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# ARCHITECT

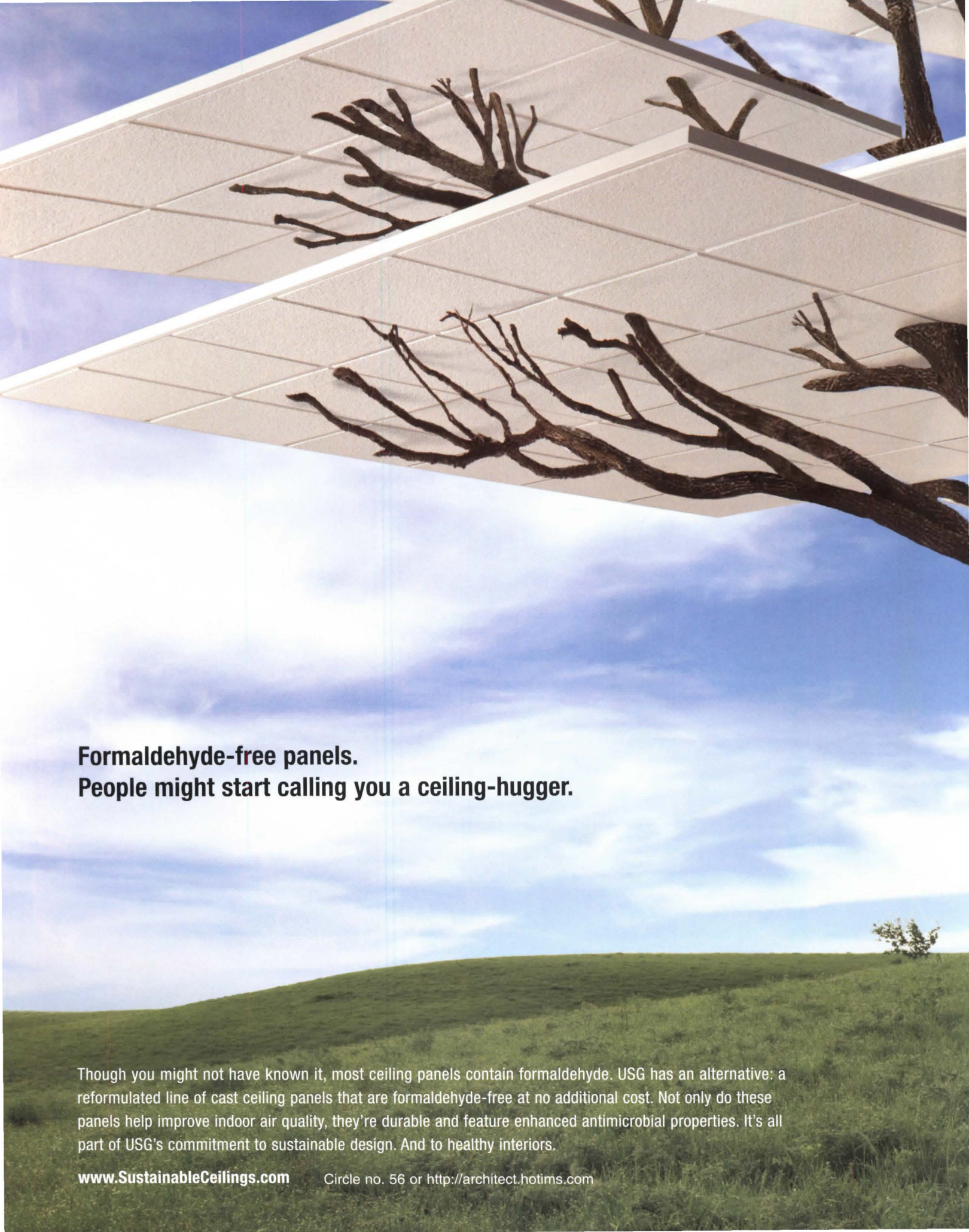
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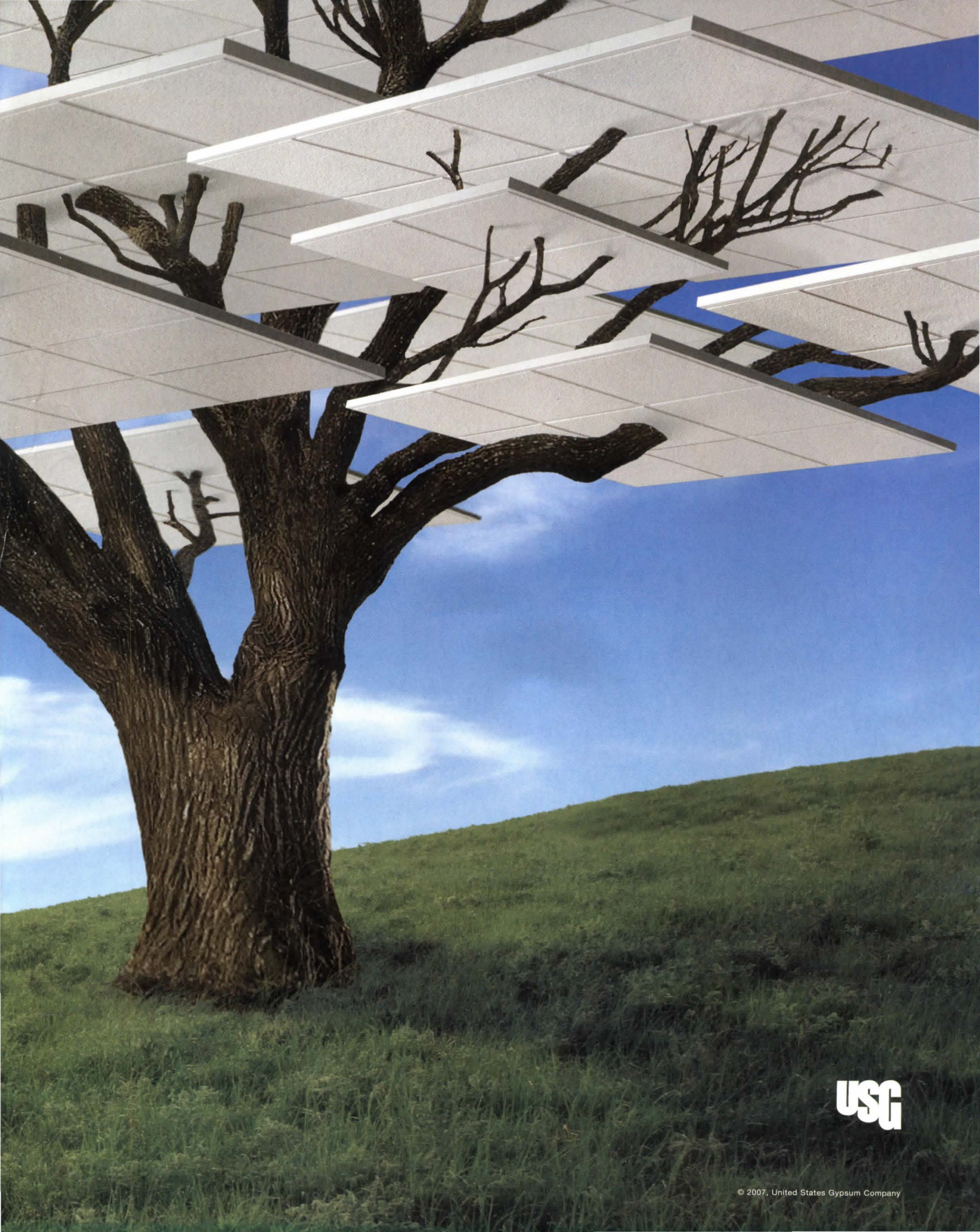
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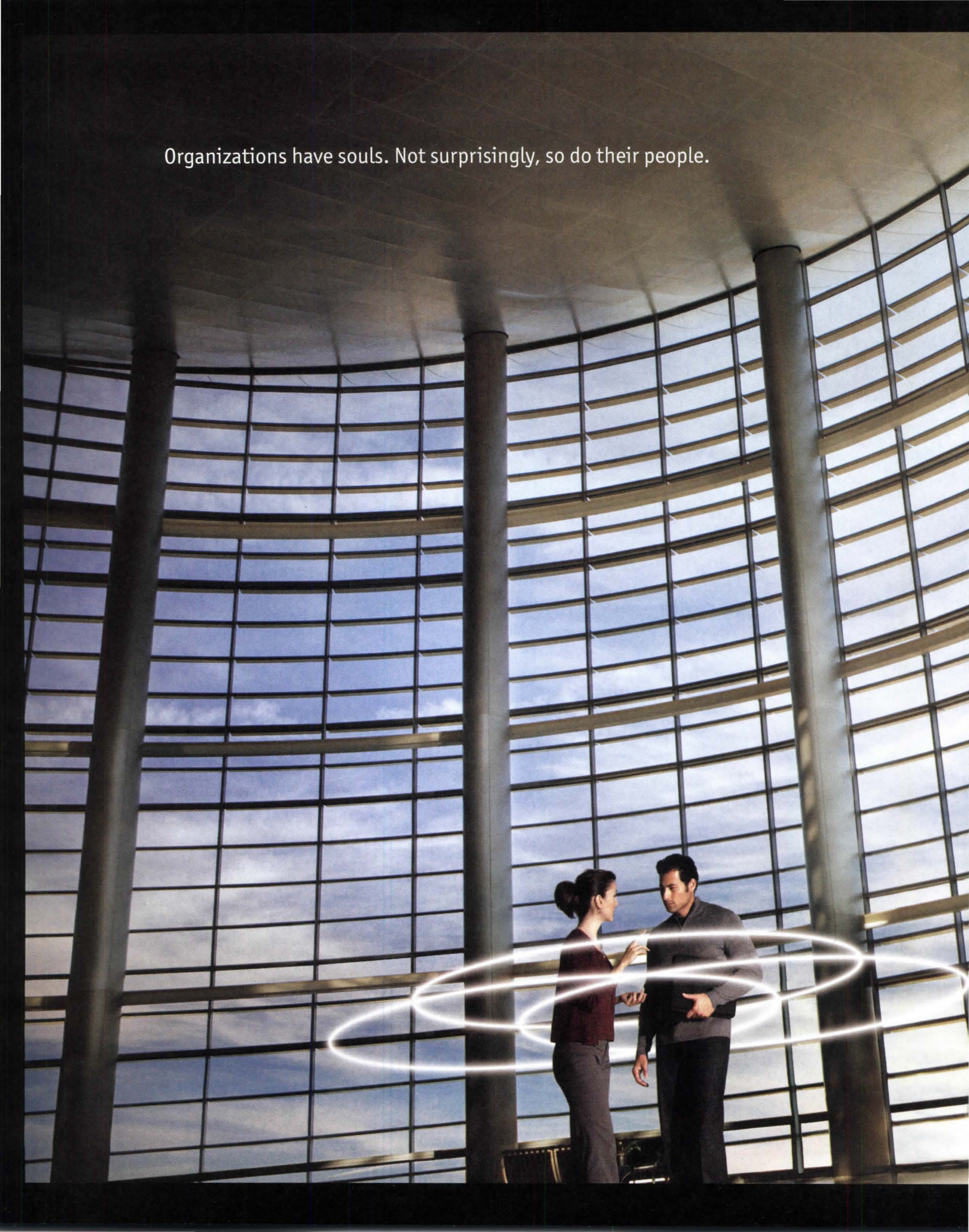
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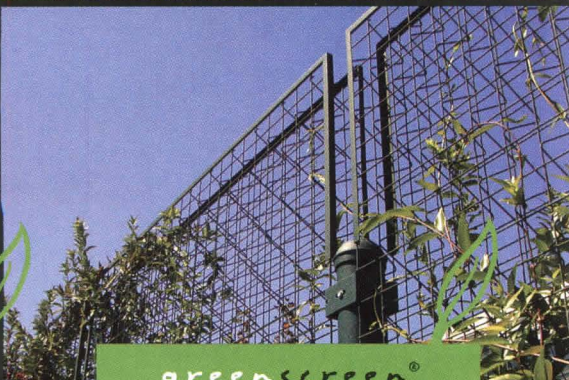
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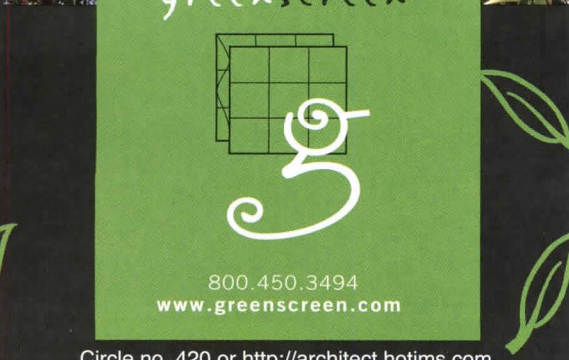
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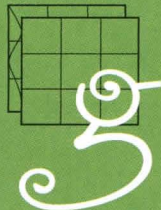


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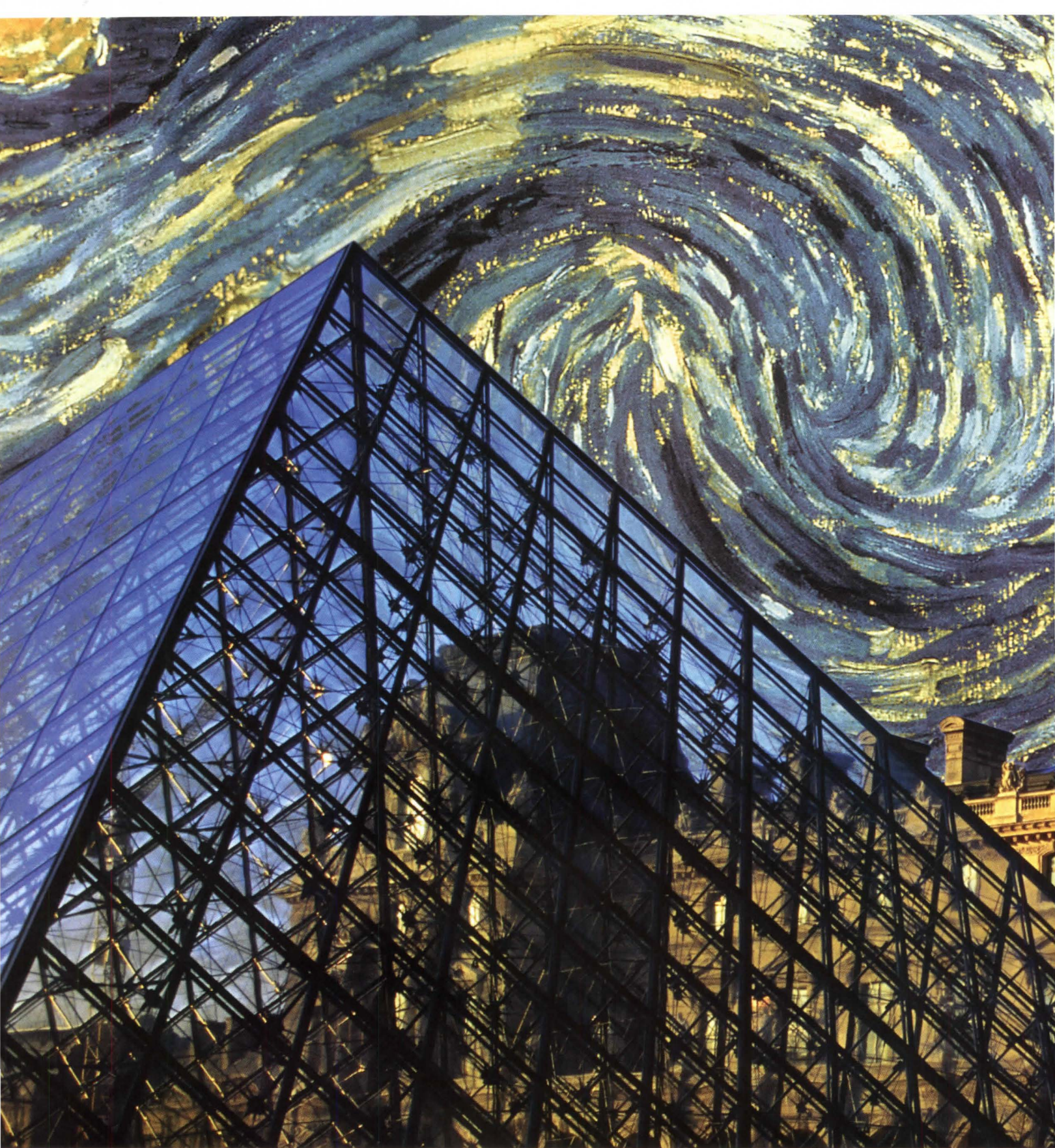
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**FAR RIGHT** Mass Studies' *Seoul Commune 2026*, part of the "Open House" exhibit on architecture and technology for intelligent living.



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# BUILD OPPORTUNITY



NANCY FROELICH

**Ned Cramer**  
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**I WISH WE HAD A DIFFERENT MOTIVE** for putting Raye McDavid on the cover of this month's ARCHITECT—say, because she's sparked a revolution in building technology, brokered a landmark business deal, or taken the aesthetics of her latest project to a whole new level. But, in truth, we put McDavid on the cover because she's a black woman. In architecture, that's enough to make her exceptional. Out of some 91,000 licensed architects in the United States, fewer than 200 are black women.

Judging from the comments of McDavid and other black women architects in the cover story ("0.2 Percent," page 62), the profession is far from perfectly diverse. The AIA's 2005 "Demographic Diversity Audit" only underscores the anecdotal evidence. According to the report's executive summary, "There is little disagreement across the profession of the value of diversity and [the] need to encourage and develop individuals from under-represented groups as architects and as leaders."

It's nice to know that most architects, in this day and age, support diversification—even if it's just to avoid a lawsuit—but prejudice is a slippery issue. Civil rights legislation puts forth a set of dos and don'ts, but the unwritten rules pose a greater challenge. Discrimination can be embodied just as easily in a facial expression as in a hiring or firing decision.

The solution to the profession's relative lack of diversity isn't as simple as sending a memo to the H.R. department or establishing a faculty task force. Architects and architectural educators have to act early—and often—to encourage a more diverse future for the profession.

My former employer, the Chicago Architecture Foundation, runs an outreach initiative for high school students in Chicago Public Schools—the Newhouse Program. The program was founded by the late Illinois state senator Richard H. Newhouse, who was unable to realize his childhood dream of becoming an architect because of the many obstacles he encountered as a black person. The program that bears his name is now celebrating its 25th anniversary, and every year some 1,500, largely minority students participate in its skill-building workshops, awards program, and internships.

The Newhouse Program is just one way to engage future generations of architects. Nonprofits, universities, and AIA chapters across the country offer their own, similar programs, and there are many ways to get involved. Try becoming a volunteer, hiring an intern, donating staff time, or simply writing a check. The important thing is to take action, open doors, and create opportunities where none existed before. Demographics shouldn't be a factor in making an architect exceptional.

**Ned Cramer**  
Editor in Chief

## Credit Where Credit's Due

ARCHITECT published a wonderful description of the recent transformation of the Basilica of the Assumption in Baltimore ["America's First Cathedral," February, page 62]. While quotes from the design team and the owner's representative lent perfect interest to the narrative, Bradford McKee stopped short of mentioning how the construction effort contributed to the project's success. Was there a builder?

We are well past the era of the "architect-master builder." Today's projects have a general contractor or construction manager who seeks qualified tradesmen for the project, takes responsibility for quality control, carries the product liability, finances ten percent of the work, and assumes nearly all of the risk. As you launch your new magazine—with emphasis on the people behind the projects—please bear in mind that few projects get built by the architect alone. Successful projects today are increasingly dependent on construction professionals as well as designers.

**Thomas McCracken**

Henry H. Lewis Contractors  
tmccracken@hhlewis.com

## Tear Down the Tower

Your approach is fresh and energizing, covering substantial architectural material while expanding to people and material of general and technical interest. Most publications of this type include only the viewpoint from the architectural ivory tower. Most architects (myself included) will do well to read your publication, being reminded that architecture is only one small slice of life. The current issue includes a Specs Department ["Joint Sealants," February, page 39]—much appreciated, great information. Every bit as good (or better) as the technical publications out there. I applaud your efforts, hoping you will continue to draw in a broad realm of material, expanding my point of view.

**Gregg Voos**

Architectural LINKS  
gtvs@msn.com

## When in Miami

Thanks to Terence Riley and John Bennett ["Florida Bauhaus," February, page 47] for bringing to South Florida the fresh, uncomplicated look of the Bauhaus era, while we are drowned in faux Mediterranean architecture full of fabricated stone and plastic columns, moldings, and all kind of whimsical embellishments. But we are in a subtropical climate with thunderstorms and fierce hurricanes for part of the year, and both living and sleeping areas should be connected by an enclosed space for circulation without exposure to the elements.

**Julio J. Baladron**

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## Construction

## Dallas Architects May Be Nudged From Project Management Role

### Excessive fees cited in move to third-party oversight of county projects



Kenneth Mayfield

**CONCERNED THAT THE FOXES** are guarding the henhouse, Dallas County Commissioner Kenneth Mayfield has asked county staff to use third-party project management contractors to oversee county construction projects instead of architects.

Attorney Charles Basil, managing partner of the litigation department at Reiner, Reiner & Bendett, in Framingham, Conn., explains: "When the architect is the project supervisor, his duties require the correction or rejection of work, even if the defect is due to his design error."

Mayfield, commissioner of County District 4, cited excessive fees related to change orders as reason for the policy change. According to a report in *The Dallas Morning News*, one offending project was a parking development that incurred \$919,322 in additional fees. Neither Mayfield nor Dan Savage, the county's assistant commissioner court administrator in charge of construction projects, returned requests for an interview.

Architects initially took over the project management function after the county disbanded the office charged with the task in the late 1990s, when a dearth of municipal projects made the office obsolete. The latest proposal would bring in outside project managers to ensure "objective" oversight.

While most local architects don't object to the additional oversight, they don't want to be cut completely out

of the process either, says architect Betsy del Monte, principal of The Beck Group in Dallas. "Architects add the most value when allowed to play a part in managing the entire project," she asserts. "Most third-party project managers do not have the depth of understanding of the project that an architect brings to the project."

Adds Denise McWatters, Beck's general counsel: "When the architect is also the project manager, the project is more likely to be completed within the budget and schedule that the owner desires, since design issues can be identified and resolved more quickly in the field."

But adding project managers won't necessarily reduce liability, Basil notes. "While generally a construction project manager and an architect are held to similar theories of liability [breach of contract and negligence], the standard of care for a construction manager may be less than that of the architect, especially in the areas of latent design errors or specifications that may be more apparent or chargeable to an architect supervising the project."

At press time, county staff indicated they would attempt to follow through with the commissioner's request, though it was unclear whether they would cut out architects entirely or simply add a third-party contractor to the process.

"I can't imagine that they would seriously consider doing away with architectural firms' services for construction administration," says Bill Collins, an architect at GSR-Andrade Architects in Dallas. "But I could be wrong." MARGOT CARMICHAEL LESTER

## Urban Renewal

## Cleveland Competition to Focus on Neglected Sites

**A NEW ANNUAL COMPETITION** that targets interstitial spaces in Cleveland has been announced. The brainchild of local architects Michael Christoff and Bradley Fink, the Cleveland Design Competition will look at a different marginalized or complex site each year, the goal being to generate ideas as to how it can be revitalized into something that serves the city.

This year's project is Irishtown Bend, a waterfront site owned largely by the Cuyahoga Metropolitan Housing Authority that is plagued by unstable and shifting soil. Entrants are asked to come up with theoretical designs that could help restore the property and devote a large portion of it to public use. The goal, according to Christoff, is to "engage both the regional and the national design community to address these problems, and hopefully to generate new ideas that we couldn't bring out without a competition."

Other city and private agencies are also taking interest in the program, which counts among its sponsors the Lincoln Institute of Land Policy, the Cleveland chapter of the American Institute of Architects, Kent State University's Cleveland Urban Design Collaborative, local architecture firms Forum Architects and Process



Irishtown Bend

Creative Studios, the Ohio Chapter of the American Society of Landscape Architects, and the Ohio City Near West Development Corp.

The registration deadline is April 16, with entries due on May 1. More information on the project, including previous Irishtown Bend plans and studies, can be found at [www.clevelandcompetition.com](http://www.clevelandcompetition.com). KATIE GERFEN

## Clips

The American Institute of Architects' Architecture

**Billings Index** for December was 59.5, the best mark of 2006 (any score over 50 indicates an increase in billings). The commercial/industrial score of 63.0 was the sector's highest since the monthly survey began in 1995.

Hotels, office buildings, and health care facilities will be 2007's **hottest nonresidential construction sectors**, according to the AIA. The group's semiannual "Consensus Construction Forecast" also projects the entire nonresidential market to grow by almost 7 percent, which would make 2006-07 the best two-year period for the industry in nearly a decade.

The AIA has awarded **David Dixon** and **Michael Fitts** the 2007 Thomas Jefferson Award for Public Architecture. Dixon directs the planning and urban design group at Boston-based architecture firm Goody Clancy. Fitts has been the Tennessee state architect for 35 years.

A new report says **geothermal power** could provide up to 10 percent of the nation's electricity by 2050, with minimal environmental impact and at a cost comparable with other energy technologies. "The Future of Geothermal Energy" (available at [geothermal.inel.gov/publications.shtml](http://geothermal.inel.gov/publications.shtml)), produced by an MIT-led interdisciplinary panel, is the first comprehensive study on the subject since a 1979 report by the U.S. Geological Survey.

The Congress for the New Urbanism's Florida chapter has given the **University of Miami School of Architecture** the John Nolen Medal for its contributions to urbanism in the state.

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## REPORT NEWS

Engineering

## Future City Competition Engages Young Minds



BEN ZWEIF/FCEVENTPHOTO

**2007 Future City Competition** winners Jake Bowers, Emily Ponti, and Krisha Sherburne.

**MIDDLE SCHOOL** is a great time to start learning about engineering. That's the philosophy behind the Future City Competition, a 15-year-old contest that asks seventh- and eighth-graders across the nation to design a city of the future. Working in teams—with oversight from a teacher and an engineer mentor—students first compete in regional contests. The winning teams then go to the finals at National Engineers Week, a consortium of more than 100

engineering societies and corporations. The 2007 finals took place Feb. 19–22 in Washington, D.C.

"The goal is to provide students an opportunity to learn about engineering in a fun and practical way," says Carol Rieg, national director of the Future City Competition and one of its creators.

Each iteration of the competition poses a different challenge; this year's focus was on using fuel cell systems to power a metropolis. The contest had four parts: developing the city in SimCity 3000, a video game; writing an essay on how the city's engineering solves the challenge; creating a tabletop model; and presenting the city to the judges.

When the competition debuted, says Rieg, about 675 students from 175 schools in five cities competed. This year, some 30,000 students from more than 1,000 schools in 40 regions participated.

At the 2007 finals, 35 teams presented their cities. The winning city, "Mwinda," was created by Jake Bowers, 12, Emily Ponti, 14, and Krisha Sherburne, 12, from St. Thomas More School in Baton Rouge, La. Mwinda means "light" in Lingala, a dialect of the Republic of Congo, where the city is located. Mwinda makes use of phosphoric acid fuel cells (powered with hydrogen from enhanced algal cultures and solar collector hydrogen generators), massive lighting-containmentment capacitors, and raw uranium (mined robotically) to power itself.

This year's finals were hosted by Bentley Systems, an engineering software company and chair of the competition's leadership council. Bentley also provided the first prize award: a trip to U.S. Space Camp in Huntsville, Ala.

## Clips

Volume two of *Dialogues in Urban Planning*, published by

the Global Planning Education Association Network ([www.gpean.org](http://www.gpean.org)), is now available. The series is an effort to present the best in urban planning scholarship from around the world. GPEAN comprises 10 planning associations, including the Association of Collegiate Schools of Planning in the United States.

**ASAI Architecture**, located in Westwood, Kan., has merged with St. Louis-based **PGAV Architects**. The combined firm, which will keep the PGAV name as well as ASAI's Kansas City-area office, now has a staff of more than 120.

→ continued on page 24



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Recognition

### 2007 Emerging Voices Honorees

**NOW IN ITS 25TH YEAR**, The Architectural League of New York's annual Emerging Voices lecture series has recognized nearly 200 firms and individuals who have, through practice and teaching, made noteworthy contributions to the profession of architecture and the built environment. Those selected to speak are recognized for the quality of their work and for their commitment to effecting positive change in their local communities. "It's not about one moment or one project, but a direction in the career of someone who is beginning to have a voice," says program director Anne Rieselbach. "These architects have reached a point of having something to say." The lectures will take place throughout March. Go to [www.archleague.org](http://www.archleague.org) for more information. LAURIE MANFRA



**FIRM** AEDS

**FOUNDED BY** Ammar Eloueini in 1997

**LOCATION** New Orleans/Paris

**RECENT PROJECT** Issey Miyake "Me" Store, Paris

**WEBSITE** [www.digit-all.net](http://www.digit-all.net)

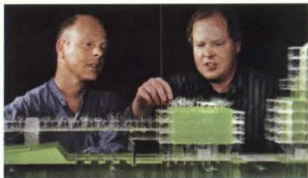


**ARTIST** An Te Liu

**LOCATION** Toronto, Ontario, Canada

**RECENT PROJECT** *Models for Tomorrow* (exhibition), European Kunsthalle, Cologne, Germany

**REPRESENTATION** Henry Urbach Architecture Gallery, New York



**FIRM** Anderson Anderson Architecture

**FOUNDED BY** Peter Anderson and Mark Anderson in 1984

**LOCATION** Seattle/San Francisco/Honolulu

**RECENT PROJECT** Sustainable housing prototype for New Orleans (conceptual)

**WEBSITE** [www.andersonanderson.com](http://www.andersonanderson.com)



**FIRM** Della Valle Bernheimer

**FOUNDED BY** Jared Della Valle and Andrew Bernheimer in 1996

**LOCATION** Brooklyn, N.Y.

**RECENT PROJECT** Condo tower at 245 Tenth Ave., Manhattan (under construction)

**WEBSITE** [www.dbnyc.com](http://www.dbnyc.com)



**FIRM** Höweler + Yoon Architecture/MY Studio

**FOUNDED BY** J. Meejin Yoon and Eric Höweler in 2004

**LOCATION** Boston/New York

**RECENT PROJECT** *Low Rez Hi Fi* (installation), Washington, D.C.

**WEBSITE** [www.hyarchitecture.com](http://www.hyarchitecture.com)



**FIRM** IwamotoScott Architecture

**FOUNDED BY** Lisa Iwamoto and Craig Scott in 1998

**LOCATION** San Francisco

**RECENT PROJECT** The Jellyfish House (conceptual)

**WEBSITE** [www.iwamotoscott.com](http://www.iwamotoscott.com)



**FIRM** Johnston Marklee & Associates

**FOUNDED BY** Mark Lee and Sharon Johnston in 1998

**LOCATION** Los Angeles

**RECENT PROJECT** View House, Argentina (under construction)

**WEBSITE** [www.johnstonmarklee.com](http://www.johnstonmarklee.com)



**FIRM** Trahan Architects

**FOUNDED BY** Victor F. Trahan III in 1992

**LOCATION** Baton Rouge, La.

**RECENT PROJECT** Superdome restoration, New Orleans

**WEBSITE** [www.trahanarchitects.com](http://www.trahanarchitects.com)

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\*See limited warranty for details.



Survey

## The People's Architecture

### AIA polls Americans on their 150 favorite U.S. structures

**THE AMERICAN INSTITUTE OF ARCHITECTS (AIA)** polled 1,804 members of the American public on their favorite U.S. architecture and revealed the 150 winners on Feb. 7. (Respondents chose from a list of 248 structures that was developed from an AIA survey of almost 2,500 of its members. For the list of the buildings that the public deemed not worthy, go to page 31.) Within days, the critics began wrestling with the question of What It All Means and whether the results should even be taken seriously. Blair Kamin at the *Chicago Tribune*: Does fame trump quality? John King at the *San Francisco Chronicle*: Are looks more important than innovation? Dan Glaister at

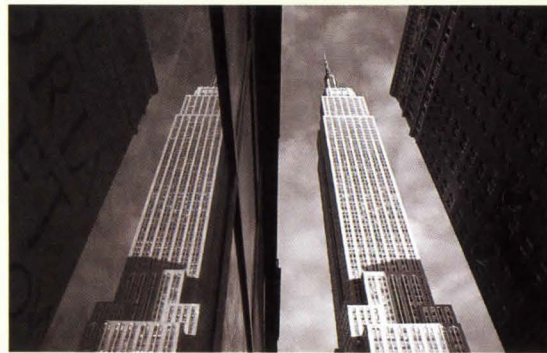
*The Guardian*: Is a poll of nonarchitects really in the AIA's best interest?

On one thing, though, there seemed to be agreement: How on earth did the Bellagio Hotel end up at No. 22? To which we say: Never underestimate the power of popular culture (in this case, the 2001 film *Ocean's Eleven*) to elevate architecture in the public's mind. (Even "tasteless" architecture, as Skidmore, Owings & Merrill's Edward Feiner described the Bellagio in *The Wall Street Journal*.)

Read about the poll, learn more about the 150 structures that are America's Favorite Architecture, and follow or contribute to the ongoing debate at [www.aia150.org](http://www.aia150.org).

#### The Top 150

- 1 Empire State Building, New York—William Lamb, Shreve, Lamb & Harmon
- 2 The White House, Washington, D.C.—James Hoban
- 3 Washington National Cathedral, Washington, D.C.—George F. Bodley and Henry Vaughan
- 4 Thomas Jefferson Memorial, Washington, D.C.—John Russell Pope
- 5 Golden Gate Bridge, San Francisco—Irving F. Morrow and Gertrude C. Morrow
- 6 U.S. Capitol, Washington, D.C.—William Thornton, Benjamin Henry Latrobe, Charles Bulfinch, Thomas U. Walter, Montgomery C. Meigs
- 7 Lincoln Memorial, Washington, D.C.—Henry Bacon
- 8 Biltmore Estate (Vanderbilt Residence), Asheville, N.C.—Richard Morris Hunt
- 9 Chrysler Building, New York—William Van Alen
- 10 Vietnam Veterans Memorial, Washington, D.C.—Maya Lin with Cooper, Lecky Partnership
- 11 St. Patrick's Cathedral, New York—James Renwick
- 12 Washington Monument, Washington, D.C.—Robert Mills
- 13 Grand Central Station, New York—Reed and Stern; Warren and Wetmore
- 14 Gateway Arch, St. Louis—Eero Saarinen
- 15 Supreme Court Building, Washington, D.C.—Cass Gilbert
- 16 St. Regis Hotel, New York—Trowbridge & Livingston
- 17 Metropolitan Museum of Art, New York—Calvert Vaux; McKim, Mead & White; Richard Morris Hunt; Kevin Roche; John Dinkeloo
- 18 Hotel Del Coronado, San Diego—James Reid
- 19 World Trade Center, New York—Minoru Yamasaki; Antonio Brittiocchi; Emery Roth & Sons
- 20 Brooklyn Bridge, New York—John Augustus Roebling
- 21 Philadelphia City Hall, Philadelphia—John McArthur Jr.
- 22 Bellagio Hotel and Casino, Las Vegas—Deruyter Butler; Atlandia Design
- 23 Cathedral of St. John the Divine, New York—Heins & La Farge; Ralph Adams Cram
- 24 Philadelphia Museum of Art, Philadelphia—Horace Trumbauer, Zantinger, Borie, and Medary
- 25 Trinity Church, Boston—Henry Hobson Richardson
- 26 Ahwahnee Hotel, Yosemite Valley, Calif.—Gilbert Stanley Underwood



No. 1 Empire State Building



No. 22 Bellagio Hotel and Casino



No. 26 Ahwahnee Hotel

#### Clips

Gregory Dreicer has joined the Chicago Architecture

**Foundation** as vice president of exhibitions and programs, a position created to expand the foundation's scope. Previously, he ran Chicken&Egg Public Projects, the New York-based exhibition planning, development, and design firm he founded in 2000.

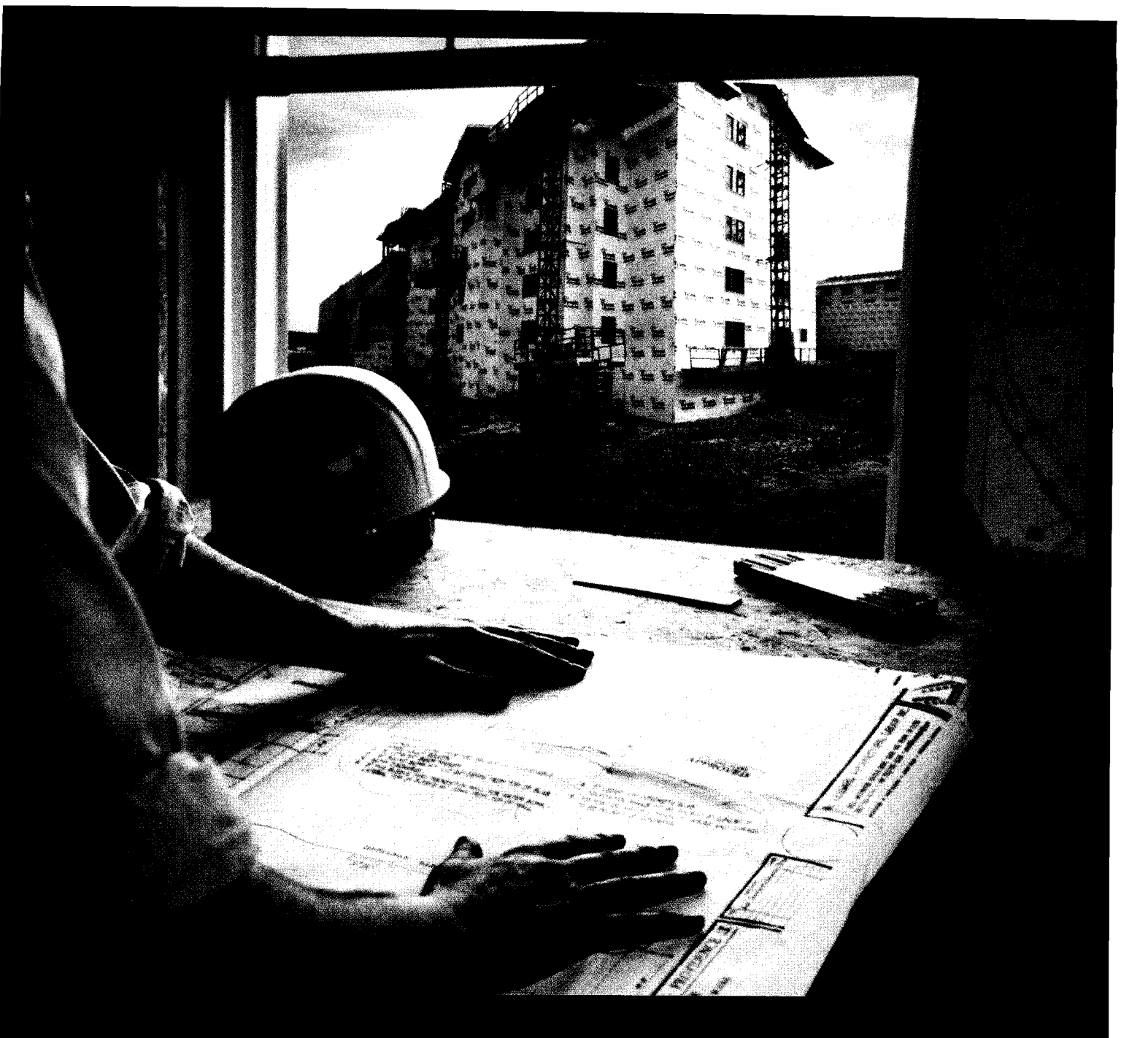
The winners of the 2007 Palladio Awards program ([www.palladioawards.com](http://www.palladioawards.com)), which recognizes outstanding work in traditional architecture, have been announced. For commercial, institutional, and public work: **Hartman-Cox Architects**, Washington, D.C.; **Commonwealth Architects**, Richmond, Va.; **Hanbury Evans Wright Vlattas + Company**, Norfolk, Va.; and **Shepley Bulfinch Richardson & Abbott**, Boston. For residential work: **BKSK Architects**, New York; **Zivkovic Associates Architects**, New York; **John Simpson & Partners**, London; **Christine G.H. Franck**, New York; **Alert, Righter & Tittmann Architects**, Boston; and **Archer & Buchanan Architecture**, West Chester, Pa.

The National Association of Industrial and Office Properties ([www.naiop.org](http://www.naiop.org)) has created a CD of **green commercial real estate development case studies**. *Exceptional Green Buildings* contains details on 19 projects, including comments from the developers.

**Michael Kwartler**, principal at Michael Kwartler and Associates, and **RKT&B Architects** president **Carmi Bee** are the recipients of this year's John Hejduk Award, given by the Cooper Union Alumni Association. The award is presented to alumni of the Irwin S. Chanin School of Architecture.

→ continued on page 36





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- 29 Kaufmann Residence (Fallingwater),  
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- 30 Taliesin, Spring Green, Wisc.—Frank Lloyd Wright
- 31 Wrigley Field, Chicago—Zachary Taylor Davis
- 32 Wanamaker's Department Store, Philadelphia—  
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- 34 National Gallery of Art, West Building,  
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- 35 Allegheny County Courthouse, Pittsburgh—  
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- 36 Old Faithful Inn, Yellowstone National Park,  
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- 37 Union Station, Washington, D.C.—  
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- 39 Delano Hotel, Miami Beach, Fla.—Robert  
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- 41 Hearst Residence (Hearst Castle),  
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- 42 Sears Tower, Chicago—Bruce Graham,  
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- 43 Crane Library, Quincy, Mass.—Henry  
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- 44 Woolworth Building, New York—Cass Gilbert
- 45 Cincinnati Union Terminal, Cincinnati—  
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- 46 Waldorf Astoria, New York—Schultze & Weaver
- 47 New York Public Library, New York—  
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- 48 Carnegie Hall, New York—William B. Tuthill;  
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- 52 Field Museum of Natural History, Chicago—  
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- 53 Apple Store Fifth Avenue, New York—  
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- 54 Fisher Fine Arts Library, University of  
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- 55 Mauna Kea Beach Hotel, Kohala Coast,



No. 60 Thorncrown Chapel

- Hawaii—Skidmore, Owings & Merrill
- 56 Rockefeller Center, New York—  
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- 57 Denver International Airport, Denver—  
Fentress Bradburn Architects
- 58 Ames Library, North Easton, Mass.—  
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- 59 Milwaukee Art Museum, Milwaukee—  
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- 60 Thorncrown Chapel, Eureka Springs, Ark.—  
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- 61 TransAmerica Pyramid, San Francisco—  
William Pereira
- 62 333 Wacker Drive, Chicago—William E.  
Pedersen, Kohn Pedersen Fox Associates



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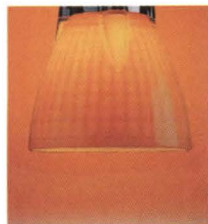
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## REPORT NEWS

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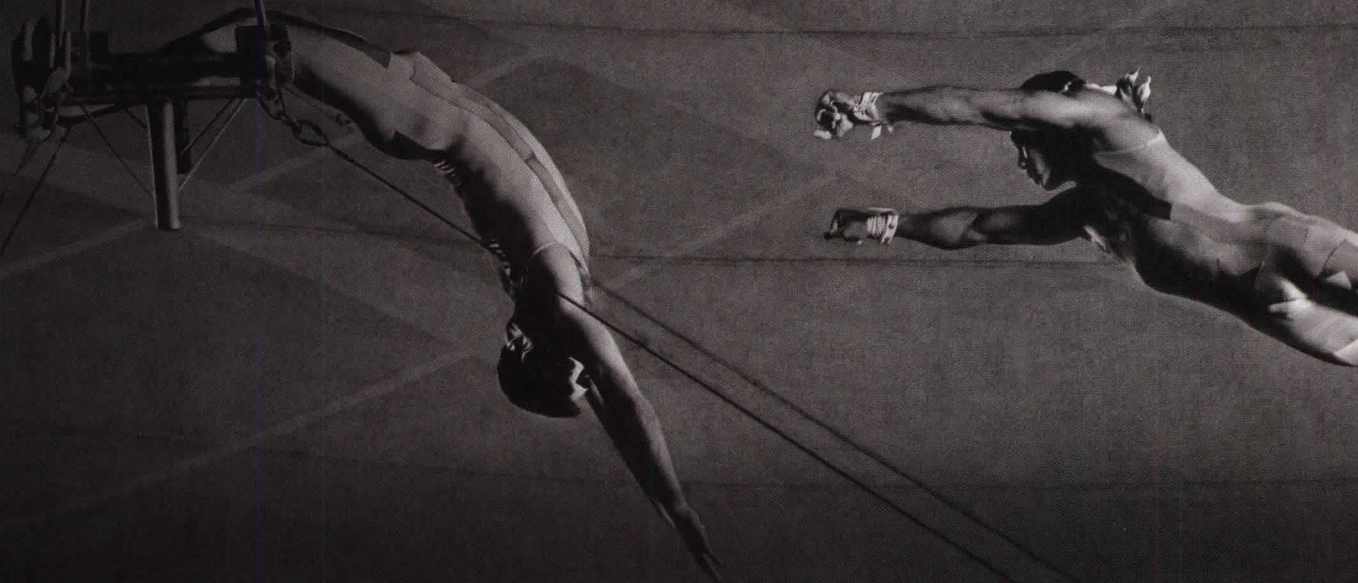
- 102 United Airlines Terminal, O'Hare, Chicago—  
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- 104 AT&T Park (San Francisco Giants Stadium), San  
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- 133 Royalton Hotel, New York—Philippe Starck
- 134 Reliant Astrodome, Houston—Hermon Lloyd  
and W.B. Morgan; Wilson, Morris, Crain and  
Anderson
- 135 Safeco Field, Seattle—NBBJ
- 136 Corning Museum of Glass, Corning, N.Y.—  
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- 138 Robie House, Chicago—Frank Lloyd Wright
- 139 Williams Tower (Transco Tower), Houston—Philip Johnson, Johnson/Burgee
- 140 Stahl House (Case Study House #22), Los Angeles—Pierre Koenig
- 141 Apple SoHo, New York—Bohlin Cywinski Jackson
- 142 John Hancock Towers, Boston—Henry Cobb, Pei Cobb Freed
- 143 Pennsylvania Station, New York—McKim, Mead & White
- 144 Hyatt Regency San Francisco, San Francisco—John Portman
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- 146 Museum of Modern Art, New York—Philip Goodwin and Edward Durell Stone
- 147 Auditorium Building, Chicago—Adler & Sullivan
- 148 Brown Palace Hotel, Denver—Frank E. Edbrooke
- 149 Ingalls Ice Arena, Yale University, New Haven, Conn.—Eero Saarinen
- 150 Battle Hall, University of Texas, Austin, Texas—Cass Gilbert

## Sorry, Better Luck Next Time

**THE AIA POLLED** the American public on its 150 favorite pieces of architecture in the United States, offering a list of 248 structures to choose from. These are the ones that didn't make the cut. (See page 24 for more information.)

- 860–880 Lake Shore Drive Apartments, Chicago
- American Folk Art Museum, New York
- Art & Architecture Building, Yale University, New Haven, Conn.
- Baker House, Massachusetts Institute of Technology, Cambridge, Mass.
- Beinecke Rare Book Library, Yale University, New Haven, Conn.
- Beth Shalom Synagogue, Elkins Park, Pa.
- Boston City Hall, Boston
- Bradbury Building, Los Angeles
- Burton Barr Library, Phoenix Public Library, Phoenix
- Caltrans Carpenter Center, Harvard University, Cambridge, Mass.
- Cathedral of Our Lady of the Angels, Los Angeles
- Cathedral of Saint Mary of the Assumption, San Francisco
- cbs Headquarters/Black Rock, New York

- Center for British Arts/Museum of British Art, Yale University, New Haven, Conn.
- Chapel/W15, Massachusetts Institute of Technology, Cambridge, Mass.
- Crown Hall, Illinois Institute of Technology, Chicago
- Dallas City Hall, Dallas
- Dallas–Fort Worth International Airport, Dallas
- De Young Museum, San Francisco
- Denver Art Museum, Denver
- Denver Public Library, Denver
- Eames House, Pacific Palisades, Calif.
- Ennis House/Ennis-Brown House, Los Angeles
- Esherick House, Chestnut Hill, Pa.
- Experience Music Project, Seattle
- Farnsworth House, Plano, Ill.
- First Christian Church, Columbus, Ind.
- First Church of Christ Scientist, Berkeley, Calif.
- First Unitarian Church, Rochester, N.Y.
- Ford Foundation Headquarters, New York
- Frank Gehry Residence, Santa Monica, Calif.
- Freer Gallery of Art, Washington, D.C.
- Genzyme Center, Cambridge, Mass.
- Gropius House, Lincoln, Mass.
- Guaranty Building, Buffalo, N.Y.
- Horton Plaza, San Diego
- IBM Building, Chicago
- Inland Steel Building, Chicago

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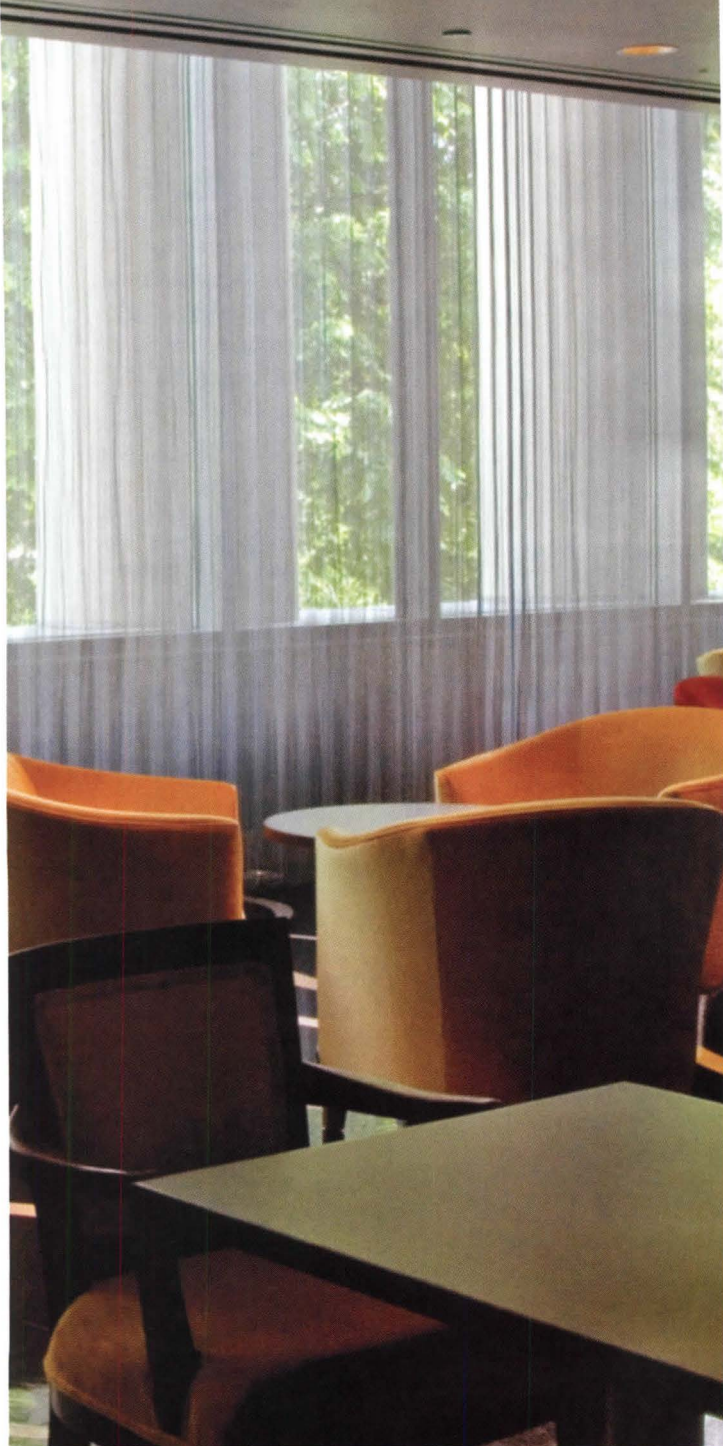


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## REPORT NEWS

### Deadlines Competitions and more

#### MARCH 16

##### Deborah J. Norden Fund

Administered by The Architectural League of New York, the Norden Fund awards a total of up to \$5,000 in grants to students and recent graduates in the fields of architecture, architectural history, and urban studies.

[www.archleague.org](http://www.archleague.org)

#### APRIL 6

##### Call for Papers: National Bridge Conference

The Precast/Prestressed Concrete Institute is requesting abstracts for papers to be given at National Bridge Conference technical sessions. The conference will be held this fall in conjunction with the institute's annual convention.

[www.pci.org/news/bridge\\_conference](http://www.pci.org/news/bridge_conference)

#### APRIL 6

##### LEED for Neighborhood Development Pilot Program

The U.S. Green Building Council is accepting applications to take part in a pilot program for the new LEED for Neighborhood Development Rating System, which integrates the principles of smart growth, urbanism, and green building into the first national standard for neighborhood design. The rating system is a collaboration between the Green Building Council, the Congress for the New Urbanism, and the Natural Resources Defense Council.

[www.usgbc.org/leed/nd](http://www.usgbc.org/leed/nd)

#### APRIL 13

##### Aurora Awards

The Southeast Building Conference presents the 28th annual Aurora Awards, open to builders, designers, architects, and land planners with projects in the 12 Southeastern states.

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

#### APRIL 15

##### Lifecycle Building Challenge

Sponsored by the U.S. Environmental Protection Agency, the Building Materials Reuse Association, the American Institute of Architects, and West Coast Green, the Lifecycle Building Challenge seeks designs and ideas from architects and students that facilitate adaptability and eventual dismantling for the recovery of all building systems, components, and materials. Categories include buildings, components, and tools and strategies.

[www.lifecyclebuilding.org](http://www.lifecyclebuilding.org)

#### APRIL 15

##### Frederick P. Rose Architectural Fellowship

Established by Enterprise Community Partners, a nonprofit housing and community development organization, the Rose Architectural Fellowship promotes quality design and green building in affordable housing.

[www.rosefellowship.org](http://www.rosefellowship.org)

#### APRIL 17

##### K-12 Educational Facilities Design Awards

Public and private K-12 educational facilities built anywhere in the world by New England and New York City architects are eligible, and any architect anywhere in the world may submit any project built in New England or New York City. Projects must have been completed after Jan. 1, 1999. Sponsored by the Boston Society of Architects and the New York chapter of the American Institute of Architects.

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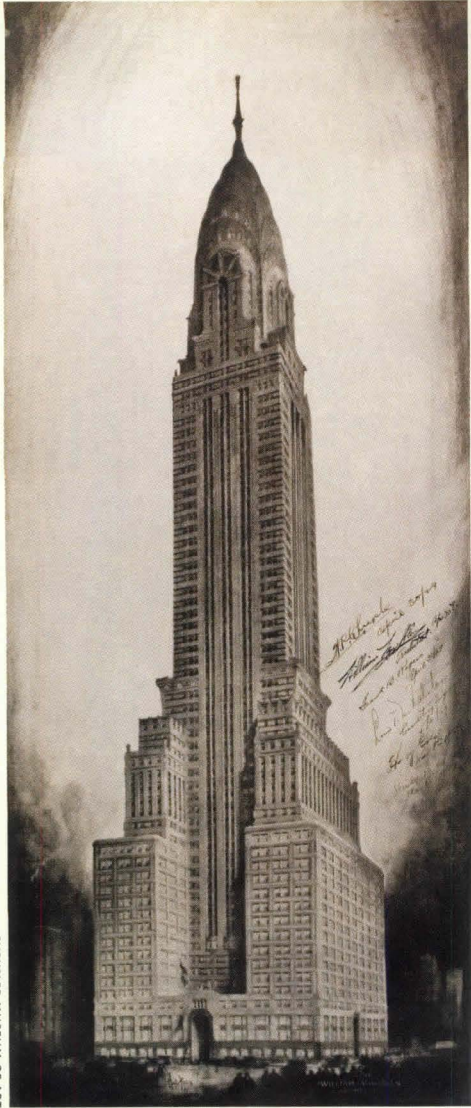
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CHRYSLER MUSEUM OF ART

## Rare Hugh Ferriss Print Sold at Auction

On Jan. 27, a rare print of the Chrysler Building was sold at an Ohio auction to Norfolk, Va.'s Chrysler Museum of Art for \$15,000. A period reproduction of a rendering by famed delineator Hugh Ferriss, the print bears the signatures of Walter Chrysler, architect William Van Alen, project manager Frank Rogers, and others. To Janet Parks, curator of drawings and archives at Columbia University's Avery Architectural & Fine Arts Library (home to a large collection of Ferriss illustrations), the various dates by the signatures and the different inks used suggest that the print was a production document showing an acceptance by all involved parties of Van Alen's design at the time. The print, which measures 38.5 inches high by 16 inches wide, will not have a permanent display spot at the Chrysler Museum but will rotate in and out of public viewing, says museum director William Hennessey. The whereabouts of the original illustration, which was the third in a series of four that showed the building's design evolution, are unknown.

### Litigation

## Chirco, et al. v. Crosswinds Communities Inc., et al. If a building pirates your copyrighted design, you can actually sue to have it destroyed. Just be sure to act quickly.

**FEBRUARY'S ARTICLE** on the lawsuit between William Hablinski Architecture and Amir Construction (page 20) discussed the subjective, and thus unpredictable, aspect of lost-profit damages in architectural copyright infringement cases. In addition to financial relief, a plaintiff also can request that the infringing building(s) be destroyed. Although demolishing goods that violate copyrights is more suitable for portable things like bootleg CDs, the Copyright Act does not bar the destruction of a building that infringes a copyrighted architectural plan. Yet this remedy may be unavailable if razing the building would work an unjust hardship on the defendant or an innocent third party.

To be eligible for any kind of relief under the Copyright Act, the lawsuit must begin within three years of the alleged infringement. In *Chirco, et al. v. Crosswinds Communities Inc., et al.*, the plaintiffs filed their lawsuit for infringement of their condominium design within the three-year statute of limitations, but the court nevertheless denied their request to destroy the allegedly infringing condominiums.

### The Lawsuit

In December 2000, Chirco discovered that Charter Oak Homes was building condominiums according to plans that Chirco believed were based on its copyrighted design. About four months later, Chirco filed its first copyright infringement lawsuit against Charter Oak Homes and Bernard Gliberman.

During the course of preparing its case, Chirco learned that Gliberman intended to build another infringing condominium development called Jonathan's Landing through Crosswinds Communities, another company he controlled. In October 2001, Chirco requested and received copies of the plans for Jonathan's

Landing from local government officials under the Michigan Freedom of Information Act.

Crosswinds Communities broke ground on the 252-unit Jonathan's Landing project in May 2002. Despite knowing about Gliberman's plan to construct more potentially infringing condominiums, Chirco took no steps to stop Gliberman until it filed a second lawsuit in November 2003. By that time, however, 168 of the planned 252 units had been constructed; of those, 141 had been sold, and 109 were already occupied by the buyers.

### The Outcome

In view of Chirco's delay in bringing suit, Gliberman and Crosswinds Communities asked the court to dismiss the case on the legal principle of laches. In simple terms, laches is a negligent and unintentional failure to protect one's rights and is commonly referred to as "sleeping on your rights."

The court found that Chirco's 18-month delay in filing suit showed a lack of diligence. As to Chirco's request to destroy the Jonathan's Landing project, the court decided that such a result would be harmful to the defendants and the innocent third parties who already had bought and occupied many of the units. The court did not prohibit Chirco from pursuing financial relief because its lawsuit was otherwise timely under the statute of limitations. Whether *Chirco* signals a trend in architectural infringement cases or is limited to its particular facts, it nonetheless provides a valuable lesson on how a court might decide the issue of destroying an infringing building when innocent buyers are involved. **JEFFREY C. BROWN**

*Jeffrey C. Brown is an intellectual property attorney at the law firm of Merchant & Gould in Minneapolis.*

### Clips

The Council on Tall Buildings and Urban Habitat ([www.ctbuh.org](http://www.ctbuh.org))

has compiled a list of the **10 tallest buildings completed in 2006**. Coming in at No. 1: Hong Kong's 1,046-foot, 80-story Nina Tower 1. Of the remaining nine buildings, the United Arab Emirates is home to four (three of which are in Dubai), China contains two, and Australia,

Japan, and Singapore have one each.

For a second year, no city in the United States is on the **list of the world's top intelligent communities**, as chosen by the global think tank Intelligent Community Forum ([www.intelligentcommunity.org](http://www.intelligentcommunity.org)). The forum selects the communities based on how far along they are in deploying broadband,

creating a knowledge-based workforce, combining public- and private-sector "digital inclusion," and fostering innovation and economic development. This year's list: Dundee, Scotland; Gangnam District, Seoul, South Korea; Issy-les-Moulineaux, France; Ottawa-Gatineau, Ontario-Quebec, Canada; Sunderland, England; Tallinn, Estonia; and Waterloo, Ontario, Canada.



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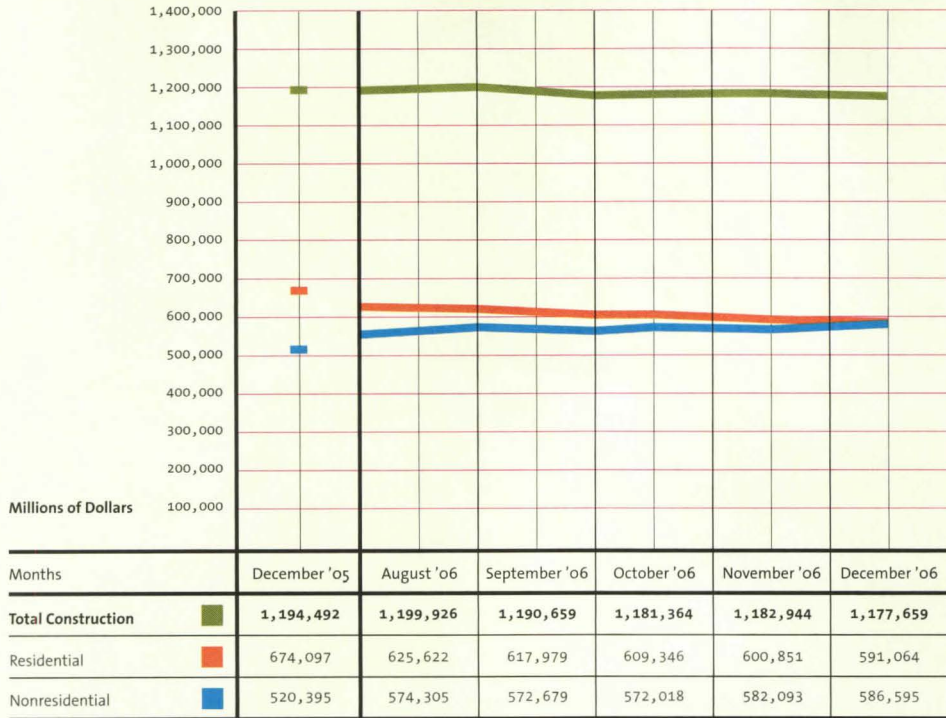


December 2006

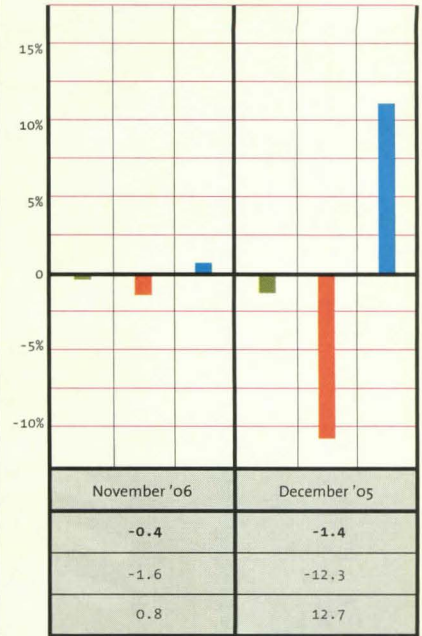
# Construction Spending

From the U.S. Census Bureau's monthly report on the value of construction put in place

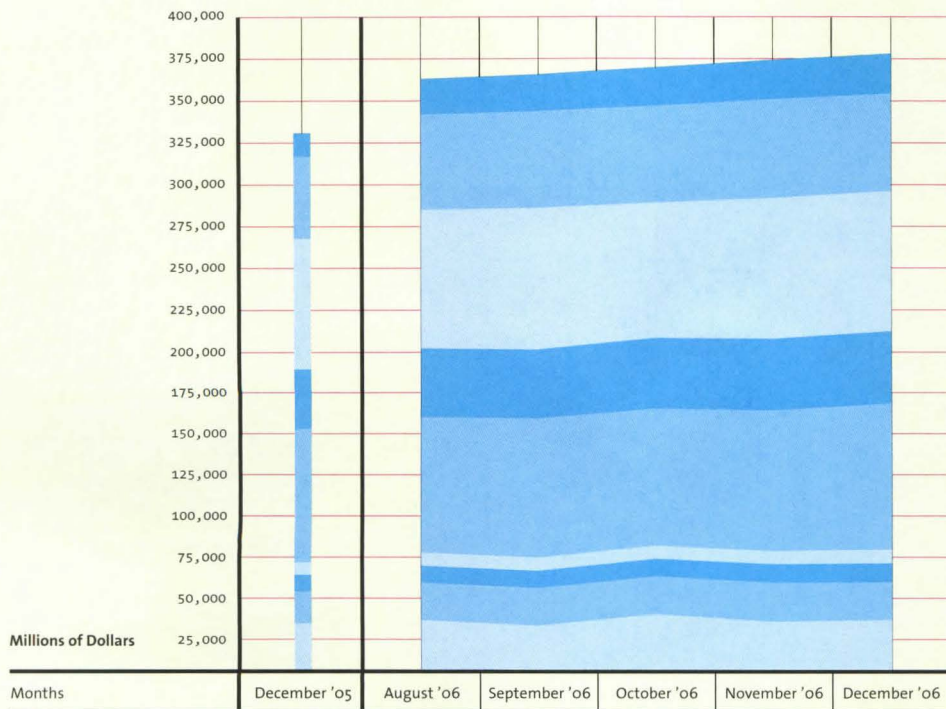
## TOTAL CONSTRUCTION (SEASONALLY ADJUSTED)



Percent Change From:



## SELECT NONRESIDENTIAL CONSTRUCTION (SEASONALLY ADJUSTED)



Category (December '06 Total)

- Lodging (24,095)
- Office (58,944)
- Commercial (85,217)
- Health care (44,910)
- Educational (90,244)
- Religious (8,317)
- Public safety (11,865)
- Amusement and recreation (23,064)
- Transportation (30,102)



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# Myrtle Beach, S.C.

## A popular East Coast destination turns increasingly upscale



RICHARD BICKEL

Until 1901, when the first hotel was built, the shores of what was then called New Town were rarely visited.

**MYRTLE BEACH'S BROAD, SANDY BEACHES**, collection of attractions, and relatively affordable prices have drawn vacationers and conventioners to the central portion of the Grand Strand—a 60-mile stretch of the South Carolina coastline—since the early 1900s. These days, however, the low-slung family motels, aging amusement parks, and low-cost retail establishments that have created what area architect Randolph Key calls “Nascar pastiche” are being replaced. Myrtle Beach and its sister city, North Myrtle Beach, are hotbeds of luxury residential and high-end retail redevelopment.

“For years, the Myrtle Beach area has been getting some 14 million visitors per year,” says local architect J. Thomas Pegram, founder and principal of Pegram Associates. (By contrast, in 2006, Virginia Beach, Va., had 2.6 million visitors, and Ocean City, Md., had 8.2 million.) “More and more visitors seem to realize that they can buy condominiums or homes here for far less money than they would spend buying similar projects in New York or Florida,” he notes.

This is pushing developers to build multimillion-dollar homes and “condotels” (condo-hotels), as well as the amenities that will attract future tourists and residents. “Growth will continue, and we need to endeavor to be very wise in how it is handled,” says Key, founder of Key Architecture. “Anyone who fails to join in will be left behind.” MARGOT CARMICHAEL LESTER

### POPULATION/GROWTH

Myrtle Beach's projected population for 2007 is 252,000. Job growth for 2006 was 6.3 percent, according to Hanley Wood Market Intelligence. Employment grew by 5 percent in 2006 and is expected to increase another 3.9 percent in 2007.

### AMENITIES

- The Atlantic Ocean and the Intracoastal Waterway
- The Children's Museum of South Carolina
- The Franklin G. Burroughs-Simeon B. Chapin Art Museum
- More than 100 golf courses, including ones designed by such luminaries as Greg Norman, Tom Fazio, and Pete Dye

### OFFICE MARKET

According to Will Stork, a research analyst at real estate broker Grubb & Ellis|Wilson/Kibler, Class A inventory will more than double in 2007, with 150,000 square feet under construction. In 2005, the average asking rate for Class A space was \$24 per square foot.

### RESIDENTIAL MARKET

Median home prices for 2007 are estimated to be about \$211,100, up from \$147,200 in 2002, according to Hanley Wood Market Intelligence. Inventory is increasing, however, and several master planned communities are in the offing.

### MARKET STRENGTHS

- Strong retail market
- High dependence on tourism
- Large retiree base

### MARKET CONCERNS

- Declining housing affordability and growing housing inventory
- Low cost of living
- Few high-paying jobs and low income growth

### INCENTIVES

“We offer no incentives whatsoever,” declares Bruce Boulineau, Myrtle Beach's director of construction services. “The market is dictating that right now.”

### DEVELOPABLE LAND

Boulineau estimates that there are a “couple thousand acres” of vacant land in the city. Adds K. Neal Bowers, the managing broker for Grubb & Ellis|Wilson/Kibler's Myrtle Beach office: “Almost everything that's developable is already owned.”

### FORECAST

“The numbers work, but the market is softening,” says David Stradinger, a partner at Winchester Land and Development. “There are only two places for oceanfront high-rises between Ocean Beach, Md., and Florida: Virginia Beach, Va., and Myrtle Beach. That's going to keep people coming and developers building.”

→ continued on page 42





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## NOTABLE PROJECTS



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Last May, the Winchester Land and Development Corp. opened the “boutique conference resort” **Sea Island**, a \$70 million luxury condotel with 150 furnished units, an indoor pool, and a banquet room. Designed by Pegram Associates.

The **Myrtle Beach Air Force Base Redevelopment Authority** is making \$30 million in infrastructure improvements—including 29 acres of lakes, parks, and roads—to the former military installation, shuttered since 1993. Developers are planning residential, recreational, restaurant, and retail projects for the site.

The **Hard Rock Theme Park**, scheduled to open in 2008, is a 140-acre, \$400 million project designed and developed by HRP Myrtle Beach Operations. The first-of-its-kind park will include more than 40 attractions, an amphitheater, shows, roller coasters, playgrounds, dining, and retail.

## KEY DEVELOPERS AND BUILDERS

## BURROUGHS &amp; CHAPIN CO.

**Major project:** Tentative plans to redevelop the Pavilion (a former landmark amusement park) and the Myrtle Square Mall

The company is the city's largest employer, with a workforce numbering 2,214 at press time.

## MCCAFFREY INTERESTS

**Major project:** Market Common, a \$150 million urban village of 113 acres that will include 181 apartments, 1,441 townhomes and condominiums, and 600,000 square feet of high-end retail and restaurant space; the project is part of the redevelopment of the former Myrtle Beach Air Force Base

In 2005, McCaffrey's Market Common Clarendon in Arlington, Va., received an Award of Excellence from the Urban Land Institute.

## WINCHESTER LAND AND DEVELOPMENT CORP.

**Major project:** The \$260 million North Beach Towers, which are being developed on a former 60-acre oceanfront campground

Winchester is a 24-year-old, privately held company that has done 25 high-rise condo projects, primarily in Myrtle Beach.

## KEY ARCHITECTS



MYRTLE BEACH PELICANS

## MOZINGO + WALLACE ARCHITECTS

**Major project:** The minor-league Coastal Federal Field baseball stadium, which recreated the feel and character of a turn-of-the-century ballpark and won the Brick Association of the Carolinas' 2002 Design with Brick Awards

S. Derrick Mozingo Jr. and Gerald C. Wallace III have been leading the five-person firm since 1984.



PEGRAM ASSOCIATES

## PEGRAM ASSOCIATES

**Major project:** Margaritaville restaurant and shops, an \$18 million, 60,000-square-foot addition to Broadway at the Beach, a 350-acre complex of shopping, dining, nightlife, hotels, and other attractions

The 17-person firm, established in 1992, is currently working on projects totaling more than \$1 billion.

## KEY ARCHITECTURE

**Major project:** Single- and multifamily housing as well as recreation and retail centers at North Beach Plantation, a 64-acre, \$300 million development by the Scalise Group. Founded in 1946, the firm has 99 employees and reported \$25 million in 2006 billings.





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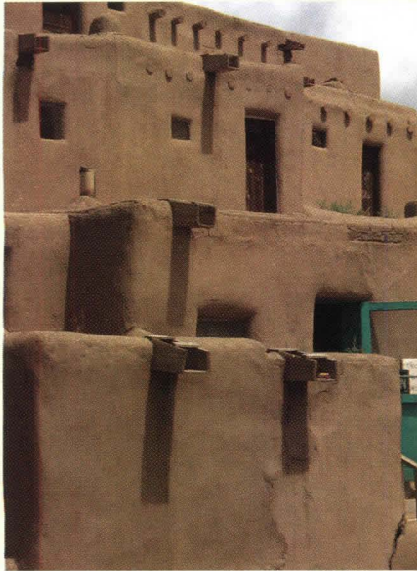
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## REPORT SCREEN CAPTURE

# www.ethnoarchitecture.com

## Seeing buildings through the eyes of others



COURTESY GABRIEL ARBOLEDA



**GABRIEL ARBOLEDA, A PH.D. CANDIDATE IN ARCHITECTURE** at the University of California, Berkeley, jokes that he can't walk anywhere. So obsessive is his interest in vernacular architecture, he always carries a camera and stops to snap photos constantly. "My wife hates it," he says with a laugh.

Arboleda plans to upload about 20,000 of his photos to Ethnoarchitecture.com, a searchable database of indigenous and vernacular architecture he launched in December (although a more basic version of the site, in Spanish and English, has existed since 2004). The site is the first internet database of its kind, he says, with information on nearly 7,300 different linguistic groups (from Brazil's Anambé to Nigeria's Zeem), 228 countries and their ethnic composition, and vernacular building types around the world.

Arboleda is using wiki technology to enable full user participation, so that after registering for free, users will be able to create their own entries and upload photos. However, he makes it clear that on Ethnoarchitecture.com—unlike Wikipedia—all user-generated content will be reviewed before it is published, "to guarantee it's credible."

The term "ethnoarchitecture" is unusual, yet Arboleda says it comes closer to his philosophy than any other. "'Ethnoarchitecture' is a contraction of two terms: 'ethnography' and 'architecture,'" he explains. "It means an ethnographic approach to architecture, an approach that assumes the point of view of the other, rather than our own." In its visual presentation, the site expresses Arboleda's belief that indigenous communities are always evolving and cannot be encased in amber, despite historical attempts to do so. The 1950s-style script used on the home page and the tagline "Architecture in Technicolor" are ironic, Hollywoodesque reminders, he says, that indigenous cultures are "overexoticized" by the Western media.

A native of Colombia, Arboleda was deeply influenced by his sustainable-development work over several years with the Secoya people of the Ecuadorian Amazon. In the late 1990s, after oil companies moved into the region, he saw the Secoya abandon their traditional palm-built houses for metal-roofed ones. But they aren't victims, he insists. "The Secoya didn't change because of the oil," he says. "The Secoya changed because everybody in this world changes."

Despite the rapid evolution or disappearance of some vernacular building types, Arboleda claims that Ethnoarchitecture.com is intended more for raising awareness than for documentation. "The first thing is to tell people: This [architecture] exists," he says. Evidently, they're listening: The site has been getting about 5,000 visits a day, by Arboleda's estimate, and several users—mainly architects and students—have approached him about adding their own material.

Arboleda hopes that interest continues to grow. "I have a whole life to keep adding information," he says half-seriously. "I created my retirement project before I even started working." **AMANDA KOLSON HURLEY**

### Links

#### DIRECTORY

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

This recently developed website describes itself as the only online registry for construction professionals who provide products and services to the educational community for the construction and maintenance of schools, colleges, and universities. Architecture firms can register their services for free and also use the site as a one-stop resource for product information and specifications.

#### ARCHIVE

[vanishingstl.blogspot.com](http://vanishingstl.blogspot.com)

Vanishing STL was created by St. Louis architect Paul Hohmann "to illustrate the continuing loss of irreplaceable architecture from landmark buildings to ordinary homes due to demolition, abandonment and neglect." Although the blog is just two months old, nearly every post has received at least one comment, suggesting that Hohmann has quickly found a sympathetic audience.

#### ESSAY

[www.rouge.com.au/7/eisenstein.htm](http://www.rouge.com.au/7/eisenstein.htm)

After completing his masterful *Battleship Potemkin* in 1926, Russian film director Sergei Eisenstein was inspired by Fritz Lang's *Metropolis* and the glass architecture of Bruno Taut and Le Corbusier to create a new movie, *The Glass House*. Although Eisenstein worked on a script for years, the film never became a reality. This essay, from Volume 7 (2005) of the Australian online film journal *Rouge*, follows Eisenstein's work on the story (as well as the social and cultural forces that shaped it), which in its final version was conceived of as a conflict between the architect who creates the glass house, the poet who enables the blind inhabitants to see it, and the robot that ultimately destroys the structure.

#### PHOTOS



GARY JARVIS

[www.flickr.com/photos/gkjarvis](http://www.flickr.com/photos/gkjarvis)

Gary Jarvis moved to Brooklyn, N.Y., in June 2006. To get to know his new surroundings, he decided to jog every last bit of pavement available to pedestrians, a 1,700-mile effort he's chronicling in words and photographs at [runsbrooklyn.blogspot.com](http://runsbrooklyn.blogspot.com). For those interested only in his street-level view of the borough, he's also posting all of his images on the photo-storage site Flickr (pictured: the corner of 55th Street and 5th Avenue in Sunset Park). Once Jarvis has completed Brooklyn, he plans to run every mile of Manhattan.



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A little forethought and carefully crafted contracts, says Caryn R. Leland, can help minimize losses if a client refuses to pay your fees.

**Make sure you're licensed** wherever you're practicing; most jurisdictions have laws that say if you are not licensed, you are not entitled to be paid. If the client discovers you are not licensed, the balance of your fee is at risk, and you may be forced to refund money you have already received.

**You absolutely need a written contract.** If you are using a "form" contract, make sure it's intended for your jurisdiction. Hiring a lawyer each time you take on a job sounds expensive, but it does not have to be. For many of my clients, I have worked out "standard" contracts that need only small changes for each new project.

Some contracts require the client to pay the architect as various milestones are reached. Others call for a percentage of construction costs. Some architects receive a flat fee, and others work on an hourly basis. Whichever method you choose, **don't get too far ahead of your client.**

If you are not getting paid, it's important to step back and ask why. Does the client have cause? If there's a problem, there is no substitute, initially, for sitting down and talking. But if that doesn't work, your contract should have a clause providing that **nonpayment by the owner is reason for you to stop work**—and that you won't be liable for any damage or delays caused by the suspension.

**FORGET "LOCATION, LOCATION, LOCATION."** For architects, it's "contract, contract, contract," says Caryn R. Leland, a Manhattan lawyer whose clients include top architects and designers. Sometimes, they come to her with esoteric questions of intellectual property law; other times, they just want to be paid for their work.

Ironically, Leland says, nonpayment can be particularly troublesome with very wealthy clients, "who have the means to litigate aggressively"—a process few architects can afford. "It's not a level playing field," she notes. To minimize the possibility of litigation, it's important to have a written contract prepared or reviewed by a lawyer. And then, if payment doesn't arrive, check the contract.

No document can ensure payment, but a carefully drafted contract will contain provisions that you can rely on to enforce your rights, says Leland.

There are plenty of reasons clients do not pay. Sometimes, during construction, an owner will pay the contractor first to keep him showing up for work. Other clients are simply bullies. The relationship between architect and client can be like a love affair, with all kinds of expectations. Sometimes, love affairs end badly.

In many jurisdictions, the architect is required to make periodic filings with building departments and other government agencies. If you haven't been paid, you may be able to say, "I'm no longer the architect of record, and can **no longer sign off on your documents.**" That may offer leverage.

**Make sure your contract states that you retain copyright in your drawings.** That means you can notify the owner that he is not free to continue using these drawings without paying your fees—to do so would be copyright infringement. The contract may also say that the client can no longer use your name in connection with the project.

**Many states permit you to file a mechanic's lien,** which gives you a temporary security interest in the building (though it does not, in itself, create a right to payment). Filing a notice of lien will almost certainly get the owner's attention. It will likely serve as a catalyst for settlement, though sometimes it exacerbates a situation.

**If nothing else works, you can sue for breach of contract.** But be sure your contract requires the client to pay your attorney's fees and court costs if you win.

*Fred Bernstein studied architecture at Princeton and law at New York University and writes about both subjects.*



# ON RECYCLING **Moore**

**CHANGES** What you have to keep in mind is that getting rid of waste material is a big expense. The demolition industry is a lot more sophisticated than it used to be. There's new equipment. Government regulations are tighter...and harder to comply with. We've become more involved in recycling than ever before.

*Bill Moore, Vice President, Brandenburg Industrial Service Co., Chicago, one of the largest demolition companies in the U.S. President, National Demolition Association. Degree in Safety, Indiana State University. Spent a decade in insurance and safety specializing in the construction of high-rise buildings, another in demolition safety, and another in marketing for Brandenburg.*



**PROCESS** First thing we do is gut the interior of a building as much as possible and do whatever handwork is needed. We remove all the hazardous materials – mercury bulbs, asbestos, that sort of thing. And if there's office furniture or architectural artifacts, et cetera, left in the building, we'll pull them out and re-sell that too. Then we'll tear out the drywall, glass and wood – basically strip the building down to its structure. Once we're ready to wreck, we use a crane to drop a big machine on the roof to hammer out the concrete floor by floor, crushing it, until we're at ground level.

**REALITY** We don't necessarily recycle for good "green press" – it's economics pure and simple. Anything we can salvage out of a building, we'll do it because there's a market for it. The more we recycle, the more we salvage and less we landfill, the more competitive we can be for our customers.

**DELICATE** Brandenburg does much more than complete demolition. One job we did – the Rookery building at the corner of Adams and LaSalle – is the oldest high-rise building in downtown Chicago. It's a landmark, more than 100 years old. So the owner decided that rather than tearing the building down, it should be completely gutted to make way for a modern interior. So we do work like that too.

**COSTS** If we go to a landfill with a load of concrete, it's going to cost three or four hundred dollars here in Chicago – and probably double that on the East Coast. Landfilling concrete is expensive, so we're always trying to find different things to do with it. We'll crush it, use it to fill basements, try to find other jobs that need fill – we even have portable crushers to make it into CA6-type material for road beds and parking lot bases. Anything to get rid of it.

**WORTH** Concrete, basically, has no value. Even when we recycle it, we still have the expense of crushing it, which is about 10 to 50 dollars a truckload. While that saves us from having to go to the dump with it, it doesn't have a positive value. You'll never break even. Steel, on the other hand, has always been valuable. And like other commodities, the price varies quite a bit – right now, we're in a very good position when we sell steel.

**SHIPPING** Let me explain something about the transportation of material. You have a tractor trailer and it weighs about 40,000 pounds. Well, the legal load limit on most highways is 80,000 pounds. So you're going to put 40,000 pounds of material into the back of the truck. It really doesn't matter whether it is filled with steel or concrete because you're not going to load that trailer to water level and still be legal. But because steel is so much lighter and less bulky, you get rid of a greater percentage of material each time you load a truck with steel. To ship material is expensive – you want to do it in the least amount of trips.

**PLANNING** Building owners and developers need to think about demolition someday – what's going to happen to the material when the building isn't useful anymore? There's a movement by the Green Building Council pushing owners to think about their building when it has to be torn down. If you make a building out of steel, it will always be recyclable. Steel will always have value.

**MIXING** Try to picture a pot of molten steel, it's kind of like a big pot of stew or soup. When you're cooking and you want to make it spicier, you just put an additive in. But instead of pepper, you might put in more manganese or chrome. That's what's called altering the chemistry of the batch. Basically, if you're making structural steel, the mill will put in a base of reclaimed structural steel – like a recipe. Now if we were making re-bar, the chemistry for that is completely different than structural steel.

**STEEL** We always factor the scrap price into a project. In fact, there are jobs valuable enough that we will actually pay to do the work just for the scrap material. We're even going back to bids from a year and a half ago where we said we'd wreck the building for a quarter of a million dollars. Now, we're calling them up asking to do the job for free. We might even give them 50 grand or something like that. That's the great thing about steel – it always has value.



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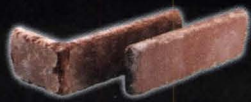
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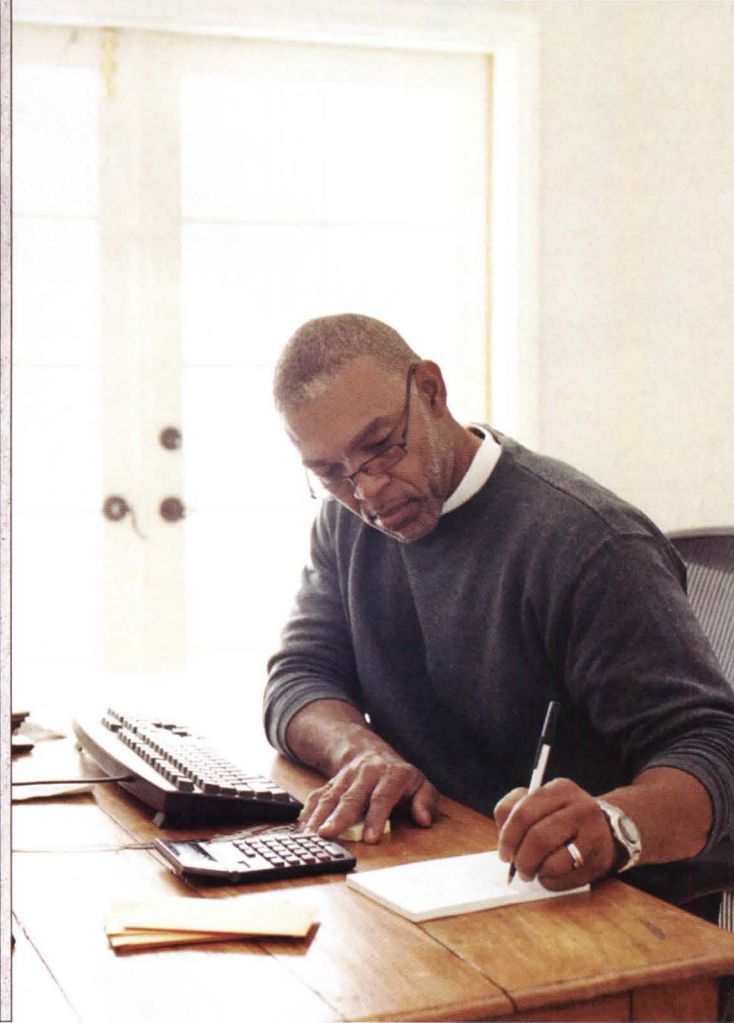
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BEHIND EVERY BRAND-NAME ARCHITECT IS AN HEIR APPARENT.

Text Mimi Zeiger

## THE NEXT GENERATION

**LAST NOVEMBER**, at a press opening held at New York's Museum of Modern Art (MoMA), Dutch architect Rem Koolhaas stood outside the architecture and design gallery chatting into his cell phone and staring detachedly into Yoshio Taniguchi's modernist atrium. Inside, in full swing, was the junket for *OMA in Beijing: China Central Television Headquarters*—an exhibition on the Chinese media and cultural complex designed by Koolhaas' Office for Metropolitan Architecture (OMA). Journalists and VIPs added to the visual cacophony of photographs, building models, and drawings of the Forbidden City. OMA partner Ole Scheeren worked the crowd, answering questions and posing for photographs.

As director of the Rotterdam and Beijing offices, the 36-year-old is responsible for the nearly 2-million-square-foot project. Scheeren, who studied at the Architecture Association in London, joined the firm in 1995 and gained some public recognition leading the design of the Prada stores in New York, Los Angeles, and San Francisco. His role as spokesperson challenges the easy equation that OMA=Rem.

In a media climate devoted to celebrity, it can be easy to miss, but firms branded by star architects are actively priming fresh talent. Recently, avant-garde architects Elizabeth Diller and Ricardo Scofidio added longtime collaborator Charles Renfro to their moniker to form Diller Scofidio + Renfro. And the MoMA exhibition is just one example of Koolhaas giving his lieutenants autonomy and a place in the public eye. Before he left to found his own practice with Erez Ella, Joshua Prince-Ramus, former head of OMA's New York office, was the go-to guy for the Seattle Central Library.

As signature practices grow and age, it becomes impossible to maintain a model devoted to a founder's virtuosity. Global projects, new technologies, and design trends face off against what Prince-Ramus deems the "genius sketch." Although his firm, Ramus Ella Architects (REX), is just a year old, Prince-Ramus is keenly aware of the pressure from both clients and the press to present a Howard Roark face to the public. He actively resists. "It isn't possible any longer to practice in the older mode. You can't operate in the star architect model. It will lead to its doom," he ominously intones. "We are not the only

ones who think the profession is changing. There is a lot of frustration among young architects about the choices offered to them: You can be a stylist or a project manager."

Instead, Prince-Ramus strategically sets up ways of working in his office to avoid singular authorship. Collaboration and debate are required from all members of the staff. In return, they all get publicly recognized. "On all of our press releases, everyone is listed alphabetically. As an owner, I don't take first billing," he says.

Even though REX advocates a nonhierarchical structure, there are still young architects out there vying to be Top Designer. It is an ambition generally not achieved—very few are singled out and given that kind of creative freedom.

Those on the more common track gain rank by taking on the nuts and bolts of project management and construction. This is hardly a career path to snub: For most architects, it defines the practice of architecture. (Both associates and partners can be on this side of the design divide.) At the same time, it doesn't have the same glamour quotient. That may explain why *The Business of Architecture: The 2003 AIA Firm Survey* reports that nearly one-third of all licensed architects are sole practitioners. If you don't get the brass ring at a larger firm, why not try for it on your own?

Even as the profession's status quos remain entrenched, established firms are tweaking the older figurehead (or *Fountainhead*) model, making some changes that should influence the next generation. Arquitectonica's Bernardo Fort-Brescia keeps a masterful



Joshua Prince-Ramus, partner of the newly formed REX.



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**“It isn’t possible any longer to practice in the older mode. You can’t operate in the star architect model. It will lead to its doom,”** Joshua Prince-Ramus ominously intones. **“We are not the only ones who think the profession is changing. There is a lot of frustration among young architects about the choices offered to them: You can be a stylist or a project manager.”**

hand in each of the projects his firm embarks upon, yet the practice’s expansion from its Miami headquarters to offices in 11 other cities, including New York, Hong Kong, and Sao Paulo, mandated changes. Business was booming, but design resources were strained.

“We are an unusual firm. We are 400 people, but we’re not a multipartner firm. The firm is owned and run by the original principals,” says Fort-Brescia, who founded Arquitectonica in 1977 with Laurinda Spear. “Having said that, yes, there is a new generation inside the firm that we are grooming. There are people that we like a lot that we are bringing into the design discussions. They are advancing within the firm ... some of them are younger than some of the more senior project managers.”

Bringing in up-and-comers is Arquitectonica’s concerted effort to redefine the firm’s future and keep its architecture current. Fort-Brescia stresses that all offices are stocked with top designers working collaboratively, but the newest “laboratory” in Cambridge, Mass., is a unique case: Not only does it delve into conceptual design, materials research, and completions with vigor, but one member of its small team is the principals’ daughter, designer Marisa Fort. A recent graduate of Harvard University’s Graduate School of Design, Fort spent some time at OMA in Rotterdam before joining the family business.

While it seems like Fort is heir apparent, she maintains an extremely low profile and says she thrives on the dialogue between satellite offices. “It is an open discussion amongst young designers in a global network. Without the other people in the firm, ours wouldn’t work,” she explains. “We do a lot of the front line production, focusing on schematic design—collaborating with Miami, Madrid, or New York. A good idea can come from anywhere in the world.”

For a competition in Seville, the studio e-mailed sketches and jpegs of hand-made models to Spain, and the overseas office responded with comments about the site and local building codes. “The new creative talent generates a stimulus in the whole firm,” says Fort-Brescia. As design principal, he welcomes these dynamic interchanges and sees them pushing Arquitectonica forward.

Mention his “legacy” to Robert A.M. Stern, founder of the eponymous New York firm, and he sallies with a bit of dark humor. “Well, nobody around here retires,” he says. “We ask this question [of ourselves] all the time. We



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principal, Arquitectonica.

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Compensation is often the key to holding onto high-quality employees, but to cultivate staff, RAMSA combines that financial incentive with training and with design responsibility. Stern's position as dean of the Yale School of Architecture influences the 250-person office. In general there is an informal academic air, but more formal education programs, ranging from the typical lunchtime product seminars to business etiquette courses, dot the calendar.

hope that someone will emerge to lead the firm." There is little doubt that leadership is embedded in RAMSA's ranks; several of the partners have been there for more than 25 years. The firm has amazing loyalty—especially when many young architects tend to bounce from office to office before hanging their own shingle—but RAMSA, like Arquitectonica and many other big firms, is reluctant to publicly celebrate the next generation for fear of poaching. "We have good people, and we don't want every headhunter calling," Stern notes.

Stern shares a common belief that there is a scarcity, almost to the point of crisis, of midcareer architects. Both an American Institute of Architects (AIA) poll from December 2006 and ZweigWhite's "2007 AEC Industry Outlook" report that firms are on the hunt for qualified employees: 60 percent to 80 percent of the offices responding cited this as a top priority. One explanation is that many architecture school graduates left the profession during the economic downturn in the 1990s.

AIA chief economist Kermit Baker has heard that story, but he can't back it up. "Three or four years ago, when construction was in a recession, you didn't hear people complaining about a lost generation," says Baker. He attributes the short supply to the boom-and-bust cycle: Building is active, and demand is high.

Compensation is often the key to holding onto high-quality employees, but to cultivate staff, RAMSA combines that financial incentive with training and with design responsibility. Stern's position as dean of the Yale School of Architecture influences the 250-person office. In general there is an informal academic air, but more-formal education programs—ranging from the typical lunchtime product seminars to business etiquette courses—dot the calendar.

"Bob takes responsibility in training young architects. It is almost like finishing school," says senior associate Melissa DelVecchio. When she joined the firm in 1998, DelVecchio's skills were quickly recognized. She worked directly with Stern from day one—"three weeks of Bob boot camp," she quips—and although she is loath to admit it, she was groomed into her design role. Fellow senior associate Jeffery Povero went straight from grad school to RAMSA in 1997. Povero jokes that he rose through the ranks because he could read Stern's mind—translating ideas to pen sketches.

The two architects are representative of a generation that has developed under Stern's tutelage and is now in the position to shape the influx of younger designers. "The hardest part isn't so much developing the team dynamic. The hardest part is giving up the parts that you really want to do," explains Povero, inadvertently mirroring the very dilemma brand-name architects face: Just how do you transfer the reins without compromising design quality or a founder's vision?

The answer lies not in a sudden bait-and-switch at the end of a career, but in creating an office environment that rewards, supports, and promotes design interchange and fresh insight.

*Brooklyn, N.Y.-based Mimi Zeiger is the author of New Museums: Contemporary Museum Architecture Around the World.*



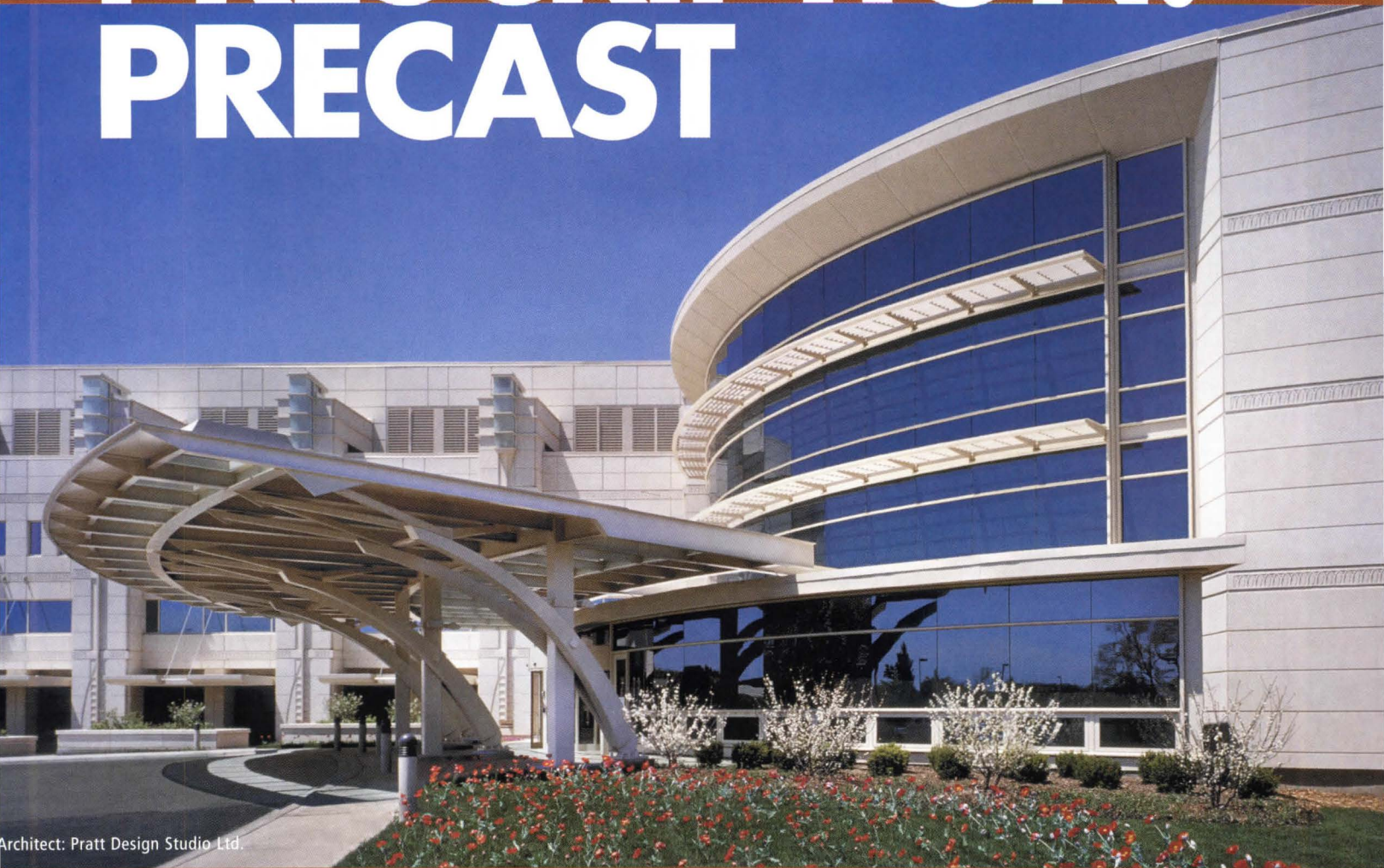
**Melissa DelVecchio**, senior associate, Robert A.M. Stern Architects.



**Robert A.M. Stern**, partner, Robert A.M. Stern Architects.



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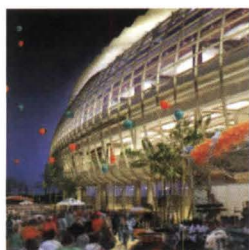
THE KANSAS CITY, MO.-BASED FIRM HAS A HAND IN NEW AND RENOVATED STADIUMS AROUND THE COUNTRY.

Text Edward Keegan

# HOK SPORT



Each addition provides open and enclosed spaces adjacent to stadium seating.



The high-tech louvered curtain wall protects sports fans from the Florida sun.



Nestled between existing pedestrian ramps, HOK's highly articulated addition to its original design offers space for more amenities. A similar structure sits on the opposite side of the stadium.

## Dolphin Stadium, Miami

HOK Sport's original 1988 design for Dolphin Stadium, home of the National Football League's (NFL's) Miami Dolphins, featured a double-decked interior that was simple and spare, its rectilinear seating configuration ideal for watching football. But its exterior has always been bare and nakedly utilitarian.

Although the two-tiered seating bowl with midlevel club seating remains unchanged, a new exterior aesthetic is being introduced in stages. Curved additions nestle between the spiral pedestrian ramps on the north and south sides of the stadium. These offer extra space for concessions, restaurants, and gatherings during games.

The additions curve in both plan and section, their bulging midsections mimicking the hulls of the cruise ships critical to South Florida's tourist-driven economy. Louvered sun controls and a high-tech curtain wall will be topped by a broad shade canopy to provide relief from the elements (but only here—the seating areas remain exposed).

While Dolphin Stadium's original configuration remains the state of the art for football, it was one of the last arenas to be built for a dual football/baseball use. It has hosted two World Series during the 14-year tenancy of Major League Baseball's (MLB's) Florida Marlins, but that team is still looking for funding to build its own baseball-specific facility in the South Florida area.

### STATS

**SQUARE FOOTAGE** 200,000 (estimated)

**SEATING CAPACITY** N/A

**SUITES** N/A

**TENANTS** Miami Dolphins (NFL); Florida Marlins (MLB)

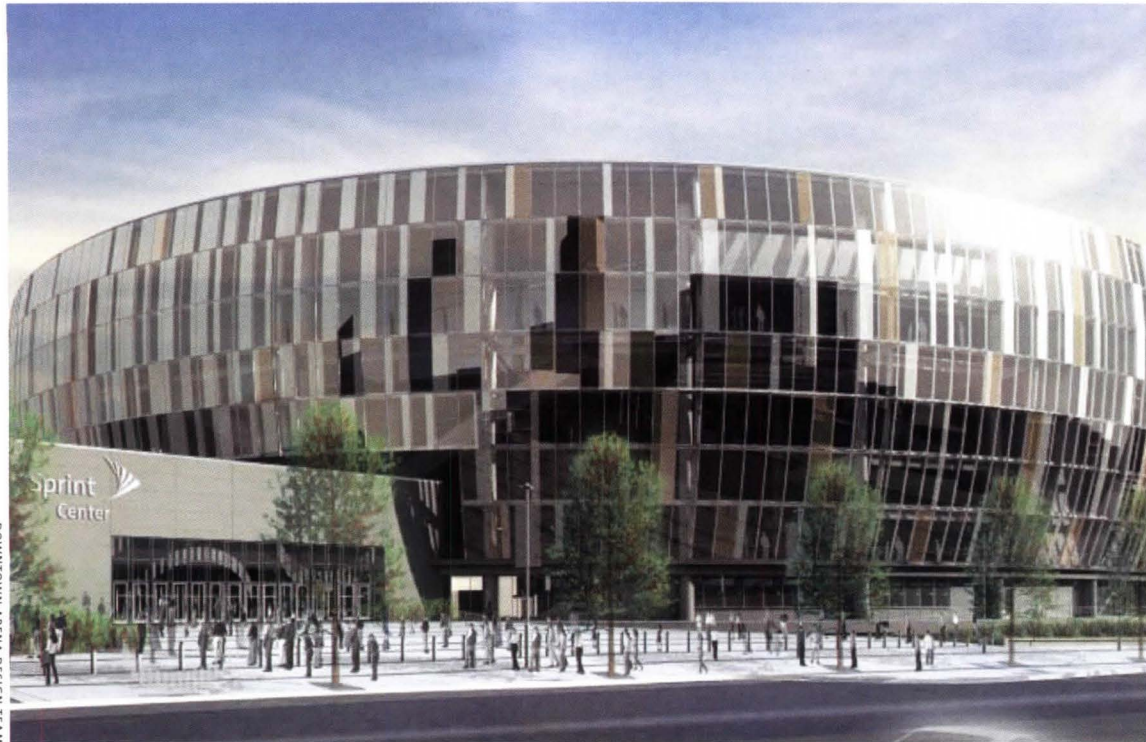
**PROJECT COST** \$250 million (privately funded)

**OWNER** Dolphins Enterprises

**OPEN DATE** February 2007; ongoing construction through summer 2007

**ARCHITECT** HOK Sport





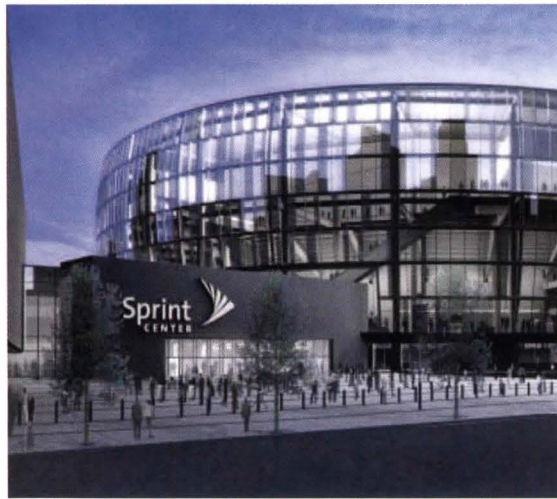
DOWNTOWN ARENA DESIGN TEAM

Sprint Arena's gently curving glass façade is a marked contrast to the hard angles of the masonry entry pavilion.



DOWNTOWN ARENA DESIGN TEAM

The arena's interior (far left) will receive natural light from clerestory windows.



DOWNTOWN ARENA DESIGN TEAM

At night, activity within the illuminated concourse (left) will be visible to passersby.

### Sprint Center, Kansas City, Mo.

The Sprint Center is the latest example of American cities' "build it and they will come" thinking. When completed later this year, the publicly financed, tenantless arena will be Kansas City's high-priced gambit to draw either a National Basketball Association (NBA) or National Hockey League (NHL) franchise to its downtown location.

The elliptical arena is clad in a crystalline glass curtain wall. Interior features include clerestory windows that crown the seating bowl with natural light, alleviating the claustrophobic feel that is typical of large arenas. The primary entrance to the complex is through a low-slung masonry volume that contrasts starkly with the sleek curve of the arena itself. At night, the illuminated interior concourse will reveal the arena's users to the adjacent street in an ever-changing act of street theater.

Sprint Arena was designed by the Downtown Arena Design Team, a consortium that comprises locally based firms HOK Sport, Ellerbe Becket, 360 Architecture, and Rafael Architects. For three decades, the vast majority of major sports venues in this country have come from these firms (and their predecessors), leading civic leaders to declare Kansas City the "epicenter of sports architecture."

### STATS

**SQUARE FOOTAGE** 666,480

**SEATING CAPACITY** 17,297 hockey; 18,630 basketball

**SUITES** 76

**TENANT** TBD (designed to NBA and NHL specifications)

**PROJECT COST** \$276 million

**OWNER** City of Kansas City, Mo./Anschutz Entertainment Group

**OPEN DATE** October 2007

**ARCHITECT** Downtown Arena Design Team





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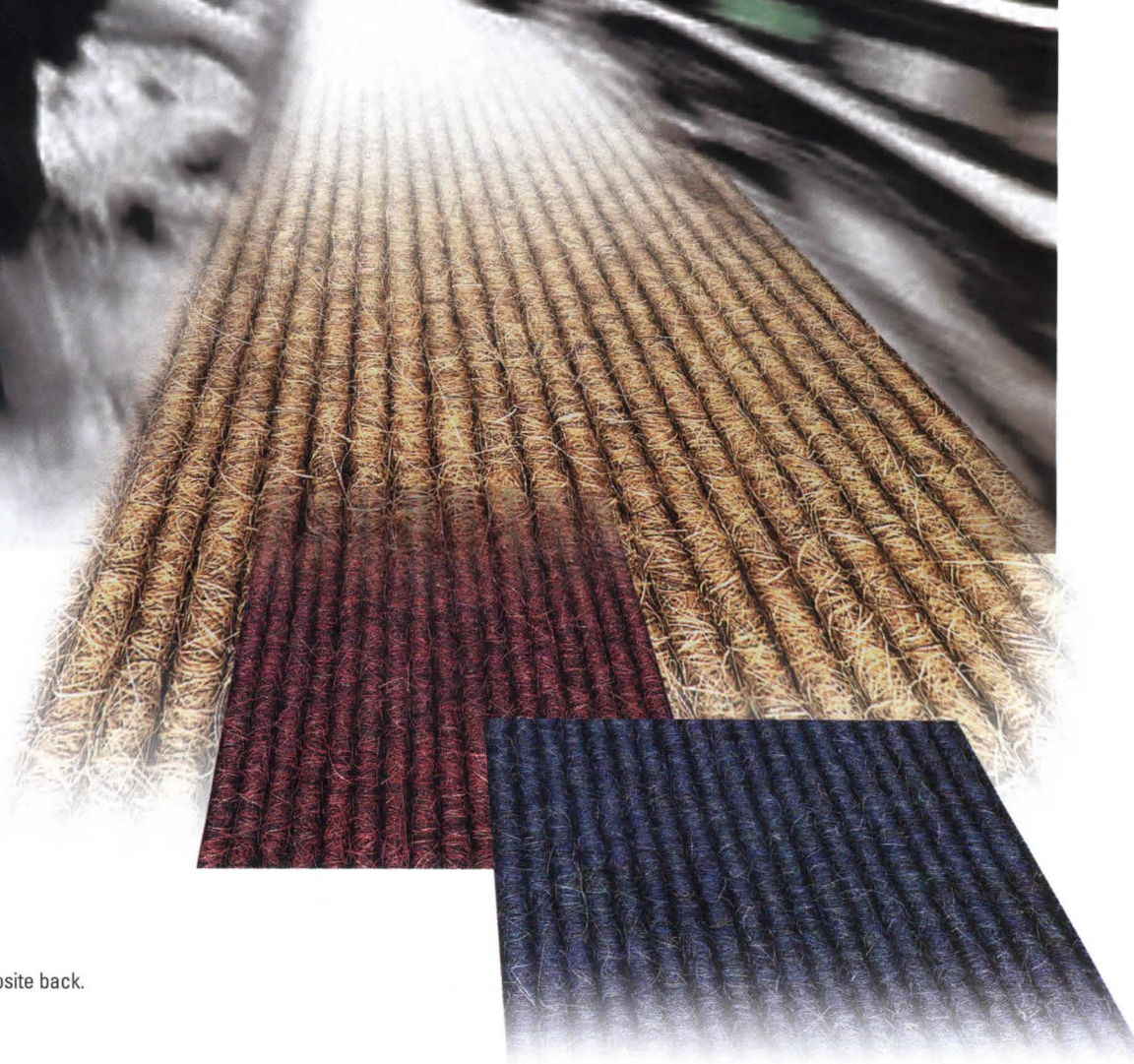
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A broad stairway (far left) echoes the approaches to many of D.C.'s civic and ceremonial structures.

This I.M. Pei-like structure (left) behind home plate denotes the ballpark's main entrance.



An asymmetrical seating configuration is a nod to the typical layout of historic ballparks.

## Washington Nationals Ballpark, Washington, D.C.

Located on the Anacostia River a mile due south of the U.S. Capitol, the Washington Nationals Ballpark—now under construction—is intended to spur development in an underutilized area of the nation's capital. With this design, HOK eschews the nostalgia-laced red brick that has clad the firm's previous successes at Baltimore's Camden Yards and Denver's Coors Field. The Nationals park, which has four tiers of open-air seating, is steel and sheathed in a combination of white precast concrete and glass that may evoke the civic monuments of Washington (although skeptics would say that its various sharp angles constitute a second-rate rendition of the National Gallery of Art's East Wing, designed by I.M. Pei).

This project continues HOK Sport's dominance of recent MLB park designs (akin to the New York Yankees' winning streak in the 1920s and 1930s). The firm has completed 10 of the last 14 structures built.

### STATS

**SQUARE FOOTAGE** 1,150,000 (estimated)

**SEATING CAPACITY** 41,000

**SUITES** 77; 10 party rooms

**TENANT** Washington Nationals (MLB)

**PROJECT COST** \$611 million

**OWNER** D.C. Sports and Entertainment Commission

**OPEN DATE** April 2008

**ARCHITECTS** HOK Sport/Devroux + Purnell Architects





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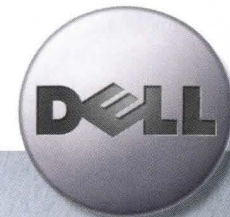
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# THE NUMBER OF BLACK WOMEN ARCHITECTS HAS QUADRUPLED IN 15 YEARS. BUT FOUR TIMES A FRACTION OF A PERCENT DOESN'T AMOUNT TO MUCH.

**FIRST, THE GOOD NEWS:** The number of black women licensed to practice architecture in the United States has quadrupled over the past 15 years.

The bad news? That number is still only 196.

"I am not ready to celebrate," says Kathryn Tyler Prigmore, 51, who was among the first 20 black women to be licensed. "Ten years ago, I think everyone thought the number of minorities and women in the profession would be significantly higher than it is now."

Black women represent only 0.2 percent of a total population of approximately 91,000 licensed architects. In law, black women account for close to 2 percent of the profession; in medicine, the figure is 4 percent.

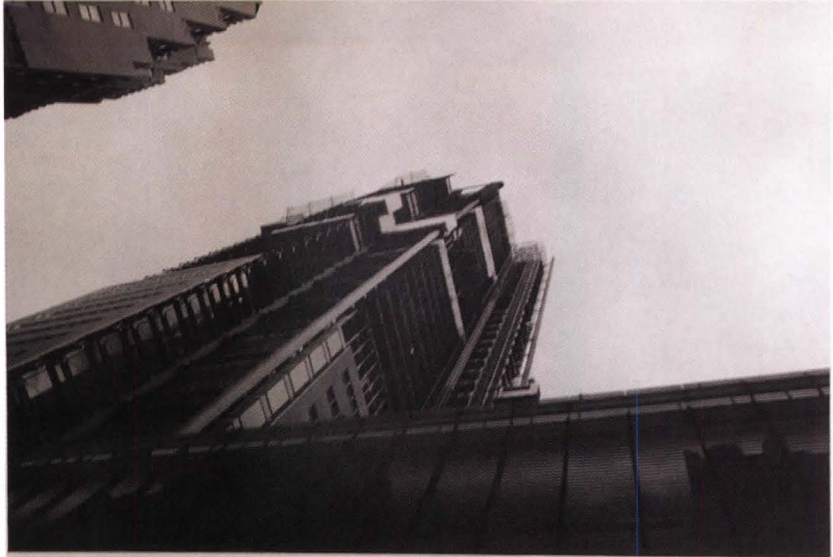
None of the major architectural organizations tracks the number of black architects, or black women architects, gaining licensure. But since 1991, architecture professors Bradford Grant and Dennis Mann have maintained their own comprehensive database, the Directory of African American Architects (accessible online at [blackarch.uc.edu](http://blackarch.uc.edu)). The first directory listed 44 women; last month, Grant and Mann added Adrienne M. Horton of New Mexico and LeAnn Elder Branzell of Florida.

"It's depressing in the 21st century, in a time when we speak so freely of diversity, that [the profession] is still obviously exclusive," says Kelly Powell, 33, whom Grant and Mann added to the directory in January. Powell is a senior architect/project manager with Davis Brody Bond Aedas in New York.

Forecasters predict that the number of black women in architecture will continue to climb steeply. More black women are enrolling in architecture schools; they represent as much as 4 percent of the graduating population, according to the National Architectural Accrediting Board.

Yet an uptick in black women studying architecture doesn't necessarily translate to architectural practice. In a field where graduates regularly strike out on unexpected paths, women and minorities seem more likely than most to forego licensure and choose alternate careers.

There aren't hard numbers on the rate of attrition, given a scarcity of demographic data (although several architectural groups are now working together to gather information, says Theodore Landsmark, president of the Association of Collegiate Schools of Architecture). But anecdotal evidence suggests that the high cost of architectural education, a lack of role models, and an



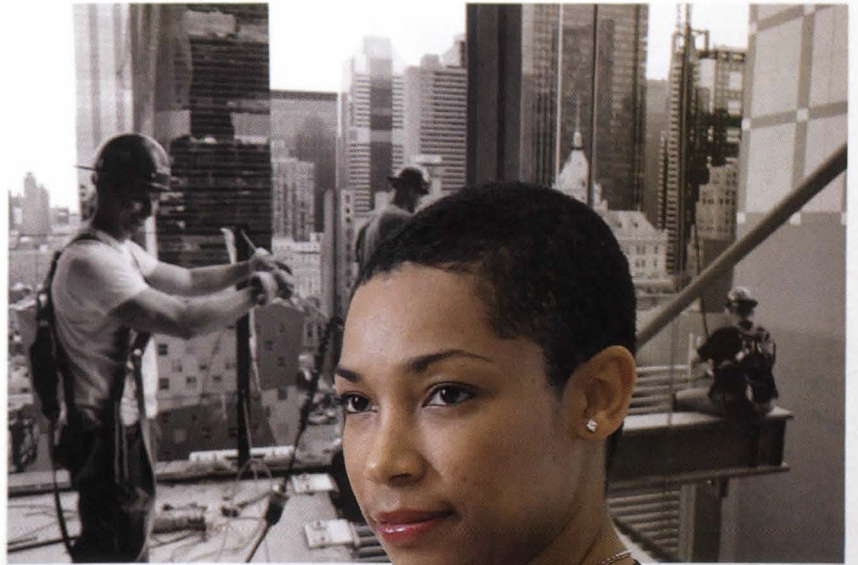
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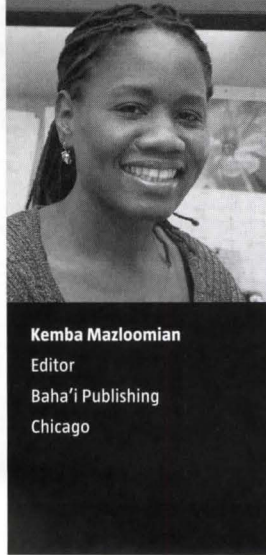
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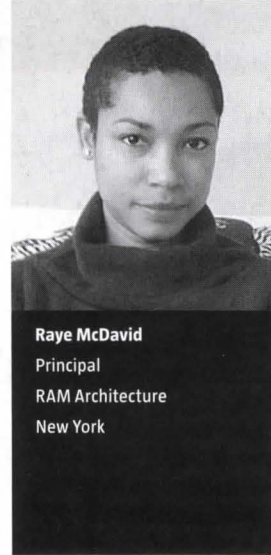




**Yamani Hernandez**  
Architecture and construction  
career cluster manager  
Chicago Public Schools  
Chicago



**Kemba Mazloomian**  
Editor  
Baha'i Publishing  
Chicago



**Raye McDavid**  
Principal  
RAM Architecture  
New York



**Renetta Moss**  
Special projects manager  
Harris County Facilities and  
Property Management  
Houston

inflexible model of success—which rewards long hours and ignores community-based design—are all factors in keeping American architecture less than fully diverse.

### Different Priorities

Why has diversification stalled? It may have to do with women architects having different priorities. “One theory is that [women] choose paths that are not traditional practitioner paths,” says Allison Williams, 55, a principal in the San Francisco office of Perkins+Will who became licensed in 1980.

This theory is bolstered by the results of a study in Australia, where women make up 43 percent of architecture students but less than 1 percent of firm directors. In 2005, the Royal Australian Institute of Architects surveyed 550 female members and concluded that they had different goals than their male counterparts. For example, women tend to reject the scale of a project, practice size, awards, and journal coverage as measures of their personal success. For women, the most meaningful measures of career progression often are client satisfaction and personal satisfaction—in the form of taking on new challenges and finding a balance in their lives.

In keeping with the results of the Australian study, many American black women architects say they find satisfaction in socially responsible design. Renetta Moss, 50, a county government architect in Houston who was added to the directory this January, says simply, “I don’t aspire to be a great architect. I aspire to use my architectural knowledge and skills to do great things for society.”

Another reason that women architects—of all races—diverge from the traditional career path is because of the profession’s imbalance between life and work. “In a culture of all-nighters, where does a mother fit in?” asks Raye McDavid, 36, who became licensed and gave birth to her son in the same month last year. “We are still, obviously, at a disadvantage because we can’t put in the types of hours our male colleagues can,” she says, suggesting that digital technology should allow for more flexibility.

McDavid says she sometimes feels that she needs to work harder to get the same recognition that male colleagues do. “I make a statement and get no reaction,” she says. “My colleague says the same thing, and it’s a revelation.” McDavid is currently setting up her own practice, RAM Architecture.

Add together the quality-of-life costs with the dollars-and-cents expense of schooling and interning, and what an architect earns cannot match the paycheck of an attorney or physician—a drawback for all prospective architects, and especially those coming from low-income backgrounds.

Yamani Hernandez, 29, graduated last spring with a master’s degree in architecture from the University of Washington. She complains about the low rewards of the profession on her blog, [strangebungalow.blogspot.com](http://strangebungalow.blogspot.com). “The education, internship and licensure process in general is long as hell,” she writes. “And the resulting salaries are crazy low compared to the other professions.” For many people of color, she says, choosing a career path doesn’t allow “the privilege of doing something you love.”

Hernandez decries what she calls “the atrocious underrepresentation of people of color in the profession.” She now works for Chicago Public Schools, managing architecture and construction programs for high school students.

### Relegated to the Margins

Kemba Mazloomian graduated from the University of Michigan in 1997 with a master’s degree in architecture and now works as an editor in Chicago. “I worked in office after office where my white male co-workers, and even the clients we worked for, questioned my competence, rechecked my calculations, [and] dismissed my relevance on projects,” she recalls in an e-mail. Her colleagues, Mazloomian says, “engaged in such a systemic campaign of emotional sabotage, that I invariably would seek work at another office—only to find that the office had changed but the dynamic remained the same.”

Prigmore, a project manager at HDR Architecture in Alexandria, Va., still has moments when she

I worked in office after office where my white male co-workers, and even the clients we worked for, questioned my competence, rechecked my calculations, [and] dismissed my relevance on projects. *Kemba Mazloomian*



feels marginalized. At last year's American Institute of Architects (AIA) convention in Los Angeles, she remembers, "I asked one of the booth attendants for information on where to get my registration packet. Without asking any questions, she immediately directed me toward the exhibitors' registration booth."

Prigmore was redirected back to the same area and returned to the booth she had visited. The attendant "was pretty embarrassed to find out I was both a speaker and a fellow," she says.

In a career spanning more than 35 years, Sharon Sutton, 65, who teaches architecture at the University of Washington, has encountered setbacks she blames on institutional resistance to diversity. "I got a Ph.D. [in psychology, in 1982] because I figured if I was overqualified, I would be able to take a leadership position," she explains. "I haven't. Forget being director or dean of a school. I've begun saying, 'The boys ain't ready. They just ain't ready.'"

Not everyone agrees that black women architects are at a disadvantage. "I can remember moments when I definitely felt it wasn't a level playing field," says Williams. "But in a really competitive arena, which is the only arena I've worked in, for the most part [the playing field] tilted in my favor as many times as it tilted against my favor. ... It really does have to do with being proud of who you are and comfortable in your skin."

### Framing the Future

Whatever their experiences, when black women such as Hernandez and Mazloomian decide not to pursue licensure, the future of the profession as a whole is at risk, according to a little-publicized 2005 AIA report, "Demographic Diversity Audit," which was prepared—reportedly at a cost of more than \$250,000—by Holland & Knight, an independent team of researchers.

In surveys, interviews, and focus groups conducted by the researchers, 11,500 participants "overwhelmingly endorsed the concept that diversity is of critical concern to

the future of the architecture profession," according to the final report.

Theodore Landsmark chaired the AIA Diversity Committee when it commissioned the study. He warns, "The consequence of not [diversifying] is that the profession will occupy a diminished niche within the larger built environment and come to be seen to be providing services only to corporate and wealthy individuals, rather than the much wider range of people who are affected by good architecture."

To recruit more minority students, architecture schools are targeting high schoolers who have been exposed to the field through construction or design, Landsmark says. "Rather than do the kind of scattershot recruiting that has tended to occur, it makes more sense to set up a table in The Home Depot in a community of color," he says.

Meanwhile, architecture programs are trying to diversify their faculties and curriculums. At the University of Michigan's Taubman College of Architecture and Planning, for example, new course offerings include "Social Change and the Architect" and "Gender in Architecture," and the school recently hired June Manning Thomas, an urban planner who is black and lectures on race, ethnicity, and gender. (She also happens to be Mazloomian's mother.)

By contrast, Powell says that when she attended Michigan in the mid-1990s, she retreated to the library to discover the work of black architects on her own.

Without such efforts, architects may well lose touch with their clientele, and their businesses could suffer, warns Landsmark. "It is safe to say that within the next decade, most of the clients will not look like what most of the architects look like today," he says.

Prigmore sees that contrast between clients and architects now. In client meetings, she says, it's becoming rarer for her to be the only woman and only black person in a room: "It happens more frequently—and is most disconcerting—when the group is only architects."

I got a Ph.D. because I figured if I was overqualified, I would be able to take a leadership position. I haven't. Forget being director or dean of a school. I've begun saying, "The boys ain't ready. They just ain't ready." Sharon Sutton



**Kelly Powell**  
Senior architect/project manager  
Davis Brody Bond Aedas  
New York



**Kathryn Tyler Prigmore**  
Project manager  
HDR Architecture  
Alexandria, Va.



**Sharon Sutton**  
Professor of architecture, urban design, and planning  
University of Washington  
Seattle



**Allison Williams**  
Design principal  
Perkins+Will  
San Francisco



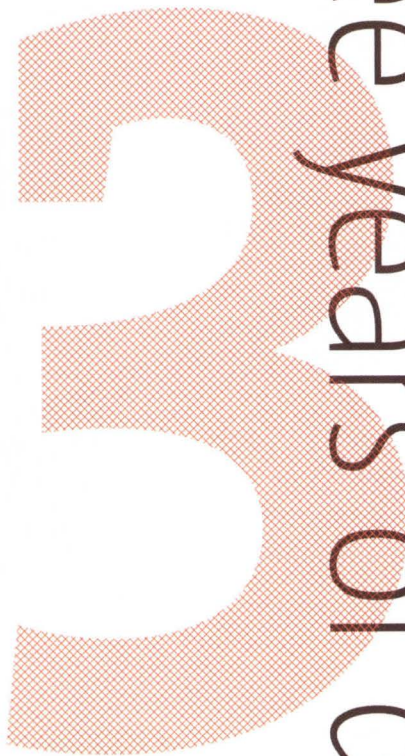






**Triennial Wallflowers** by Ken Smith  
Landscape Architect (see page 69).

# three years of design



Text Amanda Kolson Hurley

The curators of the Cooper-Hewitt's National Design Triennial, *Design Life Now*, guide you on a tour of highlights from the show.



BEN BAKER

Barbara J. Bloemink, Brooke Hodge, Ellen Lupton, Matilda McQuaid

**IF YOU THOUGHT ADVANCES IN TECHNOLOGY** had made traditional craftsmanship obsolete, David Wiseman might surprise you. The 25-year-old RISD graduate from Pasadena, Calif.—a featured designer in the current National Design Triennial at the Cooper-Hewitt Museum in New York—devotes himself to his work with the rapt, low-tech perfectionism of a Renaissance artisan.

Wiseman captured the attention of the design world in 2005 when he transformed the ceiling of a client's Los Angeles dining room into a thicket of intertwining branches, with cherry blossoms bursting from their tips. For that project, Wiseman hand-cut more than 500 porcelain blossoms and fabricated almost 100 branches from plaster and fiberglass, then climbed up and down a ladder in the client's house to attach them. He worked alone most of the time, by choice, and the project took him nearly a year to finish.

"I didn't have an exact plan for how the branches would grow," Wiseman says. "Because I didn't, it allowed me to improvise on the spot. I would go up on a ladder and put a 5-inch segment of a branch up, then come down and be able to look at it in context, and make changes accordingly." His process, Wiseman adds, is "very visceral."

Wiseman joins 86 other designers in the Triennial, titled *Design Life Now*, which is on view through July 29. The exhibits span every facet of contemporary American design, from robotics and computer programs to fashion, furniture, landscape architecture, and lighting design. "For me, the most important thing about the Triennial is the extremes of inclusion," says Matilda McQuaid, one of the four curators of this year's show. "You have everything from the high-tech to the handcrafted."

With Wiseman at one end of that spectrum, SHoP, a New York City architecture firm, could be said to represent



the other. SHoP has pioneered digital architecture in recent years, using technology to streamline the design and fabrication of buildings. Its Camera Obscura in Greenport, N.Y.—a 350-square-foot, single-room structure that, by means of an optical lens, captures images of the surrounding area—began as a kit of 750 custom parts, many of them laser-cut using digital files from a 3-D computer model.

High tech and low tech: They would seem to be polar opposites. Yet it's a false dichotomy, McQuaid says. "There's so much craftsmanship that goes into these high-tech items, like the robotics," she observes. "It's very pronounced how much time and effort it takes to produce some of these prototypes. You can talk about them as polar opposites, but at the same time, they're very much related to one another."

An awareness of craftsmanship—whether a given designer uses cutting-edge software or simply her hands and a pair of crochet needles—is the clearest theme to emerge from this year's Triennial. But it wasn't imposed from on high, the curators are quick to point out.

"We really wanted to start with the objects and designers themselves," says McQuaid. "Subconsciously, you have themes in your head, and they begin to formulate more concretely as you go through the designers. But really, it wasn't until the final selection had been made that we then went back and began to look at the designers as a large group."

Guest curator Brooke Hodge, of the Museum of Contemporary Art in Los Angeles, describes the selection process: "All four of us did a lot of research and came up with our own lists," she says. "We all got together on a couple of occasions and made presentations with images. Then we voted in a blind vote. Anything that got four out of four votes was in, and most of the things that got three out of four were in, too."

What sets this Triennial apart from past shows, according to Hodge, is the extent of collaboration among the curators. Beginning with their first meeting in early 2004, they spent hours together, sifting through more than 200 objects and designers—culled from magazines, books, museum exhibitions, and events like the Milan Furniture Fair—and winnowing them to the final 87.

"Going to see the show, it does feel like there's a connection between the pieces," Hodge says. "We all thought it worked really well for us to spend a lot of time with each other."

Architecture makes a stronger showing this time around than in either 2003 or 2000 (the year the National Design Triennial was initiated). Hodge says the curators consciously tried to represent more architectural design. But Barbara Bloemink, the former curatorial director of Cooper-Hewitt, has a different take: "There didn't seem to be much innovation in some areas, and more in others." And from 2004 to 2006, she says, "Architecture and landscape architecture ... really came to the fore."

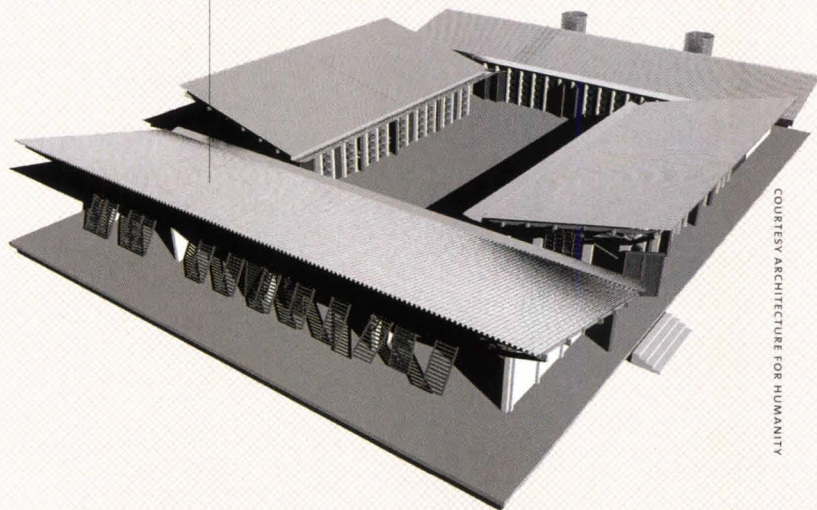
In the pages that follow, highlights from the show attest to the depth, range, and ambition of American design over three change-driven years.

**Architecture for Humanity**  
Designed by Nicholas Gilliland  
and Gaston Tolila

## Mother and Child Medical Center Ipuli, Tanzania

Established in 1999, the California nonprofit Architecture for Humanity uses design to help communities in need around the world. Two years ago, the group matched Neema Mgana, founder of the African Regional Youth Initiative, with Paris architects Nicholas Gilliland and Gaston

Tolila and helped them plan a medical center for the remote village of Ipuli in rural Tanzania. Projects like this one "promote architects thinking about designing for the other 90 percent of the world's population," says Bloemink. "It's part of the [drive for] social responsibility in architecture, which we're hoping increases." The center is under construction by local people and will open later this year, a testament to what collaborative design, community involvement, and a little money (the total cost is undisclosed) can achieve.

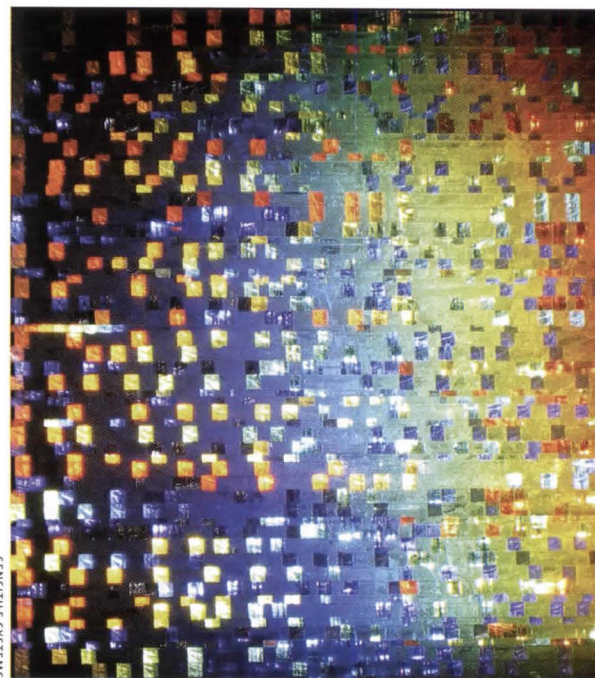


COURTESY ARCHITECTURE FOR HUMANITY

## Abhinand Lath SensiTile

While writing his master's thesis on bamboo at the University of Michigan's architecture school, Abhinand Lath read a medieval Japanese poem about the shifting colors in a bamboo forest. The poem inspired SensiTile, a technology that embeds fiber optics in tiles made of polymer, concrete, and resin, so that the tiles respond to movement and shadows with "ripples" of light on their surface. At the Triennial, a wall installation of SensiTiles allows visitors to try out their light-conducting properties.

Lath, based in Detroit, "is typical [of current designers] in terms of trying to embed new functionality, whether for aesthetic or practical reasons, into sheeting or façade materials," McQuaid observes.



SENSITILE SYSTEMS





KEN SMITH

**Ken Smith Landscape Architect**  
**Wall Flowers**  
**Cornerstone Café**  
**Sonoma, Calif.**

New York-based Ken Smith takes the idea of a man-made landscape to a new level, using artificial plants and flowers and other synthetic materials to playfully blur the line between nature and artifice. A 2005 installation by Smith at the

Cornerstone Café in Sonoma, Calif., has craft-store sunflowers and ferns sprouting at right-angles from the wall, creating the impression of 3-D wallpaper. For his Triennial installation, draped over the front of the Cooper-Hewitt, Smith “plays with the actual physical structure of the mansion,” McQuaid says. “You have these wonderful pop-like flowers that cover the entrance façade, in stark contrast to what’s behind it.”

**Will Wright**  
**The Sims**

Seven years ago, Will Wright’s company, Maxis, released *The Sims*, a game that allowed players to create and control a family of simulated humans (“sims”) endowed with artificial intelligence. Players can watch their sims fight, play chess, or canoodle in a hot tub—all within houses that players design themselves, choosing everything from the floor plan to the microwave.

Maxis’ 2004 update, *The Sims 2*, introduced digital DNA, allowing players to track sims over generations. “You create a room, you furnish it, you decorate it—then you see what happens,” says Ellen Lupton (whose preteen son is a *Sims* fan). “Playing a game like that gives one greater respect and understanding of design as [being] not just about surfaces and décor, but actually influencing how people behave.”



ELECTRONIC ARTS



**David Wiseman**  
**Cherry Blossom**  
**Canopy**  
**Triennial installation**

California-based designer David Wiseman takes his inspiration from organic forms and aims, he says, to “bring nature indoors.” His early designs—some produced while still an undergraduate at RISD—include faceted, artfully imperfect vases of porcelain, glass, and bronze that bring to mind crystals or animal eggs.

For the Triennial, Wiseman decorated an entryway inside the museum with a canopy of not-quite-naturalistic cherry blossoms, all handcrafted from porcelain. “There’s been this current in design recently toward a more baroque interest in ornament,” says Hodge. “It’s a reaction to minimalism.”

**Electroland**  
**Lumen**  
**Triennial installation**

In their collaboration as design team Electroland, architect Cameron McNall and interactive designer Damon Seeley create environments that respond—often uncannily—to the people moving through them.

At the Cooper-Hewitt, Electroland has designed an installation of fluorescent lights that runs up the staircase from the first floor to the second. As a visitor walks up the stairs, the lights come on, but in a sequence that’s not wholly predictable. “It’s a social idea—that it’s activated by users and responds to users, but also has its own behavior,” explains Lupton.

“Electroland is trying to create a more transparent relationship between the public and technology,” she says. “It’s pointing out that the buildings are always watching.”



ANDREW GARN

ANDREW GARN







the art of building for art





Text Vernon Mays

## DILLER SCOFIDIO + RENFRO TRADED ONE SIDE OF THE GALLERY WALL FOR THE OTHER AT THE INSTITUTE OF CONTEMPORARY ART, BOSTON.

**LONG KNOWN FOR ITS** concept-pushing, small-scale architecture-as-art, the firm Diller Scofidio + Renfro has moved from discrete installations to a monumental building for the city of Boston—the new home of the Institute of Contemporary Art (ICA). The new ICA delivers an expansive container for the display of contemporary art, a poetic waterfront gathering place, and a new harborside icon. Although it was designed with the same critical sensibility as the firm's earlier works and embodies a similar preoccupation with materiality and assembly, the \$41 million ICA is decidedly architecture-*for*-art.

Principal Elizabeth Diller allows that the commission posed a challenging reversal of roles for the New York firm. "As artists, we have spent most of our time on the opposite side of the gallery wall," she says. "We found that all of a sudden, we were on the other side of the institutional critique. The institution was speaking in our voice."

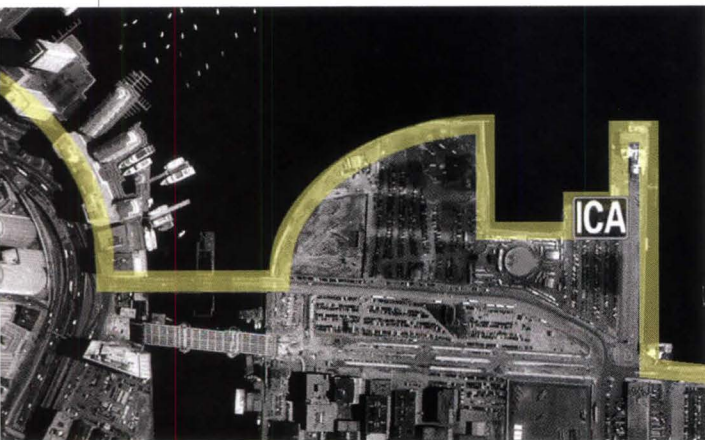
The ICA's leadership, after struggling to make the most of its former quarters in historic Back Bay, saw the move

to prominent Fan Pier on the South Boston waterfront as an opportunity to engage the public on new terms. "We felt our new museum needed to be as much civic space as artistic space," says the institute's director, Jill Medvedow. She ordained that the ground level be freely accessible to visitors, particularly because HarborWalk, a 47-mile public promenade along the waterfront (under construction), skirts the north and west sides of the building.

Says principal Ricardo Scofidio: "We immediately thought, 'A museum is a building that always wants to turn inward, yet here we are on a site that wants to turn outward. Can we reframe the deal?'"

One other factor pushed the design to a higher plane (literally): The ICA wanted its galleries consolidated on a single level. But the museum's space requirements added up to 22,000 square feet, far in excess of the footprint.

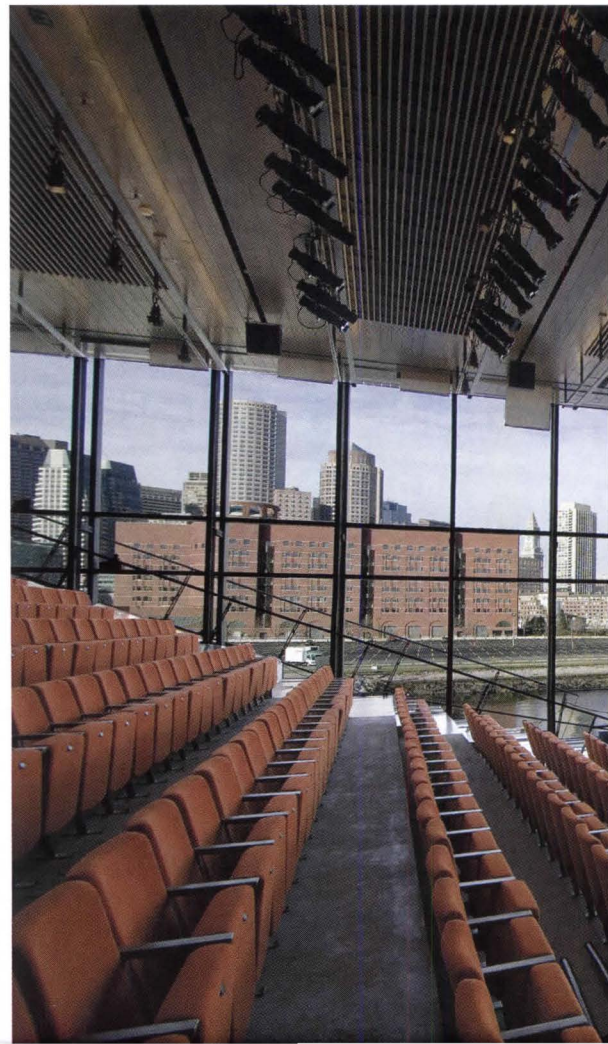
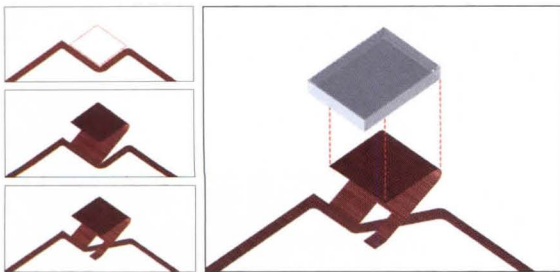
Undaunted, Diller Scofidio + Renfro worked with the Boston Redevelopment Authority on a compromise that allowed the gallery to overhang the HarborWalk.



### The Wrapper

Diller Scofidio + Renfro chose to leverage Boston's HarborWalk as much as possible by weaving it through the building. The firm's strategy was to take the boardwalk, property of the citizens of Boston, and metaphorically extend it into the new building as a pliable wood surface that defines the major public spaces. This continuous surface penetrating in and out again serves to transform the harbor view into a theatrical backdrop for the stage.

The intended reading of a folded HarborWalk surface is achieved through the consistent use of one wood species, a South American mahogany. That mahogany is milled into planks for the exterior decking; milled as tongue-and-groove boards for the sprung floor of the theater stage; milled into veneer and laminated over fire-rated mdf at the interior walls and ceilings; and edge-routed for concealed fasteners at the underside of the exterior cantilever. The architects selected an interior wood stain to match the weathered finish of the exterior wood.







### Theater: Curtain Wall

The north and west walls of the theater are uninterrupted glass surfaces. As principal Charles Renfro explains, "We wanted to work with the view, but not let it take over the building." The curtain-wall design went through several iterations, starting with a sheer glass-fin structure, with an additional layer of glass at the inner face of the fins to decrease noise from jet traffic at nearby Logan Airport. During the later stages of design, acoustic engineers decided the noise infiltration was insignificant, and the second glass layer was eliminated. (Ultimately, the glass fins were replaced by aluminum supports as a cost-saving measure.)

Nonetheless, each of the insulated glazing units that make up the single glass layer is composed of two thicknesses of glass, arresting different frequencies of sound as they pass through the wall. The horizontal header and sill plates of the curtain wall were buried above and below their adjacent surfaces, allowing the wrapper to appear to penetrate the walls.

To maintain the drama of the interior, structure along the north and west walls was kept to a minimum. The theater is suspended from above by mega-trusses. Parallel to each curtain-wall mullion is a steel hanger that also provides tracks for scrim and blackout shades. The shades can be controlled to meet performance needs—from full transparency, to filtered light, to total blackout.

PETER VANDERMARKER





IWAN BAAN

In exchange, the architects reduced the footprint at ground level, sharing the exterior space with a public grandstand sheltered by the 80-foot cantilever. “Everybody just fell in love with that,” Scofidio says.

The conceptual framework set the tone for the design. Its signature gesture—a wide curve that folds up through the building and back across itself like a giant ribbon—appropriates the wood decking from the public right-of-way, picks it up from the water’s edge to form the grandstand, continues through the glass envelope, following the contours of the 325-seat theater (the stage, the raked floor of the house, the rear wall, and the ceiling), and then slips back out through the skin above the grandstand. Resting on top is the dramatically cantilevered gallery, a boxlike form wrapped on three sides in channel glass. At night, its backlit surface glows like a lantern on the harbor’s edge.

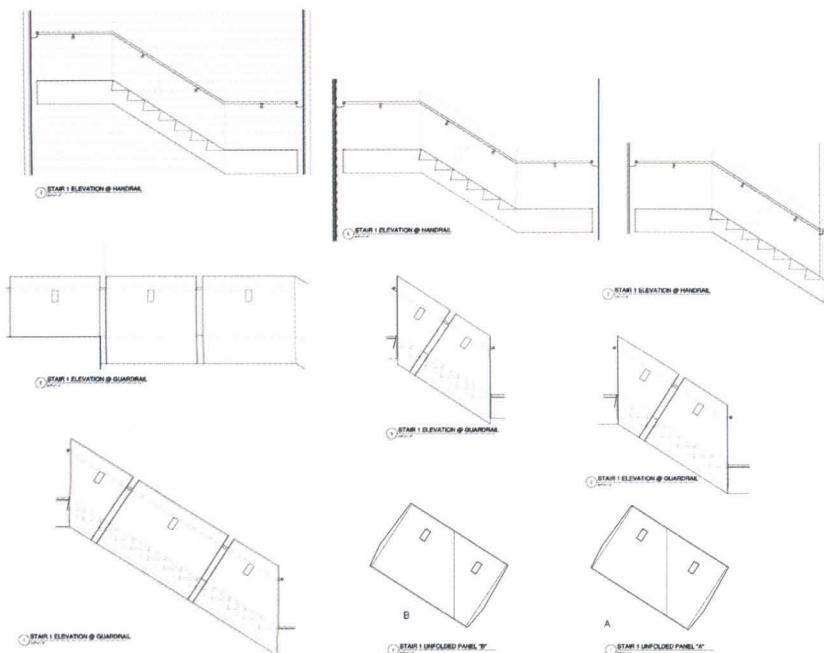
Inside the 62,000-square-foot building, space is allotted to a restaurant, a museum shop, education/workshop facilities, and offices. Random architectural “events” throughout the building recall the tenor of Diller Scofidio + Renfro’s earlier work. They range from the somewhat disorienting Mediatheque, a tiered video lab whose broad window hovers over the harbor, to the glass-walled elevator, which glides in a transparent core, framing views.

“We chose to choreograph movement through the building in such a way that it worked like a control valve—that it could just leak out the view at different times and in different contexts,” Diller explains.

Ultimately, the museum’s visual finesse is secondary to much larger goals: the establishment of an urban edge for the impending 20-acre Fan Pier development and the embrace of important public space. In that regard, Diller Scofidio + Renfro’s recognition of urban-scaled issues—and the firm’s sensitive response to them—is the noteworthy accomplishment here, aside from the fact that the ICA is ideally suited to its intended purpose, which is to exhibit art.

## Interior Stairwell

The egress stair serves double duty as the main public stair. Shaping the stairwell is a segmented, planar surface that seems to unfurl like a roll of curling ribbon. The painted steel plates function as a guardrail and are also bent to produce rigidity for the stair stringer and handrail supports. Risers are painted steel pans containing poured-in-place concrete treads with a matte sealer. The plane of the guardrail is illuminated by a continuous vertical lighting element of fluorescent fixtures, which are housed in aluminum extrusions and supported by a steel tension rod and extend the entire four-story height.





## Gallery Ceiling and Skylights

The ICA's previous home was an urban infill building dating to 1866 with galleries distributed on four levels. By contrast, the new ICA was designed with flexible, column-free galleries on a single floor. Placing the galleries at the top of the building allows the exhibition space to be illuminated by uniform, diffused daylight through a system of skylights. The skylights are equipped with motorized shades to regulate light levels.

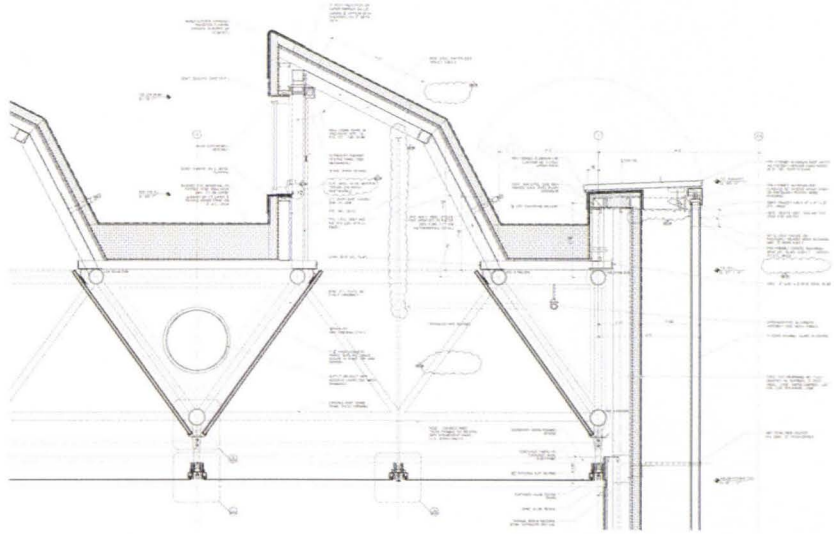
Working in collaboration with electrical engineer Andy Sedgewick of Arup London on the daylighting system, the design team determined the optimum height of the gallery to be a minimum of 15 feet, 6 inches. The monolithic ceiling diffuses light through a scrim made of a taut Trevira fabric. Above it, sawtooth skylights admit light into a 6-foot-deep loft that also contains mechanical ducts, electrical lighting, and a kicker panel to improve

light distribution. Electrical uplights in the loft simulate the same quality of light at night.

Although the ceilings appear plain and unencumbered, they are anything but. A 6-foot-by-12-foot aluminum grid holds the demountable scrims and also serves as lighting tracks, an overhead structural support for temporary dividing walls, and an organizational spine for sprinkler heads and smoke alarms. The polished concrete floor is subdivided into corresponding 12-foot-by-12-foot bays, with structural and electrical nodes centered in each one.

The key feature of the structural system is a series of four mega-trusses—each 175 feet long and 24 feet high—that allow for the dramatic cantilever. Three of the trusses run approximately north-south, whereas the fourth is angled slightly to conform to the building footprint. At the core, the two center trusses

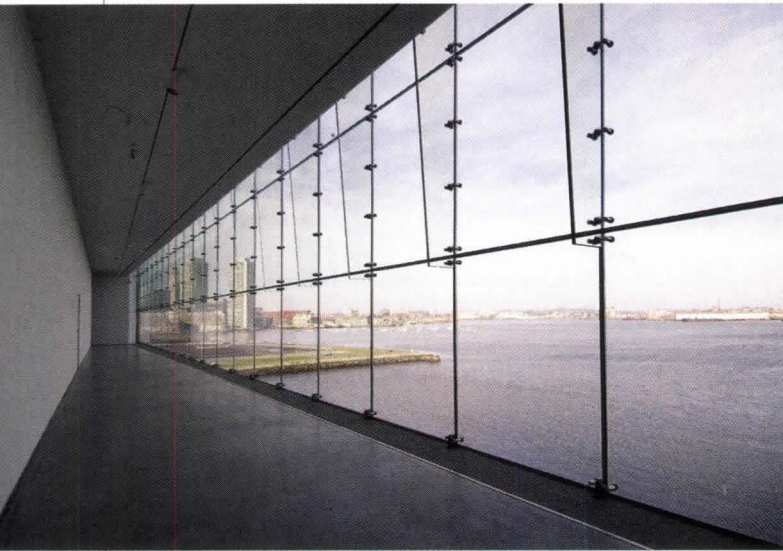
are spaced only 24 feet apart. The outer trusses are roughly twice that distance from the inner ones, which creates the loftlike gallery spaces. The heaviest steel member is a W14 x 455 beam, which is located at the top chord spanning the column in the building's northwest corner.







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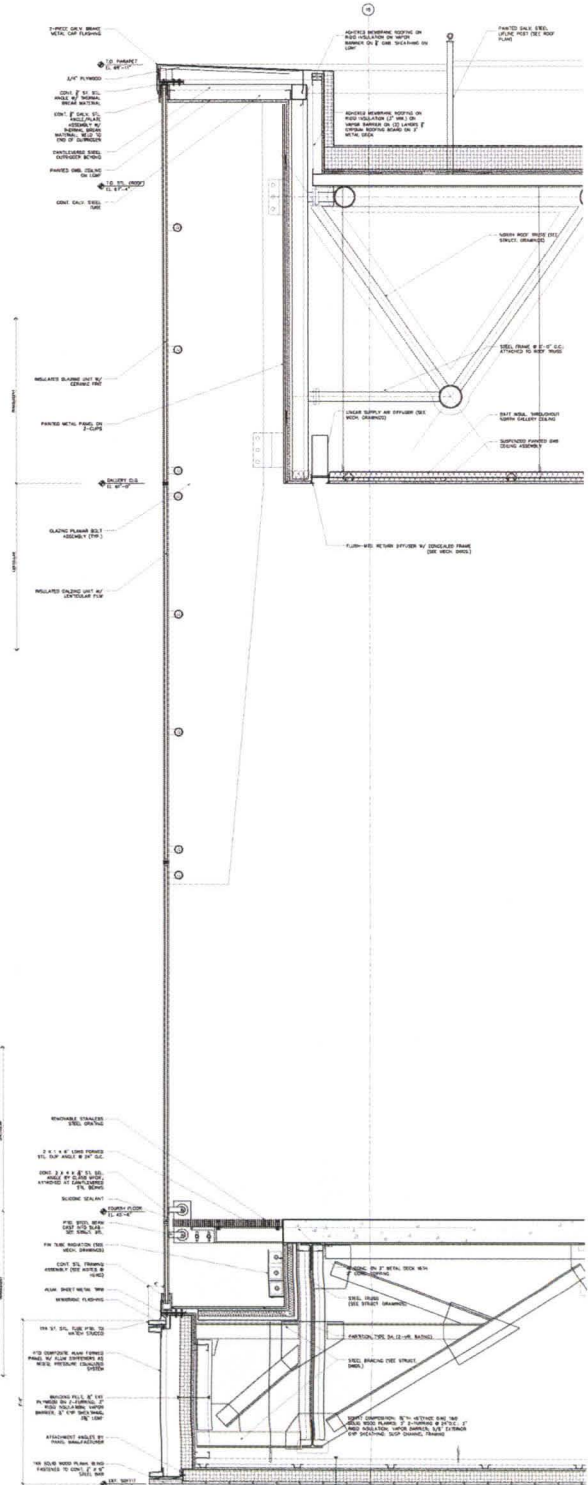


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## Founder's Gallery

The Founder's Gallery is a crossover space that spans the full width of the building's north face. By connecting the main east and west galleries, the linear room is woven into the choreography of the art-viewing sequence. The gallery's glass curtain wall—which stretches floor to ceiling, revealing a panoramic view of Logan Airport, Bunker Hill, and

Boston's business district—is composed of cantilevered laminated glass fins with point support fittings. The wall was designed and tested in a full-scale mock-up to ensure its ability to withstand high winds whipping in from the Atlantic Ocean.



**Project:** Institute of Contemporary Art, Boston

**Client:** City of Boston

**Architect:** Diller Scofidio + Renfro, New York—Elizabeth Diller, Ricardo Scofidio, Charles Renfro (principals); Flavio Stigliano (project leader); Deane Simpson, Jesse Saylor, Eric Höweler (project team)

**Associate Architects:** Perry Dean Rogers and Partners, Boston—Martha Pilgreen (principal in charge); Gregory C. Burchard, Mike Waters (project managers); Henry Scollard (project designer)

**SMEP:** Arup New York—Markus Schulte

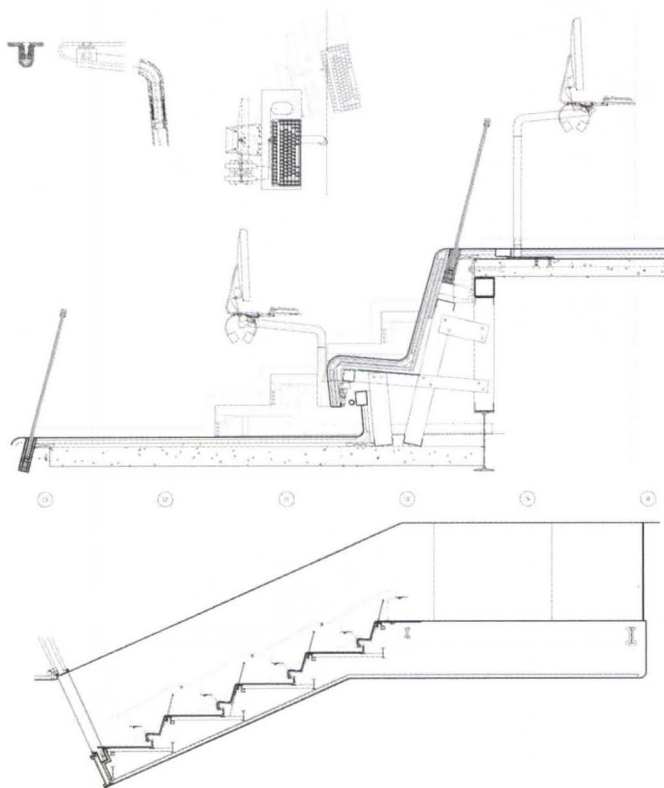
**Theater Consultants:** Fisher Dachs

**Acoustics:** Jaffe Holden Acoustics

**Project Management:** Seamus Henchy Associates

**Lighting:** Arup London—Andy Sedgewick





## Mediatheque

In conceptual terms, the Mediatheque is a piece of the gallery space that folds down from the cantilever. Here, visitors can access curated shows on the web as well as the ICA's growing database of digital artworks. The tiered space has 16 iMac stations, each of which is fabricated with a rotating stainless steel arm to accommodate two users. Artificial lighting, placed in coves below the benches and stairs, eliminates glare on the computer monitors. Noise is absorbed by the acoustical panel-and-plaster ceiling.

The lower end of the 1,100-square-foot space is capped by wall-to-wall, floor-to-ceiling glass. This minimally detailed window offers tight views of the foreground water below—all context stripped away by the solid walls, ceiling, and floor. Avoiding the thicker sightlines of insulated glass units,

which have opaque spacers, the architects detailed the window using two planes of butt-glazed laminated glass with a heated air cavity between. To eliminate condensation in the winter, the air cavity is maintained at a higher temperature than either the Mediatheque interior or the exterior.

Natural and digital phenomena blend in this space to induce a tranquil atmosphere, "like watching a campfire," says Scofidio. Yet the mood of the room changes constantly with the passage of the sun and shifts in wind and weather conditions that can render the harbor placid or churning.



# CHICAGO

# HOPE

John Ronan's brash new youth center energizes an inner-city neighborhood.

Text Lee Bey Photos Hedrich Blessing







**THREE TEENS HUDDLED** against a bracing winter's rain make their way down South Chicago Avenue, a big two-way street that cuts through Chicago's Greater Grand Crossing neighborhood.

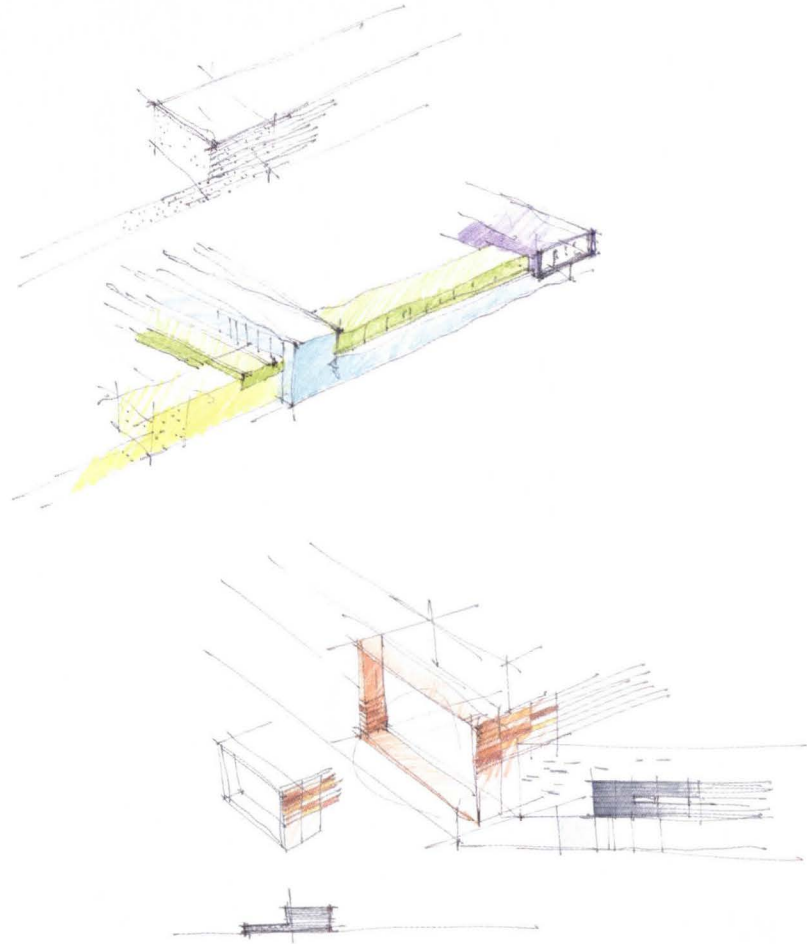
The avenue used to be an industrial hub on the city's South Side. The mills and foundries that once crowded the street are largely gone. The trio walks past empty, fenced-off lots and unused buildings.

But the kids break into a half-sprint as they cross Ingleside Avenue and enter the Gary C. Comer Youth Center, a colorful beacon rising from the tough, gray street. Its checkerboard façade of red, blue, and silver metallic panels jumps out from the surrounding brick and frame houses. The center's rectangular 74,000-square-foot mass is topped by an 80-foot steel-framed tower with a scrolling LED sign that proudly announces what's happening inside.

No other building in Chicago—or anywhere else, for that matter—looks quite like it.

"There wasn't a real model for this," says the building's architect, John Ronan, principal of the eponymous Chicago firm, during a walk-through on this rainy afternoon. "No prototype. It wasn't really an auditorium, it wasn't really a community center, and it





wasn't really a recreation building. It was all those things and a little bit more."

The \$30 million center was funded by Gary C. Comer, philanthropist and founder of Lands' End, who grew up a few blocks north of the center. He died last October at age 78, just months after the building's May 2006 dedication.

Originally, Comer's plan was to build a headquarters for one local arts group, the South Shore Drill Team & Performing Arts Ensemble. Founded in 1980, the drill team has performed its stylized dance routines and synchronized rifle tosses for audiences around the world. But it had no home of its own, so its members—now 300 strong—practiced in local schools, churches, and warehouses.

"He asked what I needed for the drill team, and I told him we needed a facility to practice in," says Arthur Robertson, the team's director and founder, referring to Comer. "At the time, we were looking to find a warehouse and gut it and fix it up. And we did look at some places. Then [Comer] said, 'We're just going to build you a facility.'"

The center's mission expanded as Comer realized that Greater Grand Crossing needed an adequate community center, a theater, and a space for indoor recreation.

Comer founded Lands' End (the errant apostrophe became part of its trademark) in 1962. What began as a

small mail-order sailboat equipment business grew into a company that was worth nearly \$2 billion when Sears, Roebuck & Co. bought it in 2002.

A billionaire ranked among America's 400 richest people by *Forbes*, Comer never forgot his old neighborhood. He bought computers and uniforms and paid college tuition for students from his alma mater, Paul Revere Elementary School, located one block east of the center. Comer also built affordable homes in the area. In 2001, he and his wife, Frances, made a gift to found the Comer Children's Hospital at the nearby University of Chicago.

But the youth center would be the philanthropic venture closest to his heart. From the beginning, in 2003, Comer was intimately involved in every phase of the center's design. After meeting Ronan—who had designed a striking elementary-school building for the Akiba Schechter Jewish Day School in Chicago—Comer picked his small, 10-year-old practice over larger and more established architecture firms.

"Gary [was] one of the richest people in the world, but you'd never know it if you met him," Ronan says. "Very down to earth. He liked personal attention. He wanted to work with somebody and not get fobbed off on minions. He called four or five other people, and I think he found them to be pretentious."

**Project:** Gary C. Comer Youth Center, Chicago

**Client:** Gary C. Comer

**Architect:** John Ronan Architect, Chicago—John Ronan (lead designer and principal in charge); Evan Menk, Brian Malady (project architects); Nageshwar Rao, Oscar Kang, Yasushi Koakutsu, Bradford Kelley, Micah Land, Sara Stevenson (project team)

**Structural:** Arup

**MEP:** CCJM Engineers

**Civil:** Terra Engineering

**Landscape:** Peter Lindsay Schaudt Landscape Architecture

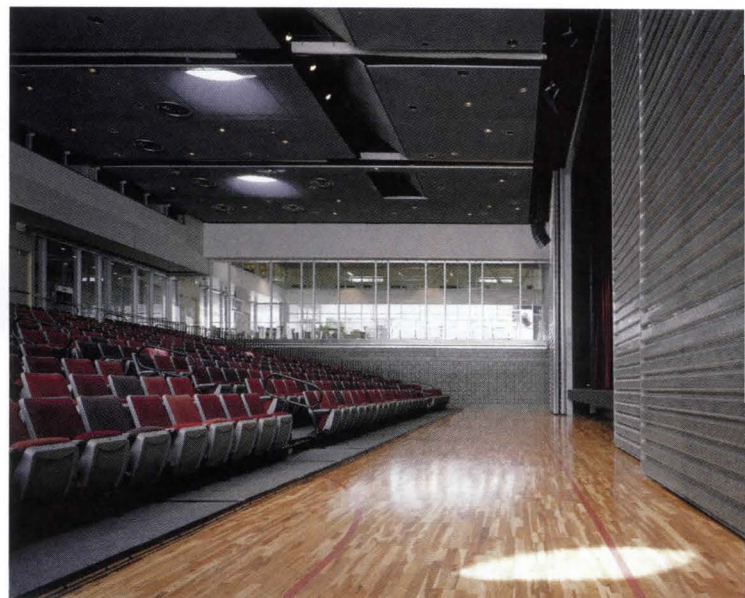
**Acoustics:** Kirkegaard & Associates

**Lighting:** Charter Sills & Associates

**A/V:** DB Integrated Systems

**Food Service:** Cini-Little International



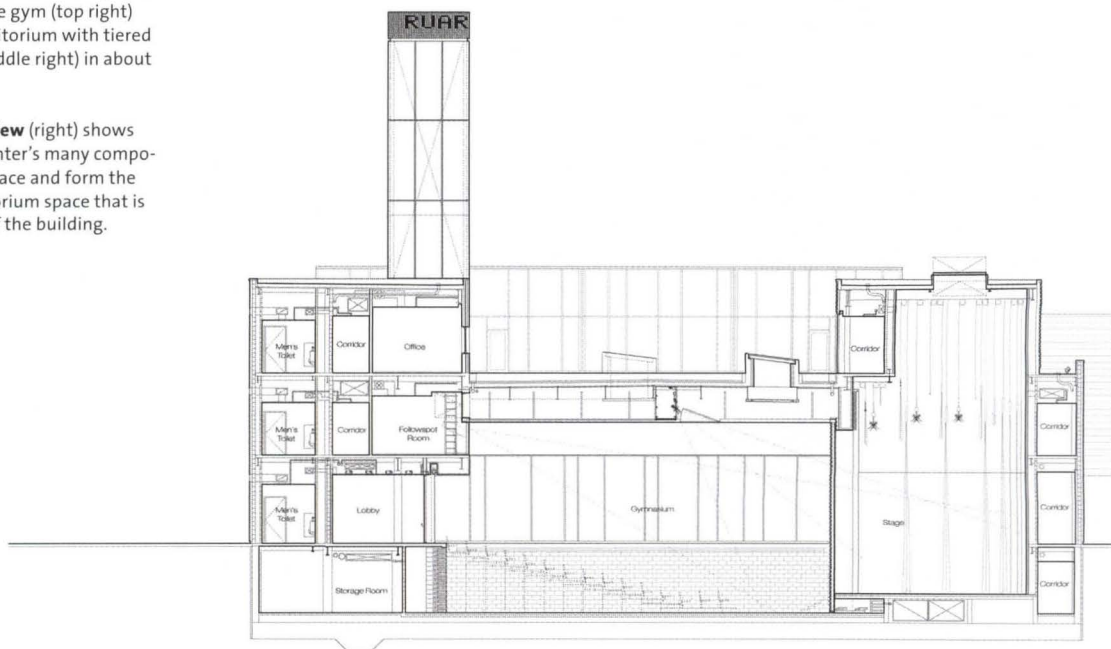


**The building's exterior** (facing page, far left) consists of 8-foot-long, glass fiber-reinforced concrete panels that bring color to an otherwise drab street.

**Three color sketches** by the architect (facing page) suggest how he put the building together. The top two show hallways, classrooms, and offices framing the gym/auditorium and cafeteria. The bottom sketch is a study of the dance room, with a large window that juts over South Chicago Avenue.

**The cafeteria's glass interior wall** (above) allows views into the gym. A mechanical system converts the gym (top right) into an auditorium with tiered seating (middle right) in about a minute.

**A section view** (right) shows how the center's many components embrace and form the gym/auditorium space that is the heart of the building.







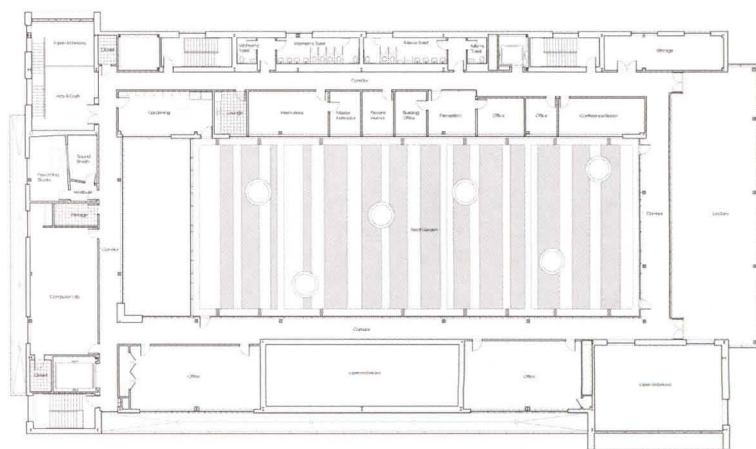
Ronan acted as both architect and traffic cop as he fielded requests from Comer, neighborhood residents, Revere students, the drill team, and the University of Chicago's School of Social Service Administration, whose graduate interns do outreach work in the neighborhood.

Neighborhood youth, fearing drive-by shootings, wanted the center to be largely windowless. Comer wanted separate auditorium and gymnasium buildings—in brick. Robertson wanted office space that overlooked the drill floor.

Ronan responded with expanses of bulletproof glass and, instead of the brick that Comer urged, 8-foot-long color tiles made of glass fiber–reinforced concrete. In the end, Comer liked them so much that he asked that they be made brighter.

"I'd seen a [youth] center before, but I'd never seen one with a whole bunch of colors on the outside," says Briana Jamison, 13, a flag girl for the drill team. "It was, like, 'Come join.'"

Rather than build a separate gymnasium and auditorium, Ronan designed a single three-story-high convertible space. With the push of a few buttons, walls move, panels slide, and the gym becomes a theater: 640 padded seats slide out of a wall. ("I'd never seen anything like that," Christopher Watkins, 12, marvels.)



**A third-floor hallway** (top) looks onto the rooftop garden and the center's iconic tower. The garden has an in-ground irrigation system, and its 2-foot soil depth supports everything except large trees. Six circles that dot the third-floor plan (above) are skylights, which bring natural light to the gym area below.





The finished center also has classrooms, a recording studio, a conference space, a computer center, a dance studio, a homework help center, a weight room, and a comfortably furnished recreation area with pool and foosball tables. Orbiting the gym/theater, many of these rooms—including Robertson's office—offer views into it. A practice area apart from the main gym has ceilings high enough to accommodate the drill team's rifle and flag tosses. The parking lot, with lanes marked off for the team to march, doubles as a staging area.

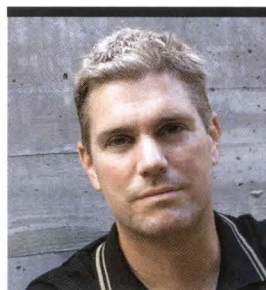
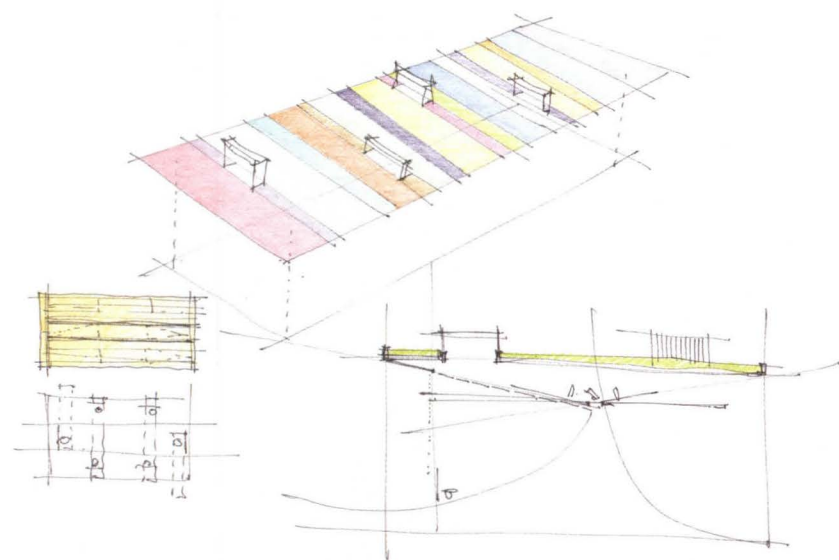
"One day Gary called me and said, 'John, I think we need to add a third story to the building,'" Ronan says, laughing. "And at that point, we didn't know what was going on the first two floors. He said, 'I know we can do this. We'll make it work. I think we'll be sorry later if we don't do it.' And he was right."

On the third floor is an enclosed, fully irrigated rooftop garden—the roof of the gymnasium/auditorium—whose bounty of vegetables and herbs is cooked in the center's kitchen. Meals are served in a 300-seat cafeteria that overlooks the gym. On a recent visit, a small group of kids had gathered in the cafeteria to learn about nutrition, while the gym below hosted a vigorous game of refereed basketball.

"They didn't have to build this place for us," says 13-year-old Paige Starks, a Revere student who attends the center after school. "But they did."

*Lee Bey is a Chicago-based critic, professor, and adviser on architecture and urbanism.*

**Sunflowers, sweet potatoes,** and a variety of herbs are among the flowers and produce grown in the rooftop garden (above left). Produce is cooked in the center's kitchen. Ronan's sketches (left) show the rows of the garden, each one devoted to a different planting. The rows line up with the mullions of the glass wall of the third-floor hallway.



#### THE ARCHITECT

**Name:** John Ronan

**Age:** 43

**Firm:** John Ronan Architect

**Employees:** 12

**Education:** M.Arch., Harvard University, 1991; B.S., University of Michigan, 1985



## RAW MATERIALS

# Structural Steel

We take steel beams for granted as the bones of new buildings, but how are they made?

**ARCHITECT** walks you through the process. Text Bradford McKee Photos Tim Hursley

At the Nucor-Yamato Steel Co. plant outside Blytheville, Ark., small mountains of rusted scrap metal rise across a stretch of Mississippi River floodplain. Most of the material, sorted by size and type, is completely unrecognizable. Some piles contain thin sheet metal. Some have pieces of buildings or machines, and in spots you see lengths of pipe. The finest scrap, called shredded scrap or “frag,” looks like metal garden mulch or tea.

Several heaps hold discarded tails from brand-new wide-flange beams—generically called I-beams, though there are several different shapes. This is the basic unit of heavy steel construction for buildings. The 850-acre Nucor-Yamato plant, with its two gargantuan, parallel sheds, makes about 2.2 million tons of structural beams a year. In about four hours' time, 125 tons of the scrap in the yard here will be recycled into steel beams.

Inside the plant's hazy, Piranesian depths, 860 employees work 12-hour shifts—four days on, four days off. They tend exploding furnaces as big as brownstones, monster vats of molten steel, and more than a soccer field's worth of mills and presses that pound metal into shape. Out of the roaring machinery, ranks of near-perfect beams sidle off the line, glowing orange and gradually turning a cool gray.

Steel, the miracle metal of the industrial age, is iron alloyed to any of various elements to suit the desired purpose. That could be pipes, tubes, plates, rebar, bed frames, saucepans, or ship hulls—or, at the Nucor-Yamato plant, structural beams for building frames.

Steelmaking originally depended solely on the mining of iron ore. Yet because steel can be melted and remade almost infinitely, American industry recycles more steel than it does anything else. About 95 percent of the content in Nucor-Yamato's beams is metal that once existed as something else.

**In Nucor-Yamato's** scrap yard, piles of ferrous scrap, including discarded ends of beams and finely shredded metal fragments, lie ready for transporting into the plant, where they will be melted into liquid steel. Behind them stands the air-handling equipment that removes and treats hot, dusty exhaust from the melting operations.









## the scrap yard

Usually, in Blytheville, making steel begins by unloading scrap on the river, though some scrap arrives by truck or train. Barges pull up to the plant's port from up and down the Mississippi and Ohio rivers. Loads vary, but a single barge may hold up to 1,400 tons of shredded scrap. It takes two hours to empty—using a crane-like mechanical claw, known as a grappler, and, sometimes, an enormous magnet—into a fleet of Komatsu hauling trucks with wheels 7 feet high.

In the scrap yard, another grappler is at work. Equipped with a scale, it weighs the scrap—and,

sometimes, chunks of processed iron known as pig iron—while loading the piles into an armored vessel called a scrap charging bucket, which stands nearly 20 feet high and looks like a gigantic hand grenade. Nearly everything about the plant is audaciously large.

About 4,000 cubic feet of scrap fit in the bucket. It sits on wheels and, when full, is rolled into the plant and raised on an overhead crane affixed inside the plant's soaring roof structure. Traveling upward, it floats above the factory's maze of moving parts until its hinged clamshell bottom hangs over the lid of the furnace.

**On the rails,** a vessel known as a charging bucket arrives with a fresh load of scrap inside the plant's melting operation. It will be lifted by an overhead crane and carried to a spot above the electric arc furnace. The bucket's underside opens to drop the metal into the furnace for melting.







## the electric arc furnace

**Once the steel** is melted to about 3,000 degrees Fahrenheit and is ready for refining, it is "tapped" from the furnace down to a vessel called a ladle before being taken to the ladle metallurgy furnace. Employees in the control room, or tapping pulpit (at left), monitor the process.

Nucor-Yamato relies on a method of steelmaking called electric arc furnace, or EAF technology. The electric arc furnace proper is a big, dirty cauldron of fire. Its inner lining of refractory brick protects the rest of the furnace from melting in the heat.

When the furnace's roof pivots open, the charging bucket's hinged bottom doors fall open. The scrap crashes into the glowing orange void with a thunderous impact, and flames erupt above the furnace. The roof swings closed.

Three white-hot carbon electrodes, each two feet in diameter, descend through openings at the roof's center and strike an arc of electricity into the scrap. A storm begins: Clouds of fire and sparks burst out of gaps in the furnace roof as the electrodes subdue the steel into a blindingly hot porridge. A safe distance away, in

a windowed, heat-shielded control room or "pulpit," a worker known as a first helper watches several computer screens that report the status of the melting batch, known as a heat. The first helper tracks the temperature as it rises to about 3,000 degrees Fahrenheit. He also calculates carbon levels, which fall as oxygen levels rise. Higher carbon content makes steel more brittle. He waits for the carbon to reach a desired low of about 0.1 percent of the molten steel.

As the steel cooks, its foamy by-product, slag (consisting largely of lime), floats to the top and is skimmed off into a cone-shaped slag pot for processing into an aggregate for roadbeds. When the steel has melted, it is time for the "tap." A slot opens at the furnace's underside to empty the liquid into a wheeled vessel beneath it, known as a ladle.





SIGMA 14





**The ladle of liquid steel** rolls into the ladle metallurgy furnace (right in photo), and its chemistry is corrected according to the type of final steel product needed. Once this process is complete, an overhead crane (left) will carry the steel and pour it into the continuous caster for forming into rough beams.

**A ladle metallurgy** furnace operator (far right) in front of a steel ladle trolley.

## perfecting the mix

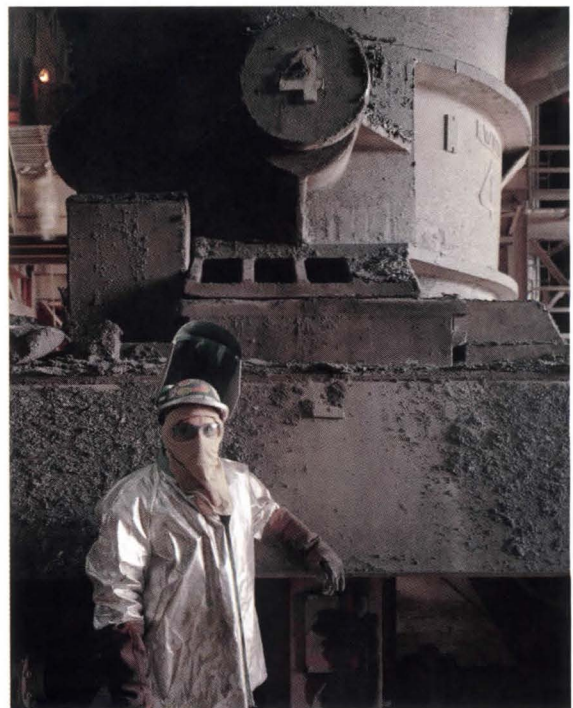
The molten steel filling the ladle is like a blank canvas; other elements, such as silicon, manganese, vanadium, and niobium, are added to create the specific chemistry desired for the final product. For structural beams, Nucor-Yamato makes a grade of steel known as A992, which, since it was first standardized in 1998, has been supplanting other grades (primarily one known as A36) as the standard for building frames because of its high yield strength and tensile strength, especially under seismic stress.

From the electric arc furnace, the ladle of molten steel is moved to the ladle metallurgy furnace for fine chemical tuning. The ladle has a porous plug at its base for pumping argon gas up through the liquid steel, causing it to bubble and stir, much as salad dressing is shaken to mix its ingredients.

When the batch is believed ready (after about 40 minutes), a sample about the size of a silver dollar is taken, cooled, and analyzed in an optical emission spectrometer. The spectrometer provides a kind of fingerprint showing the amounts of various elements. If they seem to fall in the correct range, the batch is ready to cast.

Jim Schoen, a plant metallurgist, has seen the ladle do its work countless times in more than 20 years of making steel. As he stands in the pulpit above the ladle and watches the steel agitate, he marvels at the consistency of the process, which runs 24 hours a day.

The steel mixtures “fall out of spec,” as he says, once maybe every two months.











## casting

**Red-hot wide-flange** beams (facing page) roll from the finishing mill, which gives them their final shape, toward large saws (at rear) to be cut into customized lengths for shipping. The saws can cut beams into lengths of up to about 125 feet. Some semifinished “beam blanks” (above) are set aside and stored in a large stockpile within the plant for future reheating and rolling into finished beam sections.

When the ladle rolls away from the second furnace, a pair of giant hooks lift it—still full of liquid steel—40 feet high, beyond a layer of gray stairs and catwalks, to be poured into its molds for crude shaping. Steel is poured from the ladle into a tub that divides it into two streams (another caster in the plant has four streams), each of which flows down a long mold, forming as a strand, before being cut to length by automatic gas torches at the bottom. The steel is alive, red-hot, and now in the rough form of a beam, called a beam blank or bloom.

Members of the technical staff know the temperature of the steel at all times. Just after casting, the steel registers near 1,800 degrees Fahrenheit. Sprays of water hit the beam blanks to help cool them to a solid state within minutes.

Some of the cooled ones are stockpiled for finishing later. Some go back in for reheating and final milling.

## finishing touches

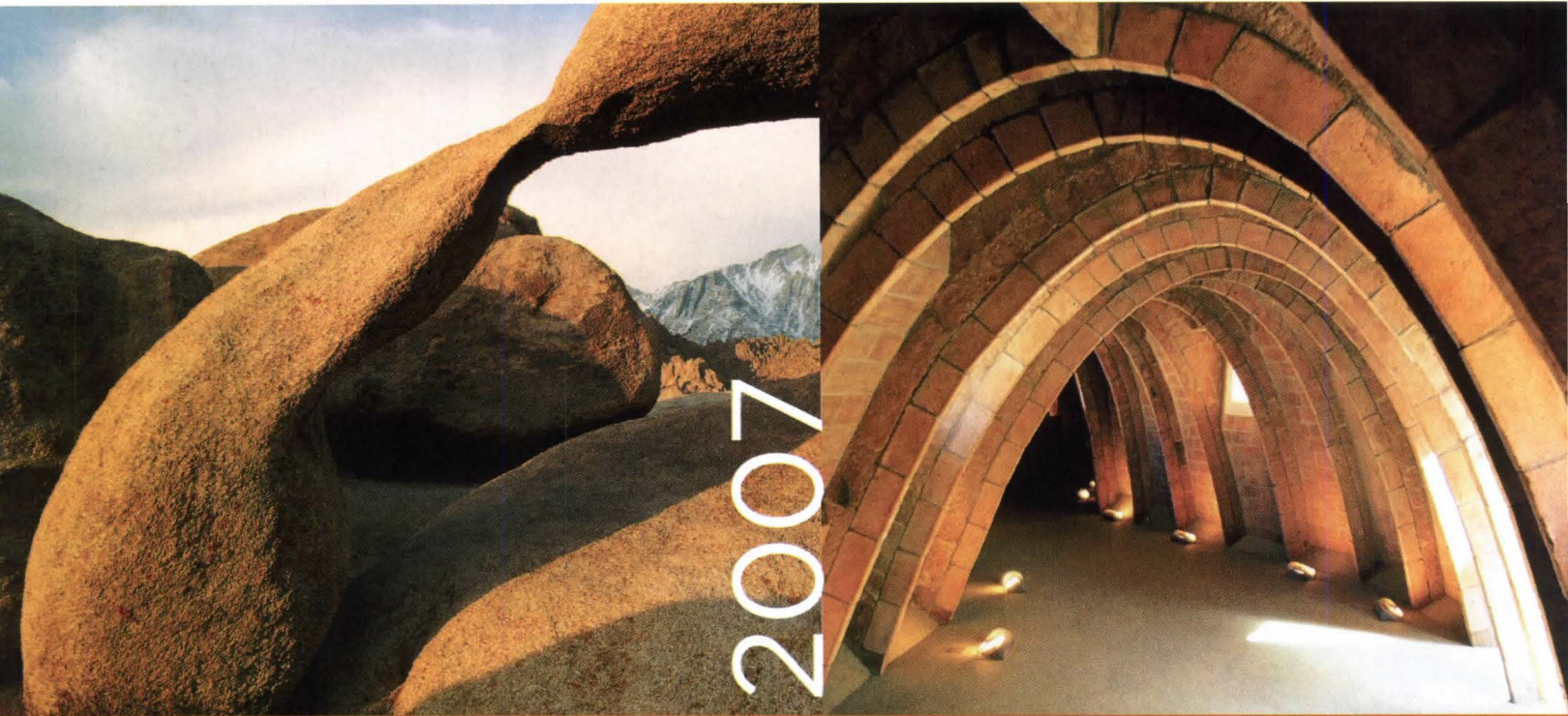
The beam blanks are sent into a 10-foot-deep gas oven and brought to about 2,100 degrees Fahrenheit. When hot again, they slide into the “breakdown mill,” where they are rolled violently back and forth like missiles within flatbed channels, and then through a series of fearsome machines that press them into the correct sizes.

The flanges of the nearly complete beams must be cooled to promote their ductility. A finishing mill evens them out, and a straightener prevents any bow, sweep, or camber along their 27-foot spans. With a terrific grind and a nebula of sparks, the beams are cut to lengths measuring anywhere from 30 feet to 80 feet. Finally, they are taken for shipping to steel fabricators, who ready them for construction.

The steel beam, mighty yet plastic, has been melted, muscled, and sculpted into a new life. “Remember,” Schoen points out, “this started out as a piece of scrap.”



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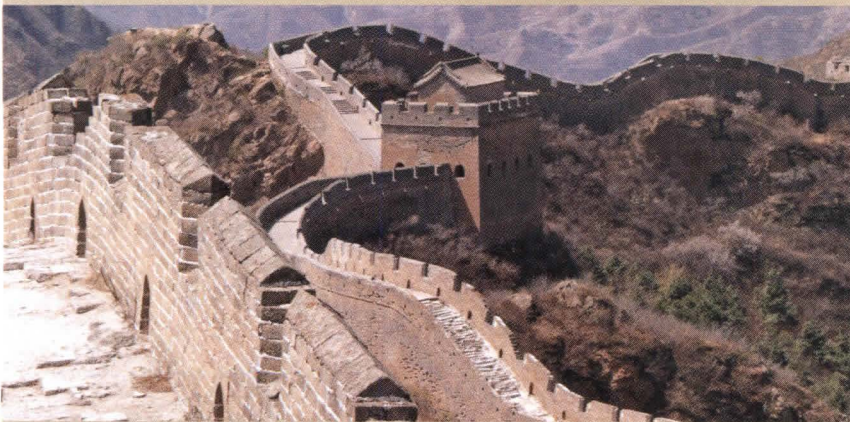
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**Barcelona Pavilion:**  
**Mies van der Rohe & Kolbe**

*Edited by Ursel Berger and Thomas Pavel*  
 The pavilion built for a chair, or so it seems at a distance, remains a milestone. This book pulls the building's daring planes—created for the 1928 World's Fair and reconstructed in 1986—back into view as a “flowing space” for the sculpture of Georg Kolbe. D.A.P.; \$60

**Eileen Gray**

*By Philippe Garner*  
 Irish designer, artist, and architect Eileen Gray (1878–1976) has remained in the shadow of modernism's decisive contemporaries, Le Corbusier and Marcel Breuer. But her lesser profile has not kept fans from striving to protect E-1027, one of two houses she designed in the south of France (the other is Tempe a Pailla). Author Garner, a 20th century decorative arts specialist, analyzes the full range of Gray's work, from furniture and interiors to completed buildings. Taschen; \$24.99

**Pedro E. Guerrero:**  
**A Photographer's Journey**

*By Pedro E. Guerrero*  
 Some of the most famous portraits of architects' houses were captured through Guerrero's incomparable lens. This book includes more than 190 shots taken over 60 years but is made richer by the voice of the photographer, who steps from behind the camera to comment on the quirky lives and tastes of his subjects. Beyond architects, Guerrero was a favorite of Alexander Calder and Julia Child, whose homes he captured for posterity. The concept of clutter is redeemed in Childs' undesigned kitchen and Calder's chaotic, but homey, Connecticut refuge. Princeton Architectural Press; \$55

**XS: Small Structures, Green Architecture**

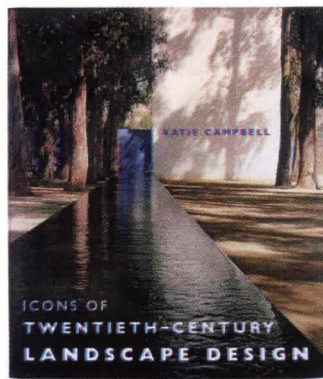
*By Phyllis Richardson*  
 There is no glum outlook for the planet in this lively compendium of antidotes to greenhouse gases, overconsumption of natural resources, and slovenly habits. Forty examples of tiny, often eccentric structures celebrate ingenuity on a budget. A sequel to the equally small XS: *Big Ideas, Small Buildings*, this book includes such familiar names as ShoP, Sean Godsell, and Thomas Heatherwick, and less familiar ones such as Nadar Khalili, who was once asked to design housing for an astronaut colony on the moon. Nifty projects attack issues of square footage with efficient use of resources, experimental materials, and outlandish forms. Amid the domes, honeycombs, inflatables, pavilions, and huts, a “sitooterie” is most inspired. Universe; \$49.95



**Doug Aitken: Sleepwalkers**

*Text by Klaus Biesenbach, Peter Eeley, and Doug Aitken*  
*Foreword by Glenn D. Lowry and Anne Pasternak*

The impact of video technology on architecture can no longer be ignored, as the Museum of Modern Art's recent installation with artist Doug Aitken and Creative Time showed in January and February. For a monthlong event called “Sleepwalkers,” eight continuous film sequences were projected onto six exterior walls of the New York museum, bringing minimalist surfaces to life as images of ordinary people made their way through the urban abyss. The rhythms and patterns of human activity are literally raised to new heights (over the Abby Aldrich Rockefeller Sculpture Garden), which can't help but put pressure on designers responsible for the streetscape. The city itself emerges as a dream-world of odd lighting, displaced people, and alien parking lots. Aitken's video art exposes a reality of importance to architects: Individuals create their own world within the official environment of concrete and glass. Which raises a signal question: Can a building be more than a backdrop? The book is the next best thing to sleepwalking in the city that never sleeps. D.A.P.; \$39.95



**Icons of Twentieth-Century Landscape Design**

*By Katie Campbell*  
 The rebellious nature of 29 radical designers is barely contained in this compelling survey of great 20th century landscapes. The mushroom-topped pavilions of Antonio Gaudi's Park Guell; Frank Lloyd Wright's Fallingwater, which merges with nature; and Le Corbusier's Villa Savoye, which rises above it, are concisely explained as benchmarks of design. Art inspired Roberto Burle Marx to plant abstract forms in Brazil, while Dan Kiley reveled in formalism in America. Of broader impact today are the landscape designs that sought to humanize the city through dramatic, if not so natural, works—Lawrence Halprin's waterfall plaza in Portland is just one example—and to accommodate industrial wastelands such as Richard Haas' transformed Gas Works Park in Seattle. No landscape reference book would be complete without Charles Jencks' Garden of Cosmic Speculation, and the only pity is that the architect's brilliantly evolving Scottish landforms get less space than Robert Smithson's ephemeral Spiral Jetty in Utah. Frances Lincoln Ltd. Publishers; \$45



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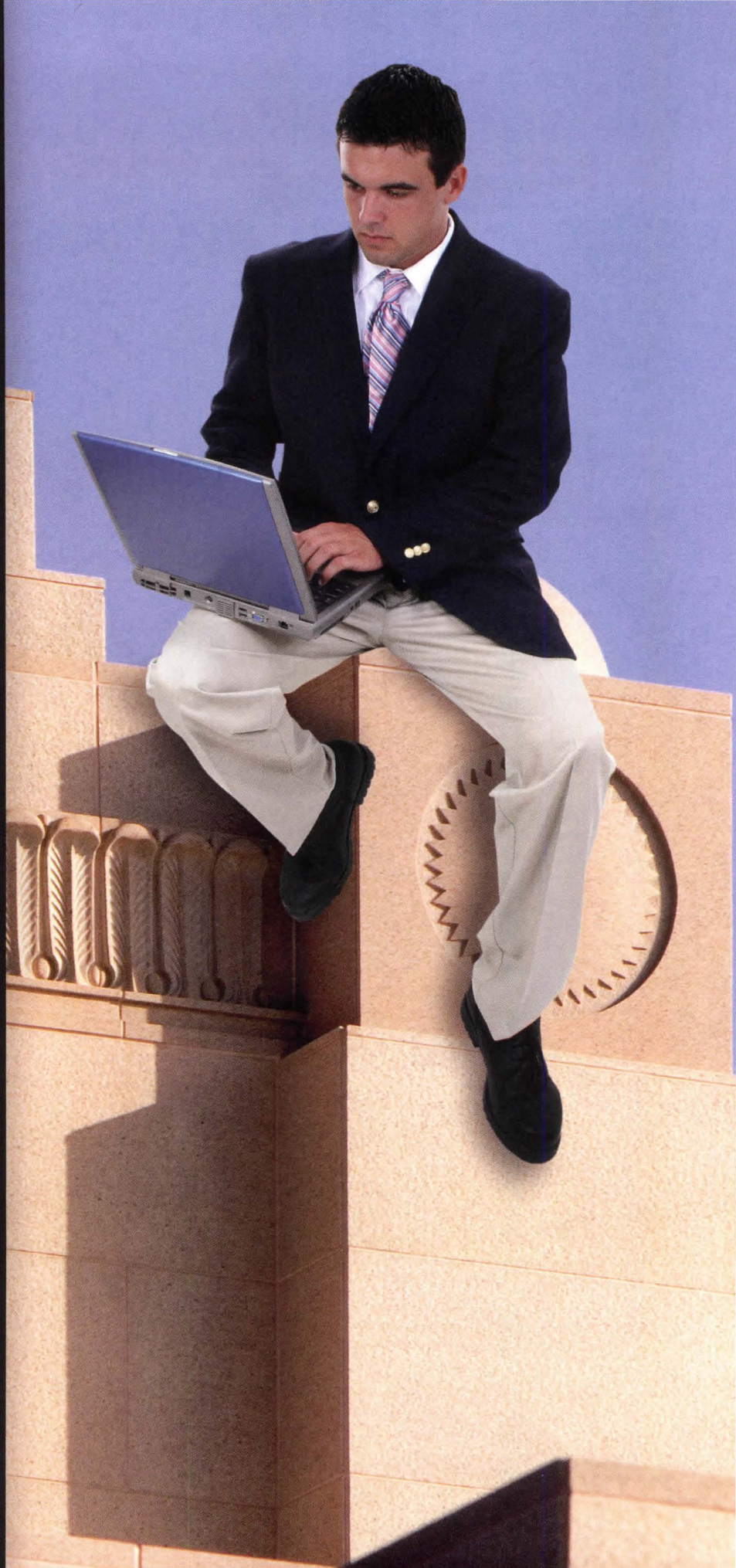
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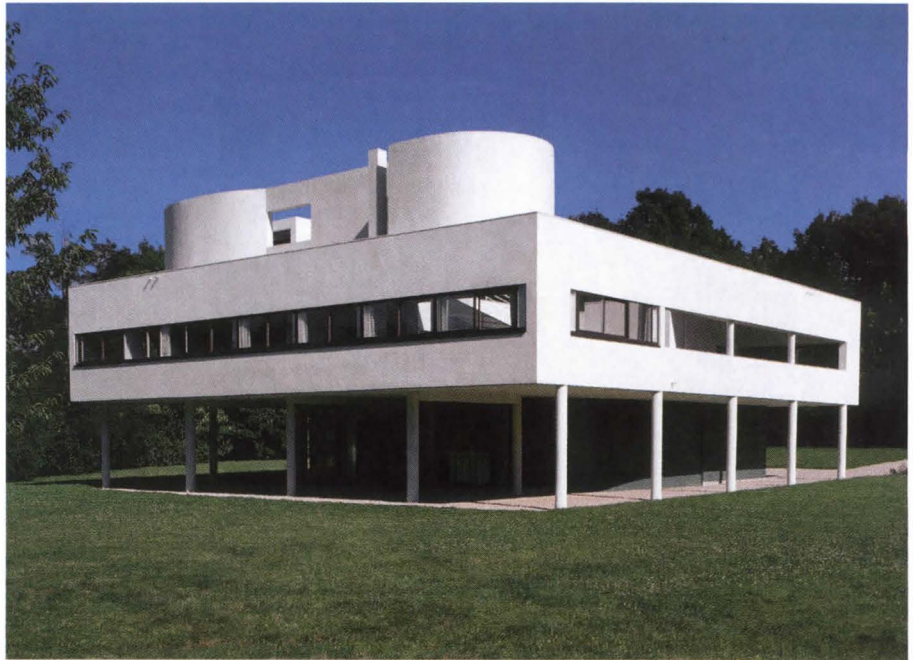
## Modernism: Designing a New World 1914–1939

Corcoran Gallery of Art

March 17–July 29

Utopian visions drove the modernists to white-walled distraction, sparking a professional passion for glass boxes that has yet to abate. This wide-ranging exhibition from London's Victoria & Albert Museum crosses the Atlantic with the most comprehensive collection of modernist models and prototypes ever assembled, including 17 originals by Le Corbusier, Gerrit Rietveld, Walter Gropius, Ludwig Mies van der Rohe, and Richard Neutra. In scholarly fashion, teacups and paintings get equal billing in the utopian construct of modern life as it was handed down to us. Twenty galleries dedicated to the evolution of Bauhaus theory will remind how the embrace of technology and the abandonment of ornamentation played out across art and design. Corcoran director Paul Greenhalgh notes that today, "Many of us have become very anxious about the lack of ideals in those arts that change people's lives." He recommends immersion in the heady ideals of the past—including a surprising interest in the environment, nature, and health—as inspiration for "the next modern, a rejuvenated idea of progress." *Above, right: Le Corbusier's Villa Savoye, Poissy, France, 1928; far right: Alvar Aalto's Paimio Chair, 1930; right: Naum Slutzky's Teapot, 1928.*

V&A IMAGES/VICTORIA AND ALBERT MUSEUM



FONDATION LE CORBUSIER



V&A IMAGES/VICTORIA AND ALBERT MUSEUM

ATLANTA

## Decorative Arts of the Kings High Museum of Art

March 3–September 2

The High Museum's three-year partnership with the Louvre brings Gobelin's tapestries, Sèvres porcelains, silver, and furniture from the courts of the three Louis (xiv, xv, and xvi) to Richard Meier and Renzo Piano's temple of modernism.

BARTLESVILLE, OKLA.

## Tokyo: The Imperial Capital Price Tower Arts Center

March 16–May 13

Woodblock prints by Koizumi Kishio preserve the frenzy of rebuilding efforts in Tokyo in the aftermath of a 1923 earthquake, which Frank Lloyd Wright's Imperial Hotel famously survived. Kishio's work, amassed in a traveling show from the Wolfsonian in Miami Beach, encompasses a then-modern airport as well as ancient temples.

CHICAGO

## Louis H. Sullivan: A System of Architectural Ornament, Part II Chicago Art Institute

March 4–June 8

Joseph Rosa, the Art Institute's curator of architecture and design, offers a second installment of Sullivan's pencil drawings: 10 more examples of the master's hand and eye for detail. They are originals for a print series of 20 produced between 1922 and 1923 and commissioned by the Art Institute's Burnham Library. Like the related manuscript "The Inorganic and Organic," Sullivan's final work, the drawings convey respect for the geometries of science and the curvilinear brilliance of nature.

## Young Chicago Chicago Art Institute Through April 29

Chicago's historic reputation as an incubator of fresh ideas is bolstered by

this exhibition of digital and conceptual work that Rosa assembled into his first exhibition at the Art Institute. Studio output from young architects, industrial designers, graphic artists, and fashion designers asserts Chicago's pivotal role on the national stage.

COLUMBUS, OHIO

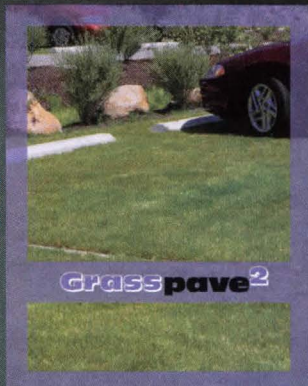
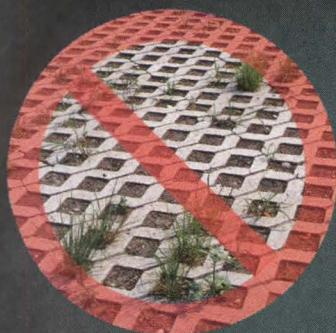
## Architecture Interruptus Wexner Center for the Arts Ohio State University

Through April 15

The Church of Saint Pierre in Firminy, France, was designed in the 1960s by Le Corbusier with José Oubrierie, then one of the master's young associates and now a professor of architecture at Ohio State University. Only now has Oubrierie been able to bring the project to fruition; the church opened last year. An exhibition and catalog convey the process and partnership in detailed sketches, photos, and drawings, as well as a new model.



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## HOLLYWOOD, CALIF.

**Some Assembly Required:  
Contemporary Fabricated Houses**

Pacific Design Center

February 28–May 13

If dreams of an Airstream trailer lurk in Steven Holl's shiny metal Turbulence House, a sunny day in Napa Valley must have inspired Michelle Kaufmann's Breezehouse. Six more forward-looking houses, some made from kits of parts, expose modularity at the edge.

## LONDON

**Surreal Things: Surrealism and Design**

Victoria &amp; Albert Museum

March 29–July 22

Architecture, design, and the decorative arts, seen through the prism of the 20th century's most bizarre arts movement.

## LONG ISLAND CITY, N.Y.

**Shin Banraisha: A Cultural Memory**

The Noguchi Museum

Through April 1

Isamu Noguchi and Yoshio Taniguchi designed the *Shin Banraisha* (Welcoming Space) for Tokyo's Keio University as a symbol of postwar regeneration. The room was dismantled in 2003 to make way for a new building. A few remaining traces—artifacts, furniture, and architectural elements—have been assembled at the Noguchi Museum, recreating a semblance of the sculptor's first interior.

## MIDLAND, MICH.

**Frank Lloyd Wright and the House Beautiful: Designing an American Way of Living**

Midland Center for the Arts

March 3–May 27

The legacy of Frank Lloyd Wright is preserved in a traveling exhibition of 100 original objects, including drawings, furniture, metal, textiles, and accessories from private and public collections as well as the Frank Lloyd Wright Foundation. A catalog with text by Virginia T. Boyd and Bruce Brooks Pfeiffer puts objects on the Wright pedestal.

## NEW HAVEN, CONN.

**Responding to Kahn: A Sculptural Conversation**

Yale University Art Gallery

Through July 8

Students and interns have gathered postwar sculpture from the collection to draw connections between modern art and architecture—in this case, the renovated 1953 Louis Kahn masterpiece, which reopened in December following a \$44 million rehab accomplished by Polshek Partnership Architects.

## PASADENA, CALIF.

**Open House: Architecture and Technology for Intelligent Living**

Art Center College of Design, April 14–July 1



MASS STUDIES

When 15 architects from nine countries are asked to rethink shelter for the next 25 years, apartments take on life as cells in a topiary-like tower commune, and an island in San Francisco Bay is reimagined as a wetland suitable for a jellyfish of a dwelling that filters and processes water, light, and pollutants. Curators culled from 100 entries to find a design from Tokyo, which proposes time-sharing unused space, a concept that could come in handy in suburbs where personal space often exceeds need. Amid the futuristic fantasies and 21st century materials, Escher Gunewardena Architecture of Los Angeles gets real, proposing a Livingkit to distribute knowledge from the First World cocoons of prosperity to those unfortunate millions who still lack sanitation, safe drinking water, and a decent shack to call home. *Above: Mass Studies' Seoul Commune 2026: Rethinking "Towers in the Park."*

**UN Studio: Evolution of Space**

Yale University School of Architecture

February 12 to May 4

The Amsterdam-based firm is best known for the Erasmus Bridge in Rotterdam and the Prince Claus Bridge in Utrecht in the Netherlands. This exhibition will include UN Studio's recently completed Mercedes-Benz Museum in Stuttgart, Germany.

## NEW YORK

**Bruno Mathsson: Architect and Designer**

Bard Graduate Center

March 22–June 10

A leading figure in Swedish modernism, Mathsson (1907–1988) designed sensuous furniture and environmentally sensitive buildings long before energy efficiency became design's new mantra. His blend of ergonomics and aesthetics can be seen in the graceful woven chairs on the catalog cover. The exhibition will move to Seattle's Swedish Cultural Center this summer.

**Design Life Now:  
National Design Triennial**

Cooper-Hewitt National Design Museum

Through July 29

For a third time, the Cooper-Hewitt has assembled a team of curators to assess contemporary design culture at the front

lines. Leading artists and practitioners point the way forward in disciplines as diverse as architecture, animation, medicine and robotics. Only the prosaic will be left behind.

## ROTTERDAM, NETHERLANDS

**Architecture of the Night:  
Luminous Buildings**Netherlands Architecture Institute  
Through May 6

A century of artificial light has transformed modern life. This exhibition begins with the novel choreography of illumination staged for the debut of the Eiffel Tower at the 1889 Exposition Universelle in Paris and progresses to the "light pollution" experienced in cities today.

## WASHINGTON, D.C.

**Architectural Textiles: Tent Bands  
of Central Asia**

Textile Museum

March 30–August 19

Nomadic life would not have been possible without the ingenious tent designs of Central Asia, now more than a millennium and a half old. Highly decorative woven bands wrapped the struts, providing the tension needed to brace the roof dome. Forty examples are on display in the historic mansion museum.



# THE FIRST ANNUAL R+D AWARDS

## CALL FOR ENTRIES

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The awards are equally open to architects, designers of all disciplines, engineers, manufacturers, researchers, and students.

### PUBLICATION

The winning entries will appear in the September 2007 issue of ARCHITECT, both in print and online.

### EVENT

Winners will present their ideas at the first annual **R+D Summit**, which will occur at **SCI-Arc in Los Angeles** on **October 4–5, 2007**. For more information about the event, visit [www.architectmagazine.com](http://www.architectmagazine.com) or email [r+dsummit@hanleywood.com](mailto:r+dsummit@hanleywood.com)

### DEADLINE

**Friday, May 18, 2007**  
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**Tuesday, May 22, 2007**  
late submission deadline (postmark, additional fee is required)

### FEE

**Subscribers:** \$100 first entry  
**Non-subscribers:** \$140 first entry (includes a one-year subscription to ARCHITECT)  
**Additional entries:** \$75 each  
**Late entries:** \$50 additional fee per entry by May 22, 2007

### PAPERWORK

Application forms and submission requirements are available for download in PDF format at [www.architectmagazine.com](http://www.architectmagazine.com)

### CATEGORIES

The awards will be judged in three categories, reflecting different stages of the research and development process:

- **Prototype**—Products, materials, and systems that are in the prototyping and testing phase
- **Production**—Products, materials, and systems that are available for use
- **Application**—Products, materials, and systems as used in a single architectural project or group of related architectural projects

The jury will consider new materials, products, and systems as well as unconventional uses of existing materials, products, and systems. Entries will be judged for their potential or documented innovation in fabrication, assembly, installation, and performance. All entries will be judged according to their potential to advance the aesthetic, environmental, social, and technological value of architecture.

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## CULTURE EVENTS



EMERGENT

**Emergent Architecture**

LOS ANGELES

MARCH 20

The public discussion group Outlet hosts Tom Wiscombe of the Los Angeles group Emergent to explain his biologically inspired model for architecture, along with a new formula for building logic: globalism, technology, and materiality instead of order, verticality, and façade. [www.outlet4arch.org](http://www.outlet4arch.org)

**Wolfsonian Weekend**

MIAMI

MARCH 2–4

The Wolfsonian-Florida International University honors Florence Knoll Bassett, Michael Graves, Nargis and Nasir Kassamali, Tupperware, and Dan Paul. [www.wolfsonian.org](http://www.wolfsonian.org)

**Green Design: The Myth and Reality**

WASHINGTON, D.C.

MARCH 7

Markku Siiskonen of Helsinki's planning department will explain his city's ambitious Viikki Community green housing development, the world's largest so far. [www.nbm.org](http://www.nbm.org)

**The European Fine Art Fair**

MAASTRICHT, NETHERLANDS

MARCH 9–18

The annual show and sale of extraordinary art promises an abundance of Asian art, porcelain, and sculpture. [www.tefaf.com](http://www.tefaf.com)

**Building Energy 2007: The Conference and Trade Show for Renewable Energy and Green Building Professionals**

BOSTON

MARCH 13–15

Discover why building for a changing climate matters. [www.buildingenergy.nesea.org](http://www.buildingenergy.nesea.org)

**Women in Architecture**

WASHINGTON, D.C.

MARCH 15

A reappraisal of the role of women in architecture by Gwendolyn Wright of Columbia, Cynthia Hammond of Concordia University, Susan Piedmont-Palladino of Virginia Tech, and Wanda Bubrick, director of the Beverly Willis Architecture Foundation. [www.nbm.org](http://www.nbm.org)

MARCH

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**Modernism at the Corcoran: A Scholarly Symposium**

WASHINGTON, D.C.

MARCH 30–31

Scholars will explore themes from "Modernism: Designing a New World 1914–1939," beginning with a lecture on "Utopia" by gallery director Paul Greenhalgh. [www.corcoran.org](http://www.corcoran.org)

**Make a Deal, Make a Difference**

LOS ANGELES

MARCH 21

A daylong investigation of strategies and best practices for developing L.A.'s emerging neighborhoods, including Hollywood, East Los Angeles, Downtown, and Inglewood. [www.uli-la.org/urbanmarketplace](http://www.uli-la.org/urbanmarketplace)

**Brandism: Strategy as Brand**

NEW YORK

MARCH 28

Third in a series of seminars devoted to the importance of branding in architecture. Michael Sorkin, Bernard Tschumi, Winka Dubbeldam, and developer Angelo Cosentini will investigate how the demands of real estate impact built volume. The next installments are scheduled for April 24, May 23, and June 27. [www.aiany.org](http://www.aiany.org)

**Architectural History Now**

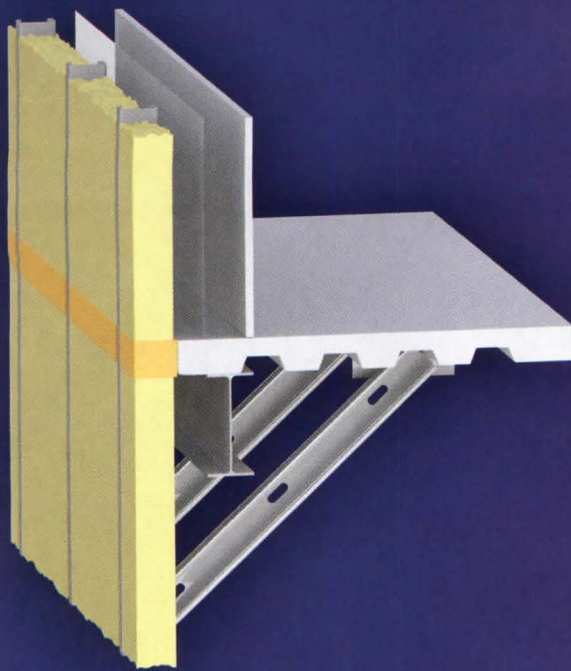
NEW YORK

MARCH 29

Cooper-Hewitt National Design Museum curator Matilda McQuaid convenes architects featured in the 2006 National Design Triennial, *Design Life Now*, for a panel discussion. [www.ndm.si.edu](http://www.ndm.si.edu)



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| 4                             | 3.5                          | R-13                         | R-6.0   | R-7.2   |
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| 6                             | 6.0                          | R-21                         | R-7.4   | R-9.0   |

Chart based on ASHRAE 90.1-2001 Table A-21

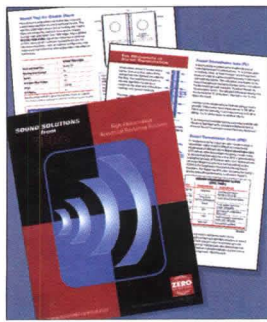
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**Design Studio Faculty search / 2006**

At a moment of significant design change within the School of Architecture and Planning at MIT, the Department of Architecture is searching for someone with a demonstrable talent and passion for the making and teaching of architecture, as well as the capacity to work within a vigorous research environment. The position to be filled is a tenure-track position in architectural design at the level of assistant or associate professor.

Dedicated to a humanistic and technologically sophisticated vision of design, MIT's Department of Architecture is uniquely positioned in a larger institution which strongly supports innovation and entrepreneurial activity. The structure of the Department of Architecture itself is unique in that each of the five disciplines (Design, History Theory & Criticism, Building Technology, Visual Arts, Computation) work at equal intensity throughout the department, creating an environment in which depth of knowledge and innovative research and scholarship fuse with the pedagogical agendas of the studios and ongoing design inquiry. Given this context, the Department of Architecture is explicitly committed to excellence in both pedagogical and research activities. Believing that the cross-current between the two creates a charged atmosphere for study and a critical edge for research, we are seeking candidates with an ability to thrive within this context.

Primary criteria for the position are proven excellence in the field of architectural design, experience in teaching design studios and strong promise of significant creative achievement in the field through design work, design inquiry, professional practice, or a combination thereof. An ability to advance our teaching and research among the following areas is desired: contemporary culture and theory; computational methodologies; sustainability; design, technology and media; and innovation in structure and material assemblies.

We are also seeking candidates with the character and energy to participate in the intellectual life of the department and readiness to teach both graduate and undergraduate studios. Initial screening will be conducted on the basis of: letter of interest that includes a list of possible references, curriculum vitae, and a ten page non-returnable portfolio of design work. We will begin reviewing applications Feb 15, 2007 with the intention of hiring for September 2007 or January 2008. Please send all materials to:

Chair, Design Search Committee  
Department of Architecture  
Room 10-491M, MIT  
77 Massachusetts Avenue, Cambridge, MA 02139  
fax: 617 253-9407



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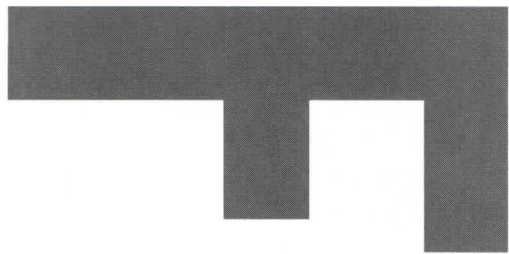
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Interview Laurie Manfra Photo Misha Gravenor

# PAUL TEICHOLZ

**After serving 30 years in construction management, what led you to establish the Center for Integrated Facility Engineering at Stanford?**

I observed that information management was the most powerful tool a construction company had to differentiate itself in terms of productivity. Paper drawings and specifications made it impossible to create an integrated approach. More academic work was needed to come up with the right tools for integration.

**What is the future of 2-D construction documents?**

Right now, they're legally required documents of record. Within the next 10 years, 3-D models will become the document of record.

**How does 3-D modeling improve jobsite productivity?**

Accurate geometry leads to greater productivity. All the pieces fit together on site, you can link your designs to off-site fabrication, and fewer problems come up in the field. It's possible, however, to go beyond that using information that's part of building information modeling [BIM], such as what the materials are, how to procure them, and how the building can be managed and maintained.

**What should architects do to cultivate a leading edge?**

Architects would benefit by working collaboratively with contractors who want to use building information modeling. They should get experience using BIM tools not just for design, but also to link to construction.

**What is the greatest challenge architects and engineers face in the next decade?**

First is to learn how to use modeling tools and reduce the time and cost of making a building by at least 25 percent. There has been no real change in our industry's productivity for the last 50 years. Second is to design buildings that are more sustainable and meet green building goals.

**How can architectural education be improved to address these challenges?**

There's too much emphasis placed on art and insufficient emphasis on how buildings perform and how they're constructed. I'd like to see architects work with BIM tools from the start of their education.

*Laurie Manfra is a freelance writer based in New York City.*





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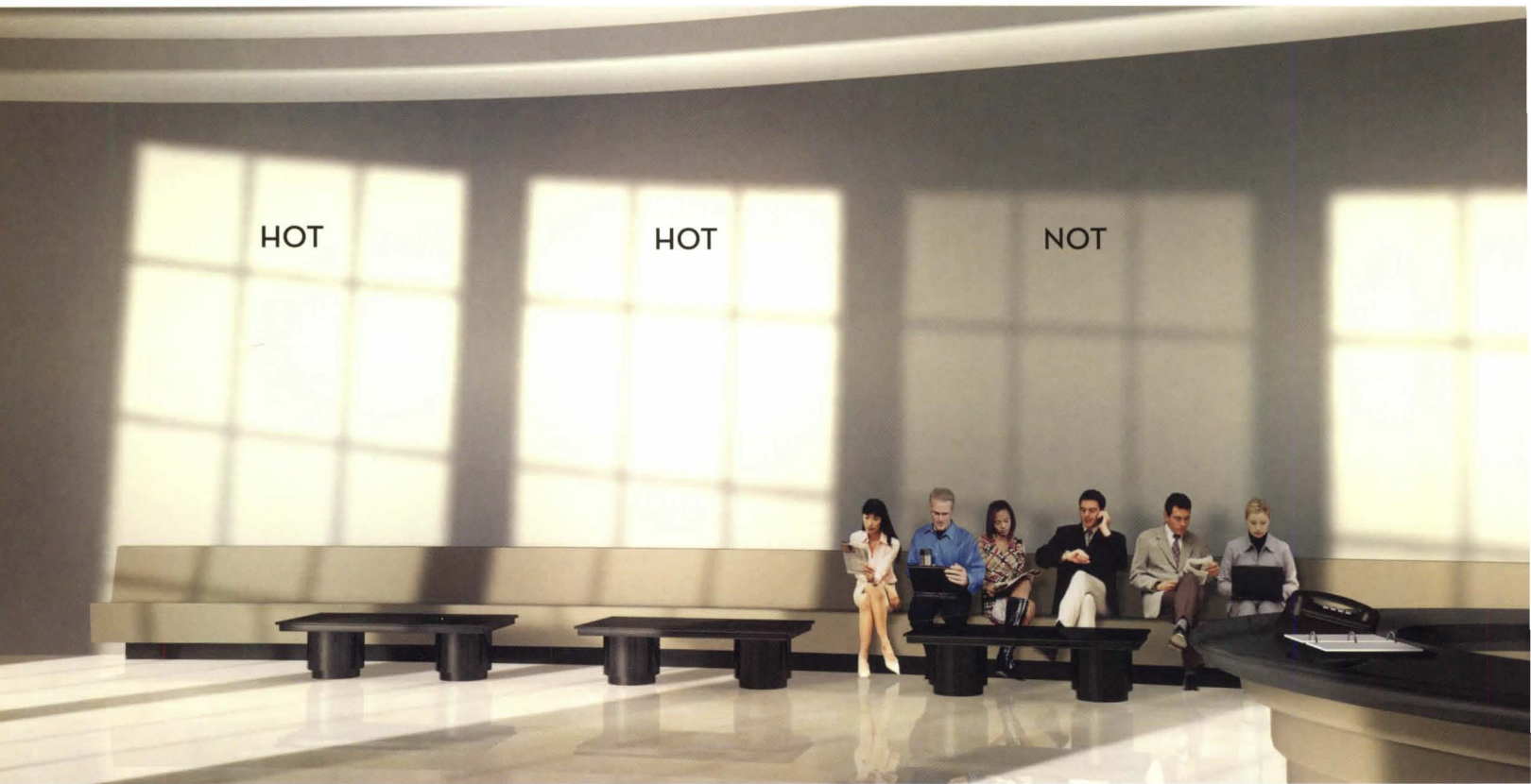
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