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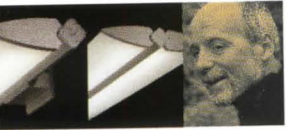
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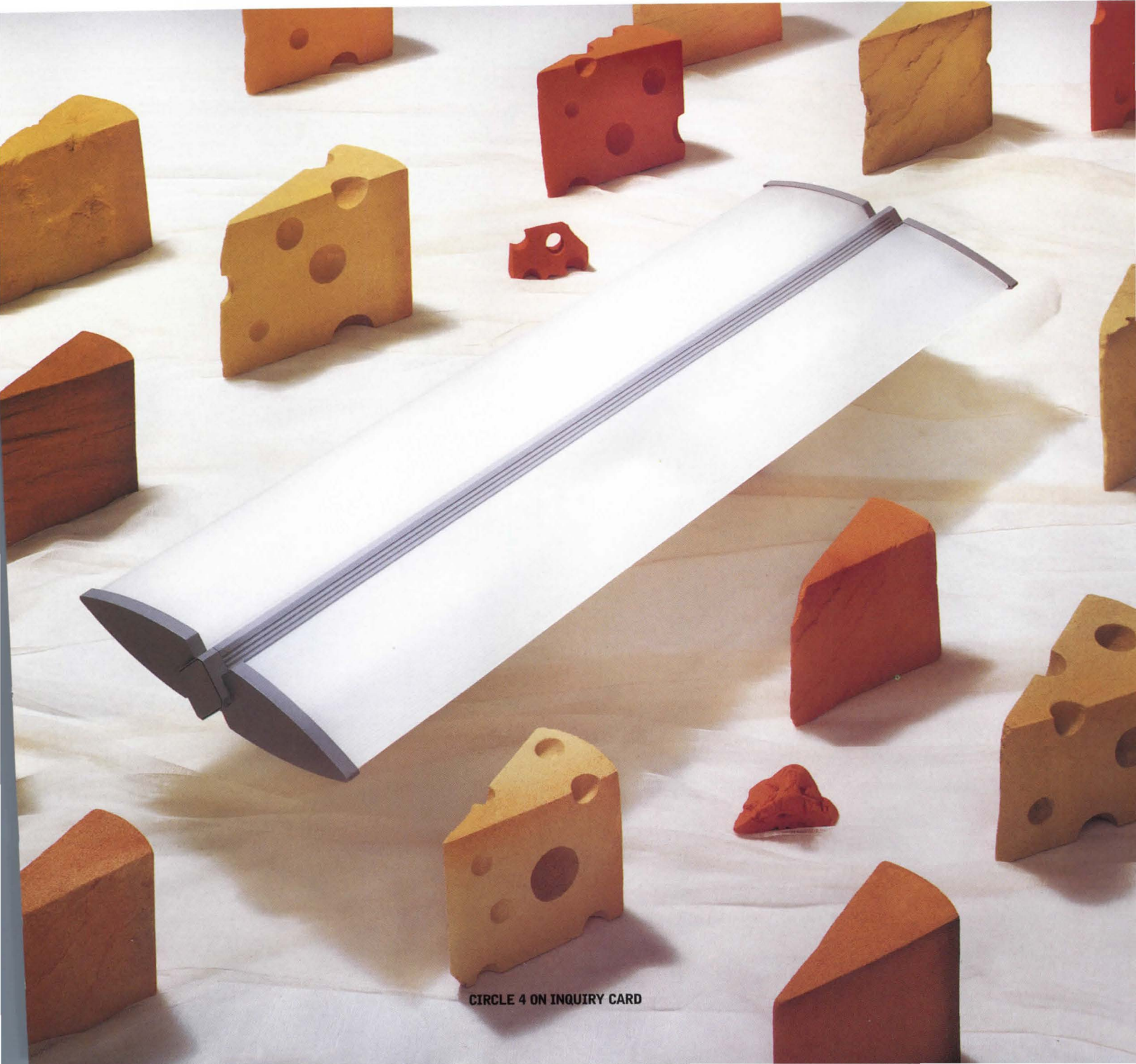


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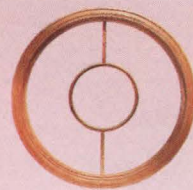
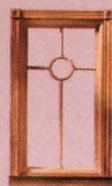
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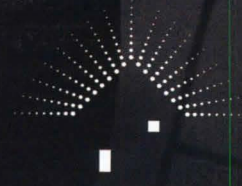


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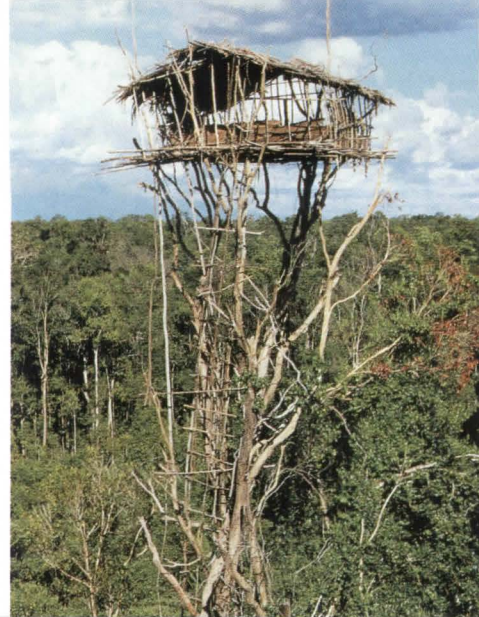
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## 04.2001



On the Cover: *Small House* by Kazuyo Sejima, Photograph by Shinken-chiku-sha  
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**WWW** \* You can find these stories at [www.architecturalrecord.com](http://www.architecturalrecord.com), including 10 unbuilt house as part of our RECORD HOUSES offering, which can be found in our Project section this month.



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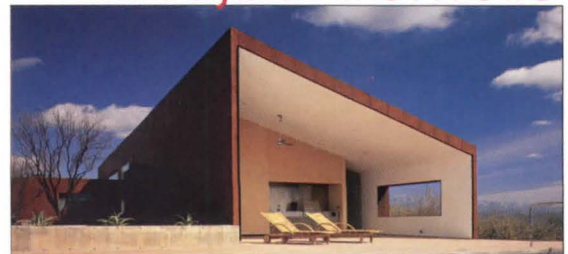


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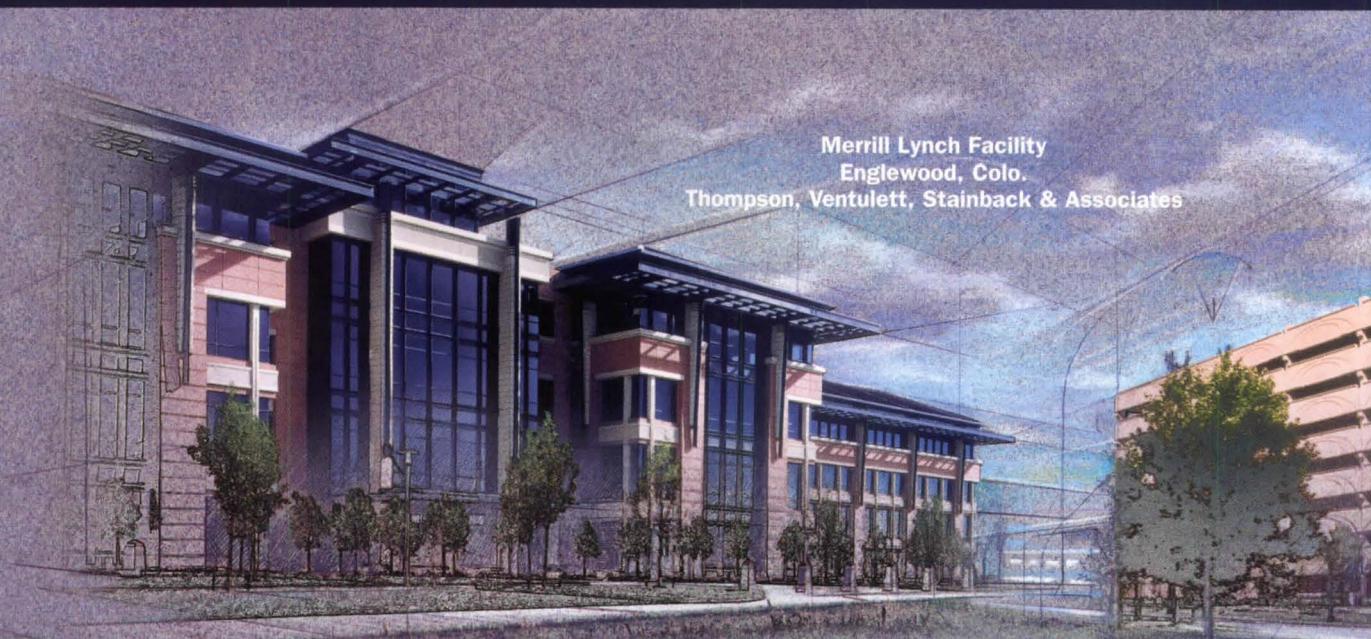
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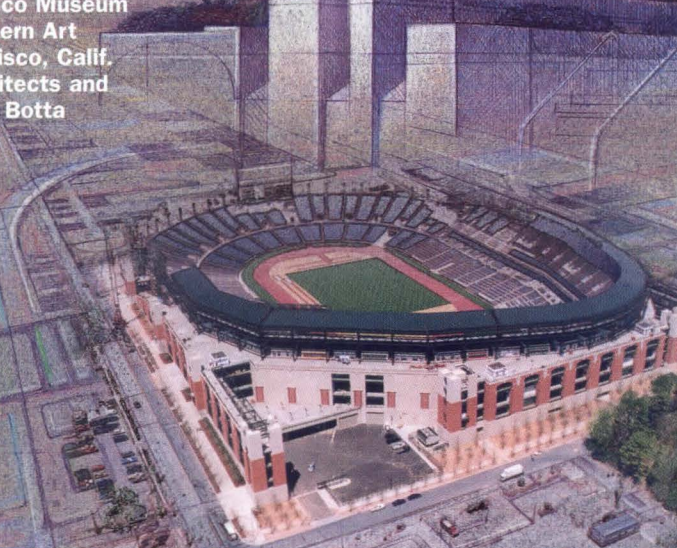
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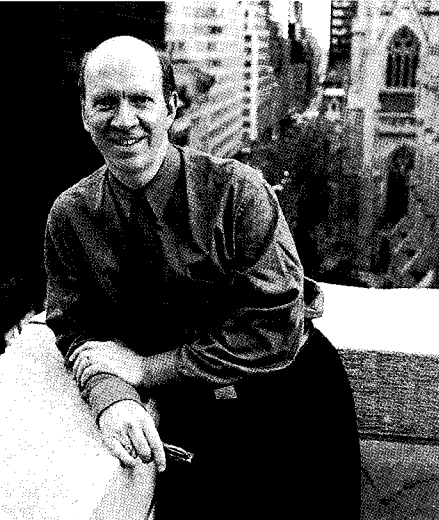
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## Editorial

By Robert Ivy, FAIA

**T**he loft on Broadway fell silent as Tarik Currimbhoy took the floor. Indian by birth, trained as an architect, he had gathered a small group of interested friends to share his slides from a visit to the Kutch region of Gujarat near the Pakistan border, site of the recent earthquake on January 26. For most, it would be the first realization of the scale of the quake's destruction. No one who sat in that room with its whirring projector was left untouched.

*His slides depicted the almost total collapse of the older building fabric, whether of adobe or masonry. Parts of the city of Bhuj were leveled; new structures in Ahmadabad, a city of two million, dropped to their metaphorical knees, listing and cracked. The death toll reached 20,000 persons and was rising; aftershocks could still be felt. All told, according to the Indian Department of Agriculture, 7,904 villages had been affected, and in addition to the dead, another 20,000 had been seriously injured. The odor of death rose like fetid incense from the rubble.*

*Jump to Seattle a month later. At 10:55 a.m. on February 28, the earth shook for 40 seconds, with waves hitting 6.8 on the Richter scale. "We had been waiting for that event for the last 10 to 15 years," said Dave Clark, AIA, chairman of the local AIA's Disaster Preparedness and Response Team. When the shaking stopped (with only two aftershocks of significance reported), Starbucks City awoke to peeled-off bricks, cracks in some streets, and falling plaster—a hefty \$1.5 billion worth of largely cosmetic damage. Miraculously, no deaths were directly attributed to the quake. Despite its force, the earthquake's deep origin had tempered the effects: Seattle got off light.*

*When asked what helped, Clark cited an extremely high level of awareness already present in the city. Local codes are rigorously enforced or even exceeded. For example, businesses and institutions sometimes call for more restrictive and expensive Zone 4 construction, when Zone 3 would suffice. Many older structures, those built prior to 1960, had been retrofitted for enhanced earthquake performance. A community of volunteer professionals like Clark, including 169 architects, engineers, and contractors, stood ready*

*to aid overtaxed municipalities in emergency evaluation. Seattle was ready.*

*In India, however, well-trained engineers and architects fell victim to a highly compromised system. Recent construction in the region often suffered from poor execution. Concrete, for example, lacked proper ratios of cement to sand and water, or proper curing and slump testing; in order to cut corners, contractors sometimes substituted smaller reinforcing steel rod than specified. "Soft" lower stories, whose floors lack shear walls, such as parking areas, weakened overall building stability and, when stressed, collapsed over their thin colonettes.*

*By contrast, in the Pacific Northwest, architects and engineers looked and learned from the Northridge and Loma Prieta quakes in California, and from Kobe, Japan's experience. Their scrutiny extended to how flexible a building can be and still retain a glazed curtain wall, for example, or how buildings that survive one quake can be overtaxed in a second occurrence. They understood how the roofs of ordinary tilt-up warehouses can be attached to the panels of the walls themselves to avoid collapse—a mundane detail, perhaps, but such simple lessons avoided massive interruptions in supplying the goods and services of normal life.*

*A culture, an ocean, and the subcontinent lie between Gujarat and Seattle, but a restless, molten core connects them. What happened in Kutch and in the state of Washington deserves our professional attention and our concerted focus, since human intervention into nature proved dangerous in one place and benign in another on a massive scale. These events provide a living textbook for architects on the immediacy and vital importance of well-designed and well-executed structures. For as certainly as we share this life-saving knowledge, the earth will shake again.*

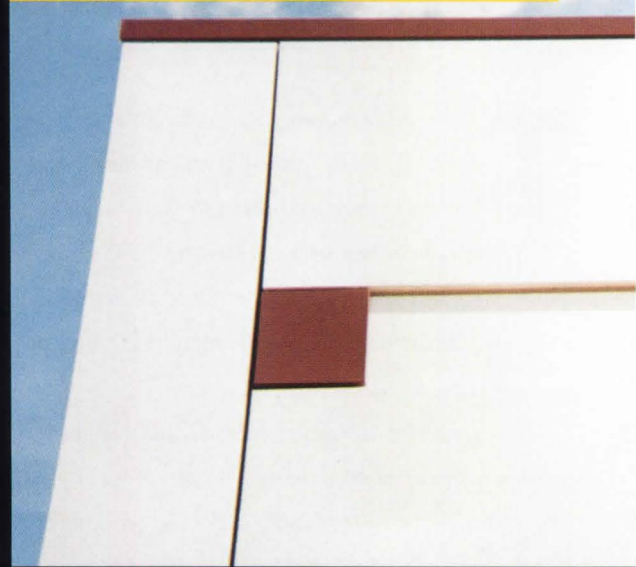


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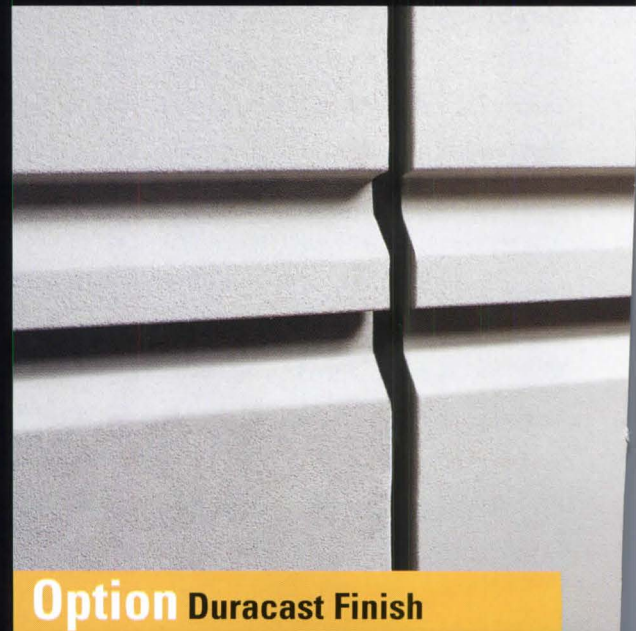
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**Option** Integrated C/S Louvers



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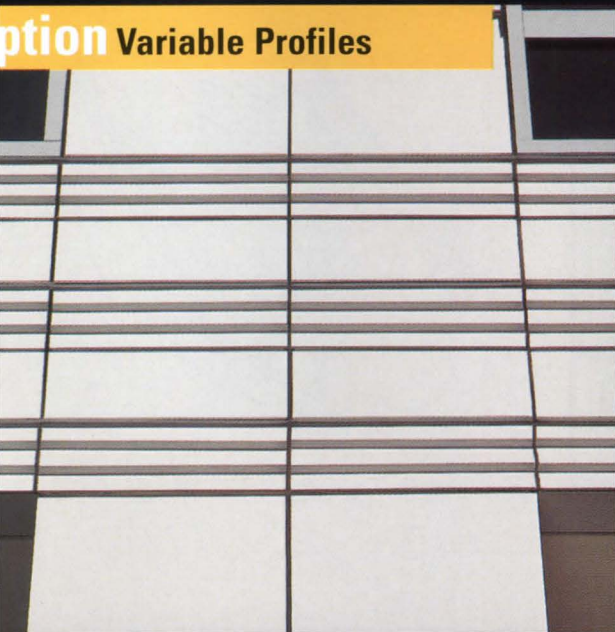
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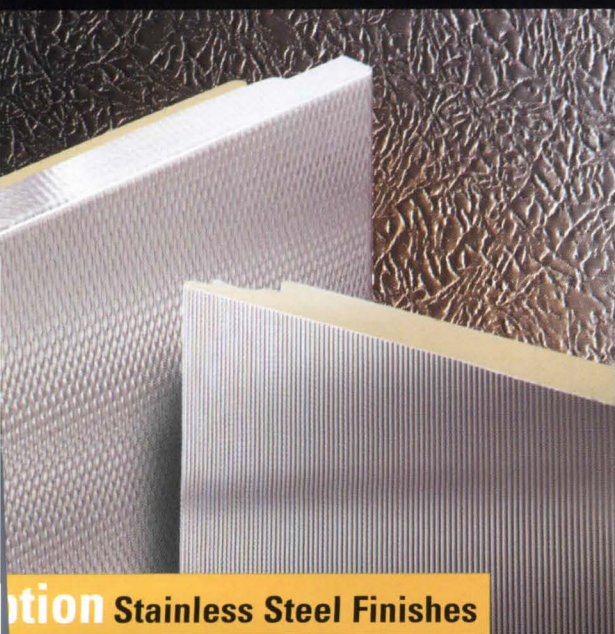
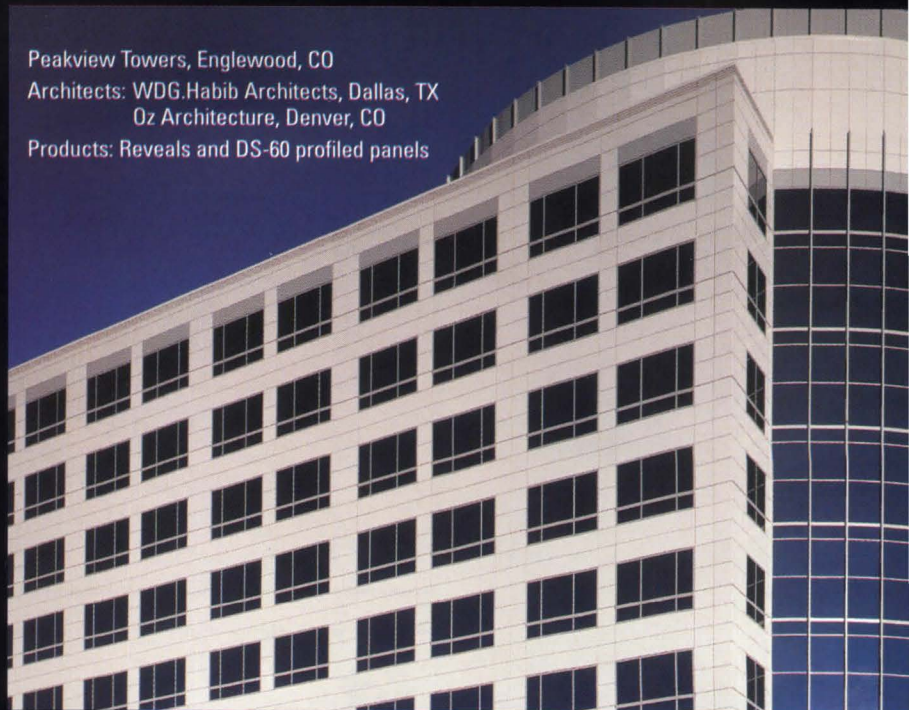
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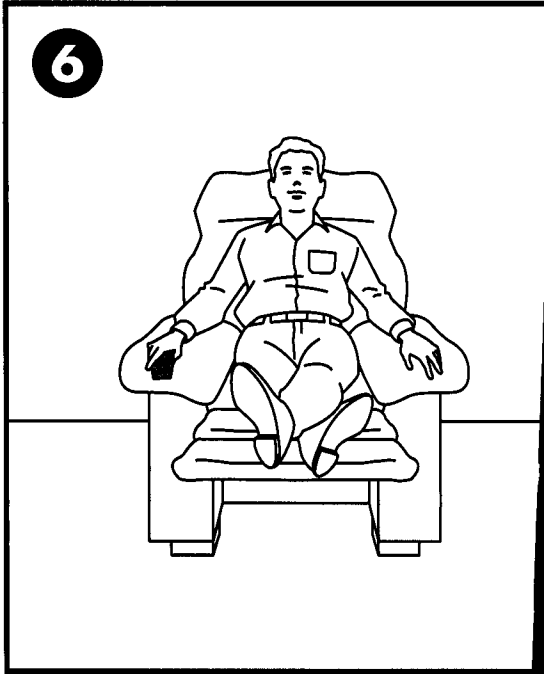
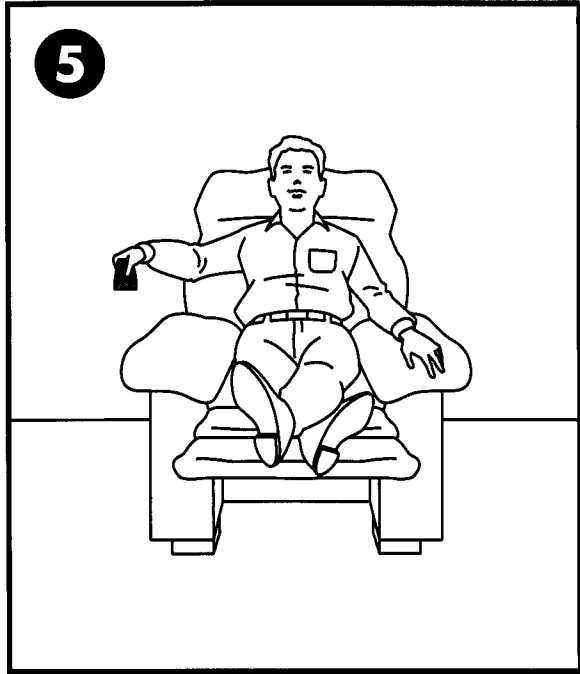
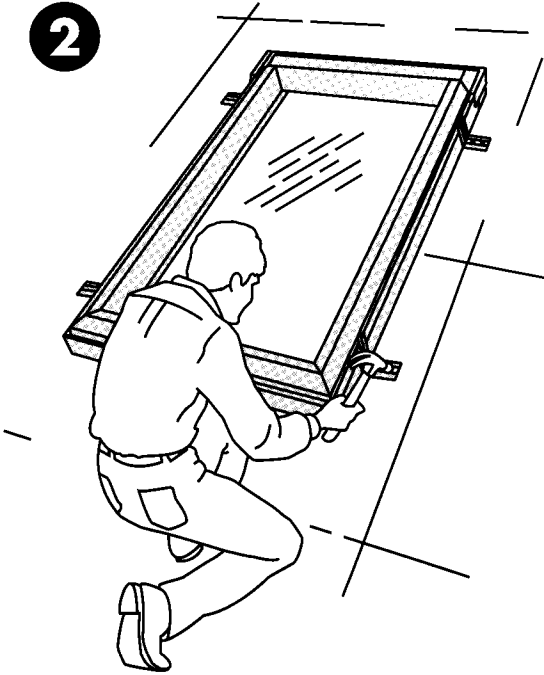
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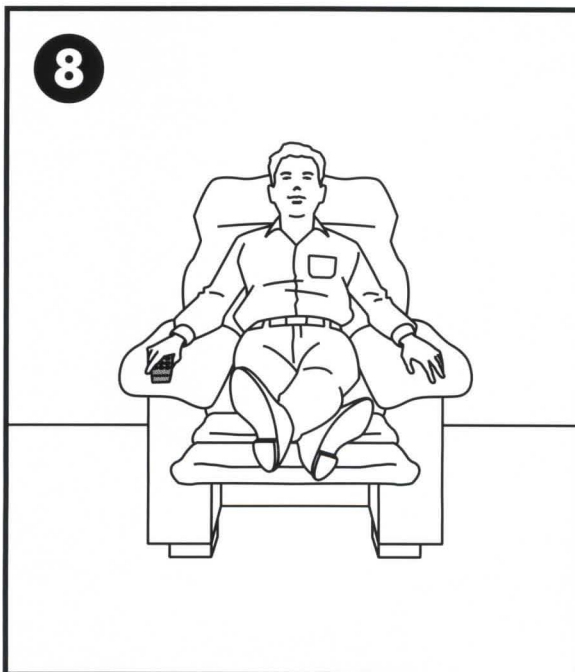
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# Letters

## Youthquake

I enjoyed viewing your first edition of *archrecord2* [MARCH 2000, page 47], especially the images of the young architects' work you included.

I appreciate your efforts to reach out to the next generation of architects. In future issues, it would also be fun to read writing by younger architects.

—Karin Pitman, AIA

*Vice-Chair, YAF Advisory Committee*

## Market—right on target

In your story about marketing [Marketing, part I, FEBRUARY 2001, page 66], your keen perception of the differences between technical professionals and administrative marketing types—an ongoing source of debate for so long—will, I hope, prompt some serious dialogue.

As someone working in the AE industry for many years, I jumped into the marketing side of the industry with a degree in architecture, thinking that my technical/design background might be advantageous in leading internal marketing functions and communicating AE services in the language of design professionals. I am glad that ARCHITECTURAL RECORD has recognized the challenges faced by people in marketing positions, and I am simply jumping-out-of-my-skin joyful that you have decided to take on this topic.

—Lyn A. Foster

*AE Market Planning Consultant  
ArchiPro, Inc.*

*Miami, Fla.*

I thoroughly enjoyed part 1 of "Marketing: The Unsung Heroine of

Successful Architectural Practice."

As a nonlicensed female marketing professional for 13 years with an emphasis in client management, sales, and business development, I felt this article put into words what I have always known but could not effectively express.

What a delight to see ARCHITECTURAL RECORD focus on this important, yet often overlooked, part of the industry. Thank you.

—Lori Ann Worthington

*Client Manager  
Hart Freeland Roberts  
via E-mail*

## Schools, listen up!

The Building Types Study and the Building Science and Technology features on school construction from the FEBRUARY 2001 issue

[Essay, page 131 and 155] both fail to consider a critical architectural barrier to effective childhood education: that of poor classroom acoustics. In fact, studies show that unsatisfactory environmental conditions in schools are led by acoustics deficiencies, experienced by almost 30 percent of responding school systems located in both old and new structures.

Learning is impeded when sound is obscured by excessive reverberation and background noise in classrooms. At particular risk are kids whose first language is not English, kids with temporary or permanent hearing loss, kids with learning disabilities, and very young children.

For the past three years, the U.S. Access Board has been collaborating with educators, acousticians,

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audiologists, architects, and product manufacturers to develop an ANSI standard on classroom acoustics. A draft standard is currently being balloted. The board has made a commitment to seek implementation of the standard when approved through the model codes, Department of Education rule-making, or by incorporation into standards issued under the Americans with Disabilities Act (see [access-board.gov/publications/acoustic-factsheet.htm](http://access-board.gov/publications/acoustic-factsheet.htm) for more information).

Design and modeling software available today makes it easier to achieve acoustically favorable classrooms. Additionally, a wide range of absorptive materials and quieter HVAC systems make it possible to meet ANSI/ASA recommendations at reasonable cost and without aesthetic penalties. Interestingly, though, the proposed standard does not really raise the bar on classroom acoustic performance: My 1973 copy of M. David Egan's *Architectural Acoustics* recommends similar values for classrooms

that include mainstream youngsters. It's a great text for architects who may need to go back to school on this issue.

—Lois E.L. Thibault  
*Coordinator of Research  
 U.S. Architectural and Transportation  
 Barriers Compliance Board  
 Washington, D.C.*

**Can't touch this**

Congratulations to Juhani Pallasmaa [JANUARY 2001, Critique, page 51], a voice of sanity among the cacophony of market-driven, lavish images that titillate both the profession and the public.

Let us be clear—a collective vision has been abandoned for the sake of individualist uniqueness, even as the AIA touts "Creating Community" in its Denver convention guide. Our hedonistic culture, driving a consumer society, cannot respond easily to Pallasmaa, who questions a "mistaken notion of freedom" and asks for "noble constraint" and "combined humility and pride."

These words are seldom heard

in the educational establishment, as it is absorbed in literary theories, (French post-structuralism, etc.), in obscure language, and in shaping complex fashionable constructions in cyberspace rather than on *terra firma*. The media is the message.

—George Anselevicius, FAIA  
*Dean Emeritus  
 University of New Mexico*

**Not dreaming of digital**

I found the coupling of "Projects," [DECEMBER 2000, page 81] and "Challenges for the Digital Generation" [page 166] to be profound. Not only do the majority of projects seem inhumane in scale and form but the ultimate expressions of subjugation to CADism.

In our community the state of architecture is generally rated at less than mediocre. Unfortunately, the private and public client base has falsely assumed that mediocre is desirable, and is suspect of an architect's ability if he does not use a CAD system. At 63, I often respond to questions of retirement

with the retort, "I will when I fall on my pencil." Seems more poetic than "falling on my mouse."

—R.E. Townsley, AIA, NCARB  
*Huntsville, Ala.*

**Corrections**

The interlayer used in the lamination for the lens ceiling over the Special Proceedings Room in the Sandra Day O'Connor U.S. Courthouse [MARCH 2001, page 185] was Sentry Glass Plus, supplied exclusively by Dupont. In News [MARCH 2001], the statue on top of Philadelphia's City Hall is of William Penn, not Benjamin Franklin. The City of Cultures Museum, which David Chipperfield is to design, is located in Milan, not Madrid [News, FEBRUARY 2001, page 47]. In the same issue, the name of one of Marlon Blackwell's assistants, Philip E. Hadfield, was misspelled [Projects, pages 94 and 95]. In "Digital Architect," [MARCH 2001, page 173] the fact that McGraw-Hill is an investor in e-Builder was left out.

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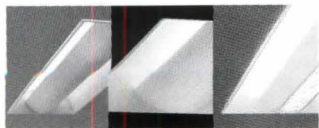
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CIRCLE 14 ON INQUIRY CARD



## 34 top architects selected for Hamptons houses

A model for contemporary housing design at the start of the 21st century may begin to take shape in the Hamptons on Long Island, N.Y. Developer Coco Brown has selected 34 architects (see list at right), each of whom will design a house for his latest development in Sagaponac, Long Island. Called the Houses at Sagaponac, the development will showcase some of the best architectural talent in the United States at this time.

"I think this will be somewhere between something very nice and the most important architectural event of the 21st century," says Brown, a former screenwriter who made a fortune in real estate in the Los Angeles area. In 1994 Brown purchased 100 already-subdivided acres in Sagaponac. He waited, watched the real-estate market, and decided to create an antidote to the poorly designed, out-of-scale mansions springing up in the Hamptons that, he says, are "financial, social, and artistic disasters."

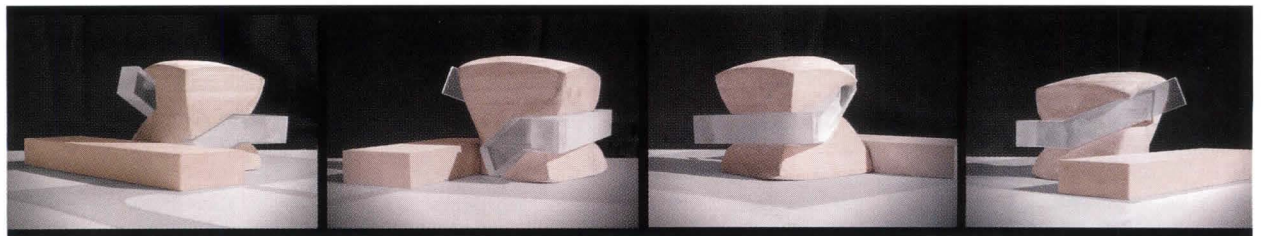
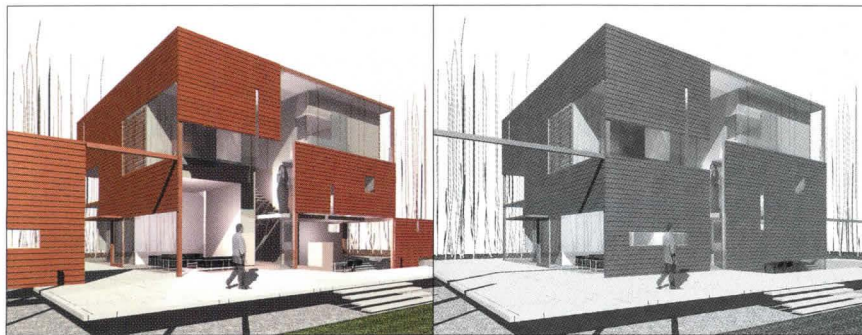
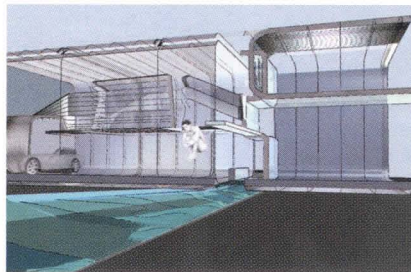
Brown asked his friend, architect Richard Meier, FAIA, to assist in selecting visionary architects (see interview with Meier on the following page). Meier will design one of the houses himself and is advising Brown without a fee.

Meier called upon many younger architects, some of whom have never had a freestanding house built, such as Jesse Reiser and Nanako Umemoto. The mix, with 23 New York architects, includes a few of Meier's contemporaries and friends. Peter Eisenman, for example, plans to build a variation on his unbuilt House IV. Henry Cobb has never had a house built before.

In terms of guidelines, architects were simply directed to be conscious of site, scale, and budget. Construction on the 1½- to 3-acre lots will begin within months, and the first house will be complete by the end of the year. According to Brown,

houses will range from 1,800 to 4,500 square feet and will cost from \$750,000 to \$2.5 million—relatively modest by Hamptons standards. Potential buyers will be matched with a house that meets their needs.

"What we may be doing," Brown asserts, "is creating a new model for a summer house."  
*John E. Czarnecki, Assoc. AIA*



**Houses in the Sagaponac development will include (from top) the first freestanding house built by Jesse Reiser and Nanako Umemoto; a home by Lindy Roy with a "water zone" including an integrated pool and diving platform; a design by Stephen Kanner with panels that can be opened and closed; and a sculptural house by Eric Owen Moss that is enveloped by a walkway and stair.**

### HANDPICKED BY MEIER

Richard Meier and Coco Brown selected the following architects to design houses at Sagaponac:

1. Al-Sayed and Grybaitis
2. Stan Allen
3. Anthony Ames
4. Deborah Berke
5. Henry N. Cobb
6. Francois de Menil
7. Peter Eisenman
8. James Inigo Freed
9. Richard Gluckman
10. Michael Graves
11. Charles Gwathmey
12. Hanrahan and Myers
13. Hariri and Hariri
14. Steven Harris
15. Hodgetts and Fung
16. Steven Holl
17. Carlos Jimenez
18. Robert Kahn
19. Stephen Kanner
20. Mark Mack
21. Richard Meier
22. Samuel Mockbee
23. Eric Owen Moss
24. Thomas Phifer
25. Reiser and Umemoto
26. Jacquelin Robertson
27. Richard Rogers
28. Rotondi and Stevens
29. Dan Rowen
30. Lindy Roy
31. Annabelle Selldorf
32. Smith-Miller + Hawkinson
33. Tsao and McKown
34. Williams and Tsien



## Record News

### Herzog & de Meuron win Pritzker Prize

Jacques Herzog and Pierre de Meuron of Switzerland were named recipients of the 2001 Pritzker Architecture Prize on April 2. The award ceremony is May 7 at Monticello. For more, visit [www.archrecord.com](http://www.archrecord.com).

### OFF THE RECORD

The Akron Art Museum has announced a shortlist of three firms to design a 50,000-square-foot building adjacent to its existing 1899 museum. The firms are Coop Himmelblau of Vienna, Snøhetta of Oslo, and UN Studio of Amsterdam. Construction, scheduled to begin in 2003, will likely be complete in spring 2005.

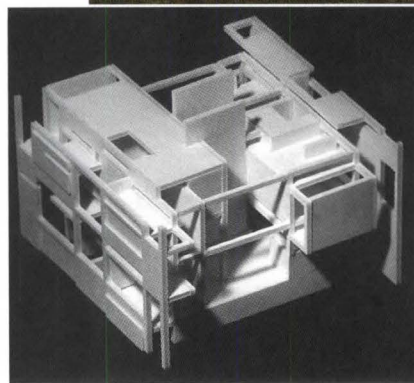
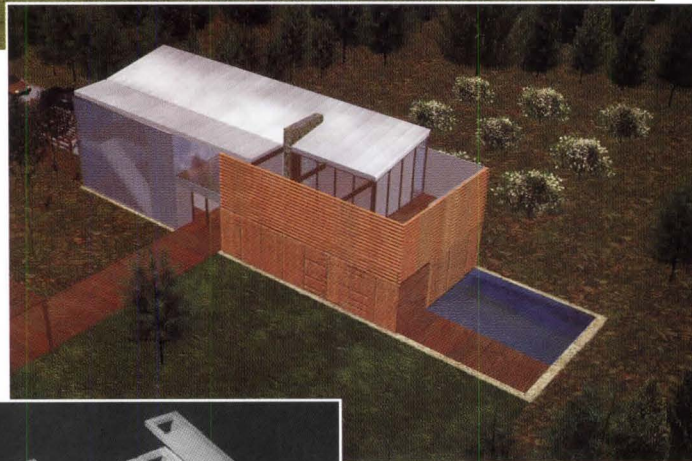
Finalists in the competition for a new home for the Rensselaer Polytechnic Institute's Electronic Media and Performing Arts Center building are: Nicholas Grimshaw, Thom Mayne of Morphosis, Thomas Lesser with Davis Brody Bond, and Bernard Tschumi.

Judith DiMaio was named dean of the School of Architecture and Design at New York Institute of Technology. She was previously director of undergraduate studies in architecture at Yale.

Toronto interior design firm Yabu Pushelberg was selected to redesign the interiors of Tiffany & Co.'s New York flagship store on Fifth Avenue. The project, which should be complete in 2004, is expected to cost \$71 million.

The Dallas Museum of Natural History announced Frank Gehry, FAIA, as the architect for its new 100,000-square-foot, \$100 million building.

From the "I Can't Relate" file: Bill Gates, feeling cramped in his 48,160-



Houses at Sagaponac will include one by Thomas Phifer (top) that will be nearly completely underground with a glassy courtyard above, a house by Gluckman Mayner (above), and a variation on Peter Eisenman's House IV (left) that was designed in the 1970s but never built.

## Hamptons development, according to Meier

Richard Meier, FAIA, met with RECORD news editor John Czarnecki, Assoc. AIA, to discuss the Sagaponac development in Long Island (see story, previous page). Meier assisted his friend, developer Coco Brown, in the selection of 34 architects, each of whom will design a house at Sagaponac.

### ARCHITECTURAL RECORD:

Can you explain the architect selection process?

**RICHARD MEIER:** It was totally irrational [he grins]. I began by thinking about it as only younger people, in all frankness, and not even neces-

made it a bit different, and so there are some older people who had never done a house before (Henry Cobb) and some that I respect and am personally close to, like Charlie Gwathmey and Peter Eisenman and Michael Graves.

**AR:** Did you have specific goals for the project at the onset?

**RM:** The goals were really to have everyone produce their best work in a setting that wasn't isolated—a kind of coming together of a very diverse group. To give them an opportunity that perhaps they have not had because they teach or are busy with other projects.

**AR:** The architects were given few

kind of exercise shouldn't have them.

**AR:** Will the mix of architectural styles be somewhat eclectic?

**RM:** Actually, it won't be as eclectic as you think. For the most part, there is a shared attitude among the architects about architecture as an art, as something that is not of the past but has some meaning in terms of our times. To some

degree, they have a shared sensitivity, although expressed very differently. In the designs I've seen thus far, there's a respect for human scale in all of them. Not one is outrageous or inappropriate.

**AR:** Now that the architects have submitted schematic designs, are you working with Coco Brown to review them?

**RM:** They all pass by me, but I'm not editing or criticizing them. I'm just commenting in a very casual way, not as a critic.

**AR:** But if there were concerns of any kind . . .

**RM:** If there were concerns, I'd be there to give guidance. I feel my purpose is to guide it the best way I can without being totally involved in it. It's very thin ice I'm walking on here because I want it to be as good as possible and I want everyone to feel that they are on their own. I'm not here to shepherd it in any way. But if someone went too far afield, I'd try to bring them back.

**AR:** Is it fair to compare this to the 1927 Mies-planned Weissenhofsiedlung in Stuttgart, Germany?

**RM:** No—nothing to do with that.


**AR:** So you have not made that comparison, as some have suggested?

**RM:** No.

**AR:** In a New York Times story about this development, your friend Charles Gwathmey said: "I'm just not sure what the point is in putting a lot of exercised houses close together on a nondescript site." So, what would you say the point is?

**RM:** The point is to give talented, thoughtful, namely young architects an opportunity to do something that they hadn't been able to do before



A white, rectangular bathtub is positioned on a concrete patio overlooking a vast, calm blue ocean under a clear sky. The bathtub is empty and sits on a flat surface. To the right of the tub, there is a crumpled white plastic bag and some small green plants with red flowers. The background shows a distant horizon line with faint mountains.

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**CIRCLE 15 ON INQUIRY CARD**



## OFF THE RECORD

Nicholas Grimshaw & Partners has designed an \$85 million manufacturing plant and office for Rolls-Royce in Goodwood, West Sussex. Construction should be complete in 2003, when BMW assumes responsibility for all Rolls-Royce business and production.

Peter Eisenman is one of 14 people to be elected in 2001 as a member of the American Academy of Arts and Letters. The 250 academy members are artists, architects, musicians, and writers.

The recently restored Rothko Chapel [AUGUST 2000, page 27] in Houston by Philip Johnson has been added to the National Register of Historic Places.

The Greater Boston Chamber of Commerce named Tsoi/Kobus & Associates as 2000 Small Business of the Year. The firm is working on a new medical education center at New York City's Mount Sinai School of Medicine.

Germany's Behnisch, Behnisch & Partners has won a competition for an architectural framework plan for a sports campus in Dublin, Ireland.

The two-year-old firm Opsis Architecture of Portland, Ore., has won a competition for a \$40 million building for the Foothills Center for the Arts in Scottsdale, Ariz.

Holabird & Root, Alan Short and Associates, Perkins Eastman Architects, Randy Brown Architect, and Anderson Anderson Architecture with Zago Architecture are in a competition for an academic center to house the division of art, design, and architecture and a library at Judson College in Elgin, Ill. A winner will be chosen this month.

The Design Trust for Public Space awarded fellowships to Casey Jones and Keller Easterling to study alternative uses for the High Line [FEBRUARY 2001, page 34] in New York City.

## Seinfeld: "What's the deal with my house?"

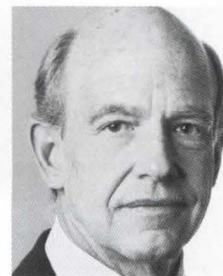
Lectures can be deadly dull, but not this one. Architect Charles Gwathmey, FAIA, lectured at the Parsons School of Design Department of Architecture in New York City on March 1. While technically an alumni event closed to outsiders, there was an unexpected visitor—one of Gwathmey's clients.

During the student-moderated question-and-answer forum, a hand went up in the audience and a strangely familiar voice was heard: "Yes, I'm a comedian."

The audience immediately laughed at this unlikely opening. There aren't many architects or architecture students who would admit to being a comedian. Who could possibly be speaking?



Jerry Seinfeld



Charles Gwathmey

The comedian continued: "And, I came here tonight to ask Mr. Gwathmey when my house is going to be completed. For, you see, I've been trying to reach you at the office and have been having a really difficult time doing so, and I wanted to ask you in person."

At this point the audience was laughing and, in part, aghast.

Gwathmey, without skipping a beat, replied: "Yes, Mr. Jerry Seinfeld, you are quite the comedian. And if you don't plan on getting married again and having another baby within the next three months,

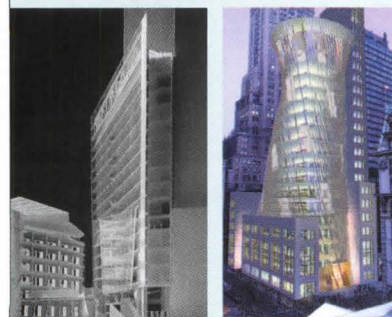
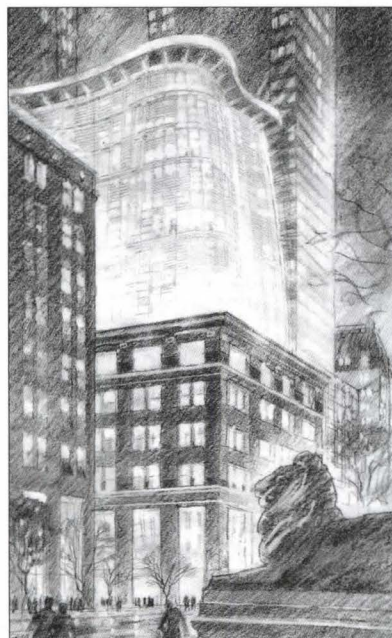
your house will be ready by this summer."

At this point, everyone in the audience turned around, and there was Jerry Seinfeld! The audience was amused by Gwathmey's response, and who would have expected Jerry Seinfeld

to be at the lecture? Does Seinfeld need something to do now that his hit television show has ended?

Then, by way of explanation, Gwathmey added: "You see, when Mr. Seinfeld first became our client, he was a bachelor. Then he got married and the program changed. And then he had a baby and the program changed again. So it's really not completely our fault that his house isn't ready yet!"

Could this encounter between the comedian and his architect be satirized in the future? Watch your televisions. *Elisheva Levi*



## Gwathmey Siegel designs NY Public Library

New York architecture firm Gwathmey Siegel & Associates Architects was selected more than a year ago in a competition for a major renovation and addition to the Mid-Manhattan branch [APRIL 2000, page 31] of the New York Public Library (NYPL). Groundbreaking, though, is still in the distant future—no date has been set—as the NYPL continues to raise funds for the project, which had an initial budget far below the current estimate of \$120 million.

Drawings of all three competition entries have only now been made public. Gwathmey Siegel's project (left) won out over projects by Smith-Miller + Hawkinson Architects with Shepley Bulfinch Richardson and Abbott (bottom left) and Hardy Holzman Pfeiffer Associates (HHPA) (bottom right). A spokesperson for the NYPL noted that, although Gwathmey Siegel won the competition with the design shown here, the scheme may be modified before construction begins.

The Mid-Manhattan branch is the central branch library at Fifth Avenue at 40th Street, not to be confused with the landmark Humanities and Social Sciences Library that anchors Bryant Park across the street. The largest branch library in the NYPL system, the Mid-Manhattan branch serves 4,000 people daily and is expected to serve 8,000 with the addition. Expansion plans tentatively call for 117,000 square feet in eight stories built on top of the existing 139,000-square-foot building.

Gwathmey Siegel proposes "A Beacon of Knowledge" in a glass-and-steel sculptural volume above the existing limestone-sheathed library. Smith-Miller + Hawkinson Architects with Shepley Bulfinch Richardson and Abbott designed a "lantern" with an "intelligent" skin that would also act as an information-display surface. HHPA's sinuous tower called for elimination of a portion of the existing building. *JEC*





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CIRCLE 16 ON INQUIRY CARD



## Record News

### “Walls turn into floors which become roofs” in Libeskind design for Denver Art Museum

Daniel Libeskind's \$62.5 million addition to the Denver Art Museum will be an explosion of geometric forms, according to a design unveiled by the architect in February. The addition will contrast sharply with the existing museum—a 1971 fortresslike structure designed by Italian Modernist Gio Ponti.

“It is constructed from walls which turn into floors which become roofs,” says Libeskind (right) in describing his design. “It is a seamless space of continuity that really flowers in a kind of tectonic arrangement.”

The 146,000-square-foot structure will be built of glass, titanium, and gray granite. It will feature a dramatic lobby with a glass ceiling and a sharply angled, cantilevered section that soars across a busy street toward the existing museum. A curved glass bridge will link the two museum buildings.

With Ponti's museum and the adjacent Denver Public Library (designed by Michael Graves), Libeskind's addition will form a sort of trinity of architectural design of the last 30-plus years.



“Architecturally, this is not a stand-alone building,” Libeskind promises. “It's a building that has a very strong relationship to its huge and powerful architectural neighbors, both the Ponti building and the library. The building is in a synergetic relationship” with the existing structures.

When completed in 2005, the four-story addition will nearly double the size of the museum. It will include gallery space, a theater, a restaurant, and a rooftop sculpture garden offering spectacular views of the Rocky Mountains. A separate aboveground parking garage will hold 1,000 cars.

City and museum officials hope Libeskind's addition will do for Denver what Frank Gehry's Guggenheim has done for Bilbao, Spain. “It will put Denver on the map as a world-class destination city,” says Denver mayor Wellington Webb.

“Like great art,” says museum director Lewis Sharp, “[Libeskind's] design will not only get the local community talking, but the whole world will begin to take notice.”

*David Hill*



The Daniel Libeskind addition to the Denver Art Museum (existing museum building to the right in photo above) will include a number of sharply angled volumes, one of which protrudes over a street in downtown Denver.



### Five unique teams compete for design of Manhattan East River site near UN headquarters

The most talked-about New York architectural competition thus far in 2001 is about to get under way. Five architectural teams are competing to design a five-million-square-foot mixed-use project on the site of a former Consolidated Edison (Con Ed) steam plant on the East River just south of the United Nations headquarters, from 35th to 41st Streets between First Avenue and FDR Drive. A specific mix of uses has not been set, but it will include substantial residential and office development.

The teams are: David Childs of Skidmore Owings & Merrill, Richard Meier, Peter Eisenman, and Hugh Hardy; HOK and Schuman Lichtenstein Claman Efron; Kohn Pedersen Fox, Rem Koolhaas, Davis Brody Bond, and Toyo Ito; Henry Cobb and James Ingo Freed of Pei Cobb Freed & Partners and

Richard Meier, FAIA, explained to RECORD the fairly casual development of his unique team: “David [Childs] and I had been talking about doing something together for a long time. I read about this [possible] project months ago and I said to David that this looks like a terrific opportunity to do something. Then Peter [Eisenman] said he'd like to be a part of this and we said, ‘Sure, why not?’”

FSM East River Associates, a partnership between Fisher Brothers and Sheldon H. Solow, is developing the nine-acre site. The partnership recently acquired the land from Con Ed.

The five teams will make presentations on their team capabilities and design vision in late April or early May. The architect selection process is led





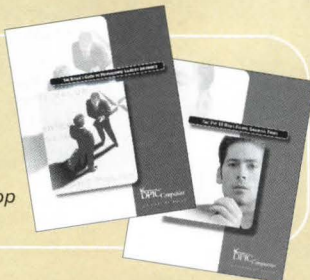
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## Record News

### For sale: Modern masterpiece vacation home, known to flood, asking \$2 million to \$4 million

The Farnsworth House, one of Ludwig Mies van der Rohe's masterpieces, is being put up for sale by its owner of nearly 30 years, London real-estate developer Lord Peter Palumbo. The impending sale raises the question of whether the public will continue to have access to the steel-and-glass pavilion, which has been open for tours since 1997.

Mies designed the house, located about 50 miles southwest of Chicago, as a weekend retreat for Dr. Edith Farnsworth, a Chicago nephrologist. It was completed in 1951 at a cost of \$73,000. According to Mies biographer Franz Schulze, the 2,156-square-foot home may be priced in a range of \$2 million to \$4 million.

Palumbo has owned the house since 1972. He said in an interview that he is having health problems and is paring down his collection of trophy vacation homes, which include two Le Corbusier townhouses outside Paris and Frank Lloyd Wright's Kentuck Knob in western Pennsylvania.

The British peer, whose primary residence is in London, has been an ideal owner. Not only has he outfitted the house with furnishings faithful to Mies' intent, he also spent more than \$250,000 to restore the riverside home after it was inundated by floodwaters in 1996. Tourists have thus been able to get a rare glimpse at a museum-quality Mies interior.



Ludwig Mies van der Rohe's Farnsworth House is for sale.

Concerned that the Farnsworth House could fall into the hands of an owner who would keep the public out, some influential people are urging the state of Illinois to buy the home and keep it open. That would follow a precedent set by the state in the 1980s with the purchase and restoration of Wright's Dana-Thomas Home in Springfield, Ill. *Blair Kamin*

This summer, two exhibitions on the work of Ludwig Mies van der Rohe will be presented concurrently in New York: **Mies in Berlin**, June 21 through September 11 at the Museum of Modern Art (MoMA), and **Mies in America**, June 21 through September 23 at the Whitney Museum of American Art.



### Frank Lloyd Wright's only Oregon house saved, dismantled, and moved

Although Oregon is routinely hailed for its beauty and livability, buildings by legendary architects do not often sprout here. So when the state's only Frank Lloyd Wright structure became threatened with demolition last fall, the local community came to its rescue.

Completed in 1964, the

\$5,000–6,000 Income" design for a 1938 issue of *Life* magazine. After the Gordons died, their son put the house and 22-acre property up for sale at a price beyond the reach of nonprofits. In September, David and Carey Smith bought the house and property for \$1.1 million, intending to tear the house down and build a

Sandra Stevens told the *Oregonian* in September after a demolition request was filed. But the house was ultimately saved by simple economics. Just minutes before a Clackamas County demolition hearing, the Smiths agreed to donate the Gordon House to the Frank Lloyd Wright Building Conservancy

breaks while avoiding both demolition fees and the community's ire. The conservancy is selling the house to the Oregon Garden Foundation.

Early this year, with a deadline looming, workers raced to dismantle and catalog the house, woodwork, windows, and built-in furnishings. Construction crews moved the Gordon House 30 miles away to the Oregon Garden in Silverton on March 11. It will take the rest of the year to put the house back together, with a new concrete floor. Lower walls, unable to be

removed without significant damage, will be re-created. The house will be sited on the same compass orientation as at the original site.

Although the conservancy traditionally prefers Wright houses to be used as private residences, the Gordon House will serve as a museum and public meeting facility.



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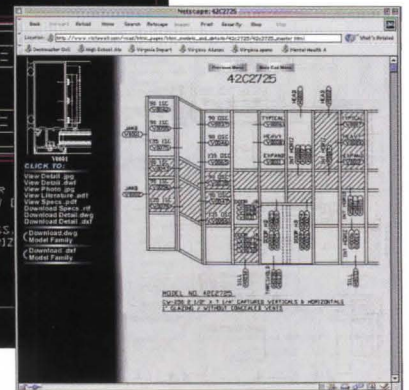
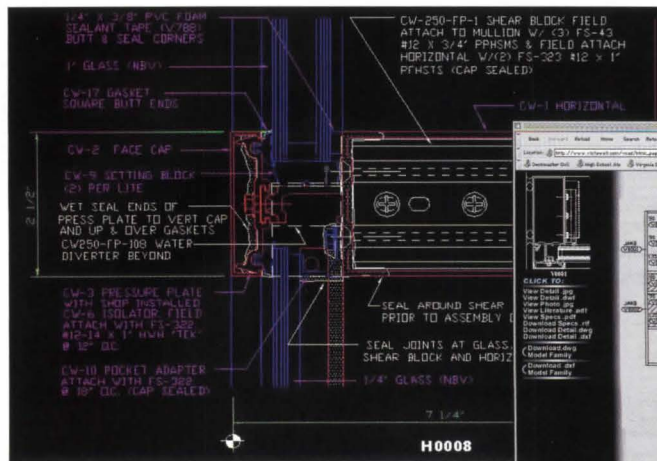
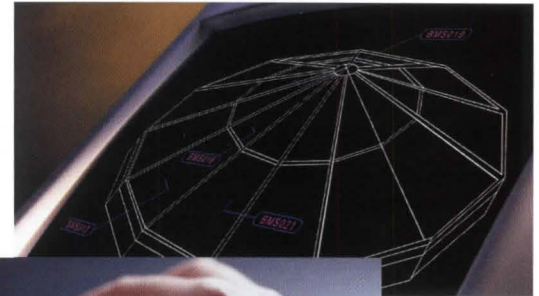
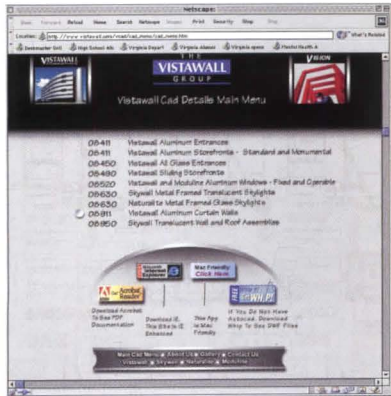
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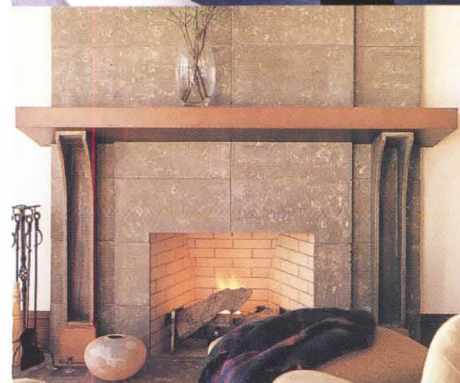
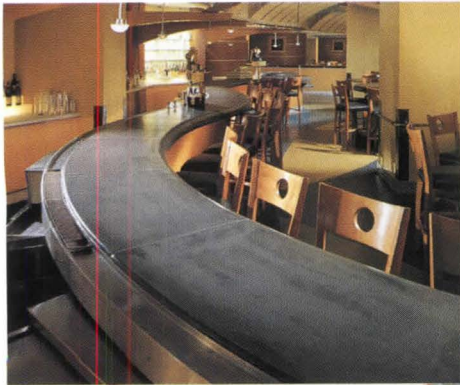
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## Record News

### Seattle architects mobilize and assess in quake aftermath

In the aftermath of the February 28 earthquake in Seattle, architects were at the forefront, providing information and necessary resources.

The magnitude 6.8 earthquake caused less than the initial estimate of \$2 billion in damage, according to the Federal Emergency Management Agency. More than 300 people were injured in the earthquake, but there were no confirmed deaths. The low, deep earthquake left widespread but mostly cosmetic damage to buildings, especially apparent in unreinforced masonry structures.

"I think we were extremely lucky," says architect David Clark, AIA, chair of the AIA Seattle Disaster Preparedness and Response Team. "We've been very pleased with how everything worked. This was a huge wake-up call."

When the earthquake hit at 10:55 a.m., Clark was leaving his home—ironically, to attend the second session in a two-day seminar on earthquake preparedness for his team. The session was titled "Awake for the Quake."

Clark's AIA Seattle Disaster Preparedness and Response Team consists of 127 members who are architects, engineers, or contractors. The team has been trained to assess whether structures are safe for occupancy. After the

earthquake, the team was contacted by the King County Emergency Operations Center, and for two days members were deployed in pairs in neighborhoods near their homes in Seattle and Renton, Wash., in order to assess building damage, answer questions, and keep residents and business owners informed.

"The AIA Seattle Disaster Preparedness and Response Team responded magnificently, providing information and assistance where most needed," says Marga Rose Hancock, Hon. AIA, executive vice president of AIA Seattle. "AIA EVP/CEO Norman Koonce, FAIA, and members of the AIA national component senior-management team got in touch very quickly and had targeted help on the way fast."

President Bush has signed Washington governor Locke's request for federal aid. Ironically, though, the earthquake hit on the same day as the release of the Bush administration's budget, which cuts the \$25 million disaster preparedness program "Project Impact." Seattle was one of seven cities chosen in 1998 for the program, which links community leaders to companies interested in lowering the economic repercussions from natural disasters. The administration's budget overview said the program "has not proven effective." According to the *Seattle Times*, U.S. Sen. Patty Murray (D-Wash.) says the program has encouraged municipalities to bring buildings up to code and to plan effectively. That planning, Murray says, may have reduced the damage in Wednesday's earthquake.

Although many municipalities have begun their own preparedness planning, Clark believes that cutting Project Impact will have a negative impact on public awareness of earthquakes. JEC



Damage was primarily to parapet walls (above) on an unreinforced masonry structure of the early 1900s that is now an office building. Debris from a damaged parapet wall (right) collapsed an exterior canopy and damaged exterior loading areas on an





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## Record News



### Visions for Manhattan's west side railyards compete for dollars, attention

The 1963 demolition of McKim Mead & White's magnificent Pennsylvania Station symbolized the end of the once-grand rail era and the birth of the historic preservation movement. Now that plans are moving ahead with a widely admired replacement by Skidmore Owings & Merrill, the long-moribund area of Manhattan around it has become a hotly contested landscape of competing urban dreams.

A committee that wants to bring the 2012 Olympics to New York envisions the railyards to the west of the station as a site for an 80,000-seat Olympic stadium, tied by an upgraded transit spine to venues in New Jersey and the New York borough of Queens. The New York Jets, an NFL team that has a lease through 2008 in an aging facility in New Jersey, wants to sign on to the stadium plan as a way to bring the team into Manhattan. George Steinbrenner is up in arms, however, since he had long dreamed of moving his Yankees baseball team from its aging Bronx home to a \$1 billion stadium on the same site. State officials fear a stadium plan will make it harder to double the size of the Javits Convention Center (to 1.5 million square feet), just to the north of the stadium site. Not to worry, say stadium advocates, the retractable-roof stadium can become an extension of the center. Not so fast, say convention planners, because stadiums don't work well for conventions. Urban designers at Cooper Robertson & Partners have developed a plan for a Jets stadium that could be converted into exhibition space.

city would like to place as much as 30 to 40 million square feet of new development around the station. This is contingent on a massive upzoning and financing of a Penn Station-to-Grand Central transit link that remains, after decades, unrealized.

Sitting atop what was once the magnificent departure hall of the old Penn Station is Madison Square Garden, a careworn, unlovely hockey and basketball arena built in 1968. NBBJ Sports and Entertainment has been hired to design a replacement structure on one of various nearby sites to be made available with new development.

Underneath the arena, 300,000 commuters daily spill into the Penn Station hodgepodge of passageways in various states of repair. Amtrak hired HOK to give a futuristic look to its temporarily spruced-up waiting areas, nearing completion. NJ Transit is reconstructing its commuter-rail concourse as a \$105 million Postmodernist homage to the McKim past. No one appears to be in



**A plan by Cooper Robertson & Partners would include a new stadium for the New York Jets and other development near the current railyards.**

charge, though, of the public concourses that tie all this together.

The project that makes possible much of this planned development may itself be in jeopardy. A recent federal Department of Transportation report said that the 91-year-old rail tunnels leading to Penn Station require \$898 million worth of life-safety improvements, a figure far higher than the cost of the new station. It advises proceeding



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## Record News

### Quigley SROs show affordable housing is possible in Las Vegas

For many, downtown Las Vegas conjures an image of billion-dollar mega-resorts drowning in neon and ersatz architecture. In reality, most of the new high-end development has migrated south along the Strip, leaving the old downtown vacant and depressed. Rob Wellington Quigley, FAIA, is hoping to change that.

The San Diego-based architect has partnered with developer Tom Hom to build two single-room-occupancy (SRO) apartment developments in the area—Kirby Lofts and L'Octaine, which are mixed-use projects that combine apartments with retail and restaurant space. Financed through private activity bonds allocated through the city (which enable the developer to receive a 4 percent low-income housing tax credit), the developments are viewed as a way to rejuvenate the area.

Quigley hopes to enhance Las Vegas' urban environment while addressing its harsh climate, and doing it all on a modest budget. "Our work has always addressed the climate and its passive energy concerns," said Quigley. "I find it intriguing to work in a desert climate because the stakes are so much higher."

Las Vegas mayor Oscar Goodman sees the SRO developments as a "real watershed" to redevelopment and housing problems. The target demographic for the SRO renters are single professionals working in the downtown area (i.e., casino workers).

The \$6 million, 31,000-square-foot L'Octaine, comically named for its location on Gass Avenue, features 51 units and 4,000 square feet of retail space. The one- and two-bedroom L'Octaine units, as small as 170 square feet, rent for as little as \$495 a month, with a \$25,680 annual income cap. The building is simple wood frame and stucco construction with a concrete first level, and

three-story structure began in March and will be finished in one year. "L'Octaine will add vitality to the street in a dignified way," says Quigley.

Less than a block away is the \$13 million, 30,000-square-foot Kirby Lofts. The four-story wood-and-stucco structure will have 276 loft-style units with street-level retail space. Rooms will rent for \$562 per month, with a \$22,500 annual salary cap. Irreverently named after a vacuum cleaner, Kirby Lofts on Hoover Avenue are scheduled for completion in May 2002.

Quigley and Hom initially collaborated on the \$12 million, 82,760-square-foot Campaigne Place SRO, completed in February 2000, also in downtown Las Vegas. The four-story, 320-unit building was a welcome addition to the neighborhood, prompting Quigley and Hom to develop L'Octaine and Kirby Lofts. Campaigne Place averaged a 75 percent occupancy rate last year with \$500 rents. *Tony Illia*







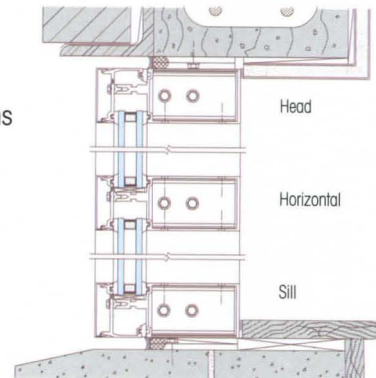
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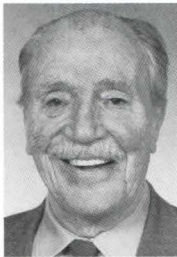
## News Briefs

**McHarg, author of *Design with Nature*, dies** Ian McHarg, a pioneering landscape architect, planner, author, and professor emeritus at the University of Pennsylvania, died March 5 at age 80.

McHarg actively advocated the philosophy that no building project should take place without an intensive study into that project's compatibility with the natural aspects of its site. He founded the University of Pennsylvania's department of landscape architecture and regional planning, serving as its head for three decades. His most enduring work, however, may be his 1969 book, *Design with Nature*, which the critic Lewis Mumford compared to the environmentalist works of Rachel Carson and Henry David Thoreau. The cele-

bration of Earth Day came about, in part, because of McHarg's ideas. Last year, McHarg was awarded the prestigious Japan Prize for urban planning. *Kevin Lerner*

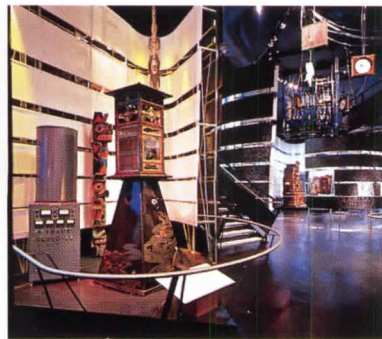
**Bill introduced for better schools** America's Better Classroom Act of 2001, a \$25.2 billion bill for new school construction and renovation, was introduced in Congress on March 14. AIA President John D. Anderson, FAIA, joined Rep. Charles Rangel (D-N.Y.), and Rep. Nancy Johnson (R-Conn.) in urging Congress to pass the bill. Anderson said, "The bipartisan Johnson-Rangel measure allows the use of tax-credit bonds that emphasize federal support rather than federal control over local school districts requesting assistance."



McHarg



Light and dark curving walls provide a dramatic backdrop for the *Time* exhibit.



**Gehry at Guggenheim** A full-museum retrospective of the work of Frank Gehry will be held at the Guggenheim Museum in New York City from May 18 to August 26. *Frank Gehry, Architect* will trace his career and the work of his firm, Frank O. Gehry & Associates, with photographs, drawings, models, furniture, video footage, and the installation itself. The installation will include a major "architectural intervention" in Wright's rotunda.

in RECORD's Design Vanguard issue [DECEMBER 2000, page 82], designed the *Time* exhibition at Chicago's Museum of Science and Industry. A permanent exhibit, *Time* includes more than 450 timepieces that span 3,000 years and were acquired from the National Time Museum. Garafalo's design—with dramatically lit, swirling walls that are white on one side and black on the other—makes the timepieces appear to float through space. Viewed from two levels and two sides, the exhibition alludes to the fluidity and elusiveness of time.

**Garafalo finds *Time*** Chicago architect Doug Garafalo, featured

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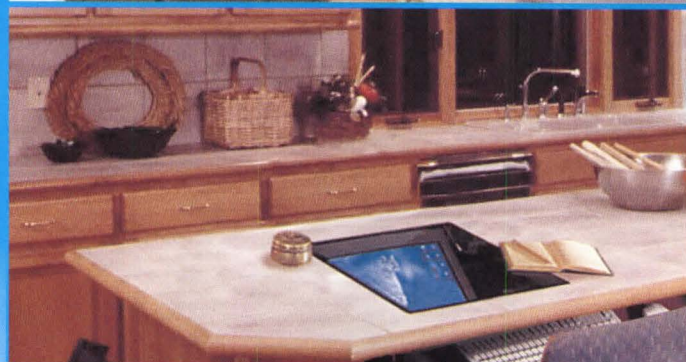
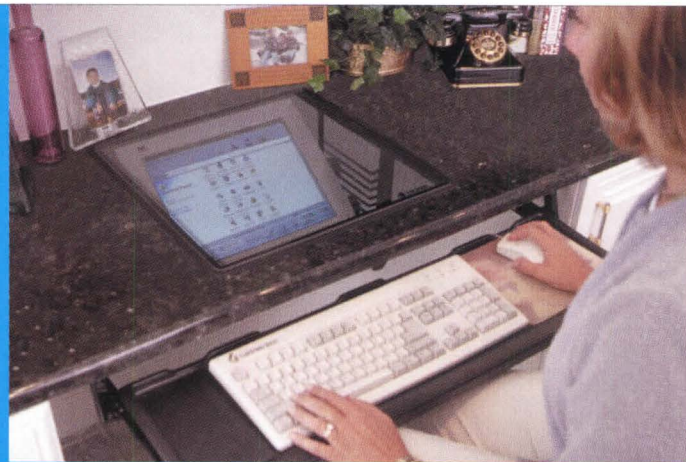
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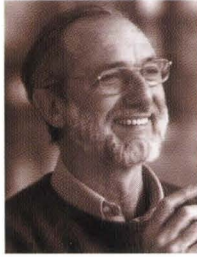


## News Briefs

**Foster hired by Hearst for New York building** The Hearst Corporation has hired British architect Lord Norman Foster to design an addition to the Hearst Magazine Building on Eighth Avenue at 57th Street in New York City. This will be Foster's first building in New York. The Hearst Magazine Building is a six-story 1926 structure by Joseph Urban that was intended to be the base for a much taller building. Only six floors were constructed with the onset of the Depression and World War II. The exact size, time frame, and cost of the building expansion have not been made public.

**Piano receives Wexner Prize** Renzo Piano has been named recipient of the ninth Wexner Prize; it was

the first time that the \$50,000 prize, conferred by the Wexner Center for the Arts in Columbus, Ohio, was awarded to an architect. Piano will give a public lecture at the Wexner Center on April 19 and will receive the award in a private ceremony April 20. Past Wexner Prize recipients include composer John Cage, filmmaker Martin Scorsese, and visual artist Robert Rauschenberg.



Piano

**Cannon learns from Maybeck for Principia** Cannon Design of St. Louis has completed conceptual design for a sports and recreation building at Principia College, a school of 550 Christian Scientist students in Elsah, Ill. The original campus was designed by Bernard Maybeck, and Cannon's building

takes visual cues from his work, especially his painterly approach to the design of facades. Clerestory windows—as well as a palette of materials including concrete, brick, and metal tile in different colors—relate the building to Maybeck's structures.

**Construction begins on Lincoln Presidential Library and Museum by HOK** Ground was broken February 12 for the new Abraham Lincoln Presidential Library and Museum, designed by Hellmuth, Obata + Kassabaum (HOK), in downtown Springfield, Ill. The four-story, 100,000-square-foot library will open in October 2002,



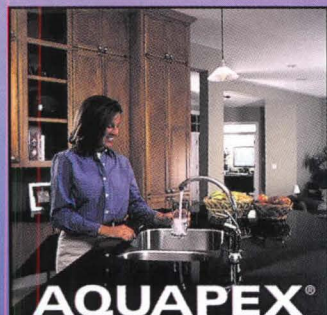
The Lincoln Presidential Library and Museum.

and the 100,000-square-foot museum will open in November 2003. The library replaces an existing library in the basement of the Old State Capitol building.

**U.S. Postal Service stops all planned construction** Citing a large deficit, the U.S. Postal Service announced on March 8 a moratorium, to last indefinitely, on all new construction projects. The freeze stops nearly all 800 projects, worth about \$400 million, that were not under contract by February 22. All projects under way will continue. The USPS may lose \$2 billion to \$3 billion in 2001.



Cannon's recreation building at Principia.



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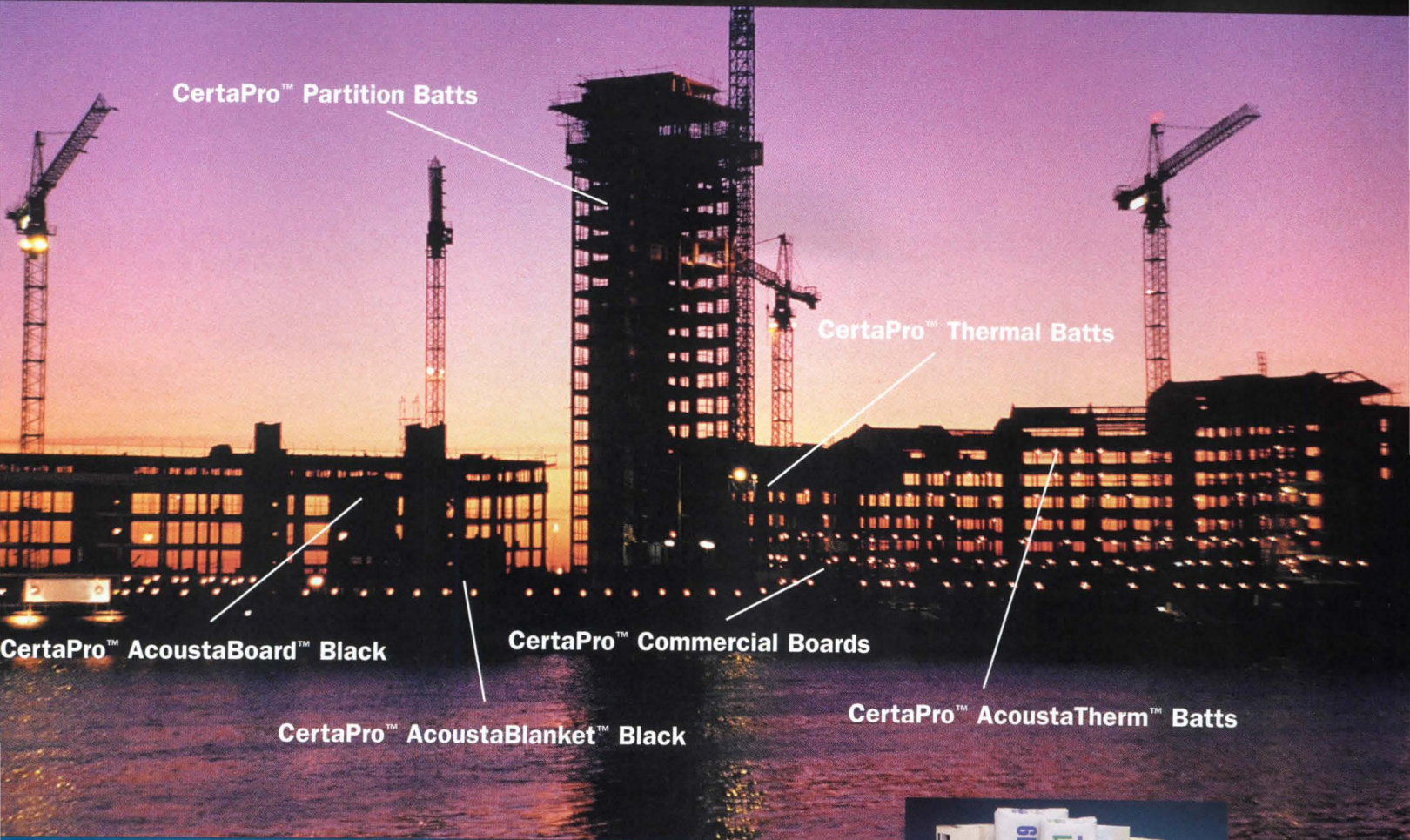


PHOTOGRAPHY: MICHEL DENANCE; ILLUSTRATION: CANNON DESIGN



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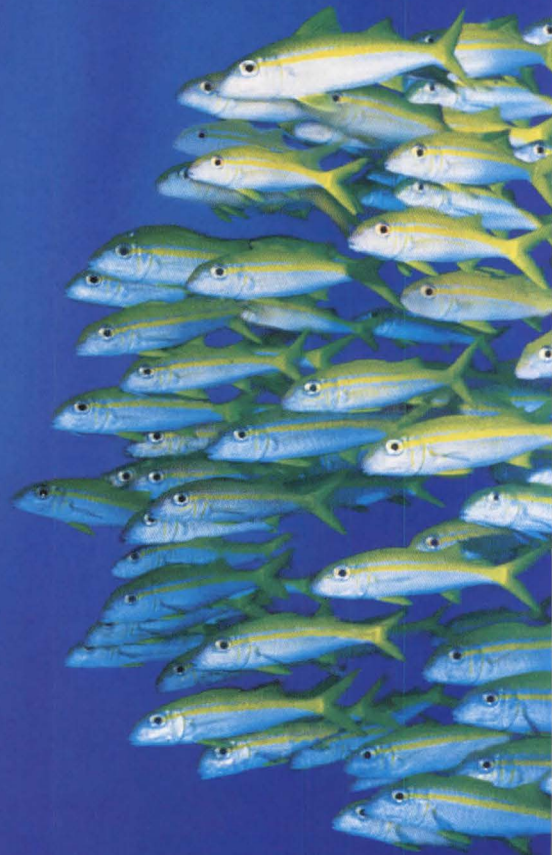


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**CIRCLE 29 ON INQUIRY CARD**







# Disney strengthens Anaheim presence with planning and pixie dust

## Correspondent's File

By John E. Czarnecki, Assoc. AIA

Disneyland opened to great fanfare in 1955, received worldwide attention, and served as a model for future theme parks. As decades passed, though, orange groves surrounding Disneyland were replaced with suburban ranch houses, strip malls, and schlock—themed motels and restaurants catering to day-trippers. For more than 40 years, as Disney built Disney World, Epcot, the town of Celebration, and other developments on a much larger swath of land in central Florida, Disneyland never changed—it aged in place on a limited site. Disney World had become a multi-day, multi-attraction destination resort, while Disneyland had become a nostalgic curiosity in burgeoning Southern California.

By the 1990s, both Disney and the City of Anaheim realized that it was in both of their interests to partner in an ambitious Disneyland Resort expansion and enhancement, as well as an expansion to the Anaheim Convention Center by Hellmuth Obata Kassabaum (HOK) and a renovation for Edison Field, home of the Disney-owned Anaheim Angels baseball team. The expansion within the Disneyland Resort was completed this year with the opening of California Adventure, a 55-acre, \$1.4 billion theme park, on what was surface parking adjacent to Disneyland. The complex—with Disneyland, California Adventure, Downtown Disney, the Disneyland Hotel, Disneyland Pacific Hotel, and the new Grand Californian Hotel—creates a commanding Disney presence in Anaheim.

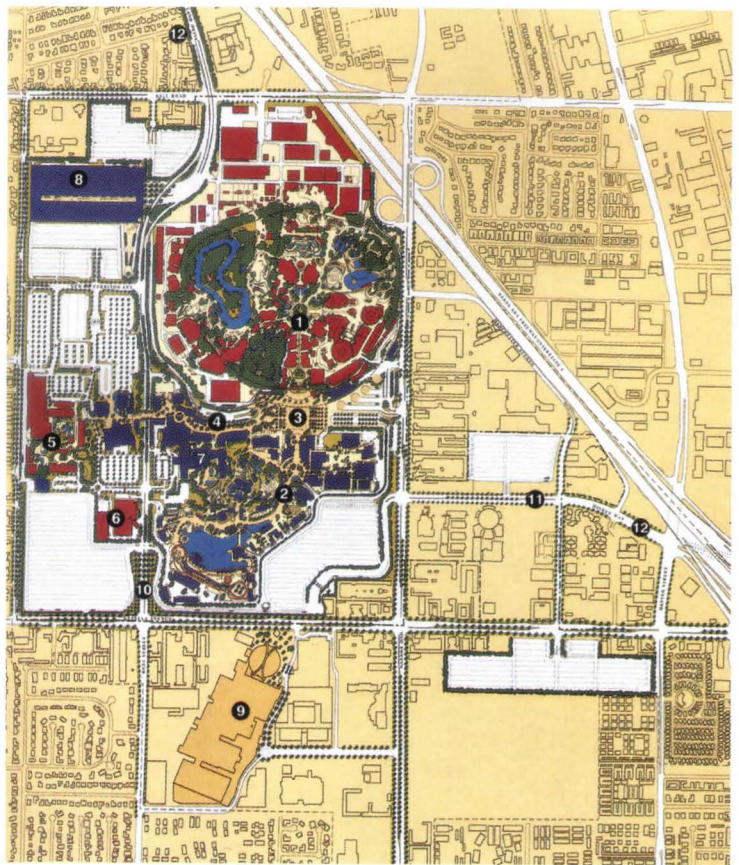
### Evolving theme parks

For decades, Disney developed thousands of acres of theme amusements in central Florida. When Epcot opened in Orlando in 1982, Disney realized that a different model of tourist development was possible: a longer stay for visitors coming not only from the region but from other countries as well.

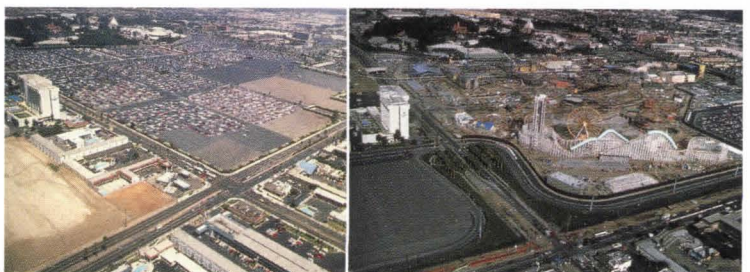
In Anaheim, Disney examined possibilities of expanding Disneyland in the 1980s, but nothing came of those efforts. Discussions between Anaheim and Disney continued in the early 1990s, though, and a comprehensive public-private partnership was formed between the suburban city and the entertainment giant. "In the last 10 years, there was a recognition that the status quo was not acceptable," says Tom Wood, assistant city manager for Anaheim. "Our objective [was] to be the preferred tourist destination in Southern California."

### Plans guide "garden oasis"

Anaheim developed two plans in the early 1990s to guide the development of the nearly 1,100 acres surrounding and including Disneyland into what was intended to be a "garden oasis." Both plans include more than \$4 billion in development, making this one of the world's largest public works/private development projects. The Disneyland Resort-Specific Plan covers 490 acres within the Disneyland Resort, and the Anaheim Resort-Specific Plan covers 550 acres immediately outside the district. The Anaheim Resort-Specific Plan provides



- |                         |                            |                        |
|-------------------------|----------------------------|------------------------|
| 1. Disneyland           | 6. Disneyland Pacific      | 10. Disneyland Drive   |
| 2. California Adventure | 7. Grand Californian Hotel | 11. Disneyland Way     |
| 3. Entrance plaza       | 8. Parking structure       | 12. New freeway access |
| 4. Downtown Disney      | 9. Convention center       | ■ 2001 buildings       |
| 5. Disneyland Hotel     |                            | ■ existing buildings   |



Disney's California Adventure (right photo) was built on what was formerly surface parking (left) for Disneyland (background in both photos).



## Correspondent's File

guidelines for future development in terms of building size, massing, and setbacks, as well as infrastructure guidelines for redesigned roads and streetscaping.

SWA Group of Laguna Beach, Calif., completed extensive landscaping along existing boulevards surrounding and leading to Disneyland. "We felt this place needed some kind of identity," says Bob Jacob, principal with SWA Group. "We had to create a landscape that was compelling and economical, consistent, and that provided a sense of being in a resort that was California-specific."

The landscape, Jacob says, also had to have a civic scale and a bold character, and it had to allow for easy identification of the streets. While the tall palm trees on Katella Avenue provide a forest of columns, the wide-spreading tipu trees on Harbor Boulevard will, in time, create a

canopy copy over that street. "We wanted to orient people so they knew where they were, based on layers of landscape," Jacob says. "People are amazed at the transformation, and the thing about landscape is that it only gets better over time."

### An urban downtown?

Within the Disneyland Resort, design of the California Adventure park and Downtown Disney was led by Disney's Imagineers, based on a master plan developed by Jacquelin Robertson, FAIA, of Cooper Robertson & Partners. Entrances to California Adventure and Disneyland face each other on a pedestrian plaza that is connected to Downtown Disney, a district of shops and restaurants. Linking the theme park entrances to parking and the Disneyland Hotel, Downtown Disney is similar to Universal CityWalk at



Extensive streetscaping by SWA Group changed the character of Harbor Boulevard (top), with wildflowers, tipu trees, and palm trees (above).

PHOTOGRAPHY: COURTESY SWA GROUP

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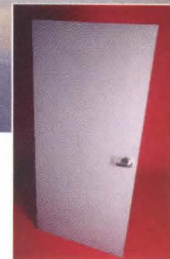
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## Correspondent's File

nearby Universal Studios. Downtown Disney restaurants include House of Blues and Ralph Brennan's Jazz Kitchen.

In a way, Downtown Disney is the biggest gamble here for Disney. It's intended to be a "real" urban experience, an entry plaza to the theme parks, and a focal point for tourists and nearby residents alike. To be sure, more than a few exteriors of Downtown Disney components by Elkus/Manfredi Architects help to create a varied and humane pedestrian realm. The overall effect, however, is not a real downtown—it's forced. But in the midst of the mundane suburban landscape of Anaheim, it may be the only semblance of downtown that residents can have.

### Hotel upgrades

For the City of Anaheim, the Disneyland Resort development is an

economic boon. According to Wood, 1,500 hotel rooms have recently been built or are currently under construction, including the recently completed 751-room Grand Californian. Five thousand more rooms will be built in the next five years.

A number of existing hotels have undergone major interior and exterior renovations, including the original Disneyland Hotel, where Disney added "pixie dust," according to Wing T. Chao, executive vice president for master planning, architecture, and design for Walt Disney Imagineering. No major architectural feat, but guest rooms received a major upgrade, and fresh paint spruces up the once-drab exterior of the hotel's towers.

Across Disneyland Drive from the Disneyland Hotel is the new Grand Californian Hotel—Disney's first ever in-park hotel with a direct entrance to California Adventure.

Designed by Urban Design Group of Denver with interiors by Brayton-Hughes of San Francisco, the Grand Californian is based on Arts & Crafts architecture prevalent in California at the turn of the last century. Interior spaces and guest rooms are reminiscent of the Arts & Crafts work of Greene and Greene, but the heavy timbers are not really timbers and the stone fireplace is not necessarily built with boulders.

### Bumpy ride or smooth sailing?

Whether the enhanced Disneyland Resort will be as successful as Disney's Florida ventures remains to be seen. At California Adventure, the opening-day crowd was not nearly as large as Disney expected, but it was early February. In the context of a jittery economy and a California energy crisis, though, Disney's latest California adventure could be a bumpy ride. ■



Urban Design Group's Grand Californian Hotel is based on Arts & Crafts design.

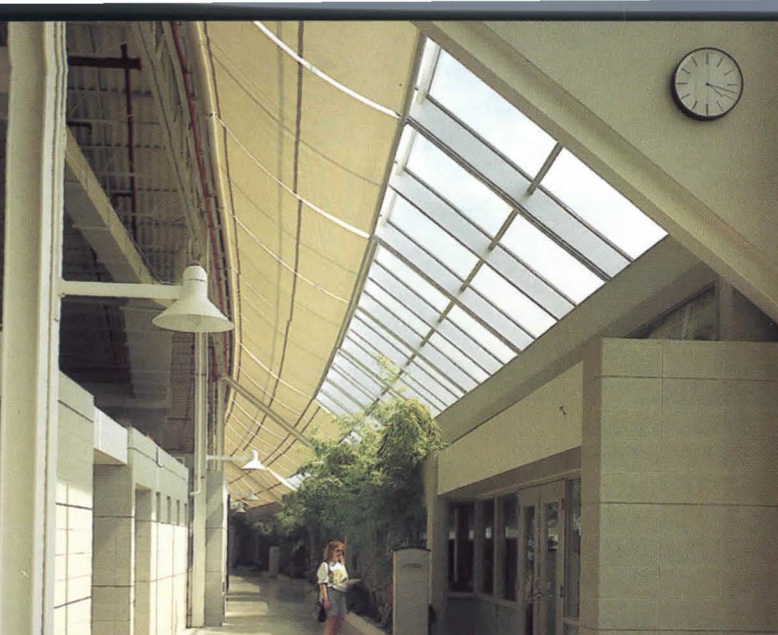
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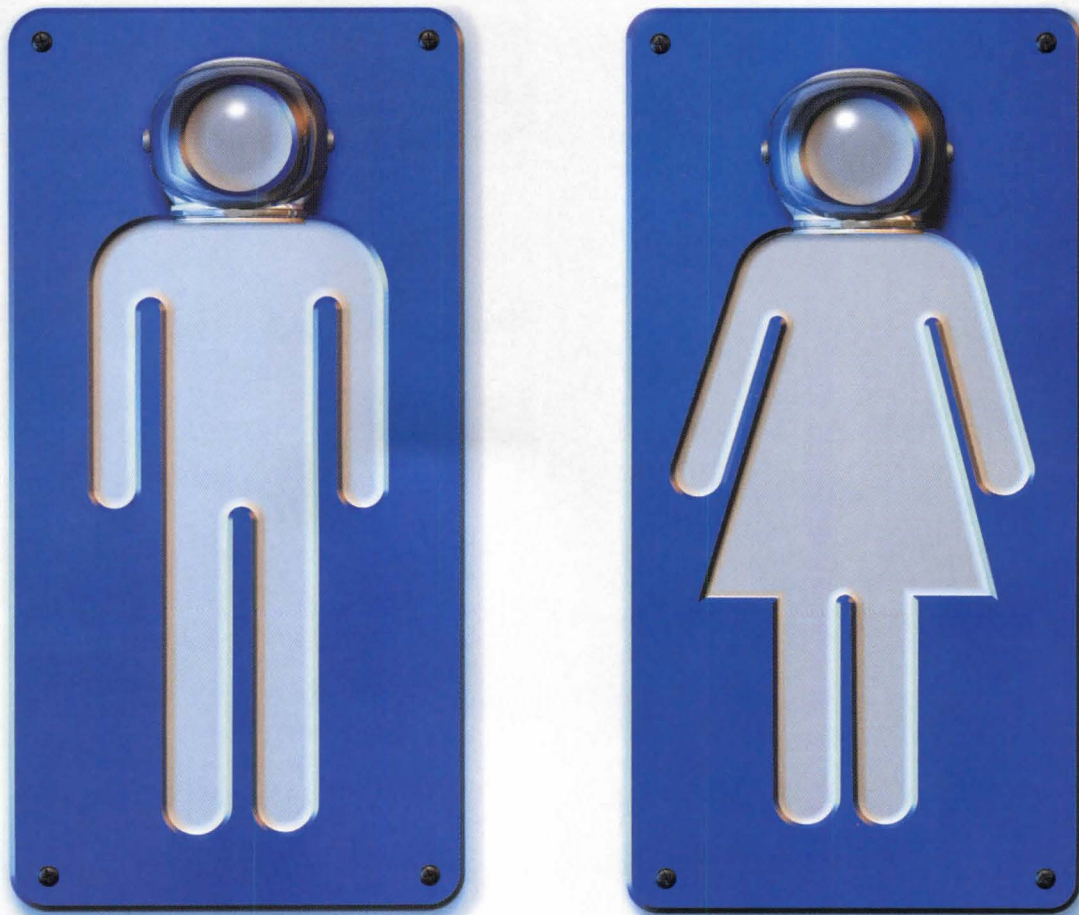
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# For and about the new generation of architects

## archrecord2

### FOR THE EMERGING ARCHITECT

This month's **archrecord2** takes you on a couple of trips. First journey: A look at the career paths of Grace La and James Dallman, partners in the Milwaukee firm La Dallman, to see why their designs are turning heads in the city. Then, join John Harrison, AIA, as he describes a tour of Potsdam, Germany, sponsored by Mithun Architects + Designers + Planners, where he is an associate. Enjoy your flight!

#### DESIGN

#### Profile: Transplants of smart design

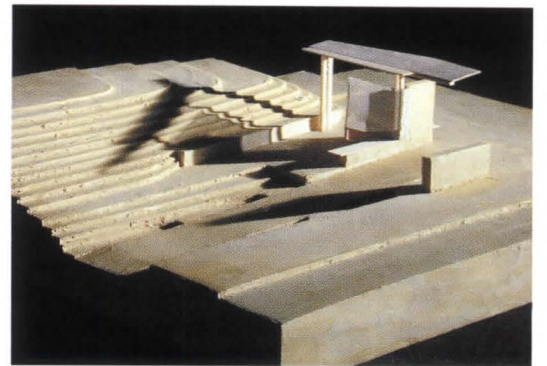
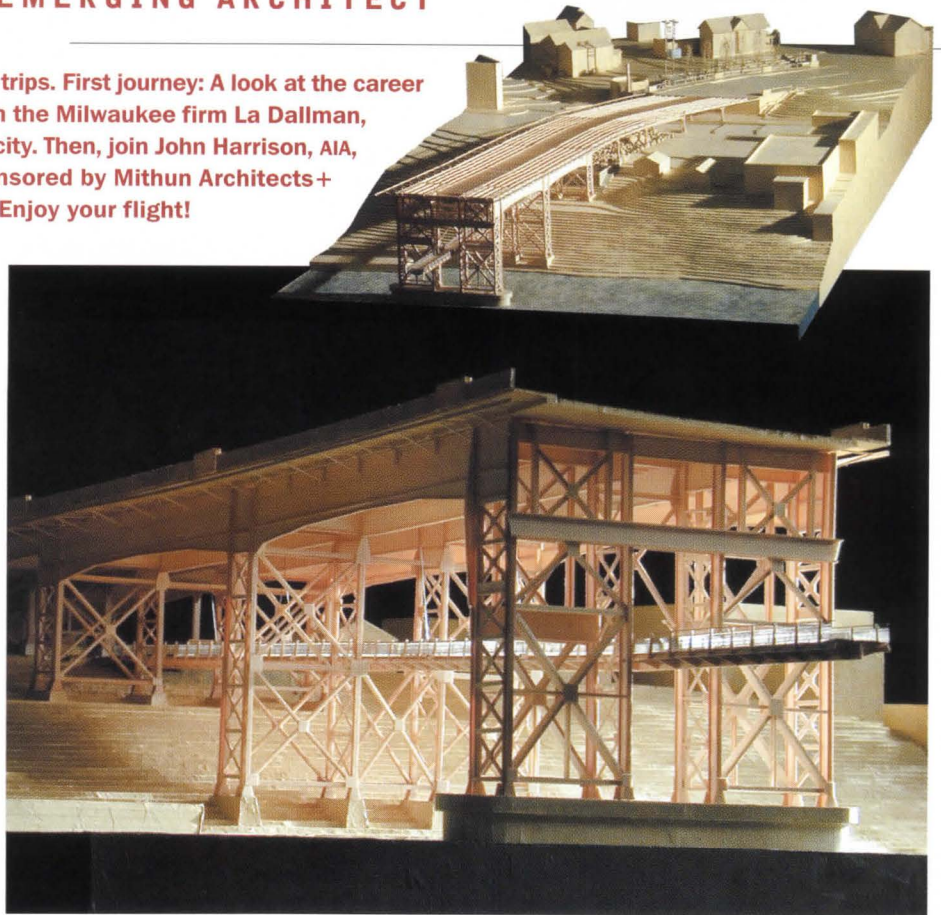


People are talking about architecture in Milwaukee. To be sure, the soon-to-open addition to the Milwaukee Art Museum (MAM) by Santiago Calatrava has more than helped bring attention to good design. But while some in

the city are banking on the MAM addition to be the next Guggenheim Bilbao or Sydney Opera House, the work of a couple fairly new to the city, Grace La and James Dallman, has broadened the discourse and opened a few eyes.

Milwaukeeans, especially well-established architects in the city, are taking notice of the widely varied projects of the husband-and-wife firm La Dallman Architects. Why? Grace and James moved to the city from Boston less than two years ago, and in that time they have received commissions for a pedestrian bridge (right), a pavilion for an environmental education center, a few houses for local philanthropists, a 30-story condominium tower, and exterior improvement to the city's Harry Weese-designed performing arts center. All this work for a couple that readily admit that they are not good at selling themselves. "We don't fancy ourselves as great marketers," says La. "I attribute the commissions we've received to people who were looking for architects who could produce a high level of design."

La and Dallman learned how to create that high level of design while studying at the Harvard Graduate School of Design (GSD), where they met in the early 1990s. Dallman, a native of Milwaukee, came to Harvard with a bachelor's degree in architecture from the University of Wisconsin—Milwaukee (UWM) and experience in Chicago with Stanley Tigerman and Margaret McCurry. La moved 13 times while growing up but had lived in Boston since age 14. She earned a bachelor of arts degree from Harvard in three years and immediately entered GSD. They worked together at Kohn Pedersen Fox's London office in summer 1992 and quickly formed a bond in which architecture was central to their lives. "It's really quite difficult to identify the moment we started to work together," La says, "because it was so much a part of our initial relationship."



**Pedestrian Bridge under Viaduct, Milwaukee, 2002**  
*La Dallman Architects, with Crisman + Petrus Architects, has designed a pedestrian bridge (top and middle) that would be slung below an aging viaduct over the Milwaukee River and a nearby bus shelter (above).*



*continued from previous page* Upon graduating from GSD, Dallman worked for nearly two years for Atelier Pichelmann in Vienna, Austria, and returned to Boston to work for Peter Rose for five years. With Rose, Dallman was project architect on a residence in Stowe, Vt., [RECORD HOUSES, APRIL 1998, page 116], and Brookside School at Cranbrook. La collaborated for a short time with Jonathan Levi, her thesis adviser and mentor, before joining Perry Dean Rogers & Partners. Shortly after turning 27, La became the youngest person to be named an associate in the nearly 80-year history of Perry Dean Rogers.

La and Dallman married five years ago, started on their own with small side projects, including furniture design, while keeping their day jobs with other firms. La was teaching as an adjunct at Roger Williams University when, in 1999, she accepted a teaching position at UWM that brought the couple to Milwaukee, the city Dallman had left 13 years before. They've built a practice with a five-person staff since fall 1999, and it is generating buzz in Milwaukee.

What sets this firm apart from the others in the city? Perhaps Dallman has the answer: "We're interested in understanding site conditions and experiential qualities of a place—to find qualities that we can bring out of these conditions rather than impose some strategy." *John E. Czarnecki, Assoc. AIA*  
**Go to [architecturalrecord.com/archrecord2](http://architecturalrecord.com/archrecord2) for more on La Dallman Architects and their work, and to submit your own projects.**

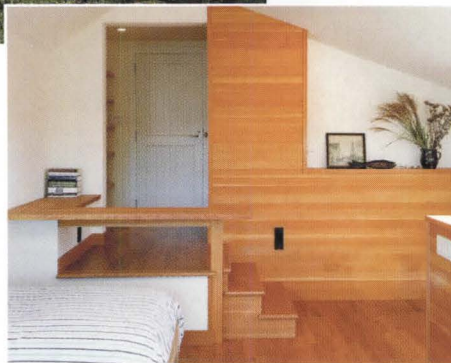


**Kilbourn Tower, Milwaukee, 2003**  
*La Dallman Architects, with TDI Associates, won a competition for a 30-story, \$60 million condominium tower. Construction on the slender tower with 59 units begins in 2002.*



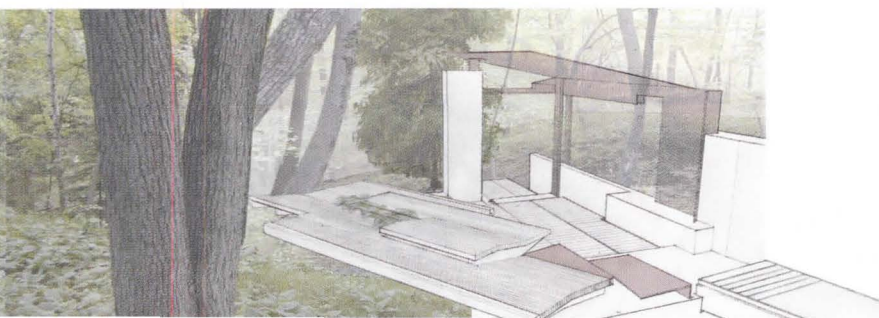
**Residential Addition, Martha's Vineyard, Mass., 2001**

*For a bedroom-and-office addition, La Dallman Architects used crisp Douglas fir interior detailing while embracing Cape Cod vernacular on the exterior.*



**Schlitz Audubon Center Viewing Pavilion, Bayside, Wis., 2002**

*Sited within a ravine, this pavilion, which La Dallman Architects calls "an aperture in the landscape," allows controlled views of nature.*



## WORK

### Forge a career and get ahead

#### Task force calls for continuum of learning

The distinctions between architectural education and practice should converge in one continuum of learning. This is the underlying belief in a Collateral Internship Task Force (CITF) report—a framework for reconceptualizing the transition from education to practice, presented to the presidents of the five collateral organizations in architecture earlier this year. Two of the most striking objectives in the report, and the cause for concern for at least a couple of the collaterals, are (1) that the Architect Registration Examination (ARE) should be permitted upon graduation and (2) that the appropriate title of a person with an accredited degree in architecture, even if he or she pursues another career path and does not become licensed, should be "architect."

The CITF was formed after an April 1999 Collateral Internship Summit [MAY 1999, page 99] that convened members of each of the collateral organizations: American Institute of Architects (AIA), American Institute of Architecture Students (AIAS), Association of Collegiate Schools of Architecture (ACSA), National Architectural



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LIVE

## The ArchiteTourist: Potsdam

Mithun Architects+Designers+Planners in Seattle has developed many long-standing traditions including a biannual study trip. It pays the cost of travel and expenses for each of its associates, principals, and support staff with seven or more years of service to travel and visit a place where they can experience architecture, planning, and design. Spouses and sometimes even children have participated in these excursions.

The trip is a time for architectural discovery, cultural enlightenment, and the fostering of friendships among colleagues. Past destinations include England, Japan, France, and Spain. Participants travel in one of three separate groups with developed agendas for study. As part of the employee's obligation for the trip, slides, sketches, and a journal must be delivered to the firm. The firm assembles this information and publishes a book, which becomes a collection of the memories of, and reflections on, the places visited by the group.

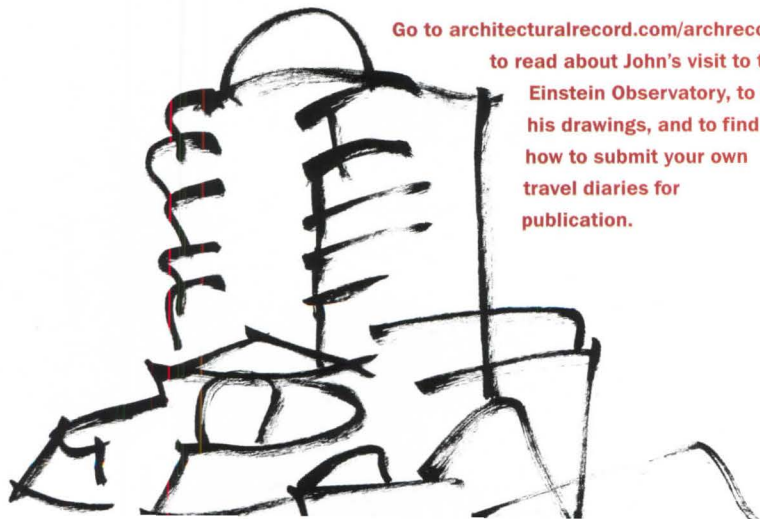
On a tour of Berlin in fall 1999, our group made a day trip to Potsdam. Little did I know that the trip would culminate in an unforgettable encounter with a modern architectural masterpiece. Potsdam is an eclectic escape approximately 20 miles from Berlin on the Havel River; its landscape is marked by buildings influence by France, Italy, Holland, and England, as well as the influence of Russian military occupation. Although a sense of Eastern isolation still lingers, the city's diverse past has left it with grand parks, squares, and neighborhoods.

The main focus of our tour was Frederick the Great's summer place, Sans Souci. Perched atop an elegantly terraced hill, it is famous for housing artists and scholars, among them the philosopher Voltaire, in the mid-1700s. The fountains, gardens, and grounds are quite beautiful, but the palace itself was less than awe-inspiring. The day trip had been pleasant but not in any way remarkable, and I planned to make my way back to Berlin to join the rest of the group for the evening. Only the prodding of a colleague convinced me to take the time to visit Erich Mendelsohn's Einstein Observatory. I was glad I did . . . John Harrison, AIA



Seattle architect  
John Harrison, AIA

Go to [architecturalrecord.com/archrecord2](http://architecturalrecord.com/archrecord2) to read about John's visit to the Einstein Observatory, to see his drawings, and to find out how to submit your own travel diaries for publication.



*continued from previous page* nine goals and objectives and recommended possible implementation strategies in its report. The presidents of the five collaterals accepted but did not endorse the report in its last meeting, and will meet again June 8.

The CITF report goals, each with an objective and implementation strategy, are: (1) accessibility into the profession should be broadened, (2) practice should be integrated into education, (3) education should be integrated into practice, (4) every candidate for registration should have a professional degree from a program accredited by NAAB or the Canadian Architectural Certification Board or equivalent, (5) alternative paths for obtaining professional experience leading to registration should be accepted, (6) examination should be permitted upon graduation, (7) continuous learning and mentorship are fundamental to the profession, (8) national and international reciprocity should be strengthened, and (9) architecture graduates should be recognized for their knowledge and abilities (i.e., they should be titled "architect").

The task force stressed that, although concerns may be raised regarding some implementation strategies, such as those under goals (6) and (9), each of the first eight goals would have to be achieved (i.e., education and practice integrated) before goal (9) could be fully implemented. JEC

For more on the Collateral Internship Task Force report, including full report text and reaction of each collateral organization, visit [architecturalrecord.com/archrecord2](http://architecturalrecord.com/archrecord2)

## TALK

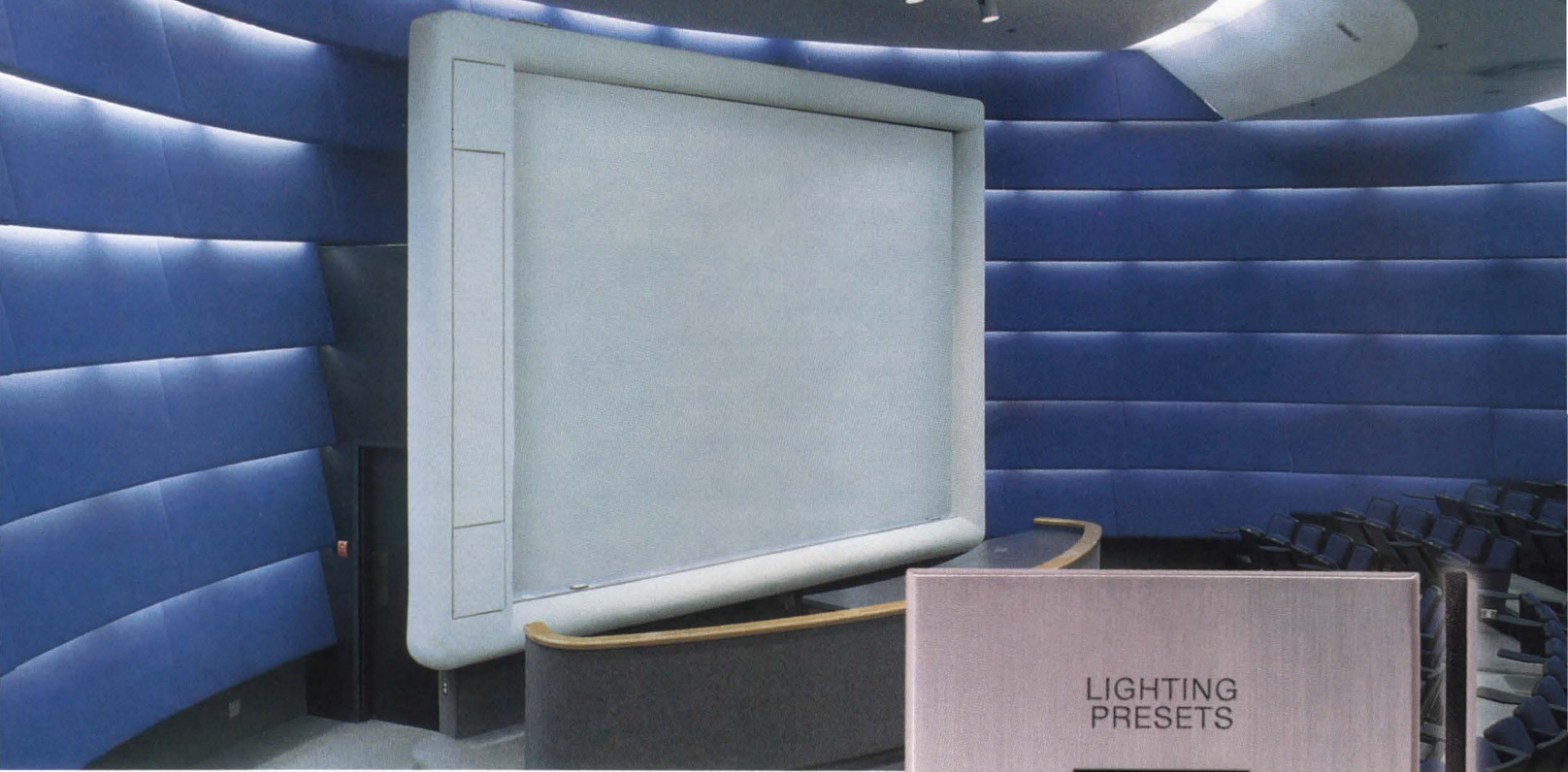
### Connect with your peers

The response to last month's question about what to call unlicensed architecture graduates was phenomenal. Check out the responses in the Talk section of the site. The feature has proven so popular that we're going to be updating the question every two weeks, while keeping all the old forums open. Look for a new question the first and third weeks of every month. While you're there, spend some time reminiscing with this one: What—or who—inspired you to become an architect?

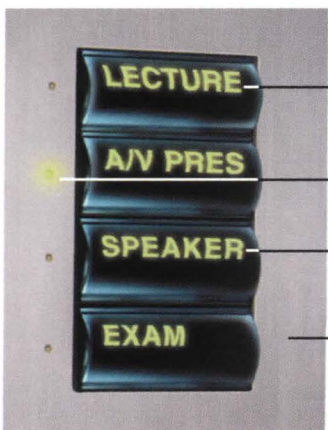


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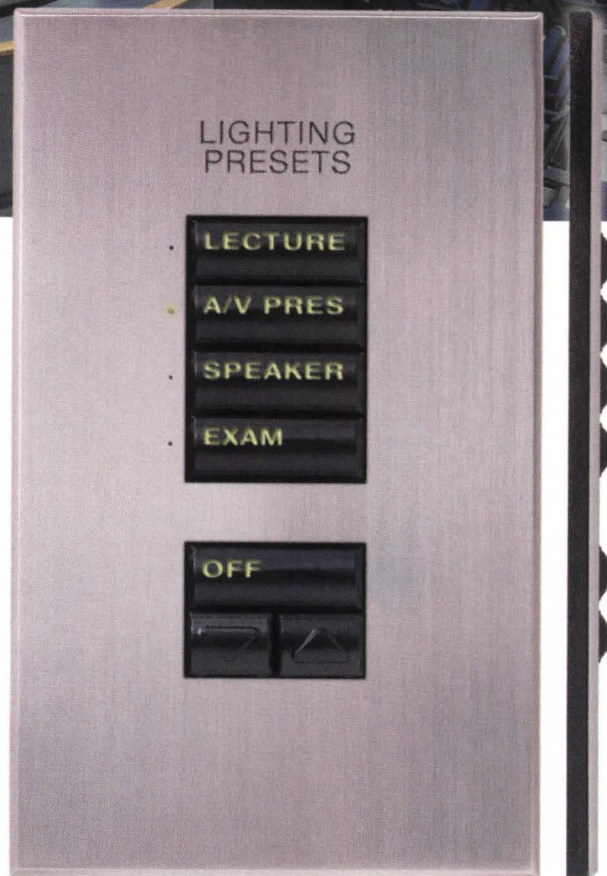
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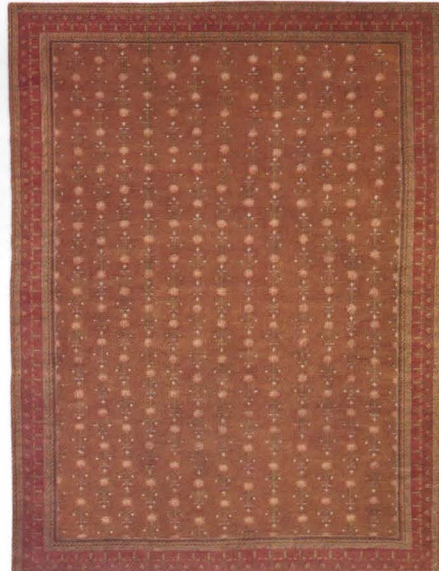
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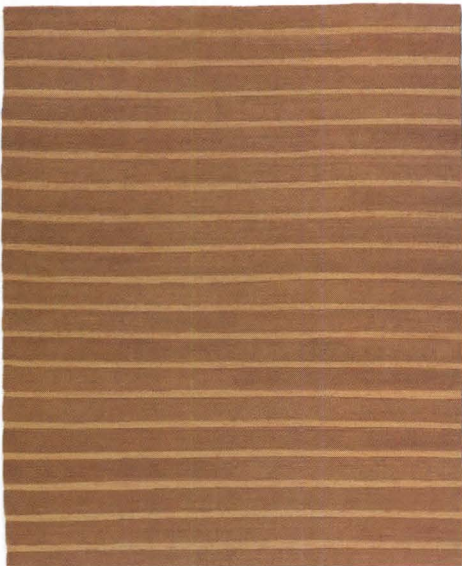




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# Fashion and the cultural fabric of architecture

## Critique

By Ulrich Lehmann

A review in this magazine [OCTOBER 2000, page 71] of *10 x 10: 10 Curators/Critics, 100 Architects* remarked that some of the young architects included in the book “will probably fade as quickly as last season’s hemline.” Tendencies or styles that are judged to be ephemeral, and thus insignificant, are often expressed through a gibe at clothing, and this indicates the degree of prejudice and preconception that fashion arouses among many in the architectural community.

Nowadays, fashion is not concerned as much with changing skirt lengths as the construction of garments and, especially over the last decade, with their deconstruction. Fashion focuses on structural investigations of lining, shoulder pads, darts, and seams to expose an underlying construction and arrive at new shapes that define the body and our posture and demeanor.

Clothing is not just determined by fads and ever-changing styles. In its fundamental motifs, it exists to provide an intimate environment for the body—to protect, cover, and adorn. Which, of course, is architecture’s principal task as well. In the same way in which early man chipped away at his cave to provide more space and comfort, he first cut, draped, and fastened furs and woven plant fibers to construct a cover from the elements.

*Ulrich Lehmann is a cultural historian based in London. His book, *Tigersprung: Fashion in Modernity*, was recently published by MIT Press.*

If our corporeal and built environments originated and developed in tandem, why have the two casings, fashion and architecture, become so estranged from each other? When we equate hemline length with something insubstantial, we are saying principally two things: First, that we regard rapid and continuing change as suspicious and detrimental for cultural and perhaps intellectual development. Second, the fascination with adornment and decoration, which is associated with the female sex in particular, is a frivolous waste of resources.

### Erratic and enigmatic

But the development of Western culture has always relied on progression and innovation, by no means planned, linear, or straightforward. Erratic and enigmatic changes often herald the start of new things. Apparently arbitrary and nonsensical shifts in the shape of garments reflect fundamental changes in manners and morals just as the development of new construction materials influences the built representations of a society. If rapid or repeated change is perceived by architects as insubstantial and dangerous, it is probably because societies have evolved with slow deliberation for centuries. A previously lengthy process of conceiving, drawing, planning, constructing, and decorating a building has been dramatically shortened by digital and virtual media, a new division of labor, and an increasing demand for flexible and changeable spaces.

In modern times, increased construction speed has brought architectural practice closer to the frantic rhythm expressed by changes in fashion. Today, architects and builders can cater to new fashions or styles more quickly. Rapid change has become a mark of contemporaneity, innovation, and flexibility rather than a sign of a fleeting trend. The fact that the life span of a building is far longer than

that of a dress might still prompt architects to regard their own designs as superior in cultural significance. Then again, fashion might have an unexpected riposte to such ideas up her sleeve. New styles are usually revivals of old motifs or novel combinations of various cultural and historical influences. For instance, in 1898 French haute couturière Jeanne Paquin cited both the shape and structure of a Greek



An early 1920s air passenger in an outfit designed by Madeleine Vionnet.







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# Strategies for creating an in-house risk-management program

## Practice Matters

By Don Crosby, AIA

DEPARTMENTS

Poor documents, unclear contracts, inadequate communication, and failure to respond to crises in a timely way all create great risks for an architectural firm, the worst of which is litigation. Yet architects often fail to address these problems in the day-to-day operation of their businesses. Risk management involves the same ingenuity and problem-solving capabilities that architects employ in the design of their buildings. It is only natural, then, that in well-run practices every professional should participate in a comprehensive risk-management program.

### Trust helps resolve problems

Managing risk begins with developing trust. When problems occur on a job, there will always be the temptation for parties to speed-dial their lawyers first and communicate with each other later. A better solution is for the parties to learn to trust each other before the first problem ever arises, so that when it does, determining who is responsible occurs only after it has been resolved. If the architect has taken the time to educate the client, then the client will understand that there are always challenges in a complex building, and that the goal is to resolve issues, not to litigate them.

For example, recently, our firm had a condo project where water intrusion from some patio decks

occurred. The client called us first, and we then brought in the contractor and subcontractor. Together we determined that a flashing detail had not been constructed correctly. Instead of pointing fingers, the team designed and installed a fix and the client was satisfied.

Other clients are not so easy to work with, so an important component of risk management demands turning away clients who don't place a high value on communication and conflict resolution. Many larger clients assign contract negotiations to lawyers who may not have adequate experience with the building industry. Therefore, architects and their insurers need to take the time to educate inexperienced clients, or their representatives, in what are reasonable errors and omissions, code issues, and insurance coverage. Any client who insists on contract language that forces an architect to act in a way that is unethical, illegal, or uninsurable is not a desirable client. Although this initial care may protract contract negotiations, if you hold the line in order to ensure a better project and a reasonable profit, you can earn the client's respect. It has been my experience that how things go during contract negotiations can be a good way to predict what will occur during construction.

Architects should also research their client's finances before signing a contract. Credit-reporting services such as Dun & Bradstreet are a good source of background information on potential clients. We do not contract with

shell corporations or limited-liability corporations.

### A new position: risk manager

Starting a risk-management program requires designating a senior person to act as the firm's risk manager. Once, this person might have been called "production chief"—a senior person with a strong background in document production, codes, and contracts. Today's risk manager must also have the ability to communicate with the staff about these issues, as well as experience dealing with legal and insurance professionals. He or she needs to know whom to call for advice in a given situation; for example, should it be an engineer or a code consultant?

The risk manager should track all claims or suits and be the firm's chief liaison on these matters. He or she must also stay informed about new construction problems as they are discovered industry-wide, as well as new technical information, and communicate these to the staff. The final responsibility for the quality of a project falls to the principal-in-charge or project principal. Project managers, who are absorbed in day-to-day issues, may not see the red flags that a project principal—with assistance from the risk manager—might notice. The risk manager serves as in-house adviser to everybody.

### The quality-control plan

The foundation for any risk-management plan is the firm's quality-control manual. The manual outlines procedures that should be followed,

starting with reviews of marketing proposals. As an expert witness, I have seen circumstances in which the marketing department promised a service or process in their proposal that the architects could not deliver. The principal-in-charge should review all marketing text, particularly that which is related to construction documents, construction administration, plan checking, and schedules.

Plan checking has become a bigger issue than ever because construction documents are stored out of sight—digitally—instead of in print form, where they can be readily reviewed, and because there is a wider gap in technical knowledge between senior and junior staff than ever before.

The quality-control manual should outline procedures for project reviews at the conclusion of each phase. Preferably these should be done by a fresh pair of eyes. It is best to use a plan checker from outside the firm or, if one is not available, use someone from another team in the firm. Currently, at the end of each phase our firm checks plans at least three times, in part to catch errors that could occur due to the knowledge gap. Finally, the manual should outline the process for quality control throughout the construction process.

A good risk-management plan builds on the manual and can be brief. Here are some key ideas for reducing your firm's risks:

- Create a culture in which solving problems is more important than assigning blame.

*Don Crosby, AIA, has practiced architecture for over 35 years. He is a partner and the risk manager at Ratcliff Architects in Emeryville, Calif.*



# Practice Matters

- Appoint senior staff member(s) to coordinate and manage risk.
- Have project principals report potential problems to the risk manager immediately and develop a *responsive strategy*.
- Before reporting a potential problem to the insurance company, the firm managers should agree that

the entire firm. An annual presentation can orient new employees and update the existing staff. Identify a senior technical person who can answer technical questions during the design phases, before potential problems reach the field. The risk manager should continuously distribute updates to the plan

## YOUR FIRM CULTURE SHOULD BE TO DEFER DECIDING WHO IS RESPONSIBLE FOR A PROBLEM UNTIL AFTER IT HAS BEEN FIXED.

- all alternative solutions have been explored.
- Make appropriate staff available to the risk manager to deal with project-related problems.
  - Establish a budget to cover risk management.

and inform staff of relevant technical issues. Well-trained employees understand their professional responsibility in terms of life safety and reputation. But it is important to explain the costs of litigation as well as its negative impact on morale.

### Getting staff buy-in

The plan and the process of risk management must be shared with

### Covering the cost

Our firm allocates 1 percent of the net project fee to cover the cost of

risk management, and we have found that this is enough to respond to our clients' needs. It serves as a reserve for dealing with problems during or after construction and is very inexpensive insurance.

### A few helpful hints

Should a client call with a complicated problem, an expert should be brought in immediately. It is a good idea to contract with a waterproofing consultant from the outset, since water penetration is the source of many claims in certain areas. A building-skin consultant can be invaluable on complex high-rise projects. Remember that your consultant cannot be an expert witness against you if litigation occurs.

In the Bay Area, the Advanced Management Institute, a local organization that offers ongoing training for professionals in the A/E industry, sponsors a monthly forum for risk managers. This informal luncheon is invaluable for hearing about strategies to address the most recent developments in technology and liti-

gation. If such a forum does not exist in your area, work with the local AIA to establish one.

While architecture schools are good at teaching about the architect's ethical responsibilities, few offer courses in risk management. With the growth of the AIA's Continuing Education Program, local chapters and insurance companies are offering frequent courses in these areas. Pay for younger staff, whether they are AIA members or not, to take these courses.

### Conclusion: create a culture

In addition to assigning a risk manager to oversee the process of educating the staff, it is also important to have enough project principals available to oversee projects and spot risky situations. Risk can be significantly reduced if the entire team works together to communicate with the client so that he or she will call you first when a problem arises. That call and your committed plan may keep you out of court. ■

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# Futures past: Cities and designs that grow from understanding history, mistakes and all

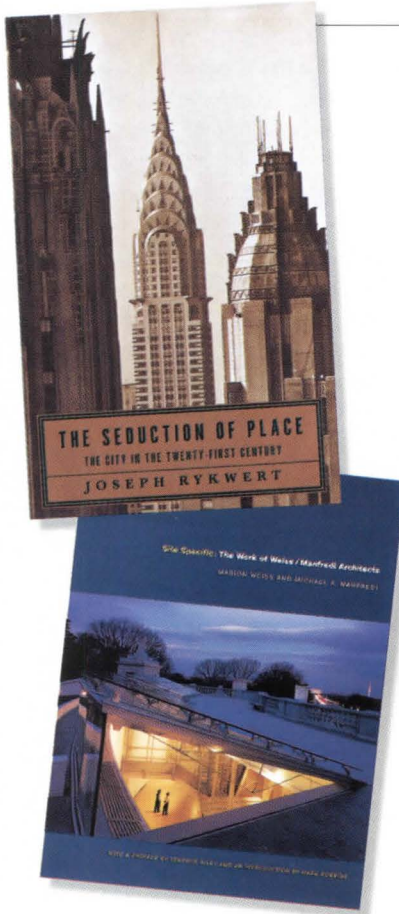
## Books

**The Seduction of Place: The City in the 21st Century**, by Joseph Rykwert. New York: Pantheon, 2000, 283 pages, \$28.

If you were marooned on a desert island with just one book about urban design, past and present, you would want it to be this one. First, it gives you a dense but smoothly written, synoptic history of cities from ancient Mesopotamia, Greece, and Rome to current-day New York, London, and Hong Kong—perfect for that ultra-small library. Second, it offers advice on thinking about cities, advice that considers the history both of architecture and planning.

Joseph Rykwert does not believe in simply shrugging off the state of the contemporary city as a product of various external historical and economic forces. An architectural historian and emeritus professor at the University of Pennsylvania, he is known for plumbing the history of ideas in architecture and urbanism in such landmark works as *On Adam's House in Paradise: The Idea of the Primitive Hut in Architectural History* (1972) and *Idea of a Town: The Anthropology of Urban Form in Rome, Italy, and the Ancient World* (1976).

In *Seduction of Place*, Rykwert reminds us that cities are shaped by a number of agents of change—politicians, planners, developers, and others—all driven by a slew of good and bad motives, including greed and power, benevolence and social responsibility.



Rykwert's broad focus leads him to point out that "irrationality and miscalculation—sometimes ruinous miscalculation. . . are as much an inescapable part of the history of urban development as they are of the story of banking or the industrial economy."

Not surprisingly, Rykwert finds that the use of the term "globalization" to describe the growth and change in cities too often masks the role of individual actions and personal responsibility in the shaping of those urban agglomerations. Looking at the local level, Rykwert

asserts that zoning policies devised to control land use and growth often foster monotony and inflexibility. For example, he notes that unexpected developments—such as the recent phenomenon of small-scale urban farms—are often stymied by such regulations.

For all the damage done by human error, the city is a "precious, essential" achievement of man, says Rykwert. Because of this, he argues that communities should encourage greater involvement on the part of residents through such processes as public "brainstorming" or community "charrettes," instead of leaving planning decisions only to city councillors and traffic advisers.

Architecture plays a significant part in shaping urban settings, helping to create places that people remember, love, or avoid. But while architects have greatly debated styles and design approaches, many mistakes have been made, notes Rykwert. "The relationship of tall buildings to the street remains one of the great problems of the 20th-century building."

In making his overall argument, Rykwert skillfully weaves much information into a tapestry that is all the richer for its background detail. A surfeit of lesser-known but fascinating facts includes the effect of the Canal du Midi, built in 1680 with 119 locks, in generating trade and industry throughout France, and the sudden explosion of hackney carriages in London from 40 in 1635 to 700 by 1700. (Think of the manure.)

While Rykwert's general history of cities around the world may be known to a professional audience, it had not been presented in so succinct or complete a manner before this book. Such enriched fare underlines the importance of knowing history as we undertake the task of improving old cities or creating new ones. *Reviewed by Suzanne Stephens*

**Site Specific: The Work of Weiss/Manfredi Architects**, by Marion Weiss and Michael Manfredi. New York: Princeton Architectural Press, 2000, 128 pages, \$35 (paper).

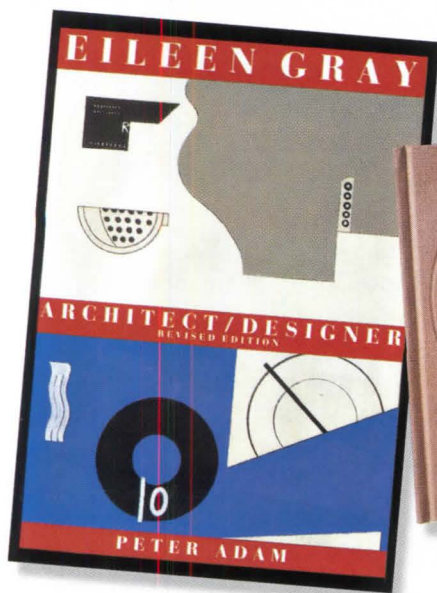
A monograph on the New York firm Weiss/Manfredi Architects, *Site Specific* examines how architecture can extract the history and secrets of a particular location, making a new place that is physically and intellectually compelling. The book's cover photograph immediately pulls the reader into the firm's best-known built work, the Women's Memorial and Education Center at Arlington National Cemetery, a glass-and-steel insertion within a neoclassical gateway designed by McKim, Mead and White. Shot from the memorial's new rooftop walkway, the photograph captures the grand sweep of the old granite balustrade while offering a view through a trapezoidal glass window that reveals a contrasting but complementary interior space to McKim, Mead and White's architecture.

The book begins with an introduction by Terence Riley, chief



## Books

curator of architecture at the Museum of Modern Art, who traces Weiss and Manfredi's artistic lineage from their former employer Romaldo Giurgola to his mentor, Louis Kahn. Mark Robbins, director of design at the National Endowment for the Arts, contributes a thoughtful overview of the firm's practice, its design process, and some of its important projects. The book then presents 19 Weiss/Manfredi projects grouped by work type into four chapters: "Site and Memory" (memorials); "Infrastructure's



Landscape" (planning and design projects for traffic corridors, pedestrian routes, and the like); "Constructing the Site" (parks and buildings that seem to grow from their sites); and "Surfaces and Settings" (mostly interiors).

From simple sketches to urban solutions, *Site Specific* reveals a design process that patiently considers each site, unselfconsciously drawing out its unique qualities. For example, the pages on Olympia Fields Park and Community Center, completed in 1994 in Illinois, present a design that integrates new park struc-

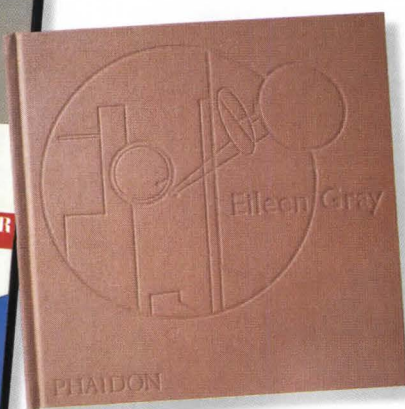
ered the rolling 20-acre site during the most recent ice age. With such references to geological forces, Weiss and Manfredi capture a remarkable echo of time: one of glacial moraines and 100-year-flood plains.

*Reviewed by Nancy Lago, AIA, who is a principal of her own architecture and landscape design firm in New York City.*

### **Eileen Gray: Architect/ Designer (revised edition),**

by Peter Adam. New York: Abrams, 2000, 408 pages, \$40.

**Eileen Gray, by Caroline Constant.** New York: Phaidon,



2000, 256 pages, \$60.

"Behind every great man, there is a great woman" goes the old adage. The same may be true in architecture, whose history is often strikingly male. Whether by virtue of their gender, personality, or the social constraints of their time, some women architects—Charlotte Perriand, for example—found their contributions overlooked in favor of their male collaborators. Yet a wave of revisionist history has led to the discovery, or rediscovery, of many of these women.

Eileen Gray exemplifies this kind of posthumous revival. Although celebrated in the 1920s and '30s as a pioneer of modern

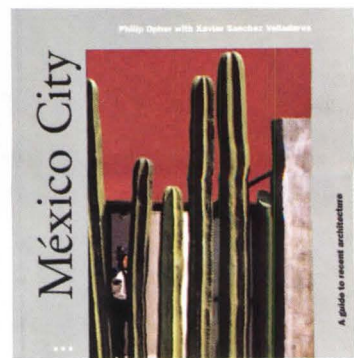
ture—while the men with whom she collaborated, particularly Romanian architect Jean Badovici, were given credit for some of her work.

When the first edition of Peter Adam's book was published in 1987, it was the only full-scale biography of Gray available. Adam knew Gray personally and had access to her archives. As a result, his book is an informal, affectionate portrait. Chronological and straightforward, conversational in tone, it chronicles the details of Gray's life in a complete, but not probing, way.

Caroline Constant, a professor of architecture at the University of Florida at Gainesville, takes a more scholarly approach to her subject. She treats the biographical details more parenthetically than does Adam while more carefully tracing and analyzing Gray's designs, influences, and milieu. Constant places Gray's work in the context of contemporary movements in design and architecture, as well as within 20th-century social and cultural history. She also credits Gray as the co-architect of four houses that until recently had been attributed solely to Badovici.

Not surprisingly, the two books have many of the same illustrations showing Gray's Asian-influenced lacquer furniture, her rug designs, and her innovative modern furniture and architecture. Gray's most famous house, which she called E. 1027 and built for herself and Badovici in the south of France, is particularly well documented in both volumes.

Although both books do a good job of covering their subject, Constant's volume emerges as the clear winner in terms of graphic design and visual impact. One of Gray's abstract rug designs is embossed in the book's rust-colored cloth cover (it has no dust jacket), and bands of this rust tone run throughout the book, framing photos and serving as a background for captions. This powerful graphic device helps make the book as



**Mexico City: A Guide to Recent Architecture,** by Philip Opher with Xavier Sanchez Valladares.

London: Ellipsis, 2000, 292 pages, \$15 (paper).

The latest in a series of appealing little guides published by London-based Ellipsis, this book measures exactly 4¼ by 4¼ inches and fits neatly into almost any pocket. Like Ellipsis's other guides to recent architecture in places such as London, New York, and Switzerland, this one includes a brief introduction and then presents a selection of buildings organized by neighborhood. Each project gets one black-and-white photograph and a short but informative block of text.

As Opher, a British architect, explains in his introduction, the book features a "personal selection" of architecture, ranging from the renovation work under way on Mexico City's main cathedral on the Zócalo to buildings by Augustín Hernández, Teodoro González de León, Ricardo Legorreta, Enrique Norten, Isaac Broid, and Alberto Kalach. "Although not yet fully appreciated abroad, Mexican architectural culture is extremely lively and diverse, with a fierce rivalry between the advocates of different approaches," states Opher. Indeed, partisans of heroic Modernism such as González de León and Abraham Zabludovsky, synthesizers of Modernism and vernacular design such as Legorreta, and a new generation of edgy architects engage in a vibrant discourse. Other Ellipsis guides include *Art New York*, *Eat New York*, and *Shop New*





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# Snapshot



By David Cohn

Set in the untamed hills of Valleaccerón in central Spain, this private chapel offers a contemporary take on an old Spanish tradition. It forms part of a rustic weekend retreat: a hunting preserve with a main house, pool, and trophy display pavilion on 12,000 acres. The estate was built by a famous soccer player, in much the same spirit as successful bull-fighters often build aristocratic country estates. In this case, however, the client passed over traditional stylistic models for the bold formal experiments of Madrid architects Sol Madridejos and Juan Carlos Sancho.

Madridejos and Sancho developed the chapel design by deforming a regular rectangular box, and introducing diagonal cuts and folds in the box's six sides to distort its shape and open it to the exterior. The total surface area of each plane was not changed in these operations. Instead, each cut and fold had to be counter-balanced by cuts and folds on other planes. As Sancho explains, "If you move one element, everything else moves, as well. Everything is tied together, as if on a string, governed by the laws of topology, the mathematics of surfaces."

## Spirit and soul unfold in a Spanish chapel



## Snapshot

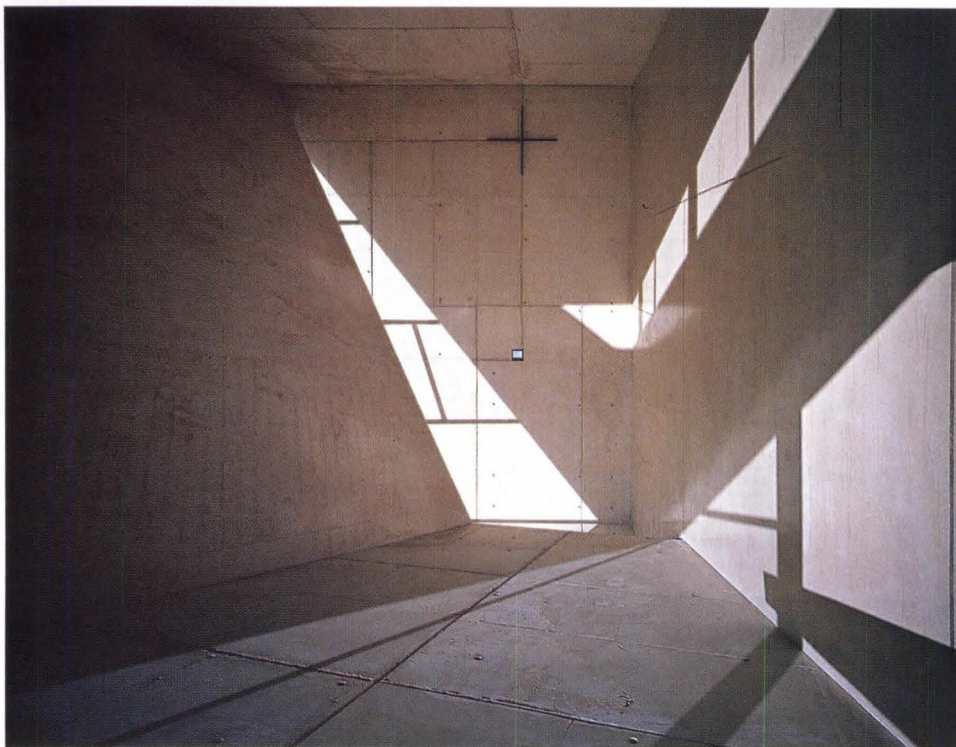


The architects manipulated the folds to create an interior focal point on the chapel's rear wall, where a Neogothic image of the Virgin will hang. This focal point receives natural light from a large incision in a side wall and from the complex triangular cuts of the western entry facade and the roof. From within, these openings offer dramatic, framed views of the landscape.

The topological balance created between the angled planes made the structural design relatively simple, Sancho reports. Though reaching a height of 34 feet, the concrete slabs are less than eight inches thick, and without beams. The openings are glazed and framed in Cor-Ten steel.

The chapel was built following a dimensioned and detailed model instead of plans. Each plane was erected in an order determined by the structural engineer, and each pour was separated by wood spacers. Local aggregates and marble fill give the concrete a warm golden tone.

The owner uses the chapel as a place of spiritual meditation rather than religious rite. The structure is without electricity or heating—thus *maintaining a more primitive and direct relation* with its hilltop setting. According to the architects, the soft tones of the concrete are particularly sensitive to the changing qualities of direct natural light which, as the architects put it, “erupts like another plane in the spatial com-








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*Craig Townsend, Architect*

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Architect: Gaskin & Bezanski, Las Vegas, NV*



*Motown Cafe at New York, New York Casino, Las Vegas, NV  
Architect: Haverson Architecture & Design, Greenwich, CT  
Photography: Opulence Studios, Las Vegas, NV*

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# Dates & Events

## Exhibitions

### **Housing New York: Ed Logue and His Architects**

#### **New York City**

*Through April 14*

Exhibits the residential projects built by Ed Logue and architects of the Urban Development Corporation between the years 1968–1974. Examines the quality and the sheer quantity of the projects built in 55 communities in New York State. At the Municipal Art Society. Contact 212/935-3960 or see [www.mas.org](http://www.mas.org).

### **Aluminum by Design: Jewelry to Jets**

#### **New York City**

*March 20–July 15*

Explores how aluminum has inspired innovation in design. Includes works by Lalique, Prouvé, Mies van der Rohe, Russell Wright, Charles and Ray Eames, and Gio Ponti. At the Cooper-Hewitt National Design Museum. Contact 212/849-8400 or see [www.si.edu/ndm](http://www.si.edu/ndm).

### **2001: Building for Space Travel**

#### **Chicago**

*March 24–October 21*

Exhibits the fantasies and realities of architecture and design for space travel. Includes works by architects, engineers, industrial and graphic designers. At the Art Institute of Chicago, Kisho Kurokawa Gallery. 312/443-3600 or [www.artic.edu](http://www.artic.edu).

### **Poetics of Movement: The Architecture of Santiago Calatrava**

#### **Dallas**

*March 25–August 5*

Displays the collection of Calatrava's models, and small-size sculptures entitled *The Aegean Pieces*. This is the inaugural exhibition at the Meadows Museum at Southern Methodist University. Contact 214/768-3785 or [www.cboleman@mail.smu.edu](mailto:www.cboleman@mail.smu.edu).

### **Frank Lloyd Wright and the Art of Japan: The Architect's Other Passion**

#### **New York City**

*March 28–July 15*

Explores the influence of Japanese design on the famous American architect. At the Japan Society. Contact 212/832-1155.

### **Architecture and Water**

#### **New York City**

*March 28–September*

Focuses on five projects that integrate architecture and landscape to engage today's waterfront. Includes work of Foreign Office Architects, Diller and Scofidio, MVRDV, Steven Holl and Michael van Valkenburgh, and Alsop and Stormer. At the Van Alen Institute. Contact 212/924-7000.

### **Federal Design Now! GSA 2000 Design Awards**

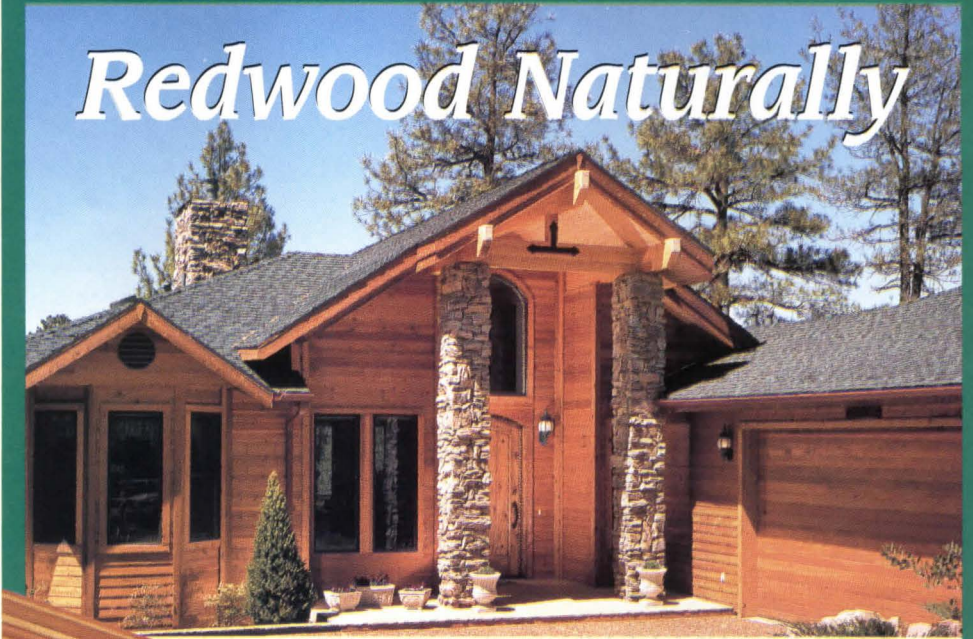
#### **Washington, D.C.**

*March 29–July 8*

Exhibits contemporary architecture and artworks that were commissioned by the U.S. federal government and that won GSA 2000 Design Awards. At the National Building Museum. Contact 202/272-2448 or see [www.nbm.org](http://www.nbm.org).

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## Dates & Events

### **Territories: Contemporary European Landscape Design Cambridge, Mass.**

April 20–May 24

Presents current themes, trends, and completed works of landscape architects in contemporary Europe. Conference on same topic held April 20–21. At Harvard University Graduate School of Design. Contact 617/495-4784 or see [www.gsd.harvard.edu](http://www.gsd.harvard.edu).

### **Conferences and Symposia**

#### **Design Futures Council Meeting: "Anticipate and Capitalize on New Opportunities in the A/E International Marketplace" Chicago**

April 24

Explores international market analysis, tactics for success, financing,

and legal and risk-management issues. At the CNA Plaza. Contact Beth Seitz, 770/209-3771.

#### **Eisenman's Aronoff Center - A Critique Munich**

April 24

A lecture by Professor Wolfgang Preiser of the College of Design, Architecture, Art and Planning. At the Technical University of Munich. Contact 49/89/289-100 or see [www.bri.arch.tu-muenchen.de](http://www.bri.arch.tu-muenchen.de).

#### **AIA Continental Europe Chapter Meeting Madrid**

April 27–29

Important biannual meeting for AIA members in Europe. Contact 202/626-7415 or [edelage@aia.org](mailto:edelage@aia.org).

#### **Symposium on Architecture and Nature**

### **New York City**

May 1

Diana Agrest will deliver the keynote address, focusing on the work of Frank Lloyd Wright and others who reinterpret nature through built form. Respondents include Stan Allen, Kenneth Frampton, and Robert Irwin. At the New School. For more information see [www.newschool.edu](http://www.newschool.edu).

### **45th Annual CSI Convention and Exhibit Dallas**

June 21–24

Sponsored by the Construction Specifications Institute. At the Dallas Convention Center. Contact 800/689-2900 ext. 4772 or [llowe@csinet.org](mailto:llowe@csinet.org).

### **Competitions**

#### **The New Suburb**

Deadline: April 19

An open ideas competition concerning urban renewal and development in new suburbs. Sponsored by the

Suburb Research Project at the Aarhus School of Architecture, in collaboration with the Danish Research Agency. Contact Jan W. Hansen, 45.86.12.93.46 or Flemming Deichman 45.56.16.79.07. or see [www.dal-aa.dk](http://www.dal-aa.dk).

#### **Sixth International Design Prize Switzerland**

Deadline: April 30

Eligible candidates include private and public designers from Switzerland and abroad. Contact [Barbara.Kohler@pr-access.ch](mailto:Barbara.Kohler@pr-access.ch).

#### **National Preservation Honor Awards**

Nomination Deadline: May 1

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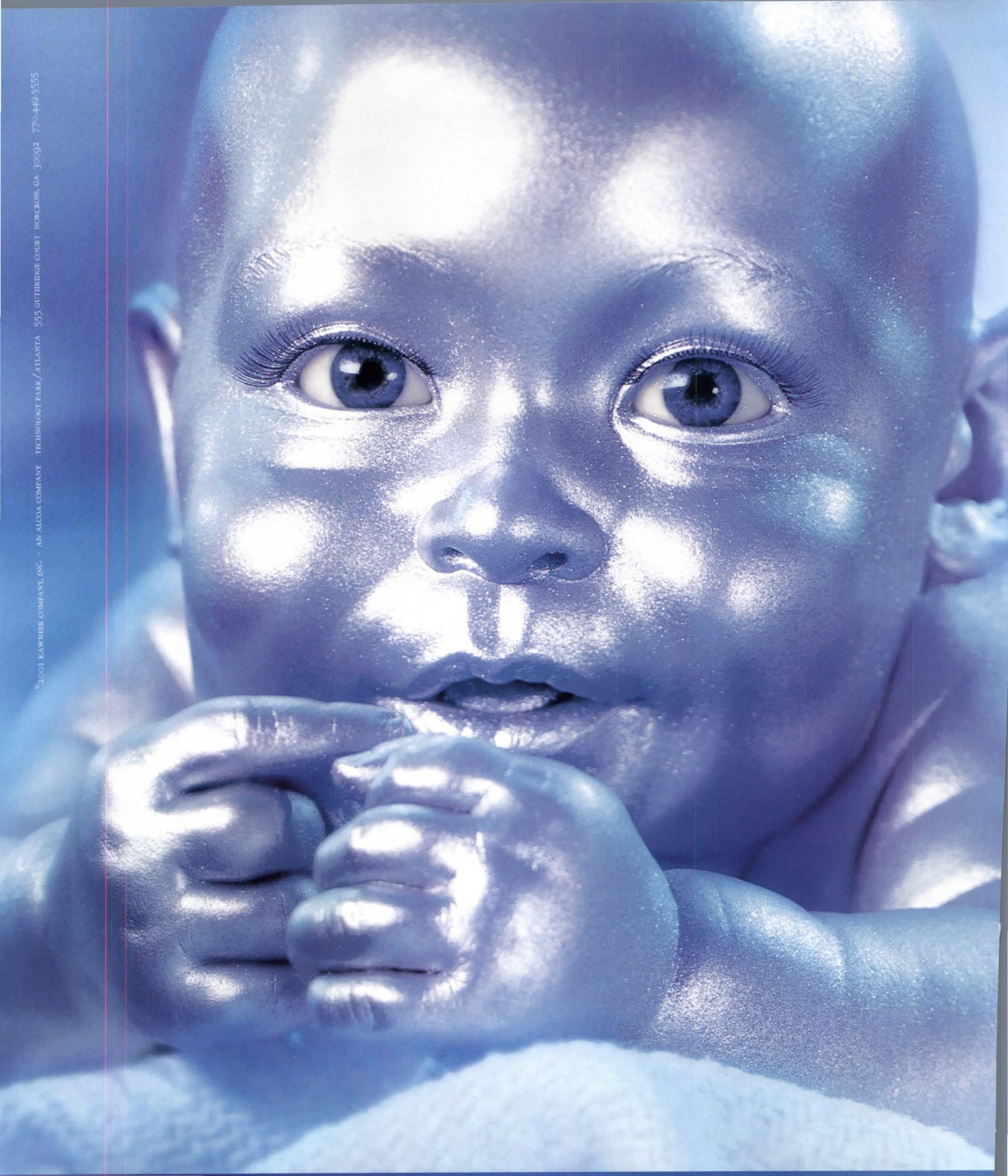
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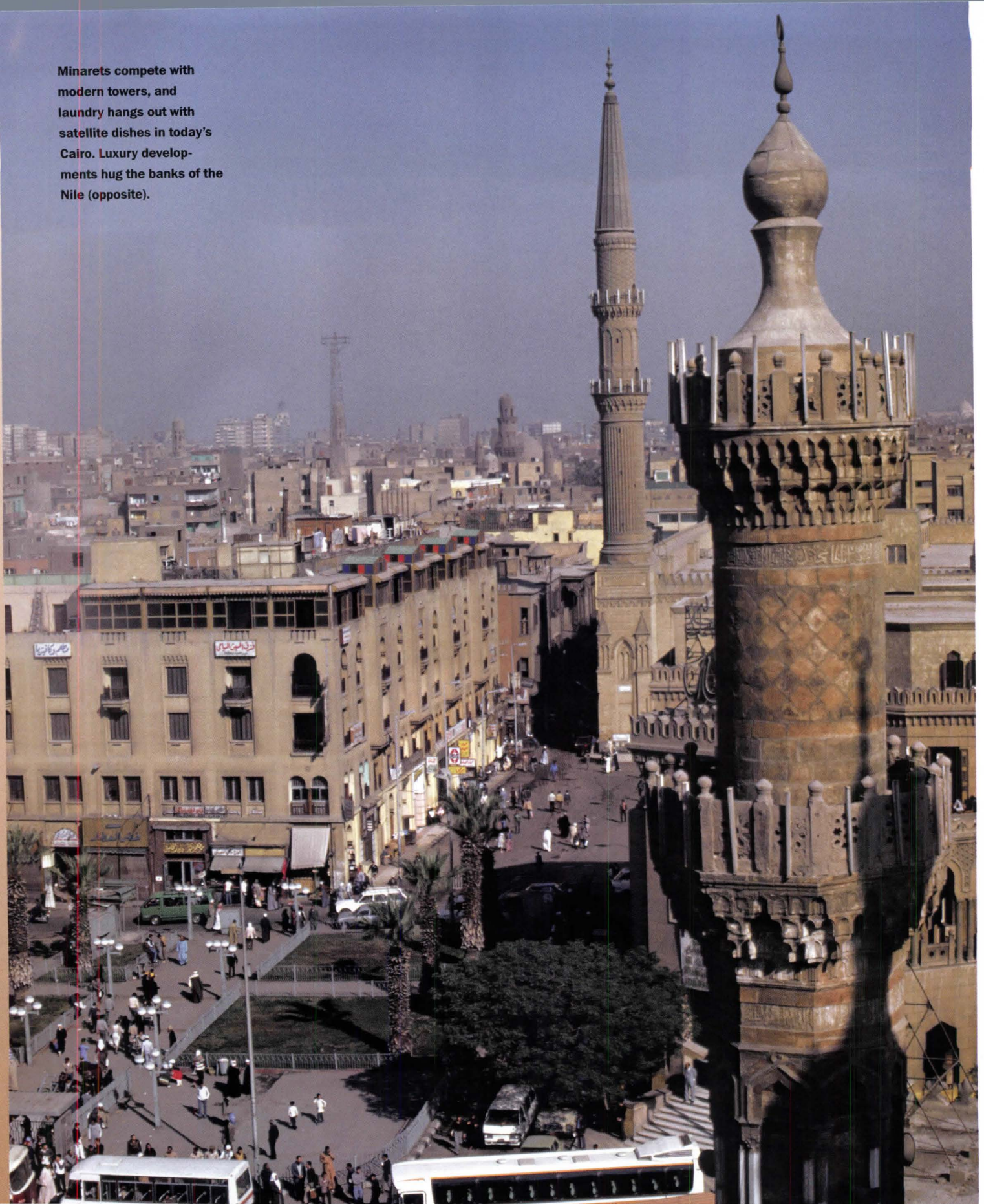
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Minarets compete with modern towers, and laundry hangs out with satellite dishes in today's Cairo. Luxury developments hug the banks of the Nile (opposite).





# Deciphering Greater Cairo

By Michael Sorkin

Arriving in Cairo, my plane descended slowly along the city's edge and took a wide U-turn above the Pyramids, offering a view that encompassed the whole city; it was like looking out the window of a chariot of the gods. What struck me was that the city didn't seem large enough.

Like many cities in the developing world, Cairo has a different kind of an edge than American cities. Although Cairo is huge, it doesn't exactly sprawl, cleaving in general to the line of the Nile. The combination of a delimiting desert and a social gradient that locates wealth near the river contributes to a relatively compact area. Of course, the insane densities also help: the average in Cairo (69 souls per acre) is close to six times that of Mexico City. A city of nearly 20 million, greater Cairo occupies an area approximately twice that of Paris but holds more than four times its population. And although rates have slowed slightly, the city is growing by about 350,000 people per year, a strain far beyond available resources or infrastructure.

Cairo is the mother node in a system that stretches the length of the Nile, the linear city par excellence. Egypt, in effect, is a country 400 miles long and half a mile wide, a singular ecological entity. Settlement and cultivation occupy only 3.5 percent of the land area of the country, and one of Cairo's biggest problems is the encroachment of development on desperately scarce agricultural lands. The exacting difference between the desert and the river creates a split in character that is an indelible fact of

the Egyptian environment. This extreme, bifurcated ecology defines the nation with a presence that is all-pervasive, whether in the sand seeping through every crack or the urgent cool of the Nile banks.

The character of Cairo shifted dramatically with the construction of the first Aswan Dam in 1902. By stabilizing the river's banks, the dam not only rescued Egyptian agriculture from historic cycles of flood and drought, but enabled extensive urban development along the shore, leading to a westerly shift in Cairo's center of gravity away from the medieval city east of the flood plain. The current character of the city, with its phalanx of high-rises straining for a view of the river, is the hypertrophied result, the familiar Chicago syndrome. One conspicuous distortion is the insane valuation of prime riverfront sites, which fetch prices at the Tokyo or New York standard, as much as \$1,850 a square foot. Indeed, Cairo is busy blowing a speculative real-estate bubble of great and frightening dimension.

While it would be foolish to describe Cairo as a city flush with efficiency, there is little sense of disorder. Although the crowds are thick, the traffic legendarily grim, and the pollution ghastly (a single lead-acid battery recycling plant has apparently caused a one-point drop in the IQ of Cairene kids), the order of inconvenience does not rival, for example, Bangkok, pinioned in its paralysis of growth. Part of the reason is simply cultural. I've always been struck on visits to Cairo by both the ubiquity and the softness of the crowds. While there is a tremendous problem of under-employment in Egypt, unemployment rates are actually fairly low. In



How do  
you fit 20  
million people  
between  
the desert  
and the Nile?

FEATURES

Contributing editor Michael Sorkin is an architect and critic based in New York City.





Cairo is one of the mostly densely populated cities in the world and continues to grow by about 350,000 people a year. Although its resources and infrastructure are severely strained, residents are experts at handling congestion.

commercial quarters, bazaars, and old neighborhoods, the bustle—the sense of endeavor—is tremendous but somehow calming. As anyone who has read the novels of the great Naguib Mahfouz will know, this street life is one of Cairo's historic glories, an intricate interaction of its citizens with shops, mosques, cafes, houses, and the narrow medieval pattern of streets.

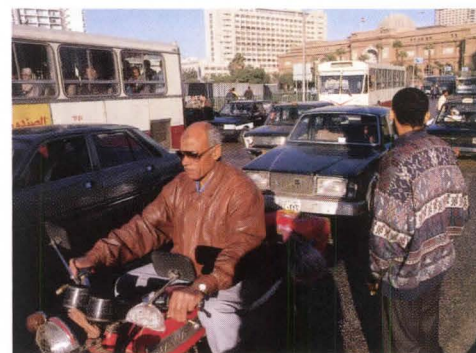
There's no better place to meditate on this condition than the celebrated Al-Fishawi cafe, long since elevated to a tourist icon and one of the world's great institutions of urban conviviality. In the midst of the teeming Khan Khalili bazaar and near the ancient, magnificent Al Azhar university buildings, Al-Fishawi comprises a double-deep enfilade of rooms done in the faded plush of the 19th century. Tables spill into the narrow pedestrian lane in front; the opposite side of the street is also lined with settees and chairs, with little tables, with a row of hookahs, and with the comings and goings of tiny cups of murky sweet coffee and glasses of minted tea. Contained in this environment is everything an architect could possibly want to know about the relation of scale, texture, and sociability, as well as an utterly exemplary and sympathetic interaction between private commerce and the space of public life.

Al-Fishawi is a reminder of the tremendous success of the city's medieval pattern, a pattern that still has deep relevance for contemporary planning. The Cairene harat, or

tural, religious, and commercial affairs that contemporary planning strains without success to reproduce. One problem, however, is the adoption by more and more Egyptians of the lifestyles of the global bourgeoisie, an outgrowth of the pattern produced by an economy focused on large-scale industrialization and bureaucracy rather than the smaller-scaled, more crafts-intensive pattern of the traditional city. And, part of the problem is simply the lack of convincing planning models that preserve the best aspects of such traditional environments.

Egypt is one of the world's great battlegrounds between tradition and modernity. This tends to schematize politics, leaving little room for the forms of compromise, the pattern of constant giving ground between private and collective interests embodied in the traditional city. After years of a semi-authoritarian, statist view of modernization, Egyptian architecture has virtually ceased to offer useful alternatives or resistances. One of the surprises in all this—given the tense, somewhat subterranean, standoff between an essentially secular government and the network of fundamentalist institutions that oppose it—is that architecture figures so little in the elaboration of this difference, that its symbolic import seems to have little or no weight in the struggle.

The best-known architect of modern Egypt, the late Hassan Fathy, embodies this contradiction precisely. Long an apostle of tra-



approach of deep cultural and environmental resonances, filled with imputations of local economy and the virtues of self-help. The resulting architecture—from the town of New Gournà to a suite of beautiful Cairene villas—is subtle, powerful, and filled with fellow-feeling for the cultural and physical landscape.

But Fathy is very much a guru without a following in Egypt. Neither the architectural schools, nor the bureaucracy, nor the broad mass of citizens seems to have much concern for the relevance of Fathy's work. This is partly due to the widely perceived failure of New Gournà, near Luxor, which Fathy built to rehouse a population that had made its living robbing graves in the Valley of Kings and that, ultimately, didn't cotton to resettlement and reemployment.

This articulation of the relationship between Western and traditional Islamic models of urbanization as a conflict has long formed the



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The medieval pattern of old Cairo with its traditional neighborhoods, or *harat*, has relevance for contemporary planning. The relation of scale, texture, and sociability here still impresses designers.

never developed the extreme bipolarity of other north African colonial cities with their traditional medieval medinas twinned with the orthogonal, rationalist plans of their colonizers, most prominently the French.

Indeed, one of the abiding fascinations of Cairo is its extremely successful import of global models of urban development and the integration of these foreign prototypes into the city against staggering demographic and economic odds. The large-scale grafting of European urban models began during the reign of Mohammed Ali, Egypt's first and prototypical modernizer. Confronting a city in which fewer than 8 percent of streets were wide enough to permit two-way cart traffic—and in which he was the only carriage owner—Ali removed encroachments from city streets and realigned many, with the unfortunate loss of considerable architectural texture. Large numbers of official and private structures were built, and over 400,000 construction workers were employed at one point on government projects.

Khedive Ismail, Mohammed Ali's grandson, deeply impressed by the Parisian Exposition Universelle of 1867 (Haussmann's swan song), implemented practices of which his grandfather had only dreamed. On his return from Paris, Ismail appointed Ali Mubarak as the Haussmann of Cairo, charged with drawing up a Parisian-style master plan for the city. Spurred by the approaching festivities surrounding the opening of the Suez Canal in 1869, Ismail and Mubarak remade the face of the city, cutting a radiating system of boulevards, adding new

European-style neighborhoods and buildings, even hiring Barillet-Deschamps, the landscape architect of the Bois de Boulogne, to create a local version of the Parc Monceau.

This activity had both positive and negative results. Among the latter was the wholesale destruction of much of the historic texture of the city and the bankrupting of the Egyptian economy, opening the door for British coloniza-

## CAIRO HAS IMPORTED GLOBAL MODELS OF DEVELOPMENT AGAINST STAGGERING DEMOGRAPHIC ODDS.

tion in 1882. Nevertheless, the rapid growth of the city continued, much of it financed by foreign capital for speculative projects. Among these was an extensive system of streetcar lines which set the pattern and standard for Cairene public transportation and which remains a highly constructive development.

Among these trolley lines was the Cairo Electric Railway, built in 1906 by Baron Edouard Empain, a Belgian financier and industrialist. Empain used his trolley to leverage both the financing and development of Heliopolis, a new town in the desert to the north of the existing core. Much influenced by English Garden City planning, Empain's idea was to create a largely self-sufficient town in the desert with both a lavish resort component and an industrial base. With this in mind, a wide range of housing types was planned, although their internal layouts were essentially European. The architecture—arcaded and elaborate—

achieves a kind of orientalist sublime, and the generous apartments in the original buildings are much sought after today.

By almost any standard, Heliopolis ranks as a success. Although its initial occupants were drawn from the wealthy and foreign populations (the Brits took it over as a base during World War I), Heliopolis was almost immediately annexed by the city of Cairo and today houses over a million people. Adjoining both the huge new development of Nasser City and the airport, its location continues to draw substantial investment and to provide a fundamentally autonomous city sector. The quality of the environment remains high.

Although there is a continuing debate over whether Heliopolis represents an alien import, involving all the usual appeals for a fictitious architecture of authenticity (what, one wonders, is the precedent for an Islamic streetcar suburb?), it's clear that Cairo—a city that has added nearly half of the population of New York to itself in the past 10 years—cannot simply expand exponentially but must decentralize. And, from the beginning of the current republic, the Egyptian government has recognized this and pursued an active and in many ways exemplary policy of new town building. It was recognized early on that the uncontrolled growth of Cairo was not simply creating conditions of apraxia for the city itself but having a distorting effect on the country as a whole.



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The completion of the Aswan Dam in 1902 stabilized the banks of the Nile, allowing development close to the river on land that had previously been a flood plain. Today, high-rises hug the water.

Cairo, the classic metropolis, continues to draw vast numbers of people from the countryside, most of whom wind up either in informal settlements within the city or at the urban periphery on existing agricultural land.

Having made the decision to try to deal with Cairo's growth as the symptom of a national problem, the government has adopted a triple approach. First, to build new cities and reinforce older centers elsewhere in Egypt to provide employment and residential possibilities in place. Second, to develop satellite cities at the periphery of Cairo to relieve pressure on the historic city core and to manage the huge appetite of the sanctioned and the informal sectors for space. And finally, to elaborate so-called homogeneous zones within Cairo as essentially self-sufficient communities.

This policy has developed over a number of years and has been closely tied to shifts in administration. The initial master plan was promulgated in 1956 during the Nasser period and reflected Soviet models and preoccupations. It included the city's first ring road, a massive industrial development in Helwan to the city's south, and—easily its largest component—the construction of Nasser City, the first and far and away largest of the satellites, to its northeast. Initially developed by and for the military, its suppliers, and other government facilities, Nasser City is now a very densely settled, thoroughly “modern” sector housing a

towers, actually approximates a city, with lively streets and the whole pervaded by a sense of completion and urban density.

The second master plan, prepared in the 1970s and identified with the Sadat regime, is called by some the “American” plan due to the sway of U.S. planners in its development. This plan included a second, outer ring road, and a

### ALTHOUGH DERIDED BY ARCHITECTS, NASSER CITY, A SATELLITE, APPROXIMATES A REAL CITY TODAY.

group of five satellite towns all relatively far from the city and intended to be self-sufficient.

The third master plan—this one under the influence of French experts—was executed by the Mubarak government and took a somewhat more sophisticated, more integrated approach, moving beyond simple policies of accommodating growth to a scheme based on planned depopulation. Prepared in 1983 and updated in 1990, this plan included additional work on the satellites, an attempt to redirect growth into an east-west corridor, and the initiation of planning for the homogeneous zones. It also sought to replace the clearance policies directed at informal housing with a strategy of “upgrading in place.”

More recently, another shift has taken place. As with so many centralized economies in the post-Soviet era, the widespread privatization of industries formerly in government hands has

urban models and acknowledging the great reserve of consumer demand for housing.

The results can be both surreal and familiar. Driving the ring road, heading east out of the city, one is almost immediately in the desert. And it's a real desert that begins right at the edge of town, sand stretching forever, blowing across the macadam, ready to take back everything should resistance be dropped. The road passes through the vast City of the Dead (Cairo's legendary inhabited necropolis) and skirts dreary housing blocks deployed on the global grid. Soon the city disappears and all that remains are dunes and traffic.

Rounding a bend, a fantastical *fata morgana* heaves into view. Across the desert appears a large expanse of shimmering, apparitional emerald: a golf course, its greens manicured perfectly, its flags fluttering in the breeze. Stretching along the shores of the course stands a community of large, very southern-California-looking houses, their roofs red-tiled, walls pale stucco, decor meant to evoke that vaguely Mediterranean feeling that's the Orange County architectural default. Like Orange County, too, the community is gated and patrolled, with Beamers and Mercedes poking from the garages.

The young architect with whom I was touring took me into this development to see



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A battle between tradition and modernity affects the form of the city, as well as the cultural and political landscape. A mostly secular government is often opposed by religious fundamentalists.

process of becoming: streets, curbs, and sidewalks laid in, lot lines laid out, a random set of houses beginning to rise.

My friend lived in Zemalek, one of the most desirable neighborhoods in Cairo, a clutch of high-rises on an island in the Nile directly opposite the city center. I was curious why he intended to move from that very lively, very urban, very pleasant environment. Some of his motives—living in the same building as his parents, the desire to build—were understandable, others less so. For my friend, the suburban development on the city fringe offered, despite its lack of social and commercial activity and despite the long commute by car into town, a dream of freedom and an escape from the madding crowd of old Cairo. And the young architect simply loved the idea of a place of his own. When he spoke of the possibility of living in an environment of quiet, the idea assumed almost metaphysical overtones. Such feelings are produced by a culture of congestion.

“New Cairo,” as it has come to be called, is the result of a planning policy that now seeks to join the partially developed new towns on the east side into a single, market-driven, physical and planning entity; similar plans are under way for new towns in the west. For the moment, though, the market is indifferent to the needs of anyone but the middle and upper classes. Despite its poverty, Egypt is awash in money—both its own and that of conservative Arab states that have long used Cairo as a playground and relief valve from the dour morality back home. The government, eager to soak up as much of this cash as possible in Egypt, has encouraged privatization both in light of its own stretched resources and for sound macroeconomic reasons.

In the course of several days, I completely circumnavigated the city, looking at numerous developments on the fringe. An icon of the voyage was a roadside ad that appeared ubiquitously. Above a funky painting of Michelangelo’s *David* was emblazoned the word “Concrete” (a men’s clothing line, as it turned out). The signs, with their evocation of construction, strength, and the European exotic, could have just as well been advertising the buildings sprouting in the sands nearby and represented the same uneasy joining of influences. Indeed, the circumnavigation revealed the early stages of the growth of a culture of the edge that included detached

success a series of paradigms of modernity that might help guide its future.

Of course, as with all such models, the possibility for their incorporation is fraught with associations of colonialism and privilege and *ancien régimes*. But there’s something utterly inspiring about the on-going efforts of Cairenes to plan their city, to come to grips with its overwhelming problems.

As in other megacities, Cairo’s growth has been exponential and relatively recent. The city is now home to over a quarter of the Egyptian population, including 40 percent of the urban population. The consequence is both density and a certain familiar metropolitan distortion, a centralization of economic and cultural resources and a magnetic attraction for success seekers of all

## THERE’S SOMETHING INSPIRING ABOUT CAIRENES’ EFFORTS TO PLAN THEIR CITY, TO COME TO GRIPS WITH ITS PROBLEMS.

fragments of the generic American exopolis—theme parks, car dealerships, shopping centers, and all the rest of the post-Disney urban apparatus.

In a sense, this style of urbanism is the indigenous form of multinationalism and, like its predecessors, reflects the most influential urban model of its time. In looking back at the history of modern Cairo, the import and modification of such models—reflected too in the shifting sensibility behind the satellite towns—has been a crucial aspect of the city’s growth. What’s curious and perplexing is the success of a number of these models and their corresponding failure to influence their successors. Cairo is a fantastic urban museum and although we tend to focus on the glories of the medieval city, there’s also a city that has embraced with great

classes. The fundamental question is whether all the despair, inequality, and failure of services that such gigantic cities produce can ever really be redressed in place.

The answer, of course, is no: There’s only one solution for megacities and that’s to stop growing. It is a question of redirecting investment to divert the metastasis of opportunity that accelerates the desire to come. The issue for physical planners is also a national one, the provision of housing—including especially types at the low end—in a volume of millions with the provision of a modicum of services. The issue for architects is not simply how to deal with the numbers but how to create environments that speak to both the aspirations and traditions of an extremely complex culture without prejudice for either old or new. ■





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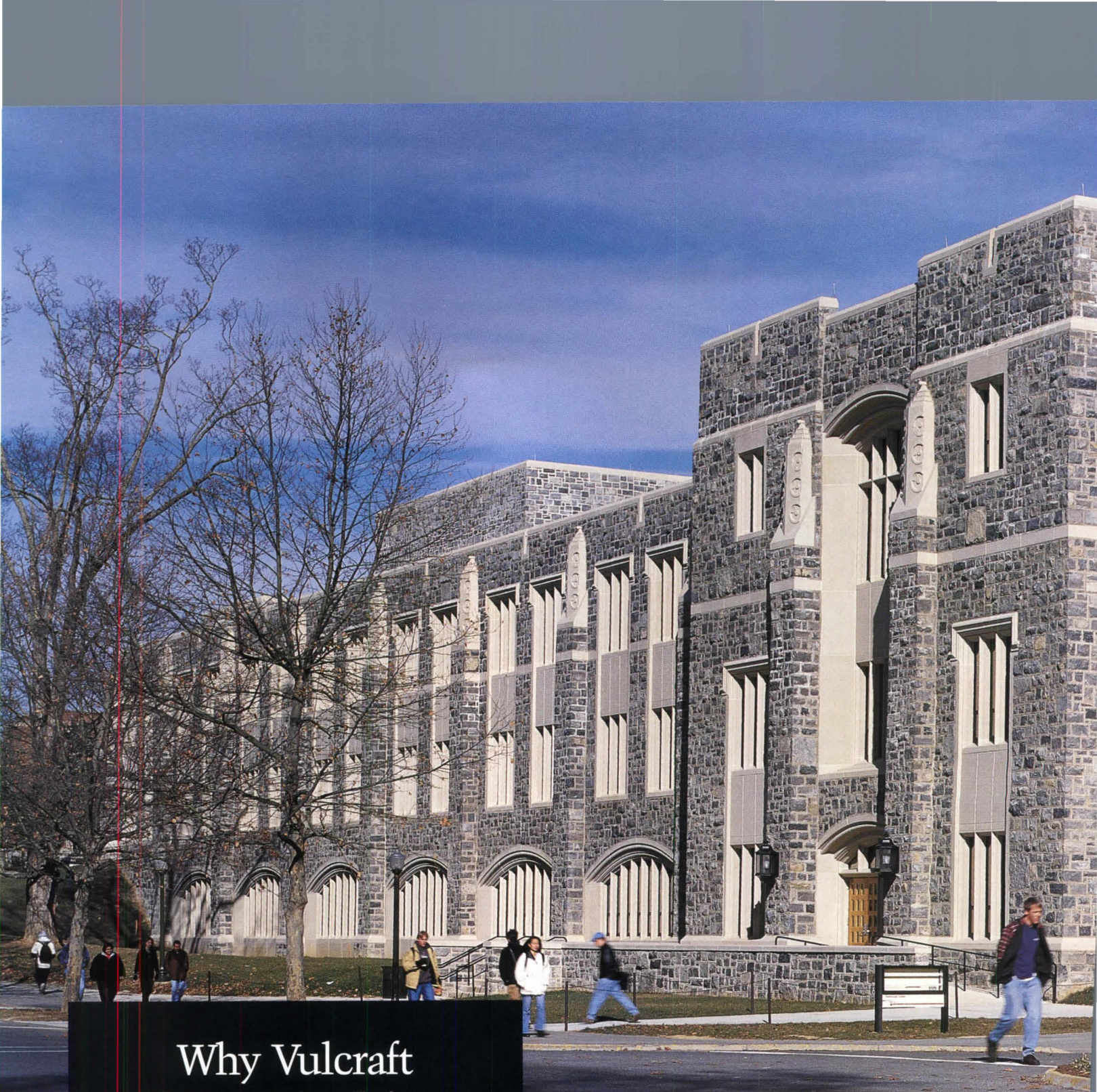
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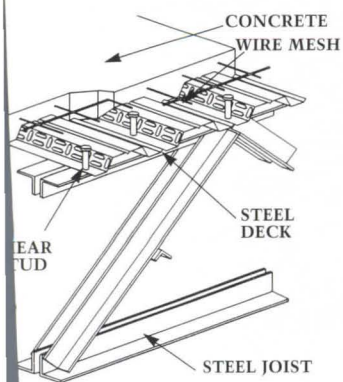
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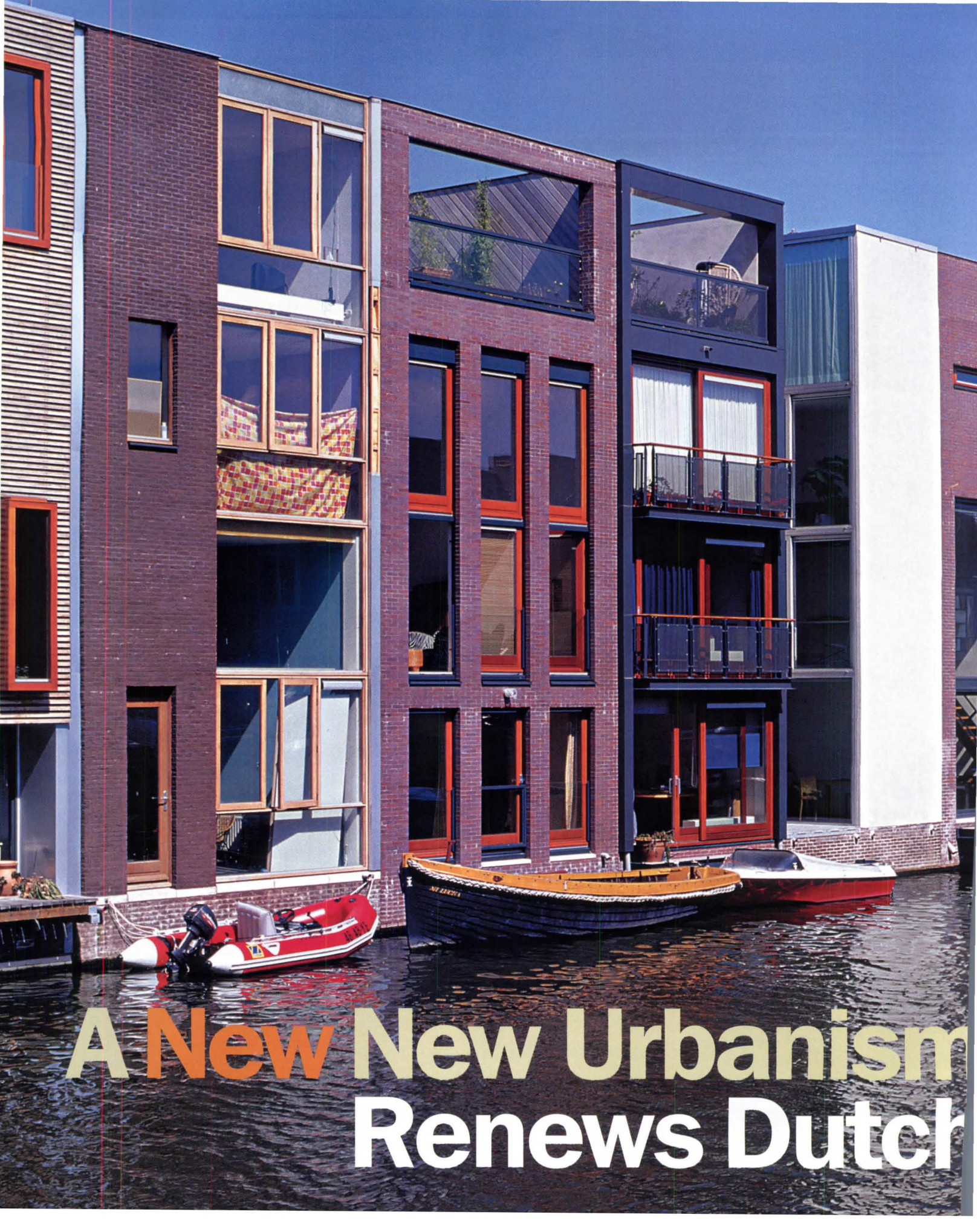
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# A New New Urbanism Renews Dutch



The rebuilding of Amsterdam's Eastern Docklands area includes the two fingers of Borneo Sporenburg (right, in foreground) and the linked Java and KNSM islands (background). Individual architects designed single-family canal-side houses (below).



By James S. Russell, AIA

**F**rom the air, it looks as if two meteorites have plunged into Amsterdam's new Borneo Sporenburg district, interrupting the bar-code pattern of its distended city blocks. The large structures are not cosmic fragments but apartment buildings, one of the willful gestures (a wide diagonal street, mowed through the blocks, is another) in this latest permutation in an 80-year-old tradition of Dutch urban-planning innovation. While the blocks of low-slung rowhouses don't obviously resemble the stepped-gabled quaintness of Amsterdam's historic canal-house districts, these made-over docklands have much in common with the picture-postcard Amsterdam everyone knows. The new project also speaks more directly to American housing dilemmas than does typical large-scale European housing.

Borneo Sporenburg represents only about one-third of an enormous redevelopment of the city's Eastern Docklands area—a once-abandoned landscape of warehouses, railroad sidings, and cargo cranes. Of the 17,000 new housing units nearing completion, those in Borneo Sporenburg are the most innovative, offering a vision of urban living attuned to the nation's shrinking household sizes, its greater wealth, and an unabated aspiration by many to live in the city's historic core or in a place with similar urban qualities.

The fundamental unit of Borneo Sporenburg is the single-family rowhouse. In Holland, individual dwellings account for a minority of the housing stock and do not form the predominant unit as in America. The urban design firm of West 8, of Rotterdam, laid out the two fingers of the island with 2,500 townhouses and floor-through apartments. The public spaces in the new development include a small, simply designed park and three

PHOTOGRAPHY: © NICHOLAS KANE (LEFT); COURTESY WEST 8 (TOP)

FEATURES

# Docklands





graceful pedestrian bridges that arch over the waterways to the other Eastern Harbor islands. West 8 principal Adrian Geuze has cut diagonals through this pattern, drawing the eye to urban landmarks, such as the spired central train station and a monumental pumping station, as well as the gap where these inlets open to the larger harbor. Within the development, the skewed “meteorite” buildings serve the same picturesque visual function as the imposing cathedrals or palaces of historic towns. (Unable to avail himself of the programmatic diversity available to old towns, Geuze ordered up larger, courtyard-style apartment buildings.) The development includes a school and special housing for the elderly and the mentally disabled. As a reflection of the nation’s increasing wealth, only 30 percent of the units are subsidized “social” housing (not long ago the typical percentage would have been 70 percent); the

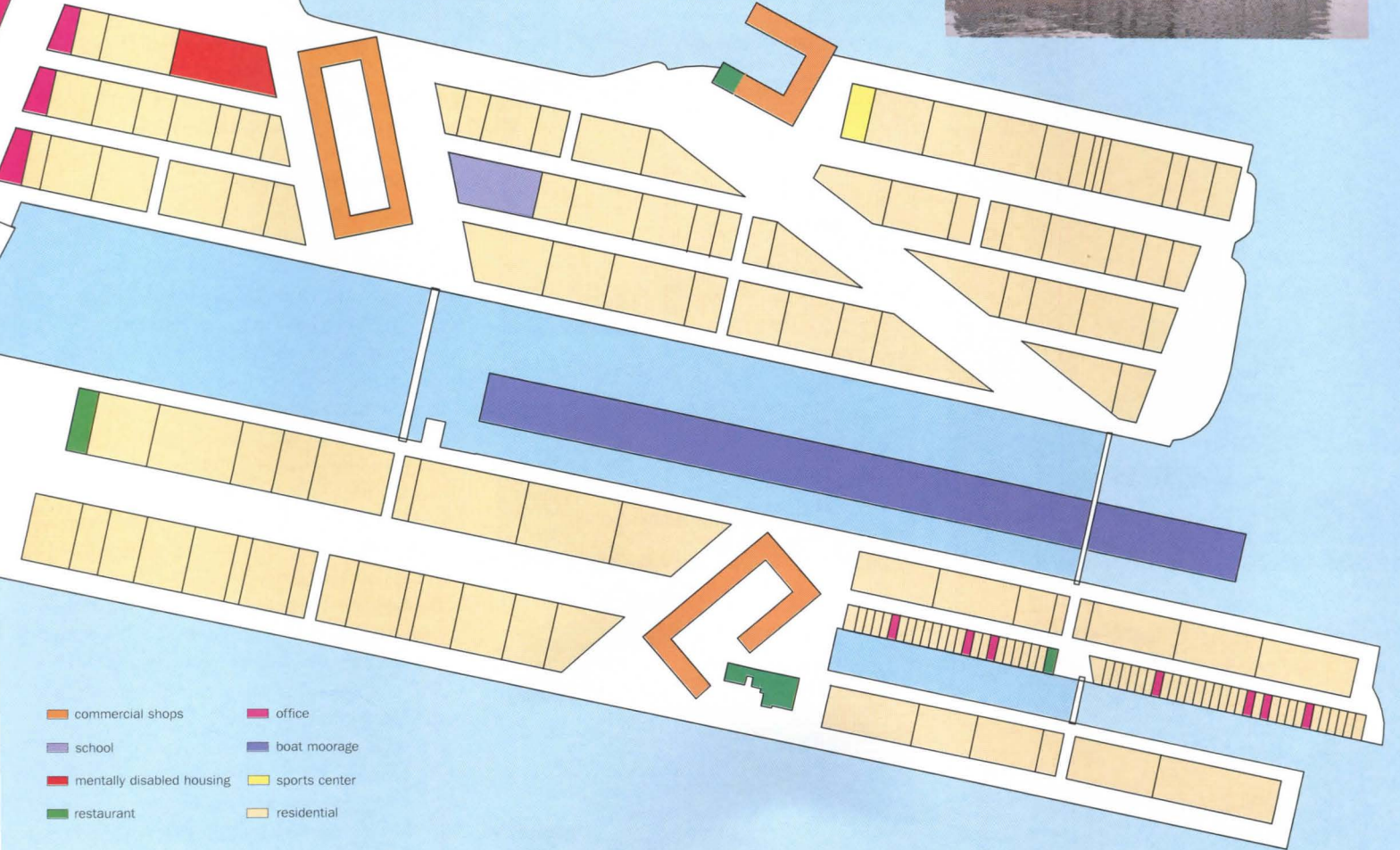


West 8 interrupted the pattern of the housing blocks with large-scale buildings (such as the one, right, designed by Steven Holl). It will be completed by Kees Christaanse.

structure projecting into the water (site plan) was originally to be designed by Steven Holl. It will be completed by Kees Christaanse.



FEATURES



rest are market rate.

West 8 charged the nine architects awarded commissions here with reinterpreting the traditional canal house for contemporary needs. The government mandated a density of about 40 units per acre (100 units per hectare—unusually high by Dutch standards) and a three-story height limitation. Instead of traditional stoops and microscopic back gardens or light courts, West 8 placed most of the tiny 16½-foot-by-49½-foot lots back to back. No rear courts were required; instead, West 8's guidelines asked architects to carve out from 30 to 50 percent of the volume in section to form light courts and outdoor spaces. The idea was to drive daylight deep into the volumes of the houses, making smallish spaces appear larger and taking advantage of water views, while maintaining privacy. Inventively designed scrims, doors, and gates make palatable the



A few units face a canal (opposite top), but many more look across a narrow street to the water (left). Though housing is concrete-framed, wood cladding—a rarity until recently—has become popular because it is a renewable resource. West 8 designed the pedestrian bridge (opposite).



**KAVEL 12**

Architect MVRDV pushed the 8½-foot-wide house volume to one side of the lot. While the scheme sacrifices straight-on views, the large glass areas facing the slot of space create an airy pavilion by bringing daylight into the length of the narrow rooms.



one-car carport (a relative novelty in Holland) that usually shares much of the street frontage with the entrance. Double-height spaces were mandated within canal-side units to draw light and shimmering reflections inside. Some areas, especially those facing internal canals where private waterfront access was possible, were designated for individual houses each designed by the buyer's own architect. Here architects have lavished a profusion of forms—each jostling for attention amid a dizzying aesthetic din.

**A new urban prototype?**

Inevitably such an endeavor begs comparison with efforts by the New Urbanists in America to create more compact, walkable communities. While such American Neotraditional developments have become, in effect, less privatized, devoting more land to shared spaces, this new Dutch model provides fewer public amenities than is common in the Netherlands. As West 8's Geuze put it, you can't have high-density and private outdoor space and still have much room for wide streets or parks. The street scale is civilized in the Amsterdam development because its 40-foot width accommodates a single lane of car traffic, a parking lane, a bike lane, and generous sidewalks. The streets feel far quieter than virtually any American neighborhood, simply because the Dutch use cars less frequently.

There is less variety in the streetscape than West 8 hoped to achieve. The original idea was to have several dozen architects design most of the housing, but to scatter the houses in rows of 5 to 12 to avoid long, monotonous facades. After the first 250 were built, however, developers petitioned the city to limit the choices to only the six most popular unit types. The inevitable result is that some street fronts are lined with long, hor-

**NORTH PIER END**

These rows by Neutelings Riedijk wrap a front-to-back, one-bay-wide unit (projecting top floor, right) over a two-level, side-to-side one. The wide units feature a two-story-high living space (above) on the canal side (not shown). The architects took a more sculptural approach at the tip of the pier (middle right).





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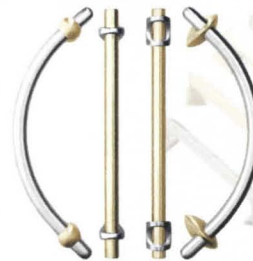
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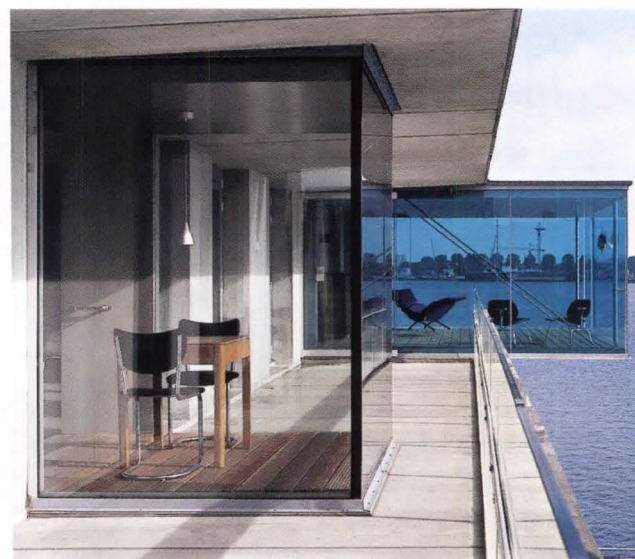
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#### SOUTH PIER END

Making dramatic use of a superb site on the very end of the island, the Architectengroep cantilevered tinted-glass cubes from the body of the building, giving residents a sense of hovering over the harbor. The sloped ramp (left in left image) is for parking a car.



#### KAVEL 18

Among the most spatially intricate houses is Kavel 18, by MVRDV. The master bedroom is like a red one-story-high drawer (right, projecting volume visible as third level) slid partly into the shedlike main volume. From a double-height kitchen/dining area (with a shaded terrace on the canal), one continuous space snakes around and behind the master bedroom, wrapping over it to another bedroom.



horizontally oriented, slablike structures rather than the fine-grained rhythm of vertical facades that West 8 had planned.

The appeal of the designs varies, from a gutsy scheme by Neutelings Riedijk (page 97) to fortresslike brick blocks prissily punched with slitlike windows. Still, the sensibility is surprisingly akin to the streets of traditional cities, in which an exuberant Gothic Revival townhouse tries to steal attention from the adjacent dour Romanesque brownstone. Because this is the Netherlands, where Modernism is the reigning design ethos, Borneo Sporenburg sports no gables, pilasters, columns, or entablatures. The streetside battle of styles tends to pit Neo Gropius against Neo Aalto. The rectangle is the key expressive element, deployed in arguably mind-numbing variety.

In America, New Urbanist dogma dictates the inclusion of neighborhood retail. Amsterdam signed an agreement with the developer of a nearby mall stating that retail stores would not be permitted amid the housing. "We were confronted with the strange idea that a street should not have shops or bars," says West 8's



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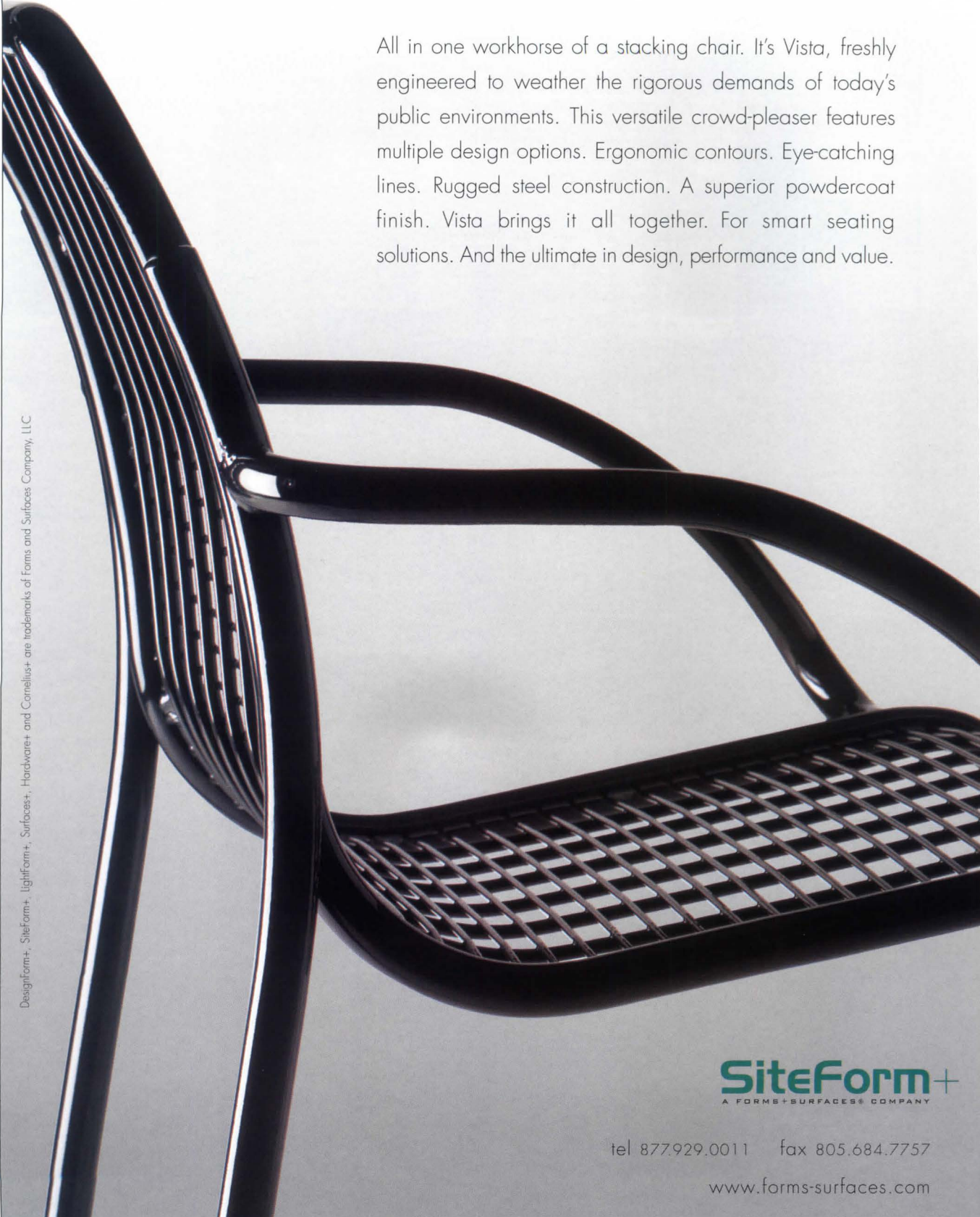
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work on your computer at home, display textile art you make, or start a daycare center, no one can stop you.” Indeed, street-level windows at Borneo Sporenburg advertise a wide variety of Internet and non-electronic startups. Such projects were abetted by West 8 design guidelines, which mandated taller ground floor heights to permit adaptation to various uses. Strategically placed street-level spaces have been designed for conversion to bars and cafes should regulations permit. Most floor plans readily allow conversion of even upper-level bedrooms into studios.

Most houses are tall rather than wide, and tend to open up to light and views as you go up. The spatial gymnastics within the Borneo Sporenburg no doubt feel liberating to those who appreciate high ceilings and ample daylight, but such assertive, undivided spaces are probably best adapted to childless couples and empty nesters who seek in-town amenities. More pragmatically, the fluidity makes the small or narrow rooms appear larger.

Few American designers have faced the Dutch dilemma of creating density with amenity, but more are finding they need to learn how, as urban-growth boundaries and traffic woes drive people to small, in-town sites. Too many American condos look as if they had run aground on a sea of parking; “garden” townhouses offer cell-like, concrete-paved spaces hemmed in by high fences. The best New Urbanist developments face these innate difficulties squarely, but in too many of them windows channel views to the living room of adjacent units or onto sapling-dotted parking lots. The vinyl windows and synthetic stucco that have come to define builder houses don’t stand up to close scrutiny in dense developments, which emphasize the “neo” in Neotraditional.

Although the design of some of the Dutch units rightfully evokes guffaws, many skillfully navigate such conflicting needs as privacy and views. Doing density isn’t easy, but the best of new urbanism, Dutch-style, makes a convincing case that housing can indeed be reinvented for a new era. ■

#### VOS HOUSE

*Architect Koen van Velsen faced both sides of the house with a grid of horizontal rectangles and carved away the mass behind them. Within this protective frame, the living spaces seem to project outward like*





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By Suki Casanave

**T**reehouses—those leafy hideaways we associate with childhood, the solitary escapes we dream of amid the pressures of the adult world—were once a matter of pure survival. Early treetop dwellings provided protection from enemy attack.

But throughout history, treehouses have also been inspired by pure pleasure or whimsy. The Romans were fond of seats built around tree trunks. And, from the Middle Ages on, lofty arbors were popular. One famous English specimen rose three stories with leafy rooms of bent branches one atop the other. It is thought that Queen Elizabeth I once stopped by for a royal feast in the second-floor banquet hall.

In the Italian Renaissance, the Medici family created extravagant treehouses in their gardens. One spectacle included marble seats, tables, fountains, and stairways spiraling around the trunk. In mid-19th-century France, a chestnut-lined street in a town west of Paris became famous for its treetop restaurants, where diners in gazebo-style rooms feasted on elaborate meals, hauled up in baskets by waiters below.

A 17th-century timber-framed cottage at Pitchford Hall in England is still perched in a garden lime tree. A 13-year-old princess, who grew up to be Queen Victoria, visited this one-room Tudor treehouse in 1832, noting in her journal: “We . . . walked about the grounds, and I went up a staircase to a little house in a tree.”

Contemporary treehouse builders, from professional architects to backyard hobbyists to hoteliers in balmy climates, are still captivated by the idea of “a little house in a tree,” designing their fantasies—and then settling in to enjoy the views. ■

*Suki Casanave, whose work has appeared in Smithsonian, Yankee, The Christian Science Monitor, and on PBS, is a writer based in New Hampshire.*

PHOTOGRAPHY: © TOUR INDIA (OPPOSITE); PAUL ROCHELEAU (THIS PAGE). THIS PICTORIAL FEATURE OWES SPECIAL THANKS TO PETER & JUDY NELSON

# Growing Wild and Branching Out Treehouses





**Paired treehouses**

*(this page)*

**Location:** Eureka, Calif.

**Special features:**

*Spiraling up a live split-trunked redwood tree, these structures were originally erected by a fisherman.*

**Treehouse hotel**

*(opposite page)*

**Location:** Kerala, India

**Special features:** The

*cabin is 90 feet above rain forest. A pulleyed rustic “dumbwaiter” can hoist up supplies.*





**Tree-trunk playhouse**

**Location:** YMCA Camp  
Orkila, Orcas Is., Wash.

**Special features:**  
*Hollow stump provides  
shelter from the rain  
and a children's story-  
telling hut.*



**Arboreal structures**

*(this page)*

**Location:** Irian Jaya,  
New Guinea

**Special features:** High,  
basketlike huts were built  
by the Sayak clan from  
Korowai.

**Ba House**

*(opposite, top left)*

**Location:** San Francisco

**Architect:** Fernau &  
Hartman Architects

**Special features:**

*Designed for Up a Tree  
exhibit, featuring work  
by San Francisco Bay  
Area architects.*

**Koi's Nest**

*(opposite, top right)*

**Location:** San Francisco

**Architect:** Skidmore,  
Owings and Merrill

**Special features:** *This  
abstract, elliptical  
structure was designed  
for Up a Tree exhibit  
(see above).*







**Summer house**  
**Location:** Jupilles, France  
**Architect:** Duncan Lewis  
and Eduard François  
**Special features:** Trees  
that change color in  
autumn





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# Record Houses 2001

**E**ach year, we approach RECORD HOUSES with an abstract and optimistic wish list: Variety, leaps of the imagination in materials and form, sheer elegance of craft and composition, and mind-sparking ideas are always welcome. Often we discover unexpected themes among the projects coming our way. Sometimes a compelling concept finds an equally powerful counterpoint in another project.

Such counterpoints emerged this year among the four North American and three Japanese houses shown here. The geographic and cultural split may be unusual for RECORD HOUSES, but when we saw the projects, it made sense. Reflecting a current running through the 2001 submissions, many of the American works selected respond to a vast landscape: Julie Snow's Koehler House is perched on a cliff on Canada's east coast; ARO's Colorado House stands high in the Rocky Mountains; and Rick Joy's Tyler Residence lies low in Arizona's Sonoran Desert.

**The featured firms are:**

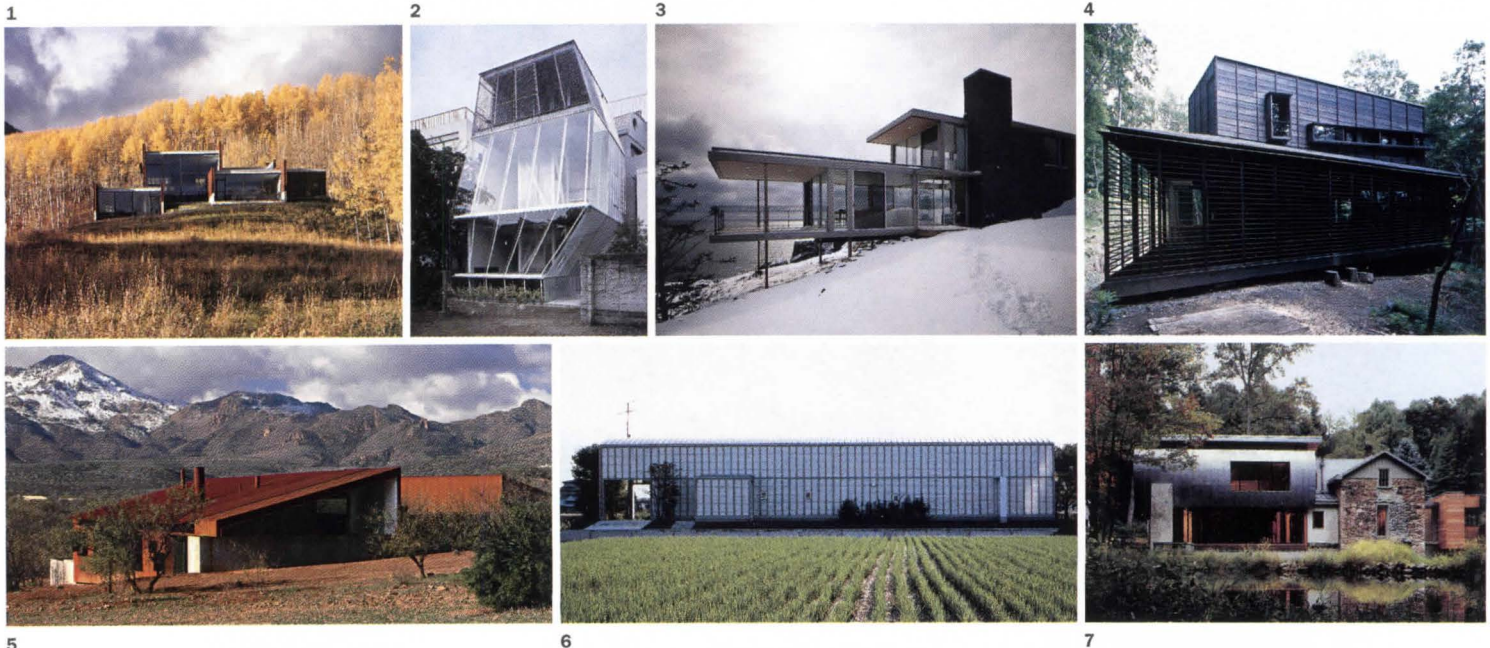
1. ARO
2. Kazuyo Sejima & Assoc.
3. Julie Snow Architects
4. Atelier Hitoshi Abe
5. Rick Joy Architect
6. Shigeru Ban Architects
7. Wesley Wei Architects

Rather than dominate the natural settings, the houses work in harmony with them, favoring simple forms—boxes, parallel walls, and sheds, albeit refined ones—and extensive zones of transparency. In each, the architecture channels views, allowing extraordinary terrain to flow around, between, or even under the built forms.

But what about densely developed cities, and less glamorous suburban or agricultural zones? Some of the most interesting solutions to such conditions came to us from abroad, particularly from Japan, where building lots and household amenities tend to be sparer than in the United States, and where architects seem willing to push radical concepts to absolute limits. For a site in a rice-growing region, Shigeru Ban reenvisioned the agricultural shed, devising Naked House with translucent exterior walls—a building with mobile rooms, taking the notion of spatial flexibility to a provocative, but surprisingly livable, extreme. In Kazuyo Sejima's Tokyo Small House, the buildable footprint was tiny nearly to the point of absurdity. But the architect responded with a striking and inventive four-story structure. In spatial explorations beyond the house itself, both Hitoshi Abe's Yomiuri House, near Sendai, Japan, and Wesley Wei's Pennsylvania House, in a suburb of Philadelphia, deftly make their sites feel more extensive and secluded than they really are.

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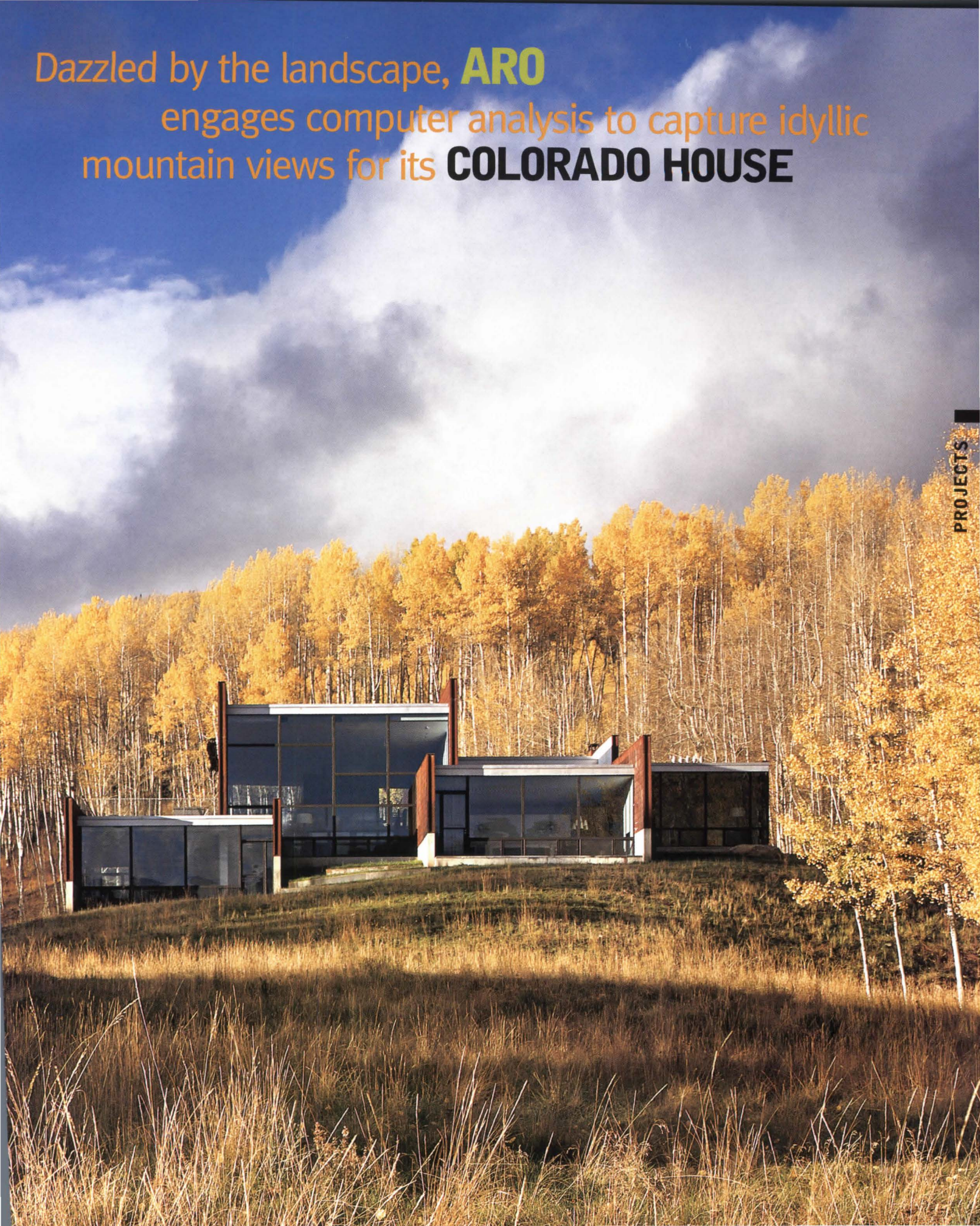
Viewed head-on from the southwest, the house looks transparent and glassy, ceding to the landscape around it. Stepping

down the hill with its massive parallel walls visible only at their edges, the building appears smaller than its 10,000 square feet.





Dazzled by the landscape, **ARO**  
engages computer analysis to capture idyllic  
mountain views for its **COLORADO HOUSE**







**By Wendy Moonan**

Perhaps only an architect with a background in biology would design a house by creating a computerized model of the site and its mountain landscape. But that is what Stephen Cassell, co-founder of the 18-person Manhattan architectural firm ARO, did when commissioned to build a 10,000-square-foot Colorado vacation house for a large family of bikers, hikers, and skiers. The architect, a Brooklyn native, flew out West to see the site (at a headache-inducing altitude of 10,000 feet), admired the San Juan mountains and untouched wilderness, and decided the site's chief assets were its commanding views. Then he flew home to figure out how to capture them.

He began by scanning into his computer topographic maps of southwestern Colorado, and ended up making a detailed wire-frame model of the 15-by-17-mile swath around the client's 120-acre parcel. His idea was to get the landscape into the computer to explore the views from the site.

ARO calls itself the Architectural Research Office because it was conceived as a laboratory for architectural inquiry. Here, the brief was relatively simple: The client, a couple from the Midwest with grandchildren, wanted large spaces to gather, as well as five bedrooms and other intimate quarters where each family member could retreat. The most dramatic vista

was toward the snow-capped Sneefles range, around 20 miles to the north-east. To give several rooms that prime view and break up the massing, house steps down a knoll. The architects designed four volumes, each on a different level with tall window walls facing the Sneefles. Then they essentially slid the volumes between massive parallel walls, clad in Cor-Ten steel.

The computer model informed the entire process, calculating sightlines and even charting the passage of daylight through the house. "It took a lot of massaging," Cassell recalls, "raising the kitchen ceiling a foot so you would see more sky above the Sneefles, and lowering the master bedroom to show more of the Sneefles from the living room." Through the computer, ARO positioned the upper mullions in a Golden Mean-derived pattern, with slight adjustments to leave certain vistas uninterrupted.

Largely generated from the inside, the house was designed around a series of unfolding views. Cassell says he took inspiration from English landscape gardens he'd studied in college, after switching his focus

**Project:** *Colorado House*  
**Architect:** *Architectural Research Office (ARO)—Stephen Cassell, Adam Yarinsky partners in charge*

*Jenkinson, Monica Rivera, Martha Skinner, Kim Yao, Innes Yates*  
**Landscape architect:** *Mathews/Nielsen*





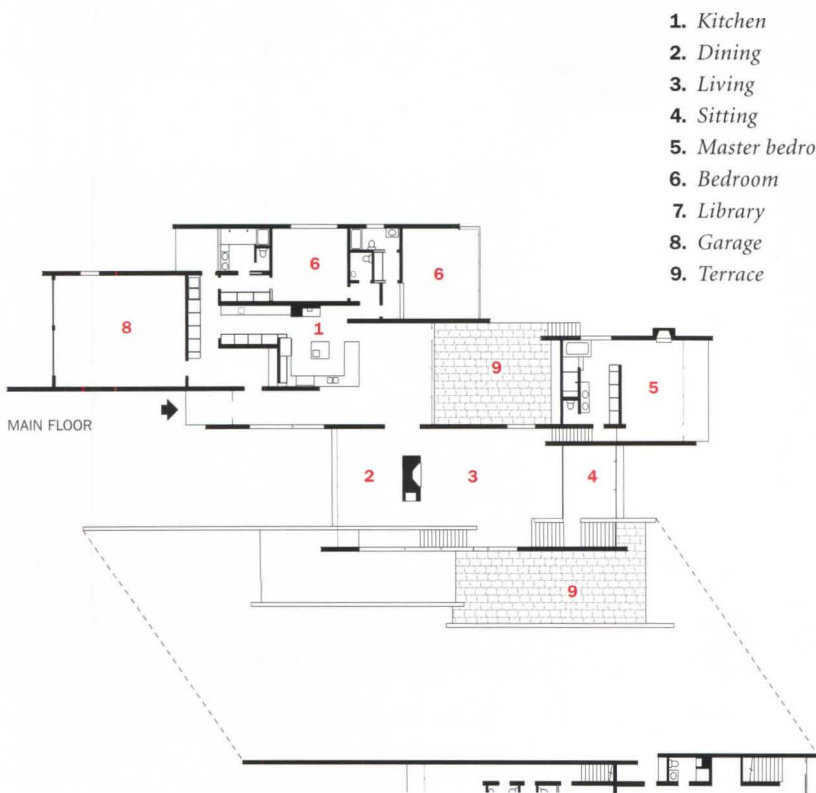
The house's form and massing appear to change from different vantage points (this page and opposite). From some angles, win-

dowless stretches of overlapping parallel walls, clad in Cor-Ten shingles, look like an abstract sculpture in the landscape (left).





The communal spaces center around the fieldstone fireplace that separates dining and living areas (left and below). Carefully framed, the views also dominate the interior (bottom and opposite).







from molecular biology and biochemistry to architecture and design. As in English gardens, he explains, “I didn’t want to give it all away at once.”

Thus, the entry area offers only a small glimpse of the Sneefles. From the kitchen, a bit more comes into view. Then, in the living room, a bigger-than-a-movie-screen panorama appears, with meadows, aspen, and, in the distance, the great jagged peaks. This va-voom view changes as you descend from the entry to the master bedroom, and a few feet further down to the library/media room. Each window offers a different take. “The parallel walls were a way to organize the view,” explains Cassell. Like blinders, the walls focus your gaze forward from within the house.

From the exterior, it’s nearly impossible to get a fix on the whole house. Even reaching it isn’t easy. The approach follows an eight-mile dirt road, culminating in a private drive with treacherous switchbacks, climbing through forest to an aspen-covered mesa. The building isn’t visible until the last moment, when the drive emerges from the woods. Suddenly, just 20 yards away, the house appears with a straight-on view of the entry. From the southwest, it looks single-storied and glassy, barely revealing the handsome Cor-Ten-sheathed walls, which from other angles become abstract sculptures of overlapping planes. Only from the inside, as you descend through the spaces, do you comprehend the house’s tremendous size.

In plan, the hub of the house is the kitchen, where the family tends to gather. The living and dining rooms, an outdoor dining court, and two

bedrooms spin off in different directions as if by centripetal force. In the corners of the interlocking volumes, stairs with elegant, shot-blasted stainless-steel railings drop between the heavy walls. Where terraces weave exterior with interior spaces, some Cor-Ten-clad walls extend from the outside in, and some plaster interior walls continue outdoors as concrete.

The materials are restrained but tough. Great care was lavished on the Cor-Ten shingles. Reminiscent of the area’s abandoned mining structures, the material, remarks Cassell, “paradoxically looks natural in this landscape.” After testing many shingle dimensions and patterns, in consultation with Zahner, the metal-fabricators for several Frank Gehry projects, ARO specified a parallelogram, laid out in intentionally misaligned courses, producing a stagger with directionality, says Cassell, “like a hill.” Pre-weathered on-site for six months, the shingles have a warm reddish patina.

Given such a site and a \$4 million budget, some architects would have designed a gigantic Colorado-style log cabin, or perhaps a ski palace. Not Architectural Research Office. Here, the path of inquiry led to a modern house that brings qualities of a mining town into the 21st century. ■

#### Sources

**Siding:** A. Zahner Company

**Stone:** Montana fieldstone (*chimney*), New York bluestone (*pavers*)

**WWW** For more information on the people and products involved in this project, go to Projects at [www.architecturalrecord.com](http://www.architecturalrecord.com)



The spiral stair plays against the tilting facets of Small House's outer skin (this page). Providing privacy as needed, the elevations differ in opacity (this page and opposite).





# On a tiny lot in downtown Tokyo, Kazuyo Sejima shapes a sculptural jewel, aptly named **SMALL HOUSE**

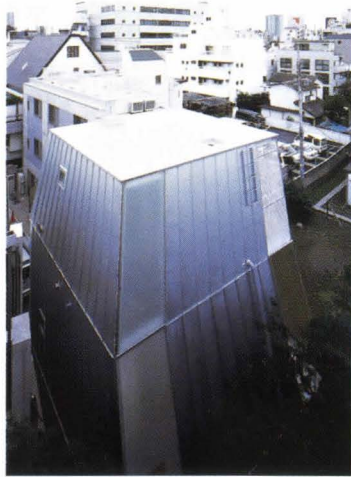
By Naomi Pollock, AIA

Some Tokyo houses are merely small. Others are so tiny they raise the question: How much space does it really take to make a home? In this city, where no minimum buildable lot size exists, the answer is: Not much. Here, the demand for property is so great and real-estate values so high that people will build on just about any footprint. And many residential lots shrink further when the city's stringent setback and shadow regulations are added to the mix. In designing Small House, Kazuyo Sejima had to squeeze a dwelling for a product designer, his wife, and their child onto the 388-square-foot buildable area of a 646-square-foot lot. The challenge was practically like performing a magic trick.

Comparatively speaking, though, Sejima's site came with surprisingly few restrictions because of its commercial character in the center of the city, where fashionable boutiques abut exclusive restaurants. Not exactly the stuff of peaceful domesticity, but in Tokyo, residential pockets often form where least expected. At the end of a quiet cul-de-sac, Small House shares its relatively well-todo street with low-scale apartment buildings, houses, and shops. Given the site parameters, most Tokyo architects would have started by calculating the permissible building envelope and then designed from the outside in. This strategy explains the unusual configurations of many Tokyo houses, but not the tilting shape that Sejima created here.

From the outset, Sejima—who is currently working with Ryue Nishizawa on an art museum for Kanazawa, Japan, and on the Toledo [Ohio] Museum of Art's Glass Center—thought the building should be a unique-looking response to its extreme site conditions, but she also saw it as an expression of her personal brand of form follows function. The shape, she maintains, resulted from the exigencies of the slabs and walls.

"I felt uncomfortable dividing up already small spaces," she says. Accordingly, the architect assigned only one or two uses to each of four floors: The bedroom, where the parents and four-year-old child sleep on a futon, and a lavatory with a shower occupy the half-basement level; the main entrance and the daughter's future bedroom (currently a family

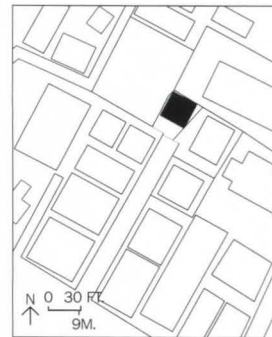


room) fill the first; the prime gathering area—for cooking, living, and dining—is on the second; and, as per the clients' request, a bathroom with a deep soaking tub and city views shares the third with a covered terrace. Instead of separating rooms with walls, Sejima lets a white spiral stair do the job.

The four levels—totaling a mere 829 square feet—were not, however, created equal. Varied in size, the floors do not always fill the allowable area, nor do they align with one another. Budget constraints were a factor, but, more important, Sejima says, she tailored each slab's dimensions and floor-to-ceiling height to meet functional requirements—and achieve hierarchy. Thus, the second level soars to an 11-foot-high ceiling, befitting its importance as the prime gathering place. "Every other slab is smaller and cannot project beyond this one," she explains. As if sliding horizontally about the spiral stair,

each floor defines different-sized open spaces around this fixed vertical element. Where room was needed to fit a galley kitchen, the architect pushed the slab out toward the property line; where less space was required for semi-submerged sleeping quarters, she pulled the finished floor in from the site line and turned the remaining outdoor square footage into a sunken patio, albeit a miniature one. Elsewhere, the architect similarly put leftover buildable area to good use: Cinching in the first-floor bedroom, for example, freed up enough space in front of the house for an off-street parking spot—a must for Tokyo car owners.

Responding to exterior and interior conditions, the architect



PROJECTS

**Project:** Small House, Tokyo  
**Architect:** Kazuyo Sejima & Associates—Kazuyo Sejima, principal; Yoshitaka Tanase, Shoko Fukuya,

project architects  
**Engineers:** Sasaki (structural)  
**General contractor:** Heisei Construction

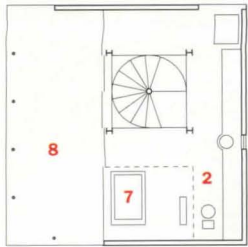
Naomi Pollock, AIA, is ARCHITECTURAL RECORD's Tokyo-based correspondent.



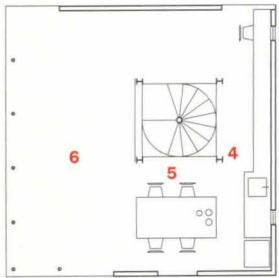
Where the house faces an unbuildable lot, it appears most crystalline, glowing from within at night (page 120) but becoming more demure by day (this page).



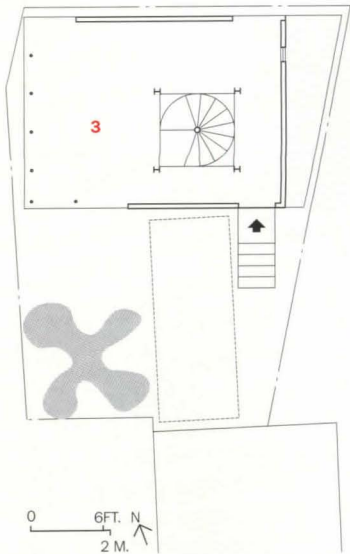




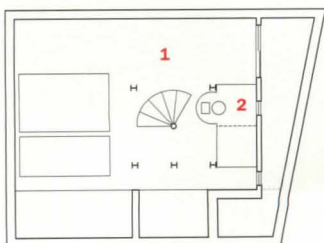
THIRD FLOOR



SECOND FLOOR

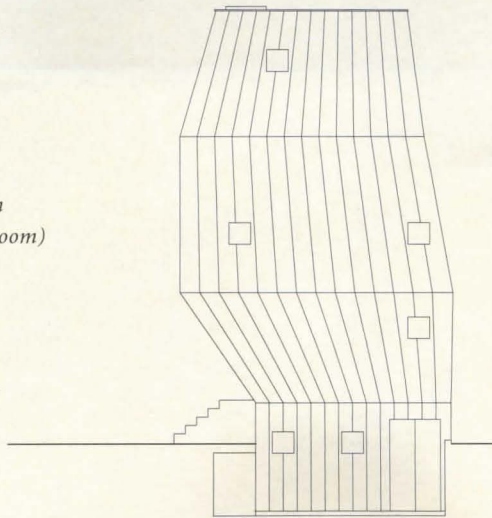


GROUND FLOOR

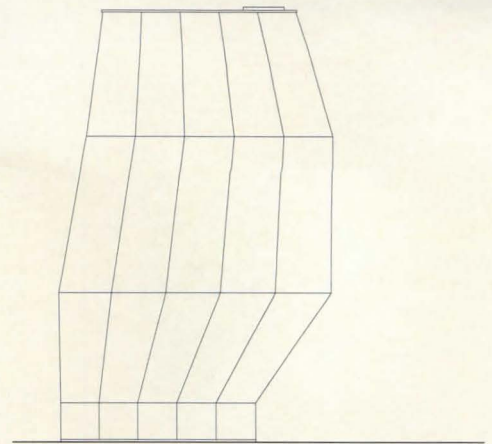


HALF-BASEMENT

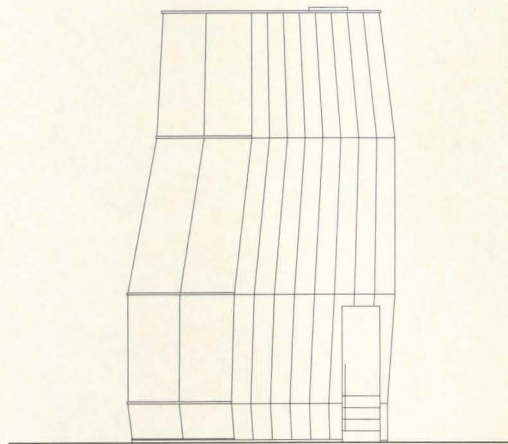
1. Bedroom
2. Lavatory
3. Family room  
(future bedroom)
4. Kitchen
5. Dining
6. Living
7. Soaking tub
8. Roof terrace



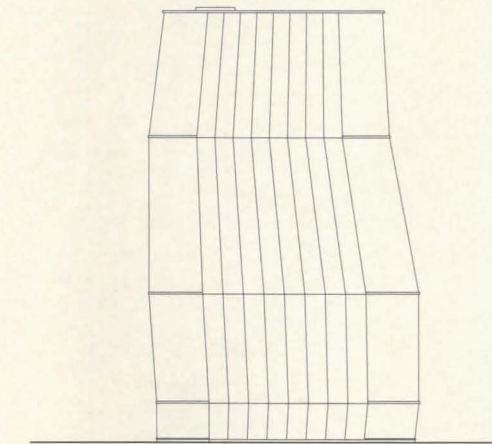
EAST ELEVATION



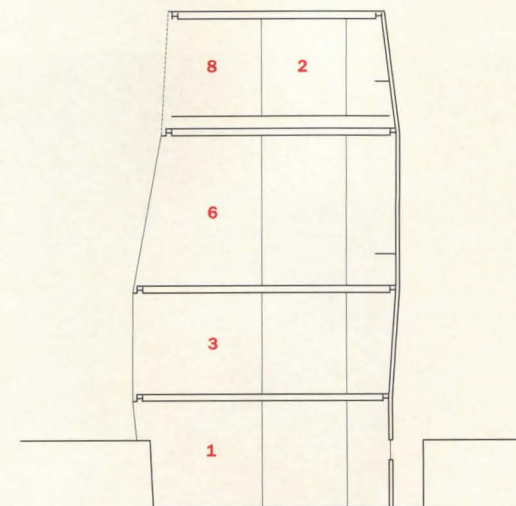
WEST ELEVATION



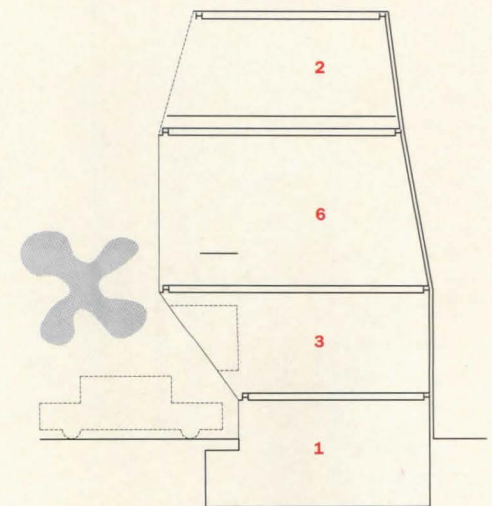
SOUTH ELEVATION



NORTH ELEVATION



WEST/EAST SECTION



SOUTH-NORTH SECTION

Like flow lines in physics, the vertical seams on Small House's galvanized-standing-seam-steel-

and-glass elevations respond dynamically to changes in the building's overall sculptural shape. The elegantly

Minimal exterior entry stair (top, left) appears in the actual building as a thin zig-zag in cast concrete.





The spiral stair plays a key structural role. Its powerful sculptural presence varies from floor to floor, in relation to the outer skin's proximity, shape, and transparency—as in the dining area (opposite and below, right) and the family room (above). The living room is visible (far left) from the entry facade, through a square opening in the translucent film.





designed the slabs and exterior walls in tandem, which involved jockeying back and forth until she found the right dimensions, angles, and overall building shape. The tilting, faceted outside walls, shifting constantly between upward and downward orientations, not only define the house's unique profile, but also change the quality of light and view for each room. With angled surfaces of standing-seam galvanized steel and clear or translucent glass panels, each face was carefully orchestrated to maximize the connection to the outdoors without compromising privacy—no small feat when the house next door is barely two inches away.

To achieve this balance, Sejima punctured the opaque walls with openings carefully positioned to control views in and out. She also cut clear areas within the glazing's translucent film and provided square, hinged windows, just big enough to let in fresh air. A second-floor door allows entry of furniture hoisted up by pulley. Where the house fronts an unbuildable lot (one without street access), the elevation becomes crystalline. Here, glass wraps both corners but aptly turns translucent where the building greets the street. Through the clear zones, distant views of the Shinjuku business district's skyscrapers make the interior seem bigger.

Despite the house's diminutive size, its unusual geometry called for a fairly complex tripartite structural system. The first component built was a square enclosure for the spiral stair. With vertical and diagonal steel bars, this encasement acts as a single column, countering horizontal shear

and earthquake forces. Next came a web of steel rods at the house's perimeter to carry vertical loads. Composed of elements no more than two inches in diameter, the entire web was "spun" on-site in three days. Partially cantilevered off the stair enclosure, four concrete floor slabs tie together the two steel systems. But because it was necessary to pour and cure each slab individually, construction took ten months or, muses Sejima, "about as long as a 30,000-square-foot office building."

With space for a sofa and not much else in the living room, and a dining area defined by a table and chairs beside the kitchen, this house pares down to a minimum the necessities of daily life. But in Tokyo, where such spare living is not unusual, it works. Here, many homes are very small, but most are so private, regardless of size, that people rely on urban resources to expand their own spaces: Parks are everyone's backyards, cafes—not living rooms—the places to socialize, and the ubiquitous convenience store acts as the city's pantry. What Small House may lack in square footage, this sculptural gem more than compensates for in bold, visual impact. ■

#### Sources

**Cladding:** *Galvanized steel*

**Floors:** *Cherry wood*

**Oven:** *AMG (electric)*

**WWW** For more information on the people and products involved in this project, go to Projects at [www.architecturalrecord.com](http://www.architecturalrecord.com)



The two-level house is anchored in a staggered formation (opposite) to a granite cliff above the Bay of Fundy, where no other house is in sight.





# Julie Snow channels a calm Modernist sensibility into the **KOEHLER HOUSE** on a cliff over the turbulent Bay of Fundy

By Suzanne Stephens

If you want to find a stunningly craggy site that looks more Maine than Maine, keep going Down East (actually north) on Maine's raggedy coast until you come to New Brunswick, Canada. There, overlooking the Bay of Fundy, near St. John, is a piece of rocky coastline so powerful it makes Maine look as tame as Malibu. This quality instantly struck David and Mary Beth Koehler of Minneapolis. The recently retired couple (he, a financial training consultant; she, a labor arbitrator) scavenged Maine for three summers seeking a site for a vacation home, before finding 55 acres with more than a mile of waterfront, 25 miles from the Maine border. Here, in this eastern Canadian province,

**“IT’S A BOLD OCEAN,” SAYS SNOW.  
“NO LANDFORMS ON THE HORIZON.”**

the still sparsely settled landscape of granite cliffs, spruce and pine trees, and high (25-foot) tides afforded ultimate privacy with a staggering panorama of the water. Living in a city apartment, so far from a real beach, the Koehlers (who also own a lake house in Wisconsin) were willing to travel a full day by plane and car for this ocean view. But they wanted that view uninterrupted. As David Koehler puts it, “We don’t have another house within sight of our place.”

“This is what we call a bold ocean,” says Julie Snow, FAIA, principal of the Minneapolis firm Julie Snow Architects. “There are no landforms on the horizon.” Snow and her clients were equally bold in placing the house on a granite ledge overlooking the sea. With no setback requirement, the house stands less than 100 feet from the average high-tide mark. “We enjoy being on the water,” says David Koehler in something of an understatement. Watching minke whales cavort in the briny deep, bufflehead sea ducks drift by, and bald eagles soar overhead, the Koehlers have only a few reminders that they are on land—or actually, rock. When they want to take a dip in the icy waters, they go on a half-mile trek to a small, white-pebbled beach, also on their property.

With this kind of natural site, Snow wanted to create a small (1680-square-foot) house that would open up to the views and also protect its occupants. While her aim was to convey the feeling of being at sea, she eschewed any literally nautical motifs.

The quiet, rectilinear scheme is evocative of the pure, early days of mid-20th-century Modernism, when vacation houses were small, efficient, open-plan affairs with no need for three-person kitchen staffs and



four-car garages. An architect known for her straightforward Minimalist designs, Snow found her clients ideal: Mary Beth Koehler had even been keeping a file on Mies van der Rohe's Farnsworth House to show her architect. But whereas the Farnsworth is a single-story structure floating above a grassy meadow in Plano, Ill., Snow's solution is very much part of its rocky site: She stacked two rectangular forms, one atop the other, aligned along an east-west axis, and slid the uppermost volume back to the west. At the east end of the house, where the grade drops, she created a daring cantilevered effect for both levels, supporting the structure with slender (almost spindly) square wood columns. “I wanted to create a feel-

**Project:** Koehler House, New Brunswick, Canada

**Owners:** David and Mary Beth Koehler

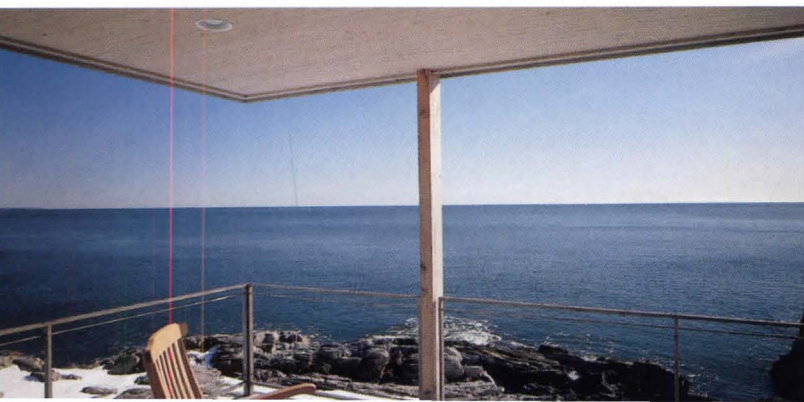
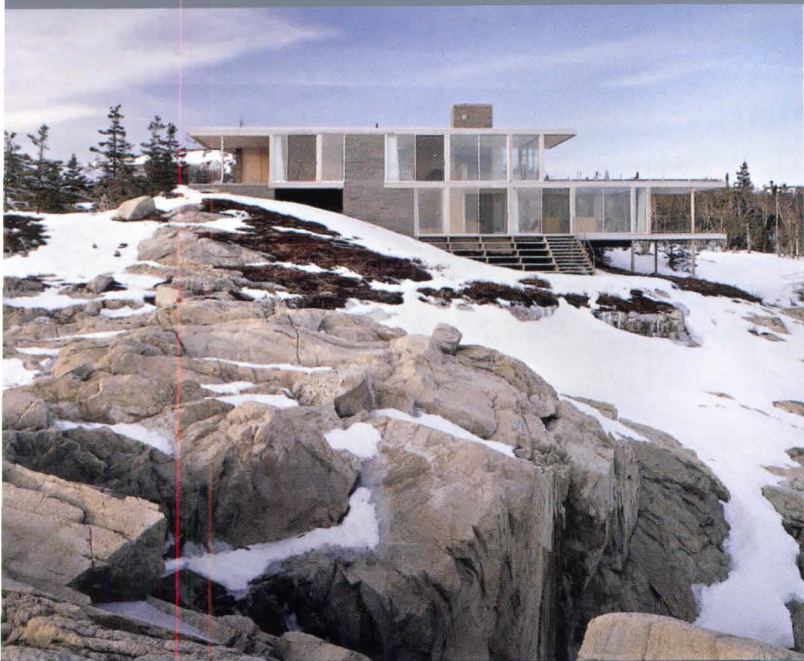
**Architect:** Julie Snow Architects—Julie Snow, FAIA, Benjamin Awes,

Connie Lindor, Lucas Alm, Ken McQuade, Jim Larson, design team

**Engineers:** Campbell Comeau; John Johnson

**Consultants:** Jack Snow (mechanical); Ed Young (building construction)





ing of a house being both anchored in the site and floating—connecting with the horizon,” says Snow.

With dramatic south-facing ocean views, the east end’s upper and lower decks give the sensation of being on a boat, accentuated on the lower level by a cedar ceiling and spare, stainless-steel railings, and on the more perilous upper deck by the absence of a balustrade (caveat navigator!). At the house’s more landlocked west end, another second-level deck becomes a private screened patio adjoining the master bedroom.

With extensive, sliding, floor-to-ceiling glazing, the interior of this largely transparent house offers much the same experience as being on its decks (without the wind—or with ample cross-ventilation, as desired). Here, living, dining, and cooking areas share a single space. Though the kitchen occupies the middle zone, it hardly shows, composed of two freestanding maple-and-solid-surface cabinets, 9 feet 8 inches long

**“I WANTED TO CREATE A FEELING OF A HOUSE BEING BOTH ANCHORED AND FLOATING,” SAYS SNOW.**

and 3 feet high, containing the refrigerator and all the other appliances. Facing each other, these cabinets provide a true working kitchen without obstructing the views.

The double-height living area is given a sense of enclosure by the bluestone north wall with a fireplace, and the maple-clad western wall, behind which a trim stair leads up to a sitting area and the master bedroom. The character of a sailing vessel pervades the house, not only in its compactness, but also in the precision of its crafted wood detailing. In addition to the fine-tuned kitchen cabinetry that can stow and batten down nearly all the culinary workings, sliding wood pocket doors in the two bedrooms can turn these glassed-in pavilions into sleekly enclosed cabins.

To evoke the serenity and sense of comfort of an earlier Modern moment, the Koehlers judiciously selected classic furniture by Mies and Le Corbusier, and a lamp by Calder for the living and sitting areas. Translucent fabric curtains can be drawn over the window walls. For all its apparent lightness, however, the house must withstand severe weather conditions, including 18-inch snowfalls and 60-mile-per-hour winds. So,

**The clean lines of the two-story house allow it to fit into its site unobtrusively (above, left). The wood frame house, with Douglas fir columns and concrete foundations, is partially clad in bluestone. The open deck (far left) adjoins the dining area at the eastern end. The entrance, on the north side, is beside the hearth (left); the double-height space is lowered by a catwalk**

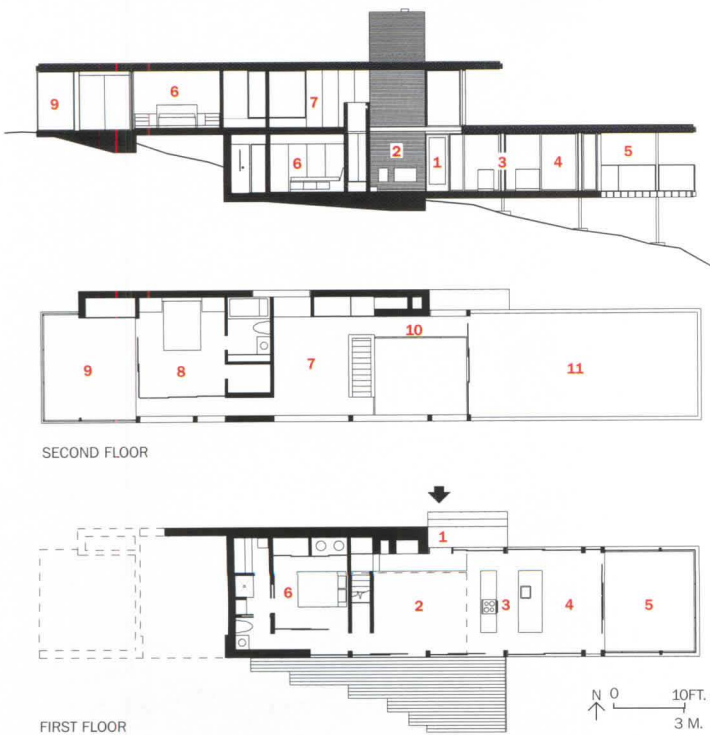






The living/dining room is divided by an open kitchen with cabinets kept to a height of three feet so that views are unobstructed.





1. Entrance

5. Dining deck

9. Screened porch

what keeps it from capsizing? To resist horizontal wind shear, Snow designed floor and roof plates with wood trusses and plywood membranes. Steel pins and a poured-in-place concrete foundation anchor the two levels to the granite rocks. The second level also hooks into the steel-reinforced chimney and a return wall beside the stacked bathrooms. Although the bathroom-core walls resist some vertical shear, the architect's horizontal solution minimizes the need for additional shear walls.

Initially, the Koehlers planned to be in the house only during the milder months, but they turned up this past January to experience their new place with snow all around. On a sunny winter's day, the living room felt much like the solarium of an ocean liner, only more private. Looking out toward the solitary rugged cliffs and the sea beyond, David Koehler mused: "You start to feel as if nothing has changed since the French explorer Samuel de Champlain sailed the Fundy coast almost 400 years ago." ■

**Sources**

Sliding aluminum doors and windows: Arcadia

Bath and kitchen fixtures: Kroin

[www.wwww](http://www.wwww.com) For more information on



The clean lines and craftsmanship of the maple paneled stair further dramatizes the arrival on the second-story landing with its expansive view of the water. From the sitting room a catwalk extends to the top deck (opposite).





The light, louvered porch projects prowlike into the forest (right and opposite site). The building's "folded" form changes dynamically from elevation to elevation: here from the southwest (right) to the east (below).





# As if folding a long ribbon into the forest, Hitoshi Abe weaves a poetic, light-dappling architecture with his **YOMIURI HOUSE**

By Robert Ivy, FAIA

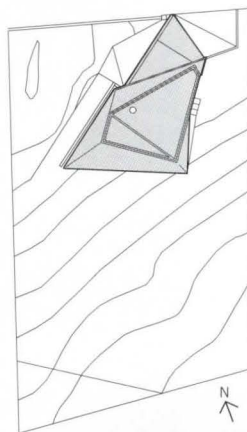
**P**aradise might describe the trees and mountain property where Hitoshi Abe's clients, a couple from the city of Sendai, asked him to build them a weekend retreat. Near an extinct volcano in the Zao area, the land abuts a national forest—the setting for the owners' treasured walks in the woods. Visually separated from other homes and extending from the road into the woodland, the leafy site allowed the architect to design a strong, compact vessel that is both house and, as he puts it, “a second landscape.”

A folded ribbon provided the generating idea. Abe's conceptual analogy is the kimono, which, when unfurled, forms a long swathe of cloth. “As you wear it,” he suggests, “it projects a landscape over your body.” Here, the program, the passage through the house, the details, and the confluence of spaces are like a ribbon folded onto the land, generating a conversation between landscape and occupants.

In this medium, every architectural element of the carefully controlled ensemble points away from the road and toward the forest: In and outdoors merge. Apertures open from the tight enclosure toward the trees in a precise, directional manner; high windows throw slots of measured sunlight onto the side walls. Mullioned glazed doors link inside and outside. The wedge-shaped porch with its overhanging roof reaches prowlike into the trees. Horizontal louvers along the porch filter daylight and cast shadows like the forest.

While the actual size of the house is only 1,850 square feet, the interior seems as powerfully hewn as a cave, due in part to its focused plan. A large central space allows the couple to entertain their grandchildren or up to 30 guests at parties or small conferences for the husband's advertising business. Hidden behind movable walls, a non-intrusive kitchen and other support areas can open up or fold back out of sight. Furnishings are spare. The upper level, including traditional Japanese tatami rooms with shoji screens, ring the gathering space below. Everything points outside.

The sensuous use of materials reinforces the forest setting. A charcoal stain renders the multi-hued sugi-wood siding—a Japanese pine



that is equivalent to cedar in its chromatic variation—almost black, allowing the house to meld with the shadows of the silver-barked trees around it.

Mounted diagonally in wide boards with occasional narrow battens, the siding seems quintessentially and traditionally Japanese in texture and coloration, yet its pattern and application are abstract and contemporary. Here, the stained siding not only appeals to the senses, but the wood grain and diagonal patterning suggest the sinuous lines of a ribbon.

The generous scale of the wood grain and details contributes to the small building's relative heft. In addition to the broad wooden louvers of the advancing porch prow, unstained, tightly spaced ceiling slats seem to float over the living area, separated from the walls by recessed acrylic-



**Project:** Yomiuri Guest House,  
Zao-cho, Miyagi, Japan

**Architect:** Atelier Hitoshi Abe

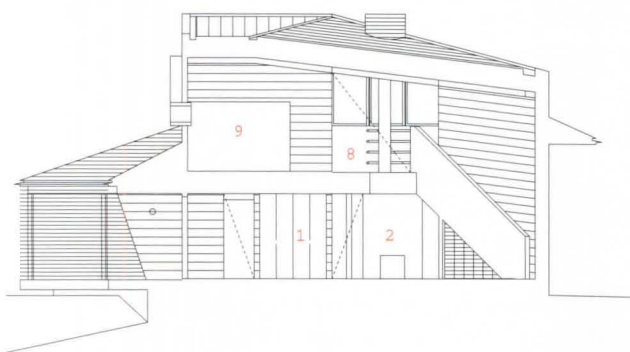
**Engineers:** T.I.S. & Partners

(structural); Sogo Setsubi Keikaku  
(mechanical)

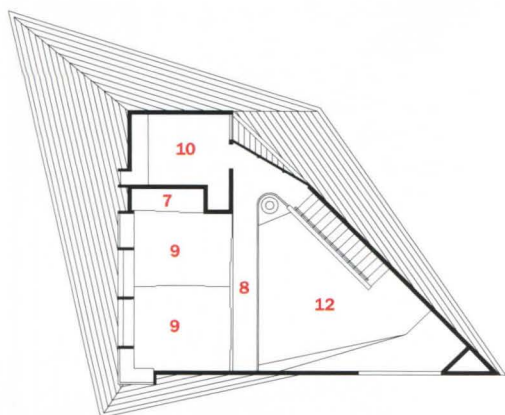
**General contractor:** Sugawara  
Construction



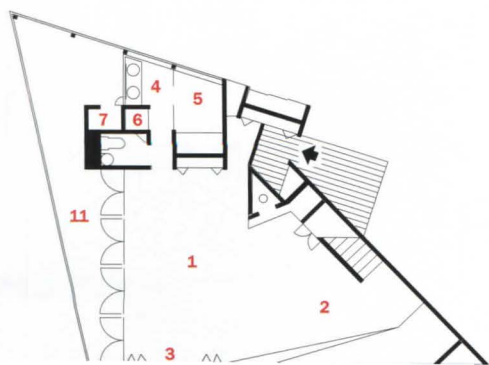
1. Dining
2. Living
3. Kitchen
4. Dressing
5. Bath
6. Laundry
7. Storage
8. Mezzanine corridor
9. Tatami/bedroom
10. Study/bedroom
11. Porch
12. Open to below



SECTION



SECOND FLOOR

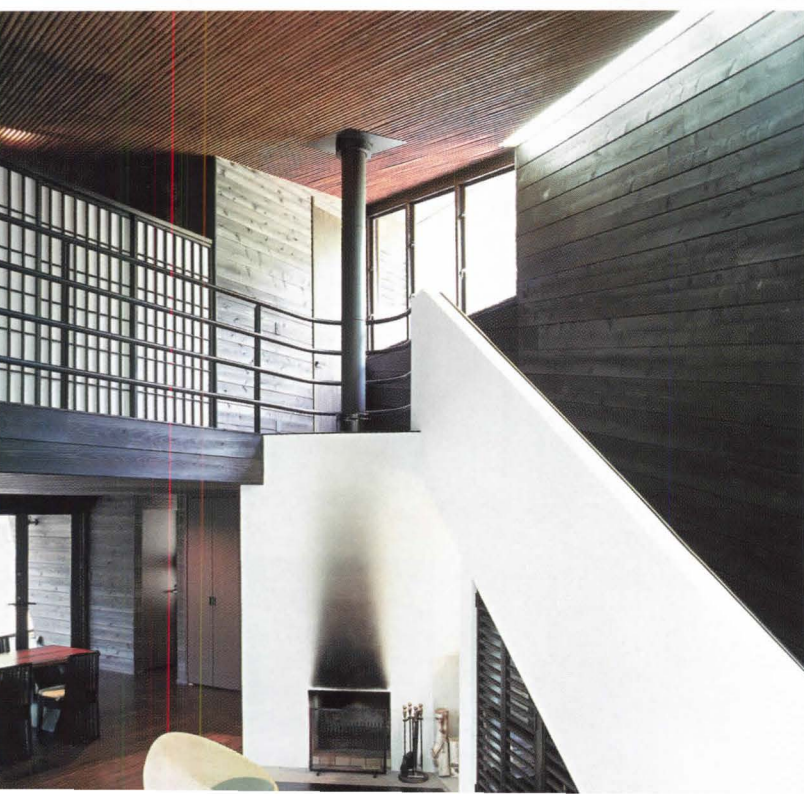






On the texturally rich interior, broad, blackened wallboards contrast with narrow, unstained ceiling slats, while shoji screens on the upper level play against the louvered doors below.





sheet light troughs. In contrast to the smoky walls, the stair rail consists of a great, white slash of painted wallboard. The plan pivots around the metal chimney flue, which acts as a linchpin.

As dynamic as a folded ribbon, both rich and restrained, the Yomiuri House comments on Hitoshi Abe's place in the universe of Japanese architecture. Conversant with international design issues, interested in the effects of new media, he represents a young generation of Japanese architects that has been educated abroad—in his case at SCI-ARC in southern California. As he sees it, human beings are constantly seeking reconnections to nature. Like traditional Japanese buildings, this small structure evokes its culture's essential attunement to artfully conceived and deployed materials. Yet unlike the work of previous generations, the bold, tectonic expression seems individualistic and indicative of Abe's personal connection to the contemporary world—the building seems to filter the culture as leaves filter light in the forest near Zao.

The Yomiuri House gives three-dimensional expression to Abe's underlying hope. As he says, "I am trying to build an architecture that works like a medium, connecting you with the outside world—a way to bring you to paradise." ■

**Sources**

**Exterior cladding:** *Sugi-wood board, blackened with Xyladecor*

**Roof:** *Sumitomo Metal Industries*

**Bathroom:** *Inax (tub); Toto (toilet)*

**Furniture:** *Wanimokko*

**WWW** For more information on



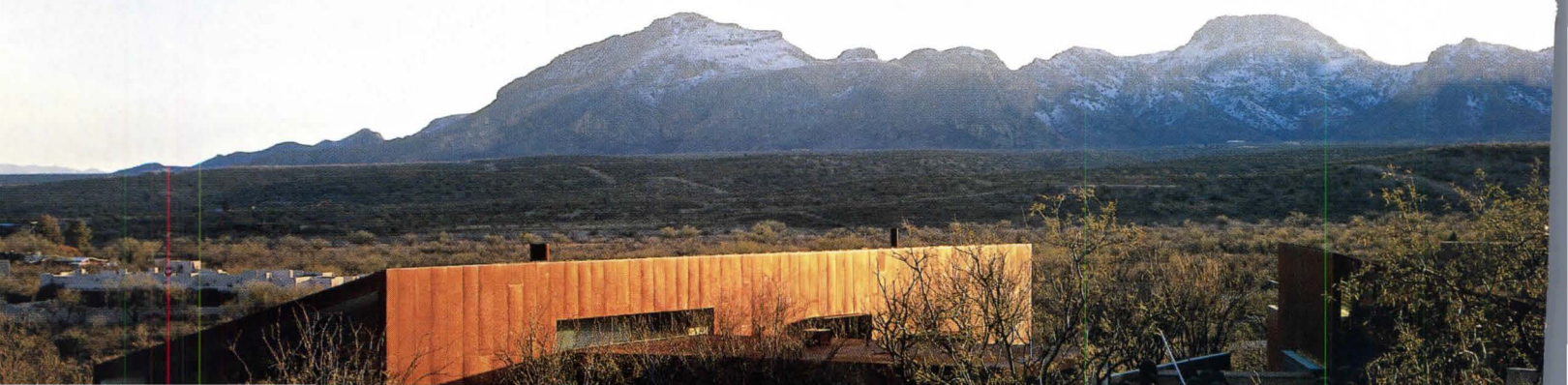
The dynamic triangular form of the living/dining area, culminating with the chimney (opposite, top and bottom) echoes the powerful prow of the louvered porch (this page).







Low-slung, pitched roofs echo the mountain forms (above). The steel cladding (weathered, as Rick Joy points out, "courtesy of acid rain") changes hue with the light, resonating with the red desert sands.





# Clad in weathered steel, Rick Joy's TYLER RESIDENCE resonates with the deep red earth of the Sonoran Desert

By Sarah Amelar

**A**s you approach the Tyler House, on a knoll covered with wild mesquite, surrounded by desert mountain peaks, the buildings rise into view. Beyond a gravelly garden studded with cacti, two volumes appear, their deep eaves hovering just above the ground and their glazed ends revealing only the tops of the master bedroom and a study in one building and a workshop in another. Clad in rusted steel, these structures are taut and rough-skinned—like lizards, lying low but light on the land, barely touching it.

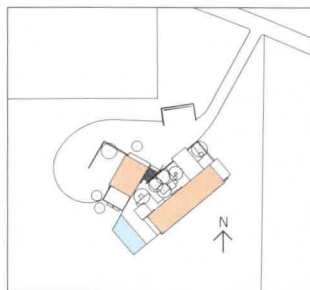
To enter the house, you take a path down from this hot, bristling climate through a canyonlike cleft between the two volumes. Here, a cast-concrete stair, bound by retaining walls, descends seven feet to a cool and shady courtyard, flanked by the 2,500-square-foot main house (containing a master bedroom suite; a living, dining, and cooking area; and two studies) and a 1,500-square-foot guest house (comprised of two bedrooms with a workshop and garage). Directly ahead, to the southwest, a spectacular view of the Tumacacori peak emerges.

"I always try to create an architecture rooted in its place—whether that's here in the deep landscapes of Arizona, or in Maine, or anywhere else," says the architect of the house, Tucson-based Rick Joy, a former carpenter and drummer, who was raised in Maine. "For me, an essential consideration is a building's impact on the land, on its surroundings."

Without tall trees anywhere nearby, Joy decided, the house needed a low profile in harmony with the desert brush and the site's gently sloping terrain. Working closely with landscape architect Michael Boucher, he carved a level shelf into the hill, defined by two rectilinear U-shaped retaining walls, skewed toward one another. Literally wedged between the two "U"s, the concrete entry stair converges toward the courtyard and its vista. Similarly sited, the house and its guest house, relatively simple linear sheds, also converge toward the most compelling panoramas.

The clients, Warren and Rose Tyler, had actually selected this four-acre site in Tubac, Ariz.—15 miles north of the Mexican border—for its nighttime, as well as its daytime, views. The region, blessed with exceptional weather conditions, is famous for clear, starry night skies (which is why the Smithsonian and other major observatories are nearby), as well as dramatic lightning storms. The dry climate and lack of clouds reduce visual distortion (or the perceived twinkling) of stars, and the desert spawns lightning by driving moisture into the sky and building up charge.

A former radio astronomer who later became a corporate CEO in Ohio, Warren Tyler had once concentrated professionally on such dis-



tant and elusive entities as black holes, rather than planets and constellations. But he was now interested in taking on optical telescopes, instead of radio waves, and stargazing for pleasure. Having often vacationed in the Southwest, the Tylers fell in love with the landscape and decided to retire there. An aficionado of architecture, Warren Tyler owns an exceptional

design library, but even after purchasing the land, the couple did not have an architect. After considering other candidates, they met Rick Joy quite fortuitously—in a match made casually by a surveyor.

Joy, who formed his own practice eight years ago after two and a half years with architect Will Bruder, had established himself with elegantly simple buildings of striated rammed earth. "But I didn't want to be known as 'the Rammed-Earth Guy,'" he recalls. "All kinds of materials and conditions interest me. I was definitely ready to explore something new."

As it turned out, the Tylers were impressed with Joy's work—

**Project:** Tyler Residence  
**Architect:** Rick Joy Architect—Rick Joy, principal; Andy Tinucci, project manager; Franz Buhler, Chelsea Grassinger

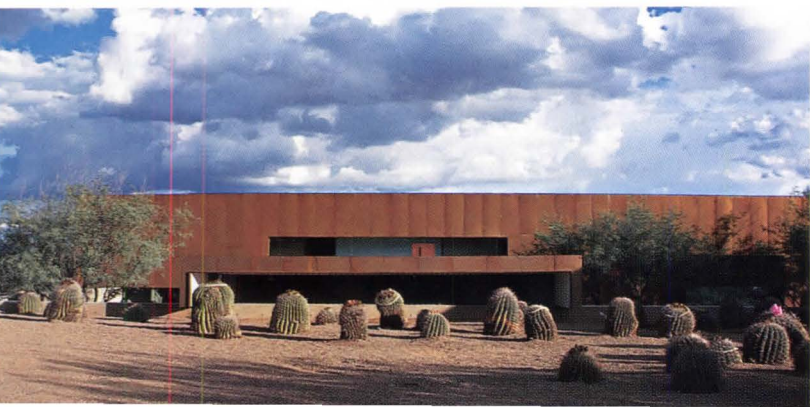
**Engineer:** Southwest (structural); Otterbein (mechanical, plumbing)  
**Landscape architect:** M. Boucher  
**General contractor:** Rick Joy Architect





The shed form of the main house, shading an outdoor kitchen, opens out southwestward toward the pool and mountains beyond (above, this page and opposite, top and bottom). A gravelly garden, spiked with cacti,

fronts the house (below left) on the entry side, where low, interlocking volumes glow at night like abstract sculptures (below right). The telescope observation deck sits above the guest house (opposite, bottom).





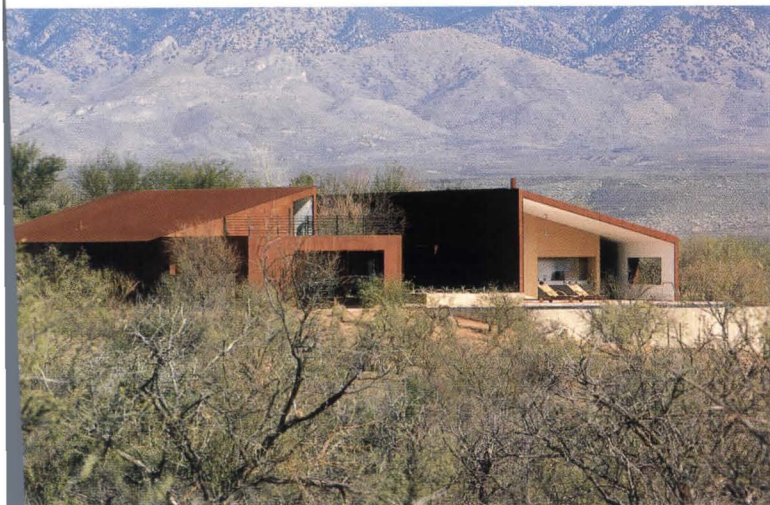


but rammed earth didn't really suit their needs. Their extensive art collection called for a more refined interior material. As they got to know Joy's projects, however, a small weathered-steel laundry building, which the architect had built behind his office, inspired them.

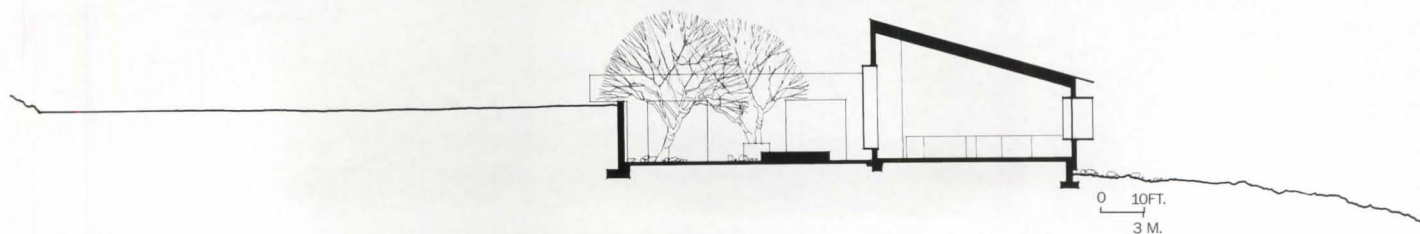
"Rusted elements appear all over the Arizona countryside—in sheds, fences, rails, wagon wheels, farm tools—and they just fit in," says Joy. The deep color resonates with the red Sonoran Desert sand. "In this dry climate," he adds, "the expense of Cor-Ten isn't necessary. Here, ordinary steel weathers and then stops shedding within a year. It won't rust through." Metal cladding, as Warren Tyler points out, is also effective in storms, acting like a lightning rod to dissipate electrical charge, rather than attract it. After settling on a weathered-steel exterior, Joy began to think of the house "as a geode: rough on the outside and highly refined on the inside."

The Tylers presented a few more guidelines. They'd need: two studios—Rose's for quilting and Warren's for his voracious reading projects; an optical telescope platform (which would ultimately go above the guest rooms); areas for entertainment and overnight guests; and easy, stair-free access, if necessary, to all indoor and outdoor spaces. Joy addressed the access question by sloping the driveway down to the garage, providing an alternate route that bypasses the entry steps.

"We also told Rick," says Warren Tyler, "we wanted a place we could live in inside as much as outside.—and when you're inside, we wanted it to feel like you were outside." An outdoor room, the long, rectangular







1. Driveway
2. Courtyard
3. Living
4. Dining
5. Kitchen
6. Master bedroom
7. Study
8. Guest room
9. Garage
10. Workshop



Having hiked the Arizona canyons extensively, Joy envisioned the converging stair (below) as a canyonlike descent from the brutally desert into the cool, shady, fountain-fed oasis of the courtyard.



courtyard, is a sensual but distinctly man-made oasis, paved in concrete, with a Mondrianesque pattern of cast-concrete planters, mesquite trees, a shallow pool, and fountains that look like cubic volumes of still water. An animated, rectilinear composition, flickering with shadows and reflections, the courtyard plays against the dry, rugged landscape. The water features and fragrant plantings were chosen to attract hummingbirds and butterflies.

The long courtyard leads directly onto the swimming pool deck, to the west, where an outdoor kitchen is sheltered beneath the roof's deep overhang. A third, much smaller and more enclosed court is tucked behind paired his-and-hers studies, which interlock perpendicularly with the volume of the main house and border the long courtyard's east end.

The entrance to the main house is marked by a hollow rectangular steel box—a small open vestibule—projecting from the facade. From the exterior, this and other penetrations in the building's steel skin suggest multiple variations on a theme. All the windows are rectangular, but, in some places, the glazing lies deep within a shading boxlike frame, while elsewhere the glass tautly seals the box's outer surface. Some windows are boxless, nearly flush with the facade, whereas others are unglazed cutouts, merely framing a vista, as in the outdoor kitchen.

From the interior, the logic of the windows—and their some-





A Mondrianesque composition of cast-concrete planters, serene cubic fountains, and mesquite trees, the courtyard plays its sensual man-made landscape against the desert brush and rugged mountains.







Flanking the stainless-steel and maple kitchen, floor-to-ceiling glazing with minimal hardware opens toward the black granite-edged swimming pool and a multiplicity of framed vistas (this page and opposite).





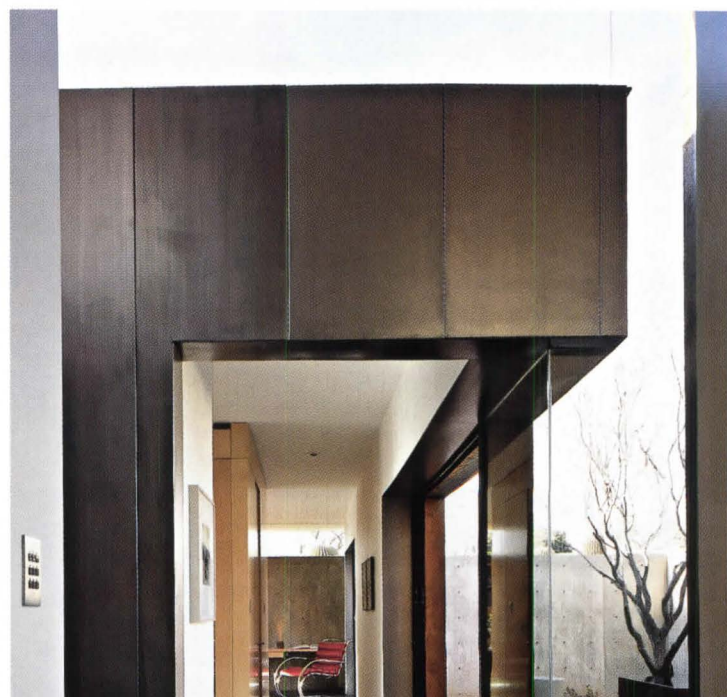


passages and great unmulioned bands of window focus again and again on the peaks. In some places, quite astoundingly, oblique glimpses of two or three framed panoramas appear simultaneously.

Both buildings have simple, Modernist, finely detailed interiors. Polished black, radiant-heated concrete floors supplant the rougher exterior paving, and white walls replace the rusted steel. Smooth, pale maple, sand-blasted glass, stainless steel, and matte-gray steel (continuous with the exterior steel, but unoxidized) comprise the interior material palette. In the main house, living, dining, and cooking areas flow together in one open space. Joy's own construction crew created sleek cabinetry throughout.

The windows, at times placed unusually low, also play key roles in cross ventilation, producing Venturi effects. In the studies, Warren Tyler's desire for an outdoor-feeling interior is achieved with sliding-glass panels that essentially transform the spaces into screened-in porches.

Having broken free of the rammed-earth mold, Joy has been experimenting with other materials and ideas. These days, in collaboration with other architects, he's designing a southern Utah spa-hotel of stainless steel and sandstone, and is guest-teaching at Harvard. "Working in the Southwest has been an amazing experience," he says, glancing toward the horizon, "but I know it's not the only place." ■





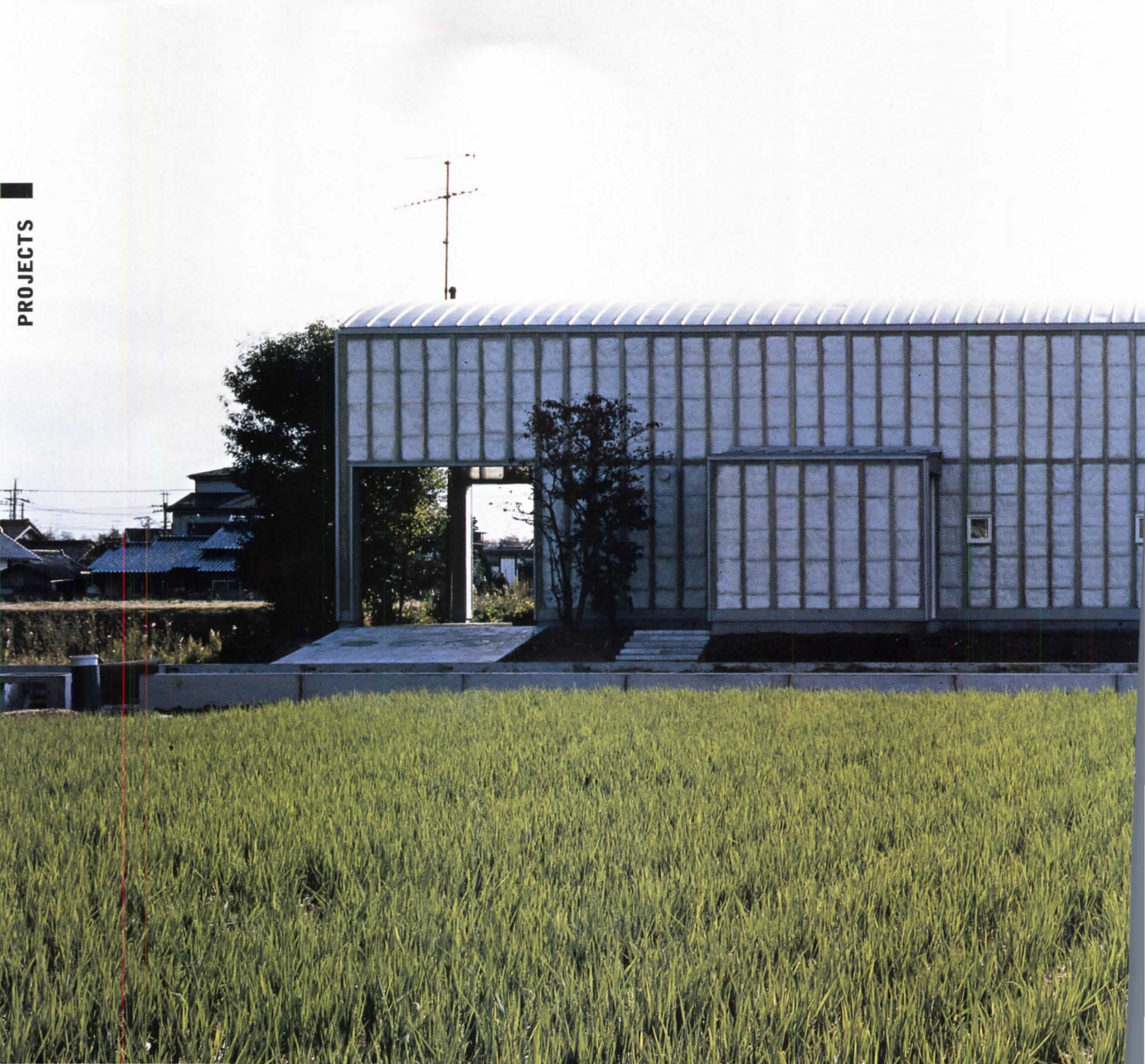


Kitchen and dining areas are visible from the courtyard (this page). Inside, a low, mullionless window runs along the southeast wall (opposite, top). Unoxidized exterior siding continues inside the house (opposite, bottom).



Amid rice paddies, Shigeru **Ban** creates  
**NAKED HOUSE**, a luminous,  
translucent shed with moving rooms

PROJECTS





Japanese houses are famous for their moving parts, for sliding shoji screens and folding futons. But mobile rooms? Naked House, Shigeru Ban's latest experiment in residential design, is a rhapsody on that very theme. Single-story and shedlike, the house has fixed elements—kitchen, laundry, storage, and bathroom—only along its perimeter, while its four bedrooms are literally freewheeling. Boxes on castors, these rooms can roll throughout the building, and even glide outdoors onto the terrace.

To Ban, the quintessential limit pusher, Naked House was an appropriate next step in his own series of Case Study Houses. His 1995 Furniture House, using factory-made furniture as columns and load-bearing walls, investigated structural concepts. Spatial explorations in his 1997 Nine-Square-Grid House and 1995 Curtain Wall House took inspiration from moving components in traditional Japanese architecture. Whereas Nine-Square pushes the potential of the mobile wall to an

extreme, Curtain Wall actually encloses its street facades with architecturally scaled curtains (hence the project's witty name with double meanings). Not one to retrace his steps, Ban had been eager to try his hand at a house with rolling rooms. The key was finding the right client.

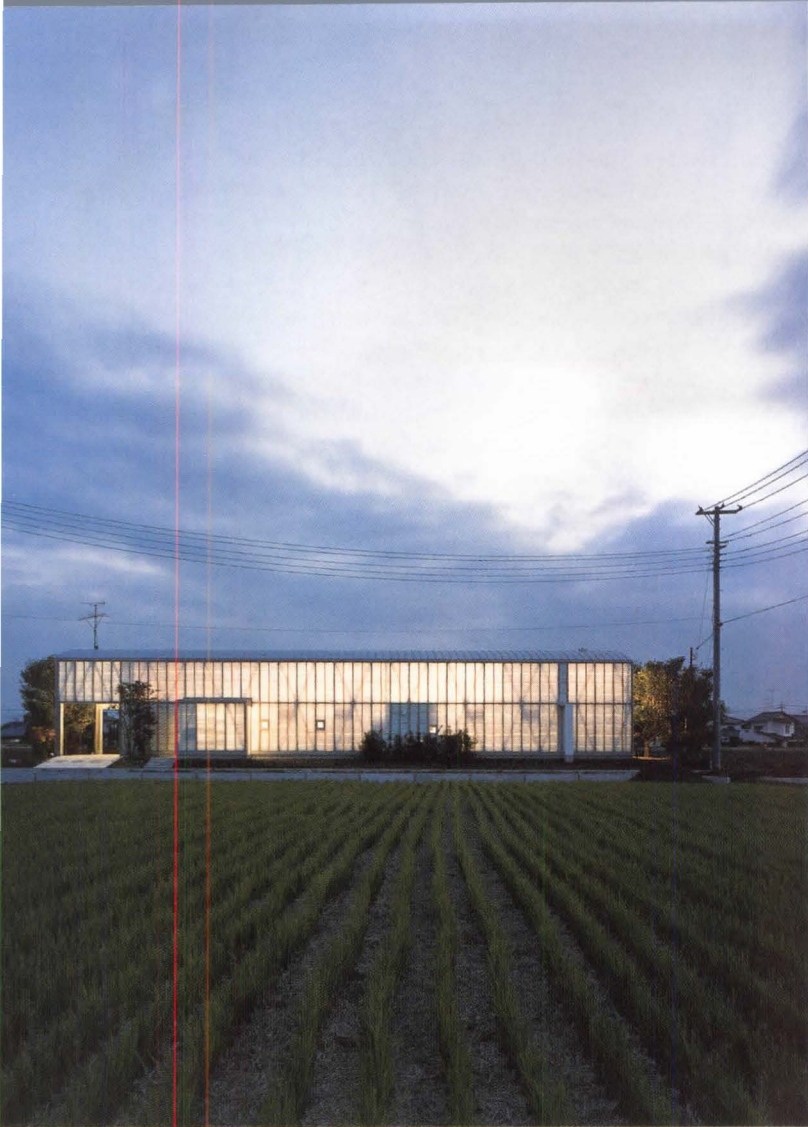
"I am kind of picky in selecting clients, especially for houses," says Ban. "I don't want to compromise [ideas], but the client shouldn't have to either." A salesman of golf club memberships, the client won Ban over with his description of an ideal home: a warehouselike building, free of airtight private rooms, where he, his wife, their two children, and his mother could gather to enjoy one another's company. Here, the architect saw his chance.

When Ban visited the site, it dawned on him that the appropriate precedent was not a warehouse, but a greenhouse. Set in an agricultural area about 15 miles north of Tokyo, the property is surrounded by rice paddies on three sides and faces the Shingashi River on the fourth. The neighbors are a Buddhist temple, scattered houses—and greenhouses.

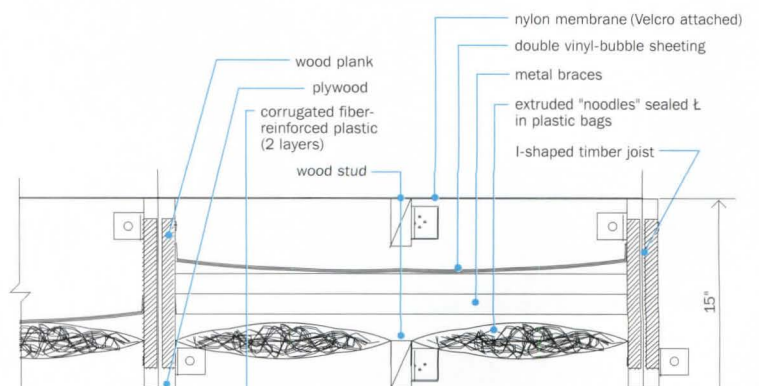
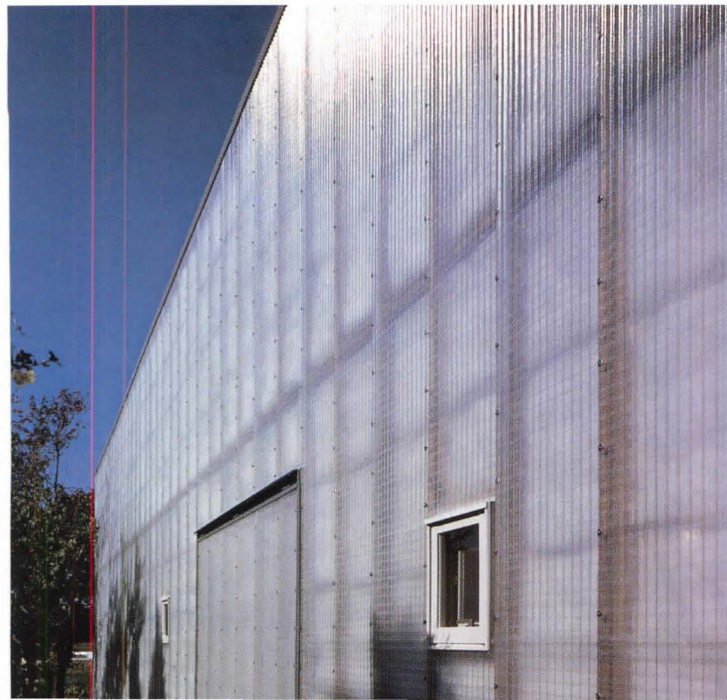
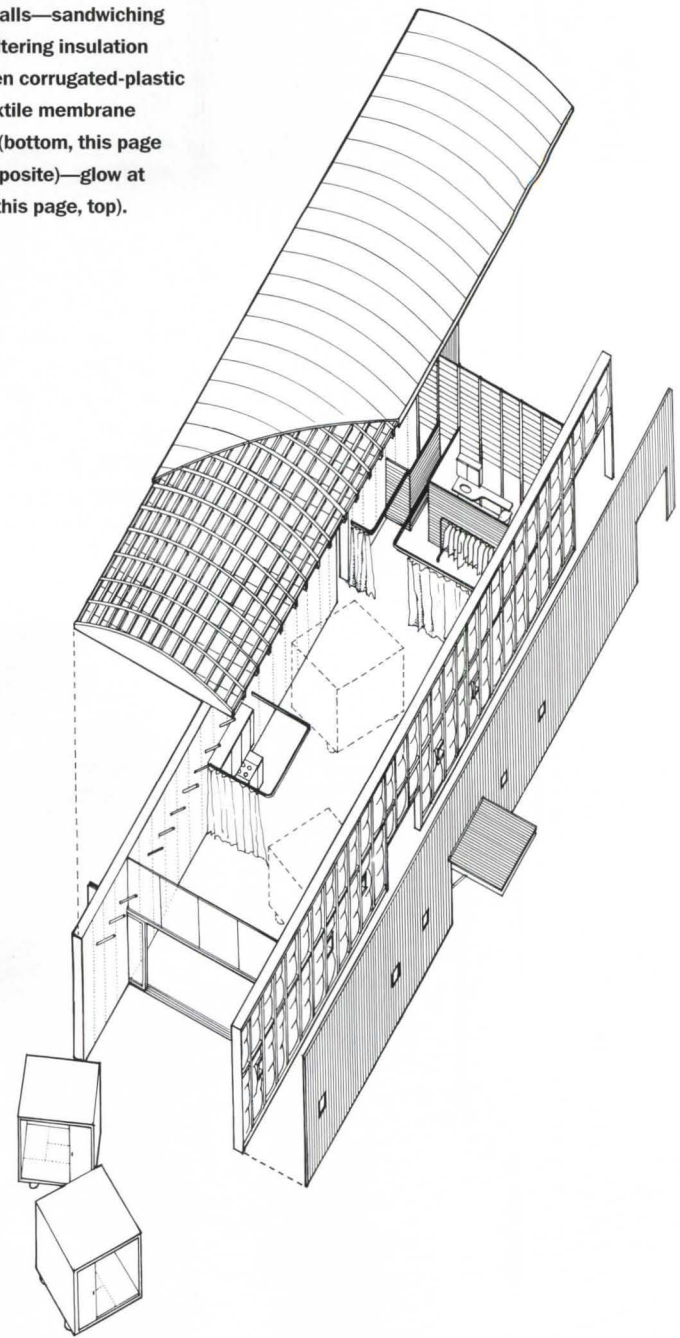


Rice-paddy troughs lead directly toward the facade's vertical divisions: structural wood columns behind a translucent corrugated-plastic skin.





Long walls—sandwiching light-filtering insulation between corrugated-plastic and textile membrane layers (bottom, this page and opposite)—glow at night (this page, top).





Louvered glazing and door-like windows flood the bathroom with light (top). Indoors, nylon membranes line the walls (bottom).







To keep the boxes light, Ban created communal storage areas for clothes and other personal possessions (right and opposite, bottom). Much of the furniture is of his design. The children use the tops of their boxes for play and study (opposite, top). The kitchen (above) and laundry (right) are fixed elements; the boxes can move in infinite configurations (opposite).





When the local government set out to widen and pave the dirt road in front of the client's previous home, he decided to raze it and start over.

Inspired by glazed sheds, Ban wanted to encase the new house in a translucent—but well-insulated—skin. He first tried sandwiching shredded waste paper between corrugated fiber-reinforced plastic and a textile membrane, but the fill blocked too much light. Experimenting with alternatives, he discovered that extruded, white polyethylene “noodles,” a packing material used in Japan for shipping fruit, let in light and kept out cold perfectly.

Yet even in Japan, where architects can convince contractors to do amazing things, the task of turning synthetic noodles into a wall seemed beyond the pale. And so, four members of Ban's staff set up shop in his studio, where they spent at least 500 hours spraying the fill with fireproofing, and stuffing it into four- and five-foot-long bags made of heat-sealed, transparent polyethylene sheeting. Each bag was divided into squares to prevent the fill from settling to the bottom. Afterward, the group carted the 500 sacks to the site, bit by bit, in the back of Ban's car.

Ban's staff intended to install the insulation themselves, but time constraints led them to turn the job over to the contractors, who stapled each bag to the house's wooden frame supporting the curved roof's 34 arched trusses. Concealed by a plaster gypsum-board ceiling, the trusses are “stitched” to the walls with slender, diagonal steel braces. A nylon canopy textile veils the insulating innards on the interior. Attached by Velcro to the wooden frame, the nylon is removable for cleaning or, says Ban, for *hesokuri*—the Japanese equivalent of hiding money under the mattress.

Aside from a modest north entry and paired doors off a small terrace to the south, the 15-inch-thick walls are punctured only by hinged, square ventilation windows. The end walls, by contrast, open completely. Sliding glass doors seamlessly connect a covered terrace to the interior, which is undivided except where fixed, partial-height walls sequester bathroom functions, and billowy curtains lightly partition kitchen, laundry, and storage zones. Together, white walls, ceiling, and floor tiles create a loftlike space.

This neutral yet luminous room sets the stage for Ban's movable boxes, made of brown paper-honeycomb panels on wooden frames. Blurring the line between architecture and furniture, each unit is a traditional Japanese room on wheels, easy to maneuver and complete with tatami mats and sliding partitions. Untethered, the independent boxes lack climate control, but they can roll up to wall-mounted air conditioners, electrical outlets, or windows to moderate temperature and lighting.

The four boxes are the family members' private retreats. Intended mainly for sleeping, each measures 63 square feet for adult occupancy or 55 for a child: just big enough for a futon and lamp. The tops of the children's boxes double as play or study areas. To keep the mobile units as small and light as possible, Ban provided separate communal storage for clothing and other personal possessions. But the boxes can also link together: “With their sliding doors out, they can connect linearly and become the perfect place for a Japanese funeral,” chuckles the architect.

In Naked House, he explored new ways of building and living. The project distinguishes clearly between private and more public realms—an often-elusive division in the Japanese house. Ban took the traditional idea of moving building parts—and, in every sense, set it free. ■

**Project:** *Naked House (Case Study House 10)*, Kawagoe, Saitama, Japan  
**Architect:** Shigeru Ban Architects—Shigeru Ban, Anne Scheou, Mamiko Ishida, project architects  
**Engineers:** Hoshino  
**General contractor:** Misawayama Kesetsu

**Sources**  
**Lighting:** Daiko, Odelic, Yamagawa  
**WWW** For more information on the people and products involved in this project, go to **Projects** at [www.architecturalrecord.com](http://www.architecturalrecord.com)





The south elevation overlooks a pond stocked with koi. A lead-coated copper "mask" on the second floor of the main addi-

tion (left in photo) conceals part of the master bedroom, while a small kitchen pavilion juts out into the wooded landscape.





Wesley **Wei** forges a balanced whole with  
his **PENNSYLVANIA HOUSE** and transcends  
the sum of its richly eclectic parts





The front of the house (right) reveals little of what happens inside, but introduces a palette of materials with the same visual weight as the original stone. The kitchen pavilion rests on a concrete plinth (below).



By Clifford A. Pearson

**T**his house in the woods evokes images of masks with their seductive power of not showing too much too soon. “I’ve always been interested in screens and other devices that simultaneously conceal and reveal,” says architect Wesley Wei, AIA, who renovated and expanded a late-18th-century stone farmhouse into a residence for an art collector. The client is a bachelor who guards his privacy, so introducing elements that obscure views inside seemed appropriate. Here, the mixing of periods, forms, and materials is a kind of masquerade in which various faces are shown to outsiders and only invited guests get to know the inhabitant’s true identity.

The original schist-and-fieldstone house, with just 700 square feet on two floors, had been compromised by unsympathetic additions during the 20th century and could not accommodate the client’s expanding collection of modern art. On meeting the client, Wei was impressed, perhaps even a bit intimidated, by the collection, which included works by George Baselitz, Francesco Clemente, Alberto Giacometti, Anselm Kiefer, and Louise Nevelson. Wei’s first sketches showed new additions that played quiet, supporting roles to the art. The client responded by saying he wanted a house that would stand up to the art, not just provide a setting for it. So Wei broke free of his self-imposed restraints and developed a more assertive design that takes its cues from the art collection and the site while creating a three-dimensional composition with its own personality. From the outside, the juxtaposition of distinct forms seems a bit jarring. Once inside, though, it’s clear that the volumes have been tailored

**Project:** Pennsylvania House, Media, Pa.

**Architect:** Wesley Wei Architects—Wesley Wei, AIA, principal-in-charge; Stephen Mileto, project

**Interior designer:** Maria Izak Nevelson Interior Design

**Fabricators:** AAA Welding (steel); A.C. Gentry (lead-coated copper); bulthaup studio (kitchen cabinets);

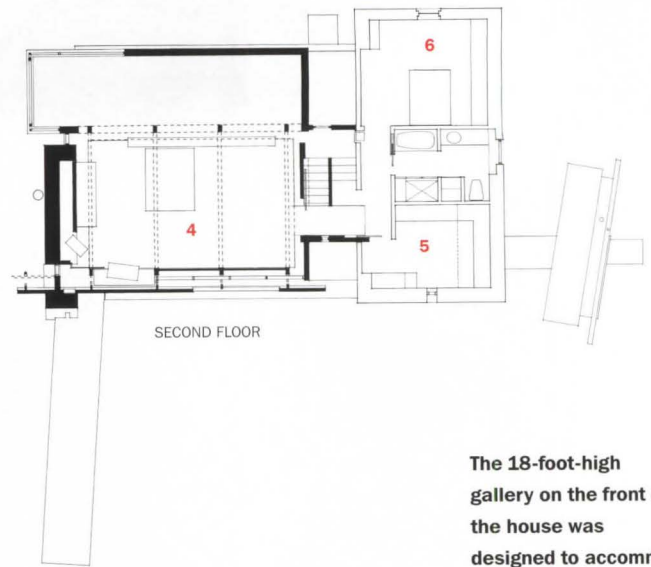
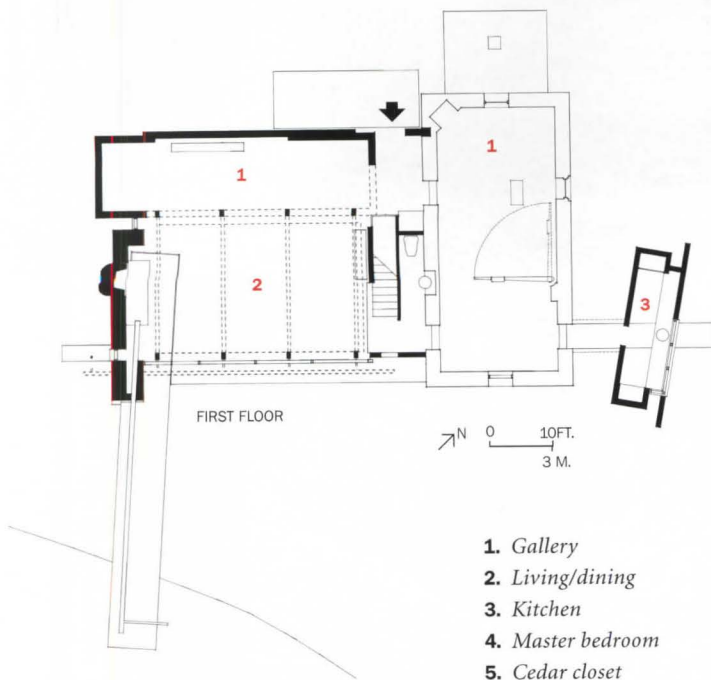






Two steps below the level of the original house, the flowing space of the new living room addition comes as a surprise.





1. Gallery
2. Living/dining
3. Kitchen
4. Master bedroom
5. Cedar closet
6. Bedroom

The 18-foot-high gallery on the front of the house was designed to accommodate a large painting by Anselm Kiefer (below).







Daylight from above gives the living room an ethereal quality. A patio (left in photo) will be extended with an aluminum deck to reach out to the pond.

to the demands of particular paintings and to the client's lifestyle; a gallery space near the front of the house, for example, rises to an 18-foot-high ceiling to accommodate a large Kiefer canvas, and a narrow kitchen pavilion shooting off the south side of the original house is proportioned for a man who rarely cooks or entertains.

Located in Media, a town about 20 miles southwest of Philadelphia, the property has an almost-rural feeling, even though other houses are not far away. A small pond with a backdrop of trees helps establish the bucolic setting, and an existing freestanding garage accommodates the client's small fleet of sports cars.

Wei razed earlier additions to the house and designed new ones on either side of the original stone building to create a trio of volumes aligned in a row. Using materials and forms that are clearly modern, the architect treated the 18th-century house as one piece in a collection of architecture. While some parts are masked or obscured, each has "a legibility, a clarity of reading," explains the architect. Thanks to the visual weight of its stone, the old structure is still the center of gravity of the overall composition. But the 2,500-square-foot expansion is more than

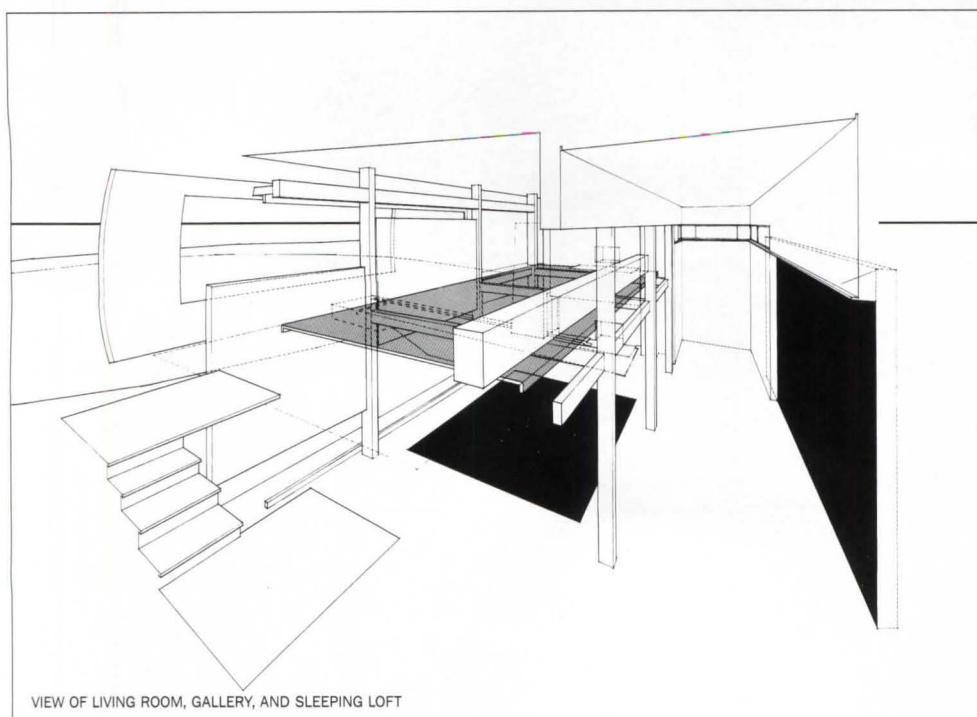
three times as large as the original house, and visitors enter not through the old building, but through a pivoting steel door on the larger of the two additions. Inside the house, each part maintains its own identity: small kitchen pavilion, stone farmhouse (used as art space on the ground floor with small bedroom and cedar closet above), an expansive north

## THE CLIENT WANTED A HOUSE THAT WOULD STAND UP TO THE ART, NOT JUST PROVIDE A SETTING FOR IT.

addition comprising an art gallery and living room on the first level, and grand sleeping loft upstairs.

Respecting the identity of the old farmhouse, Wei used a contrasting palette of materials for the additions: Cor-Ten steel, lead-coated copper, poured concrete, and Western-cedar planks. On the front elevation, he combined these materials with just a small band of clerestory windows to create a virtually opaque facade. This solidity is contrasted with a generously glazed rear elevation that looks onto the





VIEW OF LIVING ROOM, GALLERY, AND SLEEPING LOFT

Wei designed the stair and sleeping loft as elements floating within the new house (left). Old and new materials embrace at

thresholds between the farmhouse and the additions (below). A Nevelson sculpture stands in the main bedroom (below left).



pond. In fact, balancing heavy with light and old with new continues throughout the house. A circulation axis near the back of the house connects all the pieces, cutting through the thick stone walls of the farmhouse and providing remarkable transitions between old and new. A secondary path near the front of the house provides a similar set of thresholds.

In the main new wing, an almost Zenlike use of materials—waxed plate steel, cleft slate, subtly tinted plaster, and a channel of dark-gray river stones—offers an intriguing counterpoint to the pine floors (salvaged from old barns) and rough-stone walls of the renovated old house. A steel-frame structure that seems to hover within the enclosing volume of the addition supports the master bedroom upstairs. Wei exposed the aluminum-grate floor structure around the edges of this floating bedroom, allowing light from below to shine through. Because it faces west to the pond, the bedroom is equipped with two layers of mechanized fabric shades—one to block out the sun and the other to reduce solar warming while maintaining the view. The convex surface of the room’s lead-coated copper “mask” provides a third layer of protection. “We wanted this element to be voluptuous, to be a soft form,” explains Wei, “connecting the bed with the view of the water.”

Just as a good art collection unfolds as a sequence of creative moments, Wei’s design for this house in Pennsylvania offers a progression of experiences—initially denying visual access, then opening up views, cutting paths through thick old walls, and peeling away layers that protect, obscure, and tease. ■

#### Sources

**Stucco:** Penn Crete Stucco

**Roofing:** EPDM; Firestone

**Wood doors:** Morgan Morgan

**Paint:** Benjamin Moore

**Slate flooring:** Vermont Structural Slate

**Cooktop, oven, and dishwasher:**

Miele

**Refrigerator:** Subzero

**Windows:** Weathershield, Crittel

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# Weird Science in a New Age of Industry

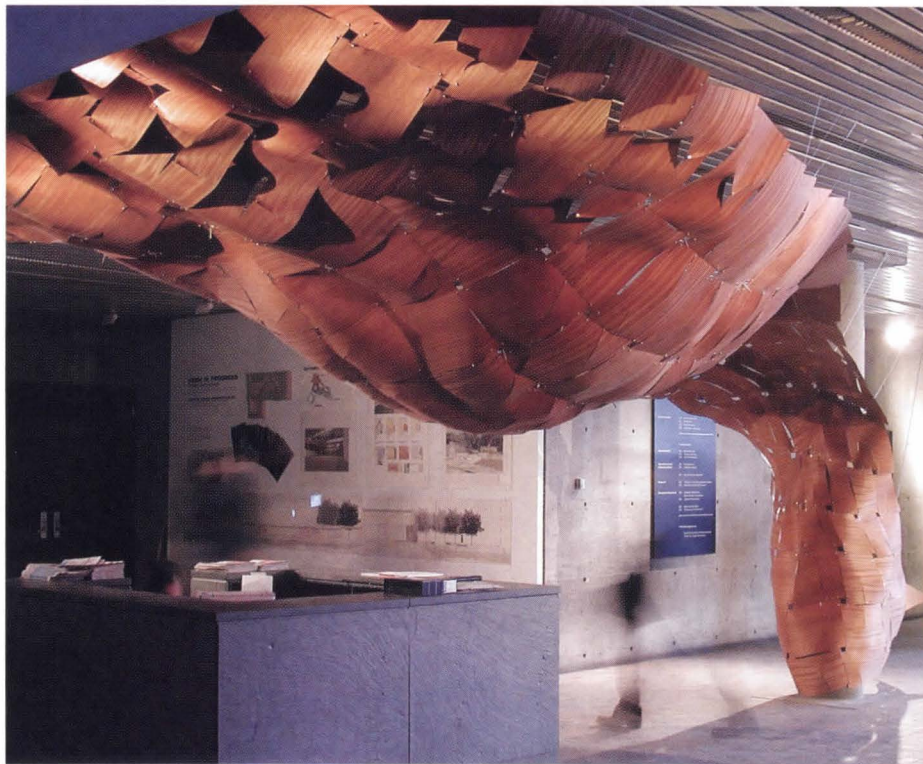
**A PROVOCATIVE EXHIBITION AT THE HARVARD GRADUATE SCHOOL OF DESIGN SHOWS THAT TECHNOLOGY WILL SOON GIVE ARCHITECTS UNPRECEDENTED CONTROL OVER MATERIALS AND PRODUCTION.**

By Sara Hart

**T**he house is the architect's laboratory. Architectural innovation and material experiments take place in residential design more than any other building type, even though across all architecture firms, less than 10 percent of billing is applied to residential commissions. Many smaller firms specialize in this sector, and residential design remains a vital part of the profession. Still, most homes are not designed at all. They're fabricated or assembled from standard parts by builders at a rate of about 1.65 million [2000 figures] starts a year in the United States. Experimentation with materials and methods has been the provenance of architects and their erudite clients, as evidenced in this month's RECORD houses, which range in daring from Rick Joy and ARO's steel houses to Shigeru Ban's polycarbonate exterior walls.

Today, research and development in residential technology is largely limited to energy efficiency and cost management, which are sponsored by government agencies, or to improved construction practices, mandated by insurance companies. Accomplishments, for the most part, are measured in incremental improvements in existing methods and materials, not the kind of innovation that requires observation then imagination. Architecture schools, for their part, have preferred giving form to theory rather than probing the possibilities and limitations of either new or existing methods and materials.

There is promise at the university level, however, where anecdotal evidence suggests that students are rediscovering the relationship



BUILDING SCIENCE

## CONTINUING EDUCATION



Use the following learning objectives to focus your study while reading this month's ARCHITECTURAL RECORD/ AIA Continuing Education article. To receive credit, turn to page 210 and follow the instructions.

## LEARNING OBJECTIVES

After reading this article, you should be able to:

1. Describe how ordinary materials can be used in new ways.
2. Discuss the concept of innovation versus incremental changes in the building industry.
3. Describe areas of current exploration in residential construction materials.

**WWW** For this story and more continuing education, as well as links to sources, white papers, and products, go to [www.architecturalrecord.com](http://www.architecturalrecord.com)

between design and material. On March 5, an exhibition exploring the nature of building materials and fabrication processes opened in the lobby gallery of Harvard University's Graduate School of Design (GSD). Called *Immaterial/Ultramaterial*, it's the culmination of a year-long advanced independent seminar, conceived by the GSD's Department of

Architecture chairman Jorge Silvetti and conducted by four professors—Toshiko Mori, Nader Tehrani, Marco Steinberg, and Ron Witte—who guided four groups of students in related investigations. Acknowledging that architects are not materials scientists but designers, Toshiko Mori, also the exhibition curator, sees material as that which is designed in the same way as form and space: "Material is a universal language. It's visceral and tactile, and anyone can understand it. If you start with theory, you won't engage people, but if you start with Homasote, for example, you can raise the level of understanding about the possibilities."

Because they chose ordinary and available materials, such as Homasote, thin plywood, rubber, foam, felt, and mesh, the students were able to manipulate the materials themselves in the school's workshop or at local fabrication shops. It's refreshing to see that in the age of computer simulation and virtual reality, these students have chosen to embrace the ordinary and available as the first step toward innovation.

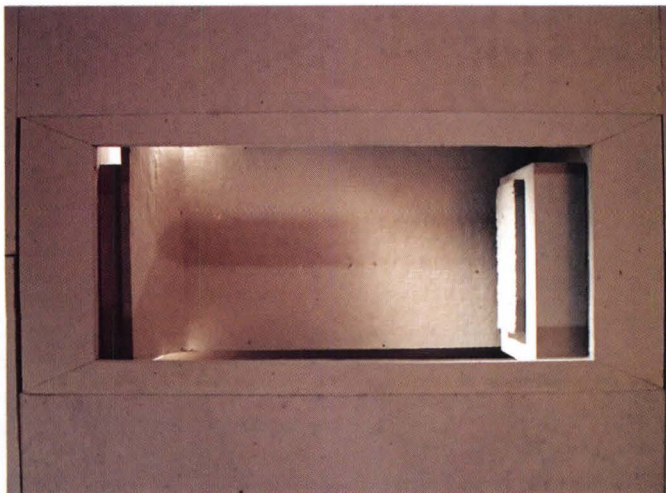
All four groups launched their investigations with the same

**A thin plywood canopy hangs from the ceiling on threaded rods, which are attached to the overlapping panels by bent aluminum spider connections.**

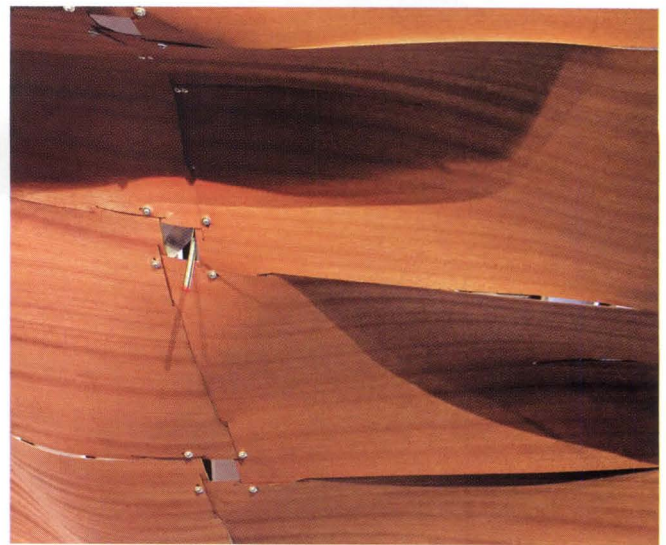
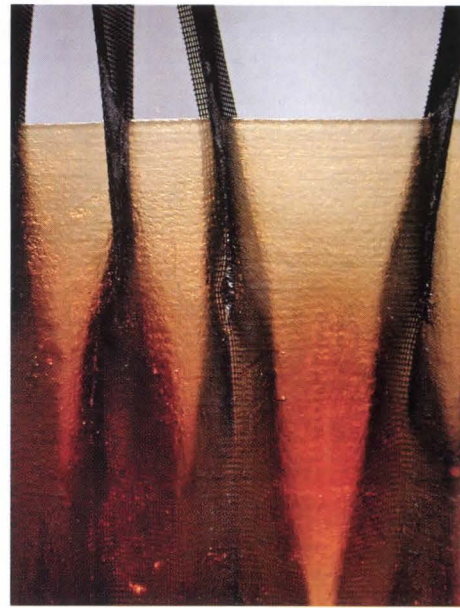




Designers turned common Homasote, a recycled newsprint construction board, into a textured wall (above) with a variety of subtle, elegant finishes. Niches (right, far right) give depth to the walls and provide lighting alcoves. Recorded and arranged by music students, sounds of rustling paper, voices, air, and milling add another dimension.







objective—to enhance the performance and draw out the latent potential of the materials with which they chose to work. The four studios framed their research around themes—Surface, Edge, Phenomena, and Substance.

### The latent beauty of Homasote

In Marco Steinberg’s “Surface” studio, Bill Yen investigated both performance and latency in Homasote. From an aesthetic perspective, such an unpretentious, dependable workhorse of a material would appear too base for the intellectual explorations of graduate students. After all, it’s just recycled newsprint and water.

In production since 1909, it has changed very little over nearly a century. Even the manufacturing process is crude by today’s standards. Newspaper and water is whipped in a vat into gray slurry and cellulose fiber pulp. Nonpaper debris is removed with a ragger, and then environmentally harmless additives are introduced. The refined slurry—98 percent water and 2 percent pulp—is moved to holding tanks and then to molds, where the mix is dried and press into sheets. The resulting product is homely and crude, yet it performs at a level that belies its modest roots. Because it is water-resistant, structural, and durable, it has been used in utilitarian buildings from the Arctic Circle to the South

Pole but now is mostly used for roof sheathing and underlayment, roof decks, and sound and thermal insulation.

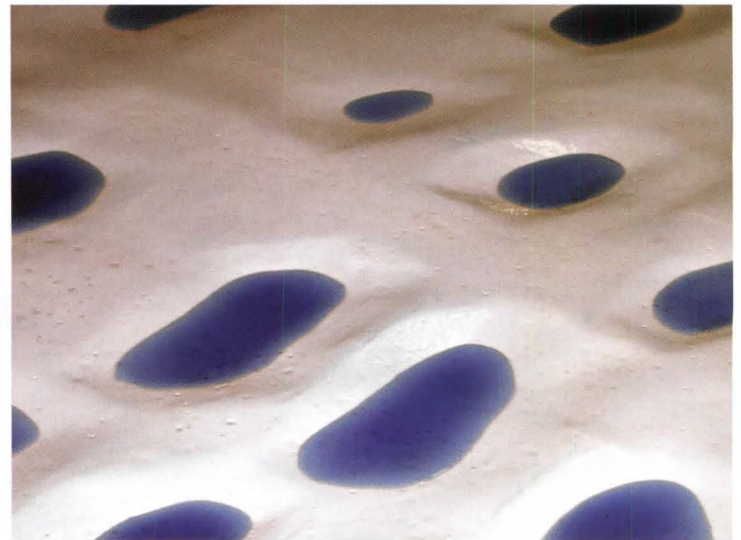
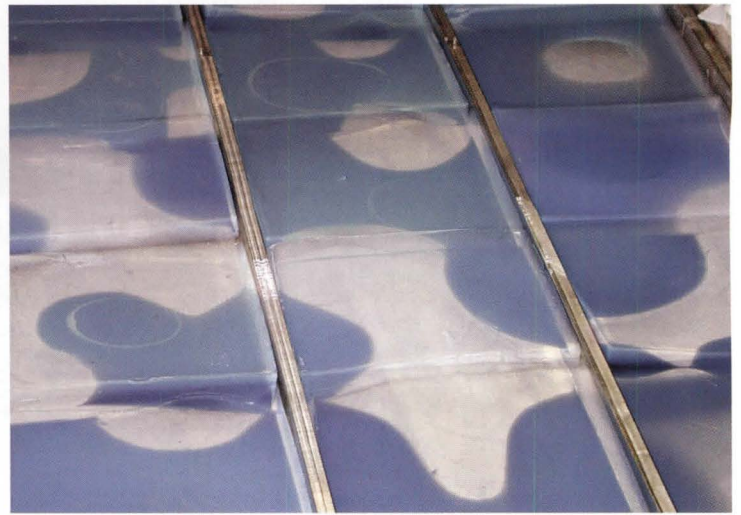
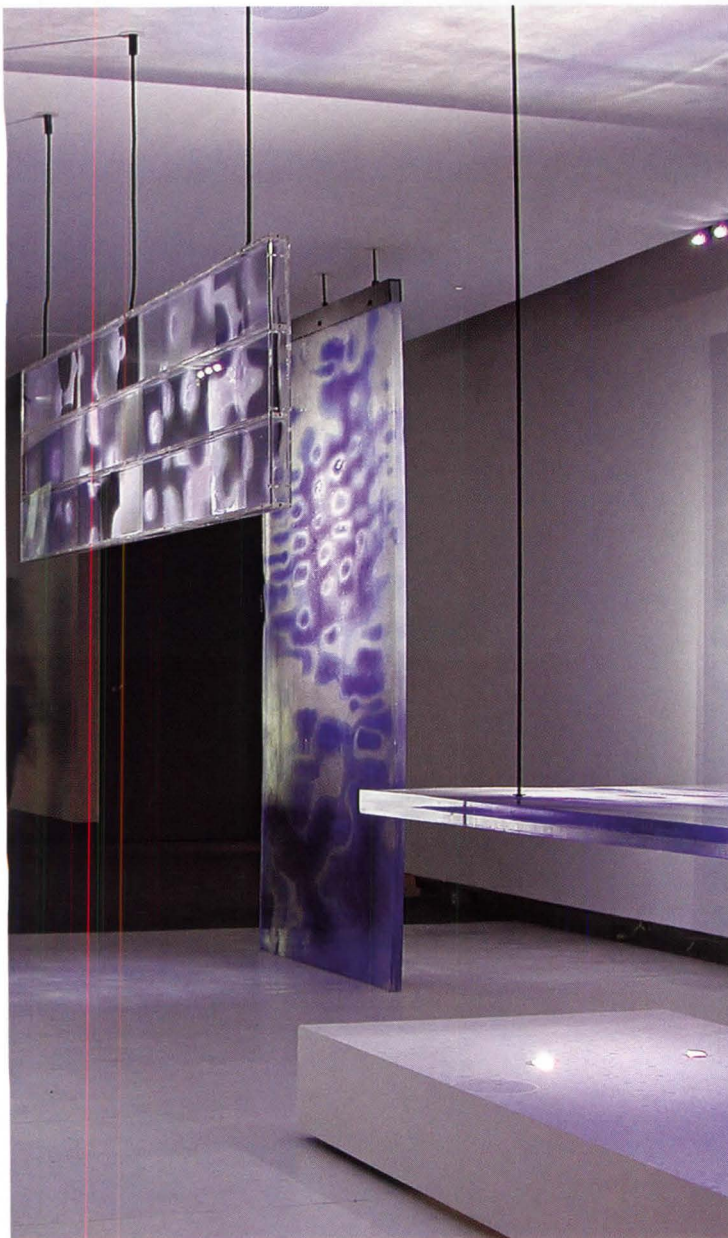
Steinberg’s group attacked the material’s inherent stiffness and made it malleable by carving, sanding, laminating, painting, and staining. Then they combined it with other radically different materials, such as cast rubber, to create curves and transparencies. “The goal with Homasote was to use design as innovation rather than technology,” explains Steinberg. In the exhibition, full-scale walls with various finishes are embedded with light strips, which glow beautifully and give the walls a new tactile quality not previously associated with this homogeneous material.

### The economy of digital production

In the “Edge” group, led by Nader Tehrani, students borrowed techniques from the apparel industry to study “the interface between aggregation and geometry.” Tehrani believes that “mass production through repeti-

**Panels (left) of a strong soft-urethane mold rubber were cast in CNC-milled foam molds and reinforced with PVC-coated fiberglass mesh. The mesh extends beyond the rubber and hangs from ceiling hooks (top). A detail of the thin-ply canopy (above) shows the machine screws, which attach to the spider connections on the other side.**





**Cast-resin panels of aerogel tiles (left) demonstrate the latent architectural potential of a highly effective insulating material.**

**Details (above, top) show how the material becomes opaque or translucent when chemicals are added.**

tion is an obsolete concept. New fabrication technologies allow architects to be the authors of the means and the methods, not contractors.” Using the GSD’s CAD/CAM and CNC facilities, students gained control of production with laser cutters, milling machines, and 3-D rapid prototyping.

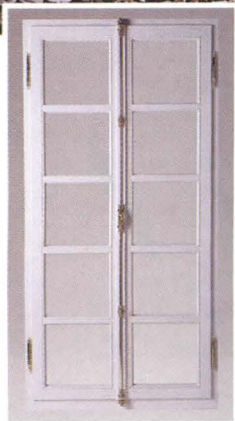
Kristen Giannattasio and Heather Walls chose wood manufacturing, molding, bending, and joining, to which they applied the techniques of tailoring, such as overlapping darts and tabs. They designed an undulating canopy made of 192 Sapele mahogany veneer panels secured with machine screws. They designed the overall monolithic form using Rhino, a design-and-manufacturing software, while simultaneously investigating ways to join the individual panels. The final units were drafted in two dimensions in AutoCAD, and the files were fed directly to a laser cutter.

The laser can cut 192 unique patterns in the same amount of time it takes to cut the same number of identical shapes. This project

for residential design in the near future. Walls and Giannattasio imagine that this process could be associated with hung-ceiling and wall paneling systems. Within the economy of digital production, custom fabrication is made cost-efficient and, therefore, particularly useful where acoustical, lighting, and mechanical conditions are atypical, such as in renovations or conversions.

Also under the direction of Tehrani, John May and Richard Lee investigated the relationship between structure and surface. They created CNC-milled foam molds into which liquid polyurethane rubber was poured and reinforced with PVC-coated fiberglass mesh. By pleating, folding, and cutting the mesh and by varying the thickness of the rubber, the designers created strange but beautiful patterns and invented a paneling system in which the reinforcement is visible through a translucent





Roderick Graham/Richard Jaffe, architects;  
Holly Stickley Photography



Bershad Design Associates Inc., architect; Will Sherwood Photography

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Carney Architects; Greg Hursley Photography

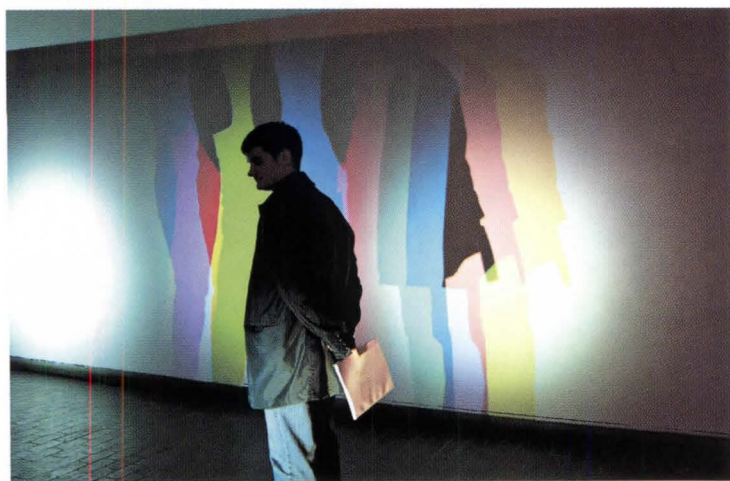
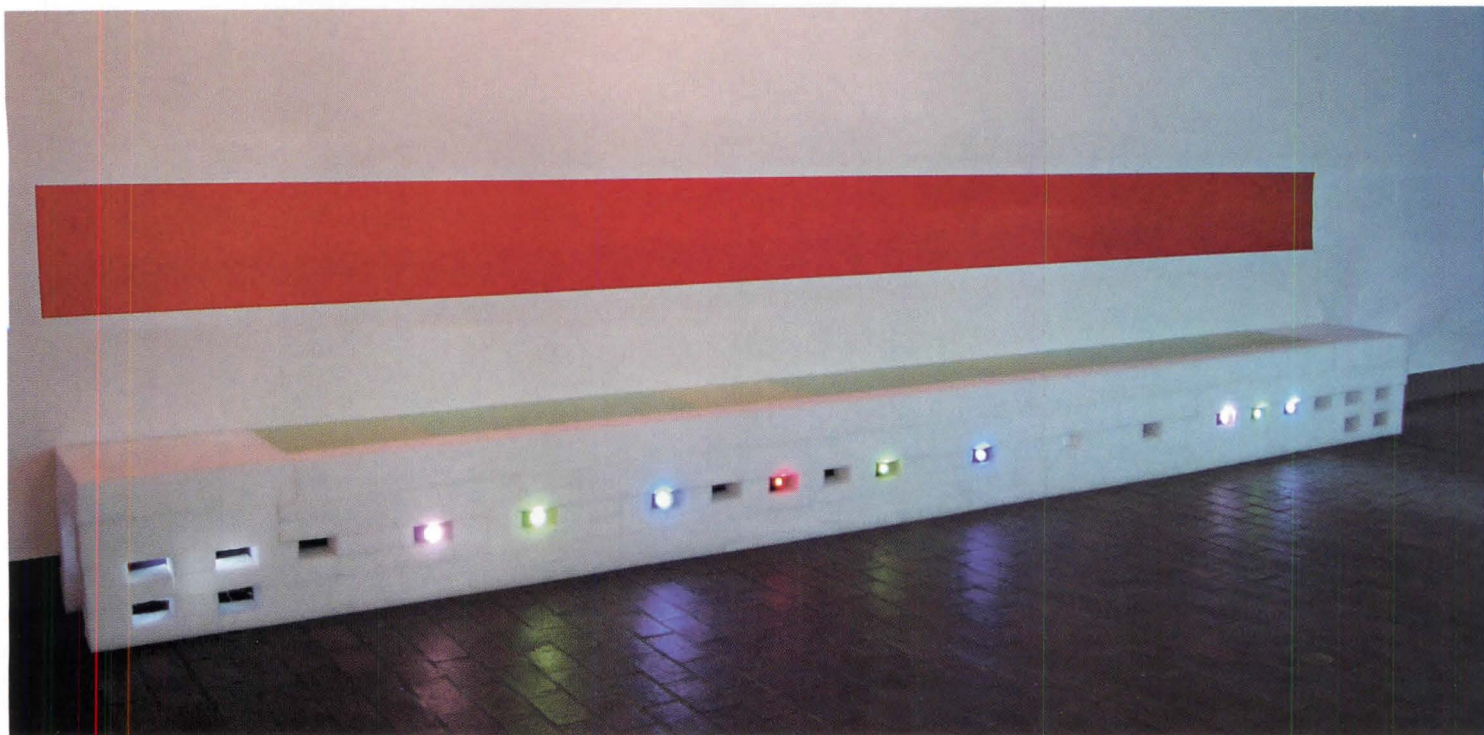


Johnson Design, architect; Photography by Christopher Lovi

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surfaces in high-traffic areas; they could also be cast as structural blocks. The rubber is exceptionally strong and abrasion resistant, and the mesh is industrial grade reinforced insect screen.

### Sense and sensibility

Whereas, the previous investigations have believable market appeal, two other groups are more speculative. “Substance” and “Phenomena” address issues of technology transfer, where one industry borrows the materials or techniques of another. In her studio, Mori’s students focused on how the characteristics of materials are perceived through the human senses in response to the theory that virtual reality and simulation actually reduce the information we absorb by eliminating that which comes from material tactility, smell, and sound.

Tala Klinck researched the wide array of foams used in disparate industries as part of her investigation into tactility. She chose pressure- and

**A bench (above) made entirely of polyethylene foam and padded with pressure-sensitive Pudgee foam contains “Spectral” fiber-optic lights, which cast colorful shadows (left) when their white beams are scattered by passing visitors. Throughout the installation, light and sound animate the spaces.**

skin tension. It is a memory foam, which means it conforms to the body’s contours, then returns to its original form when the load is removed. Klinck combined the Pudgee with a closed-cell polyethylene foam used to package fragile equipment and able to absorb impacts up to 2.5 psi. With these materials and band and table saws and a knife, she made the only furniture—a bench—in the exhibition. Because sight and sound are senses, she embedded the bench with nine strands of fiber optics, extending from metal-halide illuminators evenly placed along the front edge. When visitors pass in front of the illuminators, they interrupt the light beam, and it breaks into a spectrum of bright colors.

Despite the ethereal qualities of sound and light, Klinck’s



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CIRCLE 63 ON INQUIRY CARD





opaque or translucent. Foams are also great insulators, many resist water, and most are recyclable.”

Sounds, composed and produced by the department of music, are used throughout the exhibition, while scent permeates Mette Aamodt’s niche, a place to sit surrounded by felt-covered walls infused with fragrant felt walls.

**Looks like frozen smoke, insulates better than anything**

If any of this points to a revolution in the making, it may come from the “Substance” group’s experiments with aerogel, a silica-based substance that is 98 percent nothing—a glass matrix of hollow cavities, weighing just three times more than air. Invented in the 1930s, it had little commercial application until the 1960s and ’70s, when its extraordinary insulating properties were discovered. NASA used it to protect the Mars Rover’s sensitive instruments from temperatures far below zero. In the foreseeable future, its remarkable insulating properties could and probably will radically change architectural form. A single inch insulates as effectively as 32 layers of glass. Aerogels also insulate against noise, because sound velocity in aerogel is less than a third what it is through air.

Ron Witte’s team—Billie Faircloth, Judith Hodge, Suzanne Kim, and Clover Lee—created a matrix of tiles cast in clear resin, which illustrate aerogel’s gradient possibilities, ranging from opaque to nearly transparent, depending on what chemicals are added. Their work is on the heels of research already under way to make the substance a viable building material. Some advances have made it more translucent, and others have made it more plastic. Witte envisions a day when this almost perfect insulation/cladding material will eliminate any thermal reasons to distinguish between window and wall.

Though not motivated by commercial applications, these stu-



The exhibition ends with a sample wall, where the evolution of the projects, through trial and error, are displayed.

dent experiments, which uncovered the lurking beauty of Homasote, the performance of foam, and the elusive potential of aerogel, for example, might best be applied to the innovation-starved residential market. The investigations at the GSD clearly demonstrate the need, especially in residential design, to pursue unfeigned innovation

instead of settling for the incremental improvement of existing methods and materials. Even the most bonafide and well-crafted prototypes in this exhibition are years away from the marketplace, but the point is that architects are on the threshold of a new era in which they will have unprecedented control over materials and fabrication. ■



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**INSTRUCTIONS**

- ◆ Read the article “Weird Science in a New Age of Industry” using the learning objectives provided.
- ◆ Complete the questions below, then check your answers [page 210].
- ◆ Fill out and submit the AIA/CES education reporting form [page 210] or file the form on ARCHITECTURAL RECORD’s Web site at [www.architecturalrecord.com](http://www.architecturalrecord.com) to receive one AIA learning unit.

**QUESTIONS**

1. What is the significance of the *Immaterial/Ultramaterial* exhibit?

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\_\_\_\_\_

2. What was the outcome of the study called “Surface”?

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3. What methods did the new fabrication technologies studies explore?

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4. How did the study groups approach technology transfer?

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5. What makes the aerogel study more innovative than the current research in residential technology?

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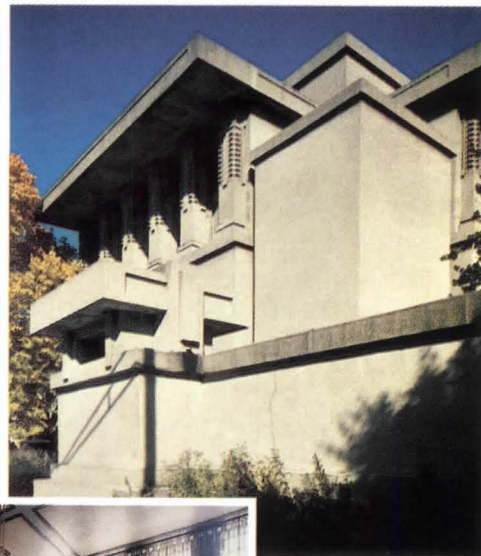
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# Tech Briefs

Frank Lloyd Wright's Unity Temple receives a face-lift • Two Florida experimental homes are adapted to give people with disabilities their first opportunity to live independent lives

## An innovative approach leads to a solution for the Unity Temple's crumbling exterior



It takes almost as much innovation to repair and restore a Frank Lloyd Wright building as it took to build one. Work is beginning on the first phase—repair of the concrete—in a multiphase restoration at Unity Temple, Wright's 1908–09 reinforced-concrete building in Oak Park, Ill. The church is one of Wright's earliest experiments with reinforced-concrete construction and represents creative use of the material as both a structural and an architectural element.

### Falling concrete

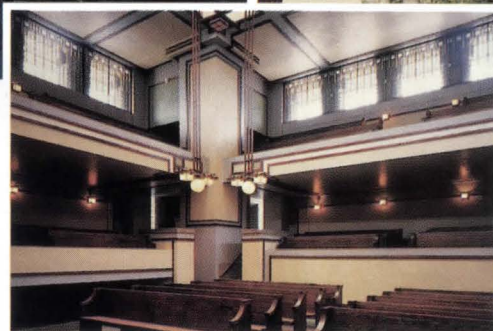
Four different kinds of concrete were used in the original construction: conventional concrete in structural columns and foundations, cinder concrete for the floor and cantilevered roof slabs, lightweight cinder concrete for roof topping, and a Portland cement-facing mortar, resembling aggregate, on the exterior walls. Over the years the cinder concrete had disintegrated and the porosity of the Portland cement facing allowed water to run into the building. The roofs deflected as much as five inches; the rebars, originally placed within half an inch

of the surface, were left exposed as a result of the erosion of the cinder concrete. The cinder aggregates contain iron particles that corrode and expand, causing chunks of concrete three inches to a foot in diameter to pop off the building.

### Interior problems

Humidity and carbon dioxide caused interior problems as well. Wright designed one of the first forced-air mechanical systems, but it never functioned. Originally, the heating ducts were hidden in uninsulated terra cotta under the floor slab and in the massive hollow columns that support the sanctuary roof. It took about a year to solve the heating problem by adding radiators before the building could be opened. "There is a lot of common wisdom about what caused the malfunction, but I haven't been able to prove anything yet," said Christine Happ Olson, executive director of the Unity Temple Restoration Foundation (UTRF), which is overseeing the project.

The lack of ventilation and high levels of humidity and carbon



Frank Lloyd Wright's 1908–09 Unity Temple, near Chicago, is a masterpiece rendered inside and out in reinforced concrete.

dioxide in the sanctuary have created cracking and spalling on the interior concrete surfaces as well as on the exterior. An investigation will determine the best way to replace the nonfunctional forced-air system, if possible by resurrecting Wright's original distribution system.

### Finding the right fix

Problems escalated during two warm winters, when alternating expansion and contraction caused concrete to fall. UTRF called in Construction Technologies Laboratories Engineered Construction (CTL) from nearby Skokie to determine the cause of the concrete deterioration and to recommend solutions. CTL studied the problem under the direction of structural engineer Thomas L. Rewerts, who now manages the project as a consultant to CTL.

The solution requires the removal of the deteriorated concrete, replacement of the rebar, new shotcrete to match the old aggregate finish, a new reinforced concrete fascia, and sealing of small cracks. Performing the repairs has been complicated by the site conditions. A 2- to 3-inch layer must be removed from the underside of the 9-inch roof slab, which is 40 feet above grade. Tall art-glass windows located just below the roof must remain in place during the demolition and construction. Traditional methods of removing concrete, such as jackhammering, are imprecise and would crack or loosen the windows.

In response to the conditions, Rewerts developed a non-percussive method of removing concrete by using a material called Bristar. This chemical compound, when



## Tech Briefs

mixed with water and left for four to five days, will expand to 200 percent of its original volume. "It is commonly used to demolish huge dams and other large structures; this is an unusual application of the material," said Rewerts. "But we believe it will become more and more common."

Sawcuts will be made in the surface approximately six inches

apart between the rebars. The cuts will be the width and depth of the sawblade and approximately six feet long from the face of the roof to the face of the building.

Transverse cuts will break down the six-foot distance into 18-inch segments. Every other sawcut will be filled with Bristar, while the other cuts will provide expansion room and break lines. As the expan-

sion causes the concrete to crack, the pieces will be a manageable size of approximately 6 inches wide, 2 inches deep, and 18 inches long. The Bristar company made it clear to CTL that the nature of the cuts is not according to their guaranteed specifications, which call for specifically spaced holes and a thicker material. Therefore, Bristar said it could not endorse this use. But Rewert and CTL tested their method before putting it out to bid and are confident that it will work. The Unity Temple Restoration Foundation

(UTRF) has raised \$1 million for the exterior restoration project, which is expected to be completed by year-end.

All of Phase I is focused on exterior repairs and restoration. Phase II will first concentrate on salvaging Wright's heating and ventilation systems. Once those systems are working, repairs of the interiors will begin. Ongoing replication of the exterior light fixtures and other details will continue throughout both phases.  
*Barbara Knecht*

## "Smart home" technology is giving people with disabilities a chance at independence

Thirty years ago, the most advanced technology available to many disabled people was a motorized wheelchair. Thanks to the vision of James McGuire, executive director of the Ann Storck Center, people with disabilities in south Florida are acquiring a new level of independence through the application of the same technologies that have been used to increase convenience in corporate boardrooms and luxury houses.

The Ann Storck Center, a Fort Lauderdale not-for-profit agency serving children and young adults with severe and multiple disabilities, built Gizmo House in Plantation, Fla., for six such people who live in a group home. At Gizmo House, so-called because it is wired with "smart home" technology, residents are able to perform tasks most people take for granted: open doors, make telephone calls, get their own snacks, and even prepare meals. A touch-screen monitor is mounted on each resident's wheelchair and connected to a central computer.

A second, new and improved wired house, Project Hope, will start construction soon in Ft. Lauderdale. Inspired by a conversation with a biomedical engineer concerning robotics, McGuire spent more than a decade raising the money, assem-

bling in 1998. The technology gives young adults with the mental ability to make choices a physical ability to act on them. "The whole intention was to give the residents as much independence as possible," says Bruce Wrobel, the computer engineer for the projects.

Typically, this kind of technology is used by corporations for three-way video conferencing or in high-end homes for controlling security gates and alarms remotely. The technology transfer required that these systems be adapted to the particular needs of multiply disabled people.

The control center is a rack-mounted version of a desktop computer installed in the telephone equipment closet. The computer communicates with and coordinates multiple components, such as motors to open and close doors, or electronic devices to operate the TV and telephone. All these systems are directed through radio frequencies via one visual interface, the touchscreen monitor. It looks much like an ATM or restaurant ordering screen, with icons that are individu-



**Project HOPE (above) will have several technological improvements over the Gizmo House.**

control various functions in the house from his or her screen. For example, each person can open and close the front door and the drapes, turn lights on and off in the common areas, and raise and lower the dining-room table and kitchen counters. However, bedroom and bathroom doors can only be opened by the person to whom they belong, TV and radio channels are tailored to each resident, and a custom-designed vending carousel

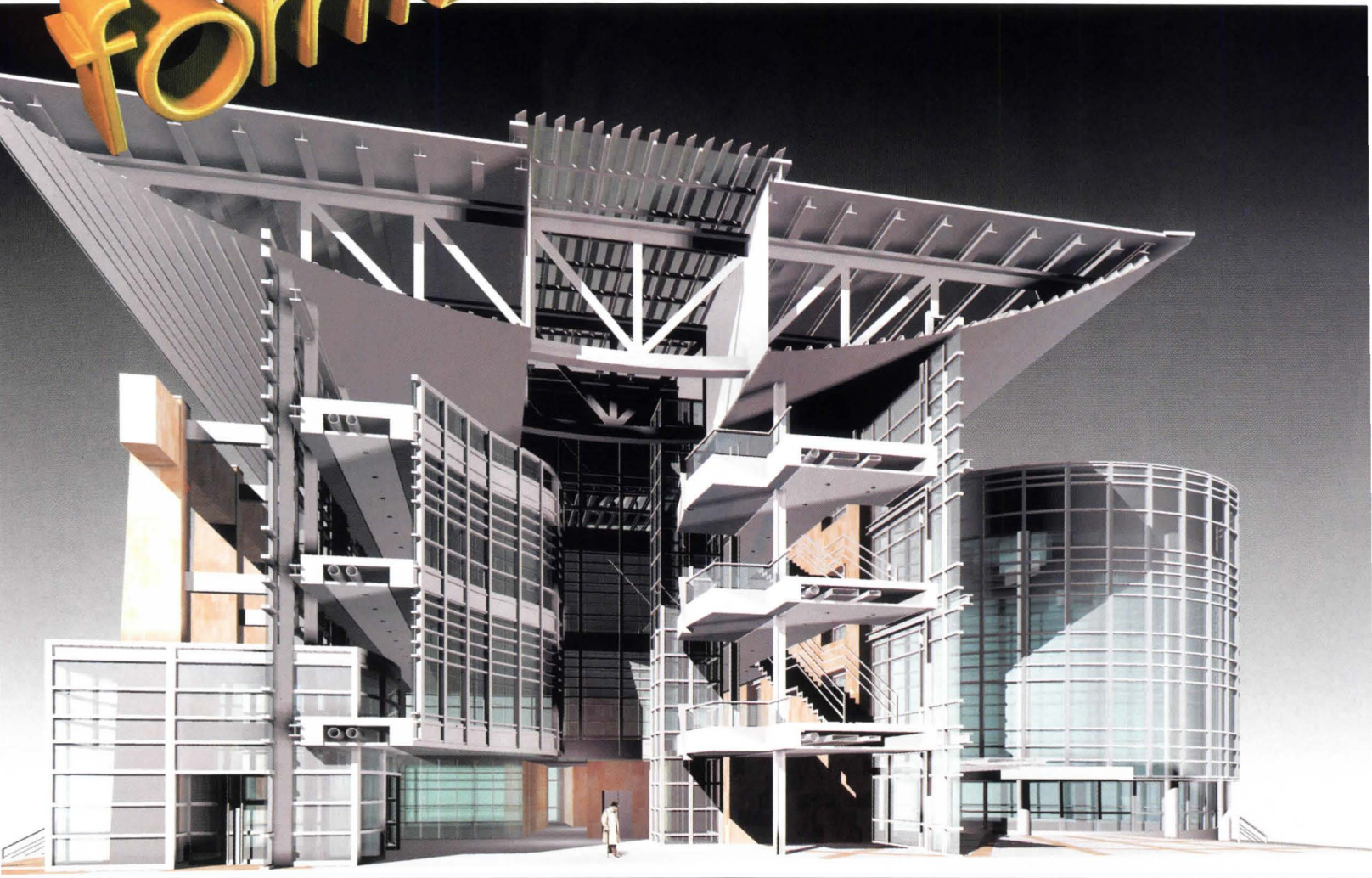
pantry with shelves that revolve like a ferris wheel makes all the contents accessible to people with limited reach. The bathtub has a rolling door that seals before the tub is filled with water. For some residents, this is the first time they've bathed in private.

The key to replication is design refinement and reduced cost. The cost of computers has gone down considerably in the past three years. The hard cost of typical south Florida residential construction is approximately \$100 per square foot; Project Hope, with its technological and architectural enhancements, is projected to cost \$150 per square foot. Upfront purchase of technology can reduce the cost of ongoing human assistance. Not only will widespread use of "smart home" technology revolutionize independent living for



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**CIRCLE 67 ON INQUIRY**



# Digital Architect

## How small firms survive technology

By Jerry Laiserin, FAIA

While listening to the news one Thursday morning last winter, New York architect Terry O'Neal, AIA, heard there had been a water main break at Fourteenth Street and Broadway, and made a mental note to allow extra time that morning to get to his office, located on the twelfth floor of a high-rise three blocks away. He didn't get there until the following Thursday. Surging waters from the broken main had flooded the basements of several area buildings, shutting off electricity and immobilizing elevators. Building officials barred dozens of tenants from their premises for nearly a week until the waters receded and power was restored.

All the computer files at his six-person firm, Terrance O'Neal Architect, were safely backed up to tape—a common practice for many businesses. O'Neal had methodically stored that tape, neatly labeled as Wednesday's incremental backup, with the tapes for Monday and Tuesday and the previous week's full backup in a locked, fire-resistant cabinet near his desk. But those tapes and their irreplaceable contents—like everything else in the office—remained inaccessible for a week following the flood, putting O'Neal out of business during that time.

*Contributing editor Jerry Laiserin, FAIA, provides strategic consulting services to architects and their technology providers.*

**WWW** For more information on technology for architects, including reviews, vendor lists, and links, go to Digital Architect at [www.architecturalrecord.com](http://www.architecturalrecord.com)

### After the flood

Unpredictable events such as these provoke anxiety in even the most well-prepared firms. "It's not just the cost, it's the stress factor too," says O'Neal. "As a principal, you've got people who depend on you for a paycheck and clients who expect work done, and you're just helpless. It's a tough way to learn what computer gurus mean when they recommend saving a backup copy of files off-site. After the flood, I started taking the previous day's incremental backup tape home in my briefcase every night."

Even that precaution proved insufficient when, a few months after the water main break, the power supply in O'Neal's network file server failed. He explains, "We had our tape backup drive physically installed on the same machine as our server. Having no power on the server meant we couldn't restore our files from the backup tape." While he waited for the replacement power supply, O'Neal first tried reinstalling the tape drive in one of his regular workstations but discovered the drive was incompatible with the non-server PC. He finally resorted to a risky maneuver—he took the hard drive out of the server PC and installed it in another workstation. "Since then, we've created redundancy on everything," he adds. "The backup tape drive is installed on another machine, not on the server, and we back up files saved on the server over our local area network."

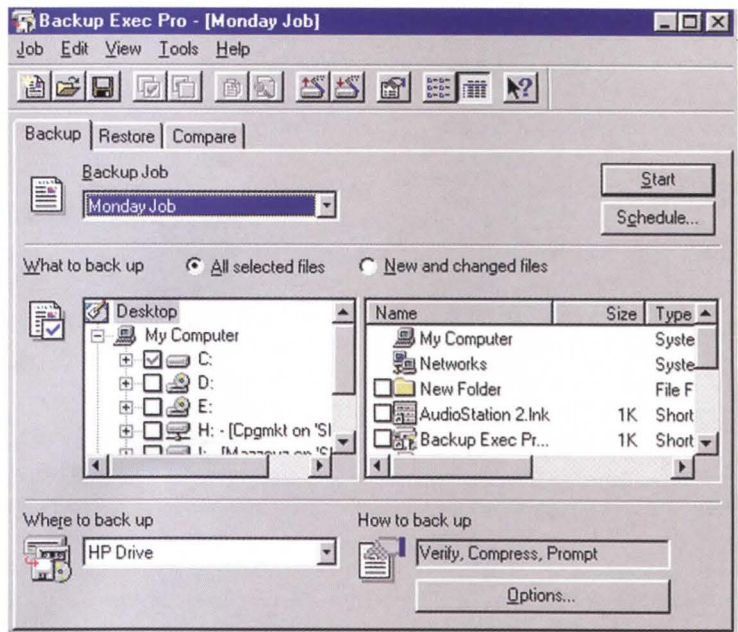
### Make a list, check it twice

In a six-person firm like O'Neal's, with average billing rates approach-

ing \$100 per hour, the cost of a day's downtime is nearly \$5,000. The cumulative value of the work products stored on a firm's computers can run easily to hundreds of thousands of dollars. Therefore, solo practitioners and principals of small firms should take a risk-management approach to the possibility of data loss and business interruption. As

airlines, hospitals, or Wall Street trading houses, for whom unanticipated work stoppages could be devastating or life-threatening. But design firms will benefit from well-planned, reasonable precautions.

Since founding his firm in 1993, O'Neal has come to rely more and more on computers for carrying out the work of the firm. Staff members



**Backup software such as Backup Exec Desktop Pro from Veritas, easily configures itself to suit the systems on which it's installed.**

with choosing professional liability insurance, architects have to weigh the cost of protection-against-loss versus the level of risk they are willing to bear. Architects, especially those in small offices, may not need or be able to justify investing in the sorts of fail-safe redundancies that are typically built into computer systems for large ventures, such as

now use a full gamut of software: AutoCAD and 3DStudio for design and visualization; PageMaker and PhotoShop for reports and presentations; ACT! and QuickBooks Pro for marketing management and financial management, respectively; and Microsoft Office for general administrative work. "As a principal, I knew I had to be just as hands-on with the



## Digital Architect

software as my employees," notes O'Neal, who admits to "having had a bad time" when his employees initially knew CAD better than he did.

After two costly business interruptions showed him how dependent he'd become on the availability of his software and data, O'Neal did some hard thinking. "I sat down and thought through what could go wrong in case of emergency and came up with a plan B to work around those problems. Then you have to consider what might happen if plan B doesn't work, and develop a way to work around that. Finally, I summarized these contingencies in a written disaster plan, so that the firm is prepared to cope with these events." Disasters for which contingencies should be considered range from electrical or mechanical failures of individual computers and components, to man-made and natural catastrophes such as fire, storms, and earthquakes, to personal or medical problems affecting the availability of key personnel.

Whatever the danger, O'Neal sees redundancy as the first and most affordable line of defense. In addition to his seven computers (six PC workstations and a file server), O'Neal now keeps a spare computer in the office, "in case someone's PC crashes." The spare pays for itself if it saves one day of work for one person each year. Similarly, O'Neal rarely finds it worthwhile to repair a defunct PC. "For the cost of the repair, plus the value of your time spent without the machine, it's often cheaper just to replace it," he observes, although he does keep three "half-dead" computers on hand and cannibalizes them for generic replacement parts such as power supplies or disk controllers.

Procedures can be just as important as hardware redundancy in ensuring continuity of business operations. Besides backing up files every night and taking the previous

with friends to use one another's offices in the event any of them loses access to their own premises. Recognizing that few of his friends will have identical hardware and software for backing up files, O'Neal has begun to use CD-ROM disks for this purpose instead of tapes. Although their 650-megabyte storage capacity is less than that of many tape formats (which can store as much data as a dozen or more CDs), they are adequate for backing up files produced daily by a small firm. Almost all new computers can read CDs, but O'Neal now buys machines with special devices called CD-RW or "rewritable" drives that can both read and record information onto these disks. The cost of adding a CD-RW drive to a computer is under \$200, and the disks themselves cost about a dollar apiece. O'Neal considers this an affordable insurance strategy that enables him to take his backup data anywhere.

Recently, O'Neal started researching online services that allow him to store backup information on the Internet in geographically remote locations. "Depending on where you are in the country, you may face a problem like an earthquake or hurricane that makes your friends' and neighbors' offices just as inaccessible as your own. Having a copy of your data stored elsewhere might be a good idea. It all depends on how much work you can afford to do over." Considering the risk associated with many Internet businesses, it is prudent to use such services as a supplement to, rather than a complete replacement for, conventional backup.

A firm's software policies also can affect how much work is at risk. For example, O'Neal insists that the "automatic save" function in AutoCAD be set for 10 minutes. This means that CAD files are automatically saved from local hard drives to the

The image shows a screenshot of a Windows-style interface. At the top is a dialog box titled "Backup Neighborhood Properties" with tabs for "Backup", "Schedule", and "Communications". The "Communications" tab is active, showing options for how the system connects to @Backup. The "Dial-Up Internet Connection" option is selected, with a dropdown menu showing "AT&T Global Network". Below this are fields for "User Name" (Internet.BS174.BS17403) and "Password" (masked with asterisks). A "Show Dial-Up Networking Properties" button is also present.

Below the dialog box is the "@Backup Online Backup Engine" window. It displays progress bars for "Scanning for new data (0% complete)" and "Transferring data (0% complete)". A summary box shows "Total Bytes:" and "Transferred:" with a "Status: Logging into @Backup" indicator. At the bottom, there is a "Stop Backup" button and a small graphic of a house connected to a server and a CD-ROM drive.

**Internet-based services such as @Backup from Skydesk provide automated backups from any Internet-connected PC.**

event of a power outage or other disruption in computer operation, any work done since the last auto-save can be recovered on an individual's local hard drive. It's also good policy to keep a secure record, both on- and off-site, of all software licenses, standards, directory structures, and user passwords.

### Keeping current

O'Neal learned most of these procedures in the hard school of trial and error. Large and mid-size firms may have full-time technology staff or at least one person with part-time computer-support responsibilities, but a solo practitioner or small-firm principal must juggle technology chores alongside the urgent demands of design, marketing, project management, and client relations. "You need several sources of information to keep up to date efficiently," he says. First, he learns from peers by talking with them about technology issues

cially his chapter's Information Technology Committee. He also tries to attend at least one technology seminar each year at the AIA National Convention, and finds those presented by the AIA Small Projects Forum to be the most relevant to firms like his. CAD magazines provide many helpful tips and tricks for managing the work process; O'Neal turns to general-purpose computer publications only when shopping for new hardware.

Most important, firms must remain vigilant about possible loss of files and data, and they should periodically review both their equipment and current work practices to ensure they're not too vulnerable to the effects of such a loss. "Technology changes so fast that you have to work just to keep up," O'Neal concludes. "Someone has to stay on top of it, and in a small firm that's the principal's job. It's my name on the door. I want to



“That was your big shot client on the phone, the head of the hospital building committee.”

“Man, I’m trying to finish something else now. Is it important?”

“Yup. And you’re not going to like it.”

“What is it?”

“They think the new triage area should be a standalone—the workflow at the emergency room won’t be affected so much at this stage. And they want to see plans and renderings. For both options.”

“Figures. So what did you tell her?”

“Three days.”

“Call her back.”

“Hey, easy Steve. They’re a big client. Can’t you do it in three days? It’s important to keep those guys happy.”

“Call her back I said.”

“And tell her what?”

“We’ll have it this afternoon.”

“That’s crazy.”

“That’s Revit.”

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IWP® Craftsman style entry door with matching sidelights and transom (style #385)



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**JELD-WEN®**



JELD-WEN, inc. presents

**NEW DOOR  
STYLES  
INCREASE  
DESIGNERS'  
OPTIONS**



**R**ich antique glass. Bright, glittering facets. Soft, glowing lenses. Imagine a larger-than-life looking glass of transparent, translucent and iridescent textures that change the light around them in a thousand different ways. This is the art of architectural glass. Combine art-like glass with a variety of wood species not traditionally found among door manufacturers' catalogues (not long ago everything was oak), and doors become an art form — part design, part sculpture and totally original. Fine art you can touch every day, say door manufacturers. Every time you come home.

Collaboration between high-design door manufacturers and glass pioneers like Shelley Jurs has resulted in an explosion of new styles and combinations that permit the designer, for the first time, to make a wide range of architectural statements. Furthermore, style has been enhanced by functionality. Today's doors are generally stronger, more energy efficient and more resistant to weather than in years past.

Manufacturers say new door lines combine "age-old architectural details" with modern-day lifestyle conveniences. There is a growing reliance upon new materials in the new door lines, and even traditional solid hardwood doors have new faces. As a result, architects have many more choices today than they did just a few years ago. Oak once dominated the hardwood door market. Today's doors, increasingly, are made from a broad range of wood species: vertical grain Douglas fir,



AIA/ARCHITECTURAL RECORD  
Continuing Education

Use the learning objectives below to focus your study as you read **NEW DOOR STYLES INCREASE DESIGNERS' OPTIONS**. To earn one AIA/CES Learning Unit including one hour of health safety welfare credit, answer the questions on page 184 and follow the reporting instructions on page 210. Use the Continuing Education self-report form on *Record's* Web site, [www.architecturalrecord.com](http://www.architecturalrecord.com).

**LEARNING OBJECTIVES**

- Describe innovations in glass doors.
- Discuss style trends in entry doors.
- Compare materials available for entry doors.







"Mission architecture, or Shaker architecture, Frank Lloyd Wright or Craftsman style construction, whatever you want to call it, is very popular now," says the spokesman for a West Coast manufacturer. "As a result, there is a considerable outpouring by door manufacturers to keep pace with that new trend."



IWPP® Estate™ door (style 1321) with iron-accented sidelights (style #1101)

## TODAY'S DOORS ARE CLEANER, LARGER

The new doors are characterized by "cleaner" lines and squared sticking, in many cases, flat, rather than raised panels.

Knotty or distressed doors, both for interior and exterior applications, once very limited, are finding their way into new homes across the country. The stylistic swing has spurred U.S. door manufacturers to broadly expand product lines, and to incorporate systems designed for ease of installation. At the same time, low maintenance is coupled with the energy efficiency of modern materials.

The new style lines offer the customer a wide variety of options: door shapes can now be flat on top, Gothic, segmented or radius-top. They come in more than two dozen stain and finish color options, with either smooth, heavy-textured wire brush, hand hewn or distressed finishes. Entryway doors, once nearly universally sized at 3'0" by 6'8", are larger — three-and-a-half feet wide and up to eight feet in height. The new larger doors were

once a custom item, but are now readily available within the same schedule as conventional-size doors.

The new pre-hung doors typically are sold with hardware and other door components — doorframe, jamb and moldings — made from the same wood stock.



One manufacturer's new Craftsman-type doors are available in maple, cherry, oak and alder and come in four designs with extra-wide six-inch stiles and flat panels held in place with square molding. The doors can be matched with sidelights and transoms to create complete entry systems.

Craftsman styling is enjoying a renaissance that is apparent among door manufacturers. The design origins are in the Arts and Crafts movement of the late 19th and early 20th centuries in England and America. The mass production of the industrial revolution was rejected in favor of art and architecture crafted by hand of natural materials. The movement reshaped American architecture and furnishings, and from the late 1800s through the 1920s, U.S. artisans adapted the distinctive Craftsman look to small houses and bungalows and to the furnishings inside. Now those same styles are being replicated.

When determining door designs, it is important to consider the finish that will be applied. Different stains or varnishes can draw out highlights and grain patterns unique to each wood species.

Generally, hardwoods tend to stain more evenly than softer wood, such as pine or fir, and various species of wood vary in the grain type (close-grain or coarse-grain) and in the grain pattern. Some grain patterns are more distinctive than others.

Alder, cherry and maple are close-grained (or tight-grained) species. They look good with a clear varnish or a whitewash stain.

Cherry, alder and mahogany all stain very evenly. They look nice dark stains (such as a chappo or merlot.)

Oak has a coarse grain pattern, is distinct when stained in warmer colors such as chappo or wheat. The distinctiveness of the grain pattern in oak is emphasized when stained in darker colors like dark cherry or ebony.

Walnut has a very beautiful grain pattern—not as coarse as oak. Walnut is a dark wood when unfinished, so a clear varnish or a chappo color work well.



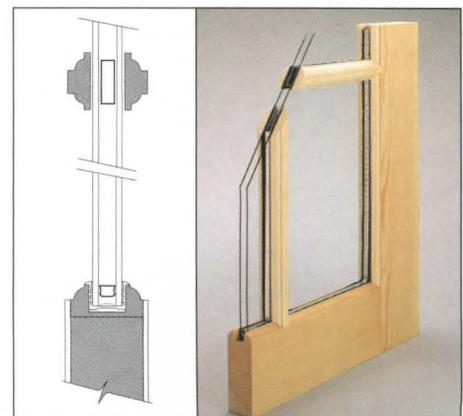
Nord® double-door entry system (style #4681) with coordinating transom (style #7681)

Ordering the door prefinished from the manufacturer often yields a more professional, longer-lasting finish, according to one manufacturer.

Manufacturers have recently begun to offer a new line of Western hemlock doors, available in sizes up to seven feet in height. Unlike other woods, Western hemlock contains no pitch or resin, so there is little chance of "pitch bleed" which can mar the finished surface of other wood doors. And Western hemlock grows harder with age, which means that doors made of it can withstand heavy wear and tear. Western hemlock has a naturally light color that will not darken with age, which makes it a good choice for a variety of finishes ranging from light to dark.

## COMPRESSION GLAZING FOR STRENGTH, EASE OF MAINTENANCE

New exterior French doors are specially constructed with low-e thermal pane glass glazed directly into frames, making them unusually weather-tight and secure. The glass is inserted directly into the stiles and rails of the door, which are then assembled like a puzzle. Glass inserts have traditionally been installed only after the wood portions of the door were completely assembled; in contemporary "compression-glazed" doors, glass is installed and assembled in much the same way as the door's wood panels. Compression-glazed glass thus becomes an integral part of the door.



Compression glazing makes the glass a more integral part of the construction, reducing the possibility of infiltration

"We can get a better seal around the glass, and we have greater control over the appearance through mechanical compression glazing," says a manufacturer. Compound beads are uniform, miters are much more exact and mechanically glazed doors perform better in all kinds of weather.





The chance of a seal failure in the new doors has been greatly reduced over doors with traditional glazing, according to manufacturers, and compression glazing results in a stronger door because corner joints fit with a higher degree of exactness.

Up to three-quarters of all doors made today by some manufacturers are compression glazed. The change is relatively recent. As little as five years ago, for instance, glass was installed in 90 percent of all doors only after door assembly was complete.

While true divided lite doors may be beyond the budget and also diminish energy efficiency, new products simulate the look and effect of traditional divided lite openings, but employ modern energy efficient technology and increased weather resistance. Manufacturers have responded to a new demand for a traditional look with a number of options. Systems that employ more substantial mullions and patterns that replicate true divided lites and which can be accessorized with sidelights and transoms. There are also fixed units in a variety of shapes and sizes to help designers achieve the look of historical accuracy.

Simulated divided lite grilles, applied directly to full-frame, tempered glass in many of the new lines, also decrease the chance of seal failure, and because full-frame glass has only four sealed edges, the modification of traditional divided lite doors makes for an extremely rigid door structure.

An added side benefit is that single-sheet tempered glass doors require fewer unsightly, but federally mandated, "tempering bugs," the engraved labels specifying ANSI compliance. On a 15-lite design, for instance, tempering bugs have been reduced from 15 to one.



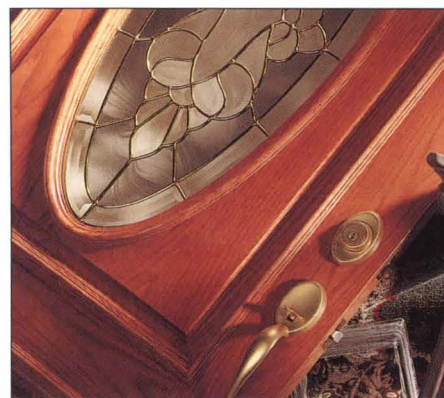
Super stable MDX thermal panel with beautiful bookmatched real wood veneer

New door lines frequently feature extra-wide stiles that can accommodate a greater variety of lockset options and provide decorating flexibility. Typically, stiles are engineered with finger-jointed cores and selected face veneers to provide strength and greater overall stability. Moisture and impact tests confirm it, say manufacturers.

Quality is worth searching out in entry doors; look for precisely matched miter joints. Designers can choose traditional edge-glued solid wood panels with precise detail and shadow lines, or bookmatched veneer on top of exterior-quality, medium-density fiberboard (MDX) panels for high stability and warp resistance.

In decorative glass, designers can choose from waterglass, baroque, gray baroque, clear beveled or clear seedy glass, and expanding new styles means that now, more than ever, you can match doors to architectural design, whether its Early American, English Tudor or Contemporary Ranch, Colonial, Craftsman, Rustic Country or Mission Mediterranean.

High-style door designs may have as many as nine different decorative glass textures, patterns and colors and be assembled with either brass or lead caming. Today's exterior-application glass is typically 5/8" thick and triple-glazed—decorative glass is encased between two pieces of tempered, clear glass.



## PROPER INSTALLATION INSURES LOW MAINTENANCE



DoorCraft® steel exclusive 3-panel design with 1/4 oval insert

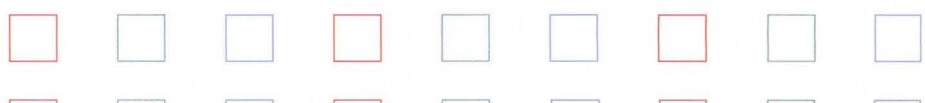
Steel is the prevailing choice in more affordable housing, attractive both for its price and durability. Steel doors also are the appropriate choice for entryways exposed to sun and rain. Fusion-crafted wood composite exterior doors, whose tough surface is engineered from pressed wood fiber and resin, bridge the price and performance gap between steel and wood doors and are engineered to perform even in extreme summer and cold winter conditions.



8-foot Alterna® fusion-crafted wood composite door

Direct exposure to the sun and other weather elements are a lesser concern with composite (fusion-crafted) doors than with doors made of wood because the fusion-crafted door surface is engineered to withstand sun, rain, heat and cold, and has an insulating core like a steel door.

No product on the market, however, can match the beauty and versatility of wood, say most homebuilders.







But, to assure a low-maintenance installation of wood doors, consideration must be given to exposure to precipitation and sunlight. Surprisingly, perhaps, ultraviolet light can damage wood doors to an even greater degree than water. UV rays break down the finish on wood doors and will eventually deteriorate the face of fiberglass doors. To preserve a handcrafted wood door, it is advisable to shield it with an overhang to protect it from both water and sunlight.

As an insulator, wood is 400 times more effective than steel and 1,800 times more effective than aluminum.

The structure of wood — a composition of millions of tiny honeycombed cells between fibers — and its resultant thermal resistance, provides a warm feel to the touch regardless of the outside temperature.

Thermal tests on door assemblies measure the "U" value, or thermal transmission, of the door. Thermal transmission can account for about 25 percent of the total energy loss through the door. Steel doors without thermal breaks will transmit cold; wood resists the penetration of cold outside air.

The thermal quality of a door is also influenced by the type of glass used in its construction. Insulated glass has twice the performance of single glass; low-e glass can triple thermal performance.

There is general agreement that wood doors by far offer the greatest versatility in satisfying the most demanding tastes and a variety of application needs.

They can be built or sized to fit any opening. They are available in numerous species, which can be stained or painted to match any décor, there are designs to match anything from ultra-contemporary to stately traditional.

No composite product can match the number of panel designs, decorative glass options or hardware options available for wood entry doors. It is also understood there are certain exposures for wood that are not appropriate unless the consumer is fully understanding of the maintenance requirements for such exposures.

When you know that a wood entry is the only option that is going to satisfy the discerning tastes of your client make sure you plan accordingly.

### A CASE STUDY



IWP® Craftsman style entry system (style #385)

The Craftsman design — and its Prairie Style and Mission Style cousins — stem from the Arts and Crafts movement. Four models in the contemporary Craftsman Series of entryways are highlighted by square geometric forms, bold linear planes and understated ornament. The doors are available in alder, cherry, maple and oak. Optional sidelights and transoms are available with decorative glass touches such as French Crackle, Iridescent Granite, White Whispy, and square beveled jewels. The stiles are a generous 6" wide, and flat panels are held in place with squared moulding.

## JELD-WEN®

Founded as a small millwork plant in Oregon in 1960, JELD-WEN today is one of the world's largest manufacturers of doors, windows, millwork, and specialty wood products. Three of its subsidiaries manufacture handcrafted wood entry and interior doors:

IWP®, Morgan® and Nord®

**IWP:** Since 1965, International Wood Products, makers of the world's finest doors, has earned an unprecedented reputation among homeowners, architects and builders for creating beautifully handcrafted hardwood entry systems of mahogany, oak, maple, walnut and cherry. Every door is meticulously handcrafted and can be an entirely custom design. IWP remains committed to developing exceptional new door designs, entry systems and finishes.

**Morgan:** Since its inception in 1855, Morgan has been delivering doors of only the very highest quality which are designed, crafted and assembled with great care to create a product of remarkable beauty. Morgan uses only the highest quality materials throughout. No plastic fillers. No printed veneers. Just real oak, and pine that deliver strength and beauty in a wide selection of interior and exterior designs. Each Morgan® door is testimony to the craftsmanship and value that only wood can deliver.

**Nord:** Founded in 1925, Nord makes doors that complement the personal design of one's home. Intricate designs are crafted from fir and hemlock for exterior and interior uses. Nord offers a variety of wood stile and rail doors, such as interior and exterior entrance doors and bifolds, as well as sidelights and transoms. Nord, a world of designs at your door.

FOR FURTHER INFORMATION CONTACT: JELD-WEN  
at [www.jeld-wen.com](http://www.jeld-wen.com) or [www.doors-windows.com](http://www.doors-windows.com)  
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CIRCLE 68 ON INQUIRY CARD





## METALLON PRESENTS HOT METAL TRENDS

Copper and brass are in. Platinum and chrome are out. Those are just two of the trends in metal usage that a variety of color experts see as popular in 2001 and beyond.

According to color trends expert Nada Napoletan Rutka, past president of the world-renowned non-profit organization, Color Marketing Group (CMG), the increased attention to metals is part of a 'back-to-nature trend' currently underway.

"Metals typify natural materials, and for this reason we see more natural finishes versus highly polished ones," says Rutka, founder/principal of Nada Associates, a color, design and marketing consulting firm in Pittsburgh. "For home furnishings, silver has been very important colorwise for the past few years. As we move forward, we are seeing a shift toward gold, as well as bronze and copper. These metals reflect the warmer colors of the new millennium."

Ken Geremia, manager of communications for the Copper Development Association (CDA), agrees with Rutka. He and his team at CDA, which educates consumers and building professionals on the copper industry, have seen a renewed interest in copper products in recent years.

"Architectural applications and specifications for copper are definitely on the rise," says Geremia. "Over the past 10 years, we've seen a continual increase of five to six percent in copper applications by architects on an annual basis."

"Copper roofing, gutters and flashing are especially popular items for commercial and residential projects. We believe the renewed interest in copper is because of its dependability, look, feel and longevity. Copper was extremely popular in the early 1900's. We're seeing its popularity cycle again now with increased interest in using metals as design accents both in and on homes."



*This urethane wall niche, which can be used in a garden setting or inside a home, has been transformed with the addition of a copper metal coating and green patina finish.*



Use the learning objectives below to focus your study as you read **HOT METAL TRENDS**. To earn one AIA/CES Learning Unit including one hour of health safety credit, answer the questions on page 190 and follow the reporting instructions on page 210. Or, use the Continuing Education self report form located at [www.architecturalrecord.com](http://www.architecturalrecord.com).

### LEARNING OBJECTIVES:

After reading **HOT METAL TRENDS** you will be able to:

- Explain the impact metals are making in residential and commercial projects.
- Describe the ways in which building products with metal finishes can be used to enhance a design.
- Discuss the metal trends taking place in the design industry.





## METALS GAINING IN POPULARITY

According to other experts, metals are gaining in popularity because of their solidity and lasting value. "I think metals are reflective of the desire for value and endurance in the home," says James Martin, president of The Color People, architectural color consultants in Denver, Colorado. "The look of hand forged and rich warmth available in cast metals creates this type of feeling.

"We're seeing a return to this look on everything from door hardware to curtain rods to book shelf brackets. The historic feeling is seen in railcar type bathroom towel racks and accessories. We're also seeing the influence of metals in light fixtures and lamps in both the arts-and-crafts and mission styles."

Leatrice Eiseman, author of "Colors for Your Every Mood" and the "Pantone Guide to Communicating with Color" believes the most important trend in metals is the use of burnished or metal surfaces as opposed to high sheen. "An ongoing trend is to treat metallic surfaces the same way the jewelry industry is doing by combining metals," says Eiseman. "You see brass combined with pewter, and gold and silver (or chrome) finishes combined as opposed to strictly limiting to one metal finish. This creates more excitement and warmth with metals.

"As a general rule, brass or gold finishes work with warm surfaces. Chrome or silver are better suited for cool colors and surfaces. However, adding a burnished or etched surface gives you more versatility and the metal finishes may be used in a combination of ways with both warm and cool colors and surfaces."

## INCORPORATING METAL TRENDS INTO DESIGNS

Architects interested in incorporating metal trends into their projects have several options. Some products, such as copper gutters and metal roofs, can easily be specified in a plan. But what does an architect do when the products he wishes to specify --- such as interior mouldings or window trim --- come only in materials like wood and urethane?

New to the industry this year is a metal finishing process that solves this dilemma for architects. Several companies are offering real metal finishes that are cold spray applied to building product materials.

Made from 95 percent real metal with a five percent bonding agent, this spray application process allows architects to specify metal finishes on a variety of building products. One company currently offers brass, bronze, copper, nickel, stainless steel, aluminum and iron rust applied to acrylic block window frames and urethane millwork products for the interior and exterior of the home.

Available as an upgrade option from the product manufacturers, the metal finished products can be used in a wide variety of commercial and residential settings. Once the metal finish is cold spray applied to a product, it is hand polished by artisans to achieve different finishes including a hammered-looking textured finish, an elegant, deep-luster satin finish and a low-sheen hand-rubbed finish. Several other finish options also exist, including a rich, hand-detailed brushed finish, a pale-green naturally aged green patina finish that exhibits old world charm, and a hand-polished antiqued finish.

Architects have the option of specifying a clear lacquer coat over a piece that has been finished with the metal process or to leave the piece natural. Since each product is coated with actual metal, an unlacquered product will age and weather naturally, like a statue in the park. When specified, a lacquer coat can be applied to the product that retards the aging process and protects the finishes created by the artisans.

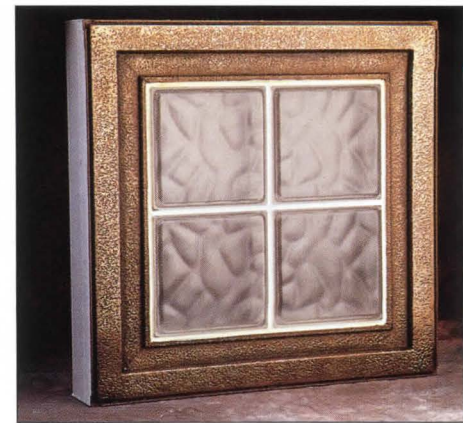
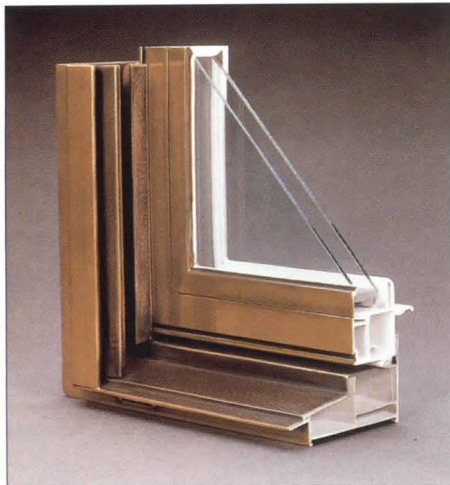
## MARRIAGE OF UNIQUE MATERIALS

One of the more exciting elements of specifying metal finishes for architects comes with the marriage of different materials for a residential or commercial project. For example, vinyl windows, which traditionally have either white or tan vinyl frames, can now be coated with metal finishes. This transforms the vinyl windows into showpiece elements of the home, yet retains all the positive low maintenance and insulation qualities of the vinyl frames.

Known for its durability and strength, the metal finishes in the marketplace today have met and exceeded rigorous testing. The metal finishes can withstand 1500 PSI before pulling away from its base material (such as the vinyl of a window frame or urethane trim).

Surprisingly lightweight, the metal finishes add less than four ounces per square foot (about the weight of three sheets of paper) to the surface of a product. Although lightweight, the enduring real metal compound finishes will not shrink, fade, crack, chip or peel. Other advantages of real metal finishes are that they meet Class A, Class I heat resistant tests (the finish will not support a flame) and the product does not conduct electricity.

"For architects interested in capitalizing on the popular trend of metal usage in commercial and residential projects, I can think of no better way than to specify metal finishes on 'routine' building products," says Sherry H. Mitchell, IIDA of Jamestown, NC. "We've seen that these finishes add little or no additional mass to the object's original weight. The cold-composite metal finishes feel, look and act like hot-cast metal. This is one of the most unique methods we've witnessed to transform and enhance building products."





## Case Study #1

### SPECIFYING METAL FINISHES

One company making it easier for architects to bring metal accents into home and commercial settings is Metallon, Inc. The West Virginia-based company offers METALLON™ metal finishes as an upgrade option on products such as millwork, trim and windows.

These metal-finished products were used by the team at Fairway Construction in Michigan when asked to design and build a stand-alone kitchen and bath addition as the showcase project for the 2000 Model/reModel project.

The high-end project was created to give remodelers attending the 2000 Remodelers' Show in Detroit unique product and design ideas. To achieve this goal, the Fairway Construction team researched and selected products that complemented each other for the upscale project. One of the first products selected was METALLON.

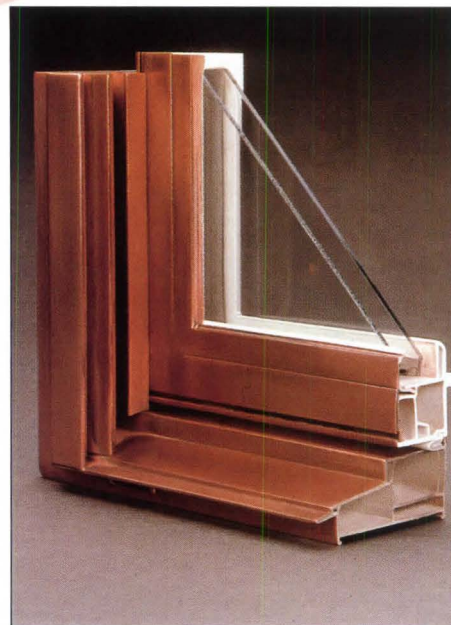
### WINDOWS WITH METAL FINISHES

"METALLON gave us the opportunity to unify the entire design theme," says Wolfgang Dorsch, director of architecture at Fairway Construction. "A terrific example was the Simonton Metallure™ bay window in the eating area of this project. We had twin casement windows mullered together. The frames featured copper METALLON in a satin finish. That helped the entire unit look more cohesive and attractive."

Another casement window unit was installed in the kitchen. This window featured nickel METALLON on the frame in an antiqued finish to complement the stainless steel appliances in the kitchen.

Moving through the addition, Hy-Lite® Products supplied a retrofit acrylic block window in the bathroom with a textured antique finished METALLON brass frame. Designed to provide privacy to the potential homeowner in the bath, the clear wave block window came as a full unit that had a vinyl frame covered with the metal finish.

"The brass METALLON on the window frame perfectly matched the brass fixtures and accessories in the bathroom," says Mary Olk, owner of Designer Interiors. Olk, who worked as an interior design consultant on the project, relied on the metal finished products to give a more connected look to the home.



*Simonton Metallure window cutaway with copper METALLON on frame.*

"The acrylic block window in the bathroom was balanced out in the addition by the use of Hy-Lite products as sidelites surrounding a set of interior French doors," says Olk. "We showcased copper METALLON with a satin finish on the eating area side of the sidelites and antiqued nickel METALLON on the kitchen side to unite the door with the stainless steel appliances in that room. The products finished with metal seemed more 'connected' to the overall home design, giving us a unified look."

### METAL FINISHED TRIM

The interior French doors and every window in the project were surrounded by urethane millwork by Style Solutions™ Incorporated. Known for their low maintenance benefits and ease of installation, Style Solutions products are made of high density urethane. The company offers metal finishes as an upgrade option on many of its moulding, trim and millwork pieces.

"METALLON added a great deal to the Style Solutions trim pieces for this project," says Dorsch. "The mouldings on both the interior and exterior of the home matched the





## Case Study #2

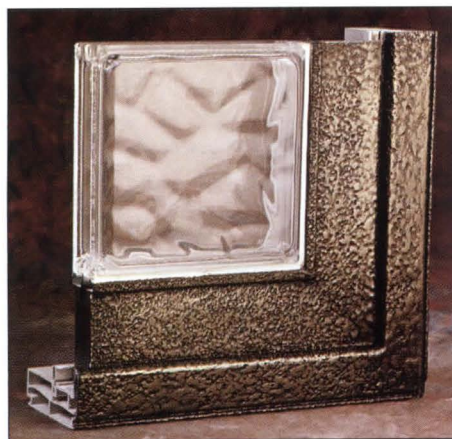
### TRENDY METALS IN KITCHENS AND BATHS

Whether it's a home kitchen sporting all the professional stainless steel appliances normally found in a five-star restaurant, or a master bathroom featuring elegant brushed nickel hardware, metals are fast becoming the "in" design product in the home. This escalating trend is being markedly felt in kitchens and baths, two of the most popular rooms of the home.

"Warm metals, such as copper and bronze, are becoming especially popular in kitchen and bath settings," says Mary Jo Peterson, CKD, CBD and president of Mary Jo Peterson Design Consultants in Connecticut. "These warm metals complement the growing trend of using hues from the orange family — which can range from pumpkin to terra cotta to tangerine — as accents in the home.

"Blue is the color that most industry professionals agree will have the greatest impact in the coming years. Cooler metals, like stainless steel and nickel actually strengthen shades of blues ... especially when they have a brushed or satin finish. And, the warmer metals like brass and copper contrast well with the blues to create an interesting mix. Whichever way you look at it, metallic finishes and real metals will continue to grow in popularity during the next several years in the home.

According to Peterson, author of the book, "Universal Kitchen and Bath Planning" 'mixing and matching' metals has become more popular in the home, especially in kitchens and baths.



Textured nickel METALLON gives a new look to a Hy-Lite Products window cutaway.



Hy-Lite Products acrylic block window unit over bath with brass METALLON on frame. Style Solutions urethane millwork moulding surrounds the window unit. The moulding has been coated with bronze METALLON.

"The love that homeowners have for stainless steel in the kitchen has segued into bringing other metals, like copper and nickel, into the kitchen," says Peterson. "This opened the door to having other metal accents throughout the home. A window with a bronze metal finish in the bathroom plays perfectly with bronze towel racks and lighting fixtures."

### ADDING METAL ACCENTS

One way architects and designers can add metal accents to a home is with building products finished with metal. METALLON, a real metal coating, captures the design and detail of the surface it is applied to, such as intricate crown mouldings.

Applied individually by hand in lightweight, multiple thin coats of real metal, METALLON is available with hand-buffed finish options on seven different metals. The resulting pieces can be used throughout both the exterior and interior of the home as metal accents.

"Metal finished products are especially popular in kitchens and baths," according to Shawn Draper, president of Metallon, Inc. "We're seeing architects specify urethane crown moulding finished with copper METALLON installed in kitchens with hanging copper pots to 'enclose' and warm up the entire room.

"Bathrooms featuring acrylic block privacy windows are getting trimmed out in brass to complement brass plumbing fixtures. Windows over kitchen sinks are finished with the stainless steel metal to align the room with an abundance of stainless steel appliances. The options are endless."

Available nationwide on Simonton Metallure™ windows, Hy-Lite® Products acrylic block windows and Style Solutions™ Incorporated urethane millwork products, METALLON is an easy way for architects to specify metal accents in the home.

"Metals bring depth and distinction to a home," says Draper. "METALLON makes it possible for architects to incorporate this growing decorating trend into every room of the home, including kitchens and baths."



LEARNING OBJECTIVES:

- Explain the impact metals are making in residential and commercial projects.
- Describe the ways in which building products with metal finishes can be used to enhance a design.
- Discuss the metal trends taking place in the design industry.

INSTRUCTIONS:

Refer to the learning objectives above. Complete the questions below. Then turn the page upside down and check your answers. Fill out the self-report form on page 210 and submit it or use the Continuing Education self-report form on Record's web site—[www.architecturalrecord.com](http://www.architecturalrecord.com)—to receive one AIA/CES Learning Unit including one hour of health safety welfare credit.

QUESTIONS:

1. What metal colors are being used for interior finishes?

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2. What are the new trends in metal finishes?

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3. In what ways are metal trends incorporated into interior finishes?

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4. Where were copper finishes normally used in buildings?

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5. Why have metals become more popular in home finishes?

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ANSWERS:

1. Metal colors are popular in cycles. During the 1970's antique brass was popular. In the 1980's bright brass was the trend. In the 1990's the metals used in homes were silver in color, either pewter, satin nickel, or black nickel. Combining silver and gold has been a recent trend for bathroom faucets and hardware. Now the metal colors for the new millennium are warmer. We are seeing brown and orange tones in bronze, antique copper, and rust.

2. Combining metals, such as brass with pewter or gold and chrome, is a growing trend. Many color experts believe that the combination of metals creates more excitement and warmth. There's also a shift in the marketplace away from silver and towards warmer metals such as gold, bronze and copper.

3. There is an increased interest in using metals as design accents in homes. Metals are found on interior finishes in more places than before. Accent copper or bronze wall tiles are being mixed in with ceramic tiles, metal countertops and backslashes are being used. Metal hardware that was concealed in the past decades is now being exposed and has come back with a pronounced enthusiasm. In cabinetry, pulls are more the focus than the wood. In window coverings, metal rods and rings are more the focus than the fabric. A new trend in adding metal into buildings and homes is to give window trim and mouldings a metallic finish, changing them from a mundane trim to a spectacular trim.

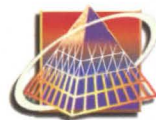
4. Traditionally, copper has been used for roofs, especially on bay windows, guttering, and light fixtures on the exterior of buildings. These usually appear green due to the weathering process. Interior uses for copper were in the kitchen giving an old world look through tea kettles, stove vent hoods, and pot racks. The use of copper gives a vintage feel since it was used extensively in the 1900 era.

5. The use of metals is reflecting the desire for value and endurance in the home according to architectural color consultant, James Martin. The popularity of metal items also comes from the fact that they are being produced in more designs now than previously, which creates a market for those who want the newest trends. Metal finishes are available for other materials, usually vinyl or wood, so that a metal look can be achieved feasibly, without adding much cost or weight to a project. Metal finishes have been refined so that they are durable and low maintenance. Added to that the fact that they are inherently flame resistant, these properties make them an easy finish to specify.





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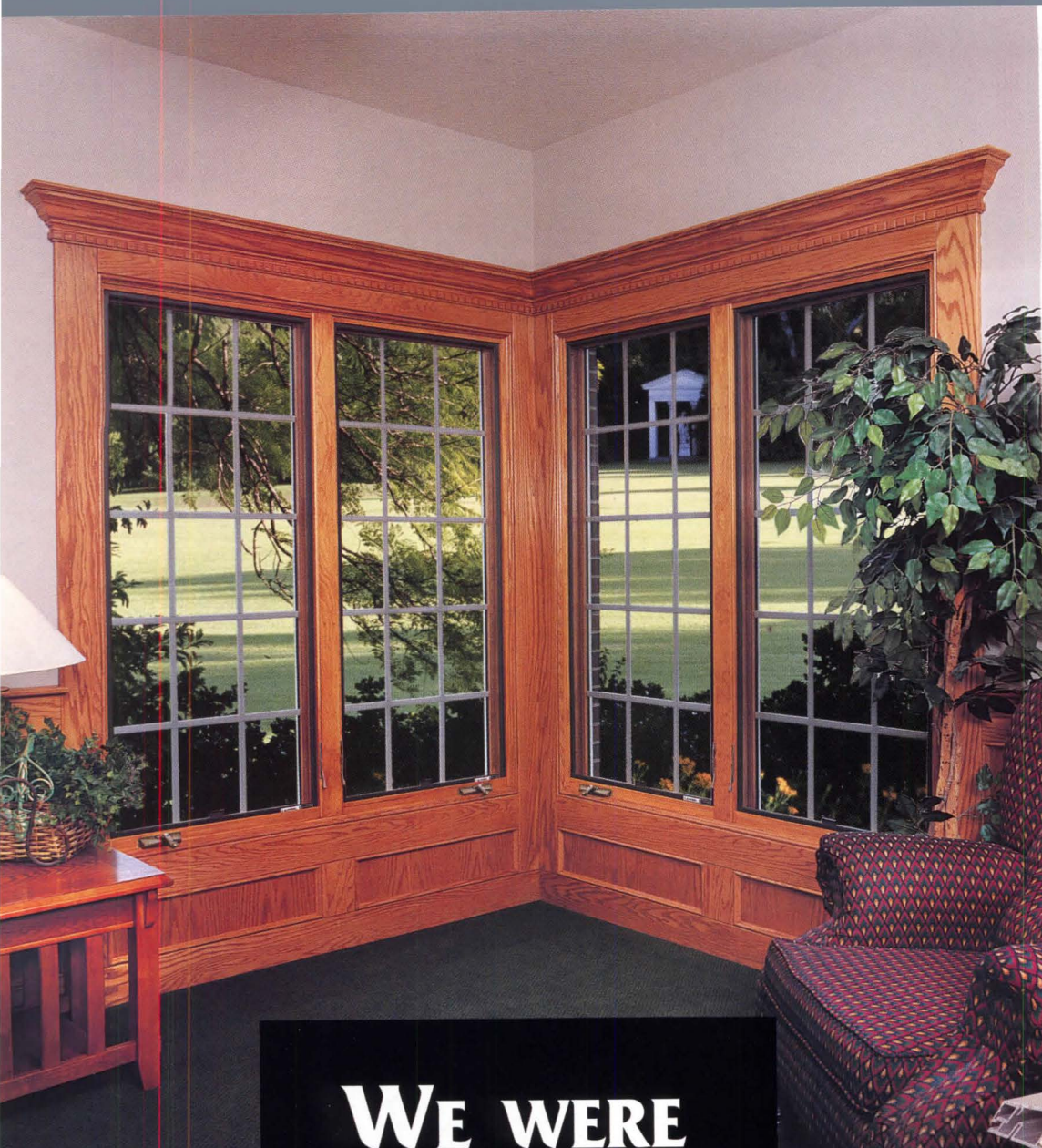
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# New Products

It's no surprise that a survey conducted by the National Fenestration Rating Council shows that architects are most concerned about product availability and durability when

selecting a window manufacturer. Also, most indicated that they "often" or "very often" use energy performance information in selecting products. *Rita F. Catinella*

## Envisioning the future of windows, while honoring the past

At the NAHB show held in Atlanta in February, Andersen Windows premiered a three-year venture, dubbed Project Odyssey, to envision how windows will evolve in the 21st century and beyond. In alliance with Phillips Design, Design Continuum, and select building-products industry leaders, Andersen is studying how technological, environmental, and sociocultural trends will shape the window of the future. A select group of reporters, architects, builders, manufacturers, and government officials was shown futuristic scenarios that used existing (or conceptual) technologies in new ways. Demonstrations included transparent photocell technology built into the window that would allow it to generate electricity; an electroluminescent display in the

corner of a window that could show information or images (such as the outdoor temperature); and a thin film transistor LCD that could show live or recorded video in the corner of a window (for example, parents could monitor kids playing outdoors).

At the show Andersen also launched the Andersen 400 series and 200 series. The 200 series tilt-wash double-hung window provides a simplified sash-tilting design, a low-maintenance, seamless frame cladding, interior and exterior finish options, double-pane insulated glass, and a modular sizing system.

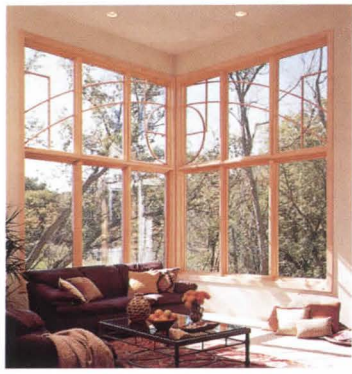


Frank Lloyd Wright art glass; tilt-wash double-hung window.

The 400 series includes the Frank Lloyd Wright series art glass collection, which is inspired by four of the renowned architect's projects: Prairie Rhythm, a centrally composed series of squares; Wichita, which features a border

pattern; Eucalyptus, an abstract plant motif with blue hues; and Colonnade, a strong geometric design of squares and rectangles. 800/426-4261, ext. 1232. Andersen Windows Inc., Bayport, Minn. **CIRCLE 200**

## Divided Lites, double-hung wood windows



Marvin offers three ways to personalize windows: Authentic Divided Lites (ADL), Simulated Divided Lites (SDL), and removable grilles. ADL features separate pieces of glass individually glazed between muntin bars; SDL bars are permanently adhered to both sides of the glass in various patterns, whereas solid pine grilles, installed on the interior, are easily removed and put back in.

The Wood Ultimate Double Hung window features an exterior surface with a solid wood profile that meets most historic restoration criteria. The jamb exposes minimal vinyl to the wood interior, and the window is available with the Low E II and argon gas option that meets the requirements for the Energy Star rating. 888/537-8268. Marvin Windows and Doors, Warroad, Minn. **CIRCLE 201**



Simulated Divided Lites (top); Wood Ultimate Double Hung (bottom).



## Looking at windows from a new angle

Eagle's clad, geometric windows allow for the custom design of octagons, pentagons, trapezoids, and triangles, by combining similar or dissimilar units and matching them with operating double-hungs or casements. All wood members are select kiln-dried, water repellent, and preservative treated. Design options include Eagle's Decorelle series decorative glass; Eagle's exclusive 3/8-inch or 1/2-inch

Modern Divided Light bars or economical Classic Divided Lights; removable wood grilles available in a 3/8-inch profile; 40 designer colors; and a choice of seven interior wood species. Windows are glazed with 3/4-inch OA Eagle Maximizer Plus insulating glass (one inch for windows above 15 square feet) with a low-conductance spacer. 800/324-5354. Eagle Window & Door Inc., Dubuque, Iowa. **CIRCLE 202**



## New Products



### ◀ Clad casement

The Pinnacle Casement by Windsor is available with an extruded aluminum sash and frame. In addition to extruded aluminum, the Pinnacle also comes with a premium Clear Select Pine interior. Windsor's new casement sequential locking system is easy to operate and gives the window a sleek look with less visible hardware. 800/887-0111. Windsor Windows & Doors, Des Moines, Iowa. **CIRCLE 203**

### ▶ Jamb extensions

CertainTeed now offers jamb extensions for its lines of new-construction windows. The extensions, which are applied to the window during manufacture, eliminate the need for the field application of drywall returns or wood returns, and reduce material costs and interior finishing time. They are available for all window styles, including geometrics. 800/223-8990. CertainTeed Corporation, Valley Forge, Pa. **CIRCLE 205**



### ▲ Southern exposure

During the past several years, Candy Zirngible and the Architectural Services team at Weather Shield have witnessed

an increase in both the size and the design complexity of bathroom windows being specified by architects. "We're seeing many unique shapes and styles incorporated into windows," says Zirngible. "Connecting with the outdoors seems to be very important." Weather Shield offers bathroom windows in six product lines for both new construction and remodeling projects, includ-

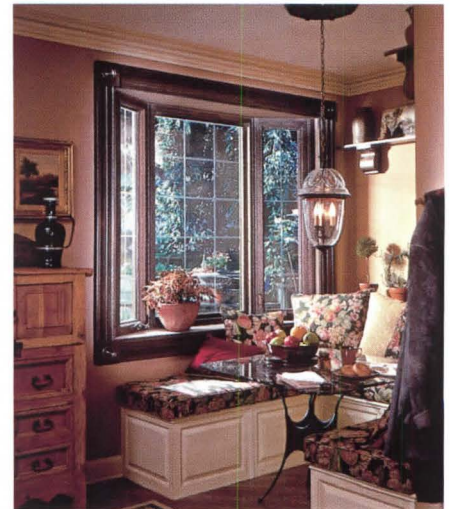
ing windows in all-wood, vinyl- and aluminum-clad wood, and all vinyl. 800/477-6808. Weather Shield Mfg. Inc., Medford, Wis. **CIRCLE 204**

### ▶ Metal-coated view

Simonton Metallure replacement and new-construction windows are coated on the inside, outside, or both sides with a choice of four metals—brass, nickel, copper, or bronze. The windows have the Metallon finish, a coating containing over 95 percent metal that adheres to surfaces after a cold-spray application process.

Currently, Simonton Metallure windows come in bay, bow, casement, awning, picture, and geometric

styles. Shown here is a Simonton Metallure bay window in bronze featuring a picture window and casements with bevel-cut glass. 800/542-9118. Simonton Windows, Parkersburg, W.V. **CIRCLE 206**

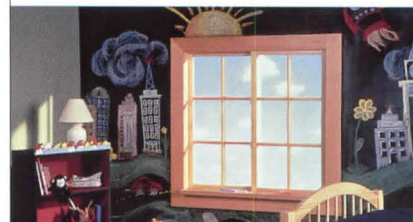


### ▲ Douglas fir and fiberglass windows

WoodClad windows are constructed using a combination of vertical-grain Douglas fir (known for its ease of staining and ability to resist dents and scratches) on the inside and fiberglass on the outside. WoodClad's fiberglass exterior offers the look of painted

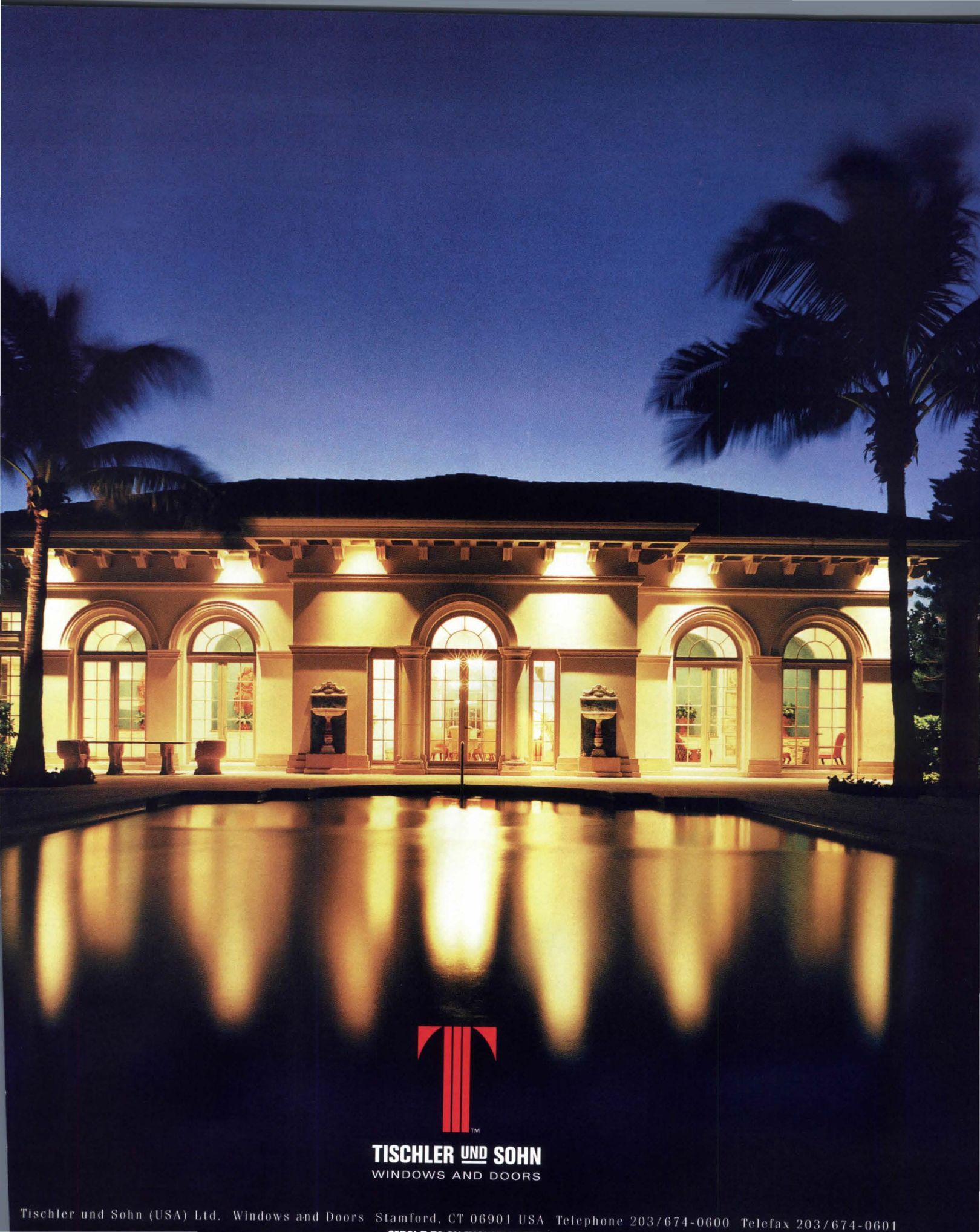
### ▼ Highly detailed, handcrafted wood windows

Pozzi has introduced a horizontal gliding window that features such details as silicone slide buttons, precise hardware, cam action locks, and die-cast sash handles. The window is constructed from preservative-treated western pine with mortise



and tenon joints and a Werzalit engineered wood sill. The overall glass thickness is  $\frac{5}{8}$  inch and the insulated glazing includes a warm-edge technology that prevents energy transfer from one side of the glass to the other at that point





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## Product Briefs

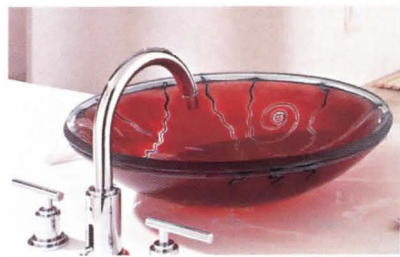


### ◀ Subway styles

Now available in the U.S. is Appiani's Anthologia Colori line of ceramic tiles for residential and commercial projects. The line includes miniature subway-style tiles in the Wall Brick series that can be composed to form herringbone, basket weaves, and numerous geometric patterns; the Domino series of geometric cutouts; Incisioni, a line etched with organic and geometric motifs; and Inserti, a hand-made series of mosaics. 516/627-0583. Fyndit Inc., Manhasset, N.Y. **CIRCLE 209**

### ▶ Square storage

Duravit is launching 4x9, a range of individual furniture items available in maple or cherry for the bath, kitchen, hallway, or foyer. The compartments can be configured either horizontally or vertically to fit the available area. 4x9 offers design solutions without remodeling; the fixtures can simply be hung on the wall for instant storage. Pull-out compartments come in a variety of colored polypropylene, including soft yellow, dusty blue, plain white, and a warm sepia tone. 888/DURAVIT. Duravit, Duluth, Ga. **CIRCLE 212**



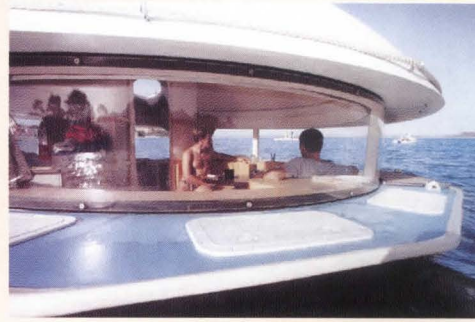
### ▶ Above and beyond glass sinks

The Rock Ice above-counter lavatory from Porcher features a cracked-glass exterior and a smooth matte interior (bottom). The basin measures 18 inches



in diameter and six inches deep and is available in aqua blue, black, slate, green, bronze, and clear glass. The Carnivale above-counter basin (top) is crafted of artisan-made glass in either red or blue. This basin is also 18 inches in diameter and six inches deep. 800/524-9797, ext. 199. American Standard, Piscataway, N.J. **CIRCLE 213**

## Products of the Month Aquatic Pod/SkyHome

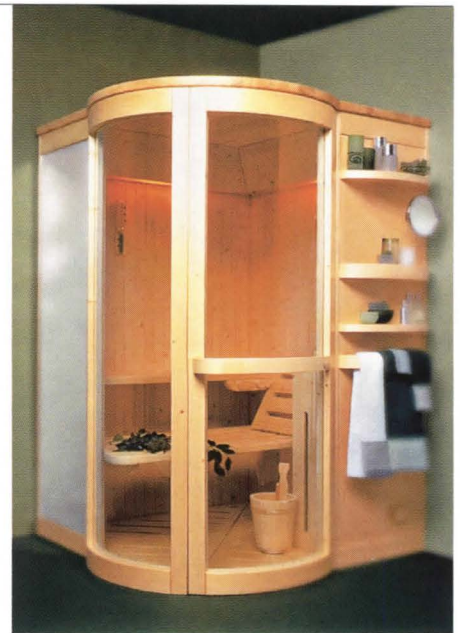


To complement this month's treehouse photo essay (page 104), here are some other structures found in strange places. The Aquatic Pod Suite (above) offers panoramic views above and below the surface of the water. Built for two, the 150-square-foot circular interior is furnished with a king-size bed, central air conditioning, mini-bar, Bose stereo, and a shower; outside, the suite is surrounded by a 6.6-foot-wide terrace. Unlike houseboats, the unit remains permanently anchored. A \$91,100 price tag includes delivery to anywhere in the U.S. Like something out of *The Jetsons*, the SkyHome (right) rises from three to eight stories high or can be custom ordered at or above tree level. SkyHomes can be built as a guest home or private sky lounge with a single master bedroom, kitchenette, bathroom, and a custom home-automation and -entertainment system. 312/664-8170. Hammacher Schlemmer, Chicago. **CIRCLE 211** 616/454-5009. Skypad Technologies Int'l LLC, Grand Rapids. **CIRCLE 210**



### ▶ Contemporary take on the sauna

Allegro contemporary saunas distinguish themselves from their traditional counterparts by the winding curves and wide glass walls. Modular in construction and self-contained, all large pieces in the saunas, such as ceiling panels, benches, supports, trimming, and lighting, are preassembled, allowing installation in less than one afternoon. The A-200 (shown) features a heater, a movable upper bench and adjustable slanted backrest, cylindrical glass door, towel rack, shelves, and full-length mirror. Allegro's heating unit has programmable time and integrated temperature control. 800/76-STEAM. Sussman Lifestyle Group, Long Island City, N.Y. **CIRCLE 214**





## Product Briefs

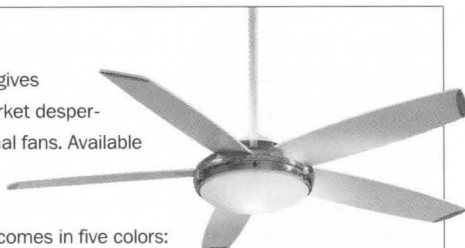


### ◀ Customize a reproduction

British chimney manufacturer Chesney's has opened its first U.S. showroom in New York. Chesney's has access to several hundred stone and marble mantels warehoused in England. The company created the "bespoke service" to enable clients to mix and match various friezes, panels, and jambs, creating reproductions of their own. 646/840-0609. Chesney's, New York City. **CIRCLE 215**

### ▶ You'll be a fan

The eMotion fan from G Squared gives architects another option in a market desperate for well-designed and functional fans. Available in three speeds, the fan measures 54 inches in diameter from blade tip to blade tip, and it comes in five colors: indigo, graphite, sage, ruby, or snow. When you use the remote to change the speeds or control the light, LEDs on the rim of the fan blink to confirm the command. 877/858-5333. G Squared, San Luis Obispo, Calif. **CIRCLE 216**



For more information, circle item numbers on Reader Service Card or go to [www.architecturalrecord.com](http://www.architecturalrecord.com) Advertiser & Product Info

### ▶ Clip art

The design team at Blu Dot (consisting of a sculptor/MBA and two architects) has introduced a group of wood-and-steel home-office furniture. Paperclip, the name of the four-piece series, refers to the chrome-plated, bent-steel-rod bases. The tops of the desk, cart, and shelves are plywood panels with Finnish birch veneer. The desk offers a generous work surface, a keyboard slide, and movable monitor stand. The printer/fax cart rolls on casters and has a ring below for hanging files. The CPU stand echoes the design of the monitor stand and fits under the desk. The 76-inch tall bookcase (shown) accommodates six shelves. 612/782-1844. Blu Dot Design & Manufacturing Inc., Minneapolis. **CIRCLE 217**



PHOTOGRAPHS: VISUAL MATERIAL FOR BLU DOT

# Record Interiors 2001

The editors of ARCHITECTURAL RECORD announce the annual RECORD INTERIORS awards program. This program is open to any registered architect; work previously published in other national design magazines is disqualified. Of particular interest are projects that incorporate innovations in program, building technology, and use of materials. The entry fee is \$50 per submission; please make checks payable to ARCHITECTURAL RECORD. Submissions must also include plan(s), photographs (transparencies, slides, or prints), this entry form, and a brief project description, all firmly bound in an 8 1/2-by-11-inch folder—postmarked no later than April 30, 2001. Winning entries will be featured in the 2001 RECORD INTERIORS. Other submissions will be returned or scheduled for a future issue. Please include a self-addressed envelope with the appropriate postage, and allow 10 weeks for return.

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Agreement: We will not offer this project for consideration by another national design magazine during the 10-week review period at ARCHITECTURAL RECORD



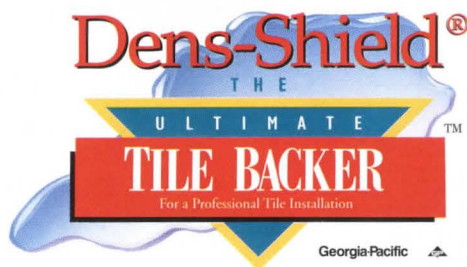
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CIRCLE 72 ON QUALITY CARD



## Product Briefs



### ▲ Lincoln logs

The Logjam line of furniture, by Brandegee Designs, originates from hand-hewn logs and joists taken from deteriorating 18th- and 19th-century Pennsylvania log cabins and barns. The natural colors and rough textures of the wood pieces are paired with polished glass and stone, steel, canvas, and leather, used for tabletops and other parts. The Thicket Bed (above) is one of 30 standard designs, including dining, conference, and coffee tables; consoles; sofas; and bookcases. 412/521-6099. Robert Brandegee Designs, Pittsburgh. **CIRCLE 218**

### ► Old-fashioned workstation

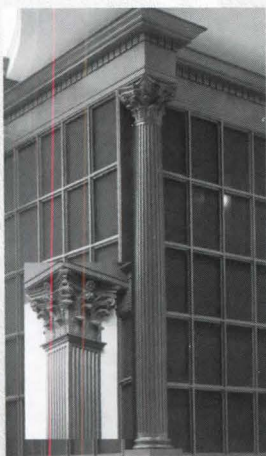
Grandpa's Workbench island workstation is the hybrid of a kitchen table and a sturdy workbench. Crafted from durable maple and enhanced with stainless steel and galvanized metal, the island features full-size stainless drawers for larger tools on one side, and smaller drawers (with label bin-pulls) to organize smaller tools on the other. The tabletop is available in a choice of stainless steel, butcher block, or without a top if the specifier wants to furnish his own. 614/447-0849. Homebody's, Columbus, Ohio. **CIRCLE 219**



### ◀ High-performance range

Jenn-Air's new slide-in ranges have a low-profile, flush design and a new curved, frameless glass door. Jenn-Air expanded the air-intake valve and increased the fan speeds on its dual-speed systems, generating more uniform air circulation. The oven control panels feature scrolling time and mode displays, and cooking options include a built-in meat probe, delayed start, dehydration, keep warm, and rapid preheat. 800/JENNAIR. Jenn-Air, Newton, Iowa. **CIRCLE 220**

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## Product Briefs

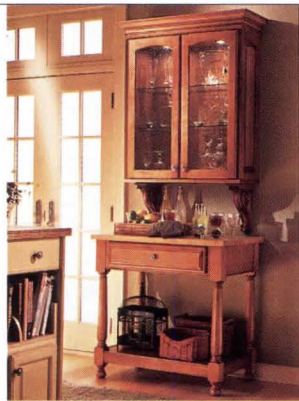


### ◀ Under wraps

Dow Chemical is adding housewrap to its family of products for home construction. Styrofoam Weathermate housewrap is a woven, perforated, polyolefin-based wrap with a translucent surface that lets builders have a clear view of studs and sheathing during installation. 800/441-4369. The Dow Chemical Company, Midland, Mich. **CIRCLE 221**

### ▶ New glaze on the chopping block

Shown here is a new KraftMaid chopping-block table with a Ginger Glaze finish. This unit can be used as an island or chopping table and is available in maple, birch, cherry, and oak (other wood species will be supplied for pine, poplar, and hickory styles). This table comes in 24-, 30-, 36-, and 42-inch widths and 24- and 30-inch depths. It stands 36 inches high and has a 1½-inch-thick solid maple chopping block. 440/632-5333. KraftMaid Cabinetry Inc., Middlefield, Ohio. **CIRCLE 222**



### ▲ Stereophiles only

For the audiophile, the Odyssey electrostatic loudspeaker offers an ultra-thin transparent diaphragm that weighs less than the air it moves and reproduces sound at high-performance levels. Odyssey's sculptural cabinetry is available in matte black with a variety of hand-finished, quick-change trim options. 785/749-0133. Martin Logan, Lawrence, Kans. **CIRCLE 223**


### ▼ Revealing architecture

Mary Miss is an artist whose work integrates art into the public realm. In collaboration with the architect Lee Harris Pomeroy, Miss was commissioned by MTA Arts for Transit to install 125 red frame elements throughout New York City's multilevel Union Square subway station. Each frame has a mirrored description that focuses attention on a particular aspect of the early industrial architecture of the station. 212/966-4287. Mary Miss, New York City. **CIRCLE 224**



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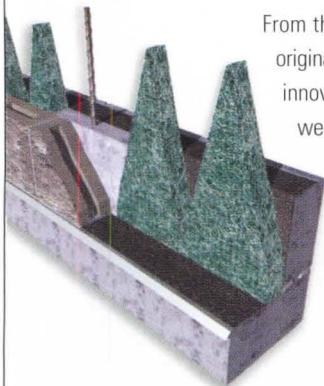
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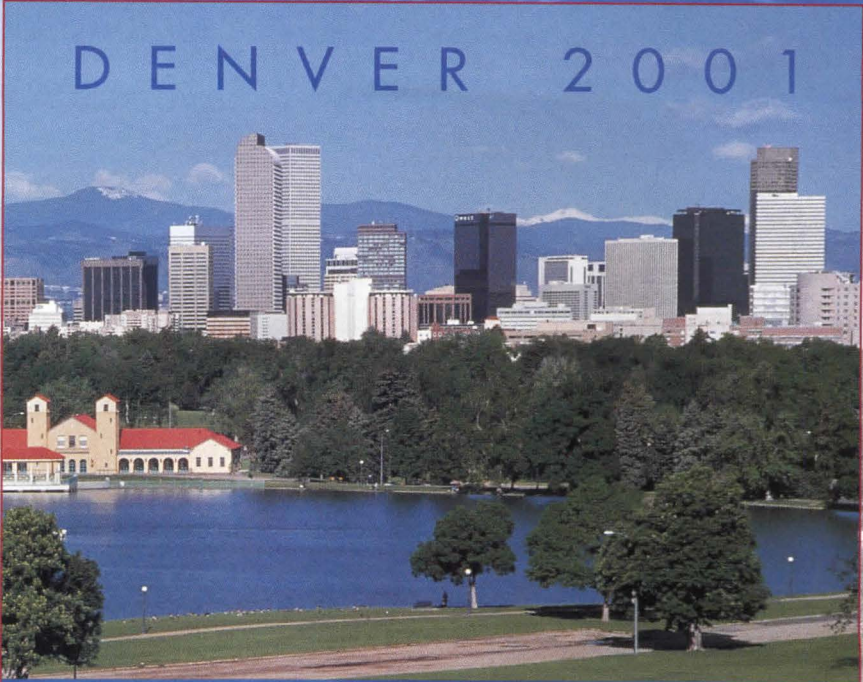


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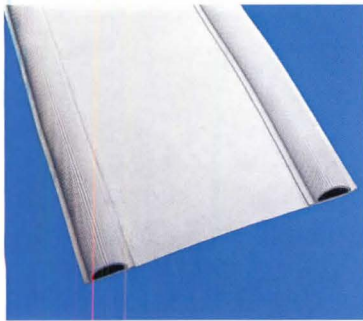
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### ▼ Damage control

AquaVert PVC is a patented, factory-fabricated PVC (polyvinyl chloride) system that protects the surface of the roof from A/C condensate, which is delivered efficiently to the roof-drainage system. The fleece backing on AquaVert PVC allows for compatibility with the adhesives for a variety of roofing membranes, including built-up, modified bitumen, and all single ply. 800/445-1500. Johns Manville Roofing Systems Group, Denver. **CIRCLE 225**

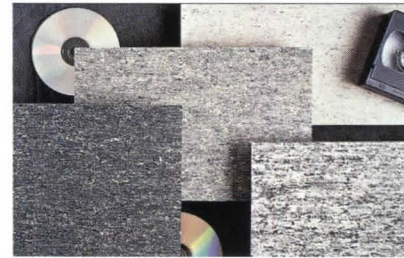


### ▲ It won't grow on you

The new Astro ClimaPlus ceiling panel is a mid-priced, finely textured, non-fissured ceiling tile that has been treated with the ÆGIS Microbe Shield, developed by Dow Corning. The shield is a patented technology that inhibits the growth of potentially dangerous microorganisms, such as bacteria, fungi, and algae, on panel surfaces. 800/USG-4YOU. USG Corporation, Chicago. **CIRCLE 226**

### ► Perfect fit

The PosiTile precision-cut carpet product allows a one-to-one fit with Tate Access Flooring's Building Technology Platform and ConCore access floor panels. PosiTile permits the easy relocation of voice, power, and data boxes, as well as in-floor air diffusers. UTP offers recyclable PosiTile designs manufactured with recycled content. 800/225-6052. United Technical Products, Norwood, Mass. **CIRCLE 227**



### ▲ Neutral linoleum

Granette, a new line of linoleum flooring from Armstrong, features a collection of contrasting black, white, and gray visuals

for commercial interiors. Like other linoleum floors in the Armstrong line, Granette is made of linseed oil, wood fibers, ground limestone, and a jute fabric for backing. In addition, cork ingredients help absorb sound and provide underfoot comfort.

Granette is well suited for retail, hospitality, and entertainment areas. 877/ARMSTRONG. Armstrong World Industries Inc., Lancaster, Pa. **CIRCLE 228**

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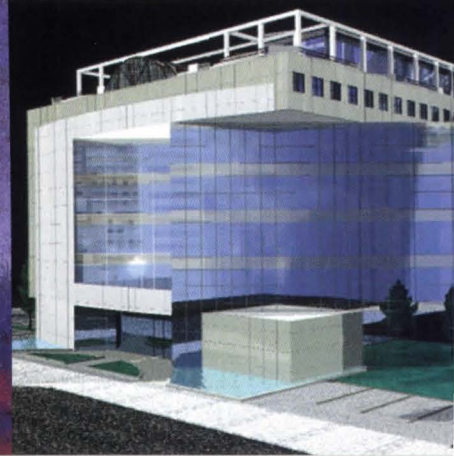
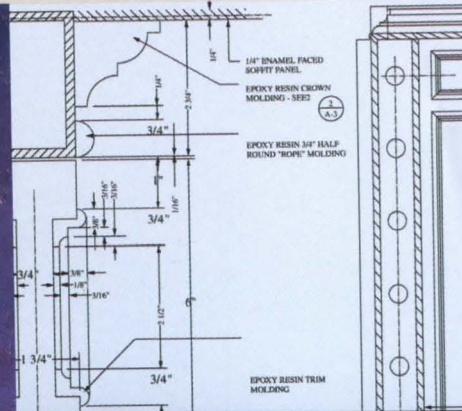
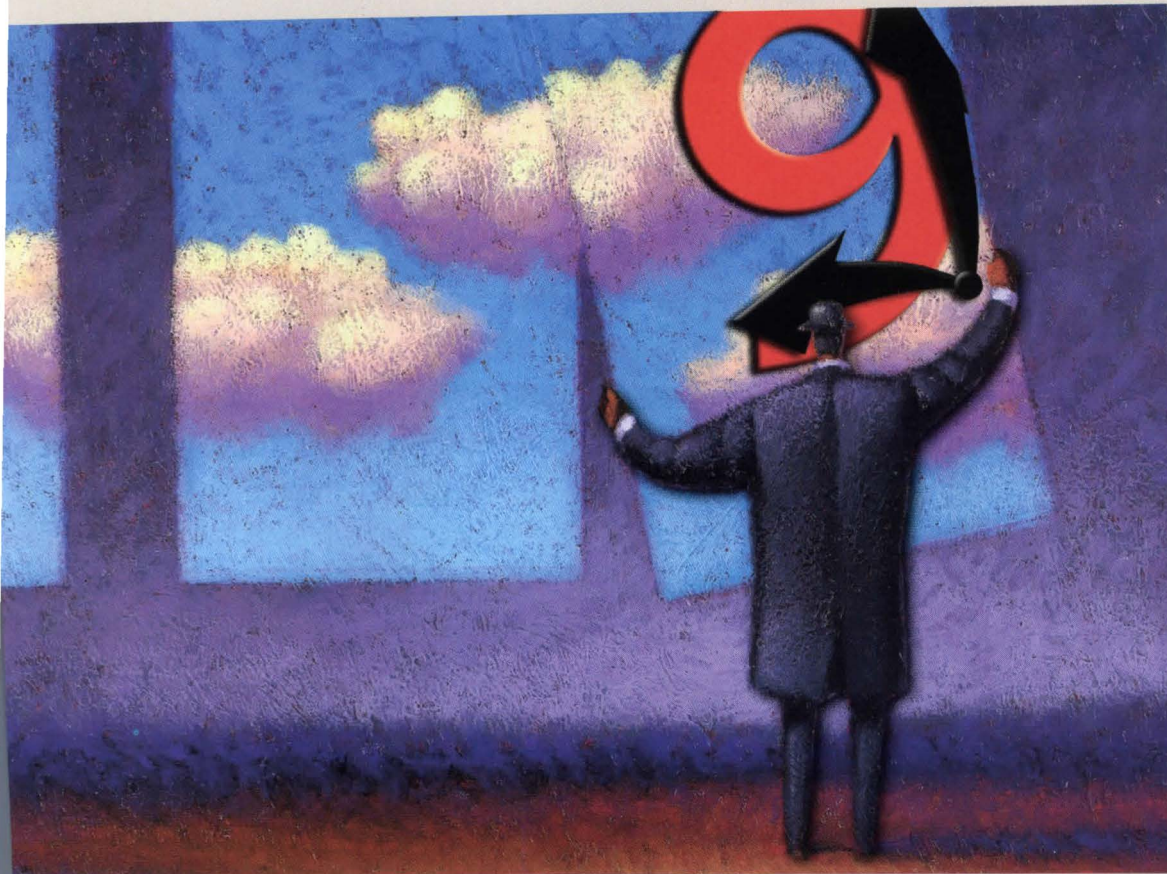
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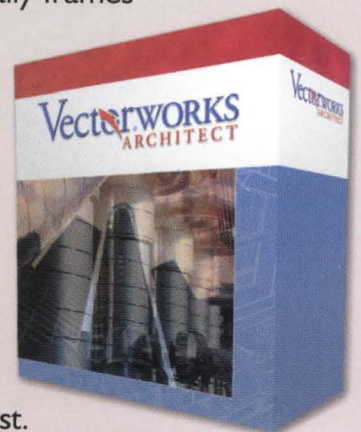
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