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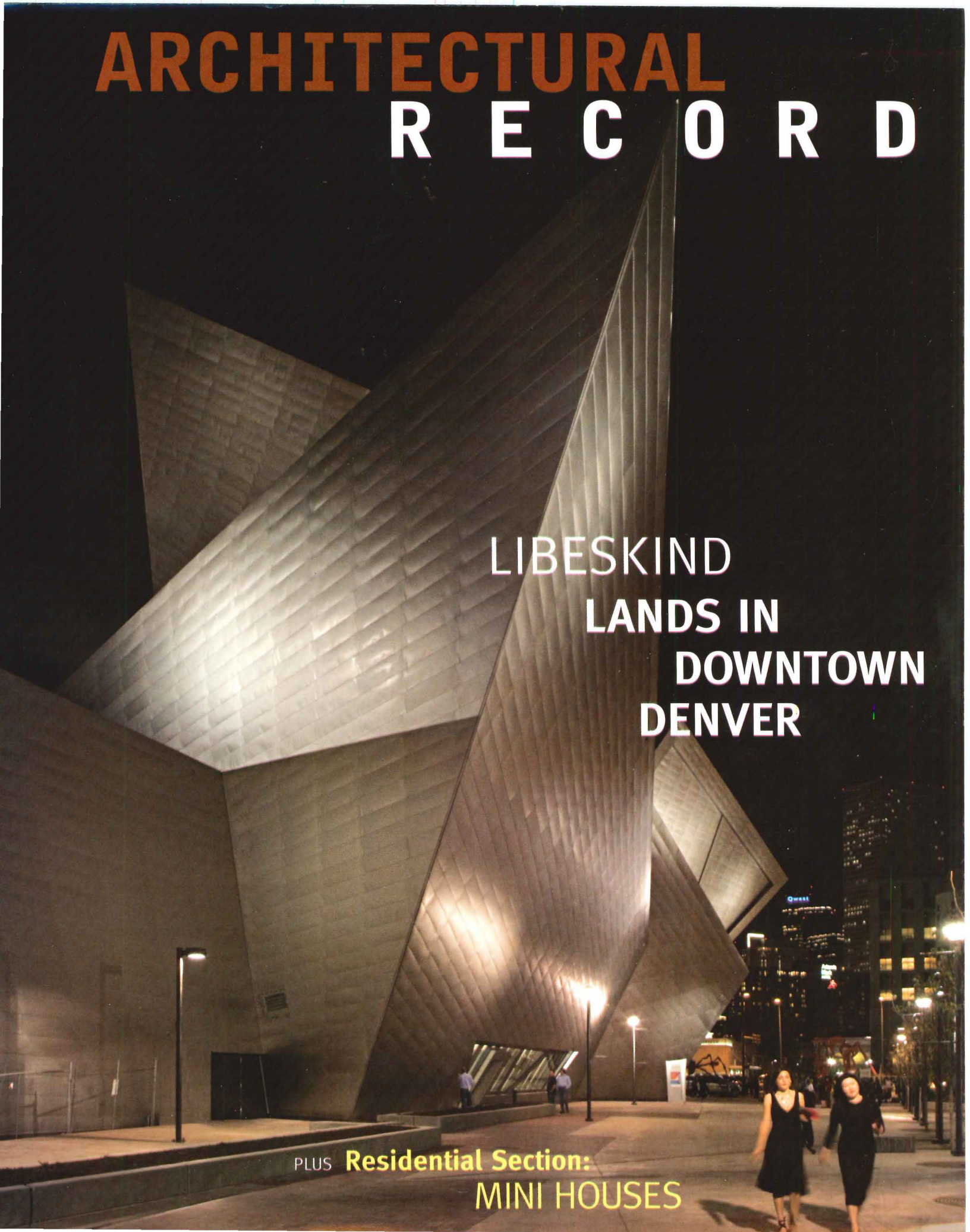

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On the Cover: *Denver Art Museum, by Studio Daniel Libeskind. Photograph by Peter Aaron/Esto.*
Right: *Museum of the North, by GDM. Photograph by Nic Lehoux.*

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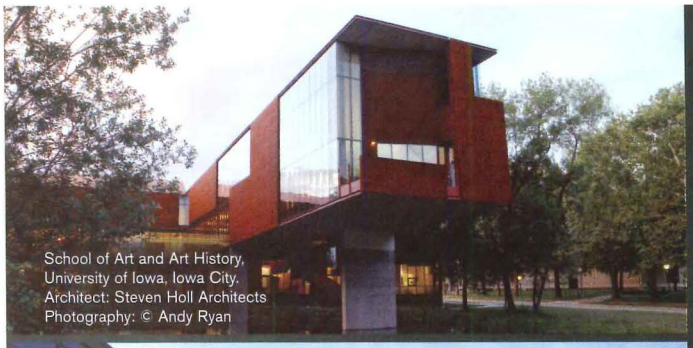
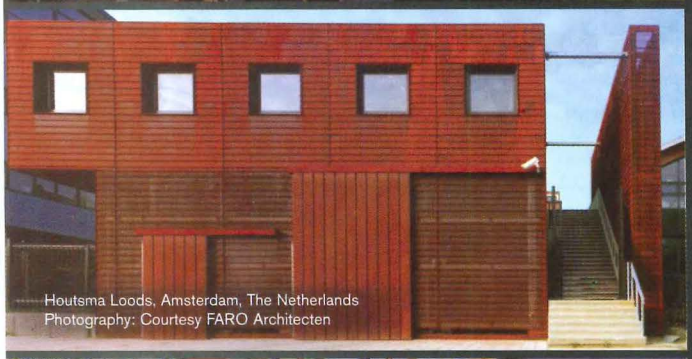


School of Art and Art History, University of Iowa, Iowa City. Architect: Steven Holl Architects Photography: © Andy Ryan

Project Portfolio

From Alaska to Ohio to Iowa, stellar architecture continues to make cultural destinations out of locations around the country that haven't always been known as centers of fashion.

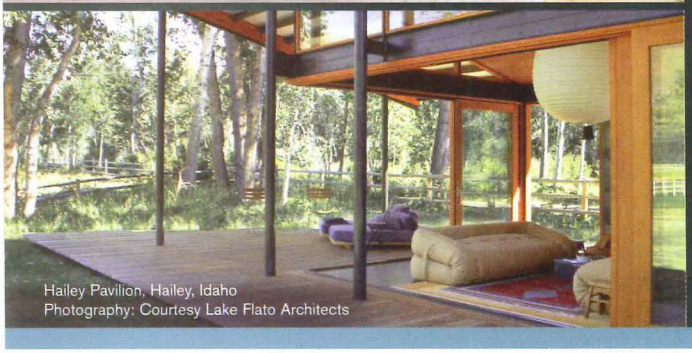


Houtsma Loods, Amsterdam, The Netherlands Photography: Courtesy FARO Architecten

Building Types Study: Office Buildings

Office Buildings: Social Sustainability

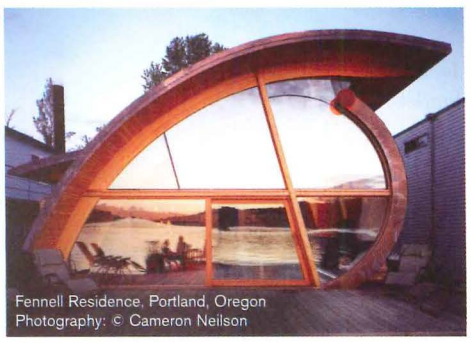
When it comes to designing workplaces for the 21st century, it's easy being green. The real challenge lies in creating environments that nurture collegiality and community, as our 10 featured offices prove.



Hailey Pavilion, Hailey, Idaho Photography: Courtesy Lake Flato Architects

Residential Special Section: Small Houses

Good architects know the importance of human scale, but it takes a while for the society in general to catch up. Still, these days, ecoconscious consumers and younger buyers steeped in cool design aren't going to live in McMansions; they want their homes to reflect their values. Here are four examples of large living in small spaces.



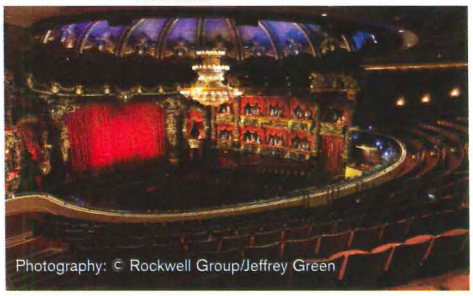
Fennell Residence, Portland, Oregon Photography: © Cameron Neilson

House of the Month

Talk about breaking out of the box! Robert Oshatz's organic floating home, the Fennell Residence in Portland, Oregon, uses curved glulam beams and an expansive glass façade to convey poetic forms.

Continuing Education Opportunities

Our editorial continuing education opportunity takes a dramatic turn this month, with a detailed explanation of how the Rockwell Group constructed a 2,100-pound neo Baroque chandelier for the Las Vegas production of The Phantom of the Opera. Go to archrecord.construction.com for other opportunities to earn credits.



Photography: © Rockwell Group/Jeffrey Green

Images: Courtesy assembledge+

Archrecord2

What outside forces shape the design sensibilities and practice strategies for young firms? For some, like L.A. firm assembledge+, it's location. Others, like Christian Wassmann, have found their paths to solo practice with the help and support of mentors.

Hive Haiku

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AIA and the Power of 10

Editorial

By Robert Ivy, FAIA

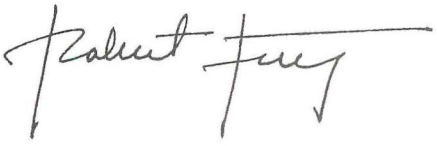
Call 2007 the year of anniversaries, in multiples of 10. All have significance, none more so than for the 77,000 licensed architects, emerging professionals, and allied partners of the American Institute of Architects, who are celebrating a Sesquicentennial. On February 23, 1857, the architect Richard Upjohn convened a small group of friends (let's call them out for glory, including a few names you might remember, to wit: son Richard, son-in-law Charles Babcock, H.W. Cleaveland, Henry Dudley, Leopold Eidlitz, Edward Gardiner, Richard Morris Hunt [whom you should certainly know], J. Wrey Mould, Fred A. Peterson, J.M. Priest, John Welch, and Joseph C. Wells). They gathered in New York for a specific purpose: to create an organization of fellow architects to "promote the scientific and practical perfection of its members" and "elevate the standing of the profession."

For 150 years, the AIA has worked to elevate architects into a unique profession devoted to the larger society through the art and science of architecture. Appropriately and simultaneously in 2007, the institute will award its highest honor for individual contributions to the profession, the Gold Medal, for the 100th time. That august award first graced an architect with great fanfare in 1907, when it was awarded to (can you guess?) Sir Aston Webb, English architect and president of the Royal Academy. Charles Follen McKim and a familiar roster of great names immediately followed suit.

Throughout the intervening years, as architects have experimented with, debated, and codified their place in a rapidly changing civilization, the AIA has served as a kind of forum of disparate peers, all allied by a common calling: individuals and groups of architects serving as mediators and interpreters of people's deepest needs for shelter, for safety, and for improvement of the environment. Ultimately, we tie down the ineffable, envisioning and creating the physical places that accommodate those high-blown aspirations. In touch with the esoteric (who else cares about proportion, or scale, or the requirements of three-dimensional space in the public realm?) as well as the pragmatic (how many fasteners does that wall actually need?), architects maintain a tension between the possible and the actual, today in an increasingly digitized, highly communicative, local and international world. The AIA, a gathering place of individual people, communities, and regions, helps sort through this impossible-seeming maze, and in the process, both the profession and the institute have grown up together.

Rather than merely hold a party and call it a day, the institute determined to launch a series of community-based initiatives through an ambitious program called "Blueprint for America." Already, 60 individual components (chapters, states, regions) of the larger organization have been awarded grants, as have 96 components that will receive supplemental grants. As an example, in North Carolina, a grant will help fund a study to minimize sprawl by developing planning alternatives. Not a bad idea. In San Francisco, the local component applied for and received aid to engage the community through walking tours of the city. All seem commendable goals. In addition, the home facility of the AIA, at 1735 New York Avenue NW, in Washington, D.C., will receive an "environmental upgrade," essentially "greening" the national offices. For details, check out the Web site at AIA150.org.

At ARCHITECTURAL RECORD, *we are joining in the celebration. Not only is McGraw-Hill Construction the official media partner for the AIA 150, but 2007 represents* RECORD*'s 10th year as the publication of choice for the AIA. Look for an enhanced calendar of celebratory events beginning in February, as well as special sections and stories and online opportunities throughout the year. You, the reader, may well be an AIA member. Regardless, we all recognize and want to share in architecture's contributions, and this year will highlight the AIA's integral role in the architect's advancement. While no institution is perfect, ultimately we look around and realize it's us, not an abstract organization. We, the members, have only ourselves to look to, and today, to congratulate. So, to us, the 21st-century architects who compose the American Institute of Architects: Happy 150th, Happy 100th—and for* ARCHITECTURAL RECORD*, a big 10. Excelsior!*



Letters

Another take on Temko

As someone who was very involved in the fight over downtown development in San Francisco for almost two decades, and who avidly read Allan Temko's work, I want to suggest a slightly modified perspective on the impact of Temko's stance as an activist in urban design [December 2006, Critique, "Battling for better architecture: The argument for activist criticism," page 41].

I am struck by how much better the architecture of newer commercial and civic buildings is in cities like Chicago, Minneapolis, and Seattle than it is in San Francisco. Virtually all the buildings the city added during the office boom of the early 1980s are mediocre, and they are mediocre because activist opponents of high-rise growth used design as one of many tools to slow the development process.

I fear that Temko's activist approach played right into the hands of the No-Growthers in the 1970s and the '80s. One way they had of slowing development was to ask the Planning Commission to exercise discretionary review on every high-rise proposal. The commission gleefully did so, making all kinds of tweaks to developers' designs, and dumbing down the design of these buildings in the process.

I believe Temko's feisty commentary on architectural issues fueled in some small way the No-Growthers' zeal for using this as one more tool to stop growth. He certainly was not the prime mover in this regard, but he was part of a movement. Where Temko fired up the zealots, Blair Kamin makes public policymakers think about what good design means. Perhaps each of them is taking the same approach, adapted to the times in which they write.

—Mike McGill
Washington, D.C.

Blair Kamin responds:

I appreciate Mike McGill's observation that I try to point out constructive alternatives to poorly conceived developments. But I must say, I learned that from Allan, especially his series on the redevelopment of the Presidio. So I must differ with McGill's perspective on Allan and the No-Growthers in San Francisco. Allan clearly believed that an enlightened public sector had a role to play in guiding untrammeled development. At the same time, he spoke out against the Postmodern urban design guidelines that Dean Macris and San Francisco's planning department foisted on architects. I think Allan got the balance right—public agencies should do neither too little nor too much in guiding private development. So while the No-Growthers may have glommed onto Allan's demand for strong public review, in no way did he agree with the outcome of the overly prescriptive guidelines. Sometimes, in other words, journalistic activism can have unintended consequences. Just don't blame that on the journalist.

Annual applause

Two aspects of your December 2006 issue drew my attention.

The first was the excellent profiles of the Design Vanguard 2006, which introduced some superbly talented younger designers. However, I was dismayed that in the more than 50 pages of illustrations on the work of the 10 firms, there was not a single floor plan, and only one section (and that was a model photograph, not a drawing). I would hold that Frank Lloyd Wright and Le Corbusier were correct in asserting the preeminent importance of the plan in architectural design, for it orders the inhabitants' experience of place.

Second, I applaud your decision to publish Blair Kamin's Critique, and am fully in agreement with his arguments for the great need today for fewer "aesthetic parlor games" and more serious evaluation of what Kamin rightly calls "the inescapable art" of architecture. Without a doubt, Temko was instrumental in stopping many gravely misguided, inappropriate, and just plain bad projects from becoming a permanent scar on San Francisco. If only every city could have a champion of common sense in architecture like Temko and Kamin.

—Robert McCarter
Gainesville, Fla.

The city that never sleeps

After reading the first few paragraphs of Suzanne Stephens's December 2006 feature, "Not Only Zaha" [page 58], I am seriously thinking about moving to New York City to be around "the hotbed of female architects." Surely, Ms. Stephens might have chosen a different metaphor.

—Michael Strogoff, AIA
Mill Valley, Calif.

Heartbreaking work of staggering travesty

I was greatly disturbed by the arrogant tone taken by architect Warren Schwartz in RECORD's December 2006 end-page, "AR Past and Present" [page 292]. In this age where architects are striving to create projects based on sustainable design predicated by minimizing our ecological footprint, here comes someone who blatantly adds to the immense volumes of garbage and waste on this Earth because his "cover-worthy" house was deemed to be "unfashionable." That is the attitude that created the mess to begin with. Recycling, upgrading, renovating—these options were either not considered or deemed unnecessary by Mr. Schwartz.

To call this act the creation of a tabula rasa is to insult the Earth. The proper term should have been gross travesty.

—Paul Backewich
Ontario

The song remains the same

Again, I opened your magazine to find another opus by that ole' surfer-dude, Frank Gehry [December 2006, Marques de Riscal Hotel, page 130]. The guy has been doing the same stuff for 20 years! Is it still newsworthy? The color of the titanium has changed but not the substance.

—James A. Gresham, FAIA
Tucson

Stooping Lowe

I read your news item entitled "Lowe's Makes Katrina Cottages available for purchase" [November 2006, page 30]. Having spent the summer in Biloxi, Mississippi, volunteering and taking a class, I have witnessed firsthand the Katrina Cottage and other redevelopment efforts and have to report that I am gravely disappointed by the Katrina Cottage itself and its mass production.

First off, the cottage does not fit on the area's typical site to allow for a family to inhabit it while rebuilding their home, which is its intent. Secondly, it reverts to architecture of the past. Its style is that of the colonial regionalism that previously existed in the area.

The people of Biloxi and other hurricane-affected areas are excited about the new, and the idea of change and rediscovering themselves. Reverting back slows down this rediscovery and the advancement of architecture.

—Jessica C. Baldwin
North Carolina State University

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Record News

Highlights

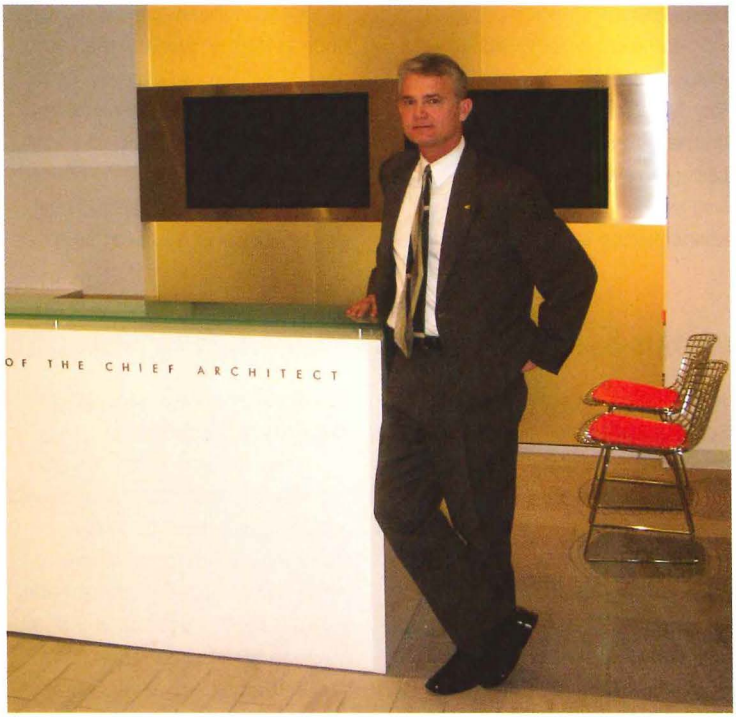
GSA's new chief architect vows to improve work environments, embrace multiple design vocabularies

In late November, the General Services Administration (GSA) named Leslie Shepherd, AIA, its new chief architect. Shepherd had been acting in the position since Edward Feiner, FAIA, retired as chief architect in January 2005. Feiner launched the Design Excellence Program and is credited with recruiting leading Modernist architects to design federal buildings. Shepherd has worked at the GSA for 18 years, most recently as director of the National Federal Buildings and Modernizations Program and deputy chief architect. He earned his B.Arch. at Texas Tech University in 1983, and ran his own firm in Albuquerque before joining the agency in 1989.

In September, The Wall Street Journal *had reported that Thomas Gordon Smith, AIA, a practitioner of Classical-style architecture, would be named chief architect, which led to speculation that the GSA was moving away from Modernist buildings. The report turned out not to be true; however, at the time of Shepherd's promotion, Smith was awarded a fellowship to provide advice and guidance to the GSA. The chief architect is influential: The GSA's current design and construction work is valued at $12 billion, and is said to be the nation's biggest landlord, owning more property than any other entity.* RECORD *caught up with Shepherd to talk about his appointment.* Tim McKeough

RCHITECTURAL RECORD: *ow has the Design Excellence rogram performed?*

eslie Shepherd: It's attracted the est architects to do our work. ctually, 18 years ago, when I went to work for the GSA, we would get maybe seven or eight submittals when we put out a solicitation. Now, it's not uncommon for us to get 50 submittals on a major project. We get submittals from the full gamut of the industry, and we really select the who's who of American architecture to do our work. It's been terrific.



AR: *That's a direct result of the Design Excellence Program?*

LS: It really is. The Design Excellence Program focuses on the lead designer. Eighteen years ago, when we'd advertise a project and select a firm, we would often get handed off to the B team or the C team. We focus on the lead designer, we select the lead designer, and we expect that lead designer to be involved from the start through the finish—and they generally are. We don't get handed off to the B team, and the Design Excellence Program has made that possible.

AR: *Where do you see the program going in the future?*

LS: Everything's going to evolve in some way. Over the last year, we focused on high-performing buildings. We've got to do a better job with energy performance. We have to deliver the projects on schedule, on budget. The bulk of our new set of peers—we just [picked] 110 new peers [for review panels]—were selected as leaders in the industry, specifically for high-performing buildings; people with sustainability backgrounds. We think that's going to inform new buildings in the future.

AR: *There were rumors that Thomas Gordon Smith, who's considered an advocate of Classical architecture, was going to be appointed chief architect, which led to speculation that the GSA is moving away from Modernist architecture. Is there truth to that?*

LS: We're looking for the program to include a full spectrum of designers, both Modernists and traditionalists. There are appropriate buildings for every place we build. Some of our newest peers are traditionalists, and we'll use those peers to select the appropriate architect for the appropriate project.

AR: *Smith was awarded a fellowship. How will he work with the agency?*

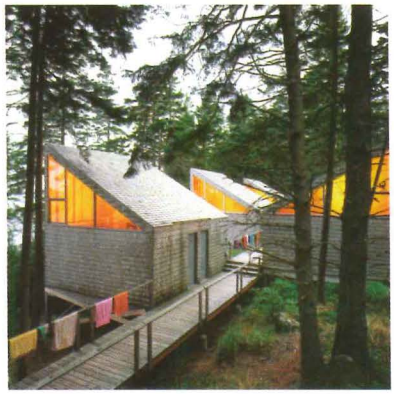
LS: He and I and Tom Grooms, the director of Design Excellence, are just working that out, but we're in the early stages of planning a symposium in the next few months to talk through those issues in a public forum. Thomas is going to be a great resource for us. It'll be great to have Thomas look over the body of work and make sure that we are doing a full spectrum, and that we have a balanced approach in the way we deliver the program.

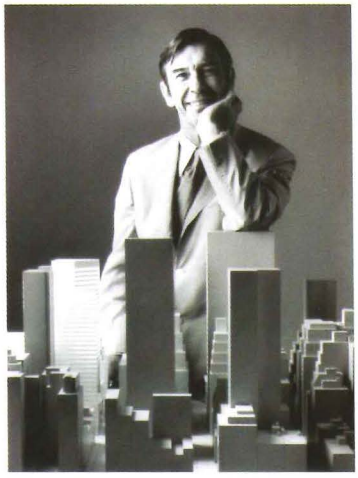
AR: *Are there other priority areas you plan to focus on?*

LS: Workplace matters, workplace environments—and that sort of goes along with sustainability. A building has to function and operate. It's not just what it looks like, but how it makes the building's occupants able to do their jobs better.

Edward Larrabee Barnes wins AIA Gold Medal

FXFowle principal Bruce Fowle, FAIA, remembers working for Edward Larrabee Barnes, the winner of the 2007 AIA Gold Medal. "We felt like we were part of a family." Barnes's nurturing traveled well beyond office walls, however, as his skillful blending of Modernism with vernacular architecture's sense of place had far-reaching impact.





Edward Larrabee Barnes (above) designed the angular, shingled buildings at Haystack Mountain School of Crafts (left) to merge Modernist and vernacular traditions.

Barnes was among the most accomplished of those American-born architects trained by Modernist emigrants. After studying with Walter Gropius at Harvard, he proceeded to give an American inflection to the rigorous geometries born in Europe. A whole generation of shed-roofed American buildings was inspired to some degree by his Haystack Mountain School of Crafts in Deer Isle, Maine, completed in 1961. That villagelike arrangement of simple buildings won the AIA's 25-Year Award in 1994, and its iconic status was reaffirmed last year with entrance into the National Register of Historic Places.

Barnes's prolific portfolio includes the Crown Center in Kansas City, Missouri; 590 Madison Avenue (formerly the IBM Building) and 599 Lexington Avenue, in New York; as well as the Walker Art Center in Minneapolis, the Dallas Museum of Art, and the Thurgood Marshall Judiciary Center, in Washington, D.C.

Just as much of his work was understated, so was the man. In describing Barnes, Henry N. Cobb, FAIA, remarked in his nomination, "With characteristically quiet determination, Edward Barnes produced a large body of distinguished built works—some of them too-little celebrated—during his more than 40 years of practice. Although Barnes was modest, perhaps to a fault, and often seemed to operate 'below the radar' of critical acclaim, his influence has nonetheless been broad and deep."

Indeed, Mark Strauss, 2006 AIA New York president, noted that the nominating committee was moved by the number of distinguished architects who felt that Barnes had a major impact on their careers. The New York, Chicago, and Kansas City chapters of the AIA all nominated Barnes.

Barnes died in 2004, at age 89. While Edward Larrabee Barnes Associates won the AIA Firm Award in 1980, this is the sixth of 63 gold medals to be awarded to an individual architect posthumously; Thomas Jefferson and Samuel Mockbee were among the other recipients. *John Kriskiewicz*

Leers Weinzapfel first woman-owned business to win AIA Architecture Firm Award

Leers Weinzapfel Associates got word of its 2007 AIA Architecture Firm Award while in the process of moving its offices from Boston's Fort Point Channel district to Chinatown. Gathered for a lunch meeting when the call came in, the staff scared up some appropriately festive beverages to toast the occasion, the first time the AIA has given the award to a woman-owned firm.

"We had already ordered our salads and pizza, so we fortified that with a little bubbly and beer," founding partner Jane Weinzapfel, FAIA, recalls.

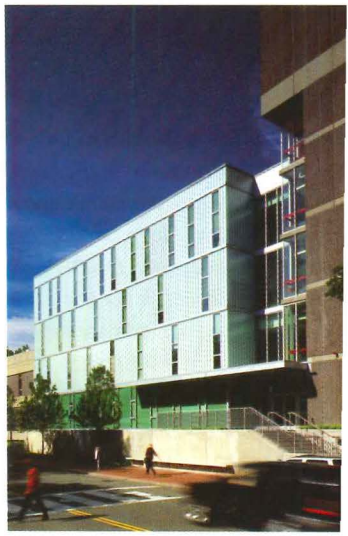
AIA jurors cited the 24-year-old firm's resourcefulness; sensitivity to client, site, and program; and its high standards of design and craft. Its careful handling of often complex and constrained urban sites also won praise. In its recent expansion of Josep Lluis Sert's 1970 Harvard Science Center, for example, the firm's designers mated glass-paneled additions to the original concrete-slab structure, taking cues from Sert's early sketches and maintaining the grid pattern of his design. And for a mid-1990s youth community center in Boston, the firm designed a gym, pool, and meeting spaces around a dilapidated hockey rink, producing an expressive, colorful building on a tight budget.

Working as Modernists in Boston's heritage-steeped, conservative environment, Leers Weinzapfel has been frank in making its case, according to the partners. Rather than cleaving to a signature style, the firm tailors its designs to each project, according to founding partner Andrea Leers, FAIA. "But the work does have a legibility of its own. It's recognizable by its attention to materials and precision and simplicity of overall form."

From the beginning, the firm has made a staple of bridges, control buildings, and other utilitarian structures, which the partners credit with honing their design and problem-solving faculties and weathering swings in the market. "We saw in it architectural interest at a time when others saw it as the business of engineers," Weinzapfel says.

And although it's "never not been a factor," Leers says the firm has managed to overcome gender barriers without too much difficulty. "There might be some occasions when [gender] would be a positive thing, and there were times when it was a hurdle."

Projects in the pipeline include a courthouse in Orlando, classrooms for the University of Connecticut, the redesign of a campus mall at the University of Maine, and the renovation of Harvard's Hasty Pudding Club. *Ted Smalley Bowen*



LWA recently completed this expansion of the Harvard Science Center.

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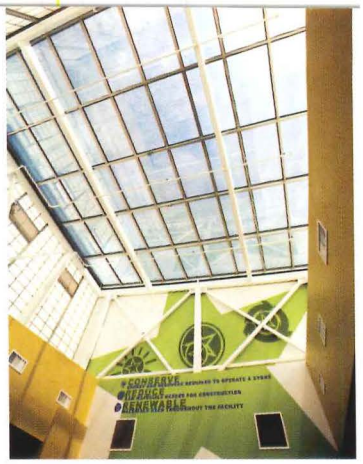
Record News

Always green building, always, Wal-Mart announces



Solar panels are among the green features at Wal-Mart's Aurora store.

Wal-Mart, the nation's largest retailer, is also the nation's largest private energy user. Each of the Bentonville, Arkansas–based discount giant's 2,074 supercenters uses an average of 1.5 million kilowatts per year; combined, that's enough to power Chile. The 3,800-store chain's annual power bill tops out at about $1 billion.

In 2005, Wal-Mart C.E.O. H. Lee Scott outlined a corporate plan to cut store energy use by 30 percent and reduce waste by 25 percent over the next three years, investing $500 million a year in sustainable innovations in new construction. Correspondingly, Wal-Mart opened two 200,000-square-foot stores in Aurora, Colorado, and McKinney, Texas, as test laboratories for these broader applications, and on November 13, the company posted the first year's data collection.

LED lighting is one technology the company will be using more widely, for example. Those lights will replace fluorescent tubes in freezer and display cases, resulting in 50 percent energy savings and longer life expectancy. Roof-mounted solar panels and wind turbines yielded less successful results, however, and require further evaluation before being used on a broad scale. The National Renewable Energy Laboratory and Oak Ridge National Laboratory will monitor the two stores for two more years to determine which items will be used in future building plans.

Regarding other potential applications, Don Moseley, Wal-Mart's special projects engineer, says, "There are high hopes for evaporative cooling, waterless urinals, composting of organic materials, and many other concepts, and each are being carefully studied, evaluated, and in some cases incorporated into additional 'test' environments in more prototypical stores." Native landscaping, waterless urinals, and electronic sensor sinks decreased water use by 85 percent at the McKinney facility, for example, although installation at standard-issue stores will likely differ.

While the testing continues, Wal-Mart will begin integrating sustainable components of its experimental stores into new stores during the first part of 2007. It's also initiating a preference program for its 60,000 suppliers to set their own environmental goals. *Tony Illia*

In response to densification, L.A. sprouts news parks

Hargreaves Associates' winning design for The Cornfield state park proposes access via four bridges and wetlands connecting to the Los Angeles River.

On November 17, the California State Department of Parks and Recreation announced that it had chosen a team led by San Francisco-based Hargreaves Associates, with Michael Maltzan Architecture, to design the first state park in Los Angeles. The winning team was selected from 33 entries in an intense, eight-month design competition that was narrowed down to three finalists including New York's Field Operations and the Los Angeles landscape architecture firm Mia Lehrer + Associates.

The Hargreaves plan for the 32-acre site, a former rail yard near downtown known as The Cornfield, includes a 15-acre lawn, fountain-filled plaza, and wetlands with gardens that connect to the adjacent Los Angeles River.

The Cornfield park is just one of several open green space plans under way in greater L.A. Less than two weeks prior to The Cornfield announcement, the Hollywood Chamber of Commerce publicized that a feasibility study was under way for a park over the Hollywood Freeway; the 24-acre swath of green would require a half-mile section of the road to be tunneled. And in 2005, a consulting team lead by Tetra Tech was chosen to create a master plan for a 32-mile stretch of the L.A. River that identifies park areas and wildlife habitats, as well as alternative transportation options such as bike and walking paths.

Open space isn't the only change in L.A.'s urban landscape: The city is experiencing major shift from suburban sprawl to urban densification. Downtown alone there are currently more than 10,000 new housing units under construction. Projects range from affordable housing developments in the historic core to swanky mixed-use towers with rooftop gardens and pools. But as these developments replace the predominant single-family house—or attract refugees from the suburban outer rings—a whole range of citizens find themselves without places to play, meet, or relax.

"A lot of the motivation to create open green space is about addressing ecological issues and longstanding inequalities," says Alan Loomis, principal urban designer of the City of Glendale, in L.A. County. "The growth issue has made people who weren't impacted by lack of park space now recognize the inadequacies."

A 2000 study by the Urban Land Institute revealed that the L.A. metropolitan area provides the lowest ratio of park space to total acreage of any West Coast city, and its per-capita park space is significantly below the national average.

But Loomis believes that the 21st-century city is ready to improve on that. "The most interesting discussions about the city and planning have been about open space and transportation," he says. "And there has been a real public response." *Allison Milionis*

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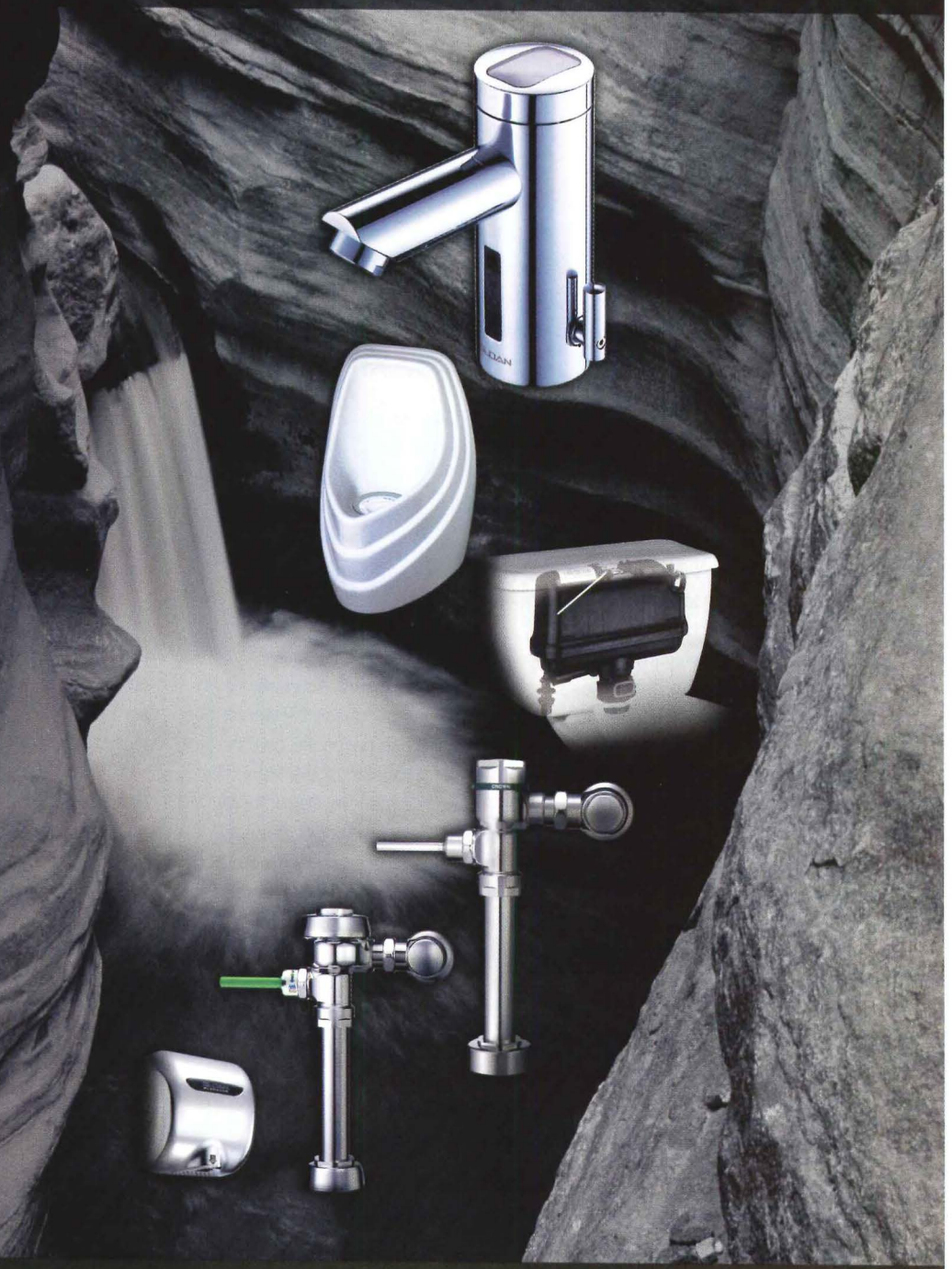

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St. Petersburg dispatch: As Gazprom's realization appears certain, Russians rail against modern monuments

RMJM's design for a new Gazprom headquarters beat out entries from Herzog & de Meuron, Koolhaas, Nouvel, Fuksas, and Libeskind.

The last time officials in St. Petersburg, Russia, tried erecting a high-rise near the historic city center, their effort was derailed by a public outcry joined by the likes of Prince Charles and Russian intellectual Dmitry Likhachev. While the Peter the Great Tower will never see the light of day, the decision by Gazprom, Russia's state-owned natural gas monopoly, to construct iconic new headquarters in St. Petersburg seems all but inevitable. And it has left the concerned citizenry reeling.

A concept design competition for the Gazprom skyscraper, which solicited entries from six major international firms, concluded on December 1. The winning scheme for a twisting, 396-meter (1,300-foot) glass tower by U.K.-based architecture firm RMJM has already drawn public protests and forced Norman Foster, Rafael Viñoly, and Kisho Kurokawa to resign from the competition jury, leaving only Russian architects and officials to arbitrate the contest.

The tower threatens to capsize the city's horizontally laid out skyline, opponents say. But as the most recent of four high-profile projects that promise to change St. Petersburg's complexion, Gazprom is just another flashpoint in a much wider debate.

What is emerging is a full-blown identity crisis. St. Petersburg, created by a decree from Peter the Great in the early 18th century, is still largely dominated by Baroque and Classicist structures. The city was spared a drastic overhaul when the Bolsheviks moved the country's capital to Moscow in 1918, and again in the late 1930s when construction of an administrative center was shifted to the city's southern periphery.

Recent years, however, have marked a new phase of intervention, symbolized in particular by a controversial expansion of the Mariinsky Theater. Dominique Perrault won the 2003 international competition thanks to a proposal to drape the interior with a golden-hued metallic exoskeleton unlike anything the city has ever seen. Three years later, speculations about the building's future are as intense as ever.

The pace of activity escalated in 2006. First, Foster + Partners was awarded the redevelopment of the man-made island New Holland into a mixed-use complex of commercial, residential, and entertainment venues. In September, Kurokawa's design was chosen for a new soccer stadium, also backed by Gazprom, to rise atop a craterlike Soviet arena that is a protected federal monument and a landmark of Stalinist architecture. Then came the decision on the Gazprom high-rise, to be built on a site across the Neva River from the Smolny Cathedral, a resplendent 18th-century Baroque compound designed by Bartolomeo Rastrelli. The proposed buildings are positioned to shadow or supplant some of the city's famed, albeit neglected landmarks.

With the conclusion of the Gazprom competition, prominent figures like State Hermitage Museum director Mikhail Piotrovsky joined the chorus accusing the city of endangering its past. UNESCO World Heritage Center has sent an official query to Russian authorities, expressing concern that the project could undermine St. Petersburg's listing as a world heritage site.

Not a single prominent design by a foreign architect has been realized until now, although the planned projects in St. Petersburg have mustered the city's overt support as well as guaranteed financial backing from developers.

Gazprom's political muscle sets it apart from even the most commanding clients. As the world's fourth-largest company, Gazprom's officials have spoken of the new headquarters both as an emblem of corporate might and a landmark for St. Petersburg.

The winning competition entry has so far been presented more as a conceptual framework, and will likely undergo some revisions in the months ahead. RMJM's proposal for a Gazprom headquarters ostensibly pays tribute to the spires that punctuate St. Petersburg's skyline. Rising from a pentagon-shaped footprint, the structure spins and tapers towards the top where it culminates in a glass needle. But this form will be defiantly scaled, measuring three times the height of Smolny Cathedral. The designers also have offered to wrap the tower with a glass skin that will change color as many as 10 times a day.

The company has turned down appeals to position its headquarters on the city's fringe, which, in addition to being economically depressed, is less stringently regulated than the city center, where zoning limits height to 48 meters (157.5 feet). The 77-story tower will cost around $2 billion, with an estimated completion date of 2010. The building will anchor a plan for a sprawling Gazprom City business district around it.

The skyscraper competition ruffled many feathers, but short of an outright ban on high-rise construction, St. Petersburg may well consider it a timely effort to explore the potential of a cutting-edge modern edifice in the existing built environment. For residents, however, the winning entry will likely exacerbate pained soul-searching about their city's architectural future. *Paul Abelsky*

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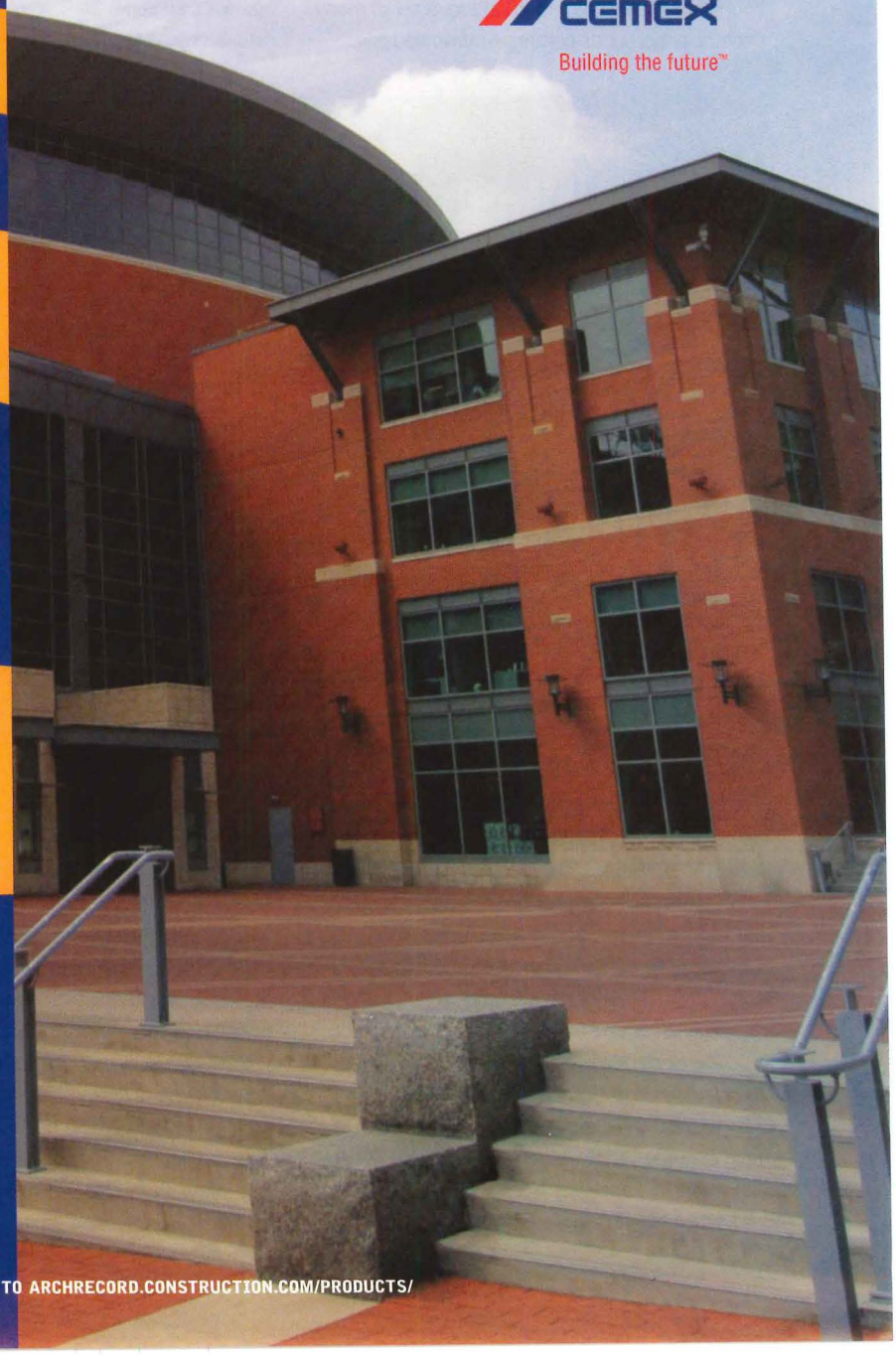
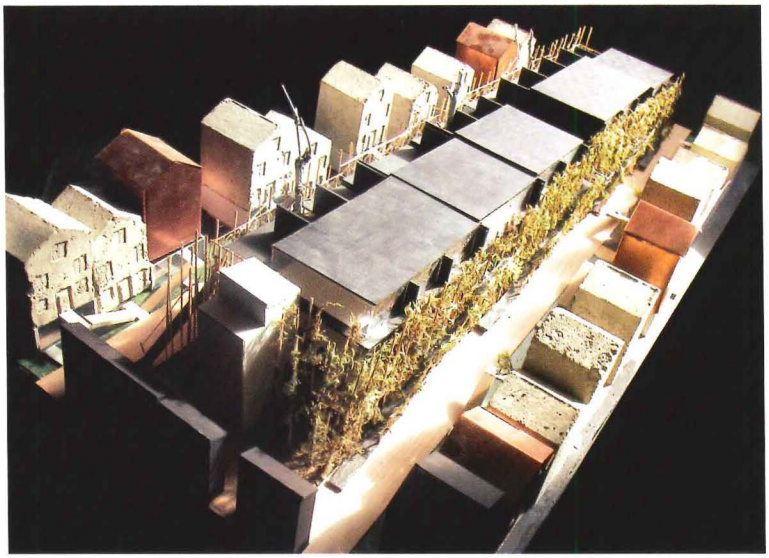


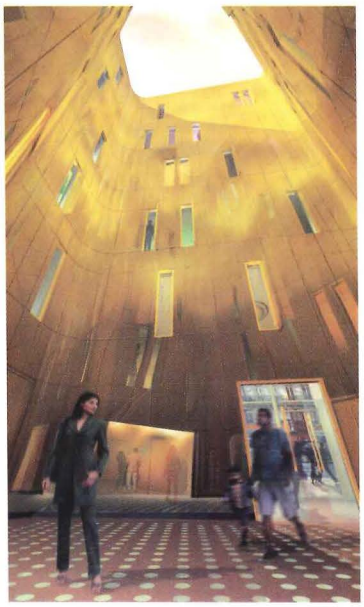
In wake of Paris riots, public housing authority builds more, and better, projects to stem disaffection

If last year's Paris riots were horrific, they weren't surprising. The *banlieue*—suburbs like St. Denis, Poissy, and Clichy-sous-Bois—are pockets of concentrated immigrant poverty and block-style buildings long regarded as tinderboxes for trouble.

Paris has begun building more affordable housing within its borders to reduce the social isolation of those outside. While offering public-housing tenants an alternative to the *banlieue*, the move addresses the city's own growing squatter population, which suffered from a slew of fires in the outer rings at the end of the summer. Whereas about 80 percent of lodgings in some peripheral neighborhoods are public, no more than a quarter of many Paris neighborhoods comprise public housing.

The tripartite Batignoles Planchées scheme by Edouard François (right); gold-colored aluminum panels in 38 Boulevard Henri IV by Guillaume Neuhaus and Laurent Niget (below right); and Lacaton + Vassal's reimagining of the Tour Bois le Prêtre (below), all commissioned by OPAC.





Almost all of Paris's social housing authorities have revamped their building strategies over the past five years. The shift dates to the inauguration of Mayor Bertrand Delanöe, a socialist and a design advocate who, with others, knew the *banlieue* was an issue long before the riots. The Office Public Patrimoine Construction Réhabilitation Aménagement Politique, or OPAC, is the largest of these agencies and offers a good case study. Whereas about 1,500 new apartments were built per year prior to the new system, that number is now about 4,000, says Helen Schwoerer, OPAC's head of public housing architecture. Two-thirds of OPAC's work is renovation and expansion, and the rest is new construction.

The city's new focus on social housing has also distributed projects over a larger area. Officials from OPAC and other agencies are working to ensure that all quarters contain 20 percent public housing, and they have announced that new buildings in wealthier quarters must include at least 25 percent affordable housing.

The city is also building better social architecture, aiming to reverse social housing's negative stigma, Schwoerer says. OPAC has added more architects to competition juries (competitions are mandatory for all public projects in France) and has begun casting a much wider net to find talent. Whereas the same firms used to build most of the city's public housing projects, now the list includes innovative, international, and young firms, such as Lacaton + Vassal, Francis Soler, Edouard François and Roland Castro. Many jump at the chance to build projects in the historic heart of the city, where new projects are almost impossible to come by.

Not all projects are stellar, but the overall results are impressive. Instead of towering blank walls framing empty courtyards, fairly low-budget projects are often animated by creative plans, forms, and materials.

An OPAC housing project being built inside a 19th-century school on Boulevard Henri IV in the historic 4th arrondissement is a good example. Architects Guillaume Neuhaus and Laurent Niget will maintain the building's landmark exterior, but they will transform the interiors in almost every way: The interior courtyard will be reinstalled and clad completely in gold-colored aluminum panels, a reference to period gilt interiors. Once-cramped apartments will be rebuilt and enlarged with lofty ceiling heights to accommodate large families. Larger windows will allow more light and improve ventilation.

A project by local architect Edouard François in the 20th arrondissement, called Batignoles Planchées, emulates its old neighborhood's livery model. It will be divided into three long volumes separated by narrow pedestrian alleyways. The outer buildings will comprise a series of attached houses of varying heights and materials, including terra-cotta, brick, concrete, and zinc, that evoke the variety of a tiny village. The project's inner section will include a concrete communal building surrounded by vegetation, with wooden stairways and balconies culminating in a roof garden. François persuaded officials to support the concept, which is radical for the city, where strict

n Massena, Beckmann-N'Thepe is designing an unusual concrete tower for a non-OPAC agency.

rules usually prohibit rural styles in the urban grid. "We should never be afraid to test the officials," he says. Indeed, François is known in Paris as an architectural renegade: In 2004, he completed the social housing Flower Tower, in which extruded concrete floor slabs sprout 380 tall bamboo plants from massive concrete pots.

In 2005, Lacaton + Vassal and architect Frédéric Druot beat out competitors Dominique Perrault, Roland Castro, and others to reshape the Tour Bois le Prêtre, a 17-story housing tower on the city's northern edge designed by architect Raymond Lopez in 1957. The team will cut away most of the thick concrete facade's partitions, installing balconies and large sliding windows in their place. Besides opening the apartments to more natural light, the units are being significantly enlarged and opened, and the firm will install new heating, ventilation, and electric systems.

OPAC and other agencies are not exactly architectural trailblazers, but they are certainly improving. Meanwhile, in the *banlieue*, the situation is more dire. Small, mostly poor towns do not benefit from the financial and management advantages of Paris. Although places like Bois-Colombes, Villeneuve-la-Garenne, and Clamart have all rebuilt their town centers, most point out that for greater things to happen here, the best hope is the implementation of a much-talked-about "Grand Paris," in which the city takes over its outer periphery. Until then, observers hope that improving social housing inside the city will have off a sense of alienation and resentment. But only time will tell. *Sam Lubell*

For more about this subject, log on to our Web site, archrecord.construction.com.)

Remembering Peter Blake, 1920–2006

Peter Blake, who died on December 5 at the age of 86, influenced the course of modern architecture in so many ways that it's hard to sort them out. For more than half a century, he applied his nimble intelligence to the field through overlapping roles as architect, magazine editor, museum curator, educator, columnist, and author of some books that have never ceased to sell.

A compact man, Blake was a coil of energy. He talked briskly, almost impatiently, and moved about abruptly. He was the archetypal multitasker—simultaneously writing, editing, networking, dealing with clients, and planning his next professional coup.

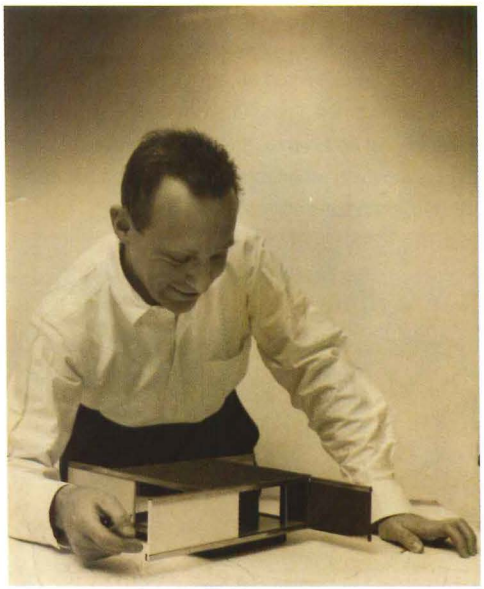
Blake was one of the numerous émigrés from Hitler's Europe whose impact on the world of architecture and America's place in it was immense. He was born Peter Blach in 1920 in Berlin to an affluent Jewish family that scattered to other countries with Nazism's rise. He attended a Quaker School in England, and began to study architecture in London before joining the rest of his family in the U.S. and enrolling at the University of Pennsylvania in 1941. It wasn't until 1949 that he received his B.Arch. from the Pratt Institute in New York. In 1944, he simultaneously became an American citizen, joined the U.S. Army, and changed his name to Blake.

From 1948 to 1950, Blake served as curator of architecture and industrial design at the Museum of Modern Art. In 1950, he moved on to the staff of *Architectural Forum*, becoming chief editor in 1960. In 1965, Time Inc. transferred the magazine to the nonprofit Urban America.

It was not easy to get past Blake's characteristic reserve. He would never take part in a face-to-face disagreement, but would discover he had to make an urgent phone call. And yet Blake had developed a remarkably keen sense of how to connect to readers. He chose appealing subjects and knew how to make what really mattered appealing to them. He insisted on accessible writing, despising professional jargon; "parti" could never appear in the *Forum*.

When *Forum* seemed headed for extinction in 1972, Blake drummed up financial backing to launch *Architecture Plus*, a magazine with broader arts coverage, and which lasted three years. He then wrote columns for *New York* during the 1970s and for *Interiors* until 1995.

Blake's books encapsulate his flair for compelling subjects and memorable titles. *The Master Builders: Le Corbusier, Mies van der*



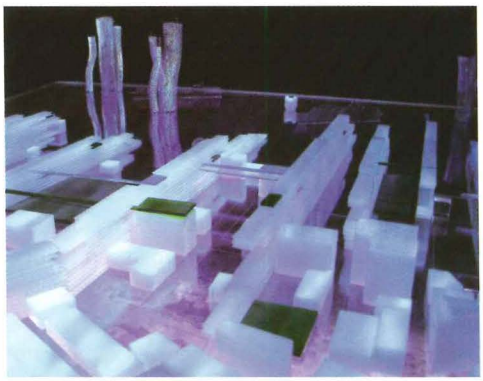
Rohe, Frank Lloyd Wright has been reissued repeatedly for generations of readers. *God's Own Junkyard: The Planned Deterioration of America's Landscape* was an acerbic companion to the other environmental protests of its time. *Form Follows Fiasco: Why Modern Architecture Hasn't Worked* joined a parade of failure-of-Modernism tracts, but pleaded for the Modernism movement to retrieve its original ideals. *No Place Like Utopia: Modern Architecture and the Company We Kept*, written in 1993, was his professional memoir.

For decades, Blake maintained an architectural practice, which produced about 50 modestly scaled works, most with a succession of partners. Perhaps the best expressions of his no-nonsense Modernism were the two houses he built in the Hamptons for himself and his family: the ingenious 24-foot-square Pinwheel House of 1953 and the elegant, slightly larger Blake House of 1960.

His skills as curator and designer were combined in several exhibitions, including Berlin's *Amerika Baut*, in 1957, and an exhibition of U.S. architecture in Moscow for the U.S. State Department, in 1959.

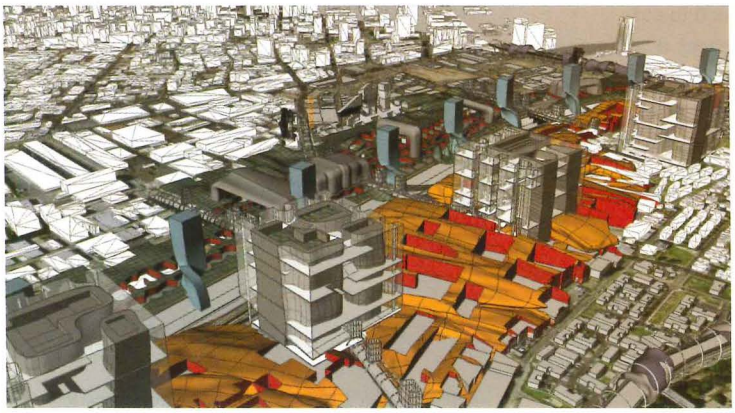
After *Architecture Plus* closed in 1975, Blake assumed prominent positions in education, chairing architecture departments at the Boston Architecture Center (1975–79) and Catholic University in Washington (1979–86). He continued to teach at Catholic until 1991, then taught for another decade at Washington University, St. Louis, and at the New School in New York. *John Morris Dixon, FAIA*

Record News



In contest, architects envision cities 100 years out

This fall, in a thought-provoking publicity stunt, The History Channel invited an array of U.S. architects to make no small plans. To promote the series *Engineering an Empire*, the network hosted three events in which architects competed against each other to propose a "city of the future."



The "vanes" that punctuate Architecture Research Office's water-logged version of Manhattan (above). Eric Owen Moss transforms L.A. infrastructure into construction zones (left). An UrbanLab-designed Eco-Boulevard shuttles pedestrians and recycles storm water (below).

New York, Chicago, and Los Angeles served as case studies for the designers. A shortlist of competitors was given just one week to conjure up a vision of their subject city 100 years from now, and realize it in renderings, models, and explanatory text. The city challenges began in late October when 10 New York teams were selected for the marathon charrette, which culminated in presentations at Grand Central Terminal; the first-round exercises ended December 12 with the L.A. contest. Each of the three winners was awarded $10,000, and the trio are now up for a national honor that would double the purse.

Anxiety over global warming informed most of the New York entries, yielding several schemes for artificial archipelagoes. The winning entry from Architecture Research Office also presumed a need for radical coping mechanisms: In its luminescent model of a 22nd-century Big Soggy Apple, a new building type, called a "vane," replaces the capacity lost from streets flooded by rising seas.

The famous phrase "Water, water, everywhere" inspired Chicago's representative, if to very different ends. UrbanLab's project, "Growing Water," grapples with increasing demand for ever-dwindling supplies of fresh water. A series of "Eco-Boulevards" would treat waste and storm water using natural filters, such as micro-organisms and fish, ultimately closing the city's water loop. The plan seems entirely possible but for some amazing feats of eminent domain, in part because the city counts several massive park and water-engineering projects as precedents.

While melting glaciers threaten to inundate Los Angeles, too, Eric Owen Moss Architects' winning submission looked at the future through a social lens. Calling the city's infrastructure racially and economically divisive, Moss unveiled a plan to "build over, under, around, and through the freeways, rivers, power grids, and tracks, to use the existing rights of way as the foundations for new, innovative construction."

National voting takes place online from January 2 to February 2 at www.history.com/designchallenge. To aid Web surfers in evaluating the three finalists, the site will include commentary from architect Daniel Libeskind, FAIA, the national juror. The victor will be announced in mid-February. *David Sokol*

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What outside forces significantly affect the design aesthetics or practice philosophies of emerging firms? For assembledge+, it's location. These architects love the Southern California climate and lifestyle, and their design reflects it. For Christian Wassmann, it's people. Spending years working and watching architects he respects has turned him into a solo practitioner with influential mentors. Join our new forum and tell us what inspires you at archrecord.construction.com/archrecord2/.

Design

assembledge+: To live and design in L.A.

For David Thompson and Kevin Southerland, principals of Los Angeles-based firm assembledge+, early influences have had a direct impact on the direction their nine-year-old, six-person firm is taking. Thompson, whose father is an architect, was raised in the heart of Hollywood, and Southerland grew up in suburban Southern California just as the sprawling valley was under development. Both took architecture/model-making classes in their public high schools (lets hear it for California schools!), and have traveled enough to realize just what a stimulating place they are lucky enough to call home.

Thompson began his career working with prominent L.A. firms such as Lorcan O'Herlihy Architects and Syndesis, and Southerland worked for Frank O. Gehry Architects, Neil Denari Architects, Gensler, and then also O'Herlihy. Inspired by entrepreneurs like David Hertz, principal of Syndesis, Thompson began building furniture. "I thought furniture would be my calling," he says, "but it led me to start assembledge+ and move to New York City for three years before coming back to L.A." O'Herlihy's firm was growing rapidly, and he asked Thompson to work for him on a contract basis. Thompson credits O'Herlihy's generous business practices for giving assembledge+ momentum, and when he and Southerland decided they wanted to take the firm a step further, and off the beaten track, by going into development, they had O'Herlihy's blessing. "Development seemed a natural evolution of our interests." says Southerland. "David and I are so intrigued by the potential of buildings and neighborhoods. We thought if we could develop and design the spaces, we could really differentiate our firm from other practices."

They were right. While other emerging firms rely on additions and renovations, and spend time submitting for competitions, assembledge+ takes another tack. "I'd rather buy a piece of dirt and make something happen with it than spend time pursuing competitions," says Southerland. "More than anything in the world,

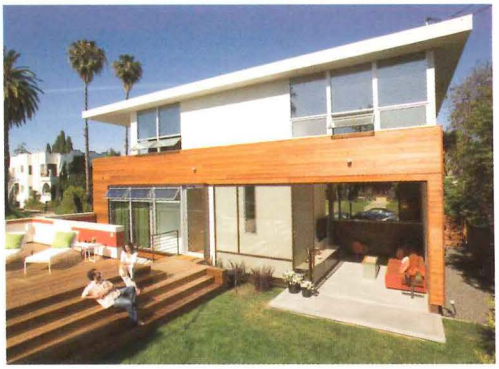
Gramercy 7 Lofts, Los Angeles, 2008
This seven-unit loft condominium has open-plan lofts with 16-foot ceilings. Located in an eclectic L.A. neighborhood, each unit has a private roof deck.

Office 8476, Downey, Calif., 2008
Located on a major suburban thoroughfare, this real estate office will be set on a thin concrete plinth 18-inches above the site.

I want to build stuff." Thompson agrees. "We always come back to the way materials are put together," he says. And they're committed to putting them together with a conscience. Southerland, who headed the sustainability design committee at Gensler, says assembledge+ prescribes to what he calls "subversive sustainable design," explaining, "If a client needs to choose from five carpet tiles, show them five that are made from recycled materials."

And while sustainable principles are just part of the everyday at assembledge+, so is a love of the urban fabric of L.A. The team's Gramercy 7 Lofts, a seven-unit condominium that broke ground in late 2006, promises to demonstrate their Modernist aesthetic, reveal their love of craft, and help to bring much-needed mid-density housing to its neighborhood. Not least, each unit will have a private roof deck with 360-degree views. "This lifestyle and climate informs a huge part of our design process," says Thompson. "Walls of glass, blurring of indoors and out, views of the sky and surrounding landscapes—we are so psyched to get up in the morning knowing we get to do this kind of work." ***Ingrid Spencer***

Sunset Plaza Residence, Los Angeles, 2007
Above the Sunset Strip, this 5,000-square-foot house opens up to the landscape. Simple forms and a warm material palette evoke a clean, Modernist aesthetic.



Ridgewood House, Los Angeles, 2006
This 2,400-square-foot home is designed for indoor/outdoor living, with a porch, decks, open planned living areas, and floor-to-ceiling glass windows and doors.

For more photos and projects by assembledge+, visit archrecord.construction.com/archrecord2/.

Work

Mentors and guts keep a young architect flying solo

Christian Wassmann is wondering whether or not to sign a new lease. In Manhattan, with its breathtaking rents, this is no small decision. While getting the extra office space would give him more room (Wassmann and his project-basis employees are used to working in an office carved out of his apartment), it could also force him to take on some work he'd otherwise have the luxury of passing up. If this is the first growing pain for a young architect who has seamlessly transitioned from project architect for Steven Holl to principal of his own practice, it's not so bad. Only 32 years old, Wassmann has a pedigree that explains his success. After moving to the United States from Switzerland, he began working for Steven Holl because Holl was (and still is) his favorite architect. He has also worked on side projects with another master of American design, artist Robert Wilson, for 10 years.

It seems that the mentorship Holl and Wilson have provided—from their influential aesthetics to their willingness to work with Wassmann outside of a standard full-time position—has made all the difference in his career. About leaving Holl's firm, Wassmann says, "He understood [my decision to leave his office], and encourages me to this day." While Wassmann left the firm in May 2005, he continued freelancing with Holl to finish a hotel in Austria, then the following winter he co-taught an architecture class with him at Columbia University.

This sort of support lessened the anxiety when Wassmann left Holl's firm without projects in hand. He quickly picked up a diverse group of projects, including a renovation of a radio station and several exhibition designs for the Vitra showroom in Manhattan. While Wassmann relishes the brief time it takes to produce exhibitions ("they're like architectural one-night stands"), he has a number of longer-term projects on the boards, including a renovation of a 1930s house in Miami, Florida. Much like his other mentor, Wilson, whose work has touched nearly every art form, Wassmann says he wants "to continue to do everything from books to exhibition design to writing and teaching, building houses, furniture, theatrical productions, film, and art projects—the full scale of design."

Wassmann (left, in white shirt, and above, at right), Robert Wilson (left, at far right, and above, at left), and the team planning the Noguchi exhibition in 1999 at the Watermill Center on Long Island.

Wassmann's strategy for accomplishing his work has already been fruitful, which may explain his hesitation to opt for the new office and the changes it might bring. He still sometimes attends pin-ups at Holl's office because they can be stimulating, but now that he is no longer part of the structured life of an office, he prefers his own less-orthodox method of getting his work done. "The best ideas," he says, "come late at night dancing and are then sketched on a piece of paper." ***Diana Lind***

For more information on Christian Wassmann and his work, visit archrecord.construction.com/archrecord2/.

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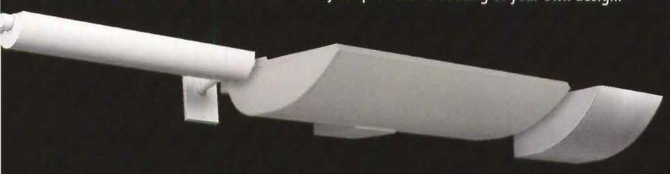

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A treasury of words for architects to ponder

Critique

By Robert Campbell, FAIA

Some people collect stamps, some postcards. An architect friend collects snow globes, those glass spheres you turn upside down to drop a frosty deluge on the scene inside. Another collects tiny models of famous buildings, the ones you find in tourist shops. The late Charles Moore collected almost everything.

I collect quotations. For this month's Critique, I've made a little anthology of some of them. A few are famous, most are not. In one way or another, they're all about architecture.

I'll begin with the nicest thing ever said by a client to an architect:

You did well, Bernardo, in lying to us about the expense involved in the work. If you had told the truth, you could never have induced us to spend so much money, and neither this splendid palace nor this church, the finest in all Italy, would now be standing. Your deceit has built these glorious structures, which are praised by all except the few who are consumed by envy. We thank you and think you deserve especial honor among all the architects of our time.—*Pope Pius II to Bernardo Gambarelli, the architect of the pope's buildings in Pienza*

Okay, that one should put you in a good mood. Here are the rest. They're in no particular order:

In Nebraska, chemicals and irrigation deplete and poison the aquifer in order to create surplus crops which the government subsidizes. —*Richard Jackson*

Taste is the death of art.—*Walter Sickert*

Art is what nature is not.—*Pablo Picasso*

An expert is a person who avoids the small errors as he sweeps on to the grand fallacy.—*Benjamin Stolberg*

All traveling becomes dull in exact proportion to its rapidity.—*John Ruskin*

Humanity is permanently threatened by two dangers: order and disorder. —*Paul Valery*

We have sold our urban birthright for a sorry mess of motorcars. —*Lewis Mumford*

Every time a student walks past a really urgent, expressive piece of architecture that belongs to his college, it can help reassure him that he does have that mind, does have that soul.—*Louis Kahn*

When the materials are all prepared and ready, the architects shall appear. I swear to you the architects shall appear without fail … —*Walt Whitman*

Contributing editor Robert Campbell, FAIA, is the Pulitzer Prize–winning architecture critic of The Boston Globe.

Pope Pius II (1405–64; dates on print above are incorrect) transformed his home village of Corsignano, in Tuscany, into the ideal Renaissance town of Pienza with a series of buildings designed by Bernardo Gambarelli, known as Rossellino.

Rome reminds me of a man who lives by exhibiting to travelers his grandmother's corpse.—*James Joyce*

Architects are cannibals if they are not parrots.—*Hugh Casson.*

Inherent in the concept of home is the concept of wandering. —*Martin Heidegger*

Building certainly ought to have the Attribute of eternal, and therefore the only thing uncapable of new Fashions.—*Christopher Wren*

The familiar is what guides us to invention…. It is a great pity that students are always asked to "invent" by staring at a blank piece of paper. Invention exists only in the context of the familiar, and schools should teach such bread-and-butter buildings of familiar life.—*Demetri Porphyrios*

[Design should be] modest and not too grandiose in scale, not too logical in form; a reasonable compromise between beauty and utility, neither overstressing beauty until it degenerates into ornament, nor overstressing utility until it becomes bare and hard.—*Frank Pick*

Critique

The Work of art is so frightened of the world at large, it so needs isolation in order to exist, that any conceivable means of protection will suffice. It frames itself, withdraws under glass, barricades itself behind a bullet-proof surface, surrounds itself with a protective cordon, with instruments showing the room humidity, for even the slightest cold would be fatal.—*Daniel Buren*

What, then, are the requisites of an attractive neighborhood besides good neighbors, and such institutions as are tolerably sure to be established among good neighbors? The most important, I believe, will be found in all cases to be that of good out-goings from the private grounds, whether with reference to social visiting, or merely to the pleasure and healthfulness of occasional changes of scene, and more extended free movement than it is convenient to maintain the means of exercising, within private grounds.
—*Frederick Law Olmsted*

THE NEED FOR THE SUPERFLUOUS IS AS OLD AS MANKIND ... BEFORE MAN BUILT HUTS FOR HIMSELF, HE PAINTED CAVES.

Architecture can only be sustained today as a critical practice if it assumes an arrière-garde position, that is to say, one which distinguishes itself equally from the Enlightenment myth of progress and from a reactionary, unrealistic impulse to return to the architectectonic forms of the pre-industrial past. A critical arrière-garde has to remove itself from both the optimization of advanced technology and the ever-present tendency to regress into nostalgic historicism or the glibly decorative. It is my contention that only an arrière-garde has the capacity to cultivate a resistant, identity-giving culture while at the same time having discreet recourse to universal technique.—*Kenneth Frampton*

Design is, in essence, giving form to values.—*Reuben Rainey*

The madman is the man who has lost everything except his reason.
—*G.K. Chesterton*

But taking the chance of making a complete fool of himself—and, sometimes, doing so—is the first demand that is made upon any real critic ... "Principles" or "standards" of excellence are either specifically harmful or generally useless; the critic has nothing to go by except his experience as a human being and a reader.—*Randall Jarrell*

Experiment escorts us last—
His pungent company
Will not allow an Axiom
An Opportunity—*Emily Dickinson*

I never saw a building addition I didn't like.—*Rafael Moneo*

Men are free when they are in a living homeland, not when they are straying and breaking free ... Men are free when they belong to a living, organic, believing community, active in fulfilling some unfulfilled, perhaps unrealized purpose.—*D.H. Lawrence*

Appearances are never deceiving.—*Paul Klee*

Rhetoric is the will trying to do the work of the imagination.
—*William Butler Yeats*

A true artist is born with a unique voice and cannot copy; so he has only to copy to prove his originality.—*Raymond Radiquet*

The well-rooted house likes to have a branch that is sensitive to the wind, or an attic that can hear the rustle of leaves.—*Gaston Bachelard*

Architecture cannot progress by the fits and starts that a succession of revolutionary ideas involves. Nor, if it exists perpetually in a state of revolution, will it achieve any kind of public following, since public interest thrives on a capacity to admire what is already familiar and a need to label and classify.
—*J.M. Richards*

I cannot know anything at all unless I symbolize it. We can only conceive being, sidle up to it by laying something else alongside. We approach the thing not directly but by pairing, by apposing symbol and things.
—*Walker Percy*

Heaven is not built of country seats
But little queer suburban streets.—*Christopher Morley*

A conference is a gathering of important people who singly can do nothing, but together can decide that nothing can be done.—*Fred Allen*

The implication in a Miesian object is of domination by the maker over the eyes of those who passively appreciate his or her creations, whereas a more uncertain object should invoke reciprocal intervention.—*Richard Sennett*

One should forgive one's enemies, but not before they are hanged.
—*Heinrich Heine*

"Sentimental" refers to a later recreation of an earlier mode.—*Northrop Frye*

Without the site, without a singular, unique site, architecture doesn't exist ... The site is always expectant, awaiting the arrival of an event that will allow it to play an active role in world history ... As such the site is an expectant reality, always awaiting the event of construction, through which its otherwise hidden attributes will appear.—*Rafael Moneo*

[In a city] there must be regularity and fantasy, relationships and oppositions, and casual, unexpected elements that vary the scene; great order in the details, confusion, uproar, and tumult in the whole.—*Abbe Laugier*

Architecture is landscape in drag.—*Antoine Predock*

If you look at a building and the windows are the right size, it may or may not be architecture. But if the windows are definitely too big or too small, you may be almost certain you are in the presence of a work of architecture.
—*Gilbert Scott*

The need for the superfluous is as old as mankind ... Before man built huts for himself, he painted caves.—*Josep Lluis Sert*

Never let greed for glory impel you to embark rashly on anything that is unusual or without precedent.—*Leon Battista Alberti*

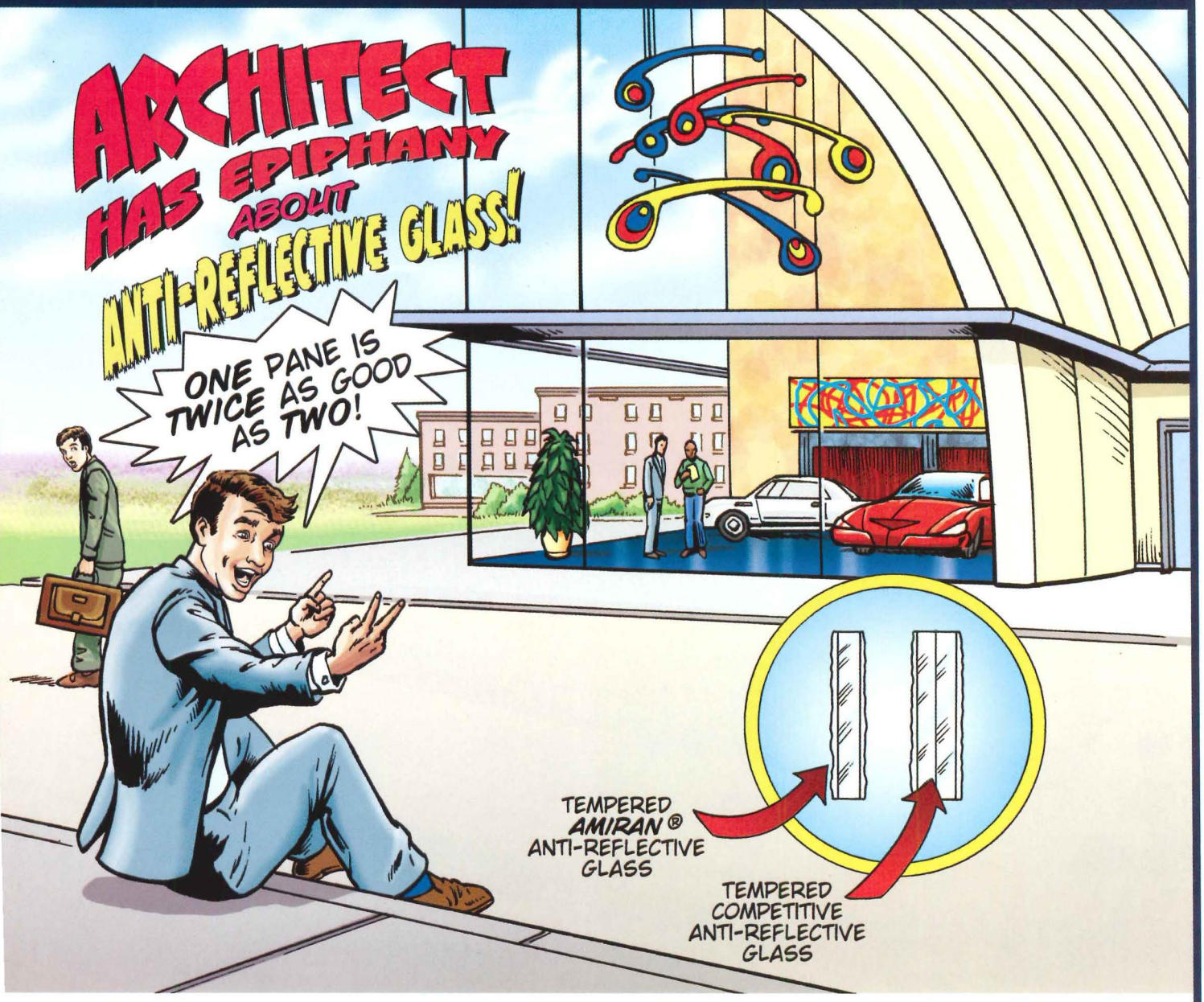
While a poet or a painter can forget about their age and be great in the solitude of their study and studio, an architect cannot exist in opposition to society.—*Nikolaus Pevsner*

Every version of historicism expresses the feeling of being swept into the future by irresistible forces ... Historicism claims that nothing is of greater moment than the emergence of a really new period.—*Karl Popper*

Play needs firm limits, then free movement within these limits. Without firm limits there is no play.—*Eric Ericson*

We can say that architecture always contains a human error, and in a deeper view, it is necessary; without it the richness of life and its positive qualities cannot be expressed.—*Alvar Aalto*

Architecture is not only about domesticating space.... It is also a deep defense against the terror of time.—*Karsten Harries* ■



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Looking East: The buildings and cities of Asia grab the spotlight

Books

New Architecture in China,
by Bernard Chan. New York: Merrell Publishers, 2005, 240 pages, $50.

Mainland China has become a playground for architects from around the world. Bernard Chan, who studied at the Architectural Association in London and lectured at the University of Hong Kong, offers a broad look at the awakening giant's new buildings and projects in this handsome survey.

After a general introduction, Chan looks at more than 100 projects, both schemes on the boards and recently completed buildings. Dividing work according to building type—culture, leisure, and sport facilities; convention centers and transportation structures; houses and housing; schools, colleges, and libraries; and offices and shops—Chan devotes a single spread to each project, be it good or bad, and covers a wide swath of new, mostly Western, often bombastic architecture. He includes many "flagship" buildings that have been publicized around the world, such as OMA/Rem Koolhaas's CCTV headquarters, Herzog and de Meuron's Olympic Stadium, and Paul Andreu's National Opera House, all in Beijing, and the first two phases of Wood & Zapata's Xintiandi complex in Shanghai. Page after page shows works of awesome scale: vast convention centers, huge stadiums and sporting facilities, and giant mixed-use towers.

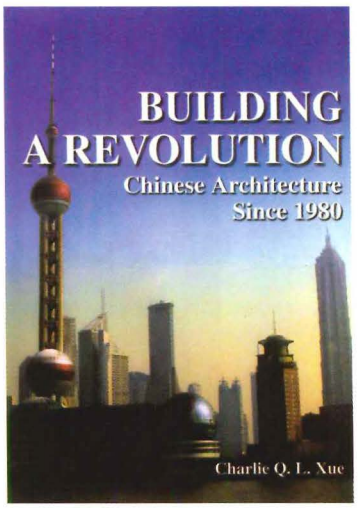
Alongside colossal works by Western architects is a smattering of projects by Chinese designers, such as Qingyun Ma's firm MADA s.p.a.m., Yung Ho Chang, Atelier Deshaus, Jiakun Architects, and Ai Wei Wei. Photographs, computer renderings, and succinct written descriptions make clear that two kinds of new architecture are emerging in China: massive concoctions, usually by foreign architects, with mind-boggling engineering and expansive glass curtain walls; and a quieter, smaller-scale architecture of intimate office buildings, private residences, cultural institutions, and shops designed by local architects. This native, organic strain is often overlooked by outside observers. Alongside colossal works like RMJM's pair of skyscrapers in Suzhou, melodramatically named the Gate to the East, or Foster and Partners' birdlike Beijing Airport, China's relatively diminutive projects, such as Qingyun Ma's Father's House in Lantian, or Jiakun Architects' Sichuan Fine Arts Institute in Chongqing, really shine. *Daniel Elsea*

Building a Revolution: Chinese Architecture Since 1980,
by Charlie Q.L. Xue. Hong Kong: University of Hong Kong Press, 2006, 232 pages, $60.

Architects in China have been building a revolution since Deng Xiaoping opened the country in 1980, ushering in exponential economic growth and a huge building boom. Charlie Q.L. Xue traces the development of architecture in mainland China from a Chinese perspective, concentrating on the evolution of indigenous architects and vernacular design and tracing the development of Chinese architectural practices and how they've been affected by events at home and abroad.

Prior to 1980, architecture in China was held back by decades of turmoil. But these years produced substantial building activity, and Xue introduces us to pre-1980, 20th-century architects of museums, civic centers, and residential complexes across China. He gives prominence to little-known designers, such as Qi Kang and Dai Fudong, whose building styles were fostered by political isolation, a rich cultural tradition, and Socialism. Xue's chosen buildings range from the pre-1949 Republican period, which blended modern techniques with traditional Chinese motifs, to the 1950s and '60s, when Communism inspired ceremonial structures, usually composed of large volumes with interlocking geometries.

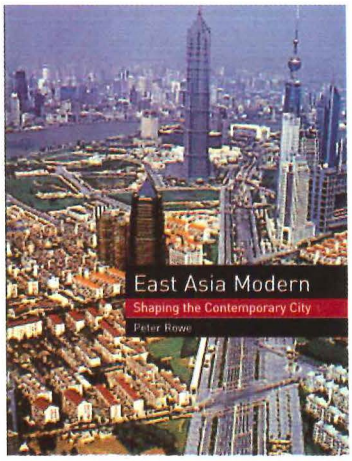
Most interesting is Xue's analysis of how the past influenced the rising generation of young Chinese architects. Xue links them with the earlier closed and rigid world and includes in his narrative such lesser-known architects as Zhang Lei, Miao Pu, and Zhao Bing. Xue calls them pioneers, along with such better-known designers as Yung Ho Chang, Liu Jiakun, and Qingyun Ma. *D.E.*



East Asia Modern: Shaping the Contemporary City,
by Peter G. Rowe. Lexington, Kentucky: Reaktion Books, 2006, 256 pages, $27.

In *East Asia Modern*, Peter Rowe, the former dean of Harvard's Graduate School of Design, examines the complex, sprawling

Books



metropolises of Asia. He singles out six megacities: Beijing, Hong Kong, Seoul, Shanghai, Singapore, and Tokyo. Each has a unique character and is at a different stage of development, but Rowe groups them together, he writes, because they share a "Confucian" history and collectively a compelling story of growth and maturation.

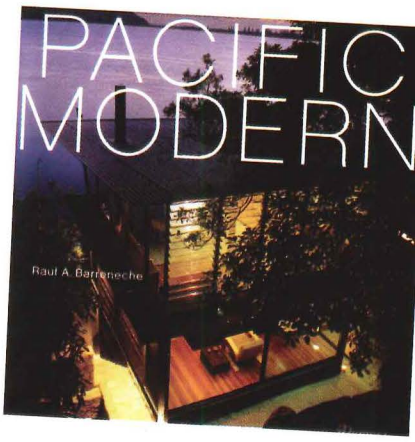
All six cities present a narrative of breakneck growth, high densities, and enormous planning challenges that make many of the great cities of the West seem almost pastoral by comparison. With 30 million people, metropolitan Tokyo is the world's largest city; Singapore and Hong Kong are compact city states at cultural crossroads; Beijing and Shanghai face intense pressures of growth; and Seoul is emerging as a metropolitan powerhouse in its own right. Intensely vertical Hong Kong, gigantic Tokyo, and burgeoning Beijing and Shanghai are all laboratories of how the urban organism copes with the multiple pressures of modern life.

Rowe compares the six cities' differing responses to such critical issues as landmark preservation, housing, urban sprawl, and transportation. He concludes that Asia's experience with urbanization is different from the West's. To the outside observer, urban Asia seems endemically chaotic and messy, but Rowe discovers that the development of these six cities has been more orderly and planned, more top down, than is initially apparent. His book holds lessons for everyone concerned with rapidly growing cities. *D.E.*

Pacific Modern,
by Raul A. Barreneche.
New York: Rizzoli, 2006,
244 pages, $45.

In his introduction to *Pacific Modern*, a sumptuous presentation of 25 recent homes along the South Pacific, Raul Barreneche suggests there is a commonality to these structures beyond their location on a map. The houses "share a kindred modern spirit.... They capture the boundless sense of openness and optimism that extends up and down the western shores of the great Pacific Ocean."

The collection includes work by Pritzker Prize winner Glenn Murcutt, whose barnlike Bowral House in Kangaloon, Australia, is perhaps the most thoughtfully indigenous house here, with its curving wall of corrugated steel that serves as a windbreak.



There's also creative work by such lesser-known (in America) designers as Patrick Clifford and Alexander Michael, both of whom designed inventive weekend homes for themselves: Michael's stores rainwater in corrugated-metal

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Books

drums that frame the entrance, while Clifford manages to make his three-story retreat on a forested hill outside Auckland seem like a taut wooden lantern. In all three cases, you feel the absence of clients pushing for predictable chic.

So far so good. But with most of the other homes, we're shown an unfortunate facet of what Modernism has become: a lifestyle choice for the well to do, where pristine angular homes are sited in ways that maximize views. As a result, beyond the localized quirks and the soft-blue settings (is there anything more languidly seductive than the New Zealand coast?), *Pacific Modern* feels a lot like so many other residential architecture books today—and a long way from the days when the Modern movement was fresh, and true believers turned to it as something more than a style. *John King*

Architecture Tomorrow, *by Francis Rambert. Paris: Terrail, 2005, 256 pages, $55.*

The title notwithstanding, *Architecture Tomorrow*, rather than offering a window into the future, is a superficial but handsomely illustrated survey of high-style buildings constructed around the world during the first five years of this century. The roster of designers consists of such firmly established architects as Renzo Piano, Coop Himmelb(l)au, and Jean Nouvel, who are creating iconic towers from Barcelona to Beijing. The book holds few surprises. Aside from the ever-clever Dutch firms of MVDRV and UN Studio, there is the usual superstar stable of Zaha, Rem, Frank, and Herzog & de Meuron. Most of Rambert's choices are fellow Europeans. The book shows Modernism's classic forms soldiering on, although challenged by bloblike, spongy Expressionist compositions. "The new buildings, sometimes odd but always very much themselves, reveal new shapes, new materials, and new spaces," says the author.

Rambert, a renowned French critic, offers grandiloquent pronouncements on the state of Modern architecture. But overall his text is painful to read and unilluminating. (Is it the translation or just the way French architectural theorists write?) Rambert divides his book into seemingly arbitrary sections freighted with fatuous headings such as "Between Image and Icon." Like too much architectural writing, Rambert's is hyperbolic and windy. Isn't there a simpler, more revealing way to say, for instance, "Hybridisation is what the opening of the new century is all about, and the result is alternatives to globalisation: a proliferation of buildings that are unique and specific and not ashamed to use glamour to change our perceptions; and of manifesto-style 'installations' that take architecture to the brink of contemporary art"?

The captions are as forgettable as the text, but the 240 color photographs are almost worth the price of admission. Rarely, however, does Rambert devote more than two images to any building. This can be frustrating, as is the absence of plans and an index. *William Morgan*

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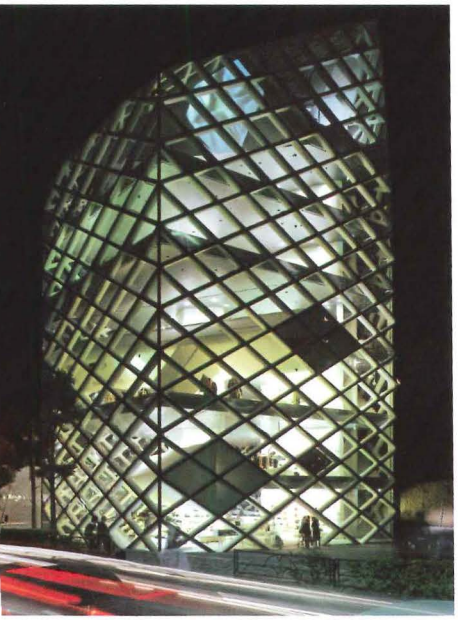
Dressing Up Fashion, Dressing Down Architecture

Exhibitions

By Russell Fortmeyer



kin+Bones: Parallel actices in Fashion and chitecture. *Curated by ooke Hodge. At the Museum of ntemporary Art, Los Angeles ıtil March 5, 2007). Travels :he National Art Center, Tokyo, e 6–August 13, 2007.*

ɛr the Rem Koolhaas–designed da Soho store in New York suf- d fire damage—including $5 on in inventory—in January 2006, iter on the snarky, Manhattan ia Web site *Gawker* wondered ther we could "expect ostenta- ; design to bounce back from a ‹e this."

Of course, the store re- ed, but *Gawker*'s sarcastic ırk, implying an equivalence een fashion and architecture, ıls a deeper cynicism toward tecture's enthusiastic embrace of conspicuous consumption. A good many consumers consider architecture just another tab in a glossy design magazine, sharing space with furniture, products, and, of particular interest, fashion. This is apparently quite distressing news to people who feel architecture should avoid fashion and strike a serious tone, in keeping with the times.

The new exhibition at the Museum of Contemporary Art (MoCA) in Los Angeles, *Skin+Bones: Parallel Practices in Fashion and Architecture*, could have focused on any number of provocative issues, but instead its intentions stay firmly

The innovative structural elements of Herzog & de Meuron's 2000–03 Prada Aoyama Tokyo Epicenter (above and above left) only superficially relate to Japanese designer Yoshiki Hishinuma's 2004 Inside-Out 2Way Dress (left).

and predictably rooted in the formal world of practice. In a sleek, white-walls installation designed by Calvin Tsao and Zack McKown, *Skin+Bones* presents dresses on mannequins and videos of fashion shows interspersed among architectural models, drawings, renderings, videos, and installations, all in generic categories like "Shelter," "Geometry," "Creative Process," "Construction-Deconstruction-Reconstruction," "Tectonic Strategies," and "Identity" (come on, isn't fashion always about constructing identity?).

The first few galleries are given over to single installations of dresses by a handful of fashion designers, such as Viktor & Rolf and Ralph Rucci. The third gallery presents Diller+Scofidio's 1993–98 *Bad Press: Dissident Housework Series*, a conceptual art project of white, folded and ironed men's shirts displayed in a long glass case. Not until the fourth gallery does the show ease into its rhythm of alternating between conventional installations of architecture documentation and the white-pedestal-mounted fashion parade.

Terms like *scale*, *materiality*, *surface* (skin), *structure* (bones), and *representation* thread through the show, while *folding*, *pleating*, and *layering* also crop up—fashion terms co-opted by archi-speak in the late 1980s and early 1990s. The show makes only half-hearted attempts to bridge the wide practical gaps between, say, the surface printing on the curtain wall of Herzog & de Meuron's 1994–99 Eberswalde Technical University Library and the use of wildly patterned fabric by Dries van Noten.

Deconstruction's return

In addition to illustrating how the creative and technical processes of fashion and architecture superficially correspond, Brooke Hodge, MoCA's curator of architecture and design, has dredged up the corpse of Deconstruction theory (Decon) as rock-solid proof that the relationship between the two disciplines is more than skin deep. In the gorgeous, albeit problematic, catalog for the show, Hodge writes that beginning in 1980, fashion and architecture sought "liberation from convention" and "openness to ideas and techniques from other disciplines, [inspiring] radically different approaches to design." An accompanying gallery installation presents the frayed, fragmented dresses of Japanese designers Rei Kawakubo and Yohji Yamamoto next to such architectural models as the Parc de la Villete by Bernard Tschumi. Haven't we've been down this catwalk before?

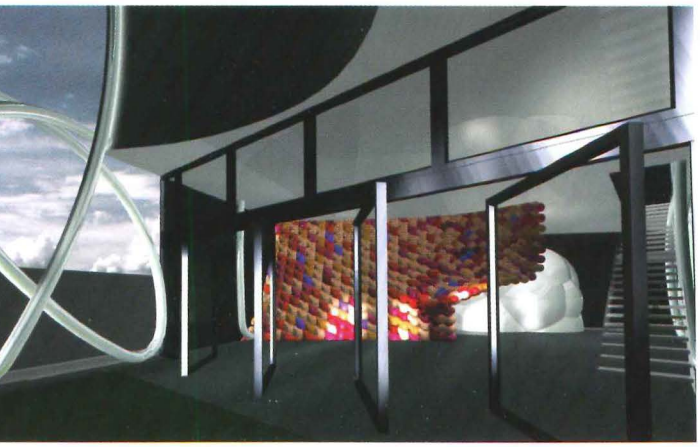
The facade of Office dA's 2002–03 House in New England incorporates layering and cutting, both of which are evident in the rubber wall slits that reveal windows beneath (above). Viktor & Rolf's 2003–04 One Woman Show collection takes layering to extremes (left).

The catalog includes two essays by Hodge, one of which establishes the framework for the show's installation and another that specifically focuses on Decon in architecture. Patricia Mears, a curator at New York's Fashion Institute of Technology, contributed an essay on the relationship of fashion to Decon, noting the lack of a thorough examination of the topic by theorists, critics, and curators. *Skin+Bones* may add to the conversation, but it leaves much unresolved.

Architecture's top model

By so intently focusing on practice and dead theory, *Skin+Bones* deflects from the economic and social contexts that license just this sort of cross-disciplinary investigation. What arguably makes the trajectory of architecture since 1980 worth considering is not Decon, but globalization—the Web, media, design publications, software advances, home-improvement TV programs, travel, and trade—which has deposited architecture further into fashion's territory. While a model of Herzog & de Meuron's 2000–03 Tokyo Prada flagship store, positioned near Yoshiki Hishinuma's 2004 Inside-Out 2Way Dress, may ostensibly share the dress's asymmetrical crisscross structural pattern, it also trades in this global culture of design chic. Miucca Prada built a fashion powerhouse through instrumental deployments of name-brand architecture throughout the world, including the Koolhaas-designed New York and Beverly Hills stores. These two architectural baubles—studies in ambitiously high-tech, experimental design—were among Koolhaas's first built works in the United States. The hip reputation of the 2001 New York design (with the accompanying book and press orgy) certainly couldn't have hurt his future American commissions, including the Seattle Public Library which *Skin+Bones* spotlights. Anyone who has seen Koolhaas cu a swath through a party in a Prada suit knows that brand association not an overlooked subject in archi-tecture offices and schools. Prada shrewd use of architecture has gained it a place in the design wor securing a piece of a taste culture that would also include MoCA.

Skin+Bones's complete lacl of attention to such circumstanc which produce what we might ge erally call *fashionability*, renders the show's many visually arrestir analogies superficial. A model of Peter Eisenman's craggy, structurally ambitious, though unbuilt 1992–93 Max Reinhardt Haus, example, appears next to Kawakubo's cantilevering skirts from the 2004 Excellent Abstrac collection. Detached from a larg framework, Eisenman's building (already late in his infamous De exercises) essentially becomes sculpture, a secret source of in ration for a dress collection sor 10 years later. Inversely, the te of fashion's endless cycle of rei



g Lynn's Slavin House, to be completed in 2008, which incorporates a wall nterlocking plastic pegs, recalls a Paco Rabanne dress from the 1960s.

ntion—beg, borrow, and steal—reasingly find refuge in chitecture. And if we're trading rely in surface effects, it's worth nsidering that the Eisenman lding's webbed steel structure figures the similarly clad Seattle rary and Tokyo Prada.

And then there are the exhibi-n's truly unfortunate associations, ch as Tess Giberson's Structure 1 lection from 2003–04, which minated in a fashion show with dels undressing and draping the ments onto a simple wooden ucture in an effort to create their n environment. Giberson's col-ion is installed adjacent to geru Ban's Paper Emergency lters for the United Nations h Commissioner for Refugees: porary do-it-yourself shelters imple plastic fabric on a card-rd-tube structure. This aposition lacks insight, not to tion sensitivity, and slights 's architecture through a crude al reading and a few wall texts ling to "community."

all about the look

show's "Creative Process" sec-epitomizes the limits of a purely al analysis of fashion and itecture. It pits a series of pho-aphs of designer Narciso iguez at work, pinning, pointing, olding a dress into existence, against Frank Gehry's exploratory models for his 1987–2003 Walt Disney Concert Hall (a project that seems to appear in every architecture show at MoCA). The genius-at-work visual trope suggests that Gehry's three-dimensional design process (which relies on CATIA, a software program developed for the aerospace industry) relates just enough to Rodriguez's dress construction to warrant the conclusion that little creative or theoretical ground separates these two masters.

With all due respect to Rodriguez, architecture has far surpassed fashion's use of materials and technology. The kind of deep information embedded in an architectural model—real or digital—no longer has a basis in the Modernist obsession with surface. Ironically, Gehry's development of Digital Project, a proprietary 3D design software, pushed architecture further into this complex modeling realm while allowing Gehry to remain largely unconcerned with its effects on the underpinnings of his work, outside of streamlining the fabrication process for its undulating surfaces and complicated interior geometries.

As it happens, Gehry, along with a number of other architects in *Skin+Bones*, such as Daniel Libeskind, Zaha Hadid, Eisenman, and Koolhaas, played a significant role in the ultra-fashionable 1988 *Deconstructivist Architecture* exhibition at New York's Museum of Modern Art. That show, organized by Mark Wigley and Philip Johnson, forms the basis for *Skin+Bones*'s explicit use of Decon as the theoretical ground for making a surface analogy with fashion, as opposed to a critical rupture from Postmodernism that pursued a return to the supposedly unfinished projects of the Russian Constructivists. Architecture's use of Decon exists within a clear genealogy—one that many of its unwitting practitioners openly acknowledge—that finds little application to fashion's whims. Nevertheless, *Skin+Bones* presents no competing claims to Decon, let alone even a satisfying explanation of the theory and why it, out of other 20th-century architecture theories and movements, represented such a break to necessitate a critical re-evaluation in terms of fashion.

The height of fashion

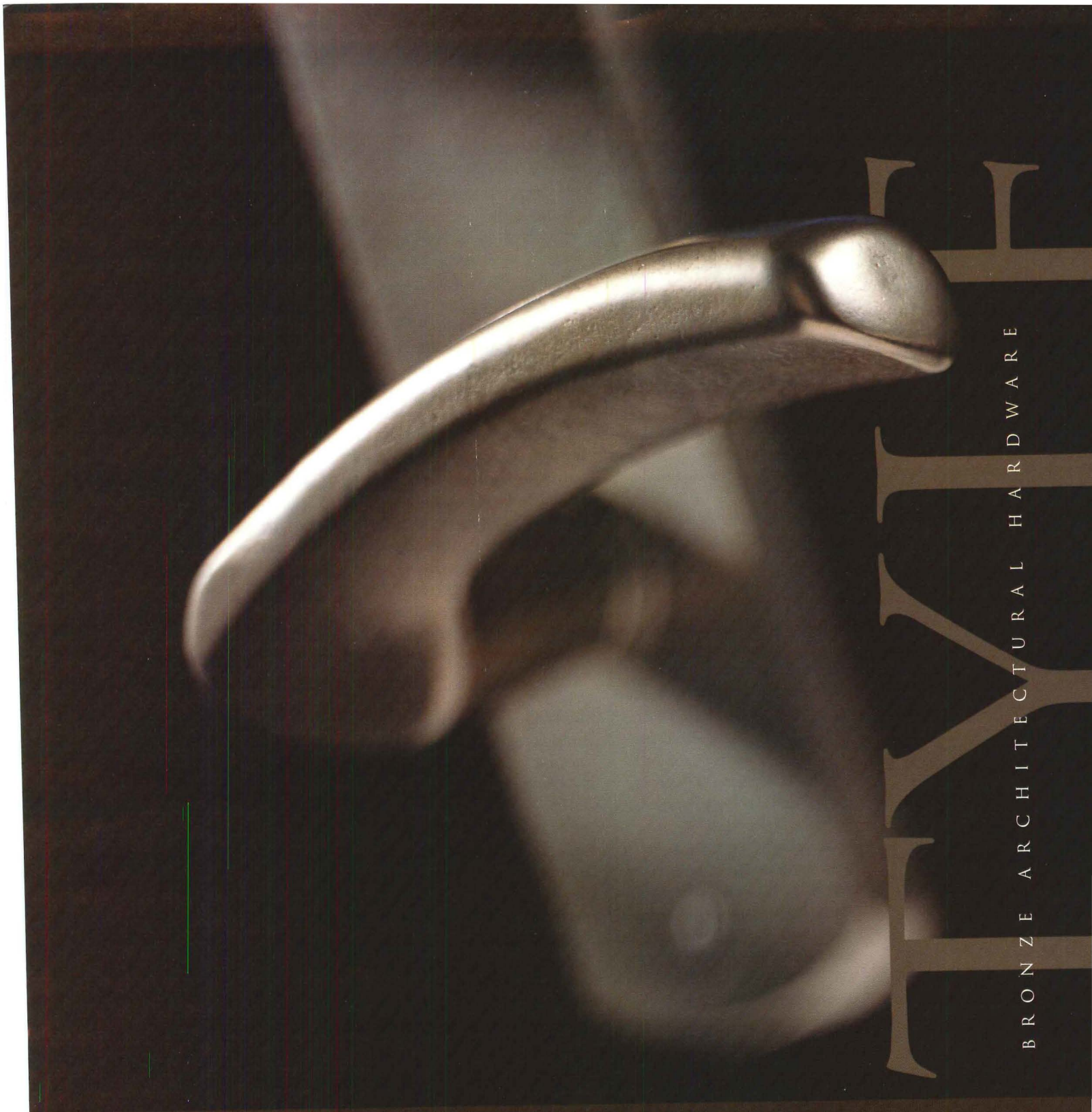
Hodge's apparently arbitrary decision to consider theory only up to 1988, the year of Wigley's exhibition and book, is regrettable, since even Wigley has moved on from Decon with a 1995 book, *White Walls, Designer Dresses*. Here, he exhaustively lays out Modernism's relationship to fashion and fashionability, recalling Modernism as the anti-style, the death knell for the 19th century's style crises. Regardless of what one thinks of his analysis, this exclusion conveniently skirts opening any debate on style, image, branding, trends, and everything else under fashionability's sway. Wigley is certainly not the only authority, but it would be a start.

Even with its ooh-la-la glamour and tasteful installations, *Skin+Bones* numbingly confines fashion to expensive women's evening wear from Tokyo, Los Angeles, New York, and Europe. This is not radical reconsideration, but tony conformity. We don't get to see fashion's immense possibilities: These are clothes designed for a single imaginary person, who happens to be a starvation victim in 6-inch stilettos. That's a fundamentally different tactic from the one exemplified by the architecture on display in MoCA's galleries. As with Prada's flagship stores, "epicenters" where the company can host cultural events targeted at a larger audience than its clothing customers, the rules of architecture permit open-ended design play in ways high fashion prefers to ignore.

Tasteful or cool

Of course, architecture's table has room for the fashionable, since certain sectors of the profession have always served up trendy design gestures and gimmicky technological solutions (not necessarily bad things). Cool architects find their way into *Skin+Bones*, and even if no single building truly receives the depth of curatorial treatment one might hope for in an architecture show, their work will certainly be seen again. Greg Lynn's undulating wall of interlocking plastic pegs for his ongoing Slavin House only hints at what this architect could accomplish had he been given an entire gallery at MoCA. And, undoubtedly, the theoretical remnants of Deconstruction have absolutely nothing to do with it. ■

With relatively little built work, Lynn has used his product design to inform his Slavin House—a fact too little explored in *Skin+Bones*'s intense formal focus.



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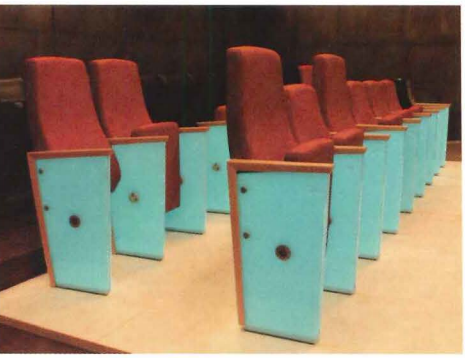
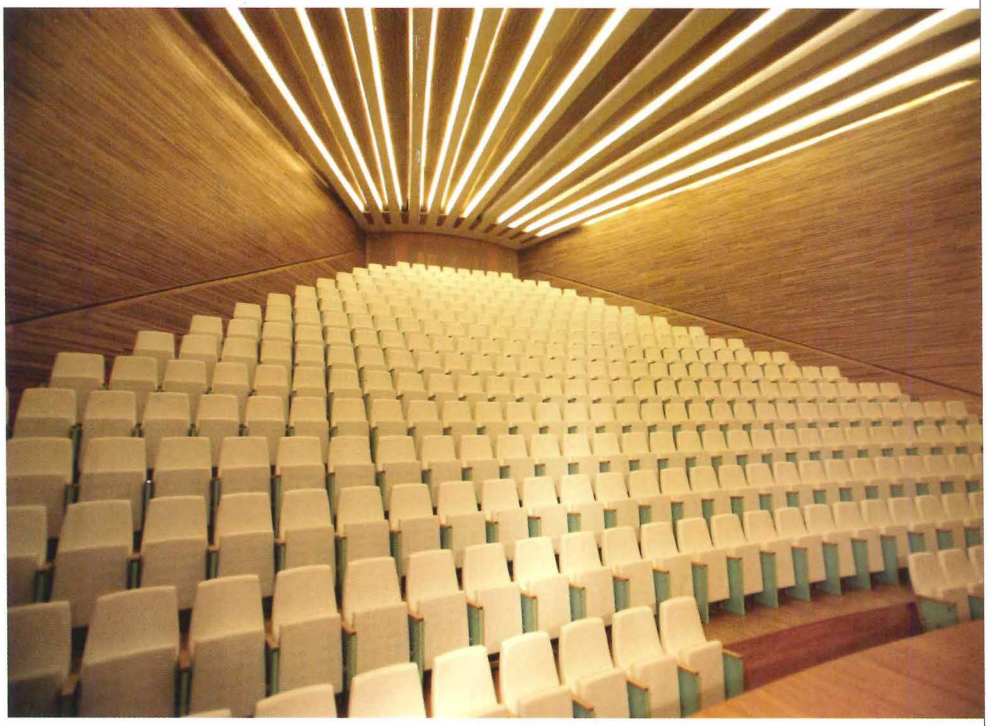
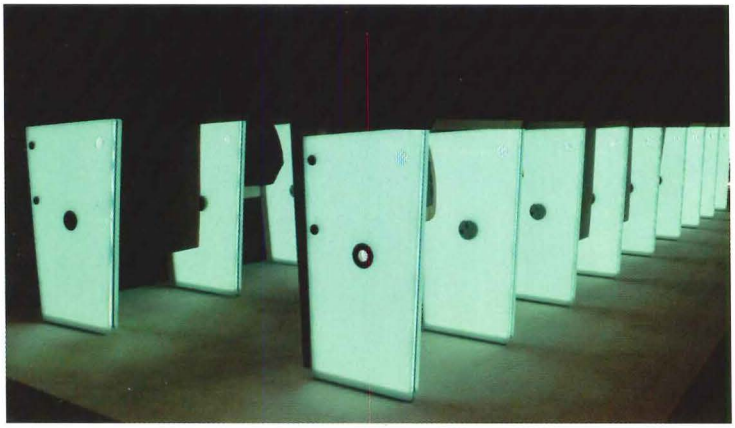






Clockwise from left: Prototypes of the chair design. The Aula Magistral is one of four main theaters in the complex. Each chair is connected to the theater's lighting system and can be used as emergency lighting.

Glowing theater seating sets the stage for drama

By Rita Catinella Orrell

Poltrona Frau, known for leather-upholstered furnishings and car interiors, collaborated with Santiago Calatrava to develop an illuminated seating system designed exclusively for the four large theaters and small rehearsal space of the Palau de les Arts Reina Sofia, the opera house in Valencia which officially launched its first season in October 2006. Working from sketches by the Valencia-born Calatrava, Poltrona Frau produced and installed 4,219 seats in four colors, with different inclinations, heights, and widths, according to a long visibility study carried out by the company. Made of wood, leather, and glazed crystal, each chair is illuminated by a thin, electroluminescent light source and controlled by a specially designed software program. Depending on the desired atmosphere for the production, the chairs can be illuminated from 50 to 150 volts, giving the audience a feeling of floating in the dark—a scenic effect strongly desired by the architect. Poltrona Frau, New York City. www.poltronafrau.com CIRCLE 200

Snapshot

Utrecht's mile-long high-speed baffle

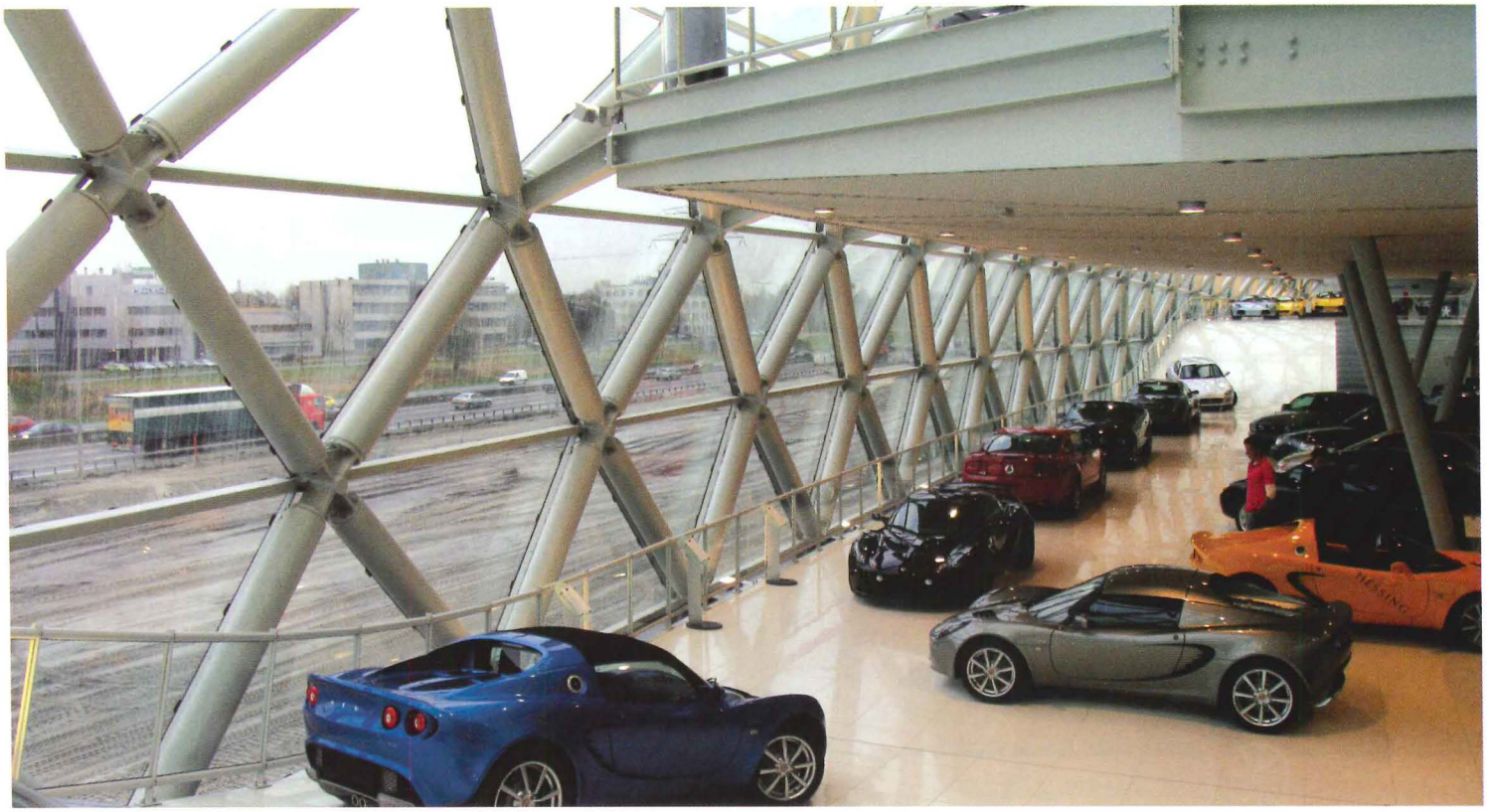
By Beth Broome

Zipping along the A2, one of the busiest highways in the Netherlands, motorists approaching or leaving Utrecht are treated to a break in the roadside tedium with a shimmering, mile-long sound barrier. As if tipping its hat to the automobile—to which it owes its existence—the wall widens at its midway point, ballooning into a "cockpit" that houses a luxury car showroom. If the sound barrier is, as the Dutch architecture firm Oosterhuis_Lenard (ONL) describes it, a snake creeping along the highway, its translucent gray skin punctuated by scales of glass, then the cockpit is the egg that the snake had for breakfast.

The project started off as a basic request by the city of Utrecht to ONL for a simple, earthen acoustic wall to block sound for a new residential development behind the north–south highway that connects Amsterdam to Maastricht. The scope quickly grew when Hessing, a luxury car dealership, put in a request with the city for a new, higher visibility location for its showroom. Shortly after regulations for the wall were modified, stipulating an extra element topping off the bermlike barrier, the city connected Hessing with the architects, gaining them yet another client.

Seen from the perspective of a driver traveling at about 75 miles per hour, the sound barrier was designed with speed in mind. In the initial design phase, ONL used

Snapshot



At its middle, the sound barrier, which lies between two highway exits, blooms into a luxury car showroom (top). Merchandise sits like caged animals, waiting to break free of the cockpit's steel-lattice-and-glass structure (above and right).

a 3D surface model that replicated the experience of driving on the A2, helping the architects determine the shape the barrier would take. The architects drew on car styling techniques, giving the steel-and-glass barrier an aerodynamic form with lines, along which the surfaces fold, that fade out at the cockpit and then fade in again.

The barrier and cockpit's steel-lattice structure is clad in single-glazed triangular glass plates set in an overlapping pattern to buffer noise. The cockpit's glazing also advertises the showroom's wares: Lamborghinis and Maseratis that face the highway, giving the appearance of waiting patiently to be released onto the open road. All of the structure's visible joints will be fitted with LEDs with interactive capabilities, enabling traffic to activate sensors programmed to alter color and brightness.

The barrier has a variable section along its entire length. "All the pieces are different," says ONL's Gijs Joosen. "The building is made with mass-customized panels by connecting our 3D models directly to the steel producer," he says, referring to the team's "file to factory" design/production approach.

The cockpit and sound barrier offer benefits to those on both sides of the fence. While residents will get their P&Q, motorists whizzing by can glimpse into the cockpit—which Hessing says has helped to significantly increase sales—and window-shop at high speed, daydreaming that they, too, will someday upgrade their ride. ■

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Succeeding a Suc

Succession plans should be more than schedules for transferring ownership—they should be integral to a firm's strategic plan to recruit and develop talented staff

By Andrew Pressman, FAIA

Woody Allen's famous quip, "I don't want to achieve immortality through my work. I want to achieve it through not dying," perfectly expresses the kind of wishful thinking that often gets in the way of preparing for the future. Architecture firm principals in particular have a reputation for finding excuses to put off firm succession planning until they are nearly into their 60s. In some cases, this is already too late—planning for a smooth transition of both the leadership and ownership of a firm ought to begin 10 years or more before th retirement of a principal in order that all the benefits of such change can be realized. The most obvious reason for a successio plan is to compensate principals fairly for the firm they've bui with their entrepreneurial spirit, including the physical assets an intellectual property they own, and for the money they've investe in their businesses. But ownership-transfer planning should be pa of the firm's overall strategic plan. Both require that the fir develop and cultivate talented employees in areas beyond desig and project management, such as marketing, human resource financial management, and technology. Another meaningful cons

Andrew Pressman, FAIA, is a practicing architect who resides in Washington, D.C. He is the author of Professional Practice 101 *(1997).*

quence of a smooth leadership transition is that it allows the successors continued access to the marketplace. When a principal leaves a firm abruptly because of an ill-conceived succession plan, the reputation of the business may suffer tremendously.

And finally, contingency plans developed as part of a succession plan can act as a hedge against the unexpected. There is always the possibility that a principal could depart on short notice for any number of reasons, or that an event resulting in a principal's disability or death could occur. Planning for the possibility of such a drastic turn of events is necessary to ensure the continued healthy operation of the firm—if not its survival—and to reassure clients that its obligations to them will be met. In the event of such a catastrophe, it will be necessary for the firm to follow through with its projects in a manner that is consistent with its principals' values.

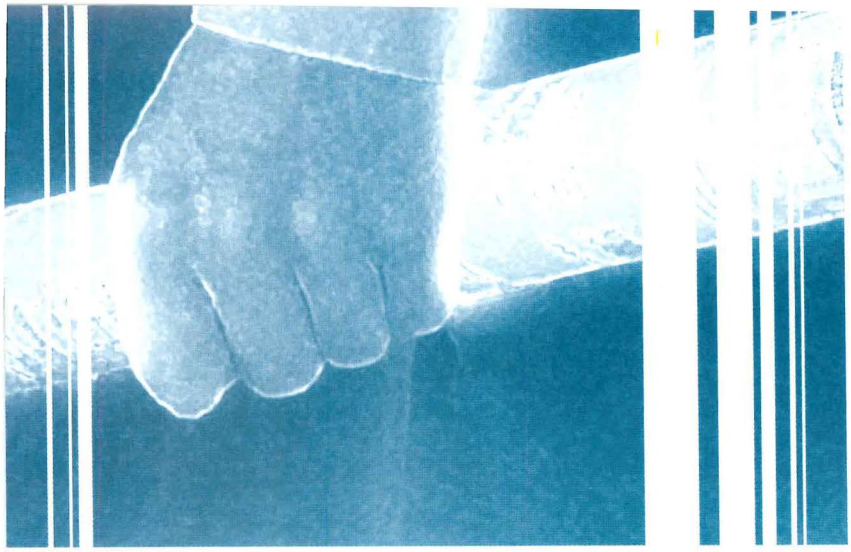
Some architects feel preparing a succession plan is an ethical obligation to their employees. Frank Harmon, FAIA, a sole proprietor in North Carolina, believes that succession planning should be part of the responsibility a principal should exhibit both to younger employees and to clients. As he says, "We should nurture young architects—the wonderful interns or associates in the office—by giving them ever-increasing responsibility and then, eventually, part of the practice." Ann Chaintreuil, FAIA, of Chaintreuil, Jensen, Stark Architects, based in Rochester, New York, underscores this notion. "The most important part of our succession planning is that we've contributed to the development of our future partners, not just to the value of the business upon retirement. They've done so much during the past 10 years. We would not be in the remarkable position we are in now if it weren't for their efforts, for which they should be rewarded."

A tool for recruiting and cultivating talent

If the slogan "people are our greatest resource" is deemed to be true, then a firm must be able to hire great people, and develop their skills as both architects and future managers. A well-defined and documented succession plan can be an excellent tool for recruiting high-potential individuals in what is, at the moment, an extremely competitive recruiting market.

As these high-potential recruits prove themselves, a

Three Case Studies: Snippets of succession planning are revealed in the profiles of practices ranging from small to large on the following pages. All of the interviews affirmed the conventional wisdom that the issues are the same regardless of size, but become increasingly complex the larger the firm. Those issues include determining an appropriate value, selecting a mechanism to transfer that value, and deciding on elements of firm culture such as governance, compensation, and retirement policies. Generally, transition in a small firm involves one or two principals passing the baton to an equal number of successors. Larger firms typically promote a broader distribution of ownership.



career trajectory that culminates in ownership and leadership for them facilitates their loyalty, and can provide the motivation they need to contribute to all aspects of the firm's success. But the firm must have a professional development program that will provide a diverse range of high-quality practice experiences. This kind of development takes years, not months.

Gordy Mills, FAIA, C.E.O. of Durrant, a 300-person A/E firm headquartered in Des Moines, explains that his firm, typical of many large firms, has career growth track plans with well-defined sets of requirements that employees must meet in order to become associates and principals. Durrant has a formal mentoring program, as well, pairing firm principals with candidates for promotion. It is clear that there are advancement opportunities if candidates meet certain specified performance standards.

Firms that use succession planning as part of their strategic planning can also use the opportunity to either hire or develop talent that can help reposition the practice for expansion by creating new studios or opening new offices.

The process of succession planning

For a group of principals that's just starting, the main task is to become fully informed in general about all elements of succession planning and how they specifically apply to their firm. The best way to do this is by talking to colleagues who have done it, and reading about the process for professional service firms. It will probably be necessary to hire a consultant. The most prudent use of the consultant's time is the front-end strategizing—setting forth goals, requirements, making a timeline, and specifying tasks—and moving forward. A consultant can prevent mistakes, such as inadvertently chasing away viable successors by overpricing the firm, or advise principals against selling out but failing to retire.

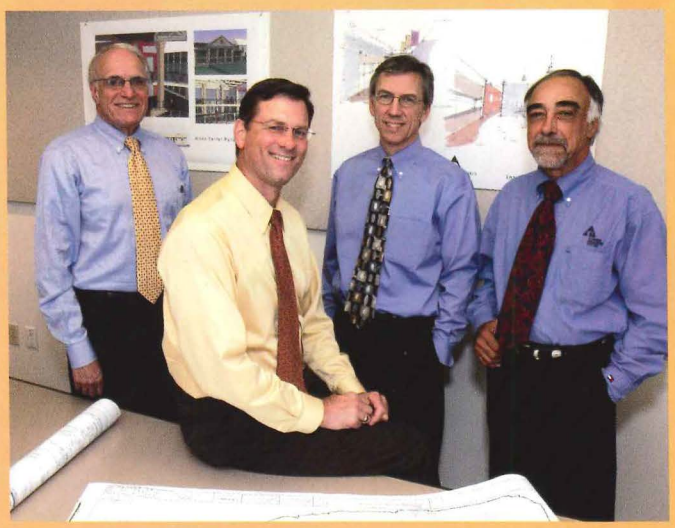
Peter Piven, FAIA, the Philadelphia-based principal consultant of The Coxe Group, and author (with William Mandel) of *Architect's Essentials of Ownership Transition* (John Wiley and Sons, 2002), lists seven steps that are crucial to making a succession process successful: start early, recruit constantly, share information, assign and delegate judiciously, provide feedback and establish accountability, communicate interests and intentions on a regular basis, and mentor continually. These steps, discussed below, should serve as a good starting point.

Tower Pinkster Titus Associates

Tom Mathison, FAIA, of Tower Pinkster Titus Associates, explains that soon after establishing the firm several decades ago, the founding principals agreed to an organized plan to sell their stock and retire—intentionally staggering the dates so they all wouldn't leave at once. They began to increase the number of shareholders to give more people a voice in the company's direction. There are now 21 stockholders in the 60-person, Michigan A/E firm. One reason to broaden ownership was to attract and retain talent; it also offered an incentive for individuals to aspire to leadership positions and be proactive in project management, marketing, and representing the firm. To become an associate, firm members must first be nominated by shareholders from either of the firm's two offices or by the board of directors. Associates are expected to be talented architects or engineers who possess leadership traits and have the ability to attract new clients and talented staff.

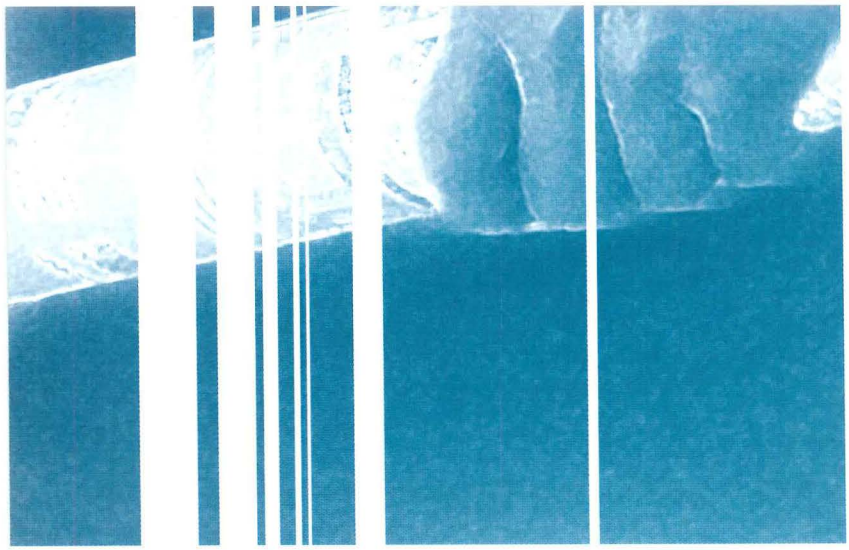
It is anticipated that principals will rise through the associate ranks, although it may be necessary to hire outside the company to acquire needed expertise. Such an external hire may enter at the associate or senior associate level.

It has become clear that senior members of the firm should retire only under financially manageable circumstances, if at all possible. There is an attempt to balance retiring principals who are selling stock with stock purchases by associates. The firm encourages associates to buy more stock if they haven't reached their limit, or it identifies new associates who are future leaders of the firm. To a certain extent, departures can be anticipated based on employees' age and an understanding of their career goals.



Left to right: Arnold Mikon, FAIA, president/C.E.O., and principals Steven Hoekzema, AIA, Thomas Mathison, FAIA, and Richard Bromfield, AIA.

Stock is valued by book value (net worth), based on an assessment by the firm's accountant at the end of each calendar year. Goodwill is not part of this firm's valuing formula. The current board is hard at work on the transition to the next generation of leaders. A new in-house training program is scheduled to be launched next year to prepare associates to lead the firm and to bolster skills in project management. Mathison believes that principals can't begin too early to groom successors to understand relationships, contacts, and projects, so when the transition does occur, it is very smooth.



Frank Harmon Architect

A sole proprietor of a small firm in Raleigh, North Carolina, Frank Harmon, FAIA, is rightly concerned that someone should complete his projects if tragedy strikes. One option for the small practice to deal with this concern—if a young staff is not yet ready—is to develop a mutual arrangement for coverage with another firm. Harmon's intention for the long-term, however, is to develop interns in the office so they can eventually take over the work as he becomes less involved in the day-to-day operations.

Prospective partners must share Harmon's perspective on design. The participatory process with clients is paramount. He would expect successors to value good design (defined by the firm's body of work) and be excellent team players. Currently, all employees have project management responsibilities under Harmon's direct supervision. That's how he ensures that ongoing professional development is inherent in the firm's process of executing the work. Harmon believes that he is doing his best work now and that it is part of his professional mission to pass that on to the younger people in the office.

Members of Frank Harmon's office are, from left to right: Judy Harmon, Erin Sterling, Matt Luck, Frank Harmon, FAIA, Sarah Dickerson, Isaac Panzarella, Colleen Simon.

Start early: Firm principals should put an ownership transition in motion at least 10 years before they plan to retire. The conventional wisdom is that it takes about that much time to implement a reasonable transfer, although there might be some exceptional cases where it could be accomplished sooner. It is more than a financial transaction. It is a transfer of the responsibility, contacts in the marketplace, and so on—the whole firm culture. Client relationships will also benefit from early planning, with likely successors working with their counterparts on the client's side of the table. It takes time to develop close working relationships.

Recruit constantly: This will illuminate differences in the talent pool and help to clarify to management which skills and personal characteristics may be desirable in the future. It is prudent to use job searches to identify interested potential successors rather than simply addressing the firm's immediate need for a new employee.

Share information: Effective communication will foster staff education about all aspects of the firm—particularly its culture. Allowing candidates to examine financial reports such as income statements and balance sheets will yield an understanding of the firm's operations, which is significant for future partners.

Assign and delegate judiciously: What work is assigned, to whom, and when are important decisions. Principals must get into the habit of delegating components of a leadership position to facilitate the transition and provide exposure. If there is some overlap, for example, a principal can observe and evaluate performance. It is easier to pinpoint any weaknesses or deficiencies in this context, which can then be addressed. If principals fail to provide opportunities for successors to engage in meaningful client relations and practice management tasks, they risk losing successors, who might even take clients with them. These exercises may also expose staff who are not good candidates for the succession process.

Provide feedback and establish accountability: Debrief early and often to discuss how you—or another principal if you are not in a position to be a direct role model—would have handled a given situation. Annual performance evaluations are a good mechanism to provide feedback related to any anticipated partner-level accomplishments.

Communicate intentions on a regular basis: Ann Chaintreuil asserts that expectations for future partners must be explicit. In her firm's case, generating new work and assuming a leadership role were important and consistent with the stated desire for the firm to continue to grow.

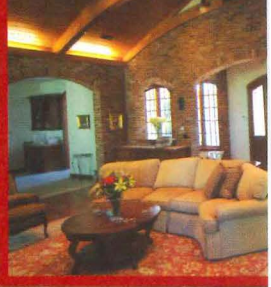
Mentor continually: Provide

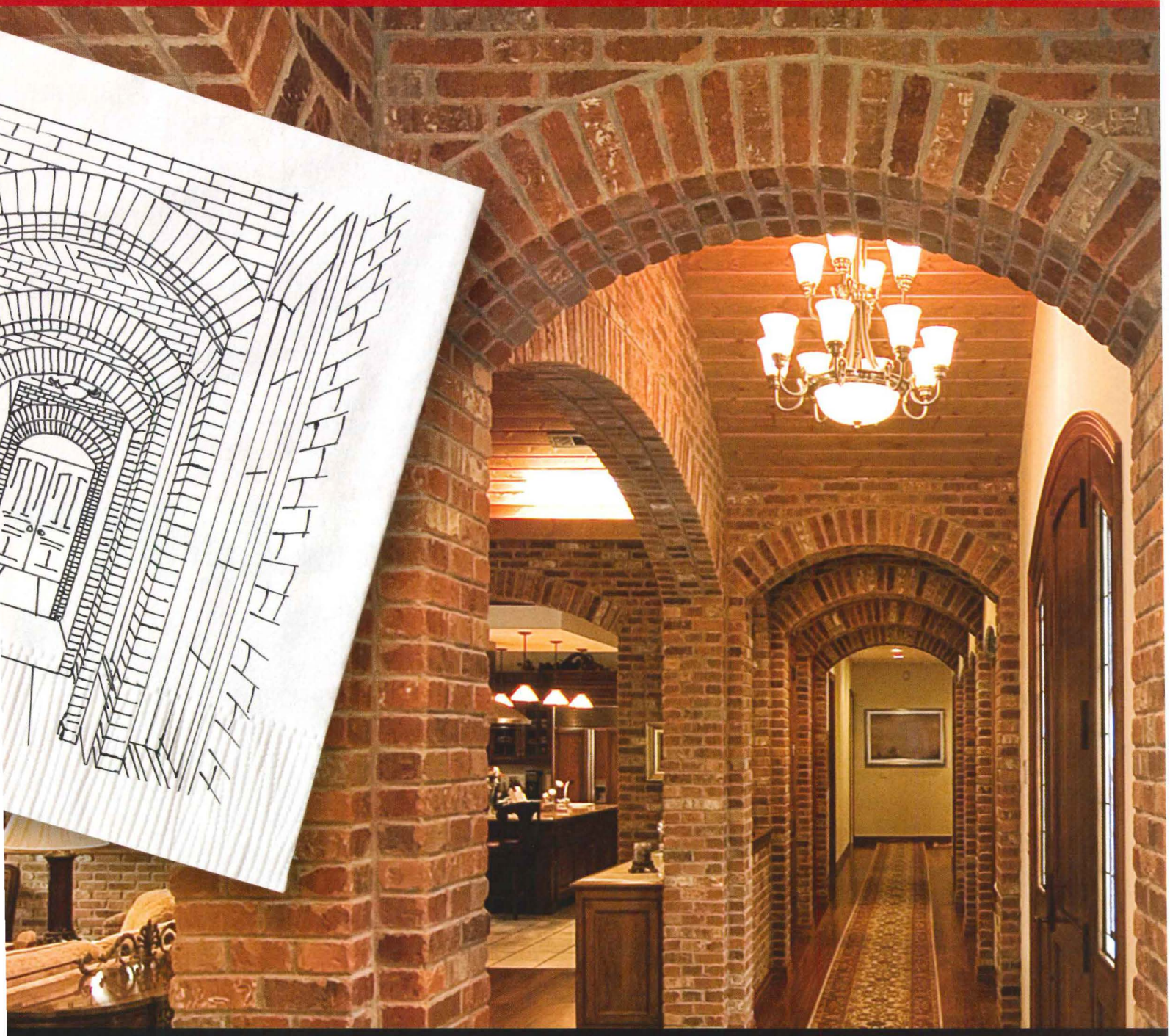
SAMPLE ARCHITECTURE FIRM STOCK TRANSFER SCHEDULE

	Before transfers		Transfers in Year 1		Transfers in Year 2		Transfers in Year 3		After Transfers		
	Number of Shares	Value at $30/share	Number of Shares	Value at $30/share	Number of Shares	Value at $30/share	Number of Shares	Value at $30/share	Number of Shares	Value at $30/share	Value at Ownership
Principal A—selling	1,000	$30,000	(200)	(6,000)	(200)	(6,200)	(200)	(6,600)	400	13,200	40%
Principal B—acquiring	-	$0.00	100	3,000	100	3,100	100	3,300	300	9,900	30%
Principal C—acquiring	-	$0.00	100	3,000	100	3,100	100	3,300	300	9,900	30%
GRAND TOTAL	1,000	$30,000							1,000	33,000	100%

Table 1: Sample stock transfer schedule. (From *Insider's Guide to Cashing In On Your Equity* [second edition], by Lowell Getz, published by ZweigWhite Associates, Natick, Mass., 1997.)

You provide the imagination.





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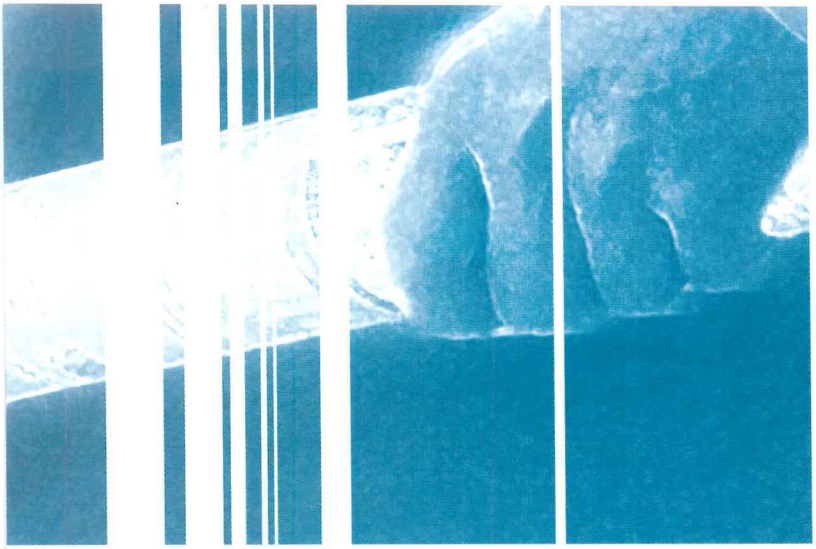

frequent mentoring beyond job-related issues to include all aspects of professional growth. This might even involve a team of principal mentors in a firm—matching strengths of a mentor to needs of a candidate at the most appropriate time within his or her development.

Financial components of a transition plan

The human-resources-related strategizing that one must do to put a transition plan together comes pretty naturally to most principals and their successors. The financial mechanics of the ownership transfer present the greatest potential for trouble. Firms really benefit from a specialist who is experienced in firm ownership transfers.

Lowell Getz, an accountant from Houston and a financial consultant specializing in ownership transition planning, has succinctly explained the three elements, as follows:

The financial transfer. The basic idea behind selling a firm is that ownership of the property is transferred from one generation of principals to the associates who will succeed them. The biggest issue is that younger associates don't have a lot of money to buy into the firm, yet the owners deserve a fair price.

The schedule. This shows how much is divested by those who are selling and how much is acquired by those who are buying each year (see Table 1, page 60). If future successors are identified early, they are motivated to stay with the firm, contribute to its success in a substantive way, and have an opportunity to distribute their financial obligations over a longer period of time.

The communications program. This introduces the succession planning and ownership transition to all the stakeholders, and explains the benefits and risks of owning stock or a partnership interest—specifically, how the firm's plan will transpire.

The value of the firm

Arriving at a rational price for the firm that is understandable and fair to both buyers and sellers is an art. There are a range of possible values. One is simply the conservative net worth, or "book value," which is defined as assets minus liabilities. Another way of assessing worth is by a firm's "premium value," which includes net worth plus intangibles such as goodwill, reputation, the ease with which the firm is successful at acquiring new work, the staff's experience and skills, and other factors, including backlog, history of returning clients, markets served, and financial history.

Getz suggests that a firm's value is not a single number, but a range, depending on circumstances (see Table 2, page 64). Getz cites two examples. If a firm is in trouble, perhaps facing the loss of a key rainmaker, the firm may only be worth liquidation value. At the other end of the spectrum, a firm might be acquired at a premium value if it is of interest to a potential external buyer.

One way to recognize some of the firm's ongoing business value is by applying a formula, typically incorporated into the

Durrant Group

Gordon Mills, FAIA, C.E.O. of Durrant, a 300-person A/E practice headquartered in Des Moines, describes the significance of thoughtful succession planning for his firm so that internal talent can grow and eventually slide into leadership positions. He notes that in today's tough talent market, having career growth plans and mentoring to help people develop professionally is critically important to retaining top talent.

Qualifications for future leaders are well-defined. Candidates must demonstrate loyalty, initiative, talent, a strong work ethic, good communication skills, technical ability, and honesty, and must have earned the respect of colleagues.

The firm has targeted metrics for various principal-level positions; for example, project management has one set, marketing another, and so on. Those who are in this principal track are generally on a three-year plan, with measurements in each year, with the expectation that all targets will be met at the end of the three years. There is, however, a degree of flexibility. For example, substantial progress toward interim goals may be sufficient to qualify a candidate to become a principal earlier.

The managing principal in each of the firm's 11 offices develops a career plan tailored to the associate or partner nominee, with goals matched to their position.

The succession plan is revised annually and modified to reflect company reorganization and fill any gaps. The company is growing at about 15 percent per year, which requires a combination of hiring new talent and internal promotions.

Left to right: Charlie Marsden, C.O.O., Lori Thielen, C.F.O., Dave Alley, chief marketing officer, and Gordy Mills, FAIA, C.E.O.

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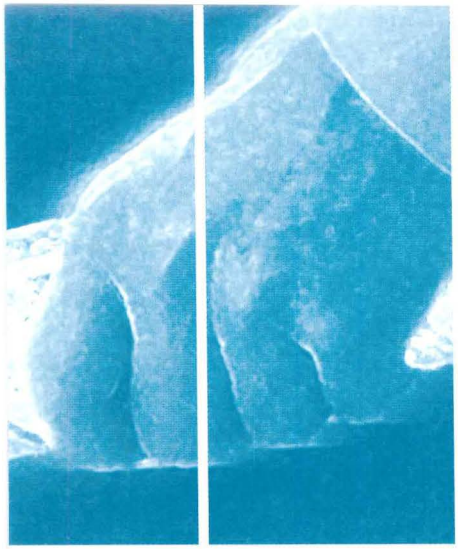

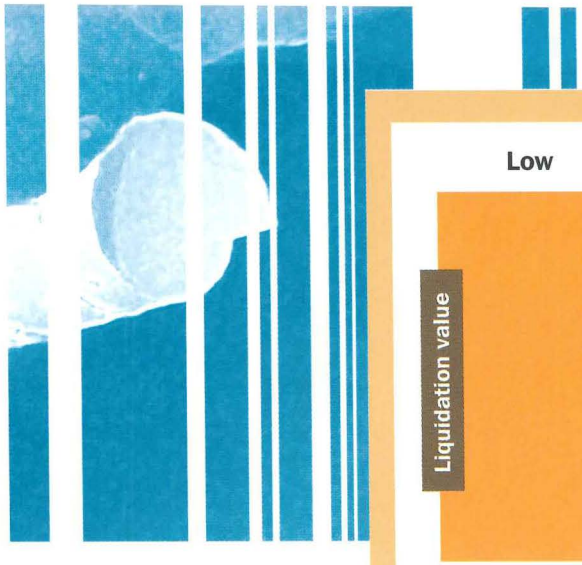

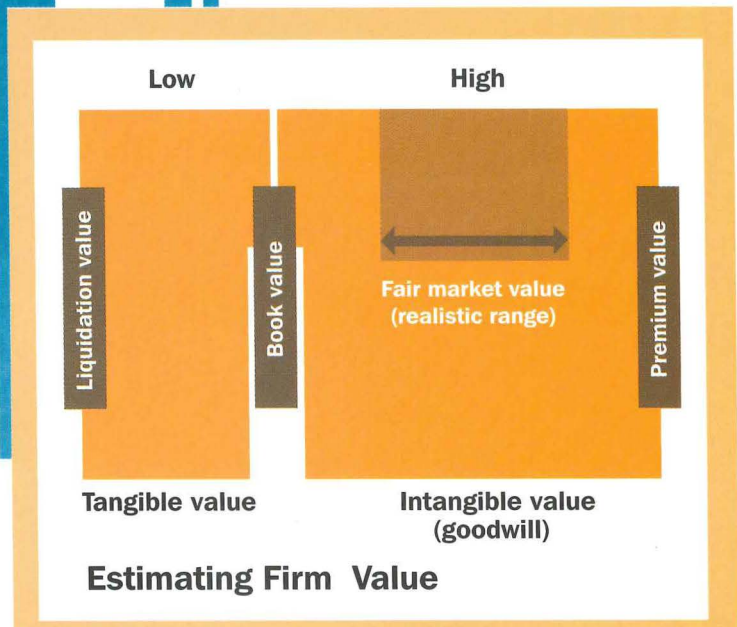

Table 2. A firm's value can depend on intangible assets like goodwill. (From *Insider's Guide to Cashing In On Your Equity* [second edition], by Lowell Getz, published by ZweigWhite Associates, Natick, Mass., 1997.)

company's buy/sell agreements, such as net worth multiplied by a factor. According to several management consultants, today the fair market value of architecture firms that are being transferred internally is typically one to two times net worth. Boston lawyer Carl Sapers, Hon. AIA, provides an example of another valuation strategy: The "Boston formula" values a firm on the basis of net worth plus 15 percent of one year's receipts. An independent, external appraisal may be a valuable assist in any negotiation, but there is an associated expense. Michael Strogoff, AIA, of Strogoff Consulting, states that "as with all business transactions, the 'fair market value' is eventually determined by discussions between a willing buyer and a willing seller and is subject to the actual terms of the ownership transfer."

Financial strategies and ESOPs

Mechanisms should be considered to promote the purchase by young associates who typically do not have a lot of cash. Usually firms use bonuses, apply salary increases, and sometimes bank loans to accomplish the transfer, so in effect, the firm funds the buyout through its profitability. Payroll deductions from the buyers' salaries over a period of years can ease the burden as well. But to make the process "real," prospective owners should always contribute some cash to the buyout so that their own investment is at stake.

An employee stock ownership plan (ESOP) is one way to sell the firm to employees. The ESOP is a type of profit-sharing plan that allows firm employees to have an ownership stake in the firm. Simply stated, a founder sells stock to the ESOP and invests the proceeds. The ESOP uses a bank loan, guaranteed by the firm, to fund the purchase, and the stock goes into the accounts of plan participants as the loan is repaid. An ESOP's big advantage is that it allows the selling shareholder to defer taxes on the proceeds received from the sale. ESOPs are most appropriate when there is a lot of stock to transfer and not a lot of time to do it. However, they are generally too expensive for small firms to set up. Total fees can range from $25,000 to $30,000 or more for an attorney to write the plan's documents, an administrator to manage each of the accounts of the participants, a valuator to value the stock every year, and an accountant to prepare reviewed financial statements. Therefore, the tax-deferred savings from ESOPs need to outweigh the expense in creating them. There are deferred compensation plans, as well, that should be evaluated, in which the owner receives payment after retirement to minimize tax liability for both the firm and the seller.

More strategic advantages

At its best, succession planning is a valuable part of professional practice and integral to firm culture. Viewed strategically, it can support finding, developing, and advancing the best people, help the firm realize a competitive advantage, and reward the retiring principals in multiple ways. There is a distinction between retiring from ownership and retiring from practice. It may be desirable—for both the firm and the individual—for a former owner to maintain an emeritus role subsequent to official retirement. If there is a substantive contribution to be made, and the retiree is not likely to inhibit an effective transition by preventing new owners from fully engaging, then a different role should be pursued. But, since any involvement is so much a function of specific personalities and motivations, it is difficult say this would always be the case.

Sharing a succession plan with prospective clients on medium-to-large-scale projects can enhance a proposal for services. At the very least, it would demonstrate depth of talent in the firm, and show that there is competent staff available to lead and successfully complete a project in the event of a tragedy. While many firms have such a plan in place, it is rarely communicated to clients, who would undoubtedly appreciate the thoughtfulness of a firm committed to protecting their interests.

According to Sapers, as late as the 1960s, very few firms considered ownership transition because most architects believed that their creative abilities were strictly personal and nontransferable. Sapers, with characteristic wit, equates those architects with the ancient pharaohs who were buried with all of the trappings of their worldly power. Today, most principals realize the importance of guiding their firms into the next generation. There is recognition that the firm has value, and with some focused effort, that value can be transferred to others. ■

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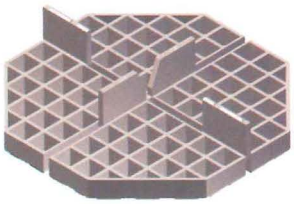

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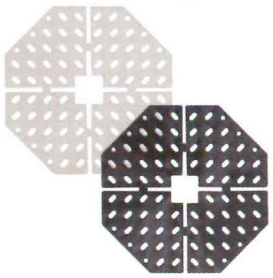

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White enamel panels with a mica finish clad the exterior of the museum addition (this page and opposite). The curtain wall frames the new entry.

Inspired by the rugged landscape, Joan **Soranno** leads a team to expand the University of Alaska's **MUSEUM OF THE NORTH** in Fairbanks

By Weld Royal

Fairbanks sits on a vast plateau near the center of Alaska, about 125 miles south of the Arctic Circle. The century-old city is surrounded by mostly roadless wilderness where fox dodge wolves and bears, and caribou roam by the hundreds. In this land of extremes, temperatures can drop 50 degrees in a single day.

The town lacks a strong architectural history, but that could change with the major new expansion of the Museum of the North at the University of Alaska, Fairbanks. Designed by Hammel, Green and Abrahamson of Minneapolis, collaborating with architect of record GDM of Anchorage, the structure's sensual, curved forms sit distinctly in contrast with the rugged natural landscape and local building traditions.

Merchants, gold miners, trappers, and dreamers founded Fairbanks, now Alaska's second-largest city (the metro area's population is 83,000). Their shelter was utilitarian, meant to last as long as the gold did. Two local landmarks are the Captain Bartlett Inn and the Fairbanks Visitors Center, both log cabins, a common local building vernacular.

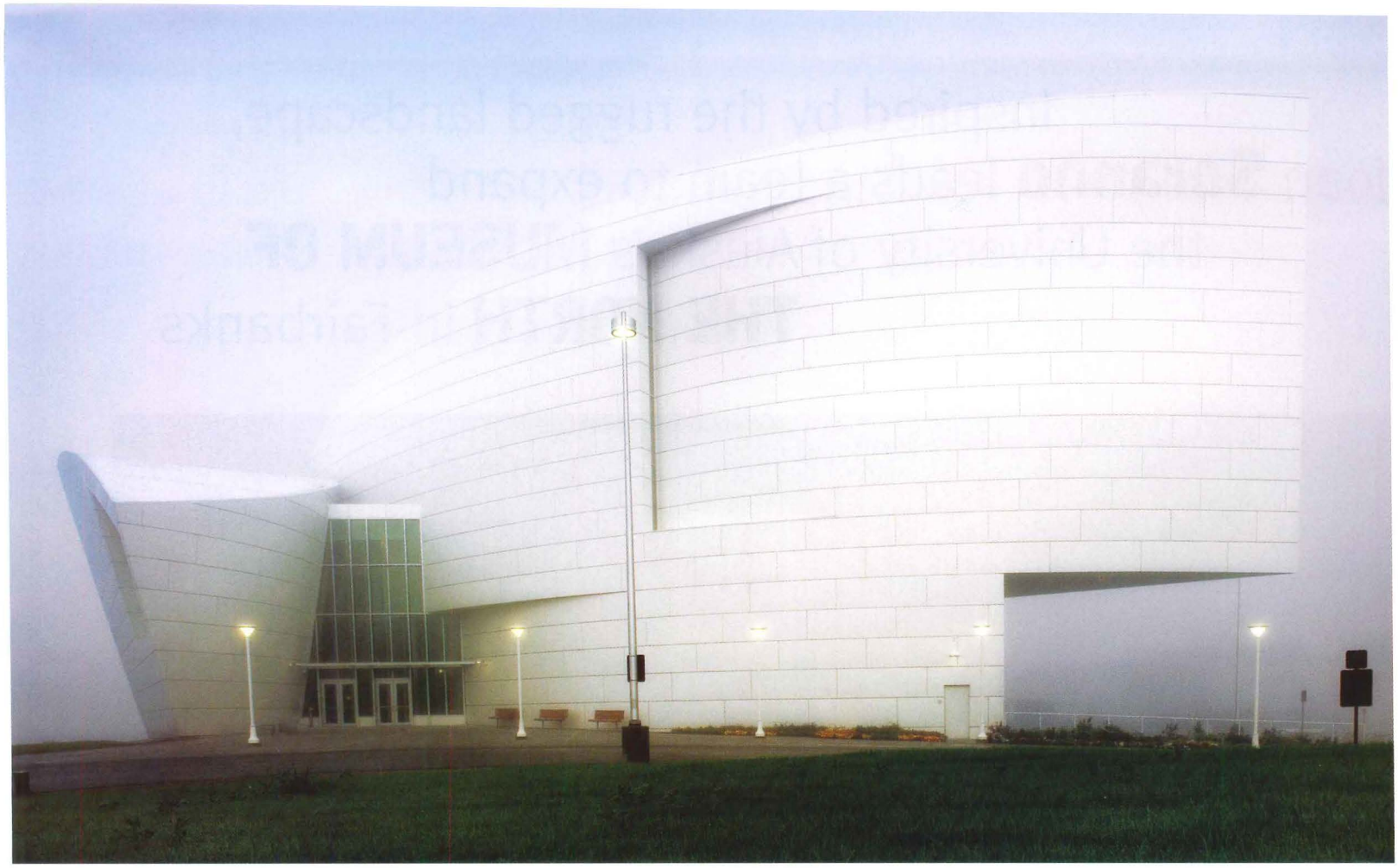
Founded in 1917, the university campus is perched on a ridge overlooking the Chena River that winds through the town by strip malls, warehouses, and boxy buildings. In the distance, the Tanana River Valley's arboreal forest stretches for 100 miles to the foot of the mighty Alaska Range. The university museum was founded in 1926 as a showcase for an archaeological collection, and today it is Alaska's foremost repository for regional natural history collections, complementing Classical and Modern art. The institution earned its own building in 1980, a 39,000-square-foot, flat-roofed Modern structure designed by HOK of St. Louis.

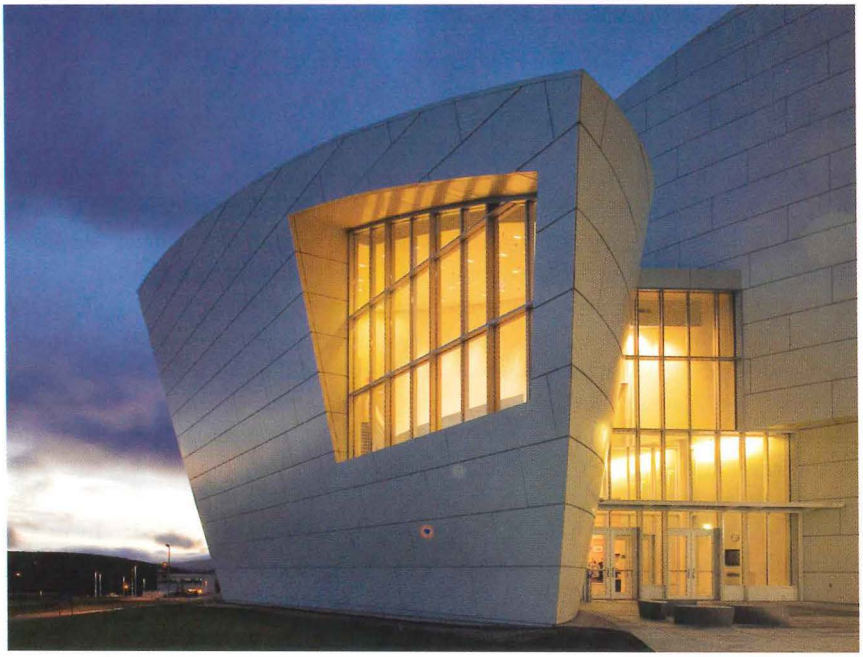
In the early 1990s, the university chancellor approached museum director Aldona Jonaitis about renovating the museum and building a new wing. The $42 million project was programmed to include a 44,000-square-foot addition, encompassing a separate gallery for art, an auditorium, a larger shop, open-to-view painting storage, and a second-floor social space. Part of the museum's purview, new research labs would allow ornithologists studying avian flu to dissect birds, while geneticists could study the makeup of 10,000-year-old plants. "I thought a gorgeous building would help show there could be a high-quality museum in a remote place," Jonaitis says.

Hammel, Green and Abrahamson teamed with GDM to compete against Peter Eisenman and Polshek Partnership, the other firms vying for the commission. HGA principal Joan Soranno, AIA, traveled to Fairbanks before completing her firm's proposal. Captivated by the Fairbanks site, Soranno drew inspiration from the nearby mountains. "I

Weld Royal is a print and broadcast journalist based in Juno, Alaska. She moved with her family to Alaska last year from New Jersey.

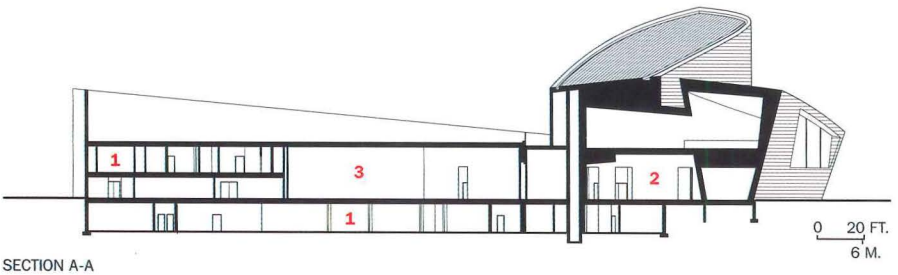
Project: *Museum of the North, University of Alaska, Fairbanks*
Architects: *GDM (architect of record)—James Blair, principal in charge; Scott Robbins, project architect; Hammel, Green and Abrahamson (design architect)—Joan Soranno, AIA, design principal; Gary Reetz, AIA, principal in charge; John Cook, AIA, Linda Morrissey, AIA, project architects*
Engineers: *PDC Consulting Engineers (civil and structural); Coffman Engineers (electrical, mechanical)*



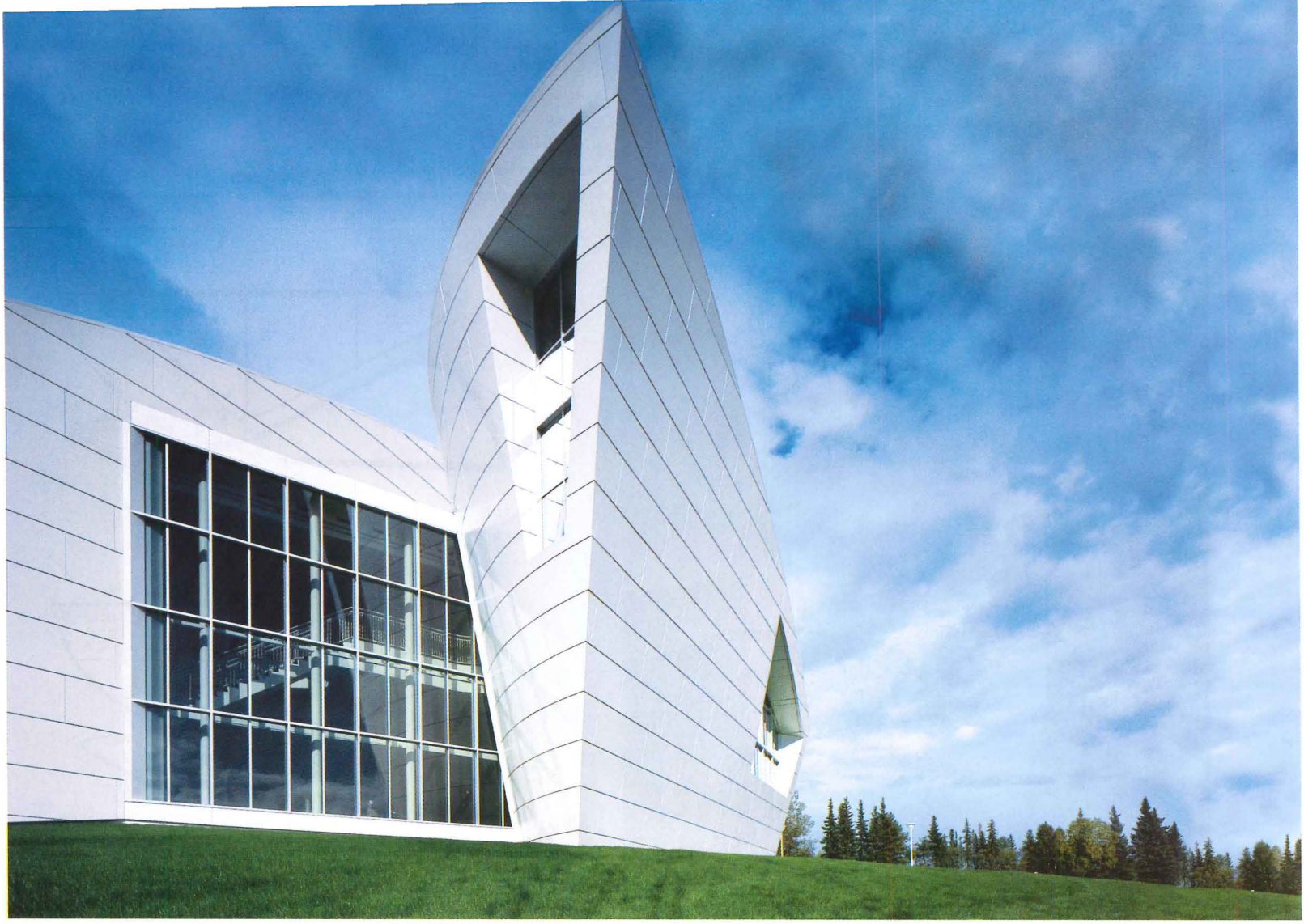


Architect Joan Soranno says she was inspired by the movement of glacial ice in Alaska to clad the building with shimmering white surfaces that change in differing light conditions (this page and opposite). Arriving visitors might feel as if they are entering a glacial crevasse. The building's glazing frames views of the mountain ranges in the distance, and allows daylight into new public spaces.

1. *Storage*
2. *Lobby*
3. *Gallery*



SECTION A-A



tried to capture the feeling with soaring shapes and forms that were still abstract and open to interpretation," she says. The university liked her approach and hired HGA's team in 1998 to design the expansion.

Meanwhile, Jonaitis traversed Alaska to raise money. Since funding would come from a mix of sources—Congress, the state, and private donors—she met with many civic groups and community boards to underscore the value of architecture in a state where many citizens remain nonplussed by contemporary design. Jonaitis says she envisioned a building that could put Fairbanks on the cultural map.

The 2,250-acre campus seems to have grown at odds to sensitive master planning. Classrooms are scattered in buildings as much as a quarter-mile apart, presenting a student-attendance challenge when the weather drops below zero. Despite its lack of architectural distinction, the site is graced by a beautiful backdrop of spruce, birch, and aspen trees.

The scattershot feeling of the place was lessened with the museum's completion this year. A new focal point, its dynamic assemblage of forms can be seen from the airport and the railway station. Clad in white enamel panels with a mica finish, the exterior takes on local colors as the light changes: the yellows and oranges of sunrise, the alpen glow of the afternoon, and greenish hues during winter nights when the Aurora Borealis dances in the sky.

Driving or walking along an access road that winds up a ridge, visitors first see the south side of the museum and a gently curved, one-level mass that appears to collide into a much larger, horizontal form. The road swings around the building, and on the north side arrives at a different view: a sloping horizontal form cantilevered 40 feet over the building's facade. Soranno shaped the building's envelope "in a 360-degree way, so there would be no official back side," she says. A 45-foot-tall curtain wall joins the two curved forms to mark the main entrance.

The museum's circulation is a simple parti—a long spine that links the new eastern entry to the old one, on the museum's west side. The 1970s enclosure is compositionally low and horizontal. Soranno used the original structure as a starting point for the core, now wrapped with curving forms conveying an upward sweep. Housed in the new addition, the main exhibition space, called the Gallery of Alaska, includes most of the natural history collection. Several large pieces, such as an Ice Age steppe bison mummy and the skull of a bowhead whale, are standouts on display. The existing building's structure has all but visually disappeared, except for a seismic seam (Fairbanks is in a high seismic zone) connecting the old and new buildings near the midpoint of the interior spine.

THE NEW FRONT DOOR OF THE MUSEUM WAS RELOCATED SO VISITORS WOULD APPROACH THE BUILDING FROM BELOW.

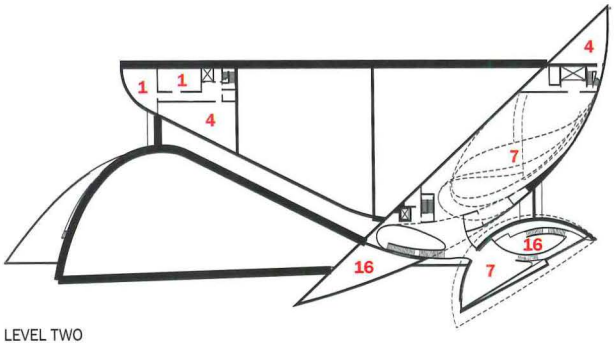
The lobby's high ceiling and expansive, south-facing glazing give the space a cathedral-like ambience. Windows offer a view of the Alaska Range capped by Mount McKinley. A "floating" staircase runs along the glass and links the lobby with another gallery on the second floor. This 4,900-square-foot gallery features a curving east wall rising 40 feet. The

space exhibits both art and artifacts intermixed in an egalitarian fashion.

A wide bridge connects the art gallery to a lounge and demonstrates the architects' skill in crafting a memorable space where one can contemplate art or Fairbanks's fast-changing light conditions. A curving staircase with low risers descends to the ground floor, past a large trapezoid-shaped window that also frames views of the Alaska Range.

Some museum finish details seem clumsy. Squared handrails on the floating staircase, for example, counter the prevailing, pristine curves. But as Fairbanks architect Charles Bettisworth, AIA, notes, the museum's break from the traditional local vernacular is already influencing Alaskan designers. "The museum does wonders to demonstrate what architecture here can achieve—an inspiring structure of beauty that people can enjoy much more than the simpler boxes we tend to inhabit." ■

1. *Storage*
2. *Office*
3. *Lab*
4. *Mechanical*
5. *Unexcavated/future*
6. *Lobby*
7. *Gallery*
8. *Auditorium*
9. *Retail shop*
10. *Café*
11. *Education*
12. *Research*
13. *Film center*
14. *Loading*
15. *Exhibits preparation*
16. *Open to below*



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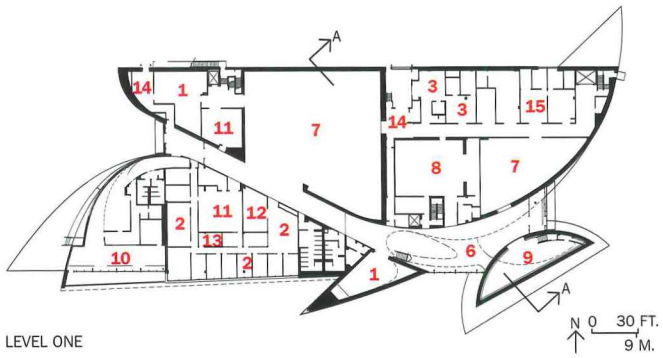
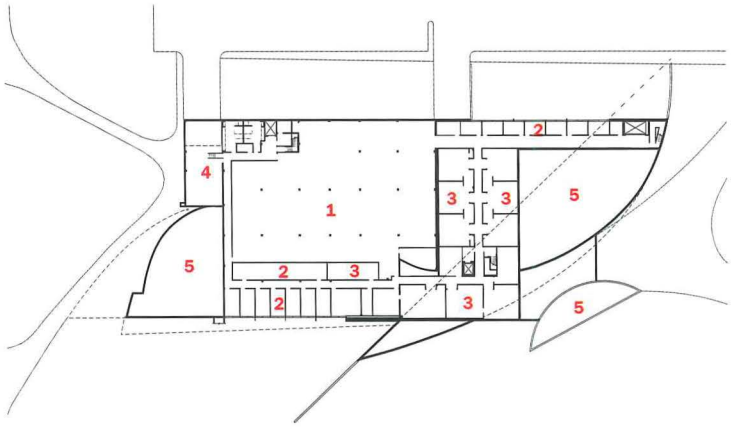


LEVEL ONE



LOWER LEVEL

Sources

Metal cladding: *Alcoa Architectural Products*
Curtain wall: *Kawneer*
Roofing: *Malarkey Roofing Products*
Snow restraint system: *Alpine Snow Guards*
Glazing: *Harting Glass Industries*
Custom glass canopies: *Super-Sky Products*
Metal doors: *Steelcraft*
Wood doors: *Lynden Door*
Hardware: *Schlage; McKinney; LCN; Von Duprin*
Acoustical ceiling: *Armstrong*

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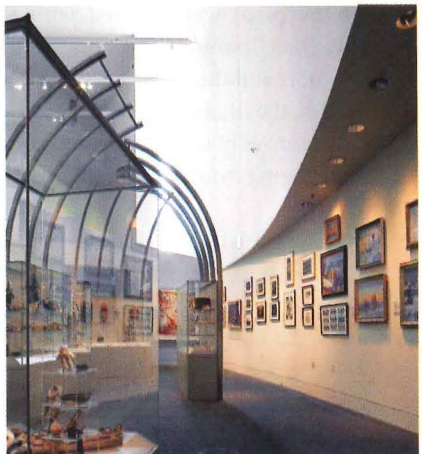
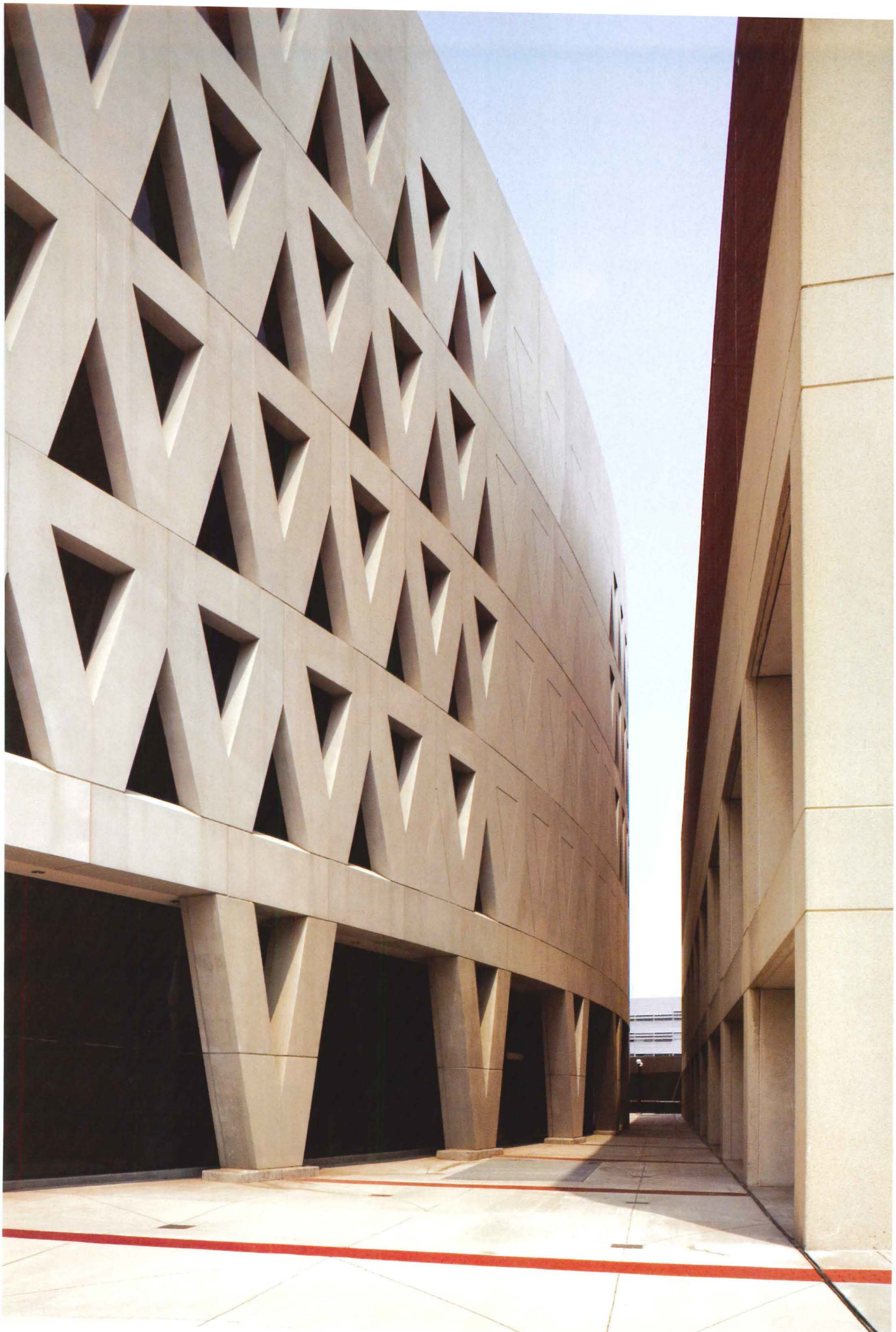


Curved stairways carry through the lines of the exterior shell (top left). The structure is cast-in-place concrete with a steel-braced frame. Exhibits focus on Alaska's natural history in addition to surveys of archaeology and art (left).

The public spaces of the museum feature glazing to frame views within dramatic, soaring spaces. A mix of daylight and electric light blend to enliven the building's white, curvaceous envelope.



The Lindner Ath
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With a curvy building that flexes its muscle quite elegantly, Bernard **Tschumi** creates the **LINDNER ATHLETICS CENTER** for the University of Cincinnati

By Sarah Amelar

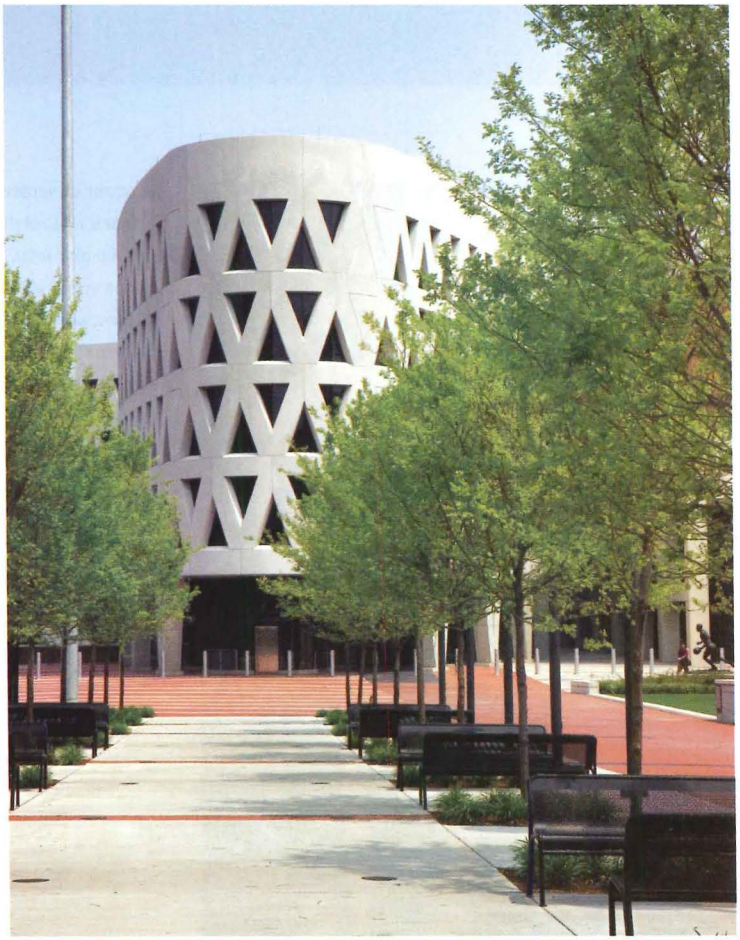
With an elongated kidney bean of a plan, the Richard E. Lindner Athletics Center slips sleekly into a tight and jaggedly irregular site at the University of Cincinnati. Though the client had given architect Bernard Tschumi, AIA, his pick of campus locations—and had not even considered offering such a stunningly cramped spot—the architect went right for this challenging scrap of land, squeezed by a football stadium, a basketball arena, and Morphosis's Campus Recreation Center [RECORD, October 2006, page 100].

"The idea of finding a simple solution to an extremely complex problem has always interested me," Tschumi explains. "And I saw this as a building about constraints, always in relation to what's immediately around it." But the university told him he could not build on that site. The constraints were more severe than he had realized: There, an existing building's underground mechanicals, requiring very long, column-free spans, would have to remain, along with access to its loading docks. But the more complicated the mix, the more this swatch of land enticed him. Proposing preliminary schemes with the necessary access points and spans, Tschumi ultimately convinced his client.

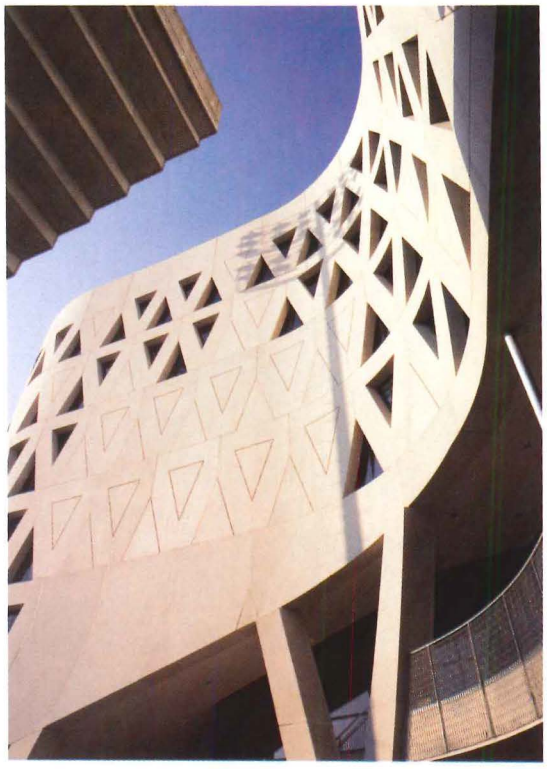
Certainly, the narrow parcel cuts across an especially congested one, but in truth, very few sites at the University of Cincinnati would have been simple. With a mélange of skewed axes and a football stadium in an oddly central location, the campus had evolved haphazardly as a commuter realm, rife with parking lots. Then, in 1989, the university launched an ambitious, 15-year building campaign, aspiring to transform the campus into an architecturally significant and cohesive domain. With a master plan by George Hargreaves, the school gradually commissioned projects by a cast of marquee architects, including Frank Gehry and Peter Eisenman.

The last commission went to Tschumi for the 236,000-square-foot Lindner Center. The $53 million structure would need 30,000 square feet of offices (to accommodate all the coaches in a single building for the first time), along with a sports-event ticketing center, a 335-seat auditorium, a permanent-exhibition gallery, a gift shop, a computer lab, tutoring and study rooms, a team practice gymnasium, university health services

Project: *Richard E. Lindner Athletics Center, University of Cincinnati, Ohio*
Architect: *Bernard Tschumi Architects—Bernard Tschumi, AIA, principal and lead designer; Kim Starr, project manager*
Architect of record: *glaserworks*
Exhibition design: *Perkins + Will / Eva Maddox Branded Environments*
Engineers: *THP; Arup*



Revealing itself differently depending on the vantage point, the building appears small from the campus's tree-lined paths (below) but shows a more expansive side where it embraces the stadium (left).



Precast-concrete covers encase a steel diagrid (above and left). To accommodate the plan's curves, some of the paired, flat, uniformly sized window panes form facets (above). On the interior (right), these triangular windows appear highly graphic, with black frames standing out against the white walls. The glass trophy case spans several floors (right).

d sports medicine facilities, classrooms, and a two-story faculty club.

The pairing of Swiss-born, Paris-bred Tschumi with American col-giate athletics may, at first, seem incongruous. Though briefly an exchange udent in the Midwest, he jokes that "the only thing I had in common with ncinnati's team was its colors—black and red," a reference to his trade-ark attire: all black, except for a red scarf. "But we architects can take on y sort of commission," he adds, "and in many ways, this is an office build-g." Soon, however, he was engaged in the spirit of the sport. The location one—abutting the end zone and joining athletic with academic realms—served far more than an ordinary office structure. From the Lindner, hletes would emerge almost ceremonially at the start of every game. "I real-ed," says Tschumi, "that the building could be part of the spectacle."

Rising to that occasion while tackling the abundant site adjacen-es, the architect studied multiple plan diagrams. He considered attaching s structure almost like a barnacle to either or both of the flanking build-gs, in some variations completely filling the existing gap. He also looked at e idea of creating a discrete, Platonic, freestanding object at the center of e site (perhaps strategically akin to Brunelleschi's Tempietto, with its cir-lar form maintaining autonomy within a tightly confining courtyard).

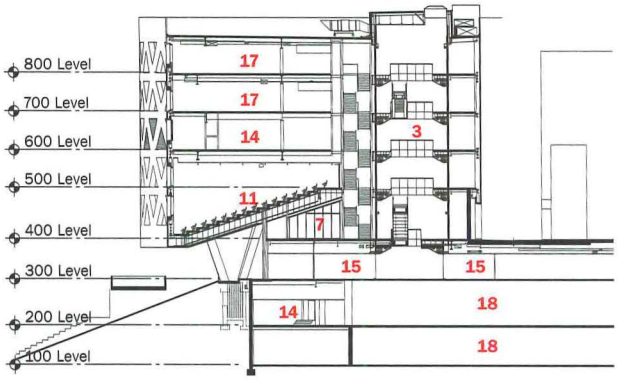
Tschumi finally landed on a hybrid strategy: "Freestanding Infill Contextual Freeform," as he dubs it. Without actually touching the eighbors, the kidney, or boomerang, plan engages each local condition a dialogue—extending out on one side to embrace a long stretch of sta-um bleachers, or nosing out where the athletes emerge, or bending in t another way to funnel people into the basketball arena. Unlike the lorphosis Recreation Center, right next door, with its compound sur-ces generating a veritable topography, the Lindner is undeniably an bject building (though simultaneously infill and freestanding).

The structure's eccentric footprint, however, wasn't the sole ben-iciary of site constraints. Those conditions also influenced the choice of ructural system, which, in turn, informed much of the overall aesthetic. o devise an outer shell strong enough to span up to 80 feet (allowing for e existing mechanicals), the architect turned to a diagrid exoskeleton—sentially a truss wall—that could touch the ground at just a few points. hough Tschumi initially favored exposed steel, he realized that a non-sulated steel skeleton would draw condensation in Cincinnati's climate, d, equally unsatisfactory, a steel-clad, insulated-concrete exoskeleton uld be far more massive and less graceful than the triangulated forms envisioned. So he designed a steel diagrid with fireproofing and insu-ion, all encased in 575 precast-concrete covers.

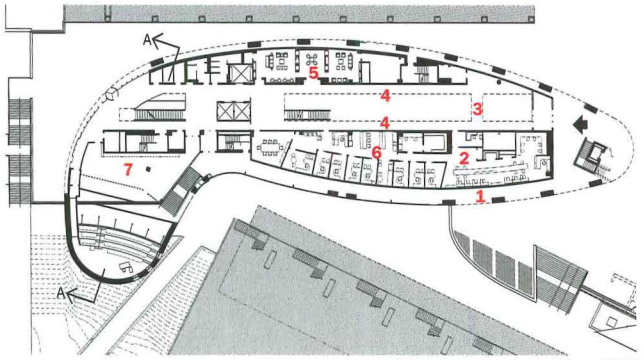
But a diagrid rising from a plan with 12 different curves is a com-x animal. To accommodate bending diagonals, many of the cast-concrete covers actually had to warp. The architectural team (which luded Kim Starr, Tschumi's project manager, and glaserworks, the archi-t of record) analyzed the various configurations, classifying them into 20 es, radically reducing the number of different forms needed. To use a uni-mly dimensioned, noncurving (hence economical) glass panel for the ire shell, the architect gave each opening a pair of triangular panes with an ustable mullion in between, allowing some windows to be subtly faceted.

Veering away from convention, the shell forms a continuum h neither corners nor separate faces. "I have a lot of reservations about ades that are facades," says Tschumi. "I wanted a building that would w its athleticism, its strength and power—the opposite of decorative."

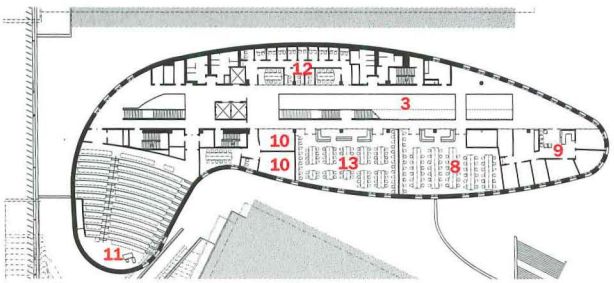
Yes, structure determined much of the aesthetic, but at the same e, paradoxically, this "nondecorative" exterior has an almost retro and zed 1950s or '60s feel, reminiscent of Wallace K. Harrison's 1964 Hall of nce, in Queens, New York, with its amoeboid plan and curvy elevations. freeform plan may never fully escape associations with the era of kid-shaped swimming pools and coffee tables. And the diagrid—which



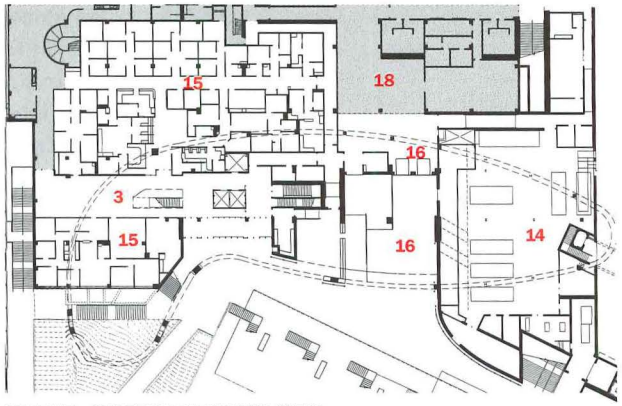
SECTION A-A



400 LEVEL: MAIN ENTRY FLOOR



500 LEVEL: ONE FLOOR ABOVE MAIN ENTRY

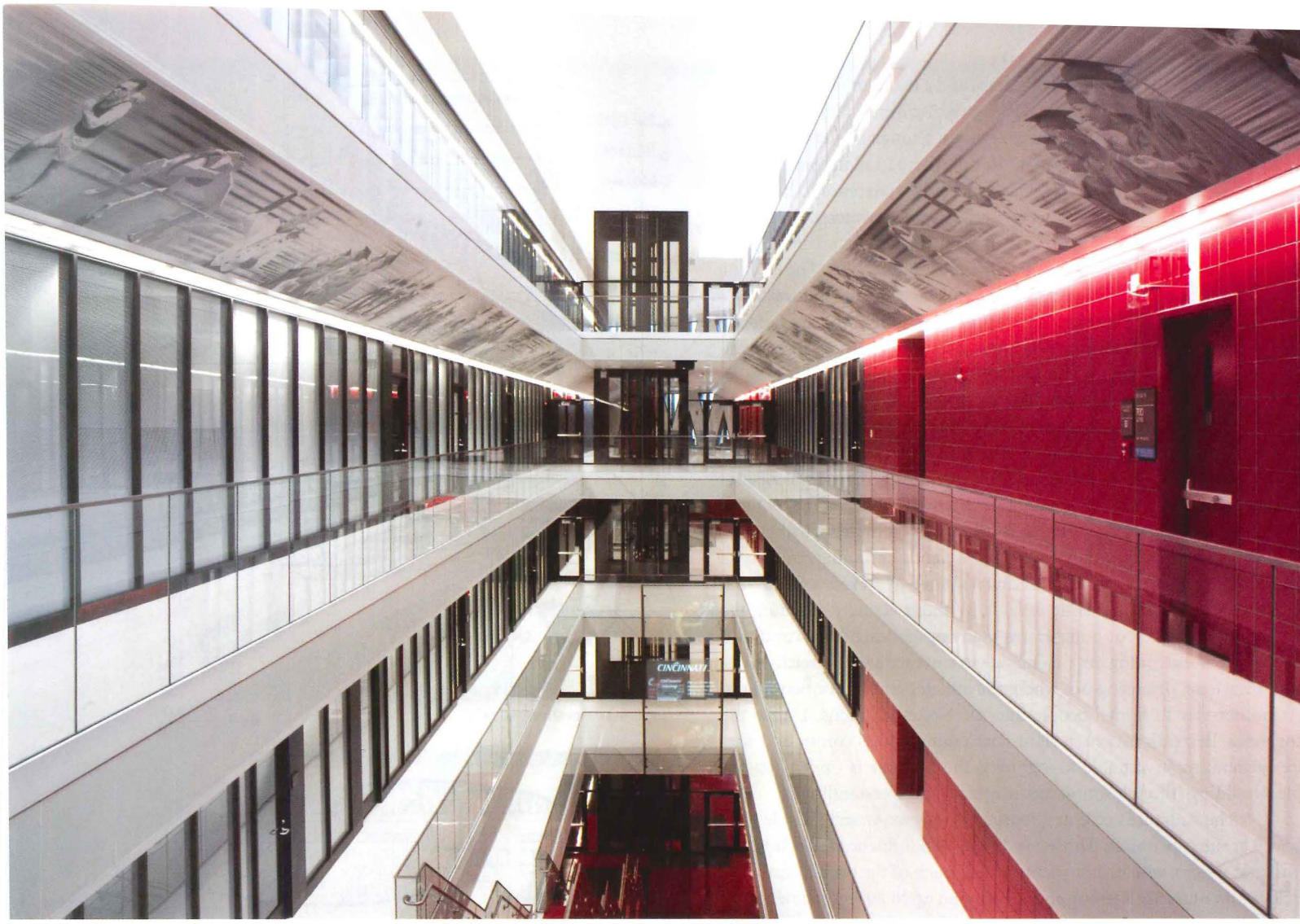


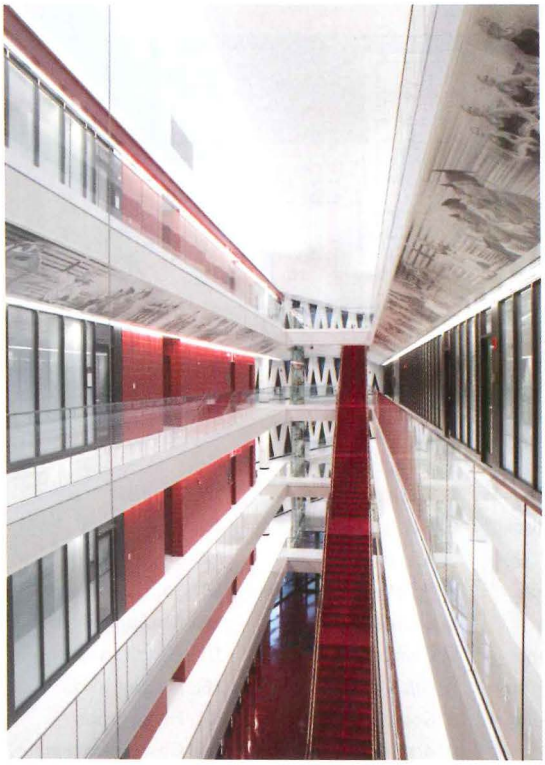
300 LEVEL: ONE FLOOR BELOW MAIN ENTRY

N 0 30 FT. 9 M.

The expansive levels below grade (bottom plan, above) dwarf the boomerang-shaped floorplates above them (two top plans, above). An auditorium spans two floors (section, at top).

1. *Ticket windows*
2. *Box office*
3. *Atrium*
4. *Permanent exhibition*
5. *Lounge*
6. *Club offices*
7. *Gift shop*
8. *Computer lab*
9. *Academic services*
10. *Seminar*
11. *Auditorium*
12. *Tutoring*
13. *Study hall*
14. *Mechanical*
15. *Health services*
16. *Loading docks*
17. *Faculty club*
18. *Existing (to remain)*





For the luminous five-story atrium, Tschumi created a lobby floor of terrazzo in the school's vibrant colors: red and black (opposite, top). This entry-level zone forms a mini museum with permanent exhibitions by Eva Maddox. Evoking filmstrips, the display continues on the undersides of the atrium walkways that flank the long red stair (left). Fritted glass partitions (above and left) enclose study areas and offices, which have triangular windows out, some with ball field views (right).

nds to be read as patterning—was also popular in the '60s and '70s, ough far less structurally evolved then. Adding to the unintended deco- tive effect, the Lindner's luminously pale, creamy-smooth concrete is ıdeniably pretty, giving the shell the qualities of a patterned sheath, or en a continuous sheet, albeit a structurally hefty one, of lacy wallpaper.

The perception of the building almost like a confection may come rtly from its relatively small size, rising only five stories. But this is merely ɛ tip of the proverbial meringue. Three more stories, with rectilinear floor ıtes almost twice as large, totalling 124,000 square feet, extend below ıde to house health services, locker rooms, loading docks, and more.

But the real trophy on display is the 5-story volume, a luminous ium space rising the full height to a linear skylight. Here, the narrow ɔr area, coupled with transparent materials, allows the voluptuous plan ł the pattern of triangular windows to read through clearly on the inte- r. A straight run of red stairs and a glazed elevator ascend to offices and dy areas, separated from the walkways only by fritted-glass partitions.

The glossy lobby floor of terrazzo (a material often associated h mid-20th-century lobbies) in vibrant red and black invokes the ɔol colors and bearcat mascot, but with a fresh, 21st-century bravura. · side of the entry level featuring primarily black flooring is dedicated permanent exhibition on the university's academic milestones (such ɛientific discoveries and Nobel prizes), while the permanent display he red side commemorates its sports history.

Tschumi says he encouraged exhibition designer Eva Maddox to exploit the underbellies of his atrium walkways and cover these surfaces with pictorial narrative strips. The overall effect of this long, narrow interior is dynamic, even cinematic, evoking filmstrips through the repetition of linear sequences and black frames on the glass partitions and transparent elevator shaft. A multistory glass trophy case and a ghostly, see-through, rear-projected film screen hang from the balconies—honoring sports victories, while adding to the clear, glossy materiality. Meanwhile, the highly graphic pattern of black-framed triangular windows against white walls plays boldly in the background, revealing views onto the live football field.

Tschumi may not have grown up waving triangular sports pennants, but he clearly grasped the potential of the triangle in connecting his display case of a building with the events it celebrates. Though a discrete object, remarkably calm and self-contained from the exterior, the Lindner Center opens up adeptly. Its sheathing even dips down toward the stadium, as if bowing slightly, while accentuating the place where players pour out from the locker rooms before a game. The constrictive exterior conditions and the dynamic interior come together with surprising success, or as one prospective student put it when first entering the building: "Ah, sweet." ■

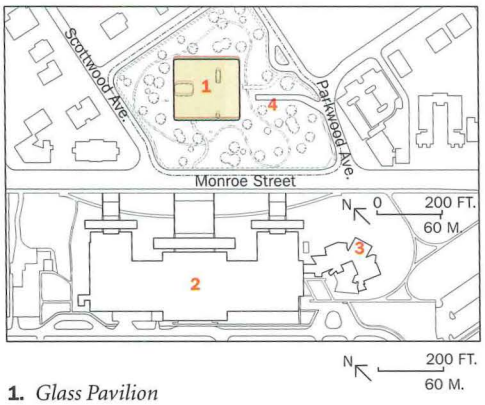
Sources
Concrete: *High Concrete Technology*
Curtain wall: *Tubelite*
Ceilings: *Hunter Douglas*
Elevators: *Otis*

For more information on this project, go to Projects at **archrecord.construction.com**.

A gap runs between the glass walls of a multi-purpose room (right in photo) and a courtyard (left in photo), providing a thermal buffer and cutting condensation.

SANAA's Sejima and Nishizawa create layers of reflections and perspectives in their **GLASS PAVILION** at the Toledo Museum of Art

Clifford A. Pearson



1. *Glass Pavilion*
2. *Main museum*
3. *Center for Visual Arts*
4. *Loading dock*

The $30 million pavilion sits in a park (above left), facing the main museum and Gehry's Center for Visual Arts (site plan, top). A hot shop is visible from outside (left). Some of the heat from the shop is recycled for radiant floor panels.

Just as theater-in-the-round radically changes the relationship between actors and audience, so the new Glass Pavilion at the Toledo Museum of Art overts many of the old rules of displaying . By using mostly clear-glass walls for both e building's envelope and its interior partiins, the architects Kazuyo Sejima and Ryue shizawa of the Tokyo firm SANAA have rformed the museum equivalent of stripping away the proscenium stage d creating a more fluid dynamic between art and viewer. Materials and undaries disappear, corners dissolve, front and back no longer apply. The ilding provides spatial drama using a remarkable economy of means, but the same time creates a series of challenges for the museum's curators.

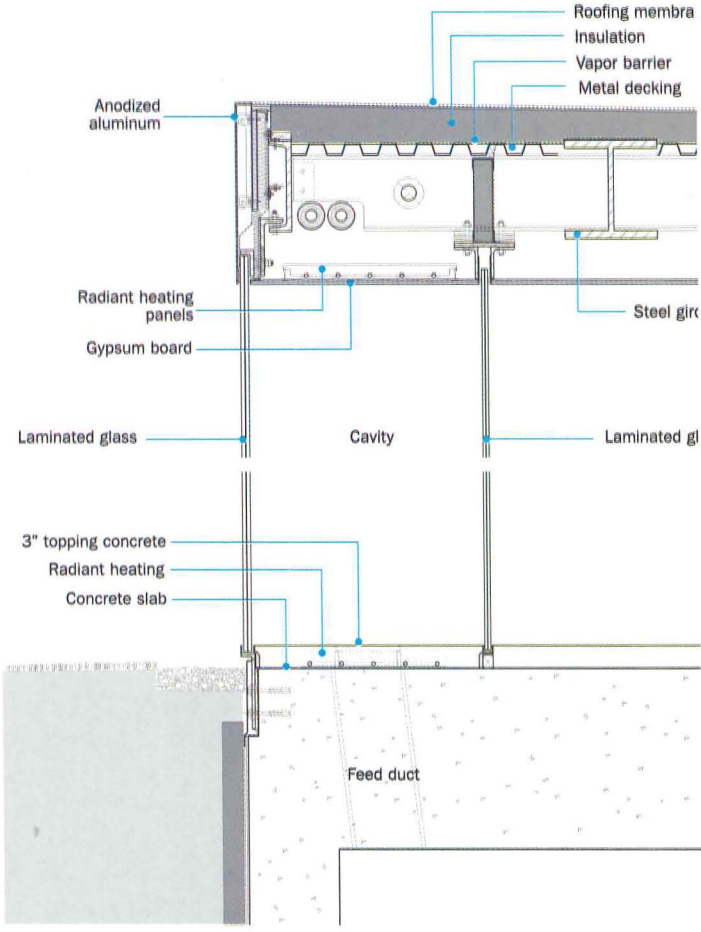
The 76,000-square-foot pavilion houses the museum's impres- collection of more than 5,000 pieces of glass art and sits in a small k across Monroe Street from the institution's Neoclassical main build- . Placing glass art in a glass building seems like an obvious strategy, but ıs out to be quite tricky to pull off. For example, how do you protect vorks from ultraviolet rays? How do you display them when most s are transparent and traditional mounting techniques are impossible? ally straightforward decisions—such as where to locate a thermo- —become difficult puzzles in an all-glass gallery.

Sejima and Nishizawa love wrestling with such design dilemmas. eir 21st Century Museum in Kanazawa, Japan [RECORD, February 2005, 88], they figured out how to place square galleries in a circular glass ling and move visitors through a mazelike interior with few traditional ays. And at the New Museum now under construction in New York they have devised an intriguing way of stacking metal boxes off-axis to daylight into the galleries. When the Toledo Museum picked SANAA 00, it gambled on a young firm known by very few people outside of . Today, SANAA is one of the hottest Japanese firms, with projects all he world, including a recently completed design school in Essen, any; a theater in Almere, Holland; a museum in Valencia, Spain; an building in Basel, Switzerland; and the Louvre II in Lens, France. The Museum's gutsy call looks nothing short of prescient now.

The Glass Pavilion's site imposed a number of constraints on its cts. To the south, it faced the main museum's 1912 colonnaded nd Frank Gehry's 1992 Center for the Visual Arts. To the north and west, it needed to address the residential scale of the Old West End, a leafy, affluent neighborhood of Victorian and Edwardian houses. From the beginning, Sejima and Nishizawa decided they would respond to the very different characters of the pavilion's neighbors by using simple forms and subtle materials and keeping the building's height to just one story above ground. They showed the museum's building committee about half a dozen schemes, including one with a cluster of small structures. But the museum wanted to bring galleries and glass-making hot shops under one

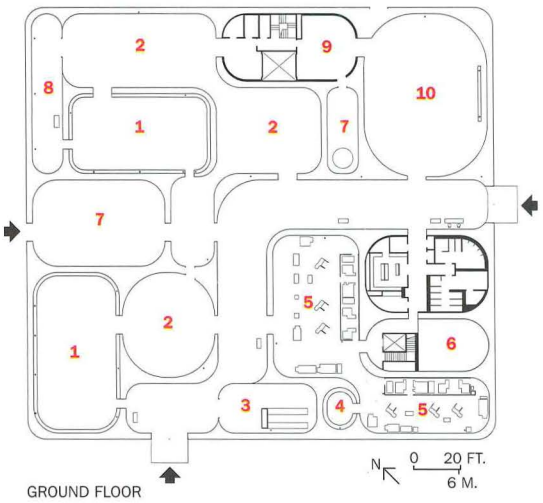
Project: *Toledo Museum of Art Glass Pavilion, Toledo, Ohio*
Architect: *Kazuyo Sejima + Ryue Nishizawa/SANAA—Kazuyo Sejima, Ryue Nishizawa, principals; Takayuki Hasegawa, Forian Idenburg, Toshihiro Oki, project architects; Mizuki Imamura, Junya Ishigami, Hiroshi Kikuchi, Tetsuo Kondo, Keiko Uchiyama, project team*
Architect of record: *Kendall Heaton*
Engineers: *SAPS/Sasaki and Partners (structural concept); Guy Nordenson and Associates (structural); Cosentini (m/e/p); Transsolar (environmental)*
Project manager: *Paratus Group*
General contractor: *Rudolph/Libbe*

Glass panels, made in Germany, then molded in China, are secured in channels in the floor and ceiling. Visitors can enter the pavilion from a large courtyard (left in photo).



SECTION THROUGH CURTAIN WALL

The pavilion's main foyer (above) winds its way between galleries and other spaces such as hot shops, a café, and a multipurpose room. Slender steel columns and a ¾-inch-thick steel wall wrapping around a lampworking shop (left in photo, top) carry most of the building's vertical loads.



GROUND FLOOR

1. *Enclosed gallery*
2. *Gallery*
3. *Café*
4. *Enclosed courtyard*
5. *Hot shop*
6. *Lampworking*
7. *Courtyard*
8. *Rest area*
9. *Food handling*
10. *Multipurpose*

roof (they had been in separate facilities before), so it selected a sche
that turned the pavilion into one large vitrine with curved glass corne

"We wanted a showcase for our glass collection," says D
Bacigalupi, the museum's director. "SANAA's design changes the way y
view the artworks, since you're not seeing them against flat walls,"
explains. "They seem to sing in these spaces."

Sejima and Nishizawa know how to coax dramatic tension
of almost nothing. By reducing every element to its bare minimum—
thinnest wall, the most slender column, the clearest glass—the archite
create an ethereal beauty that makes you marvel that it doesn't just bl
away. The building's exterior skin, made of low-iron glass panels 8 f
wide and 13½ feet high, is just 1 inch thick. Interior glass walls are j
¾ inch thick. Thirty-five rolled-steel columns just 3½-to-4¼ inches th
support the steel roof, along with a ¾-inch-thick curved steel wall wr
ping around the building's lampworking room and some cross brac
hidden within three Sheetrock walls.

Not only does the Glass Pavilion float within its wooded pa
but its galleries float like glass bubbles inside its sheer envelope. Sett
interior glass partitions about 2½ feet behind the building's exterior sl
the architects created a thermal buffer that reduces energy consumpt
and eliminates condensation. To protect artworks from solar radiati
translucent, silvery curtains can be drawn where needed. Wanting to k
the roof as thin as possible (just 1½ feet) and unblemished by protrud
mechanical systems, SANAA placed air ducts in the pavilion's floor

ocated most of the physical plant in a nearby building. A basement hides pace for museum offices, studios for activities such as sandblasting and asting, a loading dock, and 15,000 square feet for future galleries.

As part of Sejima and Nishizawa's strategy of dematerialization, a eries of courtyards carve out spaces within the confines of the building, reating a trio of outdoor rooms that reduce glare by bringing daylight nside and balancing the light coming in from the perimeter. In a peculiarly apanese way, the courtyards act as voids—free of benches, furniture, or ven art. Visitors can enter the museum through the largest courtyard, but he other two are inaccessible to the public. Like the gap space that runs etween the pavilion's glass walls, the courtyards assert a strong visual pres- nce, but remain tantalizingly out of reach. In Japanese architecture, the oncept of *ma*—a gap in either time or space—has long played an impor- ant role. At the Glass Pavilion, Sejima and Nishizawa use *ma* to animate vhat could be considered just wasted, leftover space. To American visitors, he gap between all the glass walls—which is large enough for maintenance vorkers to walk through—creates an initial wave of frustration. We can see he space but can't get inside it. Then we start imagining what might hap- en in there—not just men in overalls cleaning the glass, but perhaps nodern dancers snaking their way around and between the galleries.

Working with the graphic design firm 2x4, SANAA developed an ngenious system of displaying glass art and providing way-finding cues. Glass vitrines set on rectangular bases serve as freestanding showcases for nost of the art, while a few works, such as a Dale Chihuly piece, are sus- pended from the ceiling. Canted surfaces around the top of each base provide space for information about the art. To help visitors navigate their way through the museum, 2x4 devised a simple vocabulary of gray circles and logos for the rooms, which are embedded in the concrete floor at the two main entrances and the threshold of each gallery. With no opaque walls on which to mount thermostats, the architects set them on curving, freestanding rods inside the rooms. Two hot shops equipped with furnaces that reach 2,200 degrees act as major attractions.

Translucent curtains can be pulled around the glass walls of courtyards, some visible but not accessible to the public (right in photo, above), to protect artwork from UV rays.

SANAA's first completed building in the U.S., the Glass Pavilion displays the firm's talent for manipulating simple geometry and a restricted palette of materials to maximum effect. Looking at the reflections, refractions, and layers of spaces visible in the building's ethereal surfaces, you understand why people have been fascinated by glass for thousands of years. ■

Sources
Glass curtain wall: *Pilkington*
Anodized aluminum fascia: *UAD*
Acoustical metal ceilings: *Armstrong*
Gallery lighting: *Litelab*
Downlights: *Lucifer*
Exterior lights: *Louis Poulsen*
Paint: *PPG*

For more information on this project, go to Projects at **archrecord.construction.com**.

The new Hamilton Building of the Denver Art Museum sits on a 7.5 acre plot near the State Capitol, and next to the seven-story North Building designed by Gio Ponti in 1971. Facing the new structure is a residential and parking complex that Libeskind and Davis Partnership also executed.

Studio Daniel **Libeskind** and the Davis **Partnership** shake up downtown with a new addition to the **DENVER ART MUSEUM**

By Suzanne Stephens

The shardlike titanium-clad forms of the Denver Art Museum's Frederic C. Hamilton Building burst on the city's downtown with the energy of a lightning bolt. The museum addition, designed by Studio Daniel Libeskind in joint venture with Davis Partnership, will not easily win over those who decry the way that "signature" architecture tends to overwhelm art on display. With its fractured shape, slanted planes, and sharp corners galore inside and out, it pointedly and insouciantly declares its position in the ongoing debate about whether or not architecture should fade into the background when displaying art.

Site plan with residence and garage, plaza and museum.

Nevertheless, as museumgoers thread their way through a series of galleries, they will find arresting platforms for viewing art, even where the angular geometry creates compelling and sometimes vertiginous vistas. But more about that later. Regardless of the controversy about the display of art within the canted gallery walls, the jagged building is a surprisingly successful tour de force on urbanistic grounds alone. It revitalizes an area of downtown Denver between Civic Center Park, the location of the Colorado State Capitol, and a dilapidated district to the south dubbed the Golden Triangle, now in the process of being gentrified with housing, art galleries, shops, and restaurants [RECORD, November, 2006, page 21].

At the southwestern end of the Beaux-Arts park stands the home of the Denver Art Museum, which was designed in 1971 by Gio Ponti, the Italian architect who was founding editor of *Domus*. Even in those pre-Bilbao Guggenheim days, the museum figured it needed an architect of international stature to draw the crowds. The local architect for the job, James Sudler Associates, chose as design consultant the Milan office of Ponti's firm—Studio Ponti, Fornaroli, Roselli—largely based on his sleekly Modern Pirelli Building in Milan of 1956 [RECORD, March, 1972, page 87]. Ponti, however, did something quite different in Denver: He designed two connected towers clad in reflective glass tiles, which, with 28 sides, jaunty crenellations, and myriad slot windows resembled a medieval fortress. It earned the epithet "eccentric."

Next door looms Michael Graves's addition to the Denver Central Library of 1995, a large-scale assemblage of polychromatic drums and cubic blocks that arguably adds an equally "eccentric" note on the the park.

A balletic *grand jeté*

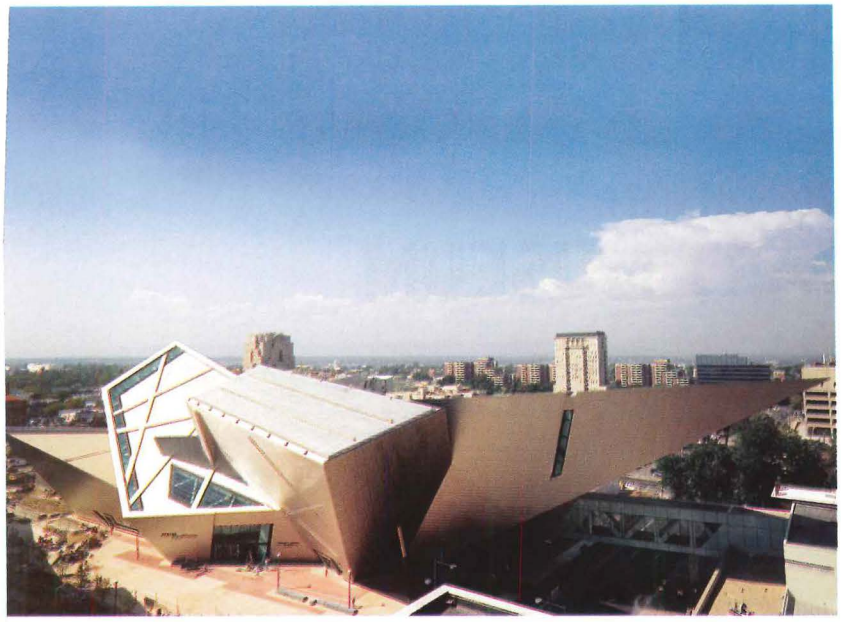
When the museum decided its collections of 60,000-plus artworks had outgrown the dark, loftlike floors of the seven-story building, it chose to cross over 13th Avenue to the south. There it could erect a new, 146,000-square-foot building with 30,000 square feet of exhibition space. In order to finance the $110 million project (which includes existing building renovations and other expenditures), the Denver Art Museum obtained a $62.5 million bond from the city's voters. Then it raised $47 million more in private money from a capital campaign, plus $62.5 million in private endowment funds.

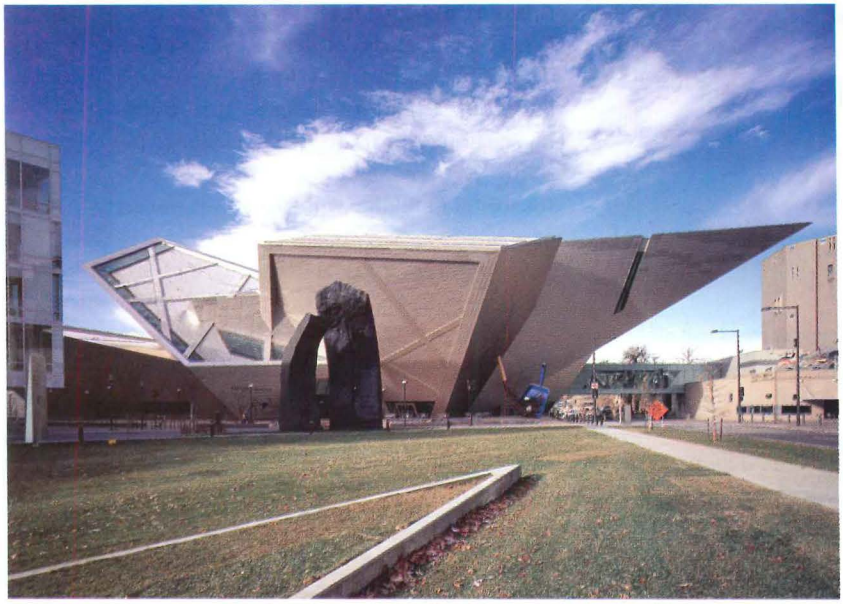
Libeskind's own glimmering, center-stage artifact seems poised *en pointe*, lifting off from its base while cantilevering dangerously and dynamically in different directions. A second-story bridge connecting to Ponti's structure, now called the North Building, shoots out like the arm of a ballerina grasping her taller partner in an athletic pas de deux.

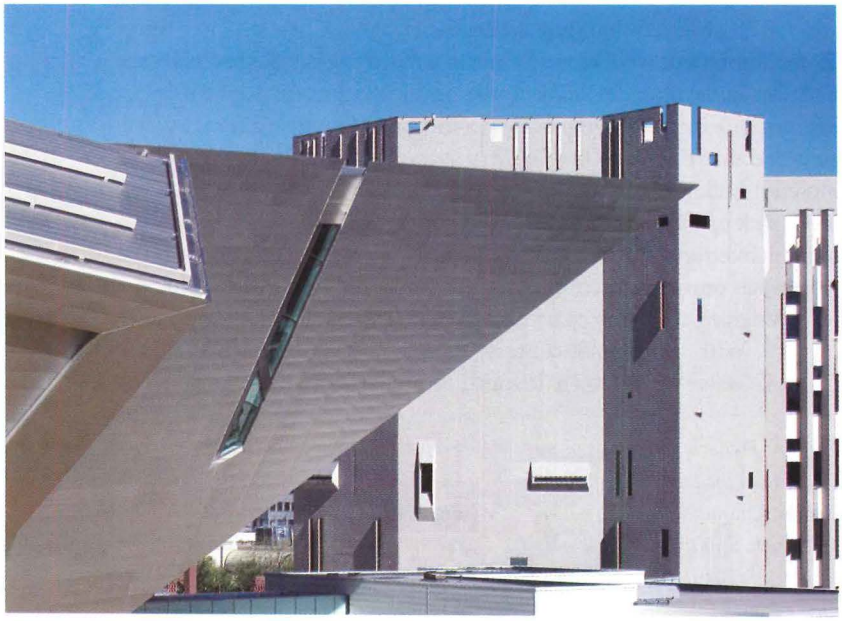
In front of the new addition, Libeskind designed a large plaza, which is also edged by his Museum Residence, another new structure where 55 condominiums wrap around a 1,000-slot parking garage that serves the museum. In the Museum Residence, perpendicular lines (so helpful for placing furniture in apartments) make a comeback. More than a few diagonal, zinc-clad shards seem to have flown out from the whirling dervish of the museum building to encrust the residential building. Yet the shardettes nicely pick up the design theme of the museum while providing the condominium interiors with sharply framed, wide-angle views of its neighbor. The project has proved so successful that Libeskind and Davis Partnership are busy designing a 17-story apartment and hotel tower also on the site.

With this overall context—Beaux-Arts civic center, the State Capitol, Graves's full-blown Tuscan-Postmodern structure, and Ponti's

Project: *Frederic C. Hamilton Building at the Denver Art Museum, Denver, Colorado*
Architect: *Studio Daniel Libeskind with Davis Partnership, a joint venture—Daniel Libeskind, principal; Brit Probst, AIA, principal (Davis); Maria Cole, AIA, project architect (Davis)*
Engineers: *Arup (structural, mechanical); MKK Consulting Engineer (mechanical, electrical); J.F. Sato (civil)*







The tilting planes of the titanium-clad addition lean out over the entrance plaza (left). A pedestrian bridge under the 100-foot-long cantilevered prow on the north connects to Ponti's North Building (middle and bottom).

precursor-of-Postmodernism gambit—you would think the Libeskind colossus would create total havoc in downtown Denver. Ironically, the opposite happens. Ponti and Graves's interlopers in a Beaux-Arts civic space become more integral to the show now that the energy and action has shifted to backstage. With the advent of a third weird presence in the cast of characters, a beguiling interaction links the ensemble.

The Denver Art Museum chose Libeskind as its architect for the expansion in 2000, in a process involving public presentations by three short-listed contenders, Arata Isozaki, Thom Mayne, and Libeskind. While Libeskind impressed the Denverites with his Jewish Museum in Berlin [RECORD, January 1999, page 76], the Denver addition had to offer a variety of exhibition spaces that could accommodate large-scale (a.k.a. "blockbuster") temporary exhibitions as well as the museum's own varied collections of contemporary and Modern art, and its collections of African, Oceanic, and Western American art. After he was selected, Libeskind asked the Denver architects Davis Partnership to form a joint venture. As Davis principal Brit Probst, AIA, explains, both firms worked as a single team: The schematic design was carried out in Berlin, where Libeskind was still located, then design development and construction phases moved to Denver. Six people from Studio Libeskind were stationed in Davis's office throughout, although there were continual back-and-forth visitations with the Libeskind office once it moved to New York in 2002.

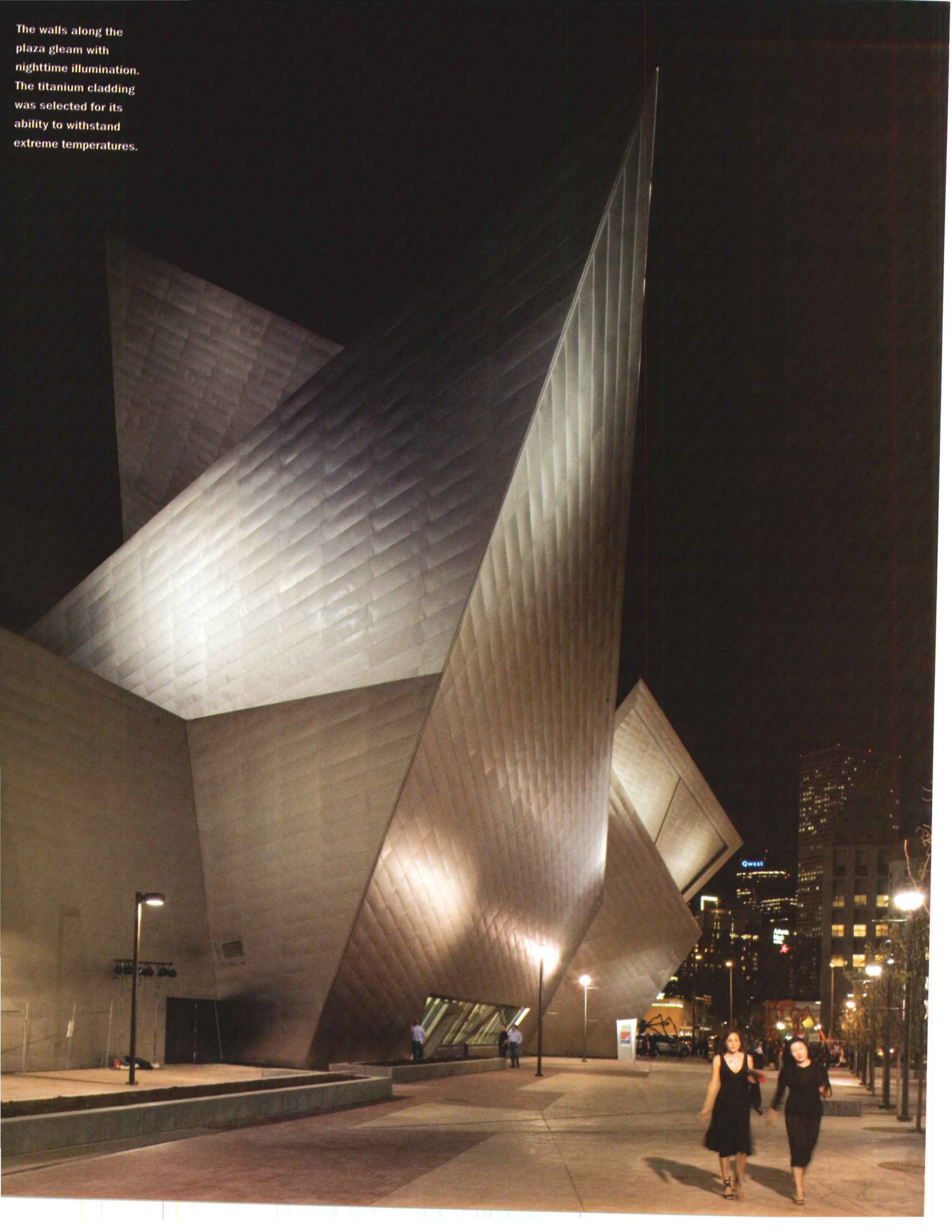
A whirl within

The Hamilton Building's entrance on the plaza draws museumgoers into the 120-foot-high atrium, which twists and turns in a dramatically internalized echo of the exterior's canted planes. The gallery walls, Libeskind bravely boasts, also follow the exterior form. Not since the triangulated galleries of I.M. Pei's 1978 East Wing of the National Gallery (and before that, the spiraling slanted envelope of Frank Lloyd Wright's Guggenheim Museum of 1959) has the display of art been required to submit so profoundly to the demands of an architectural corset.

To the museum's credit, the director, Lewis Sharp, and his curators were open to the challenge, and worked with Libeskind to avoid the looming container-versus-contained conflict. In addition, the museum installation designer Daniel Kohl created freestanding partitions in the four levels of galleries to reinforce the geometry of the building. The display system gives differently sized objects and art a sense of scale, and a color palette distinguishes the installations from Libeskind's white interior architecture. The balance between objects, color, installation enclosure, and the architectural envelope is successful for the most part, especially in the galleries currently showing Native American art on the second floor. Some questionable moments occur: The contained display of African art on the fourth floor can feel claustrophobic; Western American art galleries on the second floor, dominated by bland tan partitions, lack oomph.

Some installations gain in dramatic power from the unusual sight lines. Antony Gormley's spikey statue *Quantum Cloud XXXIII* eerily occupies the pointed prow of the contemporary art gallery on the fourth floor arrestingly pointed up by a shaft of light coming through the glazed slo next to it. A Gene Davis painting, *Phantom Tattoo*, floats on a perpendicular plane away from the sloping walls, underscoring its optical nature.

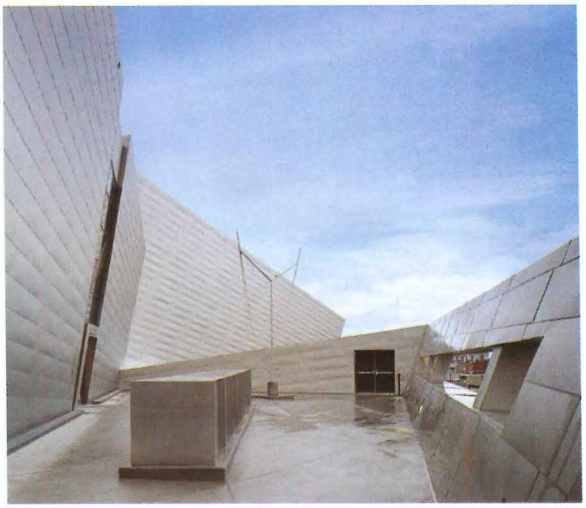
Unfortunately, one of the things evidently not confronted was th demand by the ADA that large chunks of a building with sharp, angula edges have little fences around them to prevent disabled museumgoer from bumping into them. The presence of a surfeit of these diminutiv

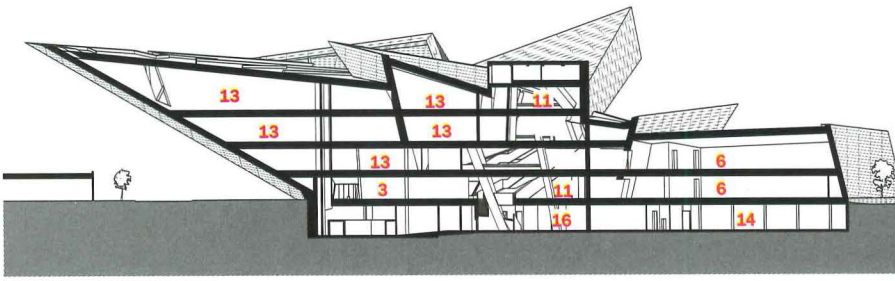


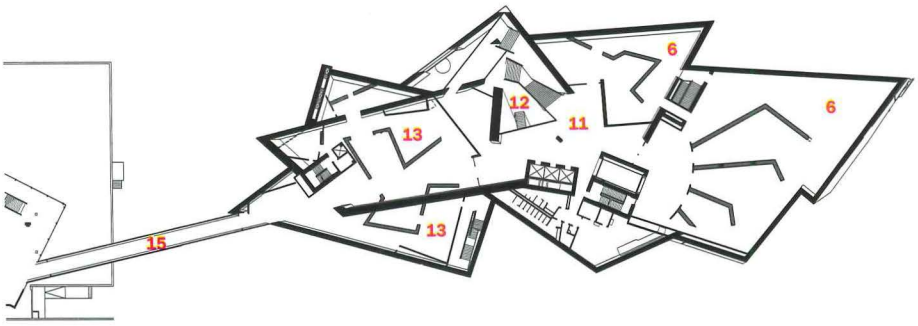
The walls along the plaza gleam with nighttime illumination. The titanium cladding was selected for its ability to withstand extreme temperatures.

The atrium's dark granite stairs, bounded by slanted and sloped white gypsum board walls, take visitors up and around the four levels of galleries (this spread). From the upper reaches (opposite) of the 120-foot-high space, visitors can see a LED-light and mirrored-disk art installation by Tatsuo Miyajima, called *Engi*.

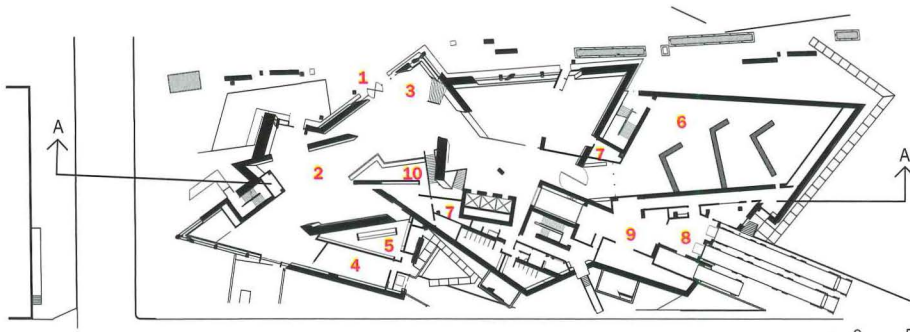
The sculpture terrace on the third floor (below) contains a piece by Donald Judd that blends into the architecture. On the fourth level (middle), a work by Antony Gormley dramatizes the prowlike corner; while the second level contains the largest temporary exhibition gallery (bottom).







SECOND FLOOR



FIRST FLOOR

1. *Entry*
2. *Café*
3. *Lobby*
4. *Kitchen*
5. *Coats*
6. *Special exhibition*
7. *Office*
8. *Loading dock*
9. *Unpacking*
10. *Reception*
11. *Atrium*
12. *Open to below*
13. *Permanent exhibition*
14. *Art storage*
15. *Bridge to North Building*
16. *Auditorium lobby*

guardrails at first looks like some installation by Richard Artschwag
Only after seeing so many do you recognize this is for real.

Structural challenges

While Libeskind cites the Rocky Mountains in the city's distance as ins
ration for his architecture, only Mother Nature may be forgiv
structural failures, such as a rock slide—not a museum. Arup's L
Angeles office, headed by principal Atila Zekioglu, and the lead structu
engineer for Denver, Edwin Shlemon, worked with Libeskind and Da
Partnership on a gravity-defying structure where there are no vertical e
ments to speak of, except the elevator cores. Since wall planes were
drastically splayed, the floors, composed of steel beams and concrete sl
over metal decking, had to help with the lateral as well as gravity loa
Many steel floor beams serve as tension ties to keep frames of the slo
ing walls, with their latticelike steel bracing, in balance. In places, ex
bracing and steel plates accommodate planar shear forces. In additi
perimeter retaining walls in the reinforced-concrete foundations abs
lateral forces from the exterior walls. The roof's slanted and slop
planes are composed of steel beams, diagonal bracing, and metal decki
Steel beams not only support the roof, but double as struts, tying the v

Large glazed openings in the roof allow natural light to permeate the atrium (this page), where the landing provides seating.

ious parts of the canted forms together. Titanium panels, which were fabricated locally, surface both the roof and the walls. One of the reasons Libeskind had wanted titanium is that it is very stable in extreme weather, with little contraction and expansion. It proved to be a fortunate choice, since a museum trustee who was head of a Denver-based titanium company donated the material. All of this structural effort, which had to be integrated into the HVAC system, was made possible with building information modeling studies used by the team, with the general contractor M.A. Mortenson (for details, see *ENR*, May 15, 2006, page 26). All parties say this three-dimensional tool—used from early project phases, not just to identify potential conflicts—proved absolutely necessary to address the various problems of the geometry throughout the design stage.

The life of icons

Now that the building has opened with a splash, and by all counts is an exciting and successful addition to the city's downtown, it will take time to see how it settles into its role as Diva of Denver. Will the galleries prove to be flexible enough for traveling shows? Will the museum continue to lure visitors to the area once the initial hoopla is over? In anticipation of snowy winters, the team installed little dams on the roof, to keep snow from refreezing as ice and sliding off the steep inclines. Will that be enough? Already problems with leaking through skylights need addressing.

But the larger question would be: Is there a sell-by date for Libeskind's expressively jagged architecture? Architecture has cycles of style like anything else, only slower, and some critics wonder if the iconic creations springing up in the past few years will soon be white elephants. Yet some extreme architecture doesn't suffer the fate of fashion: Frank Lloyd Wright's Guggenheim (1959) or Marcel Breuer's Whitney (1968) in New York City remain vigorous, symbolic statements of their respective eras. Libeskind's museum addition, with its cohesively unabashed ebullience, seems likely to fall into that camp. ■

Sources

Titanium panel: *Timet Titanium*
Curtain wall/skylight/windows: *EFCO*
Glass: *Viracon*
Acoustical ceiling: *Hunter Douglas*
Paints and stains: *Sherwin-Williams*
Seating (auditorium): *Herman Miller*
Downlights: *Edison Price*
Interior ambient lighting: *Litlab*

For more information on this project, go to Projects at **archrecord.construction.com**.

The School of Art and Art History exhibits asymmetric, planar geometry (this page) as it soars over an old quarry pond next to a limestone bluff (opposite). The cantilevered, steel-supported bar jutting to the south is wrapped in a thin skin of glass and oxidized steel siding.

Steven **Holl** nicely balances expressionism and functionalism in the University of Iowa's **SCHOOL OF ART AND ART HISTORY**

Blair Kamin

When star architects design campus art buildings, it arouses many of the underlying tensions associated with the execution of art museums. Which matters more: the building or the art, the container or the contained, the architect's re to create brilliant cultural commentaries or the quotidian needs of lty and students?

Talk to normally placid art school administrators about such ic structures (of which the classic example is Paul Rudolph's 1963 Arts Architecture Building at Yale University) and they practically fly into a about the functional shortcomings imposed upon them by arrogant ı-makers. There is never enough wall space for displaying art or showlides properly, for example.

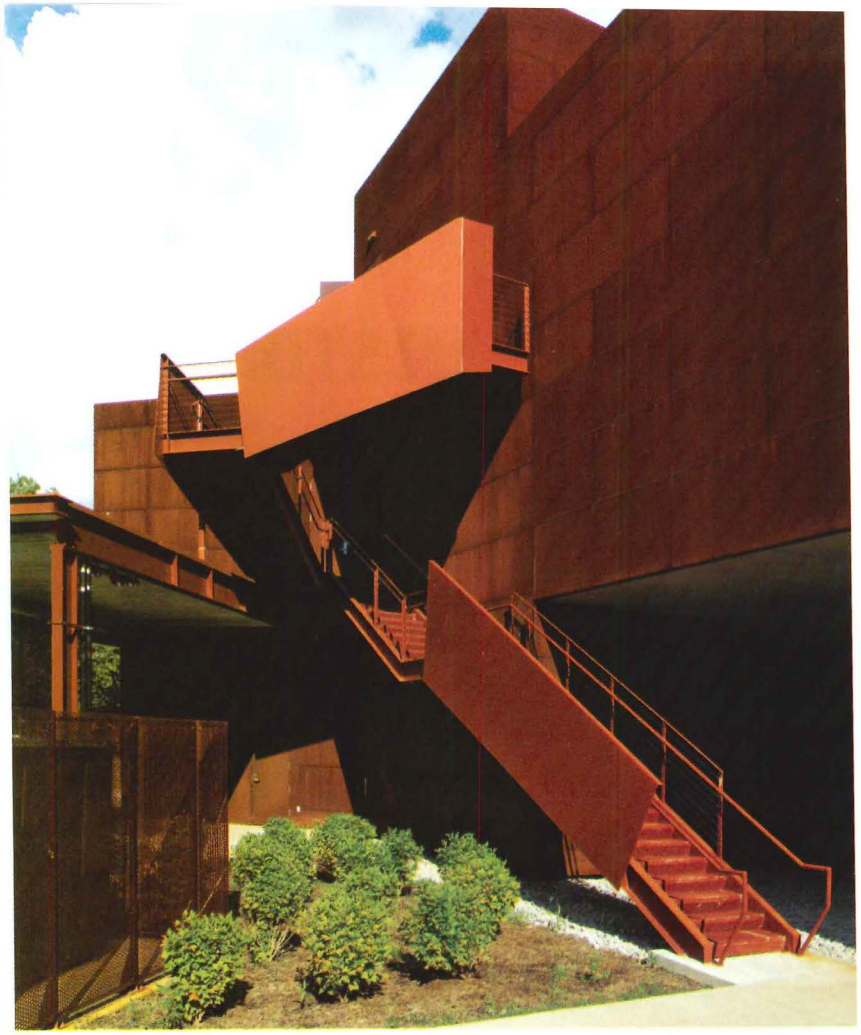
"We didn't want that," says Dorothy Johnson, director of the ɔol of Art and Art History at the University of Iowa. "We were lookfor an architect who would understand our needs to create art, ɔize art, and accommodate the needs of the students." They got what wanted—and more.

New York architect Steven Holl's $21.5 million, 70,000-square-foot ıd art history building for the University of Iowa winningly navigates a third way between the extremes of over-the-top expressionism and prosaic functionalism. Holl hasn't just made a knock-your-eyes-out building, a dynamic collage that wears a reddish-brown jacket of oxidizing steel and seems utterly at home soaring over an old quarry pond. He's made a real place, one that painters carting around their canvases actually seem to like.

Holl pulls this off by exploiting the idea of "formless" geometries, which sounds oh-so-pretentious, given that there is no such thing as formless architecture. But the idea, which abandons rigid a priori shapes and lets the arrangement of spaces and circulation routes determine the design, has real merit and actually informs the "Starchitects Descend Upon Small Cities" debate. Because of its flexibility and Holl's creativity, Iowa's art building uplifts both its users and its site. Even though con-

ɾibuting editor Blair Kamin is Pulitzer Prize–winning architecture critic of the ıgo Tribune and author of Why Architecture Matters: Lessons from Chicago.

Project: *School of Art and Art History, University of Iowa, Iowa City.*
Architect: *Steven Holl Architects—Steven Holl, AIA, principal; Chris McVoy, design architect; Martin Cox, design architect and associate in charge; Li hu, Gabriela Barman-Kramer, project architects*
Architect of record: *Herbert Lewis Kruse Blunck Architecture—Rod Kruse, principal in charge; Matt Niebuhr, project architect*
Engineers: *Guy Nordenson and Associates and Structural Engineering Associates (structural); Alvine and Associates (mechanical) Shive-Hatter, (civil)*



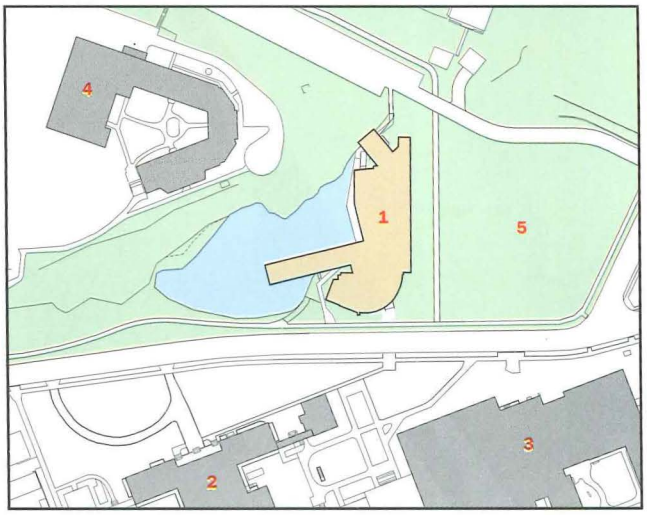
Rather than a single, iconic view, the arts building presents different but interrelated aspects. An angular stair (above left) thrusts to the northwest; the cantilevered bar intersects with the lobby space (above right); and an elevation of monumental columns and recessed channel glass (below) faces north.

struction delays forced the building to open behind schedule, the r
Holl traveled in Iowa turned out to be far less rocky than in Denver, wh
last fall he quit a justice center still in design, trading charges and coun
charges with city officials over the extent of budget overruns.

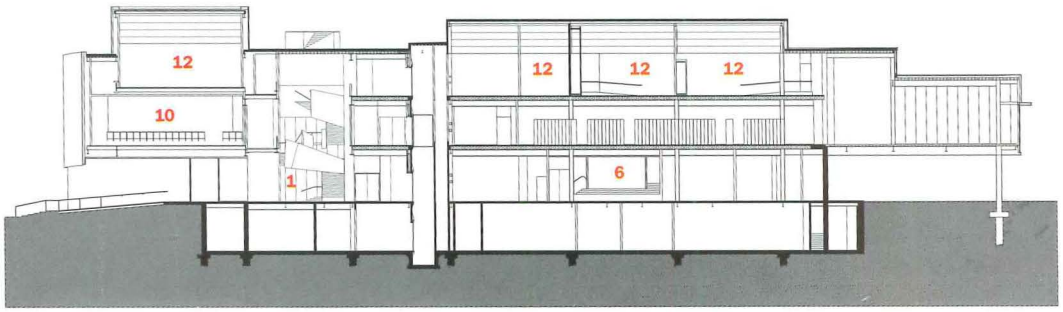
Dedicated last September and designed with associate archit
Herbert Lewis Kruse Blunck of Des Moines, the steel-framed struc
serves a progressive graduate and undergraduate program that has l
sought to bring together the making and the analysis of art. It belongs
too-loosely-knit group of arts buildings along the west side of the I
River, which bisects the hilly campus. By far the worst of these is
Abramowitz's 1968 Printmaking Wing, a one-story, exposed-conc
bunker jammed between the river and the original art building, a grac
brick-clad, neo-Palladian low-rise from 1936. When a selection comm
interviewed five finalists, including Charles Gwathmey and Carlos Jime
Holl undiplomatically told them, "I hope you don't make the same mist
you made in the 1960s." He got the job in 1999 and then did somet
braver still: He persuaded his client to move the art building south
from its original site, a so-called "art meadow," to the derelict quarry p

Campus planners initially discouraged the shift because
didn't think Holl could fit the art building between the pond and a u
line buried beneath a nearby road. But he proved them wrong with a
pact plan that cleverly pushes the art school's library out over the v

1. *School of Art and Art History building*
2. *Existing art school*
3. *Art museum*
4. *International Center*
5. *Art meadow*

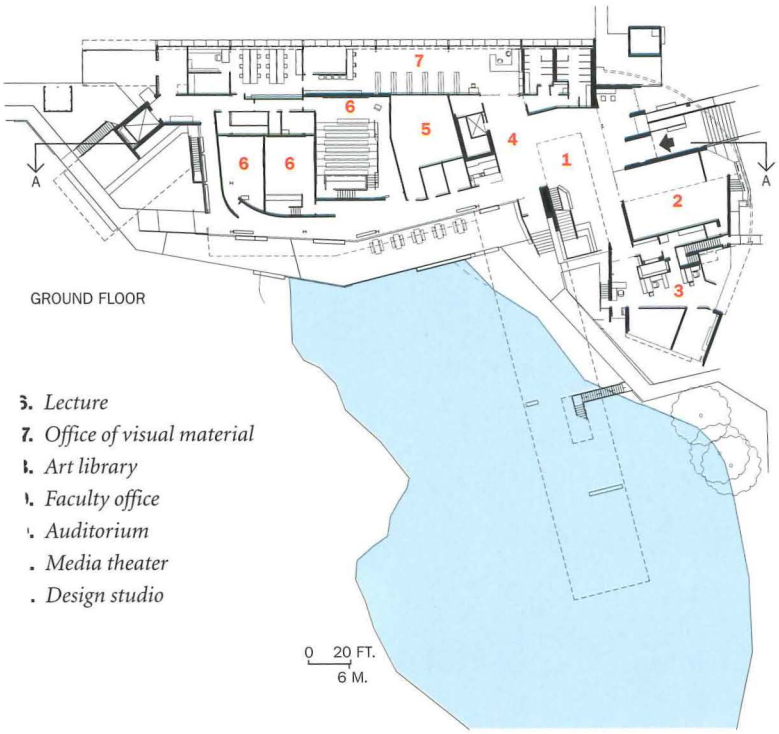


With a plan that is at once compact and free-form, Holl's art building is wedged between the old quarry pond, or lagoon, to the south, and a buried utility line to the north (left). Using Le Corbusier's 1963 Carpenter Center at Harvard University as a model, Holl's team crafted a plan (bottom) that generates shared spaces rather than being an isolated object. As the section shows (below), the atrium brings daylight into the building's core.

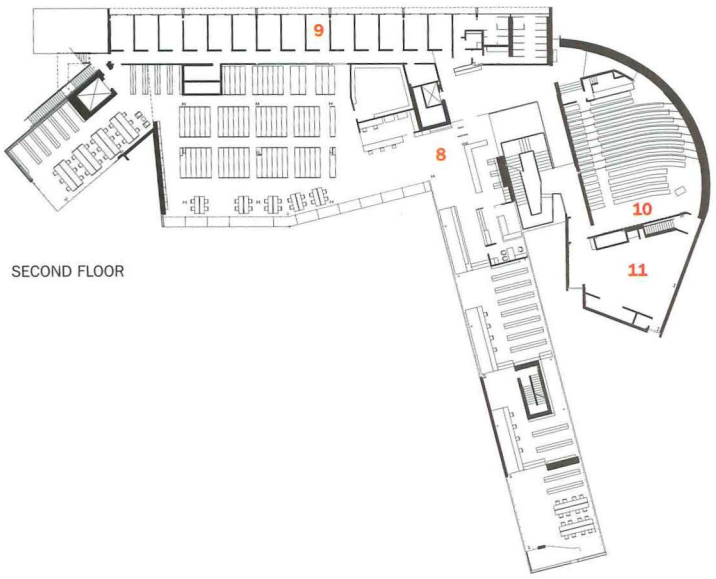


SECTION A-A

1. *Forum*
2. *Gallery*
3. *Administration*
4. *Café*
5. *Student advisers*



GROUND FLOOR



SECOND FLOOR

3. *Lecture*
7. *Office of visual material*
8. *Art library*
9. *Faculty office*
10. *Auditorium*
11. *Media theater*
12. *Design studio*

With its oversize, folded steel plates providing structural stability, Holl's neo-Constructivist stair soars through the building's skylit atrium (this page).

Channel glass brings a soft, diffuse light into the visual materials library (above). The windows are operable. A monumentally scaled reading room, complete with a porch, punctuates the cantilevered element (left).

ng the pond found space. The urban design succeeds on levels both ical and aesthetic. It moves the new art building closer to the old one; aves campus pathways through and around the building; and it allows —who demonstrated his gift for bringing together art and nature in his el of St. Ignatius at Seattle University [RECORD, May 1998, page 104]— etically engage the pond and a weathered bluff alongside it.

Holl proved to be an inspired choice for another reason: He rstands artists, being both an accomplished watercolorist and the ner of the acclaimed Kiasma Museum of Contemporary Art in nki [RECORD, August 1998, page 86]. First, he figured out how to y a relatively tight budget with an aesthetic appropriate for an art ol. "It's a place of messiness and sculpture and paint," he says. "Let's se the structure. Let's expose the concrete planks."

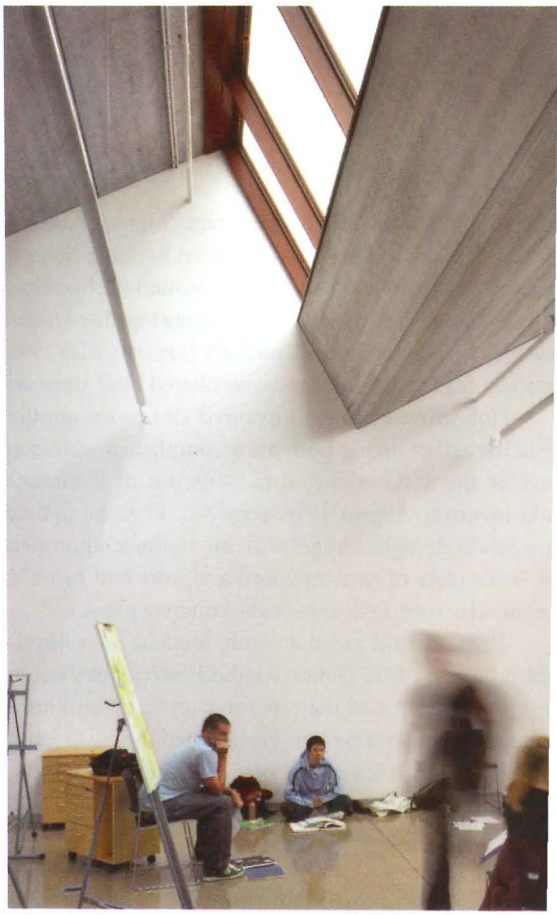
Then, as Holl gazed at study models, he realized that his plan ibled Picasso's 1912 *Guitar*, a radical exercise in sheet metal and wire ruction that opened the way for sculptures without a solid center. uilding's cantilevering library suggested the guitar's neck, its curving on the instrument's sound box. A facile connection? Perhaps. But clients were enthusiastic and the comparison crystallized his desire ke a building that would be asymmetrical, planar, fuzzy at the edges, pen at the center. As if to seal the connection with *Guitar,* Holl refers art building as a "hybrid instrument."

It hums from the moment you see it, a powerful but not overwhelming presence. While its low-slung profile relates well to the scale of the adjoining arts buildings and its reddish-brown steel skin subtly talks to the brick of the old art building, Holl is clearly playing his own 21st-century tune. There is no single iconic view. Rather, you encounter a variety of elevations, all well handled. Monumental columns and recessed channel glass endow the north wall with a strong structural expressionism. The west side offers up a dynamic neo-Constructivism, with its boldly sculpted stair. The tour de force is the elegantly mannered Modernism of the south elevation, where wafer-thin planes of steel and glass form a taut skin that alternately conceals and reveals the muscularity of the underlying, bridgelike structure.

That Holl possesses the compositional deftness to hold these seemingly disparate parts together is just half the story; the other half is that the art building is both an object you look at and a connector you move through. It realizes Holl's predilection for porosity in a way that his Simmons Hall dormitory at MIT [RECORD, May 2003, page 204] did not. The concept is realized with stunning power in the building's skylit atrium, where the building seems cracked open to the outside and a neo-Constructivist stair shoots breathtakingly upward.

The stair, achieved with structural engineer Guy Nordenson, continues the planar language of the exterior, its steel folded plates not

Holl's "porosity" is evident in the three-story-high atrium (left) where vertical and horizontal spaces characterize the juncture of the main stair and the library (opposite). The L-shaped library provides a serene, contemplative space (below left), and top-floor design studios receive north light through serrated skylights (below right). The exposed steel structure supports hollow-core concrete planks—economical but artful construction techniques that made it unnecessary to use fire-proofing. Services such as air ducts are integrated into the planks, eliminating suspended ceilings.



just for show but for structural strength. The structure also depends on hanging rods and, Holl acknowledges, too many visible bolts, at least for architects obsessed with structural refinement. "Norman Foster would cringe," he says. But, "It's not Norman Foster. It's not any of these British high-tech guys. That's not the atmosphere of an art school. You've got to have a certain humor or feeling of casualness, or else it's all uptight."

The thrillingly vertical stair has its horizontal counterpoint in the equally dazzling second-floor library, an L-shaped suite of spaces that works superbly as a viewing platform. Not only does it provide close-up views of the pond and bluff, but it also lets the building look back on itself, evoking the contemplative feeling of a college quadrangle. "I see that as kind of a social mixer," Holl says. "If you are in the library and then you look across and see someone walking in the bridge section, you've got this feeling that there's a connection." At the end of the cantilever, the one-story library turns into a monumentally scaled, two-story reading room, complete with turquoise walls. It's a joyous visual exclamation point.

Holl has taken care of the art building's everyday spaces with comparable aplomb. He gave painters, sculptors, and graphic artists commodious, north-lit studios that draw natural light from the building's saw-toothed skylights. Some of the studios have porches that encourage students to go outside in good weather. Art history students benefit from auditoriums with no natural light and enjoy good sight lines and technical facilities that seem perfectly satisfactory. Faculty offices and the visual materials library are pleasantly luminous. Most important, recalling the metaphor of Picasso's *Guitar*, is the building's open center—an atrium that includes the neo-Constructivist stair along with an informal meeting space where students and teachers can mingle. Holl extends the communal theme into the hallways, where curving planar benches cantilever off the walls. And there is poetry in these spaces, too, seen in reflections from the pond sparkling on the underside of the concrete planks.

Some students had quibbles, complaining, for example, that they have to cover up windows looking from corridors into the studios to protect the privacy of nude models. Holl laughs upon hearing that. "Maybe they should let those nudes be seen through the corridors," he quips. "It's a kind of naked building." True, and it's comely in the nude. ■

Sources

Steel frame with precast-concrete planks: *Iowa Precast Concrete*

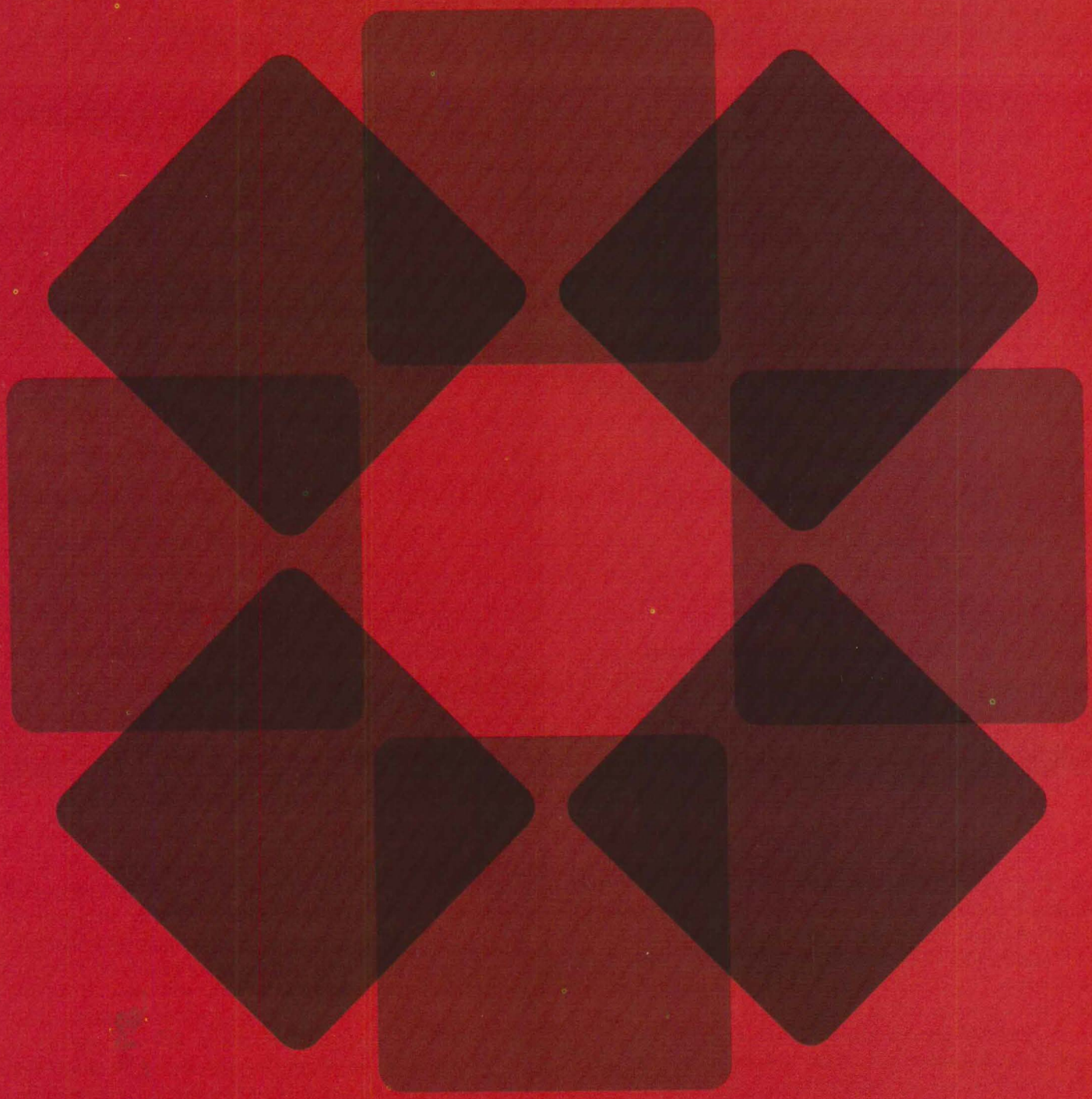
Metal/glass curtain wall: *Architectural Wall Systems; Pohl USA*

Roofing membrane: *Sarnafil*

Office furniture: *Allsteel*

Ambient lighting: *Bartco Lighting*

For more information on this project, go to Projects at **archrecord.construction.com**.



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Social Sustainability

When it comes to designing workplaces for the 21st century, it's easy being green. The real challenge lies in creating environments that nurture collegiality and community.

By James Murdock

Sustainability is now firmly implanted in the nation's mindset. There is still plenty of room for growth and innovation—according to the U.S. Green Buildings Council, LEED-certified projects represented just 6 percent of commercial real estate built in 2006—but interest in ecosensitive design has moved beyond architects to penetrate the ranks of building owners and occupants, even speculative office developers and government agencies.

At the same time, the logical corollary to green design is only just setting down roots: creating workplaces whose architecture nurtures a sense of community. Call this goal "social sustainability," as Randy Gragg dubs it in his commentary on 223 Yale at Alley24, the Seattle-based architect NBBJ's new headquarters. Its benefits are similar. As tenants know, myriad studies suggest that following the principles of sustainability, such as reducing dependence on artificial lighting and climate control by maximizing daylight and natural ventilation, improves employee productivity. (This, in turn, reduces payroll expenses—not to mention overhead—cementing the financial appeal of ecofriendly design.) But providing spaces that encourage employees to gather, to enjoy a moment of privacy among themselves (or just escape the crowd), or to appreciate a building's unique context, can be equally critical for maintaining a happy, healthy labor force.

As anyone who's worked in a cube farm knows, finding a secluded nook for a private conversation is next to impossible. NBBJ solves this problem with a series of "phone booths," microsize conference rooms with seating for two people that form a spine through the center of each open floor plate. But the architect also provides ample spaces where staff can come together—casually over a cup of coffee, at a long counter aptly called the "Big Table," or for companywide meetings on the "Giant Steps." Stairs also take center stage in Studios Architecture's California Department of Health Services Phase III office building: They provide an attractive alternative to elevators in the central atrium, and at the main entry they add a flourish at once formal and functional.

Áras Chill Dara, a new county government building in Ireland by heneghan.peng, and Rios Clementi Hale's California Endowment headquarters, in Los Angeles, represent a different approach to community. By organizing program elements in unexpected ways, the architects invite the landscape—and thus neighborhood residents—into the heart of each building, establishing a connection between civil servants and the public.

All four projects in this Building Types Study are quietly green. It's their ability to encourage collegiality, or establish urban ties, that makes them exemplars of a certain kind of sustainability. ■

ÁRAS CHILL DARA

Naas, Ireland

With an off-kilter, bifurcated plan and a novel facade, heneghan.peng. architects and Arthur Gibney & Partners create an iconic new home for County Kildare's civil servants.

CALIFORNIA ENDOWMENT

Los Angeles

Rios Clementi Hale refer to elements of a historic downtown neighborhood, as well as California's diverse landscape, to create a colorful campus focused around a garden courtyard.

223 YALE AT ALLEY24

Seattle

Using alleys, NBBJ divides a large mixed-use project, Alley24, into manageable pieces—then, with smart interior organization, does the same to the long floor plates of its new headquarters, 223 Yale.

CDHS OFFICE BUILDING

Richmond, California

Studios Architecture uses functional items, such as an exit stair and a brise-soleil, to add formal flourishes that overcome this state government building's limited budget.

For more information on these projects, go to Building Types Study at **archrecord.construction.com**.

One: ÁRAS CHILL DARA
Naas, Ireland

heneghan.peng, with Arthur Gibney & Partners, creates a new Irish Modernist icon, sensitive to the boundary between city and country.

By Raymund Ryan

Architect: *heneghan.peng.architects—Roisin Heneghan, Shih-Fu Peng, Kin Tong, Carmel Murray, Edel Tobin, Martin Rohrmoser, Ulf Klusmann, Paul Giblin, Alicia Gomis-Perez*
Associate architect: *Arthur Gibney & Partners—Leon Shakeshaft, Claudine Keogh, David Harris*
Client: *Kildare County Council and Naas Town Council*
Consultants: *Michael Punch and Partners (engineers); Mitchell and Associates (landscape); Bartenbach Lichtlabor (lighting); Buro Happold (building services, fire, acoustics); RFR (facade engineer); Boyd Creed Sweett (quantity surveyor); Zero G (signage)*

Size: *121,632 square feet*
Cost: *$55.7 million*
Completion date: *December 2005*

Sources
Curtain wall: *William Cox Ireland*
Roofing: *IKO roof membrane*
Wood windows: *William Cox Ireland*
Glazing: *William Cox Ireland; Eiffel*
Locksets: *Doorplan*
Acoustical ceiling: *Durlum-Leuchten*
Cabinets: *Gem Manufacturing*
Paneling: *Woodfit; C. Chamber*
Office furniture: *Bob Bushells; MJ Flood*

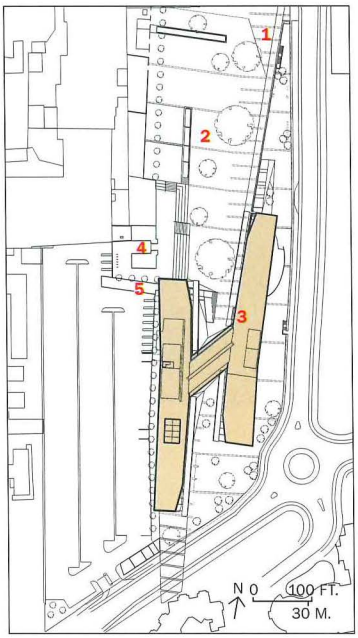
For more information on this project, go to Building Types Study at **archrecord.construction.com**.

Áras Chill Dara represents the latest in an impressive series of county halls built across the Irish Republic during the past decade. The Irish word *áras* can denote both a formal edifice, such as Áras an Uachtaráin, the official residence of Ireland's president, or simply a large building, such as Busáras, Dublin's central bus station completed by architect Michael Scott in 1953 and one of the nation's few iconic Modernist structures. Áras Chill Dara aims for its own iconic presence, one that communicates a newly confident political and civic culture.

Program

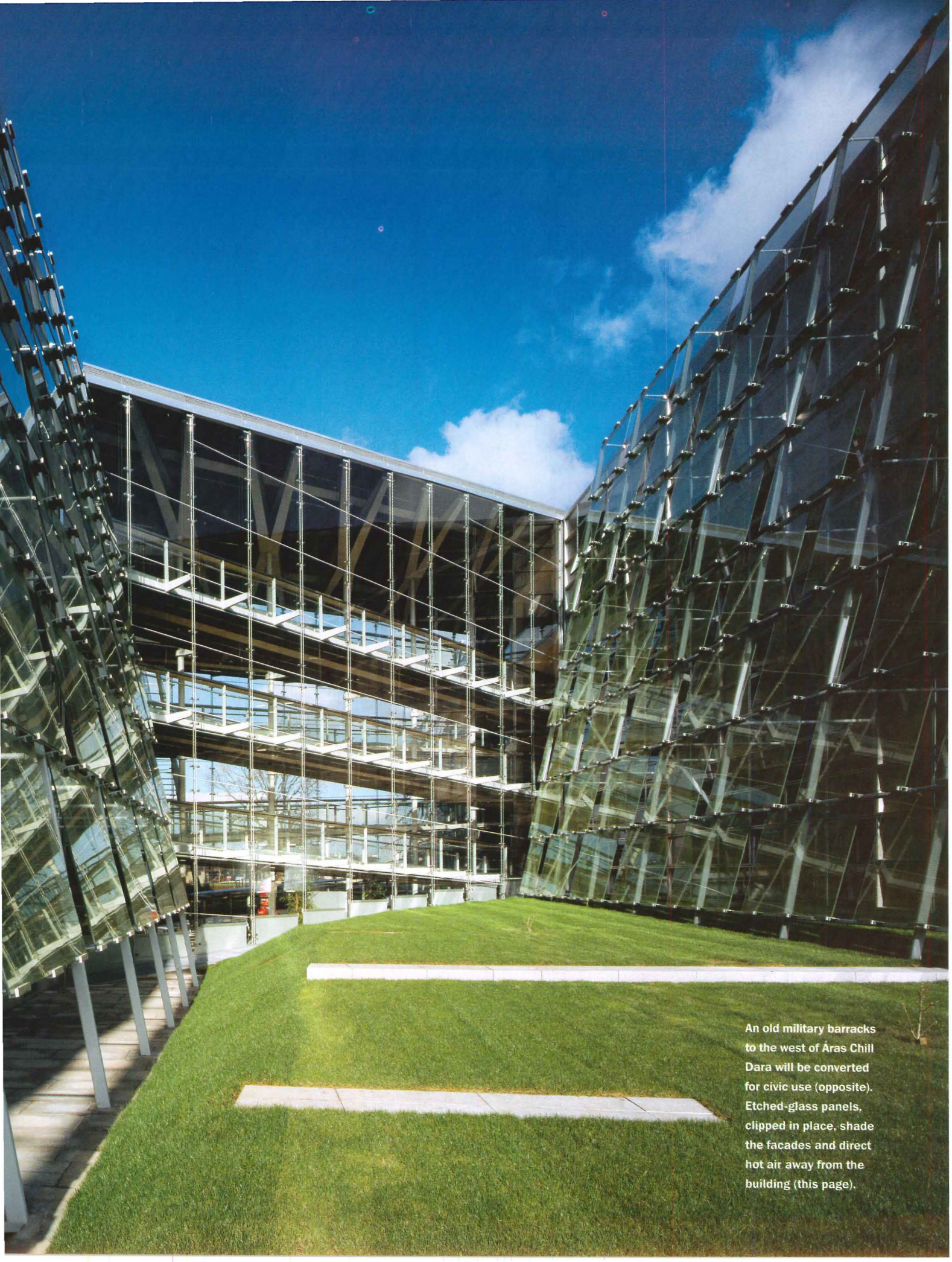
Chill Dara, or Kildare, was a county long known for agriculture and horse racing but now manifests the growth of Ireland's Celtic Tiger economy. The highway connecting Naas, the county seat, to Dublin sprouts high-tech office parks—signs that the capital city is engulfing farmland and smaller satellite towns. Áras Chill Dara sits slightly removed from Naas's main thoroughfare, adjacent to a former British military barracks, where new apartments and hotels ring the older core.

Consolidating both county and town authorities, the building contains a chamber for the County Council as well as offices for more than 400 civil servants. The competition brief requested a structure that displays a clearly urban presence, as well as a sense of invitation toward the public. At the western edge of the site, a tower left over from the barracks, known as the



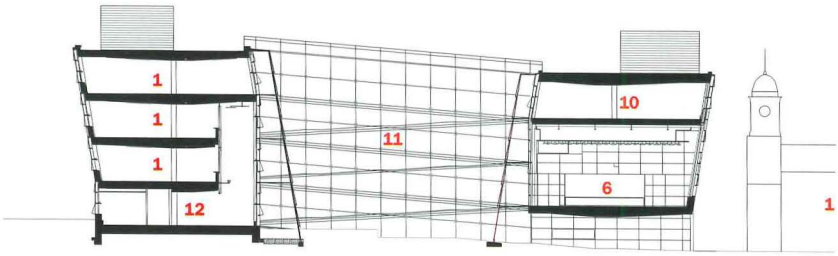
1. *Pedestrian walkway* **2.** *Civic park* **3.** *Main entry* **4.** *Lantern building* **5.** *Parking lot entry*

Raymund Ryan is curator of architecture at Pittsburgh's Carnegie Museum of Art.

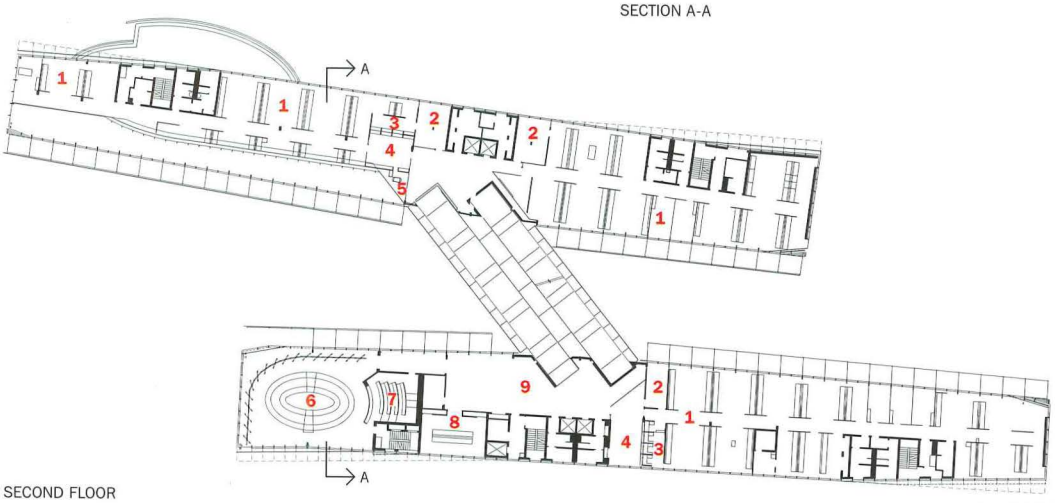


An old military barracks to the west of Áras Chill Dara will be converted for civic use (opposite). Etched-glass panels, clipped in place, shade the facades and direct hot air away from the building (this page).

Ramps suspended within a glazed passageway control visit movement between t public areas in Áras Chill Dara's two mair volumes, revealing how the facade's out glass screen works.



SECTION A-A



SECOND FLOOR

1. *Office workstatio*
2. *Meeting rooms*
3. *Service counters*
4. *Waiting areas*
5. *Children's area*
6. *Council chambe*
7. *Public gallery*
8. *Committee room*
9. *Exhibition area*
10. *Cafeteria*
11. *Walkways*
12. *Main lobby*
13. *Lantern building*

lantern building, will be renovated for cultural uses as part of a new civic park and gardens.

Profiled in RECORD's 2003 Design Vanguard, the Hiberno-Taiwanese architects Róisín Heneghan and Shih-Fu Peng met as graduate students at Harvard and relocated to Dublin after winning the Kildare competition in 2000. They worked with associate designer Arthur Gibney & Partners on this project.

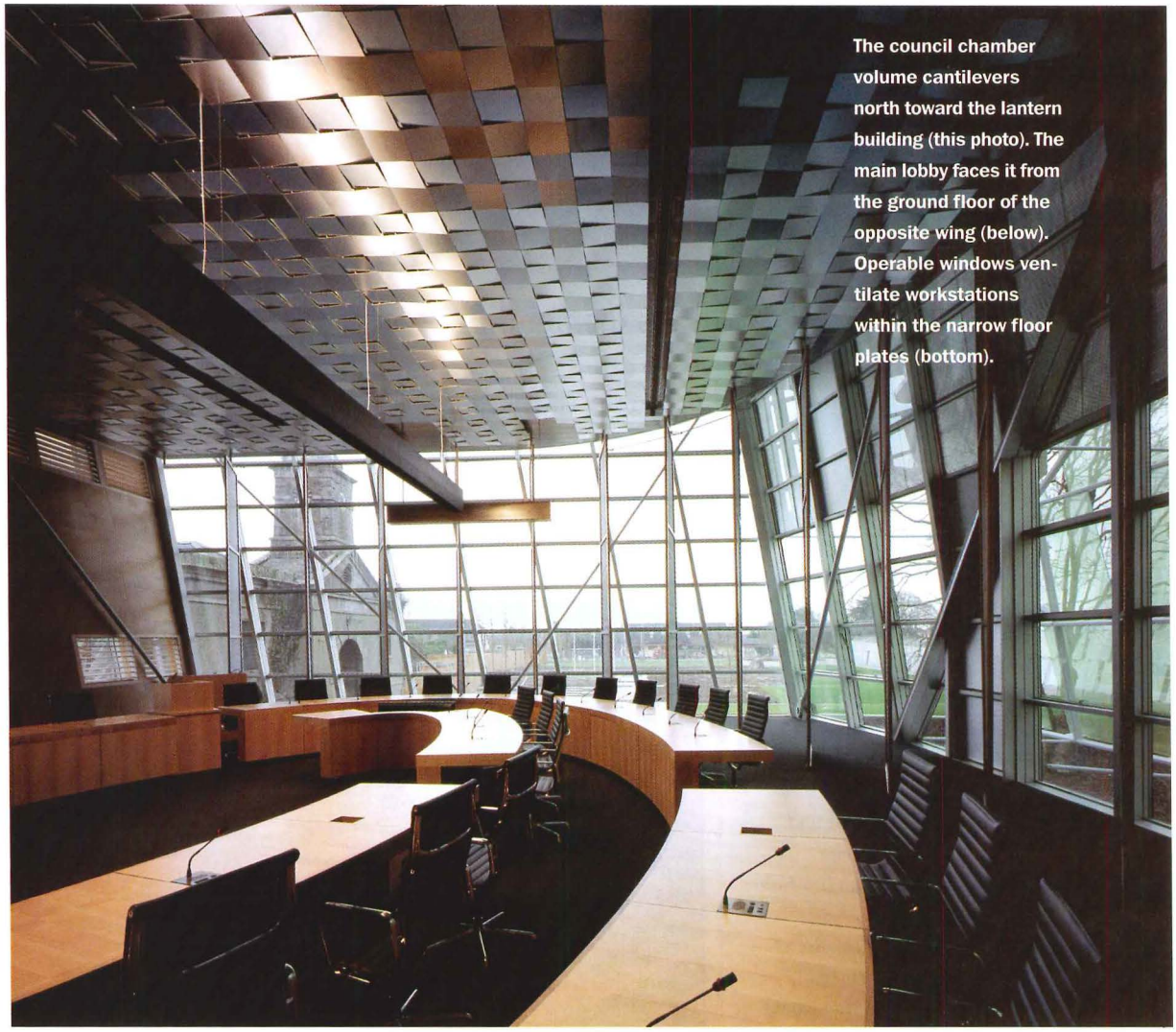
Solution

Áras Chill Dara rises from a gently tiered lawn as two wings tethered by a tall, transparent umbilical link. This is its external ideogram or iconic image: two bars of pristine office space tilting outward, not quite parallel to each other and shunted slightly in plan. The designers set the two bars with a height difference of half a story between them: lower to the east, where the main entryway extends to the public street, higher at the west, level with a parking lot.

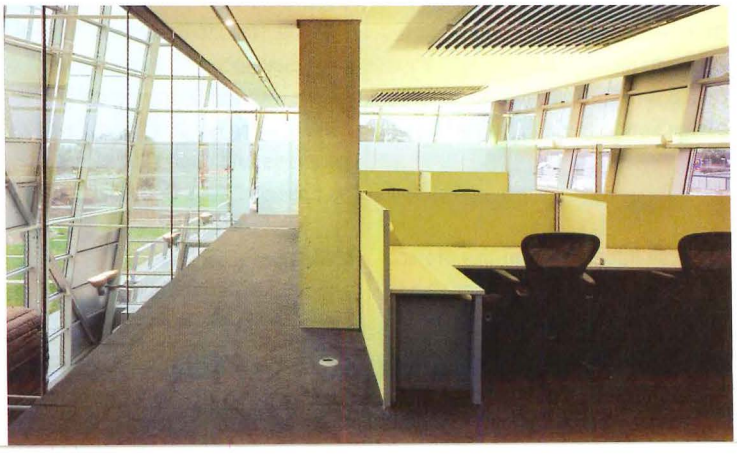
Within the linking volume, walkways appear to float like a ship in a bottle. They hang suspended between a central row of columns and prestressed vertical cables in the glass facade. This passage not only bridges the two bars; the gently sloped ramps lead upward from the departments most frequented by the public to the building's less-visited sections—revealing that Áras Chill Dara's splayed mass is not merely formal but a functional response to patterns of use in the interior.

For the building's skin, the architects set glass panels, four per floor, horizontally on the structural concrete frame; garden-facing elevations are entirely glazed, whereas the long east and west facades have solid panels at desk level. A screen of large glass panes, tilted at 84 degrees, shields the entry and acts with the inner curtain wall to form a stack for hot-air extraction. Clipped in place, leaving narrow gaps, the panes are screen-printed with skinny green triangles—a grass motif—for solar protection.

Computerized blinds within the double-glazed external wrapper reflect daylight onto exposed concrete ceilings that splay up toward the perimeter. Operable windows at desk height allow for natural cross ventilation across the slender floor plates.



The council chamber volume cantilevers north toward the lantern building (this photo). The main lobby faces it from the ground floor of the opposite wing (below). Operable windows ventilate workstations within the narrow floor plates (bottom).



Commentary

Like heneghan.peng's subsequent competition-winning designs for the Grand Museum of Egypt, in Giza, and a visitor's center at the Giants Causeway in Northern Ireland, Áras Chill Dara synthesizes landscape, structure, and light in memorable ways. It represents one of the first projects to emerge from the Celtic Tiger to convincingly address that vague territory between city and countryside. Neither rural nor urban in any traditional sense, this new Irish Modernism is cognizant of the need for form, imagery, and environmental responsiveness. With this compelling design, Heneghan and Peng make a bravura entrance onto the architectural scene. ■

Two: CALIFORNIA ENDOWMENT
Los Angeles

Rios Clementi Hale Studios unearths the diversity of a neighborhood to transform a sad lot into a vibrant headquarters and public resource.

By Russell Fortmeyer

Architect: *Rios Clementi Hale Studios—Mark Rios, FAIA, Frank Clementi, AIA, Robert Hale, FAIA, principals; Samantha Harris, project landscape architect; Jennifer Williams Reynolds, Ola May, Jennifer Charles, Ichiro Kakami, design team*
Architect of record: *House and Robertson Architects—Doug Robertson, AIA, principal; Jim House, AIA, principal*
Interior architect: *DMJM/Rottet—Richard Riveire, AIA, principal*
Client: *The California Endowment*
Consultants: *Englekirck & Sabol (structural); IBE Consulting Engineers (m/p); Kocher Schirra Goharizi (electrical); Horton Lees Brogden (lighting design); Cibola Systems (a/v); Matt Construction (contractor)*

Size: *118,000 square feet*
Cost: *Withheld*
Completion date: *April 2006*

Sources
Curtain wall: *Benson Industries*
Aluminum siding: *Custom Metal Fabricators*
Aluminum windows: *Benson*
Glass: *Viracon*
Lobby floor: *Terrazzo*
Office furniture: *Bernhardt "Shift"*
Office seats: *Herman Miller "Aeron"*

For more information on this project, go to Building Types Study at **archrecord.construction.com**.

The California Endowment's interior courtyard arrangement allows the complex to respond to various neighborhood contexts, including the Spanish Revival Terminal Annex Post Office (opposite, bottom).

Few Los Angeles neighborhoods boast the mix of history and diversity that surrounds the 6.5-acre site of the California Endowment's new headquarters, located on a once-dilapidated lot near Chinatown and the original 1781 pueblo. Locally based Rios Clementi Hale Studios (RCHS) took advantage of this condition by approaching the project as a collaborative mix of landscape and building. Historical research helped the studio incorporate community needs with the Endowment's goals. "The building is really about being as generous and open with its space as possible," says Bob Hale, FAIA.

Program

The architect's commitment to an open dialogue helped it win the 2002 design competition to replace the Endowment's existing offices in suburban Woodland Hills. The nonprofit foundation's mission to serve the health-care needs of the state's underprivileged—and a desire to raise its profile within the downtown business core—shaped the design brief. Cynthia Ann Telles, the Endowment's board chair, sees the new building as "a place of synergy for the community."

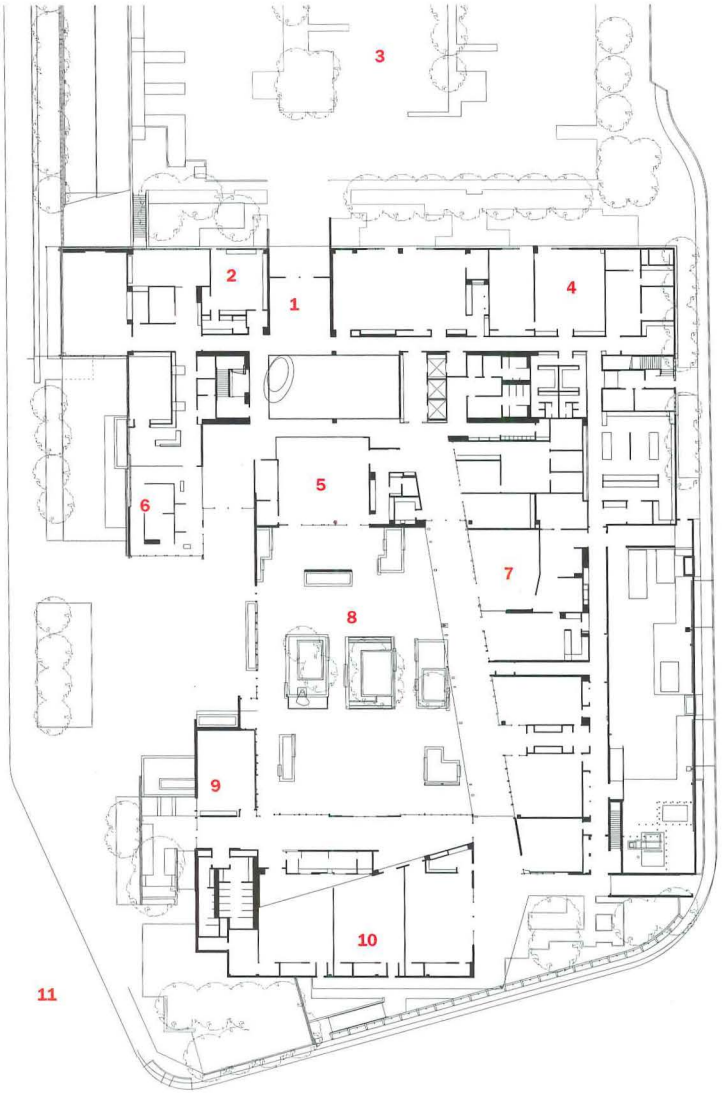
Solution

Embracing the Spanish-style, Southern California tradition of courtyard buildings, RCHS broke up the program by locating meeting areas within detached pavilions that define an expansive, 16,000-square-foot outdoor plaza. A four-story office tower on the north side of the court includes administrative offices oriented around a full atrium.

Subtle customization of standard materials, a hallmark of RCHS's work, is evident throughout the complex. The designers altered the conventional curtain wall of the office block by randomly inserting recessed glass panels, laminated blue to draw a contrast between the blue L.A. skies and the sleek, white interiors.

Seen on approach by car—typical for L.A.—the pavilions' pitched

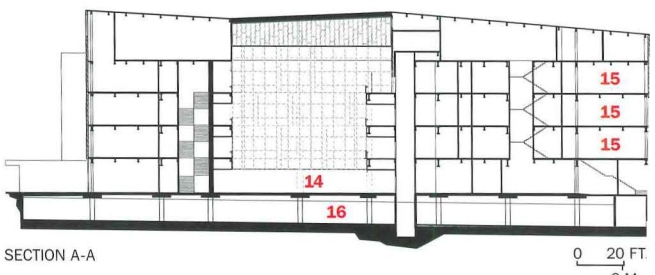
Rios Clementi Hale intends the building to represent a dialogue between the "high-tech" features of its interior spaces and the "low-tech" aspects of the surrounding landscape (above). The project, though uncertified, would achieve a USGBC LEED Silver rating.



GROUND FLOOR

UPPER FLOOR

1. *Entrance*
2. *Child-care room*
3. *Parking*
4. *Health center*
5. *Boardroom*
6. *Gallery*
7. *Café*
8. *Courtyard*
9. *Informal conference*
10. *Multipurpose room*
11. *Alameda Street*
12. *Conference room*
13. *Typical office*
14. *Lobby atrium*
15. *Typical office floor*
16. *Parking*



SECTION A-A

ofs, and the color striations of their uminum panel cladding, shift and tter. The steel-framed buildings' lor scheme intentionally responds the immediate urban context: Red es pick up the tile roofs of Union ation and Olvera Street, and the satz Orientalism of Chinatown; hre nods to nearby masonry con- uction; and the greens connect the broader landscape.

Balancing the Endowment's sire for a transparent facility ainst tangible security concerns, CHS placed a public gallery with secure entrance along the street hile allowing views and controlled cess into the landscaped court- rd. Riparian plantings reflect hat might have originally existed the site, which is not far from the A. River, while the other landscap- g symbolizes the Endowment's atewide charter: Redwoods that mmon the Sierra Nevadas and orthern coastal region; pepper ees, the central valley; and a small ot—containing medicinal plants, ch as aloe vera, pennyroyal, vender, and rosemary—that sug- sts a Spanish mission garden.

ommentary

oject by project, RCHS, a 21-year- d practice, has transformed itself to a quintessential L.A. firm. Its elrose Avenue office sits atop its ore, notNeutral, that sells the stu- o's own line of dishes, textiles, d children's furniture. This interdis- linary approach to design results projects such as the Endowment at embody the adventurous spirit the city without sacrificing a more ploratory urban ambition. Though me might question RCHS's decision orient the complex around an inner urtyard with suburban-style land- aped setbacks along its perimeter, e low-scale pavilions tame the ger office slab and ease its higher nsity into the neighborhood. oreover, the lively embrace of color, gether with the nuanced landscape tails, bring a confident architectural ality to an area that had languished past years. The Endowment attests at even simple office buildings can freshly investigated. ■

Blue laminated glass panels, recessed in the curtain wall, add visual interest to the crisp, white interiors (left). The four-story atrium lobby (below) mirrors the organizational schema of a fountain courtyard that is accessible on the south side of the Endowment complex.

Three: 223 YALE AT ALLEY24
Seattle, Washington

NBBJ proves that divide and conquer can mitigate the scale of long floor plates, with its new offices on a large, mixed-use urban block.

By Randy Gragg

Architect: *NBBJ—Brent Rogers, AIA, Alan Young, AIA, design principals; Scott J. Johnson, AIA, lead technical architect; Rysia Suchecka, design partner; Maureen Hylander, project manager; Melanie Taylor, lighting designer; Eric Levine, environmental graphics; Sean Airhart, Kelly Griffin, Maria Mendez, Stephen Kellogg, design team*
Client: *Vulcan Real Estate; PEMCO Mutual Insurance*
Consultants: *Flack + Kurtz (mechanical systems designer); McKinstry (mechanical design build); Holmes Electric (electrical); Magnusson Klemencic Associates (structural); BRC Acoustics (acoustical); Murase Associates (landscape); Egis (LEED tracking)*

Size: *362,500 square feet (Alley24); 78,000 square feet (223 Yale)*
Cost: *Withheld*
Completion date: *February 2006*

Sources
Precast-concrete panels: *Conforce*
Paper-and-resin siding: *Richlite*
Motorized blinds: *Nysan*
Windows: *All New Glass*
Custom woodwork: *Surgent; GR Plume*
Flooring: *Expanko; Yemm + Hart*
Furnishings: *dTank; Heartwood; Herman Miller; Emeco; Steelcase*
Ambient lighting: *Focal Point*

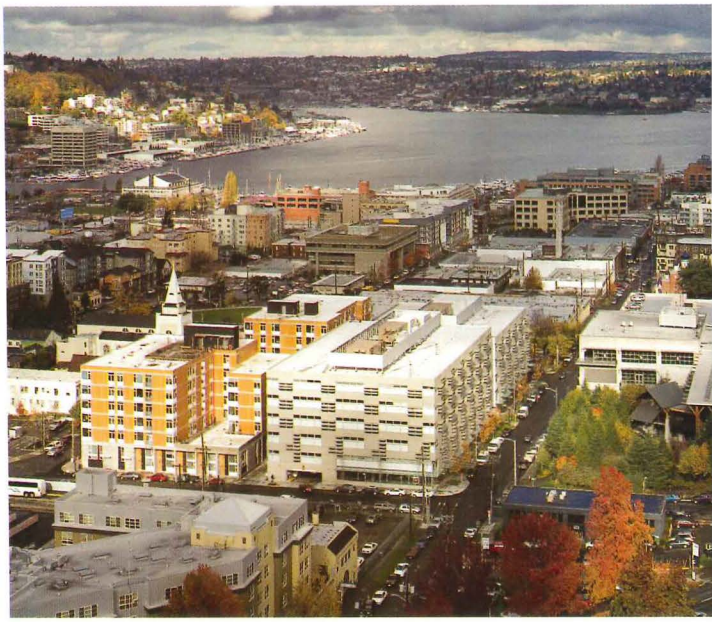
For more information on this project, go to Building Types Study at **archrecord.construction.com**.

Twenty-two years ago, the Seattle-based architecture firm NBBJ was one of the first major companies to move back into Pioneer Square, the city's then-neglected historic heart. The firm's 200 employees helped spur a neighborhood renaissance. But having grown to 330 employees, and hampered by offices that were spread across six floors, in 2004 it decided to move and again play the agent of urban change. It became both the designer and the anchor tenant of Alley24, a mixed-use complex located in South Lake Union, a former industrial area being transformed by Vulcan Real Estate, Microsoft cofounder Paul Allen's firm.

Program

NBBJ's new headquarters are located within 223 Yale, the office component of Alley24. The site, a 256-by-360-foot city block, had been anchored by the Richmond Laundry, built in phases between 1917 and 1945. A landmark designation mandated the preservation of its masonry facade. Rather than simply piling 214,000 square feet of offices and retail shops, as well as 172 apartments, behind the laundry's historic walls, NBBJ wanted to fashion a live/work/play environment that would showcase the firm's commitment to sustainability, what design principal Brent Rogers describes as "doing the most with the least." Additionally, the firm wanted to achieve a LEED Silver rating for the project.

Randy Gragg covers architecture and urban design for The Oregonian.



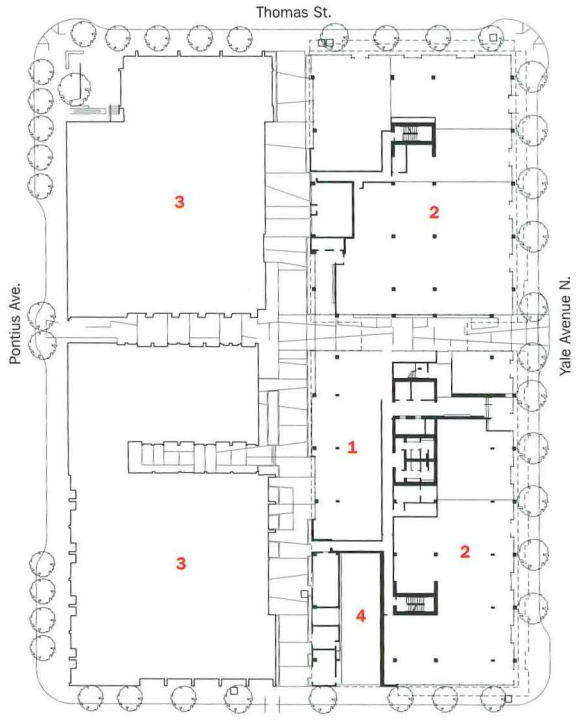
Recycled-paper-and-resin panels clad the apartment blocks; concret cast with grooves to create shadow patterns, covers the office and retail buildings in Alley24 (above). Computer-monitored, motor-driven blinds cover the lower part of most windows; shades bounce sunlight inside and lessen heat gain (opposit

Solution

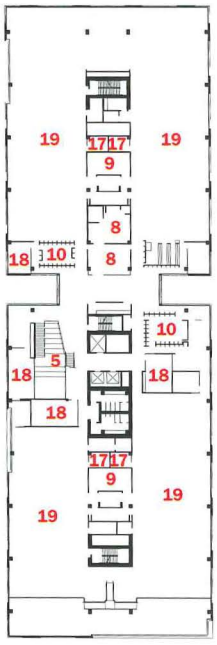
The need to infuse the entire Alley24 block with light and air suggested a classic urban design scheme: Two midblock alleys that divide the site into quarters. Rogers clustered the entrances to offices, apartments, and underground parking around the alleys' crossroads, creating a lively "Main and Main" feel; to ensure the perimeter remained active, he spread shops along the street-facing elevations. Town houses and flats occupy the former laundry, while apartment buildings flank it. These steel-framed buildings are clad in an innovative, recycled-paper-and-resin material called Richlite, while patterned con crete panels cover the posttensione concrete office buildings.

NBBJ principal Alan Young led the team designing the firm's new offices in 223 Yale, which is named after its street address. He located the main reception area as well as a art gallery on the ground-floor corn

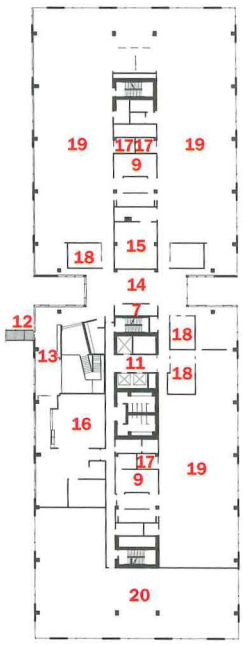
The main entry to 223 Yale, the office component of Alley24, sits at the intersection of two midblock alleys (above left). A zone containing conference rooms and other gathering spaces bisects each floor plate (above right).



SITE PLAN / FIRST FLOOR



SECOND FLOOR



THIRD FLOOR

1. *Entry to 223 Yale*
2. *Retail*
3. *Residential*
4. *Garage entry*
5. *The "Giant Steps"*
6. *The "Big Table"*
7. *Coffee area*
8. *Model shop*
9. *Photocopier room*
10. *Library*
11. *Elevator lobby*
12. *Skybridge to roof c*
13. *Café*
14. *Presentations area*
15. *Server room*
16. *Reprographics*
17. *"Phone booths"*
18. *Conference room*
19. *Workstations*
20. *Unleased space*

Alley24's internal intersection. A matic stair, made of reclaimed uglas fir, ascends from this lobby studio level. Dubbed the "Giant eps," it doubles as seating for mpanywide meetings as well as ghborhood gatherings.

Fostering a sense of community d been a challenge in NBBJ's ver- ally diffuse former headquarters. nically, 223 Yale posed a problem horizontality: The firm now occu- s 75,000 square feet on two floors at, measuring 120 by 360 feet iece, rival the size of football fields. hoing the overall development's ban plan, Young bisected the floor ates with what is, in effect, a town uare: a central space containing a chen, model shop, library, central air, and conference rooms. Its art is a long counter, known as e "Big Table," where staff members ld meetings, work on projects, or sually commune over coffee.

Smaller conference rooms own as "phone booths," for one-on- e meetings and private calls, form central spine that runs lengthwise rough each floor. Open-plan work- ations ring the perimeter, ensuring at all staff sit within 45 feet of the ndows, all of which are operable.

ommentary

ith speculative office buildings w achieving LEED Gold and even atinum, a Silver is low-hanging uit, particularly for build-to-hold ents such as Vulcan. Green roofs id rainwater recycling, photovoltaic lls, or on-site power generation ight have made Alley24 a true stainability leader. But the big n here is social sustainability. By rning conviviality into an organiz- g principle for both the overall e and NBBJ's own offices, Rogers id Young have created excellent ototypes for large city-block velopments and large-plate office ildings. The "Giant Steps" and the ig Table" add another level, effec- ely turning NBBJ's headquarters o an extension of the street. Like e basic ingredients of good urban- n, these elements encourage ance meetings and the casual change of ideas. ■

A periodicals library (above) is just one of many areas where NBBJ's staff can congregate near the "Big Table" on the first office level. The "Giant Steps," made of reclaimed Douglas fir, ascend from the ground-level lobby to the office floors above, doubling as bleacher-style seating for companywide meetings (right).

Four: DEPARTMENT OF HEALTH SERVICES OFFICE BUILDING

Richmond, California

Studios Architecture highlights functional elements to create a social hub for the third phase of a state government campus.

By Mimi Zeiger

Architect: *Studios Architecture—Charles Dilworth, AIA, principal in charge; Alan Tom, AIA, project manager; Elizabeth Sporer, AIA, project architect; Ben Chuaqui, AIA, job captain; Tiffany Redding, AIA, Nicholas Tsuk, AIA, Enrique Sanchez, Will Huchting, Stuart MacDonald, AIA*
Client: *State of California*
Consultants: *Rutherford & Chekene (civil, structural, geotechnical); Mazzetti & Associates (m/e/p, security); SWA Group (landscape); Studios Architecture (lighting); Charles Salter Associates (acoustical); Hesselberg Keesee & Associates (elevator); Sustainable Design Resources (sustainability); Teecom Design Group (telecommunications); Simpson Gumpertz Heger (waterproofing); Cermak Paterka Petersen (wind)*

Size: *200,000 square feet*
Cost: *$32.6 million*
Completion date: *September 2005*

Sources
Curtain wall and aluminum windows: *Architectural Glass & Aluminum*
Concrete: *Peck & Hiller; Dolan Concrete*
Panels: *Rheinzink standing seam*
Acoustical ceilings: *Armstrong*
Woodwork: *DRS; Marcor Woodwork*
Plastic laminate: *Passion Design*
Resilient flooring: *Forbo Marmoleum*
Carpet: *Monterey Carpets*

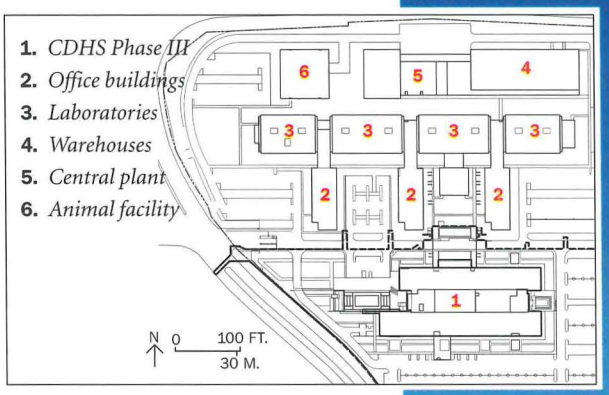
For more information on this project, go to Building Types Study at **archrecord.construction.com**.

In designing a new office building for the State of California Department of Health Services (CDHS), San Francisco–based Studios Architecture took what might have been a banal cube, hemmed in by parking lots and laboratories, and created a new public face for the CDHS, one in keeping with its mission to promote wellness.

Program

Representing the third phase of a master plan, this 200,000-square-foot structure consolidates the offices of 18 agencies, including Childhood Lead Poisoning Prevention, Environmental Health Investigation, and Sexually Transmitted Disease Control. It sits on the CDHS's Richmond, California, campus—a former industrial site, squeezed between a freeway and railroad tracks.

Although the program is straightforward—offices, open work spaces, a café, a library, meeting and training rooms—Studios faced the bigger challenge of how to encourage a sense of community among diverse state agencies integrated under one roof. Dr. Raymond Neutra, who heads the Division of Environmental and Occupational Disease Control, represented the building's users during design development. "One of the problems in a big scientific building is that we become absorbed in our own work and don't know what anyone else is doing," observes Neutra, who happens to be the son of architect Richard Neutra. "I said to the architects, 'I would like some serendipity, so that we bump into each other by accident. Let's have a coffee bar and stairways that are fun to walk on.' "

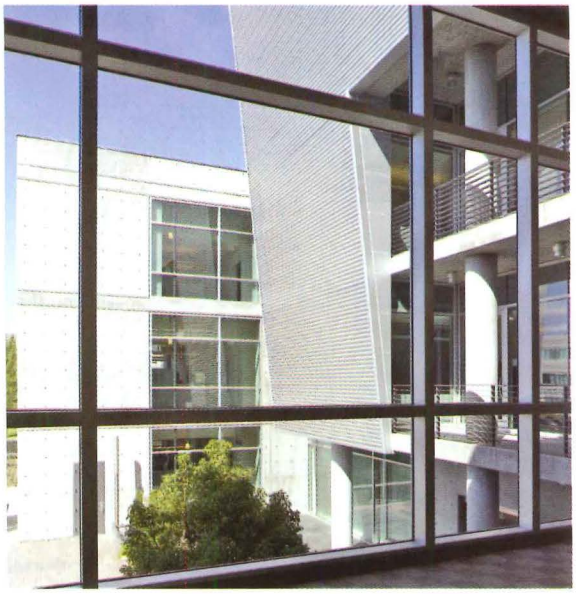


Solution

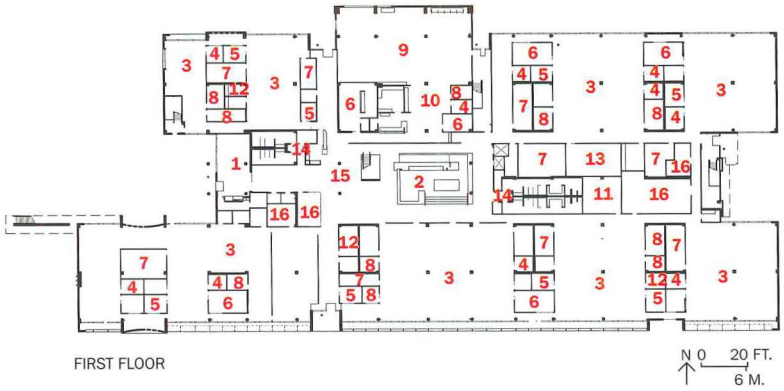
Charles Dilworth, principal architect at Studios, took Neutra's suggestions to heart and added his own item to the brief: innovation. A series of half-constructed, blocky laboratories nearby supplied a bit of backhanded inspiration. Dilworth designed a three-story, cast-in-place-concrete structure with a rectangular plan: "It's just a big box," he says. But the main entry, located on the western elevation, belies his modesty. It greets the public with an elongated court created by jostling the facade—pushing the office wings out and recessing the doors. Exaggerating this dynamic, a freestanding concrete wall, wrapped by an exit stair, extends westward.

PHOTOGRAPHY: © TIM GRIFFITH

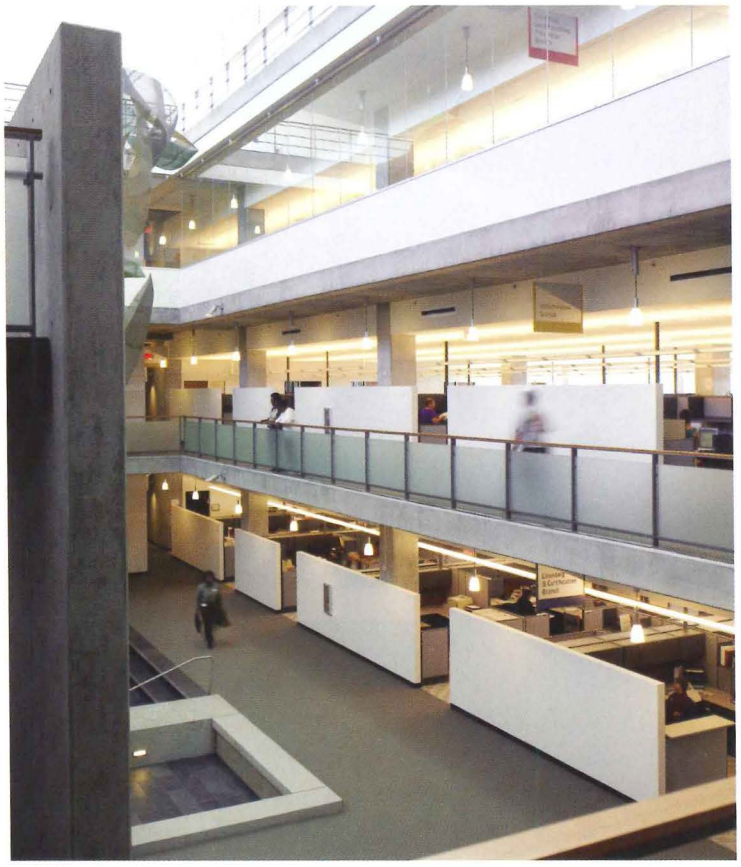
Mimi Zeiger, founding editor of loud paper, *is author of* New Museums.



A brise-soliel establishes a formal rhythm on the south facade (top left). Standing-seam zinc panels contrast with structural concrete, patterned by formwork holes (top right). On the west elevation, the entry is recessed behind an exit stair (below).



1. *Lobby*
2. *Light court*
3. *Office workstations*
4. *Private office*
5. *Quiet room*
6. *Conference room*
7. *Records storage*
8. *Storage*
9. *Library stacks*
10. *Reading room*
11. *Work area*
12. *Laboratories*
13. *Training room*
14. *Restrooms*
15. *Coffee bar*
16. *Service*



Workstations abut a central atrium, where a café, artworks, and a stair encourage employees to congregate (right). A wood-veneer screen marks the northern edge, filtering views and adding warmth (below).

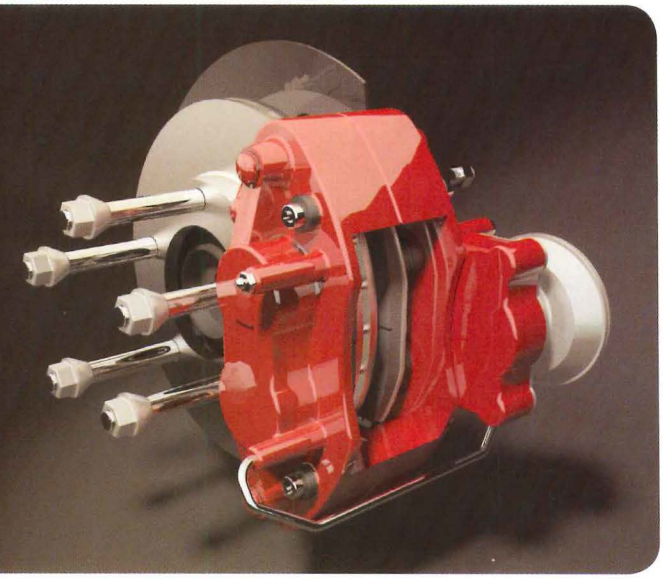
On the interior, a central atrium forms the building's social hub and contains a café, seating areas, and an open stair. Clerestory windows illuminate this four-story volume, while a curved ceiling, wrapped in Eurospan fabric, bounces sunbeams down to the ground floor.

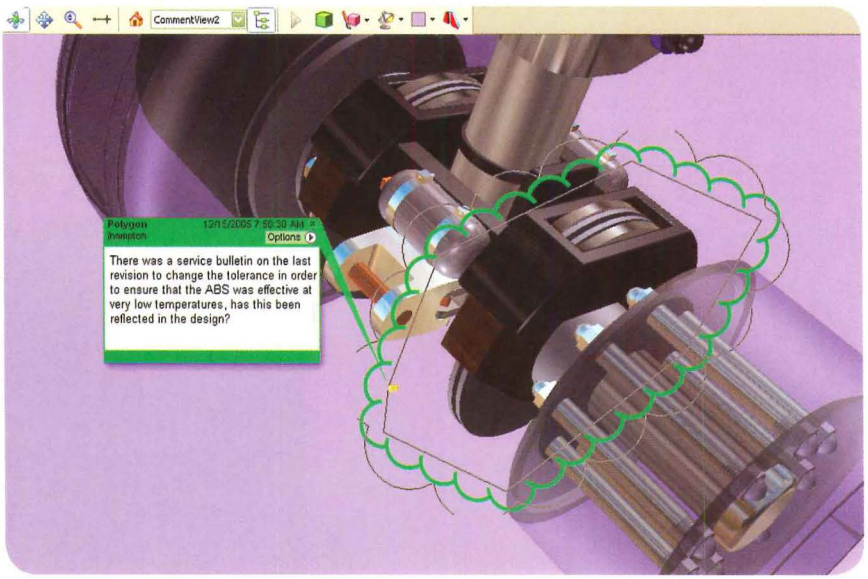
California's green-buildings program mandated that CDHS Phase III earn the equivalent of a LEED Silver rating. Accordingly, Dilworth drew as much daylight into the offices as possible. Along the building's north and south elevations, which are its longest sides, he employed a low-tech solution to reduce solar gain and glare: a Le Corbusier-like brise-soliel. Horizontal aluminum sunshades screen the windows, which are set back 8 feet from the edge of the floor plate. The depth and spacing between each louver change to account for the sun's angle: narrower and closer together on the top floor, wider and with larger gaps on the lower floors. This variation establishes a utilitarian rhythm within the facade.

Commentary

CDHS Phase III is a signature building dotted with good public art and architectural flourishes—a surprise, given the bureaucratic stumbling blocks that often plague government projects. The success of the Studios design comes from its ability to milk the most out of a few choice moves. The freestanding exit stair, for instance, is sculptural and dramatic, a Modernist gesture that one might expect to find in bigger-budget projects such as museums.

CDHS employees have responded well to the design, actually using the atrium as a gathering space and taking the stairs rather than the elevators. Which is why it is unfortunate to see the library, where Studios clearly spent a lot of time detailing carrels, locked, with its stacks half empty. It seems that when they began planning in 2001, both the client and the architect romanticized the idea of the library as a social space and failed to recognize the digital revolution that made scientific books and journals available online. One hopes that the CDHS will adapt its unused library for a new function, while staying true to Studio's sensitivity for mixing people and program. ■





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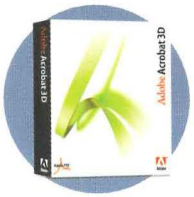

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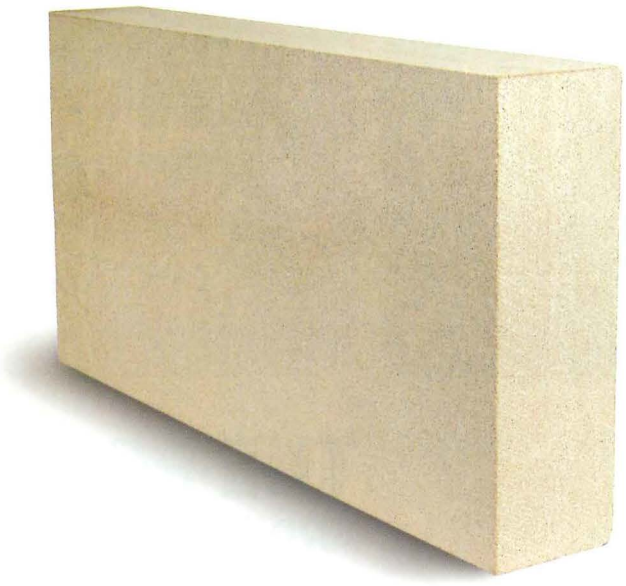

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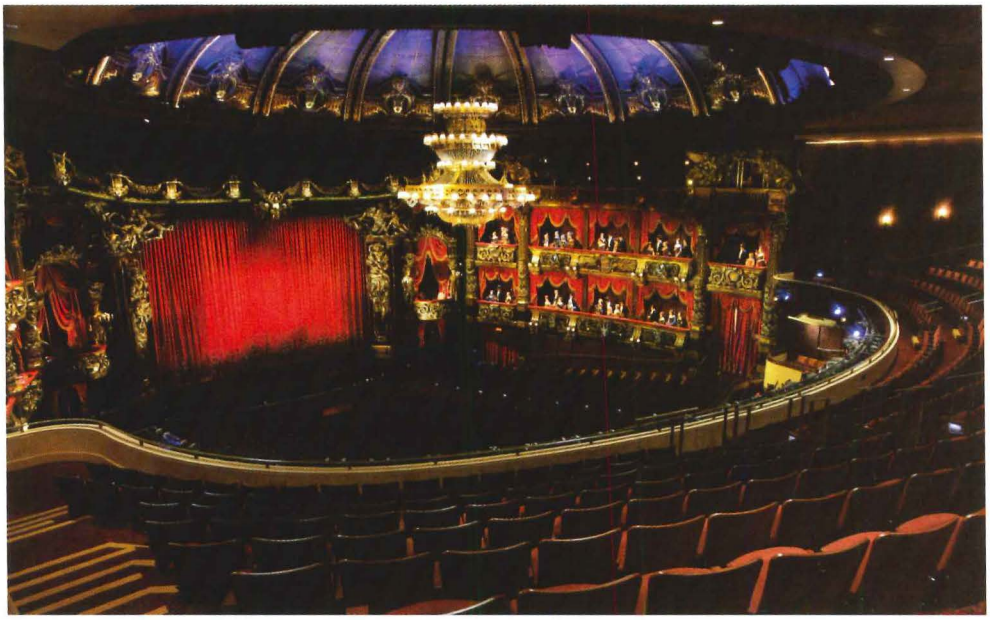
The Phantom Menace

THE ROCKWELL GROUP'S FLYING CHANDELIER FOR A NEW LAS VEGAS PRODUCTION OF *THE PHANTOM OF THE OPERA* TAKES THE FIRM'S THEATRICAL PHILOSOPHY TO NEW TECHNOLOGICAL HEIGHTS

By Russell Fortmeyer



David Rockwell says designing the theater space for *Phantom* was exciting because he could "augment the original production, with the theater as an immersive opportunity to become part of the story."

The hardest-working performer in Las Vegas isn't Wayne Newton, after all, but a 2,100-pound, Baroque-style chandelier that flies apart, crashes to the floor, and glides up into a pocket in the ceiling for the rest of the show.

That show is a new production of *The Phantom of the Opera*, Andrew Lloyd Webber's theatrical phenomenon, reconfigured for the Venetian Hotel and Casino as a Las Vegas spectacular simply called *Phantom*. The centerpiece of the Rockwell Group's redesign of the show is the chandelier, which free falls into the audience—stopping just short of 15 feet above the theater's floor—at the end of an abridged first act. The traditional fourth wall of theater is breached as the audience gasps in terror. In the *Las Vegas Sun*, Jerry Fink wrote that prior to seeing the production, he had "never heard applause for special effects." But David Rockwell, AIA, distinguishes the show from a display of special effects, preferring to think of it as magic. "The difference between the two is that magic has a story," Rockwell says.

Rockwell isn't the only person to say that the story of *Phantom*, based on a 1910 novel by Gaston Leroux, has been told exhaustively, but he jumped at the chance to work with legendary Broadway director Harold Prince, who had directed the production of *Fiddler on the Roof*, which was Rockwell's first Broadway experience. While the producers and Prince wanted to transform the show for Vegas, the team at the Rockwell Group did not want to reinvent Maria Bjornson's Tony-award-winning set that originated in the 1986 London production. "We wanted to augment the original production by having the theater as an immersive opportunity to become part of the story," Rockwell says.

The transfer of Broadway productions to Las Vegas hasn't always been a success. Recent productions of *Avenue Q* and *Hairspray*, while still attracting solid crowds in New York, failed to connect with Vegas audiences and closed early. *Phantom* has a unique blend of stage baggage: It is currently the longest-running show in Broadway history, and there are more than five professional productions in operation worldwide, including two touring companies, and a film version debuted in 2004. That might have worked against mounting a permanent production in Vegas, but producers had the benefit of reconceiving the show for an entirely new, 1,800-person theater.

Planning for a spectacle

The Rockwell Group, based in New York, has established itself through a number of high-profile projects, including the Kodak Theatre in Los Angeles, the Mohegan Sun casino in Connecticut [RECORD, March 2002, page 187], and the highly anticipated interior design for the JetBlue Terminal at New York's John F. Kennedy International Airport, which should be completed by 2009. Furthermore, Rockwell has designed sets for Broadway productions such as *Hairspray* and *Dirty Rotten Scoundrels*. He repeatedly says, in interviews and writings, that his chief concern in all aspects of his design practice is the experience of the viewer in his spaces.

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 124 and follow the instructions.*

LEARNING OBJECTIVES

After reading this article, you should be able to:

1. *Describe the movement in the deconstruction of the chandelier.*
2. *Describe the technology used to achieve the illusion of the chandelier crashing.*
3. *Discuss the concept of theatrical experiences in architecture.*

this story and more continuing education, as well as links to sources, e papers, and products, go to **archrecord.construction.com**.

The chandelier rests in four scattered pieces covered in dustcloths at the beginning of the first act. After the show's story flashes back to the heyday of the opera house, the dustcloths are quickly removed, the chandelier's lights flicker on, and the components begin their flight pattern around the theater, assembling into a single fixture in the central dome (top left). After falling at the end of act one, the chandelier is hidden in a cavity above the dome for the remainder of the show.

"The Paris Opera house represents a transformation in architecture with the person moving through it forcing that transformation," Rockwell says. "When you come up those stairs in the lobby, walk across those little spaces and into the boxes, and explode into the theater, you're in an extremely powerful spatial sequence." The Venetian Hotel wasn't interested in recreating the original opera house, with its classically tiered box arrangement and horseshoe plan. Rockwell designed the lobby and theater in an elegant, contemporary style. A few elements in the lobby nod to the show's narrative, including LED-lit glass boxes etched with the image of a chandelier enclosing cut-glass fixtures inside. The tiered gilt boxes stretching along either side of the proscenium have no functional purpose other than to frame the spectacle and buttress the immersive experience of it.

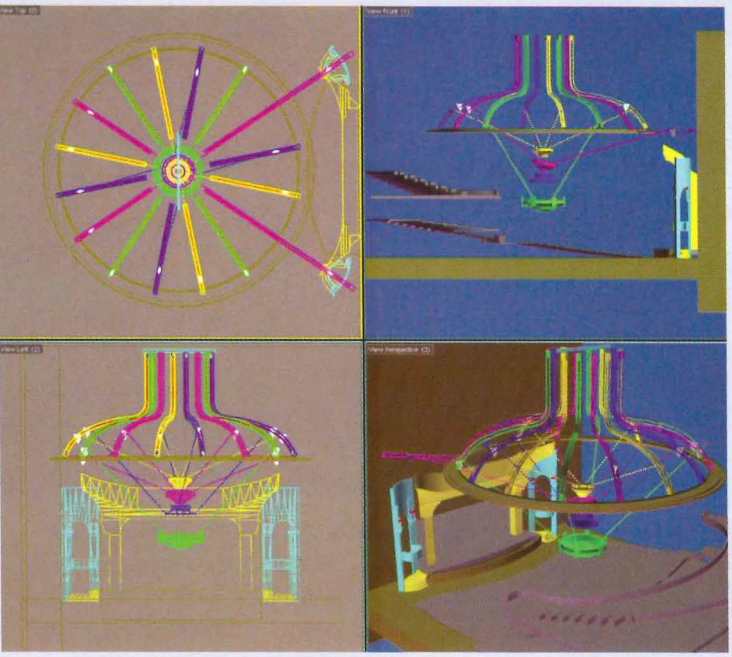
Rockwell's book, *Spectacle*, produced with designer Bruce Mau and published in November 2006, explores the idea of collective events "loaded with magical possibilities." It includes essays from a diverse group of contributors—theater director Julie Taymor, casino owner Steve Wynn, and art critic Dave Hickey—and profiles of some of the world's better-known public spectacles: *Burning Man*, *Running of the Bulls*, and *Kumbh Mela*.

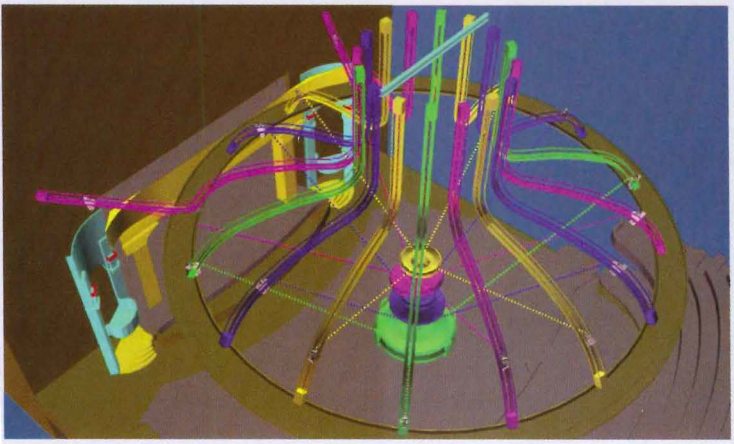
"Theatrical experiences draw a lot of their power from the notion of their ephemeral and fleeting qualities, which is tied to our ow humanity," Rockwell says. "The goal of timelessness and permanence ca lead to a kind of frozen, non-risk-taking approach." Las Vegas architectu certainly doesn't attempt timelessness, effusively embracing the urge thematically decorate that was central to the city's identity long befc Robert Venturi and Denise Scott Brown immortalized it in their 19 book, *Learning From Las Vegas*. Rockwell considers the Strip a mixi chamber. "I don't think people are going for gambling, entertainme shopping, or drinking, but the net sum of those things," he says.

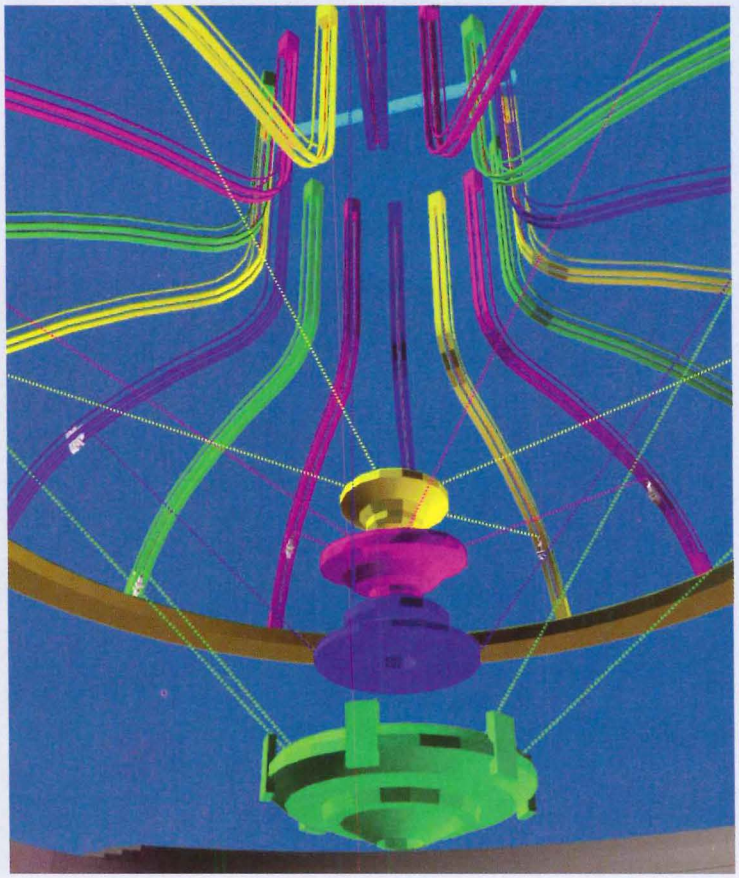
Rockwell doesn't storyboard an architectural project and its of technology in the way Walt Disney's Imagineers approached the cla rides at Disneyland, but he has used his experiences in theater as a labo tory for his ideas about architecture. "My interest in theater is ab collaboration, technology, and design in the service of storytelli Rockwell says, with particular interest in how all the elements c design—lighting, sets, color, decor—serve the same purpose.

Curtain up, light the lights

Rockwell wanted the $40 million theater, which was built within







Fisher Technical Services modeled a line diagram (pictured here) of the four components of the chandelier in the firm's proprietary software, Navigator. The program calculates the chandelier's performance trajectory, correcting for the pieces' tendency to tip vertically on wide turns around the theater.

Venetian in the shell of the closed Guggenheim Las Vegas branch (designed by the Office for Metropolitan Architecture [RECORD, January 2002, page 101]), to play a central role in the show's narrative. "When people come into the theater, we wanted to lower expectations," he says, referring to the beginning of the show, where the theater is shrouded in

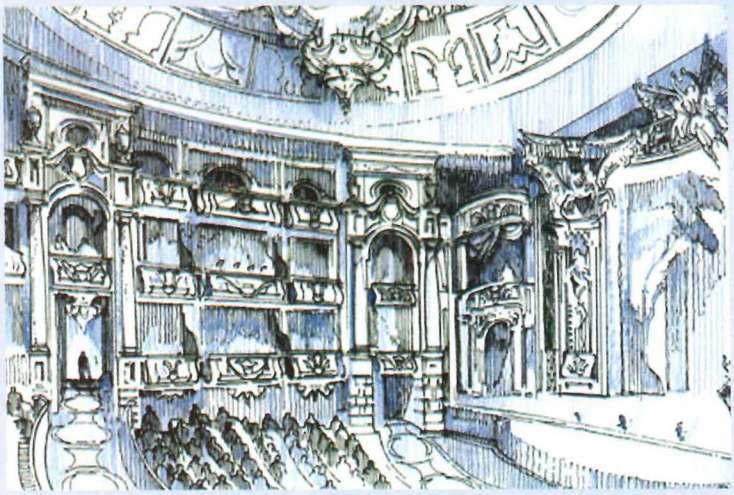
'THEATER IS ABOUT COLLABORATION, TECHNOLOGY, AND DESIGN IN THE SERVICE OF STORYTELLING," ROCKWELL SAYS.

ray dustcloths and an auction to sell remnants of the opera house is nder way. With a Baroque pomp attributable to few in the theater outde of the composer Andrew Lloyd Webber, the show whisks back in time s the dustcloths dramatically sweep into crevasses and the chandelier egins its twisting, flying journey up to the domed ceiling.

Charles Garnier's design for the Paris Opera, now known as the pera Garnier, was completed in 1875, and while its chandelier never fell om its lofty perch, it is said the inspiration for Leroux's novel came from 1 1896 incident where one of the fixture's counterweights fell and killed a patron. Although Garnier's neo-Baroque architecture, which he designated the style of Napoleon III, fell out of favor, no one has ever criticized the opera house for lacking theatricality in the way its elements cohere as a setting for the communal parade of high society. The Vegas chandelier is based on the original design with three main tiers of lights and complicated joinery and decoration befitting the gilt splendor of the opera.

The Rockwell Group designed the chandelier to be split into four components, each hung by four steel cables attached to a series of winches hidden in the ceiling above. The chandelier lines up vertically, with each element nesting within another to appear as if it were one unit. The winches maneuver along 16, 52-foot-long tracks that follow the ribs of the theater's fake domed ceiling. (The Opera Garnier's present ceiling is plaster and was painted by Marc Chagall in 1964.)

The lights on the chandelier, conceived by designer Howard Eaton in concert with lighting designer Andrew Bridge, are powered by batteries typically used in hybrid automotive design. Since only the steel cables could be used to support the chandelier, the batteries were mounted within the four frames of the chandelier's components. After performances, the chandelier is lowered and the batteries can be charged. These



The Rockwell Group undertook a variety of representational methods in its design for the *Phantom* theater, including an elaborate series of cartoons to indicate early concepts (above left). The design team then modeled the theater and the concept of the flying chandelier in the Autodesk 3ds Max software (above). Although Rockwell originally wanted the side balconies of the theater to be accessible to patrons, the Venetian administration nixed the idea. In the final design, the balconies foster an immersive environment for the audience during the performance. Prior to the show's beginning, the balconies are draped in dustcloths that, once the show's story flashes back in time, are dramatically pulled into cavities through an automated system, revealing the costumed mannequins behind (left).

elements were designed as well as modeled in AutoDesk's 3ds Max, prior to undertaking a separate process to actually make the chandelier fly. (See www.archrecord.com for a demonstration of the chandelier in motion.)

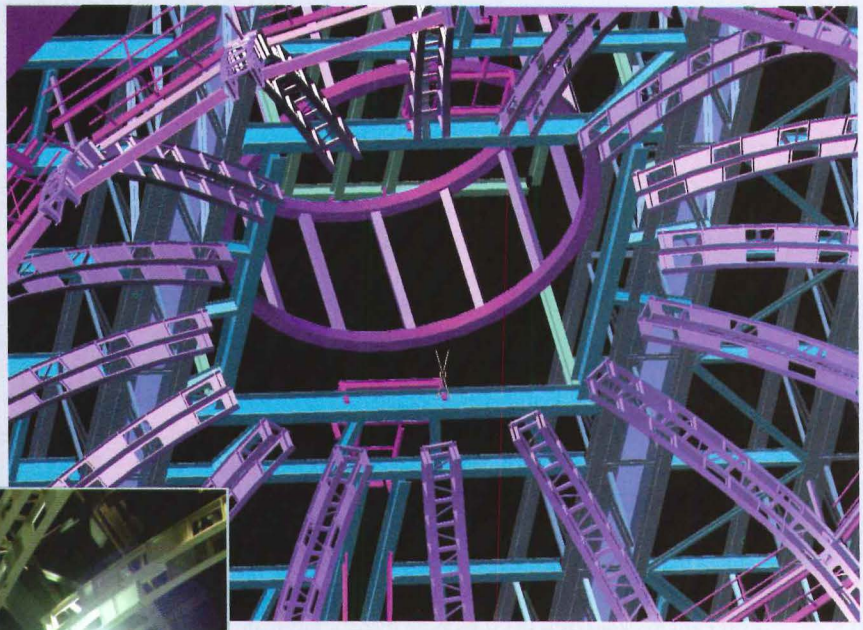
Automating destruction

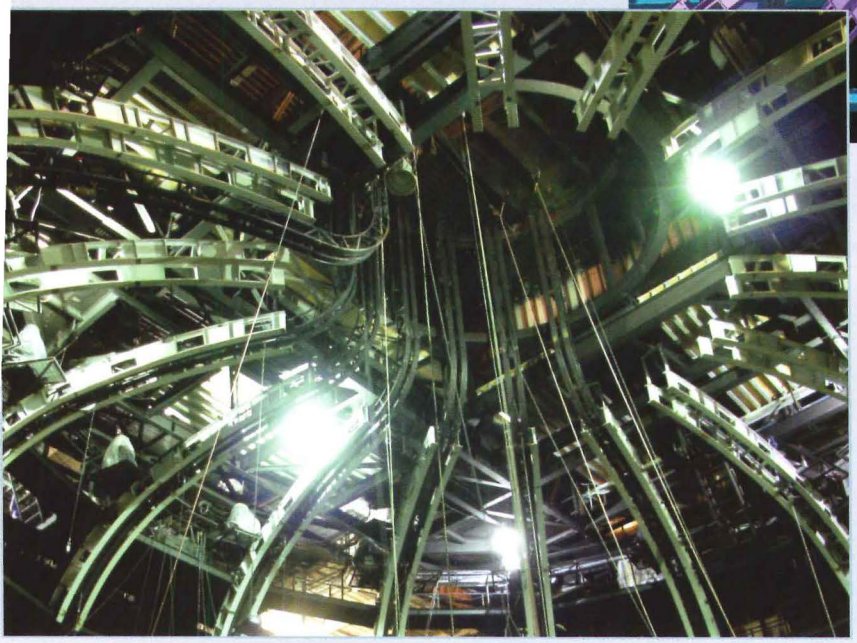
The Rockwell Group approached Scott Fisher, an engineer and a veteran technical guru of flashy Vegas productions, such as those of Cirque du Soleil. His Vegas-based Fisher Technical Services group developed, among other things, an early mechanical installation for an amusement ride at the Experience Music Project in Seattle and consults on Hollywood projects, such as the first two *Spider-Man* films. Unlike Fisher's other projects, *Phantom* required more than a simple two-dimensional trajectory. "It was a new feature for us to move an object around in three dimensions," Fisher says. "The first thing I did leaving the concept meeting was to tell my team to develop 3D software."

The team's research concluded that no one had tackled the concept of "moving suspension points," with 16 cables hung through pulleys that were themselves traveling along a curved track. Thus, Fisher tapped his contacts in academia here and abroad to put together a team that could work through the algorithms needed to make the chandelier fly.

The team put together a proprietary modeling program it calls Navigator. The plan was to build a simple line diagram of the chandelier's four parts, set up digital parameters, and let the computer do the thousands of complicated calculations necessary to carry out the chandelier's performance. The equations of algebra, trigonometry, and vector analysis embedded in the program enable it to plot the paths of all four components as they fly through space, but unlike other 3D software programs the chandelier required the addition of a more general physics. "Once you move the objects outside of the center radius, they have a tendency to roll on you and go vertical," Fisher says. "The computer had to calculate the center of gravity and determine how the outside lines can compensate for the fact that it is rolling and tipping."

After the first eight weeks of development, Fisher says the team managed to program the software to perform the calculations in 10 minutes. Getting down to the final 8-second program was difficult. "All the machines we use to run the chandelier have onboard computers that cross-monitor one another constantly," Fisher says, adding that a single human operator is on hand to oversee the sequence. During the chand





Fisher Technical modeled the domed structure and a simple line diagram of the chandelier's components in Navigator (above). The firm then fabricated the structure at its Las Vegas facility, before constructing it within the theater space at the Venetian (above left). The team called the central cavity, where the chandelier hides during act two, the "stovepipe" (left).

PHOTOGRAPHY: COURTESY FISHER TECHNICAL SERVICES

lier's routine, the software instantaneously and continuously calculates anticollision vectors on the wires, components, and audience. The program's design accounts for losing one wire, too, though the loss of two wires on a single component would require the chandelier to be shut down and automatically hauled up into the fly space above the dome. "With two wires, it basically becomes a wrecking ball," Fisher says.

Falling to earth

Needless to say, with a 2,100-pound chandelier flying overhead, there were a few safety concerns. "It's basically a 32-axis robot," Fisher says. "If one thing fails, the whole thing stops because you can't get it out of the way." Although the program is accessed on a conventional computer, the software runs on a QNX operating system across a simple Ethernet backbone. QNX systems are typically used for mission-critical schemes like heart monitors and military operations. Local building officials weren't as concerned with the programming as they were with ensuring the 20 tons of steel in the support structure could withstand the dynamics of the performance.

Each wire is attached to two winches, one that controls the vertical lift (up and down the track), and the other that modulates the horizontal traverse (lengthening and shortening to allow the wide sweeps needed during the initial flying sequence). Each of the four chandelier components runs on four tracks. With over 1.5 miles of steel cable, 1,800 individual pulleys, 15,000 bolted connections, and 640 total motor horsepower, there were a multitude of potential failure points.

Fisher's team included a 12-to-1 safety factor in most aspects of the design, undertaking fatigue analysis on the steel structure and cables similar to what might be done for an aircraft. "The steel really left the world of scenery and became a Boeing," Fisher says, noting that his team tracked the lot numbers of steel from factory to installation to ensure quality. Once the steel was framed, with the track, winches, and pulleys in place, 500 pounds of dead weight was placed on every access point. Additionally, dual braking systems were installed—especially important given the dramatic drop at the end of the first act. A stunt chandelier, obviously much cruder than the final version, was installed and tested in place. Programmers had created routines for the chandelier, which mostly came off without a hitch.

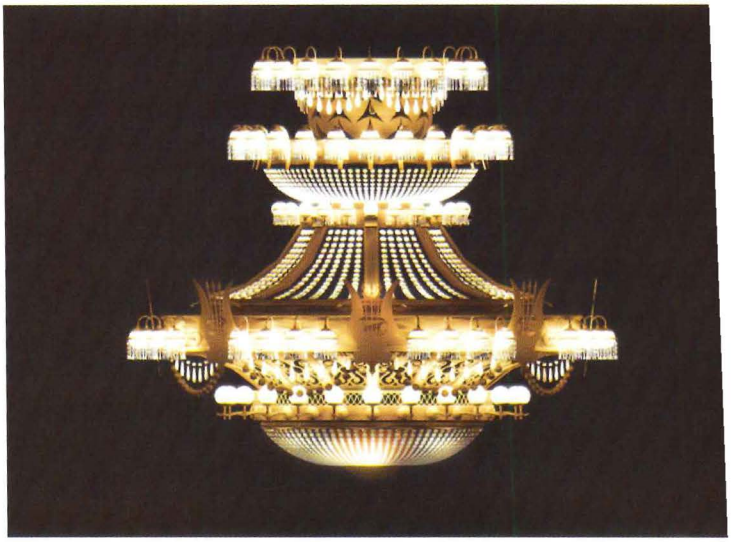
NEEDLESS TO SAY, WITH A 2,100-POUND CHANDELIER FLYING OVERHEAD, THERE WERE A FEW SAFETY CONCERNS.

The one snag was the transition from horizontal movement to the tight vertical position needed when the chandelier moves up into the dome (this occurs after the chandelier has ostensibly "fallen" on the audience). Rob Bissinger, with Rockwell Group, says the vertical portion of the track—the transition from the domed ribs to what the designers call the "stovepipe"—represented a difference of 2-to-1 for loading. The weight ratio of the pulleys then changes at that curved transition. "It's difficult, to say nothing of the fact that you have 16 lines that have to make a transition without hitting one another," Bissinger says. After some tweaking on the software, the slight bounce that had marked the shift disappeared.

Even chandeliers can be divas

With a 15-month schedule, Fisher's team designed and fabricated the chandelier at its 30,000-square-foot Vegas headquarters before installing it at the Venetian. The producers gave Fisher only five weeks before opening night to test the final installation. Justly proud of its creation, Fisher's team gave the chandelier a bit of a diva reputation after having programmed its performance to last 1 minute and 40 seconds, versus the length of 55 seconds warranted by *Phantom*'s overture. The chandelier's role was cut back.

Although Rockwell doesn't slouch on incorporating new technology into his practice—and the chandelier is certainly attracting its share of good press—he believes technology ultimately has to be embedded in craftsmanship and in service of a story or experience. The Rockwell Group is currently in the design phase on a park for another high-profile Vegas project, the MGM City Center [RECORD, October 2006, page 272]. "The idea of Vegas is in some ways better than the reality," he says. "It's a fantastical place with no context other than pleasure and entertainment." ■



The four components of the chandelier nest inside one another.

AIA/ARCHITECTURAL RECORD CONTINUING EDUCATION

INSTRUCTIONS

- **Read the article "The Phantom Menace" using the learning objectives provided.**
- **Complete the questions below, then fill in your answers (page 171).**
- **Fill out and submit the AIA/CES education reporting form (page 171) or download the form at archrecord.construction.com to receive one AIA learning unit.**

QUESTIONS

1. Rockwell says that the goal of permanence can lead to what kind of approach?
- **a.** not serious
- **b.** playful
- **c.** non-risk-taking
- **d.** theatrical

2. Rockwell believes that theatrical experiences draw a lot of their power from their fleeting qualities, which are tied to what?
- **a.** architecture
- **b.** humanity
- **c.** imagination
- **d.** culture

3. The Venetian theater was built in the shell of what building?
- **a.** Las Vegas Guggenheim
- **b.** Caesar's Palace
- **c.** Paris Opera House
- **d.** Cirque du Soleil

4. To simulate its falling, the chandelier is split into four components in which configuration?
- **a.** each hung by one steel cable
- **b.** all four line up vertically, appearing to be one unit
- **c.** each hung by four steel cables
- **d.** both b and c

5. The Vegas chandelier is composed of which elements?
- **a.** three main tiers of lights
- **b.** original Paris Opera House elements
- **c.** gold leaf
- **d.** French crystal

6. The chandelier is operated by how many machines with onboard computers?
- **a.** 8
- **b.** 16
- **c.** 24
- **d.** 32

7. During the chandelier's routine, the software calculates anticollision vectors on which?
- **a.** wires
- **b.** components
- **c.** audience
- **d.** all of the above

8. The chandelier's computer software runs on an operating system typically used for which?
- **a.** 3D modeling
- **b.** spacecraft
- **c.** heart monitors
- **d.** power plants

9. The fatigue analysis performed on the steel structure and cables was similar to what might be done for which?
- **a.** submarines
- **b.** aircraft
- **c.** satellites
- **d.** 50-story buildings

10. The chandelier achieved a diva reputation for which aspect?
- **a.** its flying across the stage
- **b.** its free fall to 15 feet above the theater floor
- **c.** its performance of 1 minute 40 seconds
- **d.** its special lighting effects

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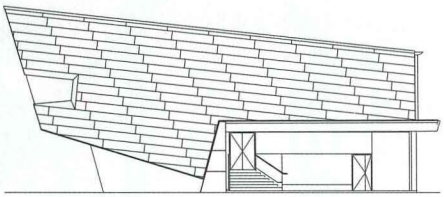

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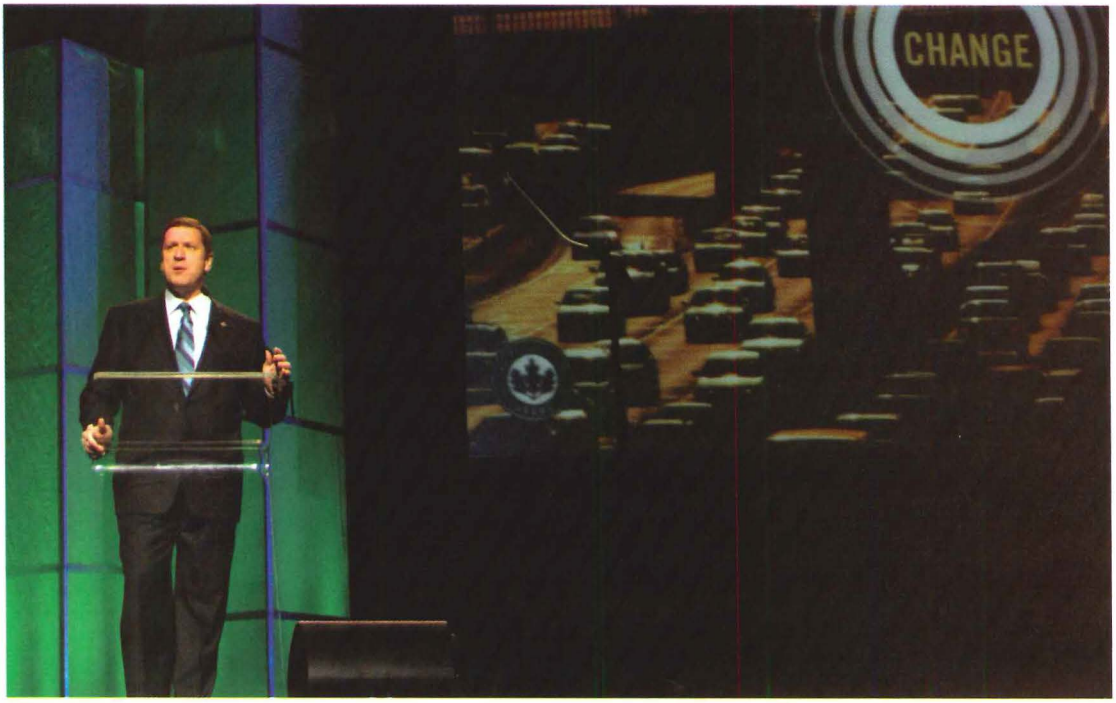
Green Building Council hones rating system as a tool for combating carbon emissions



Each U.S. Green Building Council annual conference seems to mark a milestone in the development of the organization's Leadership in Energy and Environmental Design rating system, known as LEED. A year ago in Atlanta, the big news was the move away from cumbersome project documentation binders toward a streamlined, paperless submittal process. At the most recent Greenbuild conference, council officials introduced a series of proposed changes aimed at mitigating the built environment's role in climate change.

"The USGBC, through the LEED rating system, is capable of, and responsible for, making substantial improvements" in greenhouse gas emission from buildings, said council president and C.E.O. Rick Fedrizzi, at the November 15 opening plenary for the 2006 three-day conference in Denver. Starting early in 2007, the council will require that all new commercial projects seeking LEED certification reduce carbon dioxide (CO_2) emissions by 50 percent over current levels.

To realize this goal, projects will have to achieve at least two of the possible 10 energy and optimization points outlined in the current version of the rating system. "We are essentially saying that you can't do a LEED building without energy efficiency," says Scot Horst, chair of the USGBC committee responsible for shaping the rating system and president of the 7Group, a green building consultant. At RECORD press time, a draft of the proposed change was to be released for public comment by late January.

The committee is working to assign "carbon benefits" to credits across all LEED point categories, including sustainable sites, water efficiency, materials and resources, and indoor environmental quality. "Some benefits are more complex to quantify than others," says Horst, pointing to the challenges of measuring the carbon associated with occupants' transportation to and from buildings or the embodied energy in materials. "As a country, we haven't dedicated ourselves to collecting that kind of data," he says.

The council also plans to institute a CO_2 trading program. In addition to studying the metrics that would be used to measure offsets for buildings, the USGBC is examining other issues relating to carbon trading protocol, such as whether credits would accrue to the building owner or the utility, explains Michelle Moore, USGBC spokesperson. "We are concerned that the credits represent high-quality offsets and real reductions," she says.

As part of this effort to reduce the green house gas emissions associated with buildings, the USGBC, along with the American Society of Heating, Refrigerating and Air-Conditioning Engineers, and several other groups, adopted the 2030 Challenge at Greenbuild. The initiative, launched in January 2006, and previously adopted by the American Institute of Architects and the U.S. Conference of Mayors, calls for all new buildings and major renovation projects to reduce greenhouse-gas-emitting energy consumption by 50 percent immediately. The challenge calls for gradually increasing performance targets so that all new buildings would be carbon neutral by 2030.

Several initiatives targeting greenhouse gases were announced by USGBC President Rick Fedrizzi as part of Greenbuild's opening plenary (above) at Denver's Colorado Convention Center (left).

Also in Denver, the council and the software company Autodesk announced plans to explore ways of integrating building information modeling tools into LEED. According to Phil Bernstein, FAIA, Autodesk vice president, the initiative will "democratize and make more accessible sustainable design tools," ultimately reducing the causes of climate change by increasing the number of green buildings that emit less CO_2. *Joann Gonchar, AIA*

Tech Briefs

Second Life and *Google Earth* are transforming the idea of architectural collaboration

Had Jane Jacobs lived to see *Second Life* (secondlife.com), the urban advocate might have been surprised to find that a Web site offers the most promise for gauging public opinion of proposed architecture.

Second Life, which is a kind of synthesis of the games *SimCity* and *The Sims*, allows registered users to exist within a rapidly developing alternative, Web-based world. Anyone can design buildings within the site, which makes it especially appealing for architects looking for feedback on buildings long before construction begins.

Since fall of 2005, Terry Beaubois, AIA, has taught a course using *Second Life* at the Montana State University School of Architecture. "It's an immersive 3D environment where I can visit with students and monitor their projects," Beaubois says. "It doesn't replace CAD, but it's a supplement for our technology that helps us learn to collaborate." Beaubois often teaches remotely from his base in California, but he facilitates Montana State's Creative Research Lab. He says the lab's mission is to research the application of technologies in CAD, *Google Earth*/*SketchUp*, and *Second Life* to architectural education and architectural practice.

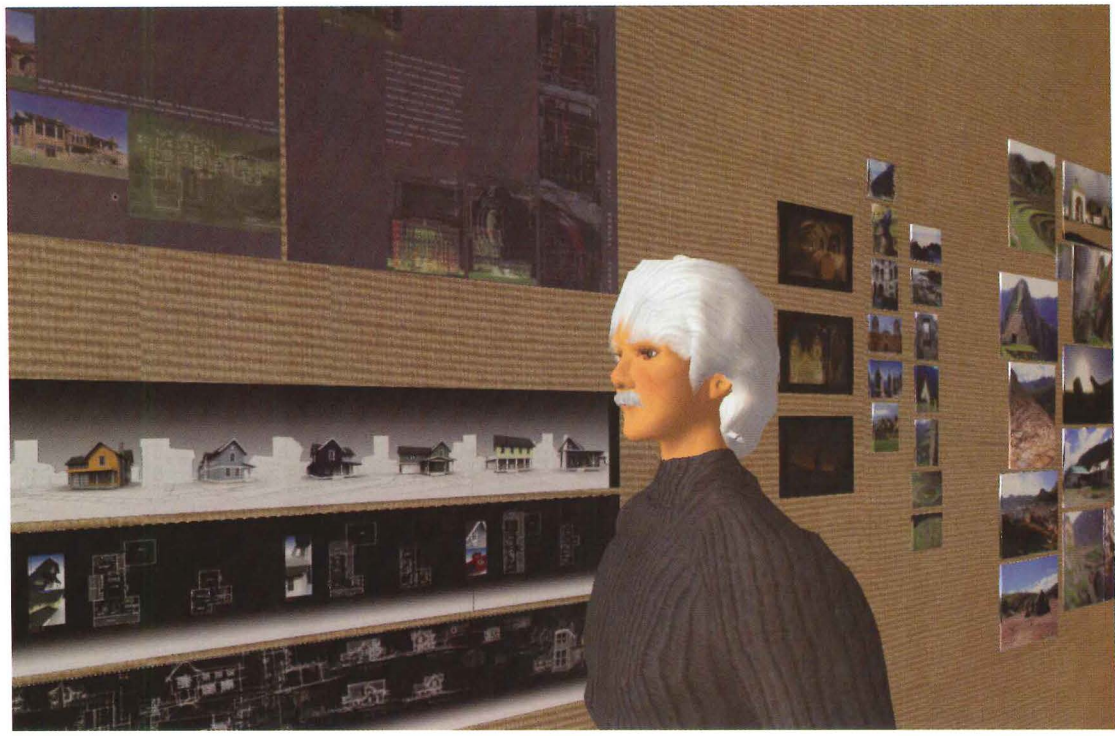
Unlike *Google Earth*, which allows users to import digital architectural models into a map of the real world, *Second Life* is composed of a mainland and private islands. Users create an avatar to be their virtual representative. Every user—and there are currently more than 2 million registered on the site—accesses the same world, so every avatar you encounter in *Second Life* is the digital face of a live user.

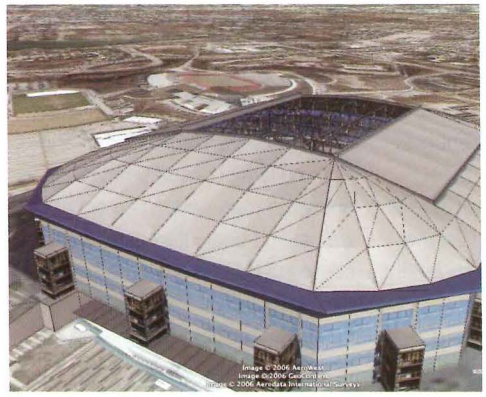
Second Life has an internal building system, which uses an interface that lets you manipulate geometric shapes to form more complex objects. Using *Second Life*'s group creation platform, Beaubois and his students can work in the same interface to manipulate geometric shapes and link them to make a variety of structures, such as a gallery space in which to show their work. Beaubois also finds it a good tool for showing students how building parts fit together. "During one class period, a student built a design and the other students went into the program to test it out," he says. "They could instantly see where the trouble spots were, and it could be modified on the spot."

Modeling programs like AutoDesk's Revit and 3ds Max have helped to bring architecture into the virtual realm. Google's recent acquisition of *SketchUp* suggests that more companies will become interested in these tools as they become more central to architects' business. John Bacus, a Boulder, Colorado–based product manager at *SketchUp*, says it's hard to keep up with all of the projects and modeling of real cities being loaded into *Google Earth*. "We don't edit the models in any way," Bacus says. "They can be loaded anonymously and anyone can review and rate them."

Bacus says you can load multiple versions of a building intended for a single site. The public could then vote on the best version. "The public tends to trust 3D models more than a simple rendering," he says. As the world of virtual architecture develops, we may see architects lead clients on tours through a 3D-modeled *Google Earth* with a view of the firm's buildings. In *Second Life*, multinational firms could create meeting rooms to foster interoffice collaboration. Already in *Second Life*, virtual lectures have attracted architects from all over the world.

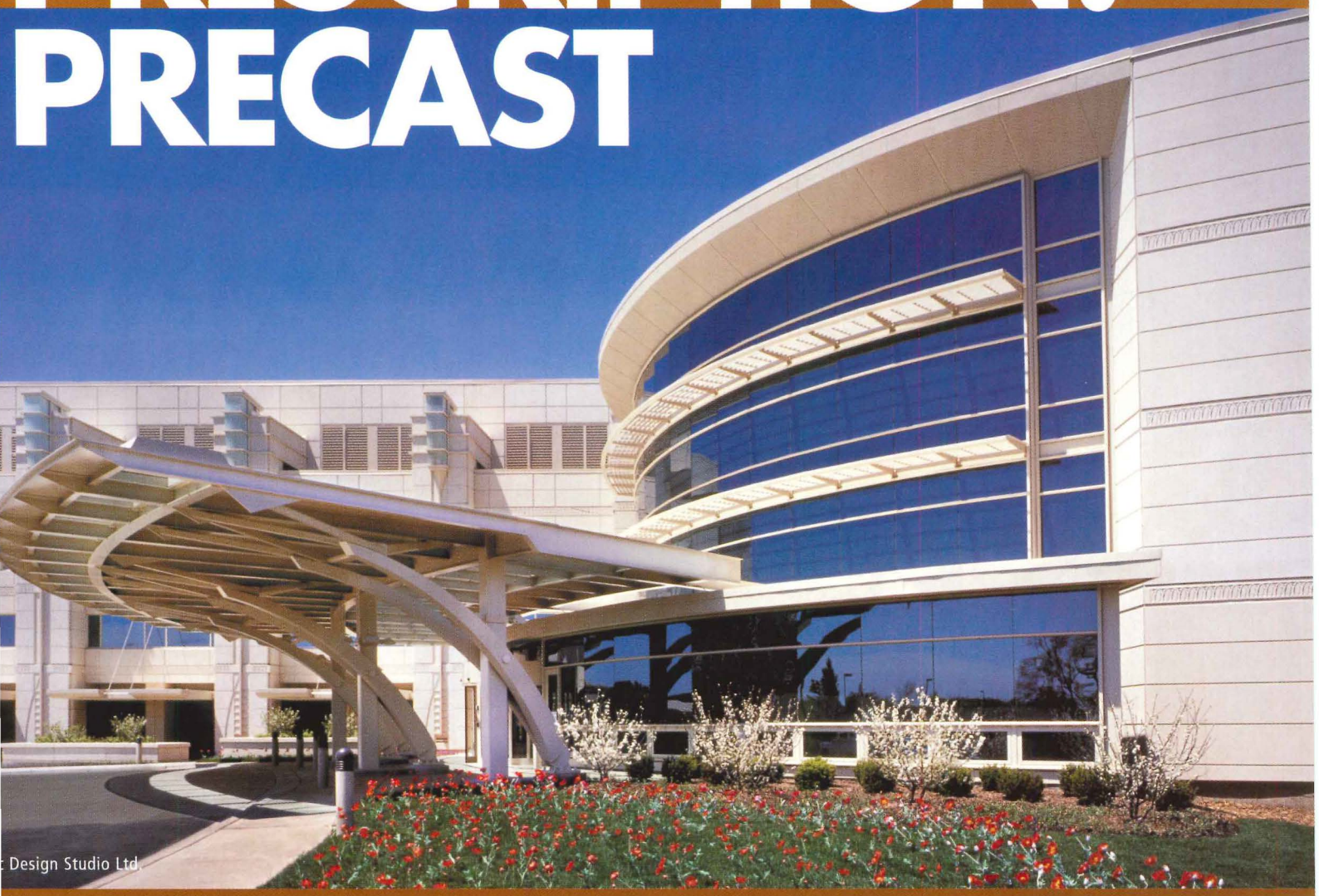
Christopher Kieran





Terry Beaubois's *Second Life* character, Tab Scott, reviews student design work in an on-line gallery created as part of his class, "Digital Collaboration for Architects" (top). Users of *Google Earth* (left) are rapidly developing 3D versions of the real world.

PRESCRIPTION: PRECAST



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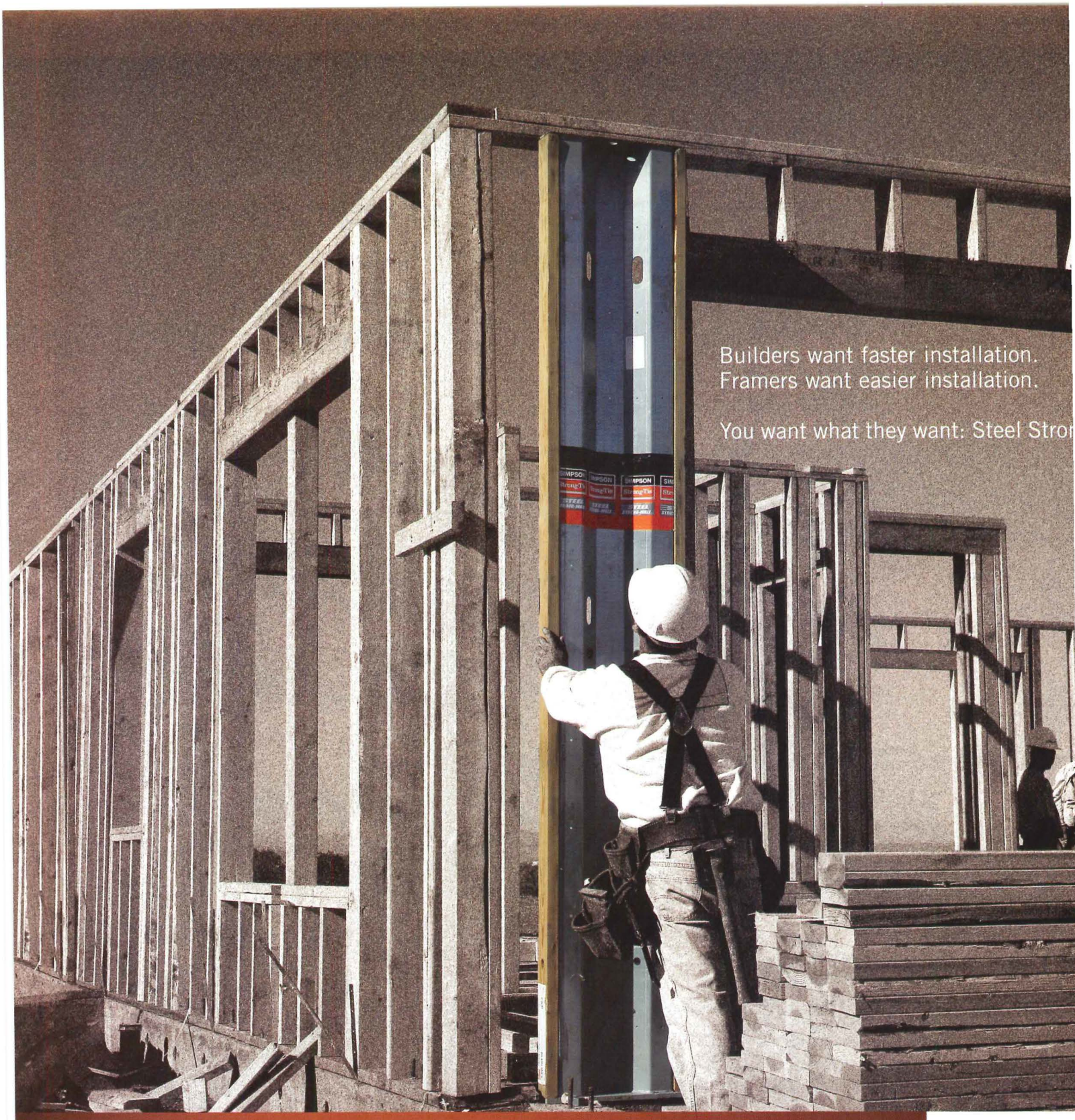

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Residential

Living large in small spaces: Modest-scale houses reflect human-scale values

BRIEFS

The housing market continues to weaken, with leading construction companies reporting lower earnings, and the U.S. Commerce Department noting a 3.2 percent decrease in the sale of new single-family homes, for the month of October 2006. Yet the National Association of Home Builders' president David Pressly says that the market correction is largely behind us, and the economy is stabilizing. Equally upbeat, *BusinessWeek* tells us interest rates will remain at historically low levels, with home buyers seeing considerable opportunities in 2007. While new home prices continue to fall in 2007, light shines at the end of the tunnel, with 2009 primed for a comeback.

Prefab houses are moving up in the world, with some now being designed for placement atop existing flat-topped buildings. For renters who move frequently, such rooftop living holds tremendous appeal. The space-saving, 387-square-foot Hanse Colani Rotor House features a cylinder that contains a kitchen, bath, and bedroom and rotates to the left and right of the central living room. Werner Aisslinger's Loftcube is light enough to be transported by helicopter. BlueSkyMod, an ecofriendly design by Todd Saunders, uses mostly local and recycled materials as well as solar panels, composting toilets, and other off-the-grid technologies. See www.blueskymod.com and www.loftcube.net.

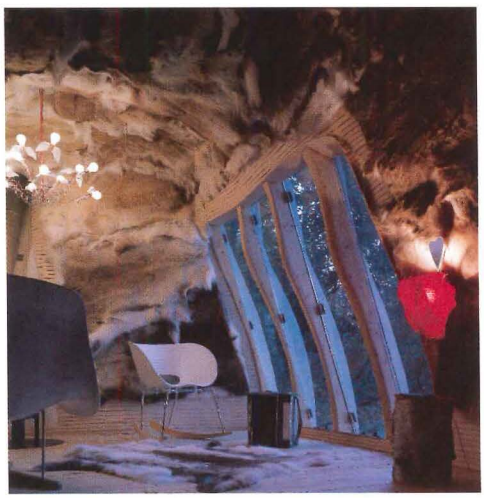
The "Zero-Yen House" is what Japanese artist and architect Kyohei Sakaguchi calls houses built from found objects in the shantytowns of Tokyo, Osaka, and Nagoya. Sakaguchi stresses the ingenuity of the illegal dwellings, which incorporate disassembly into their design so they can be quickly moved. An exhibition at the Vancouver Art Gallery included a replica of a Tokyo Zero-Yen House built by a former camera engineer who designed an electrical system powered by a small solar panel. Sakaguchi believes aspects of the house's design represent possibilities for a modular architecture based on the dimensions of the human body. Visit www.vanartgallery.bc.ca.

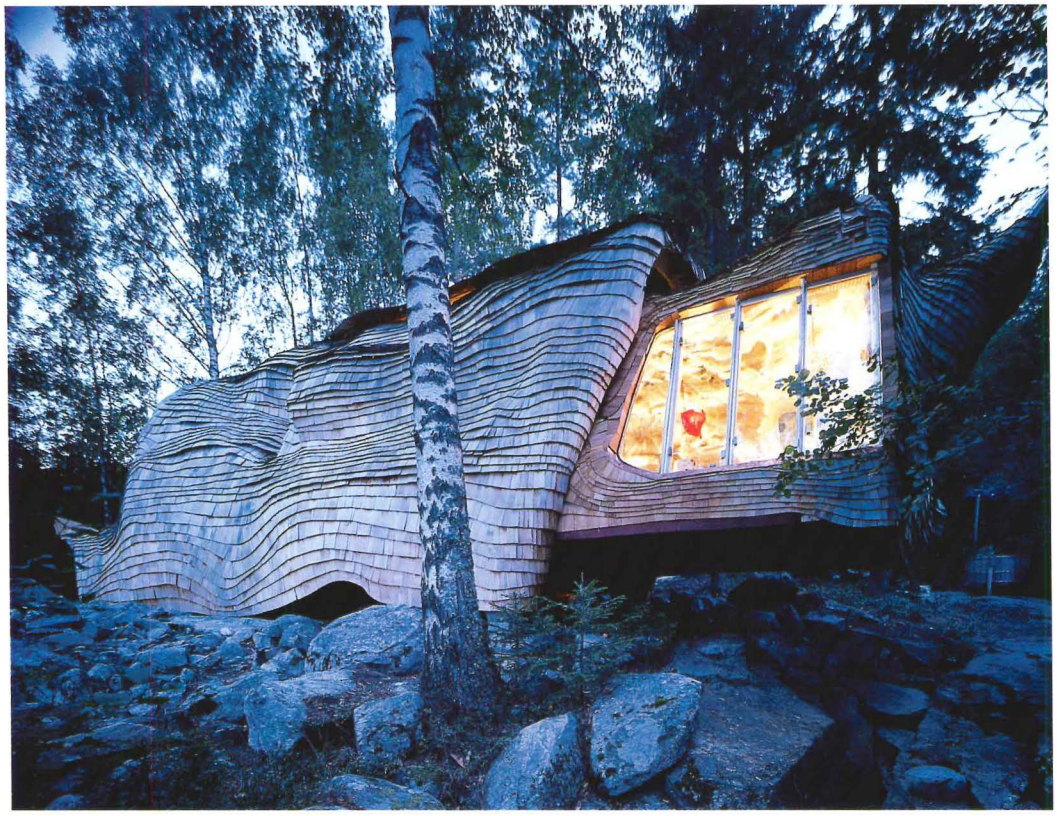
The Katrina Cottage, a house-building kit by designer Marianne Cusato [RECORD November 2006, page 30], won the 2006 Cooper-Hewitt People's Design Award. The kit goes on sale later this month at Lowe's stores in Mississippi and Louisiana. The design is popular for its traditional style and flexibility: Because it's a kit and not prefabricated, its design is not predicated on fitting onto a truck. Over 10,000 people have already expressed interest in the kit for use along the Gulf Coast and for second homes. Visit www.cusatocottages.com.

Christopher L. Kieran

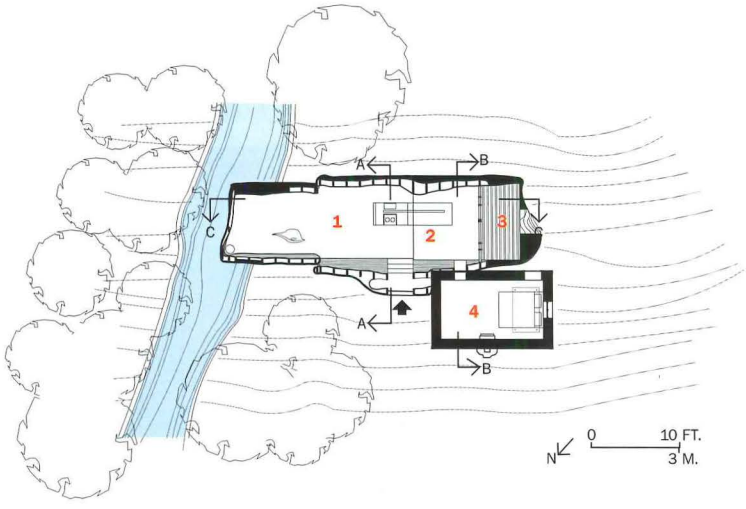
CONTENTS

As the epithet *McMansion* suggests, houses have been supersized. The square footage of the average American house rose from about 1,500 square feet in 1970 to more than 2,300 square feet in 2001. Yet from 2001 to 2004, this growth slowed, suggesting that the size of the average house stabilized, says Gopal Ahlawalia, vice president at the National Association of Home Builders. The appeal of big houses may be waning. Sarah Susanka, FAIA, author of *The Not So Big House* series of books, says that good architects know the importance of human scale, but it takes a while for the society in general to catch up. Ecoconscious consumers reject big houses with their burdening energy costs. Younger buyers steeped in cool design aren't going to live in McMansions; they want their homes to reflect their values. Susanka says the Y Generation emphasizes the value of function: "If you don't use it, don't build it," and livability, which makes a house a home. Herein find four examples of residences fit for the modern "not so big" mindset. *Jane F. Kolleeny*





The incredible shrinking house: 24H-architecture's **Dragspelhuset** expands and contracts on demand



1. *Living/dining, with extension deployed*
2. *Kitchen*
3. *Porch*
4. *Bedroom*

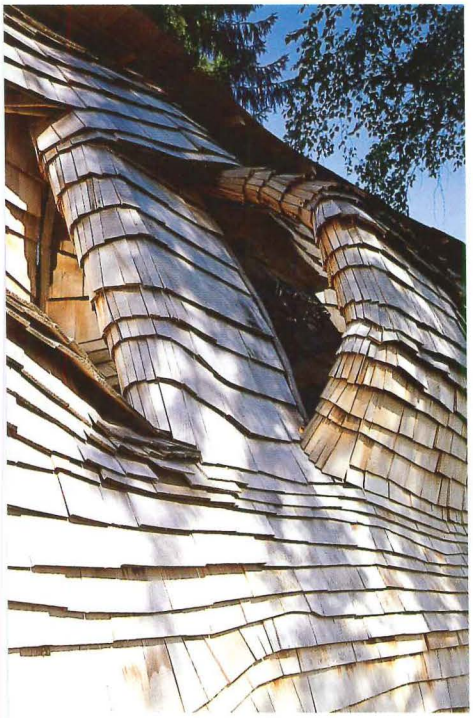
By Beth Broome

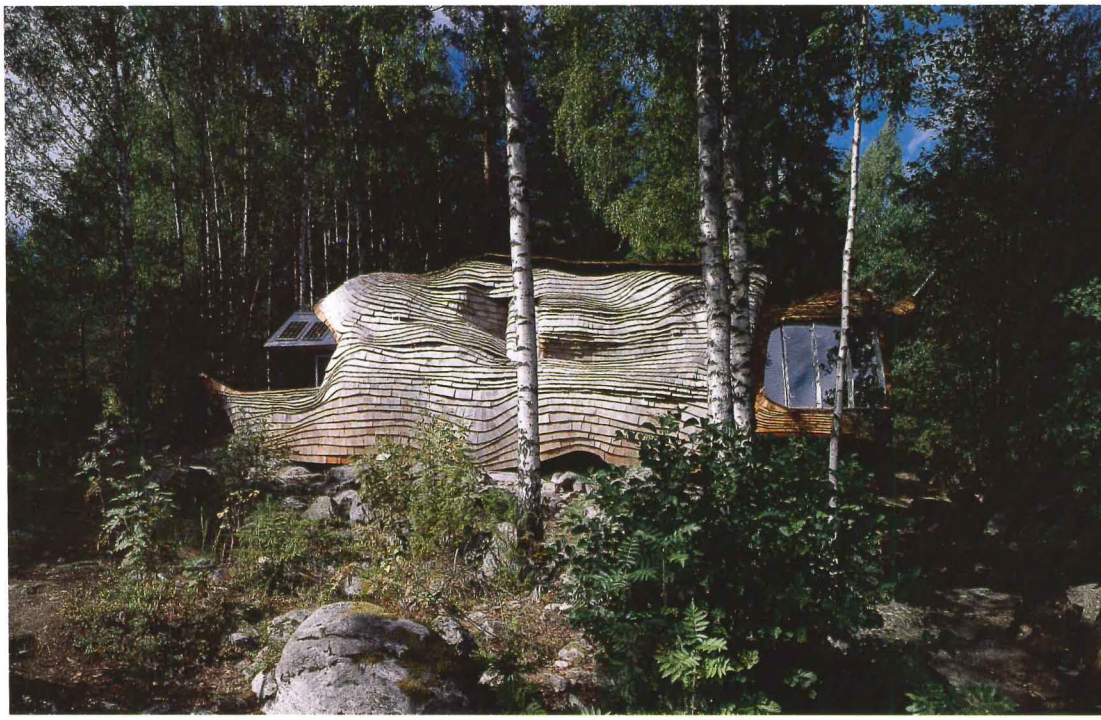
Locals around the Swedish nature reserve of Glaskogen affectio
ately dubbed this quirky little expandable house in its midst th
"Dragspelhuset," or accordion house. But the owners, Bor
Zeisser and Maartje Lammers of the Dutch firm 24H-architec
ture in Rotterdam, liken the building in its winter incarnation, when i
movable extension is stowed inside the main body of the structure, to
tightly sealed cocoon with a double skin that protects against the col
Come spring—when the extension is deployed—it becomes a butterf
with wings unfurled to provide extra shelter on rainy days.

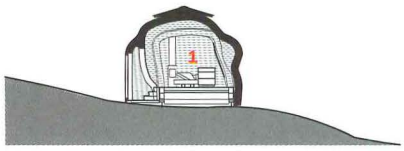
The couple, hoping to give their young daughter an experien
like Zeisser's childhood summers spent in Sweden, embarked on a que
for a vacation retreat from Holland's relative congestion. Their searc
ended with an odd property that no one wanted—a 19th-century fishi
shack isolated in a pine and birch wood on the banks of Lake Ovre Gl

Project: *Dragspelhuset, Arjang, Sweden*
Architect: *24H-architecture—Maartje Lammers and Boris Zeisser, project architects; Olav Bruin, Jeroen ter Haar, Sabrina Kers, Fieke Poelman, project team*
Engineer: *ABT*

The extension sits on wheels that slide along two steel rails as it is pulled out manually by means of a pulley system. The whole process takes less than a minute, says Zeisser.







SECTION A-A

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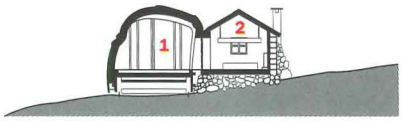
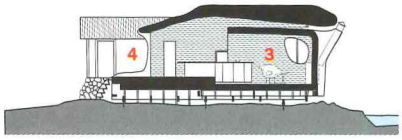
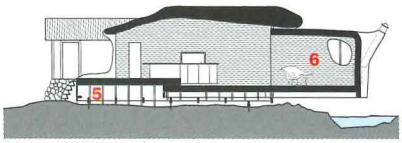


SECTION B-B



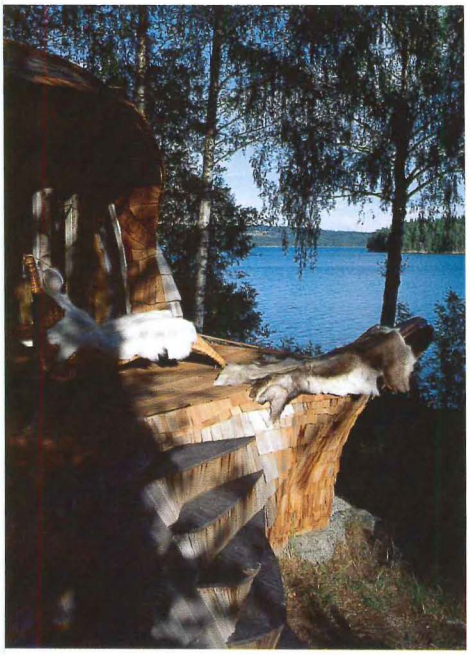
SECTION C-C



SECTION C-C EXTENSION DEPLOYED

1. *Living/dining*
2. *Bedroom with child's sleeping loft, in original structure*
3. *Extension stowed*
4. *Original structure*
5. *Porch*
6. *Extension deployed*

Dragspelhuset, when viewed from the lake, appears to be a big rock. Though integrated into its site, the house does not attempt to hide, in thi case among the red, pitched-roof cottages typical of the region.



Fanciful lighting by Ingo Maurer accents plaster and birch lattice walls. The extension's interior is completely cloaked in reindeer pelts—a tribute to the Sami people in the Arctic Circle, whose subsistence depends on the animal.

Though the shack was "barely one room," says Zeisser, its lakeside location made it very appealing. Because Swedish regulations prohibit new waterfront construction, the hut presented a rare opportunity. Despite restrictions that would limit the size of an addition to about 300 square feet, the architects purchased the unusual property.

That the house sat alongside a stream added to the site's allure. "I'm an enormous Frank Lloyd Wright fan," says Zeisser. "I've been to Fallingwater five or six times, and that's what I wanted—to have my house over the stream." But the property line lay smack in the middle of the creek, and yet another regulation dictated that development stay 15 feet clear of the property line. Still, the architects were not deterred.

To skirt both the maximum-square-foot and the property-line rules with one gesture, the architects came up with the idea of a movable extension that sits on wheels that roll along two steel rails as it is pulled out manually with a pulley system. This way, the house would only sometimes break the rules by just a little bit. "This is a typical Dutch attitude," says Zeisser. "Unlike in Germany, where a rule is a rule, we look for the edge of the rule and see how far we can bend it without quite breaking it."

An amorphous pod clad in western red cedar shakes, Dragspelhuset, when viewed from the lake, appears to be a big rock. Devoid of luxury, the house, which the architects built themselves with help from friends over the course of four summers, has no electricity, heat, phone, or running water. At about 775 square feet (with the extension deployed), it consists of an open living/dining/kitchen area, with one bedroom and child's sleeping loft occupying the old shack, which is connected to the new structure.

Amenities include solar panels for powering lights, a propane cooktop, a wood stove for heat, a hose upstream for collecting water, and a compostable toilet in a nearby outhouse. And this is just how the owners like it. "The house awakens all the senses," says Zeisser. The stream, which runs next to and under the house, is a constant presence, and views of the lake and the forest, uninterrupted by man-made structures, anchor it in the landscape. This connection to the outdoors, combined with just enough creature comforts, give Dragspelhuset's owners the rare and awe-inspiring experience of living with nature—exactly what they were hoping to pass on to the next generation. ■

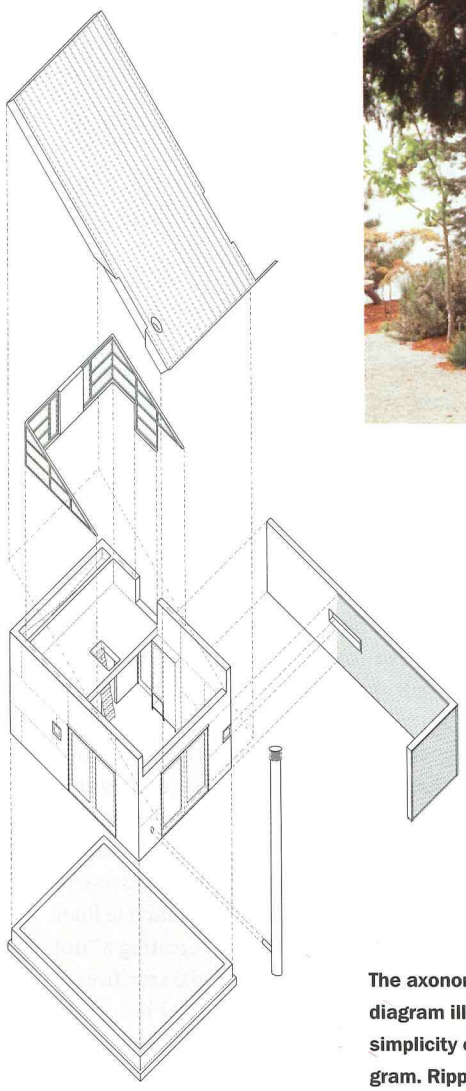
Sources

Shingles: *Theo Ott GmbH*
Glazing: *Metaglas B.V.*
Hardware: *Post en Eger*
Lighting: *Ingo Maurer*

For more information on this project, go to Residential at **archrecord.construction.com**.

A ship's ladder ascends to the 128-square-foot sleeping loft on the north side, tucked under the kitchen and bath on the main floor.

Vandeventer + Carlander Architects' **Camano Cabin** shows that good things can come in small packages



AXONOMETRIC

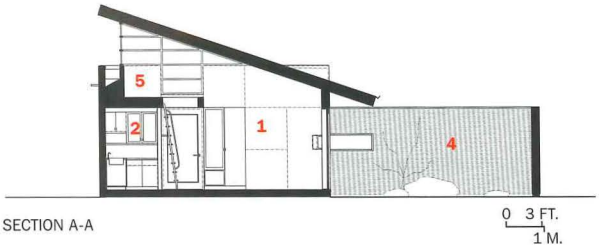
The axonometric diagram illustrates the simplicity of the program. Ripped-steel siding covers portions of the exterior. The garden wall shields the patio from uphill neighbors and extends the house into the landscape (top).

By Jane F. Kolleeny

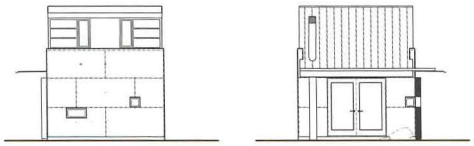
Roughly 50 miles northeast of Seattle, bucolic Camano Island attracts weekenders seeking respite from hurried city life. With 52 miles of shoreline and ample opportunities for waterfront living, the island inspired a Seattle couple to purchase a 2-acre site on a high bluff with views across Saratoga Passage to Whidbey Island and the Olympic Mountains. Working within the constraints of a modest budget, the owners took gradual steps toward fulfilling their dream of creating a weekend retreat cabin. First they cut a road through the property leading to a low area a few hundred feet from the edge of a steep cliff, which seemed an obvious place to position the house. With the equipment already on-site, they poured a simple concrete foundation to prepare for future construction. The following year they created a garden. Two years later, the owners finally began to build. Both the garden and foundation became primary organizing elements for Camano Cabin, designed by Tim Carlander of Vandeventer + Carlander Architects. In the design, the architects strove to maximize both privacy and daylight, while siting the cabin so it would take advantage of the special benefits of island living, which include watching eagles and great blue herons, as well as glorious sunsets.

"The project needed to address specific site constraints—the garden to the south being one, and the uphill neighbors to the south and north being another," explains Carlander. "Therefore, we included a garden wall covered with ribbed-metal panels, both for privacy and to extend the building into the landscape. The project would not be balanced without the garden wall to anchor it to the site."

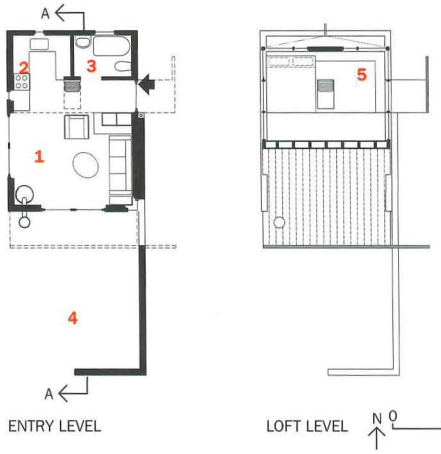
Project: *Camano Cabin, Camano Island, Washington*
Architects: *Vandeventer + Carlander Architects—Tim Carlander, principal in charge and designer*
Engineers: *Swenson Say Fagét*



1. *Living room*
2. *Kitchen*
3. *Bathroom*
4. *Garden*
5. *Loft*



The garden uses indigenous evergreens and mosses and an arrangement of rocks left from excavation (left). The loft enjoys floor-to-ceiling glass walls on three sides (below).



The 352-square-foot, wood-framed cabin consists of a simpl cube with a diagonal metal roof jutting out and creating a protective over hang on the south, garden-facing side. The living room features two sets o French doors: one opening south to the garden, the other to the west onto lawn that extends to the edge of the bluff. "In the summer, you can open u the doors and the house becomes a covered pavilion," says Carlander.

The choice of materials and detailing in the cabin's interior echoe the modern aesthetic of the exterior. The owners, acting as their own genera contractor and finish carpenters, used IKEA kitchen cabinets, and installe the insulation plumbing themselves. A Le Corbusier chaise longue and Miel dishwasher count among their splurges. Walls and ceiling are lined in inex pensive maple and cherry plywood; the panels have caulked reveals to mimi the fiber cement panel details used on the exterior. A wood stove provide warmth, as do radiant heating elements in the stained concrete floor.

While the architect appreciated the task of creating a "not so bi house" out of one room, the owners learned to make sacrifices and liv without extras. "Tight space dictated that a washer/dryer be located in th pump house, and limited closets caused the owners to build a storag unit up the driveway," said firm partner Bill Vandeventer. Maximizing a available space and using extensive glazing to mitigate any feeling of con finement in the small building, the designers created a little architectura gem, which in the end allowed them to live much larger then the mode footprint would suggest. ■

Sources

Exterior cladding: *Hardi Panel; Zincalume*

Roofing: *Torchdown*

Cabinets: *IKEA*

Paints: *Benjamin Moore*

Furniture: *Cassina Corbusier chaise longue*

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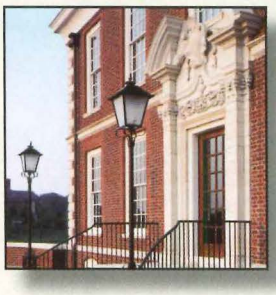

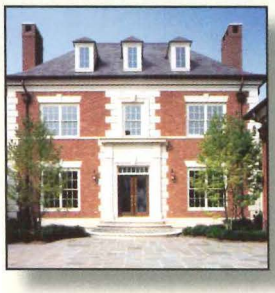

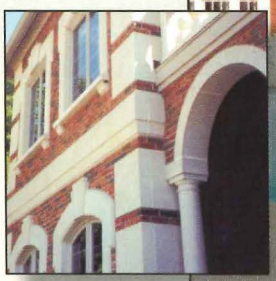

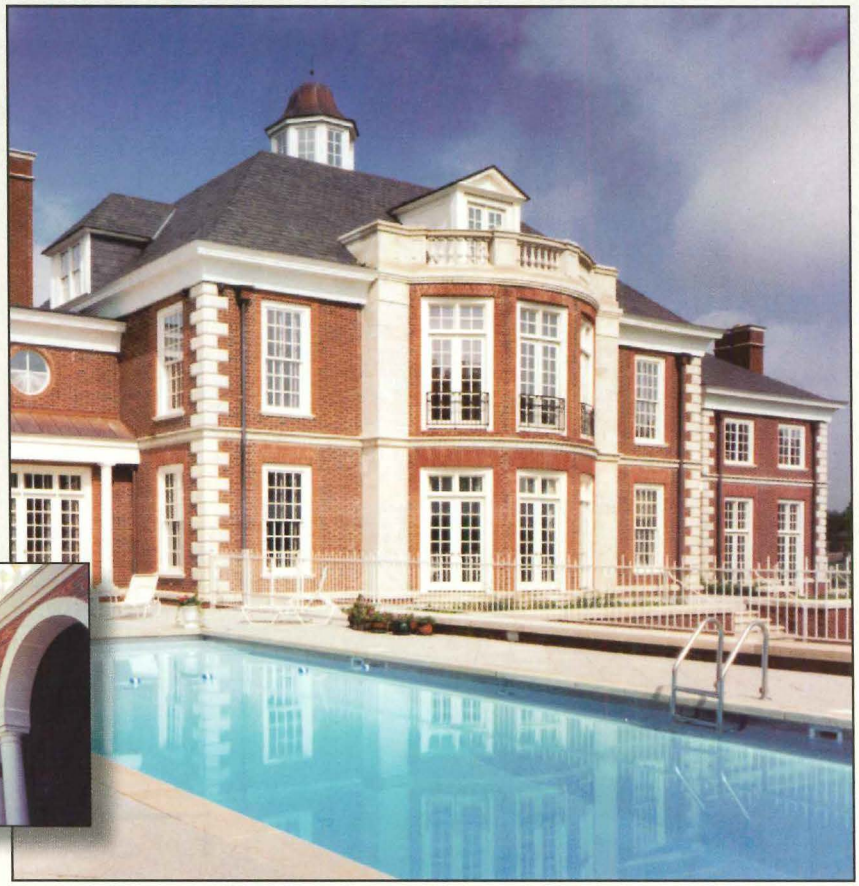

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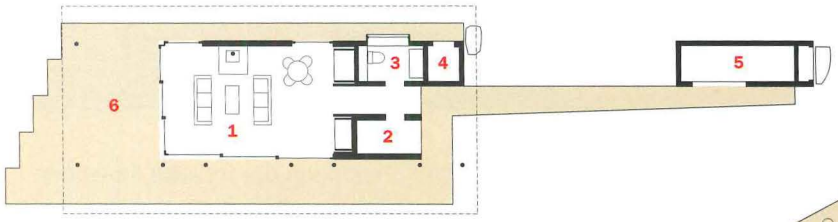
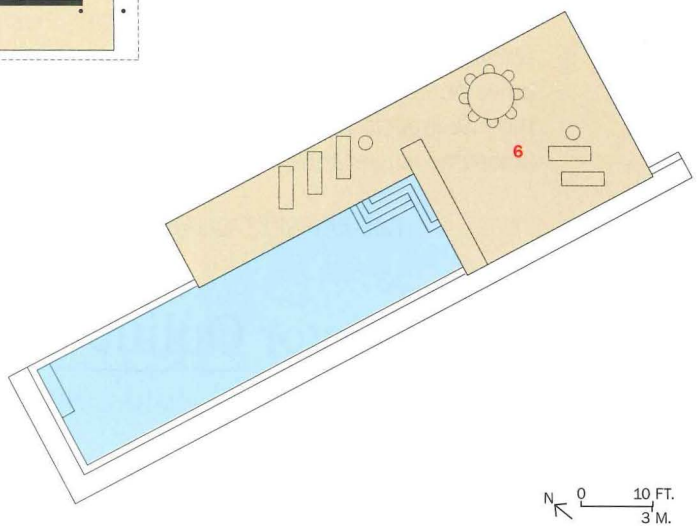




1. *Living room*
2. *Shower*
3. *Bath/changing*
4. *Mechanical*
5. *Pool equipment*
6. *Deck*

Surrounded by 120 acres of aspen and cottonwood forest, the pavilion and 20-meter lap pool were designed to mediate the clearing sited among the woods, a pasture, and the main house, and provide panoramic views of the nearby Saddle Mountains.

Lake/Flato Architects situated **Hailey Pavilion** in the perfect site, then adapted it to a new one

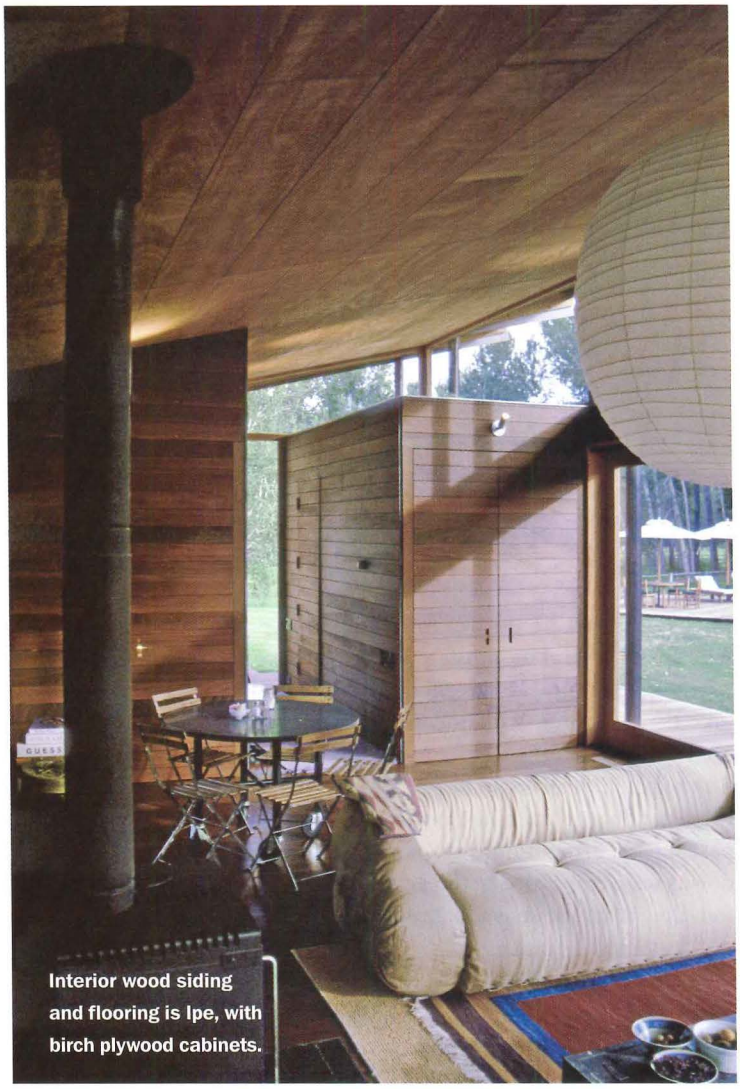
By Ingrid Spencer

You'd think that a firm like San Antonio–based Lake/Flato Architects, winners of the AIA's Firm of the Year Award in 2004, might not be interested in designing a pool house with a mere 646 square feet of air-conditioned space (1,780 including decks) on a 120-acre ranch, especially as far away from the firm's Texas base as Hailey, Idaho. Not so. "We're interested in projects at all different scales," says Lake/Flato associate partner Brian Korte, AIA. "Sometimes the quick turnaround and the need for efficiency of space in a small project make it the most challenging and interesting."

For Korte, who served as project architect on the tiny pavilion, the key challenges were making the most out of materials and a difficult site. Fortunately, Lake/Flato has made its name designing healthy, sustainable buildings that respond to their place. The architects carefully set the structure and 20-meter lap pool on a flood plain nestled among woods and near the ranch's main house and horse pasture. But then they were thrown for a loop. The East Coast–based clients, who spend several months a year enjoying the Idaho lifestyle, decided to move—literally—to greener pastures 13 miles away and wanted to take their pavilion with them. "It wasn't meant to be moved," says Korte. "But we worked with our engineer to come up with a solution to lift the pavilion structure off the existing foundation, cutting the steel beams and wood framing free from the concrete stem walls. The tricky part was securing it onto its new foundation, since the seismic hold-downs were embedded in the original concrete stem walls. Once we cut free the structure above, coming up with a way to achieve the same

Project: *Hailey Pavilion, Hailey, Idaho*
Architect: *Lake/Flato Architects—Brian Korte AIA, project architect; Jay Pigford AIA, project captain; Vicki Yuan, team*
Engineer: *Datum Engineering*
General contractor: *Bishop Builders*

Simple materials and finishes recall local farm structures. Glass walls slide and fold away to create an open-air shed during summer (top right).



Interior wood siding and flooring is Ipe, with birch plywood cabinets.

structural detail without tearing up the wall finishes was tough. But in the end, the result was unintrusive."

The original pavilion contained living, sleeping, and bathing areas, as well as a kitchen/bar, storage, and pool mechanicals. The entire building with its surrounding decks moved to the new site, while the pool, its mechanicals, and its adjoining deck stayed. Winter-tight and able to withstand the 125-pound snow loads that are common in Hailey for up to six months of the year, the pavilion has an insulated, cantilevered shed roof, covered with a layer of corrugated aluminum. Lighter at the edges, the roof provides deep overhangs that shade the outdoor decks in the summer. Inside, cedar planks clad the plywood ceiling. While not anticipating that the structure would be moved, Korte nevertheless designed the building to sit lightly on the land, floating on a rigid steel frame system composed of oiled-steel pipe columns, alternating from 6 to 12 feet apart, and composite rafter flitches clad in reclaimed Douglas fir. Organized like a modern pole barn, the pavilion has Ipe-wood-clad volumes for the bathroom, steam-shower area, and storage set between structural bays. The multifunctional living area opens to the landscape, as floor-to-ceiling glass doors edged in vertical-grain Douglas fir slide open, making the covered Ipe deck part of the communal space. The steam shower, in its Ipe-clad volume with an acrylic-paneled ceiling, also opens to the outside. In cold weather, the pavilion can be closed airtight. A wood-burning stove makes it a cozy winter escape.

"The whole process has been an eye-opener for us," says Korte. "It's made us think about modular buildings, and how a small structure can adapt to various sites. There's definitely a bigger story to tell!" ■

Sources

Metal roofing: *Galvalume*
Glazing: *Cardinal Glass*
Locksets: *Valli and Valli; Henderson*
Hinges: *Hager*
Cabinet hardware: *Blum; Hafele*
Paint: *Devoe*
Lighting: *BK Lighting/RAB*
Wood-burning stove: *RAIS*

For more information on this project, go to Residential at **archrecord.construction.com**.

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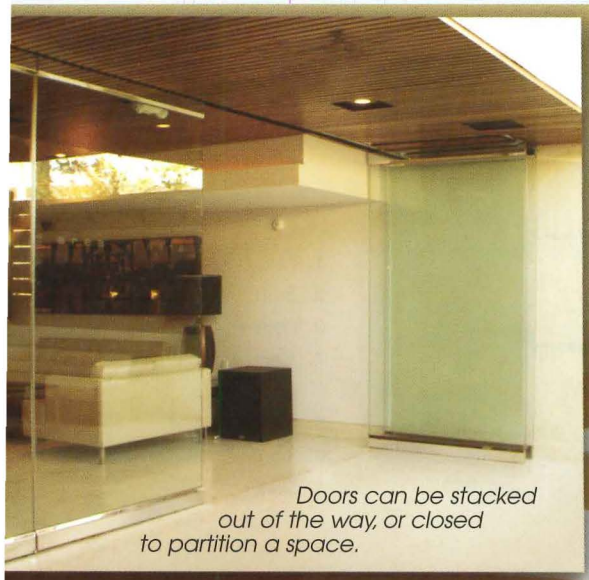

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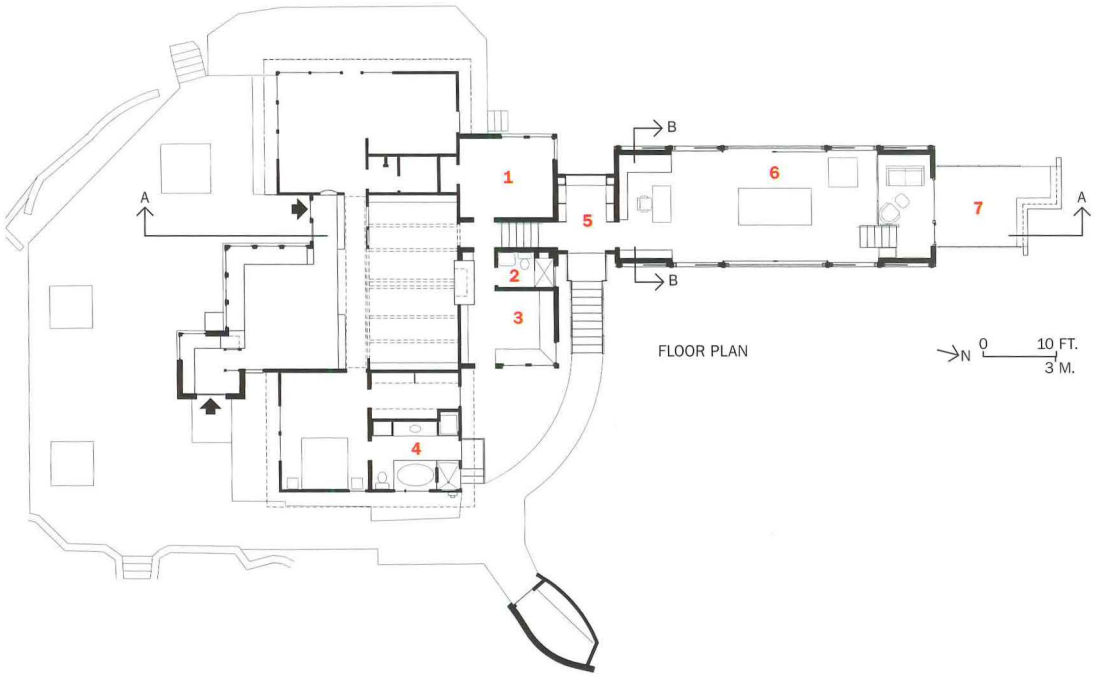


1. *Guest bedroom*
2. *Bath*
3. *Office*
4. *Renovated master bathroom*
5. *Library*
6. *Studio*
7. *Deck*

Safdie Rabines Architects' **Artist Bridge Studio** deftly spans the gap between man and nature

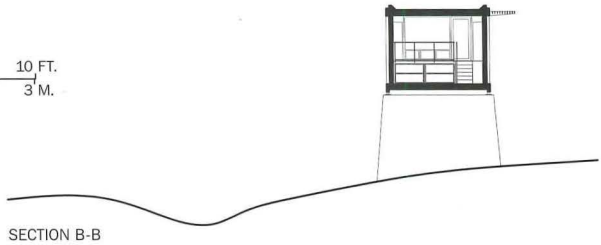
By Jane F. Kolleeny

Project: *Artist Bridge Studio, San Diego*
Architect: *Safdie Rabines Architects—Ricardo Rabines and Taal Safdie, principal designers; Charles Crawford, project architect*
Landscape: *Leslie Ryan*
General contractor: *Cavanaugh Construction*

Sources:
Curtain wall: *Trespa*
Concrete: *F.J. Brawley Concrete*
Lighting: *Tazz Lighting; Lithonia*
Skylights: *Velux*
Windows/doors: *Fleetwood Windows & Doors*
Locksets/hinges: *EMTEK*
Plumbing: *Grohe; Kohler*
Shades: *Smith Shades, Sunscreen Shade*

While downtown San Diego occupies a relatively flat plain hugging the Big Bay, the rest of the city consists primarily of canyons that separate mesas and create small pockets of desert landscape for the urban fabric to back up to and take inspiration from. In such a place, one barely notices an arroyo that inspired a modest intervention to an existing residence northeast of town. Referred to as the "Artist Bridge Studio," the project was designed by Safdie Rabines Architects as an expansion of an artist couple's small residence. While the owners appreciate small spaces, they needed more room; retiring from their day jobs as university professors and spending more time at home working at their respective crafts—he a writer, she an installation artist—they needed their home to respond to their changing lifestyle.

SECTION A-A



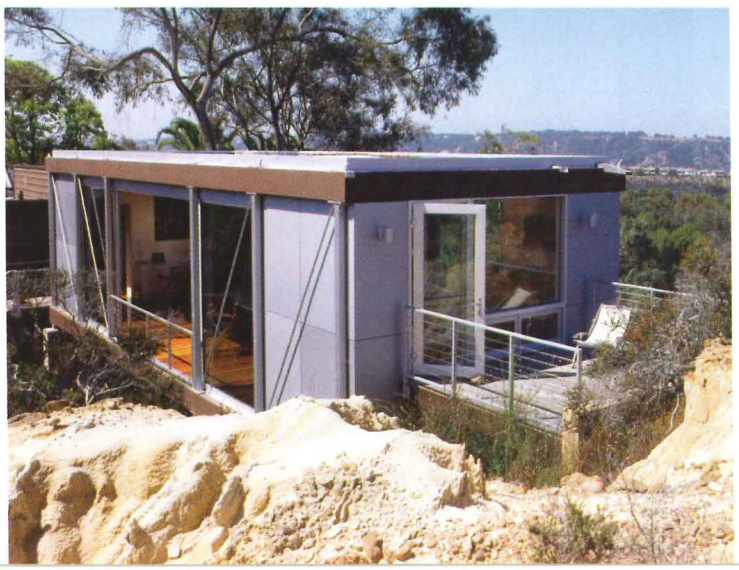
SECTION B-B

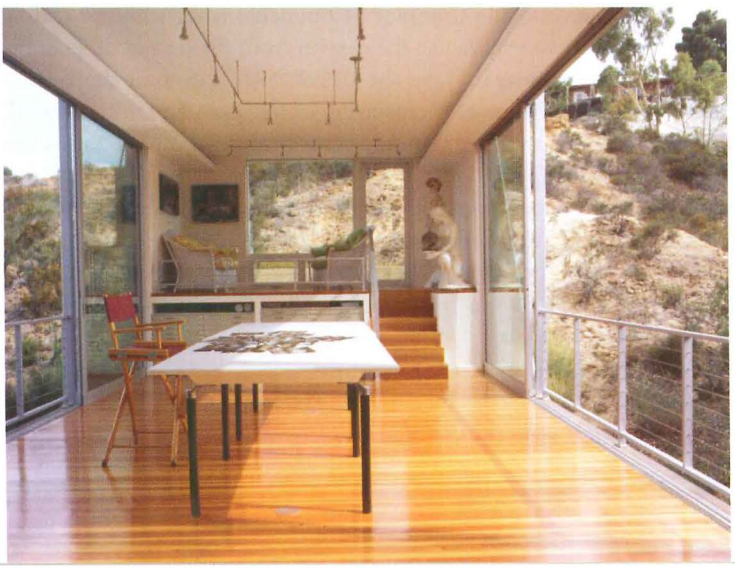
Materials used in the addition connect it to the main house and the land. The chocolate brown siding on the original house continues as bands around the addition. Trespa panels sheath the non-glass walls.

Built in 1964, the original house was dark and faced inward. Renovations by Safdie Rabines in 1993 turned the focus outward, maximizing distant ocean and nearby desert views. While this earlier intervention opened the building's exterior walls, the 1,200-square-foot addition completed this year added a deck, guest bedroom/bath, library, office, and artist studio, the last of which occupies the "bridge" that hangs over the V-shaped gully. The project enlivens a neglected backyard, taking cues from the environment: "We wanted to frame the view of the hillside in which the colors of sage and sandstone are dramatic. The terrace at the end of the bridge allows people to experience this wilder landscape," says Taal Safdie, who, along with her husband and partner, Ricardo Rabines, designed the house.

While villa-style McMansions creep up the slope that leads to the 3-acre hilltop property, mature trees and arid native plantings help protect the owner's privacy. Garden sculpture peeks out from behind the Mexican lavender, monkey trees, and manzanita that frame the winding pathway. As one arrives on the patio outside the house, chimes ring in the gentle Santa Ana winds.

Entering from the patio into the vestibule/living room portion of the original house, one moves toward the back and encounters the addition—a guest bedroom and library on the left; an office and bath on the right. Then one enters the artist studio proper. It comes as a surprise to look





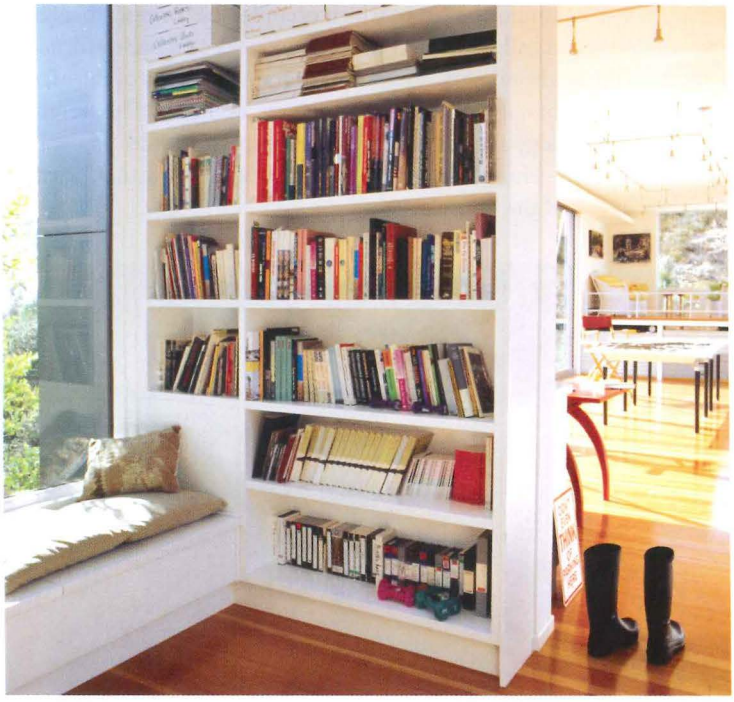
The artist studio proper (this page), suspended over the small canyon, is all glass and light.

Inside, a miniature library adjacent to the studio contains walls lined with shelves framing a window seat (below). At sunset, exterior lights illuminate the studio, making it glow in the dusk (above).

down and realize the space is suspended above the tiny canyon, supported on a pair of concrete piers with two trusses, at top and bottom, made of glued-laminated timber chords with steel cross members. On the north side of the studio, a wooden deck extends the space outdoors.

"We investigated doing a freestanding structure, but due to zoning regulations, the size and use would have been limited. We therefore chose to attach the studio to the house, but give it its own identity," says Rabines. The bridge emerged as a response to the site, allowing minimal disturbance to the tiny plot of buildable land, while providing the opportunity to experience the canyon from the best of all possible locations: in and above it. "I like the idea of floating over the canyon and crossing to the other side. It's inspiring to feel like you are suspended. When the doors are open, you are on a bridge, capturing the ocean breezes," says Rabines.

The owners wanted an addition that would maintain the intimacy of their hilltop abode. A family of deer visit frequently, lingering in the bottom of the canyon. The owners believe this is testament to the success of the project, a true intermingling of natural habitat with urban development. ■



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Residential Products

CEDIA Review

As technology branches out into every part of the home, the CEDIA Expo is becoming as much about the integration of design and electronics as it is a showcase for gadgets. Here are standouts from last year's show in Denver. *Rebecca Day*

▼ Working with natural light

The DayLight Harvesting Keypad collects information from a separate sensor and sets lighting loads according to preset levels determined by the amount of ambient light in the room. It works by dimming or turning off its controlled loads when there is enough sunlight and bringing up levels when daylight dims. In addition to helping conserve energy, the keypad offers a smooth transition to artificial light during twilight. LiteTouch, Salt Lake City. www.litetouch.com **CIRCLE 201**

▼ Being heard but not seen

Sonance calls its Architectural series speaker the first truly flush-mount loudspeaker. The speaker design aligns the plane of the grille with that of a wall or ceiling, dramatically reducing the visual impact of the installation. Each speaker is available in round, rectangular, or square shapes. The series' 4'-round and -square speakers mimic flush-mount lighting styles from companies including Iris, Lucifer, and RSA. Sonance, San Clemente, Calif. www.sonance.com **CIRCLE 203**

◄ The latest kitchen appliance

RealSteel is the industry's first 20" high-definition LCD TV designed specifically to match stainless-steel kitchen appliances. The widescreen TV comes with a built-in analog TV tuner, while a built-in HDMI connection allows homeowners to replace a bundle of audio and video wires with a single cable. The 14-pound TV can be placed on the supplied, detachable stand or mounted directly to a wall. Toshiba America, Wayne, N.J. www.toshiba.com **CIRCLE 202**

► Highest resolution projector

The HT3000 HDTV projector features the highest quality video resolution available in the consumer home theater market. The projector is compatible with Blu-ray Discs and HD-DVD players, the latest generation of DVD players to hit stores. HT3000 is available with a "Scope" System anamorphic lens, which enables the projector and a matching screen to display widescreen Cinemascope movies without showing black bars at the top or bottom of the screen. Sim2 USA, Miramar, Fla. www.sim2usa.com **CIRCLE 204**

▲ Backyard drive-in

Seeking to tap the growing outdoor entertainment market, Stewart Filmscreen has developed StarGlas, a projection TV screen that fits between two pieces of protective glass. The material can be cut into custom shapes, and its flexible construction makes it a potential substitute for a large window. In that situation, an electronics specialist could build a rear-projection room behind the glass wall to house a projector. StarGlas is impervious to rain and UV rays. Stewart Filmscreen, Torrance, Calif. www.stewartfilmscreen.com **CIRCLE 205**

For more information, circle item numbers on Reader Service Card or go to archrecord.construction.com, under Products, then Reader Service.

► Sound for the entire room

When speakers aren't hidden in the wall, they'd better be able to hold their own visually in the den or living room. The 3000 Series Speaker System combines five full-channel speakers plus a subwoofer. The combination of styling and audio engineering results in a wide dispersion of sound, so listeners throughout the room—not just those in the sweet spot between the speakers—can enjoy the experience. KEF America, Marlboro, N.J. www.kefamerica.com **CIRCLE 206**

◄ Home control remote

The Vantage Controls TouchPoint 1210 Table touchscreen is a home control interface and Web browser rolled into one. Vantage's InFusion Media software controls the functions of a Vantage home automation system, including lighting, window treatments, heating and cooling, gas fireplaces, security system, distributed audio system, and home theater equipment. Users can also pull up Web sites and check mail with the device. Vantage Controls, Orem, Utah. www.vantagecontrols.com **CIRCLE 207**

► Affordable lighting control

AuroRA is Lutron's simplified, affordable lighting control system for homeowners who want to enjoy limited benefits of lighting control with minimal installation, setup, or programming. The AuroRA package bundles five dimmers, one master control, one wireless controller, and a central antenna. Each of five buttons on the master control operates a single dimmer, and All On and All Off buttons control all five dimmers at once using radio frequency (RF) operation. The wireless controller clips to a car visor, enabling homeowners to turn on a series of lights before entering the house. Lutron Electronics, Coopersburg, Pa. www.lutron.com **CIRCLE 208**

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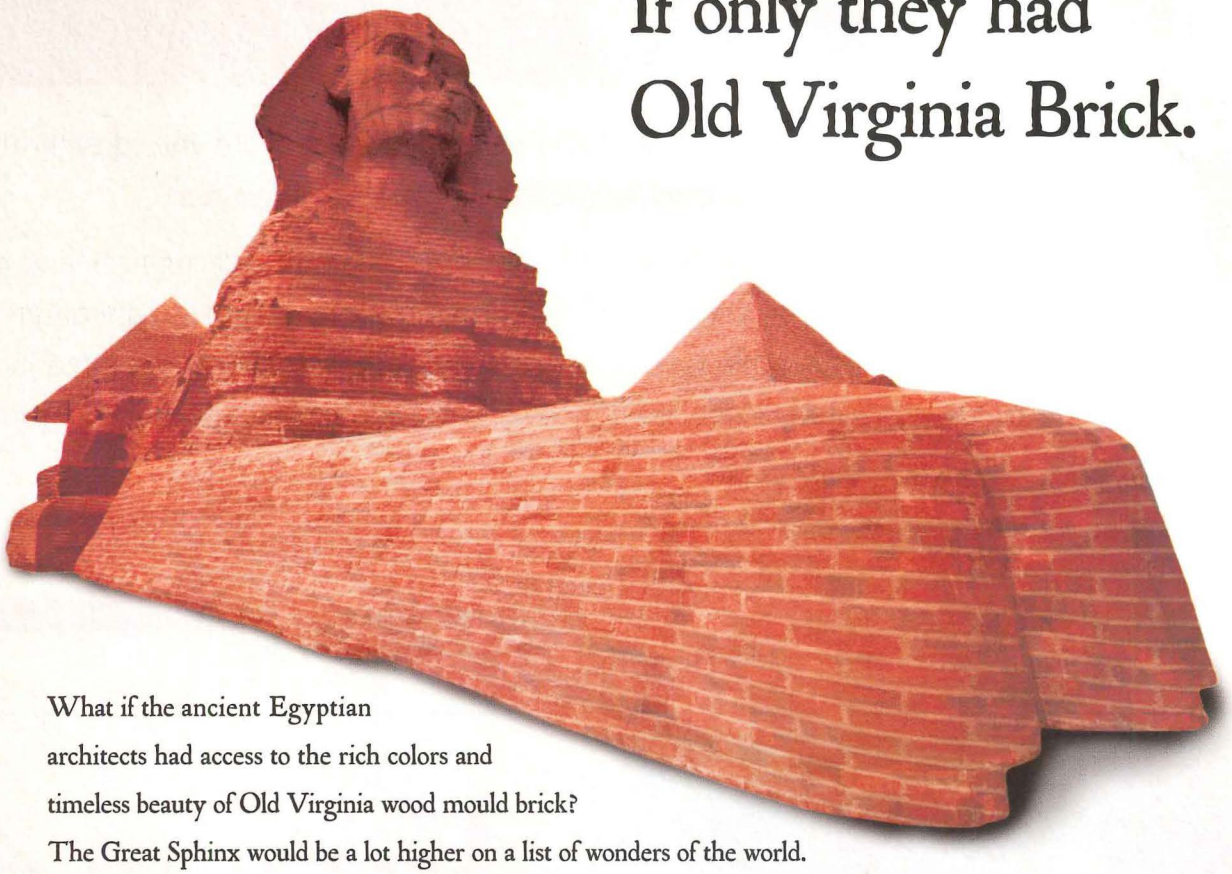
BusinessWeek ARCHITECTURAL RECORD The McGraw-Hill Companies

If only they had Old Virginia Brick.



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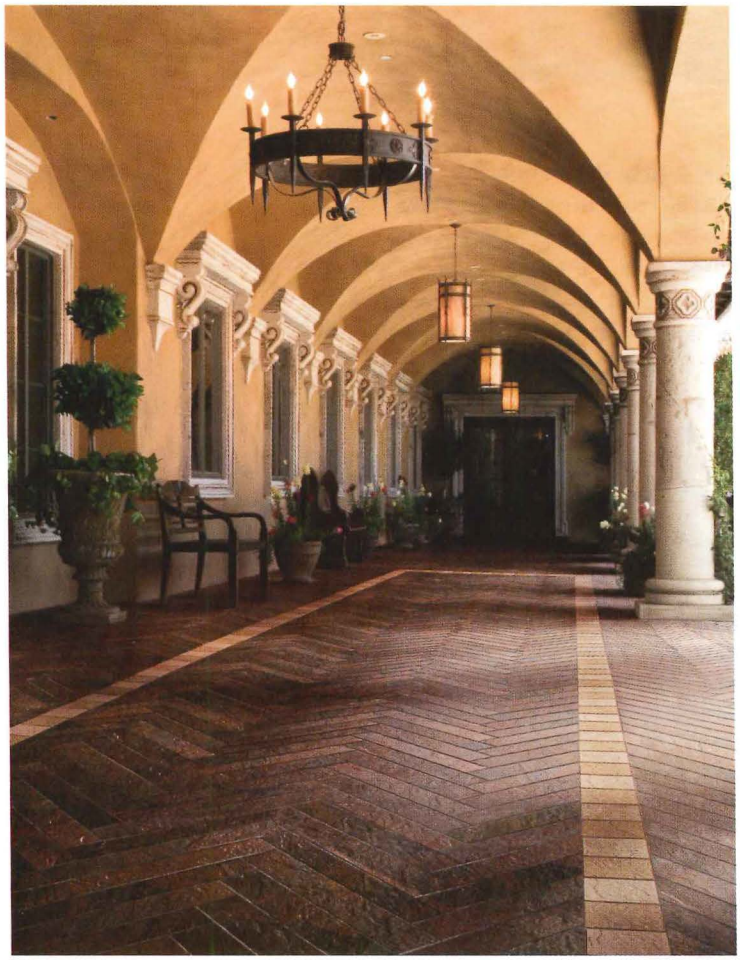
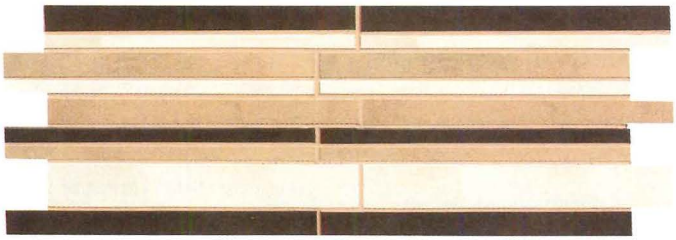
Proprietary technology creates three coordinating textures of porcelain tile





Clockwise from left: Textured Tango 4" x 24" tiles are framed by alternating 6" x 6" La Boca and Pampa textured tiles. The Tango colorway is shown in an unpolished, polished, and textured finish. The Recoleta listello (two shown).

Tennessee-based Crossville intends to capture the romance and tempo of Argentina's capital city with Buenos Aires Mood, a new line of porcelain stone tile products. Multistrato, a proprietary technology developed specifically for the collection over the course of three years, creates subtle shading, fluidity, and movement within each color.

Officially launched last October at the Consulate General of Argentina in New York City, the collection was produced in partnership with Ilva S.A., a ceramic tile producer located outside of Buenos Aires. After working for several years with Ilva and becoming enamored with Buenos Aires and it's culture, "It was just a natural thing to do to name the series after the city," says Laurie Lyza, marketing manager of Crossville.

Buenos Aires Mood is available in three surface textures for both commercial and residential use. The Multistrato technology allows for no major difference in color or graphic among the finishes. One offering has the texture and slip-resistance of slate and may be used for interior and well as exterior horizontal surfaces and paving, while the other two have the appearance of polished and unpolished marble. This allows specifiers to carry the collection across different spaces throughout a project without a jarring difference in color or visual effect.

The five colorways available in the line have a naturally random distribution of color, and each represents a location or cultural activity associated with the namesake city: Polo (a popular sport) is a creamy white-on-white with a hint of beige and gray veining; La Boca (a colorful neighborhood by the port) is a warm camel; Pampa (the grasslands) is a gray/beige blend; Recoleta (the cultural center of the city) is a chocolate hue accented with taupe and ivory; and Tango (the famous ballroom dance) features red and gold accents against a field of black.

Each texture and color has rectified edges and is available in multiple sizes, from large format to mosaics to trims.

Crossville plans to introduce several new collections this year, including updates to its most popular color lines. Crossville, Crossville, Tenn. www.crossvilleinc.com **CIRCLE 209**

► Greener cement

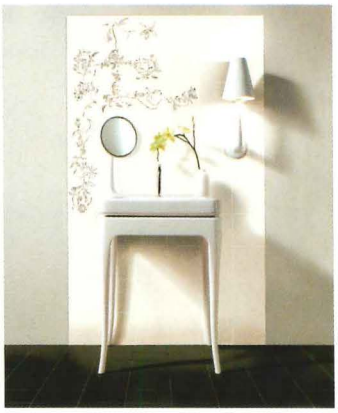
Holcim launched the Envirocore family of products at the GreenBuild show held last November in Denver. Containing materials that have been recycled or coprocessed, the products are engineered to be utilized in all portland cement applications. They are produced in a method that uses less energy and fewer raw materials while generating less waste and pollution. The ingredients in the line range from fly ash, slag, pozzolans (natural deposits), limestone, and masonry/mortar cement. Holcim, Dundee, Mich. www.envirocore.us **CIRCLE 210**

◄ Stone and tile sealers

DuPont StoneTech Professional introduced two improved stone and tile sealers at StonExpo 2006 that reduce the occurrence of residue. DuPont StoneTech Professional BulletProof Sealer and Heavy Duty Sealer are water-based and contain low levels of VOCs, making them compliant with recently enacted VOC regulations affecting areas in several states, including California, New Jersey, New York, and the District of Columbia. DuPont, Wilmington, Del. www.dupont.com **CIRCLE 211**

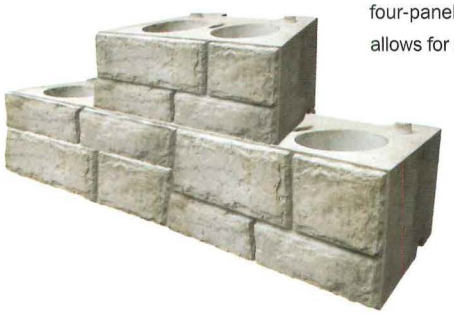
► Crafty tile collection

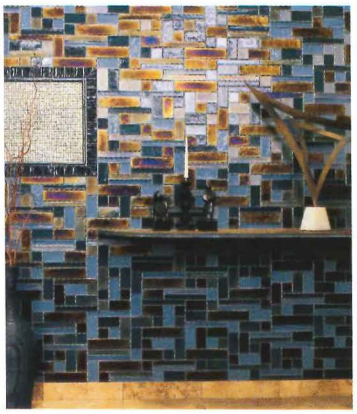
Bardelli commissioned designer Todd Boontje to develop a new tile series that uses the same palette and elegant floral decor designs for which he is renowned. The result is the Primavera line of Italian porcelain tile, a new compositional series whose modish flowers in pastels or platinum (shown, right) weave from tile to tile. The series comes in a 12-piece compositional set with six additional floral motifs. Italian Trade Commission, New York City. www.bardelli.it **CIRCLE 212**



▼ Retaining-wall heavyweight

The Bronco segmental retaining-wall system from Versa-Lok weighs in at 4,500 pounds and displays 14 square feet of face area. The system builds walls up to 10' tall without soil reinforcement, making it ideal for projects with excavation constraints. The four-panel, natural-stone appearance allows for a random face pattern. Bronco is wet-cast using approximately 1.25 cubic yards of concrete per unit and requires an 8" leveling band of granular road-base material. Versa-Lok, Oakdale, Minn. www.versa-lok.com **CIRCLE 213**





◄ Glass bottles redux

Oceanside Glasstile uses more than two million pounds of glass each year from curbside recycling programs for a product line that includes 20 to 86 percent recycled material, depending on the color. The latest in the series is Elevations, shown here as a large-format field tile and liner. Also new is Tahoe, the blue-gold tiles that accent the wall, and Facets, a line of miniature mosaic field tile, shown here in the tile "frame." Oceanside Glasstile, Carlsbad, Calif. www.glasstile.com **CIRCLE 214**

◄ Raised deck alternative

Custom-poured to provide a handcrafted look, Dekstone precast concrete is designed specifically for raised decks. Made from a mixture of color and 4,000 psi concrete reinforced with a specially designed welded wire mesh, the decks are intended for use in both residential and commercial applications. A moisture barrier between Dekstone and the required 4' wood joists protects the wood from rainwater and moisture in the concrete. Stepstone, Gardena, Calif. www.dekstone.com **CIRCLE 215**

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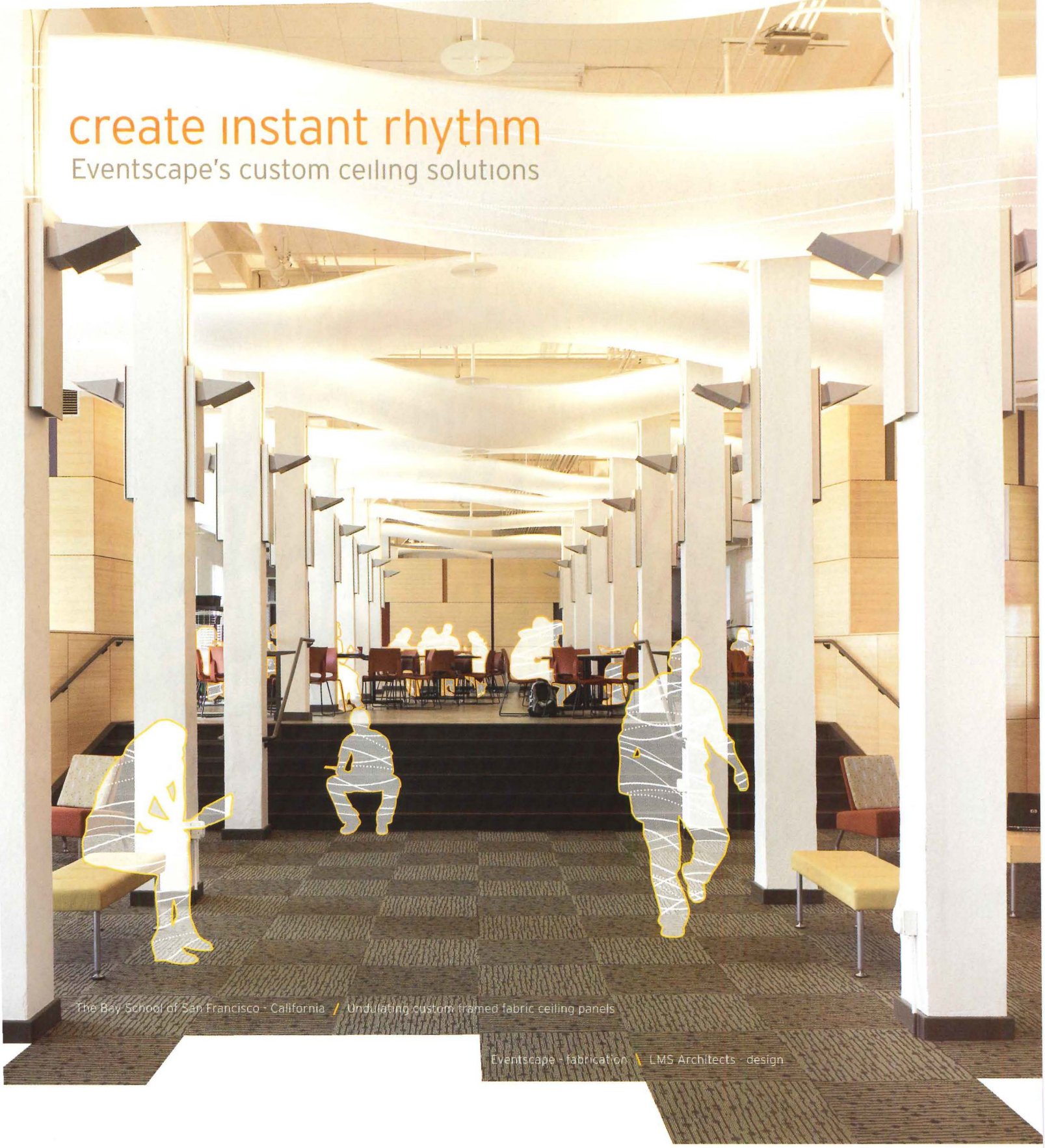

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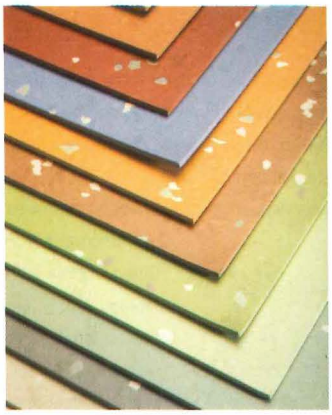
Product Briefs

► Hospitable flooring



The manufacturers of nora rubber flooring worked closely with Kaiser Permanente, the nation's largest non-profit health-care system, to develop a line of commercial rubber flooring that meets the needs of health-care interiors. Available in 48 nature-inspired colors, the PVC-free envirocare line is made of high-quality rubber, mineral fillers, and "environmentally compatible" pigments. Freudenberg Building Systems, Lawrence, Mass. www.norarubber.com **CIRCLE 216**

▼ Well-cast collection

New Orleans–born architect Marion Cage earned her M.Arch. degree at Columbia University and has worked for the likes of Zaha Hadid and Bernard Tschumi. Cage first began designing custom hardware when clients couldn't find the designs they wanted off-the-shelf. After launching a jewelry collection in 2003, she applied what she learned from the casting process to create her first collection of hardware. Inspired by finds in Parisian flea markets, the line is available in bronze or brass in a variety of finishes and patinas. Marion Cage, New York City. www.marioncage.com **CIRCLE 217**

▲ Health-care-specific seating

Keilhauer has launched Sittris, a new company dedicated to the specific seating needs of the health-care market. The component seating system, designed for both patients and caregivers, can be specified with a variety of leg and arm options for patient rooms, nursing stations, public seating areas, and speciality purposes such as bariatrics. Sittris BA (above) is designed to accommodate patients who weigh from 350 to more than 500 pounds. Sittris, Toronto. www.sittris.com **CIRCLE 218**

► Stylish shower seat

Taking a new approach to a typically clunky product, Bristol and Bath have redesigned the shower seat. Constructed of acrylic and chrome, the seat can support up to 300 pounds and is available with or without a backrest. The seat height can be adjusted to suit the needs of various users, and it folds up when not in use. The seat isn't for projects with a tight budget, however—the basic version retails for $660. Bristol and Bath, King of Prussia, Pa. www.bristolbath.com **CIRCLE 219**

◄ Security blanket

The Zo-e-shield glazing system is now available on Weather Shield Windows & Doors products. The new technology delivers low center-of-glass U-values and solar-heat-gain coefficients while protecting interiors from UV rays. The glazing's exterior surface repels dirt and reduces water spots. Zo-e-shield's Real Warm Edge Spacers create an insulating barrier against heat flow, sound, and condensation. Weather Shield WIndows & Doors, Medford, Wis. www.weathershield.com **CIRCLE 220**

◄ 300th birthday party

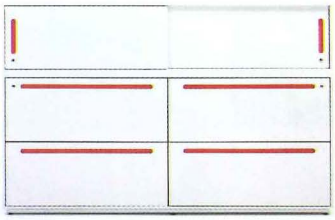
High Desert Forge was selected by the City of Albuquerque to design and fabricate the Tricentennial Towers and a group of 6'-square medallions as part of the city's 300th birthday celebration. Intended to be an iconic gateway image to the city's Old Town, the two towers are 65' tall and weight 14 tons each. They were fabricated from 1" and ¾" steel plate with stainless-steel adornments and painted copper highlights. High Desert Forge, Albuquerque, New Mexico. www.highdesertforge.com **CIRCLE 221**

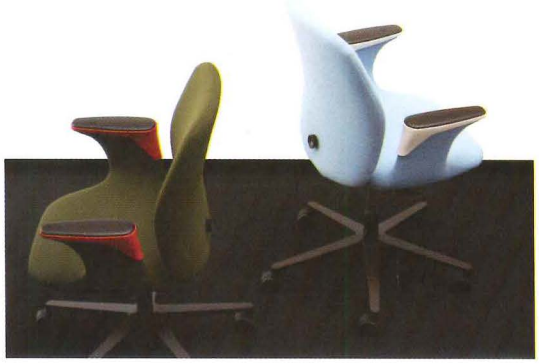
For more information, circle item numbers on Reader Service Card or go to archrecord.construction.com, under Products, then Reader Service.

Product Briefs

▼ Netting and Nesting

Vitra's concept of the open-plan office is based on the "Net 'n' Nest" theory: People go to the office in order to communicate with others (Net), but they also need the option of withdrawing from the communal environment for solitary productivity (Nest). At last year's Orgatec tradeshow in Cologne, Germany, Vitra launched a new group of products by top name designers that attempt to address both of these needs. The Worknest swivel office chair by Ronan and Erwan Bouroullec (below right) features a curving, enveloping shape with armrests that resembles a domestic armchair. The powdercoated ACSU storage system (left), designed by Antonio Citterio, offers both centralized and individual options for filing and storage. A new take on desking, BaObab (below left), by Philippe Starck, offers cable management and storage, but is primarily a sculptural element intended to "protect" users and "support work in a fresh way." Vitra, New York City. www.vitra.com **CIRCLE 222**





► Glueless backing system

InterfaceFLOR's introduction of TacTiles reflects Interface's Mission Zero goal—to eliminate by 2020 any negative impact its companies may have on the environment. The patent-pending, glueless, 3" x 3" PET plastic adhesive squares are affixed to the backing of adjoining carpet tiles, bonding the tiles to each other to create a "floating floor." Instead of hauling heavy equipment or buckets of glue to the site, installers bring only boxes of TacTiles and a 4-pound dispenser (right). InterfaceFLOR, LaGrange, Ga. www.interfaceflorcommercial.com **CIRCLE 223**

◄ Leather for tougher customers

Three and half years in development, Crypton and Edelman Leather have created a stain-resistant leather product that is more durable and practical for heavy traffic areas while retaining the luxurious hand of Edelman products. Ideal for aviation, hospitality, yachts, and even health care, the new technology allows end users to remove odors and stains created by grease, coffee, wine, and other common spills by using Edelman Leather Cleaner and Restorer powered by Crypton. Edelman, New Milford, Conn. www.edelmanfurniture.com **CIRCLE 224**

For more information, circle item numbers on Reader Service Card or go to archrecord.construction.com, under Products, then Reader Service.

▶ Adding glam to the bath

New York–based designer Jaime Drake found inspiration for his two collections of faucets and accessories for THG in postwar French designs and Italian designs of the 1950s. The handles for Profil, shown here in a plus-sign shape, can be embellished with leather, horn, and precious-stone inlays. The Emotion line includes handles available in precious stone and amourette, a rare, dense wood with markings resembling snake skin. THG USA, Coconut Creek, Fla. www.thgusa.com **CIRCLE 225**

▶ PVC-free modular backing

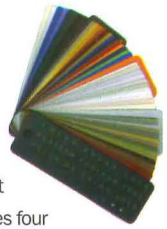
At last November's GreenBuild, Mohawk Group introduced Encycle, a patent-pending, PVC-free modular carpet-backing system that is designed with three thermoplastic layers and zero-water-based components, enabling complete recyclability back into itself without separation. The new backing system also incorporates 35 percent preconsumer recycled content by total product weight and utilizes 28 percent less virgin raw materials. The Mohawk Group, Kennesaw, Ga. www.mohawkgroup.com **CIRCLE 226**

▲ Magical wand saves money

Convia, a new Herman Miller company, has introduced the Convia Programmable Infrastructure, a modular and programmable electrical infrastructure that delivers "plug and play" power virtually anywhere within a commercial space without requiring hardwiring of devices or switches. Using infrared technology via a secure, remote-control wand, users can control any off-the-shelf electrical or electronic devices that are plugged into Convia's system connectors. According to the manufacturer, this can be achieved with installation costs at or below standard wiring, and life cycle costs that are a fraction of the cost of traditional electric. Convia, a Herman Miller Company, Zeeland, Mich. www.hmconvia.com **CIRCLE 227**

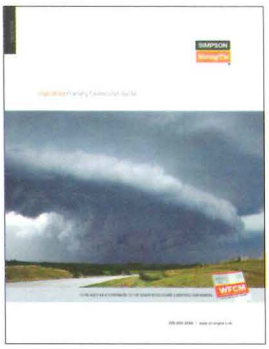
For more information, circle item numbers on Reader Service Card or go to archrecord.construction.com, under Products, then Reader Service.

Product Resources: Literature



Color trend forecast

Benjamin Moore's annual color report predicts the hues to have in 2008. *Color Pulse 2008* anticipates space will be the major issue influencing thinking about color in the next year. The report defines four categories of space—elemental, gravitational, inner, and infinite—and presents each color's ability to create, respectively, a natural, luminous, vibrant, or mysterious environment. Benjamin Moore, Montvale, N.J. www.benjaminmoore.com **CIRCLE 228**

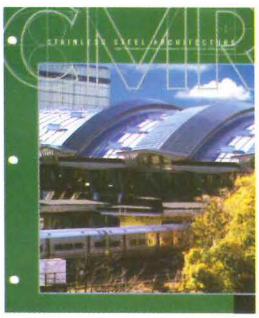


Gulf Coast cheat sheet

Simpson Strong-Tie has released a *High Wind Framing Connection Guide* of prescriptive solutions for meeting uplift and lateral load requirements in areas exposed to high winds. Focusing on wood frame construction for one- and two-story family dwellings, it intends to save time for code officials and contractors dealing with newly adopted building codes in the Southeast. Simpson Strong-Tie, Pleasanton, Calif. www.strongtie.com/hw **CIRCLE 229**

Health-care textile catalog

The Maharam Healthcare Initiative has produced a reference for health-care facility managers. *High Performance Textiles for Healthcare* provides an overview of types of textiles, with product descriptions, performance attributes, cleaning instructions, application recommendations, and a synopsis of health-care design development on issues such as the use of color and new methods of infection control. Maharam, New York City. http://maharam.com **CIRCLE 230**



Stainless-steel architecture

Contrarian Metal Resources offers a new brochure of its stainless-steel finishes. The brochure stresses the importance of correct application by citing case studies of metallic corrosion. It then offers aid by detailing specific applications and identifying individual benefits of its wide variety of finishes, showcased here with more than 20 product illustrations. Contrarian Metal Resources, Cranberry Township, Pa. www.metalresources.net **CIRCLE 231**

For more information, circle item numbers on Reader Service Card or go to archrecord.construction.com, under Products, then Reader Service

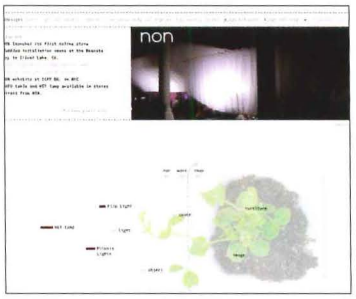
Product Resources: On the Web

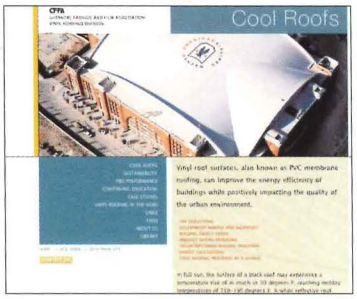
▼ www.nondesigns.com

Nondesigns's site has launched an online store for its table, lamp, and other product designs [RECORD, September 2006, page 173], all of which can be customized by the shopper right on the site. Information about the design firm and photo galleries of its work grow out of links like bean sprouts, so the site map looks like a plant when opened. It can be a jungle in there, but the site's design successfully expresses the firm's unique aesthetic.

▼ www.vinylroofs.org/cool.html

The Chemical Fabrics and Film Association's Vinyl Roofing Division site now includes an environmental benefits overview. The site's teal and beige color scheme may not attest to vinyl's tastefulness, but clearly organized information about tax deductions, government rebates and incentives, building energy codes, product rating systems, voluntary green building programs, and tools such as energy calculators, make this an exceptionally informative site.





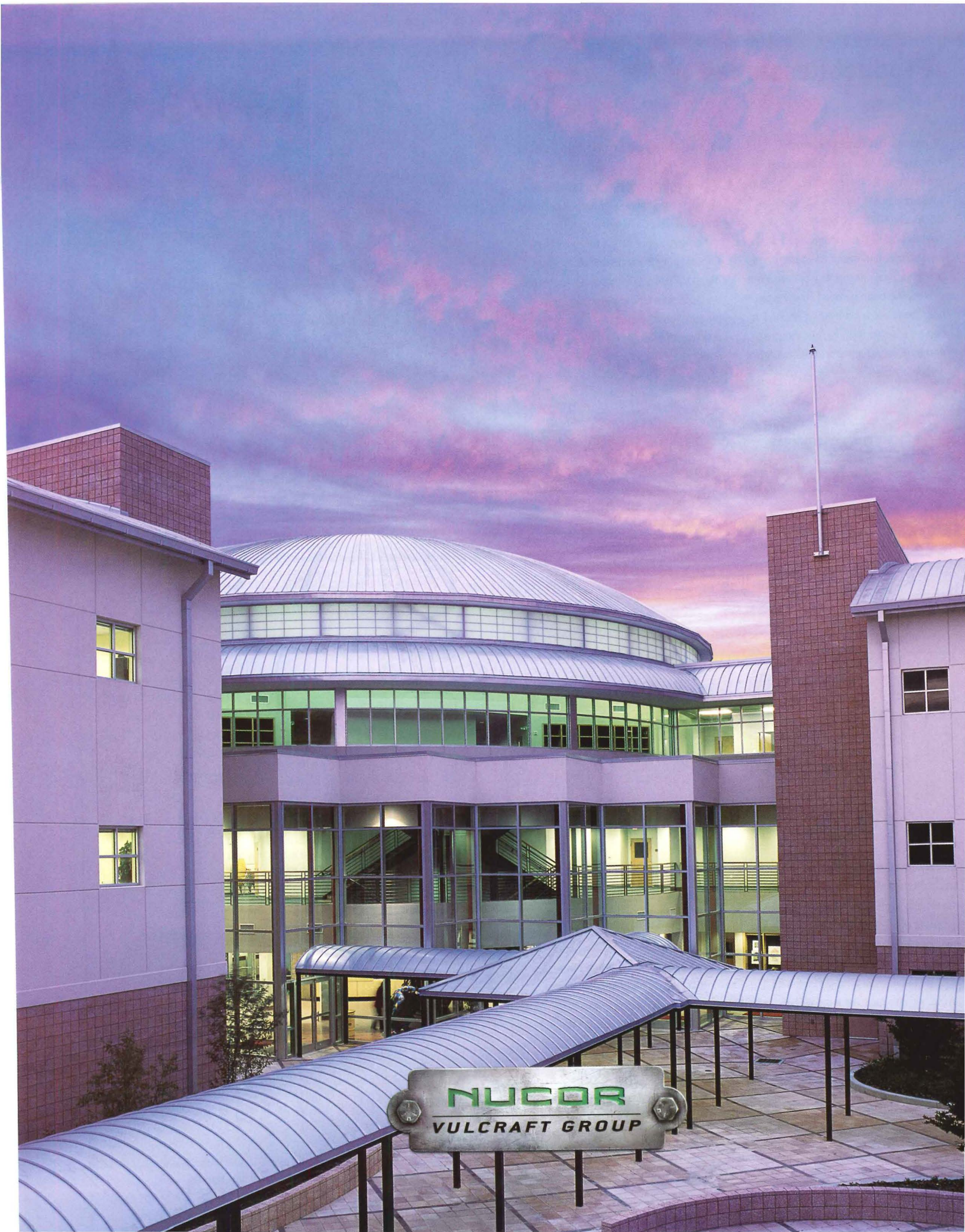
▲ www.mocoloco.com

Mocoloco is a modern contemporary design and architecture Web magazine featuring over 30 categories of designs, buildings, and products with editorial analysis. The Web site focuses on design in its well-edited content, but not in its layout, which reads like a blog. Each month, entries are discussed and illustrated in a vertical layout on a single page without a table of contents. Visitors post comments on individual designs.

▲ www.noodfashion.com

Nood Floorcovering has developed the Nood Lab, accessible through the pattern library on its Web site. Nood Lab allows designers to search for patterns, pan and zoom to survey each pattern, save designs in a password-protected portfolio, and visualize them in 216 colors in a virtual room scene. Floating text blocks can leave you feeling dizzy, but the Web site's colorful urban organic design is easy to navigate.

For more information, circle item numbers on Reader Service Card or go to archrecord.construction.com, under Products, then Reader Service.


NUCOR
VULCRAFT GROUP

Dates & Events

ew and Upcoming hibitions

inventing the Globe: A Shakespearean eater for the 21st Century
ıshington, D.C.
ıuary 13–August 27, 2007
s exhibition presents the results of a commission ive talented architects and designers to develop ɔothetical settings for the presentation of akespearean plays. The projects are highly inven- e, thought-provoking, and often quite surprising. the National Building Museum. For more infor- ation, call 202/272-2448 or visit www.nbm.org.

rairie Skyscraper:
rank Lloyd Wright's Price Tower
hicago
anuary 18–May 4, 2007
he Price Tower Arts Center in Bartlesville, klahoma, has the distinction of being the nly fully realized skyscraper Frank Lloyd Wright ver designed. Built in 1956 and inspired by a ree, at 19 stories tall, the building transformed he flat prairie on which it was built, altering he horizon with Wright's bold architectural tatement. This exhibition celebrates the 50th anniversary of this milestone in American archi- ecture and features drawings, photographs, uilding components, and some of the original urnishings designed by the architect. Call 312/922-3432 or visit www.architecture.org.

The Last Four Miles
Chicago
January 25–March 10, 2007
Chicago's 26-mile lakefront is world-renowned for its beauty, and, unlike many urban water- fronts, Chicago's shores are mainly public park and, accessible to everyone. However, two stretches of the shoreline (totaling approxi- mately 4 miles) on Chicago's South Side remain in private and quasi-governmental hands. This exhibition, presented in conjunction with Chicago's Friends of the Parks, unveils the plans for redeveloping this land to complete the shoreline park system from Evanston to the Indiana border. Call 312/922-3432 or visit www.architecture.org.

Open House: Architecture and Technology for Intelligent Living
Pasadena, Calif.
March 10–July 1, 2007
Open House will offer diverse and captivating glimpses into the house of the future as a place for new spatial experiences, systems of sustainability, and sensory enhancements through recent technologies and material developments. The exhibition will feature specially commissioned "intelligent houses" by 10 teams of emerging architects and designers from the United States, Europe, Australia, Asia, and Mexico. In addition, *Open House* will investigate the rich history of the idea of the "house of the future" and concepts of future living, placing the new commissions in both a contemporary and historical context. The show will be held at the Art Center College of Design's South Campus in Pasadena, California. For more information, you can call 626/396-2200 or visit www.artcenter.edu.

Dates & Events

Ongoing Exhibitions

Constructing the Swiss Landscape
Cambridge, Mass.
Through January 15, 2007
This exhibition examines the Swiss landscape as both a design and cultural construct. Projects include the mapping of Switzerland as an urban entity, engineered landscapes, and contemporary landscape design. At Harvard University Graduate School of Design. For more information, call 617/495-5453 or visit www.gsd.harvard.edu/swissla.

OMA in Beijing: China Central Television Headquarters by Ole Scheeren and Rem Koolhaas
New York City
Through February 26, 2007
Scheduled to open for the Beijing Olympics in 2008, the complex comprises three buildings and a media park situated on a 20-hectare (49 acre) site east of Beijing's Forbidden City. The international partnership Office for Metropolitan Architecture (OMA) won the competition for its design in 2002, and the project broke ground in 2004, with OMA partner Ole Scheeren leading its design and execution from Beijing. The exhibition explores the project through an array of graphics, renderings, and explanatory texts, as well as large- and small-scale models. A selection of architectural drawings from New York's Museum of Modern Art collection will situate the project as one of the most visionary built works in the history of modern architecture. At MoMA. For more information, call 212/708-9400 or visit www.moma.org.

Some Assembly Required
Los Angeles
Through March 13, 2007
For this innovative new show, architects and home buyers unite to support a variety of modern modular dwellings that refute the commonly accepted image of "prefab" homes as cheap, cookie-cutter structures. This exhibition presents various approaches to prefab houses: those built with a kit and an instruction manual or the diminutive one-room version. At the Pacific Design Center. For more information, call 310/657-0800 or visit www.pacificdesigncenter.com.

Modernism in American Silver: 20th-Century Design
Miami Beach, Fla.
Through March 25, 2007
This show charts the stylistic design history of modern American production silver while exploring the economic and cultural factors that influenced silver design, manufacture, and marketing across more than seven decades. At the Wolfsonian-FIU. For more information, call 305/535-1001 or visit www.wolfsonian.org.

The 2006 National Design Triennial: Design Life Now
New York City
Through July 29, 2007
Inaugurated in 2000, the Triennial seeks out and presents the most innovative American designs from the prior three years in a variety of fields, including product design, architecture, furniture, film, graphics, new technologies, animation, science, medicine, and fashion. On view throughout the museum campus will be the work of 87 designers and firms, ranging from established design leaders such as Apple Computer, architect Santiago Calatrava, and Nike to emerging designers like Joshua Davis, Jason Miller, and David Wiseman. At the Cooper-Hewitt National Design Museum. For more information, call 212/849-8400 or visit www.ndm.si.edu.

ctures, nferences, and mposia

c R. Multhauf chtime Lectures cago

lnesdays, January 10–31, 2007

free lectures include: Zurich osito: "The AIA Chicago Design ellence Awards"; Susan King: y Girl Architect—Lonely: 100 rs of Women Architects Working rganizing in Chicago"; Jeanne g: "Aqua Tower"; Charles tson: "Mo(dern) Mo(mentum), Building Rising at State and dolph." At the ArchiCenter. Call /922-3432 or visit www.archi-ure.org.

yVision Final esentation: Young signers Envision Future C. Monuments and morials shington, D.C.

uary 12, 2007

Museum's CityVision program teaches participants how to initiate and promote change in their communities through the processes and products of design, students learn problem solving, teamwork, and advocacy. During the fall 2006 semester of CityVision, participants from Paul Public Charter School, Browne Junior High School, and MacFarland Middle School worked with the National Capital Planning Commission to enhance areas surrounding the National Mall. Students will present their "monumental" ideas for improving East Potomac Park, Banneker Overlook, and the RFK Stadium site. At the National Building Museum. Call 202/272-2448 or visit www.nbm.org.

2007 Vincent J. Scully Prize: Witold Rybczynski Washington, D.C.

January 17, 2007

Author, scholar, professor, and architect Witold Rybczynski has investigated and chronicled the fields of architecture and urban planning for more than 20 years. The National Building Museum is recognizing Rybczynski's valued contributions to architecture and urban planning by presenting him with the 2007 Scully Prize. Following the ceremony, Rybczynski will give a lecture on "Demand-Side Urbanism." At the National Building Museum. Call 202/272-2448 or visit www.nbm.org.

Spring 2007 Lecture Series: Design Goes Mainstream Houston

January 17–February 7, 2007

In recent years, "design" has permeated the mainstream. Companies like Target, IKEA, Design Within Reach, and Apple have been the harbingers of style to the general public. Magazines like *Wallpaper* and *Dwell* present a design-conscious lifestyle and are read by designers and the general public alike. This lecture series will explore larger issues of design and the products we use in everyday life. Wednesdays at Brown Auditorium, The Museum of Fine Arts, Houston. Call 713/348-4876 or visit www.rda.rice.edu.

Competitions

2007 PCA Educational Foundation Research Fellowships

Deadline: January 15, 2007

Each year the Education Foundation of the Portland Cement Association (PCA) awards students working on projects related to cement manufacturing, concrete technology, and residential, public works, masonry, and engineered structures. The fellowships are open to any student completing studies toward a master's or doctoral degree from an institution of higher education within Canada or the United States that is accredited by a regional or national agency. The applicant must be pursuing graduate study in an engineering, science, material science, or architectural program. Call 847/972-9164 or visit www.cement.org.

Sally Kress Tompkins Fellowship 2007

Deadline: January 15, 2007

Dates & Events

A joint program of the Society of Architectural Historians (SAH) and the Historic American Buildings Survey (HABS) permits an architectural historian to work on a 12-week HABS project during the summer of 2007. The award consists of a $10,000 stipend and announcement during the Society's 60th Annual Meeting in April. Call 202/354-2180 or visit www.cr.nps.gov/hdp.

2007 COTE Top Ten Green Projects

Deadline: January 17, 2007

Since 1996, this juried recognition program has celebrated the best in sustainable design. The program requirements are unique and require narrative descriptions as well as performance metrics. This unusual set of requirements is part of the program's recognition of the importance of qualitative and quantitative elements of sustainable design. These COTE measures and metrics of sustainable design are a framework for a holistic understanding of sustainable design. Visit www.aiatopten.org.

AISC IDEASÇ Awards Competition

Deadline: January 31, 2007

Engineers, architects, fabricators, and all other building team members are invited to submit their best recent projects to the American Institute of Steel Construction's IDEASÇ Awards. Projects where structural steel has been used in an innovative manner will be recognized. Visit www.aisc.org.

2007 SEGD Design Awards Program

Deadline: January 31, 2007

The Society for Environmental Graphic Design (SEGD) annual design competition honors the best in environmental graphic design. Projects include themed environments, way-finding and signage, place-making projects, mapping, public art, identity programs, architectural graphics, exhibits, and retail. Visit www.segd.org.

The James Beard Foundation Awards

Restaurant and Graphics

Deadline: January 31, 2007

The James Beard Foundation Awards recognize outstanding achievement within the fine food and beverage industries. The awards honor professionals in these fields, including cookbook authors, chefs, restaurateurs, winemakers, journalists, broadcasters, as well as restaurant and graphic designers in the United States. This competition is open to architects and designers in North America for restaurant projects since 2004. For additional information, visit www.jamesbeard.org.

Villa Esperanza: A Santa Fe Sustainable Ideas Competition

Deadline: February 5, 2007

The goal of this international competition is to provide a model for social justice and sustainable housing design in Santa Fe, New Mexico. The project focuses on the redesig of an existing low-income-housing project to address issues of urban transit, green design, and affordability. For further information, visi www.santafedesignweek.com.

Ceramic Tiles of Italy Desig Competition Call For Entrie 2007

Deadline: February 9, 2007

The 14th annual Design Competiti honors design excellence in projec that feature Italian ceramic tile. North American architects and interior designers are invited to submit residential, commercial, and institutional projects complete between January 2002 and Janua 2007. Entries may be submitted fo domestic and international new

onstruction and renovation projects. For ore information, visit www.italytile. om/italytilenew/html/DesignComp2007.asp.

oung Architects Competition: Proof
eadline: February 12, 2007
articipants in the program are chosen through portfolio competition that is juried by distinuished architects, artists, and critics, and the oung Architects Committee. The committee, a oup selected each year from past participants the Young Architects Forum, is responsible for eveloping the program's theme and selecting ompetition jurors. Open to designers 10 years less out of school, the competition draws ntrants from around North America. Call 12/753-1722 or visit www.archleague.org.

007 Aurora Awards
eadline: March 9, 2007
uilders and architects who have demonstrated xcellence and creativity when designing hurriane-resistant structures are invited to submit roposals to this design competition recognizing rojects in the southeastern United States. olutia, a manufacturer of polyvinyl butyral PVB) interlayers for impact-resistant glass, is ponsoring a new category in the competition: he Safe & Secure Award will recognize uilders, designers, architects, and other ome-building professionals who incorporate—nd meet or exceed code requirements or—impact-resistant windows and doors for afety, and who use other design elements that inimize the effects of hurricanes and other isasters on residential structures. For more nformation, visit www.theauroras.com.

roject New Orleans
all for Submissions
ngoing
roject New Orleans is seeking to compile a ecord of all architectural and planning propos-ls created for the post-Katrina rebuilding of ew Orleans. Submissions are welcome, both ritten and graphic, from the architectural to he regional, and from all engaged in thinking bout the future of the city in physical terms. isit www.project-neworleans.org.

-mail event and competition information two nonths in advance to lisabeth_broome@mcgraw-hill.com.

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Program title: "The Phantom Menace," Architectural Record (01/07, page 119). 017EDIT1

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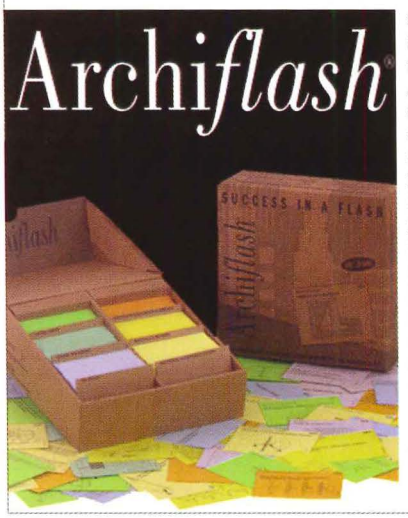

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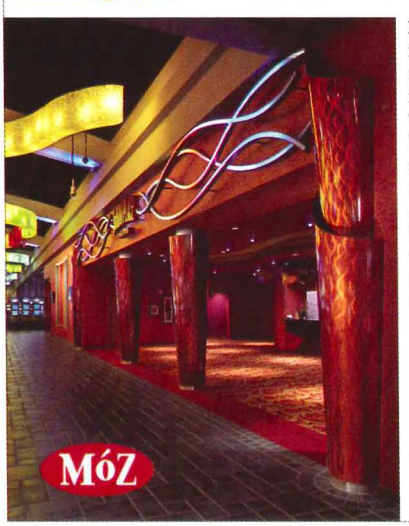
| Circle Reader Service #150

Column Cover Systems

Móz Designs, Inc.



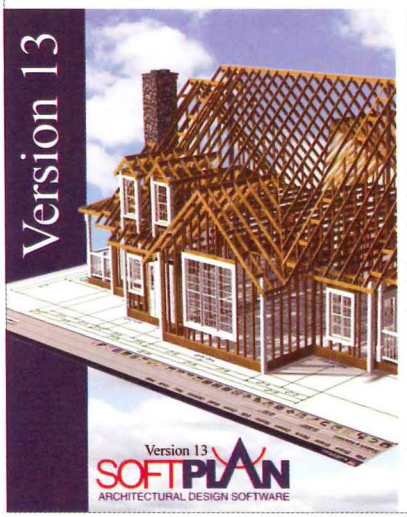
Móz Column Cover Systems are p fabricated to offer easy installat and come in a variety of shaj including round, oval and taper Their Column Covers stand up heavy traffic and are available w new durable Special Finishes. M offers 12 unique patterns, 16 stand colors and their metals are expe handcrafted. Let their value engine ing team transform your ideas a concepts into solutions for dynar environments.

510-632-0853
www.mozdesigns.com/ar1

| Circle Reader Service #

How Houses are Drawn

SoftPlan Architectural Design Software



SoftPlan is an industry leading residential CAD software package. Now on its 13th release, SoftPlan allows architects and builders to create house plans in a fraction of the time taken to draw by hand or using a conventional CAD package. Using the latest technology, SoftPlan gives the flexibility to create complex, custom drawings with speed, accuracy, and ease. Quickly and easily create floor plans, elevations, cross-sections, photo-realistic 3D renderings, material lists, and more.

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www.softplan.com

| Circle Reader Service #151

Custom Architectural Stone

World Wide Stone Corporation™

Company owned and managed fac ries and quarries produce Archit tural details such as stone moldi and trims, columns, pedestals, sin arches, cornices, window sills, thre olds, stair treads, and baseboar These cut to size accents cre unparalleled and remarkable envir ments. Emphasize and accentu any detail or design with Dura Stone™.

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Floor & Roof System

Amvic Building System

AmDeck™ is a lightweight, modular stay-in-place form made of EPS for concrete floors/roofs. One-way concrete floor/roof joists can span up to 30- to 35-ft. and shoring can be placed up to 20-ft. on center. Overall, AmDeck™ is well engineered and easy to use. A perfect addition to your next project.

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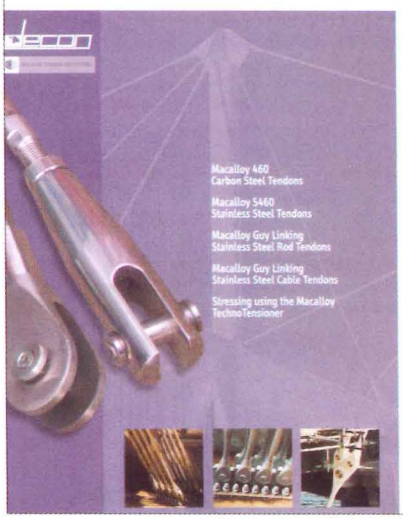
www.amvicsystem.com

| Circle Reader Service #152

Tension Rods

Decon USA, Inc.



Macalloy Bar and Cable Syste Available in both carbon and stainl steel. The strength and aesth qualities of Macalloy Tension Rods evident. High strength mate allows use of smaller diameters, p ferred by Architects and Engine Airports, Museums and Stadiu incorporate Macalloy Tension Ro pushing the envelope of mod structures.

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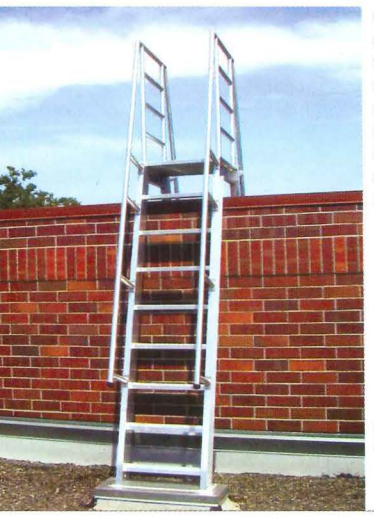
www.deconusa.com

| Circle Reader Service #

luminum Access Ladders

Keeffe's, Inc.



O'Keeffe's has been manufacturing quality architectural building products for over 60 years, providing their customers with one of the largest selections of high quality aluminum access ladders on the market today. O'Keeffe's custom fabricates virtually any type of access, caged or ship ladder depending on your need.

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| Circle Reader Service #156

Engineered Wood Product

Weyerhaeuser

iLevel™ Trus Joist® TimberStrand® laminated strand lumber (LSL) is a high-quality engineered wood product available for a wide range of applications, including beams, rim board, treated sill plate, headers, columns and studs. Builders choose TimberStrand LSL because it is consistently strong, straight and true.

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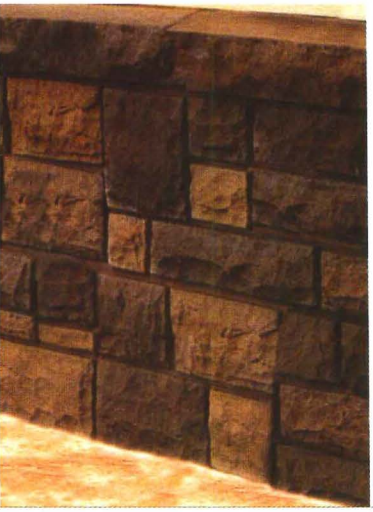
| Circle Reader Service #159

uthentic Looking Surfaces

rchitectural Products by Outwater, LLC



Achieve the look of authentic stone, brick, wood and many other realistic surfaces for a fraction of the cost with Outwater's innovative 2-ft. by 4-ft. high-density polyurethane FauxStone Panels, designed and manufactured with exacting realism to visually and texturally replicate the original building materials from which they have been modeled. Ideally suited for interior or exterior use in a vast number of commercial and residential applications, Outwater's maintenance free FauxStone Panels are lightweight, impact resistant, and dimensionally stable as well as impervious to adverse climate and weather conditions.

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www.outwater.com

| Circle Reader Service #157

Fire-Rated Aluminum Products

Aluflam North America

Imagine being able to specify a fire-rated system that looks so good you wouldn't know it's fire-rated. Imagine the clean, rich lines of clear glass. With ALUFLAM storefront and curtainwall systems, this is reality. Contact them for further information.

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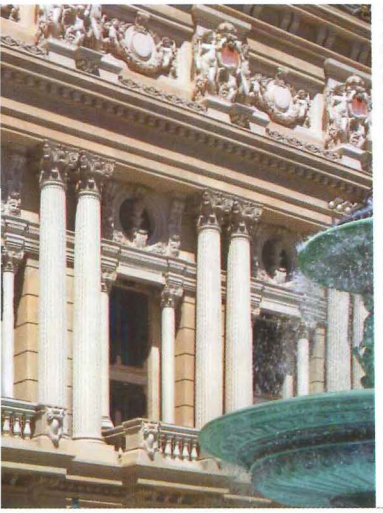
| Circle Reader Service #160

Columns, Balustrades & Cornices

Melton Classics



Melton Classics provides the design professional with the most comprehensive selection of quality architectural products in the industry, including architectural columns, balustrades, mouldings, cornices, and a wide array of architectural elements. Architectural columns are available plain or fluted, load-bearing or column covers, round or square in fiberglass, fiberglass/marble composite, synthetic stone, cast stone, GFRC, and wood for paint or stain. Melton Classics offers maintenance-free balustrade products ideal for any application.

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www.meltonclassics.com

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Pre-Engineered Door Hardware

HDI Railings

From minimalist simplicity to stylish sophistication, HDI offers pull handles to suit every taste. Featuring nearly 60 distinct designs made from stainless steel, wood, glass and stone, you're sure to find a solution to your need. Many pull handles come in a variety of sizes, and the HEWI CombiSystem features a patented method of adjustment, allowing easy installation on existing doors.

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www.hdirailings.com

| Circle Reader Service #161

Anti-Reflective Glass

IGT Glass

Luxar anti-reflective glass is perfect for any glass application where glare and reflection are not wanted. Luxar reduces glare and reflection to less than 0.5%. It is perfect for museums, store fronts, stadiums, restaurants, projection rooms and display cases. It is available on low iron float glass for maximum clarity in 2mm to 12mm thicknesses to meet any project requirement.

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www.luxar.ch

Circle Reader Service #162

Curved Translucent FRP Panel Systems

Major Industries

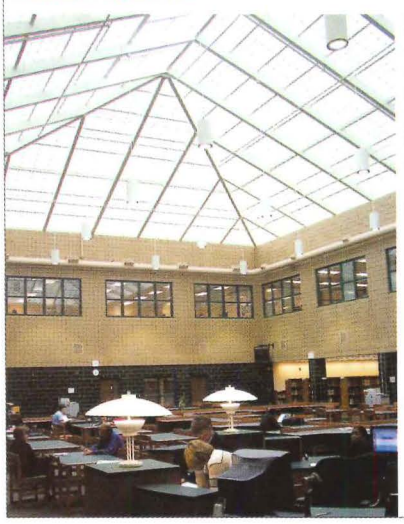
When your daylighting proje demands something special, t TransCURVE™ translucent buildi panel system provides exceptior performance, with the added bene of a striking, unique appearanc TransCURVE™ glazing panels featu a visually attractive aluminum gr core in several popular patter giving panels a refined look wh maintaining exceptional strengt TransCURVE™ also features a pren um architectural-grade FRP exteri skin that blocks damaging UV ra while transmitting the beauty of na ural light.

715-842-4616
www.majorskylights.com

Circle Reader Service #1

Next-Generation Daylighting

Kalwall Corporation



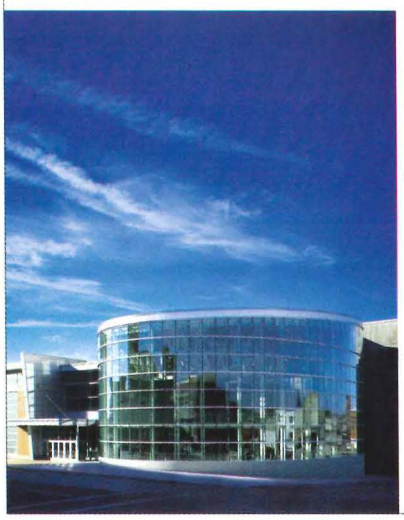
New Kalwall 100™ panels enable architects to meet daylighting needs and building envelope energy requirements at a lower cost than the formerly released Kalwall+ Nanogel system, which at 2-3/4-in. thick holds a .05 U-value. The Kalwall 100 exterior panel, which has a U-value of .08, is 4-in. thick and increases the structural capabilities of earlier versions to meet the worldwide demands of new building regulations for stiffer, stronger cladding, in response to recent natural disasters.

800-258-9777
www.kalwall.com

Circle Reader Service #163

Solar Control Glass

Oldcastle Glass



Exclusive, new SunGlass™ Sol Control Glass delivers the beauty the sun without the heat. Now arch tects can specify a neutral color gla that invites the sun in without ma ing building occupants sweat. Tha because SunGlass™ delivers a comb nation of unprecedented solar contr and visible light transmittance. I the look you want with the perfor ance you need.

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www.oldcastleglass.com

Circle Reader Service #1

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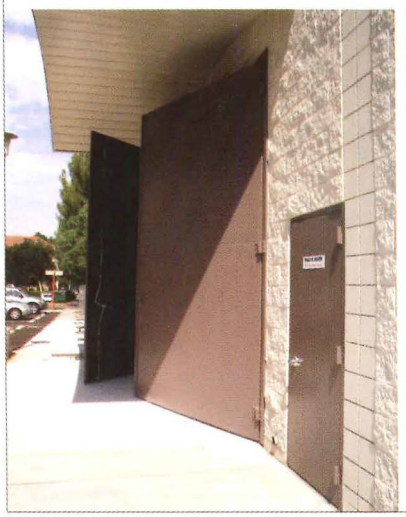
Krieger Specialty Products



For over 70 years, Krieger has been custom manufacturing acoustical, blast, bullet, security, radio frequency shielding, thermal shielding, stainless steel and other special purpose doors and windows. Their custom designed and manufactured doors and windows are utilized by leading architects in premier installations such as the Kodak Theater, Disney Concert Hall, Hollywood Bowl, Max Fisher Performing Center, Boeing Integration Center, The Getty Museum, L.A. Zoo, Basketball Hall of Fame, the Pentagon, and various other U.S. government, military, and embassy buildings throughout the world.

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Circle Reader Service #164

Anti-Reflective Glass

Pilkington

OptiView™ Anti-Reflective Glass mi imizes glass reflections by reduci visible light reflectance to less th 2%, while blocking more than 99% UV transmittance using Pilkingto online pyrolytic process. OptiView Anti-Reflective Glass offers more s flexibility than other anti-reflecti glass products. Being a lamina OptiView™ Glass provides excelle acoustic control and superior saf and security performance. Pilkingt OptiView™ is a practical choice retail storefronts, showrooms, a other applications where an an reflective product was never option.

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www.pilkington.com

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kington North America - Fire Protection Glass

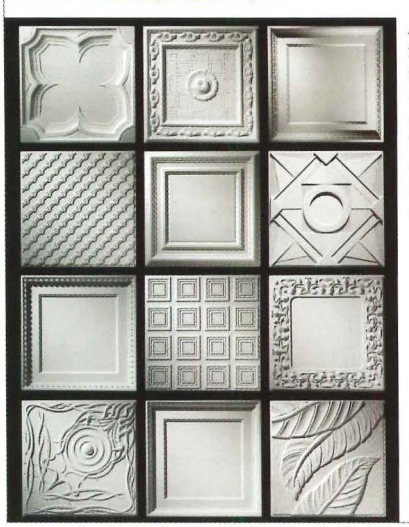
Pilkington Pyrostop™ is available with many options including opaque films, colored interlayers, surface designs and lightly sandblasted. Pilkington Pyrostop™ can also be combined with any of the Pilkington products to meet your design needs. For more information contact Technical Glass Products or visit their web site.

800-426-0279
www.fireglass.com

| Circle Reader Service #168

Ornamental Plaster Ceiling Tiles

Above View Mfg., By Tiles, Inc.



Above View ornamental plaster ceiling tiles are fabricated from a non-toxic, non-combustible, proprietary composition. They drop into any standard 15/16-in. T-Bar grid system. There are more than 50 standard designs, custom design work, and 1,300 custom colors and faux finishes available upon request.

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www.aboveview.com

| Circle Reader Service #171

re Rated Aluminum Framing

AFTIFIRST

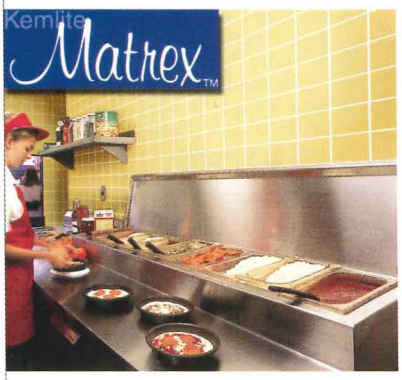
With SAFTIFIRST's SAFTIfire Frames, rated 45-min. to 2-hr., you can create the maximum barrier against fire and radiant heat while providing attractive framing that meets all the temperature requirements of the national building codes. Design flexibility of multiple forms makes for easy installation, creating a sleek, attractive profile.

888-653-3333
www.safti.com

| Circle Reader Service #169

Decorative Wall Panels

Crane Composites, Inc. (formerly Kemlite Company, Inc.)



The look of tile, The ease of FRP. The frpDesign Solutions Matrex panel has a high gloss decorative surface in solid and granite colors. Matrex fiberglass reinforced plastic (frp) panels are available with 4-in. by 4-in. sealed simulated grout lines or without grout lines and are easy to install and maintain. For more information, visit Kemlite on the web.

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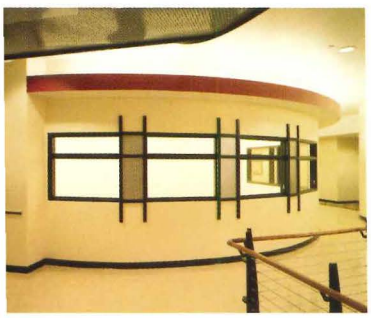
www.frpdesignsolutions.com

| Circle Reader Service #172

ire-Rated Glass & Framing

chnical Glass Products



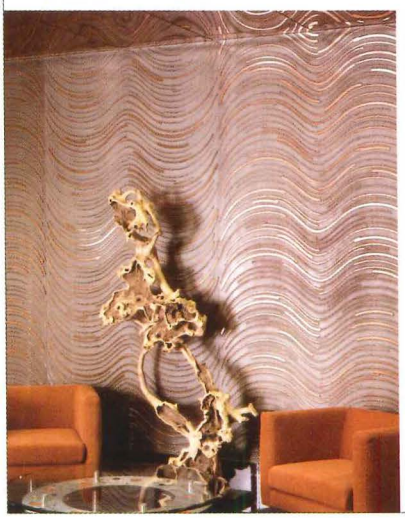
Technical Glass Products has been a national distributor of fire-rated glazing and framing materials since 1980. They are committed to providing reliable, rapid service and outstanding product options. Their knowledgeable staff can assist you in determining which product is right for your application. Contact Technical Glass Products at 1-800-426-0279 or www.fireglass.com.

800-426-0279
www.fireglass.com

| Circle Reader Service #170

Cast Metal Wall Surfacing Material

Gage Corporation, Intl.



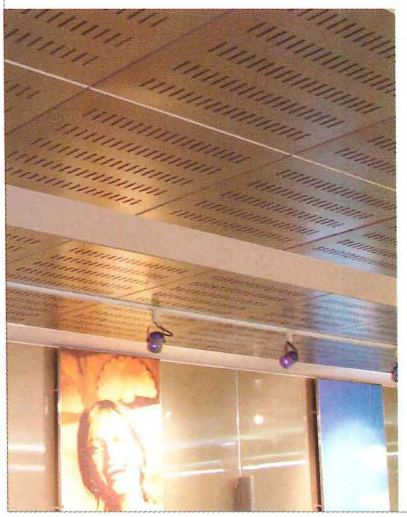
Gagecast® is a cast metal wall surfacing material suitable for a variety of interior architectural applications where patterns that feature high luster, relief, durability, and cost effective installation are a requirement. Twenty-eight designs are standard, however, custom collaboration is encouraged. Gagecast® is one component of Gage Vertical Surfacing. Contact the factory for product literature and selected samples. Email gage@centurytel.net

800-786-4243
www.gageverticalsurfacing.com

| Circle Reader Service #173

Perforated Metal Ceilings

Gage Corporation, Intl.



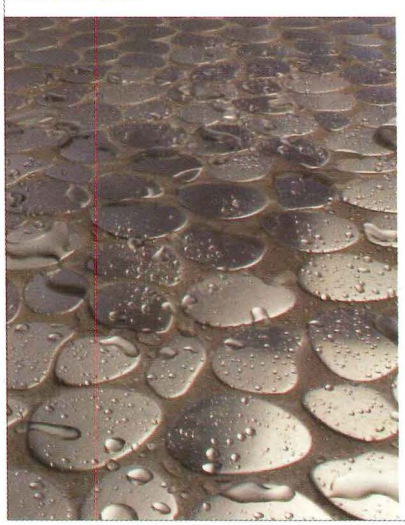
Setting a new standard for perforated metal ceilings, Gage introduces the 700 Series of perforated metal ceilings manufactured from 50% recycled aluminum. Standard designs include five distinctive finishes and 14 different perforation patterns. Selective and custom designs are also available. Contact the Gage factory for literature and samples.

www.gageceilings.com

| Circle Reader Service #174

Architectural Surfaces

Solistone, Inc.



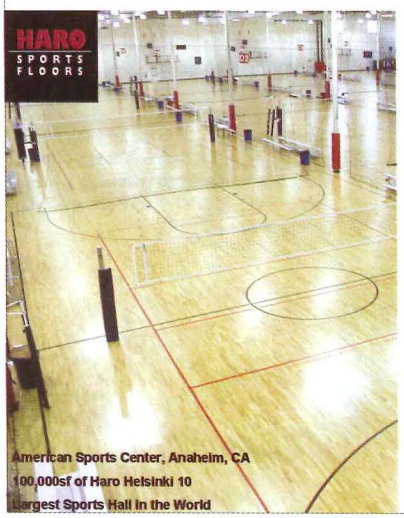
SOLI offers one-of-a-kind architectu surfaces for traditional and contemp rary applications. From metal to marb granite to glass, SOLI products bri distinctive design to floors and wal indoors and out. They also offer a va ety of unique porphyry, cobbleston and pavers. View their extensi collection of innovative tile and nat ral stone at www.soliusa.com.

800-410-7654
www.soliusa.com

| Circle Reader Service #1

Sports Floors

Haro Sports Floors



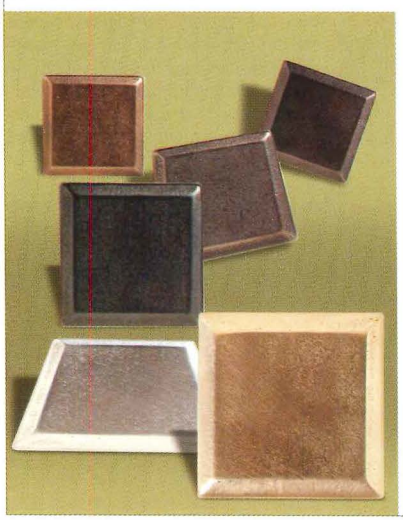
Athletes shouldn't suffer through injuries due to a poor performing sports floor. Athletic Floor Systems provides the best performing, safest and lowest cost gymnasium floors available. AFS supplies sports floors for competition gyms, sports arenas and multi-purpose facilities. There are more than 7500+ installations in over 65 countries. Demand performance, safety and low cost in your next sports floor.

800 323 6792
www.haro-usa.com

| Circle Reader Service #175

Bronze Tiles

Sun Valley Bronze, Inc.



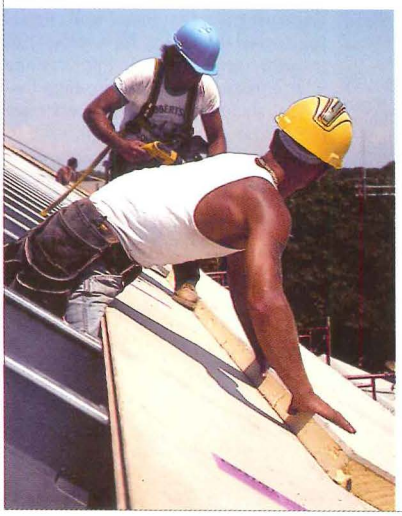
Beauty and function. The Sun Val Bronze Tile Collection combines sleek look with exquisite craftsma ship. Custom sizes are available w either a square edge or a beve edge, and in a choice of 6 patinas. T Tile Collection is a perfect backdrop Sun Valley Bronze cabinet hardw in your kitchen or bath.

866-788-3631
www.svbronze.com

| Circle Reader Service #

Green Roof Systems

Homasote Company



Homasote Company, one of America's leading green building products manufacturers and nailbase roof insulation's originator, has received Factory Mutual approval for N.C.F.R.® Thermasote® on steel roof decks. Use it to specify attractive, residential-looking roofs for multi-family, mixed-use, commercial, medical and other construction. For an alternative green roof system, excellent for conventional and LEED® construction, specify Firestall® Roof Deck with N.C.F.R. Thermasote. Wind uplift tests show these Homasote® systems make code in wind-prone areas.

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The American Tin Ceiling Co.

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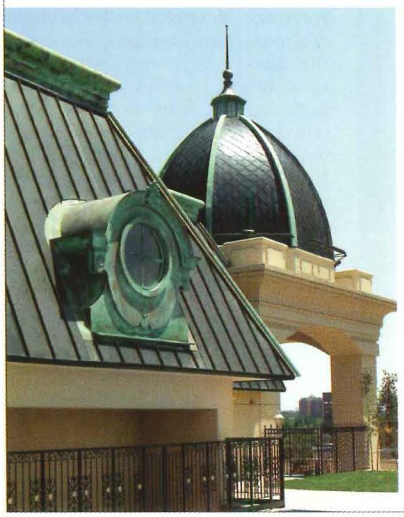
Specializing in carpets, rugs and wall/ceiling coverings made from natural Abaca fiber, Mother Nature's strongest plant fiber, sustainable and bio-degradable. The Natural Carpet Company also specializes in hand-knotted carpets and rugs made from wool, hemp, silk and nettle. Custom rugs are their expertise. Fax number 310-664-1421 Email info@naturalcarpetcompany.com

310-664-1420
www.naturalcarpetcompany.com

| Circle Reader Service #180

Architectural Sheetmetal Products

CopperCraft



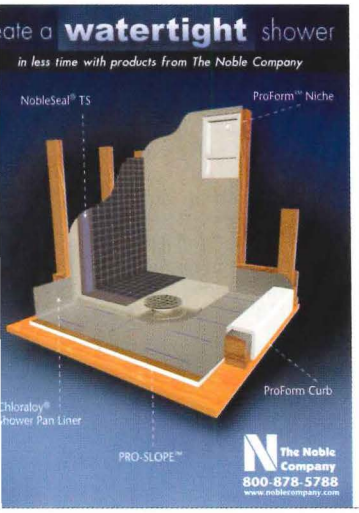
Structural integrity and performance are as important as aesthetics. Applying this understanding to the manufacture of its products is what sets CopperCraft apart from the competition. Their design, engineering, testing, and fabrication methods meet stringent structural and performance standards. You get unsurpassed quality, delivery, and custom service including a nationwide network of representatives. Their complete line of high quality architectural sheetmetal products include ornamental dormers, roof vents, roof drainage products, conductor heads, steeples, cupolas, and spires.

800-486-2723
www.coppercraft.com

| Circle Reader Service #183

tertight Showers

Noble Company



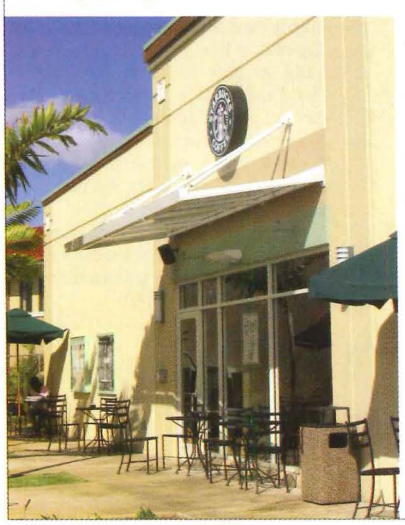
Save time and money and avoid leaks that can lead to the growth of mold. Use Noble Company's shower waterproofing products to help ensure a watertight installation. Products include sheet membranes, like Chloraloy® and NobleSeal® TS, ProForm™ Niches and Curbs, and PRO-SLOPE™, a composite that creates the required slope under the waterproofing membrane. Proven products with a history of success. For more information call or visit their web site.

800-878-5788
www.noblecompany.com

| Circle Reader Service #181

Canopies & Walkway Covers

CPI Daylighting Inc.



CPI's new LiteBrow Suspended Light Transmitting Canopies provide an excellent shelter with an open-air feeling, allowing natural daylight through to light up the area below. They are provided in a variety of widths and lengths, projecting from 3- to 5-ft.-wide and up to 24-ft. in length. LiteBrow canopies offer an economical, functional design with unequaled aesthetic appeal.

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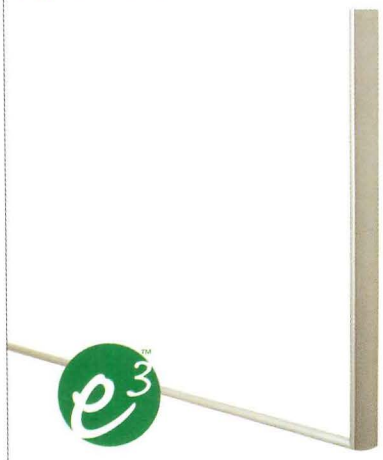

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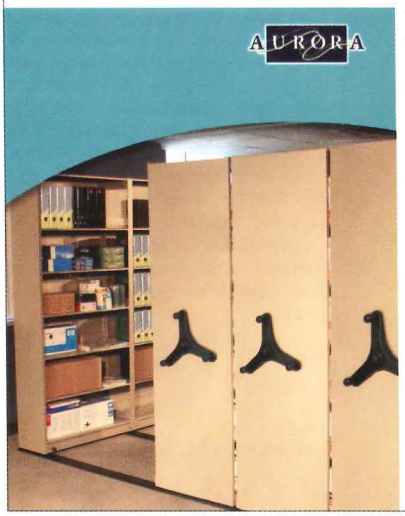

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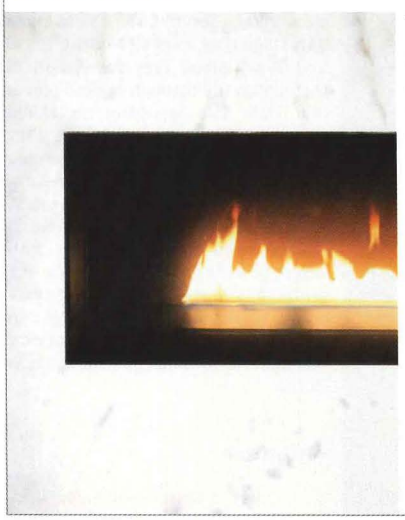

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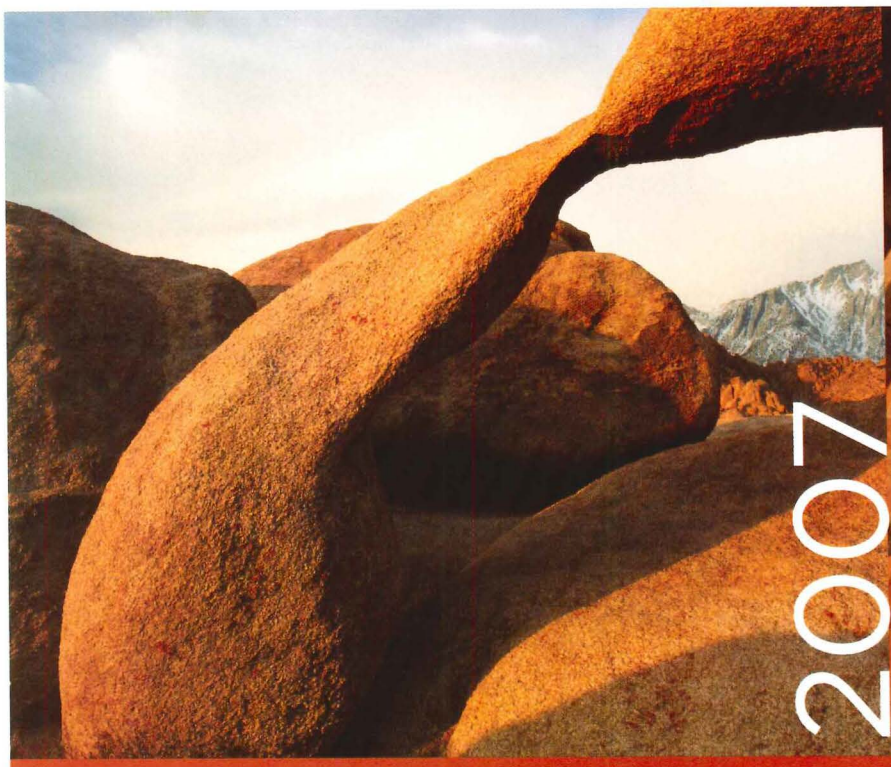

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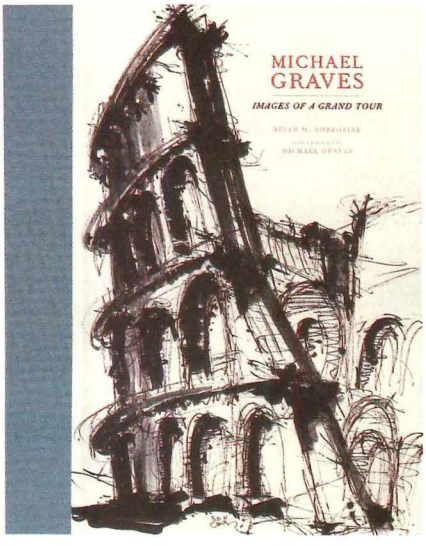
The Architect's Hand

***Basilica of Maxentius, Rome* (pen and ink wash, 1960).**



Michael Graves on the Grand Tour

In spite of the lamentations that drawing by hand is a lost art to new generations of architects virtually r on the computer, this artistic pursuit still thrives, if unheralded. Throughout the year, RECORD plans to de the end page of each issue to sketches and drawings by those who avow that the hand best helps the mind to analyze and conceptualize architecture. What better way than to begin with Michael Graves, the sion's consummate artist of the late 20th century? As illustrated so compellingly in *Michael Graves, Ima Grand Tour*, by Brian M. Ambroziak (Princeton Architectural Press, 2005), the drawings and sketches tha executed in the early 1960s at the American Academy in Rome attest to the power of the city's patrim the Prix de Rome winner. When he drew the 4th-century Basilica of Maxentius in Rome in 1960, Grave that it "gave me the courage to continue not only with my analysis of buildings, but also with developing in drawing antiquities." In so doing, in this case he employed a pen and ink wash on a sheet of paper, 3C inches, which he felt would best render these particular ruins. "Seeing the enormity of those three bay first thought is that this must have been the entire building. However, the structure that springs from the indicates the former presence of an even larger, navelike space." *Suzanne Stephens*

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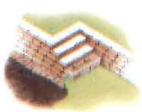

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