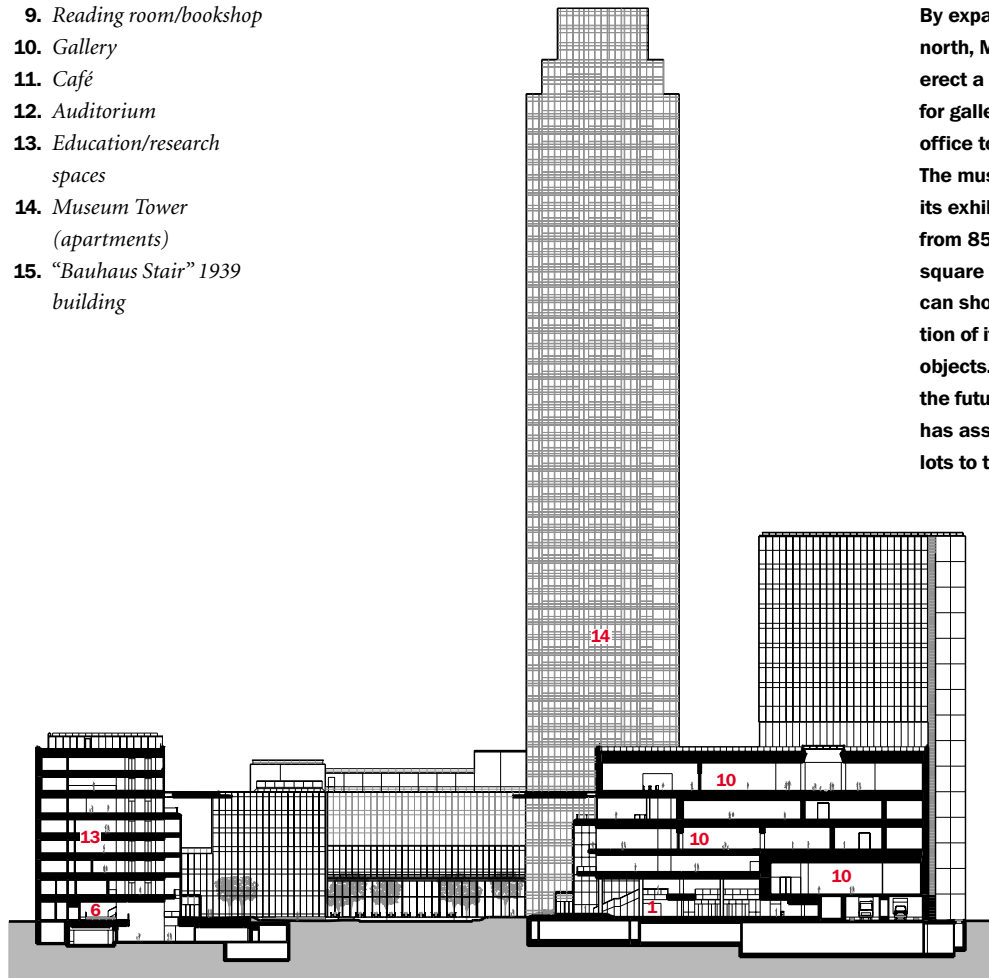
In its previous lives, MoMA extended along a half-block frontage of 53rd Street. With the acquisition of the Dorset Hotel on 54th Street, plus properties to the west of the Pelli-designed Modern Tower, the museum could conceive of a space that spanned the block from 53rd to 54th Street. Taniguchi created a vertical six-story stack of galleries arranged roughly in a square spiral around a 110-foot-tall atrium, which begins on the second floor. Stepping back from this gallery block, a smaller seven-story high tower juts up, reserved for museum offices and conservation.

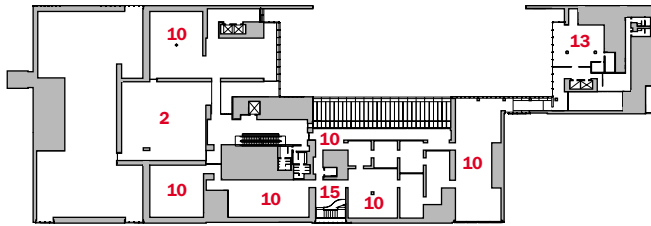
Taniguchi's manipulation of section throughout the new wing mitigates the pancake feeling of a conventional tower. For example, he raises the ceiling height in the lobby near the 54th Street entrance from 12 feet to 25. Visitors on a mezzanine-like second floor reading room and bookstore can look down into the lobby. From a bridge traversing the space, they have a stunning view of the sculpture garden through a soaring clear white glass window wall with anorexically thin painted-steel mullions. Similarly, visitors mounting the green slate stairs edged by a black granite wall find themselves in the staggering vertical expanse on the second floor. Here, large rectangular openings in the atrium's walls afford striking glimpses of galleries and circulation areas above, where in turn visitors looking at art can gaze down at the atrium below.



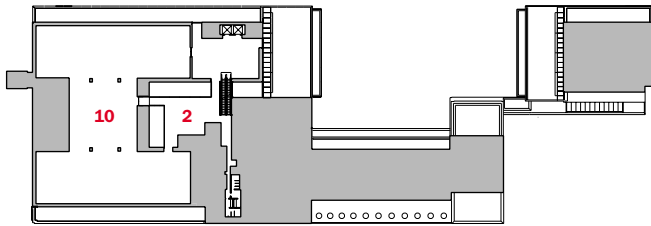
- 1. Lobby
- 2. Atrium
- 3. Restaurant
- 4. Bookstore
- 5. Sculpture garden
- 6. Lobby for education and research center
- 7. Services
- 8. Education
- 9. Reading room/bookshop
- 10. Gallery
- 11. Café
- 12. Auditorium
- 13. Education/research spaces
- 14. Museum Tower (apartments)
- 15. "Bauhaus Stair" 1939 building

By expanding west and north, MoMA could erect a six-story block for galleries, plus an office tower (below). The museum increased its exhibition space from 85,000 to 125,000 square feet, but still can show only a fraction of its 100,000-plus objects. Planning for the future, the museum has assembled several lots to the west.

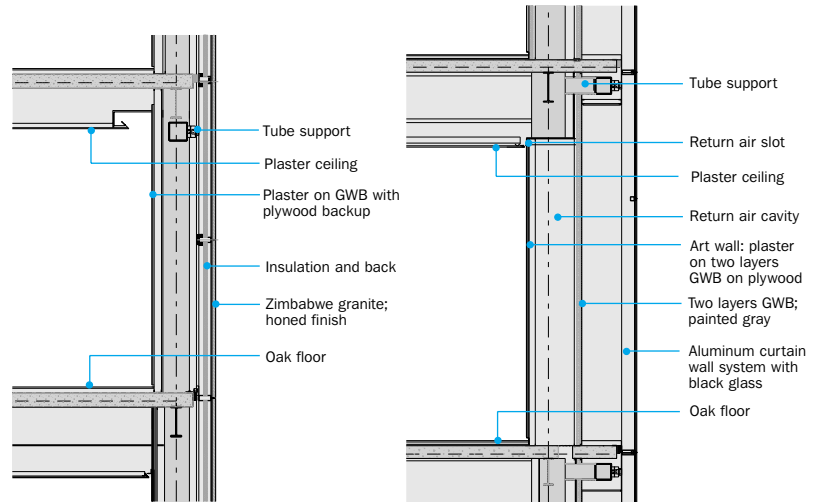




THIRD FLOOR



SIXTH FLOOR



WALL SECTION AT GALLERY (STONE)

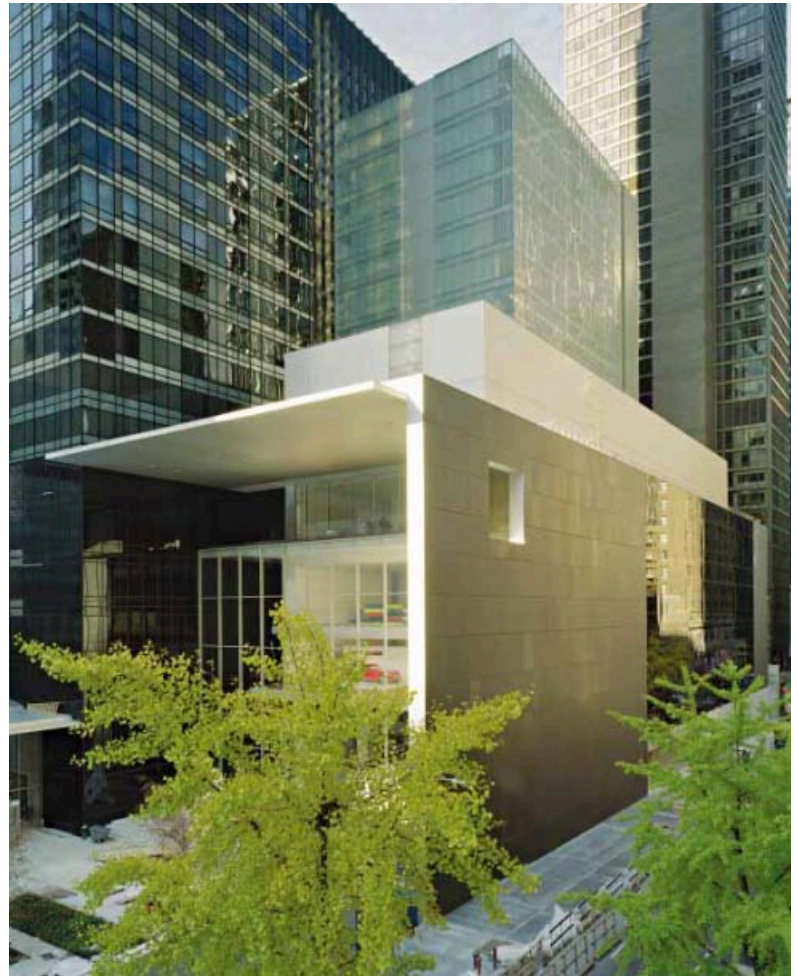
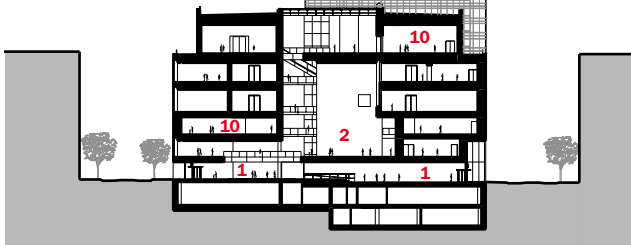
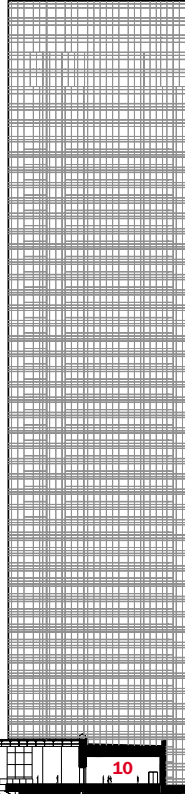
WALL SECTION AT GALLERY (BLACK GLASS)

The new construction is mostly on the 54th Street side (below), including a small, setback, 7-story office tower in the

shadow of the Pelli-designed Museum Tower apartments. The steel-framed building with concrete decking is clad

in aluminum for the canopies, with gray granite, and black, white, and ceramic-fritted glass curtain walls.

The double entrance on 53rd and 54th Streets allows a north-south pedestrian connection (section, below). The existing buildings on 53rd have galleries, as well as administrative offices, other nonpublic areas (dark voids in plan), plus a restaurant, The Modern, entered through the Philip Johnson addition.



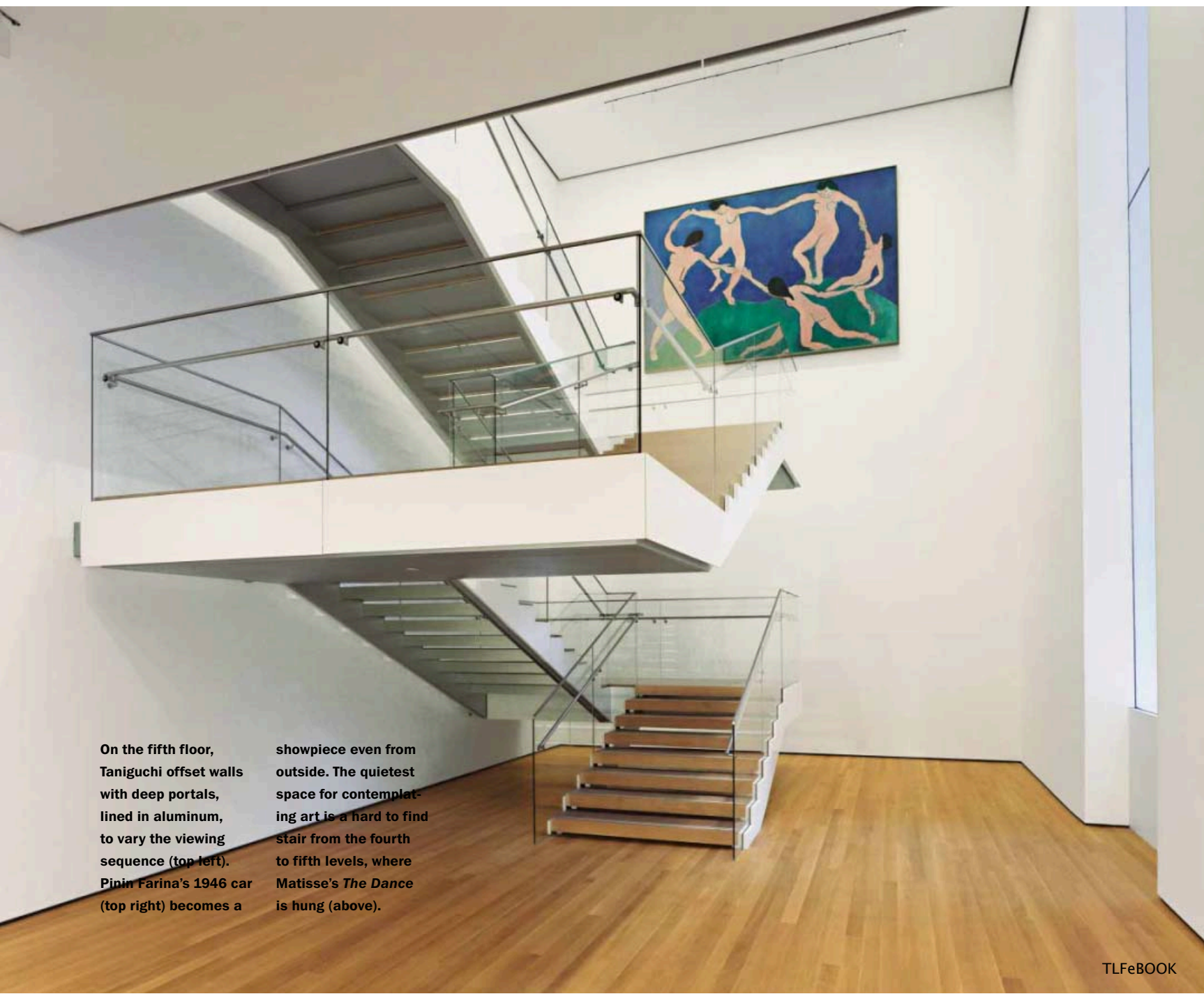


Galleries, including those for architecture and design (above), where Bruno Munari's lithograph *Campari* is hung, offer arresting glimpses of the atrium. With all the

new space, the architecture and design department increased its size from 6,800 square feet to about 8,500 square feet, including public circulation areas.

PHOTOGRAPHY: © FLOTOW + WARNER STUDIO (THIS PAGE)





On the fifth floor, Taniguchi offset walls with deep portals, lined in aluminum, to vary the viewing sequence (top left). Pinin Farina's 1946 car (top right) becomes a

showpiece even from outside. The quietest space for contemplating art is a hard to find stair from the fourth to fifth levels, where Matisse's *The Dance* is hung (above).



Throughout this gallery block, Taniguchi introduces riveting views of the cityscape of towers and town houses outside through glazed niches and large windows. These go far to reduce the claustrophobic feeling of being inside, and the shifting natural light modulates the flatness of artificial illumination. The only problem occurs at night, inside, when large expanses of glass turn into black voids.

The biggest distraction day and night is the overwhelming presence of drywall, particularly in the atrium. Though plaster-coated, the sheer expanse of matte white planar surfaces in this five-story space dwarfs and dominates the art—an ironic twist, since the “white box” has been considered so neutral as an environment to display art. As a result, Barnett Newman’s *Broken Obelisk* looks like a broken pencil when seen from above; Monet’s *Water Lilies* has all the dramatic presence of a shower curtain tacked up on a wall. Other finishes, such as waxed plaster, were likely too expensive, and at one point the architects discussed cladding the atrium with metal panels, but their grid and acoustical perforations would have been visually disastrous for paintings. Still, the atrium makes a great party hall. Perhaps the architecture and design department should step in with a missile from Cape Canaveral—isn’t the Bell 47 helicopter over the stair getting old?

To give the gallery walls a floating quality and make the art virtually pop out, Taniguchi used 1-inch reveals between the walls and the floor and ceiling. They needed a new extrusion for the approximately 5 miles of linear feet required to create the reveal. For the most part, the device succeeds, but rushed construction to meet opening deadlines left scars of hasty workmanship. And after a while you long for a tinted wall or two.

#### **Matisse on five**

The sixth floor is reserved for temporary exhibitions; five and four contain work from the permanent collection (1880s to 1940s and 1950s to 1980s, respectively); level three displays architecture, design, and photography; and the second floor shows contemporary work from about 1980 onward. Theoretically, visitors would take an elevator (tucked into a corner on the 54th Street side) from the lobby to the top floor to view temporary exhibitions, and then descend via escalators (also tucked away to be unobtrusive) through the rest of the collection to see it somewhat chronologically. One part of the strategy works: The escalators are no longer the main event as they were with Pelli’s 1984 renovation. The rest of the concept doesn’t: After you enter the museum, the spatial procession keeps you moving up via the main stair to the atrium and then by escalator to the rest, so you tend to view the collections in a more haphazard way. Should visitors want to dash in at lunchtime to see the latest temporary show, it’s a long way to the top.

No doubt the installations will be fine-tuned, yet ceiling heights are calibrated according to the size of the work installed on each floor—contemporary art on the second floor has a 20-foot-8-inch ceiling height and a column-free span of 180 feet to accommodate huge pieces (the architects installed a truss on the top mechanical floors and suspended the upper galleries from it). The sixth-floor galleries have an 18-foot ceiling plus two token skylights (more were deemed too pricey). The painting and sculpture

**The 20,000-square-foot contemporary galleries (above) offer enough room for Cy Twombly and Blinky Palermo paintings. Ellsworth Kelly’s *Sculpture for a Large Wall* (opposite) jumps off the wall on the skylit sixth floor.**



galleries, with smaller-scale art, vary between 12 feet 8 inches on the fifth floor and 14 feet 7 inches on the fourth. The architecture and design galleries on the third floor decrease to 11 feet.

Although visitors may be befuddled by the art's placement, at least the atrium visually orients them as they loop through the galleries. With a ticket price of \$20, museumgoers may want to check in for the day. A café and restaurant (designed by Bentel and Bentel), a second café by Taniguchi, a reading alcove and shop on the second level, a bookstore on the ground floor (both by Gluckman Mayner), plus two movie theaters and the garden, certainly help. All it needs is a spa. (Couldn't Jeff Koons do one?) Even so, the galleries are easy on the feet because of the springy floors. The concrete decks are shimmed with neoprene pads overlaid with a grid of boards with sound insulation, over which a plywood base and finally oak flooring are installed.

### **Back on 53rd Street**

KPF was in charge of renovating the 1939 Goodwin-Stone and the 1964 Philip Johnson buildings and restoring their facades. It's always a shock to realize these buildings and the garden have never been landmarked. How did the Modern avoid it? With all the changes, modifications, and tamping over the years, it is a wonder that a few well-beloved chunks remain, such as the Abby Aldrich Rockefeller Sculpture Garden, which Philip Johnson designed with James John Fanning in 1953. So the museum must be applauded for this latest fix-up, which includes reconstituting the canopy, the entry desk, and the general plan of the lobby of the 1939 building for the entrance to staff offices and the theaters.

The translucently white Thermolux panels of the Goodwin-Stone facade had deteriorated long ago and had been replaced with a milky spandrel glass. This time around, KPF found a manufacturer who had bought the patent of the original Thermolux—basically a suspended web of fibers in a sandwich of glass—and has reinstalled the updated version in the building's front.

Most of the iconic, so-called “Bauhaus Stair” in the Goodwin-Stone lobby was demolished 20 years ago, with only a reconstructed remnant remaining, which leads from the second to the third floor. The first leg, from the first to the second floor, unfortunately will not be reconstructed, for the space is being kept temporarily for education offices, and circulation down to the lobby of 11 West 53rd would create a security problem. Happily, the remaining piece now fares better. Originally, the luminous Thermolux wall emphasized the stair's linearity, but in the 1984 expansion, drywall covered the opaque glass window, owing to condensation problems. The stair, which formerly looked like a beached whale, is now breathtaking.

Both the remainder of the Goodwin-Stone and the Johnson buildings are devoted to galleries, as well as administrative offices, and a staff cafeteria and public café that are on the second floor of the Johnson building. The latter are designed by Bentel and Bentel, who also designed The Modern, a restaurant on the ground floor of the Goodwin-Stone building, which opens this month. KPF is also redoing the Founders' Room for the trustees and designed the director's office on the top floor of the Johnson addition, as well as deputy directors' offices at the top of the Goodwin-Stone building, where the canopy juts out over the terrace.



### The garden's back, but a bit sparse

Taniguchi ripped out the much-maligned greenhouse and escalators of the 1984 expansion. The greenhouse encroached on the sculpture garden, and the escalators blocked a view for those entering the museum. Now, ironically, that horizontal panoramic sweep has been diminished except at the ground-floor restaurant and terrace: The existing renovated structures offer less-encompassing views of the garden over setbacks and through ceramic-fritted-glass walls. The best views can be seen from the garden's short ends—from the new lobby on the west, and the eight-story education and research wing, to be opened in 2006, on the east.

Still, one of the museum's high points is how the three facades bounding the east, south, and west sides of the garden form a stunning architectural set piece. Taniguchi's sheer, clean surfaces, impeccably linear detailing, skinny mullions, and translucent, clear white and black glass (now cladding the part of the Modern Tower previously concealed by the glazed escalators) unify an ensemble that had become increasingly fragmented with the expansions through the years. By creating 80-foot-high, prosceniumlike porticoes of steel framing covered by anodized aluminum panels at each end of the garden, Taniguchi frames the spaces, yet does not detract from their sense of openness.

Unfortunately, the planting in the garden seems sparse—perhaps an unfair comment, since it only opened in the fall. Zion Breen and Richardson, the landscape architects who've been involved in the garden's planting and design since 1961, explain that the original birches and the weeping beeches could not be reinstalled. Their younger counterparts lack

**The 54th Street garden (left) is hidden by an aluminum-ribbed fence. On 53rd Street, KPF renovated the Goodwin-Stone building; new Thermolux panels back the stair from the second to the third floor (opposite, top two).**

PHOTOGRAPHY: COURTESY MOMA (THIS SPREAD, BOTTOM FOUR)

## MoMA's Prehistory: 1929 to 1996

With fanfare, white tie, and gowns, MoMA celebrated its new home at 11 West 53rd Street in May 1939 (1), about two weeks after the World's Fair had opened in Queens. The museum, founded in 1929 by collectors Lillie P. Bliss, Abby Aldrich Rockefeller, and Mary Quinn Sullivan, had on its board of trustees Frank Crowninshield, the editor of the soigné *Vanity Fair* magazine, and Harvard professor and former investment banker Paul J. Sachs. The group took over the 12th floor of the Heckscher (now Crown) Building at Fifth Avenue and 57th Street, enlisting Harrie T. Lindeberg to design the 3,800-square-foot gallery space. Alfred H. Barr, Jr., Wellesley art history professor and Sachs protégé, took the reins as director.

In 1930 and 1931, Howe & Lescaze drew up schemes for a new museum structure on a site yet to be selected. Then in 1932, the Modern

moved into a town house on 11 West 53rd Street leased from John D. Rockefeller, Jr. By 1936, Philip Goodwin, MoMA trustee and an architect known for traditional work, got the museum commission. (He declined the fee.) Edward Durrell Stone, then working for Wallace Harrison, one of the architects of Rockefeller Center, was hired by Nelson Rockefeller, MoMA trustee and head of Rock Center's construction, to help Goodwin. Barr's preference for the second architect, Mies van der Rohe, Walter Gropius, or J.J.P. Oud, was overridden.

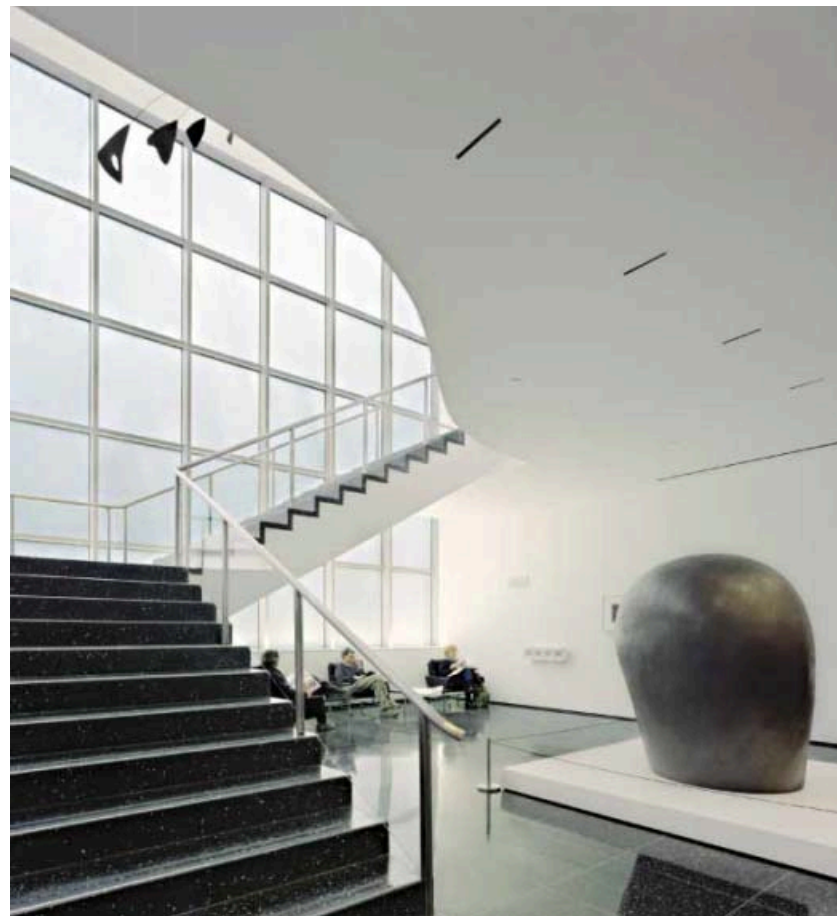
During construction, the Modern camped at Rockefeller Center, returning to 11 West 53rd Street when the new building was finished. Even without Mies, the museum turned out to be a startling example of the International Style. John McAndrew, curator of the Department of Architecture, evidently contributed

signature elements to the cubistic concrete structure, including the curving canopy, a serpentine front desk, and the 11-hole, cantilevered canopy over the sixth-story terrace. Both Barr and McAndrew worked on the sculpture garden, a slight, swirling, gravely affair, enclosed by

plywood and woven wood on frames.

The museum grew after World War II. In 1951, Philip Johnson, back for a second stint as the head of the Architecture and Design department, and now a practicing architect, designed a new Miesian-style annex at 21 West 53rd Street. Then in





1953, he redesigned the sculpture garden, irrefutably one of his major works, which he executed with landscape architect James Fanning, plus partner Landis Gores and architect of record George Hopkins (2).

In 1954, the Modern arranged with the Whitney (then moving to 22

West 54th Street in a building by Miller & Noel) to have Johnson design the Whitney's facade facing the sculpture garden. When the Whitney moved uptown in 1966, the Modern absorbed the building.

Growth pressures led Johnson to propose an eight-story tower east

of the garden in 1959, which never came to pass. By 1964, Johnson added the east wing for new galleries east of 11 West 53rd Street (3), and built a one-story garden wing with a broad stair leading up to an open sculpture terrace, also at the east end of the site.

In the late 1960s, the museum began to discuss using its air rights to erect a tower to provide economic self-sufficiency. In 1969, Johnson drew up an office tower scheme for 23 West 53rd Street. Financial uncertainty did it in. Seven years later, MoMA embarked on feasibility studies for a condominium apartment tower to solve a \$1.2 million deficit. Johnson, who had long since left the museum and was immersed in designing large-scale buildings, expected to get the commission. Virtually house architect since 1951, he served on the board and owned valuable art. He was disgruntled when Cesar Pelli & Associates won the job in 1977.

(To smooth over the situation, the museum board passed a ruling that no trustee could be the architect.)

The project proved to be controversial. It required a complicated piece of legislation creating the New York Trust for Cultural Resources, which allowed the nonprofit institution to sell its air rights to the developer of the tower, then finance the building through tax-free bonds. Instead of paying city taxes, the condominium gave the trust tax-equivalency payments. When Pelli's 55-story tower was completed in 1984, the museum got the financial strength it needed. But it altered for good its domestic character.

In 1990, the Museum needed to expand again: Cooper Robertson & Partners analyzed the feasibility of creating galleries under the garden. That idea was shelved, and in 1996, the museum acquired the Dorset Hotel and some other properties west of it on 53rd and 54th Streets. The rest, as they say, is history. S.S.



## Yoshio Taniguchi: The recent history, 1997–2004

By now it's an old story: In 1997, when Yoshio Taniguchi (1), then 60, was named the architect of the Museum of Modern Art, much of the architecture world's cognoscenti said "who?" He had been selected first from a list of 10 architects, including Steven Holl, Bernard Tschumi, Rafael Viñoly, Tod Williams and Billie Tsien, Herzog & de Meuron, Toyo Ito, Wiel Arets, Rem Koolhaas, and Dominique Perrault. Then the shortlist had come down to Tschumi, Herzog & de Meuron, and Taniguchi.

Taniguchi, who has a strong reputation in Japan for museums and civic buildings, had not designed anything outside the country. But he was the product of Harvard's Graduate School of Design in the early 1960s, during the José Luis Sert years when Le Corbusier's spirit was pervasive. Fumihiko Maki, not much older, was teaching there and became his mentor and friend. Although Taniguchi had begun his career studying mechanical engineering at Keio University in Tokyo, his father, Yoshiro Taniguchi, a well-known Modernist architect who designed the Okura Hotel in Tokyo, had secretly hoped his son would turn to architecture. With the subtle encouragement of a family friend, it worked. When Taniguchi returned to Japan in 1964, he worked for Kenzo Tange, often on large urban projects, for 10 years before establishing his own office.

Taniguchi's style, as can be seen by the exhibition (and lavishly photographed book), *Yoshio Taniguchi: Nine Museums*, organized by Terence Riley, MoMA's chief curator of architecture and design, is pristine, elegant, sleek, and immaculately Modern. In fact, Taniguchi almost makes Mies look brash. The work more than proves Taniguchi's belief in the "aesthetics of reduction." As he has explained about his cool, clear, rectilinear volumes, where concrete is so smooth it looks like vanilla pudding, and softly gleaming stainless-steel

canopies float over open space, "Some architects try to create detail; I try to conceal detail." He imbues his building with an architectural quality generated through the interlocking volumes of exterior and interior space, where the wall, slab, and podium provide the significant constituent elements. This achievement is demonstrated superbly in both the Gallery of Horiuji Treasures (4) at the Tokyo National Museum (1999) and the Marugame Genichiro-Inokuma Museum of Contemporary Art (3, 5), in Marugame City (1991). Taniguchi calls this museum "my best work." And it is. Its small size; the way it fits into the city; and its use of granite, limestone, and ribbed aluminum on a steel-and-reinforced-concrete structure create a mesmerizing space for viewing the work of Genichiro Inokuma. With the Toyota Municipal Museum of Art in Toyota City (1995), Taniguchi also demonstrates a strong ability to create a luminous environment for viewing art by modulating natural and artificial light in the building's translucent ceiling (2).

The museum's selection committee, chaired by Sid Bass, with Marshall Cogan, Agnes Gund, Ronald Lauder, David Rockefeller, and Jerry Speyer of Tishman Speyer Properties, did its due diligence by visiting the work of the competing architects, with Terence Riley as a guide. Seeing Taniguchi's work in Japan swung the vote.

Taniguchi has always desired to keep his office small; and in Japan, it works. There the architect takes the project through design development, then turns it over to a construction company and its complement of highly trained architects on staff. The company—which does not get the job through bidding—assumes responsibility for the production drawings, and the architect becomes the arbiter of any changes during construction. America, needless to say, is different, even though the process has

been changing. A decade or so ago, the high-design architect would take the project through schematics and design development, while the associate architect or architect of record turned out production drawings. Then it went out to bid

with construction companies. In recent years, many associated firms find they are doing more and more design development for the (usually foreign) design architect, and have ratcheted up the credit line to "executive architect." In turn,



they get more involved from the schematic stage on.

In the case of MoMA, a local architect was needed, and Taniguchi very much wanted one who had designed museums. Cooper Robertson Architects, who advised the MoMA on programming, and organized the competition, among other things, also provided suggestions.

While the list tended to include firms more famous for office towers than museums, such as Fox & Fowle, most had design reputations. Even in the worst economic climate, corporate architects with design images aren't keen on playing second fiddle. But seemingly because MoMA's commission was so singular, and KPF was interested in getting more museum work, it decided to go ahead.

Taniguchi participated in the selection of his sidekicks, but the executive architect's contract was not with Taniguchi. It was with the Modern. Therefore, any disagreements between the two architects' offices were resolved by the museum's building committee, headed by Jerry Speyer.

As KPF's Gregory Clement notes, the two offices began working together in an integrated manner from the schematic phase. In fact, KPF installed eight architects in Taniguchi's Tokyo office to develop the scheme, plus made frequent visits to Japan. Still, the documents—from schematic through production drawings—were executed in New York, and all the consultants were based in the New York area.

One of the small interesting details in the KPF choice is that the two people so heavily involved in the project, Clement and Stephen Rustow, are alumni of I.M. Pei's office (known for museums) as was Robert Heintges, the consultant on curtain wall details. So, in spite of the occasional clucking about Taniguchi having to work with New York architects, this team did have credibility. S.S.



**From the new galleries, visitors look east over the garden to the education and research center, not yet complete. Its raised podium and prosceniumlike portico, Taniguchi's signature elements, complement those of the west building.**

the lushness of their predecessors. Although Chinese elms line the inside wall along 54th Street, this wall, now clad in a flat Jane Gray sandstone rather than the gray speckled brick Johnson had used, looks stark. It needs ivy. But the real problem is the exterior of the garden wall facing 54th Street. Taniguchi has clad the 14-foot-high wall in ribbed aluminum that, together with the well-detailed louvered security gates at either end, stretches to 196 feet. It looks like a construction site shielded by aluminum fencing—it *really* needs ivy. In Japan, Taniguchi has sheathed buildings with ribbed aluminum, but there they seemed to have a softer sheen.

#### **Clean-machine curtain walls**

Measured against a New York City standard, the curtain walls of glass, aluminum panels, and granite border on the exquisite, transcending the aesthetic of the 1939 original. Robert Heintges of Evans Heintges Architects, the curtain-wall consultants, notes that Taniguchi's Minimalist aesthetic, with its huge pieces of flat glass, metal, or stone, and tiny ( $\frac{1}{4}$  to  $\frac{3}{8}$  inch) joints, plus the enormous glass spans with thinner-than-thin mullions, was difficult to get in the U.S. Taniguchi's desire for homogenous surfaces called for a different ratio in terms of materials and labor costs than the unions were used to.

The horizontal joints posed a particular problem. For example, moving a Richard Serra sculpture in the galleries would cause deflection of more than an inch, a severe handicap when the curtain wall is hung from the floors. So the team designed a system with a dedicated beam to support only the weight of the curtain wall, not the floor loads. Considering all this effort with Taniguchi's joints, no wonder the Americans are so happy. This was prodigious effort.

#### **It's only money**

Small wonder MoMA's price tag was steep—about \$500 a square foot. Indeed, it's surprising that the Modern even embarked on this project only 20 years after the last renovation and expansion. While many felt that Pelli's 1984 addition looked like so much real estate, few museums would



**In the new museum office tower, Alspector Anderson Architects designed a handsome painting and sculpture**

**conservation space (above). Gluckman Mayner created a mezzaninelike reading room and bookshop**

**for museumgoers (below), with a larger, 6,400-square-foot bookstore on 53rd Street (bottom).**



have had the sangroid or deep pockets to ditch it so quickly.

Happily, the museum has been attracting trustees able to donate \$5 million and up and a director, Glenn Lowry, capable of leading the charge of this art-minded brigade. The construction costs alone were \$315 million, with the total cost of \$425 million, including professional and staff fees. The capital campaign comes to \$858 million to pay for heavy ancillary costs (storage, moving, renovating MoMA Queens, plus operations and future acquisitions). Pledges have hit the \$725 million mark, so more money has to be raised, including some needed to finish the education wing.

The museum was fortunate that Pelli's condominium tower, built in 1984, has been paying tax-equivalency payments to a trust rather than taxes to the city. This is the result of legislation passed in 1976 creating the New York Trust for Cultural Resources (with its condemnation clause and tax-exempt bonds). The trust provided the vehicle that helped the museum acquire the Dorset Hotel and brownstones on the west part of the block for \$50 million in 1996, as well as attract investors to its auction-rate bonds. In addition, the museum received \$65 million from the city.

The price tag is high, but frankly Taniguchi's museum would have been better off had it been higher still. Different wall finishes would have endowed the spaces with more vibrancy, and additional skylights on the top floor would have added to its luminosity. Naturally, the Modern did its best to save money with construction efficiencies, but glitches occurred, in part because of changes in the construction team. The original contractor, Morse Diesel, which built the evanescent glass curtain wall at the Rose Center at the American Museum of Natural History, was acquired by AMEC. People left. Major problems followed. Trustee Jerry Speyer, of Tishman Speyer Properties, donated his firm's expertise and pulled in Turner Construction as the owner's representative. Yes, it could have been much worse.

So all things considered, the outcome is gratifying. Taniguchi pushed and got a lot out of all involved. His museums in Japan, isolated from other buildings, are ethereally perfect, precisely crafted works of art (page 106). Although he was in for a shock working with American construction methods, he managed to keep much of the purity of his approach. Comparing Taniguchi's museum in New York City to his work in Japan is a little like the shadows in Plato's cave. You think it's your reality (and it is), but it is a mere simulacrum when contrasted with his.

Now we'll see what happens when Taniguchi completes his new commission for the Asia House in Houston's museum district. In spite of the minuses at MoMA, the overall result tells us that Taniguchi's building was exactly what the Modern had wanted all along—deep in its 75-year-old institutional heart. It desired a supremely refined, neutral building that was both a museum and modern, both corporate and (slightly) avant-garde, a container that would not outshine the contained. And when you peer at it closely, you know it's still a class act. ■

**Engineers:** *Severud Associates, Guy Nordenson and Associates (structural); Altieri Sebor Wieber (mechanical)*

**Consultants:** *Zion Breen Richardson and Associates (landscape); George Sexton Associates (lighting); Shen Milson Wilke (acoustical); Evans Heintges (facades)*

*Structural Slate Company*

**Carpeting:** *Constantine; Crossley Carpet Mills*

**Paints and stains:** *Benjamin Moore; Janovic*

**Gypsum extrusions:** *Pittcon*

**Furniture:** *USM (office)*

**Lighting:** *Nulux; Edison Price; Litelab; Artemide; Hydrel*

**Solar shades:** *MechoShade Systems*

**Sources**

**Metal/glass curtain wall, skylights:** *Gartner/Permasteelisa*

**Glass:** *Zadra Vetri*

**Green slate flooring:** *Vermont*

For more information on this project, go to [Projects at www.architecturalrecord.com](http://Projects at www.architecturalrecord.com).

PHOTOGRAPHY: © THOMAS LOOF AND PERNILLE PEDERSEN (MIDDLE AND BOTTOM)



The grand stair of green slate is edged by a massive black granite wall on one side and an ethereal glass-and-stainless-steel balustrade on the other. Visitors ascend to the five-story-high atrium on the second floor under a Bell 47 helicopter.



**The 80,000-square-foot main building evokes the form and spirit of the now-abandoned Rock Island Bridge. The library sits just east of downtown Little Rock (opposite).**





# Polshek Partnership's CLINTON LIBRARY connects with Little Rock and the body politic

By Clifford A. Pearson

**L**ike the man who commissioned it, the William J. Clinton Presidential Center strikes a progressive pose but keeps a comfortable distance from anything radical. With an exposed steel frame and bridgelike body cantilevered 90 feet out toward the Arkansas River, the building expresses its faith in modern technology in dramatic fashion. At the same time, it reaches out to its neighbors and back to the past, connecting with downtown Little Rock just to the west and incorporating two adjacent 19th-century structures. This is architecture as politics, played skillfully to please a large constituency and accommodate a range of perspectives. Both Clinton the man and Clinton the library embrace politics and draw strength from it.

The lineage of presidential libraries is not a particularly glorious one in terms of architectural excellence—lame historicizing and pompous forms being two of the more egregious faults. Calling the Clinton library the best of the breed may seem like faint praise. But the nature of the program (archive, museum, tourist destination, walk down memory lane) and the inclination of the client to shape history in the most favorable way make such buildings tough for an architect. That the Clinton library speaks clearly in the Modern vernacular and opens itself to the public says much about the skill and intelligence of its architect, the Polshek Partnership.

The \$165 million building complex sits on a 28-acre site on the south bank of the Arkansas River just a few minutes walk from the heart



PROJECTS

PHOTOGRAPHY: © TIM HURSLEY, EXCEPT AS NOTED

**Project:** *William J. Clinton Presidential Center, Little Rock, Ark.*

**Architect:** *Polshek Partnership Architects—James S. Polshek, FAIA, Richard Olcott, FAIA, design partners; Joseph Fleischer, FAIA, partner in charge; Kevin McClurkan, AIA, Molly McGowan, project managers; Kate Mann, Megan Miller, Christen Johansen, Charmian Place, Amy Lin, Kathleen Kulpa, Katharine Huber, Tanya Chan, Brad Groff, Elliott Hodges, Stephen Joyce, Edgar Papazian, Michael Regan, Mary Rowe, Oliver Sippl, Oneka Horne, Tala Mikdashi, project team*

**Associate architects:** *Polk Stanley Rowland Curzon Porter Architects; Witsell Evans Rasco Architects and Planners; Woods Carradine Architects*

**Landscape architects:** *Hargreaves Associates; Landscape Architecture, Inc.*

**Exhibition designer:** *Ralph Appelbaum Associates*

**Engineers:** *Leslie E. Robertson Associates (structural); Flack + Kurtz; Cromwell Architects Engineers (m/e/p)*

**Consultants:** *R.A. Heintges (curtain wall); Steven Winter Associates, Rocky Mountain Institute (LEED); Poulin + Morris (signage)*

**General contractor:** *CDI Contractors*



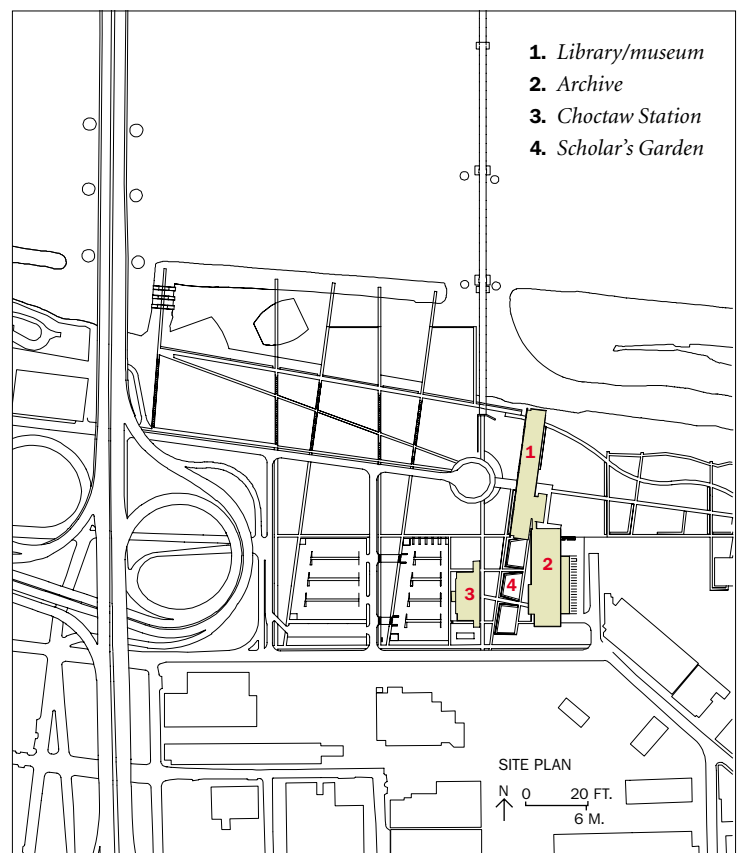
of downtown Little Rock. The center features an iconic cantilevered structure housing the main public and exhibition spaces, an attached archive building, the Clinton Public Policy Institute and Clinton School of Public Service in the adjacent Choctaw Station (renovated by Polk Stanley Rowland Curzon Porter Architects), and a \$25 million park designed by Hargreaves Associates. Plans are now under way to restore the Rock Island Railroad Bridge, which inspired much of the new architecture, and turn it into a pedestrian connection over the river to North Little Rock.

“In our first meeting with the president, he told us he wanted a building with lots of daylight, that’s open and accessible,” recalls James S. Polshek, FAIA, who led the design team along with Richard M. Olcott, FAIA. By all accounts, Clinton was an engaged client, quick to see critical elements in the plans and full of suggestions. “From the very beginning, he told us this was going to be an environmentally responsible building,” says Olcott. In the end, the building earned a silver LEED certification.

“When we asked the president what is his favorite building in Washington, he said I.M. Pei’s East Wing of the National Gallery,” says Polshek. That helped confirm the notion that he was not looking for a Neoclassical building with columns and pediments.

When Polshek and Olcott first visited the site, they immediately grasped the importance of the Rock Island Bridge, one of six that cross the river in Little Rock. Erected in 1899 and abandoned since 1980, the bridge was in very bad repair and was viewed by many people as a hazard that should be torn down. “We didn’t know how we’d use the bridge, but we knew that history is not expendable,” explains Polshek. “Connecting with the past actually gives you more freedom.”

The architects initially envisioned the building running parallel



Engineered like a truss, the main building cantilevers 90 feet out toward the river and includes a glass-screened porch projecting out to the west (right in photo). The archive building (right in photo opposite) also has a double skin facing west, overlooking the Scholar's Garden.



The 28-acre park, designed by George Hargreaves, features faceted land forms that provide a transition to the water, while a pent-house apartment for the Clintons sits under

a long-eaved roof on top of the library (below). Visitors can enter the complex from either a circular plaza (bottom) or a garden court on the south (opposite).





to the river to maximize views to the water. Their first set of designs fell into three basic schemes: a campus (reminiscent of Jefferson's design for the University of Virginia), a villa (think Palladio and the Villa Rotonda), and a plaza (with an urban space as the organizing element).

Eventually, Polshek and Olcott realized the building needed to follow the line of the bridge, not the river, and to be raised above the land like the bridge. Working with Hargreaves, the architects integrated the landscape with the building design, so the public park flows around and even under the library. Combining active areas such as a circular entry plaza, a grassy amphitheater, a playground, and a seasonal festival grove on the city side of the site with a quieter "rural" zone to the east, the landscape plan creates a variety of places within a unified scheme.

Polshek and Hargreaves also exploited two grids they found on the site: an older one that follows the river and a newer one aligned to most of the city's streets. The 7-degree difference between the two grids became the angle between the library's exhibition building and its archive and helped set off sculptured landscape elements along the river from more urban elements facing Third Street and the extension of Markham Street (called President Clinton Avenue as it approaches the library).

The final design kept some of the earlier elements, creating a small campus of three buildings with a circular entry plaza and a quiet "scholars garden" between the archive building and the old railroad station. At one point, the architects envisioned a fourth building, a small office structure in front of the archive. But Clinton suggested they place the offices above the archive, saving land and putting workers in more direct contact with the collection of 80 million documents, 79,000 artifacts, 21 million e-mails, and 2 million photographs. Polshek and Olcott responded by turning the offices into a two-story glass box sitting atop the precast-concrete archive structure that occupies the ground floor and one level below grade.

"When we started this project, Jim Polshek said, 'I'll give you a building with views of the river, but it won't turn its back on the city,'" recalls Skip Rutherford, president of the William J. Clinton Foundation. Four years later, the building does a good job of engaging the urban fabric, offering two main access points: through the scholar's garden that stretches to Third Street, and the more formal circular plaza that terminates Markham Street. By creating a 420-foot-long glass porch for the main building's west facade facing downtown, the architects opened the library and the activities within it to public view. Especially at night when

**"HISTORY IS NOT EXPENDABLE," SAYS POLSHEK. "CONNECTING WITH THE PAST ACTUALLY GIVES YOU MORE FREEDOM."**

its interior spaces glow from within the long glass elevation, the building emphasizes the client's goal of accessibility.

"The foundation has four basic functions," explains Rutherford, "archiving, education, tourism, and economic development." Before it purchased any property, the foundation had considered other locations, including North Little Rock and Fayetteville at the University of Arkansas. But the foundation realized that a site in downtown Little Rock would be the most accessible and have the greatest economic benefit for the state. As it turned out, the library had an impact even before it opened, encouraging developers to renovate old buildings and add new projects along Markham Street. With the library now open, the once-dilapidated downtown core is coming alive with new stores, a renovated market hall, restaurants, a convention center, and several new office buildings.

Like the railroad bridge that inspired it, the main library building uses structure as formal expression. Essentially, a giant steel truss

## Before Clinton, 11 presidents built libraries to preserve and polish legacies

Franklin Delano Roosevelt started it all with a sketch in 1937 of a tasteful Dutch Colonial-style building to house his presidential papers. Over the next three years, he erected the small library (1) in Hyde Park, New York, following his own design and using Hudson Valley fieldstone for the exterior walls and small dormers in the sharply pitched roof. When the building opened on July 4, 1940, FDR donated the \$376,000 structure to the U.S. government and opened it to the public.

Today, there are 12 presidential libraries, 11 of which are run by the National Archives and Records Administration (NARA). (The Richard Nixon Library and Birthplace in Yorba Linda, California, is not part of the government system, but NARA runs the Nixon Presidential Materials Staff, which controls the documents that Congress took charge of after Nixon's resignation.) Typically, a president sets up a private foundation that builds his library, then hands it over to NARA to operate.

Following FDR's example, many presidents have located their libraries in nostalgic locations associated with their lives (e.g., the Nixon Birthplace; the Hoover Library in West Branch, Iowa; and the Eisenhower Library in Abilene, Kansas). Others have built them on university campuses to make them part of larger educational institutions (the Gerald Ford Library at the University of

Michigan in Ann Arbor, and the Lyndon Johnson Library at the University of Texas in Austin). Although open to everyone, these locations tend to be less accessible to the public at large and require a bit of a pilgrimage to get to.

Most presidents have hired safe, corporate architectural firms to design their libraries, such as Jova/Daniels/Busby and Lawton, Umemura & Yamamoto for the Jimmy Carter Library and Museum in Atlanta (4); the Stubbins Associates for the Ronald Reagan Presidential Library in Simi Valley, California (5); and HOK for the George Bush Presidential Library Center at College Station, Texas (6).

A couple of high-design architects have tackled presidential libraries, including I.M. Pei, who designed the John F. Kennedy Library and Museum on Columbia Point in Boston (2); and Gordon Bunshaft of SOM, who created the Johnson Library (3). Few critics consider these projects highlights in the architects' careers, and both suffer from being standoffish monuments that seem more concerned with formal geometry than engaging the public.

Responding to the often conflicting demands of people interested in shaping a president's legacy makes designing one of these libraries a daunting task, requiring as much political skill as that used by the client to run for office. C.A.P.



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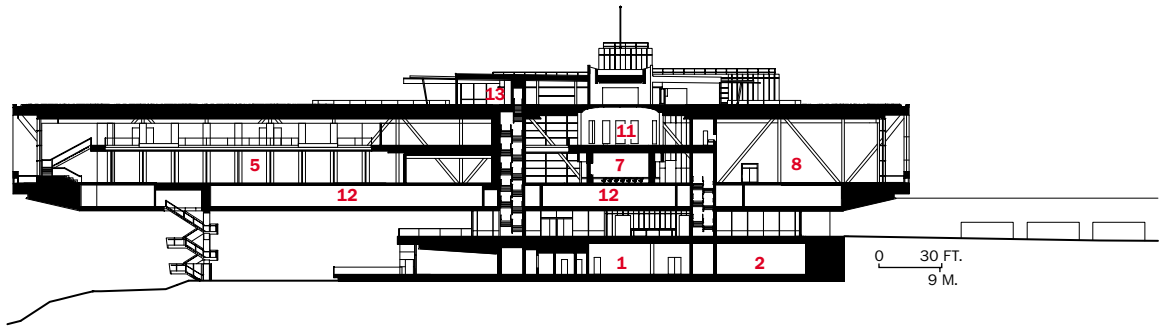
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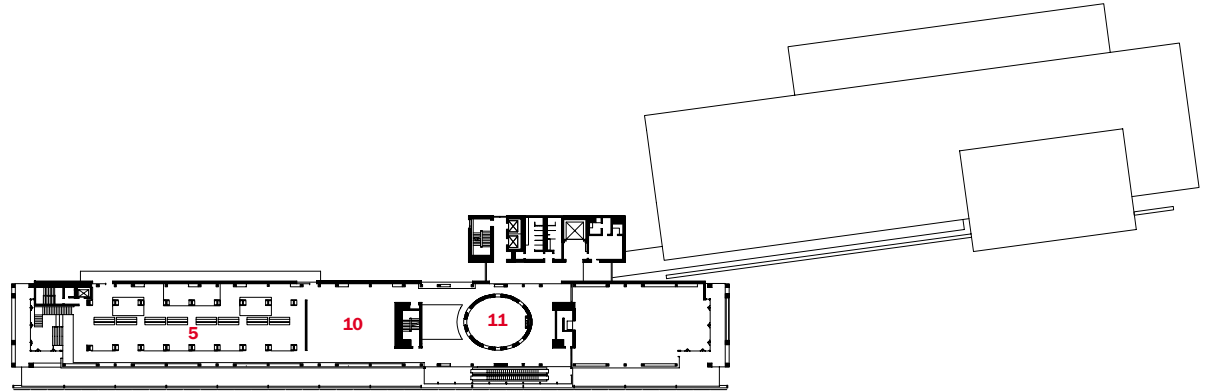
PHOTOGRAPHY: FRANKLIN D. ROOSEVELT PRESIDENTIAL LIBRARY (1); PEI COBB FRED & PARTNERS (2); LYNDON BAINES JOHNSON PRESIDENTIAL LIBRARY AND MUSEUM (3); JIMMY CARTER PRESIDENTIAL LIBRARY AND MUSEUM (4); RONALD REAGAN PRESIDENTIAL LIBRARY (5); BRIAN BLAKE FOR GEORGE BUSH PRESIDENTIAL LIBRARY AND MUSEUM (6)



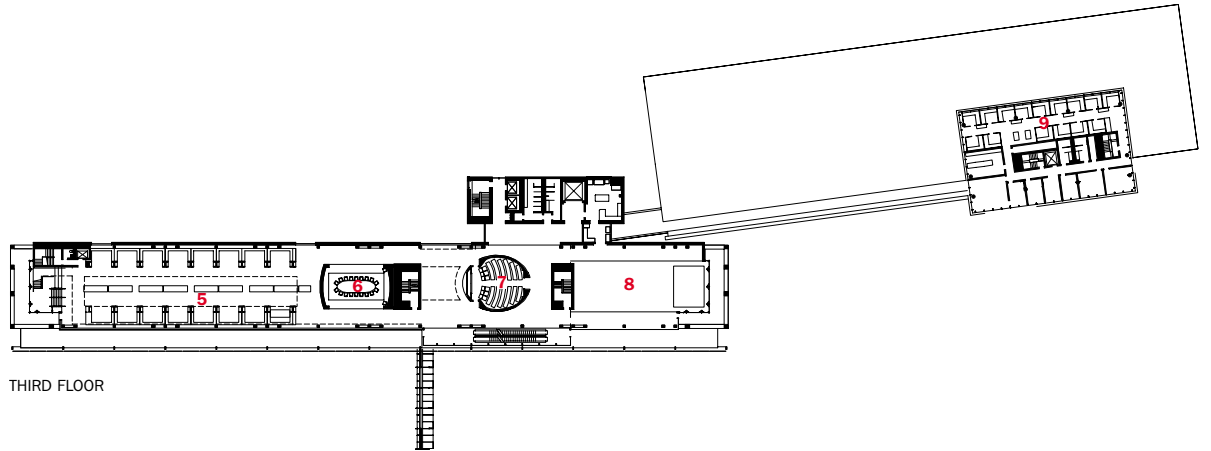


SECTION A-A

- 1. Lobby
- 2. Lobby annex
- 3. Education suite
- 4. Archive
- 5. Museum
- 6. Cabinet room
- 7. Orientation theater
- 8. Great hall
- 9. Archive offices
- 10. Temporary gallery
- 11. Oval Office
- 12. Mechanical
- 13. Apartment

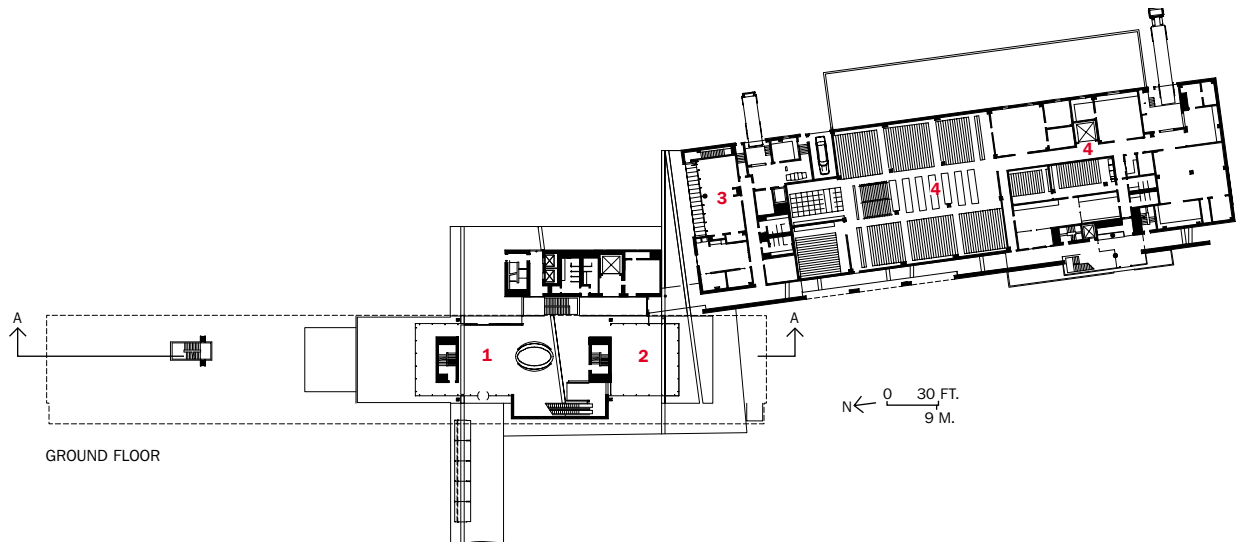


FOURTH FLOOR



THIRD FLOOR

Visitors enter the main building, then go to the third and fourth floors for the museum and exhibitions. Mechanical equipment occupies the second floor. Document storage takes up most of the ground floor and basement of the archive.



GROUND FLOOR



The 14-foot-wide, glass-screened porch (above) tempers the sun on the west side of the library while offering views to the city and river. The museum provides a

110-foot-long timeline of the Clinton Administration running down the center, and alcoves on two levels devoted to topics such as the economy, world conflicts, and the envi-

ronment (opposite, top and bottom right). The building also includes a replica of the Oval Office (below) and a lobby with a presidential limousine (opposite, bottom left).



divided into 14 bays of 30 feet, it rests two stories above the ground with only lobby spaces on the entry floor. Projecting out from the truss on the west, the building's long glass porch serves as a mostly enclosed (but not air-conditioned), 14-foot-wide space accessible from the exhibition hall. Made of laminated glass panels with an unusual interlayer of both white and black frits, the outer facade of the porch reflects sunlight away from the building while allowing views from inside. According to Olcott, the glass acts as a sunscreen, reducing heat gain by about 50 percent. Since the porch has metal grating for flooring and roofing, it enjoys natural ventilation. While the west elevation employs glass and light, its counterpart on the east presents a mostly opaque face of aluminum-composite panels. In a clever move to keep exhibition areas free of ductwork, the architects slipped a 7-foot-high story filled with mechanical systems directly underneath the gallery floors. "We call it 'the belly' because of where it sits, but it actually works more as a spine for services," remarks Olcott.

Exhibition spaces at presidential libraries tend to be corny and ad hoc affairs, with display cases scattered around large rooms and walls covered with memorabilia. At the Clinton complex, though, Polshek worked with Ralph Appelbaum Associates to integrate exhibition design and architecture. The largest space, a two-story-high museum, is divided into 14 alcoves by towers of wood shelves filled with hundreds of presidential-blue file boxes containing real documents from the Clinton administration. The shelves and documents give the space the feeling of a library, not a theme park. A canted timeline running down the center of the room provides a quick history of Clinton's eight years in office, while displays tucked into two levels of alcoves cover various themes and issues raised during his administration. Some of the memorabilia are unavoidably kitschy, but Appelbaum's design keeps them within an intelligent, sharply detailed framework. Also unavoidable is the recreated Oval Office, required to be fake, since even the furnishings of the real Office must remain at the White House. How to treat such a Neoclassical stage set within a frankly Modern building posed a bit of a dilemma. Polshek and Appelbaum's solution was to display the room as an object within the long, glass-fronted building, an approach that works particularly well at night when the room becomes clearly visible from the outside. A glass-enclosed apartment for the Clintons sits like a penthouse on top of the library, visible from the outside but strictly off-limits to the public.

Some people have quipped that the Clinton Center is really a very big double-wide trailer hitched up on steel posts. But the American icon it most borrows from is the long Charleston side porch, a gracious adaptation of the town house to the warm climate. Southern manners are evident in the library's integration of architecture and gardens, while strong industrial imagery keeps it from being too fussy or genteel. Yet the bridge metaphor, while visually appealing, connects it more to the 19th century than the 21st. Nowhere does the architecture try to interpret or express any of the digital or information technologies beginning to transform libraries and the very nature of archives. For that, you will have to go to Rem Koolhaas's Seattle Central Library [RECORD, July 2004, page 88] or Toyo Ito's Mediatheque in Sendai, Japan [RECORD, May 2001, page 190]. ■

#### Sources

**Composite metal panels:** BHN

**Screen-wall glass:** Cesar Color

**Glass-wall castings and fittings:**

W&W Glass Systems/Pilkington

**Steel-curtain-wall structure:** ASI

**Aluminum curtain wall:** CDC

**Perforated-stainless-steel screen:**

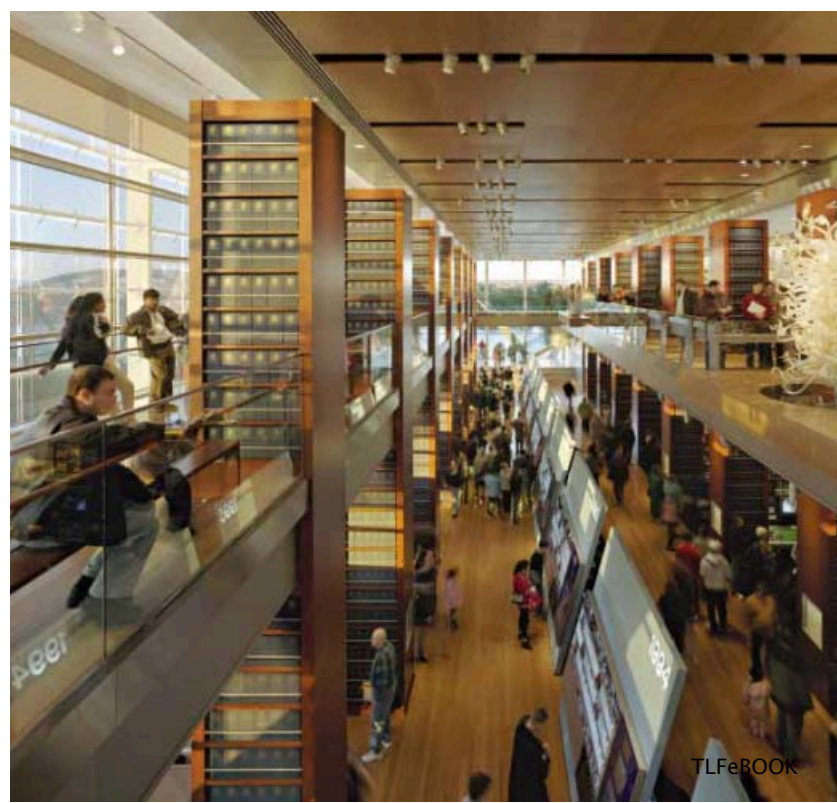
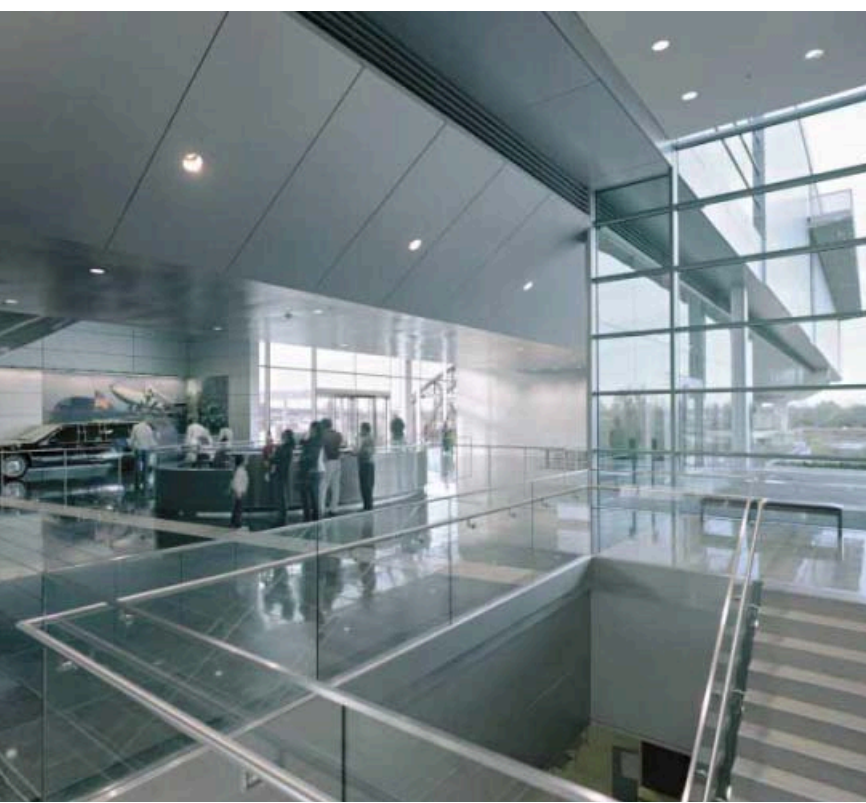
Centria Architectural Systems

**Stone installation:** Lucia

**Metal-and-bamboo ceilings:** Ceilings Plus

For more information on this project, go to Projects at

[www.architecturalrecord.com](http://www.architecturalrecord.com).



**Morphosis** embraces the public realm of Downtown Los Angeles with the environmentally attuned and formally expressive **CALTRANS BUILDING**





Along Main Street, on the entry facade to the west, semisculptural supergraphics call out the location: 100 Main and First Streets, right at the city's center.

Left behind long ago in the exhaust, Downtown Los Angeles has recently seen a surprising emergence of new, monumental public structures at its civic core. Rafael Moneo's Roman Catholic Cathedral [RECORD, November 2002, page 124] and Frank Gehry's Disney Hall [RECORD, November 2003, page 134] have joined Arata Isozaki's Museum of Contemporary Art. But the ensemble really reached critical urban mass—putting the “there” into L.A.'s wan public space—with the latest newcomer, Caltrans District 7 Headquarters Replacement Building, by Morphosis.

Here, the Santa Monica architect brings experimental design out of its long isolation in Los Angeles's hillsides and into the civic realm. The 13-story, 1.2-million-square-foot Caltrans building commands an entire city block bounded by Second, First, Los Angeles, and Main Streets, kitty-corner from City Hall, where the street grid kicks in. Even with perforated-aluminum-clad facades and a public square wrapped by artist Keith Sonnier's neon installation, the project's hard costs barely reached \$145 per square foot, even factoring in the artwork.

Ironically, Caltrans, a state transportation agency, constructs the very highways that erode urban centers throughout California. For this first commission of the state's new Design Excellence Program, Morphosis formed a design-build team with the Clark Construction Group, as well as Urban Partners, a company then headed by pro-Downtown activists.

The standard, hermetic office building has been deleterious to Downtown Los Angeles street life. Commuters typically steer into parking basements and ride up elevators to their desks, escaping only for lunch, if that. The Caltrans program, calling for 760,000 square feet of office space with 410,000 square feet of parking, had the makings of yet another batch of lifeless interiors, sealed off from local activity (despite provisions for day care, a cafeteria, auto-repair shop, small conference center, and some retail). The architects responded by opening this normally closed building type to the city, and configuring its indoor space to generate an interior urbanism, where workers could socialize with one another. As Morphosis principal Thom Mayne, AIA, says, “We focused on the ‘publicness’ of the building.”

Rather than create a point tower, Mayne drew on the program's horizontality with a massive 13-story, 640,000-square-foot office block, sited along the east side of the full-block parcel, leaving free a quadrant open to diagonal City Hall views. Defining the street edge, the architect brought the main office volume to the sidewalks along First and Los Angeles Streets and placed a four-story wing, housing a computer center and auto shop, along Second Street and a stretch of Main. The basic diagram, with its L-shaped footprint, is straightforward, even efficient.

The structure surrounds what is now called the Eli and Edythe Broad Plaza. Into the lower-rise leg of the L, Mayne carved a four-story, 328-foot-long outdoor “lobby,” lined with *Motordom*, Sonnier's kinetic, wraparound neon installation. “We chose this large room with its art piece as the focal point of the project,” says the architect. “We're not making an object, but a space.” Penetrating the building's main volume, this “room” becomes transformed into a glazed, skylit, 13-story well, bringing



the outdoors deep into the mass of the building.

Earlier in Mayne's career, his structures had Schwarzenegger physiques—overdeveloped and overly detailed—as in Crawford House, in Santa Barbara, and the Kate Mantilini restaurant, in Beverly Hills. A new Morphosis, however, has emerged with such large-scale work as California's Diamond Ranch High School. The designs no longer appear obsessed with knotted details and autoheroicism, but are now conceived in larger, more space-defining and gestural moves. “Very modest budgets have redefined architecture for us,” says Mayne. “You have to locate architecture spatially, through conceptual devices, syntax, and more austere terms, rather than conventions of elegant materials and detailing.”

Though the contractor started out with the assumption that, in design-build, recalls Mayne, “contractors run the show and architects serve the process,” the newly minted collaborators had to recalibrate their operating expectations during the project's 30-month start-to-finish schedule. Throughout this fast-track process, subcontractors and architects sat side by side working out details over computer screens.

The transformative move at Caltrans lies in the perforated metal skin, hung 1 foot away from the curtain wall. First, in Seoul at Suntower, and then, in Austria at Hypo Bank, Morphosis has experimented with a secondary facade of perforated metal, veiling the primary weather barrier. In Seoul, the screens are largely decorative and sheer; but in Europe, where according to Mayne, people “consume 50-percent less energy per capita

**Project:** *Caltrans District 7 Headquarters Replacement Building, Los Angeles*

**Architect:** *Morphosis—Thom Mayne, AIA, principal; Sylvia Kuhle, project manager; Pavel Getov, project architect; Anthony Mrkic, job captain; Chandler*

*Ahrens, Irena Bedenikovic, Tom Christ, Mario Cipresso, Ben Damron, Marty Doscher, Paul Gonzales, Salvador Hidalgo, Olivia Jukic, Ted Kane, Dwoyne Keith, Kristina Loock, Jean Oei, Axel Schmitzberger, Martin Summers, Daynard Tullis, project team*

*Joseph Giovannini is a New York-based architect and critic.*



The building's outermost skin of perforated aluminum changes appearance with available light. The panels' shading efficiency was a top priority, but the architects also succeeded in animating what might have been monolithic east and west elevations (each measuring 200-by-400 feet) by introducing horizontal slots with no panels; a sprinkling of fixed, projecting panels that cast shadows; and panels with one of three different perforation sizes (this page and opposite). Defining the entry plaza, with its City Hall views, the metal skin drapes down like a skirt (above).



Alluding to Caltrans's involvement with urban infrastructure, the building evokes movement, as if its pieces were slipping past one another. On its north face, a projecting "light bar" marks First Street,

while the building's low eastern base acknowledges the grid shift at Los Angeles Street (below). Operable photovoltaic panels form a brise-soleil (right) on the south facade (bottom).



than we do," the screens serve more energy-conserving roles.

Using a Swiss waterproofing membrane at Caltrans, the architects achieved a weather barrier cheaply, helping fund the secondary aluminum skin. Lifted off the curtain wall by aluminum struts, the metal facade appears independent of the supporting volume, extending beyond its edges. The structural frame cantilevers even beyond the skin, hovering over passing traffic. At the structure's base, the skin drops down as a skirt, folding into canopies that establish a human scale along the plaza.

Environmentally, the outer sheath performs as a brise-soleil, while creating a microclimate in the zone outside the curtain wall. So solar gain occurs on the exterior, with hot air escaping in a chimney effect that draws cooler air from below, reducing the entire facade's temperature. On the southernmost elevation, the architects provided a brise-soleil surfaced in photovoltaic panels—the largest such installation on an architectural facade in the country, according to Mayne—that fulfills 5 percent of the building's energy needs as it breaks the intense L.A. sunlight. Altogether, the skins increase the structure's energy efficiency by some 20 percent.

The screen, however, also has major formal consequences. By controlling the perforation densities, Mayne treats the skin as alternately solid and immaterial, allowing him to sculpt the building visually while giving the plaza a strong edge. Depending on the light, perceptions of opacity and transparency shift. Mechanically timed, some of the facade panels open and close to adjust shading as weather or sun angles change.

Mayne also helped "buy" the skin by designing fairly conventional office floors, though even here he challenges convention. On the interior, his socializing innovations include skip-stop elevators that open only every third floor onto a landing, from which people can ascend or descend on open staircases. With the light well bringing transparency to the building's core, occupants can see one another several departments away. To open up the interior more, Morphosis created a rooftop plaza opposite a third-floor fitness center.

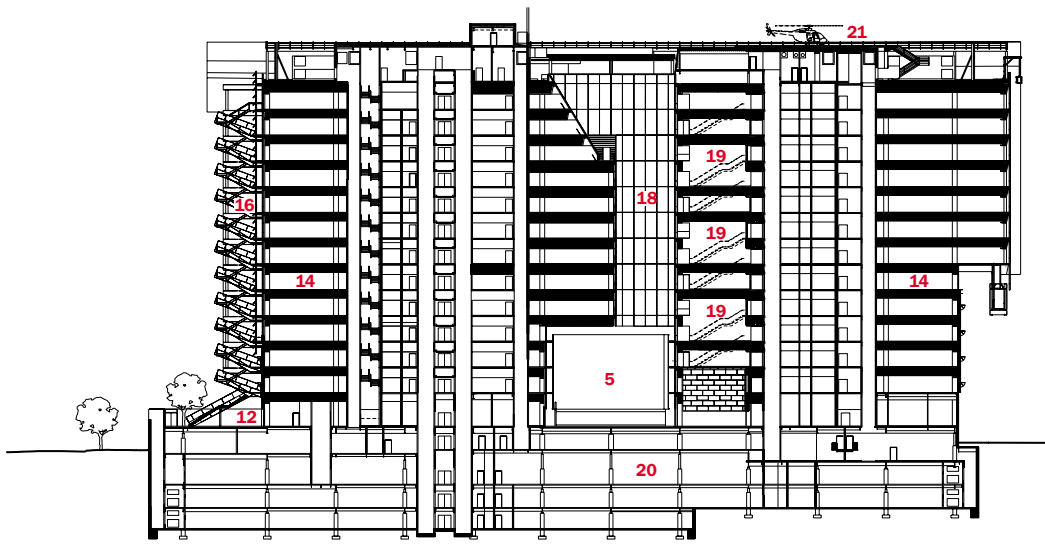
Though the ground level offers an exhibition space, plus day-care and conference centers, a more public program that would further activate the plaza has not yet taken hold. Efforts to put a locally famous Sammy's Kosher Burrito at the corner didn't survive union rules. A cafeteria will soon open at the building's base, along with a credit union—neither of which will catalyze much public interaction. Some discussion has centered on intro-





CALIFORNIA DEPARTMENT OF TRANSPORTATION

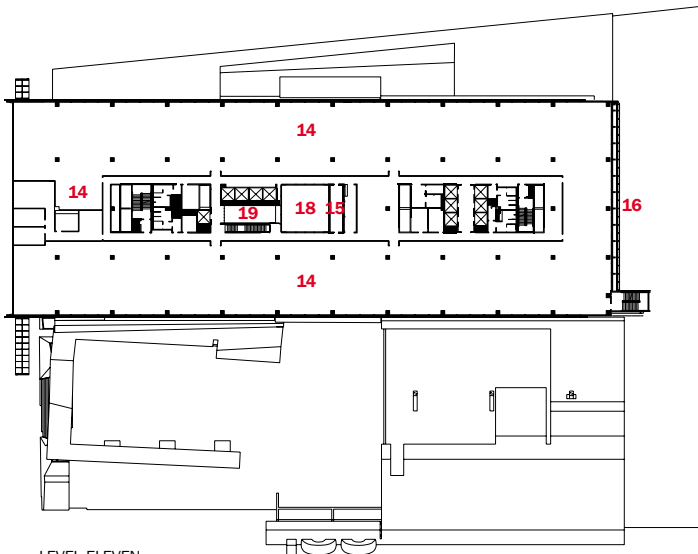
In the entry plaza (this page), a light box, bearing layered signage, echoes the light bar on the north face. Layering (of skins, spaces, words) permeates the project.



SECTION A-A

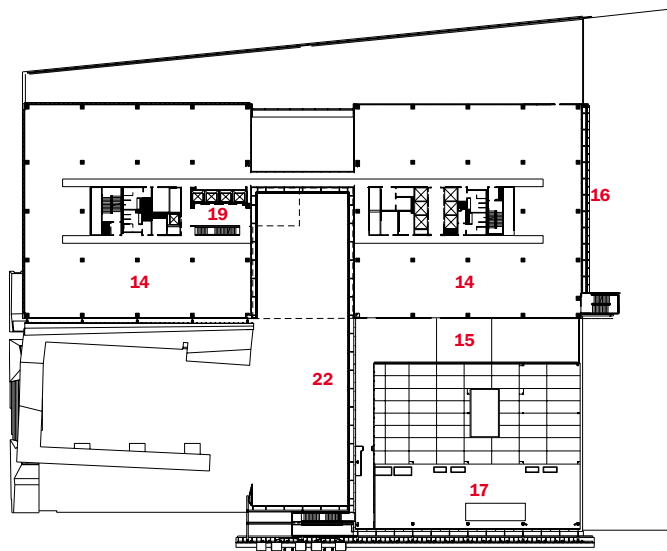
0 30 FT.  
9 M.

In the main interior lobby (opposite), a partition clad in resin panels hangs from the ceiling structure. This “thick wall” frames a reception desk. The gridded proportions harken back to the aluminum facade panels. A syncopated rhythm of fluorescent fixtures, set within this wall, glow through its thin resin skin.

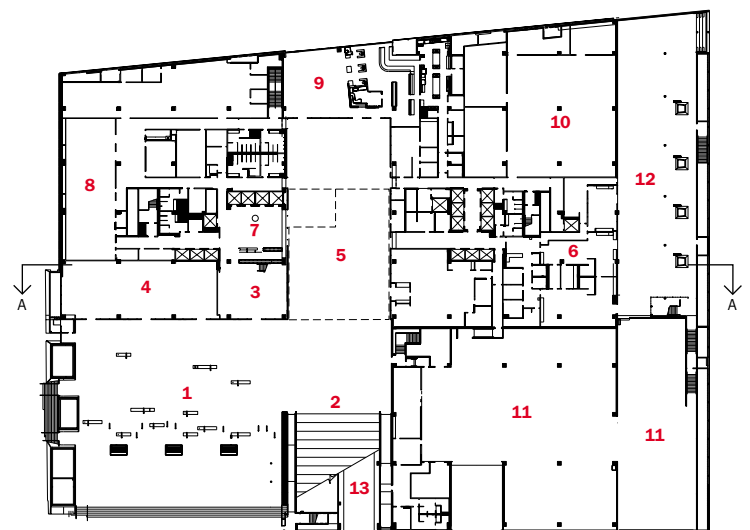


LEVEL ELEVEN

- |                       |                         |
|-----------------------|-------------------------|
| 1. Public plaza       | 12. Day-care playground |
| 2. Assembly seating   | 13. Parking entry       |
| 3. Exhibition gallery | 14. Open offices        |
| 4. Retail             | 15. Terrace             |
| 5. Urban lobby        | 16. Photovoltaic wall   |
| 6. Day care           | 17. Mechanical          |
| 7. Entry lobby        | 18. Light well          |
| 8. Conference center  | 19. Skip-stop lobby     |
| 9. Cafeteria          | 20. Parking garage      |
| 10. Storage           | 21. Heliport            |
| 11. Auto shop         | 22. Neon art piece      |



LEVEL FOUR



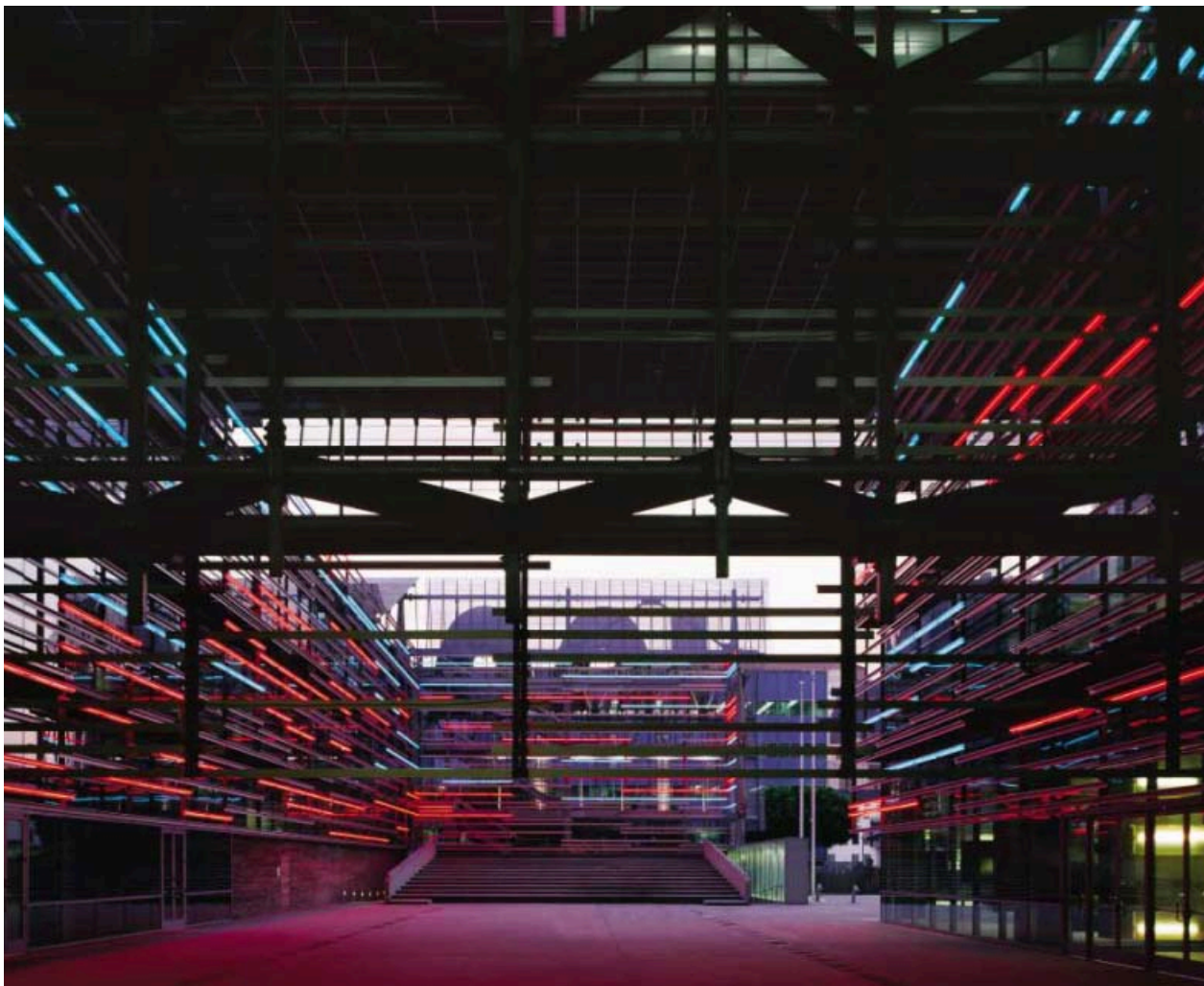
MAIN LEVEL

0 30 FT.  
9 M.



On the east and west facades, the so-called “three-dimensional panels” (near right) remain fixed and primarily aesthetic, while on the same elevations, operable panels (far right), in rows of five across, open and close automatically according to the position of the sun. This perforated veil, permitting views out even in its closed position, becomes increasingly invisible as the viewer steps back, going deeper into the interior.





ducing a privately operated, all-night restaurant, but the structure, which looks civic in its monumentality, has yet to take on its fully public role.

Still, Caltrans is an exceptionally successful design-build project, if success can be rated in terms of environmental achievement, civic presence, cost, architectural innovation, and aesthetic power. Morphosis's fully integral role gave the firm valuable leverage within the power triangle of architect/contractor/developer. The results are unusually comprehensive, as the double skin alone suggests, achieving a broad range of expressive and functional ends—embodying both public spirit and ecological responsibility.

If Mayne overloaded his earlier designs with “Architecture,” he now balances detail, gesture, and scale deftly. Having once pursued a boutique operation, the architect has lost nothing in the translation from small to large commissions, and may even be one of the rare practitioners who operates best on a broad canvas, which can absorb the intensity he brings to each project. The gap between Lilliput and Brobdingnag may be wide and treacherous, but at Caltrans, Mayne has bridged it. ■

#### Sources

**Curtain wall:** PPG Industries;  
Sierra Aluminum; Acura Systems

**Photovoltaic system:** Atlantis  
Energy Systems

**Metal panels:** Morin West; Model Glass

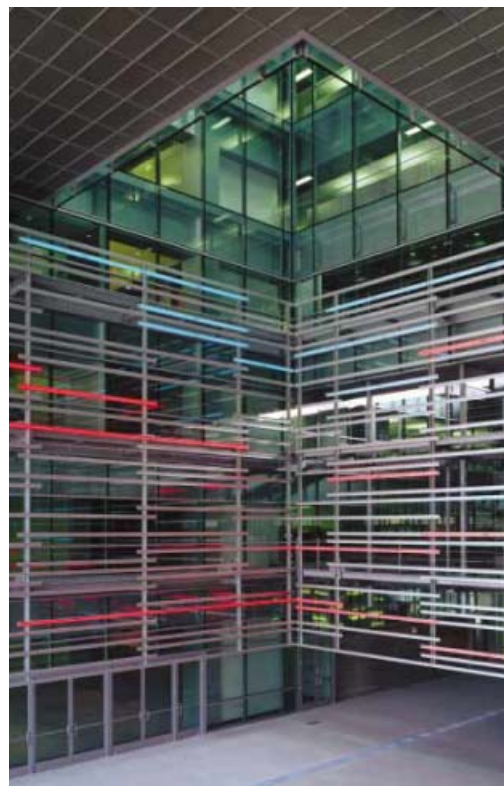
**Lighting:** Ledalite; GE; Lutron

**Lighting Controls:** Ledalite

**Doors:** South West Aluminum;  
Armweld

**Plumbing:** Kohler; Delta; Zurn

For more information on this project,  
go to Projects at  
[www.architecturalrecord.com](http://www.architecturalrecord.com).





A kinetic, space-defining neon installation evokes streaking tail-lights as it leads from the plaza (this page) into a semioutdoor “urban lobby” (opposite,

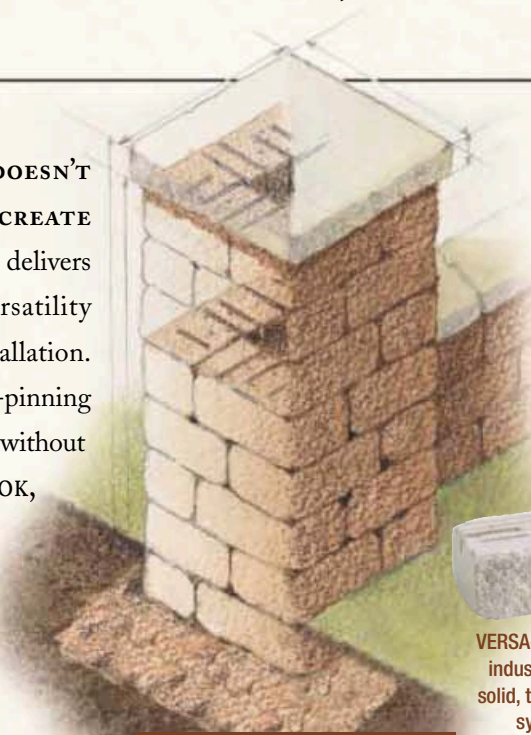
top), beneath a light-well (opposite bottom). The tubes illuminate, color by color, visually entering the building—and then go dark before starting anew.

CALIFORNIA DEPARTMENT OF PORTS

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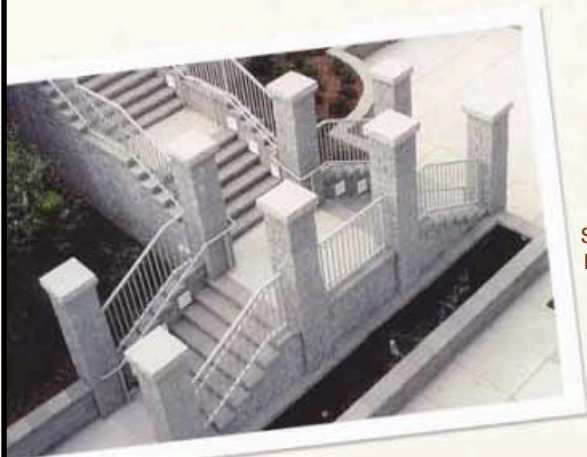
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TlFeBOOK



## Performing Arts

# Beating the Odds

**WHILE THE ALLURE OF THE ARTS IS UNDIMMED, DIMINISHED DOLLARS ARE DRIVING COMMUNITIES AND ARTS GROUPS TO THINK HARDER ABOUT WHAT SHOULD BE BUILT AND FOR WHOM.**

By James S. Russell, AIA



1.

### Chicago

*Gehry Partners' Jay Pritzker Pavilion, for outdoor music, catalyzed the creation of a postindustrial park of crowd-pleasing spectacle.*



2.

### New York City

*Rafael Viñoly made a new three-theater home for jazz that takes advantage of urban panoramas high above Central Park.*



3.

### Los Angeles

*Hodgetts + Fung completely transformed the sound of the famed Hollywood Bowl without compromising its iconic image.*



4.

### New York City

*Painstakingly dug under Carnegie Hall's treasured Stern Auditorium, Polshek's Zankel Hall serves music that ranges from classical to contemporary.*



5.

### Phoenix

*Jones Studio created a glowing lantern within a rusted-steel envelope to draw audiences to a long-awaited arts building.*

**A**rts supporters have anguished over a steady diet of “Arts Funding Slashed!” headlines. States have been especially brutal, sometimes all but zeroing-out support for arts in the face of looming deficits. Orchestras, hostage to high fixed costs, have had a particularly difficult time, with half a dozen succumbing to insolvency in the past few years.

As the projects in these pages show, however, 2004 has been a banner year for performing-arts architecture. There’s more to come. Cities with ambitious projects in the pipeline include Atlanta (a symphony hall by Santiago Calatrava), Kansas City (two halls by Moshe Safdie), Dallas (projects by Foster and OMA), Minneapolis (Jean Nouvel), Nashville (David M. Schwarz/Architectural Services), and Orange County, California (Cesar Pelli).

Is this an arts-building boom that is completely out of touch with the fiscal realities facing resident companies? The Florida Philharmonic declared bankruptcy not long ago, jeopardizing its leading role in the Miami Performing Arts Center—itsself a troubled project beset by delays, cost overruns, and construction-quality problems. (It’s now slated for a 2006 opening.) “The philharmonic’s tribulations are recent,” said Fred Clarke, partner at Cesar Pelli & Associates, of New Haven, the center’s architect. “We’ve seen every funding up and down in the 10 years we’ve worked on the job.”

The demise of the performing arts has been predicted time and again. Still, enough signs trouble the financial horizon to reconsider the models that have been used in the past.

### An end to billion-dollar ambitions

Public-funding cuts are not as steep as they’ve been. That’s the good news. “We’re at or approaching the bottom of the trough,” said Randy Cohen, vice president of research and information at Americans for the Arts, an advocacy group. “It’s hard to say what will happen with private-sector philanthropy—corporations, foundations, and individuals,” he added, which nowadays forms the preponderance of operating and capital support. Cohen said recent data showed rising private contributions, but not nearly at a level that would make up the public decline.

For more information on these projects, go to Projects at [www.architecturalrecord.com](http://www.architecturalrecord.com).



**No ground breaking has yet been set for Moshe Safdie's \$304 million design for Kansas City. (The third hall, far right, has been deferred.)**

How times have changed. Just five years ago, Lincoln Center confidently launched a program for more than \$1 billion of improvements to its three giant theaters. Amid constituent bickering and contributions that dropped with the city's economy, a waving roof by Frank Gehry over the center's often-empty plazas was nixed.

The replacement of the troubled Avery Fisher Hall with a glowing, curvaceous design by Foster and Partners was abandoned. (Foster has begun testing the feasibility of a very limited menu of fixes.) New York City Opera dreamt of an overhaul or replacement for the Philip Johnson–designed New York State Theater. It's still dreaming.

Instead, Lincoln Center will proceed on a variety of image-building improvements to its public spaces, designed by Diller Scofidio + Renfro, that will increase the visibility of its diverse offerings. "To be philosophical about this," observed Rebecca Robertson, the executive director of the Lincoln Center Development Project, "big development projects take a long time." Her architect can proceed, she says, because "we're lucky to have six constituents who want to do capital improvements at the same time."

### Thinking locally

Dollars raised by cities and counties have remained an arts-funding bright spot. "Cities better understand that arts are part of the creative-industries economy," explained Cohen. Local arts support varies widely across the country. New York City allocated \$120 million in arts support in 2003—more than the federal government committed to the National Endowment for the Arts. On the other hand, the City of Seattle, which prides itself on its vibrant cultural scene, is renegeing on a promise to help fund the \$127 million renovation of McCaw Hall, which is home to its internationally renowned opera and its distinguished ballet. McCaw reopened a year and a half ago, after successfully raising a promised \$72 million privately. Kansas City leaders have pushed hard to fund a two-venue, \$304 million complex designed by Moshe Safdie, but voters failed to renew a tax that would help underwrite the project.

Robert Marks, vice president at the Samuels Foundations, a supporter of the performing arts in New York City, remains deeply skeptical about long-term growth in arts funding. He does not see a big rebound in public arts support, while noting a trend to declining support from corporations and foundations. "This leaves only wealthy individuals. It is why boards are so important today. Wealthy individuals lead to other wealthy individuals." Yet Marks understands why some groups must build: "Some institutions, at some point in their growth, must have their own home."

Though critics have wondered whether jazz, with its mercurial history and road-house roots, can thrive in its new Manhattan institution, Marks says *Jazz at Lincoln Center* (page 146) could not continue in borrowed spaces. "It had to stop being at the mercy of others."

### Architecture's magnetic presence

Cities attuned to the benefits of the arts look for landmark architecture to make maximum impact. "Seeing Disney Hall on the cover of every Los Angeles guidebook—that's attractive to a corporate sponsor," observed Justin Davidson, who writes about both architecture and classical music for *New York Newsday*. Mark Holden, of Jaffe Holden (acousticians for Zankel Hall [page 156], among many other distinguished auditoriums) recounts: "One of the reasons Boeing is said to have chosen Chicago over



**Strathmore, an orchestra hall by William Rawn Associates, will open next month. It's one of the rare major facilities to be built in a suburb.**

Dallas for its new headquarters is because of its superior cultural offerings. Now Dallas is preparing to build two new venues." They are as architecturally bold as anything else planned in America: the 2,200-seat Winspear Ballet/Opera (Foster and Partners, architect) and the 600-seat reconfigurable Wyly Theater (OMA, with Hillier). Landmark structures have proven to be fund magnets: Witness the "plutocrat peer pressure" that spectacularly expanded the scope of Millennium Park in Chicago (page 136).

Building architecturally impressive performance spaces isn't cheap, and there is a tendency to be far too optimistic about costs, especially when public-funding politics drives the budget. Disney Hall almost foundered for this reason [RECORD, November 2003, page 134]. In Miami, the official project cost of its 2,480-seat auditorium for ballet and opera and its 2,200-seat orchestra hall has risen from \$225 million in 1999 to \$325 million. "They began with far too optimistic a goal about how much the project should cost at this level of ambition," said Pelli's Clarke.

Should Kansas City be concerned that it has budgeted only \$304 million for its 1,450-seat orchestra hall and a 2,200-seat room for opera, dance, and Broadway shows? (A planned 500-seat theater has been deferred.) The design appears uncompromised. "They want a landmark known worldwide," explained architect Moshe Safdie. Its arching form, with its glowing lobbies dramatically draped in cable-stayed glass, will enliven a downtown that's lost much of its luster over decades. Meeting the budget "is an extraordinary struggle," but he is confident because "we are working with a contractor and estimating costs as we go. We've finished design development, so I don't think there will be surprises."

Given such uncertainties, you wonder why communities try to

IMAGES: COURTESY MOSHE SAFDIE (THIS PAGE, LEFT); DAVID M. SCHWARZ (OPPOSITE, RIGHT); © WWW.API4.COM (OPPOSITE, LEFT); VERONIKA LUKASOVA (THIS PAGE, RIGHT)



**Money woes and contractor disputes have slowed completion of Cesar Pelli's Miami Performing Arts Center, now slated for 2006.**

build at all. "If, after spending hundreds of millions, all you get is a building, it's not worth it," comments David M. Schwarz, whose Washington, D.C.-based firm designed Fort Worth's admired Bass Hall. "What you ought to get is community pride, a center of community activity." In Cleveland, he said, a day of music for

school children proved so popular that visitors were turned away before noon. Certainly, Severance Hall itself—a famed venue (renovated by Schwarz a few years ago) housing a famed orchestra—was the draw. Though Boston Symphony Hall or the Guthrie Theater, in Minneapolis, can serve only a few thousand patrons a week, their reputations in their respective cities mean far more than audience numbers.

#### **If you build it and they come, can you afford it?**

Arts-management experts regularly chide arts companies for being too starry-eyed about what it takes to run new facilities. According to Andrew Taylor, director of the Bolz Center for Arts Administration at the University of Wisconsin, "Most resident groups focus all their attention on the increased rent (which is often only a fraction of their annual operating costs) and miss out on the big bump in personnel expenses they get when they strive for the better quality the new space demands—more rehearsals, better sets, and so on." Fort Worth's Bass Hall, completed in 1998, offers vastly improved facilities for its resident companies, but now the companies find they can't afford to pay the rent. "It was built on a boom-economy business model," commented Cohen, from Americans for the Arts.

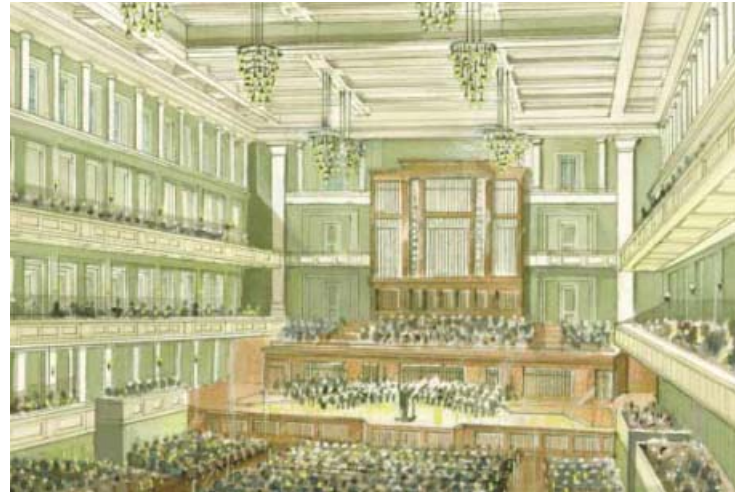
In fact, it is devilishly difficult to predict the degree to which better facilities yield larger audiences, higher-quality performances, and greater local arts support. "You have to take a long view," says Pelli's Clarke. "Certainly we're facing an unfortunate set of circumstances, but I see Miami in transition from a second-tier place to a first-tier place, and the arts organizations will come along." It happened with Minneapolis's Guthrie Theater. It has outgrown its Ralph Rapson-designed 1963 home, and will move to a new Jean Nouvel building in 2006.

#### **Is smaller better?**

The future of facilities may lie in some intriguing emerging trends. In decades past, orchestra halls were often built at 2,500 seats or more. Kansas City bucks that trend at 1,450 seats. Especially for smaller cities, "there is a trend to smaller halls," says acoustician Holden. "The acoustic environment can be enhanced." Orchestras would prefer to fill a smaller hall than play to rows of empty seats. Intimate rooms, however, have far higher per-seat

operating costs and demand larger endowments. By contrast, "we were told that a hall below 2,000 seats was not viable," says Elliott Pfansteihl, president of Strathmore, a music venue in a park setting in Bethesda, Maryland, that will open its new 1,978-seat concert hall, designed by Willam Rawn Associates, next month (opposite, right). In some communities, university performing-arts centers are playing a bigger role. According to the Bolz Center's Taylor, they more frequently commission new work. Adds Holden, "For smaller cities that can't afford to build stand-alone facilities, universities can successfully merge town and gown."

High-profile controversies over big projects can obscure the contributions made by smaller companies. In New York, some eight theater stages with under 700 seats have opened in the past year, as well as a new eight-story home for the Alvin Ailey dance company (look for



**In two years, David M. Schwarz/Architectural Services' Nashville symphony hall, which emulates Boston's great concert hall, will open.**

them on RECORD's Web site). Frank Gehry is collaborating with Hugh Hardy on a \$22 million, 299-seat building for Theater for a New Audience. It will solidify a cluster of arts organizations that has grown around the Brooklyn Academy of Music. Even at Lincoln Center, the current effort creates a larger role for smaller companies and less well known venues, like the Juilliard School, the Film Society of Lincoln Center, and the Chamber Music Society.

#### **Culture comes to the 'burbs?**

Though people and wealth continue to grow in the suburbs, these low-density landscapes have only rarely supported substantial new performing-arts venues. Drive times are simply too long for audiences and funders alike, say officials. There are exceptions. Orange County, California, already home to one of the most sophisticated complexes outside a traditional downtown, is adding a Pelli-designed symphony hall that will open in 2006. BOORA is working on a three-theater complex in Mesa, near Phoenix. Strathmore is the first major hall to be built outside Washington, D.C. It will become a second home to the Baltimore Symphony, which struggles financially within a city that is shrinking. Pfansteihl, its director, says Strathmore can successfully grow because nearby communities are already heavy artsgoers.

When building facilities is so much trouble—the fund-raising, the management of the process, the fear of the obligations it imposes—it's easy to lose sight of why it's worth doing. "In the Dorothy Chandler Pavilion, the Los Angeles Symphony had a clear artistic vision hampered by the hall," says *Newsday's* Davidson. Disney Hall may have boosted prestige and civic pride, offering board members a cool place to hang out. Fundamentally, he underlines, "It answered a need that was artistic." ■

# Jay Pritzker Pavilion Chicago

# 1

**GEHRY PARTNERS' PAVILION IN MILLENNIUM PARK CATALYZED THE CREATION OF A NEW POSTINDUSTRIAL PLAYGROUND OF CROWD-PLEASING SPECTACLE.**

**By Blair Kamin**

**Architect:** Gehry Partners (pavilion)—Frank O. Gehry, Craig Webb, Manoucher Eslami, Reza Bagherzadeh, Chris Banks, Saffet Bekiroglu, Tom Besai, James Jackson, Leigh Jerrard, Kurt Komraus, Jason Luk, David May, Chris Mazzier, Frank Medrano, Sy Melgazo, Napoleon Merana, Chris Mercier, Julianna Morais, Diego Petrate, Lynn Pilon, Birgit Schneider, Tensho Takemori, Karen Tom, Scott Uriu, Adam Wheele

**Client:** Millennium Park, Inc.

**Consultants:** Skidmore, Owings & Merrill (structural engineering); McDonough Associates (mechanical engineering); Terry Guen Design Associates (landscape); Schuler & Shook (lighting); The Talaske Group (acoustics)

**Capacity:** 11,000

**Cost:** \$475 million

**Completion date:** July 2004

## Sources

**Metal cladding:** A. Zahner (pavilion); Permasteelisa (bridge)

**Proscenium sliding doors:** International Door

**Glass:** Glass Solutions/Viracon

**Seating:** American Seating

For more information on this project, go to Projects at [www.architecturalrecord.com](http://www.architecturalrecord.com).

When Chicago's Millennium Park opened last July, it felt like Woodstock without the mud and the drugs. In the first six weeks alone, Chicago officials estimate, more than a million people poured through the \$475 million, 24.5-acre park to see such dazzling projects as Frank Gehry's exuberant Pritzker music pavilion, a snaking bridge (Gehry's first), and huge—and hugely playful—works of public art by Anish Kapoor and Jaume Plensa. What the parkgoers really were looking at, though, was the future—a bold exploration of a new paradigm for urban parkland.

The park supplants Olmsted's industrial-age model, one meant to be passively appreciated by parkgoers, as though they were looking at a framed landscape painting. It posits, instead, a new postindustrial model: A highly interactive landscape, one in which viewers enter the frame and become part of the scenery.

## Program

Of course, other parks have broken the Olmsted mold, but Millennium Park is fundamentally different because it has been built within an existing Beaux-Arts park—Grant Park—that is wedged between Lake Michigan and the clifflike wall of buildings along Michigan Avenue. For decades, this corner of the park was

*RECORD contributing editor Blair Kamin is the Pulitzer Prize-winning architecture critic of the Chicago Tribune.*



a dusty pit filled with working commuter railroad tracks and a surface parking lot. Its future seemed brighter, but not particularly intriguing, in 1998 when Chicago Mayor Richard M. Daley unveiled the first

plan for the area—a timid, Beaux-Arts scheme by Skidmore, Owings & Merrill of Chicago. Had that plan gone ahead, Millennium Park would have generated an enormous yawn.

What Millennium Park generated instead was enormous controversy. It opened four years after its scheduled year 2000 debut. It cost \$325 million more than Daley's original budget of \$150 million, although private donors picked up \$205 million of that overrun. Investigative reporters had a field day digging up what went wrong. After construction began and a civic consensus developed that Skidmore's plan was anything but millennial, the park's fund-raising impresario, John Bryan, the former president and C.E.O. of

PHOTOGRAPHY: © ROLAND HALBE, EXCEPT AS NOTED



The bandstand's curving stainless-steel "headdress" (below) beckons patrons from the depths of the Loop (opposite, bottom). The outdoor stage, monumental artworks, and new gardens have drawn millions to the park (opposite, top).

PARK

Against the Loop's towers, the Pritzker Pavilion spreads across Grant Park like a giant fish fillet. The arching tubes suspend speakers over the audience.

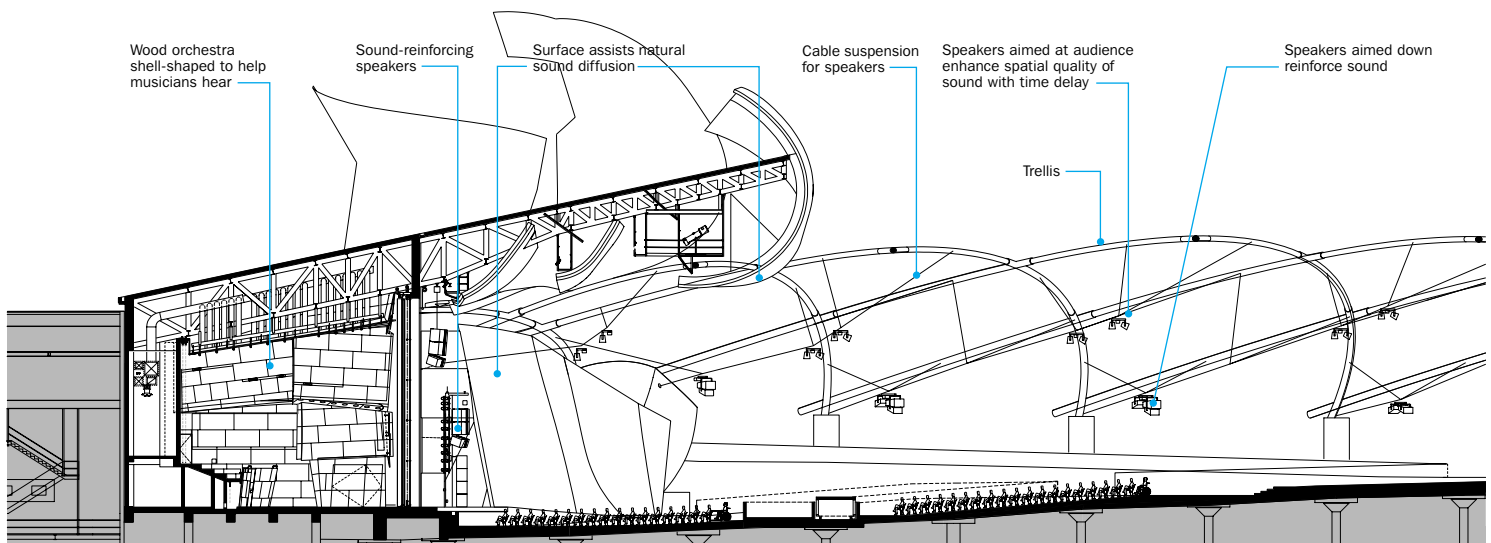






The trellis shapes an exhilarating space that subtly relates to Grant Park's formal, tree-lined outdoor rooms. The Douglas-fir-lined

acoustical shell (opposite) is configured so that musicians can hear each other well. Massive doors roll out to protect the stage.



SECTION - ACOUSTICAL CONCEPT



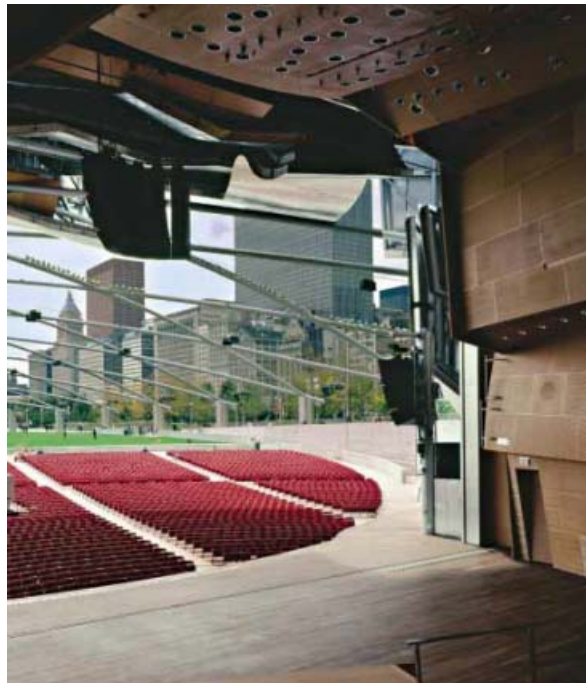


PHOTOGRAPHY: © SCOTT MCDONALD/HEDRICH-BLESSING (BOTTOM RIGHT)

the Chicago-based Sara Lee Corporation, and project design director Ed Uhler worked with wealthy donors and corporations to import world-class talents who would design major contemporary works of art and architecture. That might not have posed a problem in a typical park built on grade. But in one that is built atop bridgelike structures spanning the railroad tracks, it was a recipe for migraine headaches. That led to millions of dollars in change orders and years of delay.

**Solution**

Yet the stellar quality of the product ultimately outweighs the helter-



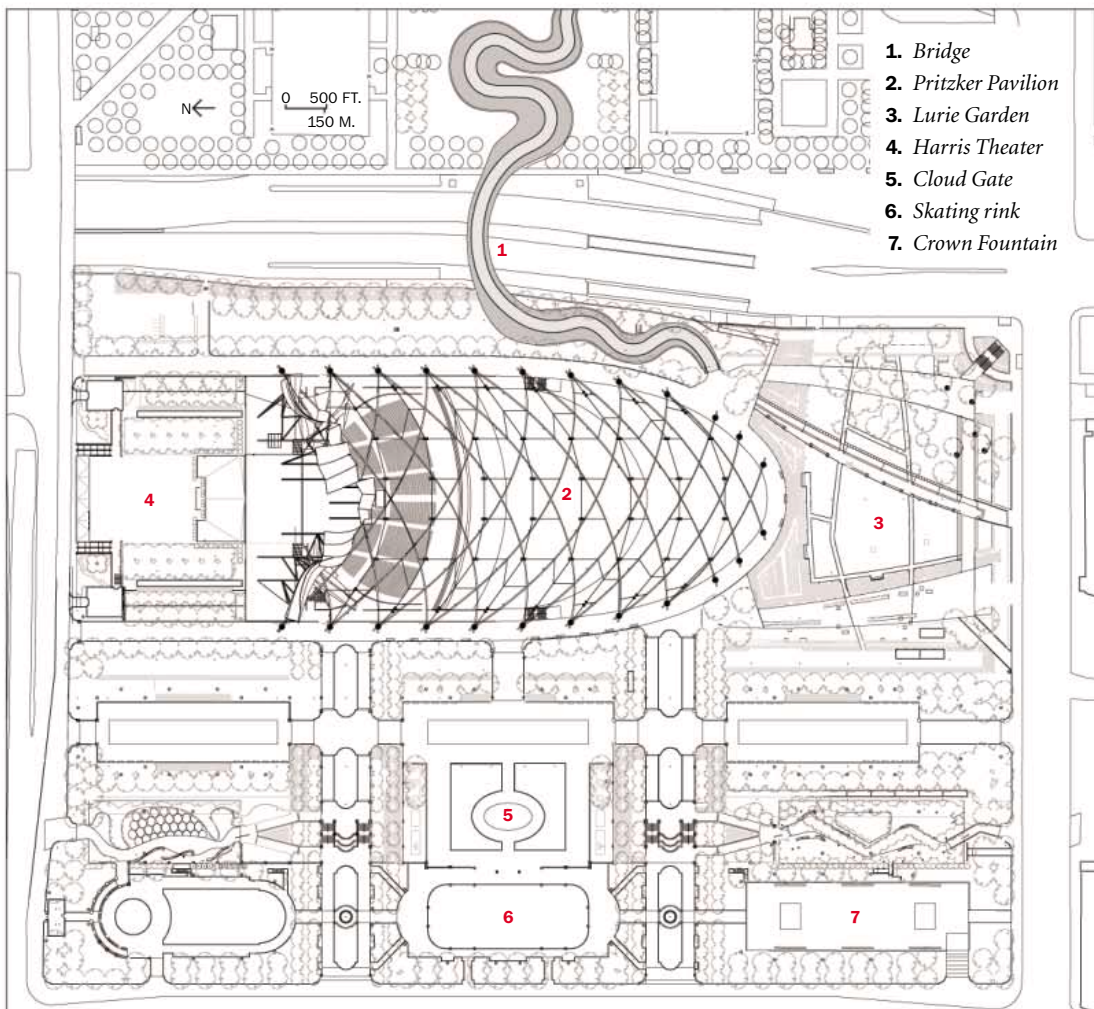


skelter process. The transformation began in earnest in 1999 when Daley unveiled Gehry's plan for the Pritzker Pavilion. The design set the park's tone—forward-looking and contemporary rather than backward and Beaux-Arts. The example set by the Pritzkers' gift (they annually bestow the Pritzker Architecture Prize) also instituted a kind of plutocrat peer pressure, leading other wealthy families to donate.

The \$60.3 million Jay Pritzker Pavilion spreads across Grant Park like a giant fish fillet. With outdoor seating for 4,000 in fixed seats and 7,000 on a lawn, it consists of two interconnected structures: A band shell with a boldly cantilevered head-dress of gleaming, stainless-steel curls that reach a 120-foot height, and a woven network of curving steel pipes that forms a heroically scaled, domelike trellis, 600 feet long by 320 feet wide. The trellis sweeps over the entire audience area, supporting speakers that liberate the lawn from the visual clutter of poles.

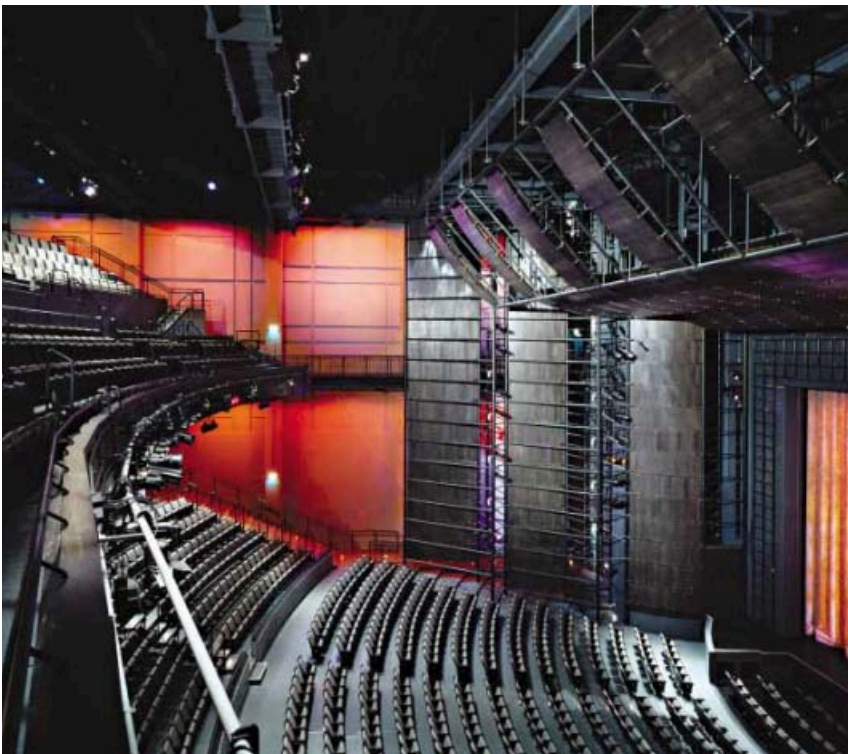
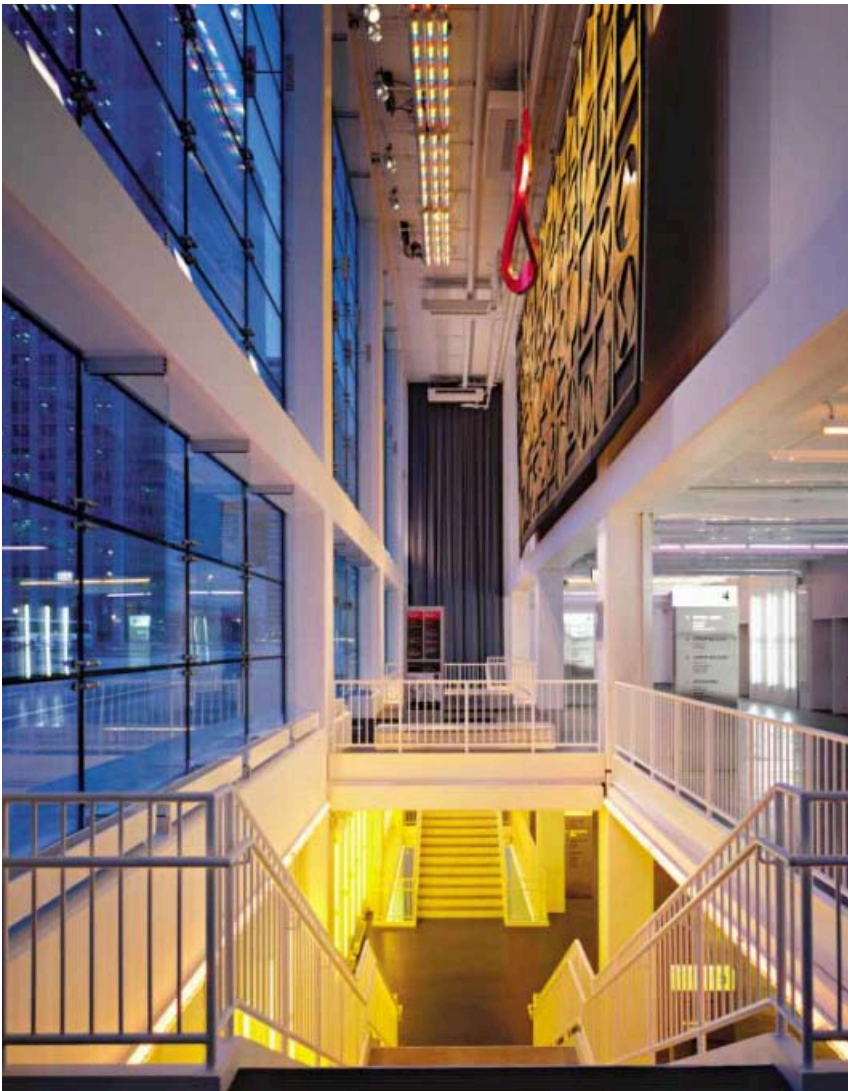
Though the pavilion has its faults—the trellis appears opaque rather than lacy from certain angles outside, for example—on the whole it succeeds brilliantly. The bland corporate towers behind the stage are an effective foil to the celebratory curve of the shells, which suggest waves of sound emanating outward from the stage. The band shell and skyline combination also enables the person at the back of the lawn to feel visually engaged with the stage, correcting a problem Gehry had trouble solving in his previous work at the relatively diminutive Hollywood Bowl. Yet it is the trellis that is the project's glory. Not only does the speaker system mounted on it deliver exceptional outdoor sound, it is so alluring that people picnic there even when no concerts are being held. Gehry extends Chicago's vaunted tradition of bare-boned architecture, dispensing with Miesian rationalism for an architecture of motion and feeling.

Gehry's snaking BP Bridge is equally magnetic. Strolling its sinuous path is a bracing change from Chicago's gridded streets. Its lone weakness is that it is not a pure



Trellis tubes crisscross similar tubes that support the stage shells (opposite). The \$14.5 million bridge (this page) buffers the music pavilion from car noise and serves as a viewing platform, providing drop-dead views of both the band shell and the skyline. The bridge is pure form, with no handrails to muck things up, just waist-high walls that hold you in.





**The Pritzker Pavilion wraps the underground Harris Theater for Music and Dance (lobby, top, and auditorium, bottom) by Hammond Beeby Rupert Ainge.**

span; a chunky concrete pylon supports its center. Without the pylon, though, the bridge couldn't be so spectacularly skinny.

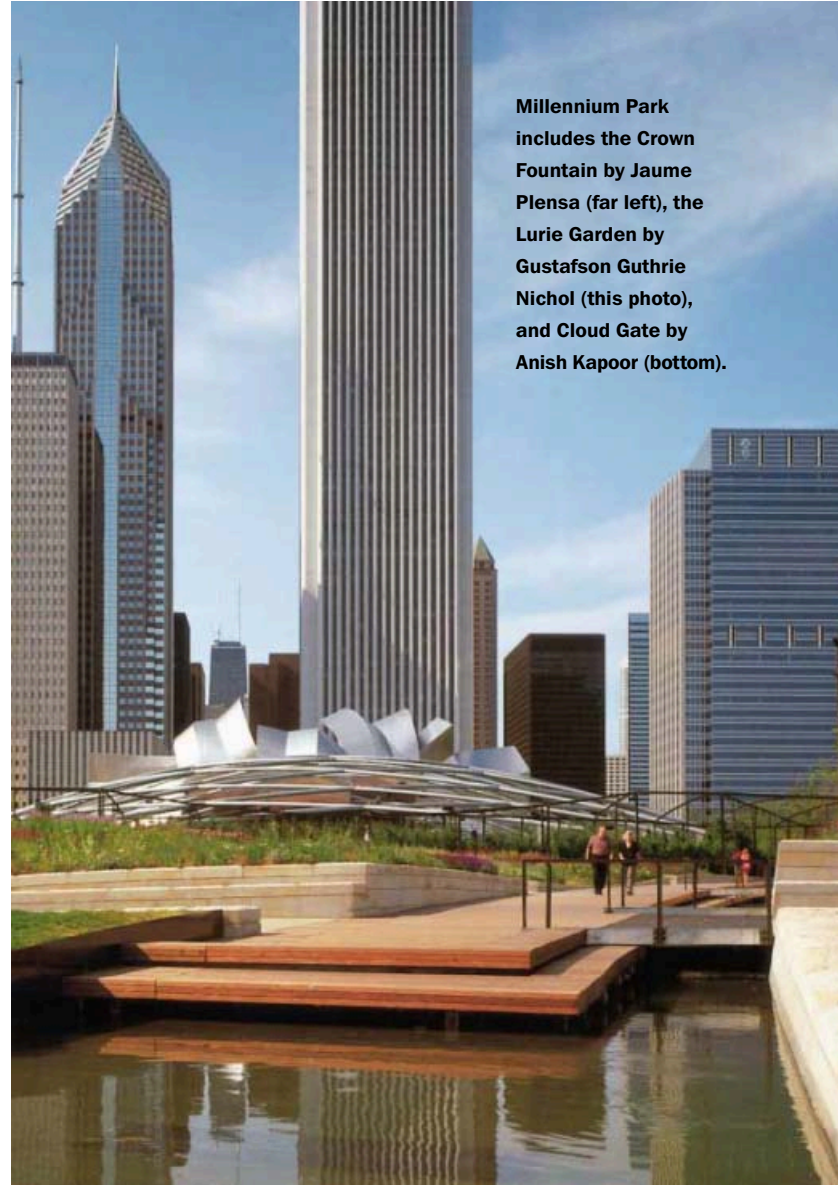
As great as Gehry's contribution is, artists like Kapoor challenge him, making sculpture resemble architecture just as Gehry makes architecture resemble sculpture.

That's the subversive challenge of the monumental, \$11.5-million Cloud Gate. Even at 66 feet long and 33 feet high, it looks like liquid mercury. Theatrically meeting the ground at just two points, you wonder if this massive presence is going to keel over. While visitors are initially drawn to the striking reflections on its mirrorlike surface, they are ultimately seduced by its underside. Parkgoers inevitably enter this space and look up, broad smiles on their faces, to see their miniaturized reflections in the domelike ceiling.

There is much more to Millennium Park, including Plensa's lively Crown Fountain, where super-size human faces projected onto twin glass-block towers spit jets of water; a handsome, mostly underground theater by Hammond Beeby Rupert Ainge of Chicago that shares backstage facilities with Gehry's band shell; the bold contemporary Lurie Garden by Kathryn Gustafson of Seattle that needs time to mature before it can be fully evaluated; plus a retro skating rink and peristyle, by OWP/P of Chicago.

But to focus solely on individual pieces is to miss the broader significance (and the shortcomings) of Millennium Park. The park's contrast between contemporary objects and its Beaux-Arts landscape comes off well, respecting the old even as it invigorates it with the new.

Socially, Millennium Park needs to become more nurturing, a place with more benches and other nooks where people can gather and partake of each other. It will burn itself out if it is solely about spectacle. In other words, it still has a road to travel before it truly fulfills its social promise. Even so, it represents an extraordinary artistic achievement as well as a tantalizing glimpse into the future of the urban park. ■



Millennium Park includes the Crown Fountain by Jaume Plensa (far left), the Lurie Garden by Gustafson Guthrie Nichol (this photo), and Cloud Gate by Anish Kapoor (bottom).



# Jazz at Lincoln Center New York City

# 2

**RAFAEL VIÑOLY DEVELOPS SEVERAL INTIMATE AND OFTEN UNIQUE SPACES  
IN A NEW HEADQUARTERS FOR JAZZ.**

**By Sam Lubell**

**Architect:** *Rafael Viñoly Architects—Rafael Viñoly, Jay Bargmann, principals; Charles Bloomberg, Stephanie Goto, Issei Horikoshi, Shigeru Kotoda, Sandra McKee, Takeshi Miyakawa, Hiroki Wakimura, Nida Rehman, Peter Girgis, Anoo Raman, Rayna Huber, Carisma Koenig, Steve Moon, design team*

**Client:** *Jazz at Lincoln Center*

**Engineers:** *Dewhurst Macfarlane and Partners, in association with Goldreich Engineering (structural); Flack and Kurtz Consulting Engineers (mechanical)*

**Consultants:** *Cline Bettridge Bernstein Lighting Design (lighting); Sound of Jazz, a joint venture of Artec Consultants and Walters-Storyk Design Group (acoustical)*

**General contractor:** *Turner/Santa Fe Construction Company*

**Size:** *157,000 square feet*

**Cost:** *\$128 million*

**Completion date:** *October 2004*

#### **Sources**

**Glass:** *W&W Glass Systems*

**Allen Room curtain wall:** *James Carpenter Design*

**Paints and stains:** *Benjamin Moore*

**Carpeting:** *Atlas carpet*

**Interior ambient lighting:** *Specialty Lighting*

**Fixed seating:** *TSI, with Maharam Fabric*

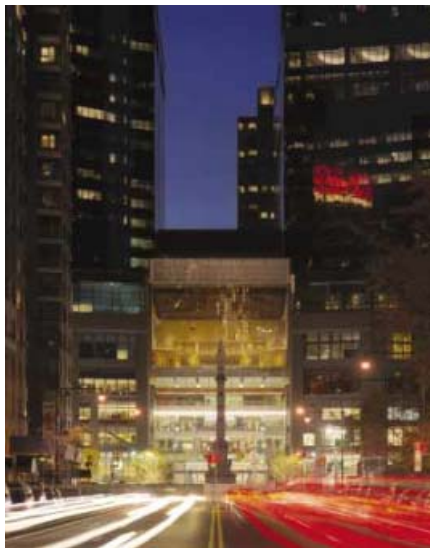
For more information on this project, go to Projects at [www.architecturalrecord.com](http://www.architecturalrecord.com).

In 1998, Rafael Viñoly got the rare opportunity to create a new type of building when he won the commission to design the Frederick P. Rose Hall at Jazz at Lincoln Center, the first performing arts complex created for jazz music. Most of its performance spaces dwarf traditionally small, sometimes shabby, if charming, jazz venues like New York's Blue Note and Village Vanguard. Trying to maintain these spaces' intimacy—a key ingredient for a type of music that depends on its audience for energy—at a larger scale was one of several unique challenges facing the high-profile project.

#### **Program**

The program for the complex, on the fifth, sixth, and seventh floors of SOM's Time Warner Center, included four performance spaces: the Rose Theater, the primary concert hall; the Allen Room, a cabaret overlooking Central Park, with room for 550; the unfortunately named Dizzy's Club Coca-Cola, an intimate jazz lounge; and the Irene Diamond Education Center, a rehearsal space and recording studio also used for shows.

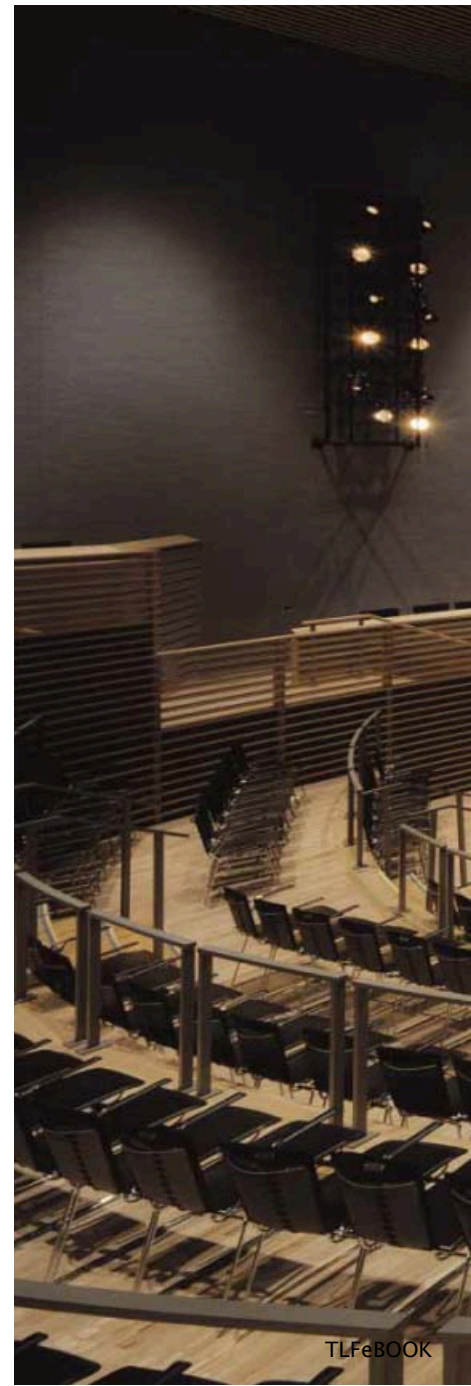
Building committee chair Jonathan Rose says the objective for the theaters appeared simple: to achieve intimacy, acoustic richness, and a refined sense of originality. These goals were complicated by a



desire, driven largely by capital concerns, to host as many types of events as possible. Moreover, Viñoly had to squeeze the performance spaces into a roughly 150,000-square-foot envelope within a fairly modest budget of \$128 million. The architect felt compelled, meanwhile, to develop an aesthetic that evokes jazz's elegance, dignity, and joy, while avoiding what he calls a "jazzy" aesthetic—clichéd forms associated with the music, clumsily derived from abstract art and intended to entertain. Such imagery is found anywhere from pastel-colored chain restaurants to cartoonish logos for radio stations.

#### **Solution**

The larger theaters, the Rose and Allen, strive to be at once capacious and intimate, flexible and unique. The



PHOTOGRAPHY: © BRAD FEINKNOPF/FEINKNOPF PHOTOGRAPHY

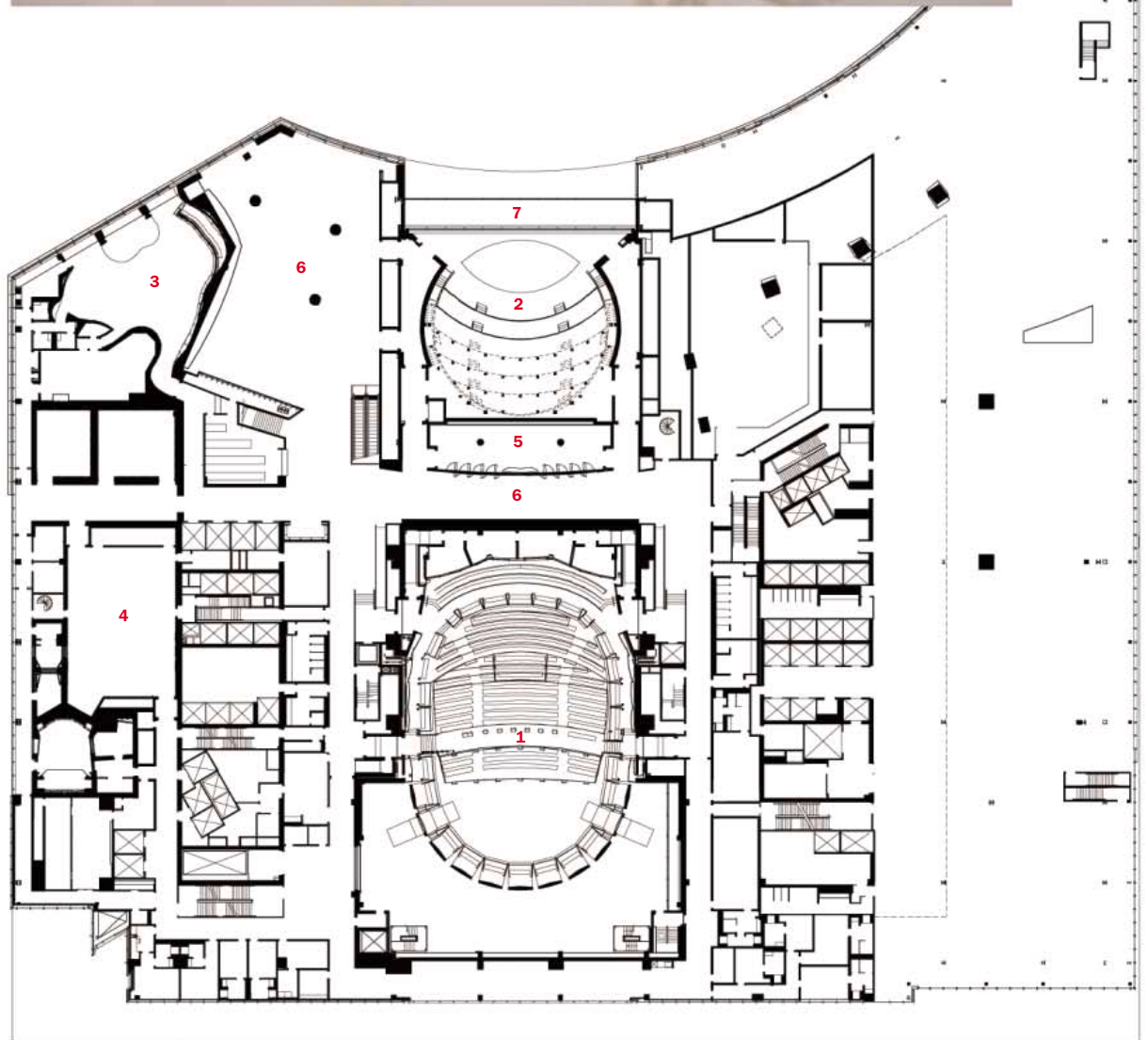
**The Allen Room** (below), which faces **Columbus Circle** and can be seen from the street (opposite, left), is dominated by a 50-by-90-foot glass curtain wall. Delicately curving maple acoustic absorbers (right) separate orchestra and mezzanine seating and curve around concertgoers, enveloping them in the space.



A forestage lift converts the orchestra pit into additional seats, while upper seating zones are arranged in loges, similar to many European halls.



- 1. Rose Theater
- 2. Allen Room
- 3. Dizzy's Club  
Coca-Cola
- 4. Irene Diamond  
Education Center
- 5. Ertegun Jazz Hall  
of Fame
- 6. Lobby space
- 7. Glass curtain wall



SIXTH FLOOR

N ← 0 30 FT.  
9 M.



The Rose's ring of lights can change color, casting a varied glow. Seating wraps around the stage, increasing intimacy. Neoprene pads and other buffers separate the theater acoustically from the rest of the building.





Lobbies (top) flow around theaters. The curvy design of Rockwell Group's informative Ertegun Jazz Hall of Fame (bottom) echoes musical rhythms.



Rose, which seats up to 1,231, includes seating configurations shallow enough that the farthest viewer is only 88 feet from the stage. Movable seating towers, divided into loges, increase the sense of closeness by wrapping the audience around the stage, while the loge's syncopation breaks up visual rhythm, preventing the impression of a continuous sea of people. A retractable acoustic ceiling helps make the space adaptable for theater, opera, or ballet performances. Textured African Movingui wood lends an exotic refinement and helps seating fade into the background at performance time, while a ring of square-shaped lights sprinkles color onto the seats below. Backstage lighting peeks behind the seating towers, creating a sense of mystery.

The Allen Room's centerpiece, arguably the complex's highlight, is a 50-by-90-foot double-glazed window behind the stage that looks onto Columbus Circle and Central Park. The curtain wall's inner layer is tilted back to avoid direct sound and light reflection. Intimate amphitheater-style seating atop blond maple platforms sweeps upward from the stage, lending the space a crisp elegance. Louvered maple acoustic absorbers line the stairways, accentuating the room's sensuous curves and enveloping the audience, stage, and city outside. Seating tiers can retract partially for smaller audiences, or fully to add cabaret-style arrangements.

For Dizzy's, the center's director, jazz impresario Wynton Marsalis, simply asked Viñoly to create a place that was "it." Viñoly, a pianist since childhood, seemed to understand the vague directive. "If you don't know what that means, you never will," he says with a smile. The room's curving bamboo walls create a sense of movement, echoing the rhythms of the music and providing a warm sense of enclosure. It shares the Allen Room's spectacular view, albeit with much smaller windows.

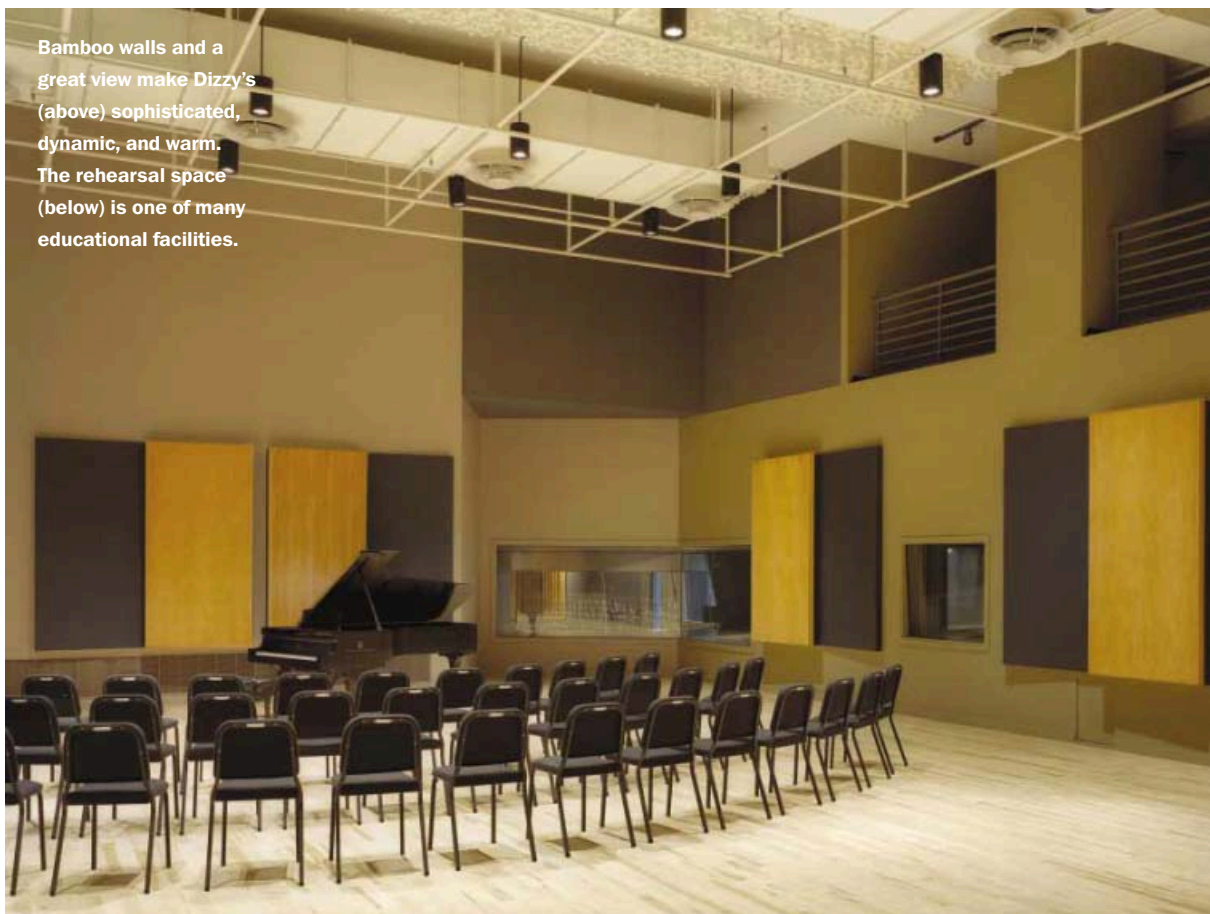
Viñoly admits the lobby areas were not his focus. He originally slated the Allen Room to be part of the lobby, but later decided to make it his "gift to the hall," celebrating "a connection to the artists" over "a con-

nection to the architecture.” Visitors enter the simple, multicolored space, which alternates between one and two stories, through an uneventful ride in elevators and escalators originating in the shops and restaurants below. The double-height portion, hung with pictures of jazz greats and featuring windows overlooking Central Park, is located on the periphery, taking shape, Viñoly notes, in the space left over from the theaters.

### Commentary

The theaters are generally built with an eye for comfort and elegance that is sometimes inspiring. The most successful spaces line the park. The Allen Room is a gem, with its Zen-like interior blending seamlessly into the magical curtain wall that, as Viñoly puts it, “brings the city into the room.” The audience and performers share the exhilaration of being in a unique place, as they do at Dizzy’s, where at night, candlelike lights grace small tables, and the backdrop of the city makes visitors feel as if they’ve stepped into a cinematic jazz palace. The Rose, while handsome and surprisingly accommodating, fails to offer the the same level of originality, appearing more a reinterpretation of a classic hall than a new invention. The colored chandeliers, a late addition, seem a tacked-on attempt to add excitement.

The lobby is the project’s major detractor. Its isolation, shapeless form, and lack of compelling focus (the windows, its highlight, are too distant to make a real impact), mitigate its effect. Painted Sheetrock walls, institutional carpets, backlit signs, and garish colors seem generic and detached. While Viñoly says he intentionally diminished the area in favor of the performance halls, there’s a creeping sense that, as in the mall below, his team stuck to formula. Jazz music, though refined, finds its real groove in improvisation and the ability to surprise; the most effective spaces here do the same. But once the theater doors open, it becomes difficult to avoid a nondescript sense of “jazziness,” which shortchanges the audiences who, along with the artists, lend jazz its greatest vibrancy. ■



Bamboo walls and a great view make Dizzy's (above) sophisticated, dynamic, and warm. The rehearsal space (below) is one of many educational facilities.

# Hollywood Bowl

## Hollywood, California

# 3

**HODGETTS + FUNG FRESHENS UP A REVERED CONCERT VENUE WITH AN ENLARGED SHELL AND ACOUSTICS WORTHY OF WORLD-CLASS MUSICIANS.**

**By Deborah Snoonian, P.E.**

**Architect:** Hodgetts + Fung Design Associates—Craig Hodgetts, AIA, Hsin-Ming Fung, AIA, principals; Eric Holmquist, project architect; Denise Zacky, Martha dePlazaola, Kevin Owens; Richard Bonneville, Rafael Rosas, Michael Knopoff, project team

**Executive architect:** Gruen Associates

**Client:** County of Los Angeles

**Consultants:** Jaffe Holden Acoustics (acoustics)—Christopher Jaffe, principal; Robin Glosemeyer, consultant; MHI Miyomoto (structural engineer); Gotama Building Engineers (m/e/p); Fisher Dachs Associates (lighting, theater planning); Geotechnologies (soil engineering)

**Size:** 28,500 square feet

**Cost:** \$25 million

**Completion date:** June 2004

### Sources

**Acoustical ceiling:** Sound Control Company

**Acoustic canopy:** Mice Creative Projects; Total Structures; Prosenium

**Turntable:** Westmont Industries

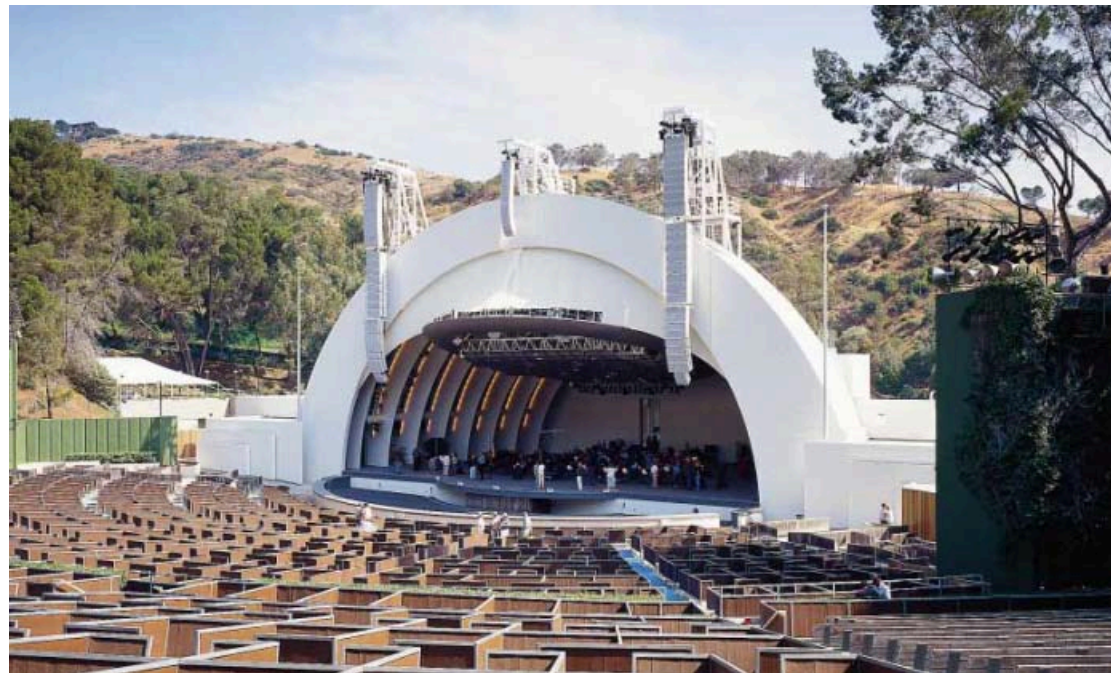
**Concrete:** Tony Servera Company

**Shotcrete:** Structural Shotcrete Systems & Shoring

**Structural steel:** Milco Constructors

**Sunshade:** Jim Miller Canvas

For more information on this project, go to Projects at [www.architecturalrecord.com](http://www.architecturalrecord.com).



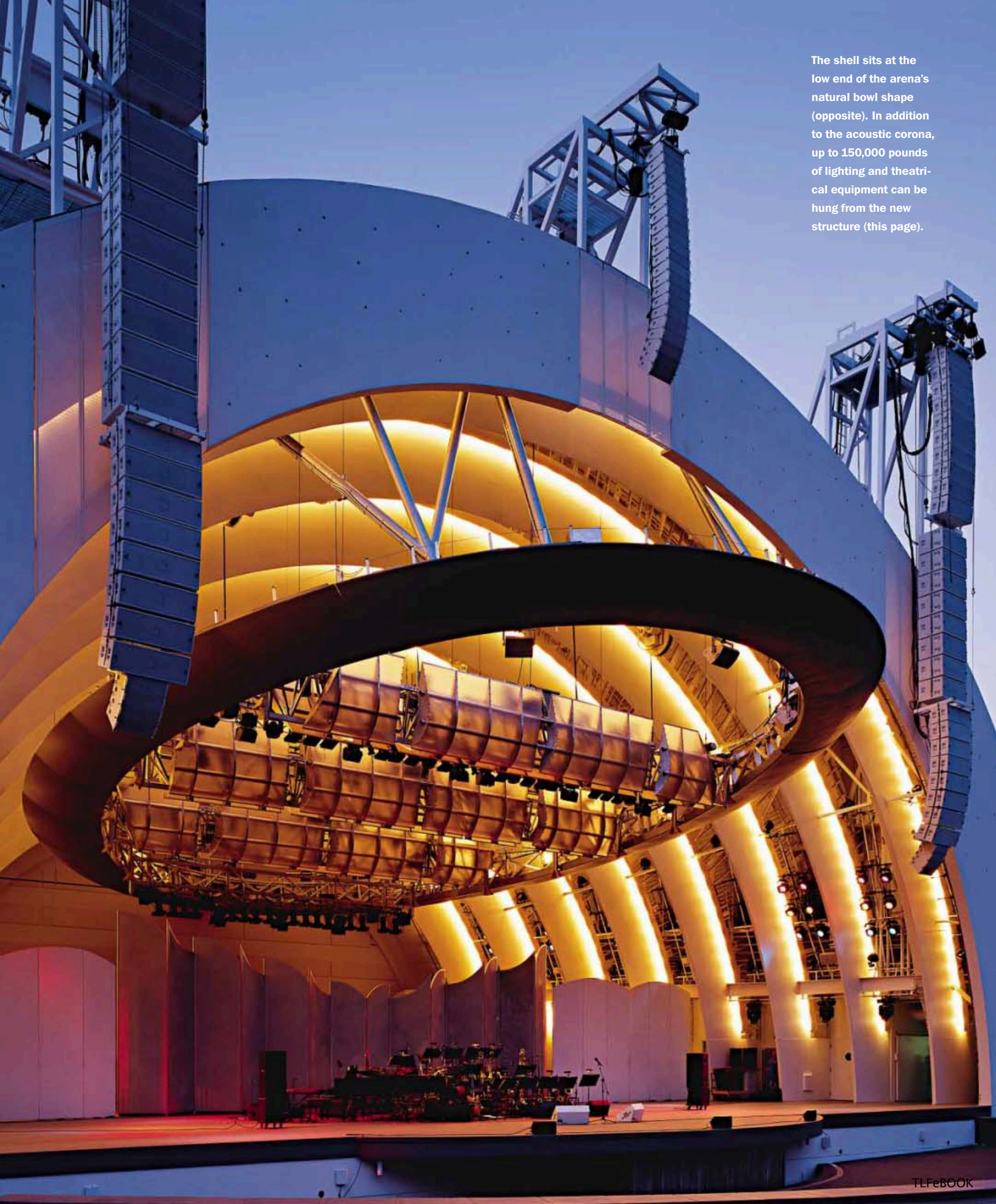
Los Angelenos have enjoyed outdoor concerts at the Hollywood Bowl for generations, while musicians have felt just the opposite. The shell was too small to contain a full orchestra (the strings had to sit in front of it), and its acoustics prevented musicians from hearing each other play, which forced the stringed instruments to be overmiked during performances, dramatically compromising the sound quality. Patchwork solutions like the sound-diffusing sonotubes installed in 1970 and the fiberglass spheres added in 1980, both designed by Frank Gehry, did little to assuage the problem. By the 1990s, the Bowl's beloved but

crumbling 1929 Moderne shell, the fourth of a series built in the 1920s, had literally rusted into place on its steel wheels. In 2000, the county hired Los Angeles architects Hodgetts + Fung to overhaul the structure. Lawsuits lodged by nervous preservationists stalled the project more than once, but construction finally began in October 2003. Nine months later, an elegant new shell retains the character of the original while satisfying the needs of the Los Angeles Philharmonic, the Bowl's primary leaseholder, as well as the variety of other pop and classical acts that cross its stage every year.

### Program

Besides being flexible enough to accommodate acts ranging from Madonna to Morton Feldman, the shell had to be enlarged for orchestral performances and shored up against earthquakes. Back-of-the-house niceties like recording studios and a library, championed by a project manager who left the job midway through, were nixed in favor of a simplified (read cheaper) program. Unfortunately, Hodgetts + Fung's proposal to rebuild reflecting pools near the stage was also shelved (the original pools were removed in 1972 to make way for pricey seating close to the stage).

PHOTOGRAPHY: © LARA SWIMMER/ESTO, EXCEPT AS NOTED

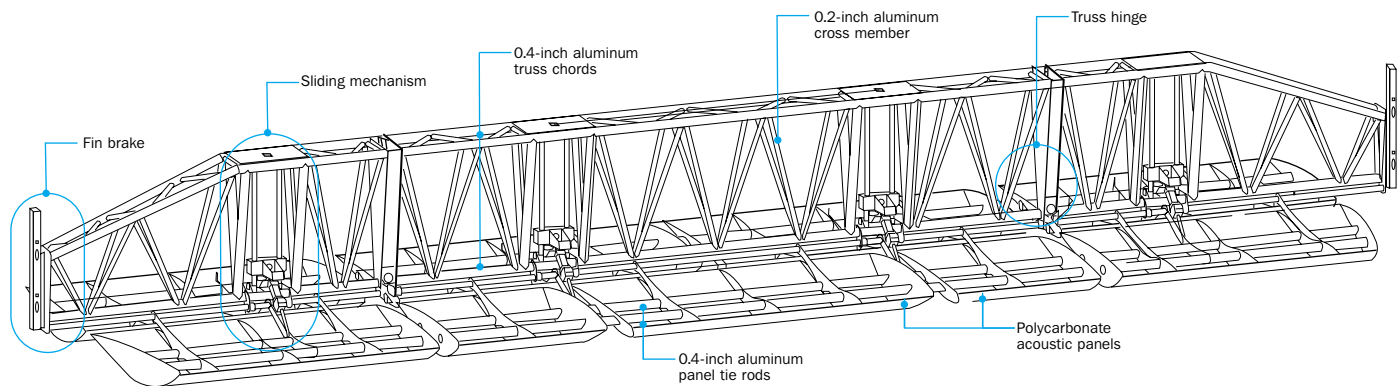


The shell sits at the low end of the arena's natural bowl shape (opposite). In addition to the acoustic corona, up to 150,000 pounds of lighting and theatrical equipment can be hung from the new structure (this page).

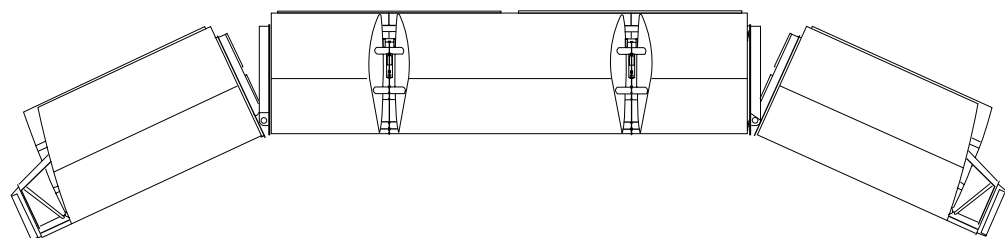


Different shell designs (clockwise from top left) include an arched proscenium by Allied Architects (1926);

Lloyd Wright's pyramid (1927); Gehry's fiberglass spheres (1980); and another Lloyd Wright design (1928).



ACOUSTIC BAFFLE



BAFFLE IN FINAL STORAGE POSITION

PHOTOGRAPHY: COURTESY HOLLYWOOD BOWL MUSEUM (TOP TWO); BRUCE TORRENCE HISTORICAL COLLECTION (BOTTOM LEFT); © DONALD DIETZ (BOTTOM RIGHT)

## Solution

The new shell echoes the older one's proportions and form but is about a third larger in volume. Its concentric rings appear circular from the audience, but they're actually elliptical, a shape the architects took pains to refine aesthetically and acoustically, working with Jaffe Holden Acoustics.

The obvious addition is the aluminum "corona" suspended over the stage, which is raised and lowered by means of pistons and nautical-grade winches. Four motorized baffles installed within it correspond to each section of the orchestra: strings, woodwinds, brass and percussion, and chorus. The polycarbonate panels, streamlined like airfoils, can be moved like flaps on an airplane to produce different acoustic effects; they can also be folded up and stored when not needed. Together, the corona and shell produce a reverberant sound that helps musicians hear each other, and therefore play better, and engineers now rely less on pure amplification to project sound to the audience of nearly 18,000. As with any new concert venue, the designers are still tweaking the system after an initial tuning period.

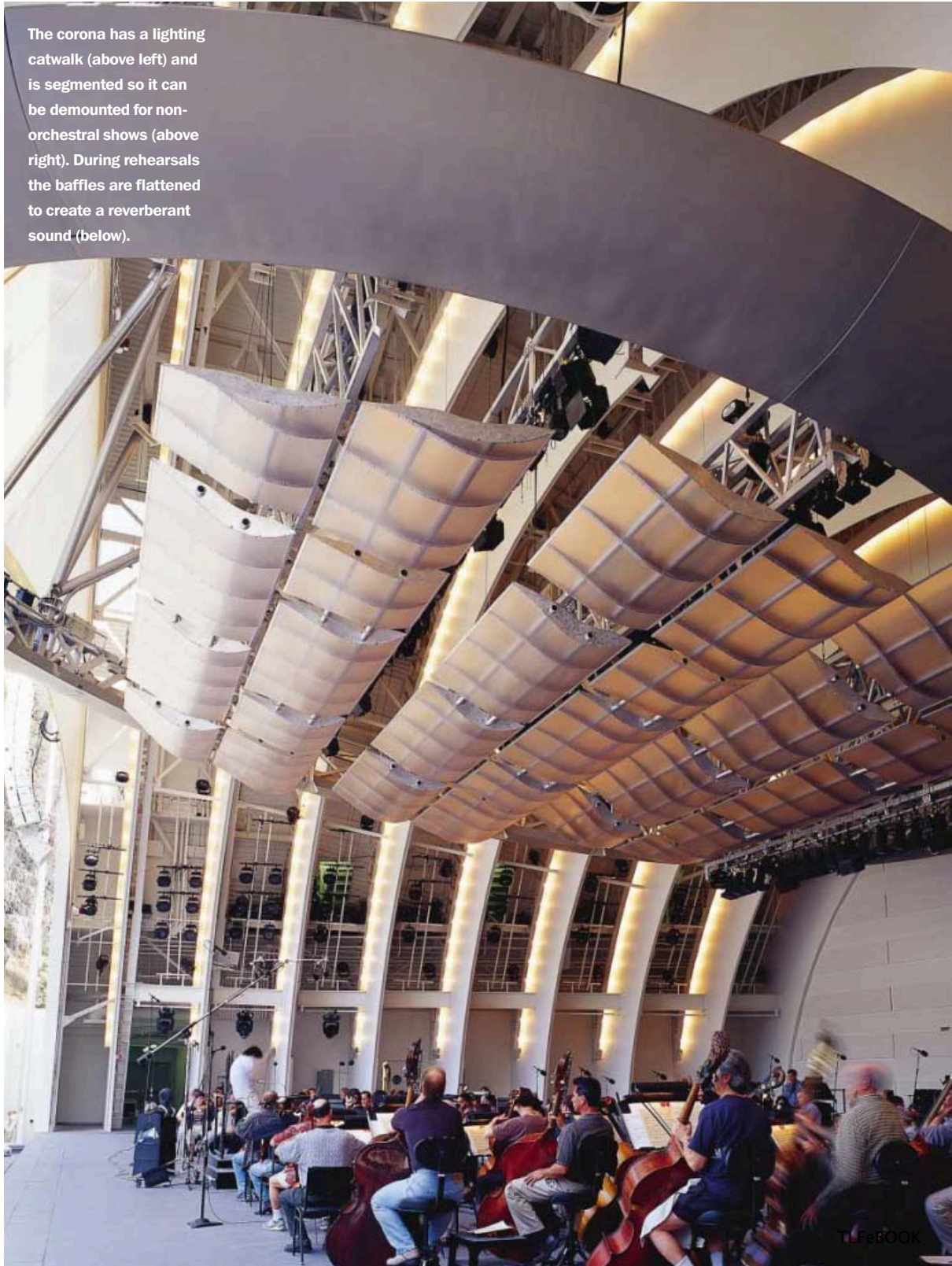
A turntable built into the stage enables quick set changes, and as a final flourish, fireworks can be launched from the shell's roof.

## Commentary

The shell's acoustics have been roundly praised by musicians, and while concertgoers may appreciate the improved sound, many of them mistake the new structure for the old ("They did a great job restoring those rings!" said Jon Lutz, a frequent Bowl attendee, last October). The new shell, like the old, provides a visual focal point for the audience and anchors the Bowl in its dramatic natural setting, where nary a housing development is visible from the stage or seats—almost unbelievable, considering how overbuilt its surroundings are today. The corona adds a dash of techno-zoom to the shell's retro vibe. Who says Hollywood glamour is dead? ■



The corona has a lighting catwalk (above left) and is segmented so it can be demounted for non-orchestral shows (above right). During rehearsals the baffles are flattened to create a reverberant sound (below).



# Zankel Hall

## New York City

# 4

**POLSHEK PARTNERSHIP RETURNS A THIRD PERFORMANCE SPACE TO THE CARNEGIE HALL MASTER PLAN, ELEGANTLY EXPANDING UNDERGROUND.**

By William Weathersby, Jr.

**Project:** Judy and Arthur Zankel Hall at Carnegie Hall, New York City

**Architect:** Polshek Partnership Architects—Richard Olcott, FAIA, James S. Polshek, FAIA, Joseph Fleischer, FAIA, partners; Charles Griffith, project manager; Thomas Wong, senior designer; Charles Brainerd, David Ooyevaar, project architects; Charmian Place, Ghiora Aharoni, Ruth Berkold, Peter Brooks, Rebecca Carpenter, Robert Condon, Anna Law Ho, Alex Leung, Jane Lin, James Sinks, Alina Tesmer, Robert Young, Jonathan Zane, project team

**Client:** Carnegie Hall Corporation

**Consultants:** Robert Silman and Associates (structural); Flack & Kurtz Consulting Engineers (mechanical/electrical); Jaffe Holden Acoustics (acoustic); Auerbach Pollock Friedlander (theater); Auerbach Glasow (lighting)

**Construction manager:** Tishman Construction Corporation

**Size:** 40,100 square feet

**Cost:** \$72 million

**Completion date:** September 2003

#### Sources

**Escalators:** Montgomery Kone

**Doors, canopy:** Allied Bronze

**Seating:** Theater Solutions

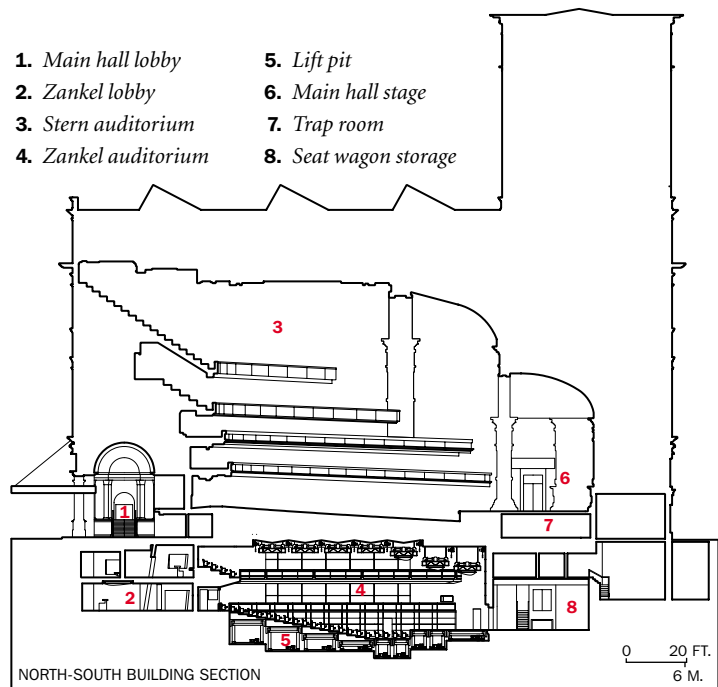
**Carpet:** Bloomsburg Carpet

For more information on this project, go to Projects at [www.architecturalrecord.com](http://www.architecturalrecord.com).

For 25 years, Polshek Partnership Architects has orchestrated incisive master-plan enhancements of Carnegie Hall, long viewed as one of the country's premier concert venues. During the 1980s, the firm restored both the main Isaac Stern Auditorium and the smaller Sanford I. Weill Recital Hall. Public amenities and backstage spaces were expanded into the new neighboring Carnegie Hall Tower in 1991. With the completion of a third performance space, the 644-seat Judy and Arthur Zankel Hall, Polshek has reached beyond its role as conservator of the historic building to that of innovator, expanding the notion of what a Carnegie Hall concert can be. The auditorium fulfills the venerable institution's mission to broaden its musical performance and educational programming with a modern and flexible space.

Zankel Hall restores philanthropist Andrew Carnegie's original vision of housing three performance spaces under one roof. Designed by architect William B. Tuthill, the 1891 Italian Renaissance-style structure initially included a third, 1,200-seat recital hall within its below-grade level. Later, the hall was adapted as an off-Broadway theater and a cinema. By the late 1990s, the venue had been compromised both architecturally and acoustically beyond restoration, leading Carnegie Hall administrators to envision building a new auditorium with an expanded

1. Main hall lobby
2. Zankel lobby
3. Stern auditorium
4. Zankel auditorium
5. Lift pit
6. Main hall stage
7. Trap room
8. Seat wagon storage



#### Program

Carnegie Hall's mandate was to create an intermediate-size performance space with excellent acoustics and modern architectural details that remained sensitive to its historic surroundings.

Enhancing a \$72 million construction budget, a \$28 million endowment was raised to finance expanded artistic programming and music education, which would be supported by multimedia communications capabilities. Major challenges were improving public access from the street, excavating through bedrock to create the larger auditorium volume necessary to support a

scope in its place. "From performers to board members to stage technicians, everyone surveyed wanted to gain features Carnegie Hall had never offered," says project architect Richard Olcott, "such as seating and stage flexibility, audiovisual sophistication, and an environment accommodating more experimental performance styles."

PHOTOGRAPHY: © JEFF GOLDBERG/ESTO, EXCEPT AS NOTED; DON PURDUE (THIS PAGE)

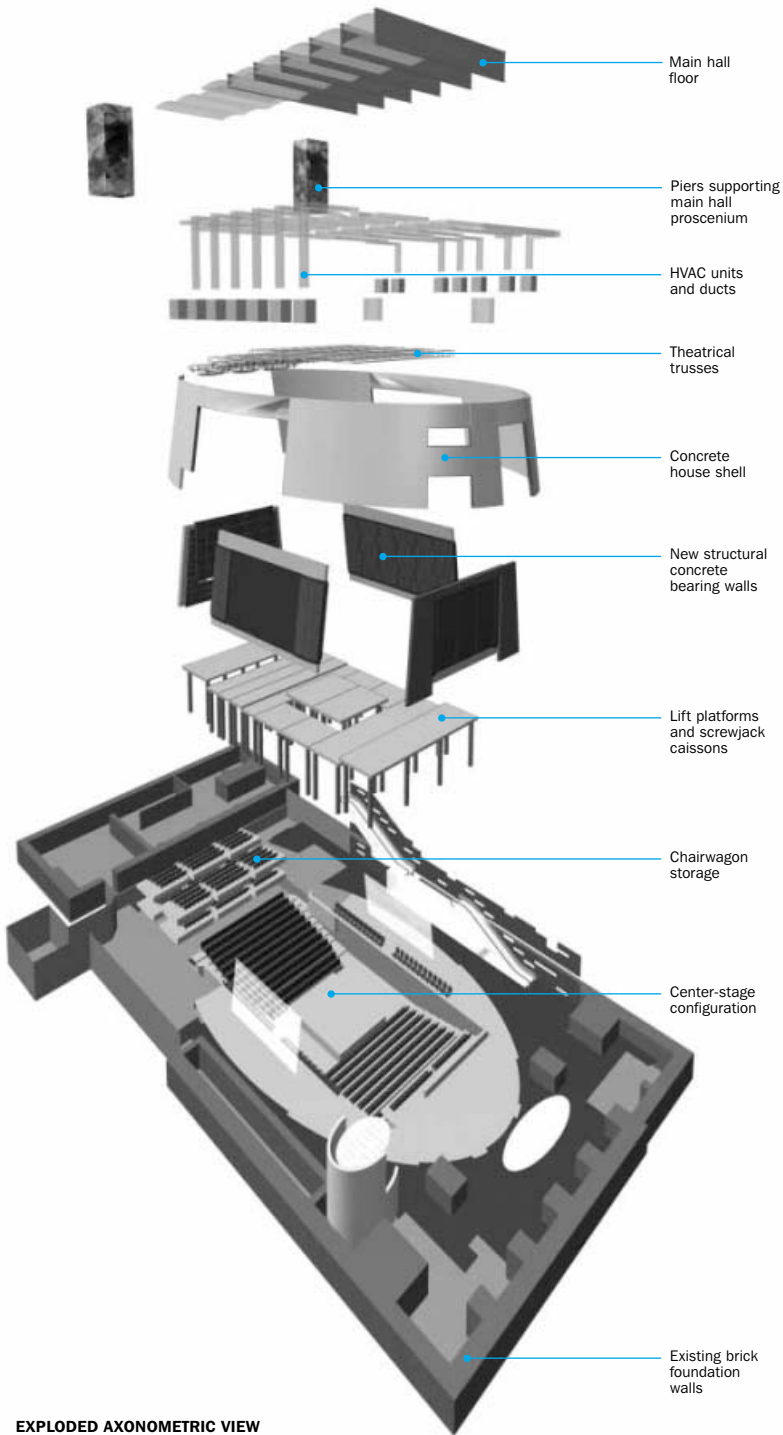


A canted wall fitted with backlit glass panels rises the height of the two lobby levels. A new canopy enhances brick and terra-cotta details at the expanded entrance (opposite).

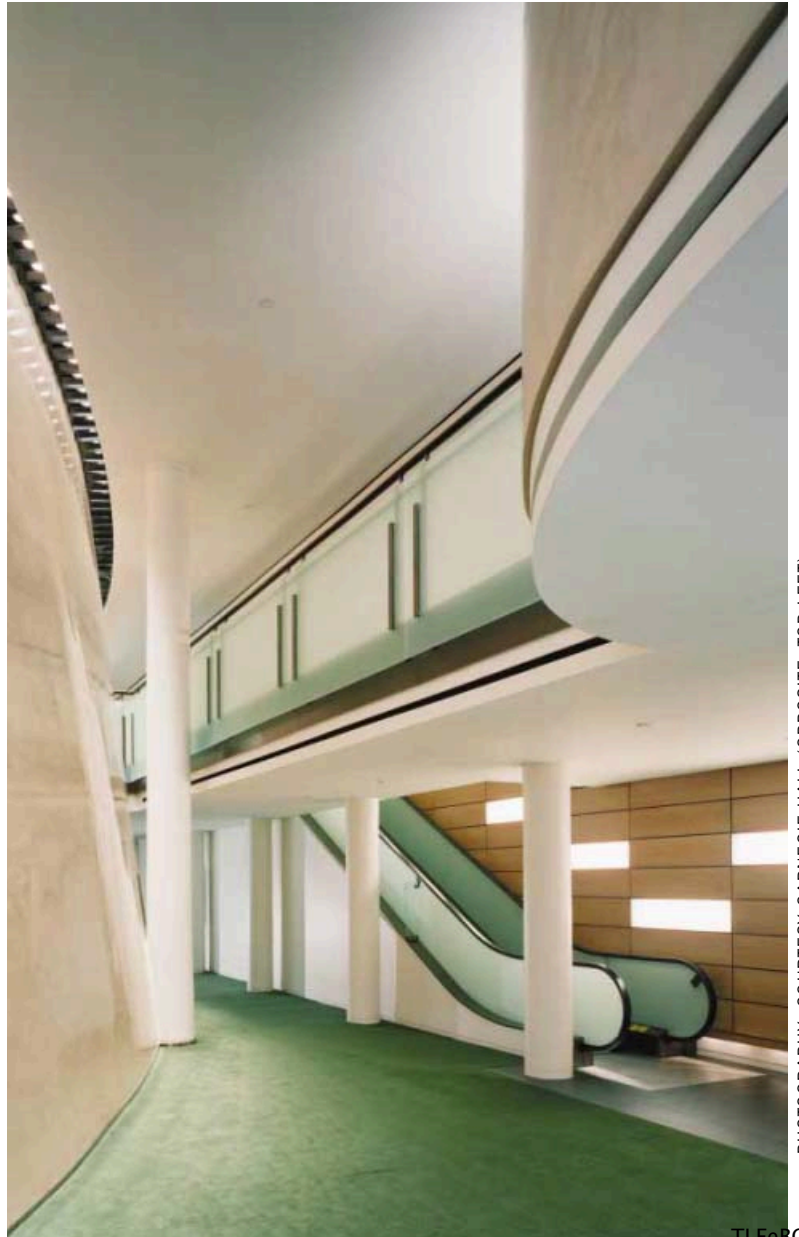


The configuration of Zankel Hall, a rectangular auditorium set within a curvilinear enclosure (below), reverses the juxtaposi-

tion of the main Isaac Stern Auditorium, where a curvilinear concert hall is contained by a rectilinear outer structure.



EXPLODED AXONOMETRIC VIEW



PHOTOGRAPHY: COURTESY CARNEGIE HALL (OPPOSITE, TOP LEFT); BERNSTEIN ASSOCIATES (OPPOSITE, TOP RIGHT)

## Construction required careful excavation below the main hall

Building beneath the main stage of Carnegie Hall was a complicated process that raised construction costs. Adapting the former cinema (near right) to an acoustically viable concert venue meant excavating 22 feet through rock below the existing floor plane, often by hand. Constructing Zankel Hall required the removal of approximately 6,500 cubic yards of rock and 750 cubic yards of brick. Of the more than 50 subcontractors hired by Tishman Construction, the challenge of the excavation went to Schiavone Construction, a firm that traditionally tunnels for the New York City subways. Work was timed to allow the auditoriums above to remain fully operational during construction; more than 4,000 performances and rehearsals went ahead undisturbed.

All construction materials were transported by a custom, 20-ton hydraulic elevator through a

10-by-20-foot opening in the sidewalk. Backhoes, track drills, and other equipment were taken apart to fit through the opening, then reassembled below ground. To accommodate construction, workers installed a complex tempo-

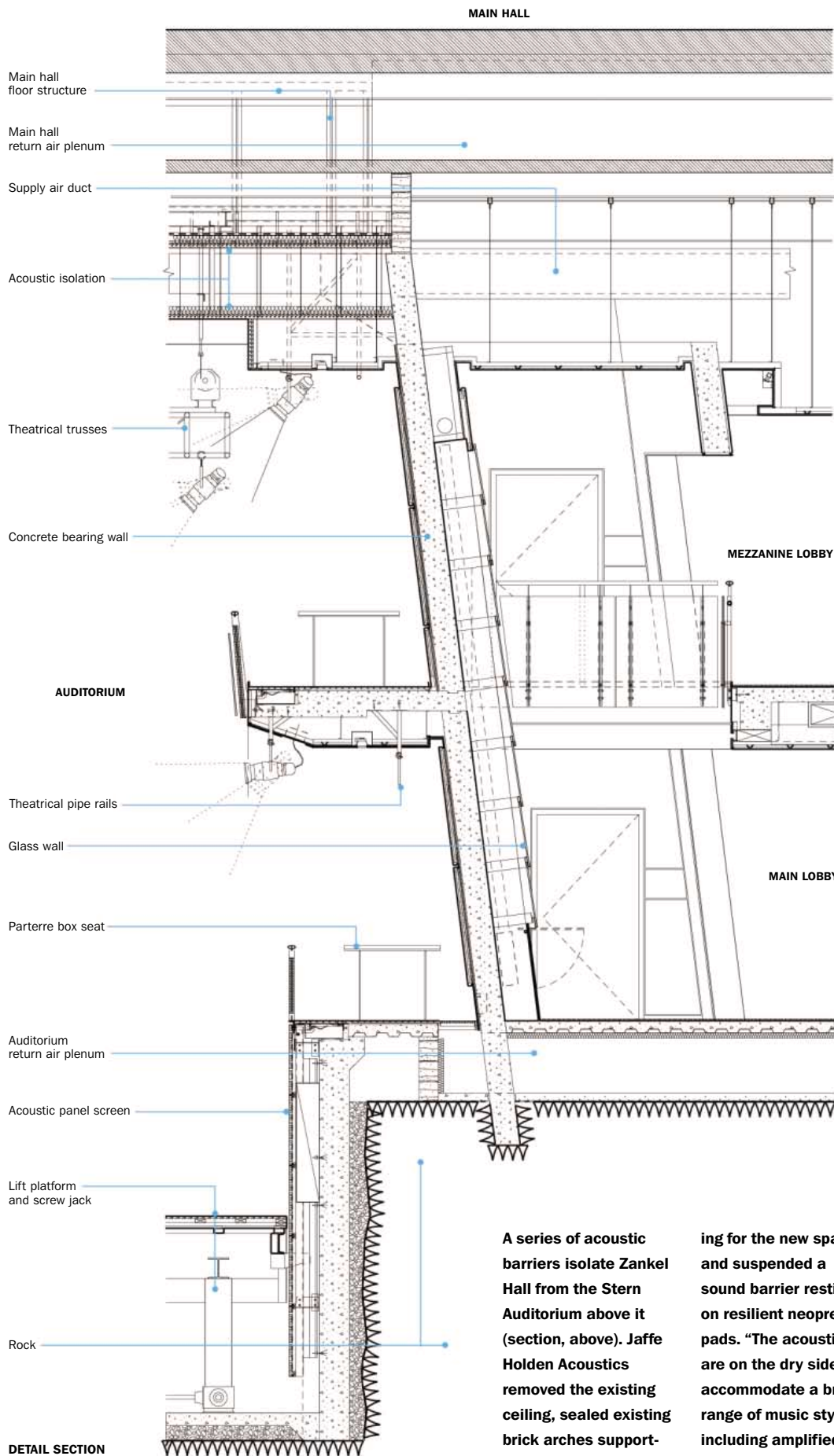


rary shoring system made of steel supports (below) to hold up the floor above. Eventually, builders transferred the weight of Stern Auditorium from the old steel girders and cast-iron columns to the new ellipse's 10-inch-thick structural concrete walls. The ellipse's surfaces slope at 7 degrees to improve acoustics. W.W.



Curved bearing walls lead patrons through lobby spaces (below and opposite, bottom). Elliptical light fixtures echo the structural lines (opposite, top).





**A series of acoustic barriers isolate Zankel Hall from the Stern Auditorium above it (section, above). Jaffe Holden Acoustics removed the existing ceiling, sealed existing brick arches supporting the main hall, installed a plaster ceiling**

**for the new space, and suspended a sound barrier resting on resilient neoprene pads. "The acoustics are on the dry side to accommodate a broad range of music styles, including amplified performances," says consultant Chris Jaffe.**

broad range of music styles, and acoustically isolating the hall from the main hall directly above it and the adjacent city subways.

### Solution

An expanded Zankel entry on Seventh Avenue replaces street-level retail spaces. Historic brick and terra-cotta details were repaired and matched by a new arch added above the entrance to complete the symmetry of the elevation in the spirit of the original design. To compensate for a tight street-level lobby, an oversize canopy shelters patrons gathering on the sidewalk.

The stacked interior spaces are a play of interlocking geometric forms in contrasting materials. Within the rectangular footprint of the building's masonry walls, a canted ellipse constructed of reinforced concrete and finished in polished plaster defines lobby circulation. Set within the ellipse, the rectangular auditorium features free-standing walls paneled in American sycamore. Cream-colored plaster, mohair upholstery, and warm woods detailed in bronze subtly evoke the main hall's detailing.

Flexibility is the refrain in Zankel Hall. "It's all one big, movable puzzle," says Polshek project manager Charles Griffith. The main floor is a series of lifts, constructed atop screw jacks. Seats affixed to chair wagons can move via air casters in and out of an adjacent storage area. The lifts and chair wagons allow reconfiguration of the auditorium to end-stage, center-stage, and flat-floor formats.

### Commentary

Sixteen months after the hall's opening, the end-stage configuration dominates the schedule, though programming is diverse. A recent week, for example, marked the Carnegie Hall debut of classical piano virtuoso Till Fellner, followed a few mornings later by a vibrant musical exchange between students in New York and New Delhi connected by a live, broadcast-quality phone link. Zankel Hall transforms a bastardized basement space into a modern showplace for music. ■



In a tight lobby space, curving forms such as a staircase and balcony provide visual interest two levels below grade (far left). A black-box-style ceiling equipped with 21 automated trusses allows versatile positioning of lighting and sound equipment (left and below). The end-stage configuration often used for concerts offers three size options for the stage floor. Slatted side walls of sycamore are backed by acoustical diffusion panels.



# SMCC Performing Arts Center

## Phoenix, Arizona

# 5

**JONES STUDIO CREATED A GLOWING LANTERN WITHIN A RUSTED-STEEL ENVELOPE AT SOUTH MOUNTAIN COMMUNITY COLLEGE'S NEW ARTS BUILDING.**

**By Ingrid Spencer**

**Architect:** Jones Studio—Eddie Jones, AIA, Neal Jones, AIA, Brian Farling, Maria Salenger, AIA, Matthew Salenger, Patricia Chen, Amy Chan, Jay Atherton

**Client:** Maricopa Community College District

**Engineers:** Rudow + Berry (structural); Kunka Engineering (mechanical/plumbing); Associated Engineering (electrical/lighting)

**Consultants:** e Group (landscaping); McKay Conant Brook (acoustical); Landry & Bogan (theater)

**Contractor:** Layton Construction

**Size:** 33,000 square feet: 350-seat theater, 100-seat black-box theater, dance studio

**Cost:** \$7 million

**Completion date:** October 2003

#### Sources

**Concrete block masonry:** Superlite

**Metal cladding:** Kovach

**Metal/glass curtain wall:** Arcadia; Border Glass

**Woodwork:** Western Millwork, Stradlings (auditorium enclosure)

**Ceiling fabric:** Carnegie Fabrics

**Furnishings:** Knoll; Irwin Seating

**Lighting:** Lithonia, Hydrel, Kim (exterior); Lithonia, Eliptipar, Hubbell (interior)

**Skylights:** CPI

For more information on this project, go to Projects at [www.architecturalrecord.com](http://www.architecturalrecord.com).



"I've waited 17 years for this!" says a broadly smiling Dr. Jerome Garrison about South Mountain Community College (SMCC)'s new performing arts center. As the chair of fine arts, communication, and developmental studies at the school, Garrison has had the near-impossible task of trying to recruit students for theater, music, and storytelling programs without having a place for them to perform. "They would ask me, 'where will we play?' and I would launch into a speech about how they would be traveling to perform at Arizona State University or some other place. I didn't want to tell them they only had the gym at South Mountain."

*Ingrid Spencer, RECORD's former managing editor, writes from her new home in Austin, Texas.*

#### Program

Luckily for the patient Garrison, explosive growth in Phoenix has brought funds to strengthen Maricopa County's 10 community colleges. Still, sharing available resources with the other schools meant SMCC had no more than \$7 million to construct its building.

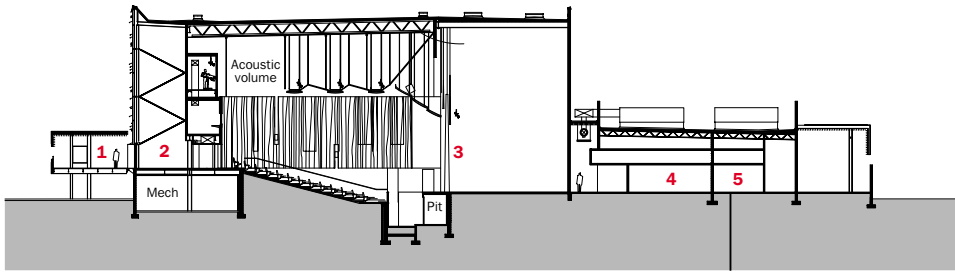
Phoenix-based Jones Studio, known for its careful and precise Modern residences, had never designed a performing-arts center. Garrison and the school's board were impressed with the diversity of the firm's work, however, and something clicked between architect and client. "They wanted the performing arts center to be a beacon for South Phoenix," says project architect Brian Farling. "We convinced them that we would create a building



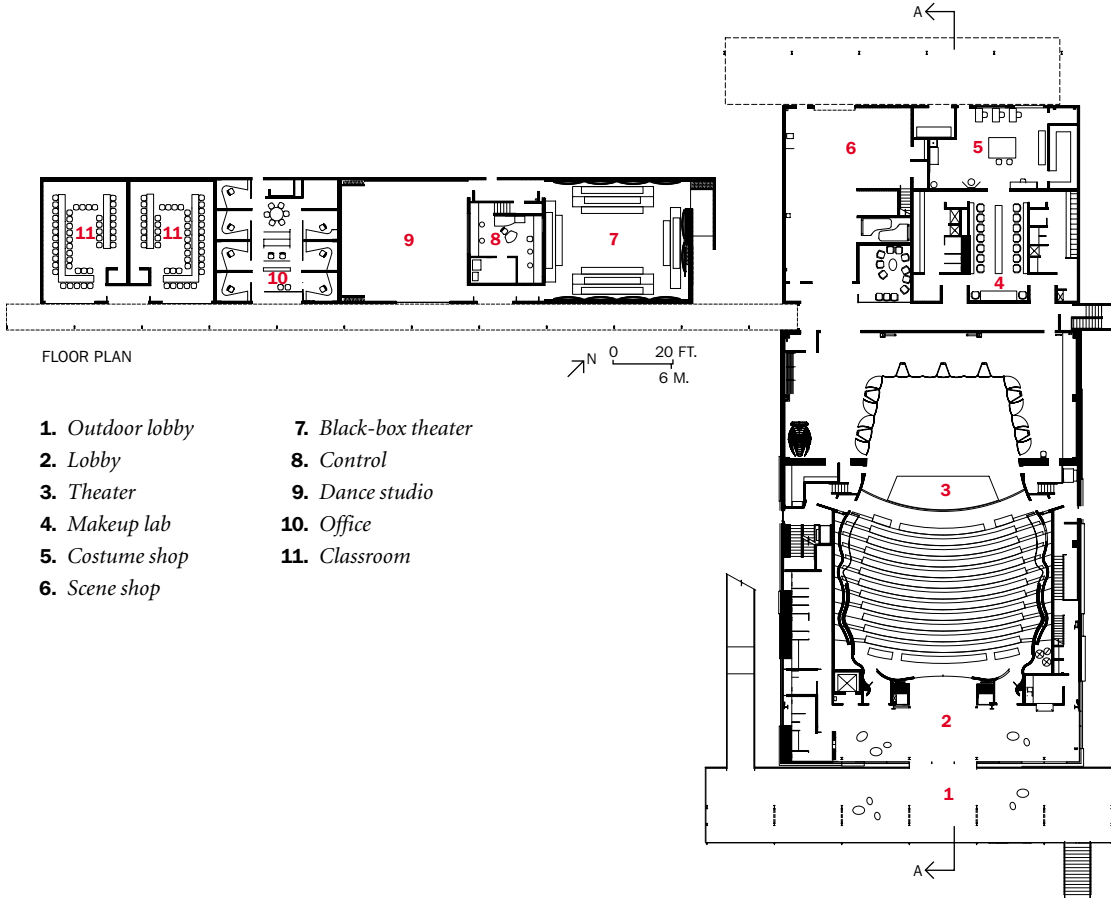
PHOTOGRAPHY: © MARK BOISCLAIR PHOTOGRAPHY

Moving from the stage end of the auditorium volume, the solid panels appear to peel (right), revealing blade-like strips and gaps. They uncover an inner skin of metal-framed stippled glass at the lobby end (below and opposite).





SECTION A-A



FLOOR PLAN

- |                  |                      |
|------------------|----------------------|
| 1. Outdoor lobby | 7. Black-box theater |
| 2. Lobby         | 8. Control           |
| 3. Theater       | 9. Dance studio      |
| 4. Makeup lab    | 10. Office           |
| 5. Costume shop  | 11. Classroom        |
| 6. Scene shop    |                      |

within their budget that would present a strong architectural statement to the community.”

The 24,600-square-foot performance center required a 350-seat theater complete with orchestra pit, a 100-seat black-box theater, studios for dance and recording, as well as back-of-house spaces and classrooms.

### Solution

Following the existing campus courtyard plan, the architect divided the new center’s elements into three major building volumes. A metal trellis shades the one-story classroom wing of sandblasted concrete block. A 54-foot-high metal-clad box containing the performance hall fronts a low volume for back-of-house areas. The two structures form an L-shape framing a courtyard lined by existing art, music, and liberal-arts buildings to create a new arts quadrangle.

Steel bollards of different sizes that delineate a passenger drop-off zone suggest patrons awaiting a performance. A stair and ramp lead up to a trellised outdoor lobby, building a sense of anticipation.

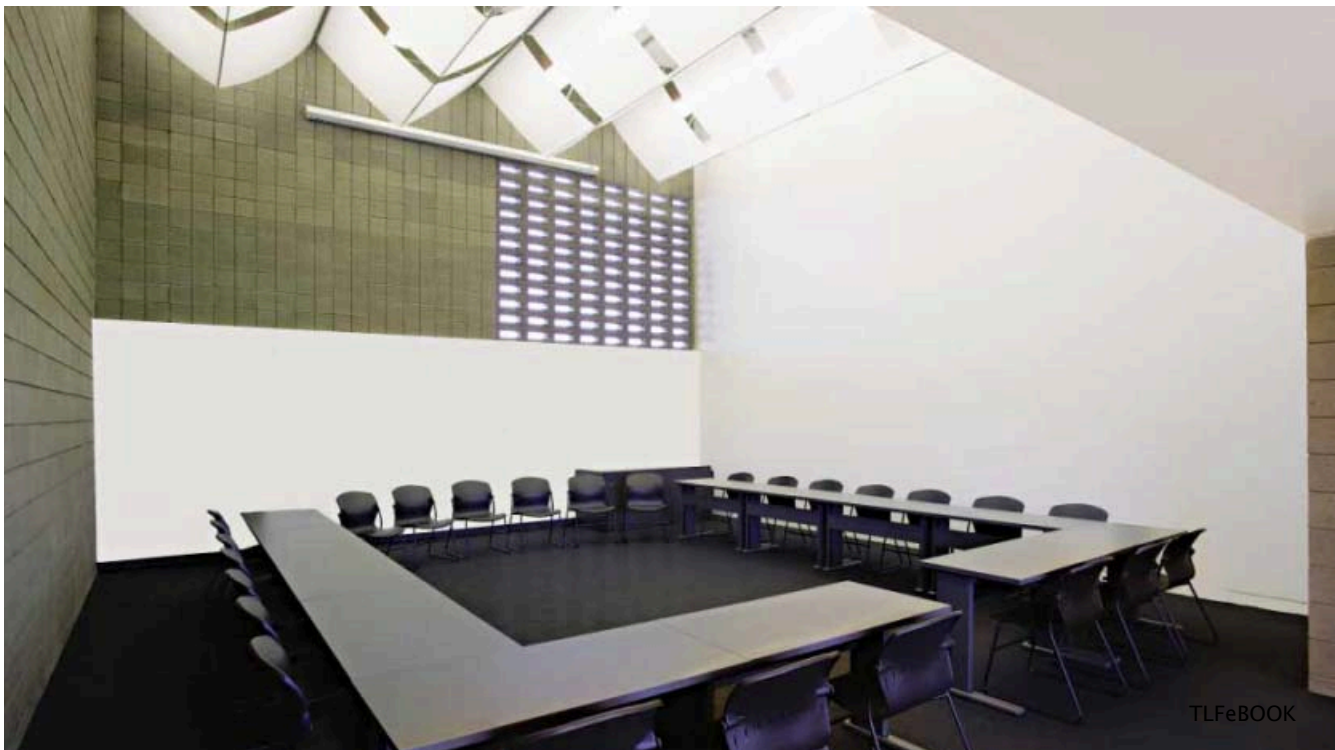
By wrapping the auditorium box with rusted-steel panels, Jones Studio made it the focus of the school’s new courtyard. The auditorium glows lanternlike at night, while during the day, the metal pan-

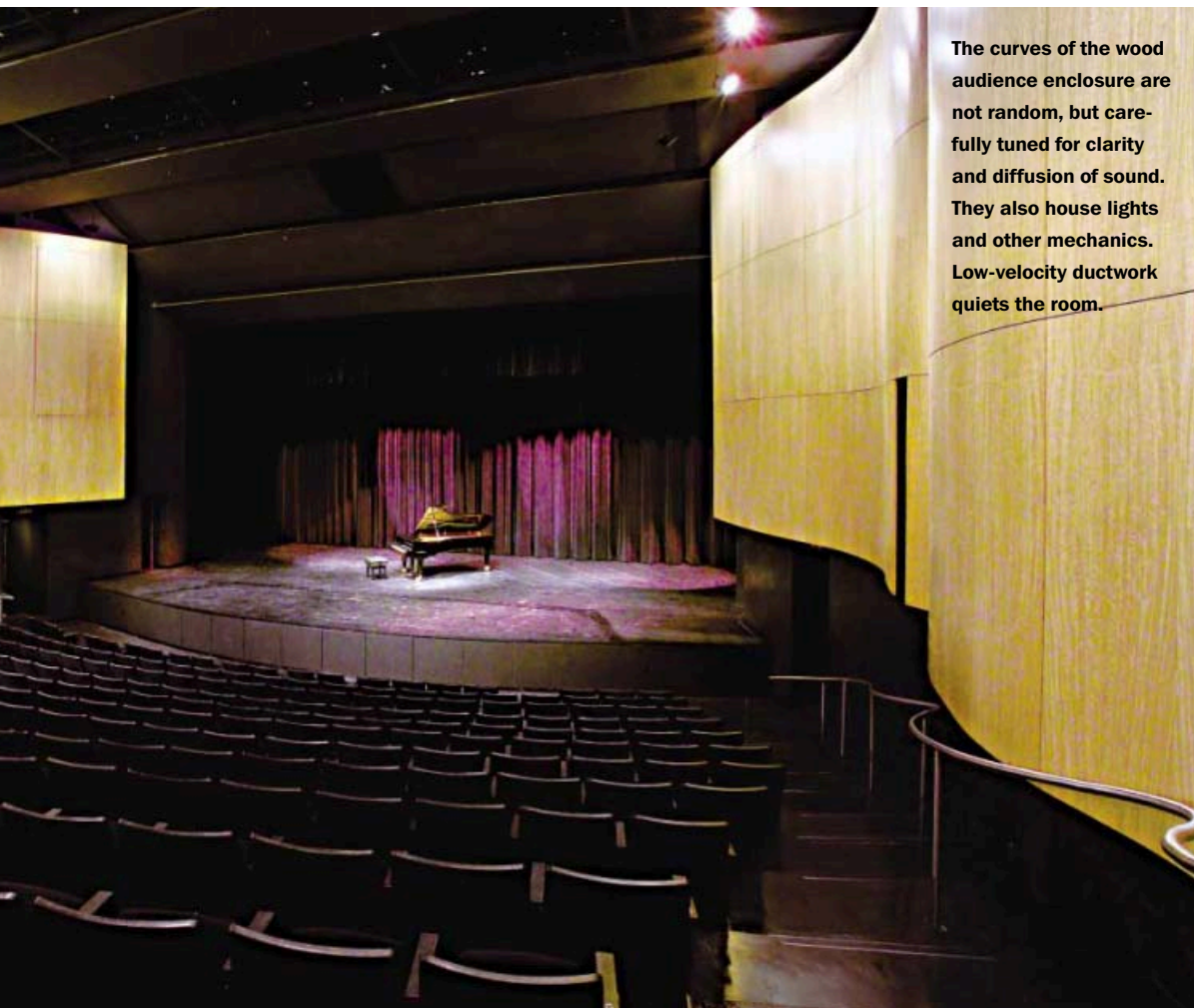
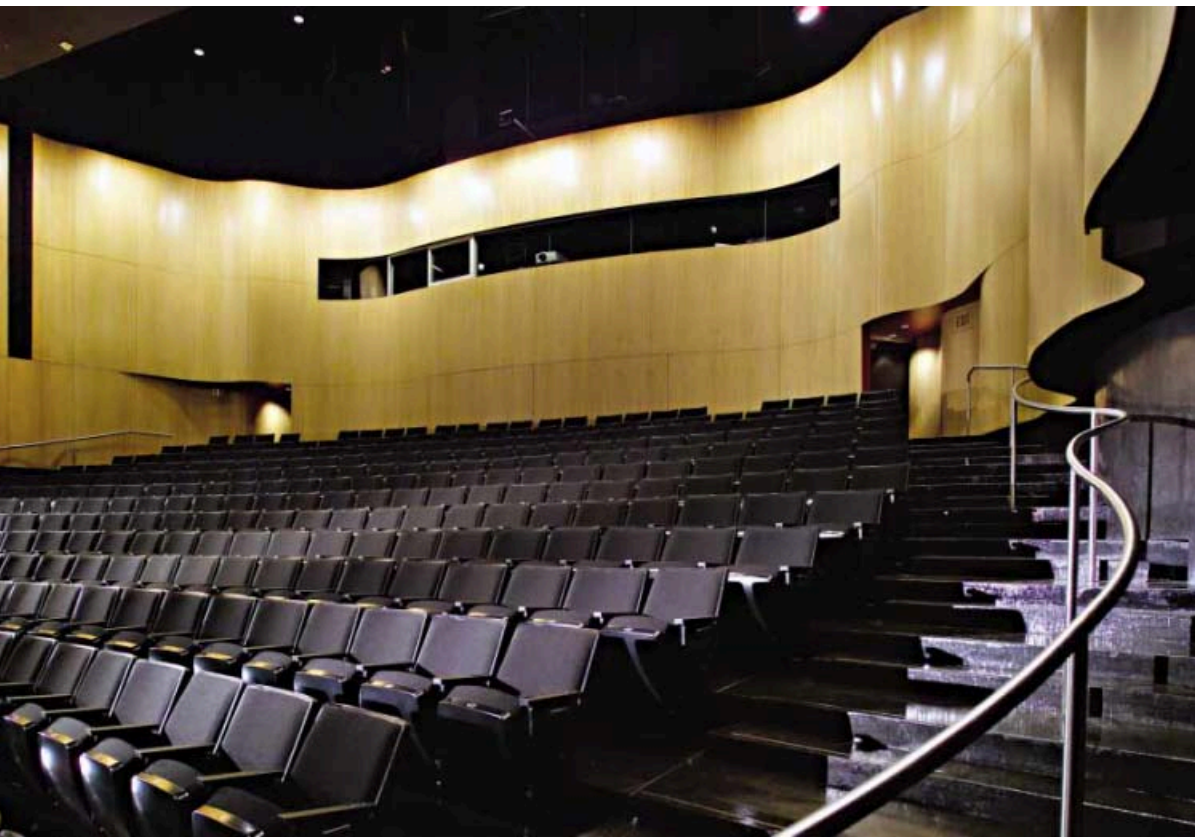






The outdoor lobby faces the South Mountain landscape (opposite, left). Untreated steel (opposite, right) won't rust through, thanks to the dry climate. Steel tubes brace the patterned-glass lobby wall (top). Ordinary white cotton cloth, stretched into planes, conceals inexpensive fluorescent classroom lighting (right).





**The curves of the wood audience enclosure are not random, but carefully tuned for clarity and diffusion of sound. They also house lights and other mechanics. Low-velocity ductwork quiets the room.**

els create dappled patterns of sun throughout the lobby.

Inside, Jones Studio kept to humble, standard materials—inexpensive theater seating in black; sandblasted concrete floors—conserving the budget for one special touch: an undulating eucalyptus-clad inner shell. “We pictured the inside of a violin,” says Jones Studio principal Eddie Jones. “The outside case is harder and more distressed, but you open that case to reveal this precious instrument.”

“It’s an unusually good-sounding hall for its size and budget,” says acoustician Dave Conant, whose firm McKay Conant Brook served as acoustical consultant on the project. “The eucalyptus is very tightly adhered to a base of sand-aggregated gypsum plaster, which provides enough density and stiffness to maintain bass response and acoustic warmth”—particularly important for music.

The volume of the theater is larger than it appears. Above the wood walls and overhead catwalks, the space extends another 12 to 14 feet to the roof’s underside. When sound-absorbing draperies—closed for spoken-word events—are pulled away, this additional volume doubles the reverberation time, allowing the sound to bloom for song or unamplified instruments.

Natural daylight fills the scene and costume shops, as well as the makeup labs behind the main theater. The black-box theater and dance studio, which share a single control room, both feature lofty ceilings.

### **Commentary**

The results of this intense effort are beginning to speak for themselves. Garrison’s welcome task is fielding requests to play at the center from community groups and professional musicians. “We invited a portion of the Phoenix Symphony to play at the center’s opening,” says Garrison. “Not only did they like the space, but they asked if they might return, this time with the whole orchestra, which they did—and will—again and again.” ■

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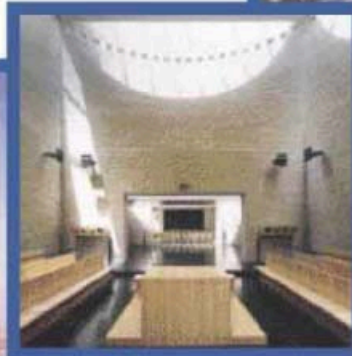
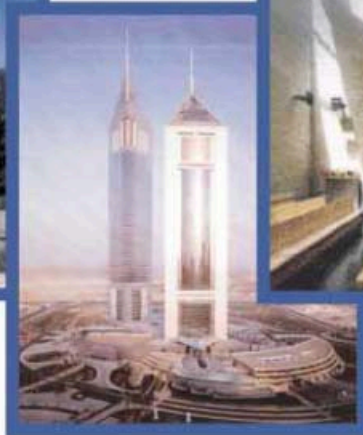
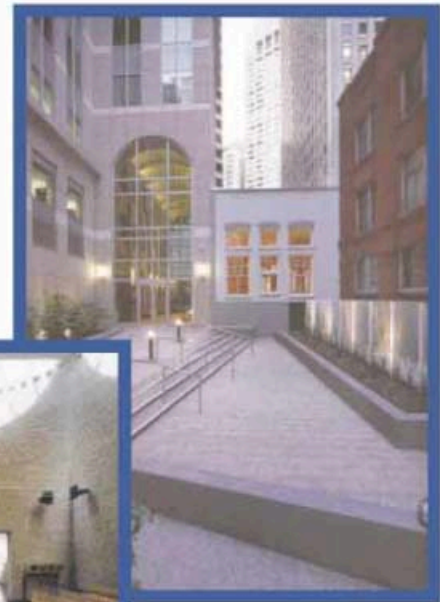
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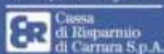
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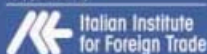
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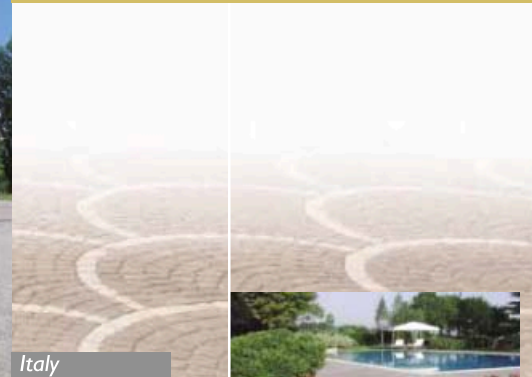
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## THE ITALIAN STONE INDUSTRY

Italian stone materials are renowned throughout the world because of their wide range of colors and the size of their deposits. Italy is one of the leading world producers of raw materials, producing over 10.5 million tons of blocks per year, which are quarried and processed by almost 10,000 companies with 60,000 workers who are the most highly skilled in the world. Italy's raw material imports amount to over 2.3 million tons per year with a value of approximately 500 million USD while exports, which are almost all finished products, amount to 3.5 million tons per year with a value of over 2 billion USD.

Italy's modern stone industry has a long tradition behind it and has managed to maintain its world leadership thanks to its highly skilled workers and avant-garde technology. The latter is the result of the close relationship between stone suppliers and machinery manufacturers which has led to positive results such as the production of more and more advanced machinery, the setting up and perfecting of plants already operating, guaranteed continuous assistance, on-site experimentation of new prototypes and remote assistance through the web sites.

This is why Italy is also the world leader in the field of technology with over 400 specialized companies and a work force of around 8000. Thanks to the quality of its technology Italy is the most important country for the processing of stone materials too.

The market demand for stone materials varies a great deal, especially because of color trends, and this means that suppliers must be able to offer the widest possible range of materials. Over the years Italy has developed its role as intermediary and has become a world stone marketplace. In addition to the large quality of local materials Italy trades numerous materials imported from all over the world.

Many Italian stone materials have been on the market for centuries; some are no longer available because of limited resources while others, thanks to new technology and knowledge, have recently been placed back on the market or reintroduced after a period of inactivity of the quarries. Stone materials are divided up into various market categories. This division may not reflect scientific concepts but it is useful for a quick review of the main Italian "litho types".

The term marble is used to define all carbonate materials or other materials with similar physical-mechanical characteristics. The term granite is used to define all siliceous rocks which contain minerals such as quartz and feldspar. Finally, the stone category comprises all materials, generally not polished such as sandstone and porphyry.

Italian marble varieties come in a wide range of colors and textures like the white and veined varieties excavated from the Apuan Alps in Tuscany. The colored varieties include the green materials from Aosta Valley and Lombardy; the beige materials from Puglia (Serpeggiane and Trani), from Sicily (Perlato) and Lombardy (Botticino); the yellow materials such as Giallo Siena and Giallo Reale.

The Veneto region is rich in several types of colored stone such as red (Rosso Verona, Breccia Pernice, Rosso Magnaboschi) and pink (Nembro Rosato) marble; Rosso Rubino comes from Tuscany; Portoro and Rosso Levanto are excavated in Liguria.

Other colored materials include the Tuscan Arabescato, Orobici, Breccia Medicea and Fior di Pesco Carnico.

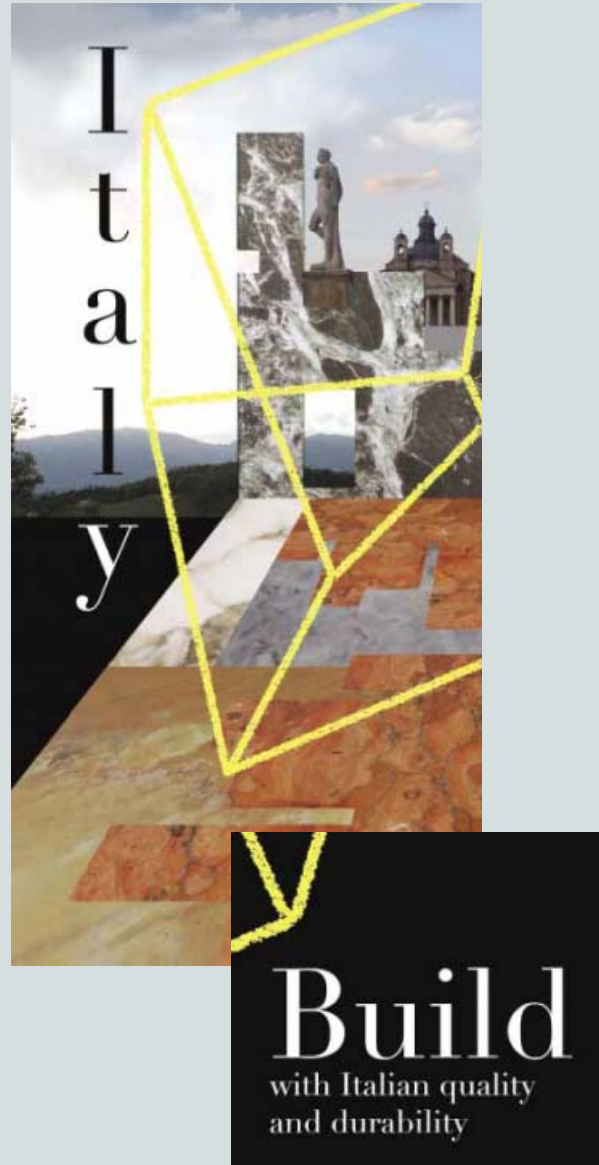
The most important deposits of Travertine, also a well known Italian stone, are found around Tivoli, Rome, Grosseto and Siena, all in central Italy.

Pink and gray Sardinian granites are famous throughout the world for their homogeneity. The pink Baveno granite comes from Piedmont.

The stone category includes the Pietra Serena which is the compact, homogeneously colored gray stone used in the Renaissance palaces and squares in Florence and the Finale, Dorata and Santa Fiora stones.

A few varieties of trachyte, a volcanic rock with brownish-yellowish shades, are also found in the Veneto region. The yellow-colored Pietra di Vicenza is used in many architectural works.

Other volcanic rocks, such as Peperino and Basaltina are quarried in the Lazio region.



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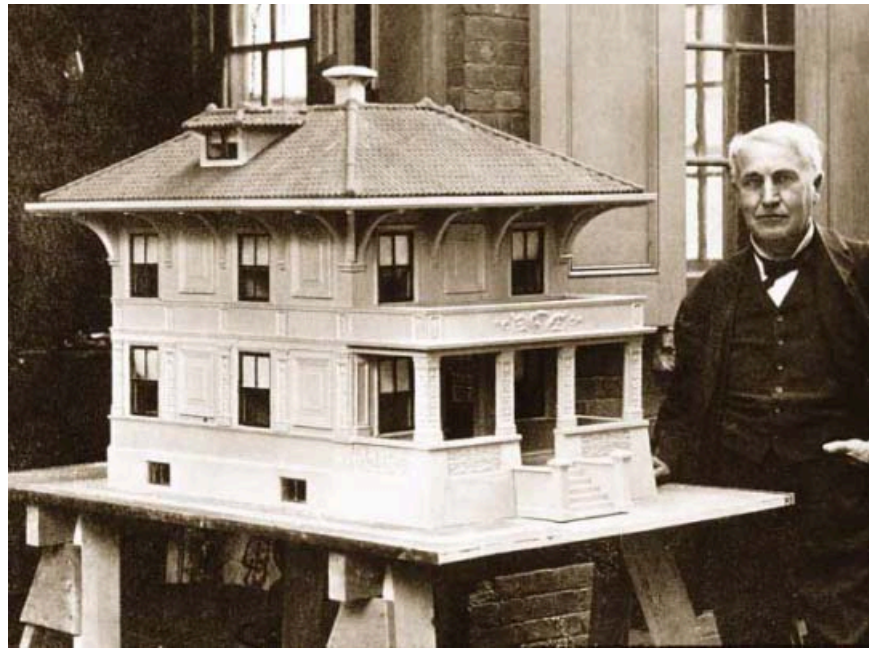
# Concrete Gets Glamorous in the 21st Century

**BOLD INVENTION OVERTAKES STEADY PROGRESS AS NEW CONCRETE PRODUCTS CREATE STARTLING OPPORTUNITIES FOR ARCHITECTURAL EXPRESSION**

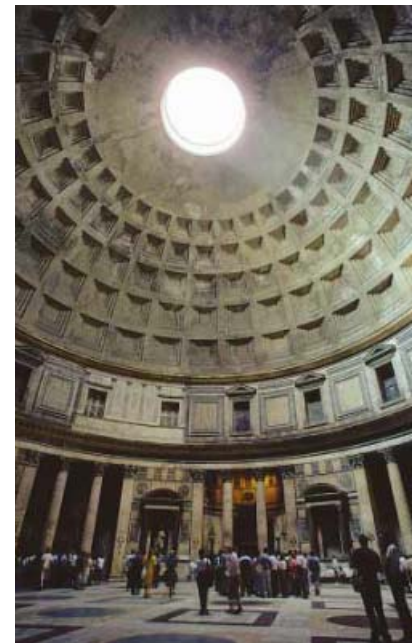
By Sara Hart

**T**he splendor of the Pantheon in Rome, attributed to Emperor Hadrian, lies in both its architectural form and its engineering virtuosity: a rational domed cylinder of reinforced concrete that soars to a height that equals its diameter, reaching 143 feet at its oculus. Built in A.D. 126, it was the tallest dome in the world until the Cathedral of Florence was constructed in 1436. The Pantheon is no less magnificent—and relevant—today than at its inception, perhaps more so, because the ancient knowledge of concrete's exceptional capabilities was lost with the fall of the Roman Empire, not to reemerge for a millennium. Thanks to Joseph Aspdin's invention of portland cement in 1824 and Joseph Monier's introduction of the reinforcing bar in 1867, the 20th century was an era of intense technological progress in both concrete and steel. Le Corbusier, Pier Luigi Nervi, Frank Lloyd Wright, to name only three, pushed the emerging technologies to their limits.

Progress continues at a steady pace. Technological advances have accelerated, as evidenced in the recent work of Santiago Calatrava, Foster and Partners, Wilkinson Eyre, Steven Holl, and others. Trial-and-error engineering no longer takes place on-site or requires knowledge of precedent. What was once trial and error is now called iteration and takes place in powerful computers and state-of-the-art laboratories. So extensive is the innovation in concrete that now a discussion of the material requires a new vocabulary of modifiers—high-strength, ultra-high-performing, translucent, light-emitting,



**The Pantheon (right) contains a lightweight aggregate to reduce its overall weight. In 1910, Thomas Edison (above) introduced \$1,200 all-concrete houses to Middle America, thinking everyone would want to live in solid cast-in-place homes. No one did.**



self-compacting, and what is known as “smart” [RECORD, December 2004, page 215].

Not only is the architectural profession intrigued with this ancient material, so apparently is the general public. The National Building Museum in Washington, D.C., has mounted an exhibition called *Liquid Stone: New Architecture in Concrete* (see sidebar, page 180), which opened last June. It was accompanied by a lecture series, and even included a *Concrete Carnival* for young people in conjunction with a concrete-canoe competition sponsored by the American Society of Civil Engineers and Master Builders.

The show has been so popular that it has been extended through April 17. Curator Martin Moeller was motivated in the planning by a desire to explore the relationship between material technology and design, something, he observes, that all architects and engineers wrestle with but is usually imperceptible to the public. By exposing that complex relationship in a lucid, visually compelling, and tactile exhibition, nimbly designed by

ARCHITECTURAL TECHNOLOGY

## CONTINUING EDUCATION



Use the following learning objectives to focus your study while reading this month's ARCHITECTURAL RECORD/AIA Continuing Education article. To receive credit, turn to page 182 and follow the instructions.

## LEARNING OBJECTIVES

After reading this article, you should be able to:

1. Describe innovations in the physical characteristics of concrete.
2. Discuss the benefits and limitations of several new concrete products.
3. Describe several installations using examples of innovative concrete products.

For this story and more continuing education, as well as links to sources, white papers, and products, go to [www.architecturalrecord.com](http://www.architecturalrecord.com).



French architect Rudy Ricciotti won a competition to design the Musée des Civilisations de l'Europe et de la

Méditerranée in Marseille. Its intricate latticework is made from Ductal, an ultra-high-performance

concrete. Scheduled to open in 2009, it will be sited on the waterfront near the historic Fort Saint-Jean (below).



New York-based Tod Williams Billie Tsien Architects, the museum has performed a public service. “First, it contains many projects and products that are simply fascinating, from Hariri & Hariri’s audacious plan for the cantilevered skyscraper (Museum of the 21st Century) to the translucent concrete samples,” explains Moeller. “The public reaction shows that there is a real interest in progressive design, and that there are some stunningly inventive projects in the works. Also, I think visitors find the look and feel of the exhibition to be engaging, and complementary to the subject matter. Finally, comments I have received from several visitors indicate that they really liked the various ‘surprises’ throughout the show.”

#### **Le béton armé**

The French building-products manufacturer LaFarge ([www.lafarge.com](http://www.lafarge.com)), exclusive underwriter of the *Liquid Stone* exhibition, sponsored a three-day event in October, which began in Washington at the exhibition and ended with an intense symposium at Princeton University, in New Jersey, hosted by the School of Architecture. Billed as *Architecture & Technology: Concrete Futures*, the symposium attracted practitioners and journalists from the United Kingdom, France, Germany, Turkey, Greece, Italy, and

the United States. Presenters included an impressive group of architects, engineers, historians, and academics.

French architect Rudy Ricciotti (whose work is discussed later), principal of RCT Architects and professor at the Institute of Art in Marseille-Luminy, France, delivered the keynote address. He set the stage for discussions that ranged from how to get emerging technologies out of

### **THE CONCEPT OF TRANSLUCENT CONCRETE SEEMS MORE THAN AN OXYMORON; IT WOULD SEEM TO BE AN IMPOSSIBILITY.**

the laboratory and onto the building site to the beauty of European formwork and the unconventional methods of construction in China. From the stream of images that crossed the screen throughout the day with examples of all sorts of methods and theories, it became apparent that of all the materials currently available, concrete stirs the imagination more than any other. Thus, the drive to innovate. It also evoked a more emotional response from the otherwise stolid gathering: One participant enthusiastically remarked that concrete at once meets the need for tactility and for historic meaning.



**Ricciotti's Seonyu foot-bridge in Seoul is a major innovation in the use of ultra-high-strength concrete—in this case, Ductal. It spans almost 400 feet, is 14 feet wide, and yet the 4-foot-deep arch supports a deck that is only a little more than 1 inch thick.**



### **Innovation and the oxymoron**

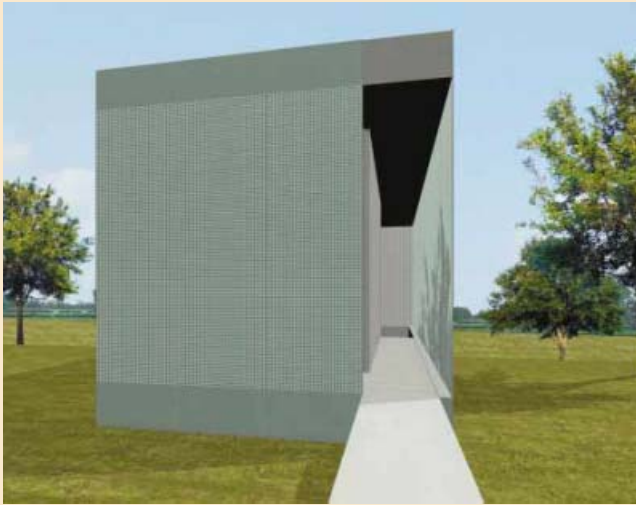
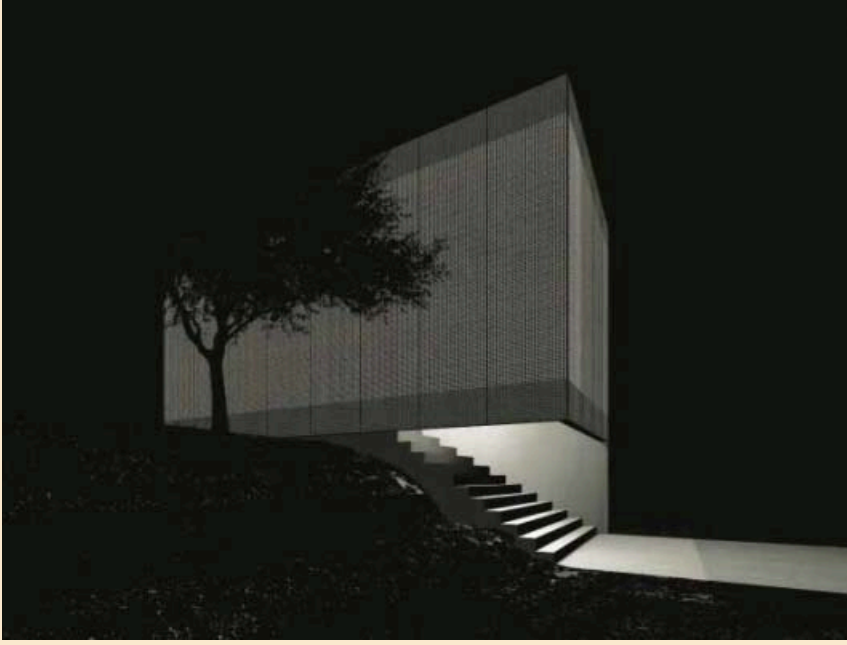
The fact that concrete is opaque is one of the indisputable physical attributes of the material. Of all of its intriguing, variable features, opacity has always been a given. Therefore, the concept of translucent concrete seems more than an oxymoron; it would seem to be an impossibility. And yet translucent concrete has been invented twice in the past few years. *Time* magazine recently named LiTraCon ([www.litracon.com](http://www.litracon.com)), a translucent concrete block, one of the “coolest inventions of 2004.” [Also see *RECORD*, December 2004, page 281.] (Apparently, the response to *Time*'s designation was so overwhelming that the company's Web site collapsed from a stampede of curiosity seekers. At press time, the site was still down.)

The material now trademarked as LiTraCon was invented in 2001 by a young Hungarian architect, Áron Losonczy, who combined concrete with an optical fiber from Schott ([www.us.schott.com](http://www.us.schott.com)) to create building blocks that transmit light. The recipe calls for thousands of fibers, which run side by side, transmitting light between the two main surfaces in each block. Light rays enter the fiber at one end and are guided along the core by internal reflection, following all the bends in the fiber, which they exit at the other end.

According to the manufacturer, a wall created out of LiTraCon blocks can be quite thick, as the fibers work almost without any loss of light up to 60 feet, providing the same effect with both sunlight and electric light. Shadows on the lighter side will appear with sharp outlines on the darker one. Even colors of light are unaffected by transmission. The blocks will be on the market later this year.

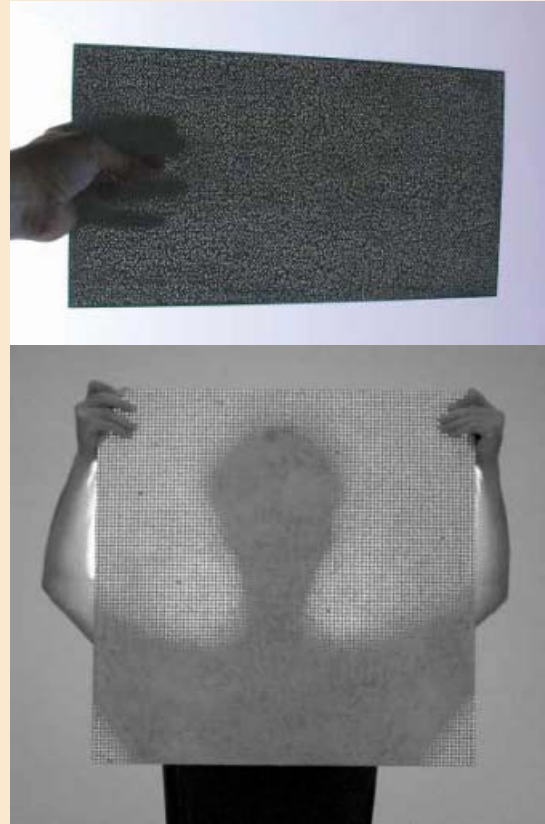
Meanwhile, Bill Price, assistant professor of architecture at the University of Houston, has developed a similar translucent concrete, which currently exists only in a few prototypes but will go commercial when it's ready. In contrast to LiTraCon, Price's Pixel products use polymer and crushed glass to transmit light, rather than fiber optics. The effect is startling. His goal is to create not one product, but a series of translucent concrete products—panels, bricks, and blocks. (LiTraCon will only be available in blocks when it first launches.)

What makes Price different from other innovators is his approach to research and development. He's methodical—part academic, part rational practitioner, part lab rat. He began his investigation by rethinking the traditional ingredients of the material, initially as research and development director at the Office of Metropolitan Architecture,



The proposed Pixel Chapel (left and below) by Bill Price with Scott McGhee will be constructed with one of Price's translucent concrete products, Pixel Panels. Price is developing thinner panels. One panel is  $\frac{1}{4}$  inch thick with 35 percent

light transmission (below), while another version (bottom) is 1 inch thick and transmits 25 percent light. Transmission is not determined by thickness, however. A 10-inch panel could transmit the same amount of light.



Rem Koolhaas's architecture firm in Rotterdam. "In 1998, I broke the research vector down into multiple directions. I took each ingredient associated with concrete and asked it to carry light," he explains. "The ingredients are binder/additives, reinforcement, aggregate, and formwork." He took each component and either altered it or replaced it with another. Iteration meets trial and error.

He is currently experimenting with mass, seeking ever-thinner versions of his Pixel Panels. For a project in South Korea, he developed another prototype, a translucent brick that measured 10 cm x 30 cm x 60 cm. With these units, he built two walls 18 x 18 feet tall (stabilized with cables) that was particularly dramatic at only 2½ inches thick.

#### Post-Pantheon inventions

LaFarge, in conjunction with specialty-chemicals producer Rhodia ([www.rhodia.com](http://www.rhodia.com)) and the construction arm of the Bouygues ([www.bouygues.fr](http://www.bouygues.fr)) corporation, developed an ultra-high-performing concrete trademarked as Ductal. It incorporates metallic or organic fibers and is highly ductile, which means that, unlike brittle materials, it can bend while continuing to carry more load. As a matter of fact, tests

have shown that its strength is six to eight times greater than regular-strength concrete (under compression). Its compressive strength is as high as 230 MPa (33,350 psi) without reinforcement. Highly resistant to bending, its great flexural strength (30 to 60 MPa, or 4,350 to 8,700 psi) means that it can withstand significant transformations without breaking.

The Seonyu footbridge, completed in 2002, links the main town of Seoul, Korea, to Sunyudo Island in the Han River. It was jointly con-

### DUCTAL IS HIGHLY DUCTILE, WHICH MEANS IT CAN BEND WHILE CONTINUING TO CARRY MORE LOAD.

ceived by the City of Seoul and "France's Year 2000 Committee" to transform the island into an urban park and to symbolize the friendship between South Korea and France. The arch-shaped structure, designed by Rudy Ricciotti, is the world's first bridge to be constructed entirely of Ductal. Built by VSL-Intrafor, Bouygues Construction subsidiary, its profile, in context, is paper thin. The deck is only slightly thicker than 1 inch,

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The Vail-Grant house clings to a steep hillside in the Silverlake neighborhood of Los Angeles. Designed by Pugh + Scarpa, it is

constructed in part with Structural Concrete Insulating Panels (SCIPs), engineered by Green Sandwich Technologies. This particular panel system was specified for its energy efficiency, speed and ease of field assembly, strength, and impact-resistance.



### Liquid Stone: New Architecture in Concrete

The exhibition at the National Building Museum in Washington, D.C., presents recent or current projects that use concrete in new or unconventional ways. The 30 projects on view showcasing concrete's strength, versatility, and potential are organized into three curatorial categories—structure, surface, and sculptural form—and are represented with photographs, drawings, models, and material samples. Featured works include Santiago Calatrava's new Auditorio de Tenerife in the Canary Islands, and the longitudinal house(s) by Vincent James Associates in which spaces are defined by an undulating ribbon of concrete that alternately serves as floor, wall, and ceiling.

The show, designed by Tod Williams Billie Tsien Architects, with graphics by Pure+Applied, has been extended until April 17. The museum and Princeton Architectural Press are developing a book to be based on the exhibition and a related Princeton symposium. S.H.



and the pi-shaped arch is only 4 feet deep. Ricciotti was able to achieve this with Ductal because it requires only about half the amount of material than traditional concrete.

Ricciotti will test the architectural capabilities of Ductal again at the Musée des Civilisations de l'Europe et de la Méditerranée, in Marseille, which won't be completed until 2009. In this project, he plans to weave solid strands of the material into a delicate concrete lattice (another oxymoron), forming a warp-and-woof pattern. The effect will be an abstract interpretation of Islamic decorative motifs, while the whole museum will emerge as what Ricciotti calls a "vertical casbah"—the modern version of a traditional North African citadel.

Closer to home, creative use of concrete thrives, even if the circumstances are less paradoxical. Santa Monica-based Pugh + Scarpa Architects have designed a house in Silverlake, the architecturally affected neighborhood of Los Angeles. Innovation happens in straightforward problem-solving as often as it happens in formal experimentation, and Pugh + Scarpa have illustrated this with the design of the Vail-Grant Residence. The site is a steep hillside with the added problem of being adjacent to a Neutra house. The architects strove to



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**Architect Jim Jennings, artist David Rabinowitch, and owner Steven Oliver collaborated on a guest house for visiting artists in Geyserville, California. The space is defined by two concrete walls etched with fluid lines in the polished surface.**

preserve views of this iconic structure while meeting a complex set of zoning requirements.

They discovered that encroaching on the steep topography could be managed better with structural-concrete-insulating panels (SCIPs), rather than poured-in-place concrete and tall retaining walls. Custom designed by Green Sandwich Technologies, the panels are lightweight and easy to install. They are more cost-effective than

## THE USE OF SCIPs REFLECTS THE EFFORT MANUFACTURERS ARE MAKING TO DEMONSTRATE HOW GREEN CONCRETE CAN BE.

poured-in-place concrete, too. By limiting the width to 15 feet throughout, the architects reduced spans and further simplified construction.

The use of SCIPs reflects the effort manufacturers are making to demonstrate how green concrete can be. The Green Sandwich Panels at the Vail-Grant Residence provide an R-40 insulating performance (as well as high sound-coefficient protection). Their composition is impressive: Their recycled-material content is 40 percent by weight and 60 percent by volume; fly ash accounts for 50 percent of the content; waste is 100 percent recyclable. This is a clear indication of how both innovation and invention are being applied to all aspects of this highly versatile material. ■



### AIA/ARCHITECTURAL RECORD CONTINUING EDUCATION

#### INSTRUCTIONS

- ◆ Read the article “Concrete Gets Glamorous in the 21st Century” using the learning objectives provided.
- ◆ Complete the questions below, then fill in your answers (page 240).
- ◆ Fill out and submit the AIA/CES education reporting form (page 240) or download the form at [www.architecturalrecord.com](http://www.architecturalrecord.com) to receive one AIA learning unit.

#### QUESTIONS

1. The Pantheon in Rome, built in A.D. 126, was constructed of which material?
  - a. portland cement
  - b. reinforced concrete
  - c. concrete blocks
  - d. cut stone
2. In this article, trial and error in research and development is referred to as what?
  - a. high-performing
  - b. iteration
  - c. self-compacting
  - d. lucid
3. Who invented portland cement?
  - a. Joseph Monier
  - b. Joseph Aspdin
  - c. Le Corbusier
  - d. Pier Luigi Nervi
4. The physical attribute of concrete that was standard for all types of the material until 2001 is which?
  - a. translucence
  - b. light-transmitting
  - c. opacity
  - d. curved
5. When concrete can bend while continuing to carry a load, it is considered to be which?
  - a. ductile
  - b. compressed
  - c. reinforced
  - d. brittle
6. Which is the physical characteristic of the concrete walls constructed of LiTraCon?
  - a. they are ultra thin
  - b. they are bendable
  - c. they are made of panels
  - d. they are made of blocks
7. Bill Price’s Pixel products transmit light through which material(s)?
  - a. fiber optics
  - b. crushed glass and polymer
  - c. LiTraCon
  - d. Ductal
8. Although they are different in content, Ductal and LiTraCon have which characteristics in common?
  - a. they are flexible
  - b. they consist of fibers
  - c. they are produced in blocks
  - d. they are extremely thin
9. The benefits of structural-concrete-insulating panels include all the following except which?
  - a. lightweight
  - b. cost-effective
  - c. poured-in-place
  - d. R-40 insulation
10. How thick is the concrete deck of the Seonyu footbridge constructed in Seoul, South Korea?
  - a. slightly more than 1 inch
  - b. slightly less than 1 foot
  - c. two-and-a-half inches
  - d. four inches



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# Tech Briefs

## Virtual reality and digital modeling go on trial for a federal courtroom design

Justice may be blind, but some federal judges in Mississippi have been seeing in 3D. In recent months, they've been part of a pilot project launched by the General Services Administration (GSA) to use virtual reality in the design process. Twice last year, the judges donned red-and-green 3D glasses, like those from 1950s movie theaters, to view stereographic representations of their new courtroom in Jackson long before its construction. Sponsors of the pilot project hope the design team and client can flag problems with sight lines, lighting, and materials before the courtroom is built, to avoid retrofits or costly change orders.

Federal courtrooms aren't cookie-cutter designs. Each judiciary voices preferences for room geometries and the placement of elements like the judge's bench, counsel tables, the jury box, and the witness stand. To visualize designs prior to construction—which is key for preventing problems with sight lines among the various courtroom parties—clients typically review 2D drawings and crude plywood mock-ups costing \$50,000 or more to build. Could sophisticated imaging technology create better 3D representations and reduce errors?

This question was posed by Renée Tietjen, AIA, a senior architect in the office of applied science of the GSA, which contracts with private-sector architects for federal courthouses. The Jackson project seemed well suited for a new approach. "The space was a modified ellipse, and we thought there might be some problems," she recalls.

PC-generated walkthroughs alone aren't sufficient to validate the design issues the team sought to resolve. "I abhor them because you're always looking straight

ahead," says Hugh Hardy, FAIA, principal of H3 Hardy Collaboration Architecture of New York, the courtroom's architect. Instead, the judges met with the design team at Disney Imagineering Studios in California—once in June 2004 to test sight lines, and once in December to assess lighting. There, a special room called a CAVE (Computer Automatic Virtual Environment) houses a wraparound screen that stereoscopically reproduced a life-size virtual model of the courtroom. Stanford University's Center for Integrated Facility Engineering (CIFE), a virtual design research center, built the 3D model based on CAD drawings, with help from the engineering firm Arup in New York.

During the model walkthrough, courtroom elements could be rearranged based on the feedback of judges and others. After getting the judges' response, Hardy and the GSA refined a number of design elements, including lowering the view-blocking rail on the top of the judge's bench, and the CAVE sessions also resolved where the counsel tables would be located.

To validate the design's acoustic characteristics, the GSA relied on a 3D sound model created by Arup Acoustics, which was tested last summer at the firm's sound lab in New York, where judges could hear accurate simulations of speech. "If there are any problems, we can proactively work to fix them," says Raj Patel, principal consultant at Arup. Acoustic revisions in the Jackson courtroom included changing some surface shapes and adding sound-absorbing materials to improve speech intelligibility.

Paul Marantz, the project's lighting designer and a partner of



Arup tested the courtroom's acoustics (top) and helped build 3D models for lighting and sight-line analysis (above and left). The team noticed a potential glare problem behind the jury box (middle in image at left) during the CAVE walkthrough.

Fisher Marantz Stone of New York, notes some of the limitations of the virtual-reality process for lighting analysis. Contrast ratios below what's perceptible by the human eye block out shadows and highlights in the 3D environment that people would normally see in a real room. Nevertheless, because lighting isn't evaluated at all in a plywood courtroom mock-up, Marantz feels the CAVE experience was valuable. "We were able to fix a half-dozen issues—none of which was fatal. But it gave us the opportunity to improve the design."

Tietjen, who declines to say how much the pilot cost, says the technology proved itself as a design tool. Now the challenge lies with the GSA to streamline the feedback process. "We need to bring the technology to clients, not the clients to the technology," she says. But for Judge William Barbour, U.S. District Court judge for the southern district of Mississippi, the jury is still out. "We won't know if virtual reality accurately simulated the courtroom until we get through with the building," he says. "But my initial impression is yes, it definitely did." *Alan Joch*

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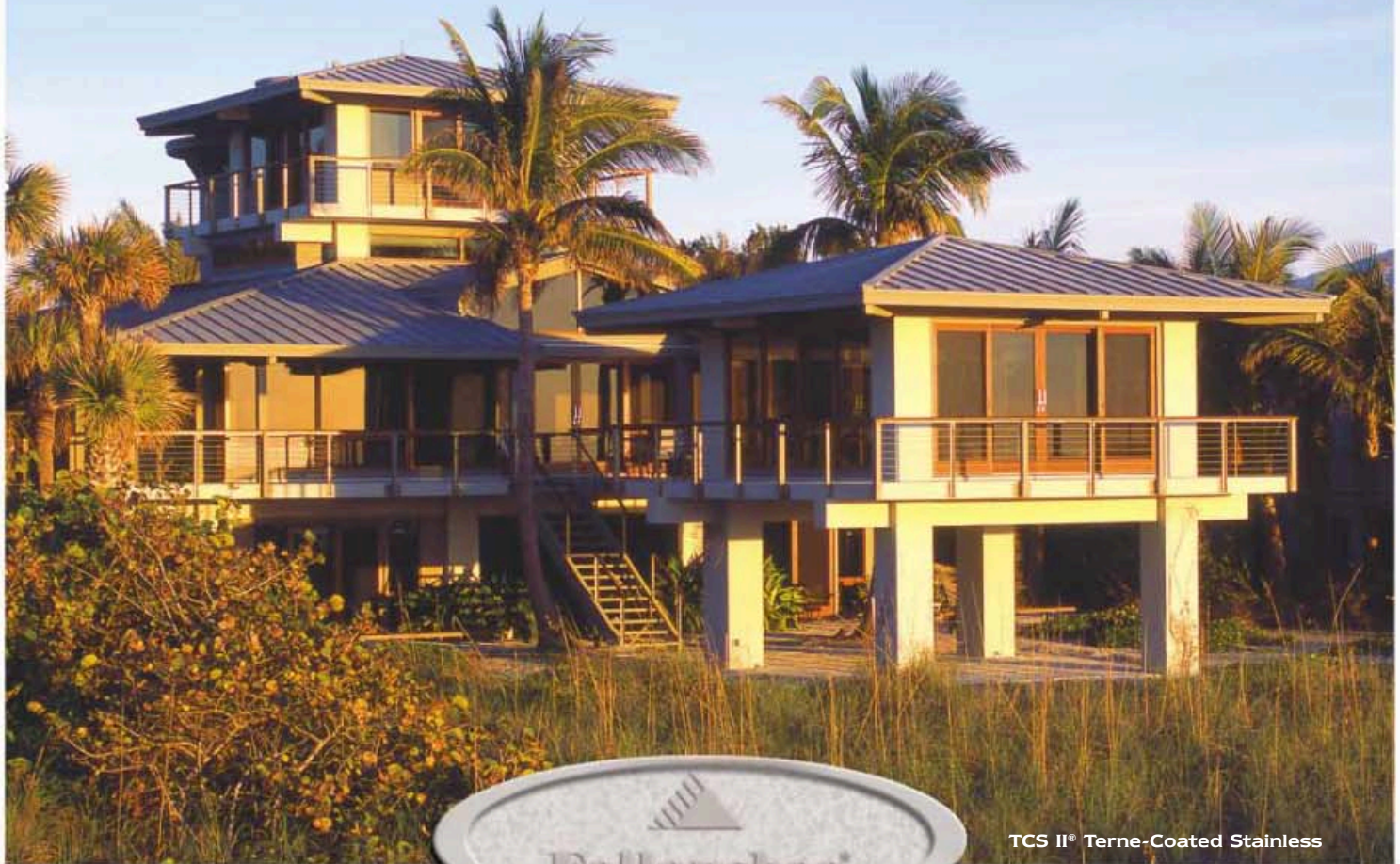
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# Residential

## Five sophisticated urban dwellings entice us to consider the virtues of city life

### BRIEFS

#### **Suburban sprawl: bad for your health?**

People who live in areas with a high degree of suburban sprawl are more likely to report chronic health problems, according to an article in the October issue of the journal *Public Health*. Compared to people who live in densely settled areas, sprawl-dwellers report higher rates of arthritis, high blood pressure, headaches, and breathing problems. The study, coauthored by Roland Sturm and Deborah Cohen of the RAND Corporation, examined 8,600 people living in 38 metropolitan areas across the United States. Although Sturm and Cohen found more physical maladies, they saw no evidence of increased mental-health concerns among suburbanites. They speculate that sprawl dwellers suffer more physical ailments because they walk less and spend more time riding in cars than city residents. The study was funded by the National Institute of Environmental Health Sciences and the Robert Wood Johnson Foundation. For more information, visit [www.rand.org](http://www.rand.org).

#### **A refined pallet for housing**

Students at a recent Ball State University

environmental conference learned how to construct temporary housing from disused wooden shipping pallets. The workshop was led by architects Susan Wines and Azin Valy, partners of the New York City-based architecture firm I-Beam Design. Millions of shipping pallets are discarded annually, Wines and Valy say, but they can be used to create low-cost temporary shelters for war refugees and other displaced people. When covered with stucco or tiles, these “pallet houses” can become permanent. Visit [www.i-beamdesign.com](http://www.i-beamdesign.com) to learn more.

#### **Navy awards largest housing contract to date**

The Department of the Navy awarded GMH Communities Trust a contract to design, build, and manage military family housing at eight naval installations throughout the Northeast. The agreement encompasses 5,600 homes, of which 1,914 will be demolished and 2,400 will be replaced or renovated. Valued at more than \$600 million, it is the largest public-private housing venture since the Navy began updating its housing in 1996. To find out more about this development, visit [www.gmhcommunities.com](http://www.gmhcommunities.com).

#### **Graves expands furnishings**

**line** The Michael Graves Design Group is expanding its home furnishings brand to include residential furniture, flooring, kitchen cabinetry, vitreous bath fixtures, and other building products. A sister company of Michael Graves & Associates, the architecture office headed by Graves, the Design Group was formed in 2003 to handle Graves’s growing home goods business. For more information, visit [www.michaelgraves.com](http://www.michaelgraves.com). *James Murdock*

Urbanites love the city for many reasons, among them easy access to jobs, public transportation, and entertainment. Urban living also counters the much-despised phenomenon of suburban sprawl. Indeed, readapting or restoring existing buildings can be an extremely thrifty means of preserving resources and space. The infrastructure is in place—the water, sewers, roads, utilities, parks, fire, police, and schools—and the foundations and basic building elements exist. Though surely not new architectural concepts, restoring aging buildings or using empty lots for infill in urban settings have become increasingly popular trends for these reasons. Also driving the move into town is the excitement of living near the pulse of a city, where people gather to partake of culture, commerce, politics. Herein find three town houses, one coach house, and one new infill project, all located in dense urban areas, where the action is.—*Jane F. Kolleeny*

### CONTENTS

- 188 House on Pilgrim’s Lane**  
*Eldridge Smerin*
- 194 Coach House**  
*John Ronan Architect*
- 198 T Residence**  
*Studio Rinaldi*
- 206 Vertical House**  
*Lorcan O’Herlihy Architects*
- 212 New York Town House**  
*Alexander Gorlin Architects*
- 219 Residential Products**

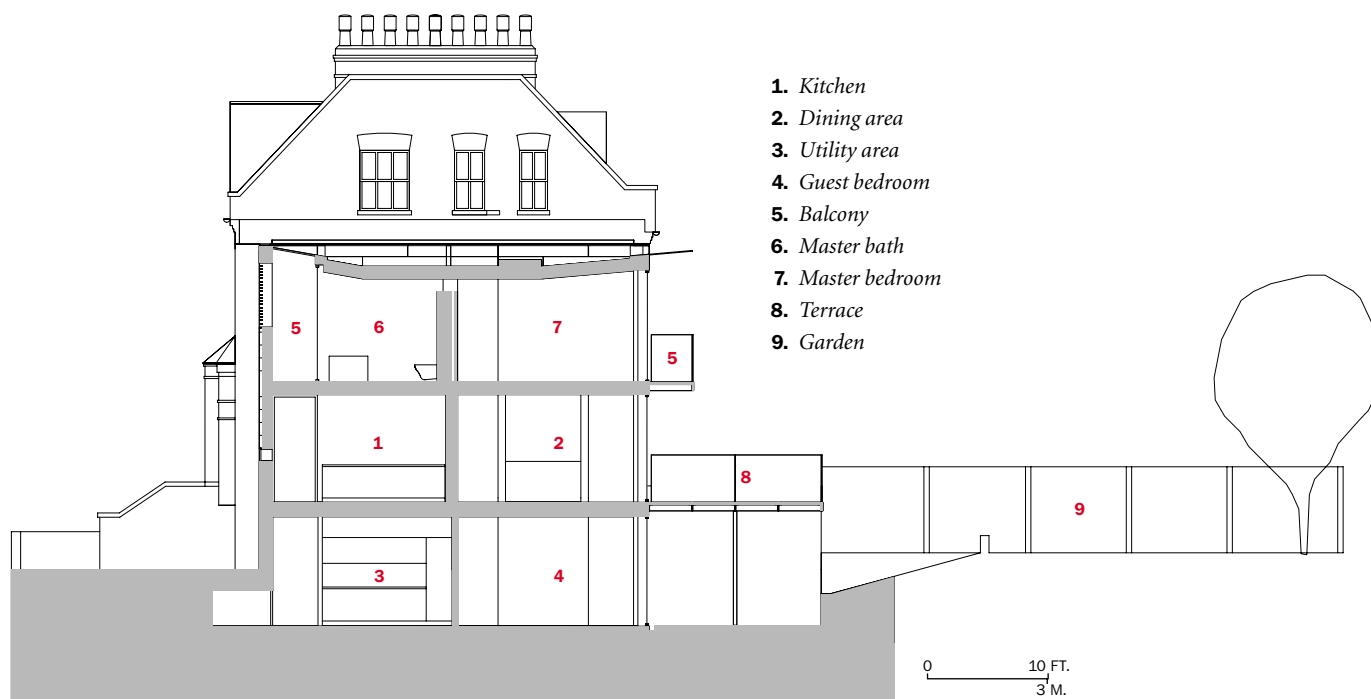




In an area with many innovative 20th-century Modernist houses, including Erno Goldfinger's Willow House from 1939 on an adjacent street, this town home creates a sense of historical continuity while enriching the neighborhood.



# Eldridge Smerin's House on Pilgrim's Lane transcends the mundane language of bricks



SECTION

By Lucy Bullivant

When a leading rare-books dealer and his wife bought a derelict Victorian town house in the Hampstead Village Conservation area of London, they asked the architects Eldridge Smerin to transform and enlarge the property to provide a home for the couple and their three children. The practice, established in 1998, is well known in Great Britain for its private housing, retail, office, school, and government buildings. Nick Eldridge and Piers Smerin, former design directors of the leading architectural practices John McAslan + Partners and Foster and Partners, respectively, were nominated for the Stirling Prize for their 2001 redesign of a 1960s Modernist house, The Lawns, in Highgate, North London—a design noted for its clarity and flexibility of plan.

The three-story town house utilizes a light, steel-framed structure. The spatial limitations of the original 2,000-square-foot house, which was gutted and remodeled, were overcome by a two-floor lateral expansion across an adjoining space that was formerly a garage. The new 2,000-square-foot addition doubles the living space to achieve a total of 4,000 square feet, with each floor 660 square feet in size.

The facade of the addition consists of full-width birch-plywood panels positioned with their lamination exposed. “The surface of the panels has connotations of joinery, or even a butcher’s block,” says the architect. The exterior of the addition’s sheer polished surface expresses a calm muteness that is only interrupted by a single narrow but long hori-

zontal slot of frameless glass offering glimpses out from the kitchen area on the first story and a fully screened peek-a-boo area at the second story in front of the master bathroom, which on warm days can become a balcony providing glimpses of the leafy street.

The transition between house and addition is facilitated by a full-height glazed volume incorporating an all-glass entryway floor with a hallway leading to the rear of the house, where one finds windows with garden views. The hallway to the back opens up the kitchen, dining, and reception rooms on either side. A series of metal-clad projecting-bay-roof windows allows light to penetrate to the heart of the residence. The staircase between the ground and first floor is constructed entirely from laminated toughened glass panel, while the higher stair to the two bedroom floors is made of wood. Walking up clear glass stairs can be a thrilling experience. The overall design unifies the existing and new elements of the house into a practical whole and avoids what Piers Smerin describes as “an apologetic or low-key infill solution constructed in the language of bricks,” which is typically seen in a London conservation area.

The classical English plan of the original house is made flexible

#### Sources

**Project:** House on Pilgrim's Lane, Hampstead, London  
**Architect:** Eldridge Smerin—Nick Eldridge, Piers Smerin, Richard Glover, Alison Poole, Sophie Ungerer, project team

#### Consultants:

Elliott Wood Partnership (engineer); Jinny Blom Landscape Design (landscape); The Light Corporation (lighting); ab associates (cost consultants)  
**General contractor:** RBS Building Services

Lucy Bullivant is an architectural critic, author, and curator. She is the editor of the book *4dspace: Interactive Architecture* (January 2005).



**The main staircase has clear glass treads and a transparent, laminated glass screen between the stair and entrance hall (left). The dining room is sited at the rear of the house (below).**

with sliding and folding doors. Translucent glass-panel doors screen off the ground-floor kitchen and dining room from the front door, allowing these public areas to cater effectively to the informal and sociable way the family chooses to live, with frequent at-home functions attended by adults and children. Horizontally interlocking spaces result from the family's request to avoid overly formal division between rooms. Children's playrooms, the

nanny's bedroom, a home office, and utility and storage rooms are sited at the basement level. A double-height corridor and a funnel-shaped staircase maintain a visual connection with the entryway, as movement below, in, and around a lilac linoleum-floored passageway occurs beneath the glass floor. An open-plan reading space on a balcony overlooks the basement level, intentionally welcoming both adults and children.

At the rear of the house, the dining room opens onto a cantilevered terrace lit underneath through translucent glass panels. A jaunty metal ramp leads down from here to the garden. Designed by Jinny Blom, it is simple, with a few bold elements—a paved area with 4-foot-square limestone slabs in between a grassed area, a new slatted cedar fence, and concrete steps and walls. The grass flows down to an outdoor area at basement level, where a long, suspended table made of in-situ concrete topped with a single 8-foot-long limestone table sits in front of the children's playrooms. The architects also designed most of the fixed furniture in the house, including bedside tables and storage units, and a





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The underside of the circular stair is a massive sculpted-timber monolith formed in segments from birch plywood (left). A reading area is located on a balcony overlooking the basement level (below).

sideboard in the dining room with a cutlery drawer running the entire length of the room. The placing of two toplit, stacked-metal-clad boxes projecting out from the side wall of the addition is an ingenious space-saving device to add storage “pods” to the kitchen and master-bedroom above. The boxes animate the facade externally and create storage space internally without breaking the clean lines of the interior walls. The proximity of a neighboring house

on the edge of the former garage site limits further lateral building, but the scale and positioning of the pods avoids intruding upon the neighbor’s view of the street, a critical issue for an infill site in London’s high-density residential neighborhoods. The Pilgrim’s Lane scheme is well considered in its scale and spatial organization, enhancing the intangible qualities of light, and giving materials like glass and wood their full value. ■

#### Sources

**Glass:** *Compass Glass*

**Concrete:** *Adept Foundations*

**Wood:** *AMS*

**Roofing:** *Sarnafil (elastomeric)*

**Windows/doors:** *RBS Building Services*

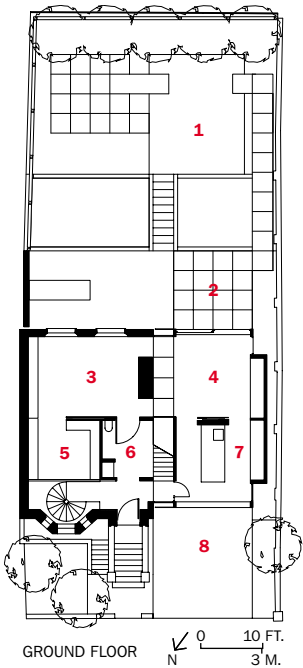
**Hardware:** *Allgood*

**Furnishings:** *Cappellini and B&B Italia*

**Kitchen appliances:** *Fridgidaire*

For more information on this project, go to Projects at

[www.architecturalrecord.com](http://www.architecturalrecord.com).



1. Garden
2. Terrace
3. Living area
4. Dining area
5. Library
6. Hall
7. Kitchen
8. Parking





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# John Ronan Architect saves a **Coach House** from certain death with a clever use of light, space, and materials

By Lee Bey

**P**ity the urban coach house—many of them, anyway. Stripped of their original use nearly a century ago, the little buildings soldier on, enjoying a lengthy second life as garages. A few more might have been converted into houses, provided zoning laws permitted it. Some are artists' studios. A great number just hang on, the repository of Christmas ornaments and life's flotsam and jetsam—much like an old, unheated attic ... just bigger.

But take a look at a remodeled coach house in the Lakeview community on Chicago's North Side. It was built in the 1890s behind a substantial graystone house on Pine Grove Avenue. The building had spent most of its life quartering horses, then an array of clutter, including an inoperable Triumph automobile. No longer. Five years ago, Chicago

*Lee Bey is the former architecture critic for the Chicago Sun-Times. He currently writes and lectures on architecture and urban issues.*



architect John Ronan rescued the two-story structure, turning it into an essay in light, space, and tastefully chosen materials. The clients, Jim and Molly Perry, a couple with three children, hired Ronan for the job in 1998 on the advice of their friend, Chicago architect Mark Sexton of Krueck & Sexton Architects. "Mark was too busy to take the job," said Jim Perry, and in the end he wasn't disappointed. In fact, his wife shares in the accolades for Ronan: "He is an easy guy, so bright and talented. He's going to be one of the great architects of our time."

Local architects agree. Ronan is widely seen as a leader of the next generation of Chicago architects. He garnered a fair share of notoriety last February when he beat out 135 architecture firms in an international competition to design the \$84 million Perth Amboy High School in New Jersey. Yet the little coach house on Pine Grove—his first commission—still generated a lot of buzz for him. Why?

"I'm not sure," Ronan said. "Maybe because it was my first project." Maybe. But credit Ronan's execution as well. He transformed the once-dark and lifeless 19th-century brick coach house into a lively work and recreational space. There is an office, storage, and garage on the first floor, and a large multipurpose area on the second floor. It is a remodeling that rethinks the concept of remodeling—and, by extension, spaces such as coach houses, attics, and basements. The interior is bright and airy. The result is a surprising and adaptable home.

Ronan said the Perrys wanted to build a playroom for their children, as well as guest quarters and office space inside the coach house. The building also had to hold parking for two cars, a kitchen, storage, and a bathroom with a shower. Ronan built the office and garage space on the first floor. But instead of sectioning off new rooms on the second floor like a divider in a desk drawer, he designed an open and flexible space, with plenty of storage.

The room could then be whatever it needed to be—playroom, kitchen, extra bedroom, party area, whatever—by folding and tucking things into (or pulling them out of) the Minimalist birch-plywood cabinets Ronan designed and placed around the room. Even the bed folds up Murphy-style behind a cabinet.

"Last time I was there, it was set up as an indoor hockey rink. I never expected that," Ronan said. The approach preserved the loftlike feel of the second floor, originally a hayloft. Ronan also left the brick walls exposed on the inside, allowing the eye to find beauty in the antiquity of the material. Square nails and original wood joists are still visible, also by design. There is natural light. And instead of covering the exterior brick walls with plasterboard, Ronan cleaned them and left them bare, again exposing the building's antique charm. Yet the space is clearly Modern. There is a Sub-Zero pullout refrigerator/freezer, glass tile, a Miele dish-

**Project:** Coach House, Chicago

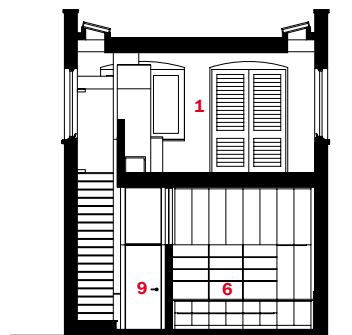
**Architect:** John Ronan Architect—  
John Ronan, project architect

**Engineer:** R.H. Witt Mechanical

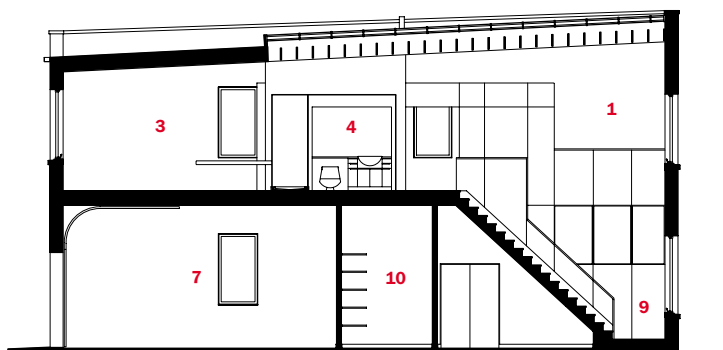
**General contractor:** Eiesland  
Builders



**The building consists of a 100-year-old masonry shell that once housed horses and coachmen (opposite). The interior construction functions like furniture that has been inserted into the shell and can change many times over the life of the building (this page).**

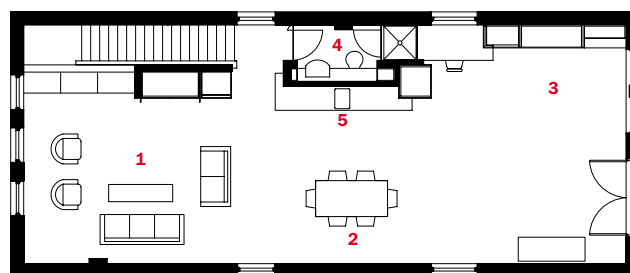


NORTH-SOUTH SECTION



EAST-WEST SECTION

0 3 FT.  
1 M.



SECOND FLOOR

N 0 3 FT.  
1 M.

- |                           |                    |
|---------------------------|--------------------|
| 1. Living/conference area | 6. Office          |
| 2. Dining/crafts area     | 7. Garage          |
| 3. Guest quarters         | 8. Garden          |
| 4. Bath                   | 9. Entry           |
| 5. Kitchen                | 10. Gardening room |

The original brick of the carriage house borders one side of the steps up to the second floor (this page). The multipurpose room upstairs includes a fold-out bed, media

electronics, storage, and a kitchen. But all program elements are tucked into the mill-work, leaving a flexible space that can be changed as needed (opposite).





washer, and black slate countertops.

Ronan said the lessons learned here are being carried to the larger projects on which he now works. He is planning a Chicago youth center and is considering a gymnasium that transforms into a 600-seat performance theater. Ronan also said he's designing a new house for the Perry family. But have any more coach-house requests come his way? "Yes, but I haven't taken any of them," he said. Ronan hasn't done other such houses because he wanted to focus on larger work, and he doesn't wish to be typecast as a designer of a particular building type.

After more than five years of using the space, Molly Perry still has praise for Ronan and his work. "John was able to keep the old elements of the building, updating them with a very modern space that's multipurpose," she said. "And that's what we were really looking for." And on the strength of that design, the Perrys hired Ronan to design a new house for them on a street a little west of their current residence. Molly said the new house has an exterior that is as modern as its interior. The family is set to move in soon. "I grew up in Georgetown, so I was used to Federal and Colonial Style, but we chose to build a Modern house—we wanted a Modern house." ■

#### Sources

**Built-up roofing:** *Firestone*

**Wood windows:** *Marvin*

**Skylights:** *Wasco*

**Locksets:** *Schlage*

**Hinges:** *Hager*

**Cabinet hardware:** *Blum; Hafele*

**Cabinet and custom woodwork:**  
*Eiesland Woodworking*

**Paints:** *Benjamin Moore*

**Chairs:** *Herman Miller; Aeron*

**Downlights:** *Lightolier*

**Plumbing:** *Kohler; Vola*

**Floor and wall tile:** *Bisazza*

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go to Projects at  
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# Studio Rinaldi demonstrates superb craft in transforming a rundown town house into the T Residence

By Jane F. Kolleeny

**I**talian architect Stefania Rinaldi relishes hands-on involvement with all her projects. In the case of the T Residence on the Upper West Side of Manhattan, she found the construction phase of the renovation especially interesting. As Rinaldi puts it, it involved a series of procedures—deconstruction, assessment, and reconstruction—that the initial design phase was unable to address. Step-by-step problem-solving threw the design team into the immediacy of the moment, an invigorating experience that propelled the building well beyond the architect’s original concept.

This former one-family town house was in such disrepair and so broken up into piecemeal rooms after years of reconfiguration that the best the owners and architect could do was to start over. And that’s what they did: “With the exception of a grand fireplace and oak wainscoting in the living room, and the molding and ceiling in the dining room,” said the owner, “we gutted until we hit the neighbor’s brick wall.”

A large mammal couldn’t turn around in this charmingly narrow but deep building. On the street facade, the architect maintained the dignified front by duplicating

**The Zen-like garden makes good use of materials, including teak, quartzite, limestone, steel, Plexiglas, and concrete (opposite and below right). The front facade of the town house was renovated to its original state (below left).**

the original, landmarked exterior detailing and installing new curved glass bay windows. Seeing the hopelessly rundown condition of the rear of the building, Rinaldi completely removed it (fortunately it was not protected by New York City’s Landmarks Preservation Commission), opening up the interiors to light and transparency with continuous floor-to-ceiling glazing.

Typically, the second floors of such late-19th-century town houses are elaborate, since they were used for entertaining guests. In this case, the dining room, kitchen, living room, guest room/library, and powder room reside on this level. The clients, a Swedish couple who purchased the first and second floors of the building, saw a marvelous opportunity to create a cozy home that doubled as a showcase for their excellent collection of Modern and antique furniture and art.

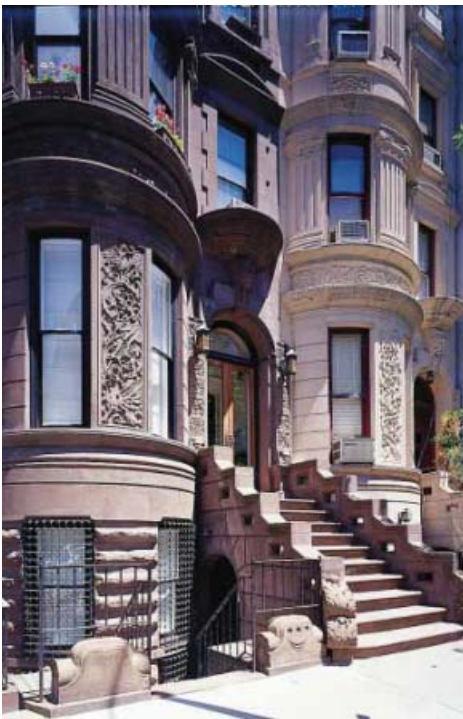
Sited on the front, the dining room houses the owner’s great-grandfather’s 200-year-old oak chairs and a 100-year-old crystal chandelier. These furnishings blend seamlessly with the Modern Danish dining-room table and sleek built-in cabinets that line the long inside

**Project:** *T Residence, New York City*  
**Architect:** *Studio Rinaldi—Stefania Rinaldi, principal; Brian Liona, Aurelio Clementi, Dara Burke, Daniel Hammerman, Beatrice Popoiu, Tavis*

*Wright, project team*

**Consultants:** *Geiger Engineering—Elie Geiger (engineer); Story—Paula Hayes, principal (landscape)*

**General contractor:** *William Dorvillier*

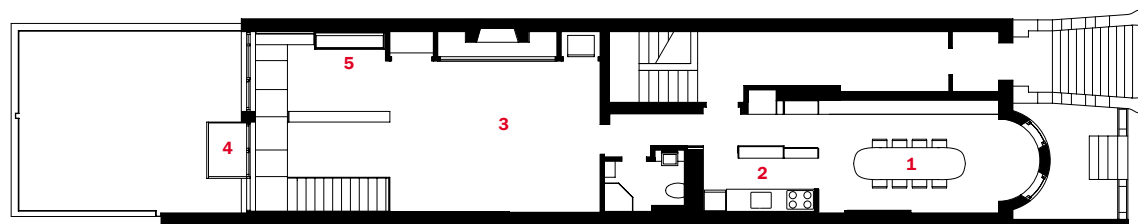






Existing wood details are integrated seamlessly with Modern design elements in the living room (above). Doors on either side of the fireplace blend into the wall and conceal spaces behind

them, such as the office area to the left of the fireplace (left). Glass partitions and doors divide some rooms for privacy, including the kitchen from the formal dining room (opposite).



FIRST FLOOR



GROUND FLOOR

N ← 0 10 FT.  
3 M.

1. Dining room
2. Kitchen
3. Living room
4. Balcony
5. Study
6. Bedroom
7. Closet
8. Sauna
9. Den
10. Garden



wall. Both are oak, the wood chosen for almost the entire interior.

The kitchen sits behind the dining room, separated by a frosted-glass partition illuminated with snakelike, fiber-optic light tubes. The architect uses glass partitions in various locations throughout the house to open or close up the space, balancing privacy and accessibility, as the situation demands. One can see from one end of the interior to the other when the various dividers are open and light streams in from the back of the house, illuminating the dimmer rooms at the front.

At the back of the building, the living room, like a crown jewel, embodies what remains of the original elegant detailing. Carved oak wainscoting and a magnificent fireplace take up the entire longitudinal wall of the room, which features a tile hearth and resembles a shrine in the space. Tucked into each side of the mantle are cubbies hidden behind

### GLASS PARTITIONS LOCATED THROUGHOUT THE HOUSE OPEN OR CLOSE UP THE SPACE, BALANCING PRIVACY AND ACCESSIBILITY.

trap doors—camouflaged as panels fitting nicely into the molding of the fireplace—containing a home office on one side and a well-stocked wine cooler on the other. Modern Scandinavian furnishings and art provide tasteful highlights in the room. The coffee table was made from an original door of the town house, placed on legs and covered in glass.

Eliciting an old-world charm, the off-white walls resemble Florentine stucco. “This is not the prepackaged kind now available to the marketplace,” said Rinaldi. “It is hand-mixed, where a craftsman applies layer after layer—in this case seven—to create a smooth, luminescent surface.” The craftsman hired for the job worked at night, avoiding day-time hours when dust from the renovation work would have hindered his efforts.

Subtle touches abound. A Swedish-designed air-conditioning unit, handcrafted furniture built by the owner’s great-grandfather, and clever built-ins designed by the architect maximize the space and create



**Transparent elements appear in unique locations: in the risers on the floating staircase (above), and on the floor near the back of the house (top right). The rear wall of the house is glazed from top to bottom (below).**

continuous surprises. Exquisite glass tiles in two shades of gray-green line the walls and floor of the upstairs bath; the master bath downstairs features the same tile in teal, turquoise, and aqua, and an ample-size sauna.

Floor-to-ceiling glazing replaces the gutted 2-story back wall, which extends to become a glass floor, so light filters from one story to the next. A floating stairway features clear polycarbonate risers furthering the feeling of transparency. The first floor hosts a private outdoor deck and

## A LARGE MAMMAL COULDN'T TURN AROUND IN THIS CHARMINGLY NARROW AND DEEP HOUSE.

garden with teak floors and stone walls. A balcony on the second floor overlooks this area, which is furnished with a wood bench on two sides, a tiny fountain, a storage bin cleverly camouflaged behind wood slats, and two large urethane planters. Moving inside from the deck, one finds the master bedroom, bath, sauna, walk-in closet, den, and guest room, all tucked comfortably into this quiet first-floor space.

Rinaldi, who came from Italy to New York 12 years ago to build





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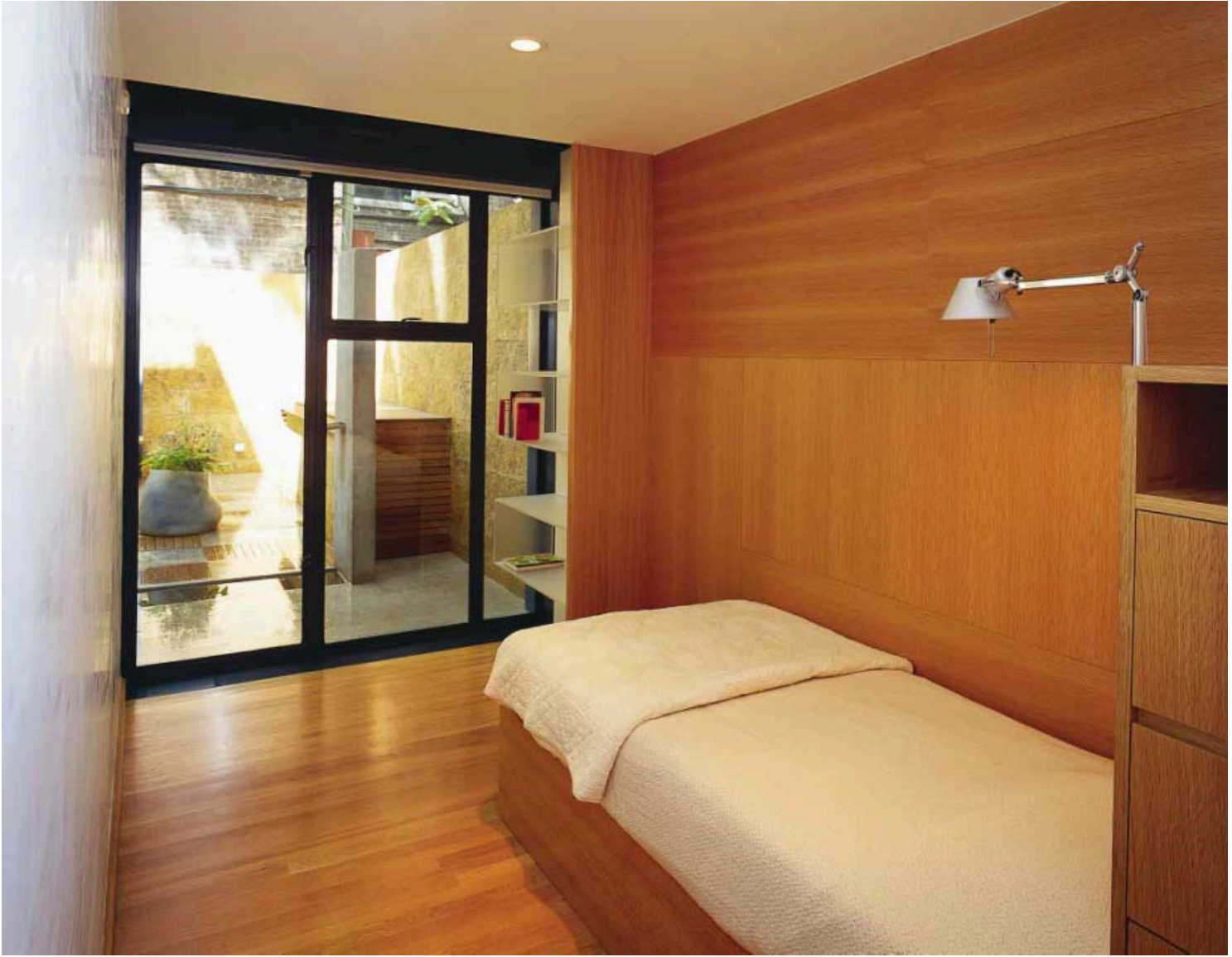


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\* Service life is the period during which the display's light output is 50% or more of the original light output.

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The guest quarters are tucked cozily into a corner of the first floor (above). The master bath, also on this level, is covered in delicately colored glass tiles and features a comfy sauna for two (right).

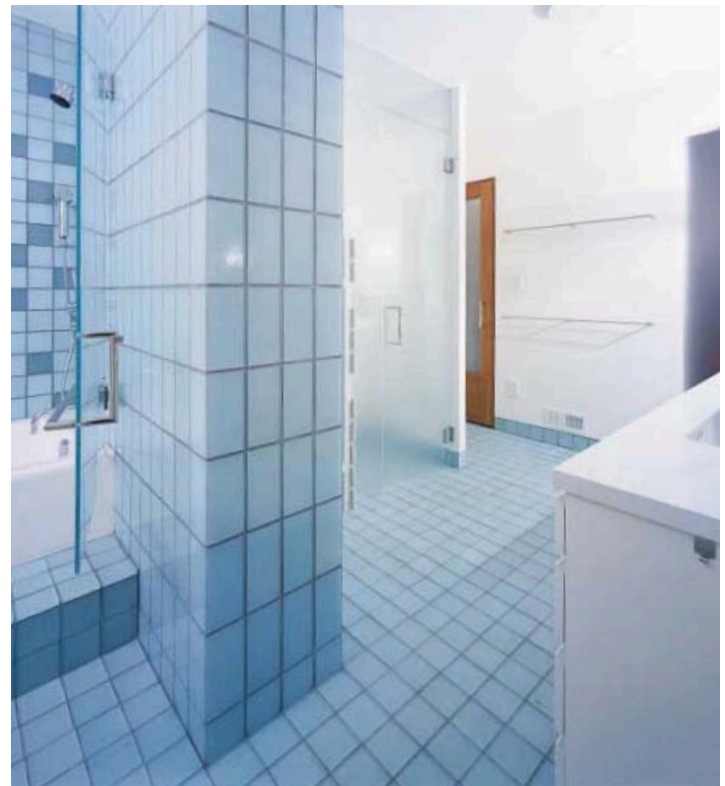
her practice, speaks of the delicate relationship that develops with the residential client: “The dreams of the architect become the property of the client, and the architect can only hope that the wisdom and vision he or she wishes to convey is shared.” In the end, the materials and forms of the design bind the homeowner viscerally to the designer. ■

#### Sources

**Stone exterior cladding:** ABC Worldwide Stone  
**Wood windows:** Heights Woodworking  
**Steel windows:** Optimum Window  
**Floor glass:** Deep Glass  
**Hardware locksets:** Modric  
**Hardware hinges:** Optimum Window  
**Cabinetwork and custom woodwork:** Design Inplace  
**Architectural millwork:** Gustav Mergins

**Paints and stains:** Benjamin Moore; Florentine Stucco  
**Wood flooring:** N. Persaud  
**Lighting:** Cooper Lighting; Artemide; Starfire; Lucifer; Delta; Flos; Lutron  
**Plumbing:** Dornbracht; Runtal; Finlandia-Harbia; Palone Brothers; Lindab

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Like a serene light box, the house resides on a tight lot on a busy Venice, California, thoroughfare (opposite). The public areas on the third floor are brightly illuminated by many variegated windows (left).



## Lorcan O’Herlihy’s **Vertical House** brightens an ordinary block with unusual cladding and fenestration

By Allison Milionis

**D**id someone in Los Angeles say urban infill? Indeed, recent building trends reflect a shift in the City of Angels that favors urban development over post–World War II suburban sprawl. The trend is as much a reflection of necessity as a manifestation of cultural preferences. While a significant number of the infill projects are taking place in the city’s downtown core, where there is an ample supply of underutilized buildings and warehouses, fringe communities are experiencing their own form of spatial and populace reorganization.

“People are moving into denser areas. They want to be within walking distance of shops and restaurants. As a result, I think a new type of architecture will crop up in L.A.,” says architect Lorcan O’Herlihy. “In a way, this house is a prototype.” O’Herlihy is referring to the house he designed and shares with his wife, Cornelia Hayes-O’Herlihy, in Venice, California. In 1998, the couple purchased the narrow property, which included an old bungalow, with the intention of building a new home. Though the setback was a mere 25 by 48 feet (before they got a variance of 7 feet), O’Herlihy says they were just glad to own property, and he believed they would find a way to work with the narrow footprint.

*Allison Milionis is a freelance writer living in Los Angeles. She writes on architecture and design for several magazines, and frequently contributes reviews and narrative essays to local publications.*

“Challenges can bring about an even stronger design. Often that’s what makes a unique project,” he notes.

Even in this beach town where unconventionality is the modus operandi, the O’Herlihy residence is intriguing. From the street, the tall black box appears to hover above the carport, its facade punctuated by a carefully choreographed pattern of translucent channel glass, clear and color-tinted windows that offer glimpses of the interior and its inner structure. Some windows are flush with the wall, and others are slightly recessed, adding an element of texture. The cladding, composed of 4-by-8-foot cement-board panels suspended on the structure of a steel-moment frame, allowed the architect to experiment with a rhythmic window pattern that continues on all four elevations. “I’m interested in letting materials drive the design,” says O’Herlihy. The 24-inch cladding module that he used throughout the house was a by-product of the materials that he had on hand, which he had collected over the years with the intention of someday using them on his own house—such as 140 pieces of channel glass.

### Sources

**Project:** Vertical House, Venice, Calif.

**Architect:** Lorcan O’Herlihy Architects

**Engineer:** Paul Franceschi

**General contractor:** Above Board Construction



1. Dining room
2. Kitchen
3. Living room
4. Guest bedroom
5. Master bedroom

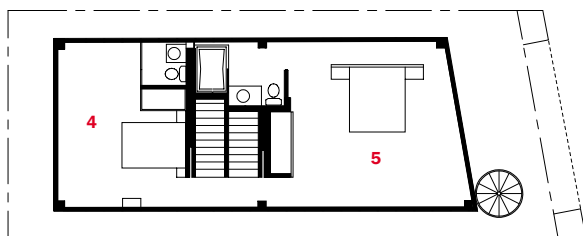
As in most of the house, the living room features custom-designed furniture by the architect.

Similar to an office tower, the plan is open, with the service core in the center. A modest entrance at the side of the house leads to the ground-floor office and the interior stair, which ascends to the second-floor bedrooms and baths. Unusual for a residence, the third floor is considered the “public space” and includes the kitchen, living room, and a powder room. Interior details, including the furniture and cabinetry designed by O’Herlihy, mirror the colors and proportions of the exterior modules and innovative use of conventional materials. The last leg of the

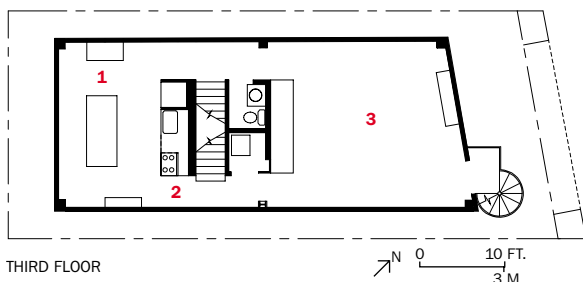
## EVEN IN THIS BEACH TOWN WHERE UNCONVENTIONALITY IS THE MODUS OPERANDI, THE O’HERLIHY RESIDENCE IS INTRIGUING.

ascend leads to a glass-enclosed window bench at the top of the stair and the roof deck/garden—an extension of the living room, with sunset views of the Pacific Ocean and snaking coastline.

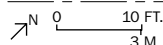
With the service core in the center and the structural supports at the perimeter, every room is open, which allows for unobstructed circulation and natural light streaming through the many narrow windows to illuminate all the spaces. Has privacy been an issue for the couple? “We don’t think about it,” replies Lorcan, who devised screens for the master-bedroom windows. “I think it’s important to start the design process



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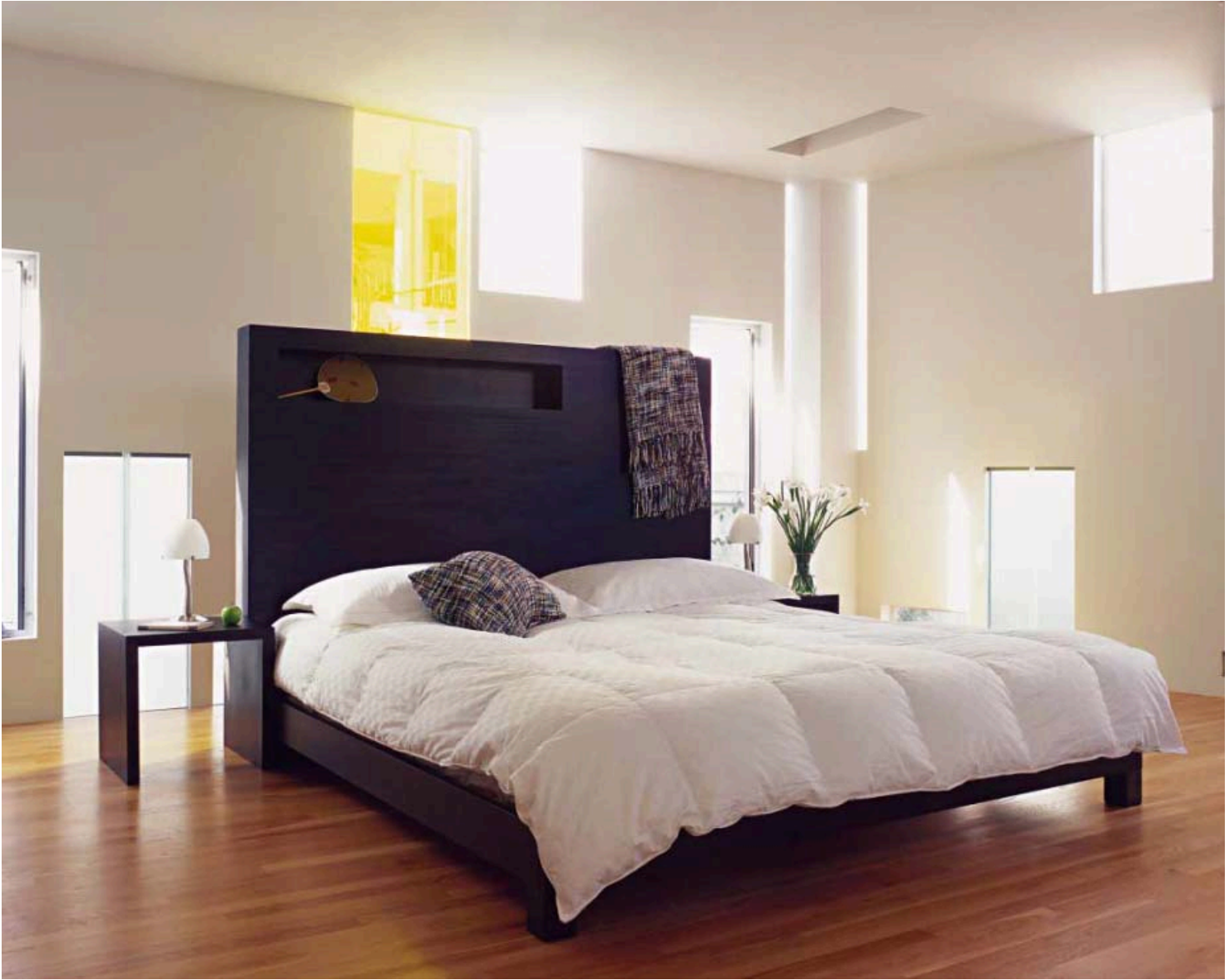
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**In the bedroom and bath, the clever placement of the many clear and colored windows**

**provides a profound sense of openness without sacrificing privacy.**



focused on light and build on that, rather than starting with privacy. Light is used as an architectural material here.”

O’Herlihy describes his house as an inversion of the classic California Modern, which was inspired by the sun but typically located on a site with views, or a suburban lot surrounded by ample open space. On this compressed urban site, the architect had to rethink the model, to focus inward without abandoning a sense of openness, light, and a connection to the outdoors. “Architecture is moving on, and innovation in materials and how we live are driving the changes,” says O’Herlihy, who is recognized for his eagerness to experiment with traditional models. Recently, he was awarded several urban housing commissions that will provide opportunities for him to integrate elements from his own house. “I’m personally interested in rethinking single and multifamily housing in Los Angeles. Working on my own house provided a lab for some of the ideas.” ■

#### **Sources**

**Roofing:** *Shur Deck (elastomeric)*

**Aluminum windows:** *Milgard*

**Glazing:** *Profilit*

**Metal doors:** *Milgard*

**Hardware:** *Haefele Hardware*

**Cabinets and woodwork:** *EuroColor*

**Furniture:** *Customized by architect*

**Bathtub:** *Zuma*

**Bath fixtures:** *Duravit*

**Kitchen appliances:** *Fridgidaire*

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[www.architecturalrecord.com](http://www.architecturalrecord.com).

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TLFeBOOK

Midcentury Modern furniture dominates the living room, but windows and a skylight over the adjoining stairway give the space a contemporary sense of light and warmth.







## Alexander Gorlin Architects converts an aging New York Town House into an artful, warm, and airy retreat

By Sam Lubell

Many of us may dream of living in a beautifully composed work of art. Yet with many Midcentury Modern houses, living in a masterpiece can be a cold, unwelcoming experience—full of simple elegance, but lacking the essential warmth that makes a home most livable. With a recent project on New York City's Upper East Side, New York–based Alexander Gorlin Architects undertook the challenge of converting a stylish, yet standoffish, Modernist town house into an updated, welcoming retreat.

Gorlin and his firm rebuilt the 6,000-square-foot house around the core of a 1957 Modernist residence designed by little-known architect Paul Mitarachi. Set back considerably from the street, the original two-story building had its promising components, including an expansive, elegant first-floor space with travertine marble floors and large windows. But as Gorlin notes, the original architect and client appeared to run out of money and perhaps inspiration to make the dream a reality. The other floors were small, cluttered, and allowed little sun inside. They were dark-

**Project:** *Town House, New York City*

**Architect:** *Alexander Gorlin Architects—Alexander Gorlin, principal; Thomas Bowers, project architect; Brendan Cotter, senior associate*

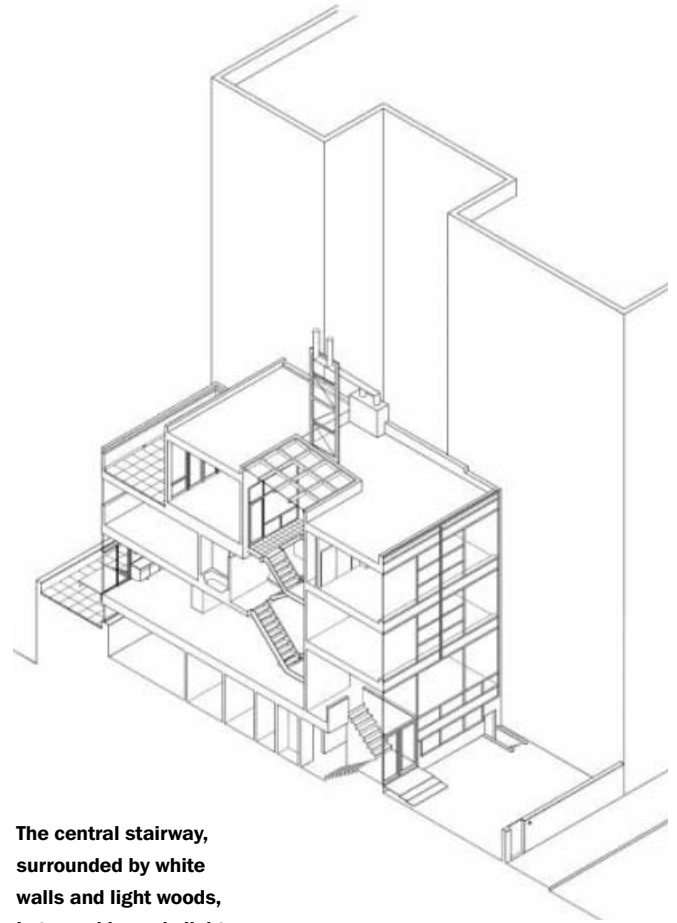
**Engineer:** *Ross Dalland*

**Interior designers:** *EFM Design; Steven Sclaroff*

**Consultants:** *Matthews/Nielsen (landscape); Kugler Tillotson Associates (lighting); Acoustic Dimensions (acoustics)*

**General contractor:** *Kel-Mar Designs*

PHOTOGRAPHY: © PETER AARON/ESTO IMAGES

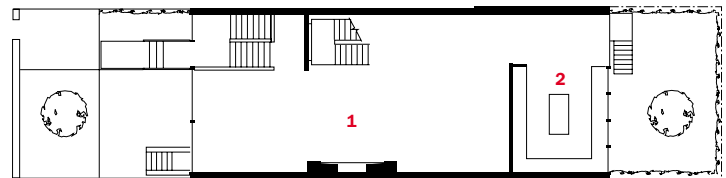
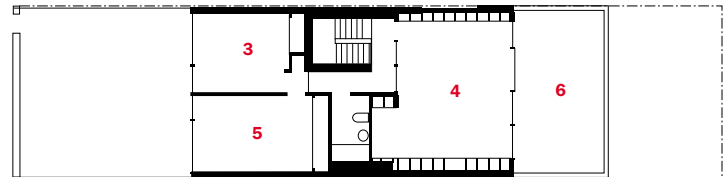


The central stairway, surrounded by white walls and light woods, is topped by a skylight and glass floors, to allow maximum light.

est in all the wrong places: The kitchen sat in the basement, while the upper floors had smaller windows letting in slivers of light. “You went up to the second floor, and you thought you were going to a basement,” says Gorlin. “The house had an inverted feeling; the higher you got, the darker it got.”

Gorlin’s goal was to maintain, and even improve upon, the space’s inherent elegance, but make it livable for a family of four, including two young girls. The most important ingredients were warmth, light, and transparency, achieved, in large part, by gutting much of the interior (except the first floor) and replacing it with a sophisticated layering of interconnected spaces, often covered with white paint and light woods (mostly beech and pearwood), and open to natural illumination whenever possible. To increase light, the architects moved the kitchen to the first floor and replaced it with a lower-level children’s playroom and a gym, while an entire third floor was added onto the roof, increasing space and opening up new possibilities for light.

“When the house was built, efficiency was considered most important, not comfort,” says Gorlin. He says he chose to put form and comfort on an equal footing. The merger is evident in the front facade, which was once largely concealed by vertical tongue-and-groove wood siding. A new front maintains sizable first-floor windows and now includes floor-to-ceiling glazing on the other floors, punctuated by an artful combination of syncopated panes, varying in size, that bathe the interiors in light and recall, through their abstract composition, a Mondrian painting. The red door, formerly gray, contributes (not acci-



FIRST FLOOR

- |                |                 |
|----------------|-----------------|
| 1. Living room | 4. Media room   |
| 2. Kitchen     | 5. Study        |
| 3. Bedroom     | 6. Roof terrace |



The media room (above), encased in glass, provides visual connectivity to the entire third floor. The kitchen (left), in the back of the town house, receives extra light thanks to partially translucent kitchen cabinets.



Floor-to-ceiling windows bathe the master bedroom in light. The adjacent bathroom contains only glass doors.

dentally) the finishing touch to this palette. The building's deep setback enabled the architect to focus on transparency without displaying the family's life to passersby.

For the collectors who own the home, the luminous first floor is lined with fine art, sculpture, and photography by masters like Jeff Koons and Bernd and Hilla Becher. To accommodate the collection, Gorlin says he designed the space to be intentionally less aggressive, serving as a background for the art. Furniture, rugs, tables, and other interior elements, which have a decidedly Midcentury Modern style, are confidently layered into the space by New York-based EFM Design and Steven Sclaroff. Meanwhile, the living room flows without doors into the sleek kitchen to increase the sense of space and connection. To augment light inside the kitchen, shelves lining the back facade are partially transparent, allowing for greater interior illumination.

The adjacent wood and steel stairway, probably the most important element of the house, ties most spaces together and infuses rooms with light and visual energy. A skylight built over the third floor, and flooring below made of lines of partially transparent structural glass supply light to almost the entire house. Drama is achieved by a floating design, in which stairs are separated slightly from the walls by small steel beams and lined with thin steel cables. Around the stairs, uninterrupted corridors link the bedrooms on the second floor, while on the third floor there is a straight view from the front hallway to the back balcony. The new third-floor multimedia room, a glass cube lined with beech closets, contains a television, stereo, and enough CDs, as well as art, architecture, film, and

photography books, to start a small city library. These interests of the client informed the final ingredient of Gorlin's design, which he describes as having a "sinister edge" inspired by the client's fascination with film noir. The interior of the media room reveals a frame that is painted white inside but black on its exterior. In this vein, both the front and back facades of the house are dark, making it an intriguing yet somewhat ominous presence for onlookers—although the silhouetted walls of the surrounding buildings frame a view that is equally compelling from within. "Too much white would be bad," notes Gorlin.

The sense of warmth throughout the residence tempers and complements this edge. The fashionable fireplace in the center of the living room, lined in black, is indicative of Gorlin's intervention. The previous owners never knew the fireplace worked, but the architect's team found it functioned beautifully, providing a Modern yet warm centerpiece to a home that has also rediscovered its welcoming character. ■

#### Sources

**Masonry:** *Beldon Brick*

**Glazing:** *Windovations (wood windows); Circle Redmont (glass floor system and skylights)*

**Hardware locksets:** *FSB*

**Cabinet hardware:** *Haeffle Closers*

**Downlights:** *Lightolier; Peerless; Iris; bartco; Ardee Lighting; Louis*

*Poulsen; Nulux; Bega; Rambush;*

*Roberts; Halo; KIM; Belfer*

**Hinges:** *Stanley*

**Paint:** *Benjamin Moore*

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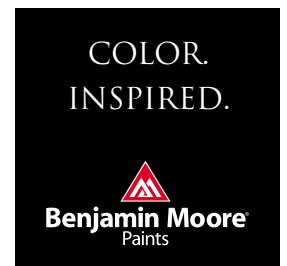
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## Residential Products

### CEDIA Review

Walk the aisles of the Custom Electronics Design & Installation Association show, and it's clear that flat-panel TVs rule home theaters, and speaker, accessory, and furniture companies are styling products to match. Below are five standouts from last fall. *Rebecca Day*



#### ▲ Rolls-Royce of TVs

The competition in the flat-panel TV race continues to play out in ever-increasing screen sizes. Korean manufacturer LG Electronics has introduced a 71" widescreen plasma display boasting the latest high-definition formats. To underscore the Rolls-Royce positioning of the panel, LG has finished several components with 24-karat gold paint—a \$75,000 price tag includes surround-sound speakers and a separate digital tuner. The supersize monitor can display up to nine individual pictures at the same time. LG Electronics, Englewood Cliffs, N.J. [www.us.lge.com](http://www.us.lge.com) **CIRCLE 200**



#### ◀ Music where it's wanted

NetStreams' Musica Keypad system places digital amplifiers in each room, behind each keypad, rather than in one central location. The system is the first to integrate an optional FM tuner, allowing each room to have an independent selection of radio stations. The FM antenna mounts between wall studs during construction. NetStreams, Austin, Texas. [www.netstreams.com](http://www.netstreams.com) **CIRCLE 202**

#### ► Frame/speaker combo

M•Design's Eleganza InvisiSound Frame handles two plasma TV issues: It serves as an attractive hardwood frame to give the display a floating appearance on a wall and eliminates the need for add-



on speakers by incorporating left, center, and right channel sound using specially designed speaker technology. The frame is available for 50" and 60" monitors. M•Design, Las Vegas. [www.MDesignLife.com](http://www.MDesignLife.com) **CIRCLE 204**

#### ▼ Custom-built speakers

The days of the boxy loudspeaker are gone. Thiel's new ViewPoint speakers, designed to complement a plasma or LCD TV, take a custom-built approach. The company will match the size and color of any flat-panel display to bring high-quality sound to a wall-mount TV. The speakers boast a specially designed sound radiation pattern to cover a broad area of space evenly. Thiel Audio, Lexington, Ky. [www.thielaudio.com](http://www.thielaudio.com)

**CIRCLE 201**



#### ▼ Disappearing act

Le Wing is an integrated projection TV screen and speaker mechanism that disappears into the ceiling when the projector's not in use. Designed for installation over a fireplace, large window, or in the center of the room, Le Wing features speakers that can extend independently for music listening. The screen is certified to home theater standards and is made of a perforated material to allow sound to pass through freely. St. John Group, Mission Viejo, Calif. [www.screenresearch.com](http://www.screenresearch.com) **CIRCLE 203**



## Residential Products

### ► Handcrafted woodwork

Berkeley Mills custom millwork ranges from white-oak mailroom postboxes for Pixar Animation Studios to a mahogany garden table to seat 24 for a private client. The studio's five collections, Shoji, Arts & Crafts, Prairie, Tansu, and Mesa, include case goods, upholstered pieces, seating, tables, beds, and workstations. Shoji, the newest addition, features custom-measured, -made, and -installed shoji and fusuma (Japanese-style sliding doors) crafted in partnership with artists in Ishikawa, Japan. Berkeley Mills, Berkeley, Calif. [www.berkeleymills.com](http://www.berkeleymills.com)

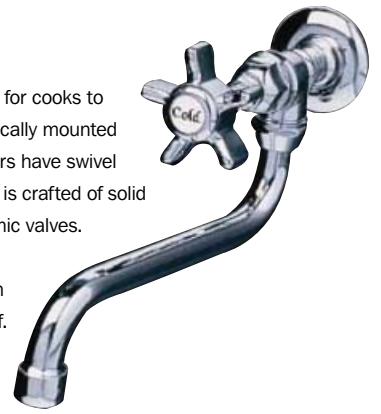
**CIRCLE 205**



### ► Not just kitchen filler

Rohl's pot filler series offers an elegant way for cooks to fill large stockpots without heavy lifting. Typically mounted above the stove or the cooktop, the pot fillers have swivel spouts that reach out either 9" or 11". Each is crafted of solid brass and equipped with quarter-turn ceramic valves.

They are available in five finishes: polished chrome, polished nickel, satin nickel, Tuscan brass, or Inca brass. Rohl, Costa Mesa, Calif. [www.rohlhome.com](http://www.rohlhome.com) **CIRCLE 206**



### ► Textured wallcoverings

Graham & Brown, a firm that has created wallcoverings in the U.K. for more than half a century, is now expanding its presence in the U.S. with a selection of new products. The Paintable Textures collection (right) is available in a range of textured patterns inspired by sources including Victorian-era pressed-tin ceilings, crisp linen, and painters' brush strokes. The papers allow specifiers to inexpensively recreate the look of faux-painted and fabric-covered walls. Graham & Brown, Cranbury, N.J. [www.grahambrown.com](http://www.grahambrown.com) **CIRCLE 207**



### ◀ Looks like slate, but better

Imperial Slate is an extra-thick ceramic roofing shingle that replicates the depth and patina of mined slate but is substantially lighter, less brittle, easier to install, and less expensive than conventional slate. Like most Ludowici roof tiles, Imperial Slate is warranted for 75 years after installation. Ludowici Roof Tile, New Lexington, Ohio. [www.ludowici.com](http://www.ludowici.com) **CIRCLE 210**



### ▲ Insulated siding

Structure is the first premium siding permanently bonded to Dow's Styrofoam brand extruded polypropylene foam. When installed properly, Structure can improve the R-Value of exterior walls by up to 25 percent, and reduce high-frequency noise and wind sounds by up to 50 percent. It is available in double 6" and wide-style 7" planks. Alcoa Home Exteriors, Pittsburgh. [www.alcoahomes.com](http://www.alcoahomes.com) **CIRCLE 208**

### ▼ "Historic" fiberglass

Constructed using the latest fiberglass technology, Aurora Craftsman doors are engineered to withstand extreme weather conditions while emulating the texture and weight of real wood. The collection offers three architecturally authentic door and sidelight designs that feature clean lines, flat panels, and Shaker-inspired sticking. Jeld-Wen, Klamath Falls, Ore. [www.jeld-wen.com](http://www.jeld-wen.com) **CIRCLE 209**



### ► Versatile house wrap

WeatherTrek house wrap is manufactured using Valeron Strength Films' patented EVD (Engineered Vented Drain) Technology. The wrap's 3D engineered surface allows for nondirectional installation and drainage of water and moisture. WeatherTrek is tear-, snag-, and puncture-resistant, as well as lightweight and translucent. It is available in standard 60" widths for 1,000 square feet of coverage. Valeron Strength Films, Houston. [www.valeron.com](http://www.valeron.com) **CIRCLE 211**





# McGraw-Hill Construction's Architectural Record Innovation Conference 2004 Three Tall Buildings and Other Tales of Innovation

All manner of building and design professionals, from Chinese architectural journalists to American software developers, gathered in New York City on November 16th for Architectural Record's second annual Innovation Conference. The conference used the case studies of three tall buildings that have inspired experimentation to illustrate how new ideas and technologies are applied to architecture. And what cases they were!

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Starting with the design team of a building which has been completed, the Deutsche Post in Bonn, Innovation 2004 moved to a project underway, the New York Times Tower, capping off the case studies with the Freedom Tower, in development on the site of the former World Trade Center.

The conference included a keynote by David Gottfried, founder of the U.S. Green Building Council, and ended with a lively panel discussion on the ideas heard during the presentations, along with some interesting speculation.

*"For over 200 years, DuPont has provided innovative solutions for a better, safer, and healthier life for people all over the world. DuPont is a science company and is dedicated to continuing to make the world a better place. The McGraw-Hill Innovation Conference is a great platform for us to showcase these successes and future miracles of science while developing key customer relationships."*

BETTY J. CROSS, Commercial Market Manager  
DuPont Building Innovations

## Why Innovation Occurs in Tall Buildings

Tall buildings are not only emblematic of innovation, but as Architectural Record Editor-in-Chief Robert Ivy noted, offer the opportunity to enhance the practice and professions. "We are beginning to see buildings that act now holistically, that act as units, that in fact use basic physical laws like convection—and it's a very simple thing that heat rises. To reinvent what these contained structures might be ... potentially has great benefits for the world at large."

This Special Advertising Section was written by freelance writer Donna Stone, who can be reached at [DZStone@aol.com](mailto:DZStone@aol.com)

Although the case studies offered no set methodologies, they did share a basic strategy for innovative building. Start with a collaboration between architect and engineer, combine with a client committed to R&D, stir in new ideas and sustainable technology, adding a construction manager and manufacturers before the design mix sets.

*"Designing and constructing a building is a collaborative process and we view our relationship with architects the same way. By participating in the Innovation Conference we're able to interact directly with architects on the leading edge of design to create products and services that meet their current and future demands."*

PATRICK J. KENNY, Business Manager  
for Construction Markets  
**PPG Industries**

### Collaborating on the Rhine



"This building actually performs," explained architect Helmut Jahn, FAIA, of the Deutsche Post building. "The façade does things which are necessary. Modulates climate and daylight solar energy. Integrates the heating and cooling systems. Compare it to the human skin. It assumes different characteristics when sun comes in. Whether windows are open or closed, it adjusts itself to outside conditions, like a changeable membrane."

Indeed, client requirements for Deutsche Post were technologically demanding. For structural engineer Werner Sobeck, "One of the outstanding ideas of this project was that this building was to have totally naturally lighted offices. So the natural light had to come through the back of the offices. How to solve this? It necessitated that we cut the building from the top to the bottom."

Cut the building and retain the architect's aesthetic? Amazing, but they did it. How did so many technical intentions come visually together, as Jahn noted, "in a total integration of structure, technology and design."

Engineer Matthias Schuler, charged with integrating the energy and comfort aspects, said success depended on, "The engineers becoming involved early in the design process. Very early on the discussions took the glazing into account."

Architect Jahn pointed to role reversal. "The architects are thinking about technical consequences and the engineers are considerate of aesthetics."

When it comes to collaboration, structural engineer Sobeck ultimately saw it as a choice, "Early on you can either be at each other's throats or you can look for the commonalities."

*"I attended the conference for CENTRIA. I thought that there was a key subject covered by Helmut Jahn. He stated that the emphasis of the project was directed at using materials and designs that were sustainable. He further stated that they were not trying to get "points" that are used in LEED certification in the U.S. Two critical issues in the design of that building were the amount of energy saved through the unique glass curtain wall design with a shingled, operable triple glazed wall and the fact that they used water from the Rhine River and actually replaced it at a cooler temperature. Jahn stated that these items, critical to the design in Germany, would not receive LEED credits in the U.S."*

JIM FLANAGAN, Product Manager  
**FormaBond**

### Challenges of the Times



The Renzo Piano Building Workshop and Fox & Fowle Architects are the architects, and Bruce Fowle, FAIA, led the presentation for the New York Times Tower. "The real challenges," Fowle explained, "have not only been making Renzo's vision conform to New York City standards and building codes, but importing the European vision and technologies into the American marketplace. Americans are way behind and can't do what Europeans can do."

Or can they? Structural engineer Tom Scarangelo said the design called for a highly integrated exposed steel system most often seen in Europe. "What's typically seen on braces here in the U.S. are either single diagonals or pairs of x-braces with one in tension and the other one with no stresses at all. Neither of those solutions was desirable. They were bulkier in appearance than the designers wanted."

Working with manufacturers, Scarangelo found a solution using prestressed rods. "One of the things I think is key to the ability to innovate is time. You really have to give the team time to do their job. It's not too much time or too much money. Given the appropriate amount of time you can actually save money."

*"The three teams that shared their success stories are to be commended for their innovative use of structural steel to form the framework of these integrated structures. The sharing of these ideas can only further inspire other teams to follow their examples."*

JOHN P. CROSS, Vice President of Marketing  
**American Institute of Steel Construction**

### Sometimes a Client Leaps

When it comes to innovative success, architect Fowle believes, "Number one is a committed client. It's one thing to have a compe-

tion and hire the architects, but to actually follow through and provide the support—it's expensive. The fact that they understand the value of research and development is essential.

"It was a leap of faith to build a 4,000 square-foot mockup of a corner of our building," David Thurm, Vice President of Real Estate for the Times stated during the Innovation 2004 panel discussion. Located outside the paper's printing plant in Queens, Thurm said, "We ended up bringing 250 Times employees out. When you see it together there's something to that...I think visualization tools are critical but I think there is something about making that investment in a mockup."

Many mockups were used in R&D for the tower. Near Paris a mockup endured all sorts of simulated weather, and outside of Turin, multiple aspects of the ceramic rods that will lace the glass tower were tested, including how to wash the windows, "We looked into robots but found that a squeegee worked best," said Fowle, with a smile.

Manufacturers also built mockups with the rods in their own shops. "This allowed them to go through the process and understand what it's really all about in terms of the real costs," explained Fowle, adding that an investment by the client of about \$250,000 in mockups, "will save millions of dollars in buyout."

The importance of working with manufacturers was underscored at Innovation 2004 when Jeremy Mucha, an engineer with Benson Industries, the company manufacturing the curtain wall with rods, spoke on equal footing with the architect and structural engineer during the case study presentation.

*"The new reality that buildings are being designed as "whole buildings" rather than a collection of building products will mean architects, engineers and manufacturers will draw upon each other in researching and developing product solutions to meet the needs of the customer. It is about better performing buildings that have less impact on the environment- and that is very exciting!"*

BARRY REID, Marketing Product Manager  
G-P Gypsum Corporation

### All this Innovation is Well and Good but...

The New York Times Tower impressed Ron Klemenic, Chairman of the Council on Tall Buildings and Urban Habitat, moderator of the Innovation 2004 panel discussion—but he wondered. "Once again," he told David Thurm of the Times, "you are an owner-occupied building. How does the rest of the industry get on the bus with the innovations we are talking about as opposed to just replicating what we've done for the last twenty years?"

Thurm hopes, "when people see what we have done manufacturers will make it affordable. There will come a point when people will say underfloor air? Why did anyone think that was not a good idea?

What was complex about that? Developers will anticipate that owners will want it and owners will be smart enough to ask for it."

*"When introducing a new invention like Sto Guard® waterproofing/air barrier, Sto Corp. needed to interact with the recognized leaders in the building and design marketplace. The Innovation Conference was an excellent venue to not only meet that goal but to exceed it."*

ALEC MINNE, Marketing Group Manager  
Sto Corporation

### A Tall and Green Keynote

"I didn't know much about skyscrapers and tall buildings in terms of green. I hadn't thought about it a lot until you all invited me to share some thoughts," David Gottfried, founder of the U.S. Green Building Council and World Green Building Council, revealed during his Innovation 2004 keynote address.

"When I read about the case studies to be presented, I soon became a real convert. Skyscrapers are indeed very green. They have small footprints for preserving land. As we go up instead of out infrastructure reduces. We are seeing energy efficient, double glazing systems that are letting the light in and the heat out, and a technological innovation of energy with these buildings becoming their own power plants."

Gottfried also spoke to the hurdles in the greening of America. "How do we value energy efficiency and performance and fresh air and resources higher than resource exhaustion, and how together do we carry that into economics and into Wall Street? Those are the real challenges facing us here."

*"Scofield has been a sponsor of the Innovation Conference since its inception. We have found it a worthwhile opportunity to have a dialogue with those who are shaping the future of the building industry. It provides a truly unique format. Unlike the trade shows put on by professional organizations, it deals with the convergence of many disciplines and technologies to solve real world problems. The panels discussed how new developments in building materials and concerns for energy efficiency and green building influenced them to arrive at innovative solutions. We heard from the diverse members of the building team who interacted and contributed to the design process."*

PHILLIP J. ARNOLD, President & CEO  
L. M. Scofield Company

### The Freedom Tower a Vision of New York

"The Freedom Tower," Architectural Record's Robert Ivy noted, "has received so much attention not only to what the physical character of that building might be but how people have looked to that building to answer unanswered questions that were provoked on September 11th."

Architect David Childs, FAIA, a principal of Skidmore, Owings & Merrill in New York, began his discussion of the Freedom Tower with this observation. "I never saw the World Trade Center in a favorable light. I did like the flash of those corners every now and then but just looking at this block, this idea of a superblock imposed on this wonderful city, it had nothing to do with New York."



From using the tower's crown as a great theater of light to honor the sad marking of 9/11 or to celebrate the Fourth of July, Childs made it clear the Freedom Tower had everything to do with New York—as well as innovative design. "You see this building tapering in? In this case we took that taper and rather than just making it straight, we folded it, we twisted it, gave it the eccentricity that the Master Plan wanted. But we balanced it on both sides, which resulted by itself in this torque. This torque completely grew out of the idea of its site. This form grew by itself and created something iconic because that is the primary role of this project as a marker in the sky for the memorial at the base."

When it came to the conference's main topic, Childs put it simply. "Innovation is not the result of one person working alone in a room. It takes collaboration."

*"Events like the Innovation Conference give manufacturers like Owens Corning an opportunity to gain a broad, international perspective on the challenges and priorities of the architectural community, where their passion, vision and inspiration lies and what they see as the future of design and construction. That insight, coupled with the knowledge we acquired about such significant, innovative projects like the Freedom Tower, is exactly what manufacturers need to stay in step with architects."*

LYNNE HARTZELL

Director of Marketing Communications and Brand Strategy  
**Owens Corning**

### Putting the Freedom Pieces Together

"The vision of the architect," engineer and concrete structure expert Hans Schober explained, "is a building which will be iconic, pure in its form, integrated with the site, redundant, and simple to build." It will also be "a twisting and torquing superstructure," explained structural engineer Ahmad Rahimian, "where every floor is unique."

"And, a building," environmental engineer Guy Battle emphasized, "that needs to somehow recognize the issues of sustainability ... we needed to work towards a tower building that produces more energy than it needs, collects more water than it needs."

At 1,776 feet, the building will be tallest structure in the world, office floors and all sorts of public spaces with a shifting use of the building as it rises on the top. Wind turbines to be used above the occupied floors are expected to produce 20 percent of the building's energy—the innovative list for Freedom Tower only begins.

*"The Innovation Conference is a key component of the ongoing partnership between AutoDesk and Architectural Record. We are a proud sponsor of this conference and applaud the collaborative spirit at Innovation 2004 between software manufacturers like ourselves, owners, architects and engineering companies."*

DEBORAH GALLO, Senior Director  
Building Solutions Marketing  
**AutoDesk**

### The Next Innovative Step Change

When it comes to innovation, engineer and panel discussion member Ed DePaola pointed out, "Builders don't have the luxury as they do at General Motors to build a prototype, and if they don't like the way it behaves, build another. They test it 20, 30 times, and when they get one they like, they build it. We can't do that with buildings."

Perhaps not in concrete and steel, but today builders can put it together virtually. "The need to see all the pieces come together is precisely why the SOM (Skidmore, Owings & Merrill) team used the next generation tools on the Freedom Tower," architect and software executive Phil Bernstein told the panel. "There's very complex three dimensional geometry, a rotating torque—they sit in the conference room and walk through the 3D visualization of the building."

Will the new 3D computer software bring a step change in the way we build? "The tools that can make a shape that looks like a duct have been around for a while," Bernstein explained, "but tools that can make that duct behave like a duct, or a column that behaves like a column that is dynamically coordinated so the representation is part of a building and not just an image—that is the big change, but it is going to take a while for those processes to fully integrate."

Architectural historian Carol Willis agreed that such integration takes time, reminding the panel members of the years between the invention of the elevator and the first skyscraper. "There is a technological determinism but it would be a mistake to equate innovation with technology only. There is a broader culture ... we need to convince developers to build buildings that are sustainable ... these sorts of arguments need to enter. And there are plenty of ways to innovate with low technology, especially with sustainability. Just because we have the computers doesn't mean the crayons can't be useful as well. What we have seen with the Freedom Tower—and any of these buildings—they are talking about the sun and the wind."

# Products **Tile, Stone & Concrete**

This month's focus is on the latest in **tile, stone, and concrete**. In 2005, architects can **scout for these products** at an array of trade shows, including World of Concrete, 1/18–21, Las Vegas; Cevisama, 2/8–12, Valencia, Spain; Coverings, 5/3–6, Orlando; and Cersaie, 9/27–10/1, Bologna, Italy, to name a few. *Rita F. Catinella*



The Savoy wall tile line (right) can be used in residential applications for accent walls, kitchen backsplashes, and countertops (above).



## Clean-lined architectural wall tile recalls another era

Savoy architectural wall tile is intended for residential applications, including showers, kitchen

backsplashes, accent walls, and light-duty countertops, as well as vertical surfaces in hotels, restaurants, specialty shops, and luxury retail environments. Savoy is available in 3" x 6" and 6" x 6" field tiles, and a 6" x 6" beadboard that may be used as a field tile or accent tile and installed horizontally or vertically. The clean-lined collection includes the 1" x 2" Pinwheel Pattern and the 1" x 2" Running Board or Brick Pattern. A solid dot, available in the line's five colors (White, Linen, Blush, Sea Mist, and

Café) can be used to replace the central dot in the Pinwheel or as a single accent piece. Crossville offers 11 trim pieces, including a bullnose, quarter round, chair rail, base molding, crown molding, and several liner bars. The lighter shades of color have an opaque glaze, while the darker ones have a transparent glaze that adds depth and luminosity. Slight shade variations in both the field tile and trim add to their handmade quality. Crossville, Crossville, Tenn. [www.crossvilleinc.com](http://www.crossvilleinc.com) **CIRCLE 212**

## Hand-picked stones clad one-of-a-kind windows and doors

Tueren-Art manufactures interior and exterior doors and windows with a surface coating made of natural stone, including marble, granite, sandstone, slate, or onyx. The covering coat ranges from .12" thick for interior doors to .28" thick for front doors. It is patented, tested, and certified by German Institutions of Testing and used worldwide. The doors are impact-, shock-, scratch-, sound-, and

weather-resistant. Tueren-Art offers both a Classic line that focuses on the beauty of a single slab of stone and a Design line that features cutouts, as well as engraving, sandblasting, and gold-leaf-inlay options. The doors weigh between 165 and 198 pounds, depending on the type of stone and accessories used, and exterior doors are fitted onto an aluminum frame construction. Each door is

one-of-a-kind and created to customer specifications—the client even chooses their own stone slab before it is processed into the final product. F.M.E., Erfurt, Germany. [www.tueren-art.com](http://www.tueren-art.com) **CIRCLE 213**

**These exterior doors feature slabs of Azul Bahia granite.**



## Custom-colored mortar holds together new D.C. museum

Quikrete provided the mortar used to lay block and stone for the National Museum of the American Indian (NMAI), which opened last fall in Washington, D.C. The museum is a five-story domed structure that has the appearance of a gigantic natural rock formation and

**The NMAI takes the form of a gigantic rock formation.**

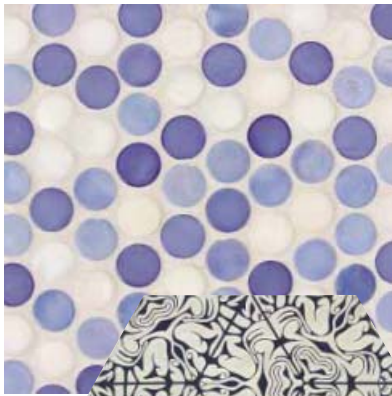
is accented by curving bands of rough-cut, golden-toned limestone.

The project required the use of 1,935 Quikrete 3,000-pound bags of Type S mortar and its Spec-Mix silo system to lay block backup on the 250,000-square-foot NMAI. The project took three years, involved more than 40 masons, and required two custom-blended colors, which were individually mixed into the mortar for wet-setting stone. In addition, 1,500 Quikrete 3,000-

pound bags of fine grout were used on the project.

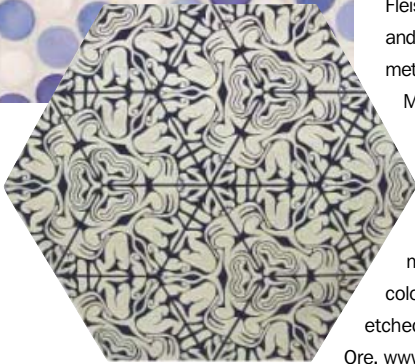
The company's bulk mortar and Spec-Mix silo system has been used on many recent high-profile projects around the U.S., including the Boston Convention & Exhibition Center, Atlanta World Congress Center, San Diego Padres baseball stadium, and the Ray and Maria Stata Center science building at the MIT campus in Boston. Quikrete, Atlanta. [www.quikrete.com](http://www.quikrete.com) **CIRCLE 214**

## Products Tile, Stone & Concrete



### ◀ Ceramic and concrete

Glaze (top), from Ann Sacks, is a modern glass version of the traditional ceramic penny rounds. The opaque sparkling tile is available as 3/4"-wide penny rounds or 1" x 6" sticks in white, baby blue, blue blend, and celadon. Four concrete tile designs by Andy Fleishman include Diamond and Petal, two large-scale geometric designs, and Tendril and Maximus (bottom), two intricate floral-themed designs. The color palette of gray, crème, chocolate, and camel is multiplied by the various color-grout options for filling the etched lines. Ann Sacks, Portland, Ore. [www.annsacks.com](http://www.annsacks.com) **CIRCLE 215**



### ▼ Improved concrete panel system

Nexwall is a 2"-thick panel system that utilizes a patented galvanized-steel channel to reinforce, lift, and connect the concrete panel. The panels can be finished in the same manner as most other architectural precast panels, and 1/2" reveals and formliners



can be used to add architectural features. Gray concrete panels with custom graduated formliner details and reveals were used for this plant (left) in Olathe, Kansas. Omega Concrete, Kansas City, Kansas. [www.omegacrete.com](http://www.omegacrete.com) **CIRCLE 217**

### ► Rocks from the Rockies

Montana Rockworks supplies architectural and landscape stone from quarries in the Montana Rockies for homes, lodges, museums, and art projects. Known nationwide for its Chief Cliff Series, a Rocky Mountain argillite stone available in a variety of styles, the company also offers Rainbow River Rock for chimneys, Tumbled Stone with softer edges, and specialty products such as Cap Stone, Pavers, and Treads. Montana Rockworks, Kalispell, Montana. [www.montanarockworks.com](http://www.montanarockworks.com) **CIRCLE 219**



### ▼ Stone kitchen countertops

StoneDesign is a new line of kitchen countertops from SieMatic that wrap a lightweight base material with a thick layer of real stone. With thicknesses ranging from 1 1/2" to 3", the worktops allow for the gapless manufacture of lengths that would otherwise be difficult to fit. The worktops, available in over 24 stone types, can be precisely cut on-site, even along inclines and in window recesses. A Jura Yellow limestone with a rough-hewn edge is shown below. SieMatic, Bensalem, Pa. [www.siematic.com](http://www.siematic.com) **CIRCLE 216**



### ◀ Ceramic-look concrete masonry

Astra-Glaze-SW+ premium-glazed masonry units offer the look of ceramic tile, but with the durability of concrete masonry. USDA-approved for



use in sanitary conditions, Astra-Glaze-SW+ is appropriate for both interior and exterior applications. Moisture-resistant even in high-impact environments, it is ideal for food-processing plants, schools, health-care, and correctional facilities. Trenwyth Industries, Emigsville, Pa. [www.trenwyth.com](http://www.trenwyth.com) **CIRCLE 218**



### ▲ Stone-cladding alternative

Almatec porcelain stoneware slabs offer an alternative to traditional stone cladding for all applications. The slabs feature deep stone veining and are available in large format sizes up to 48" x 48". Each slab has a higher mechanical strength than that of stone, as well as resistance to freeze/thaw cycles and to wind thrust. In addition to vertical cladding, Almatec stone is appropriate for interior and exterior walls and floors in residential or commercial projects. Impronta Italgraniti USA, Springfield, Va. [www.improntaitalgraniti-usa.com](http://www.improntaitalgraniti-usa.com) **CIRCLE 220**

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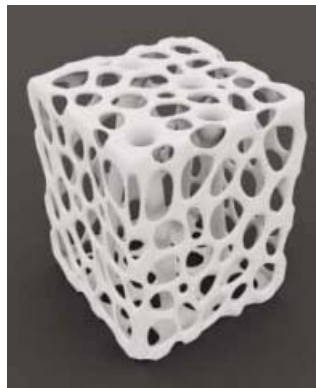


## Product Briefs

### ► Go up the round way

Mitsubishi Electric debuted a set of spiral escalators at the grand opening of the new Forum Shops at Ceasars in Las Vegas last October. The four custom escalators, configured in tiers, feature graceful curves that offer panoramic views of the surrounding shops and create the illusion of being suspended in midair. Mitsubishi Electric is the world's only manufacturer of spiral escalators. Before, there was only one site in the U.S. with a spiral escalator in operation, the San Francisco Centre (installed in 1988). Mitsubishi Electric & Electronics USA, Cypress, Calif. [www.mitsubishielectric.com](http://www.mitsubishielectric.com)

CIRCLE 221



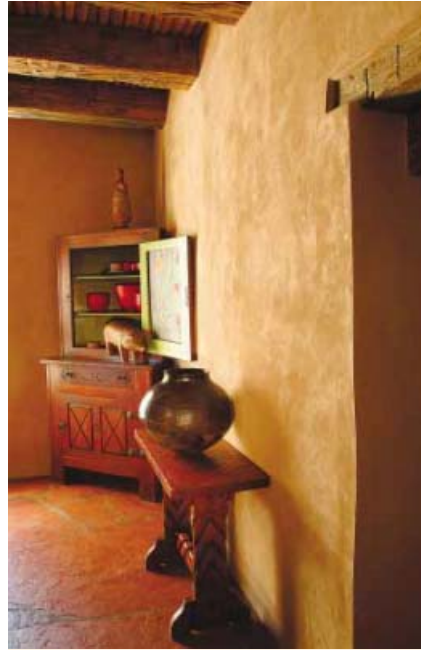
### ◀ Large-scale 3D layering

Each piece in French designer Patrick Jouin's new Solid furniture collection was created with the stereolithography, or computer-aided 3D layering, technique in mind. Previously used for only small-scale models, Jouin used stereolithography to create a full-scale furniture collection consisting of two chairs, a table, and a stool. Presented at the Maison&Objet show last September in Paris, each piece is offered in a limited edition of 30 and will be sold through New York City retailer Moss starting this month. Moss, New York City. [www.mossoonline.com](http://www.mossoonline.com) CIRCLE 223



## Product of the Month Earth Plaster

After only 16 months in its 2,600-square-foot location, American Clay needed to expand to 7,000 square feet last May in order to keep up with demand for its new product. An alternative to cement, gypsum, acrylic, or lime plasters, American Clay's Original Earth Plaster is suitable for use on internal surfaces of walls and ceilings. The clay plaster attaches to properly primed stable and dry sub-



strates, including masonry, base earth plasters, lime basecoat plasters, cement stucco and plasterboards, gypsum plasters, and painted walls.

A combination of clays, aggregates, and natural pigments, the Earth Plasters are offered in 12 earth-inspired colors in the original Loma formulation; the even smoother Porcelina reformulation that provides a polished, Venetian veneer; and in the oyster-shell-based Marittimo. American Clay also offers a new soy-based, non-VOC sealant and add-mix to provide additional resistance to soil and water, especially for commercial applications. A winner of last year's NAHB Outstanding New Green Product Award, the 100 percent natural plasters are mold-resistant, nontoxic, and use low energy and less waste during manufacturing. American Clay, Albuquerque. [www.americanclay.com](http://www.americanclay.com)

CIRCLE 222



### ▲ Auto-inspired carpet

The MotorSport contract carpet collection is the result of a partnership between Lees and BMW Group DesignworksUSA. Using progressive graphic design software and technology, abstract manipulations of industrial textile materials were translated into carpet in varying tones, textures, and patterns. Available in both broadloom and tile, the patterns include Photofinish, a richly textured multicolor product; Horsepower, a tip-shear with an extremely soft texture; and Finishline, which ties the collection together. MotorSport is certified as an Environmentally Preferable Product (EPP) and is CRI Green Label plus certified. Lees Carpets, Greensboro, N.C. [www.leescarpets.com](http://www.leescarpets.com) CIRCLE 224

## Product Briefs

### ▼ Keep it safe in the garage

The Laptop Garage, from KI, is capable of supporting, concealing, and securing a 17" laptop inside the work surface when not in use, providing students with a clean writing surface. By simply lifting the flush-mounted handle, the doors fold back and out of the way and the laptop is raised from its stored position. The system is lockable and tamper-resistant, and when used in conjunction with KI's InTandem table, all power and data cables are cleanly managed and completely concealed. KI, Green Bay, Wis. [www.ki.com](http://www.ki.com) **CIRCLE 225**



### ▲► Design lab winners

Electrolux presented top honors in its Design Laboratory 2004 program to University of New South Wales in Australia for Rockpool (top), a waterless dishwashing unit concept. The program, held in New York City in November, showcased models of concepts created by industrial design students around the world. Second place went to Czech and Slovak students for Washman, a washer/dryer combo (right). Electrolux, Dublin, Ohio. [www.electroluxusa.com](http://www.electroluxusa.com)



**CIRCLE 226**

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#### ◀ Decorative asphalt solution

The DuraTherm decorative surfacing system was designed specially for high-traffic areas. The product's durability and fast installation process has drawn the interest of cities, counties, and state transportation departments that use it for crosswalks, intersection treatments, traffic-calming applications, priority transit lanes, parking areas, and other safety and beautification projects. DuraTherm utilizes a specialized heating system that softens the asphalt so that decorative templates can be pressed into the surface. Precut sections of DuraTherm are then set into these impressions, and the heating system is used again to fuse DuraTherm flush with the asphalt surface. StreetPrint, Blaine, Wash. [www.streetprint.com](http://www.streetprint.com) **CIRCLE 227**

#### ▶ Thirty-five years in the making

In celebration of Landscape Forms' 35th anniversary, the company has launched 35, a new collection for outdoor corporate environments, parks, and streetscapes. The company partnered with the design, identity, and branding firm frog design to gather extensive observational research from the field and conduct a series of roundtable discussions to understand the present and future planning and use of public and private outdoor environments. The seven products in the line include two benches, two sets of tables with attached seating, a litter receptacle, a chaise longue, and an umbrella with a butterflylike form. Landscape Forms, Kalamazoo, Mich. [www.landscapeforms.com](http://www.landscapeforms.com) **CIRCLE 228**



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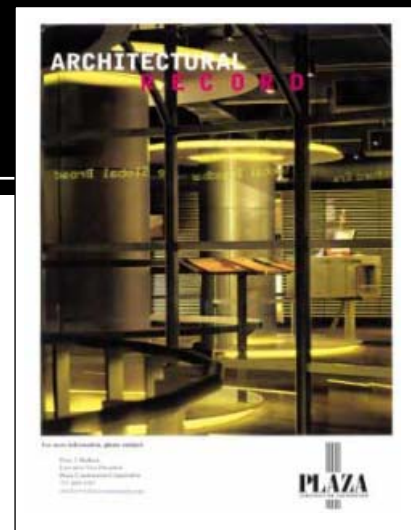
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## Product Briefs



### ▲ Discreet trench drain

ACO Brickslot is a discreet trench drain specially designed to give an aesthetic look to brick paving. Used with the K100S channel, Brickslot provides effective drainage without detracting from the overall aesthetics of the hardscaped area. The  $\frac{3}{8}$ " slot blends with the paving joints and is flared to prevent debris from being trapped. The off-center slot allows it to be positioned directly against a well or other structure, making it practically invisible. ACO Polymer Products, Chardon, Ohio. [www.aco-online.com](http://www.aco-online.com) **CIRCLE 229**

### ► Permanent protection

Fire Smart Roofing's Fire Retardant Cedar Shakes and Shingles offer an affordable alternative for areas where the building code requires use of flame-resistant roofing materials. In place of a spray-on application, Fire Smart Roofing applies a high-pressure impregnation technique to the cedar followed by a heated drying process that permanently bonds the retardant into the wood's fibers. S+W Forest Products, British Columbia, Canada. [www.firesmartroofing.com](http://www.firesmartroofing.com) **CIRCLE 230**



### ◀ Door for every design style

TruStile Doors has added three new door series—Art Deco, Farmhouse, and High-Country—to its Authentic Designs door collection. The three new series will be introduced at this month's International Builder's Show in Orlando. The collection currently offers a total of 12 door lines, including examples in the Arts and Crafts, Colonial, Modernist, new European, Southwestern, and Victorian styles. TruStile Doors, Denver. [www.trustile.com](http://www.trustile.com) **CIRCLE 231**



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## Product Briefs

### ► Raw steel to the front door, in two hours

Ceco Door Products has opened an \$8.5 million automated-door line capable of processing a single door from raw steel to packaged product in less than 2 hours. In addition, the line can be programmed to manufacture 20 different styles of doors, including the Regent, Imperial, Omega, and Ultra/Legion brands. Ceco Door Products has also recently introduced several new offerings, including the StormPro 320 severe-weather door system, the Sight Light egress marking solution, two new polystyrene doors, and six natural stain finishes for its line of Madera sustainable steel doors (shown at right). Ceco Door Products, Monroe, N.C. [www.cecodoor.com](http://www.cecodoor.com)

CIRCLE 232



### ► Hurricane-resistant doors

With the highest automatic-door impact-and-pressure rating in the industry, the Dura-Storm Impact Hurricane Series of automatic egress systems helps reduce the potential for injury and high repair costs. According to the manufacturer, the series was designed with a resistance capacity of +/-80 PSF (pounds per square foot), far exceeding the typical hurricane impact of +/-50 to +/-70 PSF of the other storm-resistant door systems currently on the market. Stanley Security Solutions, Indianapolis. [www.stanleysecuritysolutions.com](http://www.stanleysecuritysolutions.com) CIRCLE 233



### ▲ Add bounce to their step

Ecomax is a modular, pedestal-tile system designed for rooftops, patio walkways, pool surrounds, and playground

areas. A patented installation system makes Ecomax easy to reconfigure for nonadhered installations. The 2" x 2" footed tiles are available in two thicknesses, and produce excellent drainage properties and slip-resistance for outdoor applications. Like all other Ecosurfaces products, Ecomax

is made from high-quality, 100 percent recycled SBR tire rubber and colorful EPDM flecks. Ecosurfaces, Lancaster, Pa. [www.regupol.com](http://www.regupol.com) CIRCLE 234

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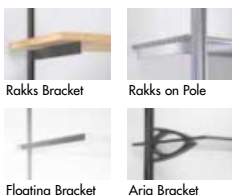
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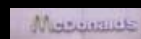
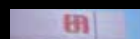


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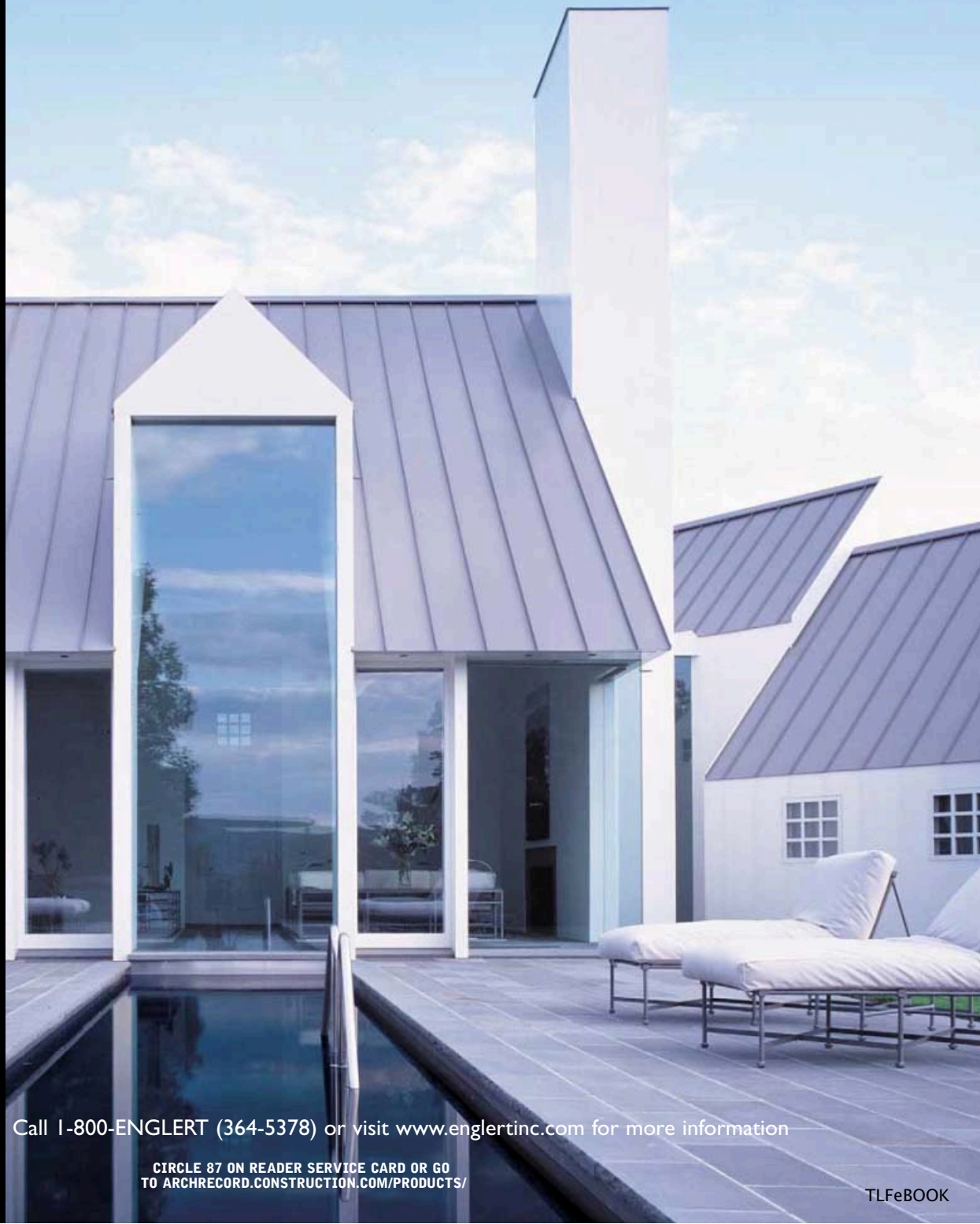
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Images, Private residence by architect Hugh Newell Jacobson in Washington, DC.



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Product Literature

**Comprehensive color system**

Dunn-Edwards' Perfect Palette color library is composed of nine binders with extra-large color chips, a traditional fan-deck for a quick search of any color, and a color album with 1" color swatches grouped by family for easy color specifying. The palette has 1,400 core colors; 100 shades of white; 96 deep, rich accent colors; and 100 classic colors, including some from the previous system. The 5" x 8" color chips feature the color name and number printed multiple times on the back, so if they are cut at an odd shape for a client, the name and number can still be determined. When a chip is removed from the binder by using its perforated edge, a color-identifying tab remains behind in the binder for easy reorder. Dunn-Edwards, Los Angeles. [www.dunnedwards.com](http://www.dunnedwards.com) **CIRCLE 235**

**Luxury shower line brochure**

Hansgrohe has introduced a new 24-page color brochure that presents the firm's entire line of Pharo luxury shower products. The Pharo brand encompasses a variety of prepackaged shower fixtures, including shower panels, columns, temples (enclosures), and steam cabins. The brochure devotes a full page to each

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New site promotes metal roofing products. [www.follansbeeroofing.com](http://www.follansbeeroofing.com)

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of the 10 models in the line, with photographs as well as dimensional drawings and text to describe the products. Hansgrohe, Alpharetta, Ga. [www.hansgrohe-usa.com](http://www.hansgrohe-usa.com) **CIRCLE 236**

**Door seal and threshold binder**

Pemko's new 2004 Catalog features the company's door seal and threshold products. Product drawings are full scale and shown with appropriate technical information. Pemko, Memphis. [www.pemko.com](http://www.pemko.com) **CIRCLE 237**



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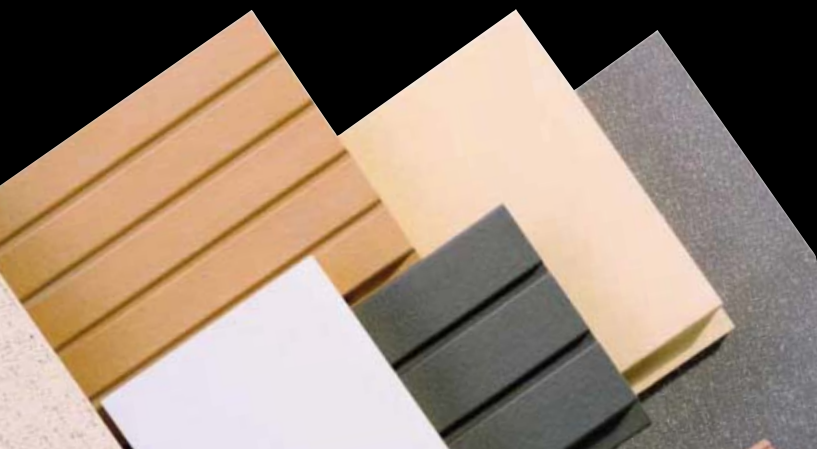
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## Product Literature

### Bath culture book

The 2005 edition of *Kultur im Bad* (*Culture in the Bath*), the product book detailing the full line of Dornbracht bath and kitchen fixtures and accessories, is available. The 289-page volume divides designs into three basic lifestyle motifs: *Eternity*, which focuses on enduring classical style; *Imagination*, which reflects a more expressive and emotional attitude; and *Transfer*, a style that is more experimental, innovative, and incorporates "technical intelligence." Dornbracht USA, Duluth, Ga. [www.dornbracht.com](http://www.dornbracht.com)

CIRCLE 238

### Expanded ceiling catalog

The newly updated *2004/2005 Ceilings Systems* catalog from USG provides product-specification information about the company's complete line of acoustical ceiling panels, suspension systems, and specialty ceiling systems. USG, Chicago. [www.usg.com](http://www.usg.com)

### First comprehensive catalog

Corelite has published its first full-color, comprehensive product catalog. The 88-page catalog introduces more than 40 new application photographs, and features an "Applications" section that

provides design and footcandle examples for five of Corelite's most common applications. Corelite, Peachtree, Ga. [www.corelite.com](http://www.corelite.com)

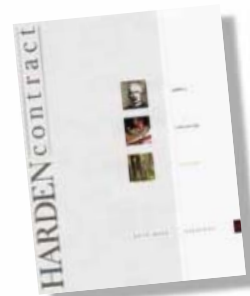
### Wood furniture brochure

Harden Contract's new 12-page *Solid Solutions* brochure introduces Harden's operating philosophy of combining the production of handcrafted solid-wood furniture with ecologically sensitive factory and woodland management. Harden's participation in its own EnVision environmental initiative, and in the American Forest and Paper Association's Sustainable Forestry Initiative Programs, which promotes healthy, sustainable forests, is outlined. Harden Contract, McConnellsville, N.Y. [www.hardencontract.com](http://www.hardencontract.com)

### UVC device bulletin

Steril-Aire has published *UVC and Schools*, a new application bulletin that explains how UVC devices installed in air-handling systems can result in a wide range of benefits, including mold and microbial control, enhanced IAQ, and energy and maintenance savings. Steril-Aire, Cerritos, Calif. [www.steril-aire.com](http://www.steril-aire.com)

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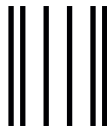
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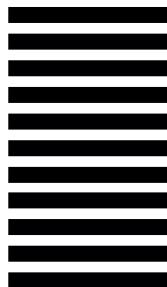
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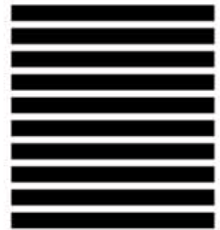
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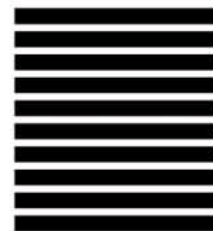
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21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140
141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160
161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180
181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200
201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220
221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240
241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260
261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280
281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300

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- (3) Designer
- (4) Specification Writer
- (5) Interior Designer
- (6) Contractor or Builder
- (7) Lighting Designer
- (8) Other \_\_\_\_\_

##### 2. In what type of organization do you work?

- (9) Architectural or A/E Firm
- (10) Commercial, Industrial or Institutional
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- (12) Government Agency
- (13) Interior Design
- (14) Lighting Design
- (15) Other \_\_\_\_\_

##### 3. Building Types you are currently working on?

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ARCHITECTURAL  
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	<p>www.sketchup.com</p> <p> <b>150</b></p>



<b>Modern Outdoor</b>	
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	<p>www.modernoutdoor.com</p> <p> <b>153</b></p>

<b>Global Restaurant Design</b>	
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	<p>www.grdcorp.com</p> <p> <b>151</b></p>



<b>Boston Valley Terra Cotta Inc.</b>	
<b>Rainscreen Systems</b>	<b>888-214-3655</b>
 <p>Available in: 6 standard profiles, 6 different widths 8"-16" in lengths from 12"-60" as well as custom designs per the architect's specifications. Also available are 13 through body colors, glazed finishes and custom body colors, sizes and shapes upon request.</p>	<p><b>4 Masonry</b></p> <p>Boston Valley Terra Cotta, leaders in the design and manufacturing of Architectural Terra Cotta, is manufacturing Terraclad™, Architectural Terra Cotta Rainscreen System. Produced in the U.S. in their Orchard Park, NY, factory, this system is available for new design and retrofit. Boston Valley Terra Cotta offers six standard profiles, six different widths, 8-in. to 16-in., lengths from 12-in. to 60-in., as well as custom designs per the architect's specifications. Also available are 13 through-body colors, custom colors, glazed finishes, and custom sizes and shapes upon request. Terraclad is a green material, manufactured from high quality engineered clay body, designed to withstand the freeze/thaw climate and meet the industry standards of today.</p>
	<p>www.bostonvalley.com</p> <p> <b>154</b></p>



<b>SoftPlan Architectural Design Software</b>	
<b>Design Software</b>	<b>800-248-0164</b>
	<p><b>1 General data</b></p> <p>SoftPlan Version 12, the industry's leading residential CAD software package, allows users to create house plans in a fraction of the time taken to draw by hand or using a conventional CAD package. SoftPlan is ideal for architects and designers looking to decrease drawing and revision time while increasing accuracy and productivity. Using the latest technology, SoftPlan gives you the flexibility to create complex, custom drawings with speed, accuracy, and ease. Quickly and easily create floor plans, elevations, cross-sections, photo-realistic 3D renderings, material lists, and more. For a free demo call: (800) 248-0164 or visit www.softplan.com.</p>
	<p>www.softplan.com</p> <p> <b>152</b></p>

<b>Gothicstone Collection</b>	
<b>Exotic Paver &amp; Stone Products</b>	
 <p>Concrete Pavers vs. Natural Stone Pavers... You Decide!</p> <p>GOTHICSTONE COLLECTION</p>	<p><b>4 Masonry</b></p> <p>If you are looking for exclusive and unique travertine products for your outdoor and indoor projects, Karl Mangialardi (a.k.a. "The Stonehunter"), founder of Gothicstone Travertine Pavers, has traveled worldwide for years in search of exotic paver and stone products. The Gothicstone Paver is a natural travertine paver quarried, cut, and antiqued in the Turkish mountainside. Not only are these natural stone pavers beautiful, travertine stays cool under foot. Conforming to ASTM standards, they are twice the strength of concrete, have a high co-efficient of friction, and are freeze/thaw compatible. A wide variety of colors, sizes (they specialize in large format), matching indoor tile, and architectural fit-outs are their specialty.</p>
	<p>www.gothicstone.com</p> <p> <b>155</b></p>



<b>Grille Block, L.L.C.</b>	
<b>Sculptured Concrete Masonry Unit</b>	<b>941-358-1150</b>
	<p><b>4 Masonry</b></p> <p>Winner of the "Award of Design Excellence" based upon design, functionality, and style by Charles Griggs, Architect. The 8-in. by 16-in. Grille Block@s are made of white 7,000 psi glass-fiber-reinforced concrete and are sculptured on both sides. Visibility is limited to 5%, while allowing 22% free-air and providing privacy, aesthetics, ventilation, and security. Courtyard design by Seth Schulaner Design Studio. For literature and/or AutoCAD drawing, call or fax Grille Block L.L.C. Fax number 941-358-6010. Email Grillblock@aol.com.</p>
	 <b>156</b>



<b>Handrail Design Inc.</b>	
<b>Pre-Engineered Railings</b>	<b>717-285-4088</b>
	<p><b>5 Metals</b></p> <p><i>inox</i><sup>TM</sup> Stainless Railing System: Manufactured of corrosion-resistant stainless steel, <i>inox</i> is ideal for interior or exterior applications in commercial and residential facilities. Infill materials are available in perforated stainless steel, tempered glass, and stainless steel rods. Handrails are available in wood/stainless, stainless, or colored nylon. Curved rails and custom designs are available. Complete supply and installation service are available throughout North America, which includes <i>inox</i>, CIRCUM<sup>TM</sup>, HEWI<sup>®</sup> Nylon, and d line<sup>TM</sup> railings. Email info@hdirailings.com.</p>
	 <b>159</b>



<b>Stoneyard.com</b>	
<b>Building &amp; Landscaping Stone</b>	<b>800-231-2200</b>
	<p><b>4 Masonry</b></p> <p>Stoneyard.com, located 30 miles west of Boston in Littleton, MA, fabricates blue-stone, granite, cobblestone, limestone, brownstone, sandstone, quartzite, and slate for pavers, building veneer, thin veneer, dimensional stone, steps, coping, walls, and other natural stone building and landscaping projects. Stone is cut to your specifications at their state-of-the-art fabrication facility and is available in finishes such as thermalled, honed, sandblasted, and bush hammered. They stock ten acres of natural stone ready for immediate delivery nationwide, including a full inventory of pavers, cobblestones, and pebbles. Order natural stone samples 24/7 at their Web site, browse their inventory, review specifications and download their catalog.</p>
	 <b>157</b>

<b>Architectural Products by Outwater, L.L.C</b>	
<b>TexturePlus<sup>TM</sup> Panels</b>	
	<p><b>6 Wood &amp; plastics</b></p> <p>Achieve the look of authentic stone, brick, wood, and many other realistic surfaces for a fraction of the cost with Outwater's innovative 2-ft. by 4-ft. high-density polyurethane TexturePlus<sup>TM</sup> Panels, designed and manufactured with exacting realism to visually and texturally replicate the original building materials from which they have been modeled. Ideally suited for interior or exterior use in a vast number of commercial and residential applications, Outwater's maintenance-free TexturePlus Panels are not only lightweight, impact resistant, dimensionally stable, and impervious to adverse climate and weather conditions, they can also be installed on virtually any type of surface using common tools and methods.</p>
	 <b>160</b>

<b>Gage Corporation, Intl.</b>	
<b>Cast Metal Wall Surfacing</b>	<b>800-786-4243</b>
	<p><b>5 Metals</b></p> <p>Gagecast<sup>®</sup> is a cast metal wall surfacing material suitable for a variety of interior architectural applications where patterns that feature high luster, relief, durability, and cost effective installation are a requirement. Twenty-eight designs are standard, however, custom collaboration is encouraged. Gagecast is one component of Gage Vertical Surfacing. Contact the factory for product literature and selected samples. Fax number 608-269-7622. Email gage@centurytel.net.</p>
	 <b>158</b>



<b>Bear Creek Lumber</b>	
<b>Architectural Wood Products</b>	
	<p><b>6 Wood &amp; plastics</b></p> <p>Bear Creek Lumber offers a wide selection of top-grade architectural wood products including custom sidings, decking, interior tongue-and-groove panelings, and architectural appearance timbers. Cedar shakes/shingles are also available in all sizes. You can specify western red cedar products, Alaskan yellow cedar, Port Orford, cedar, red-wood, or Douglas fir, as well as spruce, hemlock, and pine, which are all available in clear vertical grain grades. Tropical hardwood floorings and planks in stock. Ask about Bear Creek's reclaimed and FSC products. Custom milling is also available. Products can be shipped to any destination worldwide.</p>
	 <b>161</b>



<b>Melton Classics, Inc.</b>	
<b>Architectural Products</b>	
	<p>6 Wood &amp; plastics</p> <p>Melton Classics provides the design professional with the most comprehensive selection of quality architectural products in the industry, including architectural columns, balustrades, moldings, cornices, and a wide array of architectural elements. Architectural columns are available plain or fluted, load-bearing or column covers, round or square in fiberglass, fiberglass/marble composite, synthetic stone, cast stone, GFRC, and wood for paint or stain. Melton Classics offers a maintenance free balustrade product ideal for any application. Balustrades are available in four durable materials: MarbleTex™ synthetic stone, poly/marble composite, cast stone, and polyurethane, and can meet any code or radius application.</p>
	<p>www.meltonclassics.com</p> <p> 162</p>


<b>Aluflam</b>	
<b>Fire-Rated Aluminum Doors &amp; Windows</b>	<b>714-899-3990</b>
	<p>8 Doors &amp; windows</p> <p>Imagine being able to specify a fire-rated system that blends in so well with non-rated materials that you virtually can't tell them apart. Imagine the clean, rich lines of true extruded aluminum frames and large panels of clear glass. With ALUFLAM framing and VETROTECH SAINT-GOBAIN glass, this is reality. Contact them for further information. Fax number 714-899-3993. Email info@aluflam-usa.com.</p>
	<p>www.aluflam-usa.com</p> <p> 165</p>

<b>ATAS International, Inc.</b>	
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	<p>7 Thermal &amp; moisture protection</p> <p>ATAS INTERNATIONAL, INC. presents TECHO TILE™, a metal roof panel with a deep configuration in the form of an "S" or Spanish tile. TECHO TILE has a long lasting KYNAR 500® or HYLAR 5000® coating in a choice of 29 colors. Selection may be made in either a traditional matte or glazed tile finish. SCANROOF® is a modern, lightweight, and easy to install metal panel that simulates a tile roof. The integral purlin gives structural strength to the panel and allows installation over open framing. The SCANROOF system is available in 26 Kynar 500 or Hylar 5000 colors.</p>
	<p>www.atas.com</p> <p> 163</p>


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	<p>www.cherrytreedesign.com</p> <p> 166</p>

<b>BASF</b>	
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	<p>www.basf.com/spray/sweet-ebe</p> <p> 164</p>


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<b>Kalwall Corporation</b>	
<b>Anti-Terrorism Approved Panels</b>	<b>800-258-9777</b>
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<b>Kemlite Company</b>	
<b>Fiberglass Reinforced Wall Panels</b>	<b>800-435-0080</b>
	<b>9 Finishes</b> Kemlite Matrex wall panels are colorful decorative fiberglass reinforced plastic (frp) panels in solid and granite colors with sealed grout lines to look like tile. The 4-in. tile design panel upgrades the look of any wall application where the traditional embossed pattern of frp panels may not be desired. A durable, easy-to-clean panel, Matrex adds flexibility and style to any area. Unlike traditional ceramic tile, Matrex is easy and quick to install, reducing installation costs. The simulated grout lines are precisely measured and mechanically scored and sealed with a technologically advanced mold and mildew resistant clear acrylic coating. The sealed lines prevent dirt from penetrating the surface, and makes cleaning easy. Matrex gives you the look of tile.
	www.frp.com

<b>Special-Lite, Inc.</b>	
<b>Entrances &amp; Storefronts</b>	<b>800-821-6531</b>
	<b>8 Doors &amp; windows</b> Special-Lite, Inc. has updated the standard colors available for SpecLite 3 <sup>®</sup> FRP material to include more neutral, earth tone, and classic architectural colors. Six of the nine standard colors are new: Sandstone, Seawolf, Slate Grey, Military Blue, Boysenberry, and Hartford Green. Existing standard colors of Beige, Light Grey, and Dark Bronze remain unchanged. Custom FRP colors are also available to match any architectural color scheme, subject to minimum order requirements. The company's established collection of Kynar colors has also been updated and includes an exact match for the nine new standard FRP colors.
	www.special-lite.com



<b>Nathan Allen Glass Studios, Inc.</b>	
<b>Cast Glass Stair Treads</b>	<b>604-277-8533</b>
	<b>9 Finishes</b> This spiral staircase features cast glass stair treads, clear finish, with Nathan Allan's exclusive "Glass Sandpaper" safety finish on the walking surface. All Nathan Allan Glass treads and landings are laminated and tempered to meet engineering requirements. Treads and landing can be produced from a selection of 45 textures, an assortment of colors and/or privacy coatings. Project by: River Glass Designs Rockville, MD.
	www.nathanallan.com



<b>R.C. Musson Rubber Co.</b>	
<b>Stair Tread Catalog</b>	
	<p><b>9 Finishes</b></p> <p>Musson lets people walk all over them. Take a few steps into Musson's new catalog and find out more about solid heavy-duty rubber, vinyl, or aluminum stair treads for interior and exterior use. Musson illustrates designed-for-safety stair coverings such as fire-safety, grit-strip, visually-impaired, and glo-strip with matching floor systems that include raised design disco, low disc, square, and diamond tiles. All are displayed in an expanded color line with related accessories.</p>
	<p>www.mussonrubber.com</p> <p> <b>174</b></p>

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	<p><b>10 Specialties</b></p> <p>Enjoy art. The Cirque ceiling fan, a high performance dynamic sculpture is a Good Design Award winner. View silver and mahogany blade versions on their Web site. Includes a 50 W dimmable light and touch control system, and a remote control is available. Whisper quiet, powerful, and beautifully made, this timeless design can be used on 8-ft. ceilings or on cathedral ceilings with optional downrods up to 6-ft. long. It is also suitable for sloped ceilings. Lifetime warranty. To buy high-design architectural fans and lighting, please visit G Squared's Web site or call between 6 AM and 6 PM PST.</p>
	<p>www.g2art.com</p> <p> <b>177</b></p>

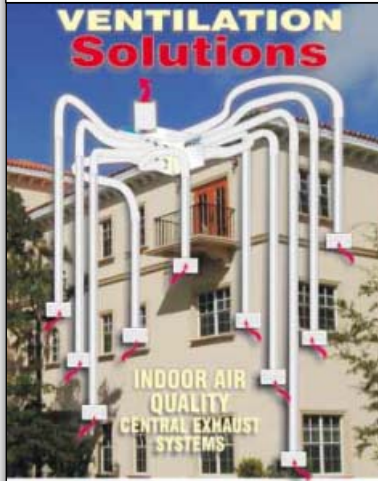
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	<p><b>12 Furnishings</b></p> <p>The natural beauty of wood can add warmth and style to any interior window. CACO, Inc. crafts Delta Woods blinds from hand-selected hardwoods in both stained and painted finishes. Delta Woods wood slats and wood components are kiln dried to 7% or less moisture content, meaning a lighter weight blind with straighter slats. Delta Woods lacquer finishes are twice coated and oven cured for durability. Quality is apparent from top-notch headrail and component systems, hardwood slats, valance, distinctive trapezoid bottomrail, to ergonomically designed wood tassels. An applied fire-retardant coating option is available and includes a certificate stating that blinds will meet fire codes.</p>
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<b>Viva Ceramica</b>	
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The RFP and attachments will be available to be picked up or downloaded from the web, beginning February 1, 2005. The website is the City of Los Angeles Business Assistance Virtual Network (BAVN) at <http://www.labavn.org>. In order to download the RFP, your company should be pre-registered with BAVN. Registration is free on BAVN. Once registered, click on Opportunities for Public Works Bureau of Engineering.

The proposer and/or a member of its sub-consultant(s) teams are required to attend a pre-submittal conference on **February 15, 2005, 10:00A.M. at Board of Public Works, City Hall, 200 No. Spring Street, 3rd Floor, Los Angeles, CA 90012**. Attendance at this meeting is important to the prime consultant and is worth 10 Good Faith Effort evaluation points. The City's MBE/WBE Good Faith Effort procedures will be reviewed at this conference.

The RFPs are due no later than **3:00 P.M. Pacific Time on April 1, 2005**. The RFPs should be marked as "Los Angeles River Revitalization Master Plan Request for Proposal" and delivered to:

**Deborah Weintraub, AIA**  
Deputy City Engineer  
Bureau of Engineering  
650 S. Spring St., Suite 200 (Spring and 7th Streets)  
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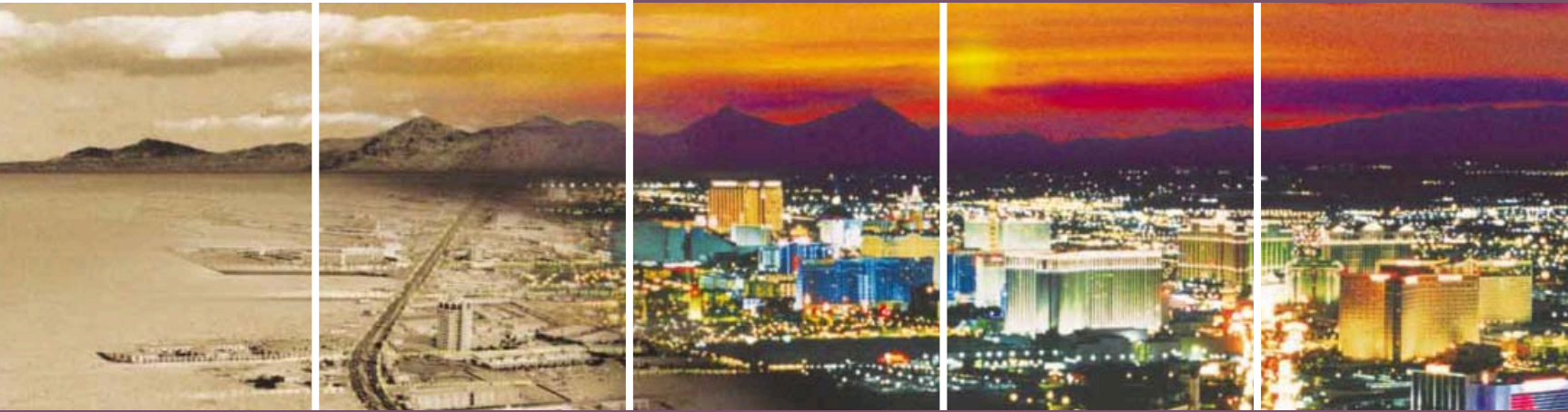
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## Diamonds in the Forest



By Sarah Amelar

To celebrate 50 years of Record Houses, we invite you to visit—via this endpaper—a vintage Record House each month in 2005. We'll treat you to a glimpse of these exceptional buildings as they've evolved since initially appearing on our pages. And what better place to begin than with the first Record House: architect Ulrich Franzen's own 1956 home, in Rye, New York.

In launching this special annual issue, RECORD set out to promote Modernism. But first, the editors needed to convince their readers that real-life people—families with kids and pets—could actually eat, sleep, entertain, and play in open-plan, Minimalist houses. Further implying that such designs could even *enhance* daily life, the magazine commissioned two shoots: one by the architectural photographer Ezra Stoller; and the other by *Life* photographer Elliot Erwitt, showing the good-looking Franzens frolicking with their children and hosting a dinner (with, close scrutiny reveals, RECORD's editors as the guests).



ecture. The examples are, in a sense, a summary of outstanding houses built by architects of the U.S.A. during the past two years. Creative effort, such as is required in designing a successful dwelling, public building, or shaping a community, is an accomplishment that is deserving of thoughtful evaluation and public notice.

*A House That Is Lived In*

We have chosen, in these first few pages, to break with tradition in Architectural publication, to show one of our selected houses as occupied by a family. Our illustrations are of its living, dining and play areas, in actual use. The Ulrich Franzens, who developed and built the house, were photographed with the interior as a background. They appear as normally concerned with routine activities, caring for children, preparation of food, dining, entertaining guests, and relaxing.

Mr. Franzen is an architect, Harvard trained, whose ideas for the house were supported and aided by his wife, a Bennington College graduate. The two spent several months in setting up space needs for their family of three children (a girl and two boys) plus a dog and a cat.

The design objective was to create a house for their particular family, one that gave promise of lasting usefulness and attraction. "Not a place,"

observed Mrs. Franzen, "that was sterile of ideas, soon to be outmoded and outlived — soon to become the nightmare, as to 'The Man in the Gray Flannel Suit'." It was a requirement of the plan that there be space throughout the house, for the effective display of a varied collection of contemporary art, consisting of murals, small paintings and sculpture.

The site was selected after a long search by auto excursions into three states bordering New York City, where the architect has his office. The site, bordering New York City, where the house is placed, is thickly wooded and has rugged outcroppings of stone. An ancient stone wall borders one side of the property. Because of the nature of the ground and a preference for the natural setting, there was no need for formal planting and an expanse of lawn, difficult to maintain.

The house is two miles from the town of Rye, New York, and three-quarters of an hour commuting time from Manhattan. There are nursery and public schools nearby; a bathing beach and boat basin on Long Island Sound are within a short walking distance.

We consider the Franzen house, shown on these opening pages, to be a fair example of the sort of domestic design that is being contrived today by an enthusiastic group of young architects whose training, since the Second World War, has stressed and applied the theoretical and experi-

*A very new and different approach to planning a house has been used by Architect Clark J. Franzen in this house for his own family. Eight diamond-shaped beams rise over a very fine and unobstructed "platform" for living. The roof is supported by eight columns, and interior partitions are free, free-standing. The house is delightful to look at, interesting to study.*

*But what is it like to live in?*

*I've just met, within a day with the Franzens family. These photos are the result.*

*"The buildings of a country and an age should be ethnological expressions of the wants, habits, arts, and feelings of the time in which they were erected."*

JOHN RUSKIN, SEVENTEENTH CENTURY

ARCHITECTURAL RECORD HOUSES OF 1956 89

From the Pages of ARCHITECTURAL RECORD 1956

**Above: One of the original ARCHITECTURAL RECORD layouts from mid-May 1956 shows Elliott Er Witt's candid shots of the Franzen family alongside an Ezra Stoller photograph of the architecture alone.**

**Previous Page: The distinctive double-diamond roof (top), floating visually in the forest, relied on a steel structure (bottom) that was assembled in a single day.**

Designing a dramatic, yet easily assembled, double-diamond roof cantilevered over twin decks, Franzen envisioned the 1,850-square-foot pavilion as a low-cost prototype, which he recalls building for some \$58,000. The frame—a roof structure composed of 2-inch steel angles with eight supporting steel columns—was erected in a single day. "When the steel went up," the architect says, "I felt as if I'd saved the world."

But following a divorce, the family eventually sold the house and moved on. According to the current owner, by the beginning of this millennium the entire property had lapsed into disrepair, languishing on the market for nearly two years at an asking price approaching \$2.4 million.

Enter Fernando Barnuevo, a Spanish-born banker and father of five. In 2002, he recalls, a friend asked him to invest in "a great 2-acre, wooded property with a little 1950s house—a tear-down—we could replace with a 7,000-square-foot, \$5.5 million colonial." But one look at the Franzen House, and Barnuevo was smitten. The building instantly evoked his wife's story of a single night's stay at a Schindler house, which changed her life. Though the Franzen House was too small for Barnuevo's family, he negotiated a price and bought it—nearly destroying the friendship with his potential investment partner. Since then, the owner has restored and rented out the place. His dream is to offer students a chance to stay here (perhaps at a nominal fee) to inspire their own life-altering experiences. He's approached some architecture schools to help realize his vision.

In the meantime, the far-reaching influence of the Franzen House, now widely published, is still apparent. As Barnuevo reports, he occasionally encounters a Japanese tourist, peering into this secluded property, just trying to catch a glimpse of the house. ■





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