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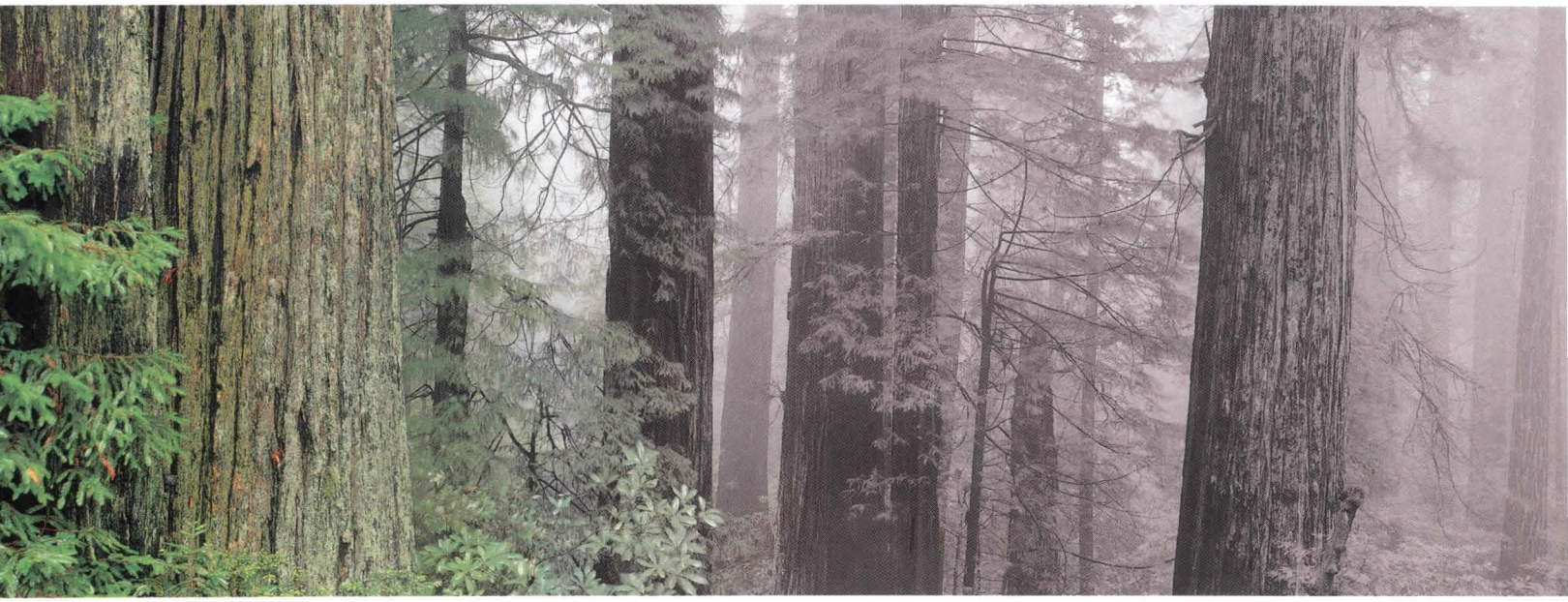

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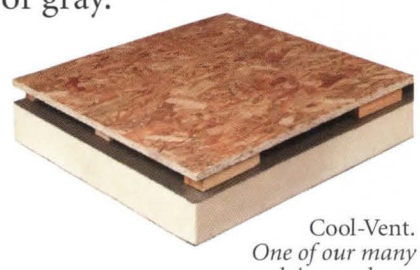

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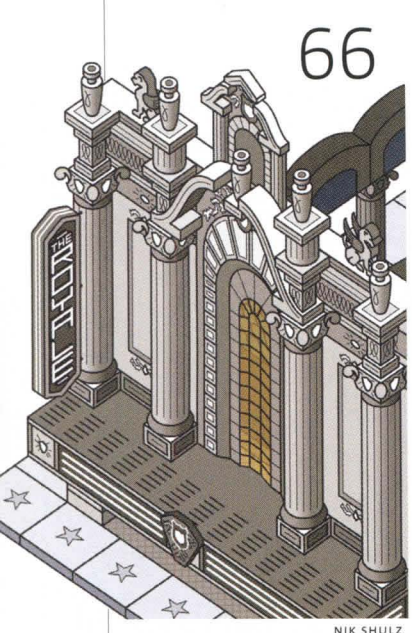

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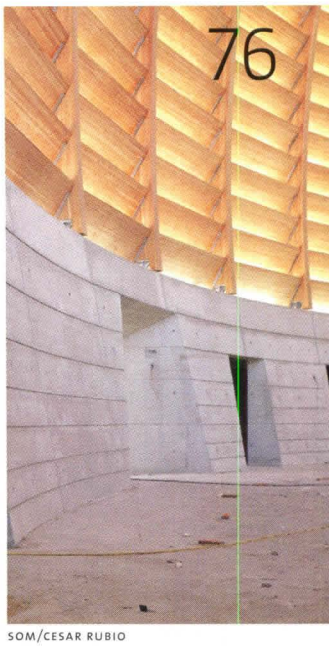

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FEATURES

ON THE COVER
Left and right, Amale Andraos and Dan Wood, principals of WORK Architecture; center, Alex Garvin, president of Alex Garvin & Associates. Photo by Art Streiber.

I CALL IT "ENTERTAINMENT ARCHITECTURE." AT THE END OF THE DAY, YOU HAVE TO CREATE SOMETHING SERIOUSLY ENTERTAINING.

Roy Higgs, from "Coming Attractions," page 66.

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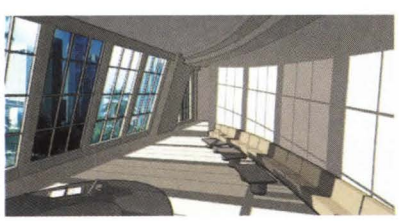

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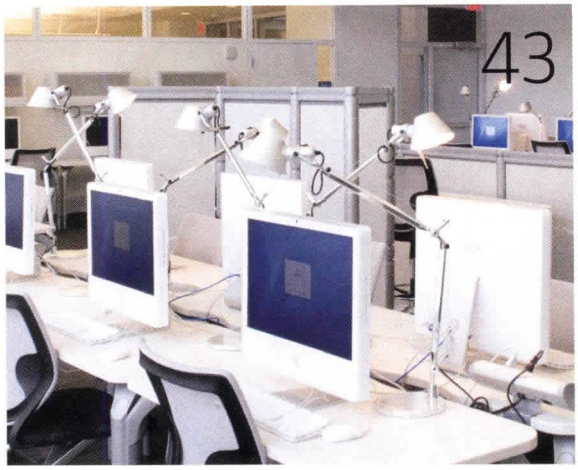

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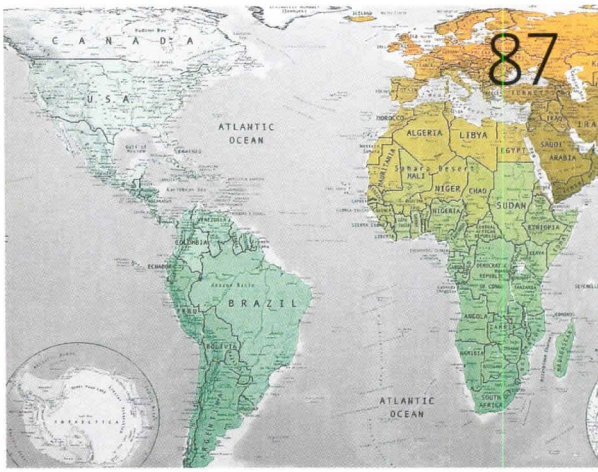
RIGHT Inside the Collaborative Media Room at Syracuse University



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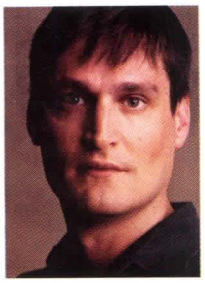

TIMOTHY GREENFIELD-SANDERS

Ned Cramer
Editor in Chief

EVERYBODY'S TALKING RECESSION. As this issue of ARCHITECT went to press in late January, economists for financial giants like Merrill Lynch and Goldman Sachs were shifting their predictions from gloom to doom, the Asian and European stock markets had dipped 20 percent in reaction to the U.S. subprime crisis, and the usually bullish White House was working with Congress on a $150 billion economic stimulus plan.

Ready to join in the panic?

Stop. Take a deep breath. Remind yourself that recessions are a natural part of the capitalist life cycle. They're just the economy's way of healing itself after a particularly aggressive growth period, like the burn you feel after a hard workout. Eventually the burn goes away, and your muscles rebuild themselves, stronger than ever. Recessions, for their part, last on average between six and 24 months, and, in that amount of time, there's no reason for a well-managed architecture practice (and its employees) to suffer.

The profession's learned a lot since the recession of the late 1980s and early 1990s, when giant firms laid off people by the hundreds. For one thing, large and small practices today are alive to the benefits of a diversified portfolio. The strategy is practically a business-world cliché at this point, but it seems to work. In the coming months, the going will get toughest for firms that haven't diversified—particularly, given the subprime situation, those that specialize in single- and multifamily housing.

Fortunately, it's never too late to diversify, and the opportunities are obvious. The AIA's newly released 2008 Consensus Construction Forecast predicts modest growth this year in the hotel, office, and institutional sectors. Moreover, in December the institute's monthly Billings Index posted its 34th consecutive positive score. "As the country braces for a possible recession in 2008, there will likely be an easing in demand for design services," AIA chief economist Kermit Baker said in an accompanying statement. "While that is a natural reaction, it is important to note that with positive conditions for architecture billings going back over two years, nonresidential construction is expected to [be] one of the sources of strength in an otherwise uneven economy."

So if your best condo-developer client goes bust, try leveraging your expertise into a bid for a college dorm. But remember that diversifying doesn't have to mean stretching yourself into unfamiliar territory. In the past decade or so, leading firms have developed services and products that fall outside the strict definition of an architect's role but well within their own comfort zones. You can do the same. Turn your experience designing sustainable buildings into a green consultancy (William McDonough + Partners), license that product you designed in the 1980s to a manufacturer or retailer (Michael Graves & Associates), or convince your corporate client that they don't just need new office space, they also need you to develop an entirely new brand identity for them (Gensler).

Layoffs may be inevitable. In fact, they may prove beneficial as a way of streamlining an oversized office (see "You're Fired!," page 39, for tips on how to let someone go without getting burned by a lawsuit). But before anybody whips out the ax, it's worth exploring other ways to cut payroll expenses. I bet most employees would rather lose their 401(k) match than their jobs. If salary increases look impossible, try offering MBO (management by objectives) bonuses, linked to specific financial goals. It doesn't have to cost a fortune to keep the talent happy, and the last thing a hungry firm can afford to lose is valuable people. Calling for pizza while the staff's on charrette, or taking them on a field trip when it's over, will go a long way toward boosting morale.

In the end, the trick is to keep your head—to make decisions and take actions that will *not only* help your firm survive but keep it in good shape, pumped for the boom to come.

Ned Cramer
Editor in Chief

Rushing to Judgment

With regard to your editorial, "So, Gehry Got Sued ..." [December 2007, page 12], the key question is: Why is everyone rushing to judgment without knowing the facts?

Yes, it could be the architect's fault, but it is just as likely that the client ignored the architect's advice when insisting on cost reductions, that the contractor provided poor workmanship, or even that the errors and faults of several parties coalesced into the MIT debacle. It is just too easy to say, "The architect is to blame. We all know cutting-edge architecture is so impractical."

Why not tell the truth: We don't know who is at fault, and, yes, we have a problem with many possible answers. Let us study the matter objectively and carefully and assess blame only when we are fully informed. I thought the American way was to assume innocence until proven guilty—surely our greatest living architect deserves that much courtesy.

You say something quite wrongheaded when you ask, "Is this situation really so unusual?" and then advise everyone to hire a lawyer and study the new AIA contract documents. Matters like this are very complex, and in practice it is very difficult for architects to get a fair hearing. On the one hand, the complainant has a simple gripe: It doesn't work, and look at what I paid for it. On the other, the professionals and contractors have very complex, often tedious, explanations that must be understood if judgments are to be fair. It may be that as a profession we are too quick to judge our peers.

Allan Greenberg
Washington, D.C.
agreenberg@allangreenberg.com

Nurses Rising

I was very pleased to see your cover article on nurses in architecture ["The Rise of the RN," December 2007, page 60]. The inclusion of clinical professionals in our design teams is an important first step in creating a truly humanistic healthcare practice. There are now three universities offering specialized health design programs. In fall 2008, the University of Illinois at Chicago will enroll the first students in its Master of Science in Architecture of Health Design.

William Worn
University of Illinois at Chicago
wornb@uic.edu

Correction

In the January 2008 issue, we incorrectly reported the P/A Award–winning Taichung Gateway Park project as being located in China. Taichung is the third largest city in Taiwan. ARCHITECT deeply regrets the error.

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In This Issue

John Gendall (News, p. 21, and A/V, p. 43) studied the history and theory of architecture at Harvard University's Graduate School of Design and has written for *Metropolis*, *The Architect's Newspaper*, *Architectural Record*, and other publications. He lives in New York.

Linda Hales (News, p. 20, and Pro Bono, p. 49) was a design critic and editor of the Home section at *The Washington Post* and has written for *Elle Décor*, the *International Herald Tribune*, and *The Wall Street Journal*, among other publications.

Vernon Mays ("Building the Modern Cathedral," p. 76), ARCHITECT's editor at large, is curator of architecture and design at the Virginia Center for Architecture in Richmond, Va. He is the founding editor of *Inform* magazine and was the architecture critic for the *Hartford Courant* in Connecticut.


Art Streiber

PHOTO: ELAINE BROWNE

LOS ANGELES PHOTOGRAPHER Art Streiber regularly contributes to such publications as *Vanity Fair*, *W*, *Wired*, *Time*, and *Esquire*. For the past seven years, he has been granted special backstage access at the Academy Awards, photographing the event for *Premiere* and *InStyle*. "Celebrity photography is so controlled," he says, "but the moments I get backstage are still unguarded." Streiber has seen Oscar winners "collapse and cry, or scream, or fall against a panel" as news of their victory sinks in.

Streiber shot Alex Garvin, Amale Andraos, and Dan Wood in New York for this month's cover. "To be able to sit down with Alex and have him take me through a brief history of New York City was absolutely fascinating," says Streiber, who has an amateur interest in architecture and urban planning.

Wood and Andraos, husband and wife as well as business partners, didn't know Garvin before the shoot. Still, it's a small (architectural) world: "Dan broke the ice by saying he and Amale had been at the wedding of a couple and Alex had designed their home." By the end of the shoot, the three were conversing as "collegial friends," Streiber recounts. AMANDA KOLSON HURLEY

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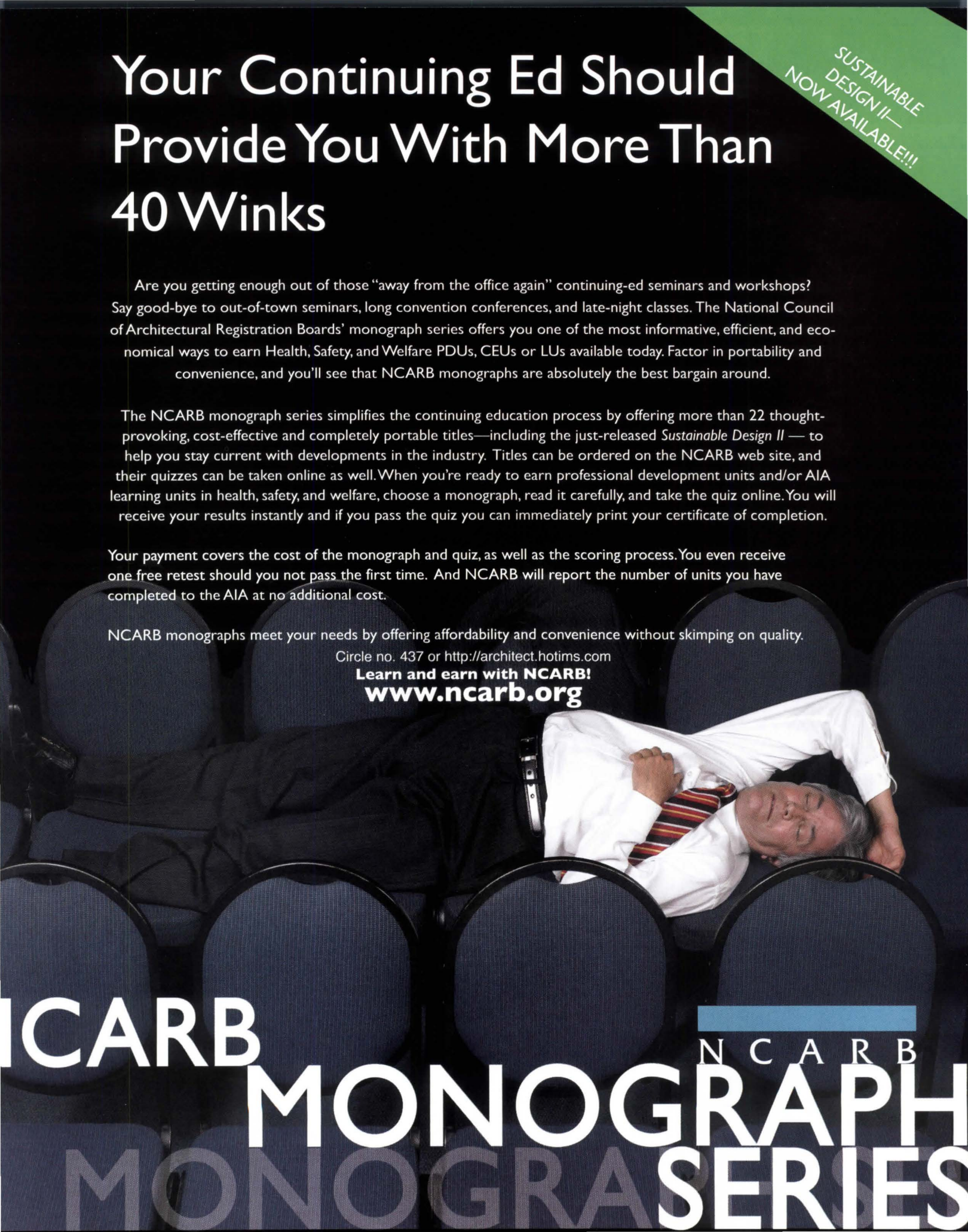

NCARB MONOGRAPH SERIES

In Memoriam

Italian Designer Ettore Sottsass, 90, Dies

Across five decades, the polymath architect infused his work with emotion

Ettore Sottsass

IN AN AGE OF PROFESSIONAL SPECIALIZATION, the vanishing Renaissance man still dwells in Italy in that permeable membrane between design, architecture, and writing. But even by Italian standards, no designer-architect-editor-writer was more the Renaissance man than Ettore Sottsass, who died on Dec. 31, 2007, at the age of 90.

The design landscape teems with the charming surprises he created at every scale, from his fingernail polish–red Valentine typewriter for Olivetti (1969) to Malpensa Airport in Milan (2000). He wrote for the architecture magazine *Domus* and co-founded, with Allen Ginsberg, the literary journal *Planeta Fresco,* and he led the iconoclastic design movement Memphis, which crucified in the most delightful way the purism of modernist Italian design culture, of which Sottsass had been a card-carrying member. He abandoned notions of modernist beauty, comfort, and function in favor of mischief and endowed objects with spirit. Functionalism, he said, "it's not enough. Design should also be sensual and exciting."

Born in Innsbruck, Austria, in 1917 and raised in Milan, Italy, Sottsass graduated in 1939 from Turin's Politecnico with an architecture degree and, after the war, opened an industrial and architectural design office in Milan. Like others of his generation, he focused on Italian postwar reconstruction.

It was a good time to be a designer. The cataclysm of the war had shifted the design paradigm, opening Italy to a more exuberant, less fettered form of Modernism, sustained by a newly stabilized and growing economy. In 1958, Sottsass began his 30-year association with Olivetti, daring to introduce shocks of color—and therefore emotion—into the office while challenging doctrines of function and taste within the new modernist establishment. With engineer Mario Tchou he created for Olivetti the Elea 9003 (1959), Italy's first calculator; soon after, they redesigned Olivetti's mainframe computer with blocks of color that distinguished various parts, while lowering its height so that technicians could speak to each other over the top. (He was a humanist, too.)

In 1981, Sottsass was one of the moving spirits behind the launch of the Memphis collection—furniture and household items created by a loosely knit international group of designers and architects. Accustomed to classic good taste, the cultured eye had to adjust to the clash of discordant materials, kitsch, and abruptly juxtaposed forms, one shape having nothing to do with the next. Memphis electrified the design world, announcing an alternative based in a Pop Art sensibility rather than dry and exhausted rationalism. It didn't matter that you couldn't really sit in the chair—you sat in a concept. The pieces had attitude.

Sottsass' restless imagination caused him to return to architecture in the mid-'80s, when he designed shops for Esprit as well as private houses. He continued to work as a designer, for Apple and even for more somber companies like Siemens and Philips, wielding his considerable personal and design charm to subvert conservative business environments.

The design world followed Sottsass' career closely for more than 50 years, acknowledging his achievement with retrospectives at the Los Angeles County Museum of Art in 2006 and at the Design Museum in London in 2007. His opus was remarkable for its range, inventiveness, and cheek. He was the rare iconoclast who produced enduring icons that became classics despite their contrarian premise. JOSEPH GIOVANNINI

"[Functionalism,] it's not enough. Design should also be sensual and exciting."
—Ettore Sottsass

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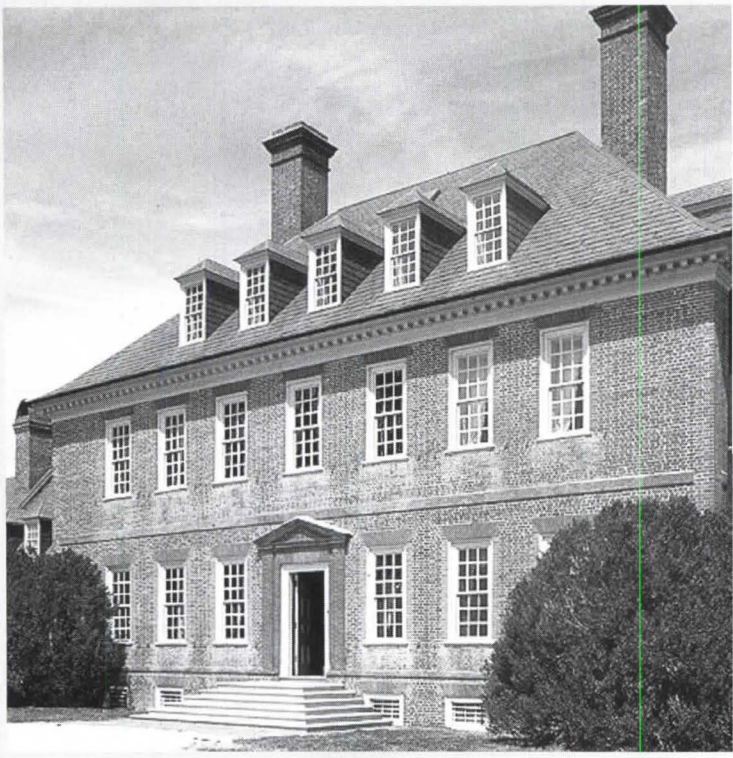
Carter's Grove Plantation Sold for $15.3 Million

Williamsburg museum, closed for last three years, suffered from poor attendance



THE COLONIAL WILLIAMSBURG FOUNDATION has sold the historic Carter's Grove Plantation to Virginia native and CNet founder Halsey Minor for $15.3 million. The house, situated on a 400-acre property that includes a mile-long frontage on the James River, was built for Carter Burwell in the 1750s. It is considered one of the best examples of Georgian architecture in the United States and had been owned and operated as a museum by the foundation since 1969.

Listed as a national historic landmark by the National Park Service, the structure struggled to maintain an audience after it was opened to the public. The house is located eight miles southeast of Colonial Williamsburg, whose other historic sites are contained within an easily walkable district. The house had been closed for three years prior to the sale.

Preservation easements will protect both the house and its property from development incompatible with its historic character. Calder Loth, senior architectural historian for the Virginia Department of Historic Resources, worked with the Colonial Williamsburg Foundation

drafting the easements prior to the estate's offering on the market.

Virginia has one of the oldest established easement programs in the country. It allows the value of the easement—the difference between an appraised value established before the sale and the actual transaction price—to be taken as a charitable donation on federal taxes and as a tax credit for state taxes. These valuable assets were retained by the foundation, which is currently selling them to further its proceeds from the property.

Most residences listed as national historic landmarks remain privately held. Virginia's rich history places it on the front lines for the changing fortunes of house museums like Carter's Grove. The Washington, D.C.–based National Trust for Historic Preservation currently owns 28 structures throughout the nation that are open for public access, many of them houses.

"The National Trust retains title to properties, but they're trying to establish local foundations to take more responsibility for maintenance, staffing, interpretation," says Loth. That's what happened at James Madison's Montpelier, near the town of Orange, Va., which has seen annual attendance approach 60,000 after an extensive restoration was completed a few years ago.

A precursor to Carter Grove's reversion to private ownership was the Robert E. Lee Boyhood Home in Alexandria, Va.'s Old Town that was operated as a museum from 1967 to 2000. No restrictions were placed on that sale, although the eventual purchaser completed considerable renovations, donated easements to the National Trust, and periodically opens the home to the public. According to Loth, that home is once again on the market.

Woodlawn, located only 3.5 miles from Virginia's Mount Vernon and built by close relatives of George Washington on land he personally gave them, is facing similar circumstances—dwindling attendance driven in part by its proximity to better known historic attractions. Woodlawn was the first property to be acquired by the National Trust for Historic Preservation, in 1952.

One house museum, of a more recent vintage, is doing considerably better. Philip Johnson's Glass House in New Canaan, Conn., finished its first season of public access last year with its tour schedule booked well into the future. "Something like that is very different," says Loth. "I think it will always have an attraction."

The new owner of Carter's Grove will be required to open the house to the public one day a year, at the request of the Virginia Department of Historic Resources. While specific renovation plans have not been announced, it has been reported that Minor plans to raise thoroughbred racehorses on the property. The 12-bedroom house requires minor changes; upgraded plumbing, a new kitchen, and a downstairs bath are to be added by a New York firm that specializes in classical and traditional design. EDWARD KEEGAN

Built in the 1750s, Carter's Grove is considered among the best examples of Georgian architecture in the nation.

COURTESY CABELL.COM

Clips

Sarah Dunn and **Martin Felsen** of the Chicago-based firm UrbanLab are assuming the directorship of **Archeworks**, the Chicago alternative design school. The institution's co-founders, **Stanley Tigerman** and **Eva Maddox**, announced the change at the Archeworks' January panel discussion "Passing the Baton."

The **American Institute of Architecture Students** has named the recipients of its annual Honor Awards: chapter: **University of Kansas**; chapter president: **Ryan Carl Wong**, University of Washington; student research: **Kristin Saunders**, University of Kansas; educator: **David W. Hinson**, Auburn University; community service: **Fifth Grade Architecture Project**, Auburn University; and special accomplishment: **Rebuilding the Seventh**, University of Kansas.

In December, the City Council of **Greenberg, Kan.**, passed a resolution that **all city-owned buildings larger than 4,000 square feet be LEED Platinum certified** and that they reduce energy use by 42 percent from current building code requirements. **BNIM Architects** of Kansas City, Mo., helped the council draft the resolution and is working on a master plan for the reconstruction of the town, which was devastated by a tornado last May.

The **Association of Collegiate Schools of Architecture** has honored three educators with its 2007–2008 Distinguished Professor Award: **David Heymann**, University of Texas at Austin; **Gregory Palermo**, Iowa State University; and **Victor Regnier**, University of Southern California. For more 2007–2008 ACSA award winners, go to acsa-arch.org.

New York Times real estate writer **Lisa Chamberlain** has been named executive director of the Manhattan-based **Forum for Urban Design,** an organization comprising architects, academics, and others involved in urban planning, design, and development.

The **Canada Council for the Arts** has awarded the $50,000 **Professional Prix de Rome in Architecture** to Manon Asselin and Katsuhiro Yamazaki of the Montreal firm **atelier T.A.G.** The duo plan to record interviews with young, innovative architects and to research studio activities, building projects, and construction in East Asia, Europe, and New York City.

The **Mitsubishi Electric Corp.** has built what it claims is the **world's tallest elevator-testing tower.** Named Solae and located in Inazawa City, Japan, the 567-foot-tall, $50 million structure will enable the company to research next-generation elevators for skyscrapers.

The **Municipality of Gdansk, Poland**, has announced that Polish firm **FORT Architects** is the winner of the international design competition for the **European Solidarity Centre**. The building will be completed in 2010 and open on the 30th anniversary of the birth of the Solidarity Movement.

Stanford University Medical Center has chosen two lead architects to design expansions and seismic upgrades for the Stanford Hospital & Clinics and the Lucile Packard Children's Hospital. New York–based **Rafael Viñoly Architects** will work on the Stanford Hospital; **Kohn Pedersen Fox,** also based in New York, will work on the Children's Hospital. The entire project could cost upward of $2 billion. Construction is expected to begin in 2010.

Two St. Louis firms, **Lawrence Group** and **Austin Tao & Associates,** are merging. Austin Tao & Associates will retain its name and operate as a subsidiary of the Lawrence Group, responsible for landscape architecture.

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Minnesota: 12%
Nevada: 12%
Wisconsin: 15%
Delaware: 16%

SOURCE: U.S. DEPARTMENT OF TRANSPORTATION

Education

MIT Digital Media Guru Maeda Tapped to Lead RISD

WHEN THE RHODE ISLAND SCHOOL OF DESIGN (RISD) announced in December that John Maeda, guru of technology and design at MIT, would be its 16th president, there was reason to anticipate an infusion of geek consciousness at the 130-year-old fine arts school. But Maeda has fashioned a career that is equal parts artist, designer, and humanist. While steeped in the inner mysteries of computers, he has never restricted his vision to what's behind an LCD screen and says he won't expect students to limit theirs. "What I'd like to add is my own take on what I think is the future of expression," he says. "It's not about technology per se. It's about quality."

Currently associate director of research for the Media Lab at the Massachusetts Institute of Technology, Maeda is known as a relentless advocate for simplicity in the digital age, a welcome concept for any architect, designer, or artist struggling to keep technology from squelching creativity. He has produced one-man exhibitions of contemporary art, designed products, and shown interactive furniture. Arriving at RISD this June, Maeda will succeed Roger Mandle, who is retiring after 15 years and after raising $105 million in the college's first major capital campaign.

Once the announcement was made, Maeda launched a blog to connect with RISD's 2,300 graduate and undergraduate students. He says he's not worried that the school that produced movie director Gus Van Sant, architectural artist David Macaulay, and glass wizard Dale Chihuly "hasn't engaged" technology to any major extent. "It's a pretty poor investment to throw computers at an art school and hope they come up with something original," Maeda says. He does hope to focus RISD on "what's coming 10, 20, 30 years down the road" and to figure out what the world needs from art. He thinks the answer is "joy." LINDA HALES

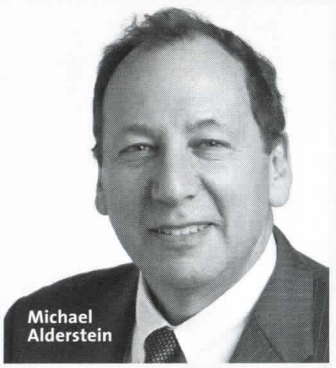
Comment

"I think that some interior designers a
architecture is not just about designi
director Aaron Betsky discussing the 2008 Ven

Interview

Michael Alderstein: U.N. Renovation Will 'Establish a Model' for Other Buildings

THE UNITED NATIONS HEADQUARTERS complex has long stood as an icon of postwar politics and architecture. The 39-story glass-and-steel Secretariat tower and the curving, white General Assembly building in Manhattan have become monuments with global significance. Built a half-century ago, their aesthetic may be lasting, but their performance has been in decline. Thus the U.N. is setting out on a five-year, $1.9 billion renovation. Participating architecture firms include Einhorn Yaffee Prescott and HLW. The project is being led by architect Michael Adlerstein, formerly with the National Park Service, who came on board last year as executive director of the Capital Master Plan. In his office overlooking the site, ARCHITECT spoke with Adlerstein about the plans for the complex. JOHN GENDALL


Michael Alderstein

Will you describe the state of the United Nations headquarters now?
[The Secretariat is] a solid building, and a beautiful, iconic building, but it has slowly been allowed to run itself down. Some of the fixtures are so outdated that they [could] go directly from the demolition contractor to the museum. The building is insulated with asbestos, so when repairs are done, contractors come through in full-body space suits to clean up. The curtain wall is so leaky that workers on the outside of the building cleaning the windows can feel the air conditioning seeping out from a closed window during the summer. None of us has ever seen this kind of condition before.

You've worked on some impressive projects. How does this one compare?
When I was an architect with the national park system, I worked on restorations of Ellis Island, Independence Hall, the Gettysburg battlefield, and other important, historical projects. But there's nothing like the United Nations. It's recognized around the world. And unlike some other restoration projects, it is still operating as a functional governmental building. With the U.N., we're very respectful of its past and always cognizant of ongoing governmental functions.

So how do you approach this project, and what are some of the unique challenges in terms of project management?
With the previous plan, known as DC-5, a new building would have gone up in an adjacent lot, and everyone at the U.N. would have moved off site. That never made it past the state legislature in Albany. Now we are planning to move people in phases. There will be a swing space nearby, but people will move out on a rotational basis. So far, the employees are quite pleased. Because of the way the institution is organized, the project is subject to some strict terms. For example, the budget is approved by the U.N. Council, so we can't go over. We simply have to make budget, just as we have to make the schedule.

How does sustainability factor into this project?
It's very important. We will be lowering the building's energy consumption by at least 40 percent by introducing a wide range of green features. In fact, we are going to establish a model for what other older buildings should be doing. One of the most important elements will be to introduce a better, more efficient envelope. Not only will it dramatically improve insulation, it will also be completely blast-proof—which the current one is not.

oducing extraordinary and immediate effects ... and that true landscape
th plants but about revealing what already exists." —Cincinnati Art Museum
nnale architecture exhibit, which he will direct, in the Jan. 17 *Architect's Newspaper*

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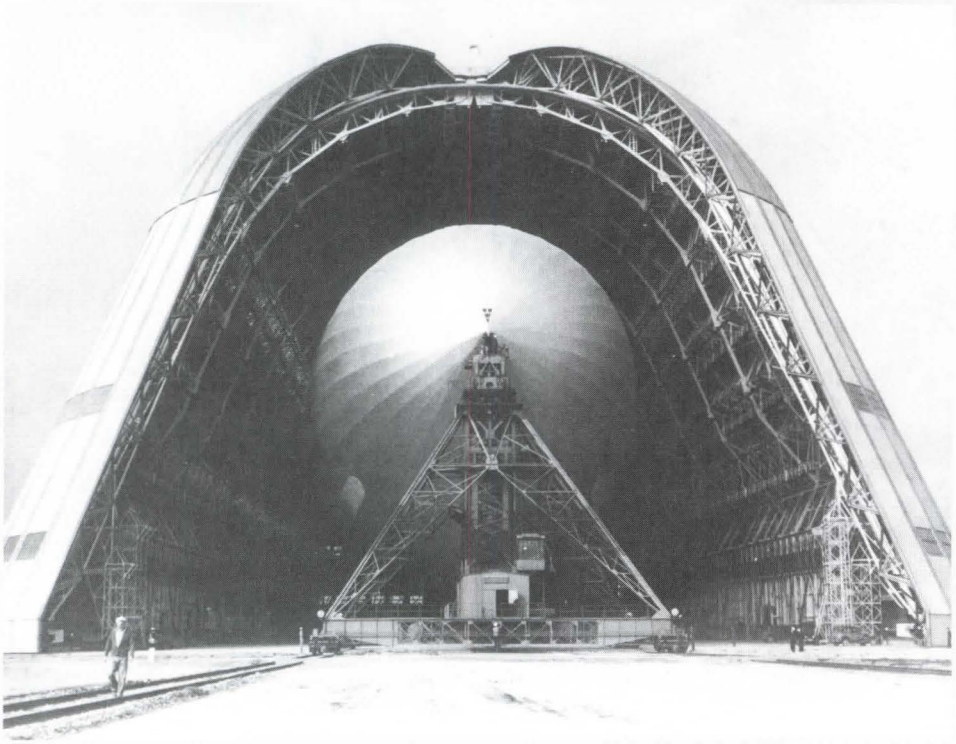
Preservation

U.S. Navy Weighs Options for Bay Area's Hangar One



The short-lived dirigible *USS Macon* and its home, Hangar One, in an undated photo.

COURTESY MOFFETT FIELD HISTORICAL SOCIETY

ALTHOUGH THE 785-FOOT-LONG rigid-frame airship *USS Macon* crashed into the ocean in 1935, less than two years after its first flight, its monumental home has remained as an emblem of Machine Age exuberance. Yet even with its storied past, Hangar One at Moffett Field, just south of San Francisco, has an uncertain future.

Designed by Karl Arnstein and completed in 1933, "it is one of the few artifacts we have left from the era of great rigid airships," says Bill Stubkjaer, curator of the Moffett Field Historical Society Museum. In 2003, the environmental contaminant Aroclor was traced to the hangar's corrugated steel exterior panels, known as Galbestos. Runoff was carrying toxic polychlorinated biphenyls (PCBs) from the coating of asphalt-saturated asbestos felt into San Francisco Bay. The Navy sealed the panels with a temporary asphalt clear coat and, in 2006, announced plans to demolish the building.

Determined to find a long-term solution that would meet both environmental and historical interests, a group of ex-Navy personnel and preservation advocates united to explore alternatives to demolition. Community members put aside debates about the future of Moffett Field to form the Save Hangar One Committee (savehangarone.org). Founding member Steve Williams, a pilot from the Bay Area, recalls the sense of romance, mystery, and awe the structure inspired in him as a child. The hangar's 198-foot-tall "orange-peel" doors and 1,133-foot length dwarfed everything in the surrounding landscape save the Golden Gate Bridge. Williams now views the hangar as a precursor to the Northern California "technology culture" epitomized by Silicon Valley.

As of a community meeting held early last month, the Navy had narrowed 13 possible options down to five: applying an acrylic coating or a rubberized material over the existing siding; replacing the siding; removing the siding and coating the exposed structure; or demolishing the hangar. The Navy will not make a final decision until it concludes a structural analysis, drafts a revised engineering evaluation/cost analysis, and receives public comments. If the hangar is preserved, NASA—which has owned the airfield since 1994—will control any potential future uses.

GIDEON FINK SHAPIRO

REPORT

70%

Projected increase in road-building costs between 1993 and 2015.

SOURCE: AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS

Design

AIA Report Names Six Principles for Transportation-Related Projects

SUCCESSFUL TRANSPORTATION PROJECTS can result in multiple benefits, if properly designed, according to a report released by the American Institute of Architects (AIA) in January. Titled "Moving Communities Forward: How Well-Designed Transportation Projects Make Great Places," the report generated six keys principles and practices that have broad applications:

- Develop a unified plan with an integrated team of design professionals.
- Include community stakeholders throughout the design process
- Use clear graphics to increase understanding of the design intent (including new tools like building information modeling and geographic information systems).
- Create human-scaled buildings and spaces.
- Incorporate clear signage to allow easy navigation of complex, multimodal stations.
- Design projects to be durable and adaptable.

Nearly 30 projects were surveyed using a case study methodology. Different regions, demographics, and project types were included to generate information applicable to the broadest range of transportation-related projects. The report notes specific benefits created through successful designs: promoting economic development, improving health and the environment, providing great places, fostering civic participation, and making communities safer.

Transportation-related projects pose a particular opportunity for advancing environmental issues. Buildings account for 48 percent of carbon emissions into the atmosphere. The transportation sector adds 27 percent. Better design and integration of these projects serves an obvious and pressing need. Funded by the U.S. Department of Transportation, the study was jointly conducted by the AIA and the University of Minnesota's Center for Transportation Studies. Text of the full report is available at aia.org. EDWARD KEEGAN

"Objects of fine art [are] fundamentally different from buildings. No one lives in music or in a painting. ... One apprehends the fine arts from without, and is free to avoid or ignore them. This is not possible for those who occupy buildings. However beautiful, buildings must serve different needs." —John Silber, author of *Architecture of the Absurd,* in a Jan. 16 letter to *The Boston Globe*

Museum

MoMA's Antonelli Promoted to Senior Curator


Paola Antonelli

NEW YORK'S MUSEUM OF MODERN ART (MoMA) has promoted its influential architecture and design curator, Paola Antonelli, to senior curator, a signal that design matters more than ever in the modern pantheon.

"She has put MoMA and design on the map in ways it hadn't been in 30 years, since Emilio Ambasz," says Barry Bergdoll, Philip Johnson Chief Curator of Architecture and Design. Since arriving at MoMA in 1994, Antonelli has advocated relentlessly for good design while generating such epic exhibitions as "Workspheres" (2001) and "Safe: Design Takes on Risk" (2005). She has stretched conventional definitions of design to address spatial concepts, social politics, and human behavior. The exhibition that opens Feb. 24, "Design and the Elastic Mind," will explore how design mediates between humans and changes in the pace and scale of everyday life.

Antonelli, who trained as an architect in Italy, has involved architects at every opportunity (Greg Lynn and Aranda/Lasch are in the new show). "Architecture and design, now more than ever, are joined at the hip," she says, "or at the heart and brain." **LINDA HALES**

Development

Scofidio Expects Work on Governors Island to Begin This Spring

NEW YORK CITY'S GREENING CAMPAIGN has a new frontier on Governors Island. In December, the results of an international design competition were announced: A jury had selected an alliance comprising West 8, Rogers Marvel, Diller Scofidio + Renfro, Quennell Rothschild, and SMWM to plan a 90-acre nature preserve, a centerpiece of the city's waterfront development.

Jerry van Eyck, partner at Rotterdam-based West 8, calls Governors Island "the un-Central Park" for its nonurban condition and "a sleeping beauty" for its untapped potential. Despite its prime location between Manhattan and Brooklyn, the 172-acre island has seen little use since 1996, when the Coast Guard closed the last of a succession of military installations dating to 1794. The winning preliminary proposal creates elevated harbor views, augmenting the island's natural features with artificial hills to be developed through excavation and demolition of existing structures on the landfill-based southern segment—"building the new island from the old island," says van Eyck. A two-mile perimeter promenade will encircle the northern national historic district, central lawns and gardens, and a freshwater marsh at the southern tip.

Transportation, internally and externally, will be critical to the island's popularity. The team proposes stocking the island with wooden bicycles whose design, coupled with physical isolation (access is currently limited to ferries), should minimize theft. The island's deed bans vehicular traffic, notes Governors Island Preservation and Education Corp. president Leslie Koch, hailing a free bicycle as "an icon of democracy." Architect Ricardo Scofidio concurs. "My hope is they will get the bicycles up and running," he says, "and let people ... ride around even before we start designing." He also envisions better access to the island via shuttlecraft resembling Venetian *vaporetti* (passenger motorboats), which would be quicker and cheaper than an aerial tramway proposed by Santiago Calatrava—another option under study by the city's Economic Development Corp.

Roughly half of the estimated $400 million in funding is already in place, Scofidio says, estimating that design work will begin this spring. Completion is projected for 2012. **BILL MILLARD**

COURTESY ANDREA CIOTTI

Edited by Andrew Slocomb West

CALENDAR

FEBRUARY & MARCH

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
17	18	19	20	21	22	23
			LECTURE **FAR frohn & rojas and Studio Tamassociati** present their Wall House and explore legal constraints at the Royal Institute of British Architects. *architecture.com*			←COURSE Dive into Paul Williams' work at the UCLA Extension with the one-day **Architect to the Stars** course. *uclaextension.edu*
24	25	26	27	28	29	1
CONFERENCE Windows, doors, skylights, and storefronts galore at the **American Architectural Manufacturers Association's** 71st annual conference. *aamanet.org*				DEADLINE Discover a solution to the **Estonian Academy of Arts'** space problem in the city center of Tallinn, Estonia. *maja.artun.ee*	DEADLINE Define design in the Shaw Contract Group's **Design Is ...** awards. *shawcontractgroup.com*	
2	3	4	5	6	7	8
		↙LECTURE Spend an evening in Stockholm, Helsinki, Copenhagen, and Oslo with the Smithsonian in **Cities of the Northern Lights: The Capitals of Scandinavia.** *residentassociates.org*	LECTURE Learn how Mark Johnson is revitalizing the urban realm in **Re-Building Civitas: The Re-Generation of Place in Urban Design.** *sciarc.edu*		DEADLINE Nominate the next great thinker for the Van Alen Institute's **2008–2009 New York Prize Fellowship.** *vanalen.org*	↑SYMPOSIUM Decipher words and images at the New School symposium **Rodolphe Töpffer & the Word/Image Problem** *newschool.edu*
9	10	11	12	13	14	15
				→TRADE SHOW **Greenprints 2008** will give designers and contractors new ideas on being eco-conscious. *greenprints.org*		tree hugger
16	17	18	19	20	21	22
	CONFERENCE **Environments for Aging** brings designers, owners, and builders together in Tucson, Ariz., to discuss the needs of an aging population. *environmentsforaging.com*					
	↓COURSE Relive those stormwater nightmares at the **Pervious Concrete** seminar in Louisville, Ky. *ldbreakthroughs.com*	LECTURE Edward Schmidt of the New York Academy of Art will lecture on **Classical Myth, Allegory, and the Heroic Narrative.** *classicist.org*		→COURSE Reps from Threshold Acoustics explain how to put **Acoustics in Practice.** *aiachicago.org*		
23	24	25	26	27	28	29
		→COURSE Discover how fire alarms really function by attending Fire-Lite's MiniScan Academy. *firelite.com*				

Looking Ahead:

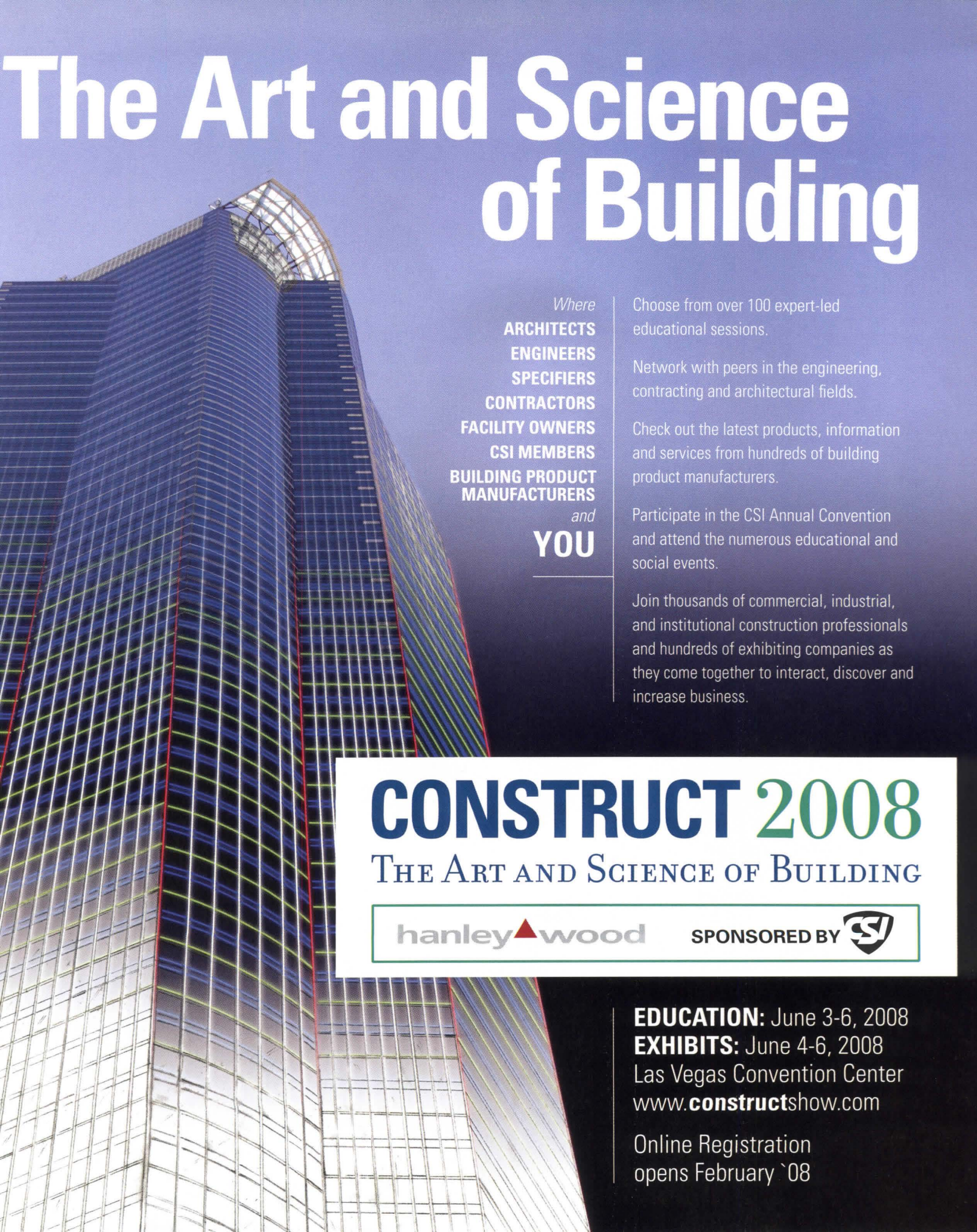
SUBMISSION DEADLINE
Make over the strip mall in the **Flip a Strip Competition**, March 31 *flipastrip.org*

SUBMISSION DEADLINE
The Minimum Subsistence Level Housing of Today, March 31 *bauhaus-dessau.de*

REGISTRATION DEADLINE
The Leading Edge Student Design Competition, March 28 *leadingedgecompetition.org*

CONFERENCE
American Concrete Institute Convention, Los Angeles, March 30–April 3. *concrete.org*

CLOCKWISE FROM TOP LEFT: COURTESY AAMA; COURTESY ELEANOR SCHRADER SCHAPA; COURTESY UNIVERSITY PRESS OF MISSISSIPPI;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Text Katie Gerfen

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INSTALLATIONS

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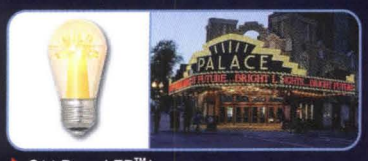

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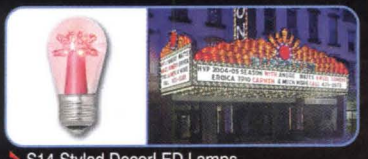

> S14-Styled DecorLED Lamps
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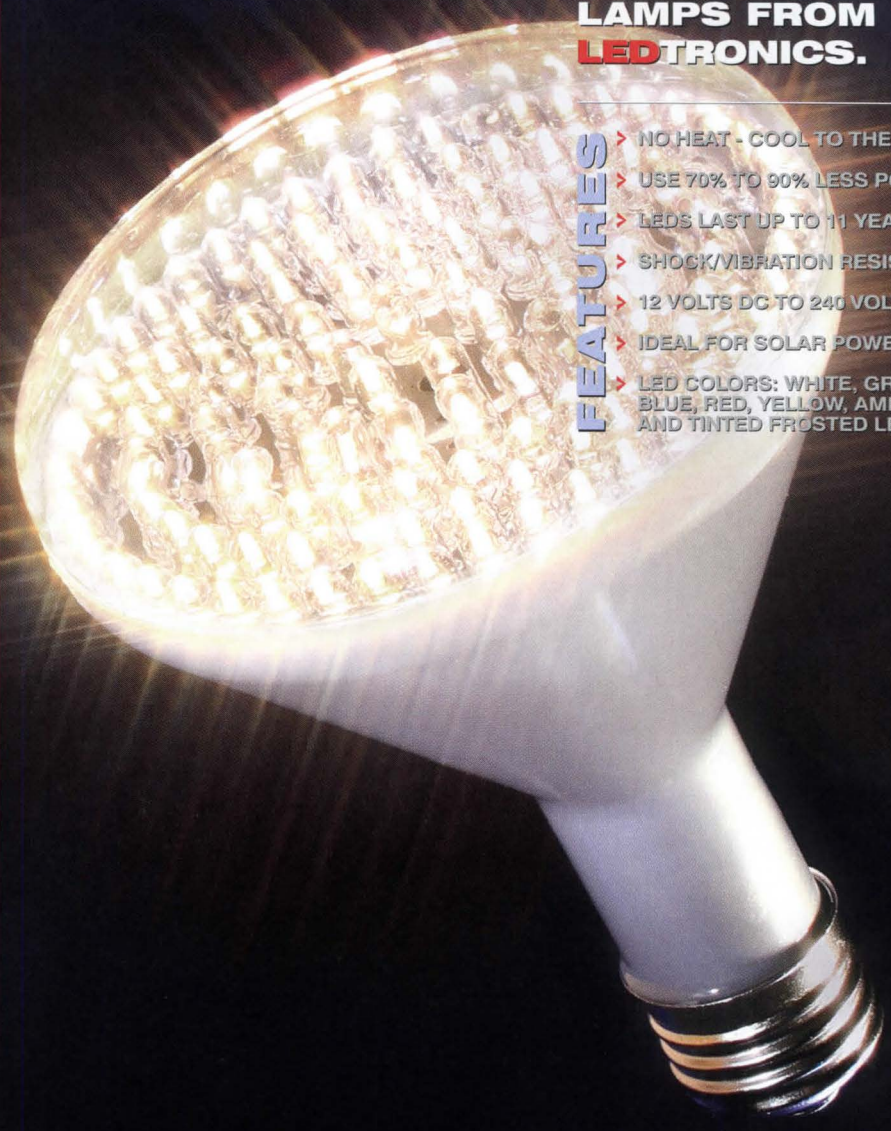

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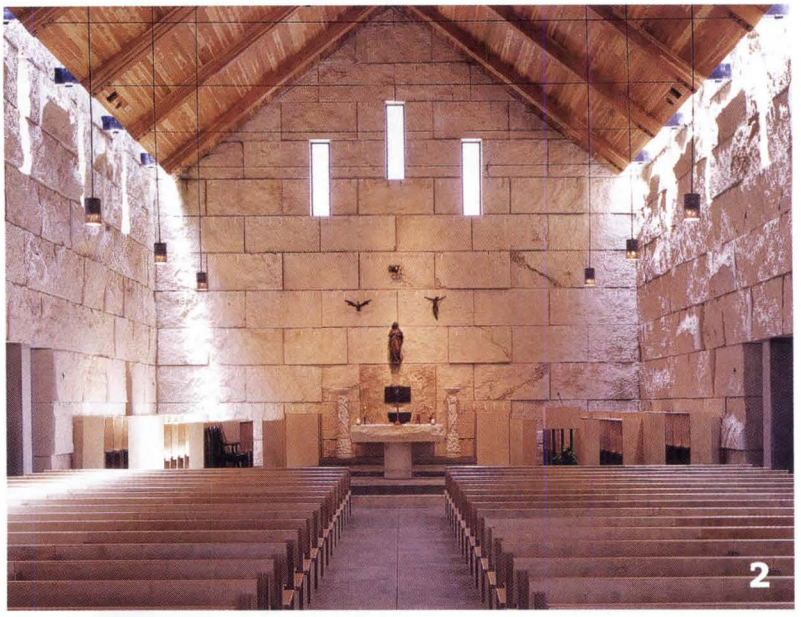

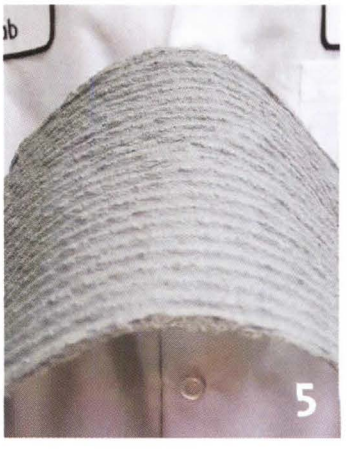

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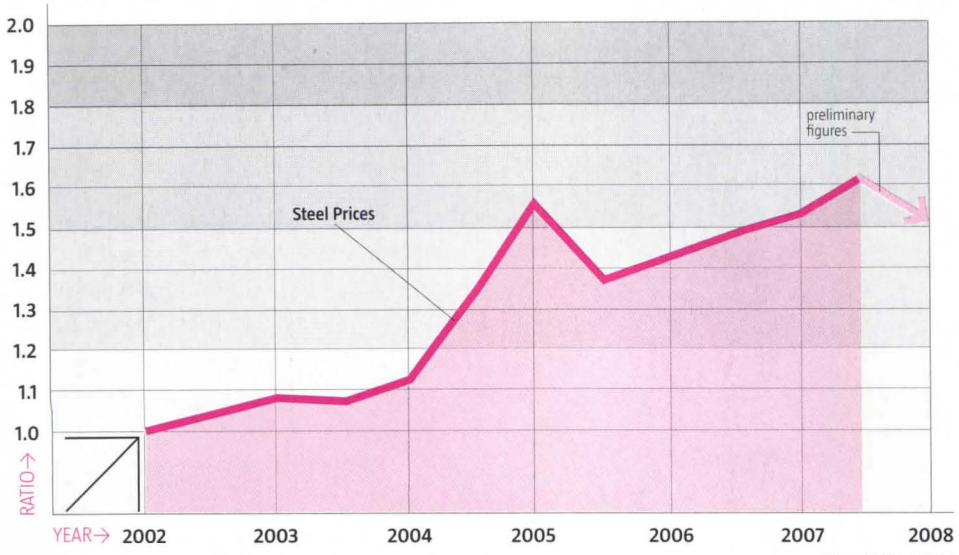
Text Kate Herman

NUMBERS

Ratio of Steel Prices to Consumer Price Index, 2002–2007

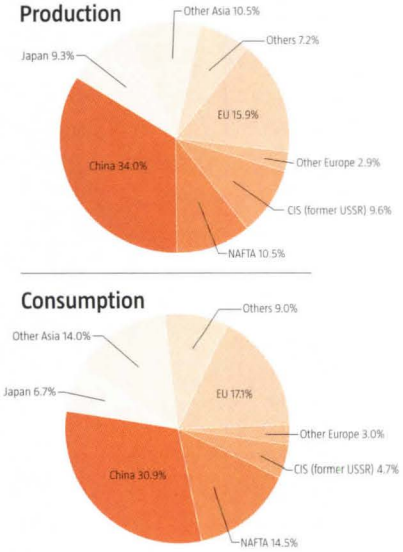


SOURCE: ARTHUR C. NELSON

Steel production and use: geographical distribution, 2006

World total: 1,244 million metric tons crude steel

SOURCE: INTERNATIONAL IRON AND STEEL INSTITUTE



Why Steel Is So Costly

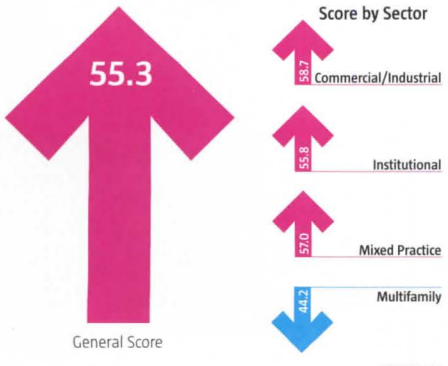
BLAME THE UPCOMING OLYMPICS IN CHINA if you want, but the real story on steel pricing these days is much more complicated. China *is* at the heart of it, however: Although Olympic-related construction is pretty well finished by now, the country has taken the opportunity to make miles and miles of infrastructure improvements and has ramped up development as well. Couple that with China's booming steel mill industry, and you're left with a U.S. market struggling to keep pace.

Stateside, "you've got a shortage of scrap supply, partly because of a major trend of using melted scrap," says Chuck Bradford, a Wall Street metals analyst who cites rising ocean freight costs, a weak dollar, and a reliance on Chinese and European raw materials as factors in the price spike. "We're a net importer of steel, and it's very hard to create a new mill here."

To put things in perspective: China produced 495 million tons of steel in 2007, compared with 100 million tons generated in the United States, Bradford says. And while China has increased the number of its steel mills, only one new mill, SeverCorr, has opened stateside in recent years. It's in Columbus, Miss., and it's owned by Russians.

Still, Bradford believes U.S. steel prices will settle down soon, and John Armstrong, manager of public affairs for Pittsburgh-based U.S. Steel, agrees. "There was a period not too long ago when there was an abundance of steel," Armstrong recalls. "That time could come again."

Architecture Billings Index, November 2007



SOURCE: AIA

CEO Confidence in the U.S. Economy

Conference Board Measure

44 → 39

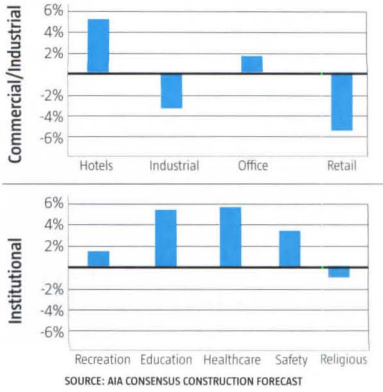
Third Quarter 2007 — Fourth Quarter 2007

THE LAST TIME THE CONFERENCE BOARD MEASURE FELL BELOW 40 WAS IN THE FOURTH QUARTER OF 2000.

(A score above 50 reflects more positive then negative responses.)

SOURCE: THE CONFERENCE BOARD

2008 Market Segment Growth Forecast



SOURCE: AIA CONSENSUS CONSTRUCTION FORECAST

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Text Margot Carmichael Lester

LOCAL MARKET

BOZEMAN, MONT.

Population/Employment
2007 residents: 36,500; 2000–2006 job growth: 21 percent, mostly in technology.

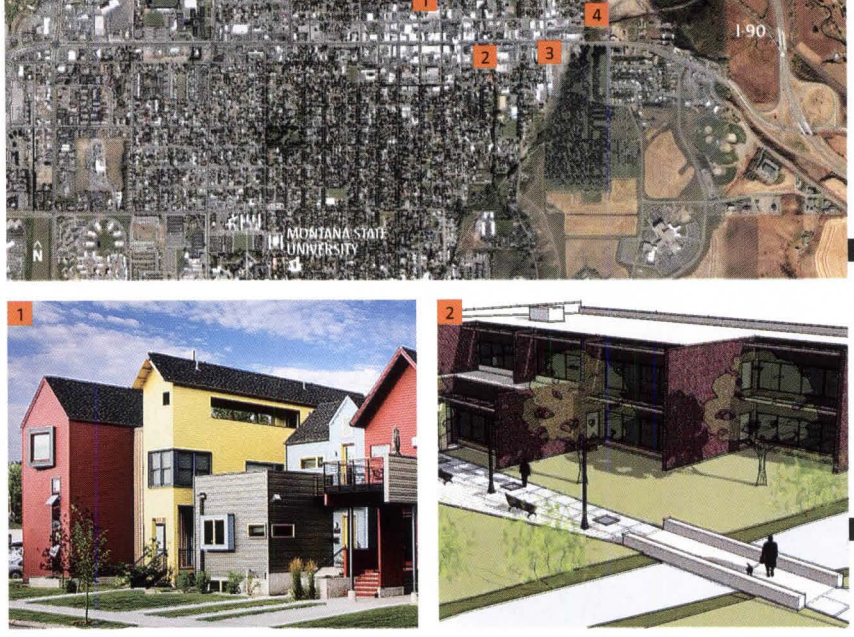
Office Market
Class A office rents: $18/s.f., central business district; $16/s.f., suburbs.

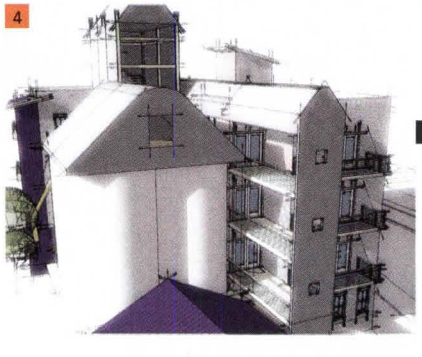
Residential Market
2007 median home sale price: $329,900.

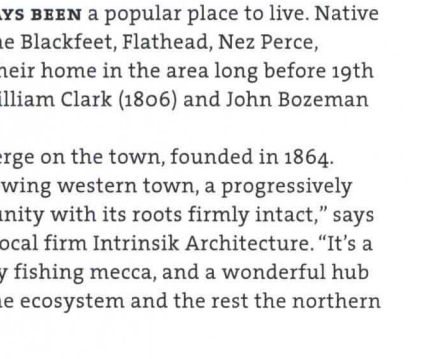
Market Strengths
- Vibrant historic downtown
- Montana State University
- Northern Rockies location

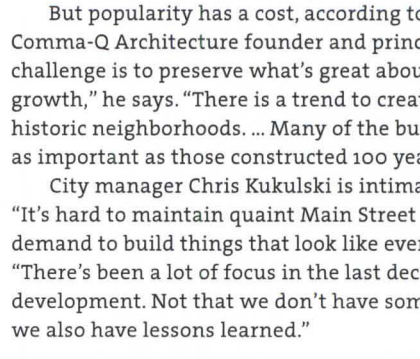
Market Concerns
- Fuel costs affect tourism
- Preservation/growth balance
- Housing affordability

Forecast
In 2007, the City Council voted unanimously to make LEED for Neighborhood Development certification a condition for approval of a proposed subdivision. "If they apply that to [other] projects, it will make a community-changing contribution over the next 10 years," says architect Kath Williams of Kath Williams + Associates. "That's surprising leadership from such a small town council."









1 NORTH BLACK ROW
Architects: Intrinsik Architecture, Bozeman; Comma-Q Architecture, Bozeman; **Developers:** Dennis Steinhauer, Archer Construction; **Completion:** 2006; **Cost:** $2 million; **Size:** 5,898 s.f. • Five-unit attached townhouse project; received 2006 Montana AIA Honor Award and Bozeman Beautification Award.

2 CITY HALL RENOVATION
Architect: Comma-Q Architecture; **Developer:** City of Bozeman; **Completion:** 2008; **Cost:** $1.7 million; **Size:** 22,614 s.f. • Previously the Bozeman Public Library; will have an Energy Star rating of 86.

3 BOZEMAN PUBLIC LIBRARY
Architect: Kath Williams + Associates, Bozeman; **Developer:** City of Bozeman; **Completion:** 2006; **Cost:** $17 million; **Size:** 55,000 s.f. • Montana's first municipal building to be LEED certified.

4 B&G GRAIN ELEVATOR
Architect: Intrinsik Architecture; **Developers:** Diana Arnold, Vicki Fish; **Completion:** 2010; **Cost:** $3.2 million; **Size:** 15,000 s.f. • The historic town icon will hold retail and residential space.

BOZEMAN, MONT., HAS ALWAYS BEEN a popular place to live. Native American tribes including the Blackfeet, Flathead, Nez Perce, Shoshone, and Sioux made their home in the area long before 19th century explorers such as William Clark (1806) and John Bozeman (1863) showed up.

People continue to converge on the town, founded in 1864. "Bozeman is a classic yet growing western town, a progressively thinking and diverse community with its roots firmly intact," says Dan Harding, a principal of local firm Intrinsik Architecture. "It's a college town, a ski town, a fly fishing mecca, and a wonderful hub to experience the Yellowstone ecosystem and the rest the northern Rockies has to offer."

But popularity has a cost, according to Bozeman resident and Comma-Q Architecture founder and principal Ben Lloyd. "The greatest challenge is to preserve what's great about Bozeman yet allow for growth," he says. "There is a trend to create 'museums' out of our historic neighborhoods. ... Many of the buildings being built today are as important as those constructed 100 years ago."

City manager Chris Kukulski is intimately involved in the process. "It's hard to maintain quaint Main Street when there's so much demand to build things that look like everywhere else," he admits. "There's been a lot of focus in the last decade on quality design and development. Not that we don't have some mistakes and regrets, but we also have lessons learned."

SATELLITE IMAGE: GOOGLE EARTH; BUILDINGS (1–4): MOE WITSCHARD; COMMA-Q ARCHITECTURE; BOZEMAN PUBLIC LIBRARY; INTRINSIK ARCHITECTURE

Text Mimi Zeiger **Photo** Jay Blakesberg

SCREEN GRAB

EXPOMUSEUM.COM

Graphic designer and world's fair enthusiast Urso Chappell has dreams of turning his decade-old website into an actual museum about expositions.

URSO CHAPPELL WAS 15 WHEN HE VISITED his first world's fair. Held in Knoxville, Tenn., Expo '82 wasn't perfect: Its theme, "Energy Turns the World," was a carryover from the cost-of-oil–conscious '70s, and attendance was low, historically speaking. But with 22 countries represented, it was enough to get the teenager hooked on the spectacle. Chappell has been an exposition fan and researcher ever since.

A San Francisco–based graphic designer, Chappell launched expomuseum.com in 1998. Recent hot news includes the selection of Yeosu, South Korea, as the host for Expo 2012 and the unveiling of blue-skinned Haibao, the mascot of the 2010 fair in Shanghai, China. The site is an impressive resource on the history of world's fairs, and Chappell hopes it will one day become a physical museum. Until then, the online version is structured around a timeline: For every event since the 1937 fair in Paris—and for many prior ones—Chappell provides a brief synopsis and links to data, photos, and maps. A discussion forum creates a community of fellow aficionados and is a clearinghouse for questions on mascots, pavilions, and politics.

World's fairs are notable for their pavilion architecture. "It's like creating an experimental city unto itself," notes Chappell. History books cite the iron-and-glass Crystal Palace, designed by Joseph Paxton to house London's Great Exhibition of 1851, as the beginning of Modernism, and Chappell starts his timeline at that moment. In 2000, MVRDV's Dutch Pavilion for the expo in Hanover, Germany, wowed with its stacked environments, but whole fairs have slipped by unnoticed. Did you know Expo 2005 was held in Aichi, Japan? "Most people assume world fairs don't happen anymore," admits Chappell. "The last one in North America was Vancouver, in 1986. There is a whole generation that doesn't know what they are."

Still, he optimistically tracks developments. This June is Expo 2008, in Zaragoza, Spain. One signature structure will be the Zaha Hadid/Arup–designed Pavilion Bridge, the form of which is clad in fibreC, a sustainable material, thus encapsulating the fair's theme, "Water and Sustainable Development." Expos can still thrive, says Chappell. "My hope is the website will have an inspirational value."

LINKS

designerpages.com

Launched last September, Designer Pages is both a product spec guide and a collaborative networking site for architects, engineers, interior designers, and manufacturers. The board of advisers includes FXFowle Architects' Daniel Kaplan, George Leventis of Langan Engineering, and hospitality designer Adam Tihany.

sesqui.pedali.st

The Sesquipedalist began life as a monthly blog review of books on architecture. Broader, more frequent posts have appeared since the blogger started work on a Ph.D. The "about" page says the topic is "whether the architectural press passively *reflects* or actively *deflects* the construction of the built environment."

www.paleofuture.com

Forecasting what the next decade or century will hold for humanity is always a risky proposition. Paleo-Future—"A Look Into the Future That Never Was"—takes a genial poke at the ways writers, scientists, designers, and others have erred (and occasionally succeeded) in their visions of tomorrow.

famousarchitect.blogspot.com

Longfellow may have written that "fame comes only when deserved," but the folks behind Notes on Becoming a Famous Architect believe any designer can reach the necessary level of worthiness. The growing list of lessons includes "No. 6: Amass Symbolic Capital" and "No. 14: Do Good Work & Keep Your Soul."

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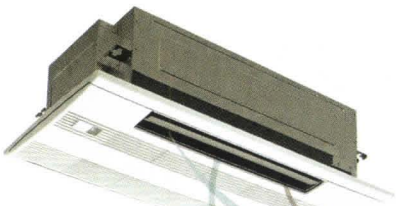

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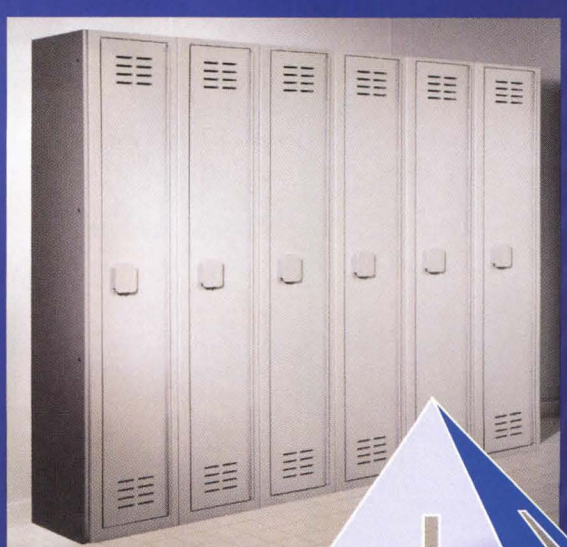

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WHEN IT'S FIRING TIME, MAKE SURE YOU DON'T GET BURNED.

Text Fred A. Bernstein **Photo** D.A. Fleischer

YOU'RE FIRED!

Companies nationwide turn to attorney Keith Spiller for counsel on employment law.

LETTING AN EMPLOYEE GO IS NEVER EASY. And architects, whose practices are particularly sensitive to changes in the economy, may do more firing than members of other professions. The process isn't just emotionally tricky—it can also have legal consequences. Which is why you may want to consult an attorney like Keith Spiller before sending an employee packing. Spiller, who got his law degree at Wake Forest University in North Carolina, represents hundreds of companies (including several in the design world) from his Cincinnati office. He also heads the employment law practice for his firm, Thompson Hine LLP. That makes Spiller not just an employment expert but also an employer who practices what he preaches. He took time out from giving annual reviews—which he calls a necessary step for avoiding liability should one have to terminate an employee—to share what he knows.

No surprises.
Having to fire someone is hard—but it's harder if it comes without a warning. An employee should never be surprised to learn things weren't working out, says Spiller. "The most important advice I can give an employer is to create and manage the employee's expectations."

Say it once ...
The first thing you want to do is establish a relationship of employment at will, which means that either the employer or the employee can terminate the relationship at any time for any reason not prohibited by law. So put a sentence to that effect in the job application.

... and say it again.
Put an employment-at-will statement in the introduction to the employee handbook. And include a form in which the employee acknowledges having read the statement. The employee signs that form and turns it in; it goes into his or her personnel folder.

Go by the book.
This assumes you have an employee handbook. If you don't, a lawyer can help you, and it doesn't have to be expensive. "We've done some for as little as $1,500," Spiller says.

Once you have a handbook ...
It should make clear what's expected and lay out the series of steps you'll take with an employee who isn't living up to expectations. Of course, you'll want to include a disclaimer stating that you can change these policies at any time and that the handbook does not create a contract. Says Spiller, "There are a number of cases—I have one right now in New Jersey—where the employee says you made these promises in my handbook and you didn't live up to them." A disclaimer will help you defend against such claims.

Keep accurate records of an employee's weaknesses ...
"The normal calls that I get from my employer clients go like this: 'I want to fire Joe, because Joe comes in late all the time.' I ask to see the personnel file. Thanks to PDF attachments, I get the file minutes later and his reviews say only that 'Joe is a great employee.' Now, if we fire Joe for being late, the personnel file may come back to haunt us."

... and strengths.
In a performance review, paint a balanced picture of the employee. Otherwise, you may lack credibility before a judge or jury.

Get someone to review the decision to fire.
"If you have a lawyer, great," says Spiller. "Otherwise, it can be someone in human resources, someone not directly involved in the decision. Take a look at how you've handled similarly situated employees. If you fire someone for missing work, but you keep on other employees who have missed the same amount of work, a judge or jury may infer there was another reason for the termination."

Consider "demographics."
"Take a look at the person's age, gender, race, religion, national origin, and any handicap or medical condition that could be perceived as one," says Spiller. If the employee you're planning to fire falls in a protected category, you could face a discrimination claim. That's something to consider, but "it shouldn't drive your decision," Spiller says, especially if you've protected yourself by doing a good job of creating and managing the employee's expectations.

Exploration Place

Project	Exploration Place Wichita, KS
Owner	Exploration Place, Inc.
Architect	Moshe Safdie & Associates Boston, MA
Roofing Contractor	Buckley Roofing Co., Inc. Wichita, KS
Roofing System	Sarnafil Décor Roof system in custom colored cement gray vinyl membrane.
Project Size	85,000 sq. ft.
Completed	Spring 2000

The Challenge

By the late 1980s, the Children's Museum of Wichita, Kansas, and the Wichita Omnisphere and Science Center had seen a lot of use as centers of education and family activity. City officials wanted to invest in a redesign that would ensure its continued value to members of the growing Wichita community. In short, the facilities were in need of a facelift.

Flash forward to 1995, when city officials approved a daring and creative design proposed by internationally renowned architectural firm Moshe Safdie & Associates of Boston, Massachusetts. The firm's plan was to merge the two centers into a single 20-acre complex located on the Arkansas River. In their design, the roofs of the new structures would blend the sinuous curves of the waterway with the abrupt edges of man-made construction.

They would be built around two imaginary rings: One roof would be angled to the heavens like a satellite dish, beneath a toroid that floated above the river. The other roof offered a vaulted look, its sides plunging earthward over a toroid far beneath ground level (see illustration). An undertaking of this complexity would require a roof system flexible enough to support the architect's unique vision.

The Solution

According to Hugh Phillips, a principal at Moshe Safdie & Associates, "We selected Sarnafil because they could make a custom color, custom batten, and custom details. The custom color and batten detailing selected were very critical to an acceptable appearance due to the importance of the roofs as a focal point. They needed to be visually compatible with the exposed architectural concrete of the exterior walls."

Moshe Safdie & Associates specified Sika Sarnafil's Décor Roof System, in cement gray vinyl membrane. The roofing contractor, Wichita-based Buckley Roofing, began the job by applying a peel-and-stick vapor barrier, over which the electrical contractor installed hundreds of feet of electrical

"The powerful geometries of the island and land wings of Exploration Place required a roofing system that would lend itself to the positive and negative torodial forms of the roofs." —Hugh Phillips, Moshe Safdie and Associates

conduit. Buckley Roofing then placed two layers of 2-inch-thick Sarnafil polyisocyanurate insulation, which was notched as needed to fit around the conduit. A ¼-inch layer of gypsum cover board was attached over the insulation.

The curving surfaces that make up each toroid posed geometrical challenges—the membrane seams needed to align with the roof contours and remain watertight regardless of the roof slope. The seams of the Sarnafil vinyl membrane are hot-air welded together resulting in a permanent watertight bond. "The ease of membrane seam welding and the watertight integrity of those welds was an important factor in this difficult project," says Ed Frederick, president and chief executive officer of the roofing contractor, Buckley Roofing.

In all, 16,000 linear feet of seam welding was completed using Sika Sarnafil's Sarnamatic hot-air welding machine. The result: a watertight, monolithic membrane that spanned the surface of each curved roof. Battens simulated the appearance of metal roofing standing seams, while eliminating the need for half-sheets of membrane at the roof perimeters.

The Performance

Today, the remarkable Exploration Place continues to capture the imagination, offering visitors a multitude of exhibits, state-of-the-art theatrical productions, and activities. Thanks to the incredible design of Moshe Safdie and the many benefits of the Sika Sarnafil Décor Roof System, visitors don't even need to enter the buildings before they receive a visual impression that will last a lifetime.

Why We Love It

Because of the flexibility of the Sika Sarnafil membrane—not to mention the craftsmanship of Buckley Roofing—the roof of Wichita's Exploration Place is completely free of wrinkles and patches, despite the enormous difficulty of this project. Coming in on time and under budget, Sika Sarnafil's Décor Roof system helps make this amazing attraction one well worth exploring.

Décor Design Awards Program

In the Jan – May issues of 2008, Architect will select and highlight a particularly striking application of the Sika Sarnafil Décor Roof System. Projects will be chosen on the basis of aesthetic appeal, technical merit, creativity in problem solving, and roof performance. Additional noteworthy projects and images can be found online at www.architectmagazine.com. If you would like us to consider highlighting one of your projects that incorporate the Décor Roof System, contact Stephen Burke at burke.stephen@us.sika.com.

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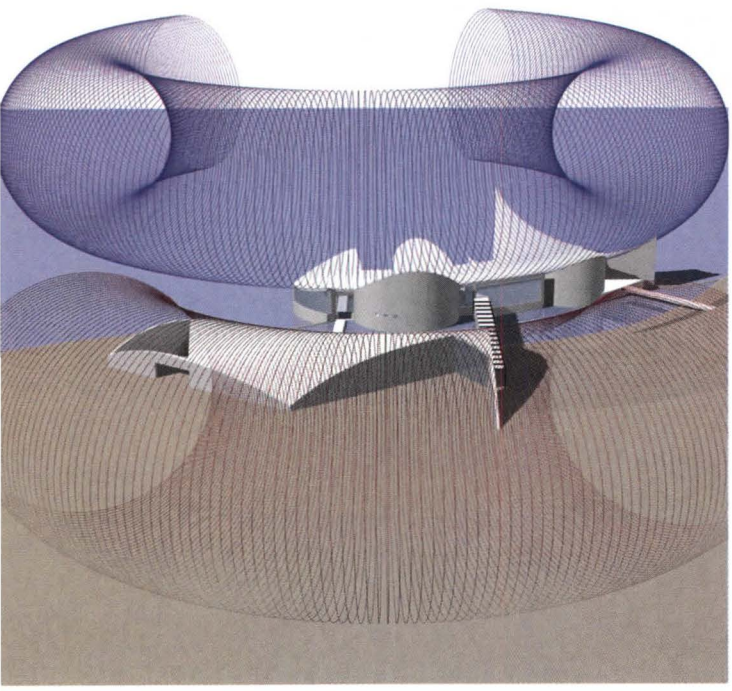

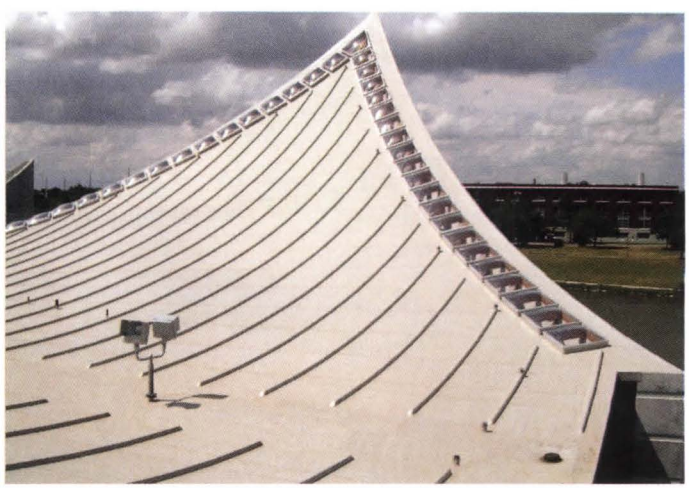

Facing Page: The Exploration Place of Wichita, Kansas, was designed to follow the curves of the Arkansas River.
Left: The two structures were designed around one toroid over the river, and another underground.
Above: Battens eliminated the need for half-sheets of Sika Sarnafil's flexible membrane at the roof perimeter.

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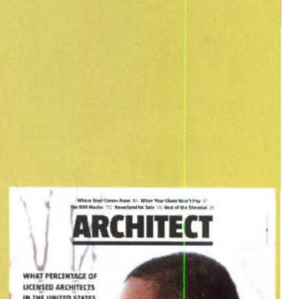

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A NEW TECHNOLOGY LAB AT SYRACUSE UNIVERSITY'S SCHOOL OF COMMUNICATIONS IS AT THE FOREFRONT OF MEDIA EDUCATION. **Text** John Gendall **Photos** Matt Greenslade

NEW NEWS IS GOOD NEWS

The Newhouse III building at Syracuse University (above) houses the school of communications and its state-of-the-art facilities for information gathering, editing, and production.

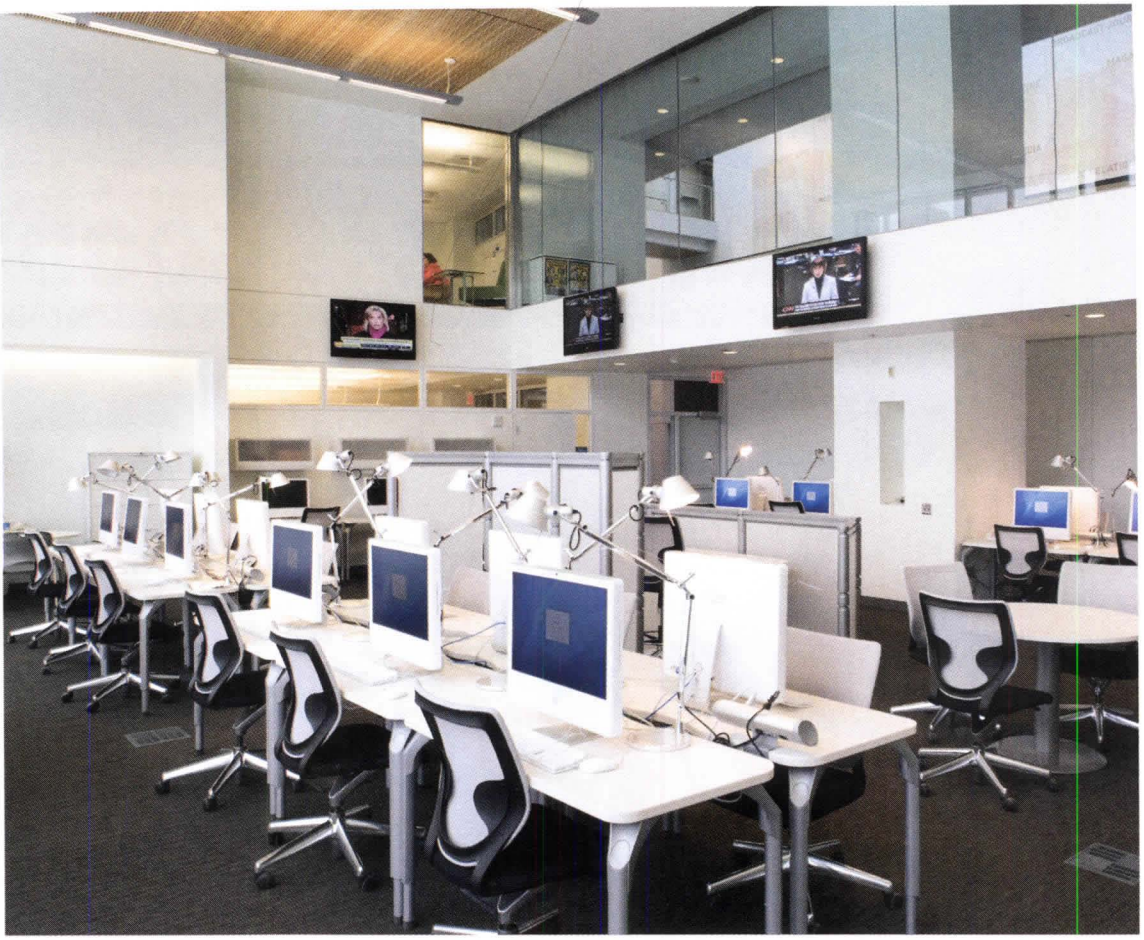
WHEN I.M. PEI DESIGNED the first building for Syracuse University's S.I. Newhouse School of Public Communications in 1963, media was a different thing altogether. Primary outlets included *Time* magazine, which cost 30 cents, and CBS, where Walter Cronkite had just taken over the anchor's chair, broadcast to boxy cabinet televisions across the country. In September last year, the school opened Newhouse III, designed by Polshek Partnership Architects, which places Syracuse back at the cutting edge of communications. Much of this is accomplished with an innovative audiovisual space known as the Collaborative Media Room.

The building itself completes what was long intended to be a small campus. In 1972, SOM connected a building to I.M. Pei's original 1963 facility, composing a larger but still incomplete arrangement. Polshek's new building not only adds 75,000 square feet to the school but also completes the small campus by forming a U-shape with the other buildings, which together articulate a central courtyard.

David Rubin, the school's dean, dreamed up the idea for the Collaborative Media Room when initial ideas for the building were being laid out. "This space acts like an experimental news room," explains Rubin. "We're a professional school, and when our graduates get hired, they need to know how to run a website and to be totally fluent in the current technology of communication," he says.

Underscoring the school's involvement in research, he adds, "Everyone in the media industry is managing from fear, and we're all trying to determine what kinds of content work online and how to monetize it. [With this new facility,] our faculty is now in a position to help answer those questions."

"The Collaborative Media Room has become the fulcrum of the entire plan," explains Tomas Rossant, design partner at Polshek. It provides a central, flexible point of convergence for different media, including web, video, television, and print production. Unlike spaces in the two older buildings, which are set aside for teaching purposes, this room remains open for flexible use and spontaneous gathering. Occupying a central location within the building, it capitalizes on



The Collaborative Media Room is an information hub on campus. Five 42-inch TVs (right) are tuned to broadcast news channels to keep students informed.

Thirty Apple iMacs (opposite top and bottom) are stationed throughout the Collaborative Media Room, each with the capacity to generate and edit print, audio, and video as the students' assignments require.

its placement along major circulation routes. Roughly pie-shaped, with general dimensions of 40 feet by 36 feet, the double-height space has warm wood ceilings 20 feet in the air with full-length glazing.

To fulfill the room's mission, the architects were faced with the challenging task of accommodating a wide range of technological and A/V equipment. Polshek Partnership worked closely with the dean as well as with John Glass, the school's multimedia producer, and Michael O'Mara, its computer consultant.

For research, Rossant went to the new generation of media outlets and toured web-based news rooms and video editing suites. "Dealing with all this technology was incredibly exciting as an architect," he says. Sounding a bit like Louis Kahn describing a brick, Rossant says, "The room wants to be a technical space."

"When we were thinking of architecturalizing the A/V components," Rossant says, "we wanted to have all the gizmos visible in the Collaborative Media Room." As a result, 42-inch Sony television monitors line the room, computers are accessible, and cameras and other supporting equipment are out, ready to be used.

"It's an Apple shop," O'Mara explains. "We have 30 iMac workstations with new Intel processors that enable us to use any piece of software there is," he adds. That software includes Garageband for editing audio, Final Cut Express for editing video, and Microsoft Office to edit text, among others.

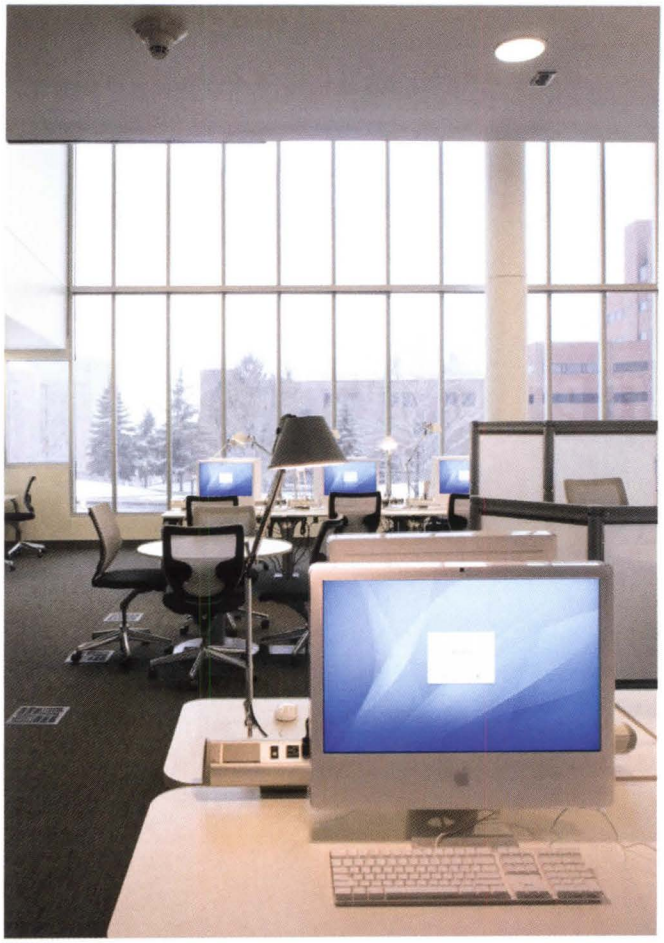
Polshek worked closely with New York–based A/V and acoustical consulting firm, Cerami & Associates. The school took the lead, defining its A/V needs and selecting and specifying equipment. Cerami consulted on those decisions, confirming compatibility between different systems and documenting specifications. The firm also played a key role toward ensuring the room's acoustic performance.

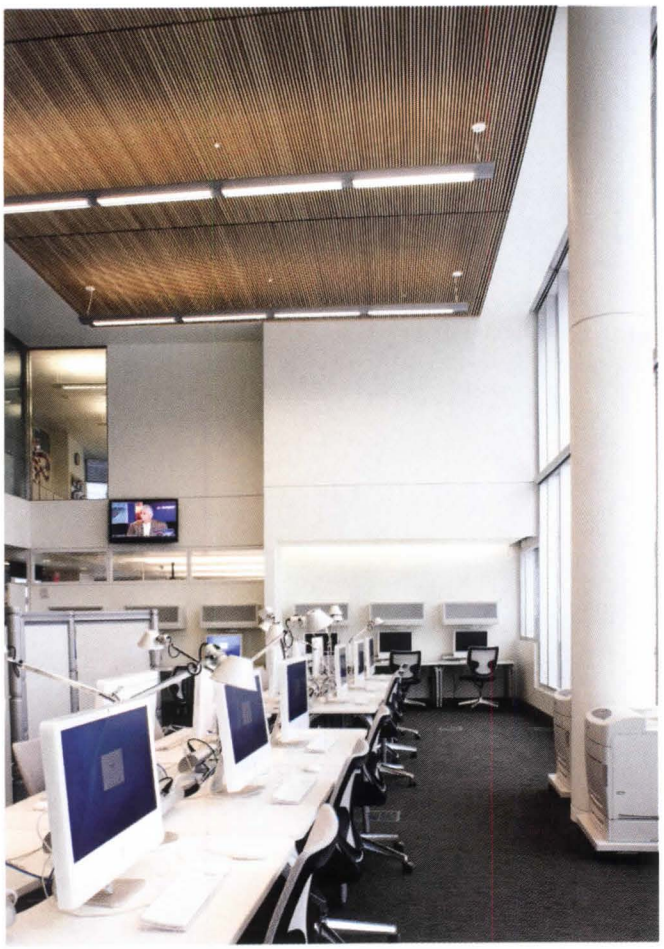
As in all buildings with photo-sensitive contents, managing the transmission of daylight into the space was an important concern. The architects wanted to bring in abundant daylight suitable for filming and create a transparent and hospitable environment for busy students. But this had to be balanced with concerns for the equipment's longevity.

According to Rossant, "transparency and visibility was necessary, since we wanted to make sure students in the room remain visibly part of the community and part of the world." But, he cautions, "light is not a friend to A/V."

Polshek called for a number of measures to address this challenge. The first amendment is etched on the glass façade: The frit pattern is not just ornamental, since it accounts for 50 percent of the window's surface, thereby mitigating damaging rays. For additional protection, a fabric shade system can be lowered electronically by those inside the room.

Perhaps the most significant change to communications since Pei's time is the lack of confinement. Reporters in remote locations can file stories on a handheld device. Everything in the Collaborative Media Room is networked. Electronically linked to television studios, editing facilities, and classrooms around the campus, the room itself picks up a symbolic meaning. Rossant says, "The architecture of the room gives it energy, makes it a theater, and turns it into a collaborative learning experience."





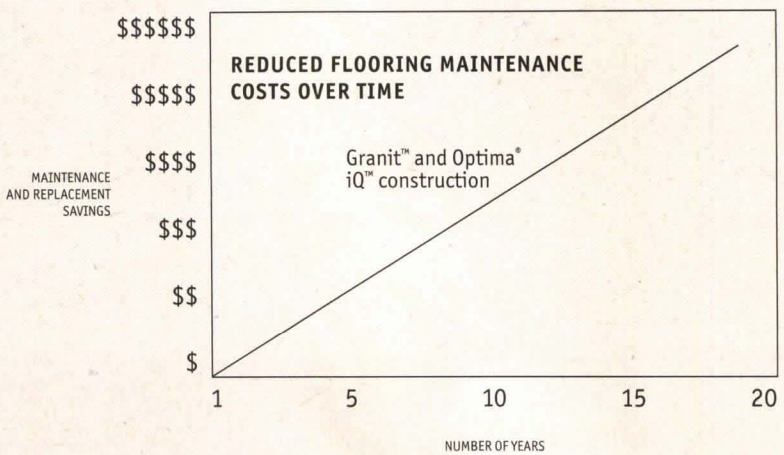
Specs

1. **Television screens** 5 Sony Bravia 42-inch LCD televisions, model number KDL-46S3000, sony.com
2. **Sound system** 2 Sony playback/recording decks, model number HVR-M15U, and 1 Sony playback/recording deck, model number HVR-M25U, sony.com
3. **Video recording** 1 Sony camera, model number BRC-300, sony.com
4. **Printing** 2 Hewlett Packard 5550dtn color laser-jet printers, hp.com
5. **Computers** 30 Apple iMac 2.16 GHZ 24-inch computers with Intel Core 2 Duo processors, 250GB hard drives, and 2GB RAM, apple.com
6. **Software** Each computer is loaded with a complete suite of software, including Adobe CS3 Suite and Adobe Font Folio (adobe.com), Microsoft Office (office.microsoft.com), FinalDraft Scriptwriter's Suite (finaldraft.com), Sound Slides (soundslides.com), Garageband (garageband.com), and Final Cut Express (apple.com/finalcutexpress).

Project Credits

Client Syracuse University • **Architect** Polshek Partnership Architects, New York—Tomas J. Rossant (design partner); Duncan R. Hazard (management partner); Steven C. Peppas (project manager); Craig Mutter, Hans P. Walter (project architects); Katharine A. Huber (interiors); Richard M. Olcott, James S. Polshek, Stefan Abel, Gary L. Anderson, James Bennett, Po-Ku Chen, Jennifer Dubas, Amber Foo, Joerg A. Kiesow, Dean Kim, Han Kim, John LaBombard, Jane P. Lin, Hanson Liu, Mimi Madigan, Kate Mann, Megan A. Miller, Si-Yeon Min, Allison H. Reeves, James Rhee, Alan D. Slusarenko, Gregory L. Smith, Daniel R. Stube (project team) • **Consultants** Severud Associates (structural); Peterson Engineering, P.C. (MEP/FP/elevator); Brandston Partnership (lighting); Quennell Rothschild & Partners (landscape); Cerami & Associates (acoustics, A/V); Two Twelve Associates (graphics); Poulin + Morris (donor recgnition/exhibition design); Wolf & Company (cost estimating); LZA Technology/Thornton Tomasetti Group (waterproofing); R.A Heintges & Associates (curtainwall); Hughes Associates (code); Stearns & Wheeler (civil); Robert Schwartz & Associates (specifications); J.D. Taylor Construction (construction manager)

Ads should be exciting and colorful to draw the reader's attention.
(Or they can just tell you how to save $162,000.*)



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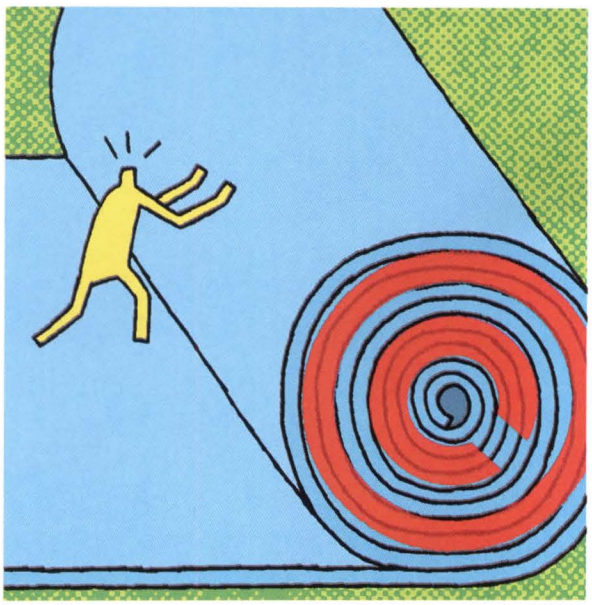
BETTER THAN AN INSURANCE PLAN, COPYRIGHT LAW COVERS DESIGNS EVEN AFTER YOU'VE EXPIRED.

Text Jeffrey C. Brown **Illustration** Tim Ellis

PROTECTION THAT LASTS



THE WORD "DURABLE" IS ASSOCIATED most often with those products we hope to enjoy long after freeing them from their protective packaging. But intellectual property, especially the exclusive rights of copyright protection, enjoys an extended warranty unmatched by anything found on the shelves of your local retailer. And although determining the duration of copyright protection can be perplexing, the complicated scheme of dates and events that permeate many aspects of copyright law can be reduced to a few dependable rules.

Before discussing them, however, definitions of some basic copyright terminology are in order. A work is deemed "created" when it is fixed in a tangible medium of expression, and it is "published" when it is distributed to the public for sale, rental, lease, or lending. Architectural works are created when the drawings are complete, either on paper or in electronic form, but a building can be published long before the actual structure goes up. Even if a work is not published, so long as it is an "original work of authorship," it is entitled to copyright registration.

Rule No. 1: Life Plus 70

In 1998, Congress passed the Sonny Bono Copyright Term Extension Act, which established that for works created on or after Jan. 1, 1978, registered works, whether published or unpublished, are protected from infringement during the life of the author plus 70 years after his or her death. (Previously, works were protected for 50 years after the author's death.) If the work was created by two or more people and not considered a work for hire (see "All for One," below), the protection extends for the life of the last surviving author plus 70 years.

Rule No. 2: All for One

Works that are created in a corporate setting like an architecture firm—otherwise known as works for hire—are protected for 120 years from creation or 95 years from publication, whichever is shorter. This longer period allows companies to get meaningful copyright protection without the burden of having to catalog the lifespan of the work's creator (or creators).

To enjoy these benefits, however, an architecture firm must take the necessary precautions to ensure that its employees and independent contractors are under an appropriate obligation to assign their creative efforts to the firm. For employees, this means defining their scope of employment. For contractors, the firm and the contractor should have a written agreement that assigns ownership of the contractor's rights in the work to the firm. Otherwise, it's possible that an employee or contractor could gain copyright rights to the exclusion of the firm.

Rule No. 3: Ownership Rights

During the term of a copyright, the owner—whether an individual or a firm—can exclude others from making copies of the design, displaying the work publicly (except for paintings, photographs, or other pictorial representations of an architectural work), or using the work as the basis to create another, related work (called a "derivative work"). In addition, only the copyright owner has the right to license or assign the copyright.

Generally speaking, a license grants only certain rights to a work, whereas an assignment conveys all the rights to the work. This means that an architecture firm can license the right to construct a building but reserve the right to create another building based on the original design. Assigning a work, on the other hand, allows the assignee to assume the role of copyright owner. For the most part, the effect of a license or an assignment is limited by the duration of the underlying copyright.

Remember This

Copyright allows your heirs (or your firm) to enjoy the fruits of your labor long after you have shuffled off this mortal coil. But you (or your firm) should also consider that the applicable laws—which are convoluted enough to confound even the most adept attorney—could be protecting a design you assume is in the public domain. When in doubt about the duration of a particular copyright, seek legal counsel.

Jeffrey C. Brown is an intellectual property attorney in Minneapolis.

THE HOLCIM FOUNDATION RUNS A LUCRATIVE INTERNATIONAL COMPETITION FOR GREEN ARCHITECTURE, AND PEOPLE ARE STARTING TO PAY ATTENTION.

Text Linda Hales

AWARDS UNDERGROUND

One of two gold award winners in the 2006 Global Holcim Awards, the Main Stuttgart Rail Station (right) in Germany, designed by Ingenhoven Architects, is situated underground and uses a series of skylights for natural light. This allows the land above to be reclaimed for urban development, including landscaping and infill projects.

WHAT IF A GLOBAL CORPORATION sponsored a green building contest with $2 million in prize money and nobody noticed?

That scenario played out when American architects all but ignored the 2005–2006 Holcim Awards, an international competition designed to identify innovation in sustainable design and construction. With a Feb. 29 deadline looming for the next contest cycle, North American jury chief Adèle Naudé Santos recalls her angst over the last turnout.

"I was horrified," she said by phone from her post as dean of the School of Architecture and Planning at the Massachusetts Institute of Technology (MIT). "We had very few entries from the U.S. We weren't showing well."

The cash-rich awards were started in 2005 by the Holcim Foundation for Sustainable Development, an offshoot of the Swiss concrete powerhouse Holcim Group. The initial competition invited architects, planners, engineers, or project owners to enter buildable projects that addressed the well-being of people and the planet.

"If we want the generation after us to live in a decent way and have enough raw material and power, we have to be more conscious of how we build," explains Holcim spokesman Edward Schwarz. "If we raise awareness for sustainability in construction, we can influence everyone along the value chain to be more responsible."

The call for entries drew about 3,000 inquiries from 118 countries. Nearly 1,500 projects survived technical vetting before juries on five continents—North America, South America, Europe, Asia, and the Middle East and Africa—winnowed the field to 46 regional champions. Winners of gold, silver, and bronze regional awards went on to compete for the top global prize of $500,000.

In the end, Santos says, American architects were conspicuously absent, not only from the winners' circle, but from the contest itself. Renzo Piano and Chong Partners' green-roofed California Academy of Sciences in San Francisco won a silver prize in the North American category, a $50,000 tribute to the Italian architect's rigorous design and poetic aesthetics. Both the $100,000 gold and the $25,000 bronze went to Canadians, honoring an affordable housing project in Montreal and research on fabric-formed buildings, respectively.

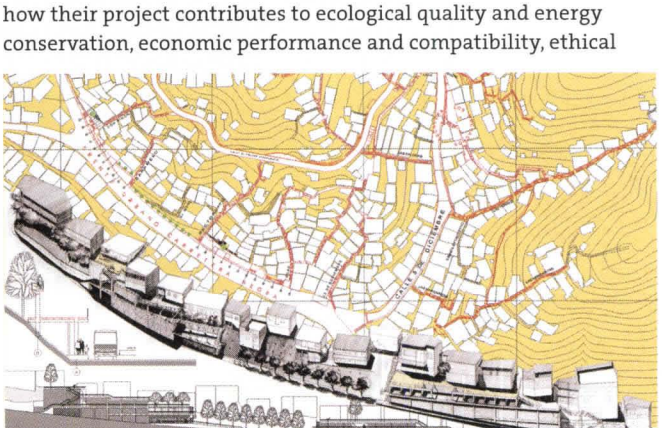
No project on U.S. or Canadian soil swayed the jurors as much as a daylighted underground rail station for Stuttgart, Germany, by Christoph Ingenhoven, and a viable revitalization for a shantytown in Caracas, Venezuela, by Proyectos Arqui 5 CA. They tied for the top global prize and took home $300,000 each.

"This isn't cheap stuff," Santos says, trying to explain why developers in the United States, and their architects, lag behind counterparts elsewhere in sustainable design.

The construction industry is perhaps the world's neediest consumer of energy and materials, and its huge potential for contributing to the betterment, or the devastation, of the environment, drove Holcim to set up the foundation, which Schwarz says operates independently of commercial interests. The advisory

team includes microcredit pioneer Muhammad Yunus, winner of the 2006 Nobel Peace Prize, environmentalist Amory Lovins of the Rocky Mountain Institute, and architect Enrique Norten of TEN Arquitectos. Pritzker Prize winner Thom Mayne of Morphosis signed on to judge the first global contest.

The awards are not a beauty contest. Applicants must show how their project contributes to ecological quality and energy conservation, economic performance and compatibility, ethical



standards and social equity, quantum change and transferability, and contextual and aesthetic impact—the only purely architectural element.

Says Santos, "There's a whole group of us who want good architecture along with the rest of the issues. It's a tall order, but I think we are ready."

The foundation is gearing up to award $2 million more for projects begun since June 1, 2007. For the first time, the foundation also will honor conceptual projects by designers younger than 35. For this new "Next Generation" category, Holcim has set aside $35,000 in prize money for each region.

"What we're looking for in our main category are projects in an advanced stage of design," says Schwarz. But organizers realized after the first round that students "have more visions and ideas."

Two young visionaries from Cambridge, Jinhee Park and John Hong of Single Speed Design, learned of the Holcim Awards in time to enter the 2005 contest. Their Big Dig Building, an unbuilt version of a house they constructed using cast-off concrete and steel from Boston's highway project, earned a $5,000 "encouragement" award.

"Competitions are costly, and for a small office like ours, they threaten to devour all of our resources," says Park. "However, it is the best way to keep our minds honed to new issues, materials, and contexts. Like many of our peers, we still have aspirations to change the world for the better."

Santos—who will be joined on the North American jury by Mohsen Mostafavi, dean of Harvard's Graduate School of Design; Marion Weiss of Weiss/Manfredi; and Reed Kroloff, director of Cranbrook Academy of Art and Museum—wasn't expecting a flood of entries. But she was clearly in the market for innovation. She talked with enthusiasm of a smaller Holcim project, a poster contest won recently by MIT students James Graham and Tad Jusczyk. Their "Crowd Farm" proposes to harness human energy, and they had made a stool that drew enough power from the act of sitting to fire up LED lights. Now that, she says, is "a big idea."

For contest rules, go to holcimfoundation.org. North American winners will be announced in late 2008. Global awards will be announced in 2009.

The second gold winner in the 2006 global awards was the Proyectos Arqui 5 CA–designed San Rafael-Unido Urban Integration Project in Caracas, Venezuela (above left). The project, which seeks to redevelop and rejuvenate large swathes of the Caracas neighborhood that have fallen into slumlike conditions, included a successful 2001 pilot program to renovate and reconstruct a series of crumbling staircases and small plazas.

The silver winner in the 2005 regional awards for North America was the Renzo Piano and Chong Partners–designed California Academy of Sciences in San Francisco (above), which features an extensive green roof as well as a solar energy system and natural ventilation. The project will open to the public in September.

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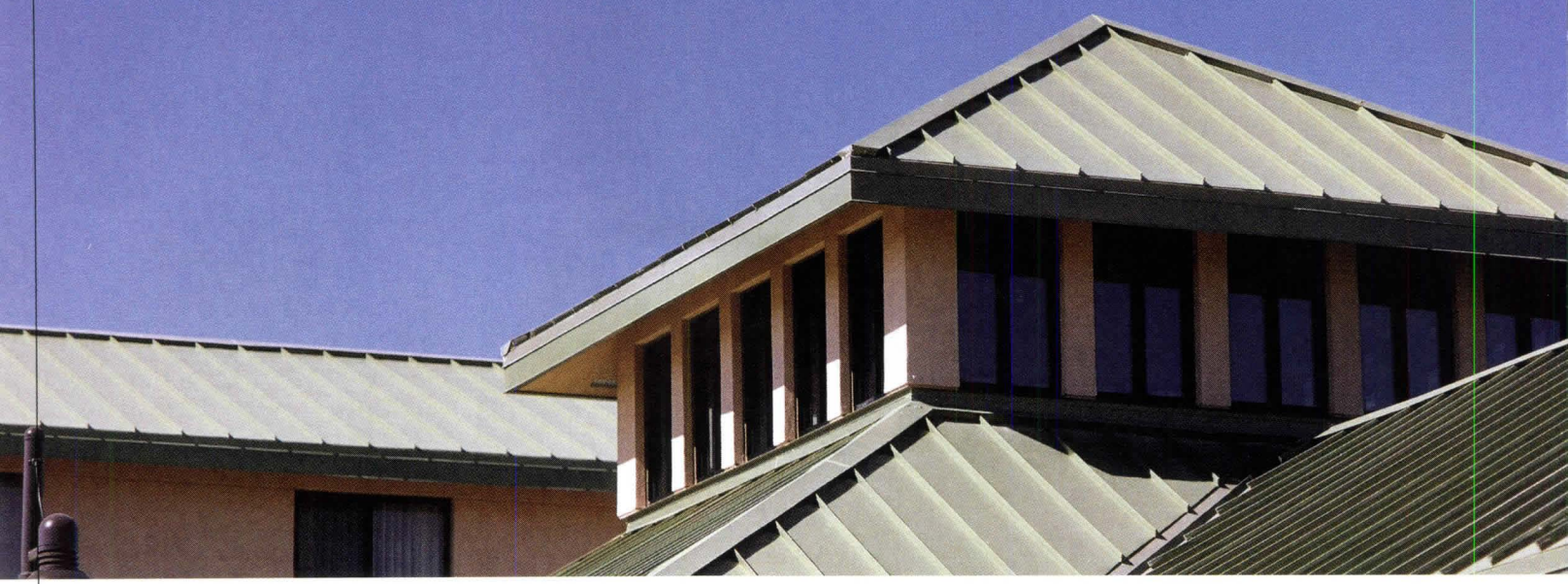

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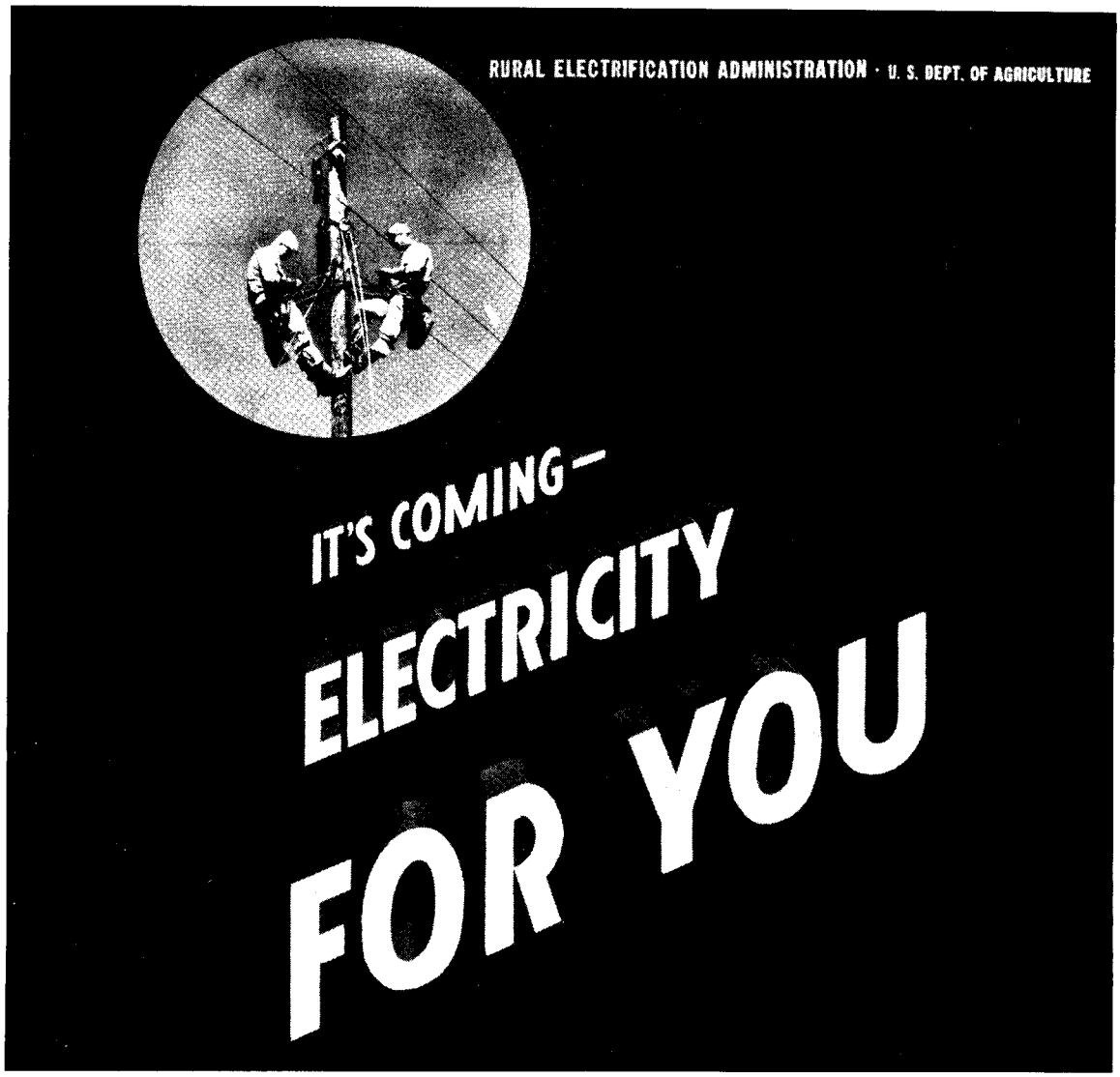
IN THE DARK DAYS OF THE DEPRESSION, THE RURAL ELECTRIFICATION PROJECT BROUGHT LIGHT, JOBS, AND HOPE TO FARM COMMUNITIES ACROSS AMERICA.

Text Hannah McCann

WHEN THE PEOPLE SEIZED POWER

Power companies had no incentive for stringing lines—at a cost of $1,500 to $2,000 a mile—to remote rural sites. But REA engineers (shown above) devised a way for communities to string their own lines at a cost of $538 per average mile. Using straight poles rather than cruciform ones, new high-strength conductors, and assembly-line construction reduced costs. "It was a business platform that provided safe, reliable power at the lowest possible rate," says Patrick Lavigne, director of public relations at the National Rural Electric Cooperative Association (NRECA), which today represents more than 900 co-ops that grew out of the REA program.

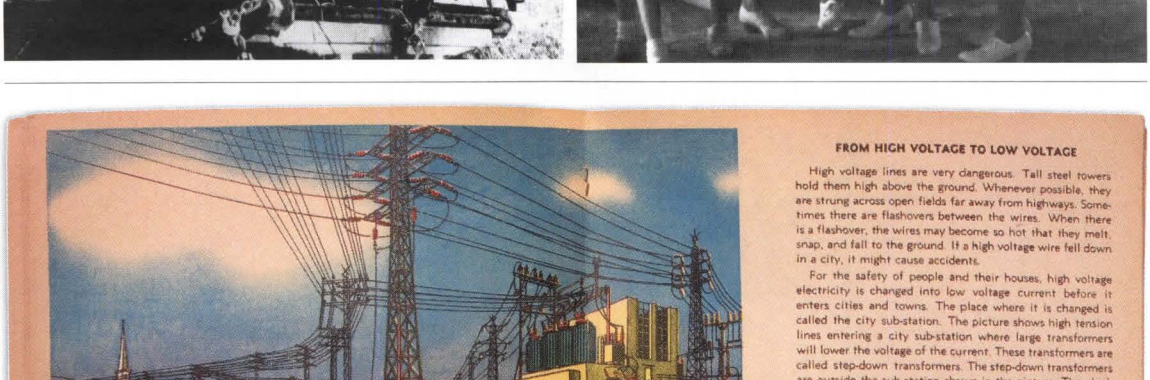


IT WASN'T JUST THE DUST that chased families off their farms during the Depression. The bright lights of the city beckoned, symbolizing all that electricity made possible: indoor plumbing, refrigerated foods, lamps and radios, and, simple though it may sound, places to meet after dark.

Enter the Rural Electrification Administration (REA), one of Roosevelt's flurry of New Deal programs. Established in 1935, the REA was tasked with bringing electricity to 5 million farms nationwide—not by building a new power system, but by providing low-interest loans to communities to build their own local systems. Today there are more than 900 rural electric cooperatives providing power in locations across America.

The REA gave a boost to struggling small towns and homesteads, which traditionally shut down after dark. Schoolchildren could now study during the evening, promoting education and literacy. Store owners were able to attract business at the end of the workday, fueling local commerce. The building and maintenance of the new electrical infrastructure created jobs and, just as importantly, pride of place.

It cost $5 to hook into a local co-op. Trading their labor for the $5 fee are the farmers shown in the photos at far left, pulling the last miles of wire in Horton, Kan., in 1938. For rural women (such as those pictured at left) who were used to hauling wood and water to cook, clean, and launder without electricity, the REA program promised liberation.



FROM HIGH VOLTAGE TO LOW VOLTAGE

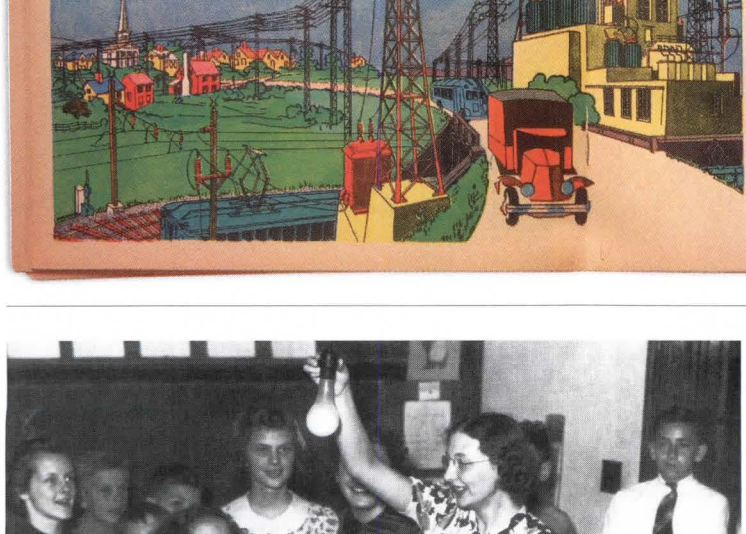
High voltage lines are very dangerous. Tall steel towers hold them high above the ground. Whenever possible, they are strung across open fields far away from highways. Sometimes there are flashovers between the wires. When there is a flashover, the wires may become so hot that they melt, snap, and fall to the ground. If a high voltage wire fell down in a city, it might cause accidents.

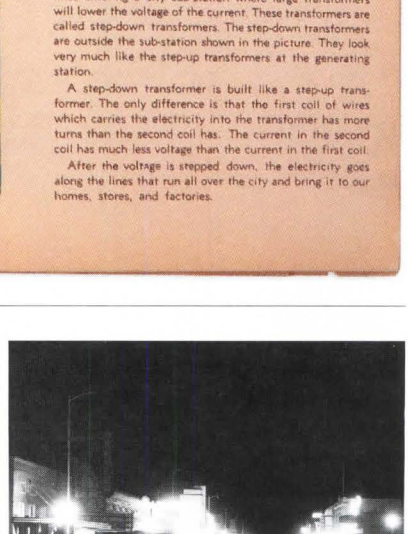
For the safety of people and their houses, high voltage electricity is changed into low voltage current before it enters cities and towns. The place where it is changed is called the city sub-station. The picture shows high tension lines entering a city sub-station where large transformers will lower the voltage of the current. These transformers are called step-down transformers. The step-down transformers are outside the sub-station shown in the picture. They look very much like the step-up transformers at the generating station.

A step-down transformer is built like a step-up transformer. The only difference is that the first coil of wires which carries the electricity into the transformer has more turns than the second coil has. The current in the second coil has much less voltage than the current in the first coil.

After the voltage is stepped down, the electricity goes along the lines that run all over the city and bring it to our homes, stores, and factories.

A 1937 educational book for children explains how electricity is generated by coal or water power and brought to towns and homes.





The lights come on for the first time in an unidentified schoolroom (far left) and the downtown of Shelby, Mont. (left). Now children could study at night and were relieved of many manual chores—both of which helped kids stay in school, according to teachers from the time. Electricity also brought people together at schools, stores, and churches after working hours. Lights redefined *"downtown" in small* communities.

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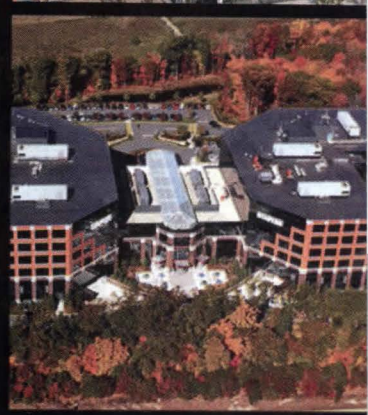

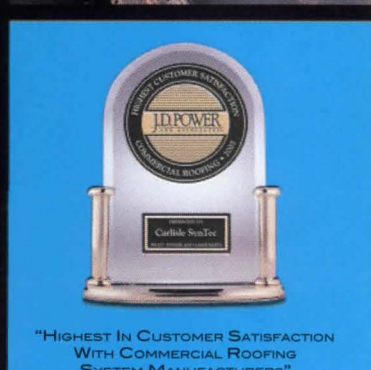

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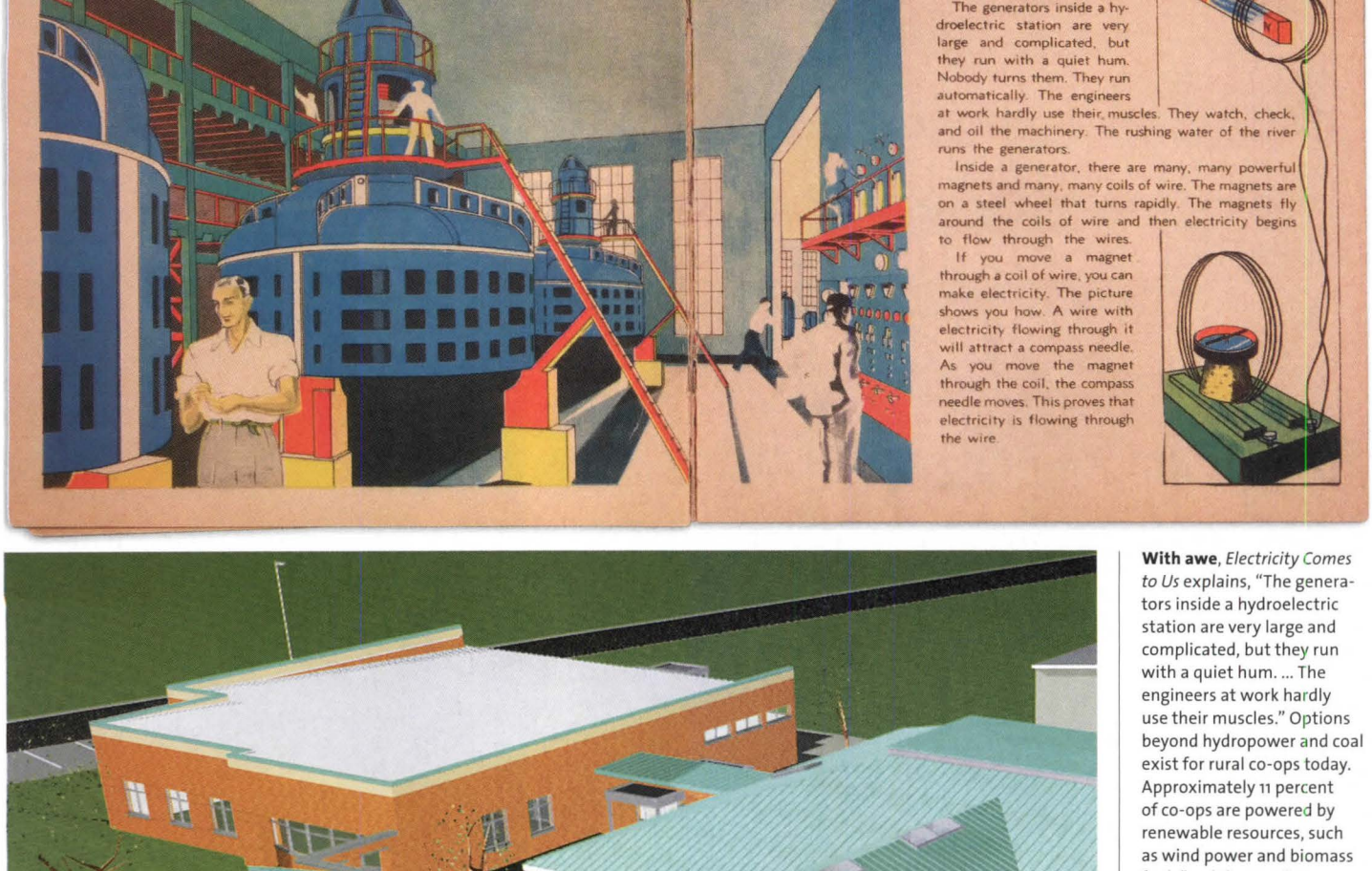
lisle SynTec received the highest numerical score among manufacturers in the proprietary J.D. Power and Associates/McGraw-Hill Construction 2007 Syndicated Commerical Roofing Systems Study℠. Study based on responses from 1 subcontractors measuring 4 manufacturers and measures opinions of subcontractors who purchased roofing materials within the previous 12 months. Proprietary study results are based on experiences and perceptions of consumers veyed in April-May 2007. Your experiences may vary. Visit jdpower.com



ELECTRICITY FROM WATER POWER

The generators inside a hydroelectric station are very large and complicated, but they run with a quiet hum. Nobody turns them. They run automatically. The engineers at work hardly use their muscles. They watch, check, and oil the machinery. The rushing water of the river runs the generators.

Inside a generator, there are many, many powerful magnets and many, many coils of wire. The magnets are on a steel wheel that turns rapidly. The magnets fly around the coils of wire and then electricity begins to flow through the wires.

If you move a magnet through a coil of wire, you can make electricity. The picture shows you how. A wire with electricity flowing through it will attract a compass needle. As you move the magnet through the coil, the compass needle moves. This proves that electricity is flowing through the wire.

With awe, *Electricity Comes to Us* explains, "The generators inside a hydroelectric station are very large and complicated, but they run with a quiet hum. ... The engineers at work hardly use their muscles." Options beyond hydropower and coal exist for rural co-ops today. Approximately 11 percent of co-ops are powered by renewable resources, such as wind power and biomass fuel, "and the number continues to grow," according to Patrick Lavigne of the NRECA. The association keeps rural co-ops informed of incentives and strategies to go green—whether in choice of power or architectural design of their headquarters.

In pursuit of a LEED Gold rating is the Union Rural Electric (URE) cooperative in Marysville, Ohio, whose headquarters renovation (shown at left) is designed by CDS Associates in Cincinnati. "Cooperatives have an obligation to educate our members. We need to do more than just what's right. We need to help our members learn how to do the same," says Eileen Tuttle of URE.

URE HEADQUARTERS COURTESY CDS ASSOCIATES. BOOK PHOTOS BY CHARLIE BROWN.

A|L LIGHT & ARCHITECTURE design awards

Architectural Lighting Magazine announces the FIFTH ANNUAL A|L LIGHT & ARCHITECTURE DESIGN AWARDS honoring outstanding and innovative projects in the field of architectural lighting design. The A|L DESIGN AWARDS recognize and reward excellent lighting design within the specific criteria relevant to each category (Residential, Interior, and Exterior). To acknowledge issues of notable importance in today's practice of lighting design, and design techniques particular to lighting, Architectural Lighting also presents a series of awards that recognize Best Use of Color, Best Incorporation of Daylight, and Best Lighting Design on a Budget. Winning projects are published in the July/August 2008 issue of Architectural Lighting and featured on www.archlighting.com.

ENTRY DEADLINE: MAY 22, 2008

Late Entry: **June 6, 2008**

Forms will be available **January 7, 2008** at www.archlighting.com.

Questions? **Elizabeth Donoff, Editor,** edonoff@hanleywood.com

INFRASTRUC

HOW WOULD YOU SPEND

$1.6 TR

"China spends 9 percent of its gross domestic product (GDP) on infrastructure and India budgets 3.5 percent ... while aiming to increase its allocation to 8 percent. By comparison, the United States budgets $112.9 billion or just 0.93 percent of its GDP, and sidesteps the reality of a ballooning $1.6 trillion deficit for necessary upgrades over the next five years."

—*Infrastructure 2007: A Global Perspective*

IN THE REPORT *Infrastructure 20*
A Global Perspective, published last M
the Urban Land Institute (ULI) and Er
& Young assess the state of the worl
infrastructure as we reach a turning po
in world history: For the first time, one
of two people on the planet lives in a c
Now more than ever, effective syste

TURE:

LLION

Edited by Amanda Kolson Hurley and Andrew Slocomb West

public infrastructure are crucial for ieties' health as populations grow l resources are squeezed. But in many ntries, including the United States, olic infrastructure is underfunded and der strain. The ULI estimates that it uld cost $1.6 trillion to make needed rades to America's infrastructure.

Hard problems demand creative solutions, so ARCHITECT asked a range of experts—architects, engineers, planners, nonprofit leaders, elected officials, and critics—how they'd fix America's infrastructure if they had the chance (and $1.6 trillion to spend). Turn the page for their responses.

Privatize—and Demand Private Investment • are gearing up for partnerships, which could be a positi which is phase one of the NAFTA superhighway. The Spani they'll have any obligations for maintenance. The cost is bei Infrastructure, in a capitalist model, is an asset worthy nothing but a cumbersome liability. This should be taken in be used to encourage maintenance and safety, and priva fees in some form. But public/private partnerships that lo

DEPAVE THE PARKING LOT AND PUT BACK PARADISE • We would spend less time fixing and more time dismantling America's infrastructure. The 50-year suburban experiment in car culture is untenable in the face of climate change and projections of peak oil. Urbanism needs to embrace ecology, and urbanists need to recapture the exuberance of visionaries from Charles Fourier to Buckminster Fuller in the creation of new models for sustainable and localized communities.

We would spend the $1.6 trillion on five important eco-urbanist projects. First, a systematic study of the suburbs identifying those which can be densified as new cities and those which can be returned to farmland: There is no middle ground in Ecotopia.

Second, the reconstruction of a national rail network for people and goods and the elimination of trucking.

Third, a massive investment in ecological infrastructure, from solar fields to town-scaled water-filtering living machines.

Fourth, the expansion of farming universities; working land organically will become the future's (more satisfying) version of working at Wal-Mart.

Lastly, the re-establishment of the Jeffersonian grid as a national priority. Ban the cul-de-sac.

The final plea is something no money can buy: To abandon small ideas, banality in design, and the clinging to historicism in order to recapture a nonexistent past—and instead to channel courage, optimism, and humanism in the search for big and forward-looking solutions to contemporary issues.

—Dan Wood and Amale Andraos
Principals, WORK Architecture, New York

From the Silk Road to Mars Rovers • History's most successful cultures are those that planned ahead and invested in technologies and the infrastructure to support them. I've used NASA radar imaging to uncover ancient trade routes with wells and secure forts in the Mideast. These routes enabled cultures to prosper in the silk and incense markets. In the 1400s and 1500s, Spain, Portugal, and England rose to prominence with shipping fleets and maritime routes. Later on, trains, planes, and, ultimately, space travel helped shape the fortunes and status of various countries.

A technology is only as good as the infrastructure that supports it. NASA's two Mars rovers are valuable only because they can share their discoveries via powerful receivers on Earth that "talk to them." We're already planning an interplanetary internet for communication among multiple spacecraft.

While the United States historically has invested heavily in traditional phone technology, India has emphasized wireless communications. I've had better cell phone reception in India than at home near Los Angeles. We are all so critically dependent on wireless communications—for financial, medical, transportation, energy, and other needs.

Charles Elachi
Director of the Jet Propulsion Laboratory, NASA

Connectivity—Physical and Digital • A creative economy in the global age means connecting people a

e so-called Highway Trust Fund is set to go bankrupt as early as 2009, private investment firms ep, if handled sensibly. What we need to avoid are items such as the Trans-Texas Corridor (TTC), m Cintra is set to take over toll collections after the TTC's completion; however, it is unclear that cialized, while the profit is privatized, effectively making the American people pay for it twice. • aintaining to ensure continuity of revenue. In a government-controlled model, infrastructure is nsideration when developing plans to keep our current infrastructure safe. • Privatization should mpanies should truly invest and bear the upfront costs in return for ability to collect tolls or usage ore like corporate welfare must be avoided. —**Ron Paul**, U.S. congressman from Texas and Republican presidential candidate

Create a Public-Realm Endowment

• Recent headlines about crumbling infrastructure have grabbed the entire country's attention. But there is even more to the story than collapsing bridges (Minneapolis) and blown steam pipes (New York). The failure to invest in infrastructure is also causing major opposition to additional real estate development.

Residents of areas with overcrowded schools and heavily trafficked roads want to stop development, especially when they are asked to foot the bill for public investment in improved or expanded infrastructure and community facilities. The easy government response is to make developers pay an impact fee. This only increases the cost of buying a house and forces developers to move farther and farther into the countryside in search of cheap land and an escape from fees that can make homes prohibitively expensive to the middle class.

In many metropolitan areas across the United States, commuters are reaching the limit they are willing to travel in search of affordable residences. Consequently, real estate developers are reverting to higher-density infill development in older suburban areas—second growth. Here, too, existing communities are objecting to congestion and decline in their quality of life.

The inadequacy of the public realm and existing infrastructure, whether in areas of greenfield development or suburban second growth, can be corrected by public investment. The cost of that investment can be captured from the incremental increase in tax revenues. Consequently, I would not invest the $1.6 trillion directly in public construction.

I would use that money to create a public-realm endowment and offer the income from the endowment to communities to cover the cost of planning, design, and engineering, provided they establish a tax-increment district that will generate an income stream that is adequate to retire the debt on bonds that would finance public investment.

Alex Garvin
President of Alex Garvin & Associates, New York, and adjunct professor of urban planning and management, Yale University

No Short Trips by Car—and Bike Racks for All

• Our collective failure hasn't been the amount of money spent on transportation—it's how we invest it that's critical. For the health of individuals and our communities, we need to put the road builders on a diet and focus on maintenance of what we've got.

More than 40 percent of trips are two miles or less in this country, and yet 90 percent of these trips are made by car. We need to enable people to walk, bike, and take transit instead of driving for more of these short, polluting trips that are clogging up our streets. That means investment in complete streets (with bike lanes, bus lanes, and sidewalks), trails, and trains, together with the buildings and land uses that encourage these modes. We need to focus on access, not mobility for its own sake, and we need performance measures that reward and encourage less driving, not more.

On a slightly smaller scale, I long for the day when a simple $100 bike rack can be put at the front of a building without a second thought. And maybe some of that $1.6 trillion could go toward connecting the disjointed bicycle and trail networks that are emerging in most U.S. cities today, so we can play our part in tackling climate change, congestion, obesity, oil dependence, and air pollution.

—**Andy Clarke**, executive director, League of American Bicyclists

ent in urban centers. Investing the money in connectivity, both physical →

STATE DOTS SHOULD BE BOLD, CREATIVE • I would instruct state departments of transportation to follow the lead of Maine and Minnesota in establishing creative partnerships with design and construction teams that can produce beautiful new structures in a reasonable amount of time.

When the suspension cables in Maine's historically significant and infrastructure-critical Waldo-Hancock Bridge were found by inspectors to be badly corroded, Maine's Department of Transportation had the structure strengthened for interim use while a replacement bridge was designed and constructed on the fast track. The new signature span has the unusual feature of an observatory in one of its towers, thereby giving the region both a distinctive new landmark and an impressive tourist attraction.

Unfortunately, Minnesota did not strengthen its I-35 bridge before it collapsed suddenly last August, but in the wake of the tragedy, the state Department of Transportation greatly accelerated the bidding process for a replacement. Giving proposals credit for aesthetics led to the awarding of a contract that will produce an attractive bridge in about 14 months.

Such bold, decisive, and creative thinking by departments of transportation can not only fix our infrastructure in a timely manner but also provide greatly added value by enhancing the built environment with beautiful structures.

–Henry Petroski
Professor of civil engineering and history, Duke University, and author of *Success Through Failure: The Paradox of Design*

Sex, Rain Clouds, and Teleportation • A dense network of hydrogen-fueled magnetic fast trains with rainmaking devices is the immediate answer. Light rail should feed into the magnetic network from every community. Both interstate rail and light rail should multitask to seed clouds (for the upcoming water crisis) and to power windmills when they swoosh by.

Commuter vans and clean-fuel motorbikes, hydrofoils, bicycles, and canoes should be freely available at stations run by the National Park Service. There should be hitchhiking shelters equipped with showers and beds at all the stations.

Within every municipality there should be a tax-exempt 24-hour zone where everything is legal: drugs, sex, and music.

Following this immediate infrastructural change, emanating at the national level and integrated locally, we should mobilize a huge national will to make teleportation available to everyone.

Incidentally, New Orleans should float and become the first of our many future coastal Venices. —**Andrei Codrescu**, author of *New Orleans, Mon Amour*

GET ON YOUR FEET • Twentieth century culture has imagined lots of sci-fi forms of transportation: Disneyesque monorails, the supersonic slot cars from Steven Spielberg's *Minority Report*, the personal helicopters in Frank Lloyd Wright's Broadacre City. Worried about road rage? Imagine sky rage. But to answer the transit question, don't go high-tech—or even low-tech. Go no-tech.

A 2005 *Washington Post* survey shows that while a large majority of commuters praise the convenience of transit systems such as the Washington Metro, they rarely use them. People love their independence. The problem is not traffic, it's commuting—not the form of it, but the fact of it.

In that same survey, one obvious form of transportation never came up: walking. Given the choice, wouldn't you rather stroll 15 minutes than sit bumper-to-bumper for 25? The challenge of public transportation is an opportunity for public health. The World Health Organization reports that a billion people are overweight because of fatty diets and inactivity, and suburban sprawl contributes to this because it limits casual exercise.

Let's invest in the infrastructure of the human body. To get people out of their cars and onto their feet, the means are simple: more mixed-use zoning; more medium-scale, high-density development; more trails and sidewalks; incentives for businesses to locate near residential areas and for individuals to work close to home; better public education about the health benefits of being active. We can solve the traffic problem and make better communities and healthier people at the same time.

We need Jane Jacobs, not George Jetson—less Buck Rogers and more Mr. Rogers.

—**Lance Hosey**
Director, William McDonough + Partners, Charlottesville, Va.

Make Mass Transit More Convenient • I would increase the funding for large-scale intercity and intracity mass transit projects to increase mobility of people at a smaller cost to the environment. Creating public-private partnerships with transit-product manufacturers to engineer a more evolved product is important as well. Ultimately, the biggest barrier to wider use of public transit is the convenience factor; increased funding for existing programs could expand capacity, frequency, and routes, which would promote their use.

Public transportation will become one of the most important components of our world as the population and its environmental awareness grow. We should fund decision making that will create available, convenient, environmentally responsible, and efficient transportation for all users and types.

Morgan Landers
Chair of the Student Representative Council, American Planning Association, and graduate student, the University of Colorado, Denver

What to Fix and Wha
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together by a thread f
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INVEST IN GOVERNMENT • Our nation has not invested as we must in roads, bridges, and transit—and our lack of investment has serious consequences. I say this as the mayor of a city recovering from a tragedy that was not an act of God, but a failure of man.

We should take this core lesson from the tragedy of the I-35 bridge collapse in Minneapolis: When you invest in quality government, you get quality results. When you don't invest, there are consequences. Our country's highest priorities for investment include repairing our critical bridges, dramatically increasing and expanding transit options, and—as Minneapolis has done—offering high-quality public drinking water to residents.

—**R.T. Rybak**
Mayor of Minneapolis

→ and digital, is important. We have to start by creating open access to talent and more efficient trade. We m

BOLSTER MANUFACTURING, SUSTAINABLY • If I had a trillion dollars, to paraphrase the Barenaked Ladies, I'd first and foremost invest in the manufacturing base that has driven our nation's economy for more than a century. America has the technological know-how to produce thousands of consumer goods—including safe, efficient, high-quality cars and trucks—that equal or surpass the world's best. Our nation's factories need investment dollars to enable them to produce those goods and bring them to market in ways that are economically and environmentally sustainable.

Coupled with manufacturing investment, we must invest in the infrastructure that will bring alternative fuels to our neighborhoods. We can produce vehicles today that will reduce our dependence on fossil fuels and reduce our nation's carbon footprint. To make them practical and desirable, we must be able to plug in, refuel, or recharge in a safe and convenient manner.

Americans want to do the right thing environmentally and will put their transportation dollars where their hearts are as soon as it becomes practical for them to do so. We should do all we can to make that possible.

—Joe Hinrichs
Group vice president, global manufacturing, Ford Motor Co.

ot to Build • I don't understand how we've let this country
rely started to rebuild New Orleans. Amtrak has been hanging
ars. That bridge that fell down in Minnesota isn't being rebuilt
There are two things I wouldn't do with $1.6 trillion. I wouldn't
foreign investors. And I wouldn't build a NAFTA superhighway.
es who benefit from the roads, bridges, railroads, airspace,
. • Our roads are choking in traffic. We need to fix them and
ling apart. We need to invest enough money to bring it into a
our ports are jammed. We need to expand them so port
e hours to pick up a shipping container. Our biggest airports
ffic. We need to bring the airspace into the 21st century. • We
n't fall down and airplanes don't crash. We must pay for
d railroad tracks and airplane maintenance hangars.

James P. Hoffa
General president, International Brotherhood of Teamsters

Invest to Grow • I would begin by investing that money, not spending it. We have to invest it so that the existing system can be a foundation for growth and expansion. We need to think about how to provide relevant intercity transportation that will attract riders as well as give both consumers and manufacturers choices, so we can exploit the comparative advantages of each mode of transportation to prevent congestion.

The social good of a national transportation system was our first great national economic priority. It is the great national economic enabler, and everyone knows when the system does poorly: We all wait a little bit longer, and we all pay a little bit more.

Our competitiveness depends in large part on our ability to keep costs down, and that takes investment. But the results of investment aren't invisible. You will see them in every store and in every town in America.

—**Alex Kummant**, president and CEO, Amtrak

Urban Wish List • My wish list for modes of transportation, as an urban dweller and not so much as an architect:

1. In the city, an extensive, high-frequency subway system (if not this, the bus is a good alternative): "extensive" meaning at any given point in the city you can find a station within 500 feet in any direction; "high-frequency" meaning a train comes every two minutes—and it ought to be on time.
2. Continuous pedestrian and bicycle paths. It is best to have a Strida (a well-designed folding bike that I have) so you can take it on the subway. Maybe Segways can share the bicycle paths.
3. A fast intercity railway that runs something like the bullet train in Japan or the TGV in France or the proposed Beijing–Shanghai maglev. Anyway, it should not take more than two hours to get to New York City from Boston. I will be happy to see the Amtrak trains in a museum somewhere.
4. It's OK to drive after all, as long as it's in a Prius.

One to three are the areas where money should be spent.

—**Yung Ho Chang**, professor and head of the Department of Architecture, Massachusetts Institute of Technology

REDEFINE THE FEDERAL STRATEGY • The federal surface transportation programs have morphed from a major focus on building the interstate system to having almost no purpose other than doling out money to states and transit agencies. With the dual threats of climate change and rising energy costs, it is time to define the federal interest in transportation to incorporate these issues along with several others, such as our aging population and the globalization of trade.

Upcoming congressional authorizations for passenger rail, highway, and transit offer the chance to define a new transportation mission for intercity corridors, metropolitan areas, and the most vulnerable of our society: the elderly, disabled, and working families.

Anne P. Canby
President, Surface Transportation Policy Partnership

'ate our airports to standards and examples set by cities such as Amsterdam, Sydney, Toronto, and Copenhagen. →

Organic Logistics • The largest sector of infrastructure is the one dealing with logistics. As a living cell is an extraordinary set of micrologistics, so a megacity is an extraordinary set of macrologistics.

The logistics of contemporary industrialized man are extremely inefficient and wasteful, as our dump sites, offal of *Homo rapax* (rapacious man), testify. Maintaining and improving these modes only modifies what is dysfunctional—a too conservative approach. I call this pursuit of a "better kind of wrongness."

As the nation's infrastructure now in disrepair is obsolete anyway, we need a serious conceptual reformulation of the whole system along realistic guidelines: not expanding roadways to accommodate ever-increasing traffic, but reformulating the damaging patterns of our communities, especially our promulgation of one- to two-story single-family homes. One house or mansion per family requires a logistical landscape horrendously wasteful and brutally anti-environmental—the nemesis of greenness. The automobile is both cause and consequence of the city's breakdown and the unavoidable materialism of suburbia. We must marginalize the automobile.

It might turn out that the human habitat has to be realigned with the logistical grids serving it. That would require urban ribbons of modest width incorporating parallel road, pedestrian, and bicycle pathways, and stations for local, regional, and continental transit. —**Paolo Soleri,** founder, Arcosanti and the Cosanti Foundation, Paradise Valley, Ariz.

Go High-Tech and Low-Tech • Having just taken my first ride on Shanghai's maglev train from Pudong Airport, at slightly less than seven minutes' duration (as compared to nearly an hour by taxi a few days earlier), I would spend a good chunk of the $1.6 trillion on interurban rapid transit. How embarrassing for our vaunted technological prowess when our recently reintroduced flagship train on Amtrak's Northeast Corridor service, the Acela Express (sic), crawls into New York from Boston in slightly less than three and a half hours, three times longer than it might take the Shanghai maglev. Not too many of us will forgo the shuttle, or perhaps even the convenience of our cars, for such a hare.

At the other end of the technological and fiscal spectrum, I would invest in what many European cities now deploy: low-cost bike rental stations, easy to find and to leave the rental at one's destination. Until the Segway becomes ubiquitously (inexpensively) available, the old-fashioned bicycle can well support our short-distance commutes.

Whatever dollars are left, I would devote to teleportation or human e-mail research. But then just maybe some investment should be dedicated to reforming our land-use habits so that we wouldn't have to commute so far, so often.

Alex Krieger
Professor of urban design, Graduate School of Design, Harvard University, and principal of Chan Krieger Sieniewicz, Cambridge, Mass.

FIX OUR RUSTING RAILS • We have a passenger railroad system that the Bulgarians would be ashamed of. There's no big project that would do more to reduce America's oil consumption than restoring passenger rail service on a par with the other industrialized nations. And forget about high-speed or maglev for the moment—let's just get it going again at a normal speed.

Restoring passenger rail service would have many additional benefits. It would put tens of thousands of people to work at all levels, from labor to management. It would decongest airports that are overburdened from flights going only a few hundred miles (trips that are better served by rail anyway). It would help revive many central cities. The infrastructure for running it is lying out there, rusting in the rain, waiting to be fixed. It does not require the reinvention of anything.

This would give us confidence to go forward and make other necessary changes in a society facing a permanent oil crisis. The fact that we are not even talking about it shows how unserious we are.

Finally, the restored U.S. passenger rail system should be electrified so it can be run by means other than fossil fuels.

–James Howard Kunstler
Author, *The Long Emergency* and *The Geography of Nowhere*

→ Finally, we have to invest money in a leadership and infrastructure that will drive open, connected, and tolera

Conserve, Evolve • A broad view of infrastructure includes the essential resources of land and water. These should be identified and quantified for conservation, cultivation, and urbanization. Urbanization includes the full network of mobility, from national air and rail to local bicycles and walking. We already know that it is imperative to reduce the impacts of cultivation and urbanization on land and water and to reduce the need for transportation based on nonrenewable resources.

Five centuries ago, the most important component of built infrastructure was the city wall. Just as we no longer need such defenses, so might we look upon our vehicular dependence in the light of a historic evolution. All human constructs are capable of intentional adjustment. Transport can be reduced by providing land for agriculture within every metropolitan area and requiring urban patterns that support transit and enable walking.

Thus I would encourage triage with regard to repairing and maintaining the national vehicular infrastructure, so that resources could be allocated as well to the support of water quality and land for cultivation within metropolitan reach and to the development of a generous public transit system for the movement of goods and people. —**Elizabeth Plater-Zyberk**, principal, Duany Plater-Zyberk & Co., Miami, and dean, University of Miami School of Architecture

THE VISION THING • When one thinks of the great infrastructure projects in history, it was often a design vision that led to innovation.

The Hoover Dam is a great example. Most people think of it as a magnificent feat of engineering prowess. What is not realized is that the original design was so ponderous and unattractive, public officials insisted that an architect was needed to redesign and oversee the project. In 1933, architect Gordon B. Kaufmann was given the commission to rework the dam and make it cohesive. His dramatic concave form organized the functional elements, provided inspiration for millions, and popularized modernist design.

If we are going to create infrastructure that will truly carry us into the next century, we need this kind of imagination, and we need to ensure that architects are in leadership positions on infrastructure projects.

– **Mark Strauss**, principal, FXFowle Architects, New York

Wind and Water • Our continued growth places demands on public infrastructure. However, infrastructure will change and evolve because of technological advances. It will continue to provide new opportunities for better management of our water and wind resources; we need to capitalize on these with sustainability and green architecture.

Increasing our use of gray water within facilities is going to become a higher priority as well as harnessing wind for energy. Relying more on water retention for everyday needs should result in new infrastructure systems that are more environmentally friendly while utilizing a sometimes wasted resource. Wind energy may supplement some very generic building systems while easing fossil-fuel demands. It could spur a heavier use of wind farms, whose energy creates a network of new infrastructure.

Curtis J. Moody
President, Moody • Nolan, Columbus, Ohio

Big Dig, Boondoggle? • Is America's infrastructure terminally ailing, or does it just need a twist of the compass and a refueling of priorities? Here in Boston, the home of the $14.5 billion Big Dig, observers and users of the mammoth tunnel project have concurred that, as the old saying goes, "Progress is not its most important product."

For all the hard-topping, a truly walkable city and serviceable public infrastructure are still out of sight for many inhabitants and commuters stuck in traffic. Given the nation's overall $1.6 trillion infrastructure deficit, there must be a better way to end clogged highways and get travelers moving.

Or so goes the sentiment, while local observers—this writer among them—witness the ordeal of the city's interminable construction-cum-destruction project, only to see traffic multiply and no better options in rail mobility.

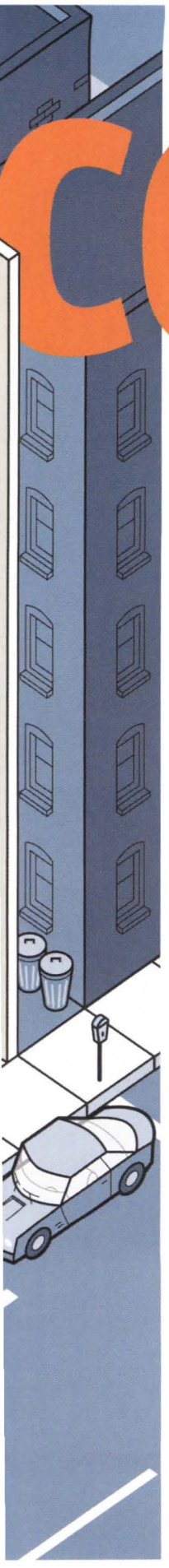
In short, there is precious little return on Boston's investment for those wanting to walk or ride on much-needed public transportation. In this project, at least, the axiom "If you build it, they will come" has proven true, to our detriment.

—**Jane Holtz Kay**
Author, *Asphalt Nation*

nmunities. Our communities need to be completely wireless. —**Richard Florida**, author, *The Rise of the Creative Class*

PACIFIC FLYER
MODERN TRAINS
LOW FARES
PHOENIX

Text Elizabeth Evitts Dickinson **Illustrations** Nik Schulz



COMING ATTRACTIONS

MOVIE THEATERS ARE GOING LUXE TO ENTICE US AWAY FROM OUR FLAT SCREENS AND IPODS. VALET PARKING, WINE BARS, AND—YES—HIGH-END ARCHITECTURAL DESIGN MAY SOON JOIN POPCORN AS CINEMA STAPLES.

AT THE NEW FLAGSHIP CINEMA of the Landmark Theatres chain in Los Angeles, you come up the escalator from the street level and are greeted by a curved wall clad in Venetian plaster. Inside the lobby is an illuminated desk fabricated with reed-embedded resin—a box office that's not a literal box but looks more like the check-in at a boutique hotel. The standard movie-theater decor is conspicuously missing: the neon, the life-sized star cutouts, the tacky wall-to-wall carpet (where there is carpet, the architects—of L.A. firm PleskowRael Architecture—specified FLOR, an environmentally friendly product). Over at the concession stand, LED screens display a menu of upscale items like Peet's Coffee and specialty candies from Japan.

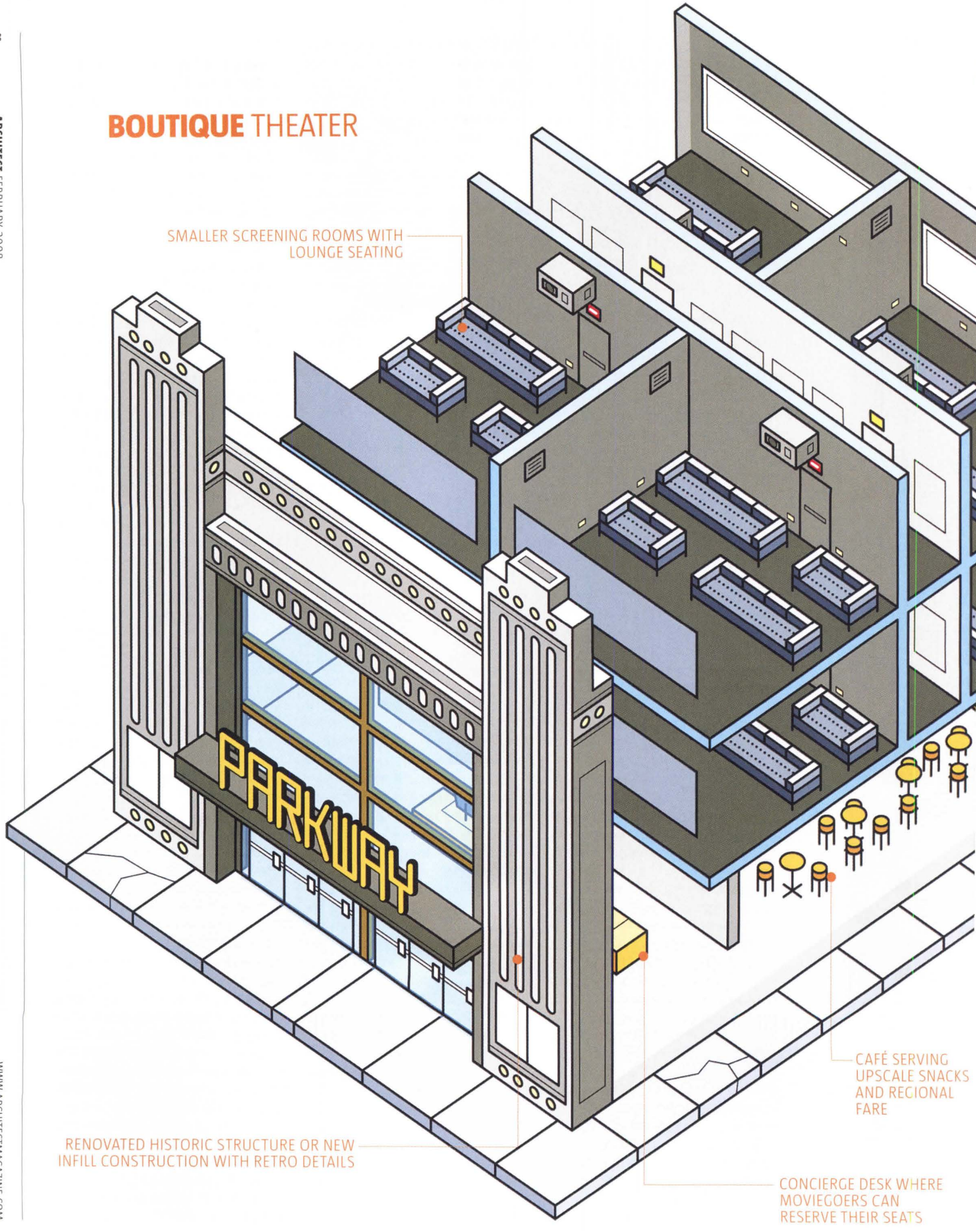
There is a small concierge desk made of basalt stone tile and, next to it, a glass-enclosed display selling hard-to-find DVDs and books about film. A wine bar, created with the help of Dallas-based interior designer Dana Foley, is tucked into the negative space created by the auditoriums above. Marking the entrances to the theaters themselves are sheet-metal–clad portals and illuminated thresholds. Theaters range from 55-person screening rooms, known as "living rooms" and outfitted with couches from Ligne Roset, to 300-seat auditoriums. An usher greets you at the door and escorts you to your reserved seat. There are no commercials before the film, no on-screen trivia or mind-numbing Muzak. Instead of previews, you get live announcements about what you are about to see from the informed staff. Every detail is in order, down to the fresh flowers in the bathroom.

Which is why, despite its contemporary design, Landmark's CEO Ted Mundorff sees the new flagship as a nod to the past: "It's a return to service, a revival of the customer experience that was around in the '30s but has since diminished," he says.

Not long ago, the average American movie theater was big on square footage and short on personality. Cookie-cutter interiors made it difficult to distinguish one venue or chain from another. The introduction of stadium seating in the 1990s drew audiences with the promise of enhanced comfort (not aesthetics) and became the dominant trend in the late '90s and early 2000s. Stadium seating "led to record attendance in 2002 and record box office in 2004," says Patrick Corcoran of the National Association of Theatre Owners (NATO), an industry group. But its novelty is wearing off, he says: "People are looking for something more."

Lots more. Today, the industry is experiencing a burst in construction and renovation activity. Movie exhibitors around the country are tempting patrons with new, carefully designed theaters that cater to increasingly sophisticated desires. Parking lots, popcorn, and box-office lines are being replaced by valet parking, bars and restaurants, and online reserved seating. Companies ranging from industry giants Regal and AMC to the art-house Landmark

BOUTIQUE THEATER



hope to pull in bigger box offices through enhanced architecture.

"About every 11 years, there's this spurt cycle where people reinvent what going to the movies is all about," says veteran entertainment architect Mike Cummings, principal of TK Architects in Kansas City, Mo. Cummings believes the industry is now in the midst of one of these overhauls. "The [trend] before this, of course, was stadium seating and the big megaplex. But that's not what we're seeing anymore. There is a lot more attention to brand and to design."

OVER-35s AND THE BOUTIQUE THEATER

Theater owners across the country are discovering that good design is not just pulling patrons from competitors—it actually helps create new audiences. People aged 35 and over, who skipped going to the movies in the past few decades, are coming back. "The dependable market for movie theaters over [the last] 30 years has been teenagers and young adults," says NATO's Corcoran. "While that market continues to slowly grow, the biggest growth is in people 35 and up. They tend to have a different idea of what a good movie experience is, and they have more disposable income."

Several new cinemas in the Landmark chain are designed to appeal to this market. Founded in the 1970s, Landmark aims for a sophisticated adult crowd by showing critically acclaimed and independent films. Eschewing the big-box footprint, the company works to integrate its theaters into the fabric of a neighborhood, often investing in renovations of historic sites. Landmark's popular Sunshine Cinema, for example, opened in 2001 on the Lower East Side of Manhattan after fitting five auditoriums in an 1898 building that once held a Yiddish vaudeville theater.

PleskowRael worked with Landmark on the Sunshine before designing the flagship, which opened last summer. Situated in a new wing of the Westwood Shopping Mall on Pico Boulevard, The Landmark, as it is called, is the first luxury cinema to come to West Los Angeles. At just under 47,000 square feet, the cinema is half the size of the average multiplex.

Rather than slotting into a big square anchoring one end of the mall, as many cinemas have done in the past, The Landmark occupies a two-level space within the mall itself. The theater's lobby and seven of its auditoriums are on the mall's second floor, sharing space with the mall common area and a Barnes & Noble. Five more auditoriums are located on the third level.

Landmark wanted to make sure that the wine bar and a concession stand located on the lobby level would be open to everyone, not just moviegoers. "This was one of the important programmatic components," says Tom Rael, principal of PleskowRael. "Landmark wanted to serve not only the guests of the flagship, but also the patrons that would come up from Pico Boulevard to shop and have a drink before dinner."

So the architects displayed the cinema to pedestrians below through a large glass exterior wall. Inside, they avoided long, narrow corridors and let the curve of the third-level auditoriums create sculptural overhangs for the lobby below. "We [captured] the undersides of the auditoriums for a more fluid space," Rael says.

Landmark opened two additional cinemas last year in Denver and Baltimore, each with similar boutique design elements. At all three, high-end concession stands that carry gourmet or regional fare—you can get crabcakes in Baltimore—promise to grow Landmark's concession-based revenue (across the industry, movie concession stands generate $3.5 billion a year). Landmark will further expand its food offerings with a new restaurant at the flagship, scheduled to open in September. Dallas-based Consilient Restaurants has entered into a partnership with Wagner/Cuban Cos., Landmark's owner, to create a $5 million, 10,000-square-foot bistro on the mall's street level. PleskowRael will again work with interior designer Dana Foley on the project, tying it aesthetically to the cinema above.

— WINE BAR

"ABOUT EVERY 11 YEARS, PEOPLE REINVENT WHAT GOING TO THE MOVIES IS. ... [TODAY] THERE IS A LOT MORE ATTENTION TO BRAND AND TO DESIGN."
—MIKE CUMMINGS, PRINCIPAL, TK ARCHITECTS

THE NEW MOVIE PALACE

Development Design Group (DDG) in Baltimore has been the exclusive architecture firm for Muvico Entertainment since 1997. DDG helped the Florida-based Muvico build a brand identity through a series of themed theaters with over-the-top designs on an amusement-park scale. Muvico has "ancient Egyptian" theaters in Florida and Maryland and one scheduled to open later this year in New Jersey. Other Muvico themes include a Beaux-Arts "Paris opera house" and a 1950s "drive-in" theater.

"The question I'm often asked by other architects is, 'Is this architecture?'" admits Roy Higgs, CEO of DDG. "I call it 'entertainment architecture.' At the end of the day, you have to create something seriously entertaining. The design detail that goes into this is extraordinary, and the cost to build one of these is not inexpensive." The average cost of a themed Muvico cinema is about $30 million.

Muvico's investment is paying off. Today, the company has 259 screens in 14 locations around the country; several of its theaters rank in the top 100 for box-office revenue, including the 24-screen Egyptian megaplex at the Arundel Mills mall in Maryland, the highest-attended cinema in North America. "In 2003, Arundel Mills attracted close to 3 million people," says DDG vice president James Andreone, who helms the Muvico design team. "Just by comparison, Camden Yards, where the [Baltimore] Orioles play, was getting about 1.5 million that year."

In addition to eye-popping design, Muvico offers supervised childcare, making it easier for mom and dad to make a spontaneous trip to the movies, and, for an extra cost, a "premiere" experience that includes valet parking, reserved seating, and free concessions.

Yet in spite of the continued success of theaters like the Egyptian, Muvico is now heading in a different direction. "We think there's a shift in the industry," says Mike Wilson, a senior vice president of Muvico. "It's becoming more sophisticated." Movie distribution is also having an effect, Wilson says: "The window between the theatrical release and the DVD release is shortening. To capture and maintain the audience, we need to create a better experience."

Last fall, the company ushered in its new design concept at

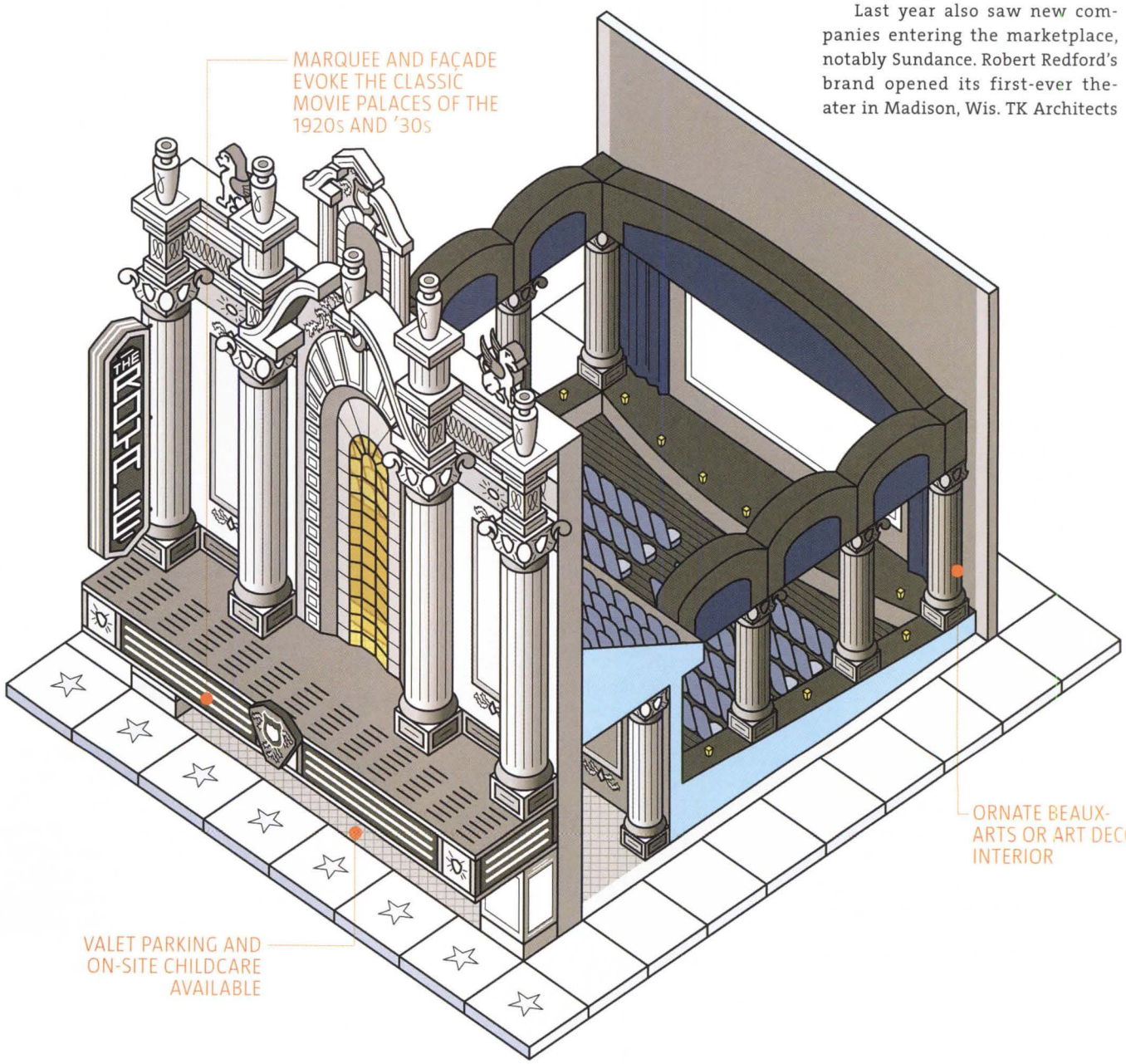
the 100,000-square-foot, 18-screen Rosemont Theatre outside Chicago. The Rosemont, with auditoriums ranging in size from 135 seats to 380 seats, is an updated version of the classic prewar movie palace and cost about 10 percent more to build than the themed cinemas. "We wanted an architectural design that complemented the luxury experience, and we looked back to the '20s and '30s for inspiration," Wilson explains. DDG gave the complex an ornate façade and flashy marquee. Rosemont offers perks such as childcare as well as a "premiere" experience: For $20 per ticket, customers can use a separate entrance with a valet and can access a private second level through a dedicated set of escalators. Once there, they can dine at a high-end, 300-seat restaurant that overlooks the bustle of the general-admissions lobby below.

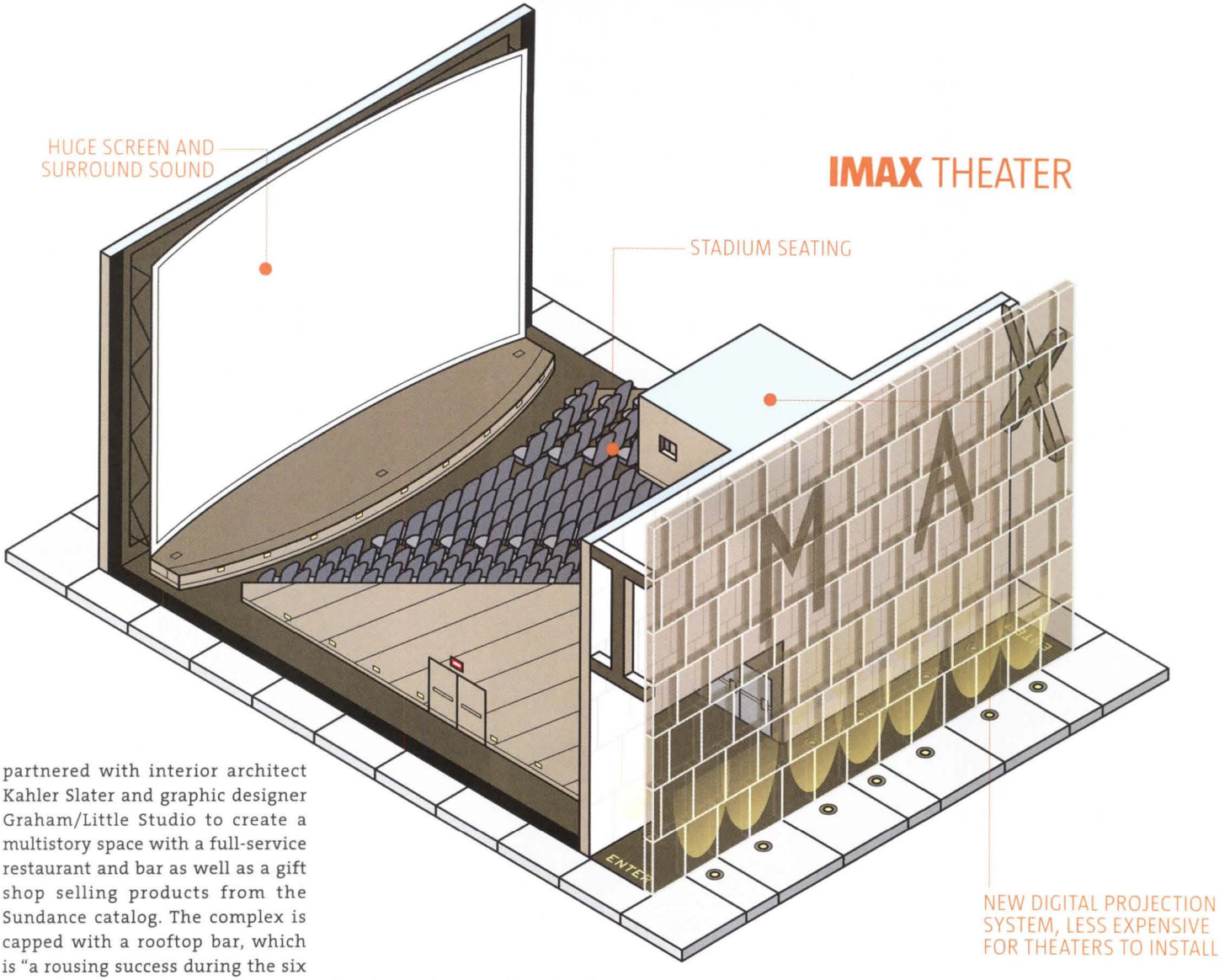
Muvico is not alone in reviving the movie palace concept. Pacific Theatres, a chain based in California, recently opened a new theater in a mixed-use complex in Los Angeles called The Grove. The theater's sweeping Art Deco lobby is bedecked with massive chandeliers. Ushers wear 1920s-inspired outfits, complete with little hats. A photo exhibit honors the great movie palaces of California and the architects who built them. Adjacent to the lobby is a restaurant called The Farm, serving contemporary Californian cuisine. Although it is not part of the theater, patrons who can't finish their $16 goat-cheese salad are invited to bring leftovers into the movie.

As the movie palace concept becomes commonplace, it is also merging with the once-rarefied art-house experience. Muvico is developing "all-premiere" theaters in urban settings that will run independent films and cater to the 21-and-over crowd. Pacific has two cinemas in California under its ArcLight Cinemas brand. These have amenities such as reserved seating, a café and bar, a retail store, concierge assistance, and a lineup of primarily art-house shows and Oscar-nominated movies. ArcLight recently retrofitted Hollywood's Cinerama Dome, a Fuller-inspired geodesic theater originally built in 1963.

Last year also saw new companies entering the marketplace, notably Sundance. Robert Redford's brand opened its first-ever theater in Madison, Wis. TK Architects

MOVIE PALACE





partnered with interior architect Kahler Slater and graphic designer Graham/Little Studio to create a multistory space with a full-service restaurant and bar as well as a gift shop selling products from the Sundance catalog. The complex is capped with a rooftop bar, which is "a rousing success during the six months of the year that they can keep it open," Cummings jokes. Sundance opened a second theater in December in San Francisco and has plans for two more this year in Denver and Chicago.

IMAX: THE NEW STADIUM SEATING?

The moviegoer's experience inside the theater itself is changing, too. Since its inception in 1967, IMAX has lured audiences with its digital surround sound and large-screen format. Once the domain of specialty theaters and museums and institutional spaces, IMAX went more mainstream in 2002 when it released IMAX DMR, a digital remastering technology that allowed any Hollywood film to be transformed into the IMAX format. In 2007, the company launched a new digital projection system. The switch to digital essentially eliminates the need for film prints and costly film projectors. "For the exhibitor, it's an opportunity to get IMAX into their theater at a lower price point," says Larry O'Reilly, IMAX's executive vice president of theater development.

IMAX is partnering with movie exhibitors, including Regal Entertainment Group, to bring its technology into more multiplexes. In October, the company announced an additional partnership with mega-chain AMC that will put IMAX in more than 100 AMC theaters around the country. Currently, IMAX has 150 theaters in the United States, of which 68 are in a multiplex setting (the rest are in institutions such as museums). By 2009, the number in multiplexes will have more than doubled.

Although it's less expensive than it used to be, IMAX is still an investment. It requires auditoriums of at least 300 seats with high ceilings to accommodate its screens. And because those screens skim the floor (for that big-picture, full-immersion experience), steeper risers sometimes have to be built to preserve sightlines.

TK has retrofitted IMAX theaters into existing cinemas in Las Vegas; Mesa, Ariz.; and Knoxville, Tenn. TK is also working to build IMAX into four new projects, including one under way in Reading, Pa. "The city and the local developer were very interested in having IMAX as a community asset," says Cummings. "The [extra cost was] $1 million, with half for the additional equipment and half for added construction."

Could IMAX be the next stadium seating? "We're not stealing existing audiences away from other theaters. We're growing a new audience," O'Reilly says. He cites exit surveys showing that people who pay for an IMAX show might not have come to the theater at all if not for IMAX.

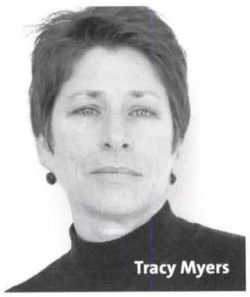
Sounds familiar. We'll see what happens in 11 years.

suburbia redefined

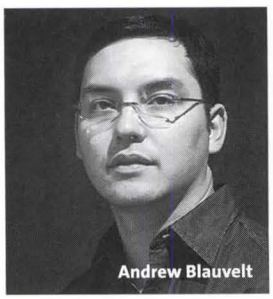
Benjamin Edwards
***Immersion*, 2004**
Learning From Las Vegas meets *The Matrix* on the enormous, colorful surface of Edwards' 75-by-125–inch canvas. The Washington, D.C., artist collages images of suburbia, technology, and the brand economy into a seductive yet disturbing vision of contemporary life. Watch an animation of the making of *Immersion* on Edwards' website, benjaminedwards.net.

Text Ned Cramer

THINK *THE BRADY BUNCH* STILL EPITOMIZES THE SUBURBAN EXPERIENCE? "WORLDS AWAY: NEW SUBURBAN LANDSCAPES," ON VIEW THROUGH MAY 18 AT THE WALKER ART CENTER IN MINNEAPOLIS, EXHIBITS THE NEW REALITIES—AND SURREALITIES—OF 21ST CENTURY SUBURBIA.



Tracy Myers



Andrew Blauvelt

Despite the many artworks on view, "Worlds Away" is a design-minded exhibition; it was organized by Andrew Blauvelt, design director and curator at the Walker, and Tracy Myers, curator of architecture at the Carnegie Museum of Art.

Brian Ulrich
***Chicago, IL*, from the series Copia/Retail, 2003**
Ulrich, a Chicago-based artist, began photographing big-box retail and thrift stores as a response to President George W. Bush's post-9/11 call for Americans to shop and thereby boost the national economy.

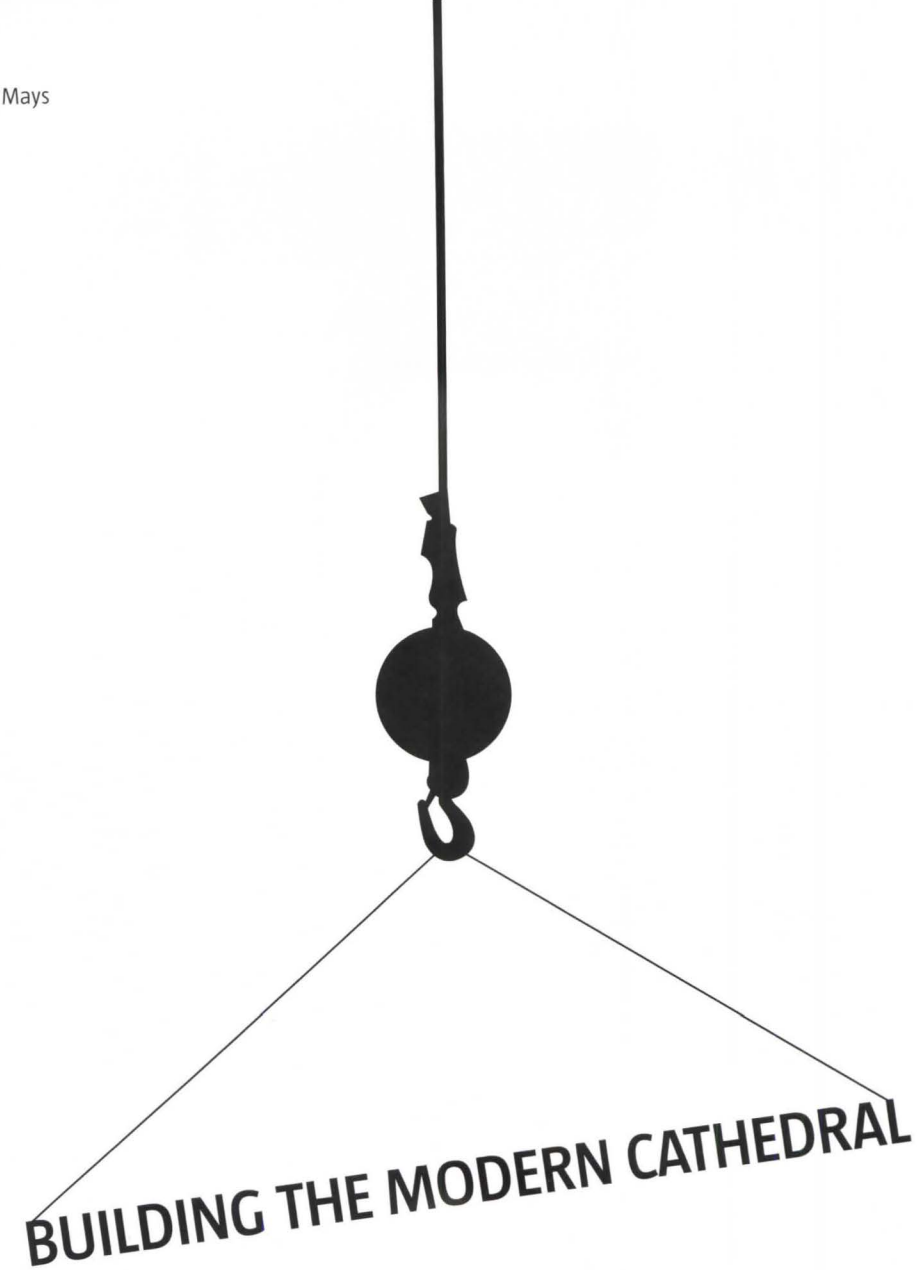
Paho Mann
***Re-inhabited Circle K's (Phoenix)*, 2004–2006**
Over the past two decades, hundreds of Circle K convenience stores have been converted to new purposes, from tuxedo rentals to tattoo parlors. Mann, who lives in Texas, documents the buildings' strange fates in photographs and on a website, circlekmap.pahomann.net.

Jessica Smith
***Trash Day*, 2007**
Textile designer Smith sends up a weekly suburban ritual in *Trash Day*, a silk fabric based on 18th century toile de Jouy prints. Other patterns from her company, Domestic Element, satirically appropriate such icons of suburbia as Levittown, freeway interchanges, and the Hummer.

Laura Migliorino
***Egret Street*, 2006**
Migliorino, a Minneapolis-based artist, confounds the stereotype of suburbanites as white families with a mom, dad, and 2.5 kids. Her portraits of subdivision residents position people of all sorts in front of their own homes and against a superimposed backdrop of the larger neighborhood.

PHOTO, PREVIOUS SPREAD: COLLECTION PETER AND ANNIE REMES, WAYZATA, MINNESOTA, COURTESY GREENBERG VAN DOREN GALLERY, NEW YORK. PHOTOS, THIS SPREAD, CLOCKWISE FROM BOTTOM: COURTESY THE ARTIST; CAMERON WITTIG; TEY STITELER; COURTESY THE ARTIST AND RHONA HOFFMAN GALLERY, CHICAGO; COURTESY THE ARTIST; COLLECTION WALKER ART CENTER, MINNEAPOLIS JUSTIN SMITH PURCHASE FUND, 2007.

Text Vernon Mays



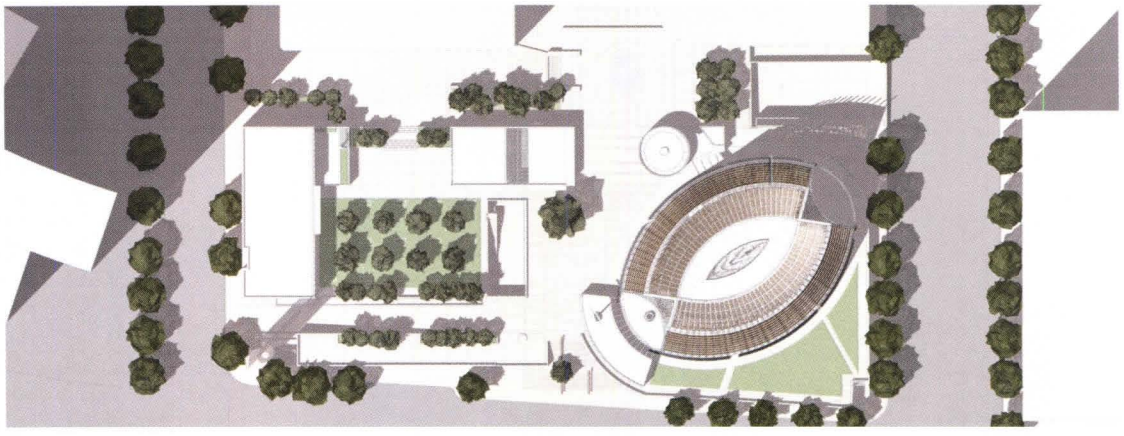
BUILDING THE MODERN CATHEDRAL

SKIDMORE, OWINGS & MERRILL PLANS FOR THE NEXT 400 YEARS IN OAKLAND, CALIF.

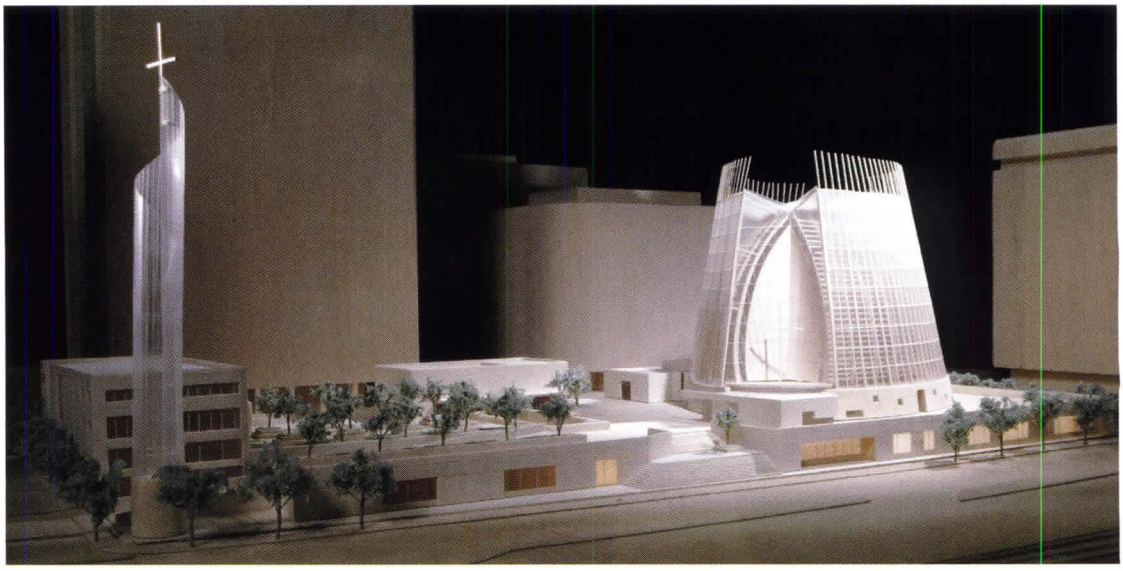
THE LORD GIVETH AND THE LORD TAKETH AWAY—although sometimes in reverse order, as in the case of the Cathedral of Christ the Light now nearing completion in Oakland, Calif. There, Skidmore, Owings & Merrill (SOM) had the opportunity to create a new 1,500-seat sanctuary as the mother church for more than 60,000 Catholics in the Oakland Diocese following the devastation caused by the 1989 Loma Prieta earthquake, which had weakened the existing St. Francis de Sales Cathedral beyond repair.

Rather than erect a new edifice in stone, architect Craig Hartman of SOM proposed replacing the damaged cathedral with a building crafted of light. Invited to interview for the job just as he was completing work on the celebrated International Terminal at San Francisco International Airport, Hartman expressed his desire to "create a place that could inspire wonder." Following a preliminary screening process, SOM was commissioned—along with Ricardo Legorreta and Santiago Calatrava—to produce a schematic design. Ultimately SOM won the job.

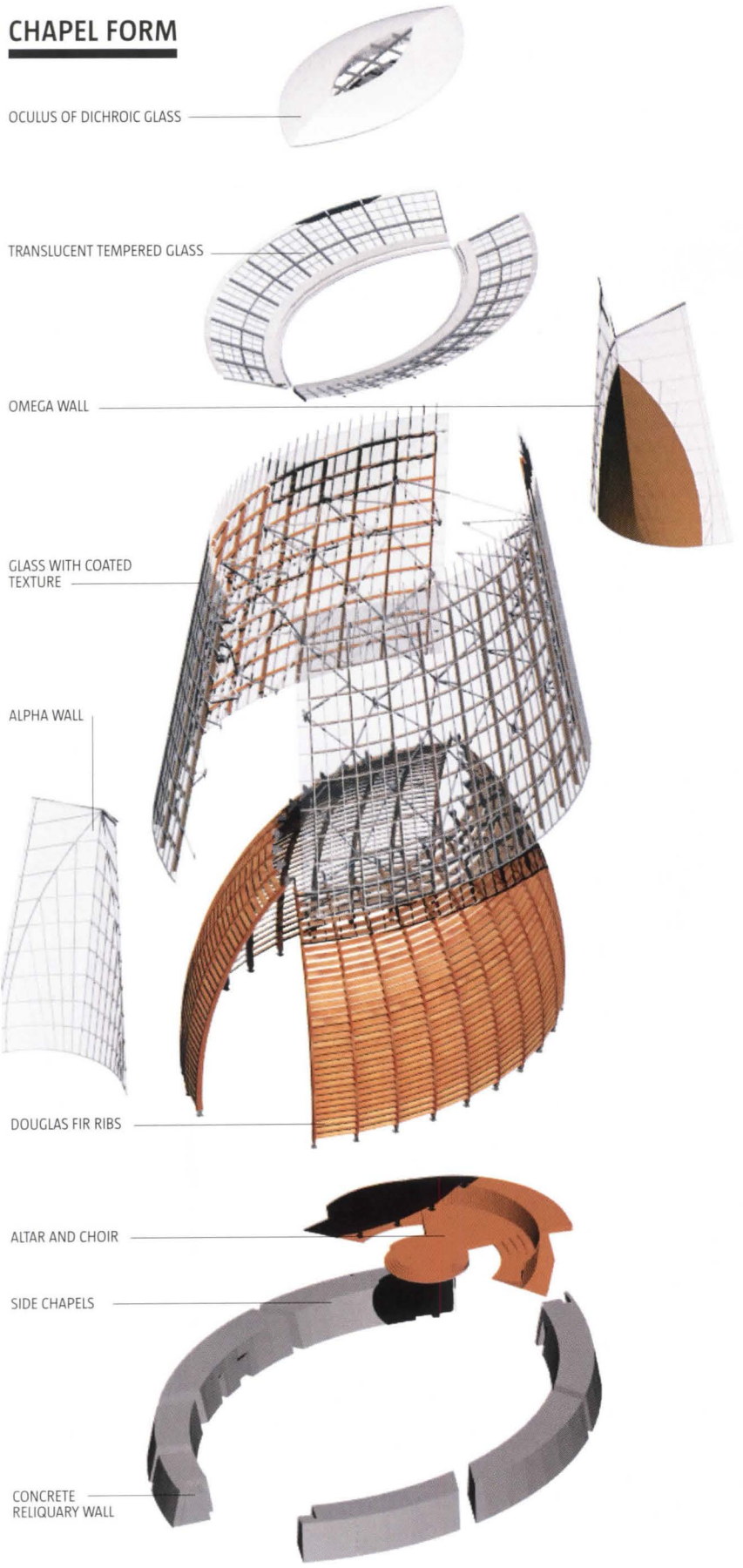
The cathedral's site on the shore of Lake Merritt (above) is 16 feet lower than the surrounding city streets. This allowed the architects to nestle programmatic requirements, such as office space, underneath a large public plaza (right and below right), leaving an uncluttered site.



One of the biggest concerns for the SOM team was to create a sense of luminosity inside the space. Their strategy: layering a glass curtain wall over a series of curved Douglas fir louvers, all anchored in a seismically sound, base-isolated concrete structure (opposite).



CHAPEL FORM



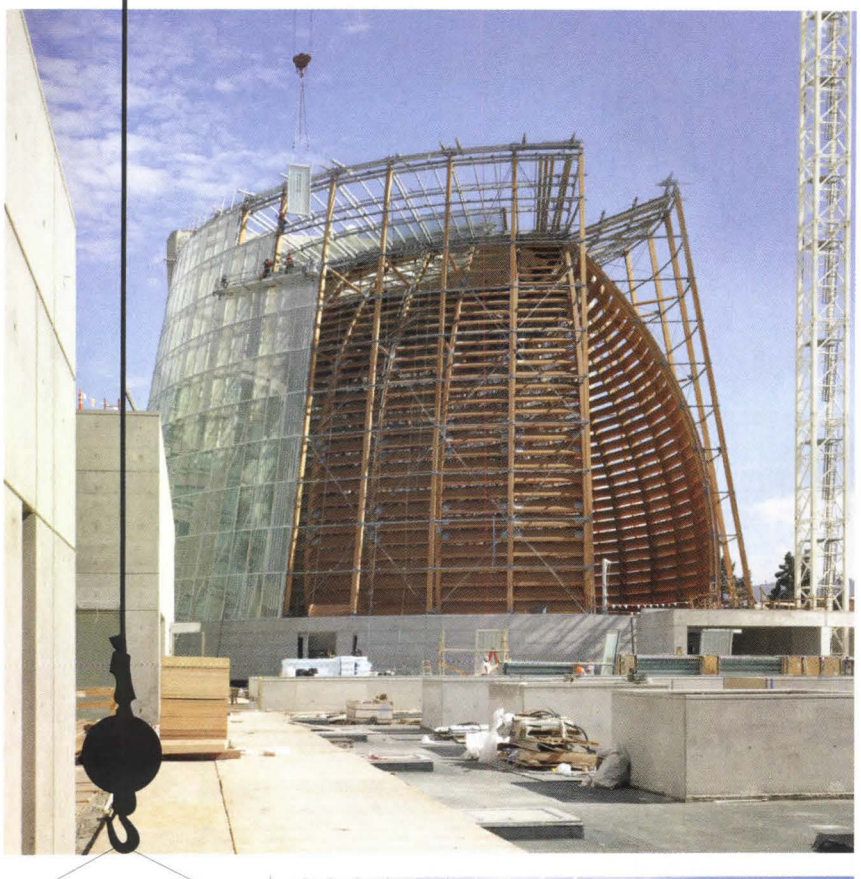
Hartman's inspirations for the building were many and included advice from Walter Netsch, a stalwart at SOM for decades and designer of the famed U.S. Air Force Academy Chapel, in Colorado. Netsch steered Hartman to the seminal book *The Church Incarnate,* by German theorist and architect Rudolf Schwarz. In it, Schwarz advocated arranging parishioners in a circle around the altar to create a sense of community and inclusion, a concept that was later adopted as Catholic doctrine. Hartman was attracted to the idea and used it as an organizing feature of SOM's three-way competition entry, which was remarkably close to the final design. "Conceptually, it was identical," he says, "the notion based upon making a wood sanctuary and enclosing it in veils of glass, and [making] a building that is about extraordinary lightness and luminosity."

A downtown site for the new cathedral was selected on the edge of Lake Merritt, at a sunken block on the lakefront that rests more than 16 feet lower than the city streets along its western edge. Hartman recognized an opportunity to create an artificial ground plane, which allowed him to place the required offices, support space, parish hall, mausoleum, and conference center beneath a public plaza. The same strategy cleared the plaza of all but a handful of low-scale buildings—which will include a rectory, library, shop, and café—thus giving prominence to the soaring cathedral.

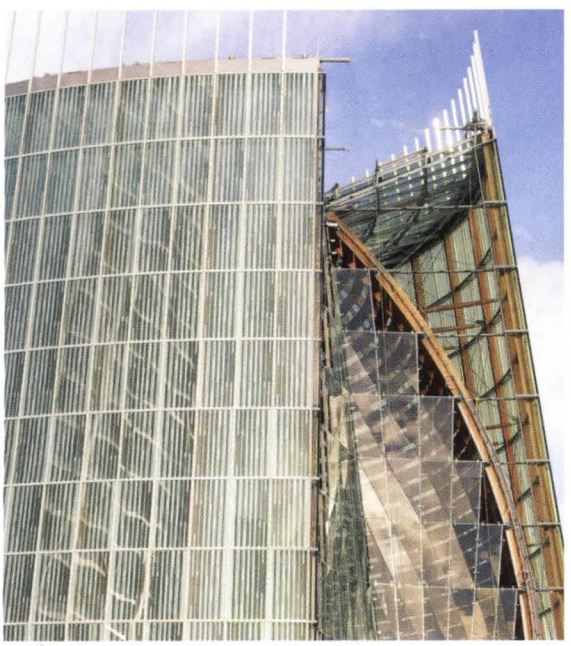
Hartman wanted to create a contemporary building that honors the symbolic traditions of the Catholic faith. "The most fundamental idea here was to start fresh," he says. "We are here on the Pacific Rim in a multicultural place, not in 15th century Europe." His scheme for the sanctuary references two connecting spheres in the manner of the vesica pisces, interlocking circles that represent both an ancient sign of congregation and Christianity's basic symbol—the fish. Sheltering the latticelike wooden shells from the elements are two sloping veils of high-performance glass that cradle the sanctuary like two cupped hands. Enclosing each end of the sanctuary is a faceted wall—the south Alpha Wall, which rises above the main entrance, and the north Omega Wall, which answers a request from the bishop by incorporating an image of Christ rendered in a sophisticated array of perforations (see Toolbox, page 83). True to the spirit of the building's luminous interior, the image appears to parishioners in the pews to be made of light.

Although the high cost of the project has made headlines, budgetary concerns loomed large throughout the design process. "It was a consistent challenge to find ways to achieve this space, a building that would be not only physically able to survive for 300 or 400 years but also be an architecture that was worthy of this ambition," Hartman allows. "We analyzed every alternative to making a space of this height and magnitude, looking at how to enclose it in a way that can be cost-effective."

Hartman's initial selection of wood as the primary material was an intuitive choice, but a fortunate one. "When I designed this building seven years ago, we were just on the cusp of an unbelievable escalation in construction costs, especially in steel (see "Why Steel Is So Costly," page 32). And had this building been fabricated



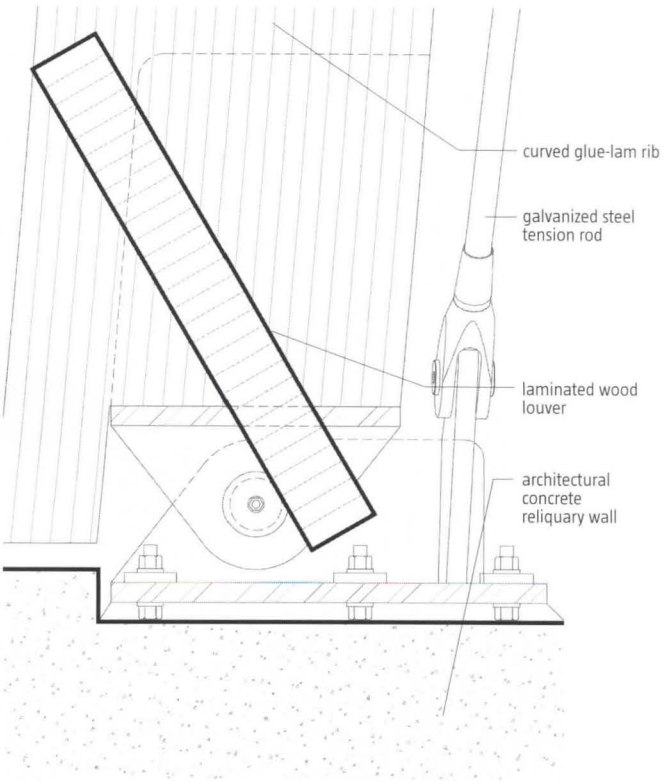
The interior space (opposite) is defined by a curving, arcing wall of fixed wooden louvers, which give off a warm glow when illuminated by the sun. The louvers are anchored to vertical ribs, which are in turn anchored to the concrete reliquary wall that frames the cathedral's base (above).



A fritted glass curtain wall (right) forms the outer skin of the building along with the Alpha and Omega walls—the sculptural walls at either end of the space. High-performance glass was tested to make sure that it admitted enough light but didn't contribute to glare or heat gain.

Glass is installed in a framework of vertical wooden members that form the canted and curving exterior wall. These wooden posts are secured to the interior wooden frame by a series of very thin steel cables and supports (right and top right).

INSIDE DETAIL

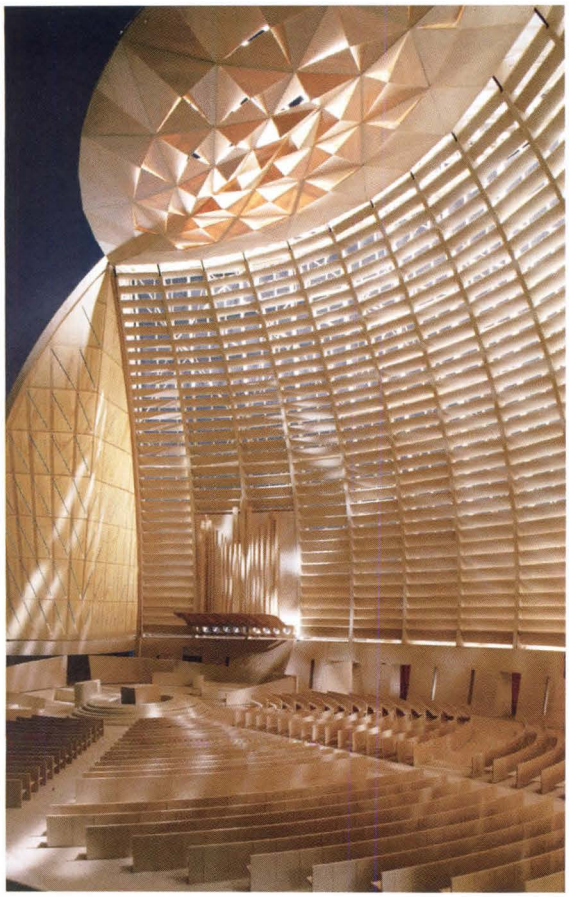


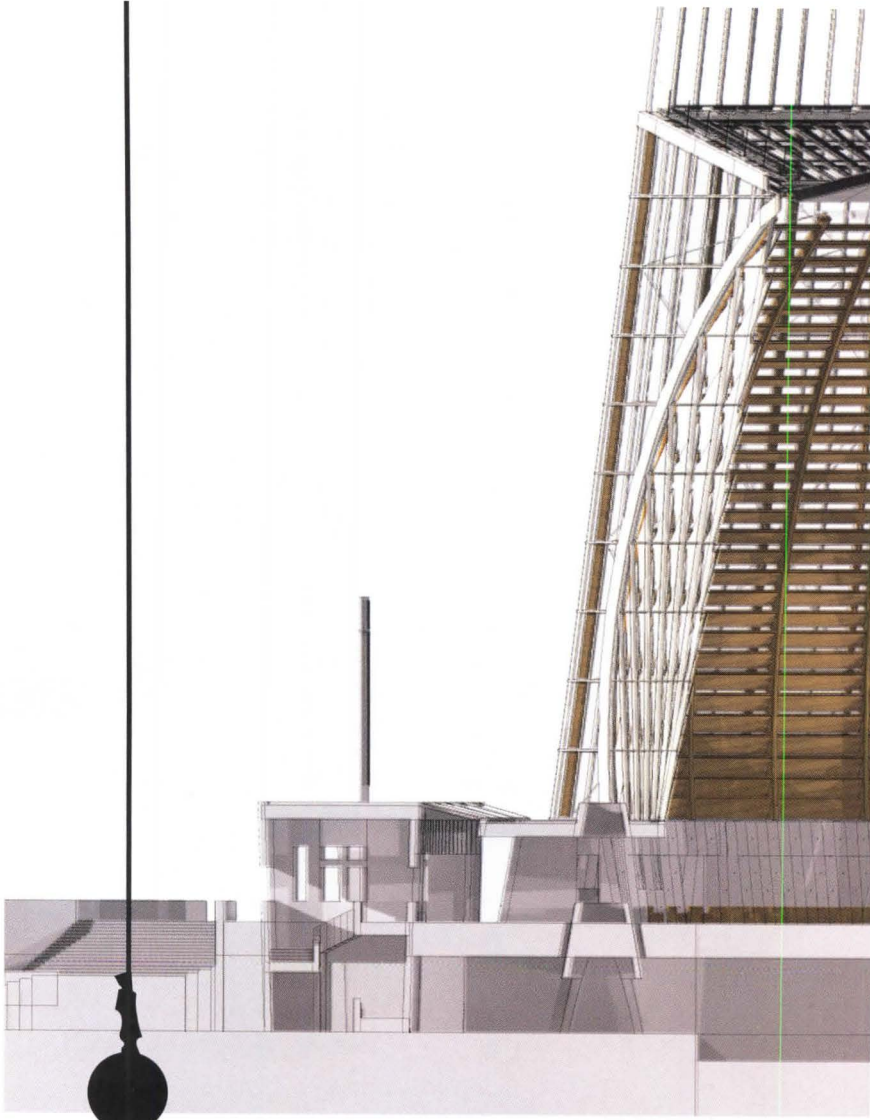
in steel, which would have been the other choice, there is absolutely no way we could have afforded it."

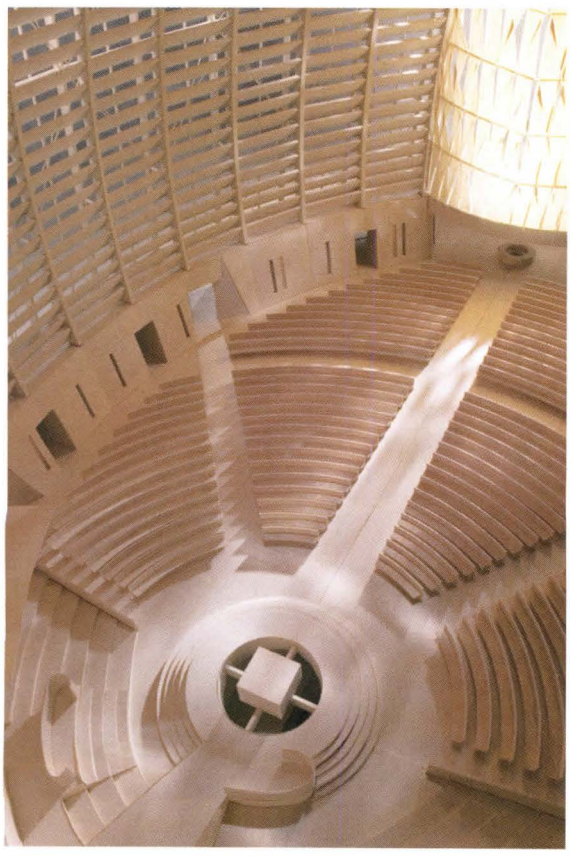
The glue-laminated wood ribs that support both the sanctuary walls and the glass veils were an ideal choice for a building intended to survive for hundreds of years, in spite of its position between the Hayward Fault, which runs along the eastern edge of Oakland, and the San Andreas Fault, which runs through San Francisco across the bay and was responsible for the Loma Prieta quake. Wood's elasticity allows it to bend in the event of a seismic occurrence, but it will return to its original shape, notes Mark Sarkisian, SOM's structural engineering director. "We took that material and combined it with reinforced concrete and delicate steel members that lace the system together three-dimensionally."

Critical to extending the building's longevity, and of crucial importance to the earthquake-wary client, was seismically isolating the sanctuary. A matrix of friction-pendulum base isolators rests beneath the sanctuary's thick concrete walls and floor slab. In the event of an earthquake, the 34 base isolators—each incorporating a 4-foot-diameter steel bearing—would allow the building to move back and forth much more gently than it would if it were fixed firmly to the ground.

The architects refer to the massive, cast-in-place concrete base of the cathedral as the "reliquary wall," in part because it contains a series of small chapels. The twin 15-foot-tall walls that constitute this base create an anchor for the wood structure. The sanctuary's curved, tapering Douglas fir ribs spring from the top of the walls, held in place by steel pins at the base. A steel compression ring



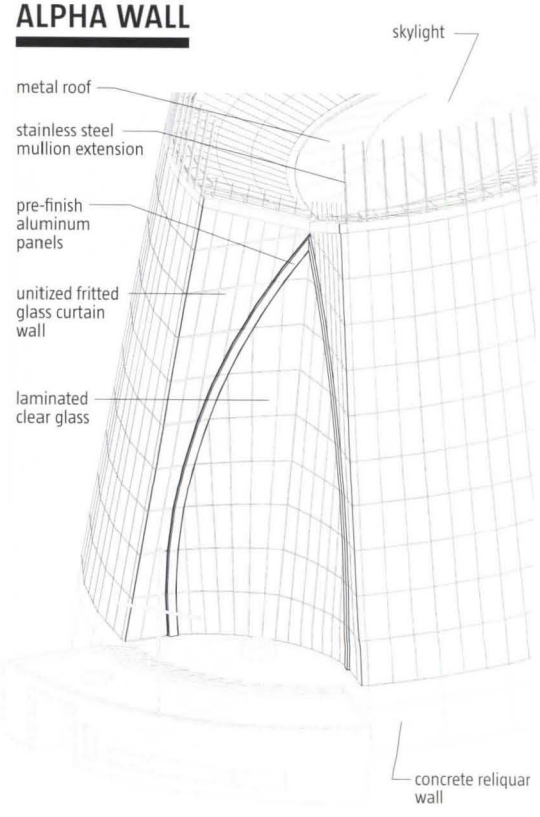




The sanctuary is flanked at both ends by sculptural walls: the Alpha Wall over the entrance (right and above), and the Omega Wall over the altar at the other end. Carefully engineered with the help of 3-D modeling programs to determine stresses on materials, the walls create a striking presence and allow light to enter the space unfettered.

The arrangement of the pews is circular, surrounding one half of the circular altar (left and above left). The SOM team decided on this configuration specifically based on research suggested by retired SOM partner Walter Netsch.

ALPHA WALL



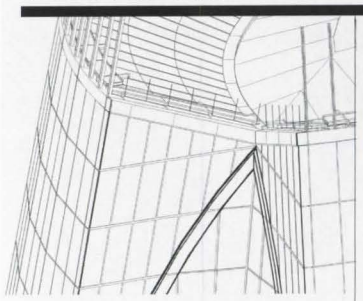
joins the ribs at the top. Weaving the vertical ribs together are hefty, glue-laminated fixed louvers that bind the ribs together like a diaphragm or shell.

The outer walls, shaped like segments of a cone, are formed by slender wood columns connected horizontally by thin steel members. The columns provide a repetitive framework for panels of fritted glass, whose translucency was carefully studied to produce the desired luminous effect. Joining the outer glass and inner wood shell are slender steel tension rods, most about 1 inch in diameter. The extreme lightness of the structure is one of its important assets, Sarkisian says. "The only way to achieve this solution was because we've isolated the building seismically. Otherwise, the structure would be robust or quite clumsy in proportion because the member sizes would be so large."

A tubular steel framing system supports the Alpha and Omega walls. (The Alpha Wall is about beginning, a place where visitors enter the building and encounter the baptismal font, and the Omega Wall is about conclusion, rising behind the altar and above the mausoleum.) The dynamic shape of the Alpha and Omega walls, which appears at first glance to resemble an inverted wedge on either end of the sanctuary, created another set of challenges, but the organic form was important to Hartman, who likens the faceted panels to flower petals. In terms of the sanctuary's overall composition, the walls stitch together the building's spherical and conical geometries—curving at the base, tipping inward, and folding like a crease at the top.

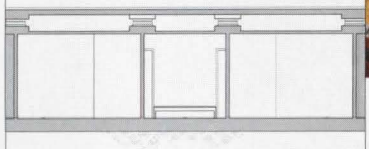
Their complex geometry required a three-dimensional study to develop suitable details for installation and fabrication of the exterior glass and interior

TOOLBOX



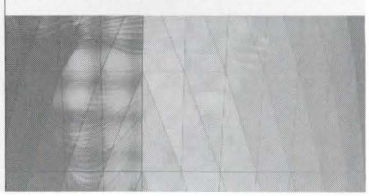
Software · The design team used a variety of programs to create the drawings and renderings for the project. Construction documents were created in AutoCAD ADT 3.3, otherwise known as version 2002, but for certain elements, such as the dynamic Alpha and Omega walls, the team turned to 3-D modeling program Form Z, version 4.0, to help determine angles and potential stresses. Structural models for the entire structure were created in SAP 2000. 3D StudioMax was used to create 3-D renderings of the building at all times of day, and Adobe's Illustrator and Photoshop, version CS, were used to create color site plans and elevations.

Seismic Base Isolators · To protect the building from future earthquakes on the surrounding web of fault lines, the building's cast concrete base rests on 34 seismic base isolators to help the building ride out any shocks. The individual base isolators are arranged in a matrix, with the load evenly distributed. SOM's in-house structural engineering team, led by director Mark Sarkisian, specified friction-pendulum base isolators, each one with a 4-foot-diameter steel bearing. This particular variety of base isolator employs a sliding system, with an interfacial material that slides across stainless steel.



Glue-lam Ribs · The actual geometry of the interior space was based on more than just the desire for a certain volume; it was based also on necessity. The width and curve of the wood structure's vertical glue-lam beams was informed in part by the 110-foot-long-by-13-foot-wide bed of the flatbed trucks that could make it over the bridges and through the tunnels on the path between the wood's origin in Portland, Ore., and the Oakland building site. The width was based on the standard 1-1/2-inch-by-11-1/4-inch dimensions of the stock laminations used in glue-lam construction.

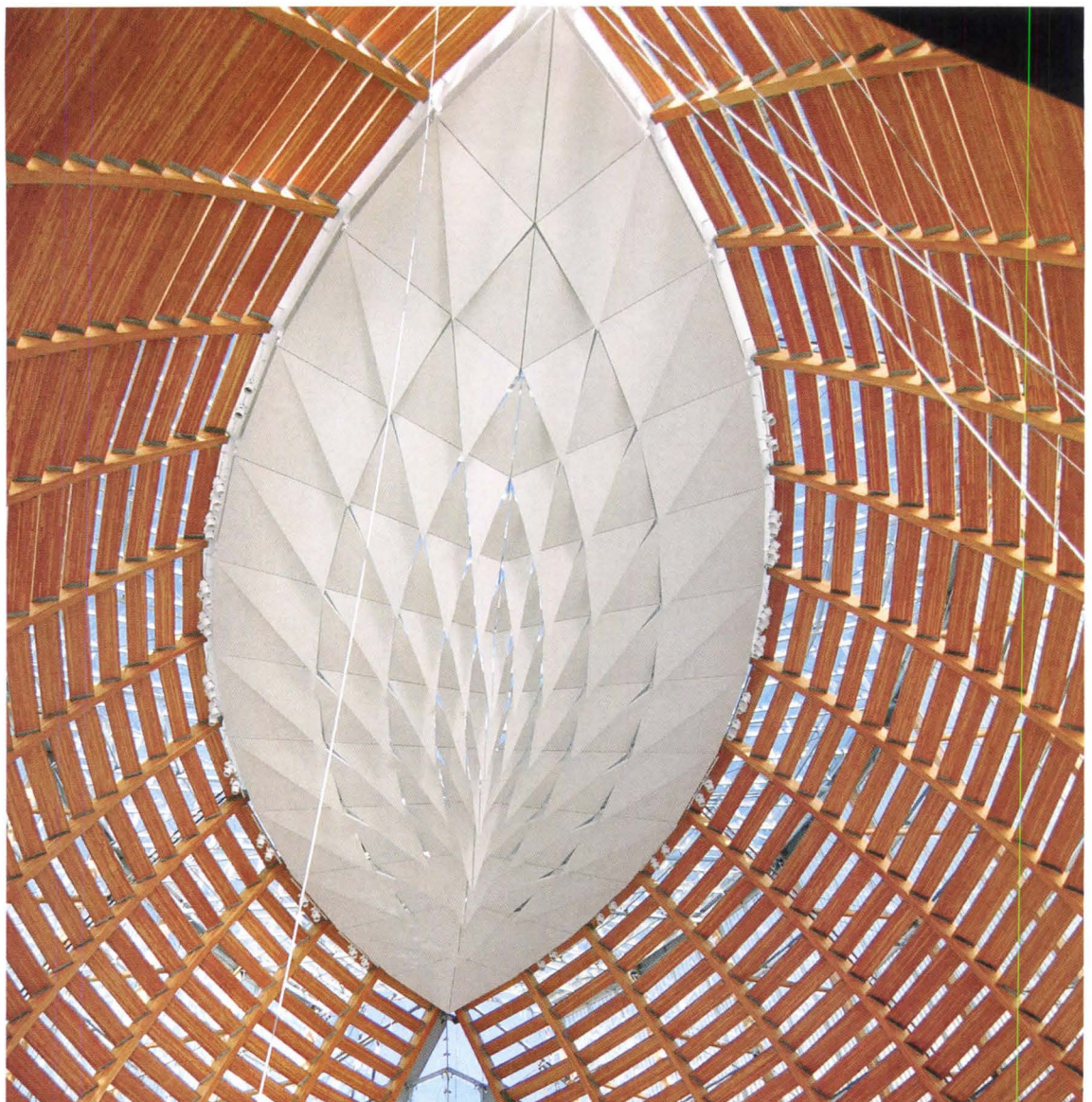
Omega Wall · When the bishop voiced his desire to include a strong representational image of Christ in the building, Hartman wanted to make it integral to the architecture. As a guide, the church supplied a digital image of a carved stone relief at Chartres Cathedral. A team of architects, environmental graphic designers, and members of SOM's digital design group worked together to create an algorithm that sorted the pixels according to brightness. The image was tweaked to enhance its legibility before then being mapped onto the 3-D surface. In finished form, the backlit image will rise more than 50 feet high, composed of more than 90,000 holes, ranging in size from 4mm to 24mm, laser cut into the anodized aluminum panels.



Above the sanctuary hovers an oculus with a scrim of faceted acoustical panels (right). The panels help absorb sound in the cavernous interior and filter daylight from the skylight above.

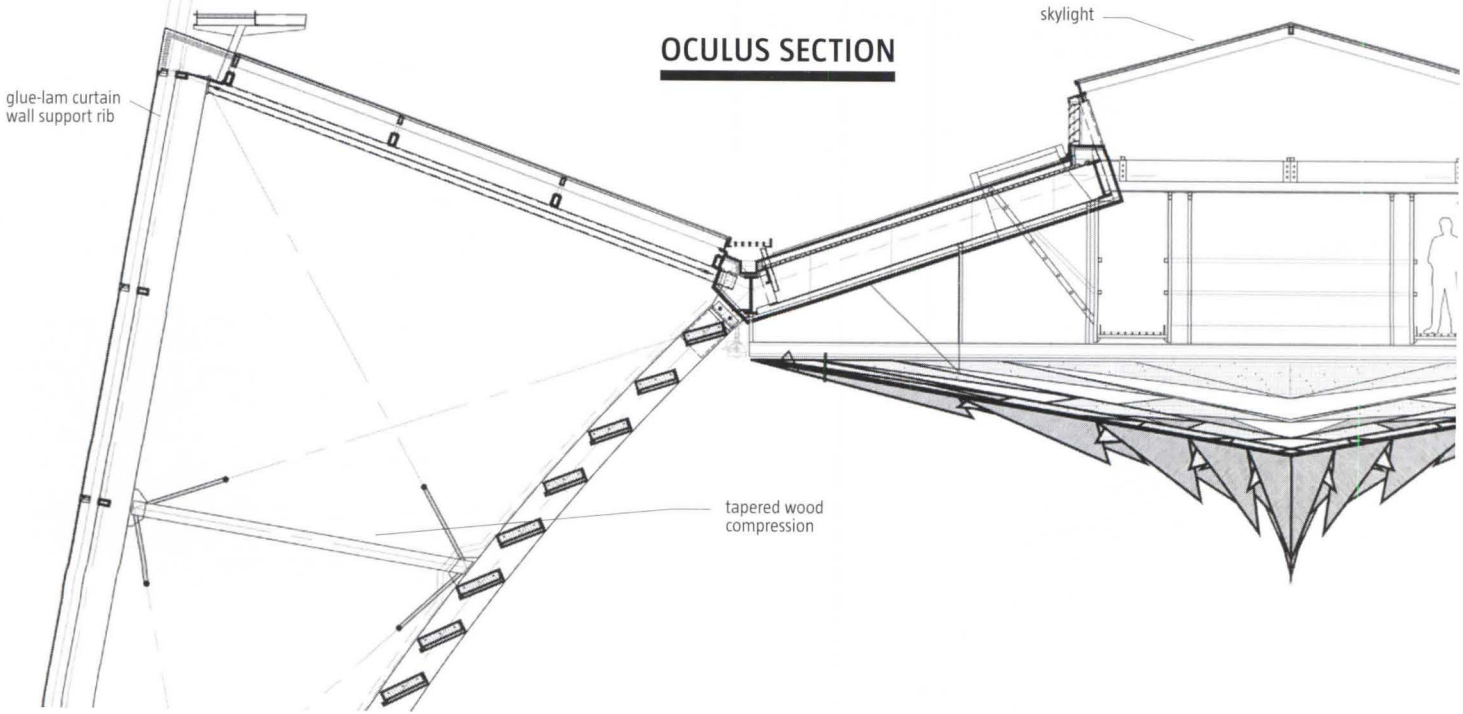
Panels were assembled just above ground level (opposite middle) to ensure proper proportion and overlapping (opposite top), as called for by the plan. Suspended en masse from tensioned cables, the whole oculus was then hoisted into place.

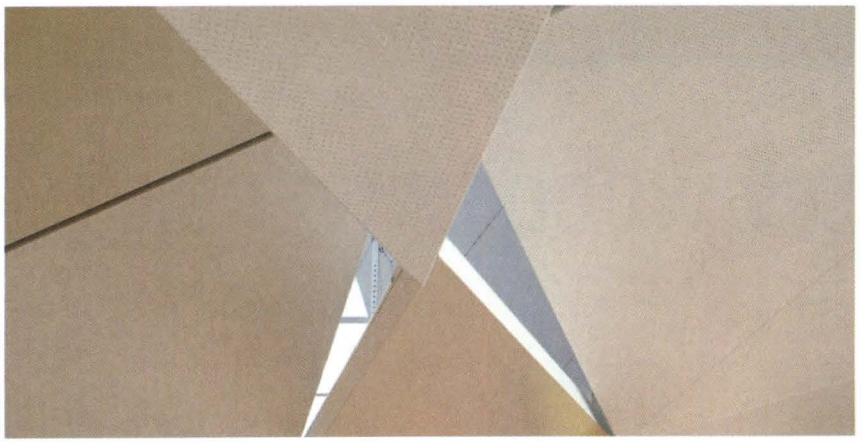
Acoustical panels are capped on the exterior by an articulated glass roof, hidden from ground view by stainless steel extensions on the perimeter (see section below).

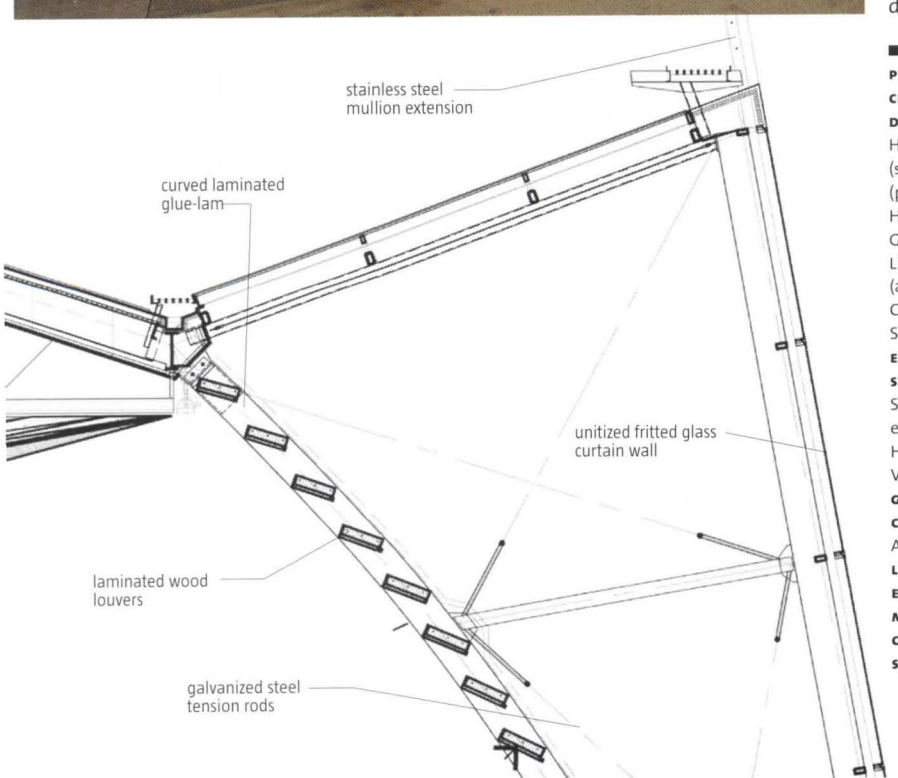


LEFT: SOM/JANE LEE; OPPOSITE TOP AND BOTTOM LEFT: SOM/JOHN BLAUSTEIN; DRAWING COURTESY SOM

OCULUS SECTION







aluminum panels that enclose them. Using AutoCAD and Rhino 3D software, the team first experimented with rectangular panels or parallelograms for the enclosure, says SOM technical director Keith Boswell. "But we were trying to twist or bend material, making it do more that it could do." That's when they settled on triangular shapes. Due to the shifting plan and section geometry of the end walls, the panels vary in size. The 3-D model facilitated the design and detailing of the panels with a high degree of accuracy, Boswell adds.

Given the function of the building, Hartman took care to consider the quality of light that parishioners will experience inside, seeking an ethereal effect produced by the combination of reflected light, the warm wood surfaces, and the glow of the transparent glass. An oval oculus at the top of the sanctuary will admit additional daylight through an arrangement of triangulated baffles. SOM repeatedly modeled the entire space in 3-D, but it also built and tested physical models to help predict the lighting effects.

From a mechanical standpoint, the firm's objective was to provide the most efficient system for occupant comfort without heating or cooling the air above the occupied height. The sanctuary will be tempered by radiant heating concealed in the floor. Air conditioning will occur through "displacement cooling," in which cool air is fed through small floor openings. This allows pools of conditioned air in a 10- to 15-foot zone near the floor, says Boswell. As cool conditioned air warms, it rises to the top of the sanctuary and is vented outside through motorized dampers at the base of the oculus.

A structural tour de force, the Cathedral of Christ the Light—expected to be completed in September—promises to be an awe-inspiring gathering place of soaring proportions, luminous light, changing moods, and soothing natural materials. If that doesn't inspire wonder, what will?

PROJECT Cathedral of Christ the Light
CLIENT Roman Catholic Diocese of Oakland
DESIGN ARCHITECT Skidmore, Owings & Merrill, San Francisco—Craig Hartman (design partner); Gene Schnair (managing partner); Patrick Daly (senior design architect); Keith Boswell (technical director); Ray Kuca (project manager); Eric Keune, David Diamond, Henry Vlanin, Denise Hall Montgomery, Jane Lee, Chris Kimball, Christiana Kyrillou, Surjanto, Gary Rohrbacher, Elizabeth Valadez, Mariah Nielson, Peter Jackson, Lisa Finster, Ayumi Sugiyama, Doug Smith, Liang Wu, Katie Motchen (architecture project team); Tamara Dinsmore, Chanda Capelli, Carmen Carrasco, Suzanne Le Blanc (interiors project team); Lonny Israel, Alan Sinclair (environmental and liturgical graphics)
EXECUTIVE ARCHITECT Kendall/Heaton Associates, Houston
STRUCTURAL ENGINEER Skidmore, Owings & Merrill, San Francisco—Mark Sarkisian, (director, structural engineering); Peter Lee (senior structural engineer); Eric Long (project structural engineer); Sarah Diegnan, Lindsay Hu, Jean-Pierre Chakar, Rupa Garai, Aaron Mazieka, Shea Bond, Ernest Vayl, Feliciano Racines (project team)
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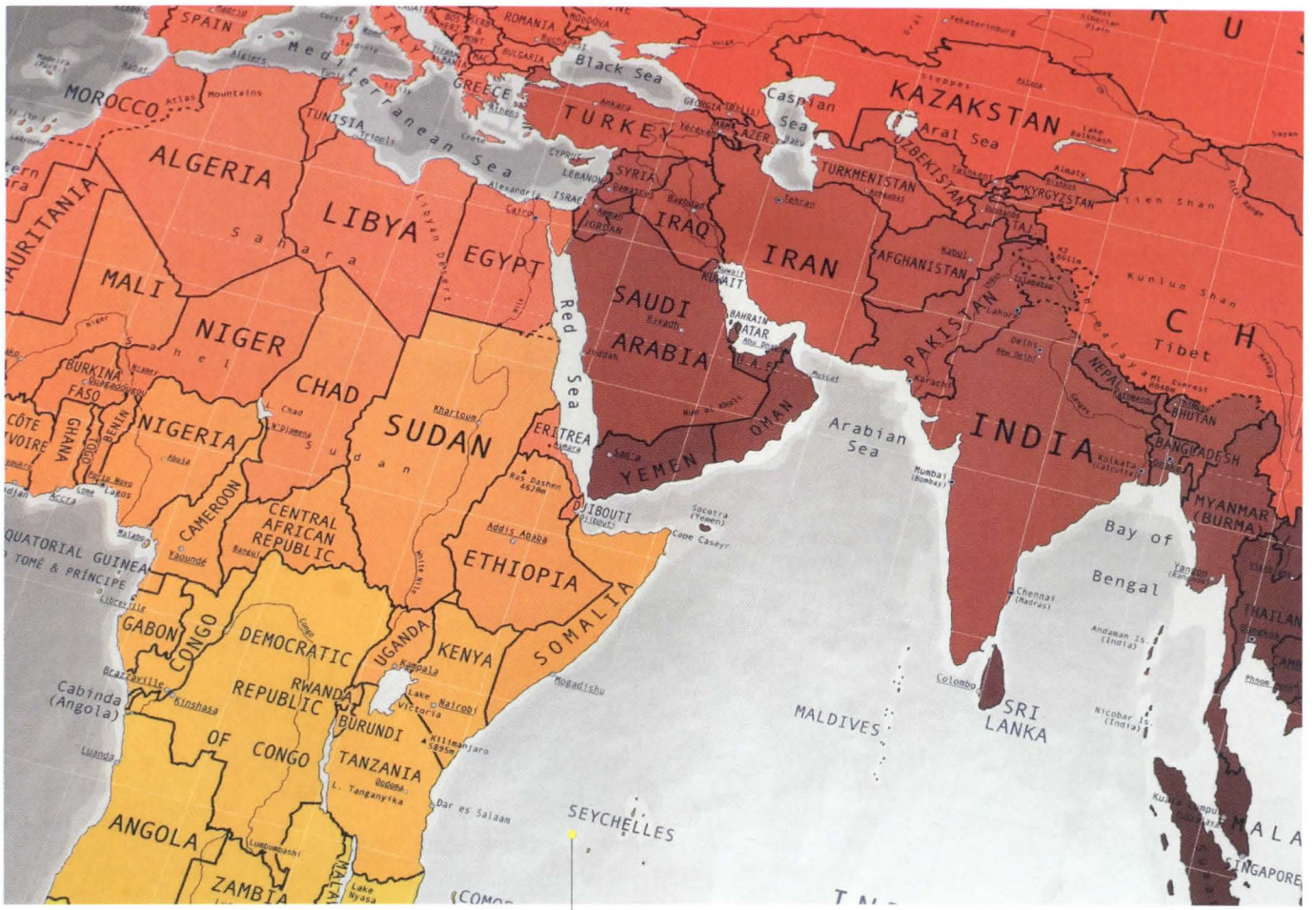
Text Hannah McCann

CULTURE

BOOKS, EXHIBITS, OBJECTS, AND MORE



OBJECT LESSON

Futuremaps are printed on silk-finish paper using spot colors to represent continents and silver ink for the seas. Scale is approximately 1: 50,000,000; size is approximately 3 feet wide by 1 ½ feet high; font is Andale Mono. Futuremaps founder Marcus Kirby recommends framing the maps without glass to let light play off the colors.

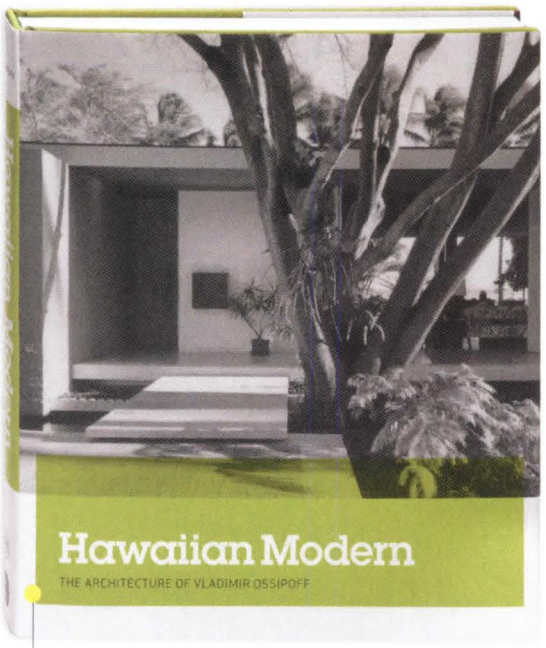
Futuremaps • £35

THERE'S A CERTAIN COMFORT in the way maps neatly package the world. But we all know the world isn't flat, separated into crayon-colored puzzle shapes, or centered around the USA. Cartographers have been waging a quiet war amongst themselves for decades, if not centuries, trying to determine the best way to represent our round, messy globe in two dimensions. Until the 1970s, the unquestioned practice was to map the world cylindrically—that is, with parallel lines of longitude but latitudes stretched in proportion to distance from the equator. The cylindrical method was introduced in the 16th century and made sense for navigational purposes. But it distorts the proportions of continents, so all of us who grew up gazing at maps on classroom walls think of the U.S. as 68 percent larger than it actually is, the Soviet Union as 223 percent larger, and Greenland swollen up to 554 percent its actual size.

Futuremaps is a one-man company in the United Kingdom headed by Marcus Kirby, a designer who is as restless to resolve the inherent problem of mapping as he is to do it with style. His background includes tailoring and coloring plates for fashion houses, but he's had a knack for geography since grade school. Kirby's maps use pseudocylindrical projections that combine parallel lines of latitude and curved meridians, so countries' proportions are accurate. Insets keep Greenland and the polar extremes at their proper size. Glossy color varies in hue across countries. Kirby explains, "We have looked to remove the harsh political borders that more traditional patchwork coloring systems promote."

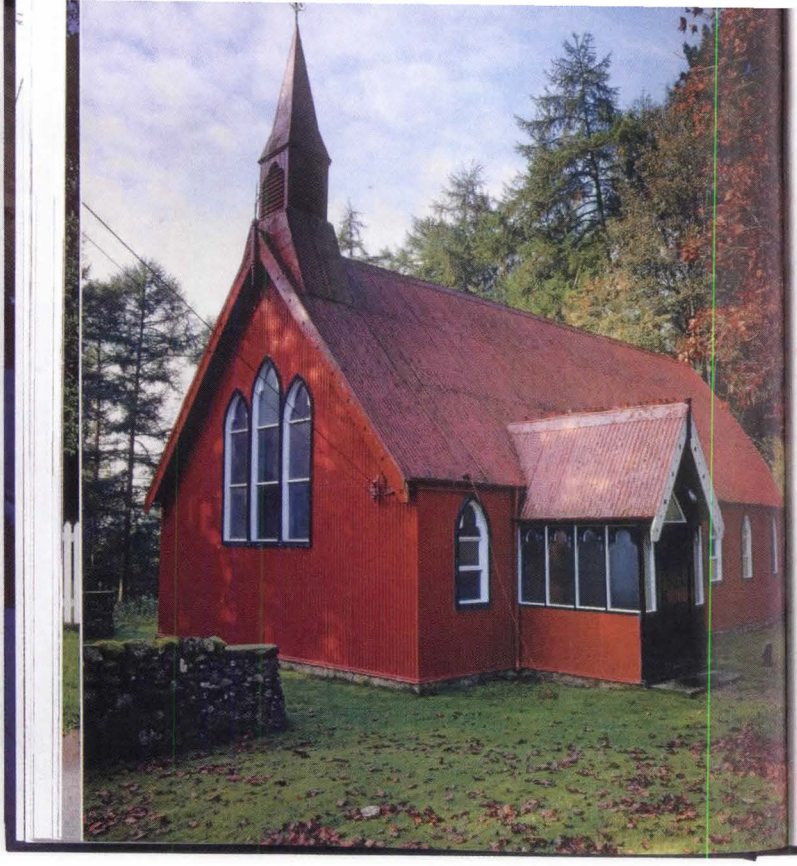
COURTESY FUTUREMAPS

CULTURE



BOOK

Hawaiian Modern: The Architecture of Vladimir Ossipoff • *Edited by Dean Sakamoto* • Just when it seemed there was nothing left to cull from midcentury Modernism, Dean Sakamoto presents the "tropical modern" corporate projects and private residences of Vladimir Ossipoff, who was born in Russia, grew up in Tokyo, studied at Berkeley, and practiced in Honolulu. *Yale University Press; $65*

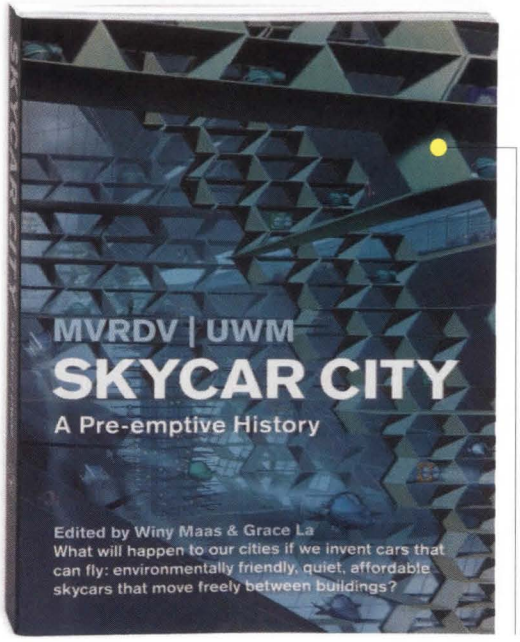


EXHIBIT

Car Culture • *Scottsdale Museum of Contemporary Art, Scottsdale, Ariz.* • Through April 27 • A dozen international artists play with our love of the automobile, an infatuation that isn't always healthy, as Austrian artist Erwin Wurm reminds us with *Fat Car* (2000; pictured here). *smoca.org*

BOOK

Corrugated Iron: Building on the Frontier • *By Adam Mornement and Simon Holloway* • Long before flat-packed prefab was de rigueur, whole corrugated metal townships could be ordered from catalogs and flat-pack shipped around the world. At first glance, *Corrugated Iron* looks packaged for the coffee table, flush with large-scale photos of patinated vernacular buildings, the usual contemporary suspects, and fun archival illustrations. What makes this book more than eye candy is the authors' exhaustive treatment. Clearly they love the subject—Holloway describes it as a "passion." *Norton; $60*



BOOK

Skycar City: A Pre-emptive History
By MVRDV/UWM • Winy Maas, principal of the Rotterdam firm MVRDV, joins professor Grace La and 12 students at the University of Wisconsin-Milwaukee School of Architecture & Urban Planning in presenting the results of the first Marcus Prize Studio. The topic: If our long-beloved fantasy of skycars came true, what would cities look like? More compelling than the written answers are the ways the group uses information-age tools to make graphs, stats, charts, models, and timelines that sing. *Actar; $38*

OPENING

Broad Contemporary Art Museum • *Los Angeles* • February 16 • The first phase of LACMA's expansion, designed by Renzo Piano Building Workshop, opens this month. At 60,000 square feet, it's one of the largest column-free art spaces in the U.S. The opening comes with some scandal as the building's namesake and financier, Eli Broad, recently decided to loan rather than donate his art collection, a decision that allows him to uncharitably enjoy an increase in the market value of his holdings as they go on public view. *lacma.org*

EXHIBIT

Work in Progress: Herzog & de Meuron's Miami Art Museum • Through April 6 • MAM Director Terence Riley offers the public a rare look into the early design development of a major cultural landmark—and a chance to debate its merits and promise. Herzog & de Meuron's design for the new museum isn't due to be finished for another year; the museum itself is scheduled to open in 2011. *miamiartmuseum.org*

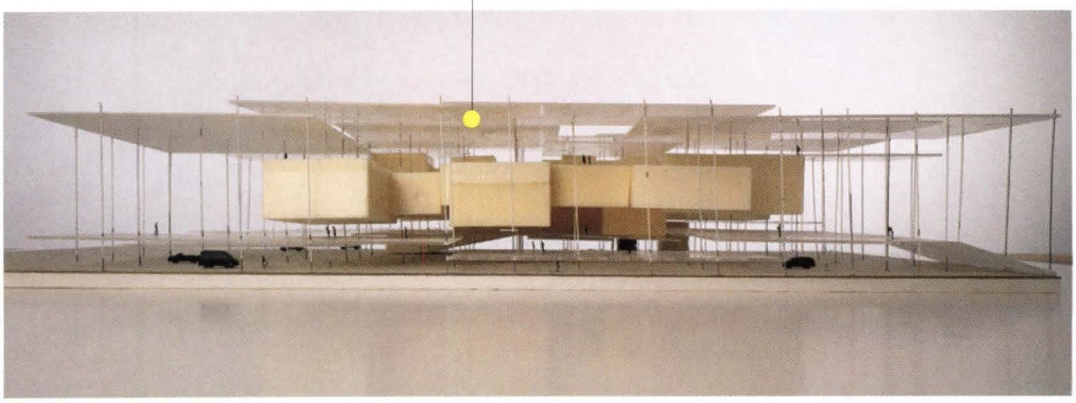


PHOTO CREDITS, CLOCKWISE FROM OPPOSITE, TOP LEFT: BOOKS BY CHARLIE BROWN; CONSTRUCTION SHOT COURTESY OF LACMA; MODEL IMAGE COURTESY OF MIAMI ART MUSEUM; *FAT CAR* COURTESY OF SCOTTSDALE MUSEUM OF CONTEMPORARY ART.

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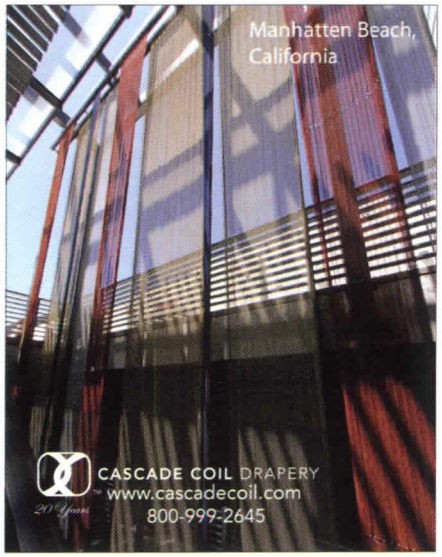

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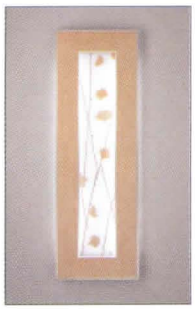

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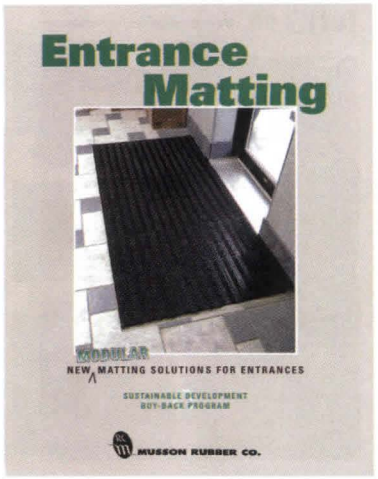

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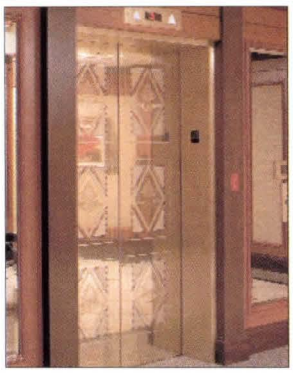

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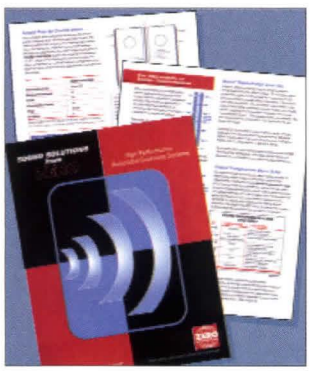

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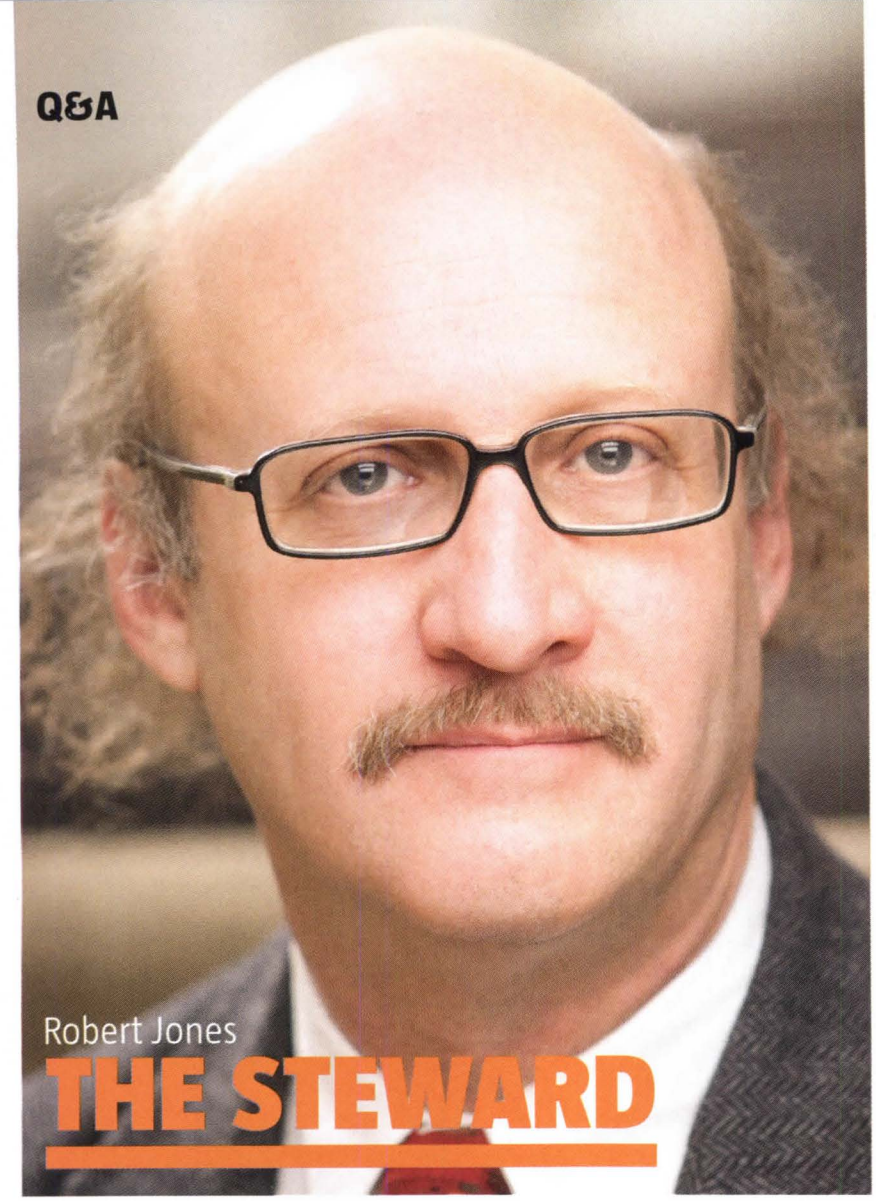

Robert Jones

THE STEWARD

Interview Edward Keegan **Photo** Matt Greenslade

AS PLANNER FOR TALIESIN EAST AND TALIESIN WEST, ROBERT JONES SEES THE FRANK LLOYD WRIGHT CAMPUSES AS INVALUABLE OBJECT LESSONS IN SUSTAINABLE COMMUNITY BUILDING.

AGE 52
POSITION Vice president of campus planning, restoration, and development
ORGANIZATION Frank Lloyd Wright Foundation
FYI Before joining the foundation, Jones was assistant dean for building operations and facilities at Mies van der Rohe's IIT campus.

→ Audio of this Q&A is available online at www.architectmagazine.com.

What background do you bring to the position of campus planner for the Frank Lloyd Wright Foundation?
I have been an owner's architect for 28 years. I was deputy chief architect at the Chicago Park District, director of design and construction for the Art Institute of Chicago, and assistant dean for buildings and operations in the College of Architecture at Illinois Institute of Technology.

What are the differences between the two campuses, Taliesin East and Taliesin West?
They are two different sites, two different contexts. Taliesin East is a rolling countryside in Wisconsin of 800 acres. It's a mix of agriculture and prairie landscape. Taliesin West, in Scottsdale, Ariz., is 490 acres of pristine Sonoran desert. The contrasts are quite stark and startling.

What problems are you dealing with?
Deferred maintenance is not a glamorous activity. Both campuses were living laboratories built by Mr. Wright and the apprentices and fellows. I believe there is only one building—the Hillside School—that was constructed by a contractor. Even though the documents and drawings indicate what we believe is behind a ceiling or a wall or below ground, it is always a revelation when our staff and our crew open up something.

Do the students still work on the grounds and buildings?
They certainly do. The immediacy of doing something real is gratifying. It has always been a hands-on curriculum. Mr. Wright, with his apprentices and fellows, practiced design/build. Understanding the materials that you are designing for and with is exciting.

Are you teaching at the Frank Lloyd Wright School of Architecture?
Not at the moment, although I hope to. The dean, Victor Sidy, and I have been talking about mobilizing a group of students to document aspects of the buildings where we can apply best practices. These were living laboratories, and Mr. Wright would experiment with new materials. Some design details exceed the technology of the day. We are trying to convert our documents into BIM. To know what has been touched by the hand and the direction of Mr. Wright are things that we need to understand.

Some of these sound like very contemporary issues ...
I am not a Wright scholar, but I have been fascinated by how Mr. Wright produced his architecture. I look at his response to a site condition using indigenous materials, using landscape, natural light, and ventilation. I believe that now, 75 years later, we are beginning to appreciate another dimension to Mr. Wright's work. His process appears to be at the core of sustainable discussions in architecture today.

What's the most surprising thing you have learned from Wright, given your proximity to his work?
It is amazing to sit and work in one of his buildings by yourself and watch the change of light, but I was really struck with the campus grounds. The 800 acres in Wisconsin is a blend of agriculture, naturalistic landscapes, and Prairie architecture. Mr. Wright did not connect into the electrical grid until the 1940s. They raised the crops that they lived on. They moved what they had canned with them on their annual migration to Taliesin West. It really was a sustainable community. The agricultural elements had been put aside since 1959, when Mr. Wright passed away. The foundation has leased land to a farmer, and we are in the process of converting several hundred acres of cropland into organic farms.

How available are the facilities to visitors?
Taliesin West is available year-round; 110,000 people go through. Taliesin East is open from May to the first of November, and we have 30,000 visitors. The foundation is undergoing a transformation to become more progressive and outward focused as an education and cultural institution. We are at a transitional point to develop and restore and activate these sites. They are areas to educate [people] about Mr. Wright's impact beyond stylistic issues.

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