

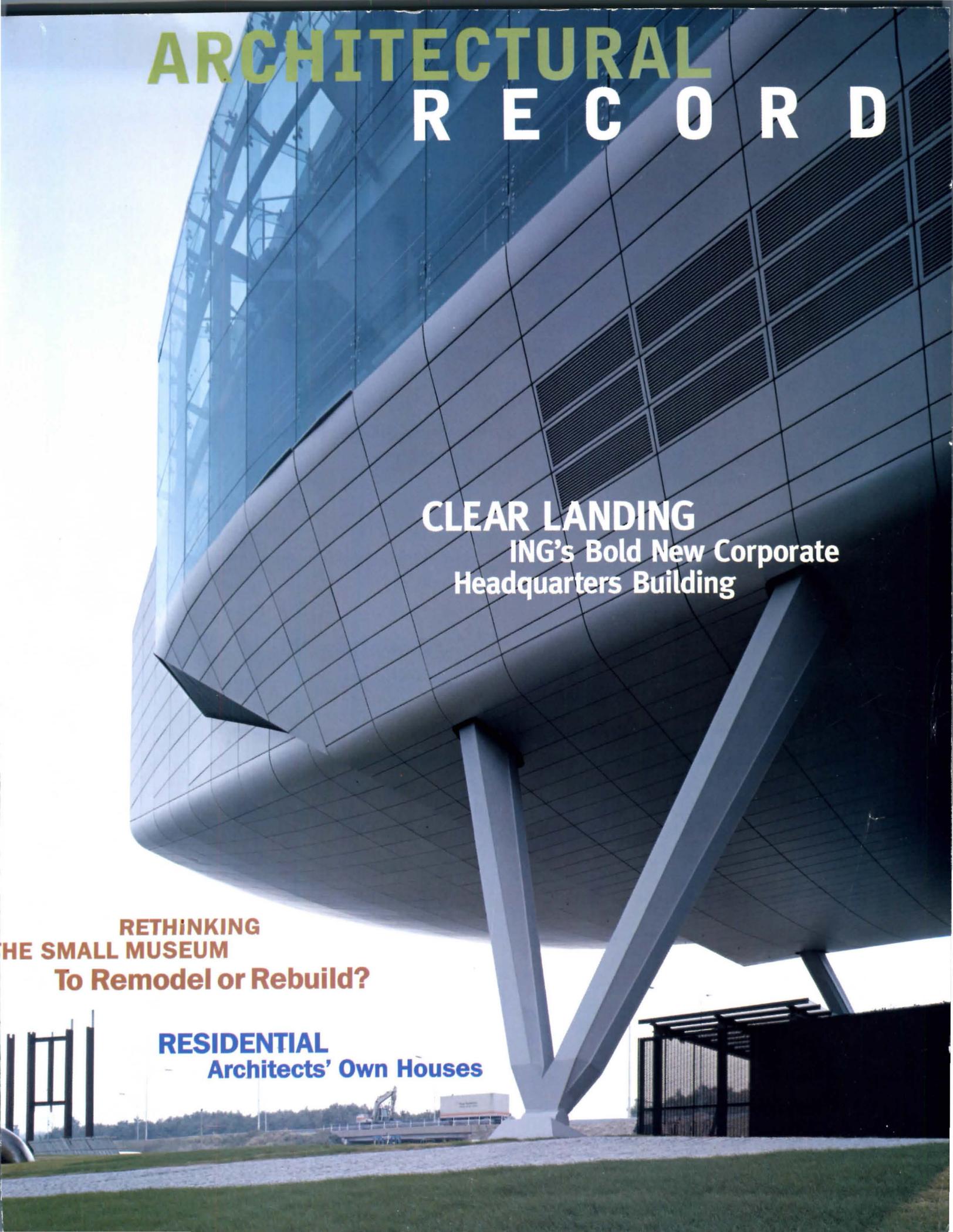
ARCHITECTURAL RECORD

CLEAR LANDING

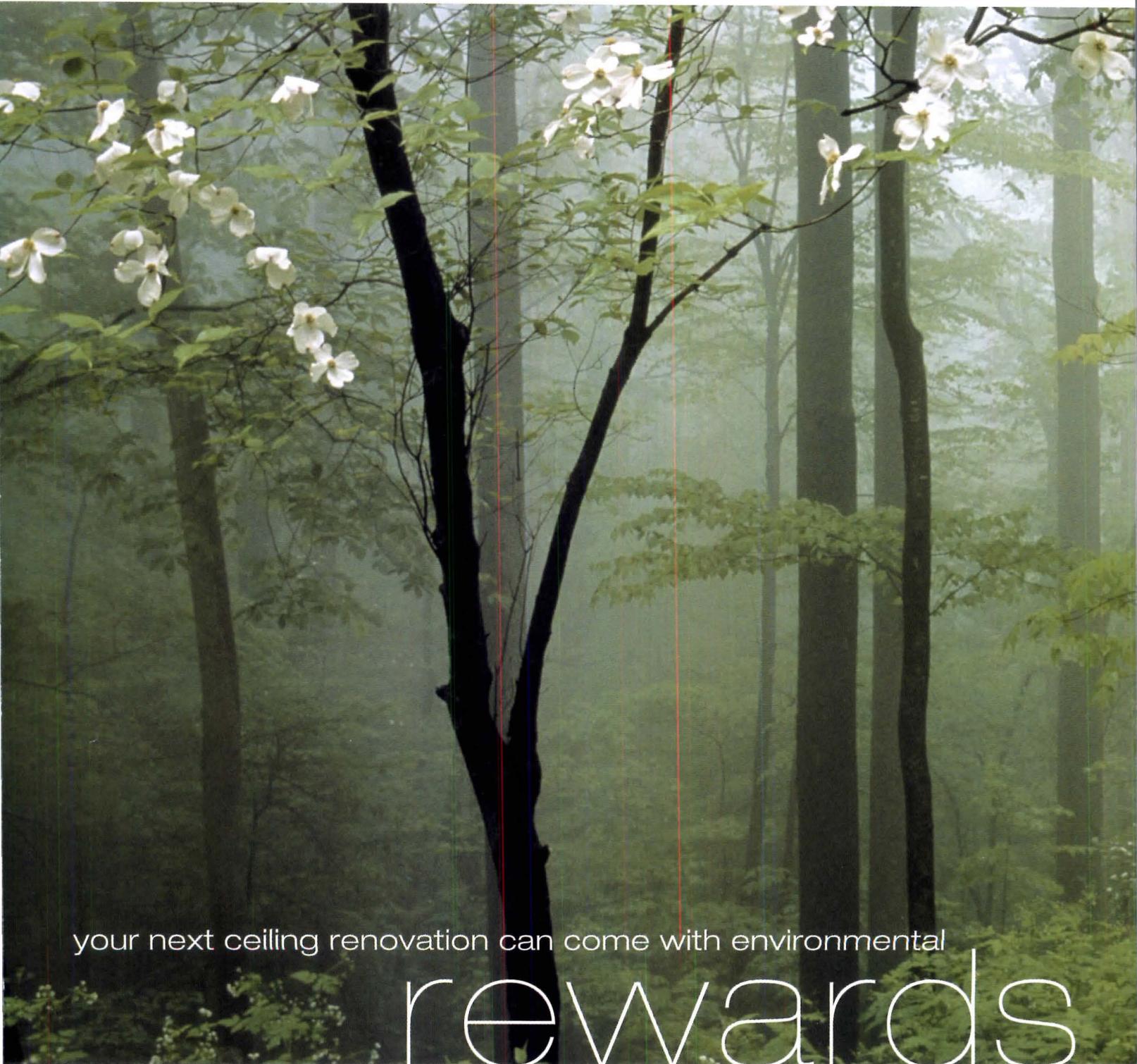
ING's Bold New Corporate
Headquarters Building

**RETHINKING
THE SMALL MUSEUM
To Remodel or Rebuild?**

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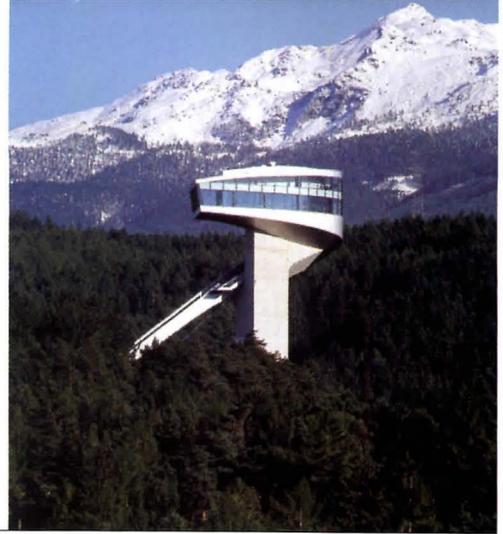


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ARCHITECTURAL RECORD

01.2003



On the Cover: *ING House*, by Meyer en Van Schooten Architecten. Photograph by Christian Richters
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www For eight additional small museums, go to Building Types Study at architecturalrecord.com.

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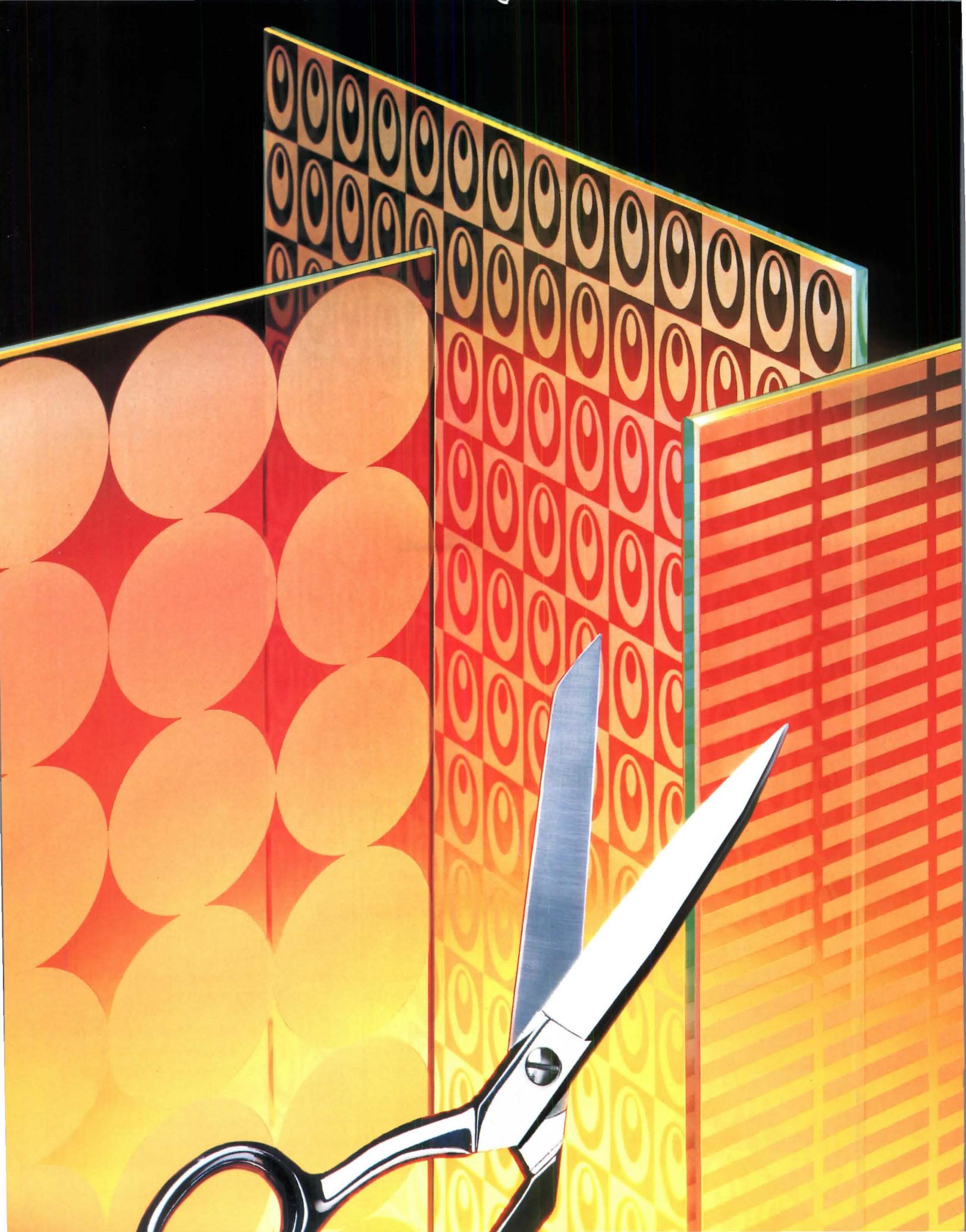
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www For 10 additional library projects, go to Building Types Study at architecturalrecord.com.

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On the Cover: Modern Art Museum of Fort Worth. Photograph by Timothy Hursley
Right: MVRDV's Silodam. Photograph by Brian Rose



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www For 10 additional k-12 school projects, go to Building Types Study at architecturalrecord.com.

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sponsored by Domco Tarkett; "The Gypsum Advantage in Area Separation Walls" (page 171), sponsored by The Gypsum Association.

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04.2003



On the Cover: Sean Godsell's Peninsula House. Photograph by Earl Carter

Right: Red House, by Jarmund/Vigsnæs. Photograph by Nils Petter Dale

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www For a look at four stellar unbuilt houses, go to Building Types Study at architecturalrecord.com.

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The AIA/ARCHITECTURAL RECORD

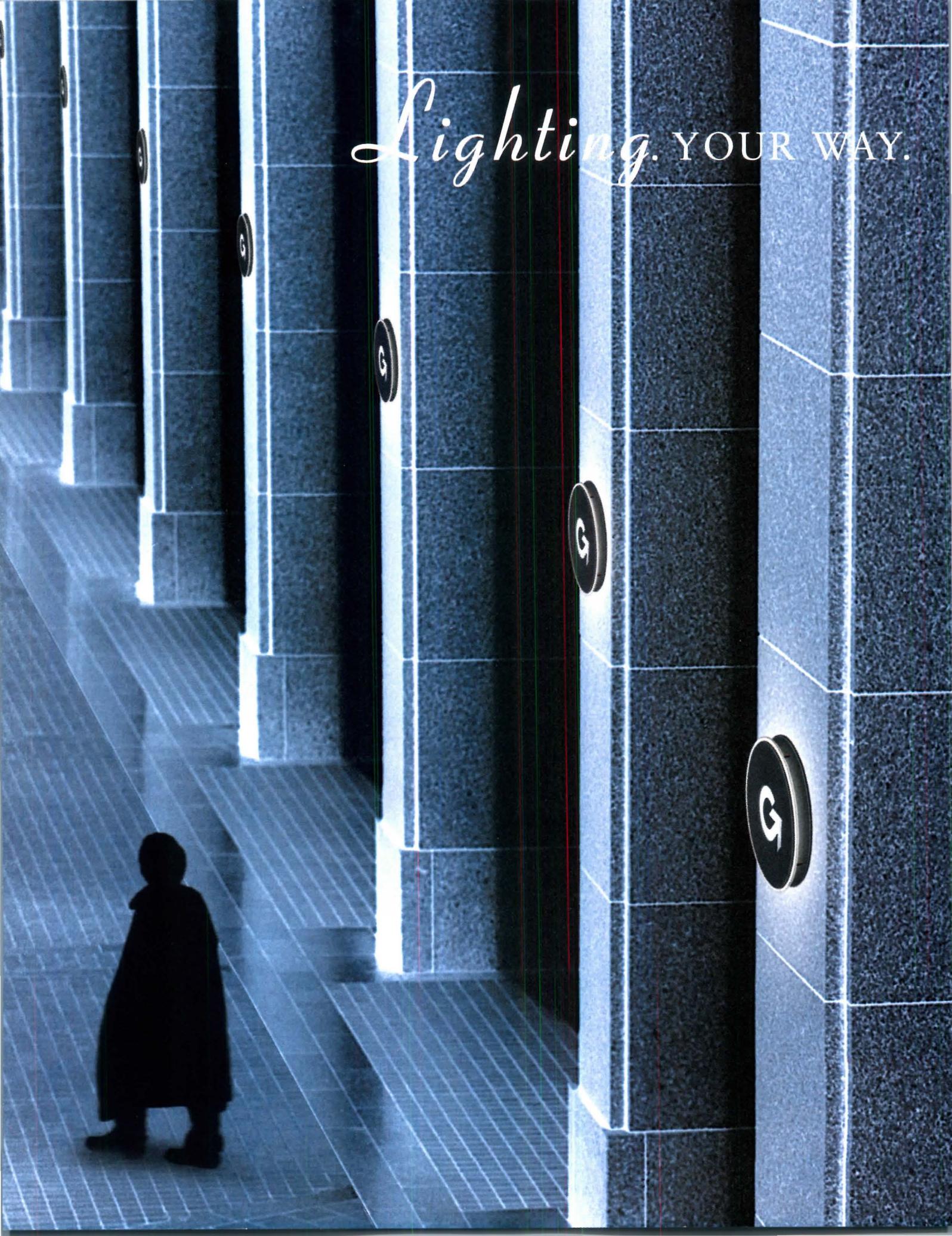
Continuing-Education Opportunities are "Building

Regulations May Finally Shed Their Impenetrable Language" (page 181); "Moisture Management in Steel Stud Assemblies" (page 194), sponsored by Dow Building Materials; and "The Beauty of Natural Stone" (page 201),

sponsored by The Marble Institute of America.

www * You can find these stories at architecturalrecord.com, including expanded coverage of projects, continuing-education opportunities, and Web-only special features.

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ARCHITECTURAL RECORD

05.2003

On the Cover: *Simmons Hall*, by Steven Holl Architects,
photograph by Paul Warchol
Right: *Fisher Pavilion at Seattle Center*, by The
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216 The Oxbow School, California

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222 Telenor Headquarters, Norway

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Fumihiko Maki + Maki Associates

A complex of discrete buildings in Nagano coheres through form, material, and site design.



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Systems Are Raising the Level and Complexity of Curtain-Wall Design" (page 267), and "Integrated Solutions: Realize the Full Potential of Architectural Precast Loadbearing Wall Panels" (page 301), sponsored by PCI.

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Bodegas Ysios, by Santiago Calatrava (top), photograph by Roland Halbe. Telenor, by NBBJ-HUS-PKA (bottom left), photograph by Tim Griffith. MetLife Tower, architect and restoration consultant, Building Conservation Associates (bottom right), photograph by Elliott Kaufman.

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256 Bodegas Julián Chivite, Spain by David Cohn*

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320 Atlas, New York City by William Weathersby, Jr.*

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329 Salamanca Train Station, Spain by Leanne B. French*

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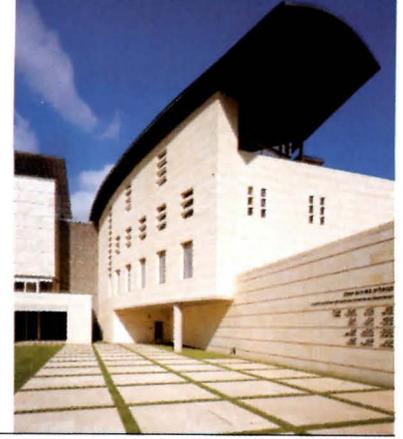
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On the Cover: Federation Square, by Lab Architecture Studio. Photograph by Tim Griffith
Right: Israeli Foreign Ministry, by Diamond and Schmitt Architects. Photograph by Tim Griffith



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- 185 Taking the Brown Out of Brownfields
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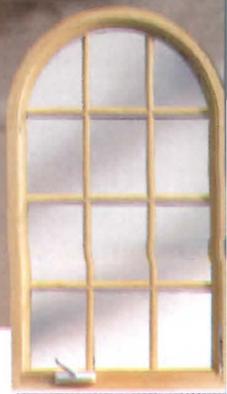


The AIA/ARCHITECTURAL RECORD
Continuing-Education Opportunity is "Taking the Brown
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MONDAY: BUDGET FORCED SPEC CHANGE

TUESDAY: REPLACE COPPER CLAD WITH PRIMED WOOD



ARCHITECTURAL RECORD

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On the Cover: Giambattista Piranesi's Fantasy of the Via Appia, 1756

Right: Fisher Performing Arts Center at Bard College, by Gehry Partners. Photograph by Peter Aaron/ESTO

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Dear Reader,

Information and knowledge give people the power they need to make good decisions. When we saw the recently released McGraw-Hill Construction Dodge's Special Sector Study on the education market we were

impressed (and surprised) at how robust the school market is. It became clear to us that we can help empower the decision makers who are in the midst of designing or building schools. We selected 30,000 architects, owners, and contractors who have worked on school-related projects to receive this special supplement, *Architectural Record Review Schools*. It has three parts.

First, we've created a special article on school design trends and construction information. By tapping into ARCHITECTURAL RECORD's network of school designers and rich construction market data provided by F.W. Dodge, we show you what to expect in the future.

Second, we've created three special studies reprising some of the nation's best school projects published in ARCHITECTURAL RECORD over the past few years, and supplemented them with new post-occupancy reviews.

Third, we're showcasing offerings from manufacturers who are leaders in the production of school-construction products. There's no question that good design is only possible when professionals know what's available for specification.

We are proud of this special supplement, *Architectural Record Review*, and we are sincere in our hopes that you will find it to be valuable too.

Laura Viscusi

VP/Associate Publisher, ARCHITECTURAL RECORD

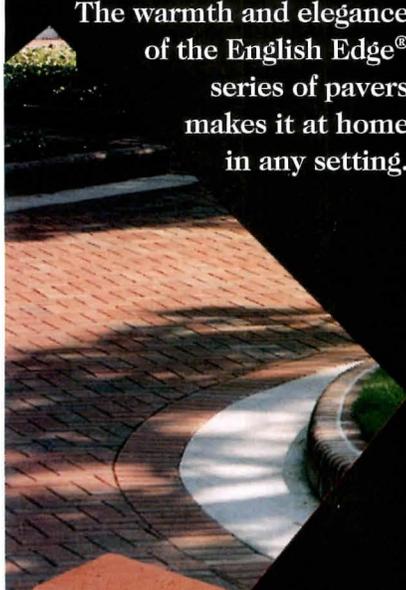
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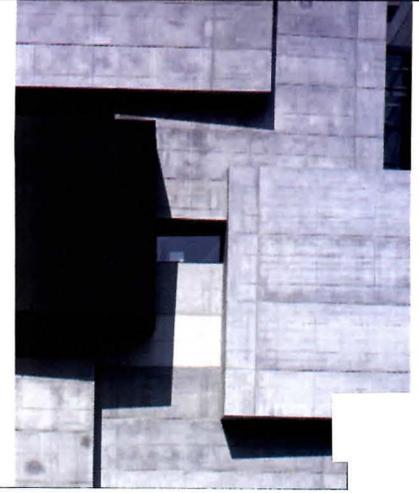
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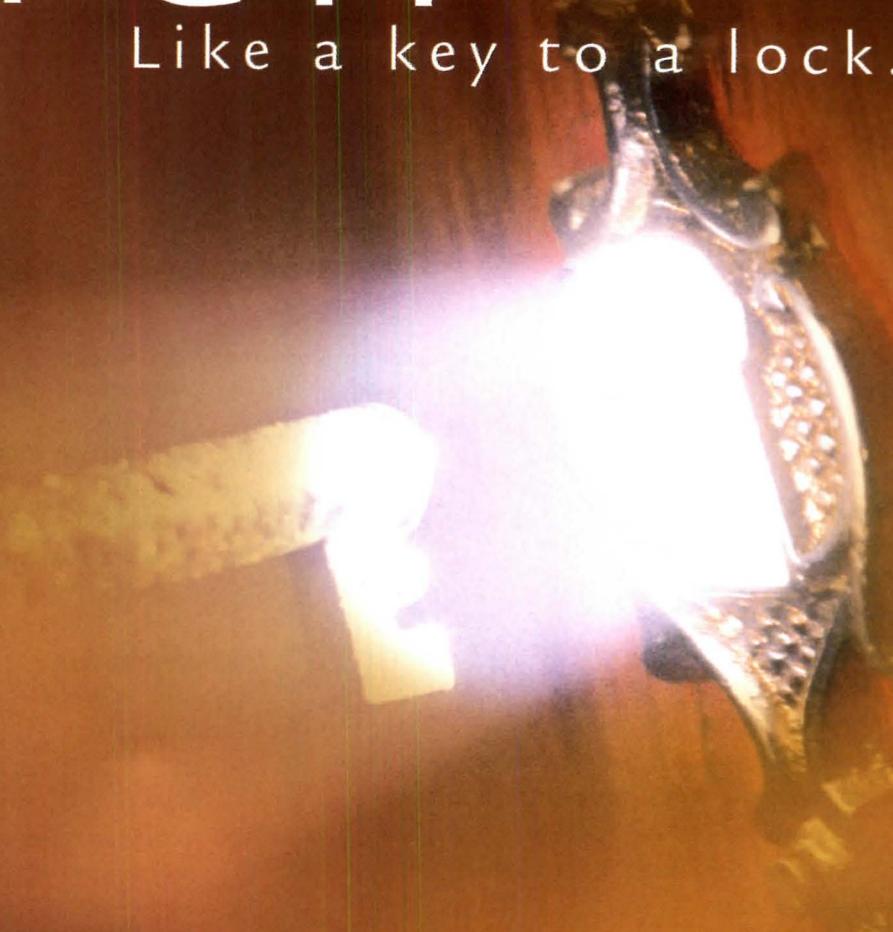
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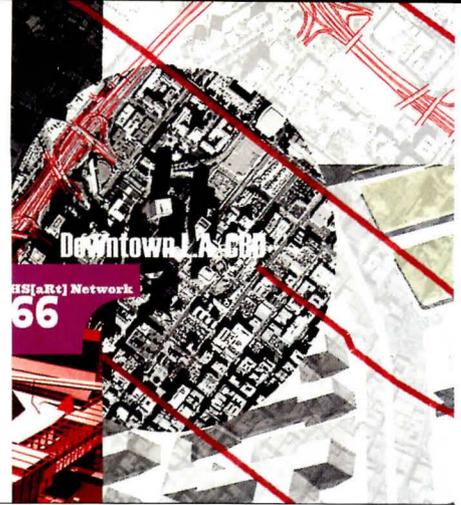
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Projects

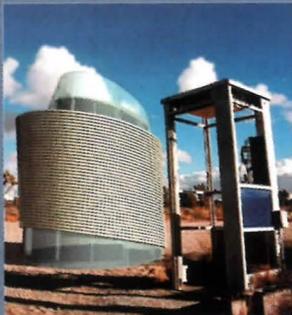
The projects this month on the Web are all about Los Angeles. Is that California city all grown up? Take a look at the Disney Concert Hall by Frank Gehry, the Sylmar Library by Hodgetts+Fung, and three renovated modernist houses in the California desert by Don Wexler.

Innovation

On the heels of our successful Innovation Conference October 8 and 9 in New York City, we present the Innovation section of archrecord.com. The purpose of this section is to expose the unnoticed and evaluate potential for major change. Both new materials and new ways of combining old ones are in development. Advances in materials science, increased private and public alliances, and the infiltration of digital technology into everything have conspired to create pockets of experimentation and unusual collaborations among architects, engineers, and manufacturers. We invite our readers to continue their own investigation.

World Trade Center

Rebuilding News. Get the latest updated coverage on the rebuilding process with news and insight.



Photography courtesy Lance Hosey

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In **DESIGN** we feature architect and writer Lance Hosey, who has a day job working for William McDonough + Partners, an environmentally conscious Virginia firm, and moonlights on his own architecture projects and writings. In **WORK**, we present Suchitra Van, the principal of Van Studio in New York City, which he bills as "a design studio for architecture, photography, and fabrication." He takes commercial photographs, having worked for Tillett Lighting Design and Maya Lin, as well as Lincoln Center.



Photography by Eduard Hueber

Lighting

This is a quarterly Lighting section. In this section, from the Pacific Northwest to the Pacific Rim, lighting benefits centers of culture, commerce, and transit.



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Photography by Timothy Hursley

Building Type Studies: University Buildings

The BTS is all about university buildings. This group features the importance of technology on college campuses, as well as clean, clear, elegant spaces, with projects including the Academic Center for Student Athletes at Louisiana State University, the Broad Center for Biological Sciences at Cal Tech, the University Technology and Learning Center at Lawrence Technological University in Michigan, and Princeton's Carl Icahn Laboratory Lewis-Sigler Institute.

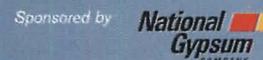
Business Week/Architectural Record Awards

For the 7th year, the *Business Week/Architectural Record Awards* honor projects on the basis of their architectural excellence and the degree to which they advance the owners' goals. The jury is selected by *Business Week, Record*, and the AIA (the sponsor), and includes architects, academics, critics, and business leaders. This year's award winners include such diverse programs as a women's clinic in Japan and a renovated Inn in Bartlesville, Oklahoma.

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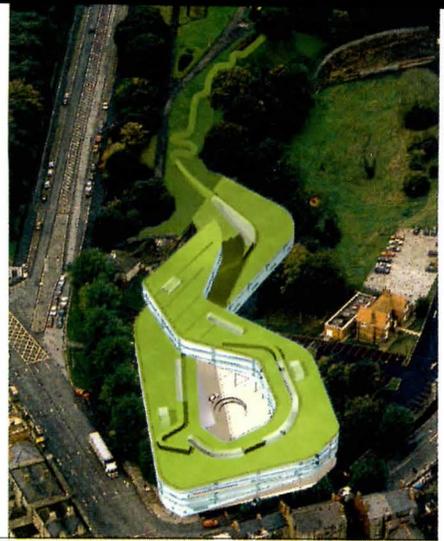
Read *Record's* building science features/continuing education self-study courses and file for CES Credits. This month learn and receive credit on the latest new construction methods.



ARCHITECTURAL RECORD

12.2003

On the Cover: *Humanitas Teaching Hospital in Milan, by Labics*
Right: *Headquarters for the Department of Arts in Dublin, by heneghan.peng.architects*



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The AIA/ARCHITECTURAL RECORD

Continuing-Education Opportunity is "Prefabrication, the Speculative Builder's Tool, Has Been Discovered by Modernist Designers" (page 123). To find out about other Continuing Education opportunities in this issue, go to page 123.

You can find these stories at www.architecturalrecord.com, including expanded coverage of the work of our 10 Design Vanguard architects, including audio interviews. Also, visit the Innovation section to learn how architects are remaking their trade with help from other industries.

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Daily Headlines Get the latest scoop from the world of architecture.

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Mobile homes are nothing new. But imagine looking up to the sky to see one fly through the air. That's what young German designer Werner Aisslinger had in mind when he conceived of Loftcube, a minimal mobile home unit designed for rooftop living. Find out more in DESIGN.

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Innovation

On the heels of our successful Innovation Conference October 8 and 9 in New York City, we present the Innovation section of archrecord.com. The purpose of this section is to expose the unnoticed and evaluate potential for major change. Both new materials and new ways of combining old ones are in development. Advances in materials science, increased private and public alliances, and the infiltration of digital technology into everything have conspired to create pockets of experimentation and unusual collaborations among architects, engineers, and manufacturers. We invite our readers to continue their own investigation.



Image: Courtesy Labics

Project Portfolio

This month on the Web we feature enhanced coverage of our 10 Design Vanguard architects. For the fourth year in a row, a selection of audio interviews lets you hear our chosen emerging architects speak about their work in their own words.

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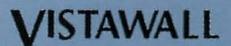


Photography: © Frank Oudeman

Building Types Studies: Restaurants

The BTS this month is all about deliciously designed restaurants. Eight Web-only restaurants in addition to the three featured in the magazine are presented. And for dessert, dynamic walkthroughs and other enhanced coverage should satiate the hungriest Web surfers interested in restaurant design.

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Photography: Courtesy Jason Pollen

Digital Practice

This quarterly digital section features research on digital fabrication, a green residential tower that has wireless Net power, digital tools that aid carpet and textile design, and in Digital Architect: A visit with Masters Gentry Architects. Digital products include management tools, online resources, and design software.

Lighting

This quarterly section reveals how lighting designers and architects are using new lighting techniques in innovative ways to make lighting function as an integral component of space, whether as a signature visual element or an inherent wayfinding device.

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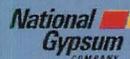


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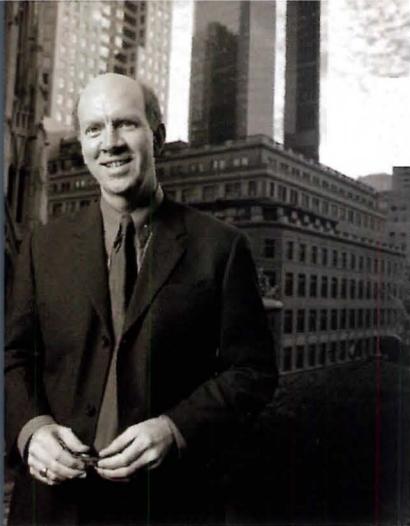
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World Trade Center

Rebuilding News. Get the latest updated coverage on the rebuilding process with news and insight.



The Value of Gold

Editorial

By Robert Ivy, FAIA

Gold may not tarnish, but it can wear thin. When the American Institute of Architects failed to award a Gold Medal this December, it raised questions about the status of the honor, a valuable institute asset. Despite a decade of innovation and arresting architecture, 2003 will pass with no medalist, prompting the rhetorical question, "Was no architect worthy?" The time has come to revisit the award, to analyze the message it conveys, its selection method, and to probe its hardness.

Since 1907, when the institute conferred its highest honor on Sir Aston Webb, RA, the winners' list has grown to include an incomparable roster. In 2002, Tadao Ando joined a canon of architectural saints including McKim, Lutyens, Wright, Le Corbusier, Gropius, the Saarinenes, Sullivan, Aalto, and Mies van der Rohe. Who could argue with such choices?

Other groups, however, are chipping away at Institute Gold. The intervening years have witnessed a proliferation of awards programs, notably the Pritzker Prize, the Smithsonian Institution's National Design Award, Japan's Praemium Imperiale, and The Aga Khan Award for Architecture. All confer honor; all command media attention, strongly competing for the limelight with the Gold Medal, the AIA's long-established First Prize. What do these groups offer and how do they deliberate?

Most employ distinguished third-party juries, reaching beyond the profession to include critics, educators, even distinguished patrons, thus broadening the reach outside intraprofessional concerns. Typically, their juries travel to visit each candidate's work, as do jurors for the AIA's own Honor Awards. The Aga Khan goes one better than most, sending professional evaluators to project sites to conduct postoccupancy analyses and then pass their findings on to a deliberative body for final determination. The Praemium Imperiale gives the most money (roughly \$150,000); the Pritzker seems apt at identifying emerging international design talent.

No stones need be cast. The AIA has a blue-ribbon history of professional management of its honors and awards efforts, including this magazine's partnership with the institute, the Business Week/Architectural

Record Awards. The Gold Medal, however, seems to suffer from a structural anomaly, looking inward, rather than outward, for direction and approval.

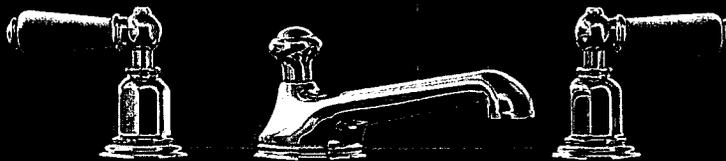
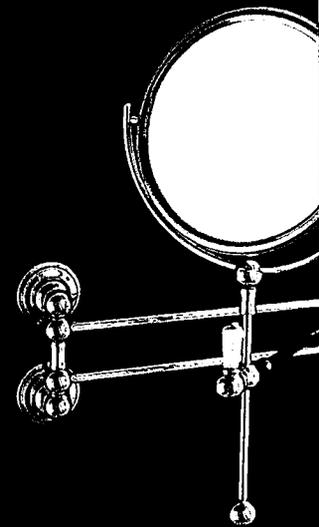
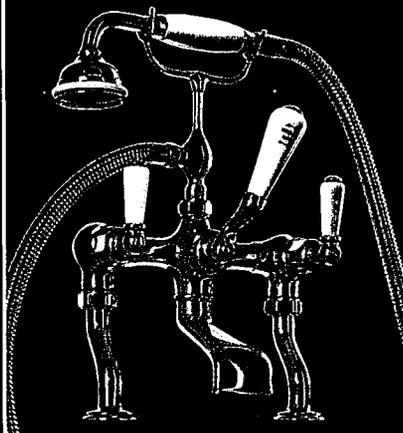
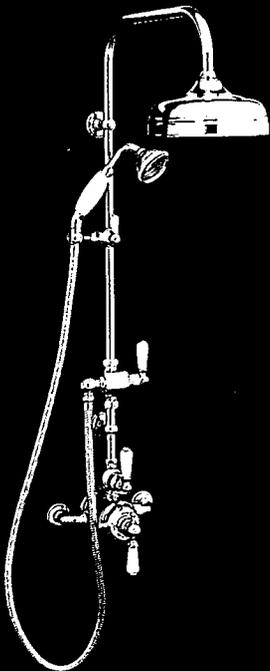
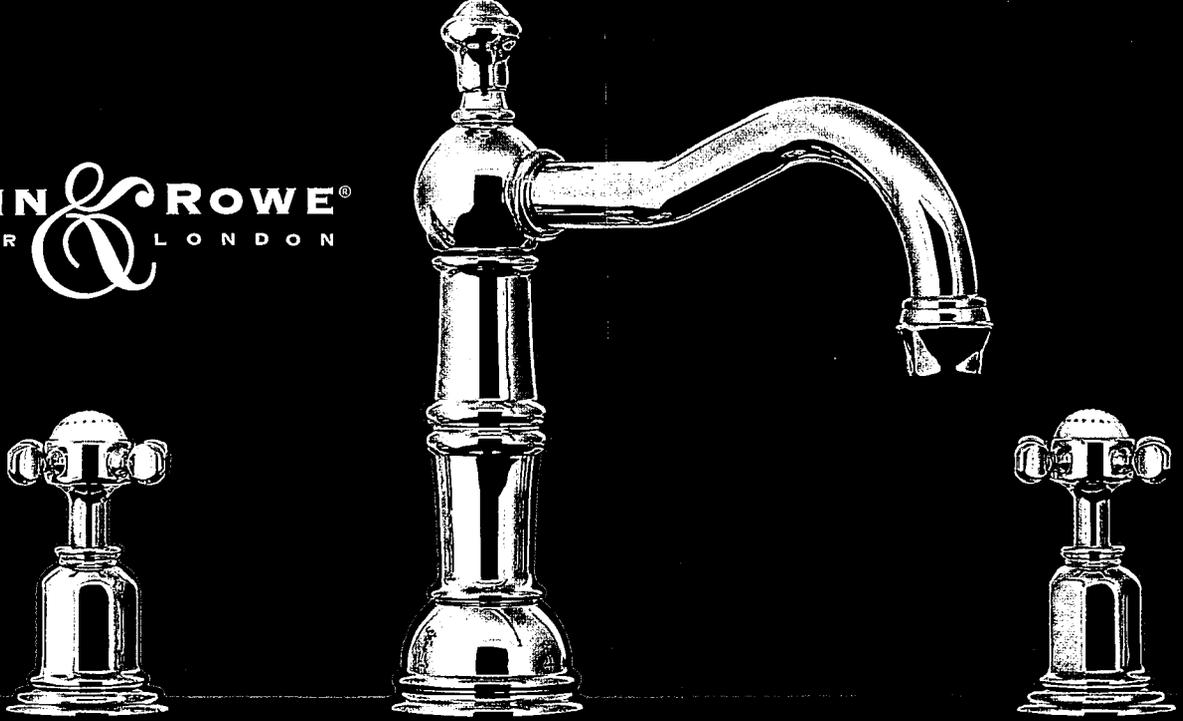
Uniquely for this award, the AIA relies on its board of directors to evaluate and select the winner. Letters of support accompany the nominations, which are managed by a board advocate, who makes two presentations of each nominee's qualifications. Revamping of the selection system should include examining this process.

2003 president Thompson Penney, FAIA, and the institute have taken an important step toward improvement by calling for a Secretary's Advisory Committee to reevaluate all AIA awards, including the Gold Medal. It is Penney's intention that all awards represent and reinforce "what the AIA and the profession values." That may be a long and demanding process.

The exercise will prove worthwhile, however, if it provokes systemic change for the Gold. The advisory committee could begin by reexamining the published criteria, which sound vague and archaic. This, the institute's highest honor, demands of the winners evidence of "great depth ... great breadth," as well as recognition for the "quality of his/her own products." Fine, but missing are many of the values we give lip service to today. Which deserve codifying? Which seem right for this year, but apt to fade? Debate lies ahead.

Like the heir of a valuable bequest, the new leadership of the AIA has both an opportunity and an obligation to make hard decisions about the Gold Medal, including discussions on who determines the winner and why. The time is ripe to pick up the Gold Medal and polish it for another century. Whatever the outcome of the deliberations, the medal should not be left sitting around unused: Gold is too valuable to leave unspent.

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Letters

State of the church

I enjoyed reading the review of the Cathedral of Our Lady of the Angels in the November issue [page 124]. I was in Los Angeles the weekend of the opening and was startled at the deep division in criticism over the project. Cardinal Mahony was the target of most of it. Your critique and the accompanying photos and drawings drew me close to the Rudolph parallel, as well, specifically the Chapel at Tuskegee Institute. Moneo's plan could be easily confused with Rudolph, and the building volumes speak to Tuskegee directly.

The question that remains for me is, would a fourth-year architecture student walk into Moneo's cathedral and spend the next three years of their life finding some way to work for him?

—Preston T. Phillips
Bridgeton, N.Y.

It takes more than a cross

In November's critique of Moneo's Cathedral of Our Lady of the Angels in Los Angeles, Suzanne Stephens accurately identifies the crucial question posed by an examination of this project: "What should a (Catholic) cathedral look like?" She concludes her analysis of the Los Angeles cathedral by qualitatively describing the answer to that question, stating that the typology of the Catholic church building "needs to be forceful, dramatic, and innovative, while maintaining its continuity with the past," and observing that Moneo's forms are "mute" instead. While I agree that the cathedral fails to successfully meet the challenge of wedding innovation with tradition, I am somewhat disappointed by the lack of depth in the author's expressed reasoning for this evaluation.

The author does well to cite Moneo's published thoughts on typology, in which he characterizes a type as inherited forms that provide "a

frame within which change operates."

Based on this concept, one could submit as an example the Christian adaptation of the secular basilica of antiquity and its subsequent formal evolution that eventually led to the Gothic church. However, the author avoids using history to apply Moneo's theory in relation to his design for the L.A. cathedral and resigns herself only to dismissing historical replication as a generator for a typological design solution. As Stephens admits, the L.A. cathedral is a "noncommunicative ... assemblage." Yet, she seems to overlook the implication of Moneo's theory in her attempt to identify the cause of this formal silence. Whereas the harmonious integration of parts, as derived from virtual symmetry and their formal relationship to the whole, was intrinsic to the historical church typology, Moneo's design departs from this "frame" to become an assembly of parts, whereby the parts retain a high degree of autonomy. It fails to embody any substantial symbolic content because its parts are not integrated for the singular purpose of translating a timeless message for the modern age, as the Carolingian abbey, Gothic cathedral, or Renaissance church did for their respective ages. Rather, it relies on the theatrics of an abstract drama to achieve a transcendent aura.

—Dan DeGreve
Dayton, Ohio

Special correspondent Suzanne Stephens replies: I agree with Dan DeGreve that I could have included much more on the typological history of church architecture to discuss Moneo's cathedral design. Indeed, my original draft referred to the development of the dome (from Sta. Costanza in the 4th century) as well as the basilica (Basilica of Maxentius, St. Peter's, etc.), the appearance of the west-

work in the Carolingian church, and various developments in Gothic and/or Renaissance churches. But it didn't fit. I also had cut out parts on the complicated concrete construction techniques employed by Moneo. As an architectural historian who has taught this subject, I regret that my critique seems to "dismiss historical replication as a generator for a typological design solution."

Addressing the Gettysburg

Regarding your November editorial ["Down They Come," page 17], the Gettysburg Visitor Center continues to be discussed whenever I get together with preservationists, and not always because I bring it up.

I still fail to understand why the building was condemned by the Pennsylvania State Historic Preservation Office (SHPO), even while the North Carolina SHPO, AIA North Carolina, and N.C. newspapers were united in supporting the preservation of the Wright Brothers Visitor Center, which was declared "noncontributing" in architectural surveys at the same time the Gettysburg one was. Why North Carolina and Pennsylvania acted in such different manners to preserve their contemporary architecture is a mystery to me. Perhaps with changes in the Pennsylvania SHPO, that can be reversed, but the failure of AIA chapters and members in Pennsylvania to support preservation of the Gettysburg Visitor Center remains to be explained.

I think the matter continues to come before the AIA Historic Resources Committee, which has passed several strong recommendations for preservation.

Your idea of a national commission is interesting, but in effect the National Trust's annual listing of the "11 Most Endangered," along with other National Trust initiatives, already serves much the same purpose. The problem is that Richard Moe has already written that he thinks the Gettysburg Battlefield should be restored—though he never bothers to explain how that might be accomplished—and the Gettysburg center destroyed. Should the President appoint a commission, he would most likely seek Moe's and the Trust's advice in appointments.

Thanks for continuing to keep me informed. We may yet win the day.
—Tony P. Wrenn
Via e-mail

Corrections

In the November Lighting Resources [page 255], incorrect text ran with the image of Luceplan's Agaricon lamp. It should have read: "With a body of high-pressure injection-molded polycarbonate, Agaricon can easily be turned on and off with a light touch. Designed by Ross Lovegrove, the lamp uses energy-efficient bulbs of up to 150 watts and measures approximately 14 inches in diameter, with a 3½-inch base."

In November New Products [page 261], the Ballo railing system image was flopped. The correct orientation is shown at left. Also in November, the Herman Miller plant [page 150] was designed by Scogin Elam and Bray Architects, now called Mack Scogin Merrill Elam Architects. On page 134 of that issue, The R.W. Group should have received credit for metal fabrications/stainless steel and GKD metal fabric panels and column enclosures.



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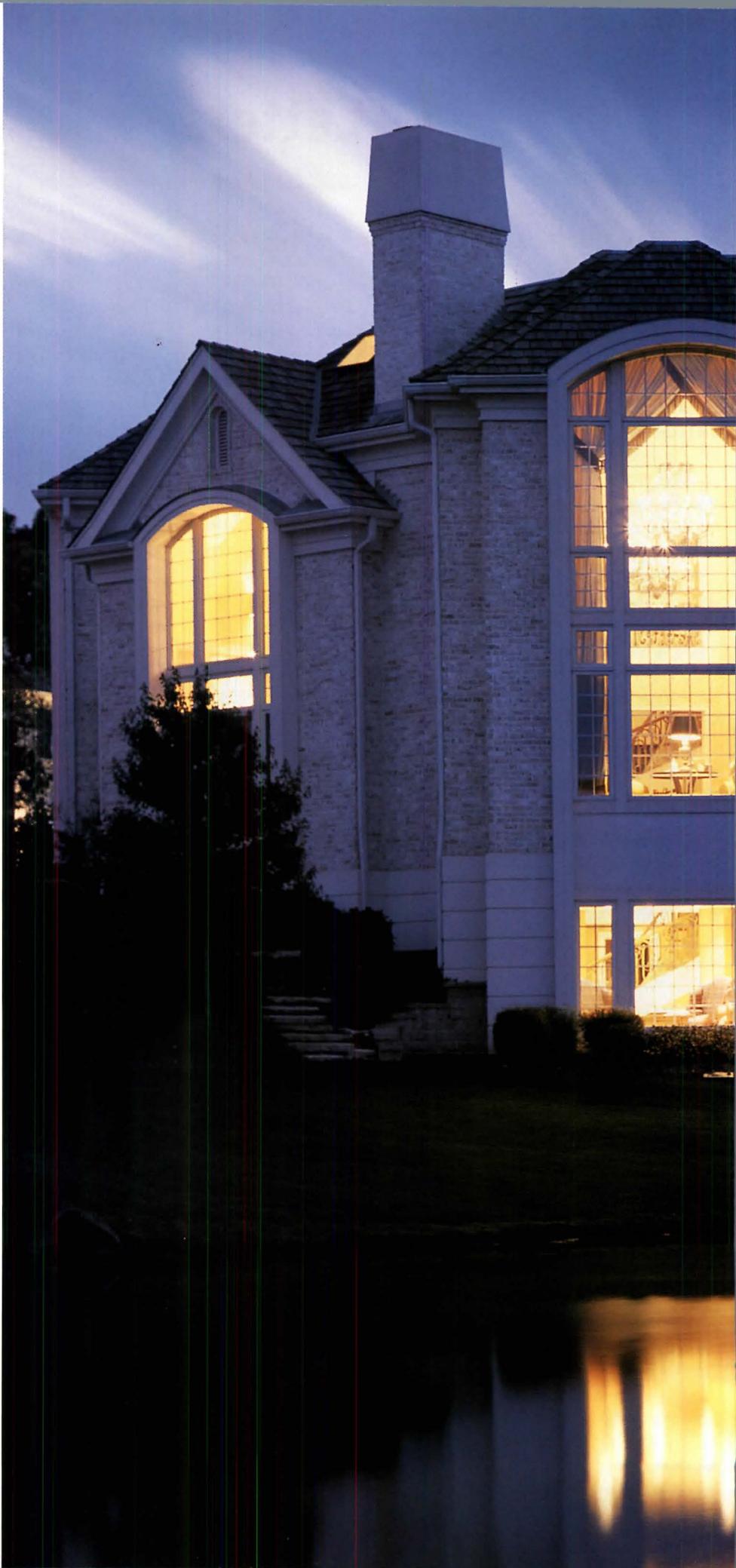
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Seattle's Miller/Hull wins 2003 AIA Architecture Firm Award

Known for its buildings that are responsive to their Northwest environs, Seattle firm Miller/Hull Partnership has been selected by the American Institute of Architects (AIA) as the recipient of the 2003 AIA Architecture Firm Award.

According to the AIA, "The AIA Architecture Firm Award is the highest honor the AIA bestows on an architecture firm, and is given annually to recognize a practice that has consistently produced distinguished architecture for at least 10 years." Miller/Hull will be honored at the

American Architectural Foundation Accent on Architecture Gala, March 8, at the National Building Museum in Washington, D.C.

Founded in 1977, Miller/Hull—led by partners Robert Hull, FAIA, David Miller, FAIA, Norman Strong, AIA, and Craig Curtis, AIA—today has 46 on staff. Its public projects include Fisher Pavilion at Seattle Center, the Roberts Port of Entry, and Bainbridge Island City Hall. Other notable projects in the Pacific Northwest include 1310 East Union live/work lofts, Campbell Orchard House, Michaels/Sisson House, and Novotny Cabin.

Hull told RECORD, "The honor of being recognized reaffirms our work for 25 years. What I believe we're recognized for is the consistency of our work from the beginning to now."



Miller/Hull Partnership staff in their office.



The 1310 East Union live/work lofts (left) and the Michaels/Sisson House (right).



In nominating Miller/Hull's architects, AIA board member Bruce Blackmer, AIA, wrote: "Their exquisitely designed buildings respond to the unique environment within which they are located like few others. Their innovative approach has created a body of work of substance and authenticity without falling into

stylistic trappings."

Hull says winning the award may allow his firm to gain more work in other regions. "We tend to do work on the west coast for the most part," Hull says. "We look forward to doing projects in other parts of the country and the world." *John E. Czarnecki, Assoc. AIA*

AIA, NCARB seek mutual recognition with European architects

Mutual recognition of professional credentials between the United States and Europe has moved closer to reality. In early December, Gordon H. Chong, FAIA, the outgoing president of the American Institute of Architects (AIA), joined with the president of the National Council of Architectural Registration Boards (NCARB) to sign an accord on principles of mutual recognition with Juhani Katainen, Hon. AIA, president of the Architects' Council of Europe (ACE). The accord commits the AIA, NCARB, and ACE to detailed negotiations in 2003.

An ACE delegate in France

said: "We want to achieve total, complete reciprocal treatment." A delegate from Ireland voiced hope that "licensed U.S. architects will be recognized throughout the E.U., and qualified Europeans will be recognized in all U.S. jurisdictions."

The ACE represents about 350,000 European architects through professional organizations and licensing bodies from the E.U.'s 15 member states and all E.U. candidate countries. Some members hope to address a full range of market-access issues, including rights of foreigners to establish firms, to bid on public procurement

of design services, and to secure long-term work visas. These questions have already been settled among E.U. member states.

For now, however, negotiations will focus on professional qualifications. European architects say they have a much more difficult process to get licensed in the U.S. than U.S. architects do in Europe. Few European countries require a professional architectural examination. *Thomas Vonier, AIA*



Standing from left: NCARB president C. Robert Campbell, AIA; NCARB president-elect Robert A. Boynton, FAIA; ACE president Juhani Katainen, Hon. AIA; and NCARB president Lenore Lucy, FAIA. Seated from left: AIA 2003 president Thompson E. Penney, FAIA; AIA 2002 president Gordon H. Chong, FAIA; and AIA executive vice president/C.E.O. Norman L. Koonce, FAIA, signing the accord.

OFF THE RECORD

The plans by the seven design teams for the World Trade Center site (see story, page 36) are on exhibit now through February 2 at the Winter Garden of the World Financial Center. The exhibition is open daily from 7 A.M. to 11 P.M.

Thompson E. Penney, FAIA, was inaugurated as the 79th president of the American Institute of Architects (AIA) on December 6. Penney, who succeeds San Francisco architect Gordon H. Chong, FAIA, as president, is president and C.E.O. of the Charleston, South Carolina-based firm LS3P Associates.

A new Target store with a half-acre "green" roof is planned to open next year in Chicago. No word on whether the red Target logo will be created out of natural vegetation.

Mack Scogin Merrill Elam Architects of Atlanta have been selected to design a new U.S. federal courthouse in Austin, Texas. Other firms that were considered for the project were Hammond Beeby Rupert Ainge, Koetter Kim & Associates, Pei Partnership Architects, Steven Ehrlich Architects, and Ten Arquitectos with CKNR.

British architect Cedric Price was honored with the 2002 Austrian Frederich Kiesler Prize for Architecture and the Arts on December 9 in Vienna.

Ayers/Saint/Gross of Baltimore has been retained by Sylvan International to design a new academic campus for 15,000 students in Hyderabad, India. Classes begin in 2005.

The Los Angeles County Museum of Art has postponed its plans for a new \$200 to \$300 million building by Rem Koolhaas [January 2002, page 47] until funding is more certain.

Harwood K. Smith, FAIA, founder of Dallas-based firm HKS, died on December 8 at age 89.

Gehry's Winton Guest House may be moved

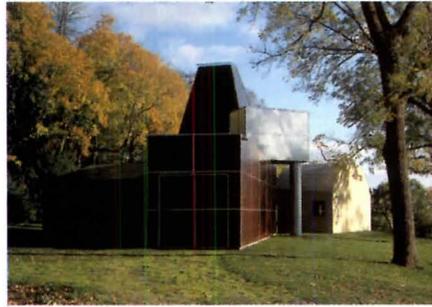
The fate of Frank Gehry's Winton Guest House in Wayzata, Minnesota, a western suburb of Minneapolis, is uncertain, but it appears that the house will be saved and moved.

Completed in 1987, the Winton Guest House is considered an excellent example of a small, sculptural residence by Gehry outside of California, where most of his projects had been built up to then. It was designed for Mr. and Mrs. David M. Winton, who owned a main house—designed by Philip Johnson in the early 1950s—on the same property.

The Wintons retired and sold the homes and property to Kirt Woodhouse in 2001. Woodhouse has divided the 12-acre property into three parcels—one with the guest house, one with the main house, and one of open land—and he wants to sell all of the land. He has sold the main house by Johnson, and it is undergoing an interior renovation. Woodhouse has



The Winton Guest House (above and left) may be donated and moved.



yet to sell the other two parcels, though. Considering the price of property in this affluent suburb, prospective home buyers would likely prefer to build a much larger home on the guest house parcel. Committed to saving the guest house, Woodhouse is looking to donate it to an area arts organization. "My intent is that it is preserved and becomes part of the public domain," Woodhouse says.

Malecha named Topaz Medallion winner

Marvin Malecha, FAIA (pictured here), the dean of the College of Design at North Carolina State University, in Raleigh, since 1994, has been named the 2003 recipient of the Topaz Medallion for Excellence in Architectural Education. The Topaz Medallion, awarded jointly by the American Institute of Architects (AIA) and the Association of Collegiate Schools of Architecture (ACSA), honors an individual who has made outstanding contributions to architectural education for at least 10 years, and whose teaching has influenced a broad



range of students. Malecha, a former president of the ACSA, will be honored in award ceremonies at the

ACSA Annual Meeting in Louisville on March 15, and at the 2003 AIA National Convention in San Diego, May 8.

In 2002, Malecha's school won the NCARB Prize for the Creative Integration of Practice and Education. Prior to his appointment at North Carolina State, Malecha served for 12 years as the dean of the College of Environmental Design at California State Polytechnic University, Pomona. J.E.C.

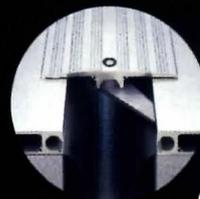
AIA does not award Gold Medal in 2003

The American Institute of Architects (AIA) will not award a Gold Medal in 2003. The AIA board of directors voted on December 5, but it did not reach the required three-fourths majority to award the prize. The board of directors is not required to award the Gold Medal each year and has not done so 36 times in the past 95 years. The last year that the AIA Gold Medal was not awarded was 1998. Recent winners include Tadao Ando (2002) and Michael Graves (2001). J.E.C.

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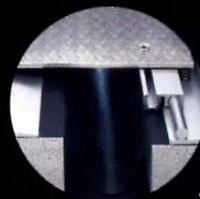
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Dorms by Murphy/Jahn under construction at IIT—the first new IIT dorms in 40 years

The Illinois Institute of Technology (IIT), which Ludwig Mies van der Rohe famously planned, is seeing the most construction since Mies himself graced the Chicago campus. A student residence hall, the first on the IIT campus in almost 40 years, is now under construction across the street from Rem Koolhaas's McCormick Tribune Campus Center. Both buildings will be completed by fall.

The 367-unit residence hall is the result of a competition that Chicago firm Murphy/Jahn won. Other competition finalists (see schemes below), all from the Chicago area, included Lohan Caprile Goettsch, Krueck & Sexton Architects, Solomon Cordwell Buenz, Booth Hansen, Perkins & Will Architects, Dirk Denison Architects, and STL Architects. IIT held an exhibi-

tion of the competition schemes last fall. The hall is funded with \$28 million in bond funds.

"We knew only one of the pro-



Murphy/Jahn won a competition with this scheme (above) for housing at IIT. Construction has begun and will be completed by fall.

posals would be picked, but the other designs also represent an amazing level of ingenuity and innovation," says Dirk Denison, studio professor at the IIT's College of Architecture and the exhibition organizer. "All eight designs found a way to complement and respect the existing Mies van der Rohe campus at IIT while at the same time creating new buildings for the way students live today. There's no

question that the Jahn design and all seven others in the competition have forward-looking vision."

Because most of the existing dorms are older, small, and lack amenities, many of the IIT students live off-campus. The new hall will help IIT recast itself as a campus with residential life. The hall—to house sophomores, juniors, seniors, and fifth-year architecture stu-

include a common room on the top floor and a rooftop terrace. At each elevator group, a communal lounge will be located at a bridge. All of the units will be either apartment-style or suite-style. Room suites are arranged with private rooms, private and semiprivate baths, and common living/dining spaces.

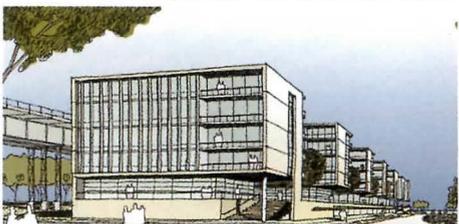
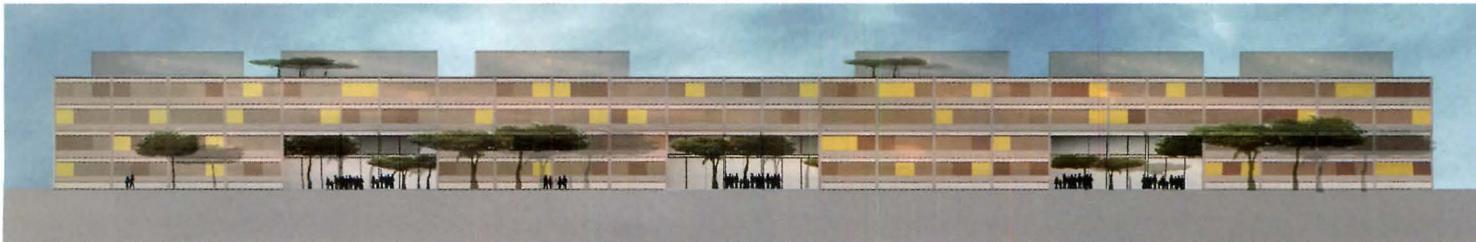
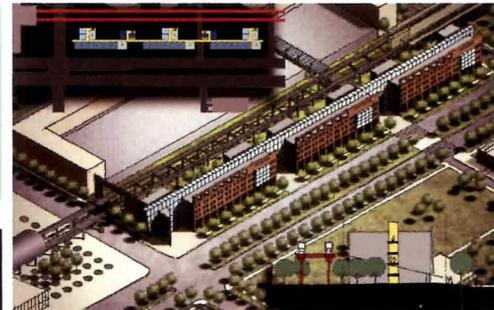
Outdoor courtyards will be planted with a dense grove of

beech, birch, or quaking aspen trees. J.E.C.

Other finalists in the competition for housing at IIT included (top row, from left) Lohan Caprile Goettsch, Krueck & Sexton Architects, Solomon Cordwell Buenz; (middle) Booth Hansen; (bottom row, from left) Perkins & Will Architects, Dirk Denison Architects, and STL Architects.

beech, birch, or quaking aspen trees. J.E.C.

Other finalists in the competition for housing at IIT included (top row, from left) Lohan Caprile Goettsch, Krueck & Sexton Architects, Solomon Cordwell Buenz; (middle) Booth Hansen; (bottom row, from left) Perkins & Will Architects, Dirk Denison Architects, and STL Architects.



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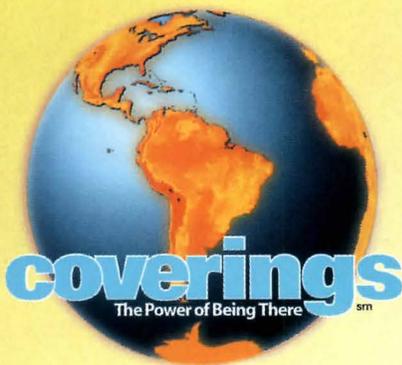
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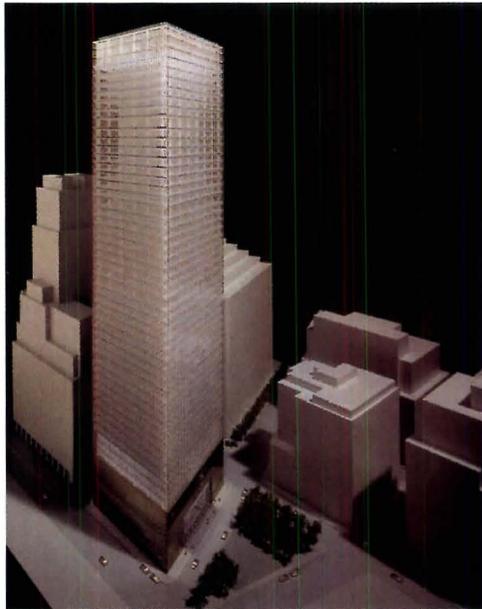


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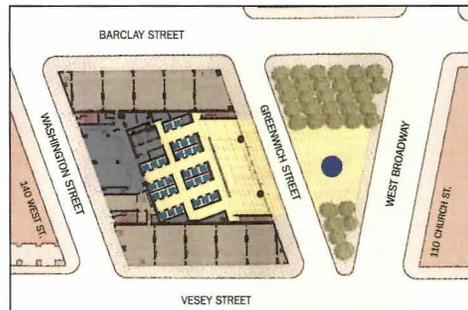
REBUILDING LOWER MANHATTAN



SOM designs new Silverstein tower for 7 WTC site

The first major building to rise out of the ashes of the World Trade Center (WTC) is a 750-foot-high crystalline box designed by the New York office of Skidmore, Owings & Merrill (SOM). Partner David Childs, FAIA, calls it "Larry Silverstein's audition for the whole site." Silverstein held the lease on the twin towers and owned 7 WTC, the building that the SOM tower will replace. Silverstein is proceeding even though the definitive reason for the collapse of his 1980s behemoth remains elusive.

The new tower is taller but encloses 250,000 fewer square feet than its predecessor. The \$700 million building will disappoint those who had looked for a soaring, defiant, or at least innovative gesture in the rebuilding. While SOM added energy-conservation tweaks, and made gestures toward those who think tall-building life-safety must be overhauled, there is essentially little about this building that separates it from the spec-building herd. SOM has designed a carefully tailored curtain wall that defies those who still fear working in tall buildings through the use of floor-to-ceiling glass of unusual transparency. The office floors emerge from a 125-foot-high base clad in two layers of stainless-steel ventilating louvers that will house a massive transformer complex replacing the one lost in the disaster. Artist/designer James Carpenter has collaborated with SOM to add shimmer to the louvers.



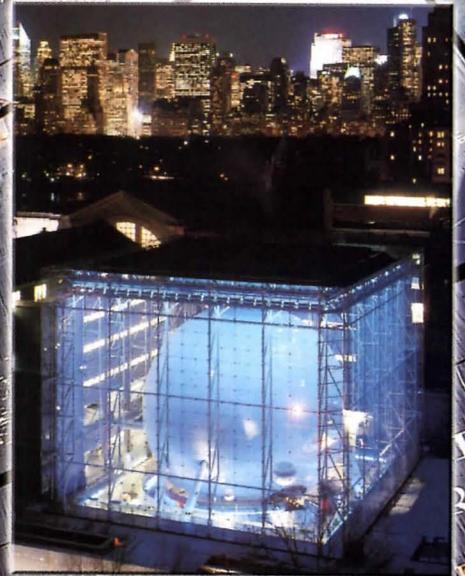
The new building for Silverstein (model, top left, and rendering, above) will have a lobby facing Greenwich Street and a new triangular park.

A significantly reduced floor plate permits the reopening of Greenwich Street, a north-south artery previously walled off from the rest of the WTC site by 7 WTC. The tower's lobby will face Greenwich Street and will front a small new triangular park paid for by Silverstein and designed by landscape architect Ken Smith.

Should the project, expected to open in late 2005, have involved a deeper post-9/11 rethinking of the office building? "In this country, lawyers and leasing agents rule," replied Childs, "and if it hasn't been done, they don't want to see it." Although the design was only recently shown publicly, Silverstein has been shopping it for months to potential tenants. *James S. Russell, AIA*

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Record News

REBUILDING LOWER MANHATTAN

LMDC and Port Authority agree to develop WTC plan by end of January, and Mayor Bloomberg presents his own vision

As seven teams—comprising among the most impressive groups of talent assembled in recent memory—feverishly worked to finish designs for the rebuilding of the World Trade Center site, the sponsoring agencies completed an agreement that may make this extraordinary effort moot.

The Lower Manhattan Development Corporation (LMDC) and the Port Authority of New York and New Jersey signed a memorandum

concerns the twin-tower site itself. The mayor asked for bolder and more costly transportation initiatives, including fast rail connections to Newark and Kennedy airports. Augmenting his own audacious call earlier that week for 60,000 new housing units citywide to address the city's perpetual affordability crisis, Bloomberg proposed more housing downtown—some on new piers in the East River—and less commercial space than

has been advocated by the twin towers' former tenants. Street improvements and additional parks are also planned. The boldness of the \$10.8 billion scheme is needed, said the mayor, "to restore Manhattan to its rightful place as a center for innovation."

The December Port-LMDC memorandum establishes a February 1 date for "recommending" a new master plan, and the mayor's proposals and the seven plans will be considered. However,



Among many ideas that he presented in his vision plan, Bloomberg showed an East River park proposal by Diller + Scofidio and the Rockwell Group.

of understanding in early December that unites LMDC's efforts with a master plan under development by Stanton Eckstut, FAIA, principal of Ehrenkrantz Eckstut & Kuhn, a New York architecture and urban design firm. Last fall, as the LMDC assembled its roster of talent [RECORD, November 2002, page 28], the Port Authority quietly hired Eckstut even though it had pledged to work with the LMDC. Though Alex Garvin, the LMDC's vice president of planning, design, and development, must endorse the planning, "We are the ones ultimately charged with putting a master plan together," Eckstut told RECORD.

Further complicating matters, Mayor Michael Bloomberg unveiled what was described as his own "Vision for 21st-Century Lower Manhattan" on December 12. Less a plan than a laundry list, the mayor challenged some of the redevelopment ideas put forth so far while endorsing others. The plan, comprising work of city agencies and undisclosed consultants, barely

the deadline all but precludes substantial participation by any of the seven competing teams. Eckstut says, "Everyone's trying to figure out how to incorporate their work."

The LMDC, however, had assured the teams that their ideas would not be handed off to another firm to develop. Some teams are said to have spent more than \$500,000 on proposals for which they received a paltry \$40,000 in fees, hoping that the LMDC would hire them to take their ideas to the next level of detail. Barbara Littenberg, a principal with Peterson/Littenberg Architecture and Urban Design, one of the seven competitors, likened the process to "a long, drawn-out client interview." J.S.R.

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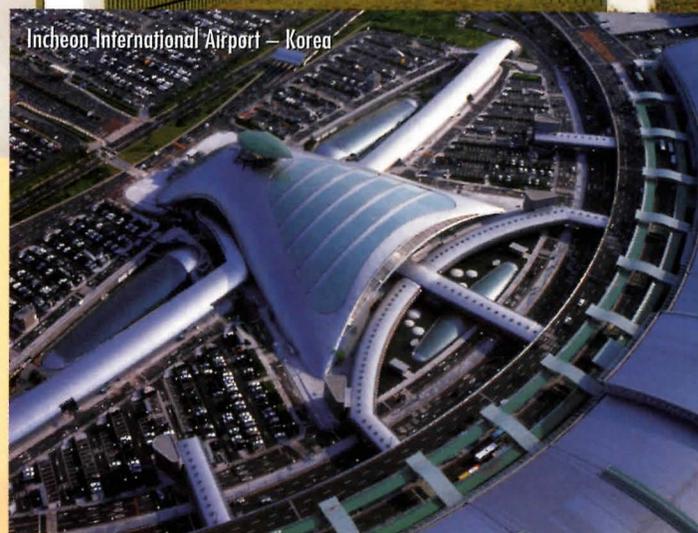


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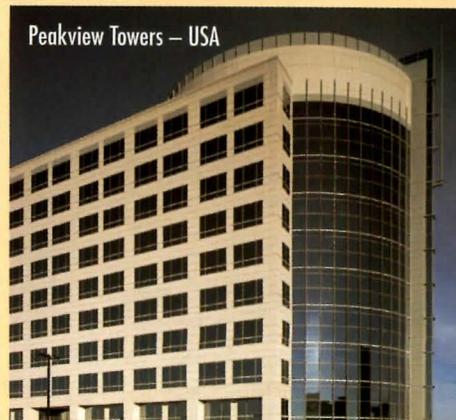
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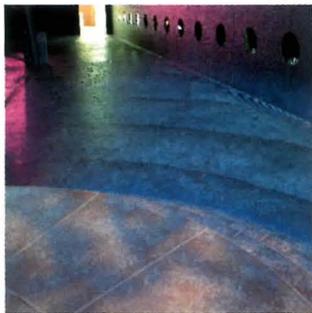
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Record News



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Ikea plans to tear down a significant portion of New Haven Breuer building for parking

Ikea, the Swedish low-cost furniture retailer, plans to demolish a portion of a 1969 Marcel Breuer building in New Haven that was originally designed for the Armstrong Rubber Company. The design features a long, low structure, with a tower situated at one end of the lower building and cantilevered above it on piers. In Ikea's original plan for the site, the building would have been razed entirely and replaced with surface parking.

According to Karyn Gilvarg, the city's chief planner, the mayor of New Haven directed Ikea to preserve the building, which is a prominent landmark from the main highway exit ramp into New Haven. Ikea and the company's architects, Greenberg Farrow Architecture, returned with a scheme that preserved the tower and the portion of the building directly underneath. The city's aldermen approved that proposal on November 7, 2002.

Some architectural advocates refuse to let the issue stand. Robert Narracci, who represents the Long Wharf Advocacy Group, argues that

removing the base destroys the characteristic asymmetry of Breuer's design. The group has proposed a scheme that retains part of the rear building. "Our proposal would only eliminate 80 parking spaces from Ikea's plan," Narracci said.

Gilvarg believes that the design has already been sacrificed, no matter what steps are taken to save portions of the building. "The whole idea of the building as a piece of sculpture in a greensward is gone at this point," she said.

The city is still fighting Ikea's effort to place signage for the store on the building, a move that Breuer carefully avoided in the original plan. But with the approval of New Haven's aldermen, Ikea appears to have won the legal and moral right to go ahead.

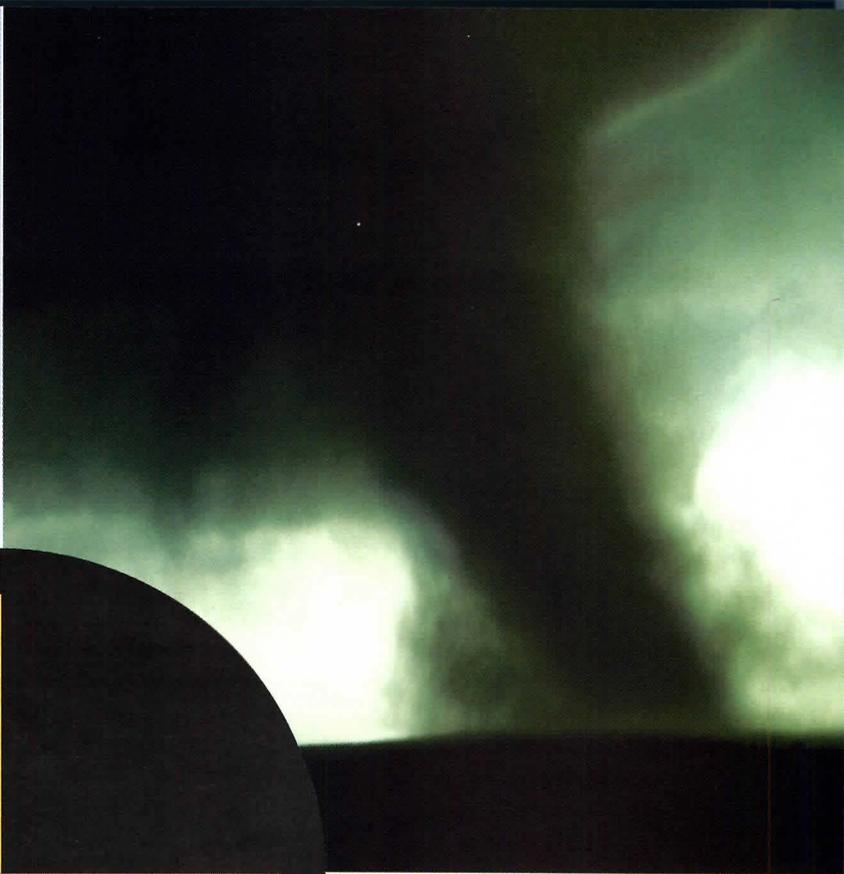
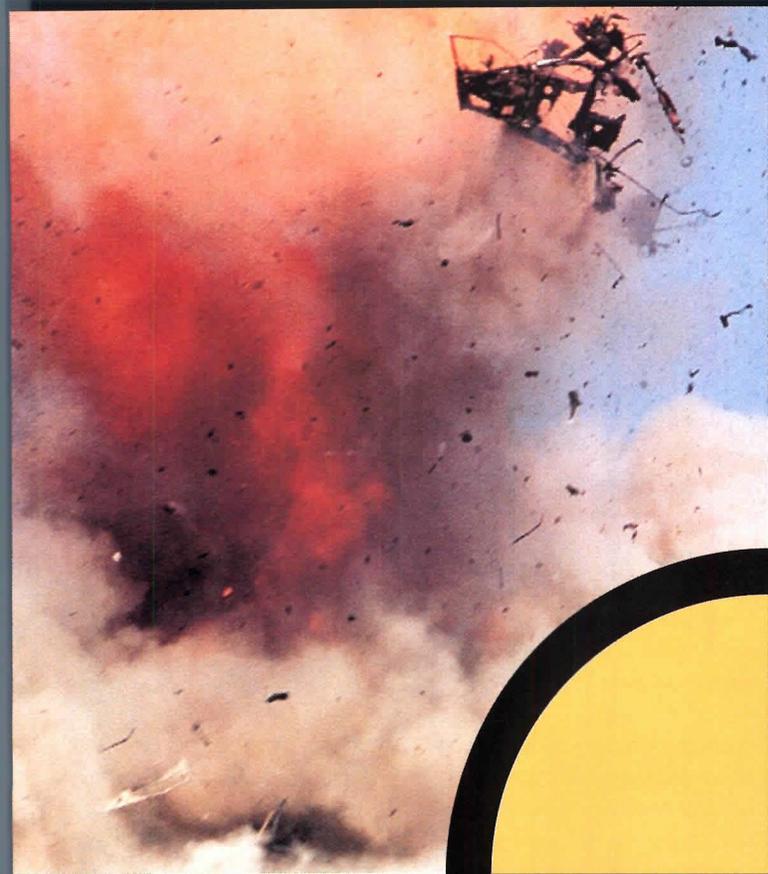
"To get a 40-person board of aldermen to agree on anything is an accomplishment, especially in an architecture-conscious city like New Haven," said Pat Smith, Ikea's director of real estate.

Still, defenders of the Breuer building feel that Ikea's approach to this process has been hypocritical, especially for a company with Ikea's design credentials. "Marcel Breuer was one of the founders of modern industrial design," Narracci said, "and every steel tube chair that's in every kitchen is somehow descended from his work."

Kevin Lerner



Ikea proposes demolition of much of the low portion of the Breuer building (top) and placing signs on the remaining part (above).



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Record News

Citroën shows design for Paris showroom with cars on revolving glass platforms

French car manufacturer Citroën announced last fall that French architect Manuelle Gautrand was selected to design its new car showroom on Paris's Champs-Élysées.

Gautrand, who has had her own practice since 1991, won against five other short-listed practices, including Zaha Hadid and Christian de Portzamparc, in an open international competition.

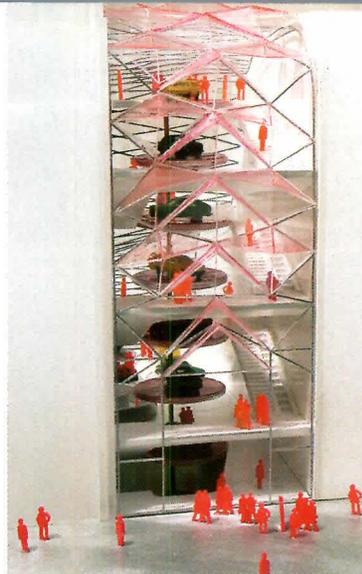
The showroom will include a facade of interlocking diamond- and chevron-shaped panes of glass. Rose-tinted panes will form the Citroën logo. The roof will also be glazed and will curve downward toward the rear of the building.

In the entry hall, a stack of seven circular platforms, supported by a 69-foot-high column, will dominate the space. The 20-foot-

diameter revolving platforms will be in either clear or red-tinted glass, faceted to resemble headlights and tail-lights. Each one will have a polished steel convex underside to reflect the car below it. "Playing with perspective, empty spaces, and the sculptured interior," says Gautrand, will make the cars "look like small toys."

A series of escalators and balconies will be on the showroom's periphery. While providing access to the vehicles on display, they will also enable visitors to watch the busy Champs-Élysées.

The first floor, covered in a durable light-colored resin, will double as a shallow ramp rising toward the back of the showroom. Five more platforms, each mounted on a



The showroom, with cars on round, glass platforms, will be encased in glass.



hydraulic piston, will move up and down. When they rise, natural light will filter down into the basement through the circular openings they expose in the floor. The platforms could also be lowered into the sub-level rooms.

Citroën's announcement comes 15 months after its competi-

tor Renault opened its own revamped showroom on the opposite side of the famous boulevard [RECORD, May 2001, page 52].

The showroom site will remain under a restaurant chain's management until 2004, when its 20-year lease ends. Work on the showroom will then begin. Robert Such

Designer: Ross De Alessi Lighting Design
Photographer: Ross De Alessi

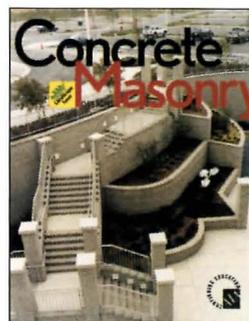
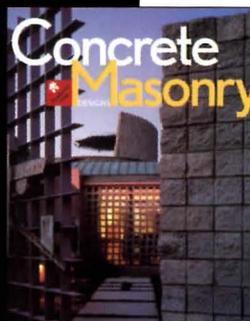
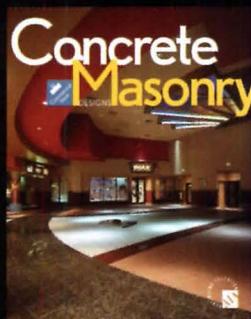
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News Briefs

Barnes Foundation petitions for relocation

Claiming that its current location is financially untenable, the Barnes Foundation, currently in a 24-room gallery designed by Paul Cret in Lower Merion Township, Pennsylvania, is seeking judicial permission to

move its acclaimed art collection to a new building in Philadelphia. The request, if granted, would break the will of founder Dr. Albert C. Barnes.

The new building



Barnes may leave its home (above).

would be constructed on Benjamin Franklin Parkway in downtown Philadelphia, a museum-lined boulevard headed by the Philadelphia Museum of Art. The Pew Charitable Trusts and the Lenfest Foundation have offered to defray the total cost of the project, estimated at \$150 million. According to the scheme, the foundation's offices would remain in its current home.

The Barnes Foundation was established in 1922 as an academy of fine arts and horticulture. Its collection of Impressionist and early Modernist art was recently valued at \$25 billion.

Behnisch, Behnisch & Partner wins competition to design school complex

Behnisch, Behnisch & Partner has won an international competition to design a school for 100 children with mental and physical handicaps. Now

under construction in Herbrechtingen, in southern Germany, the 50,000-square-foot building will be completed in July 2004.

The Stuttgart and Los Angeles-based firm's winning scheme examines "how architecture can help children develop their imagination and their social awareness," says principal Stefan Behnisch. The 49,500-square-foot school will have several single-story wood structures



School will benefit disabled children.

grouped around a central courtyard. The school responds to disability requirements while offering opportunities for learning and play. A series of terraces will serve as outdoor classroom spaces, for example.



IIT's Crown Hall will be restored.

IIT will restore Mies van der Rohe landmarks

The Illinois Institute of Technology has launched a \$20 million fund-raising campaign to restore and upgrade Wishnick and Crown Halls, both designed by Ludwig Mies van der Rohe. Wishnick Hall will be outfitted and wired for conversion into a center for biomedical engineering and science teacher education. Crown Hall's windows and ceilings will be overhauled. Both buildings are structurally sound.

Former Illinois governor James Thompson has been charged with spearheading the fund-raising drive. He will serve as chair of the newly formed Mies van der Rohe Society.

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Moshe Safdie's design for Mobile federal courthouse unveiled

The United States General Services Administration (GSA) has unveiled Moshe Safdie's design for a new \$71 million federal courthouse in Mobile, Alabama. The 322,000-square-foot courthouse will comprise 10 courtrooms, plus four more for future expansion. Safdie's design, developed with Sherlock, Smith and Adams of Montgomery, Alabama, as associate architect, was chosen under the auspices of the GSA's "Design Excellence" program.

GSA Evaluation Board member Jay Chatterjee has called Safdie's design a "veritable living room for the residents of Mobile." The low-rise courthouse is similar in height to the existing John A. Campbell Courthouse. The volume steps down as it reaches northward, where it shares a boundary with a residential

community. In order to emphasize transparency, the entrance is a glazed portico that extends to a curved colonnaded arcade. The



Safdie's Mobile courthouse will include a curving arcade.

arcade runs the length of the two-block site. Gathering spaces in front of the building will be landscaped to meet the GSA's rigorous security requirements.

Safdie won the GSA competition in 2002 against finalists Wolf Architecture, Mack Scogin Merrill Elam Architects, and Garrison Siegel Architects. Construction will begin in 2004 and will be complete in early 2007.



David Martin chosen for Ventura County museum

AC Martin Partners has won an invited competition to renovate and design an addition to the Ventura County Museum of History & Art. Frederick Fisher and Partners and Barton Myers Associates were among the finalists.

In this \$3 million project, the museum will replace its white stucco facade with one constructed of local river rock and cedar. An 18,000-square-foot addition, which will include galleries, retail space, and meeting rooms, will surround the existing 15,000-square-foot museum. A path weaves the buildings together through a series of protected courts, open gardens, and gallery exhibits.

Italian architect and designer Achille Castiglioni dies at 84

Achille Castiglioni, whose witty designs for domestic objects helped place Italy at the forefront of modern design, died on December 2 at age 84 in Milan. He is perhaps best known for the Arco floor lamp, designed in 1962, which has a chrome ball shade suspended on an arch of steel from a marble base. After Castiglioni's 1944 graduation from Politecnico di Milano, he joined his brothers Livio and Pier Giacomo in their design studio. Their collaboration lasted until Pier's death in 1968. In 1997, the Museum of Modern Art held a retrospective show, *Achille Castiglioni*.

News Briefs by David Sokol.



Martin's addition to the Ventura museum will surround the existing structure.

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Intricacy **Philadelphia**

January 18–April 6, 2003

Guest curated by the architect and theorist Greg Lynn, this exhibition includes works by architects, designers, and artists that reflect an emerging sensibility that Lynn has labeled "intricacy." The exhibition synthesizes a vast geography of ideas and practices drawn from many disciplines and cultural fields, announcing a new way of thinking about the interrelation of concepts and techniques on an abstract, holistic scale. At the Institute of Contemporary Art at the University of Pennsylvania. Call 215/898-5911 or visit www.icaphila.org for more information.

Leonardo da Vinci, Master Draftsman **New York City**

January 22–March 30, 2003

The first comprehensive survey of Leonardo da Vinci's drawings ever presented in America, this international loan exhibition will bring together nearly 120 works of extraordinary beauty by one of the great masters of all time. The show will survey Leonardo da Vinci's staggering contribution as an artist, scientist, theorist, and teacher. At the Metropolitan Museum of Art. Call 212/570-3951 or visit www.metmuseum.org for more information.

Shigeru Ban **Cambridge, Massachusetts**

January 27–March 16, 2003

This exhibition will explore contemporary Japanese architect Shigeru Ban's innovative design approach and will trace the architect's investigation of materials, structural systems,

and methods of construction in the development of alternative architectural designs. At the Harvard Design School. For more information, visit www.artmuseums.harvard.edu.

Next: LWPAC **Vancouver, B.C.**

January 30–May 2003

The second exhibition presented in *Next*, a series

on emerging artists from the Pacific Rim. Vancouver architect Oliver Lang, a partner in LWPAC (Lang Wilson Practice in Architecture Culture) will redesign the *Next* space, a laboratory for new art and ideas in a wide variety of media. A new gallery will be designed by LWPAC to complement and accommodate this program, not only to generate a new space but also to document the process of its production. At Vancouver

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Dates & Events

Ongoing Exhibitions

Me, Myself and Infrastructure: Private Lives and Public Works in America Washington, D.C.

Through February 16, 2003

This exhibition presents a consumer's-eye view of the built environment. In a dramatic shift away from traditional presentations of civil engineering, the show demonstrates how infrastructure is much more than a network of cable, pipe, and beams. At the National Building Museum. Call 202/272-2448 or visit www.nbm.org.

Herzog & de Meuron: **Archaeology of the Mind** Montreal, Canada

October 23, 2002–April 6, 2003

"Since architecture itself cannot be exhibited, we are forever compelled to find substitutes for it," said Jacques Herzog regarding this exhibition (which he and Pierre de Meuron curated in collaboration with Philip Ursprung). The substitutes on display are plentiful and plenty strange—any object that has served as a source of information for the architects. At the Canadian Centre for

Architecture. Call 514/939-7000 or visit www.cca.qc.ca for more information.

Tadao Ando: Architect Williamstown, Massachusetts

September 28, 2002–April 27, 2003

Featuring an installation designed by the architect himself, with models, drawings, prints, and videos. Since Ando has been chosen as the architect for the Art Institute's expansion and campus enhancement, the show is for trustees and architects alike. At the Clark Art Institute. For information, call 413/458-2303 or visit www.clarkart.edu.

Do It Yourself: Home Improvement in 20th-Century America

Washington, D.C.

October 19, 2002–August 10, 2003

This show is an examination of modern American housing and its products, with cultural insinuations regarding gender roles and leisure time in the domestic sphere. At the National Building Museum. Call 202/272-2448 or visit www.nbm.org for more information.

New Hotels for Global Nomads

New York City

October 29, 2002–March 2, 2003

With a title that sounds like a Koolhaas co-optation, this exhibition about hotels describes them as symbols of contemporary leisure. With a focus on opulent, Vegas-style hotels with gimmicks, attractions, and new domestic technologies, the show places these heavily designed spaces in historical context. At the Cooper-Hewitt National Design Museum. Call 212/849-8400.

Krier/Eisenman: Two Ideologies New Haven

November 4, 2002–February 7, 2003

The debate between the opposing architectural philosophies of Krier and Eisenman is the subject of this exhibition. Work by Krier, who focuses on considerations of context, site, and function to inform his designs, will be displayed across from Eisenman's, who regards abstract form as the architect's singular consideration. At the Yale School of Architecture. Contact 203/432-2288 or visit www.architecture.yale.edu.

David Adler, Architect: **The Elements of Style** Chicago

December 6, 2002–May 18, 2003

This will be the first major retrospective of the architect David Adler's work, featuring approximately 100 pieces, including plans, drawings, photos, models, and decorative arts. Also included will be major documents from the Art Institute's permanent collection and photos newly realized by the renowned Chicago architectural photography firm of Hedrich-Blessing. At the Art Institute of Chicago. Call 312/443-3600 or visit www.artic.edu.

Conferences, Symposia, Lectures

Dallas Architecture Forum Lecture Series Dallas

November 21, 2002–February 13, 2003

The Dallas Architecture Forum features its seventh season of lectures by some of the most important designers in the world. Included in the series will be talks by Enrique Norten, Rick Joy, and Terence Riley. For information, call 214/740-0644 or visit www.dallasarchitectureforum.org.

Designer's Saturday Hong Kong

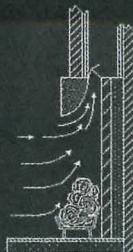
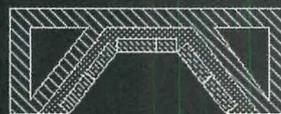
February 22, 2003

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Dates & Events

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GlobalShop 2003 Chicago

March 16-18, 2003

The world's largest store-design and in-store marketing show, GlobalShop is where retailers and brand marketers seek out resources and concepts to define store and brand identity, generate traffic, and increase sales. At the McCormick Place Convention Center. Call 866/933-1001 or visit www.vnuexpo.com.

Coverings Orlando, Florida

March 24-27, 2003

This event will feature the International Tile and Stone Exposition, the International Flooring Exposition, and the Vision Conference Program. At the Orange County Convention Center. For more information, call 561/776-0600 or 800/881-9400, or visit www.coverings.com.

Lightfair International New York City

May 5-8, 2003

This event will be the largest to date, with more than 550 exhibiting companies occupying more than 1,460 booths, and an expected attendance exceeding 19,000 architectural, engineering, design, and end-user professionals from around the world. At the Javits Convention Center. For information, call 404/220-2215 or visit www.lightfair.com.

Competitions and Awards

9th Annual AIA London/U.K. Chapter Excellence in Design Awards

Deadline for submissions: January 22, 2003

The American Institute of Architects, London/U.K. Chapter seeks entries from British-based architects, as well as from architects throughout the world, for built projects in the U.K. In parallel, the chapter seeks entries for the Student Travel Awards, which honor work from students currently enrolled in U.K. universities. Visit www.aiauk.org or send e-mail to designawards@aiauk.org.

The Architectural League of New York: Inhabiting Identity

2002-2003 Young Architects Forum

Deadline: January 30, 2003

Open to architects and designers 10 years or less out of undergraduate or graduate school. Winners receive a \$1,000 cash prize, exhibit their work, receive publication of their work in an annual catalog, and present lectures during May and June at the League, in New York City. Call 212/753-1722 or visit www.archleague.org.

The Kenneth F. Brown Asia Pacific Culture and Architecture Design Award

Deadline: January 31, 2003

The School of Architecture, University of Hawaii at Manoa is soliciting entries for the Fourth Kenneth F. Brown Architecture Design Award Program. The design award program is open to any architectural work located in the continent of Asia or a region that touches the Pacific Ocean. Entered projects should have been completed between January 1992 and December 2002. The jury will seek a design intervention that makes the most sensitive, creative, and critical response to its built, cultural, and natural environments. Visit http://web1.arch.hawaii.edu/soa_alt1/events or call 808/956-3515.

Southeastern Center for Contemporary Art: The HOME House Project

Registration deadline: February 1, 2003

SECCA will present an ambitious two-part project that addresses the future of affordable housing. First, the HOME House Project Design Open Invitational will showcase innovative design solutions for affordable living/shelter by artists, architects, and designers from the U.S. and will lay the groundwork for the second initiative, the HOME House Project, which will transform these innovative designs into functional built structures for low- and moderate-income families. For additional information, call 336/725-1904 or visit www.secca.org.

The 2003 DuPont Benedictus Awards

Call for entries deadline: February 14, 2003

The competition, a collaborative effort between DuPont and The American Institute of Architects, with cooperation of the International Union of Architects, recognizes the innovative and significant use of laminated glass. Architects may submit projects in seven categories: commercial, community, education, government, healthcare, recreation, and residential. For more details, call 202/367-1633 or visit www.aia.org or www.dupontbenedictus.org.

E-mail event information two months prior to ingrid_whitehead@mcgraw-hill.com.

For and about the new generation of architects

archrecord2

FOR THE EMERGING ARCHITECT

DEPARTMENTS

This month, archrecord2 takes a cue from the rest of the magazine's coverage to pick up on the work of James Dayton, who designed one of this month's Building Types Study projects. The Design profile below takes a look at his other work, and gives a glimpse into his life. In Live, you can find a preview of an online gallery of art from a group called Bay Area Young Architects. As always, on the Web you'll also find Work, our career section, and Talk, a forum.

DESIGN

Not just another Minnesota Dayton

Minneapolis architect Jim Dayton, AIA, is from one of the best-known Minnesota families, but he downplays his family connections and does not plan to do much work for relatives. "That's a slippery slope," he says, cautiously.



Dayton's father's cousin is U.S. Senator Mark Dayton (D-Minn.), and the architect is the great-great-grandson of George Draper Dayton, who in 1902 opened Goodfellow's Dry Goods, which became Dayton's department stores. The Daytons started Target as a discount retailer in the 1960s, and the Dayton Hudson Corporation was recently renamed Target Corporation.

Dayton's father was the last of the Daytons to work for the retailer.

While Jim Dayton had no interest in working for the retail company, he was considering a career in advertising before earning his B.A. in Architecture from Yale, in 1987, and M.Arch. from the University of Virginia, in 1991. "I think there are some real connections between architecture, retail, and advertising," Dayton says. "Part of the business of architecture is to convince someone, if you want to do something in your own language of design. You have to convince them that these leaps of faith are worth taking, as in retail and advertising."

Upon graduation in 1991, Dayton headed west to Los Angeles and interviewed with Frank Gehry, who had just received the commission for the Guggenheim Bilbao and needed to add employees to his 30-person office.

"I was a warm body showing up with a portfolio," says Dayton. "But it was an incredible opportunity and experience to be part of [Gehry's] professional success. He's basically like a father figure to me.

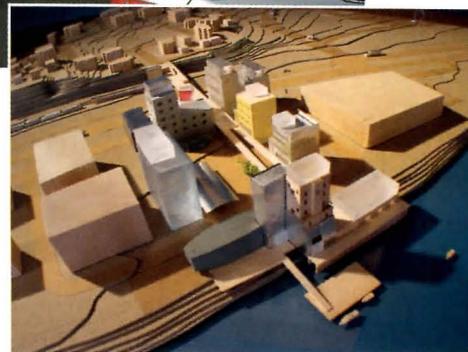
I talk to him all the time. I feel quite fortunate that I do have this relationship with him."

After five years working on projects including Disney Concert Hall, Jim and his wife, Megan, also an architect, moved to Minneapolis because they wanted to raise a family there rather than in Los



Headhouse competition, St. Paul, 2002

Dayton won a competition sponsored by the St. Paul Riverfront Corporation to transform a portion of the Mississippi River riverfront with a mix of retail, restaurants, and an indoor market. Actual construction is uncertain.



Vacation house, Madeline Island, Wisconsin, 2001

The forms of the cottage, overlooking Lake Superior, relate to the agrarian architecture of northern Wisconsin—recalling farm out-buildings and barns.

(continued from previous page) Angeles (they now have two children). Dayton also wanted the chance to start his own practice, James Dayton Design, which he did in 1997, after a year with Meyer, Scherer & Rockcastle. Before he even had his own staff and computers, Dayton was given the commission to design a new home for the Minnetonka Arts Center in Wayzata, Minnesota (page 144). "I couldn't ask for a better project," Dayton says of the \$5.8 million building for the non-profit organization that provides courses in the visual arts and crafts. He also curated the first art exhibition in the new building.

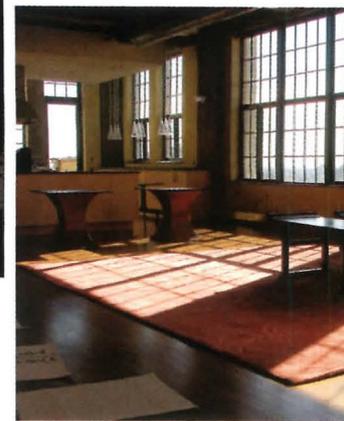
Gehry definitely made an impression on Dayton, and it's apparent in the Minnesota architect's work. Dayton explores the manipulation of forms and curves, and the juxtaposition of materials, including woods and metals, in his projects. He says he finds Gehry's urban work to be "a complex collage of elements. I find that very intriguing. I think of it as a language—of looking at materiality, plasticity, and industrial materials in new ways."

Dayton, who now has a six-person practice, employed a number of the lessons he gained from Gehry in his first completed house—a vacation cottage on Madeline Island, Wisconsin—and in a competition-winning entry for the St. Paul waterfront (both on previous page). He is now beginning design on his most ambitious project, converting a 1916 five-story Minneapolis warehouse building across from his current office into 46 loft condos. The project, three times larger than the arts center in square footage, may include a new, larger office for Dayton. *John E. Czarnecki, Assoc. AIA*
Go to architecturalrecord.com/archrecord2 for more on other emerging architects, and to submit your own work.



Farley Loft, Minneapolis, 2002

Dayton designed a contemporary loft—a home for a client who collects Asian antiques—in a former utility building of the General Mills plant in downtown.



Crowne Plaza Hotel, suburban Minneapolis, 2004

Currently in design development, a former Holiday Inn will be fully transformed into a more contemporary, 256-room Crowne Plaza business hotel with a new entrance and metal exterior finishes.

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LIVE

They left their art in San Francisco

Bay Area Young Architects, or BAYA for short, is a committee of the San Francisco chapter of the AIA (SFAIA) and other chapters around the San Francisco Bay and Oakland areas. The group connects young architects through social events and career development services, and it serves as an outlet for its members' creative talents—at least for those talents that don't find expression in work.

For the latter, BAYA has organized a yearly art exhibition called *In_Sight On_Site*, which was held this year in the SFAIA gallery.

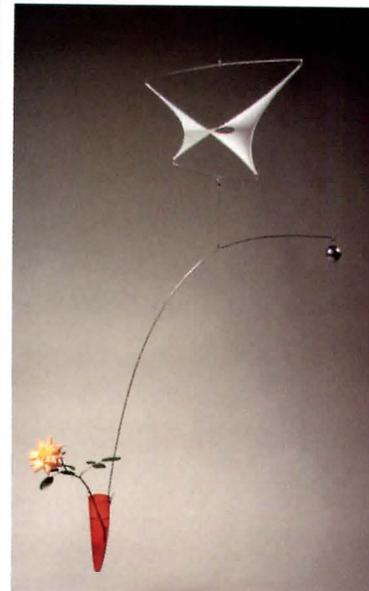
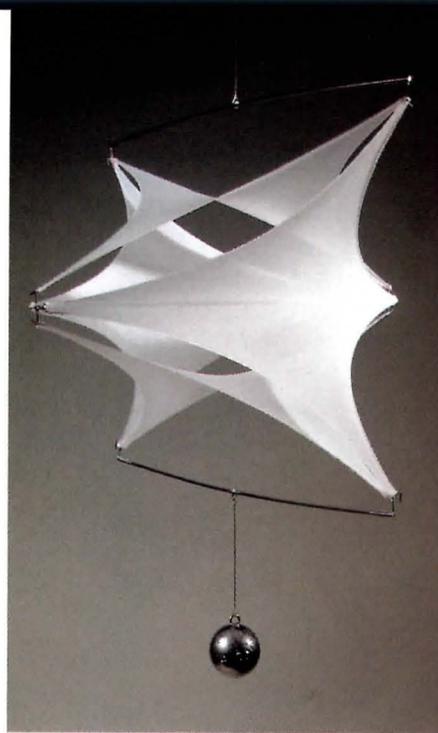
Twenty-seven architects and designers submitted work for this year's show, for a total of about 50 pieces, according to Douglas Smith, Assoc. AIA. Smith is associate director designate of the SFAIA and worked to coordinate the event, which opened on November 4.

"There's quite a range of pieces," Smith said, "from furniture and mobiles to painting, drawing, mixed media, photography, models, and sculptures."

Some of the pieces drew specifically on the artists' experience as architects, such as the tensile fabric mobiles submitted by Soo-Hwa Yuan, which were inspired by his work on a similarly

structured design for a theater set. Others, like Sabrina Lupero's *Sidewalks of Rome* series of photographs, highlighted the designers' other artistic talents. Lupero shot the images while she was studying architecture in Spain and Italy. In her entry statement, she wrote that she and her camera "maintain an oscillating relationship between the visceral and architectural components of these places."

Only one artist's work appears on this page, but a complete gallery documenting the entries to *In_Sight On_Site* can be found in the LIVE section of the *archrecord2* site on the Web. Now that the show has closed, *archrecord2* is the only place these works can be seen. *Kevin Lerner*
Go to architecturalrecord.com/archrecord2 for more, and for other architecture lifestyle stories.



Soo-Hwa Yuan entered these mobiles in the Bay Area Young Architects' 2002 art exhibition, *In_Sight On_Site*. The works were inspired by his work on a tensile fabric structure for a theatrical set design.

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No island is an island: A developer shows how to build with nature

Critique

By Michael Sorkin

DEPARTMENTS

The barrier islands off the Carolina coast are at once fragile and protective. Home to an amazing diversity of environments, ranging from ocean to dunes to maritime forests to salt and freshwater wetlands, these islands serve as habitat for a stunning range of ecosystems and a singular variety of species. Their beauty is compelling.

And susceptible. Hurricane Hugo—which ravaged the coast in 1989—was an equal opportunity destroyer, devastating both human and natural habitats with sublime thoroughness. Both, however, have revived themselves remarkably. The islands teem with alligators and deer, sawgrass, pine, and palmetto. And the houses that crowd the coast have also returned, jostling for views along the strand.

Resistance to this overbuilding of the islands is longstanding and based in several arguments. Critics challenge the crazy economics of insurance and public subsidy, the ravaging of pristine landscapes, the privatization of an asset that might be carefully shared, and the propriety of settlements in areas that participate with such regularity in a cycle of destruction and rebirth. These are the same arguments reflected in current debates about the suppression of fires in the national forests in the face of the otherwise natural rhythm of burning and renewal.

Solutions to the question of

Contributing editor Michael Sorkin is a practicing architect and planner in New York City.

development of the barrier islands range from the default—the kind of rampant growth that has fouled places like Hilton Head—to their preservation as purely natural habitats. Each of these extremes has an ethical vector, an argument about the highest and best use of a scarce resource. And each represents a proposition about the meaning of our inhabitation on the land. The natural environment is the ultimate utopia, a realm characterized by the moral indifference of its laws and the totality of its system. This view is representative of environmental thinking in general, the idea that our moral position in the world derives—in great measure—from the way in which we define our relationship to the sum of forces in the cosmos and by our willingness to subsume our Promethean impulses to a more humble and collaborative view.

This consciousness has begun to produce new patterns of architecture and settlement, and this “green” impulse is legible in a variety of incarnations along the islands. One of the more remarkable of these is Dewees Island, just north of Charleston, a place that proposes a kind of “third way,” intermediate between development and preservation. The project is the brainchild of John Knott, a charismatic builder who, uniquely, gives the lie to the oxymoron of the “enlightened developer.” Over the past 10 years, he has transformed Dewees into a model for the possibility of building communities with

a light lie on the land, simultaneously evoking both the promise and difficulties of constructing truly sustainable settlements.

Like other gated communities, Dewees is enabled by a series of restrictions and by a population that



shares in their intent. Construction is confined to 4 percent of the island's footprint, leaving the rest in its natural state. Each of the 150 lots in the site plan is governed by a code that allows no more than 7,500 square feet to be developed (including the footprint of the house, driveway, septic, cisterns, etc.) and caps the total size of houses at 5,000 square feet. The code sets out a long series of extremely sensible environmental parameters for construction, and designs are vetted by a compliance committee for conformity. No cars are permitted on the island (a ferry shuttles residents and guests back and forth), and the main medium of transportation is golf carts, restricted to a top speed of 17 mph. Roads are graded sand, and existing flora and fauna are rigorously protected. To reinforce the vibe, the development assumes a gently didactic role, abounding with small cautionary and

explanatory labels (“boardwalks protect our dunes”).

The results are very different from the typical coastal pattern. Houses are pulled back from the shoreline and roadways and are largely concealed by native trees,

Houses on Dewees Island (left) are pulled away from the shore and preserve native flora. Development in Noisette will encompass existing communities such as Century Oaks (below).



despite the height generated by the need to raise each structure between 15 and 20 feet above sea level. The experience of the island thus centers predominantly on its natural features, which are scrupulously protected. Dewees's architecture is largely Low Country generic in flavor, and modest, rather than distinguished, in character (notable exceptions are a pair of lovely houses built by Charleston architect Whitney Powers).

The island's harmonies are also

Critique

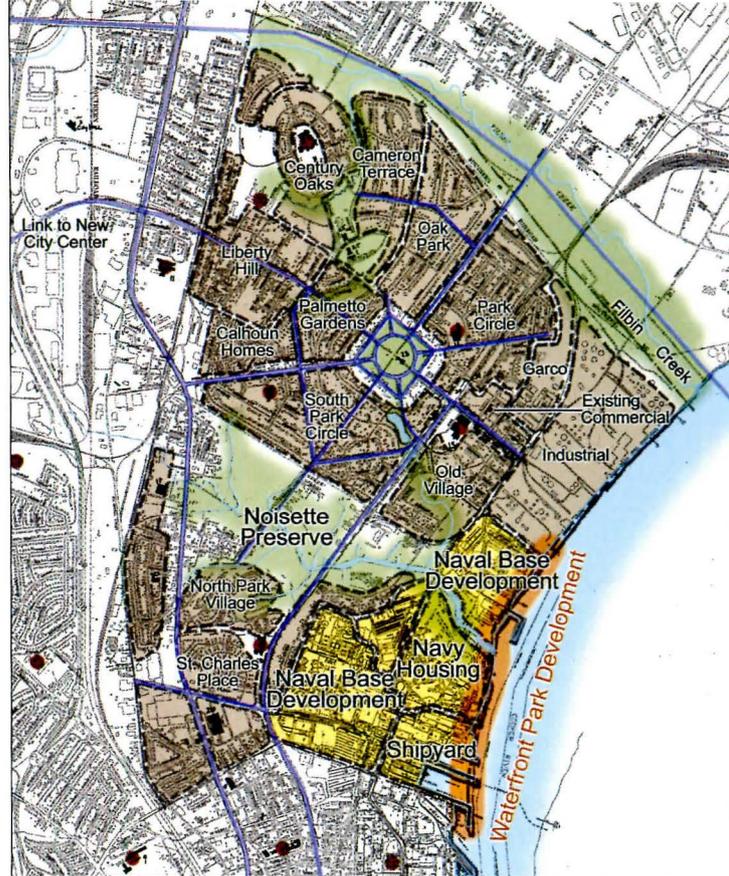
produced by the homogeneity of its inhabitants, people of means with a prior commitment to at least basic principles of sustainability. Successful communities always grow from such commonality of interests, and the question to be asked about enclaves like Dewees is not one about shared values but about those excluded. Knott is dismissive of cavils about the lack of social diversity in the midst of the stunning biodiversity, and he is probably right. A tiny resort island cannot be expected to do the work of transforming an entire culture predicated on distinctions of wealth and class. And working on environmental amelioration is everybody's business.

My own initial skepticism about Knott's project dissipated after watching an encounter between him and two bubbas on the Dewees ferry. One of them approached Knott to ask if he could help out a friend of his, the coach for a local baseball club who was planning to move to greener economic pastures in Florida. The coach's day job was laying out golf courses, and the man proposed to Knott that Dewees would be well served by the construction of a few putting greens to give the men of the island an alternative to fishing and "watching the women swim." Although the Dewees ethos precludes a golf course (the landscape equivalent of an SUV), Knott heard the man out and suggested that he would be happy to talk to his friend if he understood that he'd have to build his green using native species, grown without fertilizer. When the man and his colleague registered perplexity at the latter requirement, Knott explained with exactitude and without a hint of patronizing the negative effects of fertilizer on the environment. The men were clearly convinced, and Knott (whose early Jesuit education reappears in both his environmental fervor and love of argument) had begun another pair on the road to conversion.

But the real proof of Knott's commitment to social as well as environmental justice is made very clear in his current project for the transformation of the city of North Charleston. The development, called Noisette after an 18th-century French botanist banished from Charleston proper for his marriage to a Haitian woman, encompasses both the abandoned Charleston Navy Yard and a series of neighborhoods whose population is 68 percent African-American and largely poor. Knott has partnered with the North Charleston municipality, and planning encompasses 3,000 acres at an estimated eventual cost of over \$1 billion. This is projected to yield 10,000 new and rehabilitated housing units, 3 to 5 million square feet of commercial space, rehabilitation of 13 schools, several new museums, and the creation of a large environmental reserve.

Evidence of the seriousness of the commitment is already visible at a variety of scales. Work has been completed on the conversion of a tiny house to a high green standard to serve as an educational center and model for work to come. Tax-increment financing is in place for major infrastructural improvements throughout the site. A nonprofit sustainability institute has been created. A waterfront park is under construction. The city has overlaid a special environmental district on the whole area, and Mayor Keith Summey has called for Noisette to be "a national benchmark for smart growth." Most remarkably, the city has promulgated and publicized a "pledge" that commits it "to practice 'no tolerance' for gentrification."

The fascination of Noisette springs both from these sterling intentions and from the amazing character and pattern of the site itself. In relatively small compass, Noisette holds one of the most concentrated collections of model communities I have ever encountered, places created with deep



The master plan for Noisette in North Charleston, S.C., incorporates existing communities and offers an alternative to urban sprawl.

deliberation on the relationship of architectural form and social life. While these are not necessarily models to be emulated, they add tremendous complexity and depth to the project. Both happy and sad instances of neighborhood organization make an accidental heterotopia of wild diversity.

The range is stunning. Within the city's boundaries lie the scrupulous hierarchy and elegant architecture of officers' housing on the local naval base; the oppressive uniformities of public housing projects; the elegant dispositions of Park Circle, designed by the Olmsted brothers in 1904; the settlement of Liberty Hill, one of the first communities of freedmen after the Civil War; Century Oaks, a fantasy of tiny identical houses built in haste for workers during World War II; Cameron Terrace, a comfortable middle-class community of curved streets, green lawns, and brick rancheros; and a classic, if frayed, commercial main street, the very idyll of small-town America.

America has a special genius for the creation of such dreams of

order and communality. The South is particularly rich in these fantasies, including the master narratives of the Old South and the Confederacy. And the fantasy abides, sustained by prodigies of exclusion. Just as the South romanced itself with comparisons to ancient Athens, the noble cavalier democracy was constructed (like that of Athens) on the backs of slaves.

Utopia, of course, is as much concerned with the construction of subjectivity as of buildings. Ironically, the one element still lacking in the vision is architecture; but this, one hopes, will come. Most important, the infrastructure of difference already present in North Charleston provides an extraordinary canvas for painting a portrait of 21st-century America as it ought to be: proud of its plurality, wedded to the celebration of nonoppressive diversity, concerned for the future of its natural environment, committed to the idea of generosity and security for all; and open to the new. This is a story I look forward to following closely. ■

Sudjic's *Next* brought the Venice Biennale back to earth, for better or worse

Exhibitions

By Joseph Giovannini

DEPARTMENTS

Venice Biennale: Next. Curated by Deyan Sudjic. At the Arsenale, Venice, Italy, from September 8 through November 3, 2002.

Every two years the international architecture community takes its temperature at the Venice Biennale in a tribal convocation that cuts across national boundaries and continental divides. This year, even China made a strong appearance with highly sophisticated projects. But there is no such thing as a neutral Biennale. Each belongs to the eye, mind, and agenda of the

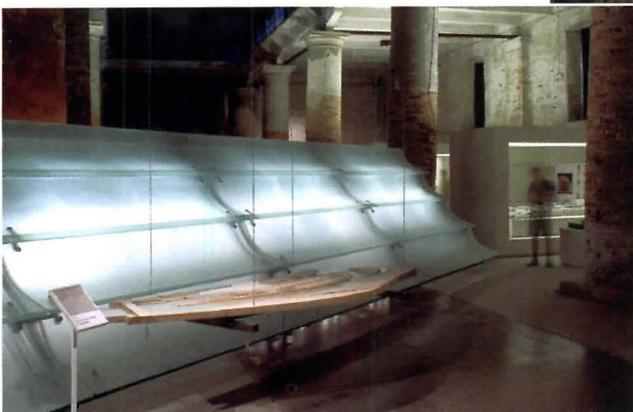
Joseph Giovannini is an architect in New York City and the architecture critic for New York magazine.

appointed director, so Biennales register wide swings of direction as curatorial lenses change. Two years ago, Roman architect Massimiliano Fuksas curated *Less Aesthetics, More Ethics*, a gloriously messy show that emphasized the urban consequences of architecture and the creative instrumentality of the computer. Fuksas's sectional slice through the profession made it appear that the collective architectural imagination had migrated into the computer screen, never to return. The slice implied a concomitant generational shift, with the future belonging to the young maestros of the keyboard.

Deyan Sudjic, director of the 8th International Architecture

Exhibition and editor in chief of *Domus*, took it all back this fall in *Next*, a Biennale that emphasized built and buildable projects and eschewed the often hallucinatory speculations that made the previous Biennale so provocative. Tellingly, one of the essays in the catalog, "The Shock of the Real," was illustrated with a massive, physically imposing concrete convention center by AMP Artengo Menis Pastrana now under construction on the Tenerife waterfront in the Canary Islands. Sudjic brought the Biennale back to earth with a wide-ranging selection of mostly large, sometimes monumental projects by established figures. Sudjic's was an establishment, trickle-down show, unlike

Fuksas's trickle-up interpretation. The individual viewpoint of the Biennale director has become increasingly dominant as the critical mass of exhibitions has shifted from the national pavilions in the Giardini to the vast halls of the Arsenale, where the Venetian fleet was once built. Gradually, over the past decade, the magnificent brick-and-timber warehouses have been restored, so that now any show that fills the Arsenale necessarily exhibits more material than the small national pavilions. There were some strong individual shows in the Giardini (the American pavilion featured Max Protetch's popular exhibition of Ground Zero proposals), but the consistency allowed by



The American Pavilion included a twisted steel member from the World Trade Center (top left). The main show at the Arsenale (above and left) was designed by John Pawson.

Exhibitions

omniscience in the Arsenale makes the Giardini pavilions seem inchoate.

It takes the digestive stamina of an Olympic intellectual to venture into the vast Arsenale, but Sudjic provided enzymatic subdivisions—housing, museums, education, communications, and so on—that broke down the sheer mass of projects. The exhibition kicked off with a Case Study House-type development by Asian architects (including

UNLIKE FUKSAS'S TRICKLE-UP INTERPRETATION, SUDJIC'S BIENNALE WAS AN ESTABLISHMENT, TRICKLE-DOWN SHOW.

Shigeru Ban and Young Ho Chang) next to the Great Wall: The so-called "commune" resembles a suburban enclave. After this initial surprise, familiar names rolled by—Peter Eisenman presented his vast, almost geological City of Culture in Santiago de Compostela, Spain, and Thom Mayne exhibited several large-scale government projects. The next generation also made a strong appearance: From Los Angeles, Michael Maltzan presented a perceptually complex Children's Museum in Pasadena, and Michele Saeed, the Publicis Drugstore, in Paris, where a storm of glass engulfs a bland office structure. One of the standouts was the Hellenic World Museum, in Athens—a complex of curvilinear plans swirling up from the ground—by Anamorphosis Architects of Athens.

For anyone wanting a quick summary of who's who and what's where at this moment in architectural time, the exhibition provided a sweeping synopsis. But because of the show's position on buildability, it added up to an antidote to the 7th Biennale and the computer, rather than one that stakes out an intellectual territory beyond reality architecture. The agnosticism provoked intellectual hunger. What the buildings displayed as a whole was a driving trend to competitive aesthetic invention, tinged perhaps with

a complexity that is an aftereffect both of Bilbao and the fact that computers have been assimilated into practice. Avant-garde figures such as Eisenman, Mayne, and Daniel Libeskind, considered marginal a decade ago, now dominate the mainstream.

The formal inventiveness of the designs suffered from the elegance of John Pawson's very white, Minimalist installation, which under-

cut the design premise of many projects based on the particular, individual, and accidental. With the overcontrolled regularity of a Calvin Klein showroom, the show turned differences among the projects into similarities and eliminated any surprise or sense of rawness. The emphasis on buildability had already demoted the importance of emerging theoretical and social

speculations, but the cool systemization of the presentation, combined with the categorical containment of each section and the projects' large scale, conspired to preclude ideas incubating in more modest projects by emerging thinkers. Architecture's more fragile, emergent ideas could hardly hold their own in this display of maximum splendor. The 8th proved a beautiful but surprisingly conservative Biennale.

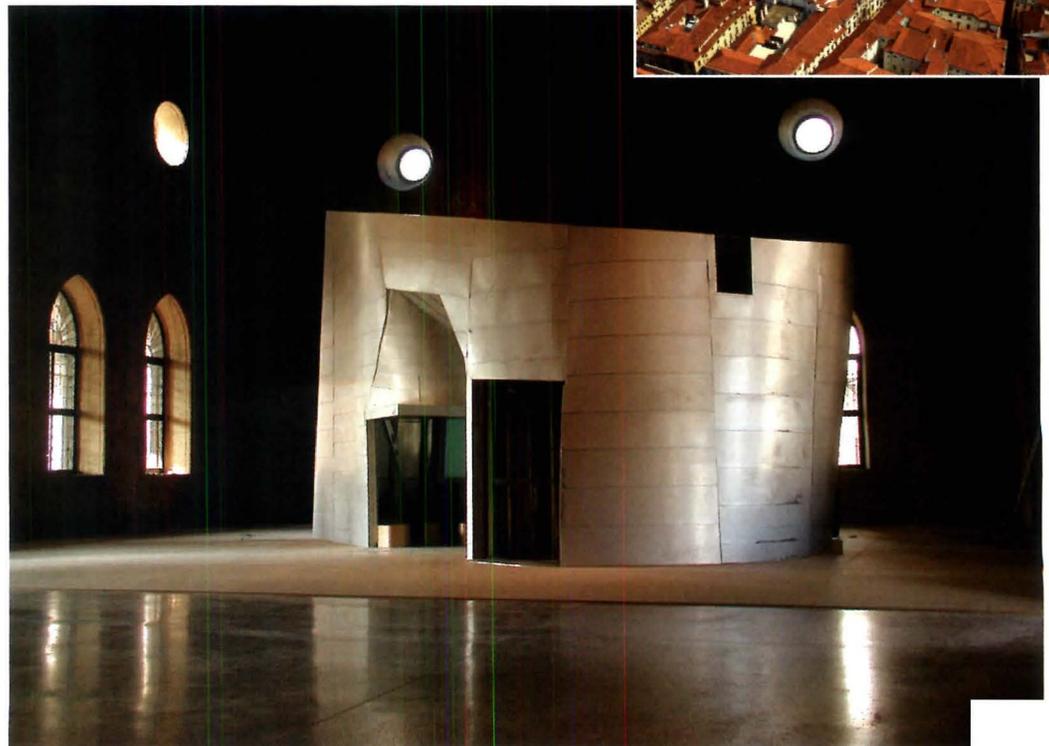
Steven Holl Architect. City to Desert: Density in the Landscape. Organized by Abaco Architettura. At the Basilica Palladiana, Vicenza, Italy. September 5 through December 1, 2002.

While hundreds of architects from around the world shared the stage at the Biennale, Steven Holl had Palladio's Basilica in nearby Vicenza all to himself. Continuing a program that had earlier brought Toyo Ito, Alvaro Siza, Tadao Ando, and others to Vicenza, Holl took over the magnificent top-floor space of the town hall that Palladio reworked in the mid-

16th century. (Palladio called it a "basilica," but it never was a religious building.) While Palladio wrapped a Neoclassical structure around a Gothic one, Holl erected a shiny, Modern pavilion inside it. Made of 32 digitally prefabricated aluminum pieces, the quirky little structure anchored an exhibition that included drawings, models, and photographs of 16 projects Holl has designed for places either on the edge of cities (Schiphol New Town, in Holland, for example, and Dallas Spiroid Sectors) or in their center (the AGB Library, in Berlin; Kiasma, in Helsinki, and others). The metal pavilion is actually the twin of a house Holl is building on a 50-acre desert mesa in Abique, New Mexico. The one in New Mexico, called the "Turbulence House," will be solar powered and emerge from the ground as if it were the tip of landlocked iceberg. The one erected for the Vicenza show will be moved to a sculpture park in Schio, Italy.

Clifford A. Pearson

A prefabricated aluminum pavilion (below) was the star of the Holl exhibition at the Basilica Palladiana in Vicenza (right).



Snapshot



By Raul Barreneche

Imagine architects and planners socializing amicably. What's more, imagine an architect at a computer while a planner lounges leisurely over the back of his workstation, or vice versa. Such blissful commingling really happened last July in an installation at the Berlin Messe, where the Union Internationale des Architectes (UIA) held their XXI World Congress while PlanCom 2002, an international planning fair, took place in an adjoining hall. At the junction of the two wings, beneath a skylit rotunda in the Nazi-era landmark, delegates from both trade shows and disciplines gathered to relax and to preview a new interactive design tool created by the online database Stylepark. The German company hired the young Berlin architect Jürgen Mayer H.—the dangling letter is his badge of distinction from so many other German architects named Mayer—to design an installation in the rotunda integrating lounge furniture, a bar, computer workstations, and a projection screen. Mayer H. created an undulating landscape that blurs the lines between functions while it tries to do away with the physical seams between surfaces.

A groovy lounge makes waves in Berlin



Snapshot

The illusion of a seamless surface from which fluid profiles ebb and flow vertically is just that: an illusion. In reality, Mayer H. laid a linoleum floor and populated it with sinuous solids that work as lounging surfaces, computer workstations, or both, with storage inside. There is also a bar and a projection-screen wall. The wavy forms, roughly 2 feet wide and of varying lengths, were constructed of MDF frames covered in plywood sheets. The tops are clad in linoleum that closely matches the floor; the sides are painted gray to create abstract, high-contrast "shadows."

Mayer H.'s visual sleight of hand suggests linoleum shavings from the ground plane pushed up in shifting fields.

Mayer H. didn't make a single construction drawing: The detailed computer models from which he generated the design were sent via e-mail to the manufacturer, Performa, in southern Germany. The fabricator then fed the data to computer-guided milling machines that cut the profiles from MDF according to Mayer H.'s designs. Like the output, the construction was seamless from design to construction.

The trade fairs in Berlin are long over, but Mayer H.'s lounge may soon reappear in a new "constellation." A well-known product designer is interested in displaying his wares on it at next year's Milan furniture fair, and a design museum may also host it. (The architect doesn't want to name names just yet.) "We really want to have it travel," says Mayer H. "It's an idea of these things being frozen but then 'remelting' or being reused in different constellations." ■

The installation in the rotunda of Berlin Messe, a convention hall, integrated lounge furniture (below), a bar, computer workstations, and a projection screen (previous page).



By Raul A. Barreneche



Although she bristles at the label and says she doesn't think of herself as a "woman architect," Zaha Hadid is the best known, most important female architect in practice today, perhaps in history.

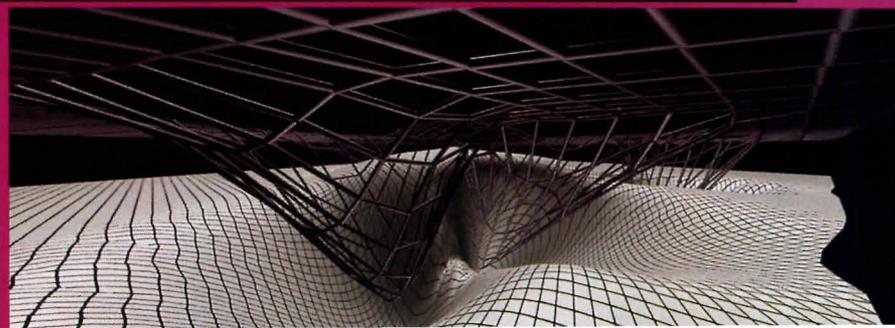
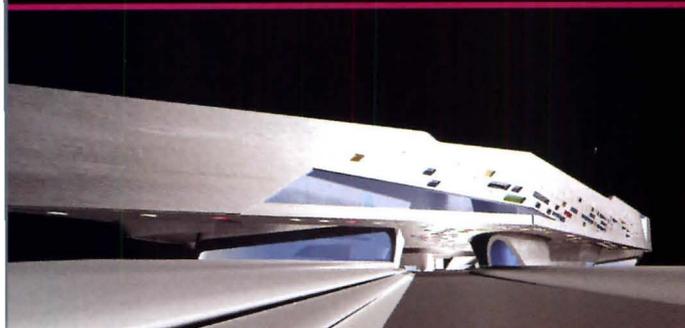
Zaha Hadid

prepares for **mainstream success**

After decades at the edge, her new high-profile buildings prove that she's no paper architect

Her inventive, highly idiosyncratic work, not to mention her irascible personality, have been grabbing headlines for two decades, since her 1983 design for a restaurant atop the Peak in Hong Kong instantly put her on the architectural map. Since then, legions of devoted fans (some might call them groupies) and as many detractors have closely watched the well-documented ups and downs of her career. Her supporters cheered when—gasp—she finally built a building, a fire station at the Vitra campus in Germany in 1993. They shared her outrage when the plum commission for the Cardiff Bay Opera House, which she won twice in competition, was rescinded in 1996 amid a well-publicized political firestorm. Years later, the debacle still leaves Hadid with a bitter taste. Skeptics, meanwhile, *(continued on page 78)*

Contributing editor Raul A. Barreneche is currently at work on a new book about tropical Modernism, to be published next fall.



A Grand Leap: The Innsbruck Ski Jump

When asked if she skis, Zaha Hadid winces and is soon reminiscing about basking on the warm beaches of Beirut and Baghdad. Though she's not a skier, it's hard to imagine a project better suited to her talents than a world-class ski jump. Her well-established affinity for sloping and dynamic forms makes her a natural to design a quintessential larger-than-life ramp: the Bergisel Ski Jump in Innsbruck, Austria.

In 1999, Hadid won a competition to replace an obsolete jump that had served in the 1964 and 1975 winter Olympics. The new course, solely for top-level competitors, needed to meet current international standards while integrating a public café and viewing terrace into its tower. The architect responded with a single and remarkably fluid gesture: a continuous, steel-clad "ribbon" that wraps the café, atop a 160-foot-high concrete tower, and pitches downward, becoming a 327-meter run that swoops into the steeply raked stadium, still rimmed by Olympic torches. In a gravity-defying feat—echoing the act of jumping—the café cantilevers 43 feet off the concrete core (which houses paired elevators for visitors and jumpers). The single, sweeping new shape—sometimes likened to a cobra or a high-heeled sandal—appears, much as Hadid had envisioned it, "to extend the topography of the slope."

Structurally, the challenge was to provide a precisely calibrated regulation curve with virtually no movement. The solution combines a massive cantilever (effectively a supertruss) for the café with a modified Vierendeel truss (a slanted 196-foot span with one moment connection at the top and another at the bottom) for the jump.

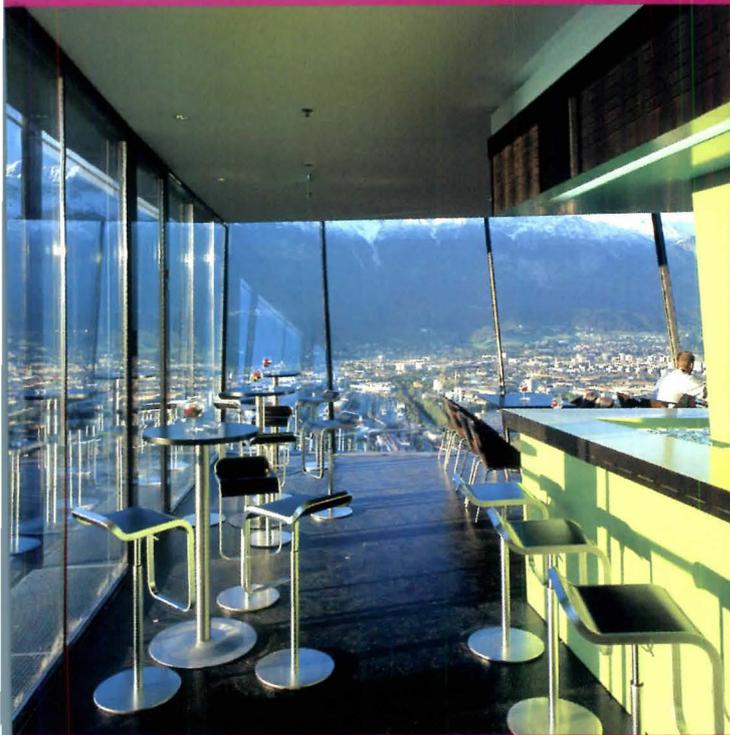
Making matters even trickier, the jump had to be completed in under a year, so that Innsbruck could remain a host site for a prestigious annual competition. (The course was ready on time, but the café remained under scaffolds, draped with a banner, for the maiden event last January.)

Unlike its predecessor, this course is usable year-round—with or without snow. In warm weather, competitors head down the enameled track and land on synthetic turf. But like its predecessor, the new jumpers' perch frames an eerie view of a local cemetery at the bottom of the hill, right on axis with the course.

Visible along the main approaches from Germany and Italy, the tower has become a local landmark, with some 1,000 to 2,000 visitors ascending it daily. People have even asked to hold weddings up there. —Sarah Amelar

Credits

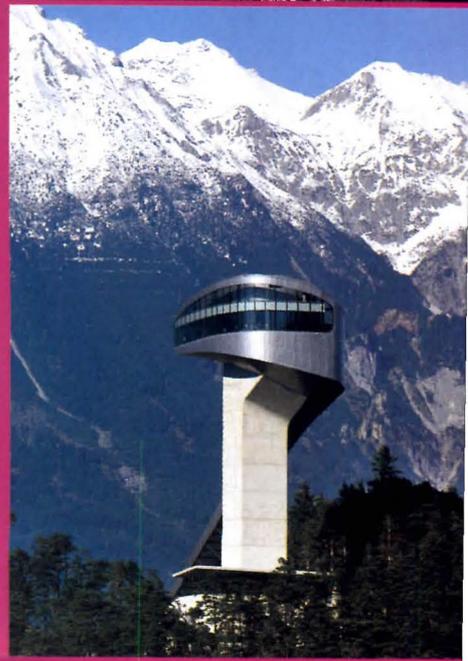
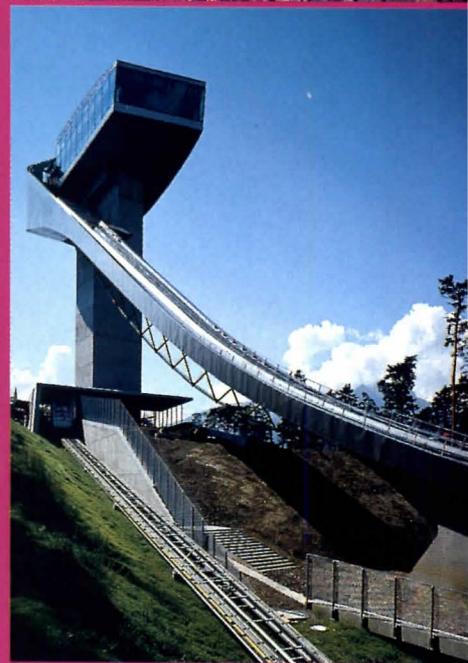
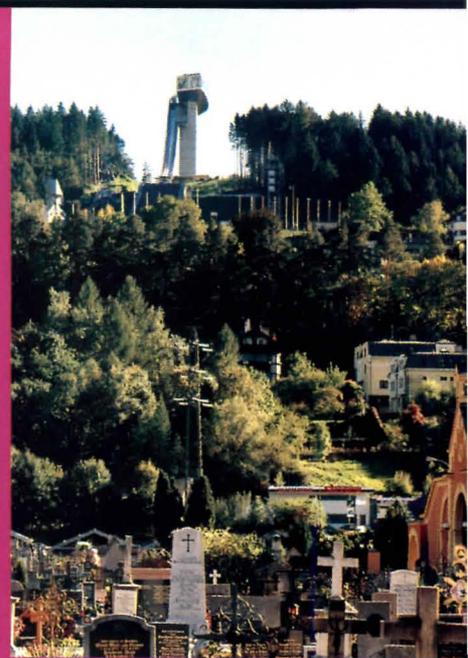
Architects: Zaha Hadid, design principal; Jan Hübener, project architect; Matthias Frei, Cedric Libert, Markus Dochantschi, Garin O'Auwazian, Jim Heverin, Sylvia Forlati, Sara Noel Costa de Araujo, project team; Markus Dochantschi, Jan Hübener, Ed Gaskin, Eddie Can, Yosash Oster, Stanley Lau, Janne Westerman, competition team





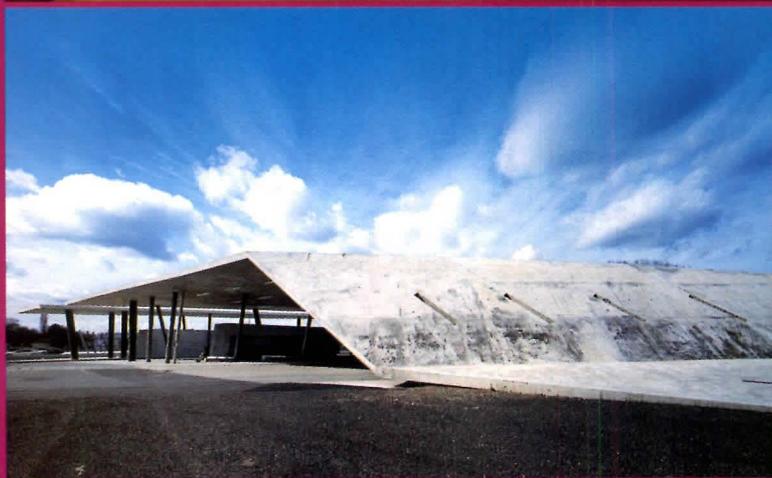
The café's cantilever gives visitors the sensation of hovering directly over the jumpers (opposite, top), sharing the daunting view down the slope (opposite, bottom). A steel-clad "ribbon" wraps the

concrete tower (above and bottom right), and a Vierendeel truss supports the ramp (center right). At the bottom of the slope, a cemetery lies on axis with the course (top right and opposite, bottom).





The car park and tram terminal Hoenheim-Nord, in Strasbourg, France, is a kinetic composition of angular light posts, columns, and a folded concrete canopy.



ZAHA HADID (continued from page 75) savored each new project as an opportunity to deride her as a paper architect better suited to the drawing board than the construction site. They relished the paucity of Hadid's built work, encompassing more interiors, stage sets, and museum installations than buildings, and seethed at the attention that elevated Hadid to something of rock-star status. The press, from professional journals to Tina Brown's defunct *Talk*, built up Hadid's grand persona by giving as much ink to her sometimes acerbic attitude and arresting attire as to her architecture.

One can already hear the exasperated groans and grumbling sotto voce. "Another story about Zaha Hadid?" It's true: The London-based architect isn't exactly breaking news. What is novel is that 20 years after the Peak, Hadid is still breaking new ground. She is shaking off the mantles of "con-

"MY AMBITIONS HAVE NOT NECESSARILY SHIFTED, BUT I'M MUCH MORE STRATEGIC NOW."

troversial" and "diva" (and even "deconstructivist") that have followed her for so many years and settling into a period of more mainstream success. She is winning more complex and high-profile commissions on a seemingly regular schedule, most recently a large factory and offices for BMW in Leipzig, Germany, and an arts center in the shadow of Frank Lloyd Wright's Price Tower in Bartlesville, Oklahoma. Hadid is in top form these days, more secure in her position as one of the leading figures in architectural discourse.

This year, Hadid will unveil a series of major projects that will double her oeuvre of built work. The Rosenthal Center for Contemporary Art in Cincinnati, the first U.S. museum designed by a solo female architect, is set to open in May; a science center in Wolfsburg, Germany, and a ferry terminal in Salerno, Italy, will open in 2004. The next few years will see the completion of a large contemporary arts center in Rome; a sprawling master plan for a "science city" in Singapore; the BMW project; and, fingers crossed, a bridge in Abu Dhabi, the United Arab Emirates; a cinema in Barcelona; and a Guggenheim branch in Tokyo. Love her or hate her, Hadid's time has come. "It's definitely an interesting moment," admits Hadid. "I didn't really have a 20-year plan, but I always planned to change the system and ultimately do the 'theoretical project,' whatever it might be. My ambitions have not necessarily shifted, but now I understand what is achievable and not achievable. I'm much more strategic now."

Building bigger projects in more far-flung locations—and more of them—is, by necessity, changing the very nature of Hadid's practice. She now has projects on-site on three continents and 45 people spread out among three different spaces in her overcrowded London studio. The office is no longer just a hive of eager young theorists slaving

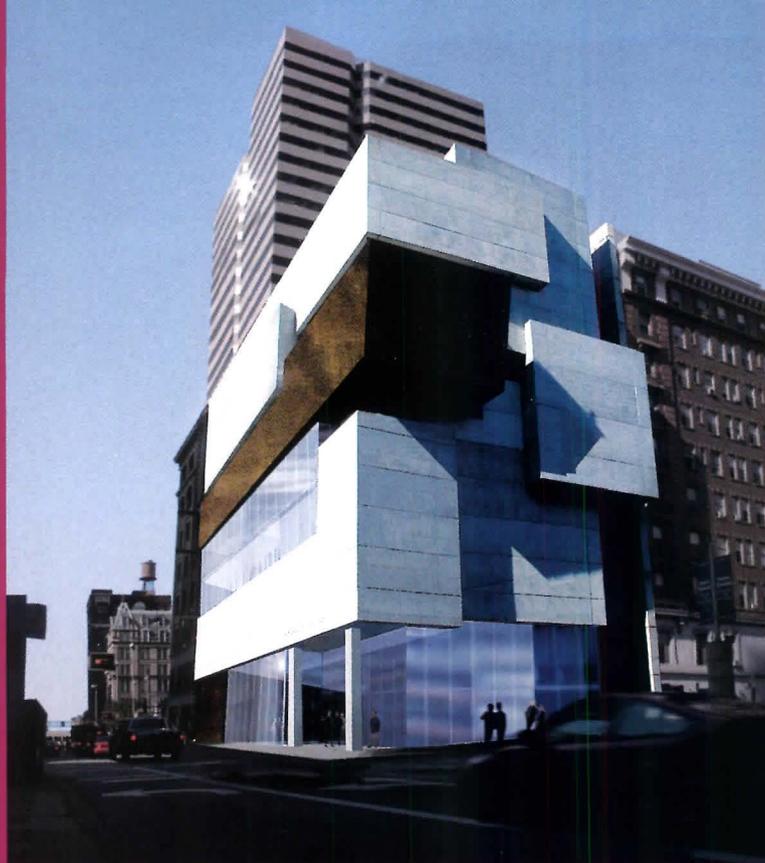
T I M E L E S S

E G E N D A R Y

H O W D O Y O U D E F I N E A C L A S S I C ?

U T H E N T I C

E N D U R I



Hadid's first U.S. building, the Rosenthal Center for Contemporary Art (top) will open on a prominent corner in downtown Cincinnati in May.

over competition entries, but also of project managers and site supervisors. With a dizzying schedule of client meetings and site visits to Europe, Asia, the Middle East, and America, as well as teaching engagements and lectures around the world, Hadid has to learn to share the reins. She already does to a degree: In public and private, she is quick to credit designers in the office with getting projects off the ground. She makes it clear that she is the leading creative force in the office, but by no means the only one.

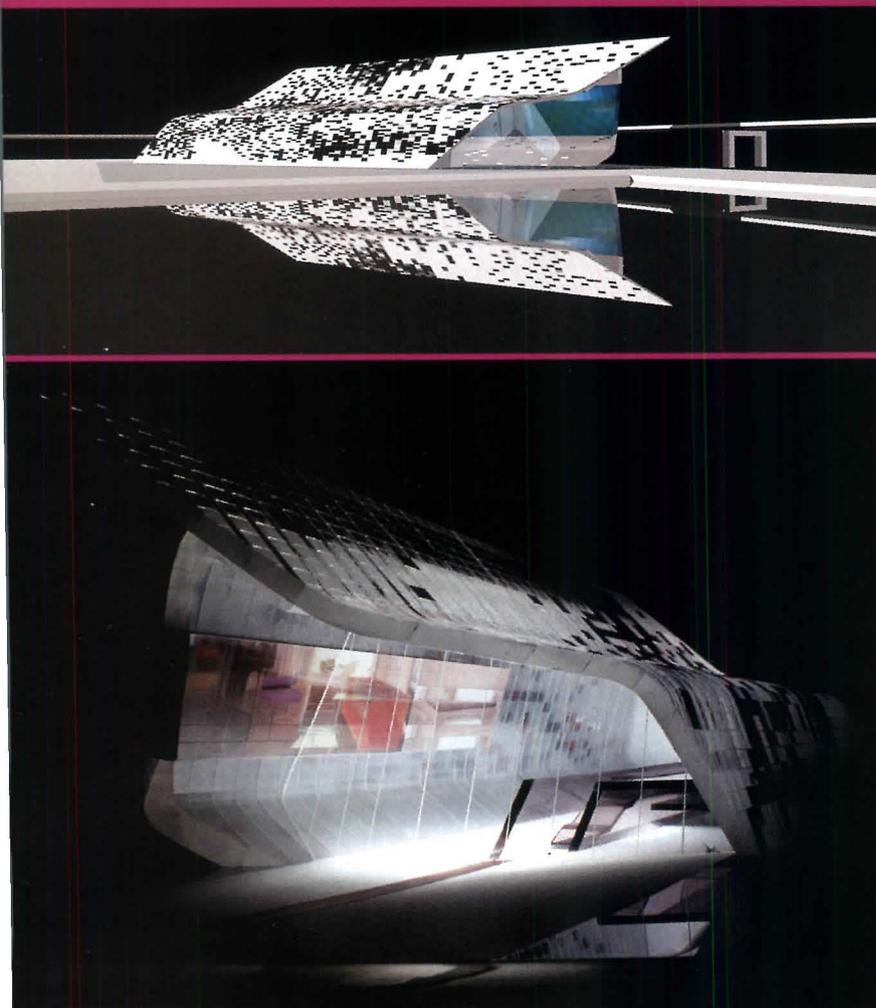
Hadid's output is also evolving significantly. It's not just that she is finally building with some regularity and tackling larger projects in more widespread locales. Hadid's most recent projects are giving discernable form to her longstanding ideas about fluidity, porousness, and the relationships between buildings and site. Implied motion and the seamless interplay of landscape and structure have been important themes in her kinetic paintings and built work, but it has been difficult to read the full impact of her ideas. Her groundbreaking renderings are nebulous, and the built projects have been too small to gauge the full formal and spatial possibilities of her design methods. Still, it's possible to read the sweeping lines of projects such as LF One, a pavilion for the Landesgartenschau in Weil am Rhein, Germany (1999), and an intermodal transit station she completed in Strasbourg, France, early last year as concretized motion generated from their distinct contexts, one

THE OFFICE IS NO LONGER A HIVE OF YOUNG THEORISTS SLAVING OVER COMPETITION ENTRIES.

pastoral, the other suburban. Her recent design for a new ski jump in Innsbruck (see related story, previous pages) is nothing if not motion incarnate, a single gestural line unfurled from the elevator tower in a strikingly clear condensation of athletic movement. Hadid's newest projects take her approach to making fluid connections between building and site to denser urban contexts. "People are starting to get it, though my projects have always been about the city, not just the object," she maintains.

Her designs have much to offer as urbanistic proposals. The Rosenthal Center for Contemporary Art in Cincinnati will draw visitors along a flowing ramp she calls an "urban carpet." The ramp conceptually extends the street and the activity of the city into the building, winding its way

Hadid's winning design for a Tokyo branch of the Guggenheim Museum features a folded, pixelated enclosure rising from the edge of Tokyo Bay (bottom two).





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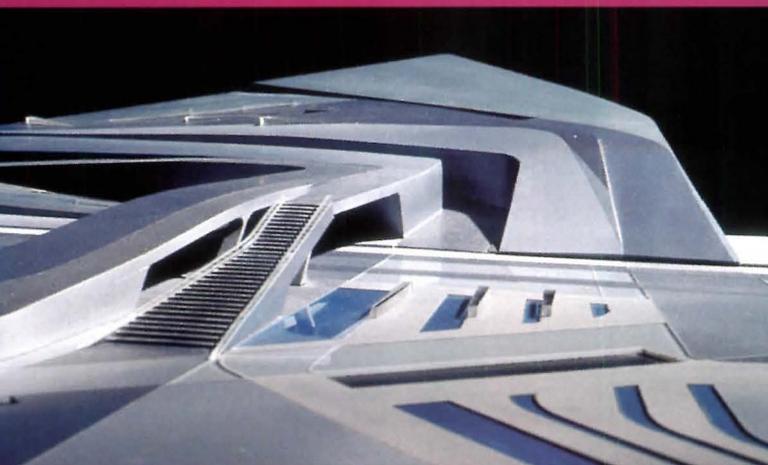
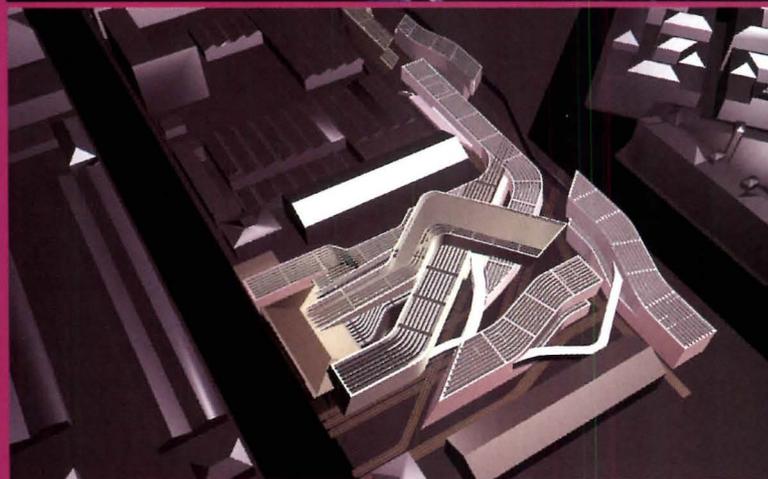
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The Contemporary Arts Center in Rome (top two) is composed of fibrous, interlocking volumes.

up through galleries within a kind of constructed indoor landscape. The “urban carpet” is both a formal device and a circulation system that ties together building and context. Her design for the Contemporary Arts Center in Rome makes sweeping, neo-Baroque architecture from interwoven paths of activities—force fields and trajectories, as Hadid describes them—resembling freeway overpasses or computer cables. Some of these paths trace existing movement through the dense urban site; others describe new intended paths of circulation through the complex of interlocking volumes. The result is a dynamic ensemble sensitively integrated into the city, generated not from a willful artist’s brush, but from an urbanist’s analysis of the city quarter.

For all its perceived avant-gardism, Hadid’s architecture is remarkably democratic. That accessible, open attitude reflects the architect’s formative years at London’s Architectural Association (AA) in the 1970s, where she studied after receiving an undergraduate degree in mathematics from the University of Beirut. The AA, says Hadid, pushed her to investigate the social aspects of architecture rather than purely formal issues. As she told an interviewer from *The Cincinnati Enquirer* this fall, what appeals most to her about Modernism is that it “deals with contemporary life. One major aspect of modern life or mod-

FOR ALL OF ITS PERCEIVED AVANT-GARDISM, HADID’S WORK IS REMARKABLY DEMOCRATIC.

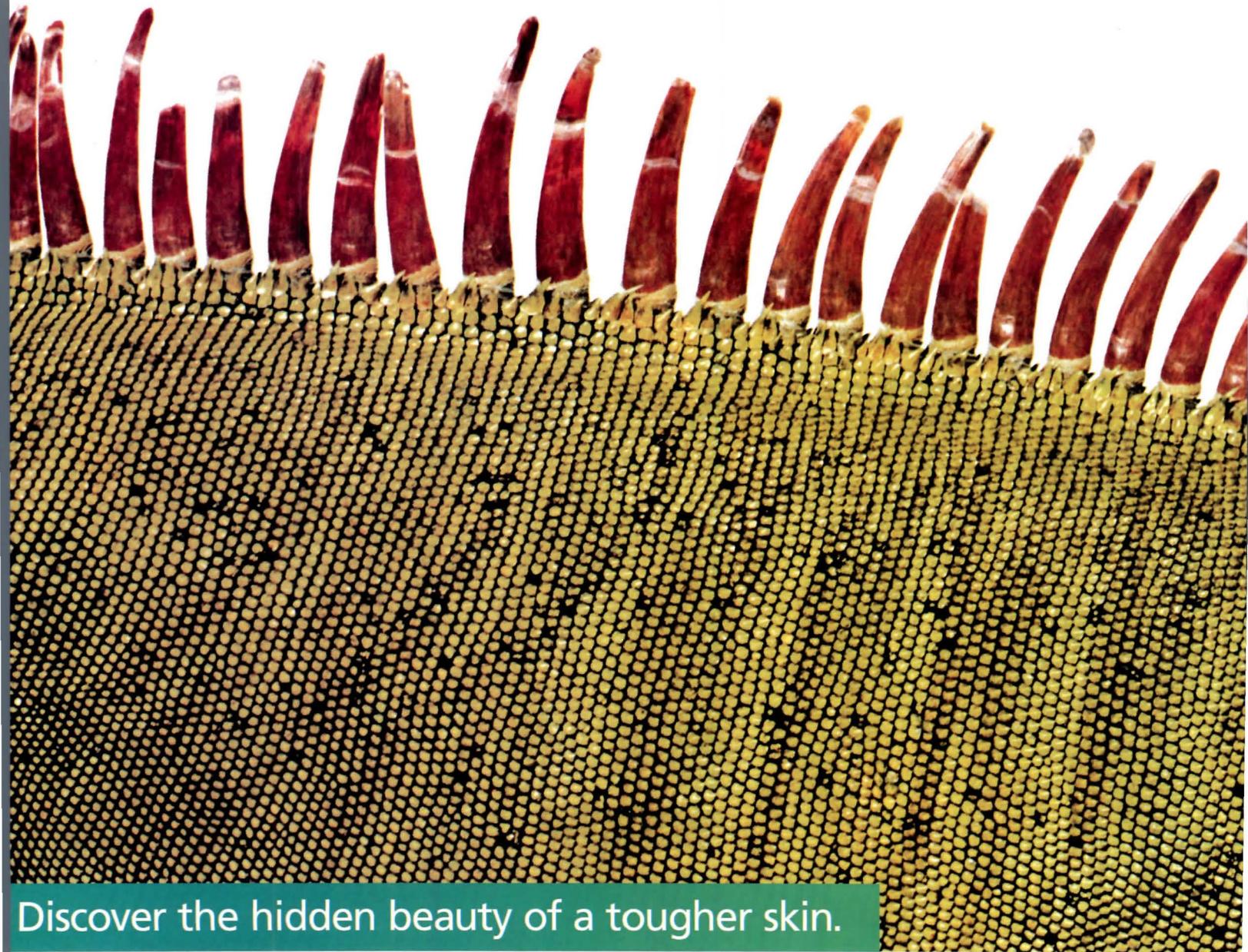
ern architecture is the acknowledgement of civic space [and] public life.” There is certainly a mathematical precision in Hadid’s work that reflects her previous academic training. But architecture has always been her goal. In that same interview, Hadid explained that she “always wanted to become an architect [from] the time I was 11 years old,” before she even knew what “a person who does projects on buildings” was called.

The Vista Master Plan in Singapore takes her approach to urban space one step further. Her plan covers 190 hectares with mixed-use activities and transportation infrastructure to serve 50,000 residents and 70,000 workers near the center of the city. Rather than segregating housing, industry, commerce, and recreation, Hadid combined these functions into a vibrant “parkscape” that will extend the city organically. She carved new parks and public spaces from an undulating, pulsing grid of new fabric. “It’s not a formalist exercise; it’s a way of reorganizing space,” Hadid suggests.

This is exactly the kind of large-scale project she

Hadid’s plan for a commercial center and cinema in Barcelona’s Plaza de las Glorias (left) will span existing railway lines.

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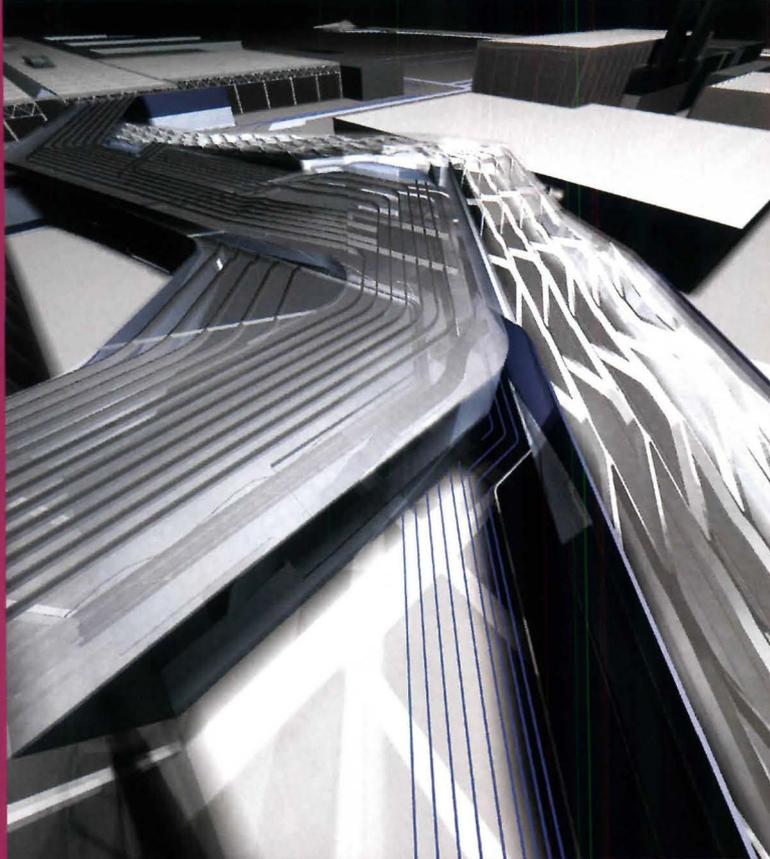
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Gypsum



Hadid recently won a competition for a new factory and office complex for BMW in Leipzig, Germany (top).

wants to do more of. “People still think there’s a disparity between a large urban project, a master plan, and architecture. I think there’s continuity between all these things. My goal is to achieve the ideas of complexity and fluidity on a large urban scale,” she says. “We’ve been trying to do that in a series of competitions, but we haven’t won them yet. The Rome project comes quite close to that overall view, but architecturally it’s still a museum made of pieces.”

Hadid is on a roll, but she has yet to build anything in her adopted hometown. “It’s a bit ridiculous that all of these things are happening outside of London. It’s frustrating that I’m sitting in London with no work here, even though the development of the work is an outcome of living here, watching a city that is so complex,” Hadid laments. “There are so many bits and pieces and strange adjacencies of large structures next to low-income housing and such. I think it’s a shame—it’s a city I know very well after living here almost 30 years.”

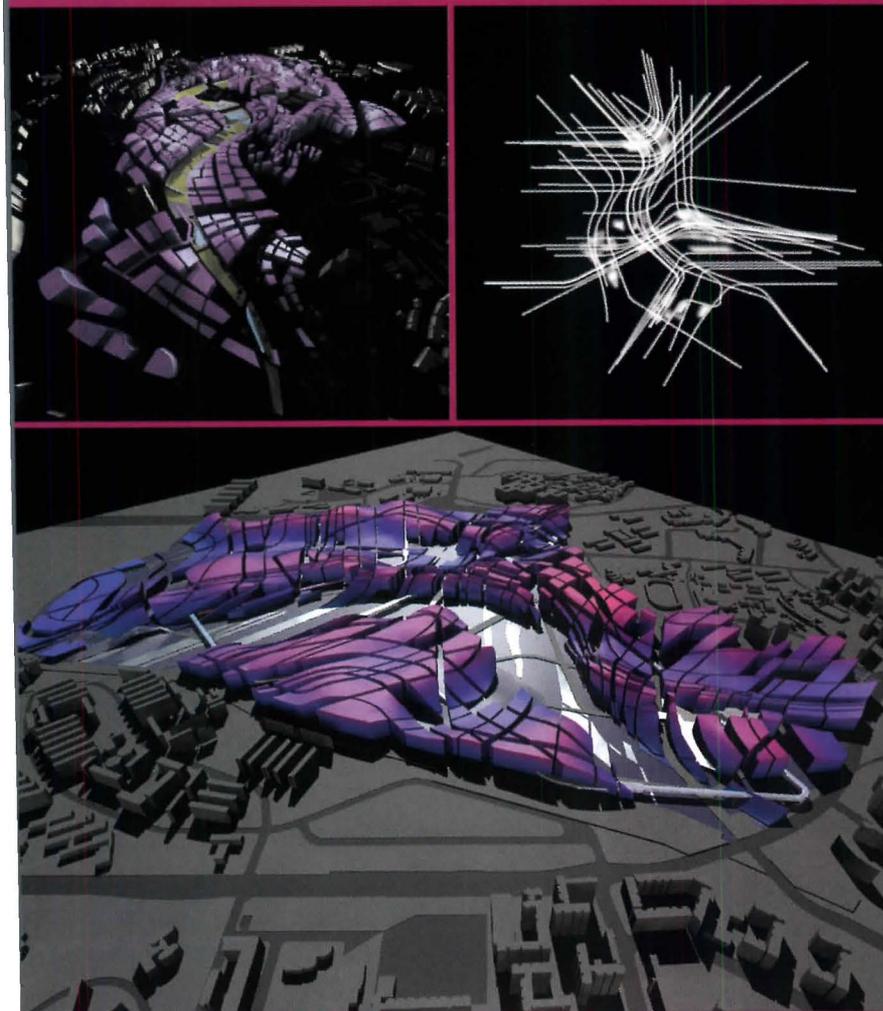
Somewhat shockingly, Hadid received the honor of Commander of the British Empire from Queen Elizabeth II in December—a very prominent accolade, given that the establishment has yet to award her a single major commission in the U.K. Some in the British press wondered aloud if the honor was about assuaging guilt over the fiasco in Cardiff. “I’m surprised I even got it,” Hadid admits, “because I haven’t

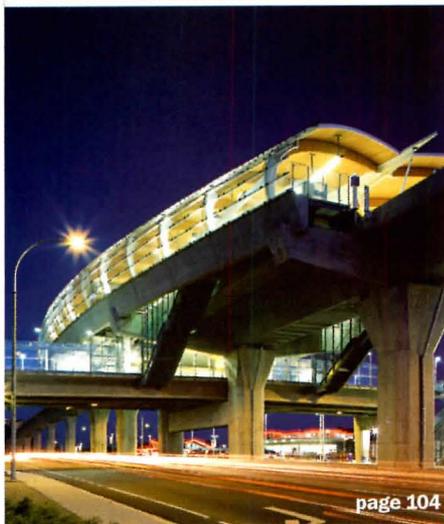
HADID IS ON A ROLL, BUT SHE HAS YET TO BUILD ANYTHING IN LONDON, HER ADOPTED HOMETOWN.

built anything here, even though there have been ample opportunities to give me work. It’s a very strange recognition. The problem is that I’m not seen as a commercial architect, even though I’m sure I’d do a very good office building. And there are no housing projects and no program for cultural buildings, so I’m stuck.”

She’s also “stuck” because she remains something of an outsider despite a high public profile at home in Britain, boosted by coverage of the Cardiff debacle. She is a stalwart, independent, Iraqi-born woman who refuses to bend her strong will to appease proper society. Meanwhile, male peers like Norman Foster and Richard Rogers have been honored with knighthood and lordship, not to mention choice commissions at home and abroad. If Hadid does reach Foster’s and Rogers’s level of multinational success—perhaps as Dame Zaha Hadid—rest assured it will be on her terms. After 25 years of practice, she is still breaking all the rules. ■

Hadid’s dense, fluid master plan for Singapore’s Science Hub (bottom three) will house 50,000 residents and 70,000 workers.





GOING PUBLIC

WHETHER CIVIC OR PRIVATE,
FOUR PROJECTS DECLARE THAT
THE PUBLIC REIGNS

Even private buildings have public responsibilities. As designers, we give lip service to people we euphemistically call the “end users,” a broadly defined group. For community buildings with obvious civic goals, the end users constitute the citizenry that such buildings serve. For corporate buildings, however, the question becomes more problematic: What civic obligations do such buildings owe to the city, to its inhabitants, to visitors, or to passersby?

This month, ARCHITECTURAL RECORD presents four diverse projects that attempt, in part, to answer those questions. At the headquarters of the ING Group in Amsterdam, architects and clients agreed on visible monumentality and symbolic transparency as ways of engaging private interests in the public realm; in Japan, the architect Hitoshi Abe employed similar means for a much smaller community center. While the general public finds obvious attraction in Vancouver’s new elevated rail system, the inhabitants of the Max Plank Institute in Dresden form its true public, encouraged to enter its transparent walls and aided by its ample public spaces in the communication essential to their work.

All four invite attention and entry; all four speak in the language of openness and light. Whether public or private, all four create welcoming public realms—because in 2003, the public reigns. *Robert Ivy, FAIA*

Sixteen steel legs support the steel "table" on which the ING headquarters stands (seen here from the east). Remarkably, the building contains eight interior gardens, one of which is a loggia between the inner and outer glass skins on the ninth through 11th floors. From across the train tracks, the center of the building's northern facade (opposite) reveals a large rectangle—the "Jungle Garden" on the fourth floor.



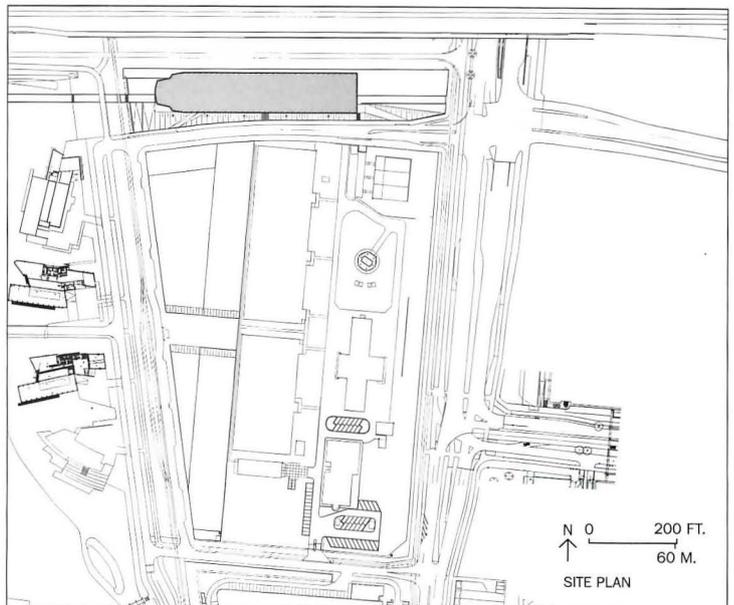
Meyer en Van Schooten's new headquarters building serves up a striking feast of glass and steel, and gives the **ING GROUP** an unforgettable place in the Dutch landscape

By Tracy Metz

It used to be that banks were heavy, solid places for actually storing money. Now, however, in a time when finance has gone global and virtual and the public role of corporations has changed, other characteristics matter more: Today, trustworthiness is translated as transparency. ING House, front office of the multinational banking and insurance concern ING Group, is therefore made of glass and steel. From the highway, you can look right through it to the meadows beyond. "The form was determined by the function," says architect Jeroen van Schooten, "although of course we then shaped it."

This classical starting point of form following function resulted in a unique building that bears no resemblance to anything that went before. The project's costs are a carefully guarded secret, but the building world knows for a fact that this is by far the most expensive corporate headquarters in the Netherlands.

When ING Group decided in 1997 to build a new headquarters for 450 favored employees, four firms—all of them Dutch, to emphasize the multinational company's national origin—were invited to present their ideas. In giving this complex and prestigious commission to the relatively small and young Amsterdam firm of Roberto Meyer and Jeroen van Schooten, who were then just barely 40 years old, the ING Group confirmed Holland's reputation for trusting its young architects. They had made a name for themselves with the master plan and new head office for the company called Kema in Arnhem; a striking building for an orthodontist's practice in Almere; the makeover of a waterfront warehouse into a furniture showroom; and, of course, their own office—a factory hall in a former railway dockyard that they divided into working spaces with bright blue metal sea containers. Their newest commission, with two other firms, is a Science Center for the University of Amsterdam, to be completed in 2007. They make polished buildings infused by a love of technology and aesthetics in equal parts, using sleek materials like glass and steel in ways that not only look high-tech but are. ING House would not have been possible without computer programs



Project: ING Group Headquarters (ING House), Amsterdam
Architect: Meyer en Van Schooten Architecten—Roberto Meyer, Jeroen van Schooten, project architects; Barry van Waveren, project leader; Jean Marc Saurer, Eric Mesman, Arno Compas, Martien Borggreve, Jùliette

Haenen, Felix van Bommel, Christian Quesada van Beresteyn, project team
Interior designer: Designgroep Trude Hooykaas and Meyer en Van Schooten Architecten
Landscape architect: Michael R. van Gessel
Project manager: IPMMC Vastgoed

Tracy Metz is RECORD's correspondent in Holland and is the author of the book Fun! Leisure and Landscape, released in September 2002 by NAI Publishers.



from the auto and aviation industries. That can be clearly seen in the auditorium that cantilevers out more than 20 meters on the west side. The rounded aluminum corners have the look of the aerodynamic Machine Age aesthetic, but in fact they were individually made in specially designed molds, with a craftsmanship otherwise associated with unique, handmade pieces. The seamless transition between glass and steel permits rounding corners and curves with surprising ease. “We use glass

**ING HOUSE WOULD NOT HAVE BEEN
POSSIBLE WITHOUT COMPUTER
PROGRAMS FROM THE AVIATION INDUSTRY.**

and steel differently from the dogmatic Modernists of the 1920s,” states Van Schooten. “Then, there always had to be a congruence between shape and material—that was part of the doctrine of ‘honesty.’ We don’t have a dogma, or if we do, it is the congruence of technology and beauty. Here the form takes pride of place. The form was determined by the narrowness of the plot, and by the fact that the building had to be raised up to the level of the highway. Also, the context played a part, starting off low in the west toward the small-scale landscape of the lake, and rising toward the high-rises of the new financial district. One of those high-rises, inter-





The "nose" of the auditorium (opposite, top) cantilevers 23 meters in the direction of the Nieuwe Meer lake to the west. A stone path leads cars to the underground parking garage, located at ground level below the auditorium (opposite, bottom). On the southern facade (this page), one can clearly see the transition from the "belly's" aluminum covering to the glass, all within one plane. On this facade each floor has its own motor-operated louvers for climate control.



An informal circulation route of relatively narrow stairs can be seen on the southern facade (this spread), slotted between the inner and outer skins. The width of the space varies greatly throughout the building, from 40 centimeters (just enough for the window washers), to 20 meters, to accommodate one of the inside gardens.





Looking up from the glazed walkway east toward the main entrance (top), one can see all the way up to the eighth floor. In the foyer of the auditorium (bottom), huge tension cables hold up the cantilever.

estingly enough, is the ABN Amro Bank, by Pei Cobb Freed.

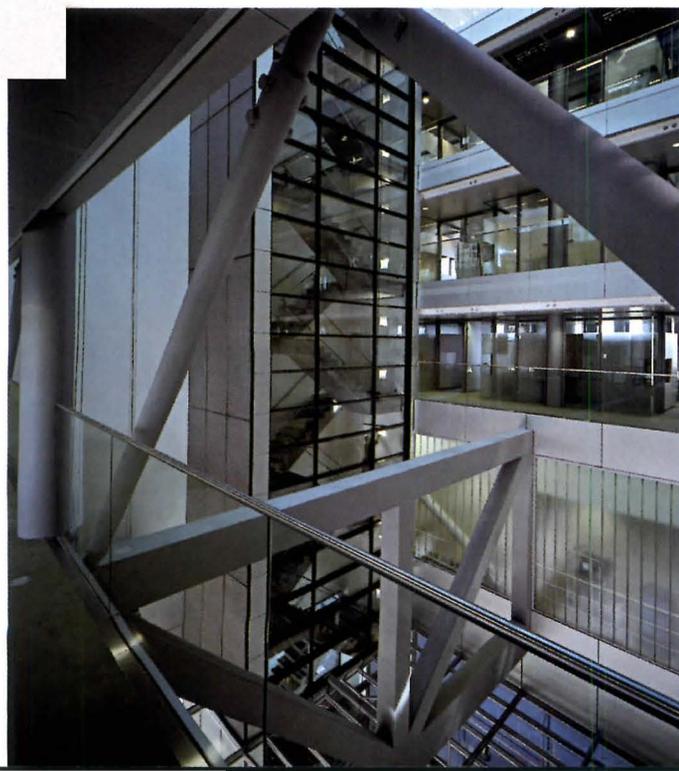
ING House stands along Amsterdam's ring road, pointing with its "nose" to the water of the Nieuwe Meer lake to the west and nodding at its full 11-floor height to the new business district to the east, the so-called South Axis (Zuidas) between the city and Schiphol airport. The long and narrow plot places the building a mere 25 meters from the highway, forcing the architects to deal with exhaust fumes and noise, while at the same

ING'S BRIEF STIPULATED A HEADQUARTERS BUILDING THAT WOULD LAST BETWEEN 50 AND 100 YEARS.

time addressing green issues such as energy conservation and personalized climate control. Indeed, they chose this spot because of optimal visibility, but also because it is between the existing city and the new financial district. ING's brief for both the program and the atmosphere stipulated a building with a structure and facades that would last from 50 to 100 years. "It therefore had to be a durable shell that provides sufficient flexibility inside for future developments in work situations," says Meyer.

Moreover, an elegant solution had to be found for the 5-to-6-meter difference in height between the ground and the raised highway.





The solution was to construct the building on a steel “table” supported by 16 slender, V-shaped legs. Using a well-known technique in bridge building, these Vs meet in colossal cylinders resting on pins in large steel blocks sunk into the ground.

A low-energy building made of glass? The glazed skins of the facades vary depending on their orientation. To the north, next to the highway, the exterior skin buffers the noise and the fumes. Fresh air is drawn into the space between the two glass skins through the belly. From inside each office, workers can operate their own windows by computer or remote control, automatically closing off the space from the central climate control.

Louvers on the southern facade, each with its own individual motor, open and close centrally and open automatically when the temperature along this facade, the warmest one, rises. That naturally created breeze thus reduces the cooling load.

ING had taken it upon itself to meet strict energy norms, and combined three approaches: The climate facades, the double skin, and a natural aquifer 120 meters under the building. The climate control consists of both chill ceilings and ventilation. The water from the aquifer is pumped from the cold layer to the warm layer, thereby producing energy for the climate installations.

ING House is a mere 28 meters wide, 136 meters long, and at



The sloping roof of the restaurant on the seventh floor (opposite, top) is double glass outside and single glass inside, with sunshades in between. The steel load-bearing construction can be seen from one of the two atria (opposite, bottom). Glass stairs connect the ninth and 10th floors (above), used exclusively by the board of directors. Maplewood walls and Mies van der Rohe chairs are featured in the board's stylish dining room on the ninth floor (right).





the highest point of its 11 floors, 48 meters tall. Of the 20,000-square-meter surface area, less than half is devoted to offices and the rest to the auditorium, restaurants, meeting rooms, generous circulation space, and the eight interior gardens. The plan of each individual floor is therefore different. The board of directors and the executive committee occupy the top three floors, which are connected by glass stairs. The offices are separated by cabinets with double glazing along the top, bringing in light and providing acoustic privacy. In addition to offices, restaurants for both personnel and executives, an auditorium with 250 seats, meeting rooms, a lounge, and underground parking for 160 cars, the building contains eight interior gardens. Meyer en Van Schooten suggested that “green views” from all the workspaces would improve the atmosphere and workers’ concentration. The eight gardens, designed by landscape architect Michael van Gessel, not only provide views but are also places where workers can meet and gather. The vegetation varies from bamboo on the ground floor to fig trees on the third, potted palms on the sixth, and sturdy pines as well as potted bougainvillea on the eighth. The gardens serve as orientation points and make it possible at various places to look diagonally all the way through the building. That even applies to the floor of the meeting room of the board of directors, which is partly of glass and allows a vertiginous view into the lounge and the roof terrace below.

The architects decided against the usual standard width of 1 meter 80 in favor of 1 meter 20. ING not only wanted open-plan offices, but also quiet work cells. ING House is a completely autonomous object, evocative of some sleek gadget that you can slip into your pocket and fondle, like the newest model mobile phone or MP3 music player. At the same time, it serves as a *trait d’union* between the small-scale rural landscape of boats, pavilions, and a new jetty at the lake and the high-powered high-rise financial district. What until recently was a nameless bit of no-man’s-land next to the highway has been transformed into a landmark. ■

Sources

Aluminum cladding: Sorba Projects

Glass curtain wall: Glaverned

Windows: A. Gerritzen

*Timmerfabriek; Nelissen; Widam nv
Aluminiumbouw*

Ceilings: Inteco; Verwol

Cabinets and custom woodwork:

Smeulders Interieurwerken

Office furniture: Ahrend

Fixed seating: Poltrona Frau

Lighting: Fagerhult; Reggiani; Erco; Bega; Wila; I Guzzini; Kreon; Philips; Etaloid; Atomis Uplighters; Marlin Lighting

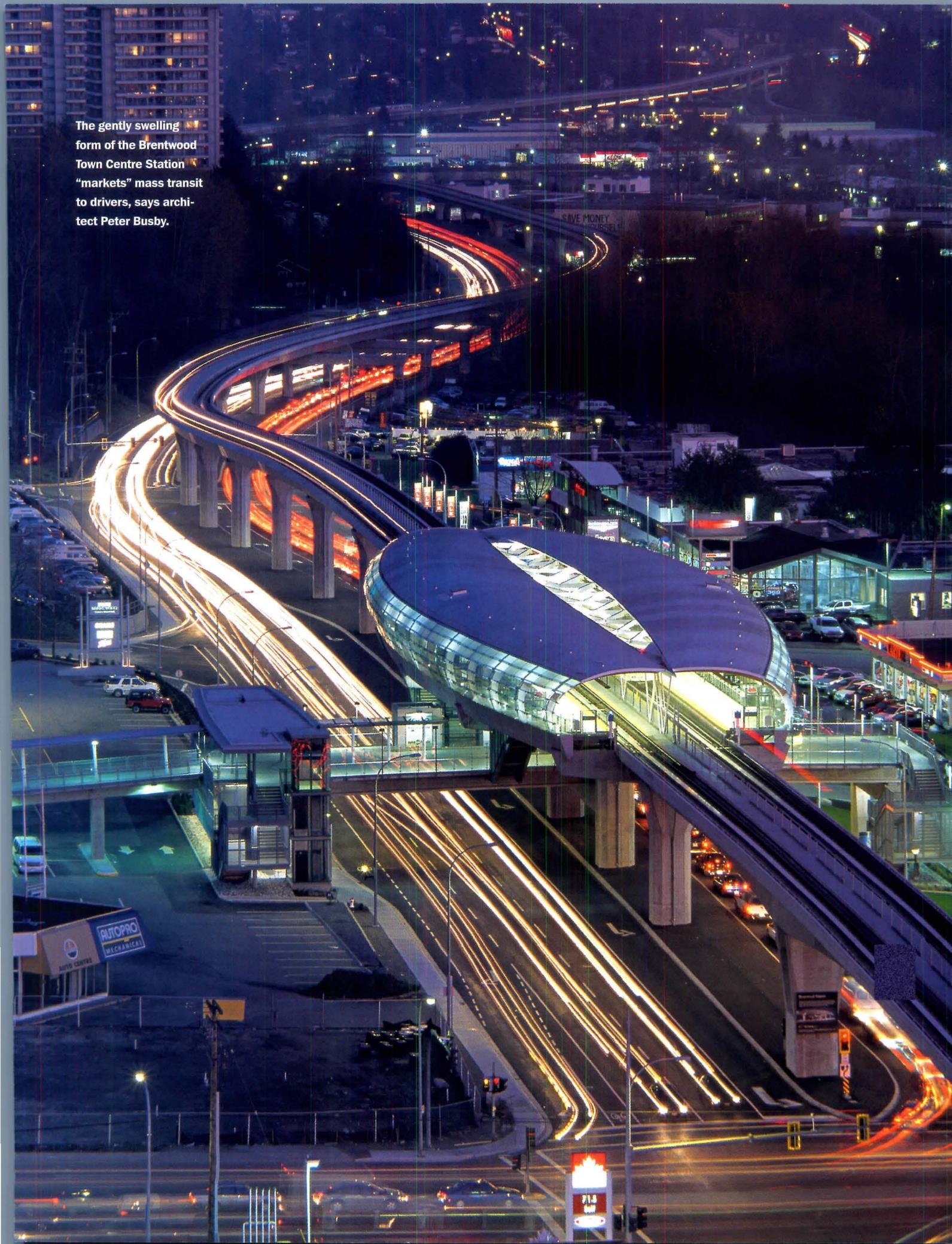
Plumbing: Dornbracht; Franke; Kludi; Bobrick

www For more information on the people and products involved in this project, go to Projects at architecturalrecord.com.

The "cockpit," or boardroom, on the 11th floor has a sloping roof of green-tinted glass to reduce glare (opposite). The space between the two glass skins, where the cascading stairs are located (this page), serves as a thermal space, provides circulation routes, and accommodates interior gardens.



The gently swelling form of the Brentwood Town Centre Station "markets" mass transit to drivers, says architect Peter Busby.



Architect **Busby + Associates** stretched a curving canopy over passengers, giving an iconic image to the new **BRENTWOOD SKYTRAIN STATION**



By James S. Russell, AIA

Few American cities have built elevated transit lines in recent years, daunted by the memorable gloom cast by rusting struts supporting ancient clattering El trains in Chicago, New York, and Philadelphia. Light rail is the transit flavor du jour, running on existing streets or traveling along separate, dedicated rights of way. But the Brentwood Town Centre Station and the 12 other architect-designed stations on Vancouver's new Millennium Line may change attitudes in the States—especially in the far-flung, low-density urban areas where rail offers an alternative to perpetually clogged highways.

What architect Peter Busby describes as the station's iconic presence is not accidental. When it came time to add a new line to the Skytrain (built for the world's fair in 1986), riders rejected as unappealing and unsafe the ponderous cast-concrete stations designed by the line's engineers, glazed in panels of metal mesh.

For the new stations, "the focus was on safety through visibility as well as comfort," says Busby. If you see an inverted canoe in the long, ribbed, curving glass-and-wood platform enclosure, you catch Busby's inspiration: a hull-like quality that suggests movement and speed. "It's an exposed location over a busy highway with wind-driven rain," Busby explains. "So we shrouded passengers with a glazed protective shell." Though the Brentwood station's surroundings present the usual inauspicious suburban ingredients—parking lots, a tired mall, and highway-strip effluvia—the station's location, at a busy bus-transfer point, will become the focus of new, high-density, high-value commercial development. Its sleek shape creates the future center's first memorable image.

The curving enclosure is also structurally efficient, with a roof built up from wood two-by-fours edge-nailed together. This nominally 4-inch-deep roof deck acts as a horizontal diaphragm to brace the glue-laminated ribs. The wood ribs fit into white-painted steel sockets at their base. Busby says the steel more efficiently handles the roof-arch stresses and is more vandal-resistant. Lapped-glass panels cover the curving sides (clips supplied by the architect's in-house furniture and hardware subsidiary). Since the platform carapace swells in plan at the center (to make room for stairs and elevators) and the ribs arch in a compound curve, 3D computer modeling was used to determine the rib geometries and to detail the flat glass panels. With staggered joints taking up the curvature, all panels have identical dimensions.

Busby's team kept passenger visibility in mind as it slipped a mezzanine under the platform. Balustrades, stairs, and elevators are all glass clad, offering easy surveillance from outside. Wide openings at the platform level bring in daylight and draw the eyes of waiting passengers onto the

Project: Brentwood Skytrain Station, Burnaby, British Columbia

Owner: Rapid Transit Project Office

Architect: Busby + Associates Architects—Peter Busby, principal in charge; Martin Nielsen, associate in charge; Scott Edwards (3D imaging); Adam Slawinski (hand rendering);

B. Billingsley, M. Bonaventura, T. Mullock, R. Peck, project team

Engineers: Fast & Epp Partners (structural); Agra Simons, Robert Freundlich & Associates (electrical); Klohn Crippen (mechanical)

General contractor: Dominion Construction

A long ramp (top) leads to a bus-transfer loop. The geometry of each rib of the platform enclosure's curving shell varies: wider to make room for glass-clad elevators (opposite, top), while

aligning to the straight edge of the track (this page, bottom). The V struts between the tracks and the zipper of supports overhead (opposite, bottom) improve seismic stability.



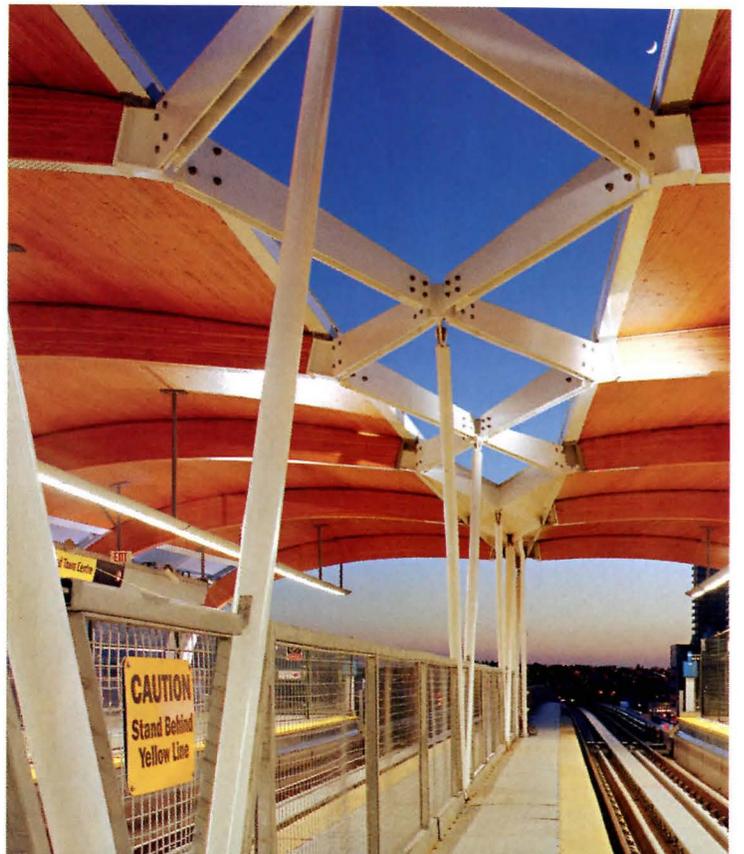


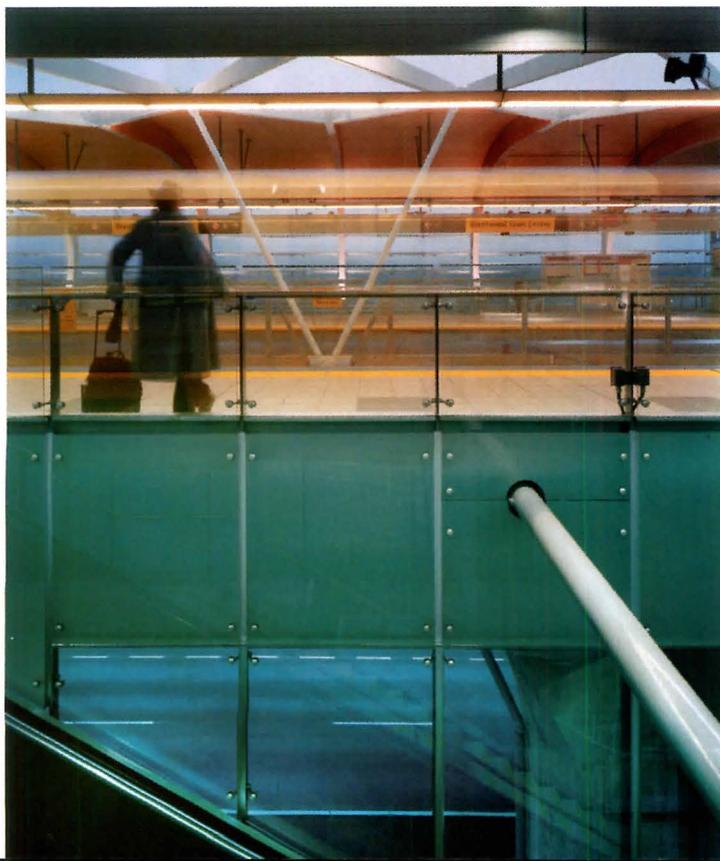
mezzanine below. The mezzanine bridges the busy Lougheed highway (you don't have to pay a fare to cross), a right-of-way the Millennium Line shares for much of its length. In this way, the station ties together future development on both sides of the road. A long ramp extends from the mezzanine to the bus-transfer loop in the mall parking lot.

Architect-designed rail stations remain a rarity in the U.S., but Brentwood's elegant yet sensitive design makes a powerful case for getting beyond the usual engineering kit of parts. (Busby designed two stations; five other firms built exemplary stations along the line as well.) It's not just that the appealing imagery of Brentwood "markets" the notion of

THE STATION CREATES A MEMORABLE IMAGE AS THE FULCRUM OF PLANNED HIGH-DENSITY DEVELOPMENT.

mass transportation to drivers stuck in traffic, as Busby observes. Appealing stations get people to accept the idea of elevated lines, which can be built quickly and for far less money than underground or trenched systems, and which can successfully share existing public rights-of-way. The Brentwood station cost about \$5.2 million in U.S. dollars; the entire line came in at about \$715 million. Unfortunately, the elegant station architecture is undercut by the clumsiness of the guideway, designed and built by a consortium called SAR Transit. People don't want to live and work next to the crudely designed systems in Atlanta and Miami, while





elevated portions of Washington, D.C.'s Metro and San Francisco's BART have won acceptance and spurred development.

Vancouver's system performs impressively. Trains arrive every 3 to 4 minutes, moving passengers at around 50 mph between stations about a mile apart. This ride is much faster than at-grade light rail, and quite competitive with drive times. (It takes 24 minutes to traverse the entire 13-mile line.) The automated system is driverless, which is not possible with light-rail trains that navigate streets or at-grade crossings. The frequency and speed have attracted high ridership, but the system also works because city planners have successfully focused high-density commercial and residential centers around the existing line, which operates near break even.

Vancouver's experience—along with frustration over a light-rail system's spiraling delays and costs—encouraged Seattle voters in November to approve construction of an elevated monorail line. We may soon be seeing more trains above us. ■

Sources

Roofing: Carlisle

Aluminum fittings:

Designlines/Companance

Uplighting: Elliptipar

Metal panels: Mercury Metals

Metal/glass curtain wall: Columbia Skylights

Concrete: Con-Force Structures

Wood glulam beams: Structurlam Products

www For more information on the people and products involved in this project, go to Projects at architecturalrecord.com.

Openness, provided by transparent balustrades (opposite, bottom) and a glass-clad elevator enclosure (this page), eases wayfinding and

improves security. The mezzanine bridge will link to anticipated future development across the busy Lougheed highway (opposite, top).



The dramatic exterior cladding consists of a skin of vibrant green grilles, which play off the deep blue of the metal panels beneath. The remaining exterior finishes are sober natural materials, including zinc cladding on the stair towers at each end of the building.



Heikkinen-Komonen Architects create a sense of community for scientists at the **MAX PLANCK INSTITUTE** in Dresden

By David Cohn

According to Mikko Heikkinen and Markku Komonen, architects of the Max Planck Institute of Molecular Cell Biology and Genetics in Dresden, Germany, “a modern research laboratory is similar to a high-tech appliance.” The task of the architect in such a project, they maintain, goes beyond its exacting technical requirements or questions of styling, to assuring that “the working environment helps, rather than hinders, the researchers in their highly demanding creative work.” In Dresden, the designers’ concern has been to shape the building so as to promote a sense of community and collective identity among the scientists that use it. They have pursued this aim through two basic strategies: a spectacular atrium that creates a central communal focus inside the building, and a vividly colored and veiled exterior facade that gives the structure a seductive aesthetic allure.

The institute was established by the German government as part of its program to rebuild the economy of the former East Germany. Its research program focuses on the mechanisms of cellular growth and attracts the kind of start-up companies and private research grants that can become the seeds of future industries. There are two other Max Planck Institutes in Dresden and 81 throughout Germany.

The institute’s executive director, Kai Simons—who, like Heikkinen and Komonen, is from Finland—had a very clear idea of what he expected from the architects. “The key to science is communication,” he maintains. He and the institute’s four other directors presented the architects with freehand sketches of how they thought the building should be organized. As Heikkinen and Komonen recall, “They were concerned about how to promote synergy, cooperation, and community. The idea was to try to force the scientists to come together, to create the critical mass necessary for new discoveries.”

The soaring atrium was the key to this strategy, a space that gathers all the public areas of the facility, with the suites of laboratories and offices radiating from it. The atrium occupies the full height and

David Cohn is ARCHITECTURAL RECORD’s Madrid-based correspondent. He wrote the recently published Young Spanish Architects (Birkhauser, 2000).



Project: Max Planck Institute of Molecular Cell Biology and Genetics, Dresden, Germany

Architect: Heikkinen-Komonen Architects—Mikko Heikkinen and Markku Komonen, partners in charge; Janne Kentala, project architect

Architect of record: Henn

Architekten Ingenieure—Gunter Henn, partner in charge; Rudolf Röglin, project architect; Frank Gebler, site manager

Engineers: Ingenieurbüro Prof. Dr. Ing. G. Scholz und Partner (construction engineer); Jaeger, Mornhinweg + Partner Ingenieurgesellschaft (HVAC)



The central atrium gathers all the public spaces of the institute, with suites of laboratories and offices radiating out from it. This spectacular space occupies the full height and width of the building's center.





width of the building's center. Its ground floor includes a café near the entrance and a dining hall overlooking a rear garden, while a study library and auditorium are immediately adjacent. On the three upper floors, the space is crossed by concrete bridges that connect the laboratory wings to the atrium's elevators and its wide helical stair, a formal tour de force clad in curving sheets of perforated steel. The bridges, nicknamed "Ponte Vecchios" by the scientists, include informal meeting points and a small seminar room. Simons has banned vending machines from the laboratories, and according to the architects, the waiters for the café's espresso bar were carefully chosen to promote mingling. As Heikkinen observes, "If you want something to eat, you have to go down to the atrium. It becomes a place for people to run into each other. The functional diagram of the building pushes people together."

The research spaces specified by the scientists called for open plans to maximize cooperation. In the eight research units on each floor, scientists share a common office area along the window wall and a large laboratory situated behind it, separated by a glass partition. Heavy equipment is located in a central core and surrounded by a double corridor.

The planners debated how to fit this program onto the site, a deep and narrow former streetcar depot in a quiet residential neighbor-

hood. Komonen recalls, "We tried about 20 different schemes, until we thought of turning the building sideways." They created a new side street that penetrates the lot, and placed the entry there. This decision solved the dilemma, permitting the entry and atrium to be situated in the center of the building, sandwiched between the two laboratory wings. It created an extruded, linear layout for the building and the support facilities located behind it, which includes a service building with delivery docks, housing for lab animals, and a small apartment building for visitors.

The dramatic exterior cladding of the main building was also a response to a functional problem. The layout of the research wings required deep floor plates. "We needed a lot of natural light to reach the interior laboratories. But with large windows on the east/west exposures, you get a lot of heat gain." They decided to sheathe these exposures in a second exterior skin of thick metal grilles, which studies found reduced the amount of solar heat entering the building by 20 percent.

Heikkinen and Komonen first planned to make the grilles of oxidized copper, but they opted for a vibrant green enamel-finished aluminum, which plays off the deep blue of the metal panels that clad the building beneath the grilles, exposed on the narrow street-facing elevation. The startling interaction of these colors, the building's signature formal



SECOND FLOOR

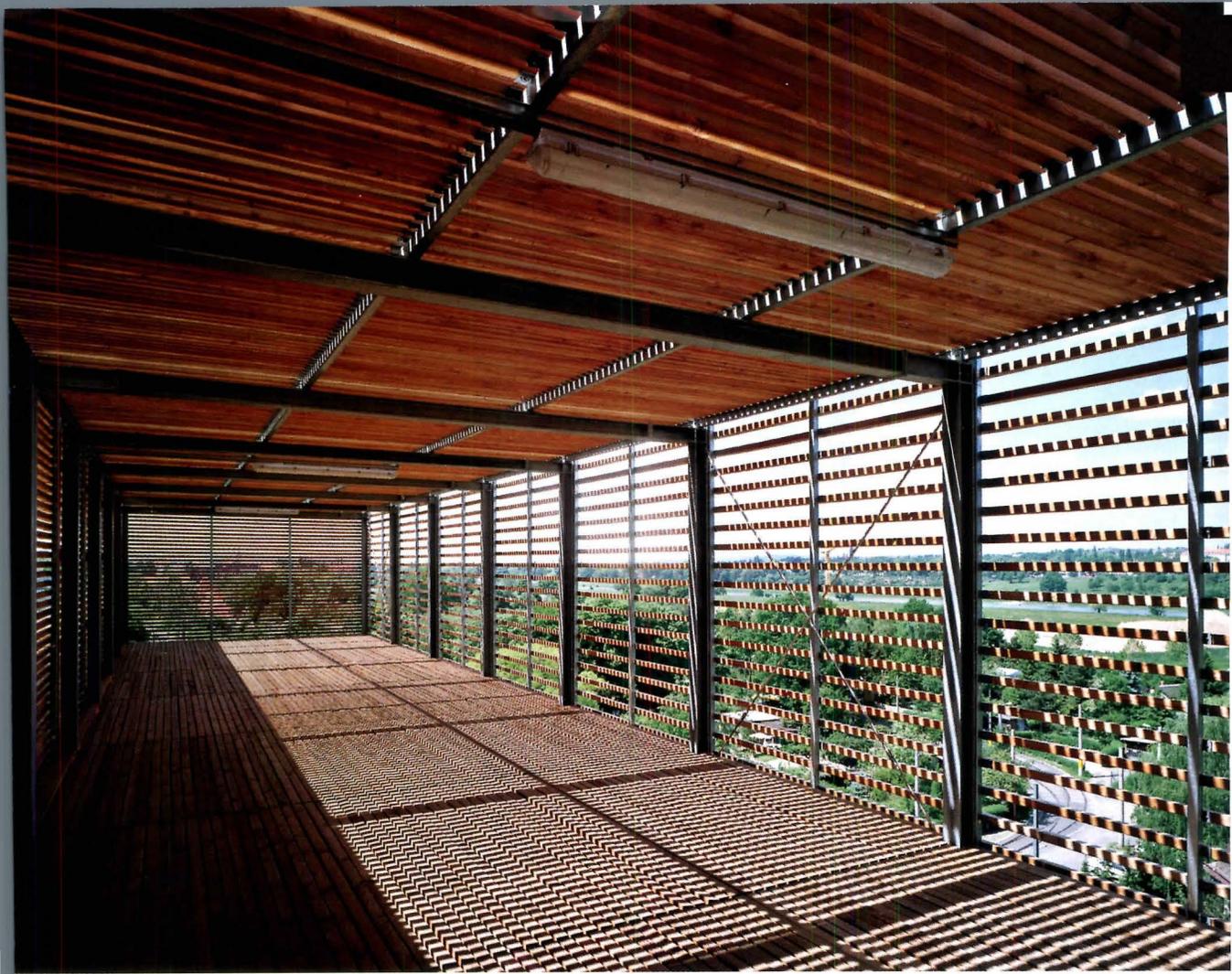


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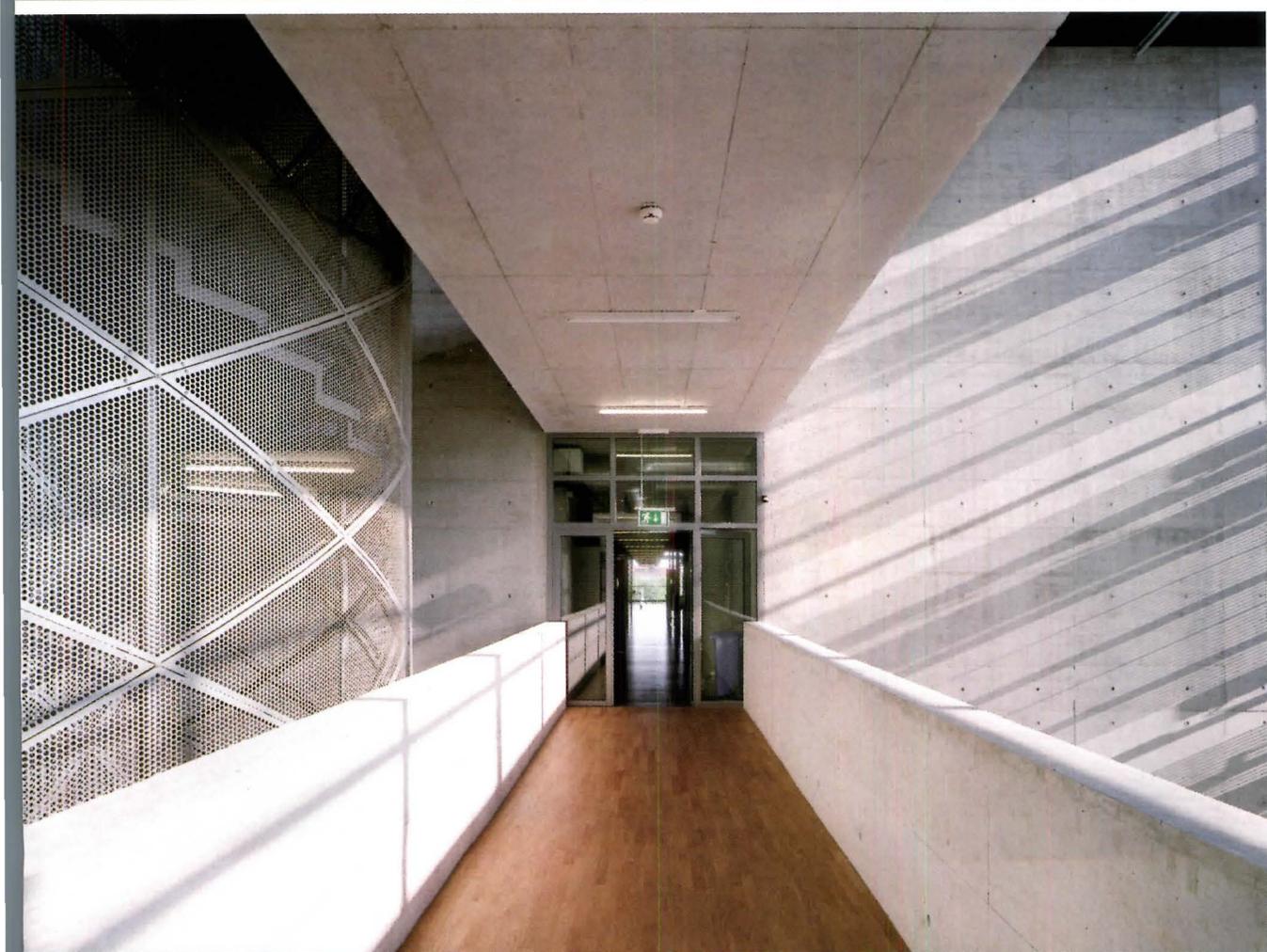
1. Office
2. Foyer
3. Information booth
4. Auditorium
5. Restaurant
6. Kitchen
7. Library
8. Workshop
9. Photo lab
10. Service area
11. Home base lab unit
12. Patio
13. Meeting room

To protect the entry, the architects designed a row of canvas sail-like canopies (opposite). In the atrium at the ground floor is a café near the entrance and a dining hall overlooking a rear garden (this page, top), while a study library and auditorium are immediately adjacent (bottom).





At each end of the roof, a sunporch is enclosed in a lattice-work of wood (top). On the three upper floors, the space is crossed by concrete bridges that connect the laboratory wings to the atrium's elevators and its wide helical stair, a formal tour de force clad in curving sheets of perforated steel (bottom and opposite)





statement, “makes a simple volume more interesting,” they explain.

Only perceived in head-on views of the facade, the blue disappears behind the grilles when seen in perspective. It thus has the disturbingly intimate effect of following visitors as they walk along the facade. The interrupted grilles create a viewing slot for the offices of the laboratories. This gesture transforms the facade into a clear expression of the interiors, with the window slots marking the laboratory wings and the continuous latticework in the center shading the atrium’s glass walls.

To indicate the entry, the architects designed a row of sail-like canvas canopies. The remaining exterior finishes constitute sober natural materials, including the zinc cladding of the stair towers at each end of the building and the copper and zinc enclosures of the rooftop mechanical penthouses. At each end of the roof, a latticework of wood frames encloses a sunporch. The handsome landscaping includes a pool that collects runoff rainwater from the roofs, and a garden of loose, rugged local stones.

Heikkinen and Komonen continue the latticework theme in the front and rear facades of the service building and the residence, using different materials to mark each building’s character. The concrete walls of the service building are covered with a fine stainless-steel mesh, which

matches the metallic color of the delivery bay doors and their exposed steel framing, while the residence is finished in a wood trellis.

Like much of Heikkinen and Komonen’s previous work, such as their acclaimed Finnish Embassy in Washington, D.C., the design is essentially a straightforward response to the program and the site, brought to life by its sophisticated skin and dramatic interior atrium. Directness and lack of pretense combine with the handsome detailing and materials and a hip aesthetic sense. In the end, what lingers in the memory are the striking color dissonances of the facade: the hard, deep blue and acid green, highly artificial and yet reminiscent of an evergreen forest under a crisp winter sky. ■

Sources

Facades: Radeburger Fensterbau

Exterior cladding: Lichtgitter (metal mesh)

Staircase: Söll Metallbau Söll

Acoustical ceilings: Lidner AG

Furnishings: Mobel Oy (wood chairs); Avarte Oy (lounge chairs)

Upholstery: Schäfer Ausstattungssysteme (instrument cupboards)

www For more information on the people and products involved in this project, go to Projects at architecturalrecord.com.



Although the building is conceptually a simple box, its two long exterior walls break away from formal rigidity, following an undulant, splaying, twisting, and billowing course—all rendered in dark cedar and faceted glazing (this page and opposite).

With his **COMMUNITY** ALL for Reihoku, Japan, architect **Hitoshi Abe** takes a radical leap from the rectilinear

By Naomi Pollock

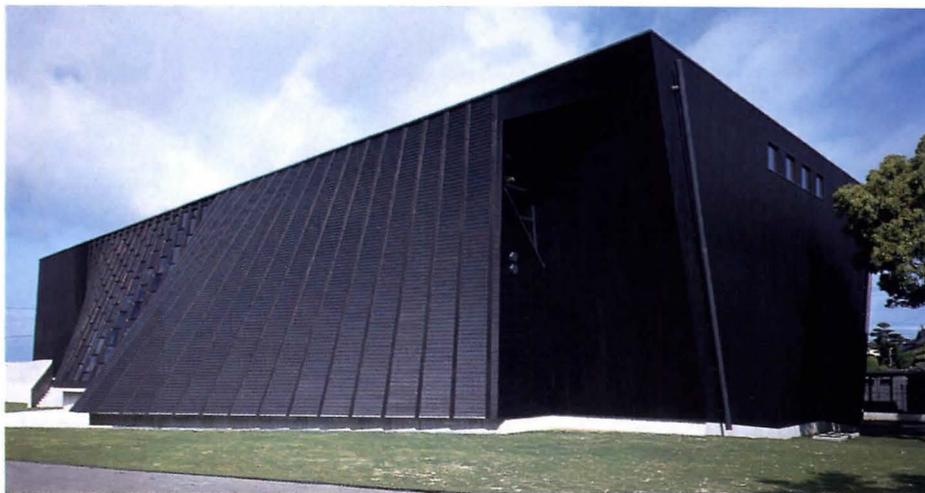
Until recently, the town of Reihoku's main claim to fame was as the site of the first clash between Samurai warriors and Christian converts. That event occurred some 400 years ago. But with the March 2002 completion of Reihoku's new community center, this town of 9,000, 670 miles from Tokyo, is back on the proverbial map. A landmark for architects, sightseers, and townspeople, the building has emerged as a regional focal point, geographically and symbolically.

Designed by Sendai architects Hitoshi Abe with Yasuaki Onoda, the 10,765-square-foot building is conceptually a simple box, containing a 207-seat theater at its north end, two meeting rooms at its south end, and communal functions in between. But, anchored by the north and south ends and a flat roof, two long exterior walls depart radically from the rectilinear. Creating a bold visual statement, the twisting walls cloak the interior and draw the visitor to entrances within their swirling folds. Like a sculptural object, this billowing form interacts with the urban landscape. Though the building's look is unusual, locals quickly embraced it as a communal gathering place and the town's sole auditorium.

A buffer of greenery and parking sets the structure apart from its surroundings—a densely built mix of postwar single-family houses and commercial properties. The demolition and subsequent relocation of government offices occupying the site left the town with a gaping hole near its center. Uncertain of how to fill it, local citizens turned to Artpolis, their prefecture's "matchmaking" service for pairing up towns with architects.

Established in 1988 by Kumamoto prefectural governor Morihiro Hosokawa and his appointed commissioner, Tokyo architect Arata Isozaki, Artpolis aimed to raise the quality of public buildings in the prefecture. The program has invited design-conscious architects from all over Japan and abroad for everything from public lavatories to major museums. It has successfully turned an agricultural backwater into an architectural mecca. Now under the leadership of Tokyo architects Teiichi Takahashi and Toyo Ito, Artpolis dispatched Abe to Reihoku in 1999.

Naomi Pollock is RECORD's Tokyo-based correspondent.



Yet soon after his arrival, Abe began to wonder whether the local folk could agree on what to build, or whether to build at all. Some wanted a concert hall, others public housing, while still others favored an aquarium. After three years of meetings and architect-led workshops, the citizens concluded that they couldn't conclude. So, they settled on a community center, where the people could continue to exchange ideas and realize their dreams.

Though protracted, the process helped clarify ideas for the building. As a public amenity, it had to be economical, hence compact and multifunctional. Conceptually, Abe envisioned overlapping circles, one centered on the paired meeting rooms and the other on the theater—end zones that could operate independently or in tandem. The area between them would house shared functions, including an information center, a lounge with Internet access and a small kitchen, and the Volunteer Bureau,

Project: Reihoku Community Hall

Architects: Atelier Hitoshi Abe and Yasuaki Onoda

Engineer: TIS & Partners (struc-

tural); Sogo Consultants (mechanical)

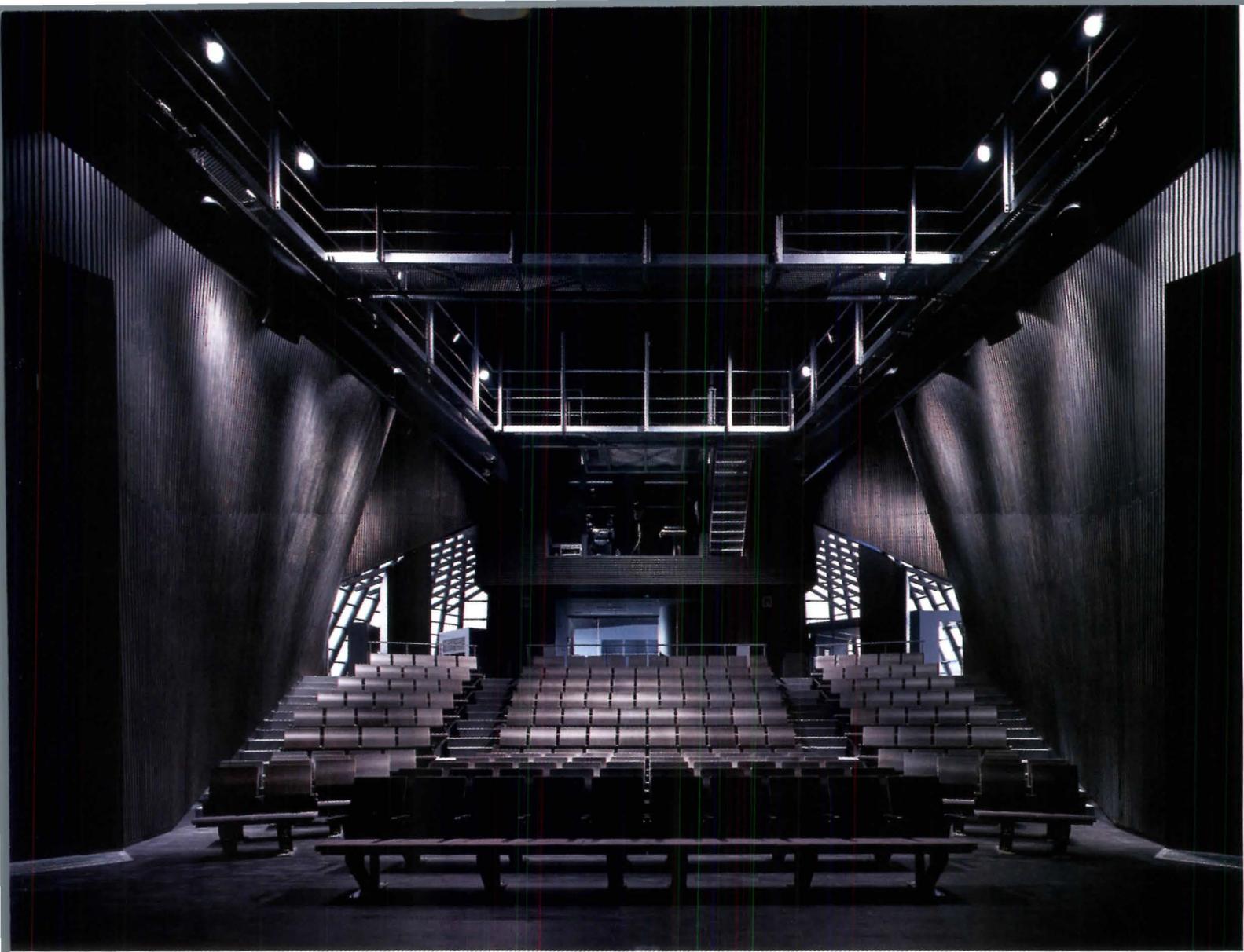
Lighting: Masahide Kakudate
Lighting Architect & Associates

General contractor: Nakamura



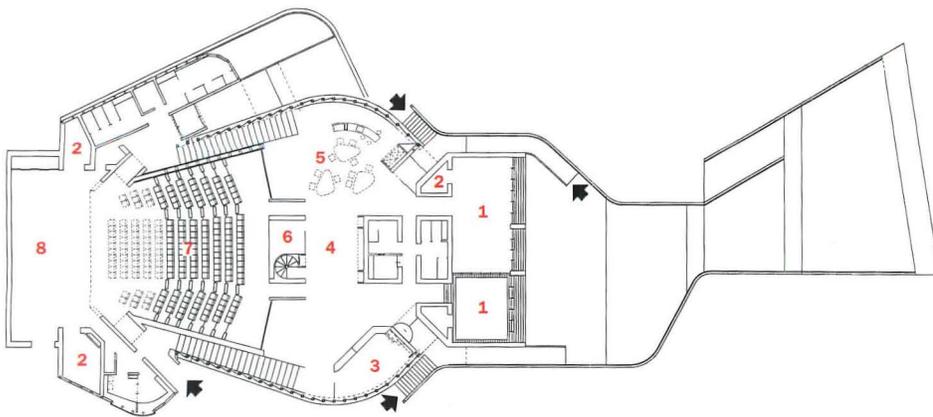
In the communal area between the auditorium and meeting rooms, the faceted and slightly overarching exterior walls give the interior a sense of luminous openness.



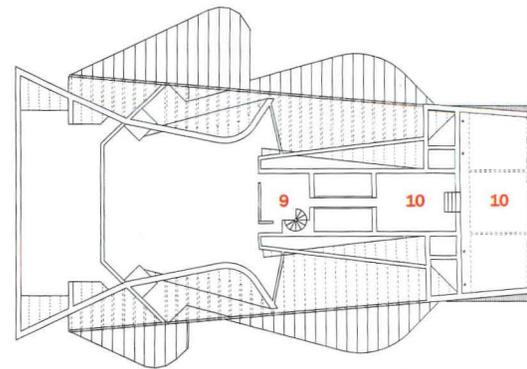


- | | |
|----------------|---------------------|
| 1. Meeting | 6. Volunteer Bureau |
| 2. Storage | 7. Auditorium |
| 3. Office | 8. Stage |
| 4. Information | 9. Controls |
| 5. Café | 10. Mechanical |

The theater (above) is the town's sole auditorium. Converging slightly as it ascends, the stairway (opposite, left) snakes between the curving exterior walls and the shell enclosing the auditorium. The constant play between dark and light makes the journey through this modestly scaled building richly experiential and varied (opposite, right).

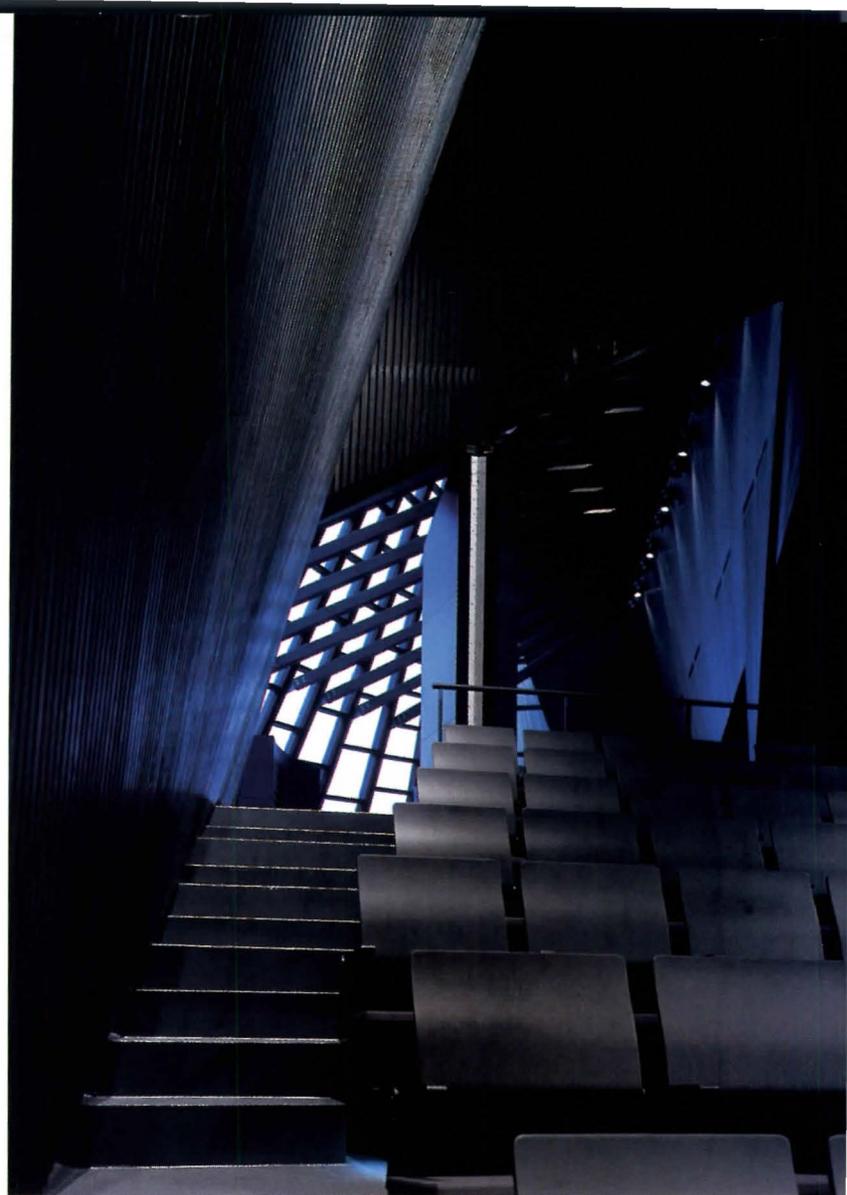


FIRST FLOOR



SECOND FLOOR

N ↙ 0 30 FT.
9 M.



the community hall's nerve center. As built, the bureau contains a glass-enclosed box, housing controls for theater lighting and audiovisual displays, as well as managerial services for the entire building, all staffed by locals.

Transparent and ambiguous borders characterize the interiors, in which corridors were kept to a minimum, leaving the functional components loosely defined and allowing each to flow into the next. The architects even blurred the theater's boundaries with movable partitions that can open it completely to the communal central spaces. Though the theater is the building's largest component, it is not dominant. Catering to many different users, Abe kept the community center as nonhierarchical as possible, even dispensing with a main entrance in favor of four doorways, a loading dock, and an *engawa* (a transitional indoor-outdoor space) off the meeting rooms, reinforcing direct interior-exterior links.

Another way Abe unified the building was by wrapping its entire interior in the undulating outer wall, which he composed of glass and locally grown cedar. Inside as out, this mantle defines a single volume, pulling together everything from the 32-foot-high trapezoidal theater down to 7½-foot-high lavatories and dressing rooms appended to it.

The exterior wall incorporates three construction types, distinguished by varying proportions of glass to wood. To let the walls twist, turn, and splay outward from the top, Abe made them out of 35-inch-wide faceted wood segments, each bracketed by laminated timber verticals. The complicated, tilted positions of the verticals demanded installation by the

fabricator. But once these elements were in place, local carpenters could add the glass panes and horizontal wood supports. Where the elevations torque most, the smallest glass panes and most closely spaced horizontal bars were necessary. Though the gradations may appear designed for visual effect, Abe says they merely reflect "the limitations of the materials."

Non-load bearing, the exterior curtain walls hang from roof beams, which, in turn, cantilever off the building's primary structure, a wood shell system, fortified by beams to resist lateral forces. This interior shell—a wavy, wood-paneled surface that flattens out at either end of the building—embraces the auditorium and meeting rooms. Another layer of tilting wood walls lining the auditorium serves the acoustics.

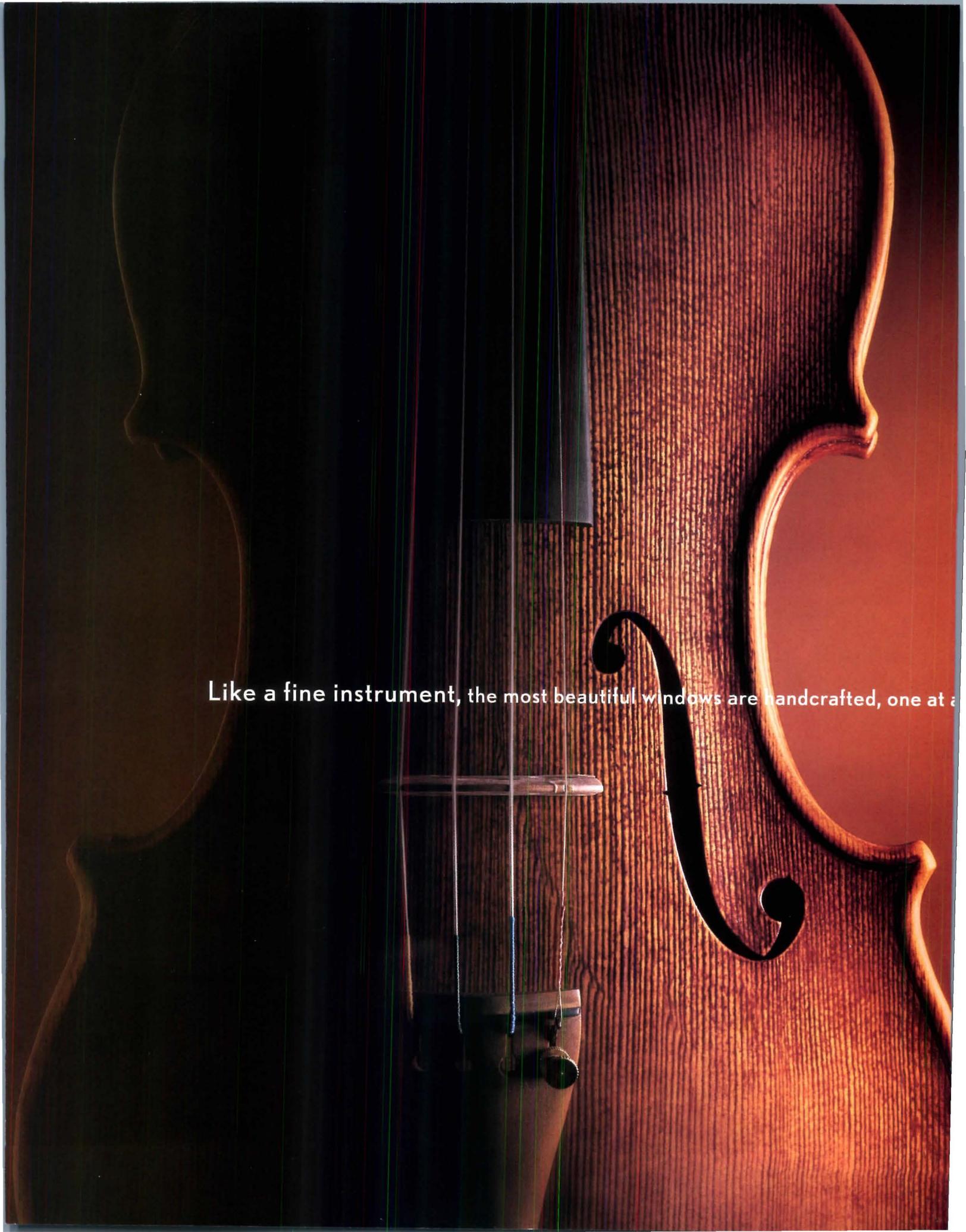
Though the center has already hosted a concert for a renowned violinist, the town's ambitions for the building are humbler. High school bands and *omiai* parties, where prospective brides meet grooms, are more its speed. "The town can use the building to express itself," says Abe. While many of Japan's recent public buildings have been labeled "*hakamono*"—beautifully designed, but empty, boxes—Reihoku Community Hall may avoid this pitfall by remaining a simple but well-used container. ■

Sources

Wood structural system: *Myazaki Wood Tech* (laminated timber)

Epoxy paint: *ABC* (*Chemcrete EP*)

www For more information on the people and products involved in this project, go to Projects at architecturalrecord.com.



Like a fine instrument, the most beautiful windows are handcrafted, one at a

SMALL MUSEUMS

Identity with Integrity

MUSEUM EXPANSION IS PROCEEDING, IN SPITE OF A TROUBLED ECONOMY. QUESTIONS OF GROWTH LINGER ABOUT NEW BUILDINGS AND ADDITIONS. WHEN IS SMALL JUST ENOUGH?

By Suzanne Stephens

1.

Turin, Italy

On top of Lingotto, the former Fiat factory, Renzo Piano Building Workshop has completed the Pinacoteca Gianni e Marella Agnelli for the display of art.



2.

Manchester, England

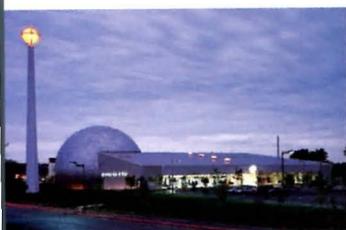
Ian Simpson has designed a singular object with an interior funicular for a small museum in the center of town devoted to the subject of the city.



3.

Springfield, Massachusetts

The Naismith Memorial Basketball Hall of Fame, by Gwathmey Siegel, is part of an effort to bring life back to the riverfront of a small city.



4.

Wayzata, Minnesota

James Dayton has designed the Minnetonka Center for the Arts as a villagelike cluster of discrete forms for showing and making art.

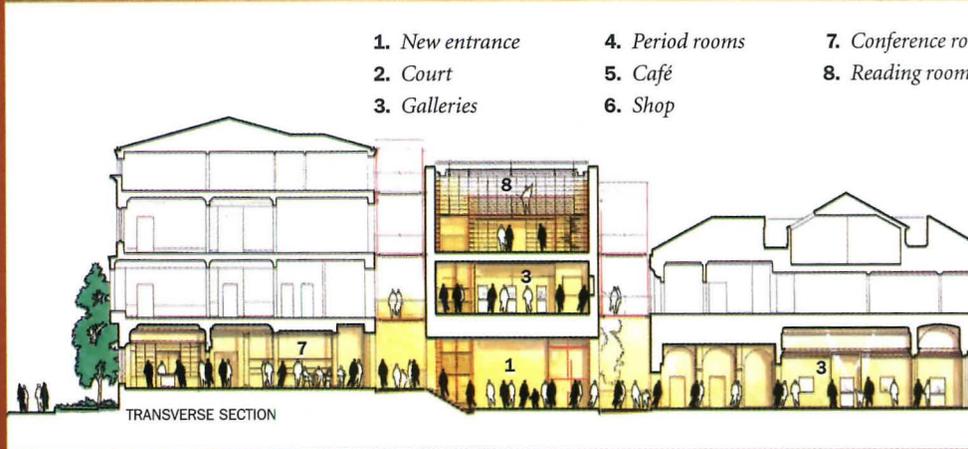
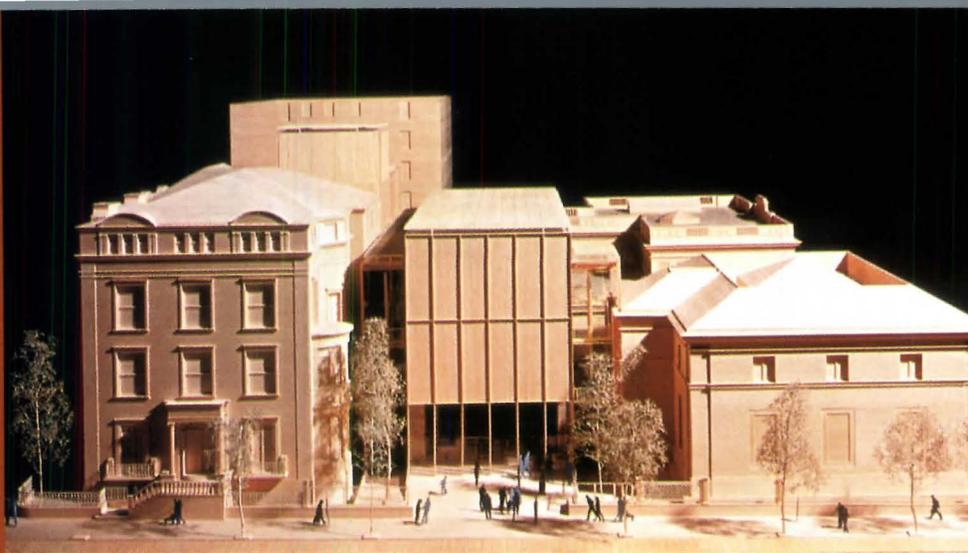


If the museum boom of the 1980s and 1990s is over, you wouldn't know it. A staggering number of the museums built or enlarged in the past two decades are going through new expansions, some involving tear downs of not-so-old work: Renzo Piano is designing an addition to Richard Meier's High Museum, in Atlanta, completed in 1983; the Chicago Art Institute, where Hammond Beeby Babka designed a new wing in 1988, is having Piano do one as well; the Virginia Museum of Fine Arts, in Richmond, had Hardy Holzman Pfeiffer design a wing in 1985, and now has hired the London-based American architect Rick Mather to come up with yet another. Last year Rem Koolhaas won a competition (now on hold) to redo the Los Angeles County Museum of Art, which called for obliterating the existing structures, including Hardy Holzman Pfeiffer's expansion of 1986. And then there is New York City's Museum of Modern Art, expanded and remodeled by Cesar Pelli in 1984: Yoshio Taneguchi is demolishing most of Pelli's building for his new, mega-size one. Asia House, in Manhattan, which hired Edward Larrabee Barnes to design its museum in 1980, commissioned Bartholomew Voorsanger to redo much of it in 2002. And Voorsanger's own 1992 expansion of New York's Morgan Library will be torn down for a larger version by (again!) Renzo Piano.

What can we make of all this? In some cases, it could be (as until just yesterday) a flush economy. In other cases, it could be that clients (museum boards and building committees) don't know what they want and how to get it in the first place. Or perhaps it is the trap of time and fashion: About the moment the architect finishes his or her first phase, the project looks out-of-date in a very competitive museum world. But what do museums do now that the economy has soured and so many projects are in design development or working-drawing phases?

At the heart of all these questions is the issue of growth. In times of easy money, it is hard for a museum, basking in its popularity, to ask if it is better off not growing too much. The observation that the museum often depends on the intimacy of the relationship between the object on display and the viewer is easy to overlook. In this context, the Morgan Library, a small treasure of a museum with master drawings and prints, rare books and manuscripts in its famed collection, provides an interesting case to analyze. Because it built an addition only 10 years ago, which is now being torn down for a larger one, and because a number of "name" architects have been involved in its expansion plans—including Renzo Piano—it becomes all the more intriguing. Although conclusive insights won't be possible until the Piano expansion is complete, the questions raised now are worth thinking about.

For additional small museum projects, and more information on the people and products involved in the following projects, go to Building Type Study at architecturalrecord.com.



The first time around

In 1988, when the Morgan Library, located on 36th Street and Madison Avenue, was able to acquire an Italianate brownstone on 37th Street, which had once been occupied by J. P. Morgan's son, the board of directors placed Bartholomew Voorsanger, FAIA, and his firm (then Voorsanger and Mills) in charge of its expansion. Voorsanger was to link the 37th Street brownstone, built in 1852–53 by Isaac N. Phelps Stokes, to the original library on 36th Street, designed in 1906 by McKim, Mead and White, and the 1928 Benjamin Wistar Morris Annex at the corner of 36th and Madison Avenue, on the site of J.P. Morgan's own brownstone house. Voorsanger's most visible contribution was the Garden Court, with a curved glass roof, placed mid-block in the cluster of historic structures. Voorsanger's most visible contribution was the Garden Court, with a curved glass roof, placed mid-block in the cluster of historic structures.

The 37th Street brownstone was originally intended to be renovated for galleries, but the need for heavy-duty fire-safety walls made the task prohibitive. So the 37th Street building was renovated for offices. Because of the limited budget—a total of \$30 million for both the purchase of the brownstone (\$15 million) and the remodeling and Garden Court—the expansion was divided into two phases, of which this was the first.

Voorsanger's Garden Court, with a café and ample space for a party hall for hire, proved to be a moneymaker. Corporations and organizations began to rent it for an average of \$5,000 to \$20,000 a night. The public and the local Murray Hill neighborhood flocked to the museum to enjoy the rare interior sunlit oasis, which was gradually thickened with plants and trees. Attendance increased from about 100,000 a year before the 1991 expansion to 220,000 in 2002.

In spite of popular success, Voorsanger's glazed curvy roof did not sit well with many in the architecture community. It appeared too finicky in a historicist Baroque way, especially as seen against the growing predilection for a cleaner, sparer, neo-Modern architecture. There were

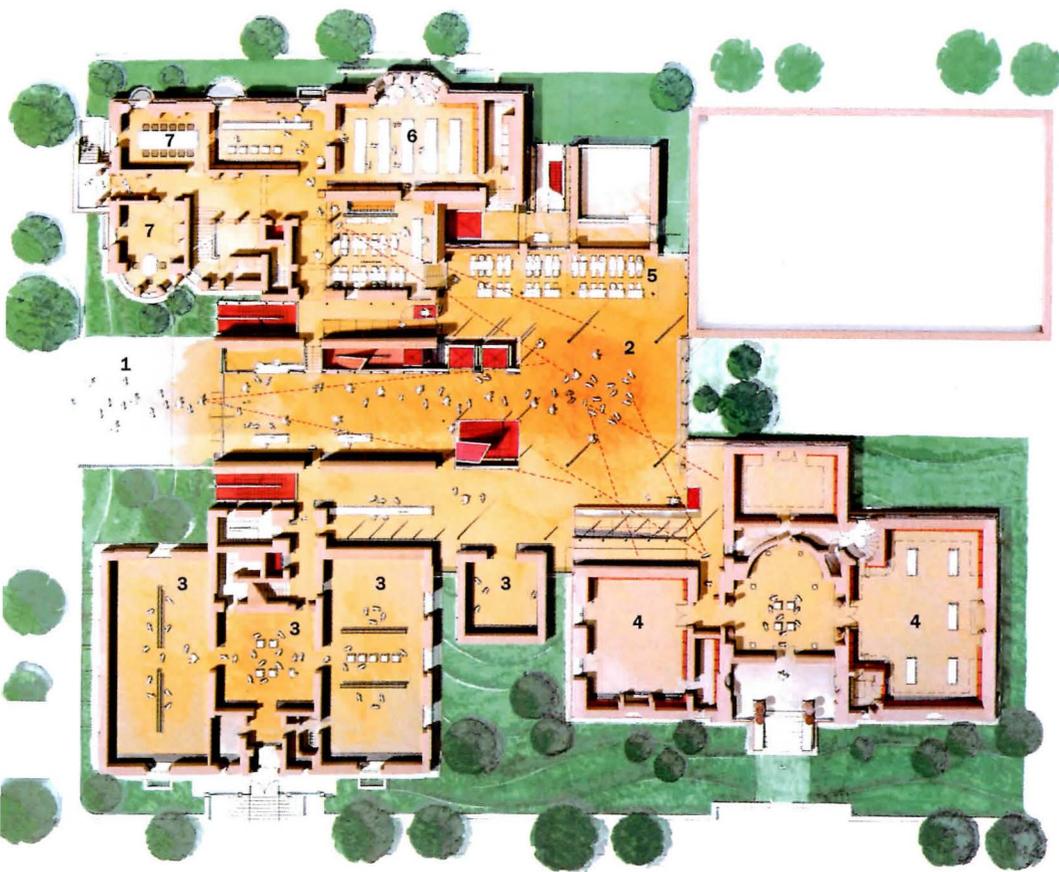
architects who would speak of the Voorsanger addition as being "too fashionable." What they meant, of course, was that it was out of fashion.

A failed competition

In the late 1990s, the board of the Morgan, under the leadership of Charles Pierce—named the director just before Voorsanger's arrival on the scene—decided to expand again. The economy was soaring. Yet Pierce and the board did not turn to Voorsanger for the second phase of his original master plan, but hired Beyer Blinder Belle to determine future needs. The desire was expressed for more storage space, a new reading room that could take advantage of current technology, along with more gallery area. Although Pierce graciously invited Voorsanger to compete with others for the commission, Voorsanger graciously turned the opportunity down and concentrated instead on radically altering Edward Larrabee Barnes's Asia Society. (Architecture, thy name is Irony.)

By 1999, the Morgan had narrowed the list of architects to Steven Holl, Tod Williams and Billie Tsien, and Hardy Holzman Pfeiffer. While no architects were on the Morgan Library's Building Committee, it brought in Paul Goldberger, the architecture critic of *The New Yorker*, to advise. "He talked about the process of being a good client," says Deputy Director Brian Regan, "and put the various architectural styles in a context so that we could think about them intelligently."

The designs submitted by the three teams all did away with Voorsanger's Garden Court. Yet none of the schemes by the three short-listed architectural firms set the Morgan board on fire. This was, indeed, a quandary. The Morgan board remembered that Piano had declined to be part of the competition. However, he had mentioned in parting that if the board had second thoughts, they should call him. Magic words. The Renzo Piano Building Workshop (with Beyer Blinder Belle) got the job.



GROUND FLOOR

The Morgan Library expansion first began in 1988 when the brownstone on 37th Street and Madison Avenue, built by Isaac N. Phelps Stokes in 1852–53, was acquired by the library. In 1991, Bartholomew Voorsanger, FAIA, linked the building to the Benjamin Wistar Morris Annex of 1928 on 36th Street, and to the McKim, Mead and White library built in 1906 (model, opposite, top left). The most visible piece was a glazed Garden Court (opposite, bottom left), which contains a café. Now the Morgan is replacing the addition with one by the Renzo Piano Building Workshop (model, opposite, top right). A new structure containing a reading room and gallery, with storage vaults below ground, will be built in the space, leaving a rear atrium of 3,800 square feet. Another link, a 20-foot cube, will be built between the 1928 annex and the McKim, Mead and White building for additional exhibition space.

Piano redux

Piano has come up with a 69,000-square-foot expansion plan that is scheduled to go into construction next May [RECORD, April 2002, page 26]. Although it is not grandly ambitious, it is ambitious: The Voorsanger Garden Court—plus additions cloned by architects Alexander P. Morgan in 1962 and Platt, Wyckoff and Coles in 1975 at the rear of the Benjamin Wistar Morris Annex—will be torn down for a new entrance and a three-story-high structure containing a gallery and a new reading room. The current entrance on 36th Street will no longer be used, a move that has spurred the criticism that the public arriving at the new entrance on Madison Avenue will have little visual knowledge of the exteriors of the Benjamin Wistar Morris Annex and, especially, the McKim, Mead and White building extending along 36th Street.

Nevertheless, Piano won points with preservationists for placing so much of the expansion underground: A four-story basement containing stacks and totaling 35,800 square feet is projected below grade. The entire complex is to be built of glass and steel, including plate-steel walls, with the color of the paint to be determined.

The Morgan hopes to attract \$100 million in donations for the project, plus a \$25 million endowment for maintenance. Although it has obtained pledges of \$62 million, the board may have to borrow against the unrestricted portion of its current endowment. Drilling through the bedrock for the vaults starts next summer, when the library closes down for several years. Which means no parties, no income, and the staff has to move to rented space. Will the sacrifice pay off?

The theory goes that the architectural success of a building hinges on the relationship between the client and the architect. Indeed, the various moves by the Morgan—including tearing down a 10-year-old building—will not guarantee its place in history as a client with a clear

and definite vision. However, the choice of Piano, who is at the top of the international heap right now and is known to create discreetly incandescent museum galleries, is smart. And, it seems, the Morgan is not running into some of the same roadblocks as other museums that have imported stars: the architect who has difficulty traveling from afar, or who doesn't seem to listen to the client, or who assumes that construction techniques in the United States are on the same level as in his or her country.

From the client's side, Pierce and Regan can't speak highly enough of Piano. Besides the architect's legendary charm, they note that he is focused, can shift gears quickly, knows how to use time and distribute work. As Regan adds, "He makes us feel we have his full attention." Such reports bode well. But the numbers on the price tag seem optimistic. And budget cuts made at the end can be killers—especially for the sort of architecture that depends on quality materials, exquisite detailing, luminous lighting, and excellent craftsmanship. And will the museum attract the 400,000 people a year it hopes to? Hard to know. Right now it doesn't seem as if the large indoor court in Piano's scheme will have as much greenery as the current one does. If the new design lacks appeal as a garden oasis (and as a party hall), the public may not notice how divine the Piano enlargement is.

The question relates to all museum growth. This rush to expand may result in the integrity of the original museum being lost. Victoria Newhouse, author of *Towards a New Museum* (1998), warns, "The Morgan is in danger of losing the personal feeling of a house-museum that historically has been its prime attraction."

When does a "small" museum start getting too large? On the following pages we show four museums that are small and not ashamed of it. Each achieves an identity through distinct architectural form. They can be seen in an hour or two, without museum fatigue or disorientation. And right now, they have no expansion plans. ■

Pinacoteca at Lingotto Turin, Italy

I

RENZO PIANO BUILDING WORKSHOP BRINGS A CONSUMMATE CRAFTSMANSHIP TO THE CREATION OF A SMALL MUSEUM IN THE LINGOTTO FACTORY.

By Niccola di Paderno and Suzanne Stephens

Architect: *Renzo Piano Building Workshop—Renzo Piano, principal; Maurits van der Staay, associate in charge; Antonio Belvedere, Kees van Casteren, Dan Dorell, Federico Florena, and Bernard Plattner (senior partner), team*

Client: *Lingotto and Palazzo Grassi*

Consultants: *RFR (“flying carpet” roof structure); Fiat Engineering (primary structure and HVAC); PI Greco Engineering (fire); P. Castiglioni (lighting); Studio Inarco (consulting architect)*

Size: *35,000 square feet*

Cost: *Withheld*

Completion date: *September 2002*

Sources

Steel structure and skin: *Clemente Fratelli*

Aluminum facades (existing building): *Lorenzon Technic System*

Glass roofing: *Guiliani Infissi SCRL*

Internal glass partitions: *Unifor*



Atop the historic and enormous former Fiat factory at Lingotto in Turin, Italy, the Pinacoteca Giovanni e Marella Agnelli protrudes visibly above the city. Or at least part of it does. A new, 400-ton structure, dubbed “Scigno,” or treasure chest, appears to levitate over Lingotto’s rooftop track for testing cars.

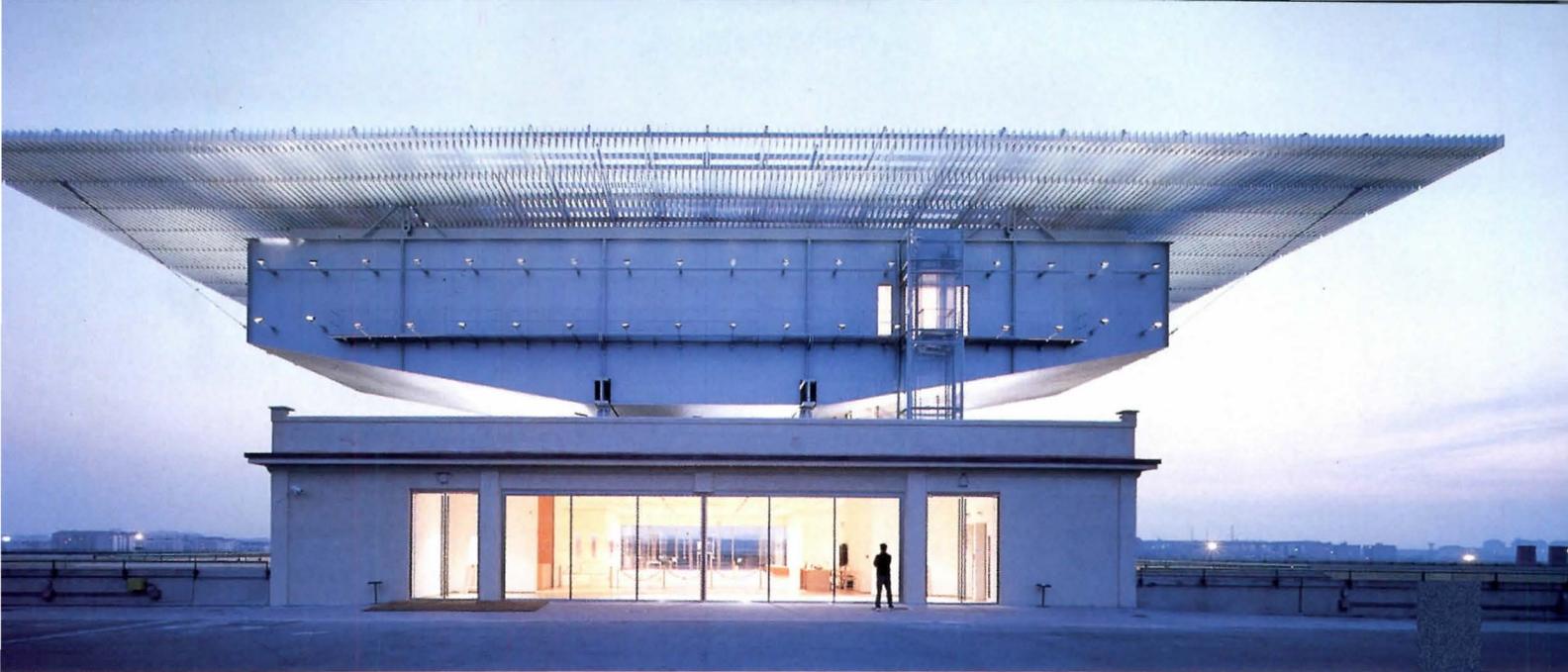
Resting on four steel columns, the steel-clad Scigno appears at once massive and light. But it forms only the tip of the iceberg of the entire Pinacoteca designed by Renzo Piano

Building Workshop: The remainder is contained on four floors of one section of the 2-million-square-foot factory under the rooftop track.

The Pinacoteca constitutes the third phase of Piano’s 14-year renovation of the factory, designed by Matté Trucco in 1917, into a mixed-use center with a hotel, shops, and conference space [RECORD, March 1997, page 42]. Since Fiat mogul Gianni Agnelli and his wife, Marella, were donating the permanent collection to the museum, which is run

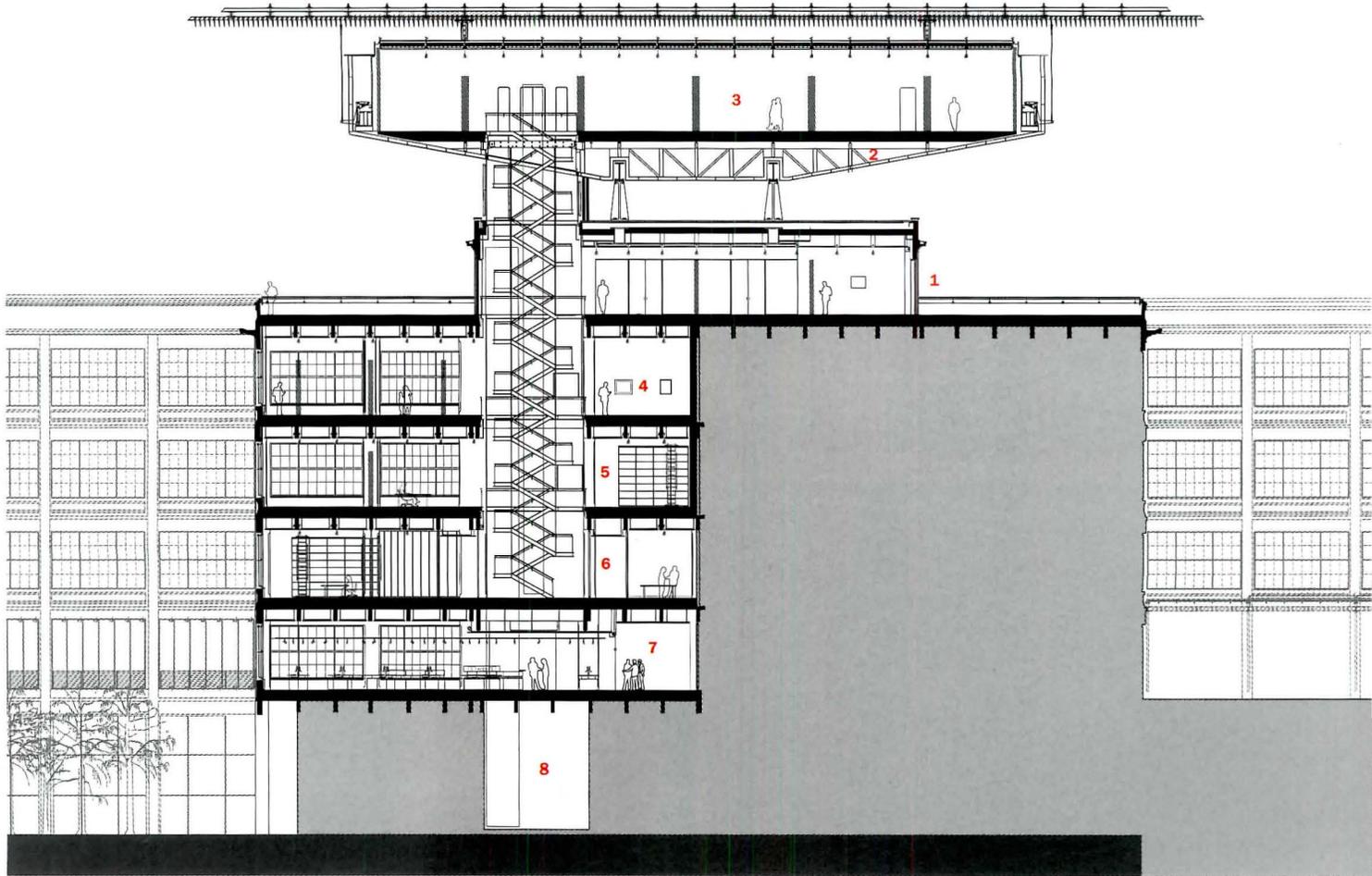
by the Palazzo Grassi of Venice (supported with Fiat money), they were very much involved in the design. Clearly, Piano’s previous work at Lingotto gave him an edge as the architect of choice. The Agnellis nevertheless were doubly committed to the architect after a visit to his Beyeler Museum in Basel. Over the next three years, and what Piano has noted were “endless discussions” with the clients, came the forceful, yet elegant result. “Gianni wanted to know

www For more information about the people and products involved in this project, go to Building Types Study at architecturalrecord.com.



The Pinacoteca's main entrance is in the pavilion on the roof (this page and opposite), where one ascends to the portion of the four floors in the old factory building devoted to temporary galleries, a bookshop, and a conference space.



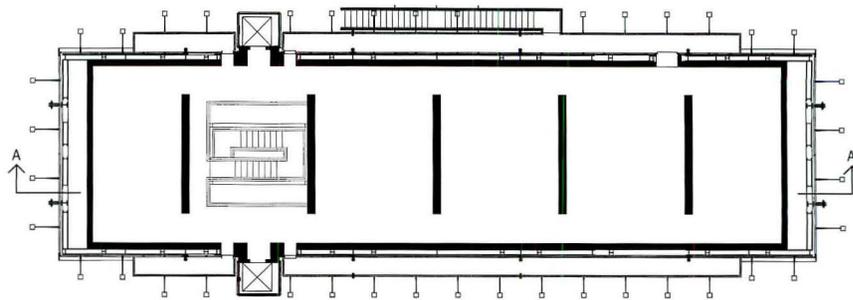


SECTION A-A

0 20 FT.
0 6 M.

- | | |
|---|--|
| 1. Main entrance and temporary exhibition | 5. Educational activities and exhibition |
| 2. Mechanical room | 6. Offices and meeting rooms |
| 3. Scrigno (permanent collection gallery) | 7. Museum bookshop |
| 4. Temporary exhibition | 8. Receiving area |

Connecting the Scrigno with the entrance pavilion and the galleries underneath a suspended stair (section, above) acts as a display device (opposite). The stair, with open risers and glass balustrades, also allows light and space to flow through the galleries.



"SCRIGNO" GALLERY TOP LEVEL

0 20 FT.
0 6 M.

the diameter of every bolt," Piano remarks. "A good client-architect relationship is not really about money. It's about understanding."

Program

The program called for a total of 35,000 square feet, of which 4,300 square feet would be devoted to the exhibition of a permanent collection of 25 artworks formerly owned by the Agnellis, by masters ranging from Tiepolo to Manet, Renoir, Matisse, and Picasso. In addition, the Pinacoteca would provide 12,910 square feet on two floors for changing exhibitions, 5,900 square feet for educational activities, plus 5,900 square feet for meeting rooms, and 3,600 square feet for a bookshop.

Solution

Upon arriving at the Lingotto, visitors first encounter a lively shopping and restaurant area. Then, turning into a corridor leading to the Pinacoteca, the atmosphere becomes quieter and more serene. A dedicated elevator takes visitors up to the main entrance on the rooftop test track, where it is possible to walk around the exterior of the Scigno and to admire the "Bolla," a spherical glass conference center designed by Piano in 1994.

By separating the permanent collection from the rest of the Pinacoteca, Piano and his team, headed by Maurits van der Staay, were able to give the permanent collection a unique identity. The Scigno, which is the permanent gallery, looks almost like an abstracted bird of steel perched on four legs atop the roof. Enclosed by a half-inch-thick steel-sheet skin, the Scigno is topped by a cantilevered roof that seems to float over the space.

The roof, nicknamed the "flying carpet," is composed of four layers of steel profiles under which are 1,600 glass fins. This canopy is attached by steel struts to the walls of the gallery and sits about 4 feet above the gallery's own translucent roof.

In the lower roof, glass sits atop layers of movable aluminum slats, 10-foot-long white neon





Pinacoteca G

In the Scigno (this page and opposite, top), one arrives by stair or elevator into a pavilion where the only natural light is filtered through a translucent glass ceiling.

he paintings in the Scrigno (right), mounted on freestanding partitions, seem to float between the solid plane of the oak flooring and the translucent ceiling. In the temporary galleries (bottom), daylight is admitted through existing windows.

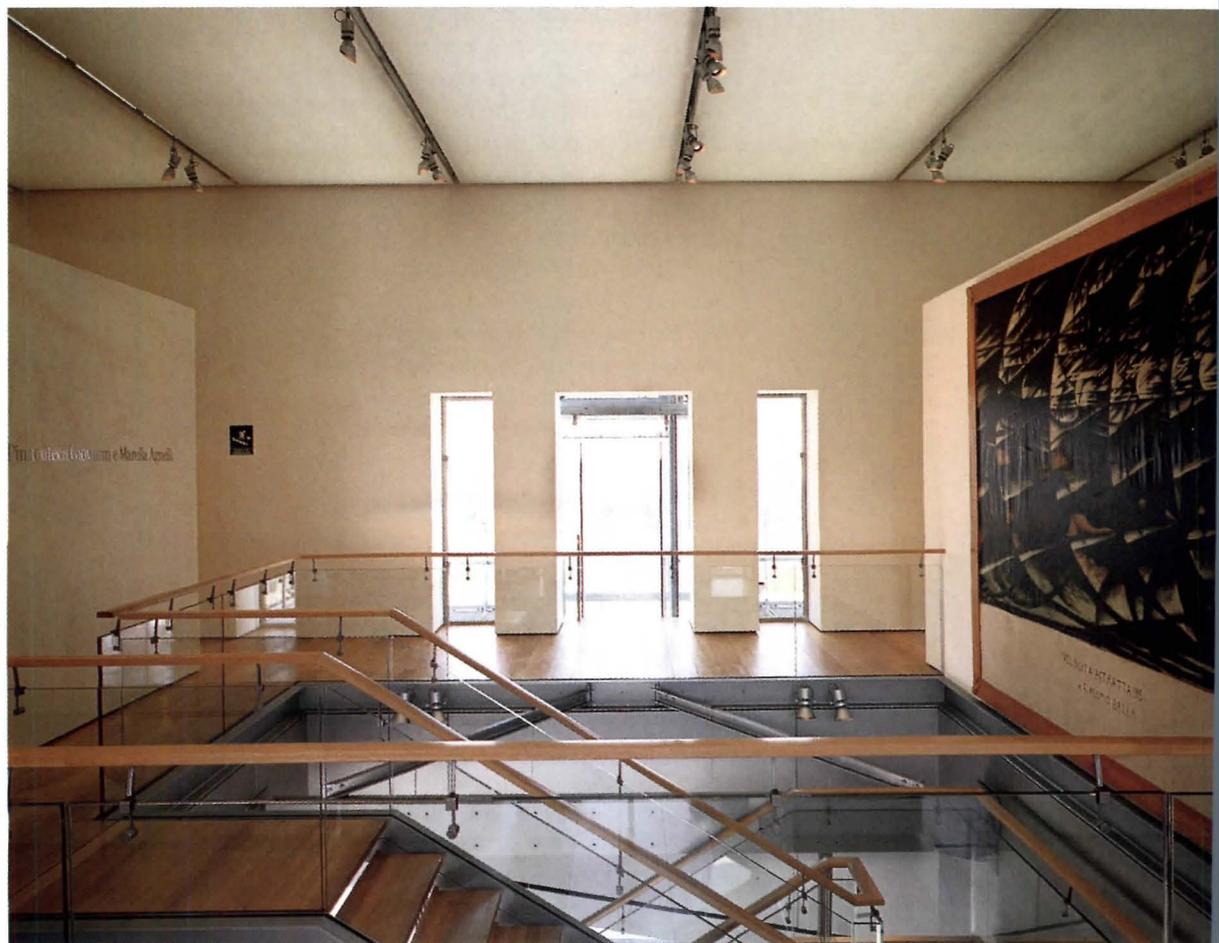
tubes, and, finally, a vellum sun-screen made of "Trevira," a synthetic fiber tissue. Additional spotlighting reinforces the mix of artificial light and daylight, so that the paintings and statues are bathed in a luminous glow. The 20-foot-high gallery, divided by 9-foot-high freestanding partitions, is sparsely designed with off-white gypsum-board walls and oak floors, and stainless-steel details.

Below, in the reinforced-concrete structure of the factory, a suspended stair of painted steel, wood, and glass links the temporary galleries and other spaces. In these galleries there is no natural top lighting; Daylight is admitted through existing windows and supplemented by spotlighting.

Commentary

A great serenity characterizes the spaces of the Scrigno. And with 25 artworks (two of which are sculptures), one feels no overwhelming need to rush through the space. The evanescent light that filters down from the roof augments the sense of contemplation in this impeccably detailed, Minimalist environment.

Downstairs, the temporary galleries are not as striking, due to the lack of top lighting. But the ample dimensions provide flexible spaces for the changing exhibitions that will be organized by the Palazzo Grassi. And even if the Scrigno is more radiant than the rest, all the spaces of the Pinacoteca represent accomplished additions to Piano's impressive museum oeuvre. ■



Urbis

Manchester, England

2

IAN SIMPSON CREATES A MONUMENTAL SHAPE FOR A SMALL GLASS MUSEUM, WHERE THE URBAN SURROUNDINGS BECOME PART OF THE EXHIBITION.

By Hugh Pearman

Architect: *Ian Simpson Architects, Manchester and London—Ian Simpson, principal*

Client: *Manchester City Council*

Consultants: *Martin Stockley Associates (structural engineer); Farley Consulting (mechanical, electrical, and acoustical engineer)*

Size: *79,500 square feet*

Cost: *£30 million*

Completion date: *2002*

Sources

Reinforced-concrete structure:

A.M. Griffith

Steel: *Fairport*

Metal and glass double-skin wall:

Seele

Roof tile: *Varla*

Roof glazing: *Vitral*

www For more information about the people and products involved in this project, go to Building Types Study at architecturalrecord.com.

Manchester, which regards itself with some justification as the second city of England, has a proud record when it comes to cultural regeneration.

The city, which was once one of the world's great manufacturing powerhouses, has adapted better than most to the postindustrial age. Three recent projects—Daniel Libeskind's Imperial War Museum [RECORD, October 2002, page 125], Sir Michael Hopkins's extension to the city's 19th-century art gallery, and Ian Simpson's Urbis—give the flavor. In this triumvirate of very different but similarly sized projects (each cost around £30 million), Urbis is by far the strangest.

Strange not only because of its hermetic architecture—this is a taut-skinned glass object that looks like nothing so much as a conning tower of a huge submarine surfacing in the urban core—but because of its content, or lack of it.

Program

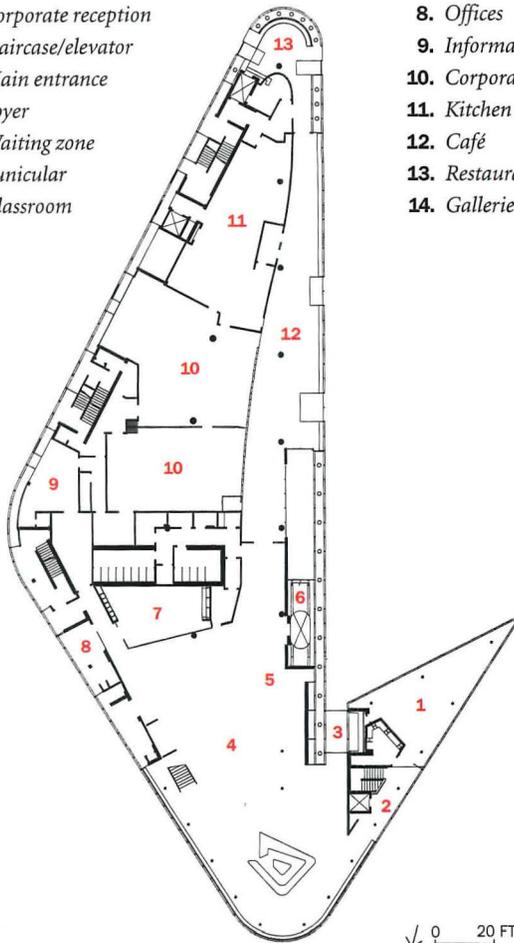
Urbis was not built in response to any overwhelming need for it, but rather to act as a symbol of rebirth after an I.R.A. terrorist bomb devastated Manchester's urban center in 1996. Ian Simpson, one of a squad of excellent younger architects who emerged in the city in the 1990s, played a key role in the urbanistic elements of the reconstruction, which has an overall value of at least £500 million. In terms of the program, Urbis was to be an interac-



The narrow, curved end of Urbis encloses the entrance to the restaurant; the main entrance to the museum is at the low end of the building facing the city park (opposite, bottom) and dramatized by the green copper roof.

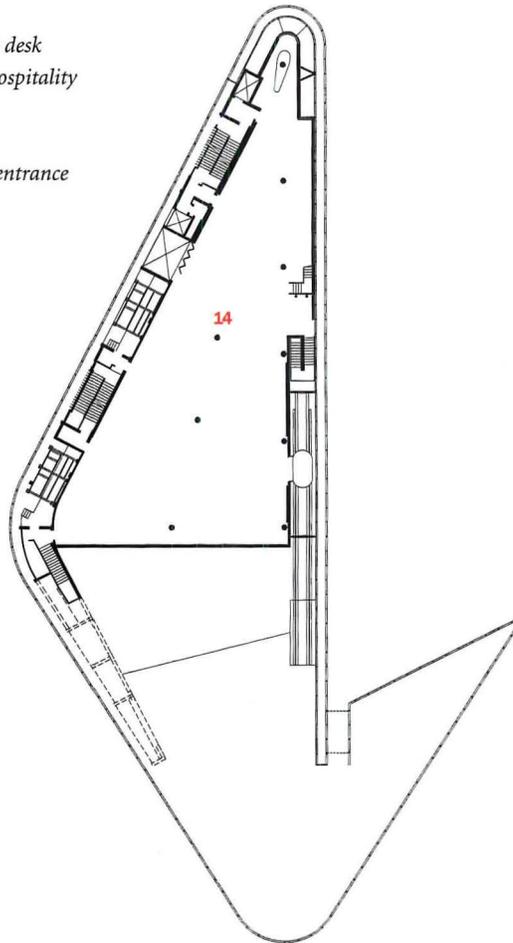


1. Corporate reception
2. Staircase/elevator
3. Main entrance
4. Foyer
5. Waiting zone
6. Funicular
7. Classroom



GROUND FLOOR

8. Offices
9. Information desk
10. Corporate hospitality
11. Kitchen
12. Café
13. Restaurant entrance
14. Galleries



LEVEL 2

tive museum devoted to the city and urbanism. In the words of Simpson, it is "not a museum so much as a series of experiences of different cities around the world."

Solution

Only six stories high, Urbis's narrow banding of double glass walls gives it a heroic scale, suggesting many more floors. The building works on the cascade principle: You take a scenic funicular-railway car that rises up through the building to the fourth level, and then work your way back down through the exhibition levels, by stair or lift. But the top two floors, which are occupied by a reservation-only restaurant and bar, and which have the best views, are inaccessible to normal visitors.

Commentary

As the glossy prow of an effectively triangular plan at an important urban intersection, this reworking of New York's Flatiron building plays its role with aplomb, even with a meaningless cranked prong on top. Because it rises from a low base, the angled roof is clearly visible. This is well handled, with a central spine of glazing surrounded by prepatinated copper tiles. Inside, the succession of four open floor decks spiraling up the building succeed in creating spatial dynamism.

The content of Urbis itself, however, leaves one unsatisfied. The general impression is that exhibition designers have struggled to fill the gallery spaces. Exhibitions about law and order or featuring video games about the city of the imagination seem condescending and baffling in equal measure.

This interior display is not the fault of Simpson, an accomplished architect with offices in Manchester and London, who has done his best in the absence of a clearly defined program. He has made a handsome container, generated by the exigencies of the site. But Urbis struggles to express its identity. It is a good, if eccentric, building in search of a real purpose. It needs content to match up to the promise of the gift-wrapped structure. ■





The interior funicular of the reinforced-concrete structure takes visitors to exhibition galleries on the fourth level (opposite). Here, displays devoted to the city are integrated with views of Manchester.

Naismith Memorial Basketball Hall of Fame Springfield, Massachusetts

3

GWATHMEY SIEGEL ASSOCIATES ARCHITECTS USED STRONG, YET SIMPLE FORMS TO SYMBOLIZE THE ACTION-PACKED ENERGY OF THE GAME.

By Charles Linn, FAIA

Design architect: *Gwathmey Siegel Associates Architects—Robert Siegel, FAIA, Charles Gwathmey, FAIA, principals; Nancy Clayton, senior associate; Barry Yanku, project architect*

Architect of record: *Bargmann Hendrie + Archetype—Joel Bargmann, AIA, principal; Thomas Scarlata, AIA, associate principal; Robert Del Savio, senior associate*

Client: *City of Springfield, Massachusetts; Springfield Riverfront Development Corporation*

Consultants: *Scenic Technology, Hottop Associates (exhibit designers); Weidlinger Associates (structural); AHA Consulting Engineers (mechanical/electrical); Mather/Jorgensen (lighting); Acoustic Dimensions (acoustics); VBH - Vanesse Hagen Brustlin (civil); Bovis Lend Lease, O'Connell Development Group (project managers)*

General contractor: *Peabody Construction*

Size: *280,000 square feet*

Cost: *\$35,500,000 (building); \$11,500,000 (exhibits)*

Sources

Dome cladding: *VerCeram*

Exterior cladding: *STO; Alpy*

Metal ceilings: *Ceilings Plus*

Acoustical ceilings: *Armstrong*

Programmable dome lights: *Color Kinetics*

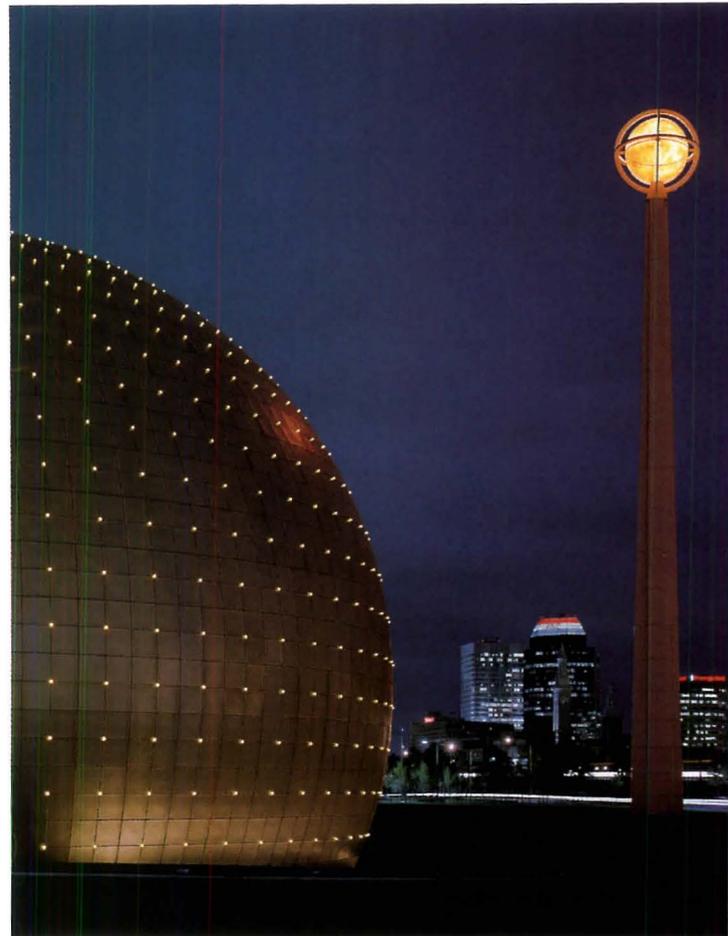
www For more information about the people and products involved in this project, go to Building Types Study at architecturalrecord.com.

For its design for the new home of the Basketball Hall of Fame, dedicated to the game's inventor, James Naismith, Gwathmey Siegel Associates relied on forms that anyone who has ever watched the game can understand: a hemisphere and, nearby, a spire surmounted by a great illuminated basketball. A wink and a nod to the famed Trylon and Perisphere of the 1939 World's Fair? Not at all, says Robert Siegel, FAIA, but very much in keeping with the firm's tradition of using straightforward geometry.

Program

The Basketball Hall of Fame's public-private client structure is complex. Representatives of the City of Springfield and the Commonwealth of Massachusetts intended for the building to be a catalyst for urban revitalization and riverfront development. After investing more than \$80 million in the project, these agencies wanted to ensure that the museum would become a destination for large numbers of tourists, attract important retailers to the large areas dedicated to stores, and generate profits enough to pay off bonds issued to cover construction costs.

The hall's board of trustees comprised athletes; sports broadcasters; and representatives from professional, collegiate, and amateur basketball organizations. They would all be involved in the museum's campaign for private donations and



tapped as sources for the ongoing supply of new exhibition materials needed to keep people coming back. These sponsors were concerned about how the story of the game would be told and how its players would be represented. All of the groups understood that the facility needed to have a recognizable image that would appeal to people

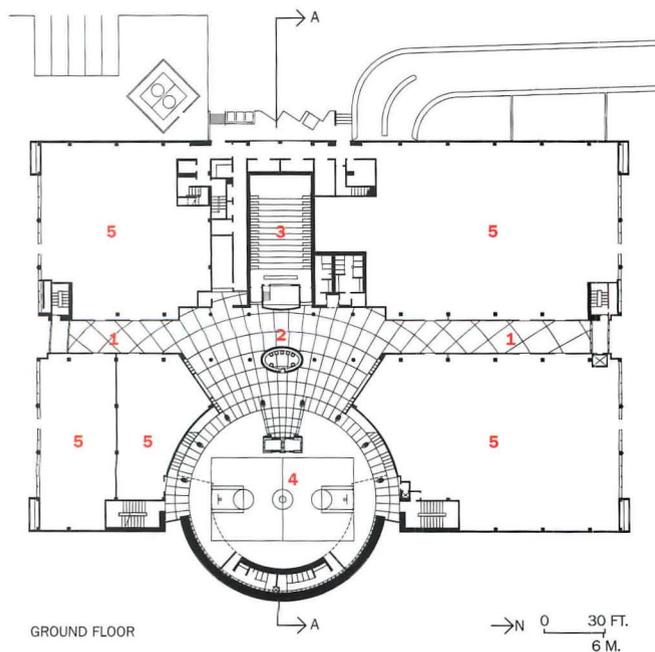
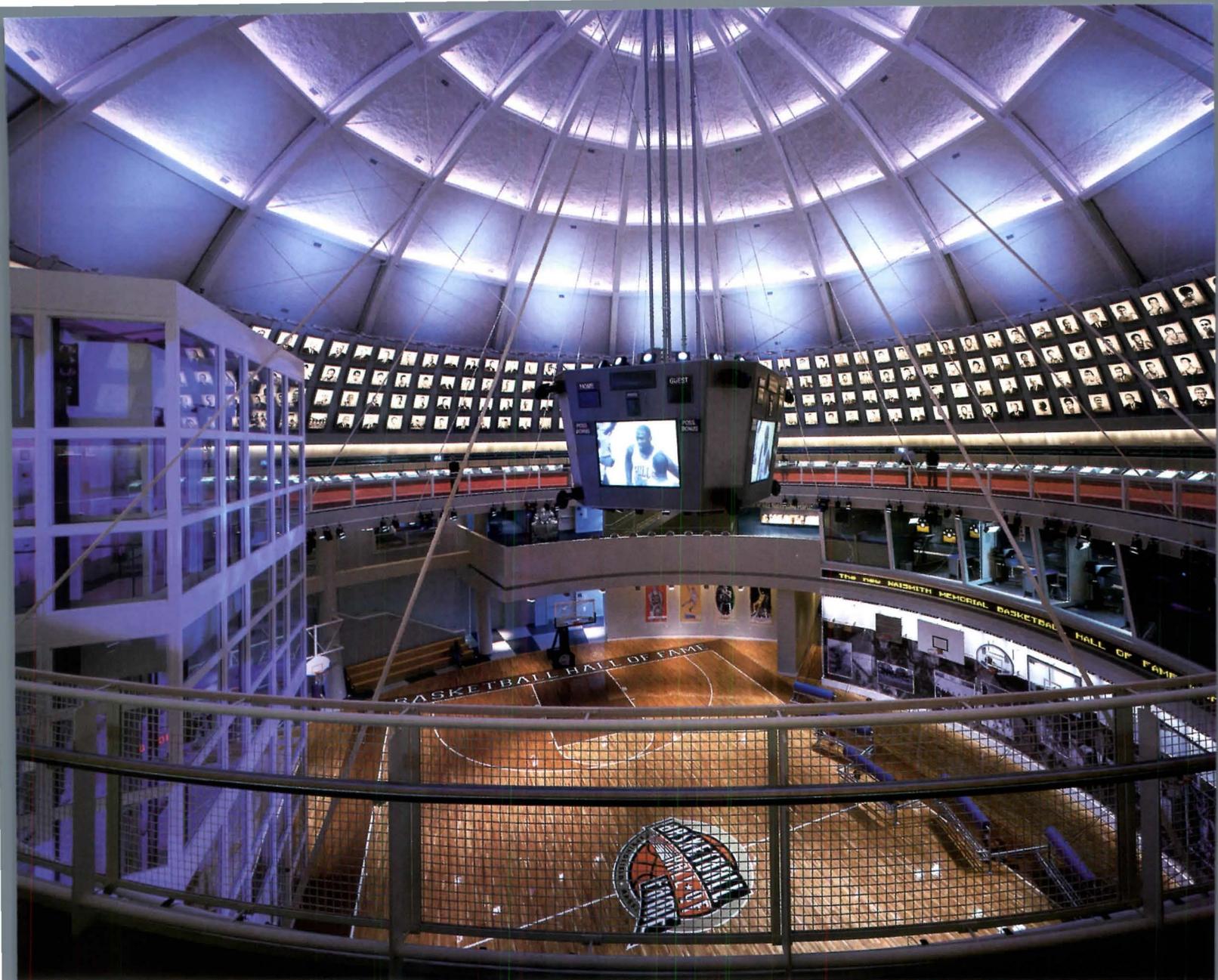
who might need to be convinced that a "museum" can be an entertaining place to visit.

Solution

The building's forms are almost self-explanatory. The hemisphere-shaped dome houses exhibits and a full-size basketball court. It is constructed of rolled steel sections and covered by

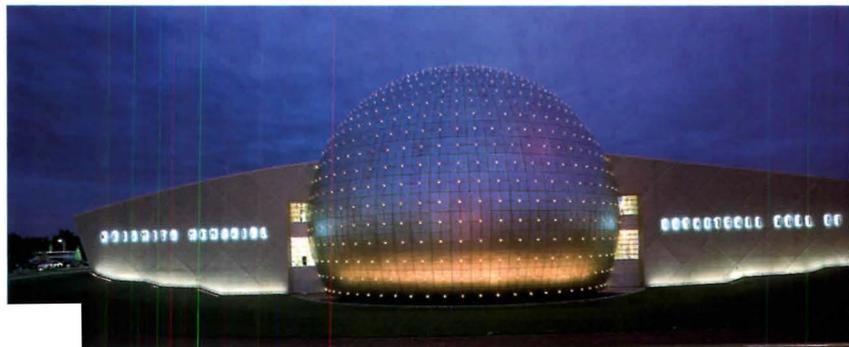
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hibits and finally to
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ound floor.





1. Retail concourse
2. Lobby and ticketing
3. Screening room
4. Basketball court
5. Retail/food service

An abundance of balconies and open staircases (above and opposite) help visitors avoid the feeling of being lost in the kind of dark, disorienting spaces typical of many museums.



ceramic-based composite panels that have a semispecular finish. The building's retail spaces, main corridor, ticketing booth, and large screening room are covered by a gently curved roof, characterized by Siegel as a "swoop." He notes, "We looked for forms that would be readily appreciated by all ages. The clients wanted it to appeal to everyone, not just people who were educated in architecture. The building had to be able to stand up as a brand, so whether it was being seen at high speed from Amtrak or Interstate 91 [which run next to the site], or on television screens across the planet, it would be instantly recognizable."

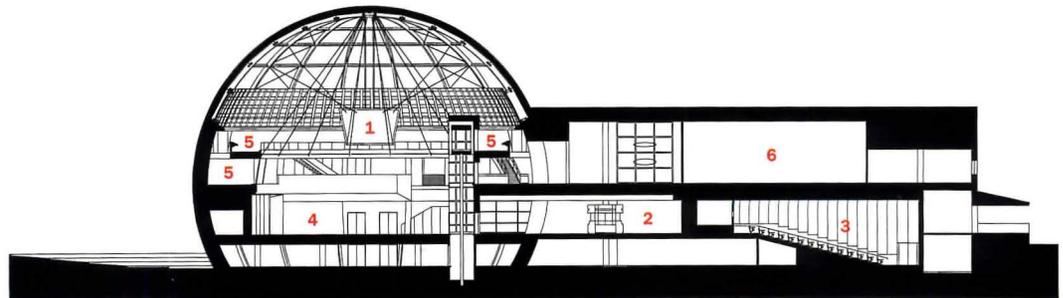
A major design decision made by the architects and Scenic Technology, the exhibit designers, in collaboration with the museum staff, was to lead museumgoers through the hall sequentially, from the top of the building down. Visitors to the hall are whisked by elevator to the building's third level, the "Honors Ring," where interactive displays teach them about Hall of Fame members. At the second level, exhibits tell the story of basketball. When visitors arrive at the ground floor "Center Court," they can take a few shots at the baskets.

Commentary

The architects have succeeded in giving the building an unmistakable identity. It is well organized and a fun place to visit. Museums that appeal to the devotees of a single area of interest, like this one, face special challenges in attracting repeat visitors. With such a strongly conic building as a foundation, the museum's success now depends upon the ingenuity of its curators. ■



1. Scoreboard
2. Lobby and ticketing
3. Screening room
4. Basketball court
5. Exhibits
6. Administration



SECTION

Minnetonka Center for the Arts Wayzata, Minnesota

4

JAMES DAYTON EMBRACES AN INDUSTRIAL AESTHETIC WITH A PLAYFUL COLLAGE OF FORMS FOR HIS FIRST CULTURAL PROJECT.

By John E. Czarnecki, Assoc. AIA

Architect: James Dayton Design—James Dayton, AIA, principal and project designer; Patrick Regan, Assoc. AIA, project manager; Jim Larson, AIA, Scott Elofson, Marcy Conrad Nutt, Tatsu Tanaka, Nicole Triden, Sarah Hansen, Andrew Kluess, Adam Back, design team

Client: Minnetonka Center for the Arts

Consultants: Meyer, Borgman, Johnson (structural engineers)—Mike Ramerth, project principal, and Gregg Curtis, project engineer; Oslund & Associates (landscape architects)—Tom Oslund, FASLA, project principal, and Joe Favor, project manager

General contractor: M.A. Mortenson Company

Size: 31,433 square feet

Cost: \$5.8 million

Completion date: June 2002

Sources

Structural steel: Mannstedt + Sons (fabrication); Western Steel Erection

Wood: Finland Color Plywood

Metal/glass curtain wall: CMI Architectural Products

Masonry and concrete: Stellar Concrete

Glass: PPG

www For more information about the people and products involved in this project, go to Building Types Study at architecturalrecord.com.

Part gallery, part studio, and part gathering place for the community, the Minnetonka Center for the Arts (MCA) is not a staid museum, but it has a clear focus: the process of art. An amalgam of playful forms in Wayzata, Minnesota, a western suburb of Minneapolis, the building calls attention to its creative intent.

“From the moment you drive by, we wanted it to be about art,” says Minneapolis architect James Dayton. A Minnesota native, Dayton (see Dayton profile in *archrecord*2, page 57) started his firm in the late 1990s when he received this commission—his first on his own—after working for Frank Gehry for five years (see story on Gehry’s Winton Guest House in Wayzata, page 30).

Program

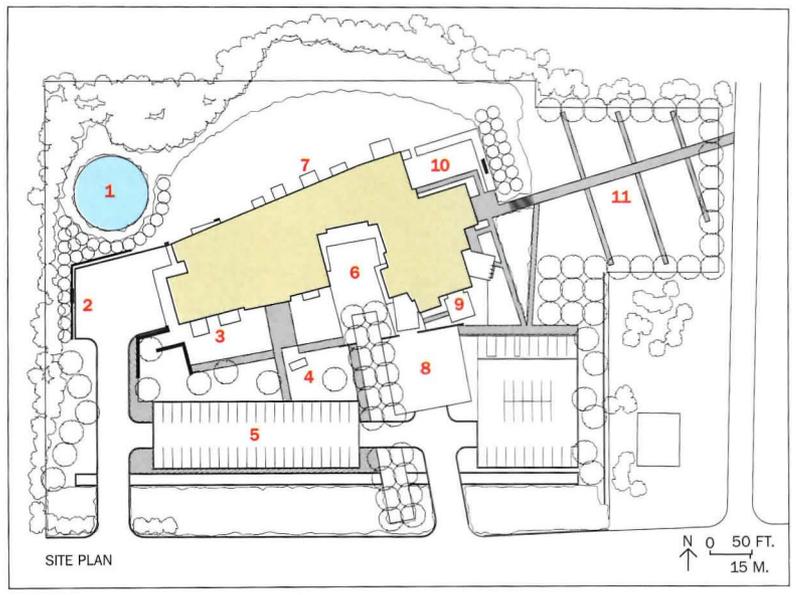
The MCA, which celebrated its 50th anniversary in 2002, is a nonprofit organization providing affordable courses in the visual arts and crafts, with an annual enrollment of more than 5,000 people ranging from children to senior citizens. For more than 30 years, the MCA was located in what had been an elementary school, and the former gymnasium was the art gallery. After initially considering a \$3.9 million renovation of the school, the MCA thought wiser and hired Dayton for a new building, 30 percent larger than the old one, at \$5.8 million.

Spaces in the new MCA are clearly differentiated between public



Facing a crushed-gravel parking lot (below), the arts center's many forms are sheathed in Cor-Ten steel, flat galvanized steel, flat galvanized steel, corrugated-galvanized siding, and Parklex. A concrete wall (bottom left) can receive art installations.

1. Pond
2. Art wall
3. Ceramics and sculpture courtyards
4. Wood kiln
5. Parking
6. Main courtyard with art wall
7. Painting and drawing courtyards
8. Entry courtyard
9. Dining terrace
10. Outdoor classroom
11. Sculpture garden



The gallery (pictured below) has movable partitions that are hung from steel beams. The skylight has a shading device

for painting and drawing shows. Cor-Ten steel siding sheaths the gallery cube, both in the corridor (bottom) and outdoors.

1. Main entry
2. Café
3. Lecture
4. Exhibition
5. Painting/drawing
6. Multimedia
7. Photography
8. Wood shop
9. Sculpture
10. Ceramics
11. Kiln room
12. Art wall
13. Main courtyard



uses, studios, and administration. The public component includes a 3,000-square-foot exhibition gallery, a café, and a lecture room, all near the main entrance. The studios, comprising the bulk of the ground floor, are organized along a corridor that is intended as a street through the length of the building. Administrative offices are on the second floor.

Solution

Dayton initially proposed a courtyard scheme, but that plan was inefficient and was discarded. Instead, the architect organized the studios so that each has access to daylight and exterior courtyards. Painting and drawing as well as multimedia studios have large amounts of northern exposure, and ceramics and sculpture studios face south, with adjacent space for outdoor work. A concrete art wall in front of the building (previous page, bottom left) is intended for outdoor art installations, and the courtyard in front of the wall is lined with rows of Little Leaf lindens. Minneapolis landscape architect Tom Oslund designed the outdoor spaces.

The gallery (left), which opened with an exhibition that Dayton curated of Minnesota artists' work, is topped by a square skylight that can be shaded when necessary.

Dayton smartly embraced a more industrial aesthetic of materials to complete the building for \$157 a square foot. On the inside, floors are poured concrete throughout the ground level, and the steel structure is exposed on the ceiling of most spaces. Cor-Ten steel siding sheaths the gallery cube, both in the corridor (bottom left) and outdoors. Dayton designed most of the tables in the building, as well as the reception desk, using birch veneer plywood.

Commentary

The building is a stark contrast for the suburb, and Gehry's influence is apparent. Although the collection of exterior masses makes it appear a bit jumbled, it is an appropriate, fun resolution. The collage of forms nicely reflects the art-in-progress nature of the work within. ■



3D Computer Modeling Is Becoming the Tool of Choice for Designing Steel Structures

DESPITE LIABILITY ISSUES, A/E/C TEAMS ARE BENEFITING FROM SHARING THEIR 3D MODELS

By Michael Bordenaro

Architectural computer modeling is not just for Frank Gehry, FAIA, any longer, and he will be the first to tell you. Gehry Technologies has been established in Santa Monica, California, to offer digital products and services in support of the building industry [RECORD, December 2002, page 167]. Gehry Partners has long provided formal training for its building team partners when they needed to incorporate advanced technology applications into their businesses in order to participate in Gehry's projects. Now Gehry Technologies will make this type of education and related technology products available to all building-industry members.

There are other architects, who, like Gehry, have designed their own processes for in-house use. Still others are developing products to assist in creating parametric (intelligent) models, which expand or contract with a click and a drag, while maintaining predetermined proportions and producing new material takeoffs. Finally, many key manufacturers are already equipped to produce building materials based on computer models.

While the use of 3D computer modeling is still in its infancy, the signs of impending change are clearest in the steel industry, where numerous detailers and fabricators use computer models to manufacture structural members. Many fabricators have highly skilled

Michael Bordenaro is a freelance writer, based in Chicago, who focuses on architectural technology.

CONTINUING EDUCATION

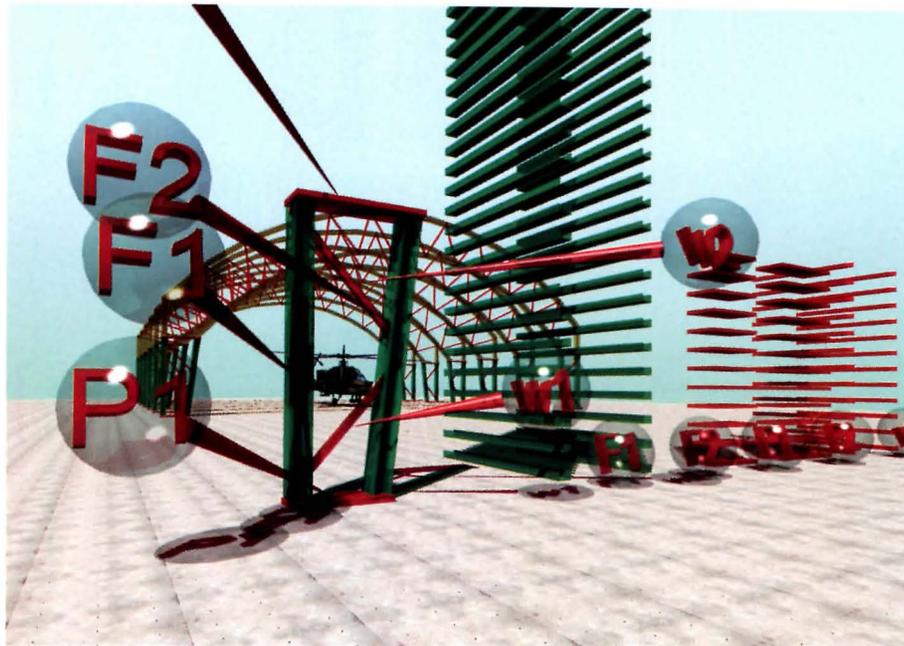
Use the following learning objectives to focus your study while reading this month's ARCHITECTURAL RECORD/AIA Continuing Education article. To receive credit, turn to page 158 and follow the instructions.

LEARNING OBJECTIVES

After reading this article, you should be able to:

1. Discuss what computer modeling can offer to the architectural profession.
2. Explain changes in business procedures that will result from sharing computer models.
3. Describe how structural-steel systems will benefit from computer modeling.

For this story and more continuing education, as well as links to sources, white papers, and products, go to architecturalrecord.com.



An intelligent structural-steel model of a hangar is viewed through an inventory of members needed to construct it. Created by Webscape, this parametric model's database is preloaded so quick changes generate immediate graphics, design data, and cost analysis.

3D computer modelers and computer numeric controlled (CNC) machinery [RECORD, November 2002, page 187].

Approaches to modeling structural steel

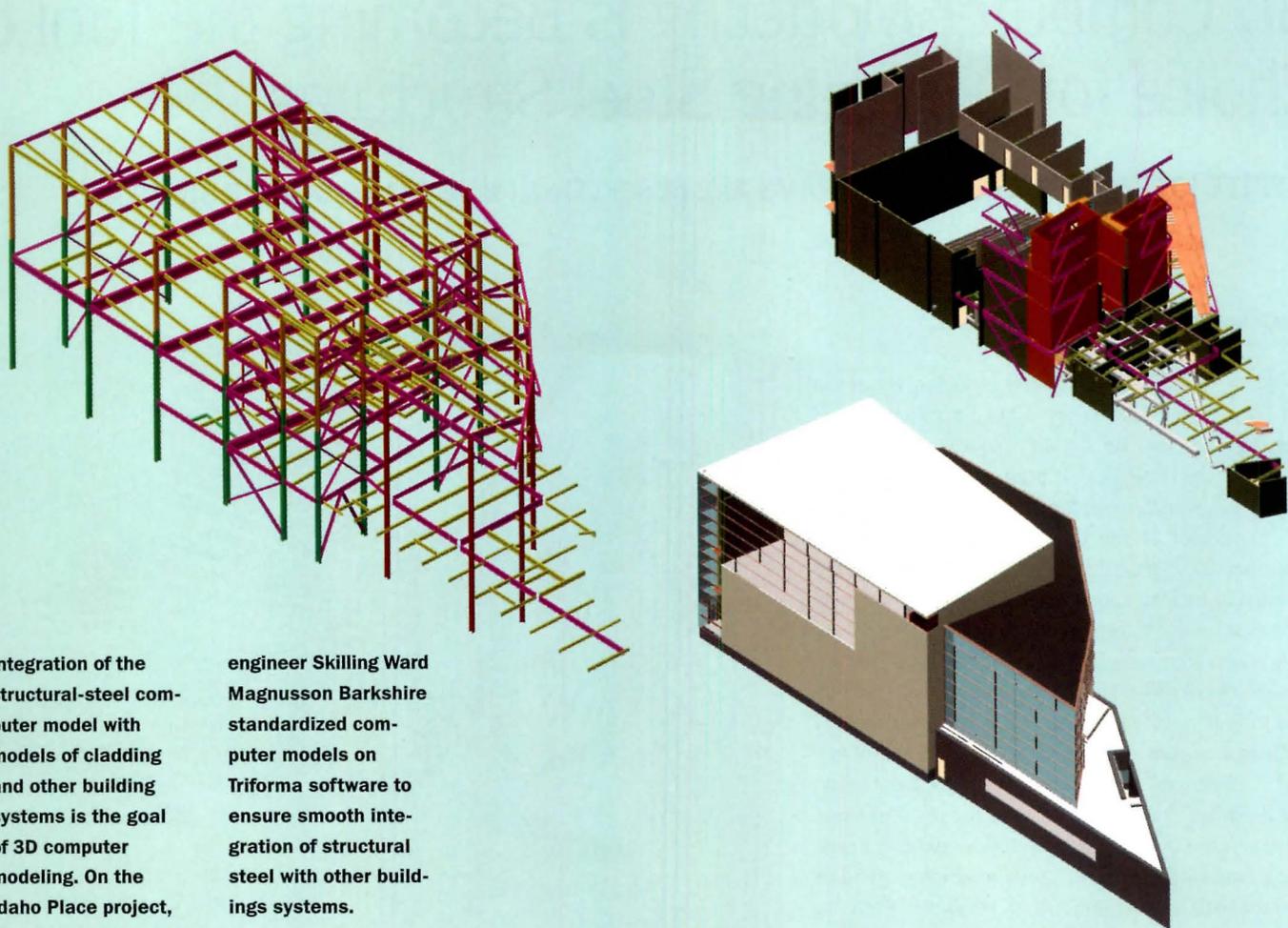
Kimon Onuma, AIA, invented Webscape to help architects build intelligent object models. With offices in South Pasadena, California, and Tokyo, Webscape and Onuma Architects have worked together creating parametric computer models of building types such as aircraft hangars and gymnasiums for use by the U.S. Army Corps of Engineers at various undisclosed overseas locations.

Using a Geometric Description Language (GDL) developed by Graphisoft, Onuma is able to create building models that can be instantly stretched and lengthened on a computer through simple mouse clicks and drags. The models are contained in a 50k to 100k file containing building material databases and complex "if-then" formulas that help determine parameters such as length of trusses, size of members, the number of bolts required, and the amount of paint needed to cover the surface area of the members.

"Working with structural engineers and using structural tables to set up the parametric model, we were able to design a variety of hangars in a meeting with the client and have the structural engineering 90 to 95 percent complete at the end of the meeting," says Onuma. The hangar model also includes information regarding cladding, doors,

Integration of the structural-steel computer model with models of cladding and other building systems is the goal of 3D computer modeling. On the Idaho Place project, architect NBBJ and

engineer Skilling Ward Magnusson Barkshire standardized computer models on Triforma software to ensure smooth integration of structural steel with other buildings systems.



windows, and other building systems and materials.

In addition to tracking the structural-member sizes, the model has the capability of graphically displaying all of the individual members for each building iteration created. "The models generate a range of information, including accurate truss lengths, heights, and member size. If there are additional snow or wind loads, the model would increase the size of members according to an extensive set of rules established in the model," he says.

Webscape meets architects' rare need for in-depth 3D computer modeling. Lawrence Rocha, Assoc. AIA, vice president and director of information services at Honolulu-based Wimberly Allison Tong & Goo (WATG), says that for most architects the progression toward 3D modeling "is not something to jump into with both feet." Rocha adds, "For this next generation of CAD, it's good to start with small projects and small teams and to get support from software vendors." Revit Technology, a Massachusetts-based developer of parametric building technology (recently acquired by Autodesk), set up a representative in WATG's Newport Beach, California, office while firm members were initiating a project using the software provider's 3D capabilities, according to Rocha.

Seattle-based NBBJ, which cosponsored the first-of-its-kind "Virtual Models Actual Buildings" regional seminar, is slowly introducing the incorporation of 3D modeling into its design practice on selected projects, including a steel spiral staircase in a new corporate headquarters

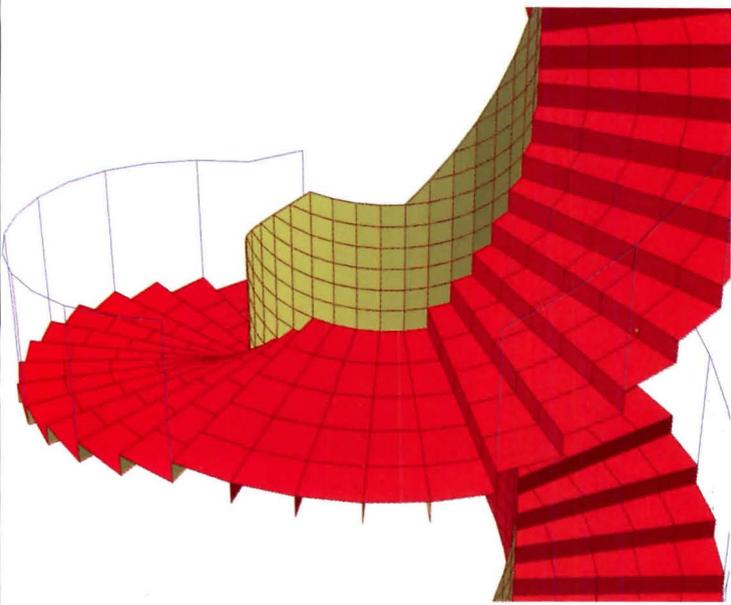
and Idaho Place, a University of Idaho multiuse facility.

For Idaho Place, NBBJ and Seattle structural engineer Skilling Ward Magnusson Barkshire (SWMB) agreed to a trial sharing of computer models standardized on Triforma 3D modeling software from Bentley. According to Carl Tully, NBBJ project architect, NBBJ allowed its 12-member team two weeks of software training. The firm used the schematic design phase to gain familiarity with the 2D version of the software and to draw much of the building by hand in order to develop a 3D

"FOR THIS GENERATION OF CAD, IT'S GOOD TO START WITH SMALL PROJECTS AND TO GET SUPPORT FROM SOFTWARE VENDORS."

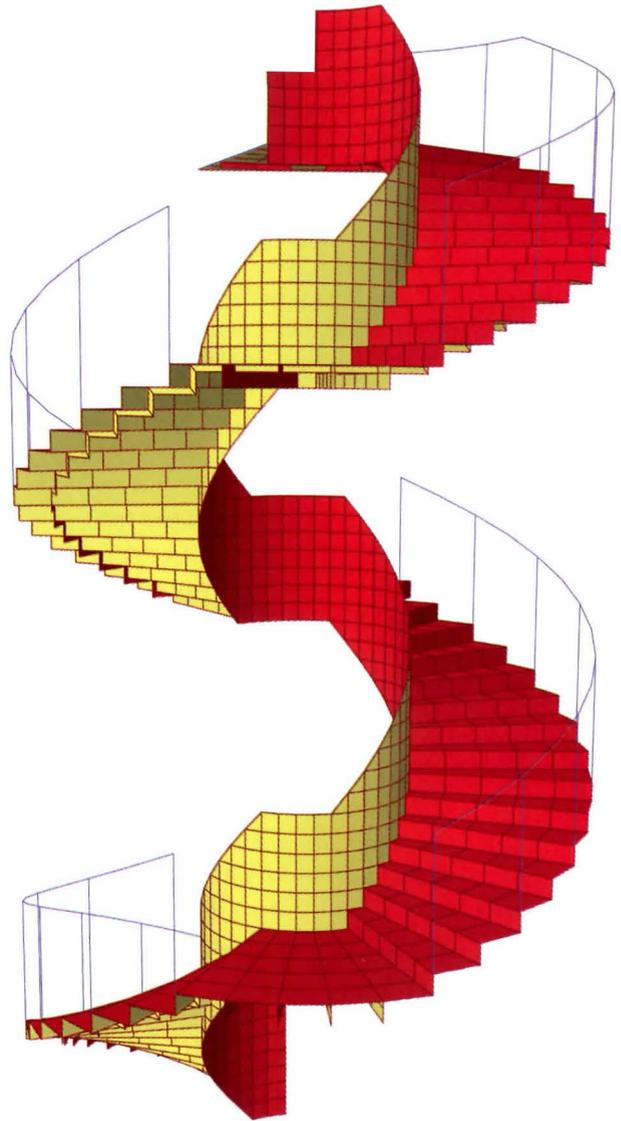
understanding of the project in a traditional manner. "The modeling aspect turned out to be relatively easy to learn," says Tully. "The challenge of organizing the different section cuts, elevations, plans, and details required more consideration than with a 2D CAD drawing set."

Ron Klemenic, SWMB president, states that the original desire of sharing files on a real-time basis was not feasible and, instead, nightly updates were exchanged between dedicated servers connected by a T1 line. The 3D modeling exercise paid off, according to Tully, who reports that junior designers were able to cut sections, spot conflicts, and raise



A helical staircase at Amgen's corporate headquarters in Seattle was manufactured from structural steel based on a computer model by NBBJ, which shared

reference data with the engineer and the steel fabricator. The fabricator created its own model to guide computer-controlled marking and cutting equipment.



significant design issues earlier in the design process and at a much higher level than is typically expected.

Tully himself was able to spot a major issue when he reviewed the structural-steel 3D model overlaid with the concrete parking deck. "A discrepancy in alignment of the structural systems was detected and resolved in design development, which might not have been addressed until the construction documents phase," Tully says.

NBBJ was also able to extract data from the 3D computer model to guide a laser cutter, which created pieces for a physical model. Additionally, NBBJ was able to have the Triforma 3D structural model overlaid with a mechanical system 3D modeling program from Design Master Software. "Because this was a new process for us, we did not save time in the design phase or require fewer staff to complete the project," Tully says. "What we gained was more focused time on significant design work, because we were constantly working with a very real visual representation of the project and couldn't 'fake' any details."

Realizing the impossible

Idaho Place is on hold until Spring 2003, so the structural-steel fabrication has not been bid, and it is uncertain how much of the 3D model will come into play during manufacturing. However, NBBJ's design of two 30-foot tall steel staircases for Amgen's Seattle headquarters has made it through design,

engineering, and manufacturing with the assistance of 3D modeling.

Amgen, which bills itself as the world's largest biotech company, wanted to encourage personal interaction among scientists through the use of "communication" stairs that would both foster and be a place for discussion. One stair represents chaos through its cacophony of forms, and the other is modeled on a double helix. Both are self-supporting structural-steel sculptures.

NBBJ architect Robert Leykam created numerous hand-drawn sketches and a 3D computer model in AutoCAD to help communicate the complex geometry of the stairs. He shared 2D AutoCAD drawings with the project structural engineer, KPFF Seattle, which used the drawings to help create a 3D model in its SAP 2000 structural engineering analysis program.

"You could not create a design like this by yourself as an architect, and KPFF could not have done it without the current technology available," says Leykam. "The connection analysis at welds, test loading diagrams, distribution of uniform loads, and analysis of other scenarios resulted in the use of less steel and less welds than I thought possible, and greatly contributed to the hovering effect of the helix stair."

Carolyn Weiss, project engineer for KPFF, says, "SAP 2000 provides 3D modeling and dynamic property analysis, so we were able to provide fundamental periods and other data in addition to presenting

detailed images of how the stairs would look.”

Leykam used the images to make subtle changes in details impacting the structures, but more importantly, the SAP 2000 3D models were provided to Portland, Oregon-based Columbia Wire & Iron Works, a 100-year-old iron and steel fabricator. However, because of legal implications, KPFF’s 3D model was only used as a check set against Columbia’s model, which was created on SDS2, a structural-steel-detailing software program. Weiss says, “We simply provided it for reference and included a disclaimer saying the dimensions have to be verified, but Columbia used it to make sure their working points were coming out right when they laid out the steel.”

The deceptively complex White Chapel benefited greatly from the creation of a 3D model by project steel fabricator A. Zahner, Kansas City, Missouri. Located at the Rose-Hulman Institute of Technology, Terre Haute, Indiana, the 5,000-square-foot chapel’s main structure is a series of 14 rectangular tube arches shaped like a 3D Gothic arch.

Bill Bradford, principal with Chicago-based VOA Associates, says, “The arches get smaller and shift off axis as you move toward the back of the structure. Viewing the computer model allowed us to realize that a rectangular tube connecting the top of the arches would provide limited bearing points for the decking.” A round tube section was specified to connect the tops of the arches and provide a more suitable point of contact for roof decking along the entire length of the structure.

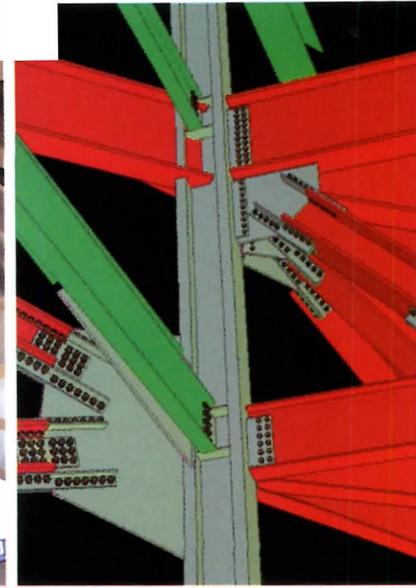
The 3D computer model created in AutoCAD by Zahner also made it clear that the first arch, which tilts out over the entry, was substantially different from the others, even though no two arches are the

“WE WOULD NOT HAVE BEEN ABLE TO FIT THE NEW STRUCTURE IN AS PRECISELY WITHOUT 3D COMPUTER MODELING.”

same. “If we didn’t have the computer model, we may never have realized that the first arch is a parabolic arch instead of a circular arch like the others,” Bradford said. This information helped with detailing the curtain-wall facade of the chapel. Zahner, which also fabricated the White Chapel’s cladding system, used the computer model to help manufacture skylights for the building after no other company was found to effectively handle the complex geometry of the roof.

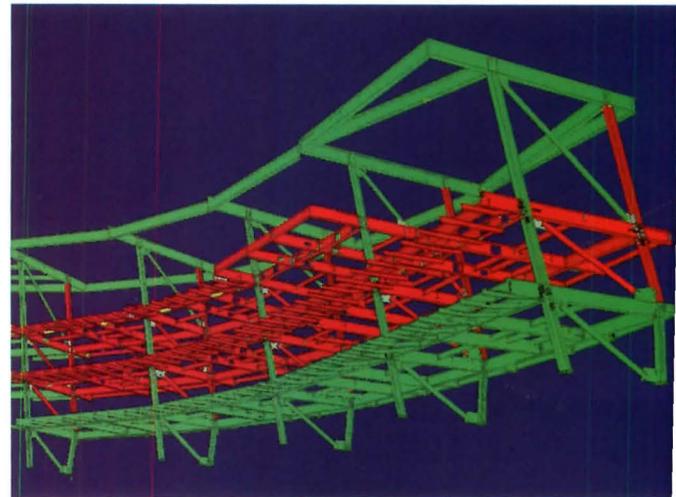
The renovation of Chicago’s famed Soldier Field and a master plan for North Burnham Park is a joint venture of the local firm Lohan Caprile Goettsch Architects and Boston-based Wood + Zapata, with the latter having primary responsibility for the stadium design. The new configuration of the stadium saves the historic colonnades by removing the interior seating structure, lowering the playing field, and inserting a new set of 63,000 seats and 133 luxury suites into the existing perimeter structure.

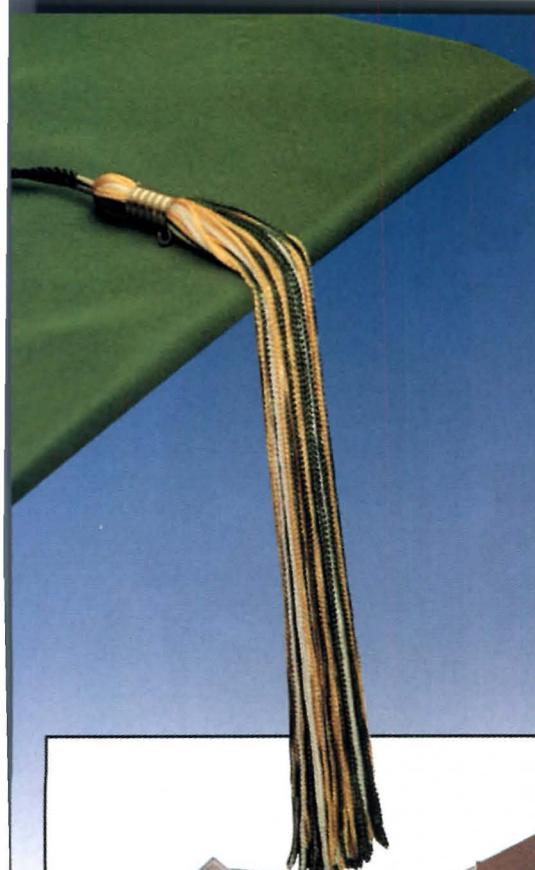
Joseph Caprile, AIA, says, “At some places, the new structural steel is within 2 feet of the existing building. We would not have been able to fit the new structure in as precisely as we did without 3D computer modeling.” Tony Montalto, project architect, had created some surface models of the project in Form•Z software to provide conceptual understanding of the design. He says considerable benefits were realized when structural engineer Thornton Tomasetti Engineers exported .dxf and .dwg files from its ProEngineer software for architectural review. “At some places, we have 10 to 20 pieces of steel coming together in complex connections. If we tried to detail this project in 2D, we would have ended up with problems,” Montalto says.



Computer modeling of steel for Chicago’s Soldier Field renovation assisted the need for complex structural connections to be designed and manufactured in a short time

frame. As many as 20 angled and beveled members come together in connections that are smoothly erected in the project’s 16-month schedule.





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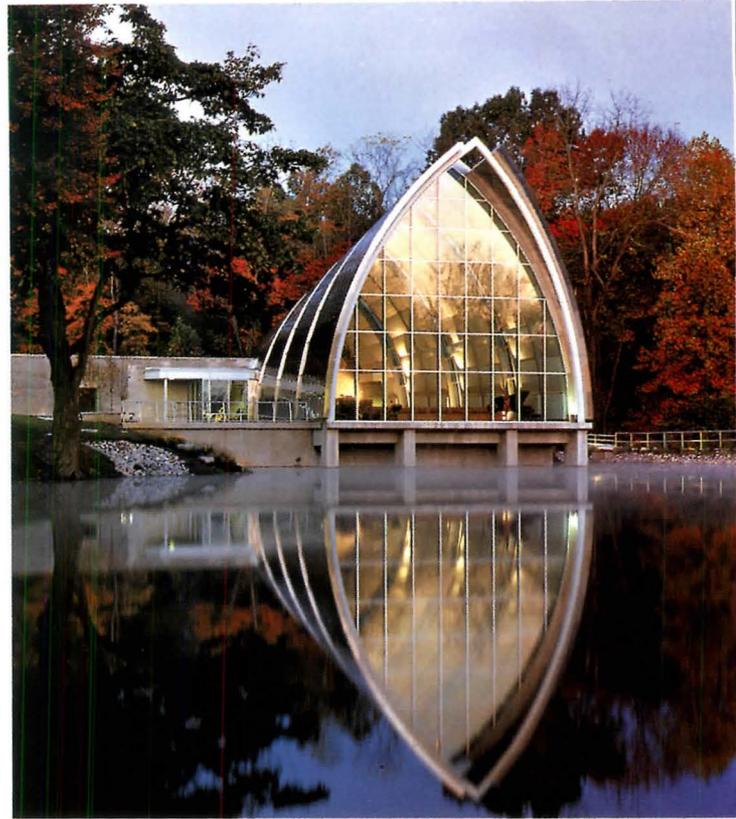
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According to Montalto, another benefit of the steel-detailing software used on the project is the ability to create a database of parameters for creating connection details. "If a structural member type 'X' comes together with a member type 'Y,' the software can be programmed to establish a predetermined 'Z' type connection," Montalto says.

Risks and rewards

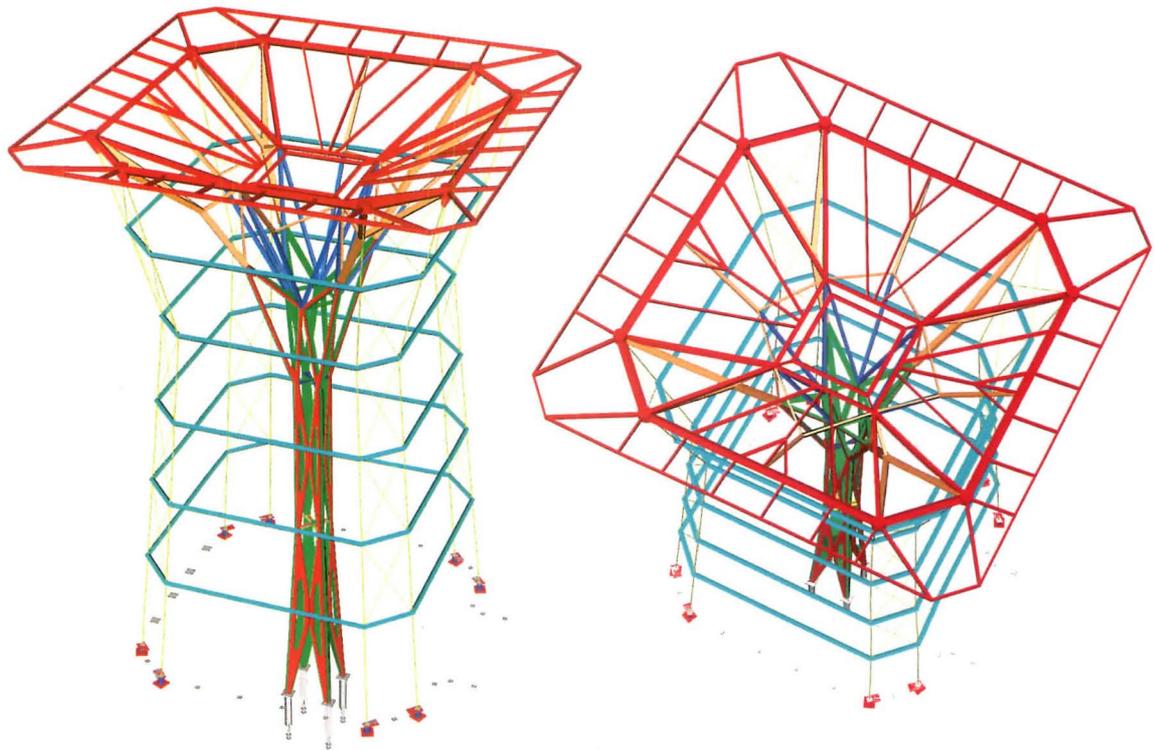
While it is possible to share computer models among professions, subcontractors, and trades, standard practices governing contracts and liability all but demand that architects require their structural engineers, detailers, and fabricators to create their own 2D drawings and 3D computer models. The cost of this redundancy may eventually make it possible to share computer models, suggests Robert Park, Columbia's chairman and C.E.O. "In a typical three- or four-story, 20,000-square-foot building requiring 1,000 tons of structural steel, the detailing would traditionally cost about \$140 dollars per ton," says Park, who has fabricated steel for Gehry projects and for other architects designing complex steel structures that benefit from computer modeling. "If we received a usable computer model that could go right into an automated detailing program, the cost would come down to \$60 per ton."

Although \$80,000 is sometimes not a significant amount on a project, there are other savings. "If you then provide the fabricator with a model that can be easily translated to run the CNC equipment, the traditional 10 man-hours per ton for fabrication can be reduced by about 3 man-hours," says Park. Theoretically, this could bring project savings between \$100,000 and \$150,000, depending on regional labor costs. Park adds that efficient sharing of a computer building model would accelerate the steel fabrication of this theoretical project by three weeks.



Rose-Hulman's White Chapel by VOA has a complex structural-steel system modeled in 3D by fabricator A. Zahner to ensure proper understanding of the member alignment, cladding placement, and other systems interactions.

The structural core of the 90-foot glass atrium at the headquarters for California Public Employees Retirement System (CalPERS) supports a glass curtain-wall canopy. Columbia Wire & Iron Works created a structural-steel computer model (right). The computer model confirmed that the design was feasible, had appropriate connections, and was actually able to be fabricated. Without a computer model, the structure would have been too complicated to build.





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Sharing should not be a liability

Because the legal component of the building process is greatly affected when team members share drawings, it takes the influence of a major architect, such as Frank Gehry, to help change the industry practice. Gehry Technologies' Dennis Shelden says, "Architects are now capable of doing what is traditionally part of the construction team's responsibility, and the risks and rewards are substantial." He notes that in conventional design processes, incongruities between structure and

"THERE ARE FEWER ERRORS AND OMISSIONS IF THE 3D COMPUTER MODELING PROCESS IS FULLY COORDINATED."

other systems may be papered over until the project moves out of the design team's scope.

"Sharing digital information provides the possibility to change that, even though the process may fly in the face of what lawyers will tell you," Shelden says. "The upside is that there are significantly fewer errors and omissions if the 3D computer modeling process is fully coordinated."

While Gehry is the leading architectural adapter of 3D computer modeling of structural steel, the projects shown here illustrate the growing awareness about the benefits of these processes and the increasing eagerness of architects to incorporate them into their practices. ■

Interoperability is a few clicks away

3D graphic software programmers are making strong moves toward low-cost applications that will let all building system programs interact with minimal effort. Rhinoceros, Bentley, AutoCAD, and others are making good headway in this effort. Bentley's Triforma 3D modeler is getting good reviews. CATIA is distributed by IBM, so it can be made cost competitive for any number of reasons.

Because of its more unified A/E/C industry, Europe is advanced in sharing 3D computer models for design and construction, according to Joseph Burns, P.E., AIA, a principal with Chicago-based Thorton Tomasetti Engineers. "Computer integrated manufacturing steel (CIMsteel) was started in Europe as an electronic data interchange standard for manufacturing steel," Burns says. "AISC has adapted the CIMsteel standard, and a number of software companies are writing to that standard, so there will be interchanges between design, analyzing, and detailing programs that ultimately deal with CNC machines."

However, Burns notes that a more comprehensive object-modeling standard is being developed by the International Alliance for Interoperability (IAI). "The IAI is working to create standards for all of construction industry foundation classes, steel structures being just one of them," Burns says.



AIA/ARCHITECTURAL RECORD CONTINUING EDUCATION

INSTRUCTIONS

- ◆ Read the article "3D Computer Modeling Is Becoming the Tool of Choice for Designing Steel Structures" using the learning objectives provided.
- ◆ Complete the questions below, then fill in your answers (page 210).
- ◆ Fill out and submit the AIA/CES education reporting form (page 210) or download the form at www.architecturalrecord.com to receive one AIA learning unit.

QUESTIONS

1. Intelligent building object models can do all except which?
 - a. produce new material takeoffs
 - b. maintain predetermined proportions
 - c. unify all building systems
 - d. expand or contract with a click and drag
2. The ultimate benefit of 3D architectural computer modeling will be which?
 - a. the unification of all building systems
 - b. production of new material takeoffs
 - c. maintenance of predetermined proportions
 - d. expansion or contraction with a click and drag
3. The current legal system encourages architects to require structural engineers, detailers, and fabricators to do which?
 - a. use the architect's schematic computer model
 - b. reduce the cost of redundant model building
 - c. create their own 3D computer models
 - d. share the cost of 3D computer models
4. The NBBJ 3D modeling exercise did not pay off in which way?
 - a. cutting sections
 - b. spotting conflicts
 - c. raising significant design issues earlier in the design process
 - d. expanding and contracting the model
5. Which did not contribute to the use of less steel and fewer welds in the design of the complex stairs?
 - a. the cacophony of forms
 - b. test loading diagrams
 - c. distribution of uniform loads
 - d. connection analysis at welds
6. The influence of a major architect is needed to help change the industry practice for which reason?
 - a. because publicity will make the change acceptable
 - b. because funding for the initial project is hard to get
 - c. because the legal component of the building process is affected
 - d. because it forms a new school of architecture
7. The benefit of fully coordinated 3D computer modeling is which?
 - a. the members become e-smart
 - b. there are fewer errors and omissions
 - c. the cost of producing the model is lower
 - d. the legal implications are lessened
8. Computer models with e-smart members provide all except which information?
 - a. orientation in space
 - b. start and end points
 - c. connection details
 - d. hang points
9. The working computer model allows an understanding formerly not available until when?
 - a. schematic design
 - b. construction
 - c. model building
 - d. shop drawings
10. The time benefit of sharing 3D computer models is which?
 - a. 10 man-hours per ton of steel
 - b. acceleration of the steel fabrication
 - c. 3 weeks per ton of steel
 - d. reduction of the steel fabrication

Digital Architect

Design Software for the Home Front

By Alan Joch

It's all in his head. At least that's how residential architect Bob Abell explains his dilemma. His mind-set is to work intuitively to create a new design for his residential clients in the affluent suburbs along Lake Michigan, just north of Chicago. "I'm constantly pulling ideas out of the air," says Abell, AIA, an associate with Geudtner and Melichar Architects in Lake Forest, Illinois.

Abell, like many other residential architects, says residential design requires special software tools that accommodate the wide variety of floor plans, roof lines, construction materials, and visual flourishes that distinguish homes from standard, boxy commercial or industrial buildings. The right software can also make the difference between success and failure for a small firm—especially important because a majority of residential architects are either solo practitioners or members of firms with 20 or fewer employees, according to the IA's 2000/2002 Firm Survey.

Fortunately, residential architects no longer have to shoehorn engineering-gearred applications to their needs, or stick with drawing by hand and miss out on the advantages of design automation. More choices are now available specifically for residential work, making it

Alan Joch is a technology and business writer based in New England. Contact him at ajoch@monad.net.

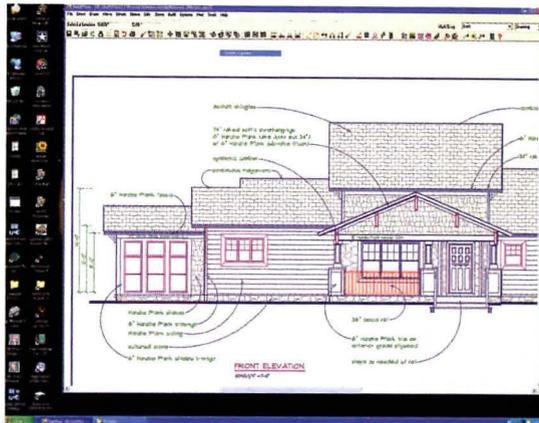
For more information on technology for architects, including reviews, vendor lists, and links, visit Digital Architect at architecturalrecord.com.

easier, more creative, and more economically viable to serve this niche than ever before.

Two camps

Residential design software falls into two general categories: programs that augment the popular AutoCAD drafting engine and those that spring from a different technological platform. Both groups share something in common: a strategy for embedding intelligent software components into the basic drafting tool so architects can quickly and accurately plug in dimensionally correct, prefabricated representations of windows, doors, and other residential elements rather than tediously drawing them by hand. In addition, the latest design applications can help architects quickly develop renderings and 3D models of their designs to help a client understand and commit to a proposal.

Two leading products in the AutoCAD camp are Build and APDesign from Cadsoft Corporation. The programs wrap AutoCAD compatibility inside a set of software tools that automate many design functions, such as inserting windows and doors into wall units. APDesign also lets architects work out the flow of a design without getting bogged down in the details of representing everything with straight lines and geometric shapes. "My roofs are nuts," says G. Michael Tucker, an architect with Sweetbriar



Using the residential CAD program SoftPlan, Joe Villeneuve, a Michigan architect, can draft a complete set of working plans in less than a day. The software also lets him create 3D renderings from plans.



Architects Atlanta in Alpharetta, Georgia. "I have to vary eave lines, vary pitches. APDesign allows me to work with surfaces, then accurately draw the roof, even if I want to introduce a custom section that's 4 or 5 feet higher than the rest of the roof line."

Tucker also gives APDesign high marks for its ability to create a model of the framing that will support the house. "The framing shows them each floor in an isometric view," he says. That type of model can also eventually help construction crews visualize the architect's intent. "It can save thousands of dollars by showing them what the finished project will look like. It helps

architects stay out of the remodeling business," Tucker quips.

APBuild user John Neufeld, founder of John Leslie Neufeld Architects in Fairfax, Virginia, specializes in designing large custom homes, up to 25,000 square feet, in the Washington, D.C., area. He begins his designs by depicting walls, which then become the basis for subsequent architectural details. "After I draw a wall, I tell the program what height and material I want for it. If I'm designing a brick veneer house, I then see that in three dimensions. At any point, I can take the model and turn it into a 3D view. All of this saves me a lot of work that I don't have to do by hand."

Digital Architect

Nevertheless, there's a trade-off when using sophisticated design software. Though the built-in tutorial is helpful, APBuild's complexity means that designers may need as much as a full year of familiarity before they become "speedily functional" with the program, Neufeld says. Also, for aesthetic reasons, he still prefers to do some parts of the design by hand. "You want the front elevation of a house to feel nice and comfortable," he explains. "It gives it more life when you draw it by hand. Computer drawings are too precise. They look dry and dead. Almost always, I do the fronts by hand."

As some residential architects use AutoCAD as the benchmark to measure what alternative design packages are capable of, its parent company, Autodesk, is making a new push to court architects—most notably with the purchase of the parametric design program Revit. "We're taught as architects never to draw anything twice, to avoid conflicts," says Peter Bruckner, an architect with Designers CADD Company, a Cambridge, Massachusetts, AutoCAD reseller and service bureau for electronic renderings and walk-throughs.

DIGITAL TOOLS FOR RESIDENTIAL ARCHITECTS HELP THESE SMALL FIRMS CREATE CUSTOM DETAILS QUICKLY.

"With Revit, you can see whatever you draw in a number of different coordinated views. It's a tool that understands the designer's intent." Third-party developers for Revit are actively creating new components for elements like doors, windows, and lighting fixtures and making them available via the Web. Manufacturers, like window maker Pella, are also making available dimensionally correct software files of their product lines.

Clean slate

While AutoCAD continues directly or indirectly to serve a large base of

residential architects, some in the industry have opted for a different platform.

David L. Wolff, AIA, became an expatriate of large commercial architectural firms three years ago and now runs a one-man shop in Portland, Oregon.

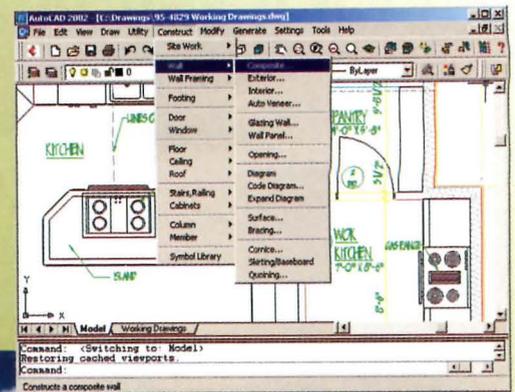
Currently, a majority of his work is residential, including a new 28,000-square-foot house that will be built along the coast of Oregon. When he went solo, Wolff also decided to move to Graphisoft's ArchiCAD because he found it fit his working style better. Now he could build an electronic model of a home and add windows or doors simply by highlighting an icon and snapping it in place. "Boom! Everything's done. You can then edit, add perspective, or turn it into 3D on the fly," Wolff says. "You don't have to construct a 3D model afterward from 2D drawings."

He says that kind of software intelligence is more than just a

handy convenience. The ability to perform custom work quickly is essential to keeping his company economically viable. "My competitive advantage is to have the machine do the work," Wolff says. "I'm not really a computer person at heart, but for me to compete with the larger architectural offices, technology is necessary."

And unlike architect Neufeld's preference for hand-drawn elevations, Wolff credits computer-generated renderings with helping him sell his designs to clients. "I come from a builder background; I was out there swinging a hammer. I went to

Cadsoft's tools, Build and APBuild, work inside the AutoCAD platform to help residential architects design customized details like gables, roof lines, and overhangs—common elements of these projects.



school with people with M.F.A. [Master of Fine Arts] degrees who would create these gorgeous renderings that I couldn't do. ArchiCAD does that for me, and this really helps me with the presentation aspect of my work."

Joe Villeneuve, architect and owner of Concepts in Designs in Plymouth, Michigan, uses a residential-gearred package called SoftPlan, by SoftPlan Systems, for designs that focus on energy efficiency for clients in metropolitan Detroit. He likes the software's ability to automatically generate elevations, 3D models, and materials lists from on-screen representations. "I can design right down to the drywall screws," he says. "The software understands the construction behind the lines that I draw. I can have a floor plan and an elevation on the screen. If I edit one, the software automatically changes the other."

Before using SoftPlan, Villeneuve drafted plans by hand. Within two weeks of using the program, he was able to work as quickly with SoftPlan as with pencil and paper. "In a month,

I was doing it faster with the computer," he says. "I can do a complete set of working drawings for a 25,000-square-foot house in less than a day. It gives me time to devote to my business as opposed to just doing production work."

Personal comfort

Users of residential design software say the most important criterion for choosing an application isn't allegiance to a particular platform, but rather, finding software that lets an architect work comfortably. "You have to see the interface and get a sense of how compatible it is with your personal style," Bruckner says. He suggests that evaluations begin with two simple questions: "Is it logical? And is it simple to use?"

Decisions shouldn't be made by watching a canned demo, he warns, because demos may look impressive, but they do little to show what it takes to achieve those results. Rather, evaluate the program using real-life tasks. After all, he says, "This is a matter of finding a long-term relationship." ■

RESIDENTIAL

Architects' homes, adapted to diverse settings, embody spirited innovation

Viewing an architect's home stimulates a voyeuristic impulse—it promises us a very special personal window into the designer's passions, needs, and philosophy. We assume that these homes must serve, as well, as laboratories for experimentation with unconventional design ideas, materials, and innovations. Architects are surely the first to know about the

new new thing: the coolest in light fixtures, furniture design, composite materials, and visually dramatic windows. Unlike the open purse strings often evident in the budgets for houses architects are commissioned to design, their own dwellings are usually more humble in cost, making a strong case for original thinking. The four architects' homes featured here come exclusively from modest-size firms, which RECORD is pleased to recognize. And what a diversity of environments! Ed Jones's Phoenix oasis tells you immediately what makes desert living appealing; the Matthews family's island retreat speaks to the seafaring spirit in us all; Jonathan Segal's urban live/work enclave reigns in San Diego's once-marginal neighborhood of Little Italy; and the thought-provoking carriage-houselike Timepiece House cozies into a historic district of plush mansions in bucolic Virginia. Feast your eyes on these unique delights.—Jane F. Kolleeny



BRIEFS

Apollo Energy Systems in Fort Lauderdale, Florida, is developing a new fuel-cell system for powering homes and hopes to have prototypes by year-end. These alkaline electrolyte cells have several advantages over systems already developed, including lower cost and greater efficiency. For more information, visit www.electricauto.com.

The firm of Native American Photovoltaics has brought power to the underemployed Navajo Indian population in an innovative way. Constructed out of photovoltaic panels and recycled utility poles, each unit generates one kilowatt of electricity to power a basic family's needs. Various low-cost sustainable implementation plans are proposed.

Rival companies compete in Japan for custom toilets for the home. Such toilets glow in the dark, lift up their lids, play relaxing music, massage and wash the buttocks, and measure body fat. That's nothing. Toilets five years in the future will recognize and talk to users, and measure weight, fat, blood pressure, heart beat, urine sugar, albumin, and blood in the urine. Help!

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Matthews Architects

180 Jonathan Segal Residence

Jonathan Segal, AIA

186 Timepiece House

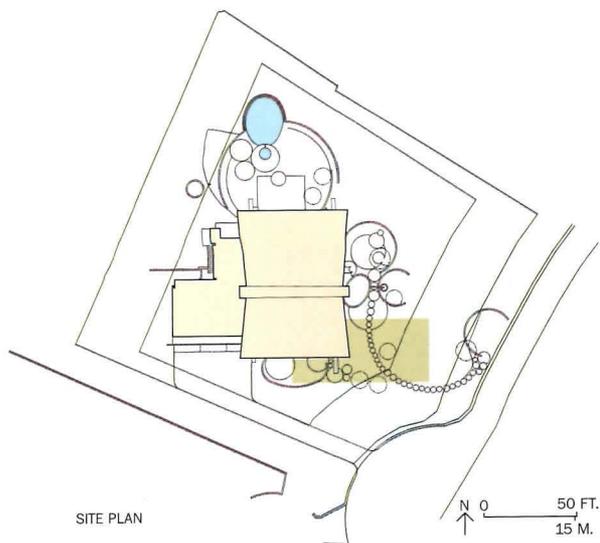
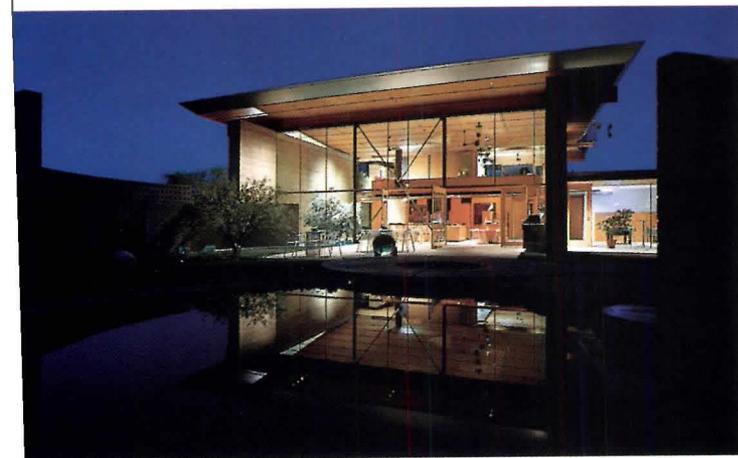
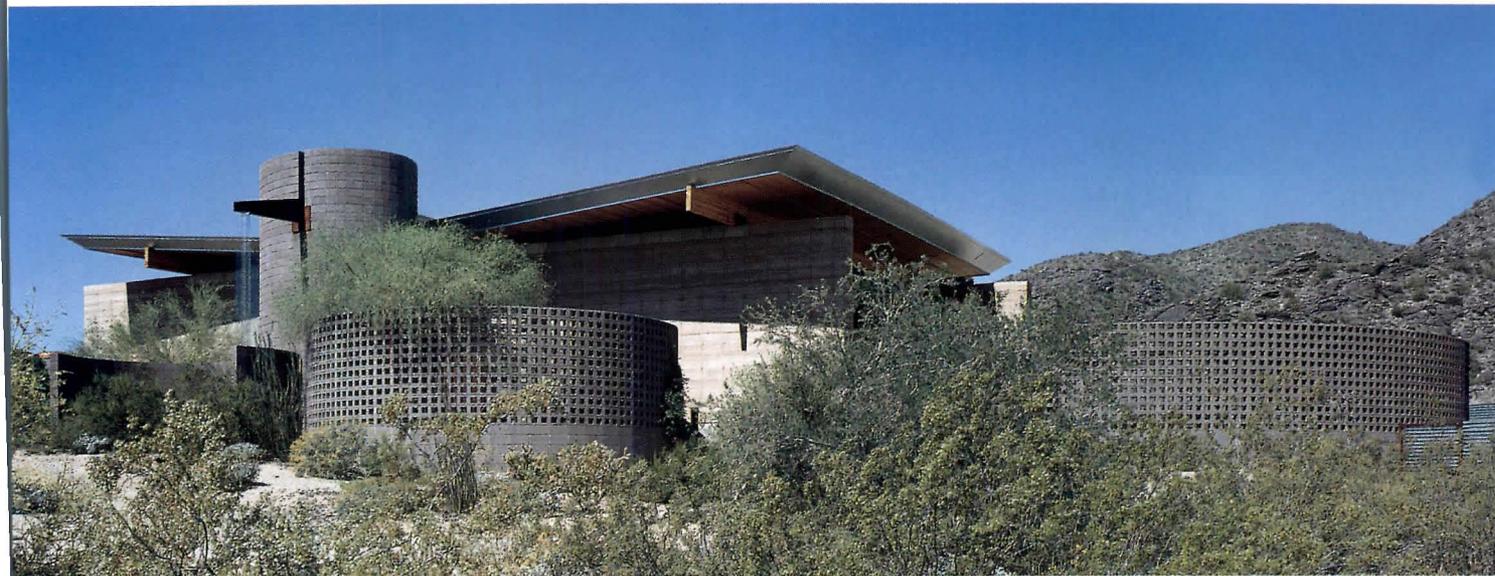
Carrie Meinberg Burke Architecture + Kevin Thomas Burke, AIA

191 Residential Products



Inside the front gate, which is camouflaged by desert landscaping (opposite, top), a tropical courtyard with a fountain and lush plants creates a microclimate within the desert (this page). The northern elevation is open to capture indirect daylight (opposite, bottom, seen at night).

In a sprawling Phoenix suburb, **Eddie Jones** creates a modern Mexican hacienda full of surprises



SITE PLAN

N 0 50 FT.
15 M.

By **Ingrid Whitehead**

In Phoenix, where pink stucco developments have sprung up like weeds in the past 10 years, Eddie Jones has designed a visionary rammed-earth home—an anomaly amid the sprawl, with walls that will last a thousand years—for himself and his wife. The house has also become a showpiece for Jones’s design sensibilities, combining his global influences, his love for the desert, his skill at creating architecture that can withstand the climatic extremes of the region, and his childhood fantasies.

“I never imagined I would live in the suburbs,” says the architect. But the opportunity arose when Jones and his wife, Lisa, found a parcel of land in the midst of Phoenix’s upscale Ahwatukee neighborhood. Deemed unbuildable because of its proximity to a large water-chlorination tank, the 1-acre site remained unsold, while red-tile-roofed McMansions sprang up all around. The property, however cursed by the tank, was also blessed by its direct connection to South Mountain Preserve, a 15,000-acre municipal park, complete with hiking trails and jagged desert landscape. Jones saw the potential, got the land for “a steal,” and set out to design a house that would make use of the mountain vista while shielding views of the tank and other houses.

Strategic design resulted in shaping the house within cylindrical sandblasted concrete outer walls. Like entering a Mexican hacienda, you step through the front gate into a tropical courtyard with a round, elevated fountain that spills into a circular pond surrounded by lush plants.

Project: Jones Residence
Location: Phoenix
Architect: Jones Studio—Edward M. Jones
Interior design: Edward M. Jones and Lisa Johnson

Engineers: Jack Trummer (structural); Roy Otterbain (mechanical)
Consultants: Bill Tonneson (landscape); Lighting Dynamics (lighting)
General contractor: Construction Zone



Elliptical wooden steps lead to a glass bridge, which connects the second-story spaces (top and below left). The giant X-brace crisscrosses the great room's wide glass wall (below right), providing lateral stability.



Jones's respect for his heroes of art and architecture (Luis Barragan, Frank Lloyd Wright, Paolo Soleri, John Lautner, Al Beadle), his admiration of ancient building materials and methods, and his own experiences played a part in the house's design. Embedded in the first of the two, 2-foot-thick, raw-rammed-earth east and west walls of the residence is a stone from the chimney of Shiprock, the first home designed in Arizona by Frank Lloyd Wright, built in 1942 for Rose Pawson.

In keeping with the one-of-a-kind elements incorporated into the house, a huge oak door that Jones saved from another site leads from the courtyard into the living space. Once inside, a sparse foyer contains a unique Soleri bell. Elliptical wooden steps lead up a cylindrical turret (a nod to Jones's childhood fantasy of living in a medieval castle) to the upper spaces.

On the ground floor, a central corridor separates the two-story high great room from the bedroom and office spaces to the south. The

north-facing great room combines a public spaces in the house, including the kitchen and dining areas. The room's 18-foot-tall-by-40-foot-wide glass wall is laterally stabilized by a steel X-brace. The rammed-earth walls and steel braces serve as the structure, insulation, and finish materials; there is no need for additional materials such as drywall, other insulation, stucco, or paint. "It's very straightforward and logical house," says Jones. "All the dirt for the walls came directly from the site, and there a



Everest takes style to new heights.



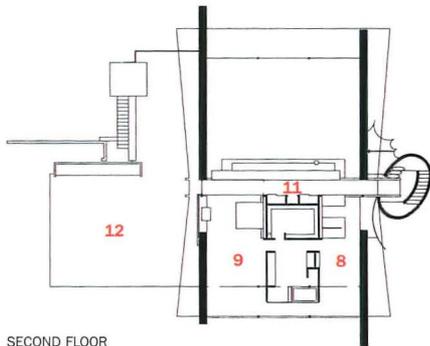
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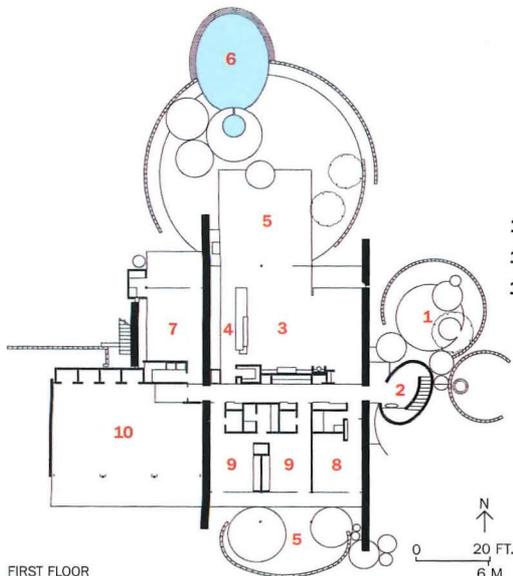
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SECOND FLOOR



FIRST FLOOR

The great room combines all public spaces in the house, including the kitchen and dining area. Views of the South Mountain Preserve to the north disguise the house's suburban context.

1. Entry patio
2. Stair tower
3. Living
4. Kitchen
5. Patio
6. Pool/spa
7. Den
8. Studio
9. Bedroom
10. Garage
11. Bridge
12. Roof deck

practical reasons for each joist and joint.”

An example of such practical design choices are the “pillows of light,” or glass interventions that separate walls from doors, and wall from the roof. The glass opens up the house by allowing natural light to seep in at all joints. The roof provides another practical solution by sloping toward the elliptical turret and culminating in a rainwater harvesting system that serves to irrigate the home’s landscaping. Although the desert is mostly hot and dry, when monsoon season comes heavy rain is directed to the desert floor by zinc-plated chain-link hung from rusted black iron steel plates on the roof facing the street side of the house.

The roof also has a skylight that runs along the entire length of the house, parallel to a 40-foot-long, clear-glass second-floor bridge allowing natural daylight to penetrate to the rooms below. Upstairs, the master bedroom and Jones’s home studio are open to the glass hallway and the great room below, providing a loftlike atmosphere.

Back down in the great room, concrete flagstones continue past the glass wall out to the patio, which offers views of the mountain preserve. An infinity-edge pool provides a welcome cool place to relax outside when the temperatures climb.

Jones says that although the neighbors were initially skeptical of the so-called “dirt house,” they were also curious. Now they regularly bring guests by to see it. Jones describes one incident with his neighbors with a smile. “After the first big rain, Lisa and I went out front to watch the rain-harvesting system in action. As we watched the rain travel down the chain link, our neighbors started coming out of the houses to watch, too, and they applauded. It was a great moment, an impromptu standing ovation.” ■

Sources

Exterior cladding: Pioneer Masonry (masonry); Construction Zone (concrete); Ken & Todd Laurent (wood)

Doors and entrances: Aztec Doors

Skylights: Glassline

Lighting: Lightolier (downlights); Light Touch (controls)

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William Matthews found a warm berth in this nautical Bainbridge Island setting

By Sheri Olson, AIA

In the Pacific Northwest, responding to the climate sometimes matters as much for mental health reasons as it does for energy efficiency and weatherproofing. “It’s dark and wet here for five months of the year; it can get very dreary,” says William Matthews, AIA, who specializes in commercial and residential work. His new house on Bainbridge Island, Washington, uses large overhangs, lots of light, and natural materials to create a welcome shelter from the rain.

After the birth of their second child, Matthews and his wife, a construction manager, sold a Seattle house he designed in the 1980s and began looking for land to build a larger house. Bainbridge Island, a scenic 35-minute ferry ride away from Seattle’s central business district, attracted them with promises of privacy, views, and deep-water moorage for the family’s motor boat, kayaks, and four sailboats. After searching for years, they found a 1.8-acre property on the south shore of Madison Bay.

During construction, the family lived in an existing 1960s rambler (now demolished) on the northeast corner of the sloped site occupying most of the level area. The new house, in the southwest corner, tucks into the crown of a hill, allowing a broad lawn that terraces down toward the water 75 feet below. “The bay’s varied shoreline gives it a distinct neighborhoodlike quality that I wanted to respond to,” says Matthews.

The roof’s simple, butterfly-wing shape nods to its neighbors, a reversal of the shed roofs of the boathouses that dot the shore. Angling the roof up on the east and west sides allows both more window area and large overhangs to protect the exterior walls from the constant dampness. Except for the roof’s wood structure, all exterior materials are slate-tile and corrugated-steel siding to minimize maintenance. The exterior walls

Sheri Olson, AIA, is RECORD’s Seattle-based contributing editor as well as the architecture columnist for the Seattle Post-Intelligencer.

Project: Matthews, Farwell Residence

Location: Bainbridge Island, Wash.

Owner: William Matthews, AIA, Robin Farwell

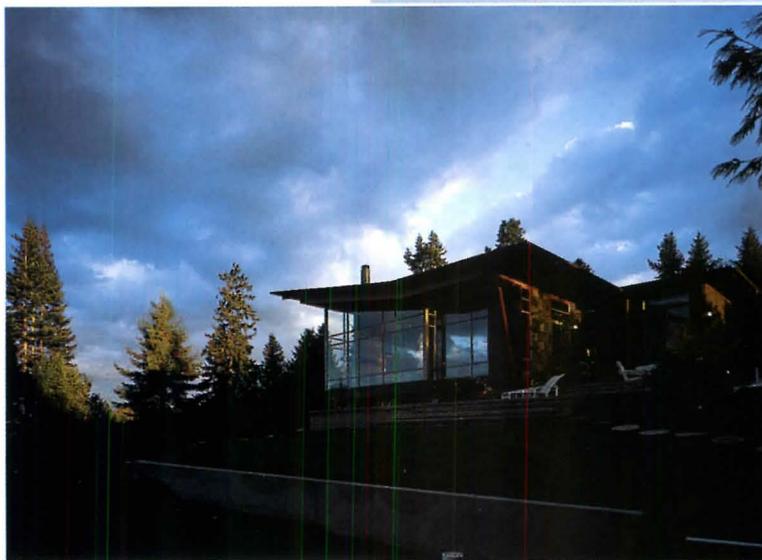
Architect: Matthews Architects—William Matthews, AIA, Jim Nakata, project team

Structural engineer: Swenson Say

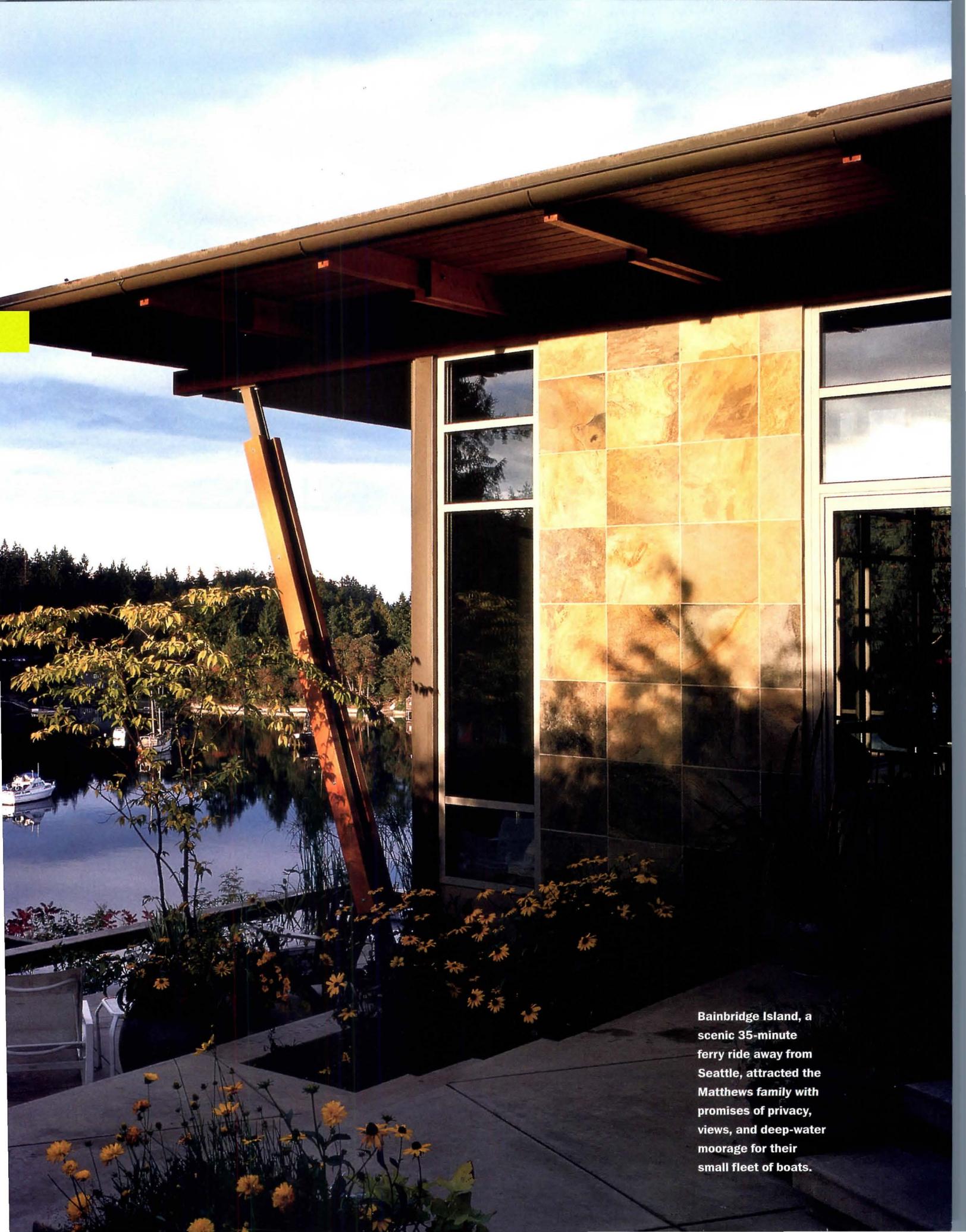
Fagét—Gary MacKenzie, principal

General contractor: Fisher Construction

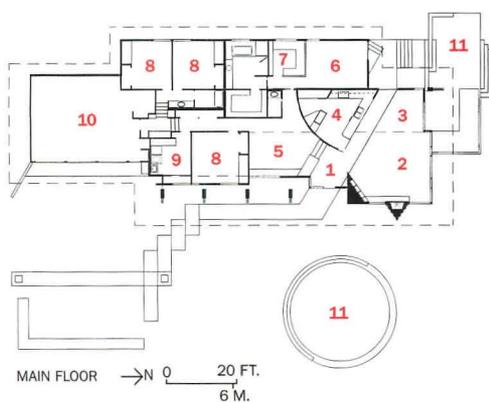
Consultants: Mary Jane Rehm (color consultant); Berger Partnership (landscape architect)



PHOTOGRAPHY: © ART GRICE



Bainbridge Island, a scenic 35-minute ferry ride away from Seattle, attracted the Matthews family with promises of privacy, views, and deep-water moorage for their small fleet of boats.



- | | |
|-------------------|-----------------|
| 1. Entry | 7. Study/office |
| 2. Living | 8. Bedroom |
| 3. Dining | 9. Laundry |
| 4. Kitchen | 10. Garage |
| 5. Den | 11. Terrace |
| 6. Master bedroom | |

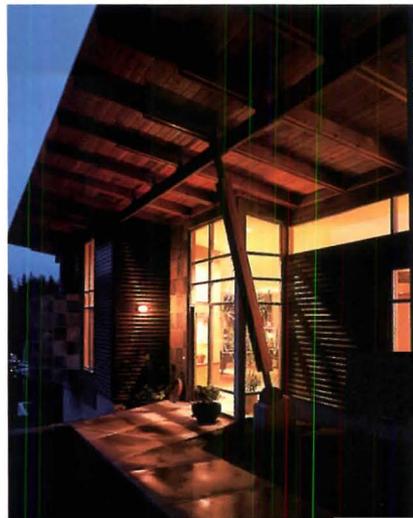
At the entry, a series of wood and steel struts support a 14-foot overhang, creating a generous porch along the east side. Slate-tile and corrugated-steel siding minimizes maintenance (above and below).

jog in and out under the overriding roof to suggest different volumes inside. At the entry, a series of wood and steel struts reach out to support a 14-foot overhang, creating a generous front porch.

Inside, the roof floats over a ground plane that follows the hill as it steps down 18 feet along the 120-foot length of the house toward the water. This progression creates a variety of scales and spaces under a continuous ceiling plane. The largest, an open living and dining area at the north end of the house, faces the bay. The window wall is a commercial storefront system with steel reinforcement to allow a thinner mullion size appropriate to residential scale. The few sections of wall not constituted of floor-to-ceiling glass contain saturated paint colors, from plum to pumpkin, that provide an antidote to the cool blue light outside.

The kitchen is physically and metaphorically the heart of the house. "We live very informally and everyone hangs out in the kitchen," says Matthews. Landlocked and without exterior walls or windows, the kitchen forms part of the large living/dining space, sharing the light and views. Cabinets join as part of an L-shaped piece of built-in furniture that sits as a self-contained unit. A slim disc of wood ceiling floats over the kitchen to further differentiate it in the loftlike space.

The house appears larger than its 3,200 square feet because of the shared open space, built-in



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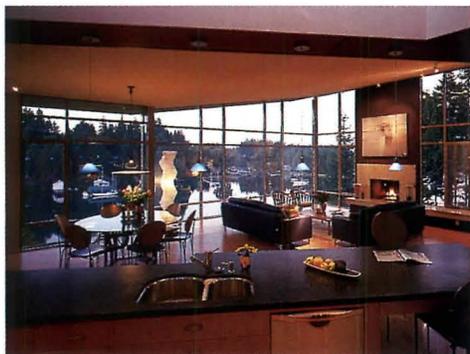
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Skylights are adjacent to walls so that the lights seem to disappear up into the ceiling while bouncing ample natural light throughout the house. The main living spaces are on one level, with a few steps up to the master bedroom and den.

furniture, and a few simple visual tricks. "If you let wall planes slide past at corners and edges, the interior feels more expansive," says Matthews. Skylights throughout the house adjoin walls so that the lights seem to disappear up into the ceiling while bouncing enough natural light inside for even the grayest days.

With an eye toward the immediate future as well as the prospect of aging-in-place for the owners, the main living spaces occupy one level with a few steps up to the master bedroom and den. The kids' bedroom reside at the back of the house. When the children are of an age to leave for college, the house will remain cozy and will not feel too big and empty. For now, it's full—graciously accommodating kids, friends, and pets without being dogmatic about design. "We didn't want to sacrifice livability to make a grand architectural statement," says Matthews of his warm berth in the winter storms. ■

Sources

Metal/glass curtain wall: *Kawneer*

Concrete: *Davis*

Exterior cladding: *Kawneer*

Roofing: *John Mansville (PVC)*

Sliding doors: *Millguard*

Hardware pulls: *Hewi*

Cabinetwork and custom woodwork: *Petric Custom Cabinets*

Chairs (bar and dining): *Dakota*

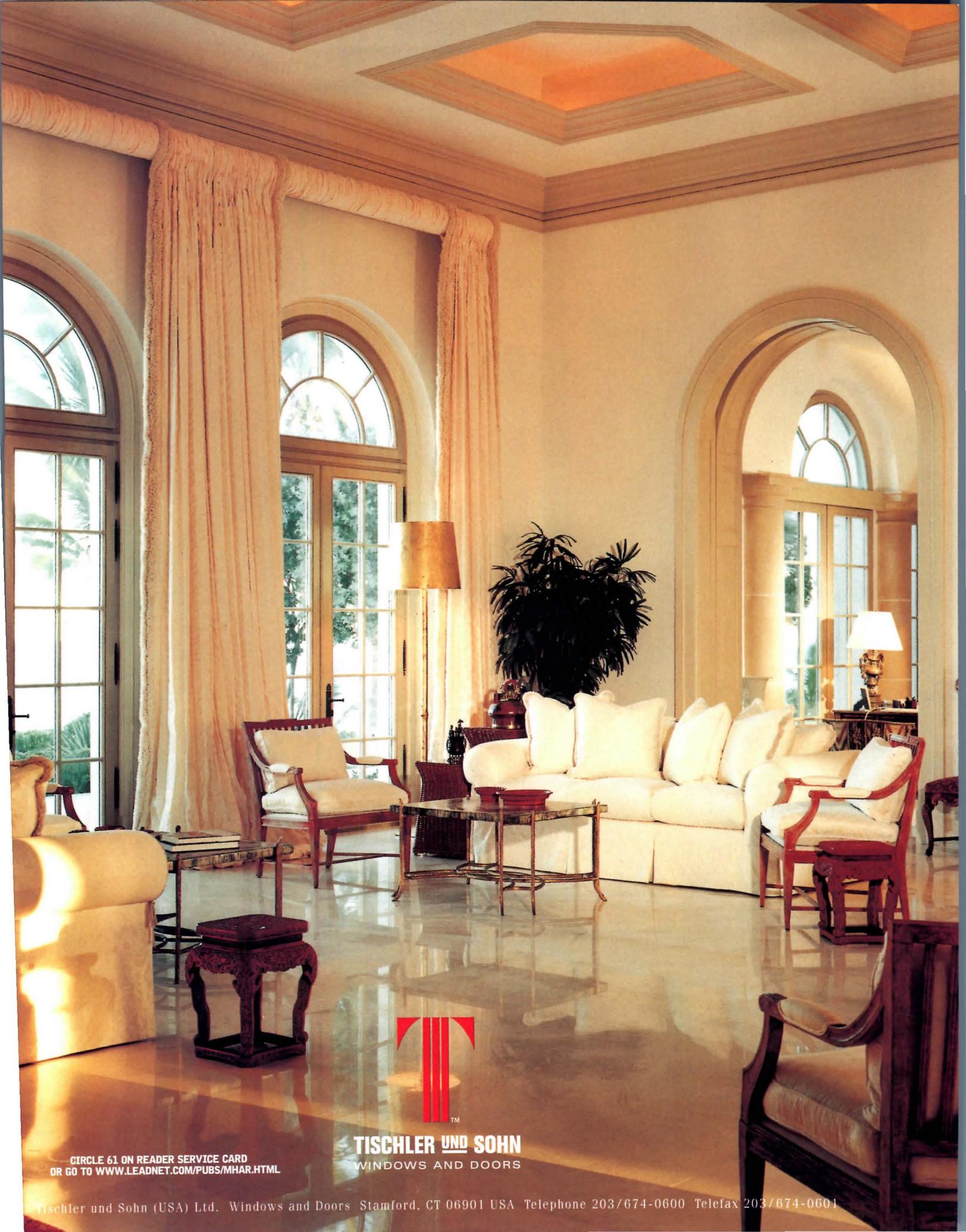
Jackson

Downlights (recessed): *Juno*

Paints and stains: *Benjamin Moore*

Carpet: *Godfrey Hirst*

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Segal's home and office are built on a 50-by-100-foot lot. The office is on the first floor and the living space on the two floors above. In addition, two three-level apartments complete the project.



Sited on urban infill, Jonathan Segal's residence fares well in rough-and-tumble downtown San Diego

by Kay Kaiser

Fan Diego architect Jonathan Segal has not had a client other than himself in 12 years. But he's not complaining. Acting as his own client, design architect, developer, project manager, construction manager, and property manager, Segal has built 16 multifamily/office projects in the rapidly redeveloping downtown area of the city. He still owns eight of them and collects rent from 150 units.

But do not dismiss this architect as merely someone who knows how to work all aspects of the building game and still have pocket money left over for a good cigar at the end of the day. In fact, Segal has brought distinctive architecture to a previously blighted area, called Little Italy [RECORD, March 1999, page 80], just outside San Diego's downtown core. Because he has been so successful at buying and building on small "left-over" lots, his signature is all over the streets that lead toward the harbor.

Segal's signature is distinctly Modern. It's spare. Urban. It's amazing that any of it is in San Diego, with previously one of the country's most provincial downtowns. But people are catching on to the value of flexible live/work spaces close to the amenities at the heart of the city. Although most of Segal's projects are four stories or less, they command more attention than the larger, glass-skinned office buildings from the late 1980s that are their neighbors.

His latest downtown project is his own home and office built on a 50-by-100-foot lot, with an office on the first floor and living space on the two floors above. Two three-level apartments complete the project and help to pay the mortgage. Segal's idea was to create convertible living environments in which portions of each home could be sectioned off as rental, office, or loft space as needs change.

High and largely unpunctuated walls rise right out of the sidewalk; raw steel garage doors protect the cars. But look closely and you see the tops of trees on the roof. The apartments and the Segal family home have completely private gardens on the top. He refers to the project as an experiment in courtyard living, a twist in which courtyards rise up in the air, screened from prying eyes. This wise decision separates the residents from the sometimes rough-and-tumble life on the urban ground plane.

The light and design refinement surprises us in the architect's own home. The main living level is organized around the two outdoor courtyard spaces. Window walls separating indoors and outdoors open and close seamlessly, and natural light is balanced by frosted glass on the south side. This glass also hides views of the mechanical equipment on the roof of the industrial building next door. The open plan of the house allows for entertaining large groups, along with the private spaces a family of four requires.

Floors are waxed and polished concrete; ceilings and fireplace fronts are lined with Sappeli wood, an exotic variety of mahogany. Segal lurged in his own house by hiring one of San Diego's best cabinetmakers, Michael Borrelli, to build integrated units to hide all the stuff two

Kay Kaiser worked for 12 years as the architecture critic for The San Diego Union-Tribune. She has published numerous books and continues to write about architecture.

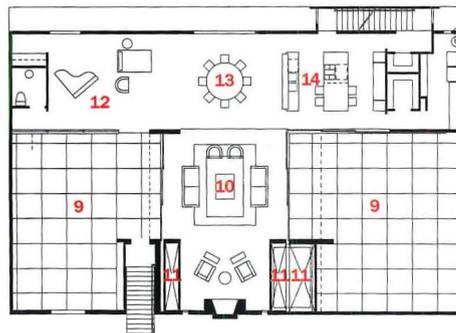
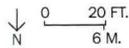


Project: *The State*
Location: *San Diego*
Owner: *Jonathan Segal*
Architect: *Jonathan Segal, AIA, Wendy Segal*
Collaborating architects: *Sebastian*

Mariscal, Andrew Duncan
Landscape architect: *Spurlock Porrier*
Interior design: *Jonathan Segal*
General contractor: *Jonathan Segal*



GROUND FLOOR



SECOND FLOOR

- | | |
|-----------------|-----------------------|
| 1. House entry | 8. Office |
| 2. Office entry | 9. Courtyard |
| 3. Garage | 10. Living |
| 4. Outdoor area | 11. Skylight to below |
| 5. Rear yard | 12. Music |
| 6. Guest room | 13. Dining |
| 7. Game room | 14. Kitchen |

The main living level is organized around two outdoor courtyards. Window walls separating indoors and outdoors open and close seamlessly.



children and their parents accumulate in a house.

The building recalls Richard Neutra, who could have had his hands all over this inventive California house, except that Segal's wife and partner, Wendy, makes dinner in an open kitchen. Rather than being separated off, she can talk to her family while she's cooking and managing the Segal properties. The Neutra reference regarding his work delights Jonathan Segal. He knows he's working his way into a new and purely California housing vernacular. It pleases him to hear passersby on the sidewalk say that his house and office is a remodel of an automotive repair shop. "Yes," he says "downtown is the place where the rubber meets the road."

He is already mentoring other San Diego architects on how to design and build their own properties and become their own best client. No more presentations of three schemes for everything. Arguments over details remain largely in your own head, he says. It cuts down on paper work and phone calls. Design gets better because the architect is in contr

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Floors are waxed and polished concrete. The ceilings and fireplace are lined with Sappeli wood, an exotic variety of mahogany (above). The master bedroom

features a bathroom with ebony wood floors and a modern tub and sink hidden behind a dividing half-wall (below).



of everything. Less stress. And money left over at the end of the day. Architect Segal jumped into the neighborhood of Little Italy at just the right time in the 1990s. The cost of land was low, and city officials were happy to see a good architect and his plans for the area. Other architects in San Diego admire Segal for bringing sensible modern design downtown.

Now, thanks in part to Segal's participation, the small developer can't afford to build in this area. Neither can Segal. But Little Italy is thriving. People like living in the heart of the city, enjoy the chic restaurants and shops, and recognize that San Diego's core has new life.

The neighborhood mix also includes some of the original Italian families that founded the area more than a century ago. The Segal children have adopted a few of those people as surrogate grandparents. The churches, schools, and stores selling imported cheese and prosciutto are all exactly where they have always been.

Homeless people also inhabit the streets of this redeveloping area. That explains Segal's high walls. In so far as he is a major investor in the neighborhood, chances are good that he will help to solve that problem, too. No one here is complaining that a smart architect decided to make his home in Little Italy. ■

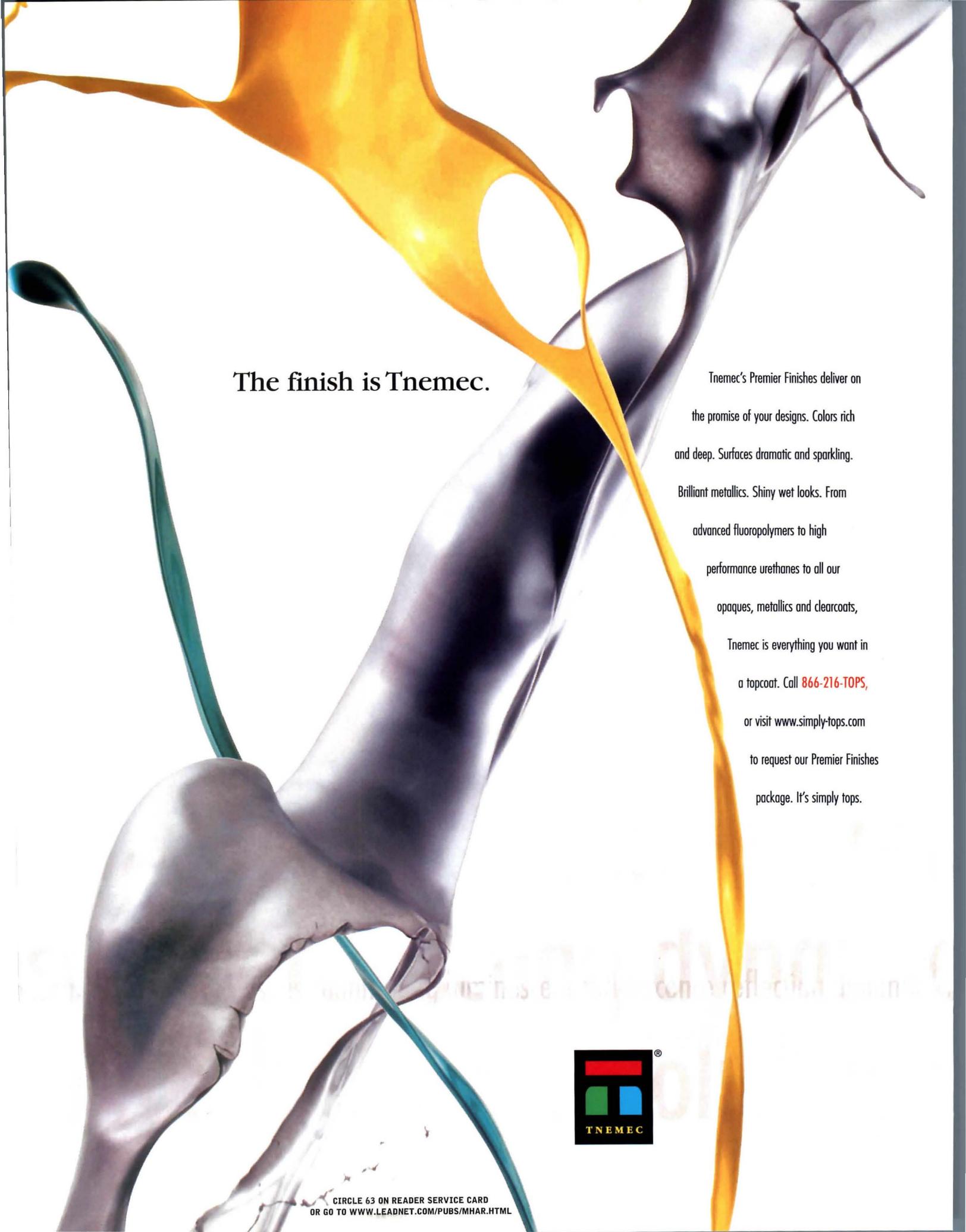
Sources

Exterior cladding: *Expo Stucco*
Roofing: *John Mansville*
Lighting fixtures: *Halo*
Dining table: *Charles and Ray Eames*
Chairs: *Hans Wegner*
Sinks, tub: *Philippe Starck*
Faucets: *Arne Jacobsen*

Windows: *Fleetwood*

Woodwork: *Michael Borrelli*

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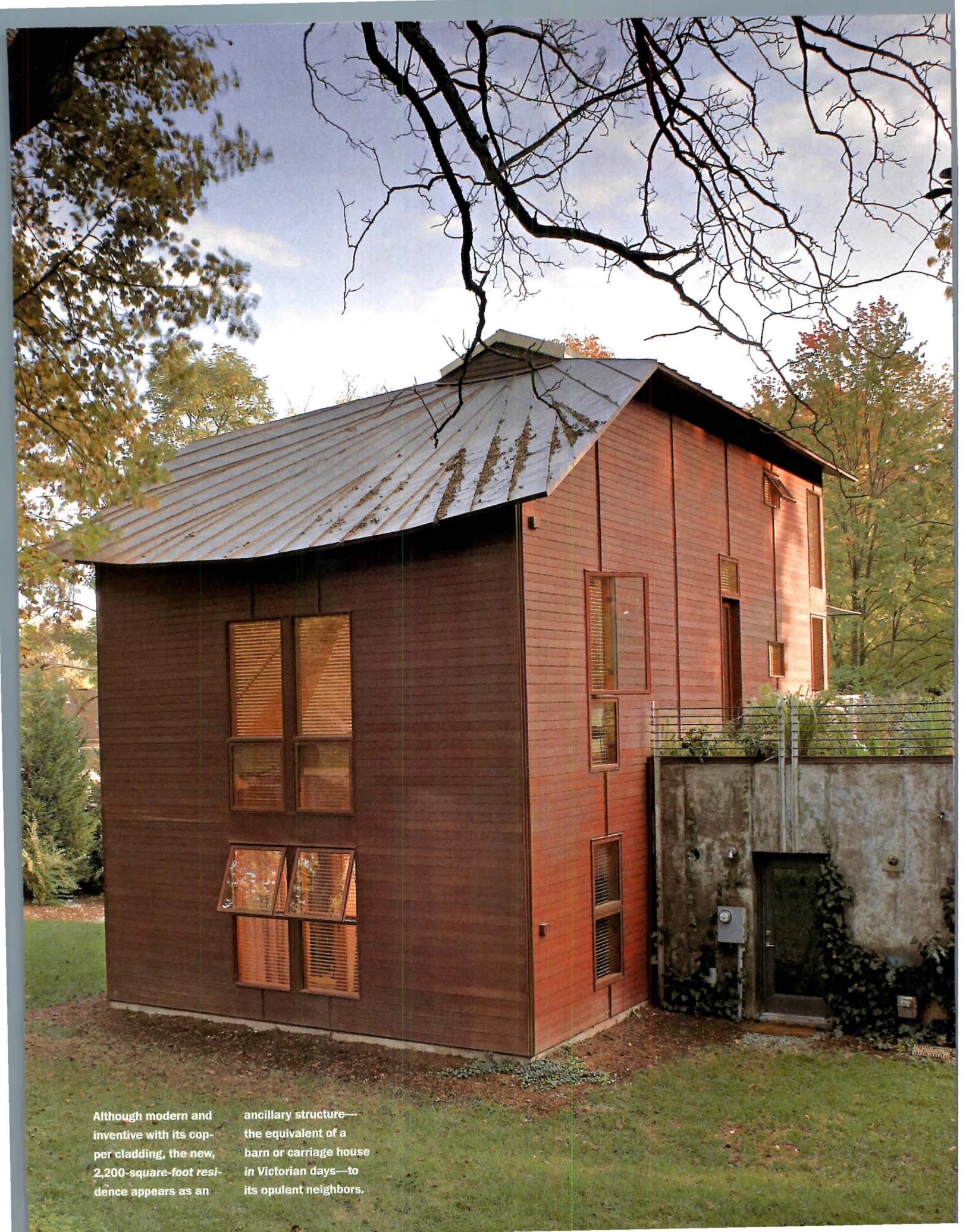


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Although modern and inventive with its copper cladding, the new, 2,200-square-foot residence appears as an

ancillary structure—the equivalent of a barn or carriage house in Victorian days—to its opulent neighbors.

The Burke's Timepiece

House charts passing time with precision and grace

By Nancy B. Solomon, AIA

Architects are well known for thinking in three dimensions. But how many practitioners ever give the fourth—time—its proper due? Length, width, and height, taken together, paint a static picture. But time is dynamic, defining the boundaries in which the human experience unfolds. The Timepiece House in Charlottesville, Virginia, demonstrates the architectural vibrancy that can be achieved when designers contemplate the many facets of time.

Set in a historic district, the site required that the designers first contend with historical time. How should a new structure engage with the grand Victorian homes that distinguish the neighborhood? “Respectful but pushing the limits,” says Kevin Burke, the owner and codesigner of the house, of his approach to the time differential. The architects wanted to acknowledge but not replicate the bygone era. The massing of the much smaller Burke home is equivalent to a single bay of its opulent neighbors. If seen from the street, the new, 2,200-square-foot residence appears as an ancillary structure—the equivalent of a barn or carriage house in Victorian days—rather than incongruously squeezed in like an uninvited guest.

And its custom-designed copper cladding, although fitting for a background building, is modern and inventive. The passage of time will become evident as this new house slowly matures: Its copper skin, now a deep wine color, will gradually form a green patina.

Cosmological time, experienced on earth through the ebb and flow of the day and the seasons, strongly influenced the programming and design of the house itself. This kind of time is most viscerally experienced through the intensity and angles of light. Sunlight became the architects’ sculpting tool, informing the placement of elements and the shape of spaces so that the architecture could celebrate the varied movements of this cyclical dance.

To achieve the most diverse lighting experiences, Burke and his wife and partner, Carrie Meinberg Burke, oriented the rectangular floor plan along the true solar north-south axis. Service entrance, laundry facilities, and sleeping quarters, which are well suited to a cooler, darker environment, are tucked away on the ground floor. A mechanical room projects out from the west side on grade. Covered by a green roof, this concrete extension forms the formal entry porch and kitchen garden at

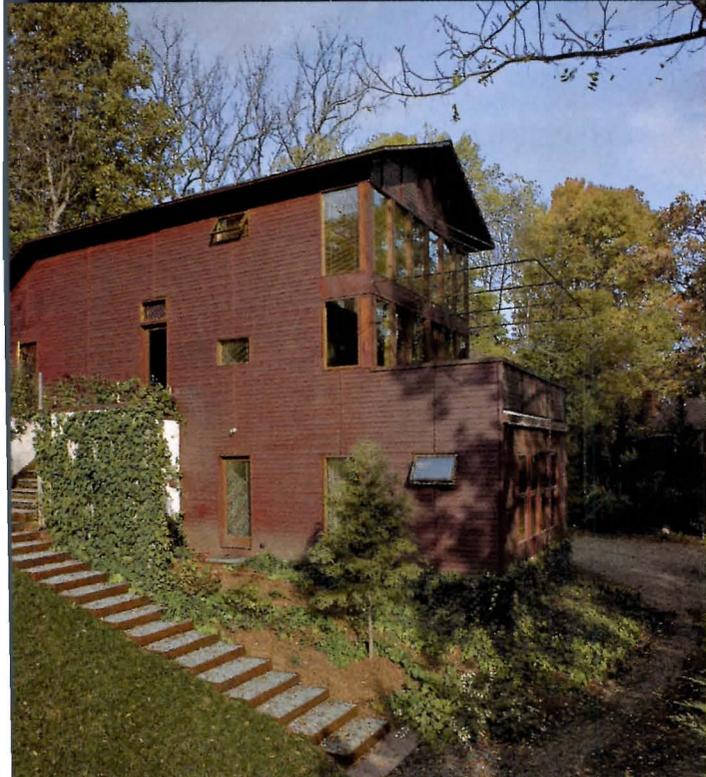
Contributing editor Nancy B. Solomon, AIA, writes about architecture and building technology.

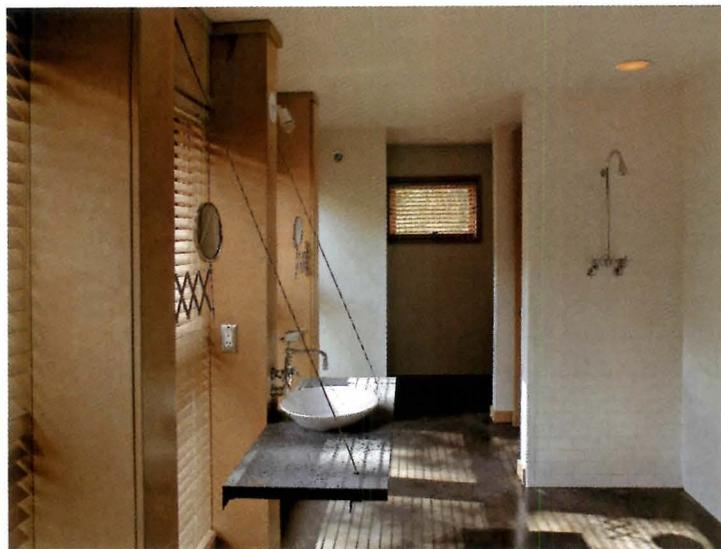
Project: Timepiece House
Location: Charlottesville, Va.
Owner: Carrie Meinberg Burke, Kevin Thomas Burke
Architects: Carrie Meinberg Burke Architecture + Kevin Thomas Burke, AIA
Engineers: W. David Winitzky, AIA

(structural); Galen Staengl, Bob Somers (mechanical)

Consultants: Fred McGann (landscape); Dave Simpson (easement); Pete and Mary Meinberg, Susan McGinnis (advisers); Marla Ziegler (historian/friend/neighbor); Cathy Womack (attorney)

PHOTOGRAPHY: © PRAKASH PATEL





The bathroom, which is below the kitchen/dining area on the main floor (above) is intended as an extension to the conservatory metaphor. The oculus lens strikes predetermined parts of the house (left).

1. Entries
2. Solstice, noon
3. Bedrooms
4. Study/guest room
5. Baths
6. Stair
7. Garden room
8. Service areas



the next level. The main floor is divided into a kitchen and dining area and outdoor terrace on the south end and a double-height living area on the north end. Finally, like a playhouse perched in the trees, the architecture studio on the mezzanine floor basks in abundant views and sunlight.

The architects designed three significant sources of natural light for the home: a double-height window wall on the south, a skylight in the center, and an oculus to the north of the skylight. Light pours through the glazing on the south end, brightening the studio space on the mezzanine, the kitchen and dining area on the main floor, and the master bathroom at grade. A more diffuse light enters via the skylight. But the main show comes from the oculus: At particular times of day and certain days of the year, a light beam emanating from this lens strikes predetermined parts of the observatory. On a sunny day, one can track the light beam along the walls, ceiling, and floor of this space as the sun traverses the sky from sunrise to sunset. And throughout the year, one can witness the changing angles of the sun within the room.

Not surprisingly, achieving this sundial effect required precise design and construction. Carrie Burke obtained the most accurate latitude and longitude coordinates of the site from the City of Charlottesville's building department. To ensure that the foundation would parallel true solar north-south, the surveyor fitted the transit, or measuring instrument, with a special lens that tracked the exact time and position of the sun relative to the site. And, as general contractor, Carrie spent considerable time showing the foundation subcontractor how light penetrated the 1/4-inch basswood model, all the while impressing upon him the fact that the project's ultimate success rested squarely on the accuracy of his concrete pour.

In addition, by plugging the site's coordinates and the date of the winter solstice into a Web-based calculation engine (www.susdesign.com/sunangle), Carrie determined the desired slope (corresponding to sun altitude) and skew (corresponding to sun azimuth) of each of the splayed roof beams in the living area. These beams were to span from bearing brackets in a steel roof truss near the oculus downward to the northern exterior wall. She gave these dimensions to the structural consultant, who then produced full-scale CAD drawings of the truss. The CAD drawings became the template for the truss fabricator. With a calculator and trigonometric equations she developed during grad school, Carrie converted radial geometry to orthogonal geometry so she could locate the proper position of each beam on the exterior wall.

Although clearly enthralled by this poetry of light, the architect did not overlook the more mundane aspects of time. Realizing, for example, that their physical needs may change over the years, they framed the house so an elevator could easily be installed in the future. The interior spaces are designed and furnished with maximum flexibility so that the rooms can transform as different functional needs arise. And, whenever possible, the architects specified low-maintenance materials to maximize their own time to enjoy their friends, family, and dynamic home. ■

Sources

Structural system: Trussjoist
MacMillan; Better Living Building Supply

Exterior cladding: Advanced Concrete; Allied Concrete

Roofing: Martin Roofing; American Hydrotech (green roof system)

Windows: Willmar

Glazing: Virginia Glass; Wasco (skylights)

Hardware: Schlage

Interior finishes: Jack Kavana (kitchen and bath cabinets)

Furnishings: Design Within Reach

Upholstery: Atlantic Futon

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Residential Products

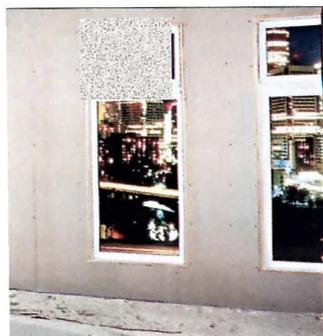


▲ Serious closet space

Already known for its lines of luxury European bath and kitchen furniture, Studio Becker has introduced the Ultimate Wardrobe System. The system can be either retrofitted into existing closets or incorporated into new homes, and it is available in a variety of finishes, including natural maple, natural beech, mahogany, and mahogany-stained beech. 510/865-1616. Studio Becker, Alameda, Calif. **CIRCLE 200**

► Titanium-surfaced griddle

Thermador presents several improved features in the pro-style appliances of its redesigned Professional Series. The Dual and All-Gas ranges have been completely redesigned with new oven technology that includes an electronic control with a platinum sensor that improves oven temperature accuracy and cooking performance while operating in a 10 percent larger capacity oven. The new titanium-surface 5,000-BTU griddle is the first to use this metal, according to the manufacturer. 800/656-9226. Thermador, Huntington Beach, Calif. **CIRCLE 202**

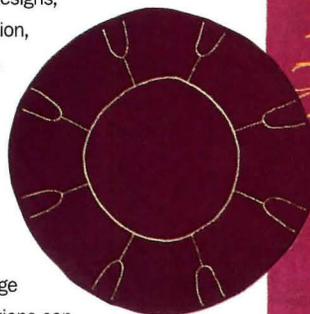


◀ Mold and mildew resistant

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► Hand hooked in the U.S.A.

Using high-quality New Zealand wool hand spun in England, San Francisco textile designer Rosemary Hallgarten hand hooks carpets. Departing from the strict geometry of her previous designs, Hallgarten's second collection, Still Life, depicts a modern, natural motif. The four designs, Driftwood, Fish Bone (far right), Twig (near right), and Tulip, take their imagery from nature but then are pared down and abstracted. A large range of colors and proportions can be adapted to the specifications of her clients. 415/924-1009. Rosemary Hallgarten, San Rafael, Calif. **CIRCLE 201**



◀ The good sort of vanity

The Clio vanity, from Mill-Due, features an optional Ekotek sink and vanity surface that is a combination of resin and aluminum. Three cabinet and three shelving options, movable mirrors, and numerous sink options (including double sink, single sink, oval, or rectangular) allow the system to take many different forms. Available finishes include matte or glossy lacquers and wood. 310/360-9858. Doma Interiors+Design, West Hollywood, Calif. **CIRCLE 203**

▼ Deluxe daybed

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Residential Products

► More interesting than TV

This ebonized oak cabinet with zebra wood doors is the latest offering from Lowell/Edwards. The interior, finished in black laminate, allows for a 20" television, VCR slot, and two tall storage drawers. Resting on four 10 $\frac{1}{2}$ " tapered legs, the overall dimensions of the unit are 33" wide x 75 $\frac{1}{2}$ " high x 24 $\frac{1}{2}$ " deep. The audio/video armoire features retracting full-height pocket doors with touch latches, and it can accommodate a TV of up to 42". A special version for thin, plasma, and LCD televisions is another custom option. 212/980-2862. Lowell/Edwards, New York City.

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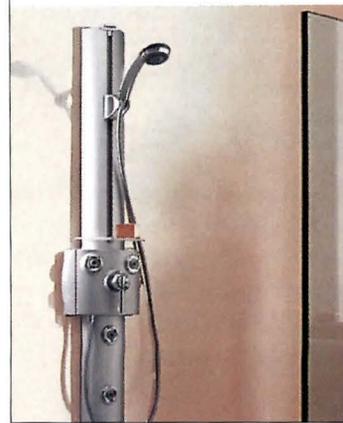


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▼ Ready-to-go shower panel

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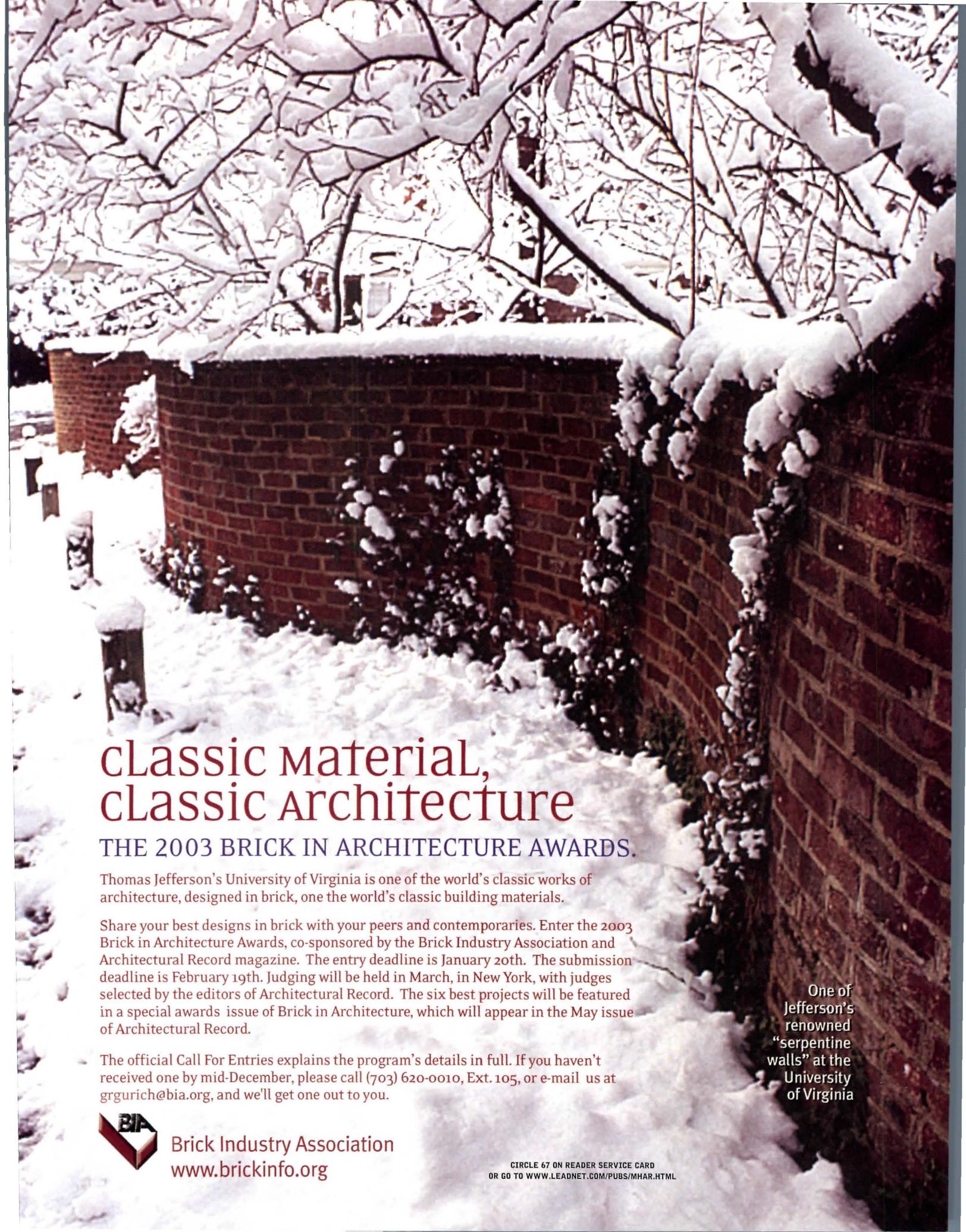


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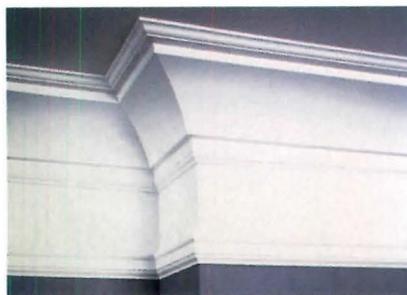


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► Mosaic tile patio

For the renovation of their 1947 house in Tucson, architects Luis Ibarra and Teresa Rosano transformed a former entry porch into an informal patio for grilling and dining. Carter Glass Mosaic tile in Lake Blue and Meadow was used to brighten the courtyard and hide an unsightly concrete finishing job. 541/552-0855. Hakatai Enterprises, Ashland, Ore. **CIRCLE 210**



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Wasco has recently announced the availability of architectural colors on all skylights, making it the first major U.S. skylight manufacturer to



Wasco's Architectural Series of custom and standard skylights (above). Wasco's easy-to-install E-Class Skylight (right).



feature color as a standard offering, according to the company. Wasco's new color chart includes Bone White, Colonial White, Black, Brick Red, Colonial Gray, Sandstone, Hartford Green, Interstate Green, Aged Copper, and Quaker Bronze.

The availability of these color frames, in Kynar 500 or baked enamel, allows for the seamless transition between roofing and framing materials. 800/388-0293. Wasco Products, Sanford, Maine. **CIRCLE 212**

Complete line of impact-resistant window products for coastal areas



StormBreaker Plus casement window (above). Double-hung window cutaway (right).

Simonton StormBreaker Plus is an impact-resistant product line designed for high windblown coastal areas. Windows are available in double-hung tilt, casement, awning, geometric, and picture styles for both new construction and replacement applications. An impact-resistant garden door is also included in the initial offering of the line.

All products in the StormBreaker Plus line feature KeepSafe Maximum glass. The units are composed of a piece of heavy polyvinyl butyral (PVB) plastic interlayer sandwiched between two pieces of double-strength glass. The laminated glass is then combined

with another piece of double-strength tempered glass to form an insulating glass unit. The unit, which has been sealed together to form a strong, impact-resistant bond, is then glazed into the sash to hold the glass in the frame.

Independent testing results show that StormBreaker Plus products meet and exceed various windborne debris standards set by the Southern Building Code Congress International, ASTM, and the Texas Department of Insurance. These results mean the line can be used in the majority of hurricane-prone areas of the United States. All StormBreaker Plus products can be ordered with Solar E glass that meets Energy Star requirements in various parts of the country. 800/SIMONTON. Simonton Windows, Parkersburg, W.Va.

CIRCLE 213



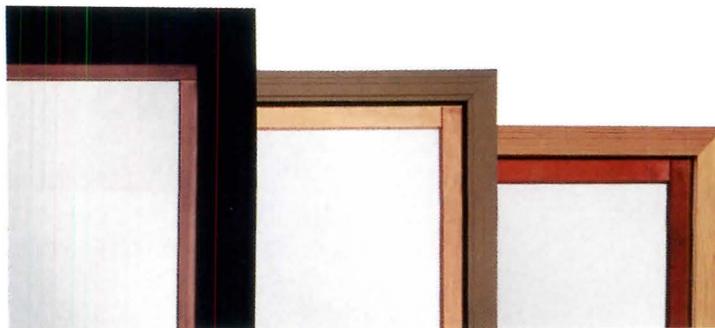
Historic aluminum single-hung window

The 2275H aluminum single-hung is an option for historic buildings, including college and university facilities. The window emulates original wood double-hungs, right down to the integral beveled sash with equal sash sightlines. Applied triple-grid muntins simulate true divided lites. A 1" insulated glazing system with low-e coating is an option. 717/849-8100. Graham Architectural Products, York, Pa. **CIRCLE 214**

New Products

► Brick mold vinyl windows

To be introduced at the 2003 International Builders' Show, the MW Brick Mould Vinyl window line features a traditional MW180 brick-mold profile designed to look like a high-quality, painted wood window frame, with the performance capabilities of vinyl. Both the single-hung and double-hung offerings meet high structural performance standards for a variety of geographical regions, including coastal markets. Energy-saving glazing options include low-e, low-e/argon, tinted, tempered, or obscure. 800/999-8400. MW Manufacturers, Rocky Mount, Va. **CIRCLE 215**



▲ Copper-clad options for wood windows

Pozzi has introduced copper and satin anodized finishes to its range of exterior clad options. Copper cladding is available on window-sash and patio-door-panel components and can be set alongside the aluminum cladding on the frame, which can be in a complementary or contrasting color. The copper cladding is available in three finishes: Hand-Rubbed Patina, Bright Copper, and Speckled Copper. 800/877-9482, ext. PR-037. Pozzi Wood Windows, Bend, Ore. **CIRCLE 216**



◀ Gliding window

The Andersen 200 Series gliding window broadens the Andersen 200 Series product line of windows and patio doors. The window features an interior in natural pine or prefinished white, a modular sizing system, and two different frame widths available in narrow 3 $\frac{3}{4}$ " and full 4 $\frac{9}{16}$ " sizes to accommodate various wall thickness. Seamless frame cladding and various grille options are also available. 800/426-4261. Andersen, Bayport, Minn. **CIRCLE 217**

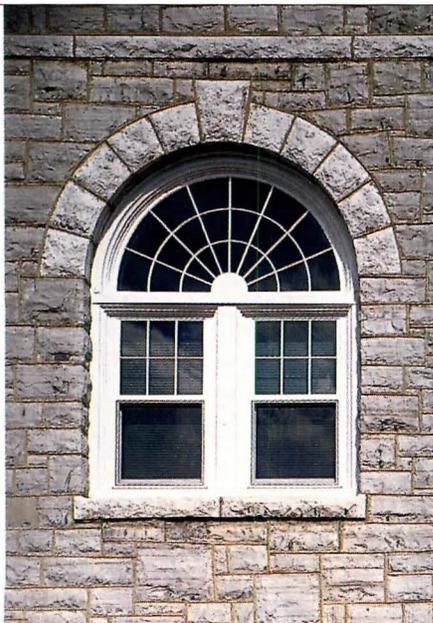


◀ Wood inside, vinyl outside

ProShield ProTilt is a redesigned double-hung tilt window featuring a tilt-latch design. A precision-tuned, block-and-tackle balance system holds the sash open in any position. ProTilt features a standard natural pine interior that can be upgraded to natural oak or prefinished white, and grille options include simulated divided lite, grilles in airspace, or pine/oak wood perimeter grilles. Glass options include standard insulated glass, low-e² glass, or low-e² glass with argon glass. A PVC exterior resists rust, corrosion, flaking, and peeling. 800/477-6808. Weather Shield Windows & Doors, Medford, Wis. **CIRCLE 218**

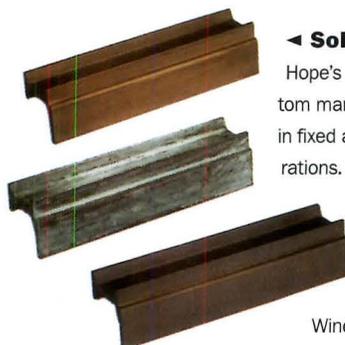
► Thermal window reintroduction

The reintroduced Kawneer Sealair 8400TL thermal windows are designed for remodel, historic restoration, or new construction. They are available fixed, offset fixed, single- or double-hung, and horizontal sliding. Flat face or beveled putty-glazed replication and a 4" master frame depth are standard. The windows feature conditioned thermal pockets and cast white bronze hardware. 877/767-9107. Kawneer, Norcross, Ga. **CIRCLE 219**



► Slider addition

The PrimeTek Window System from Moduline Window Systems now includes the slider series. The series has a 3 $\frac{3}{4}$ " frame depth and features adjustable nylon ball-bearing rollers for quiet and smooth operation and easy replacement. A reusable glazing channel allows for easy field replacement with no special tools. 800/972-9110. Moduline Window Systems, Wausau, Wis. **CIRCLE 220**



◀ Solid bronze windows

Hope's Empire Series vintage bronze windows are custom manufactured from extruded solid bronze sections in fixed and double-weather-stripped operable configurations. The line accepts up to $\frac{3}{8}$ " thick glass and features multiple true and false muntin shapes and dimensions, bronze insect screens, solid bronze hardware, and a choice of finishes. 716/665-5124. Hope's Windows, Jamestown, N.Y. **CIRCLE 221**

Product Briefs

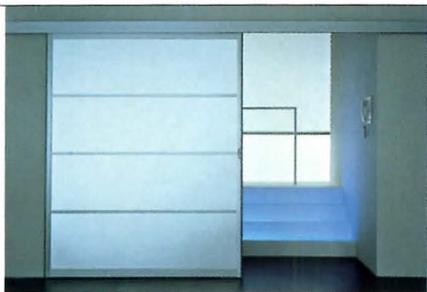


Reissued seating

While for many years Jean Prouvé's designs have formed a key focus of the Vitra Design Museum collection, the company has recently announced that it has put various Prouvé designs into production. Vitra will present an initial selection of Prouvé designs, including the Standard, 1934 (left), Antony, 1954 (center), and Cité, 1930 (right) chairs. Products by Charles and Ray Eames, George Nelson, and Verner Panton have already been reissued by Vitra. 212/929-3626. Vitra, New York City. **CIRCLE 222**

Floating panels

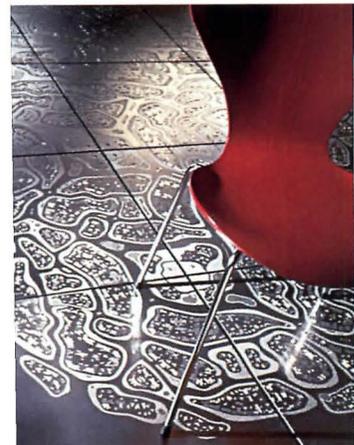
Pariparium is a system of aluminum and glass sliding panels manufactured by Rimadesio that can be customized in various forms of size, finish, glass color, and cross mullions. The panels are available in a maximum dimension of 6' x 10' and slide on ceiling-mounted or wall-mounted tracks. The tracks support the entire weight of the panels so there is no need for a floor track, which may collect dirt or impede passage. The panels are offered in a choice of more than 20 brightly colored architectural finishes unique to Rimadesio. 866/989-1111. WTP, Englewood Cliffs, N.J. **CIRCLE 224**



Stainless-steel tiles

Sistema Men stainless-steel tiles are available for residential or commercial applications in various sizes and are attached to rubber-plate supports that save the existing floor from damage. The Sistema Men modular Polis rug is made of a central design and three kinds of

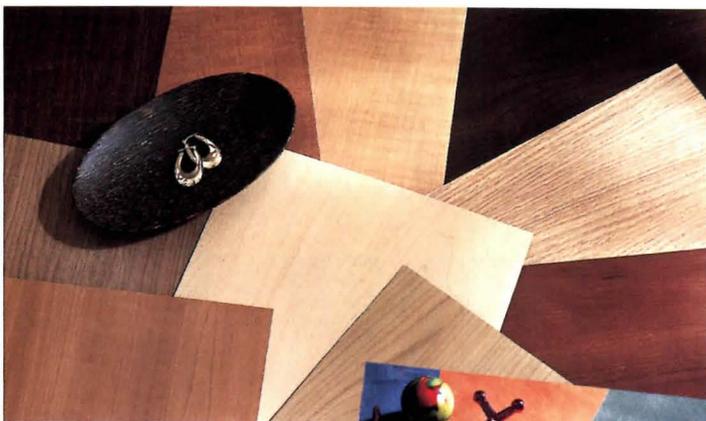
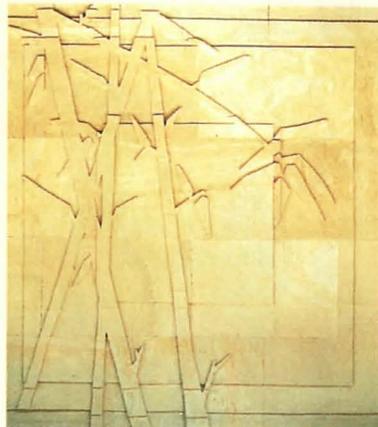
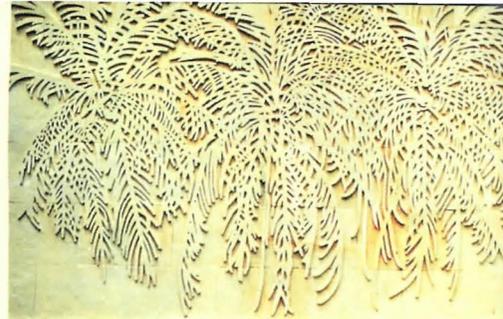
border modules that create a customizable "cityscape" pattern. 401/225-4040. Rochelle Vagenas Associates, Barrington, R.I. **CIRCLE 225**



Product of the Month **Art in Stone**

Warisan collaborates with Bali-based stone muralist A.P. Gentile and his team of master craftsmen to create original works of art for homes, luxury hotels, spas and resorts, and restaurants. Gentile learned the art of stone relief from an enclave of artisans descended from long family lines of stone carvers. Warisan's *Art in Stone* installations include the 200-square-foot *Lush Tropics* mural at the Universal Studios' Royal Pacific Hotel, as well as luxury residences from California to Bali.

Art in Stone is available as large, wall-size murals or in a wide range of panel sizes to fit any space. Motifs draw on folk and cultural elements, ranging from aquatic and tropical wildlife scenes to a reverie of Tibetan deities to abstract botanicals. Through Warisan's flagship showroom in Los Angeles the company offers furniture, lighting, textiles, Asian home accessories, and antiques from China, Indonesia, and Tibet. 877/WARISAN. Warisan, Los Angeles. **CIRCLE 223**



Laminate reflections

Wilsonart has introduced 34 new laminate designs that draw on the strengths of natural materials such as wood and stone, and industrial materials such as metal and glass. Wilsonart has broken up saturated color into swirling patterns to build a new series of laminate designs called the Brush Series (above right). The Brush Series combines texture and finish with metal-inspired tones and includes eight designs. Wilsonart has created consistent reproductions of traditional grains including cherry, oak, maple, walnut, and other wood species in the Architectural Woods series of laminate (above left). 800/433-3222. Wilsonart International, Temple, Tex. **CIRCLE 226**



Product Briefs

Held in London last September, **100% Design**, the U.K.'s growing annual contemporary design event, featured an array of **up and coming British** and international talent. **RECORD** shares a few of the highlights. *Rita F. Catinella*



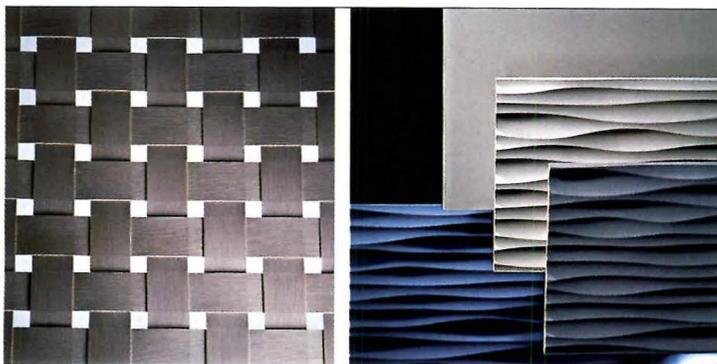
◀ Get a better handle on it

Turnstyle Designs has introduced a luxurious range of English hand-stitched leather furniture handles. Made by a master harness maker, each handle is hand stitched using vegetable-dyed English tan leather with beeswaxed twine. The handles come in three styles and colors, including black, tan, and chestnut. At the show, Turnstyle Designs also introduced new lines of window fittings and brass architectural hardware. 44/1271 325325. Turnstyle Designs, Devon, United Kingdom.

CIRCLE 227

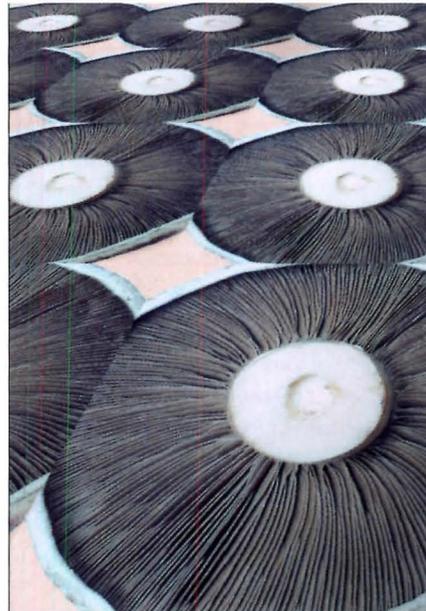
▶ Skeletal structure

One of the most striking furnishings on display at the fair was the Thin table by Matthew Hilton. A solid American walnut base and frame and a 6-mm, laminated-glass inset gives the dining table a visually light profile. Hilton has created a skeletal structure for the table by means of a distinctive leg detail, which is visible through the inset glass tabletop. This is also available with a solid glass top. 44/20 7739 1869. SCP, London. **CIRCLE 229**



▲ Woven and carved wood panels

The French company Marotte displayed examples of its woven and carved decorative panels. Woven panels are produced by weaving strips of wood veneer, creating a subtle volume effect. Different families of weaving are offered, including closed-weave, open-weave, and rattan and bamboo woven panels. The carved wood panels are fabricated in a range of materials and surfaces that include wave, dune, and fold effects. 212/206-1730. Architectural Systems, New York City. **CIRCLE 231**



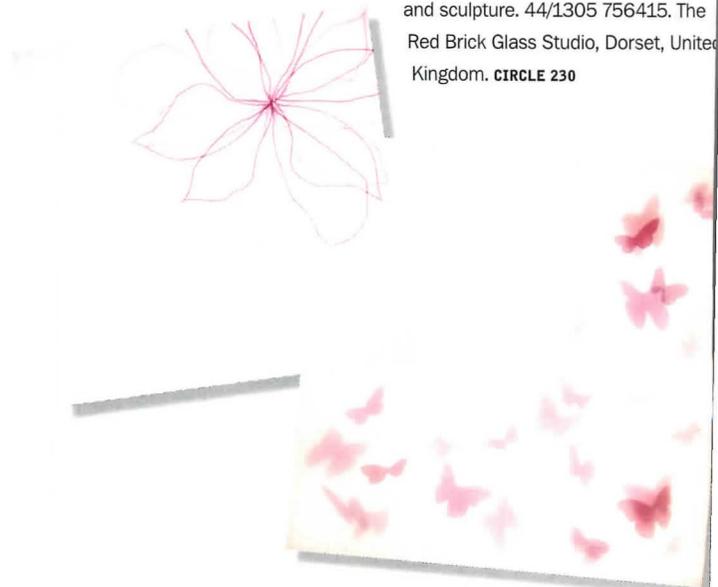
◀ Digital delicacies

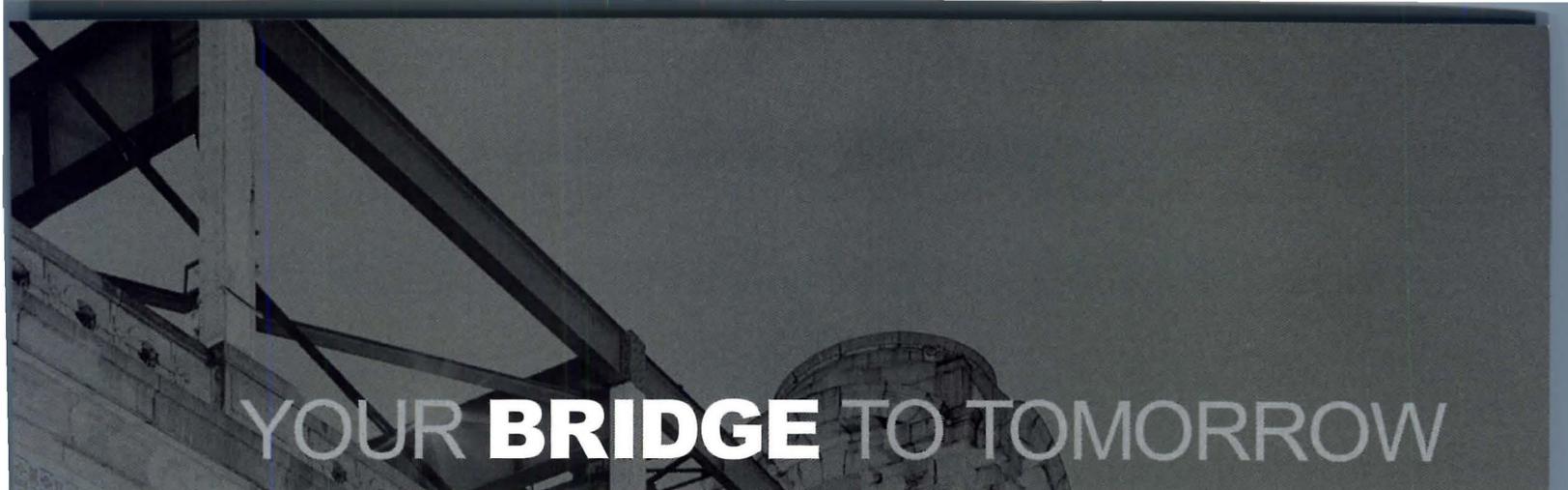
Dominic Crinson specializes in the design of digital ceramic tiles, digital wallpaper, and digital flooring. The imagery is fully customizable onto almost any material, regardless of texture, and images can be repeated as patterns or used as a single motif across the whole surface. Shown here is the top of an apple in ceramic tile and a repeating mushroom pattern in vinyl flooring. 44/20 7613 2783. Digitile, London. **CIRCLE 228**



▼ Award-winning glass artist

Architectural glass artist Wendy Ellis won a Crafts Council bursary that was established to assist new designers to present their work at 100% Design. Ellis exhibited a new range of glass panels that incorporate computer manipulated photographic transfers and stencils, kiln forming, and screen printing. At The Red Brick Glass Studio, Ellis produces glass for a variety of architectural commissions. Her glass designs are featured in windows, partition screens, lighting, doors, flooring, furniture and sculpture. 44/1305 756415. The Red Brick Glass Studio, Dorset, United Kingdom. **CIRCLE 230**





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Product Briefs



▲ Promosedia's hot seats

Promosedia, the international chair exhibition, was held last September in Udine, Italy, for the 26th consecutive year. One of the fair's highlights is the Top Ten, a competition for innovations in seating. This year's winners included the SeatTable (above), designed by Ilian Vladimirov Milinov for ORT of Sophia, Bulgaria. It was selected as Chair of the Year by journalists, architects, and designers attending

the show who were smitten by its ability to change into a work table with one simple step. Other Top Ten winners included the LUX (above right), a utilitarian stackable chair made of beech, designed by Jan Sabro for Italteam of Italy, and the 44 (right), a whimsical chair and stool ensemble designed by Heidemaire Leitner for Franz Plank of Austria. 39 0432 229127. Promosedia, Udine, Italy. **CIRCLE 232**



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Product Briefs



◀ Corten sculptures

The new Eden Series are monochromatic, linear sculptures that are suited for indoor or outdoor use in gardens, grottoes, parks, plazas, courtyards, water gardens, river walks, and atria. There are over 50 limited-edition sculptures created in Corten or finished carbon steel and ranging in size from 3' to 14' tall. Custom designs are also available for special projects. Each sculpture has a base plate designed to be bolted to a concrete pad. Slots of 1" and 1½" are precut into each base plate for easy installation. 708/424-8750. Rowe Associates, Chicago.

CIRCLE 233



◀ Safer operating rooms

Safe-T Sheet vinyl flooring, designed for the demands of hospital operating rooms, incorporates a ceramic technology embedded into the wearlayer of the floor. Safe-T Sheet also features heat-welded seams, low-contrasting visuals for reduced eyestrain, and it is stain-resistant to blood, Betadine, and other staining elements. 800/225-6500. Domco Tarkett, Houston. CIRCLE 234

▶ Double-duty doors

New Workable Surfaces doors from Marshfield DoorSystems maximize the intended design function of a space by combining a wood door with a dry-erase board, corkboard, or mirror. The doors are ideal for offices, hospitals, dorm rooms, hotels, or conference centers. Two whiteboard options and four cork colors, including buff, fawn, green, and steel gray, are available. 800/869-3667, ext. 2200. Marshfield DoorSystems, Marshfield, Wis. CIRCLE 235



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Product Literature

Hardwood project brochure

Junckers prefinished solid hardwood flooring has introduced a commercial project brochure for 2002. The 48-page, full-color brochure showcases more than 12 commercial projects designed by world-renowned architects and designers. 714/777-8425. Junckers Hardwood, Anaheim, Calif. **CIRCLE 236**

Office furnishings

Vecta's new catalog details the Werndl office-furniture line. The 56-page color catalog combines detailed written information with scores of product and location photographs, emphasizing the benefits of the furniture system. Sketches depict workspace layout ideas and illustrate how models can be put together and rearranged for maximum efficiency. 972/641-2860. Vecta, Grand Prairie, Tex. **CIRCLE 237**

Concrete countertops

The Concrete Network's new catalog features a collection of concrete countertops from some of North America's finest artisans. 866/380-7754. The Concrete Network, Yucaipa, Calif. **CIRCLE 238**

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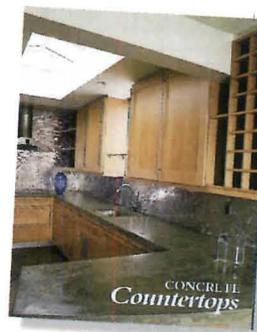
Online launch of the next generation of fittings and accessories from Villeroy & Boch www.goHype.com

This site highlights sign and neon products www.signsign.com

A site dedicated to the sale of more than 1,000 3D furniture models and over 250 interior textures www.mr-cad.com

CD-ROM lighting catalog

LAM Lighting Systems now offers the company's complete new product catalog in CD-ROM format. The catalog runs via an integral Adobe Acrobat Reader program that allows the user to view complete product spec sheets in easy-to-read PDF format. No Internet connection is necessary, making the catalog ideal for remote use on job sites or at client facilities. 800/732-5213. LAM Lighting Systems, Santa Ana, Calif. **CIRCLE 239**



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Product Literature

Comprehensive catalog

Louis Poulsen offers a new catalog with 480 pages of information on the company's lines of interior and exterior lighting. The catalog is a sturdy, hard-cover book that is conceptually bound by the three basics of the company's lighting philosophy: Function, Comfort, and Ambience. Photos of projects from around the world showcase the potential of the various product lines, while individual product spec sheets offer detailed descriptions of the company's collection of pendant, table, floor, wall, ceiling, chandelier, inground-outdoor, and custom-designed lights. 954/349-2525. Louis Poulsen Lighting, Fort Lauderdale, Fla.

CIRCLE 240

File technology

Bisazza, a manufacturer of glass mosaic and terrazzo tiles, has developed a CD that works as a virtual library showcasing the company's entire line of products. Users can quickly navigate the disc, viewing the complete product line, including the mosaic collection, the newly introduced Smalto tiles, and a growing selection of terrazzolike slab products. The CD's Custom Blends program allows the architect to specify

his or her own color-combination preference in either a random or precise ratio and to view the outcome instantaneously on-screen. Users can also browse through the images of sample borders, trims, and decorations, and review technical information and installation guidelines. 305/597-4099. Bisazza North America, Miami, Fla. **CIRCLE 241**

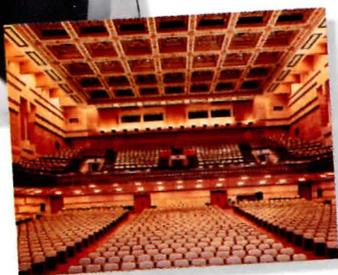
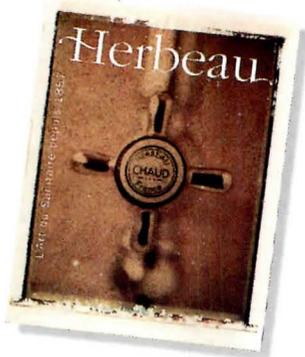
Kitchen and bath fixtures

Herbeau Creations presents a new catalog of classic French kitchenware and bathware. Herbeau also offers a complete line of coordinating design accessories, such as towel bars, lighting fixtures, and hand-painted decorative tiles. 800/547-1608. Herbeau Creations of America, Naples, Fla. **CIRCLE 242**

Marble guide

The Marble Institute of America has developed a color brochure that identifies the types of natural stone available to homeowners. Information about the care and maintenance of natural stone, a Q&A section, and tips on selecting and working with a qualified stone contractor are included. 440/250-9222. Marble Institute of America, Cleveland.

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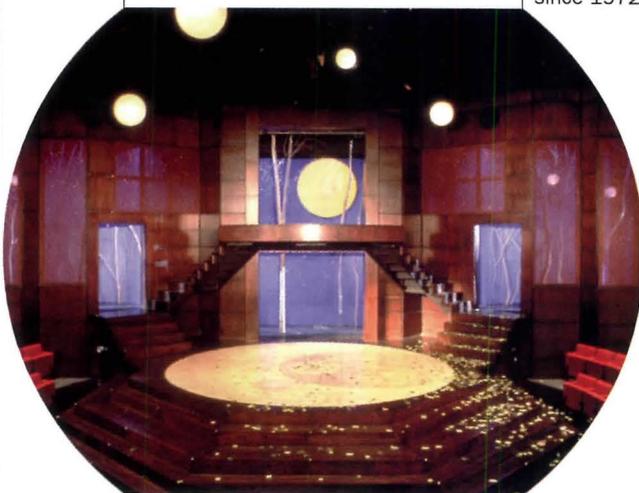


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Clockwise from top left: Chancery, Santiago, Chile; Chancery, New Delhi, India; Consulate General's Residence, Casablanca, Morocco; Chancery, Bangkok, Thailand; Ambassador's Residence, Pretoria, South Africa.



Elizabeth Gill Lui and Keya Keita discover the language of architecture

Interviewed by Jane F. Kolleyney

In 2000, Elizabeth Gill Lui and her daughter, Keya Keita, were ready to embark on the journey of their lives, one that would last two years and include 50 countries. For a project they call "Building Diplomacy," their travels sought to test the theory that embassy buildings are metaphors of cultural and historical values, rather than merely objects in themselves. Lui's lifelong career as an arts photographer and Keita's burgeoning skill in film made them a worthy documenting team.



Q: In brief, what did you do? Through the generous support of J. Landis Martin and the Office of Overseas Buildings Operations at the State Department, we visited U.S. chanceries and residences throughout the world, recording our journey through still and live-action footage of the architecture and the people, asking the questions such as: "Who are we as Americans? What does that mean? How does the world see us?" We also wrote a jour-

nal of our thoughts, observations, anecdotes, and adventures.

What inspired you to make the journey? We believe that in America's 20 year history, architecture has become the primary aesthetic medium that nation has consistently funded and exported abroad. We sought to prove it and our underlying conviction that architecture and art speak a universal language that has great humanizing potential. To utilize its fullest benefits on diplomatic stage is imperative, especially in our current day and age.

What results will come of your work? The primary goal is to publish a book with the attendant exhibitions that one would expect. As of now, one exhibition is planned at the Denver Art Museum. We are hopeful that the live-action portion of the work will be produced as a documentary and that the work become a valuable archive for our country, since this is the first time the State Department has permitted anyone to undertake such extensive documentation of America's diplomatic properties. To me, architecture is both language and experience, and I hope this work offers viewers tools to decipher our connectedness to the human-designed world we inhabit. ■

Embassy photographs by Elizabeth Gill Lui; portraits by A. Arorizo