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TOWARD A NEW ORNAMENT

New works by Jeanne Gang, John Ronan,
and Mack Scogin and Merrill Elam

Reviews by Sally B. Woodbridge and Cheryl Kent

PLUS

Edward Keegan on Chicago's new playland
Bringing design closer to fabrication
How married partners cope



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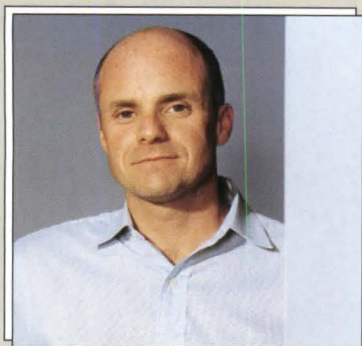


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74 Mack Scogin Merrill Elam Architects' slate-shingle-clad design for the Jean Gray Hargrove Music Library at the University of California, Berkeley adds a fourth edge to the campus' arts quadrangle.



IN SEARCH OF ORNAMENT (PART II)

BY C.C. SULLIVAN

Last year, I argued on this page for introducing more ornament into contemporary architecture (July 2003, page 9). I'd like to revisit the matter.

My comment drew an avalanche of letters and e-mails, most of them supportive. True, many of you wrote, much of today's cutting-edge work lacks visual interest on a human scale, let alone a decorative scale. But some countered that we're already blessed with strong paradigms to the contrary. One insightful letter-writer pointed to the honest expression of function as *the ornament of all time and our time* (September 2003, page 15), an idea that pleased me greatly—for a while. Ultimately this is a path of evasion; stretch the definition slightly and tree bark or a concrete sidewalk's texture can be proffered as "ornamental." Their patterns may be truthful and visually engaging, but they don't communicate much more than the physics of gravity or the system of construction. Ornament is more than a side effect; it carries a metalevel of cultural meaning that is perceptible and describable.

Lots of other writers reminded me that the classical orders provide a pleasing, flawless, and time-proven ornamental language. (Many were reacting to my hope for "new" types of ornament.) To the neo-neoclassicists and new traditionalists, I offer my fond wishes for your one-way journey to the past. Your misty-eyed confections are for neither this generation nor the next (although they do seem to suit your gated golf communities and entertainment venues just fine). Today's unadventurous revivalism is far less challenging and far less interesting than the eclectic works of the 1920s. The only fascination your beaux-arts designs hold today is invisible to the public: the emerging class of synthetic finishes and lightweight structures that bring these illusions to life.

Any relevant ornament for our lifetime must speak to current conditions and mores. Neither the structural expressionists nor the regurgitating revivalists are precisely in synch with our times.

But at least they're trying. The other side of the coin

is what author Tom Wolfe calls today's "constipated" neomodernism. Ironically, the aims of many modernist designers mirror those of the new traditionalists: Their product is coolly perfectionist and easy on the eye, calling to mind a bygone era that seems so much simpler, so much more promising than today.

Not so. Engage your world and your client, and you'll find the optimism and clarity needed to explore anew the ornamental scale. As points of departure, consider this month's design coverage (page 73). Two of the projects are built for ethnic communities, and the architects ascribe visual meaning to their clients' group identities in the framework of melting-pot America. (Think of this utterly contemporary expression of diversity and cultural specificity in opposition to the International Style's globalizing and homogenizing tendencies.) The third project is about functional expression, but with deliberate flourish. These three architects weren't just looking to garnish their plates; instead, they were exploiting opportunities for visual interest. And in the process, they uncovered meaning.

As I wrote last July, these projects share a key trait: the search for a novel and culturally relevant ornamental language that expresses ideas from history, nature, or other civilizations by means of cutting-edge building technologies. Yet while these are masterful works, they are best viewed as noteworthy starting points. In them, we can celebrate the potential of architecture to bring meaningful language and imaginative form to a world that is hungry for it.

THE ACE AWARDS, YEAR THREE

Architecture magazine offers many exclusive benefits, and the ACE Awards—now in its third year—is a great example. Created to recognize manufacturers that help bring architecture into the realm of excellence, it has also become a reliable shortlist for designers. To specify the most innovative and durable products, see our list of cited companies—based on *your* feedback—starting on page 25. ■

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letters

Double or nothing

Regarding the editorial on housing and politics [October 2004, page 11], I'll quote the late Johnny Carson: "Democracy is buying a big house you can't afford with money you don't have to impress people you wish were dead. And, unlike communism, democracy does not mean having just one ineffective political party; it means having two ineffective political parties."

Darrell A. Caraway

Emeryville, California

Hamstrung out

Kudos and hats off to Douglas Kelbaugh for his Protest article on the profession of architecture and the "seven hamstrings" [October 2004, page 88].

James Edwards

Brentwood, Tennessee

ADA under fire?

There is nothing "new" in the ADA; it has been the law of the land for nearly 15 years, and the *Architectural Barriers Act* and the *Rehabilitation Act* have been law for 35 years [September 2004, page 20]. There was never an injunction simply because a public entity wanted to gut the ADA Title II. *More important*, the Supreme Court upheld civil rights for all in the *Lane, Jones, et al. v. Tennessee* decision by properly applying the Fourteenth Amendment. It's shameful and disconcerting that four dissenting justices sided with the same segregationist arguments that have resisted people's fundamental rights going back to the abolition of slavery. *Brown v. Board of Education* was decided unanimously 50 years ago; now the highest court of the land is teetering on the brink.

Carlos Araujo

Glendale, California

Off the page

In his article on Berlin [September 2004, page 25], Max Page was really off the page in observations and conclusions while looking for his Bilbao specimen. The Berliners' quest to heal the horrific war damage is succeeding, a little at a time. The main effort is the reconstitution of the cultural fabric, reaching back to Berlin's urban-design framework—beyond Mies, to Schinkel. One needs to look for the wholeness of its parts: for example, Friedrichstrasse, Pariser Platz, Hackesche Hofe, and the gravitational pull of Potsdamer Platz.

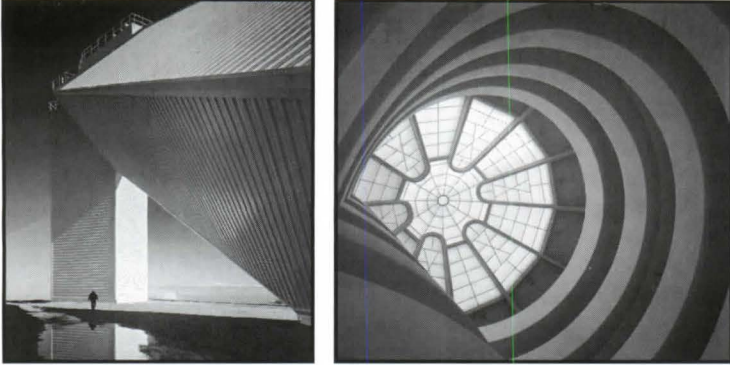
Tom Lee

San Francisco

Any old burg

Although I found much to be worthy in the Bayview Village housing project [September 2004, page 60]—the floor-plan layouts and simple forms are appealing—the rigidity of the site design and the similarity

EZRA STOLLER, 1915-2004

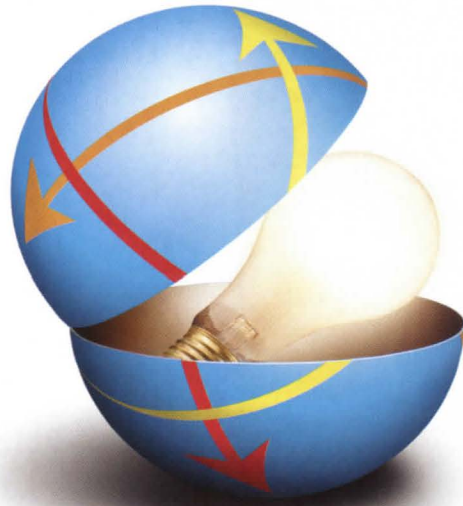


Architectural photographer Ezra Stoller, whose singular black-and-white images have deeply influenced our perception of the twentieth century's modern masterworks, died October 29. He was 89.

Throughout a long and distinguished career, Stoller refined a technique of communing with buildings before deciding on a view or time of day to photograph them. Projects by the likes of Frank Lloyd Wright, Marcel Breuer, I.M. Pei, Paul Rudolph, Gordon Bunshaft, Eero Saarinen, and Mies van der Rohe were captured in this methodical way. Born in Chicago and raised in New York City, Stoller studied architecture at New York University, photographing

buildings and sculpture while a student and then graduating with a degree in industrial design in 1938. Two years later, he took a position at the U.S. Office of Emergency Management, where he worked with photographer Paul Strand; in 1942 he was drafted and served in the Army Signal Corps Photo Center during World War II. It was in the postwar era that Stoller made his iconic images of projects such as Fallingwater, the Guggenheim (above right), the TWA Terminal, Ronchamp, Lever House, and Kitt Peak (above left), many of which are reproduced in *Modern Architecture: Photographs* by Ezra Stoller (Abrams) and in the *Building Blocks* series of single-building monographs. In 1961, he received the AIA Medal for Architectural Photography.

In 1966, he established the architectural agency Esto Photographics, which continues today under the leadership of his daughter, Erica Stoller. An exhibition of Ezra Stoller's work is on view at the Williams College Museum of Art in Williamstown, Massachusetts, through December 19. **Abby Bussel**



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CITY CODES STILL GOING GREEN



Mark Palmer often advises people on how to promote sustainable design in their cities: As green-building coordinator for San Francisco's Department of the Environment, he worked on the city's Green Building Ordinance, which went into effect in September. The ordinance requires all new public-sector projects, renovations, and building additions, such as the new De Young Museum, designed by Herzog & de Meuron (above), to achieve a Leadership in Energy and Environmental Design (LEED) certification of at least "silver" from the Washington, D.C.-based U.S. Green Building Council.

"The city likes to lead by example," says Palmer of San Francisco, which is one of 10 municipalities that have adopted similar ordinances requiring LEED. In 1993, Austin, Texas, was the first; the others are Atlanta; Cook County, Illinois; Frisco, Texas; and five other counties in California.

And the trend makes sense, believes Mike Crosbie, senior associate at Norwalk, Connecticut-based Steven Winter Associates, an A/E consulting firm: "As LEED changes, you don't have to change the law; you just always have to meet the LEED criteria. It's like adopting a national building code."

Not all the municipalities have required that public projects get a LEED rating: Some have used LEED as a guideline or reference standard instead. Community benefits include less landfill waste, reduced energy costs, cleaner air, and increased worker productivity, argue proponents.

And there are long-term savings too: According to an October 2003 report from California's Sustainable Building Task Force principally written by Greg Kats, *The Costs and Financial Benefits of Green Building*, "Minimal increases in upfront costs of about 2 percent to support green design would, on average, result in life-cycle savings of 20 percent of total construction costs—more than 10 times the initial investment."

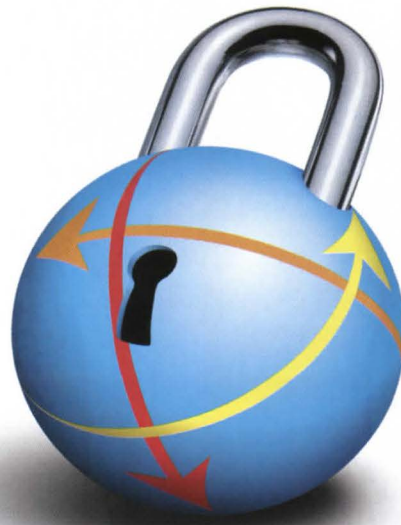
"It's a way of the future," says Michelle Jones, a principal at RIM Architects, San Francisco. While LEED projects increase her paperwork, Jones hopes that "we get to a point where everyone's doing this and there isn't so much of a learning curve, and that incorporating this is just going to be the way we do design." **Maureen Patterson**

AGA KHAN AWARDS HONOR TRADITION AND MODERNITY

From modest to massive, the seven winners of the ninth cycle of the Aga Khan Award for Architecture connect traditional design themes and materials to the contemporary issues and needs of Muslim societies.



At a ceremony held in Delhi, India, last month, the \$500,000 triennial prize was presented to: the restoration of the Al-Abbas Mosque (above) near Asnaf, Yemen, by conservator Marylène Barret of France with the assistance of Abdullah al-Hadrami of Yemen; the Alexandria Library in Alexandria, Egypt, by Snøhetta Hamza Consortium of Egypt and Norway (October 2001, page 73); the B2 House in Büyükhüsün, Ayvacik, Turkey, by architect Han Tümertekin of Turkey; the Old City of Jerusalem Revitalization Program (OCJRP), a conservation program by the OCJRP Technical Office in Jerusalem; Cesar Pelli's Petronas Towers in Kuala Lumpur, Malaysia; a primary school in Gando, Burkina Faso, by architect Diébédo Francis Kéré of Burkina Faso; and Sandbag Shelter Prototypes developed by Nader Khalili and his Cal-Earth Institute of Hesperia, California (November 2002, page 80). **Abby Bussel**



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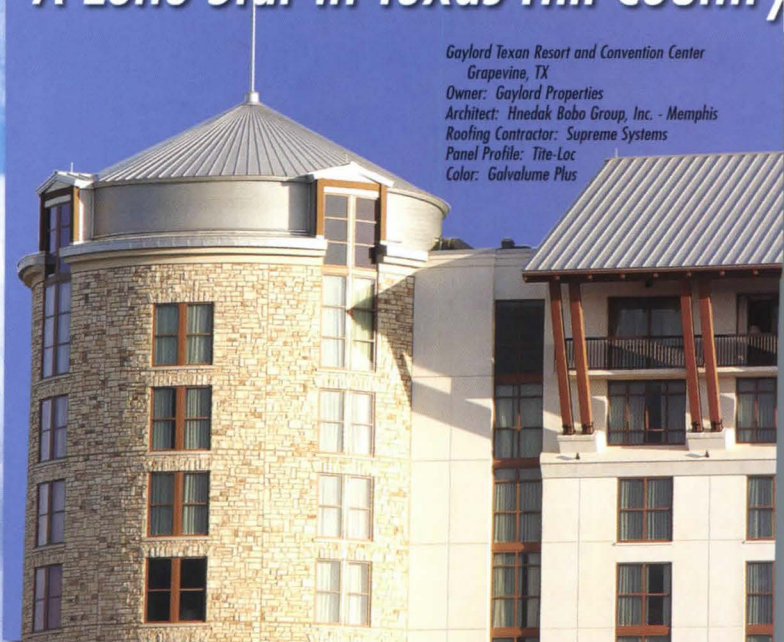
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WHEN LAND USE REALLY MAKES A DIFFERENCE



Ever wonder how developers would change the world? An accurate barometer of their most altruistic aims could be the Awards for Excellence from the Urban Land Institute (ULI), announced in November at the group's annual meeting. The awards are given for much more than making money (though financial triumph is *de rigueur*), recognizing only those "development processes" that show leadership, innovation, and contributions to the environment, communities, and society.

Lofty goals. On its auspicious 25th judging, ULI raised the bar by adding equivalent but separate awards for European projects (announced in Madrid last June). And the jury of 15 developers, investors, and designers included a European—Jan A. de Kreij, CEO of Dutch investment firm Corio—perhaps to offer insights from a socialized land.

Still, the results were mixed. In addition to worthy revitalization projects that have shaped cities and renewed communities, there were numerous high-profile ventures of dubious societal benefit. The New Urbanesque community of 1,140 homes called WaterColor in Seagrave Beach, Florida, for example, has at least achieved The St. Joe Company's goal of being more "car-friendly" than nearby Seaside. And while Frank O. Gehry's Walt Disney Concert Hall in Los Angeles (October 2004, page 66) is an architectural masterpiece, it's premature and a bit simplistic to laud its public-private collaborators for transforming downtown Los Angeles.

Other projects with credentials not quite so high-toned seemed more in synch with ULI's loftier aims. Urban revitalization was the result of such winners as Fall Creek Place in Indianapolis and the former public-housing project in Charlotte, North Carolina, that became an integrated neighborhood called First Ward Place and the "Garden District." Playhouse Square Center,

In addition to its Awards for Excellence, the Urban Land Institute's new booklet, "Ten Principles for Smart Growth on the Fringe," sheds light on what the group values in land development. Among the November report's more specific recommendations are:

- ▣ Designate open space to be saved in perpetuity.
- ▣ Use climate as a major factor in design.
- ▣ Provide diverse housing types.
- ▣ Build centers of concentrated mixed uses.
- ▣ Ensure the availability of transportation alternatives: driving, walking, cycling, and mass transit.
- ▣ Preserve community character.

with its five theater renovations, was commended for its role in Cleveland's downtown renaissance, while a LEED "gold" building, Plaza at PPL Center, similarly served ailing Allentown, Pennsylvania. And Georgia Tech's Technology Square, in a previously blighted area of Midtown Atlanta, earned plaudits for stimulating a 24-hour urban campus zone.

Other winners pale in comparison. The Pritzker family's Baldwin Park in Orlando, Florida, made good use (and green space) of a former naval base, and University Park at MIT in Cambridge, Massachusetts, brought home big-name biotech companies (March 2004, page 25). But fat tax breaks and lucrative contracts don't add up to excellence; the best developers' big-picture thinking profits all Americans. **C.C. Sullivan**



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DROPS OF MODERN IN A STOCK-PLAN SEA



"Have you ever looked at stock plans?" asks Philadelphia architect Gregory La Verdera. The rhetorical question is part aesthetic criticism and part explanation of his one-man mission: La Verdera is quietly bringing modern design to the stock house-plans market.

Stock plans have, of course, long been a staple for homebuilders and popular within a certain segment of homeowners, allowing them to choose a general style of residence while saving on the expense of having an architect design a house from scratch. But La Verdera feels there could be a demand for more distinct designs than are found at most stock-plan suppliers. "It sprung from the idea that people will be drawn to 'modern' in the speculative housing market," he says of his venture, which currently consists of a few midcentury-flavored designs posted on a subdirectory of the website used by his firm, Lamidesign.

Customers can order construction drawings of La Verdera's designs for about \$1,500—roughly the same as what large providers of commercial plans charge. But numeric comparisons end there: Two of La Verdera's would-be competitors, Dream Home Source and Houseplans, boast catalogs of more than 15,000 and 20,000 decidedly traditional plans, respectively. La Verdera is just finishing up scheme number six.

Though decried by critics as fueling the McMansion phenomenon of large yet undistinct homes, the stock-plan industry has nonetheless been experiencing a period of healthy growth, no doubt in parallel with the low-interest-rate-fueled housing boom of the last several years. According to the National Association of Home Builders, 2004 will likely set a new record for single-family housing starts. **Jamie Reynolds**

↳ Known as much for award-winning projects like his Peckham Library as for more fanciful ideas such as his proposed "megacity" to link towns in the north of England, Will Alsop is closing shop. His firm, London-based Alsop Architects, has been forced into receivership after a series of cancelled high-profile projects. Alsop plans to concentrate his future efforts on what are potentially more profitable markets in North America and Asia.

↳ At least the birds will be safe: Chicago's Department of Environment will host the new "Birds and Buildings Conference: Creating a Safer Environment" next March to address, among other things, façade designs that can help prevent some of the nearly one billion building-related bird deaths annually across the United States.

↳ A new architecture publication debuted last month: *A10*. Founded by architecture critic Hans Ibelings and graphic designer Arjan Groot, the Amsterdam-based, English-language bimonthly magazine will focus on new European architecture.

↳ Renzo Piano is designing an expansion and renovation of the Whitney Museum in New York City that will double its exhibition space. The 26,000-square-foot project was unveiled in November after plans for an ambitious expanded facility by Rem Koolhaas were scrapped in 2003 because of budgetary concerns.

↳ Applying a tactic used on the West Coast to the Southeastern states, the Carpenter's Union plans to begin hanging highly visible protest signs at construction sites—a technique known as "bannering"—to encourage owners and other neutral parties to boycott subcontractors with whom the union is in dispute.

↳ Atlanta-based TVS Architects has received the first "platinum" LEED-CI certification, a new commercial-interiors rating launched last month by the U.S. Green Building Council. The building, a showroom for the carpet manufacturer Interface, also won an AIA Georgia design award. In related news, Jerry Yudelson, chair of last month's U.S. Green Building Council's Greenbuild conference, predicts that the total number of LEED-certified projects will reach 10,000 by the year 2009. The current number is 1,760.

↳ Laurels: Vincent J. Scully received a 2004 National Medal of Arts in Washington, D.C., on November 17. The architectural historian, longtime professor, and author of a dozen books, was one of eight recipients honored by the president and the National Endowment for the Arts for their significant enrichment of the nation's cultural life.

MOMA UNVEILS ITS \$425 MILLION MAKEOVER



Late last month, the Museum of Modern Art reopened its doors to the public. Yoshio Taniguchi's \$425 million makeover, which has garnered superlatives from the popular press, adds a tower for museum offices and a gallery wing; remakes previous additions by Cesar Pelli (1984) and Philip Johnson (1964); restores Johnson's 1953 sculpture garden; and renovates the 1939 International Style building by Philip L. Goodwin and Edward Durrell Stone. Kohn Pedersen Fox served as executive architect.



EDGE OF THE MILLENNIUM

It may have arrived late, but Chicago's new Lakefront Millennium Park was worth the wait. by Edward Keegan

Chicago has an issue with deadlines. The 1893 World's Columbian Exposition was a year late—ultimately celebrating the 401st anniversary of Columbus's arrival in the New World. While their tardiness has been lost to historical amnesia, the influence of Daniel Burnham and his classicizing cohorts is still evident in the tradition-bound forms that the current mayor, Richard M. Daley, often champions. Chicago's latest example of civic foot-dragging, Lakefront Millennium Park, arrived late by four years (or three, depending on your calculation). But in contrast to the "White City," which Louis Sullivan famously claimed set back Chicago architecture by 50 years, the new park and its exciting mix of uses may have exactly the opposite effect: propelling the city's long-languishing design culture far into the twenty-first century with boldly contemporary gestures that have captured the imagination of both the general public and the cognoscenti.

The new park sits in a 25-acre corner of the city's primary downtown open space, Grant Park—on ground created by debris from the famed 1871 fire—which was first developed

during the late nineteenth century as an extensive network of lakefront railroad tracks. While much of Grant Park was shaped by the formal French gardening tenets espoused in Burnham's 1909 *Plan of Chicago*, the northwest portion remained underutilized into the 1990s, with unadorned grassy areas atop a 1950s underground garage adjacent to Michigan Avenue and a pit open to the train lines and unsightly surface parking lots.

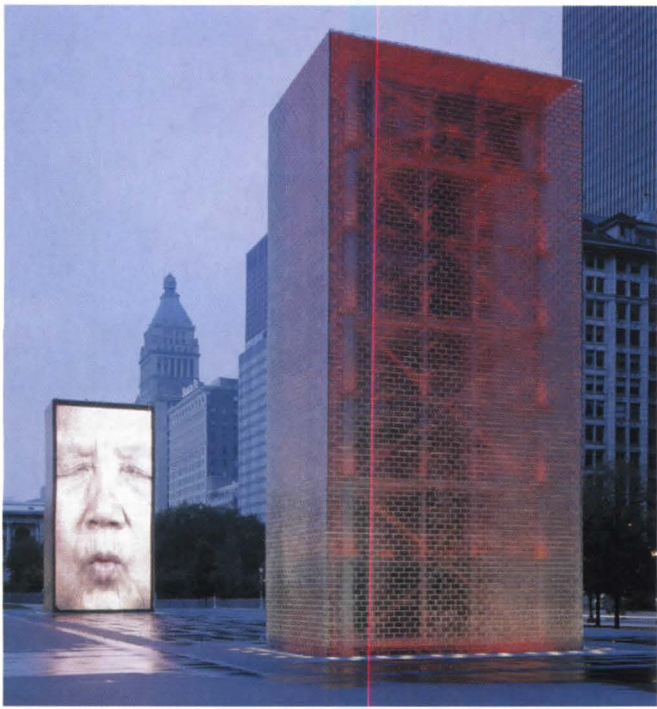
A 1998 plan by the Chicago office of Skidmore, Owings & Merrill (SOM) reconceived the 17 easternmost acres of the site as a straitlaced beaux-arts layout atop a new garage. In addition to 2,500 parking spots, the plan included an ice-skating rink, great lawn, outdoor amphitheater, restaurant, gardens, and locations for special events and public artworks. The target for completion was 2000, per its grand moniker.

IN WALKED ED

SOM's scheme was very publicly announced before Edward K. Uhler, former planning director for the Chicago Park District,



Though dominated by boldy contemporary forms like Anish Kapoor's sculpture (top), Lakefront Millennium Park nods to Chicago's past with traditional gestures, such as a peristyle recreated by architects OWP/P (above).



A fountain with twin LED displays by Catalan artist Jaume Plensa spouts water near Michigan Avenue.

joined the project as design director in September 1998. The soft-spoken, well-mannered Uhler, practical in a very midwestern way, hardly seems an impresario, but through six years of extraordinary challenges he (and an impressive roster of consultants) transformed the uninspiring early plan into a virtual encyclopedia of contemporary art and design.

After city officials asked Uhler to shepherd the complex project through its estimated two years of fast-track construction, he immediately identified significant design deficiencies. First, the area adjacent to Michigan Avenue, where a long row of century-old structures forms the downtown Loop's park frontage, was to remain an open lawn but lose its extensive underground parking to fill. This would have moved needed parking away from neighboring businesses and kept the park's focal events far from the bustling avenue. Instead, Uhler pro-

posed that the dilapidated parking garage be completely reconstructed; he then moved SOM's skating rink from a less-traveled edge of the park to the center of its Michigan Avenue side atop the garage. Though Chicago may be flat, the complex set of below-grade program elements for Millennium Park necessitated some 50 feet of elevation change across its site.

Other issues Uhler faced included serious accessibility problems. As the project evolved, SOM found its plan successively reworked by Uhler and others until only a few of its ponderously proportioned beaux-arts details remained. Not only that, but Uhler added new elements, including a reconstituted classical peristyle to the corner of Randolph and Michigan, where an earlier version had stood until 1953—an Edward Bennett–designed remnant of Burnham's city plan.

THEN CAME FRANK

The additions would pale in comparison to what followed: In early 1999, the announcement of Frank O. Gehry's participation took public the city's intention to make Lakefront Millennium Park much more ambitious in scope than initially conceived. It also ensured that the park would miss its scheduled debut, as Gehry couldn't begin designing until later that year.

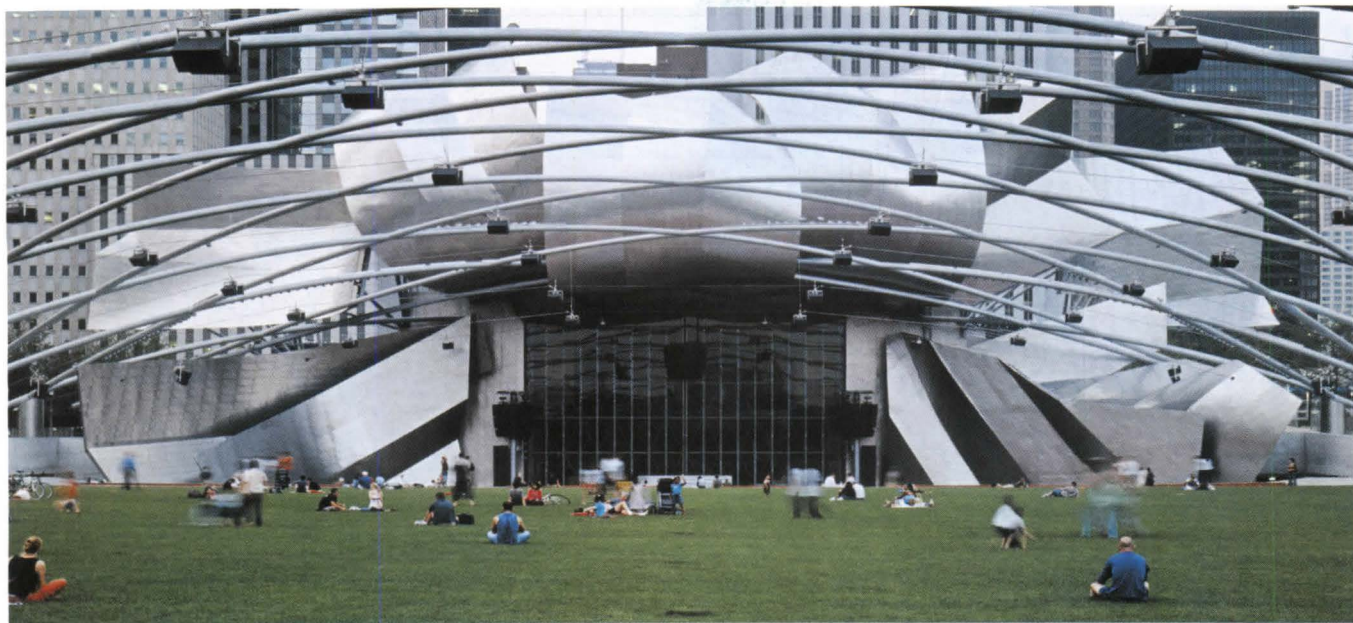
Gehry Partners' highly touted contribution is actually three carefully integrated, yet discrete, architectural pieces: the concert venue known as Jay Pritzker Pavilion, the immense trellis over the new Great Lawn, and a pedestrian bridge named after the energy company BP. (Among Uhler's many tasks was the cultivation of such big-ticket donors.) The expansive pavilion, with 4,000 fixed seats and lawn seating for some 7,000, is the permanent home of a local music festival billed as the nation's only free, outdoor classical-music series.

"This building looks like every other building," jokes Gehry of the bandshell. "You've seen one, you've seen them all!" But the reality is that only the sculpted stainless-steel ribbons surrounding the proscenium can be ascribed to his now-distinctive signature style. The trellis, some 600 feet long and more than 300 feet wide, is unique in his portfolio and solves functional issues with its intriguing form, providing mounting points for a distributed sound system. And it creates a marvelously light frame—almost a roomlike enclosure—that marks the limits of

BLURRING ARCHITECTURE AND ART

More visible than its architecture—and certainly more evident than its metamorphosed master plan—are the monumental works of art that command Lakefront Millennium Park. In particular, Anish Kapoor's *Cloud Gate*—the 110-ton, mirror-finished stainless-steel sculpture of considerable girth (66 feet long and 33 feet tall) set on a broad plinth—provides a compelling link between the park's disparate elements. It's classically sited, rendered in a contemporary material, and visually ties the city and park together on its reflective surfaces. Another important piece whose size blurs art and architecture is Catalan artist Jaume Plensa's *Crown Fountain*, located near Michigan Avenue. The work has become a gen-

uine phenomenon with visitors on Chicago's warmest days: Two glass-block-clad towers with LED displays are set within a 230-foot-long reflecting pool. These 50-foot-tall, boldly contemporary sentinels feature video images of Chicagoans projected on opposing sides of the structures. At regular intervals, the faces seem to spit onto the watery plaza, after which water cascades from all sides of the pieces. Last, *Lurie Garden*—designed by Seattle-based landscape architect Kathryn Gustafson with the Dutch planting designer Piet Oudolf and set designer Robert Israel—is a three-acre installation featuring 240 varieties of perennial plantings. Visitors encounter a series of large and small spaces sited on the gentle rise from Monroe Street toward the Great Lawn, which metaphorically recreates Chicago's history from primordial time to the bold steel structures of today. **Edward Keegan**



The park showcases an energetic, stainless-steel bandshell by Gehry Partners and two less expected works by the firm: a massive, decidedly rational trellis that supports loudspeakers (above) and a snakelike pedestrian bridge.

the venue while framing dramatic views of the Chicago skyline.

BP Bridge, often incorrectly cited as Gehry's first—"My first bridge is over my swimming pool in my backyard," he notes—is a stunning, snakelike form along the eastern edge of the park. Its sloping monolithic walls, clad in the same stainless-steel shingles as the bandshell, provide an effective acoustical buffer between the Great Lawn and nearby traffic along Columbus Drive. Its extraordinary length is due to its very slight, fully accessible slope—which makes for a clean expression devoid of handrails and landings, while making the pedestrian experience an enchanting walk through the park.

ART BEFORE COMMERCE

Though some might argue that Gehry's brushed stainless-steel proscenium is more sculpture than building, it's London-based sculptor Anish Kapoor who designed the park's principal art piece, a shimmering stainless-steel blob called *Cloud Gate*, which rests between the skating rink and the Great Lawn (see "Blurring Architecture and Art," facing page). South of the rink is another large piece, Catalan artist Jaume Plensa's *Crown Fountain*, with its twin towers of LED displays and spouting water. And between the Great Lawn and the site of Renzo Piano's proposed addition to the Art Institute of Chicago is *Lurie Garden* (named for local philanthropist Ann Lurie), a series of spaces from a design team headed by Seattle-based landscape architect Kathryn Gustafson.

As the scope and timetable of the park project expanded, the need to secure additional funding was a formidable task added to Uhlir's job. It often fell to Uhlir to match donors with specific portions of the park that would eventually bear their names. The Chicago-based Pritzker family (sponsors of the eponymous architectural prize) had much to do with Gehry's willingness to participate. The famed Wrigley chewing-gum family, long a force in conservative politics, funded the appropriately traditional peristyle, recreated at about four-fifths

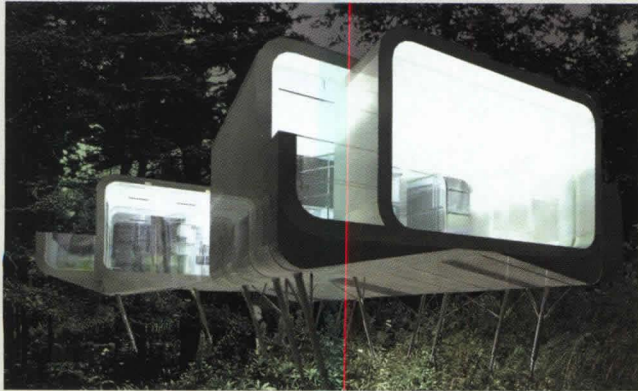
scale by local firm OWP/P. Even the McCormick Tribune Foundation—the philanthropic arm of the Chicago Tribune Corporation, whose *Chicago Tribune* newspaper caused great consternation among city officials with its muckraking articles about the project's soaring budget and late debut—donated funds for the skating rink.

While Uhlir often identified which pieces would be best suited to particular donors' sensibilities, it was John H. Bryan, the retired chairman of Chicago-based Sara Lee, who led the charge in getting the dollars in hand. The final announced project cost was \$475 million. Of this amount, \$205 million came from private donors—including 94 individual gifts of at least a million dollars and nine of \$3 million or more.

Considering this major fundraising distraction and the park's ad hoc design process—beginning with a single plan by a single designer but ultimately built from a continually evolving plan with multiple signatures from numerous firms—Uhlir would certainly not cite this project as a textbook case of public planning. But the design's ultimate success might be instructive. "Maybe it's dangerous to have architects be master planners," Uhlir muses. "They try to shape the architecture as well as the plan."

Others are more philosophical. "This feels contemporary and truly democratic in the sense that it's for the people of the city," said sculptor Anish Kapoor on the day the park opened.

And that's one of the most optimistic and promising aspects of Lakefront Millennium Park, even after only one somewhat abbreviated season of use. It's about recapturing the public's imagination and longing for civic spaces. The highly influential Mayor Daley has long been decried by critics because of his fondness for traditional architecture and for extending the legacy of Burnham from the turn of the last century. Gehry has personally helped expand this powerful mayor's conception of architectural expression. "I think he's a believer now," Gehry remarks. That in itself is an enduring achievement of Chicago's newest park. ■



BSA grant winners Rachel Levitt and Greg Biancardi's high-tech polymer wall assembly (left); 1970s members of the San Francisco's Organization of Women Architects (right), from a study by Doris Cole and Jason Knutson.

The age has arrived when it's hipper for architects to be geeks than *artistes*: Research is hot. "There's been a move away from the worship of architecture as heroic formmaking recently," says Thomas Fisher, dean of the University of Minnesota architecture school and an *Architecture* contributing editor. "Now we're moving toward the more modest view that clients hire us because we have access to a certain knowledge base that builders and interior designers don't." And yet, he laments, the profession is still gravely behind others such as law, medicine, and even interior design, which all give practitioners access to the most current research in their field through online databases.

While the national AIA professes a newly heightened interest in research and recently repackaged its "professional interest areas" as "knowledge communities," it remains to be seen whether or not the institution will formalize steps to support research throughout the profession. In the meantime, a number of large AIA chapters may step in to fill the void.

In fact, the national protagonist may turn out to be the Boston Society of Architects (BSA), which has taken matters into its own hands by launching the first in an annual series of research grants this year. The goal of the program—which distributed a total of \$65,000—is to "advance the architectural field's knowledge base and break down the artificial distinction between the academic and practice sides of the profession," states architect and BSA president Brian Healy. Out of roughly 50 applicants this year, nine proposals were chosen by a jury of three practitioners that included Healy, Fisher, and BSA director-at-large Carol Burns. The research will ultimately be compiled in an online database that can be accessed by architects everywhere.

Healy is engaged in discussions with heads of other large AIA chapters about duplicating the program—which currently serves New England—in other regions. And, according to Fisher, there are informal talks within the national AIA about

☞ **"We've come out the other end of the high-theory era of architecture."**

administering such a network of local programs—however, AIA officials decline to comment on this, saying the idea is still too tentative to discuss. Fisher also reports that the Association of Collegiate Schools of Architecture (ACSA) may develop its own online database of architectural research, and that a national AIA research journal is rumored to be in the works. The BSA, meanwhile, seeks to expand its own program, increasing the grant pool to \$75,000 in 2005.

Boston's program is certainly advancing the research agenda, but it's just a beginning. Says one BSA grantee, "I wouldn't have been able to pursue this research project if I hadn't won the grant—however, \$10,000 doesn't go very far." Yet Healy and Fisher are confident that the program will expand and catch on nationwide—in part due to forces outside the profession. "I think litigation is also starting to push the need for research," says Fisher, adding that universities are moving the profession in this direction as well. (Several architecture schools have recently suffered public critiques for not producing enough research.) "I think we've come out the other end of the high-theory era of architecture," he concludes. "Now there's a neopragmatic view that maybe we should just focus on making good buildings."

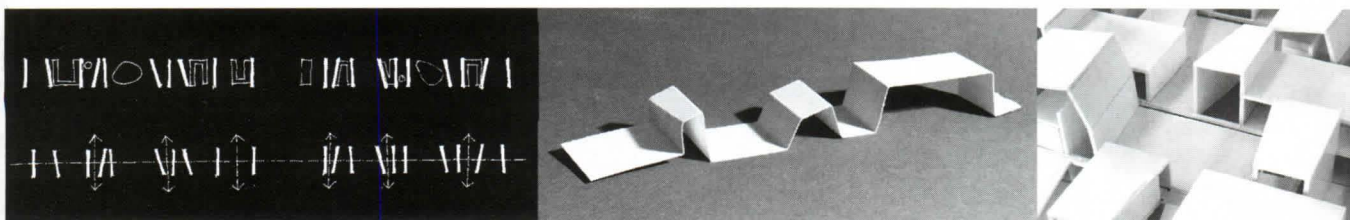
As a trial run, the first BSA grants may have a bearing on whether or not the AIA will administer such a program. A diverse array of BSA-funded research projects—from Peter Wiederspahn's smart-growth study for Somerville, Massachusetts, to Doris Cole and Jason Knutson's comparative study of letters from women architects of the 1970s and today—will be presented in a one-day symposium, at an as-yet-to-be-determined place and time, after reports are submitted to the BSA in the spring.

Guidelines for the 2005 grants will be available in January. With any luck, this program will herald a new commitment to research not only in Boston, but in the profession at large.

Anna Holtzman writes frequently for *Architecture*.

SO I MARRIED AN ARCHITECT

For architect couples, it makes sense to collaborate both in life and work. by Anna Holtzman



Architects are known to blur the distinction between their personal and professional lives. Live/work studios are not uncommon among this breed that hardly ever sleeps, and live/work partnerships are perhaps even more widespread. Collaborative couples are nothing new—think of Mies van der Rohe's companion Lilly Reich, or Charles Eames's long undercredited partner and wife, Ray Eames, to list just two. While it was once thought that women architects could only succeed by partnering with men, some 30 years after the introduction of women's lib, pairing up is still a popular option. Rather than seeing this phenomenon as a vestige of old biases, the idea of married partners has gained new legitimacy among many architects as part of a broader, forward-looking sea change in the profession: a shift toward collaborative practice.

"I actually think it's because architecture's changing right now that [practitioner couples have] become so common," says Jennifer Yoos, partner of husband Vincent James at Vincent James Associates Architects in Minneapolis. (Yoos says that she and partners James and Nathan Knutson are moving toward using the initials VJAA to reflect a plural ownership.) "I think people are beginning to see practice not as a singular kind of statement but as a collaboration," she states, describing how this new approach works: "Many of these practices—and we're similar—use a lot of research to generate designs together," rather than the outmoded model of the single creative author placing pen on blank paper. "I think practice is becoming more interactive, and different disciplines are coming closer together," she continues. "Look at the World Trade Center competition, and you see all of these interdisciplinary groups joining together. It seems

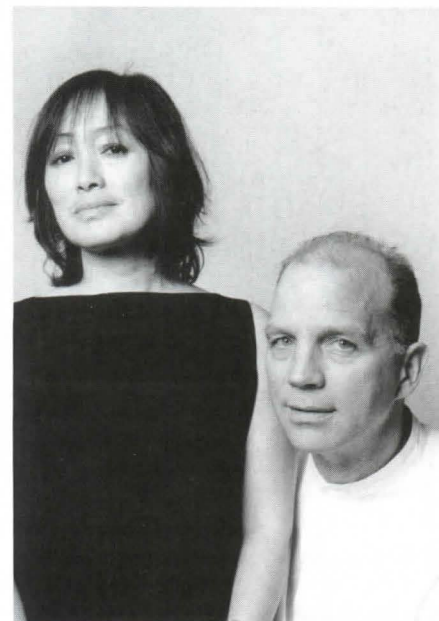


like the ones that were more successful were some of the younger architects, who had already been doing that—and it seems that with the computer being used to generate drawings, it becomes less of a personal thing."

Many architects concur, such as New York City-based Frances Halsband, of husband-and-wife firm R.M. Kliment & Frances Halsband Architects. "Everything we do these days is collaborative," she states. "No one just sits and makes sketches and says, 'Eureka, it's here!'" The complex nature of today's clients, she adds, plays a part in this: "We're always working with committees, civic groups, and neighborhood groups. The number of people that we interact with is becoming more and more vast. And so the new model for creativity is being able to listen to other people and absorb good ideas from anywhere."

THE GENDER QUESTION

Building on the question of collaboration, partners and parents Evelyn Tickle



Process models and sketches by partners Jennifer Yoos and Vincent James for their Longitudinal House (top); a residence designed by the married collaborative of Evelyn Tickle and Alexander Kitchin (above left); and architecture über-couple Billie Tsien and Tod Williams (above right).

and Alexander Kitchin, of Charlottesville, Virginia-based TickleKitchin, bring the conversation back to the introduction of women into the field: "If you look at the practice of architecture," states Tickle, "it was developed by a bunch of men. And therefore it's a much more linear process that may or may not be interesting to women." Adds Kitchin, finishing the thought, "I think in some ways, practicing as partners may make the profession a lot more interesting to women."

Of course, you don't have to be married to collaborate, but when you are juggling a *family with your career*, as Tickle and Kitchin are, there are added benefits to being a partner with your



While Denise Scott Brown and Robert Venturi maintain that all of their work is collaborative, the Pritzker Prize nevertheless excluded Scott Brown from Venturi's 1991 award, to the dismay of the couple and many other architects.

spouse. Along with everything else that they do, the couple says, they share child-rearing responsibilities evenly.

DIVVYING UP THE WORK

While the approach of collaborative partnership seems to be successful in practice, the notion of shared authorship has yet to be fully recognized by the architectural establishment. The exclusion of Denise Scott Brown from the 1991 Pritzker Prize, which was bestowed on her partner and husband, Robert Venturi, deeply dismayed all of the couples interviewed for this article. Venturi laments that Scott Brown is still a victim of the biases of past generations, while younger women architects have broken free of such outdated preconceptions. Yet award-giving institutions such as the Pritzker and the AIA still cling to the ideal of the single author. "If you look at all the U.S. General Services Administration's Design Excellence Program requirements, they always ask who the lead designer is," says Halsband. "It kills us to see that—but we have to tell them that there is one lead designer, because you can't explain that there isn't."

There are some cases, however, where a division of labor can be lightly

sketched. Traditionally, it seems that women in partnerships have tended to favor planning work—Halsband and Scott Brown, for example, take on more planning than do their partners—and men often concentrate on structures. While Tod Williams describes his collaboration with wife Billie Tsien as generally "pretty fluid," the pair concedes that Tsien gravitates toward the traditionally "female" areas of 2-D design, such as façade and color. In the case of Yoos and James, "He likes the craft of the detail," says Yoos, while she deals with more abstract overall concepts.

As for who handles the business end of the firm—a duty that none of the architects interviewed has a taste for—the role traditionally seems to fall either to the woman or to neither. Scott Brown once handled her office's contracts and managerial tasks, but the firm has since chosen to employ staff to share those tasks. "Bob doesn't have to think about this stuff—but he could," Scott Brown playfully admonishes. Halsband says that she and Kliment now have other partners who deal with business matters, but that in earlier days it was her domain. Tickle and Kitchin took a different approach: Both abhor business

dealings so much that they enlisted a consultant—a "financial therapist," in their words—to set them on a schedule of shared managerial chores.

Whether they're acting as each other's best critics, divvying up tasks according to one another's particular strengths, or passing an idea back and forth in an organic and integrated design process, these collaborative couples insist that their projects are the results of equal contributions. Some prefer to work separately on certain projects—Diana Agrest, principal of New York City-based Agrest and Gandelonas Architects, in fact, also has her own firm in which she does projects separately from partner and husband Mario Gandelonas, and both publish texts independently of each other. Others claim their process is collaborative every step of the way. Tickle and Kitchin use the word "interchangeable" when referring to themselves. Attempting to determine whose idea is which, contends the couple, speaking in turns, "would be like trying to divide up who created certain characteristics in our children."

Anna Holtzman, who writes frequently on design, is currently producing a documentary about subway musicians.

stick-to-itiveness...and several dozen legal pads: \$37

(having what it takes to run a business: priceless)

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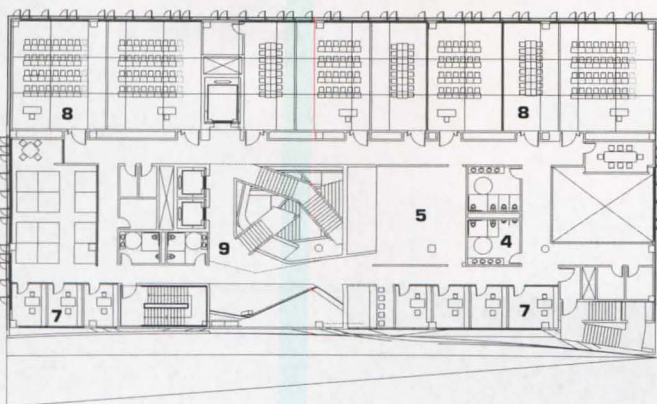
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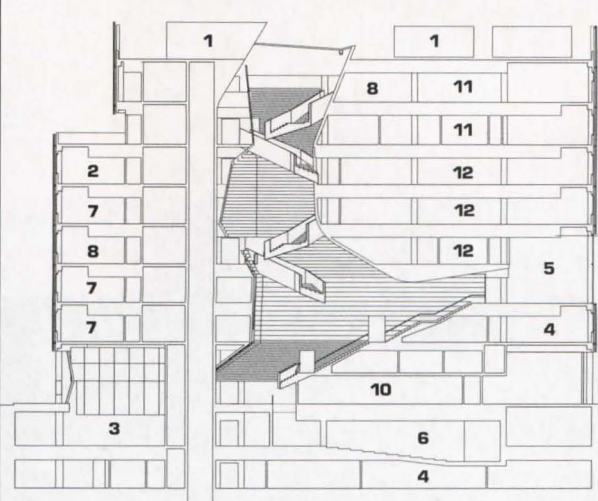


➔ MORPHOSIS | NEW ACADEMIC BUILDING, THE COOPER UNION FOR THE ADVANCEMENT OF SCIENCE AND ART | NEW YORK CITY

When Frederick A. Peterson designed a chocolate-brown, Italianate structure in 1859 to house a budding Greenwich Village engineering school, he sought out then-experimental building technologies: steel framing, for example, and elevators. A new, 200,000-square-foot academic building for the small Cooper Union campus aims to be similarly forward-looking. The highly green “preschematic” design by Morphosis (with associate Gruzen Samton) features a twister of an atrium, exposed through the main façade and pulled out toward entry areas, its volume fed by crisscrossing stair bridges and skip-stop elevators with mini-lobbies. This sculptural, energetic space reflects the building’s mission: to engender discourse among the various departments housed there, from engineering to the humanities. The eight-story volume is wrapped by a ventilated rainscreen of perforated stainless steel with large operable panels and offsets that vary randomly between 1 foot and 8 feet. With cogeneration, a wi-fi-enabled network, and efficient M/E/P systems, the \$120 million full-block building will offer students plenty of food for thought when it opens in early 2008. **C.C. Sullivan**



level-five plan ——— 23' ←

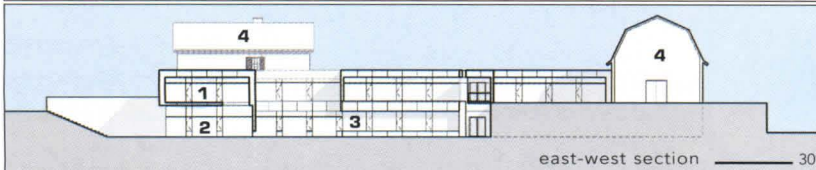
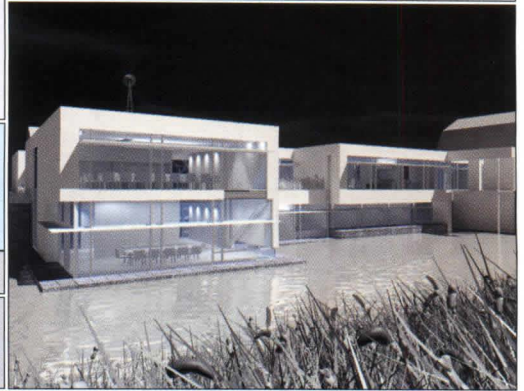
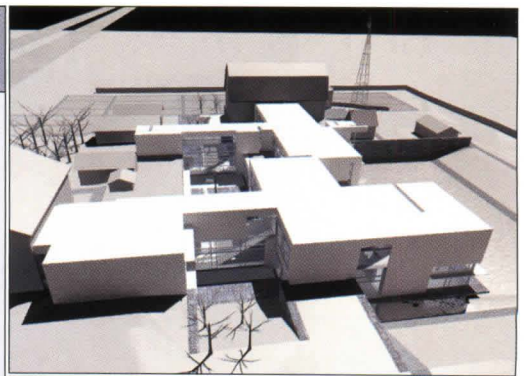


north-south section ——— 30'

- | | | |
|---------------|--------------|----------------------|
| 1 mechanical | 5 lounge | 9 skip-stop lobby |
| 2 art studios | 6 auditorium | 10 retail |
| 3 gallery | 7 office | 11 student workspace |
| 4 bathroom | 8 classroom | 12 lab |

➔ **VALERIO DEWALT TRAIN ASSOCIATES | KRESGE FOUNDATION | TROY, MICHIGAN**

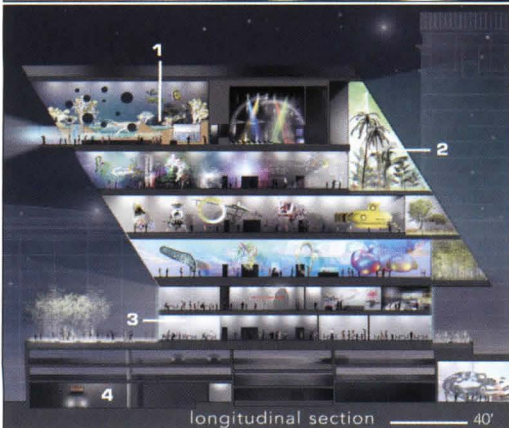
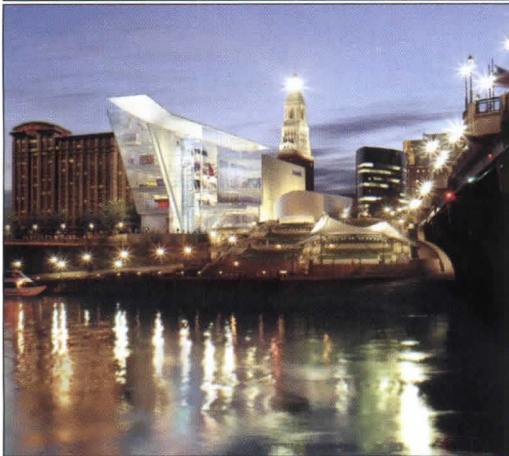
Green building technologies are on the agenda for the renovation and expansion of the Kresge Foundation's headquarters in Troy, Michigan, where the organization has operated from a group of historic farm buildings since 1984. Designed by Chicago-based Valerio Dewalt Train with Farr Associates, the plan retains the existing nineteenth-century farm buildings on the three-acre site, adds 17,200 square feet of new space, and restores prairie habitat. Organized around a series of grassy courtyards, the two-story, aluminum-rainscreen-clad addition is a series of orthogonal volumes with narrow floor plates that make it possible for sunlight to reach nearly all work areas. The scheme calls for a groundwater heat-exchange system, planted roofs, natural daylighting and ventilation, and recycled and locally produced building materials, which the architects hope will earn the building LEED certification. Kresge, which offers challenge grants to nonprofits for capital projects, intends to complete its expanded home by late next year. **Abby Bussel**



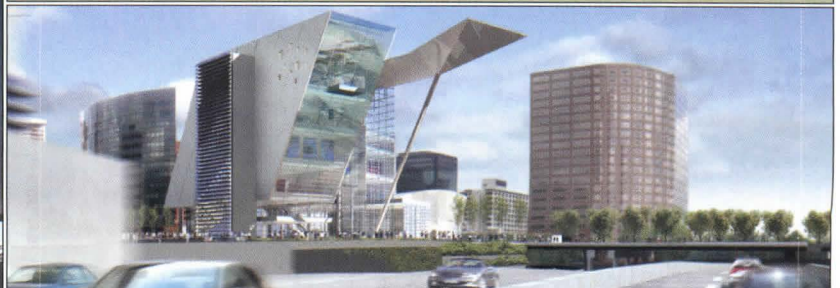
- | | |
|--------------------------|-----------------------------|
| 1 board room | 3 offices |
| 2 conference room | 4 existing structure |

➔ **CESAR PELLI & ASSOCIATES | CONNECTICUT CENTER FOR SCIENCE AND EXPLORATION | HARTFORD, CONNECTICUT**

Known for projects around the world, Cesar Pelli has won a competition in his home state of Connecticut for the design of a new science center on a brownfield site overlooking the Connecticut River in downtown Hartford. Joining new riverfront developments such as the soon-to-open convention center and Adriaen's Landing, Pelli's proposed 160,000-square-foot, six-story structure has a trapezoidal profile and large windows that dominate the river-facing east wall and portions of the west façade. In the opaque portion of the west wall, a 50-foot-by-60-foot LED screen broadcasts images of innovations in science and exploration for viewers on adjacent Columbus Boulevard. The \$150 million building boasts four floors of column-free exhibition space, a greenhouse, an education center, and a street-level display called "Science Alley" meant to draw passersby into the museum. Groundbreaking is scheduled for October 2005. **Katie Gerfen**



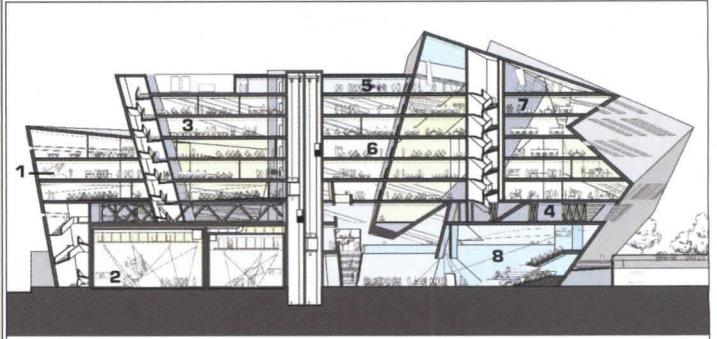
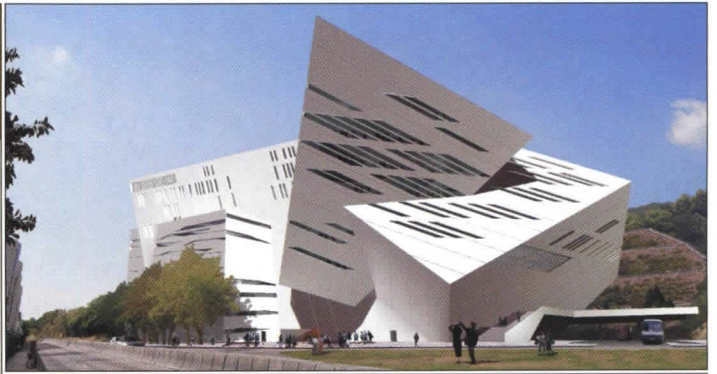
- | | |
|---------------------|---------------------------|
| 1 exhibits | 3 education center |
| 2 greenhouse | 4 parking |



→ **STUDIO DANIEL LIBESKIND WITH LEIGH AND ORANGE ARCHITECTS | CITY UNIVERSITY OF HONG KONG CREATIVE MEDIA CENTRE | HONG KONG**

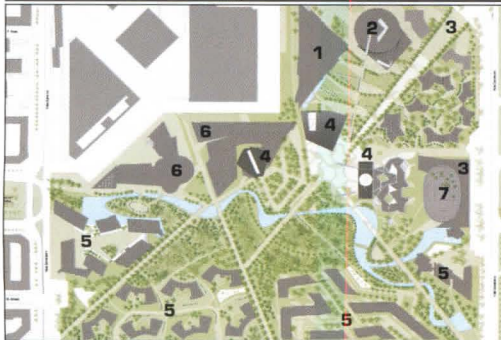
A 350,000-square-foot creative media center at the City University of Hong Kong offers some of the most high-tech media and educational facilities in Asia. Principally funded by the government of Hong Kong, the \$100 million complex will begin construction in late 2005.

The nine-story building created by Daniel Libeskind and Hong Kong-based Leigh and Orange Architects has a distinctive crystalline form reminiscent of Libeskind's designs for the Contemporary Jewish Museum in San Francisco (slated to begin construction in 2006) and the abandoned addition to London's Victoria & Albert Museum. The concrete structure with ceramic cladding houses a rich variety of disciplines that focus on digital audiovisual technology, including the research and development of state-of-the-art equipment. Theater and performing-arts facilities, film studios, exhibition spaces, and virtual-reality studios, as well as a "rave room," are incorporated into the program. **Bay Brown**



longitudinal section — 50'

- | | | | |
|--------------|-----------------------------|-----------------|------------------------|
| 1 rave room | 3 media-research lab | 5 function room | 7 faculty office |
| 2 soundstage | 4 structural transfer level | 6 animation lab | 8 multipurpose theater |



site plan — 330' ↑

- | | |
|----------------------|---------------------------------------|
| 1 design center | 5 housing |
| 2 design museum | 6 retail |
| 3 existing buildings | 7 winter garden/
children's palace |
| 4 office towers | |

Office towers designed by (from left to right) Zaha Hadid, Daniel Libeskind, and Arata Isozaki.

→ **ZAHA HADID ARCHITECTS, STUDIO DANIEL LIBESKIND, ARATA ISOZAKI ARCHITECT, AND PIER PAOLO MAGGIORA | CITYLIFE | MILAN, ITALY**

A design team comprising stars from three continents has won the commission for CityLife, a redevelopment of the Milan Fairgrounds. The high-powered collaborators beat out seven other groups that included celebrities such as Frank O. Gehry and Norman Foster, as well as younger designers like Foreign Office Architects and MVRDV.

The mixed-use project master-planned by Daniel Libeskind includes 1.8 million square feet of public space, 1,300 housing units, three office towers, retail developments, and a design museum that together create a new neighborhood, to be completed in 2014 at a cost of over \$1 billion for the buildings alone. Each architect is designing specific parcels centered around the office towers by Arata Isozaki (46 stories), Zaha Hadid (40 stories), and Libeskind (33 stories). In a separate project, a new fairgrounds designed by Massimiliano Fuksas is underway outside the city. **Bay Brown**



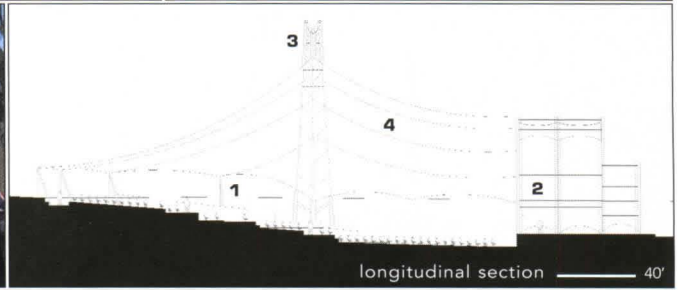
➔ **FTL DESIGN ENGINEERING STUDIO | CHARLOTTESVILLE MUSIC PAVILION | CHARLOTTESVILLE, VIRGINIA**

Located just off downtown Charlottesville's pedestrian mall, the site for a new music pavilion is at an intersection of different urban fabrics: Rehabbed nineteenth-century industrial buildings, a freeway, and recent office developments all surround this open space.

An arch spans the site at a 30-degree angle to the mall axis, creating its own strong presence. Covered by a canopy made of PVC-coated polyester, the roof is motorized and integrated into the arch, post-tensioned at the perimeter. This roof system serves seasonal uses from May to September, and is demounted for storage during the colder months. While conceived as a warm-weather venue, the site is accessible throughout the year, so the architects chose to give the pavilion a permanent identity as well. When the roof membrane is removed, the site is activated by another set of programs and functions as an urban park. The arch thus performs on several levels: urban, architectural, and structural. **Bay Brown**



- 1 seating
- 2 stage house
- 3 arch
- 4 canopy

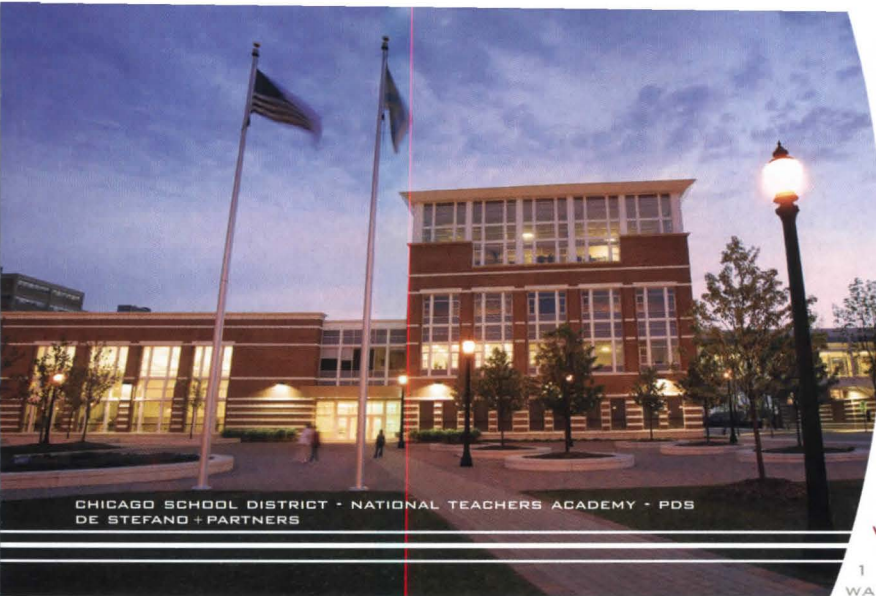


➔ **FTL DESIGN ENGINEERING STUDIO | DETROIT TRANSIT CENTER ROOF | DETROIT**

The architect of the new Detroit Transit Center, transportation powerhouse Parsons Brinckerhoff, chose FTL to design a durable yet inexpensive roof structure to shelter the facility's bus drop-off, which includes drive-through access and lounge areas and is to be completed in early 2006. The result is a permanent canopy that reaches from the ground to the sky and encompasses 50,000 square feet.

Articulated as seven distinct bays, each 110 feet long and 50 feet wide, the peaked forms create an elegant rhythm. Each bay comprises two trusses, an A-frame, and a PTFE fabric skin, which, when pulled down, transforms a roof into a wall to provide visual relief and natural light while also serving as a large rainwater receptor. **Bay Brown**





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The Shingle Style

When architectural historian Vincent J. Scully received the National Medal of Arts last month, it was a timely celebration of the man who showed us how to see and assess one of the most significant movements of the last 100-plus years. In his 1974 *The Shingle Style Today or The Historian's Revenge*, Scully documents the legacy that informed a second generation of shingle-style-influenced designers—Charles Moore, Robert Venturi, Charles Gwathmey—who put their own twist on the formal and spatial principles of the movement. Today, there is a growing interest in layered cladding that suggests yet another iteration. Mack Scogin Merrill Elam Architects' Jean Gray Hargrove Music Library on the University of California, Berkeley campus is clad in overlapping slate tiles, referencing the shingled wood structures of early twentieth-century Bay Area architects such as Bernard Maybeck and Julia Morgan. Similarly, in Chicago, Studio Gang Architects wraps a community center in titanium shingles, and in a related strategy to imbue surface with deeper meaning, John Ronan Architect inscribes super-sized Hebrew letters into the walls of a private school. Congratulations, Mr. Scully.



night and day

A music library at UC Berkeley by Merrill Elam and Mack Scogin in a composition in scale, structure, and light.

BY SALLY B. WOODBRIDGE | PHOTOGRAPHS BY TIMOTHY HURSLEY

It may take a while for the new music library on the University of California's Berkeley campus to be perceived by passersby as a familiar background building. So far, many viewers see it as an alien implant. This is not because there's a fixed canon for the campus' architecture, but because the library's design, while neither unruly nor brash, is so unfamiliar in respect to form and materials that, as is usual with inno-

vative approaches, it seems unacceptable. Yet the library is a captivating structure. Its slate-shingled walls invite touch, and, in the evening, interior illumination turns the building into a magical 3-D version of a de Stijl painting.

Designed by Mack Scogin Merrill Elam Architects (MSME) of Atlanta, the Jean Gray Hargrove Music Library was intended to complete the arts quadrangle in the southeast part of the cam-



pus by closing the quadrangle's western edge. The quad is loosely defined by three other buildings that vary in style, materials, and height, ranging from two stories to ten in the case of Wurster Hall, a massive concrete structure that dominates the area. The other two music department buildings, which are connected to each other by a covered walkway, form the north side of the quad. Built in the 1950s, they are a bland modernized evocation of California's Hispanic colonial past.

The design guidelines for the new library, which houses a prestigious collection—including 180,000 volumes of books and printed music and 50,000 sound and video recordings—emphasized contextualism through the use of color, materials, and wall composition. They also stated that rather than imitate or match the older music department buildings, the

new one should work to reinforce the concept of a harmonious and coherent complex serving one academic program.

The library's orientation responds to two conflicting axes. While the ground floor is aligned with the city grid, the two upper floors follow the campus axis. The resulting mismatch between the building corners on the ground floor—which is partly built into a hillside—and those of the floors above puzzles many viewers who see the building as slightly off its mark. The benefit of this subtle shift is that it extends the configuration of the stacks on the ground floor through the upper floors, increasing the spaces in the corners for social and other uses.

This strategy for gaining space on the building's periphery while fulfilling the core programmatic requirements is complemented by the boldness of the building's form and mate-



rials. The form suggests a tailored box with a tapering lid. The lid rises on the southeast corner as if the building were saluting its taller neighbor, Wurster Hall. The box is neatly wrapped with green-gray slate shingles and punctured with glazed openings of different sizes and shapes. If from the outside the fenestration, so different from that of conventional buildings, puzzles passersby, on the inside the logic of the windows' placement is clear. Large glazed openings occur in places where daylighting benefits people—as in the corner offices and study areas—and where it will not impact the library's valuable books and manuscripts. Slit windows light the carrels along the east wall outside the stacks. Intermediate-sized windows, some of them filled with amber-colored glass, are part of a fenestration pattern that appears

painterly. Rust-colored louvers set mainly above the large glazed openings on the corners of the south side both filter entering daylight and, like eyelashes, accent their locations.

On the main floor, indirect daylighting from the reading rooms enters the lobby through the glazed upper sections of its warm cherry-wood walls, making this modest space seem generous. The unobstructed passage from the glazed east entrance to a glass wall on the west side that overlooks an adjacent playing field also expands the feeling of space. The architects have seized every opportunity to create view corridors through the floors that bring the outside inside.

Over their 30 years of practice, Mack Scogin and Merrill Elam have made the most of limited budgets by altering inexpensive, off-the-shelf products to give them a custom-made



look. For the music library, the rhythm of a standard glazing system with a duranodic coating was modulated by the omission of the caps on some of the muntins. This simple move affected the proportion of the glazed areas by making the uncapped muntins read as more costly butt-joined glass. The library's shingled walls are made of standard slate floor tiles with one corner clipped. The tiles are individually attached to the plywood wall sheathing with ringed-shank nails.

The white-painted brace frame, which will ensure the library's stability during an earthquake, stands within the exterior curtain walls. The walls have been designed to move independently in a seismic event and thus curtail damage to the building. Dramatically apparent throughout the building, the frame doubles as a piece of interior sculpture. Because

the diagonal braces were placed symmetrically around the building perimeter, one occurs at the main entrance where it functions aesthetically as an archway.

Given its tight site and limited budget, the library's challenge to define the western edge of the quad was to avoid appearing small, low, and overwhelmed by its larger neighbors. By designing the building to stand out in bold and subtle ways rather than blend in, the architects have invigorated the quad by creating a building refreshingly unlike its neighbors. Perhaps the greatest achievement of the library will be redirecting campus architecture toward the exploration of new technology and materials.

Sally B. Woodbridge, an architectural writer for 40 years, is author of *Architecture San Francisco* (Ten Speed Press, January 2005).







From the reference and special collections reading room (above) and the listening and computer room (below), students can access materials from the library's collection of recordings and other music-related media. Brace frames (facing page) and exterior curtain walls are designed to perform independently during a seismic event.







BUILDING ON TRADITION

John Ronan ennobles the warehouse with simple materials and Hebrew tradition for a Chicago school. **BY EDWARD KEEGAN**

Miriam Schiller tells first-time visitors to the Akiba-Schechter Jewish Day School on Chicago's South Side, "You'll see the building. It's the one with the Hebrew letters on it." Schiller is principal of the school, an institution founded in 1971 that teaches 250 students from preschool through eighth grade in dual two-story structures: a 1950s edifice of limestone, brick, and concrete (originally the Hebrew school for an adjacent, now-demolished synagogue) and a brand new precast-concrete-and-copper-clad building by local architect John Ronan.

The 40-year-old Ronan had designed commercial and other institutional buildings when he worked for other architects, but this is the first nonresidential project completed by the eponymous firm he started six years ago. He beat out older, more experienced architects with decades of experience in school design by demonstrating a vision that Akiba-Schechter found compelling. "Other people said, 'We can do it inexpensively, we can do it quickly, we can do it efficiently,' but John came in and brought something more," recalls Schiller of the initial interview. "He really conveyed that he was going to try and make it beautiful."

Making it beautiful was difficult on the meager construc-

tion budget of \$160 per square foot, which included site work and utilities. "I started with warehouse construction and I tried to ennoble it," Ronan explains. His strategy was to create a simple rectangular box of 44 feet by 98 feet and set it parallel to the 1950s building. This formed a narrow courtyard between the two structures that set up an entry sequence not unlike many similarly sited, midblock apartment buildings in Chicago.

FLEXIBLE YET TOUGH

Looking for the most economical solution for the 9,000-square-foot container, Ronan initially proposed a steel-framed structure with a corrugated metal exterior. The client rejected this solution as far too warehouselike. Eventually he decided on a composite system to support steel floor and roof joists. On the south side of the building—most of which stands close to the property line and an unsightly brick sidewall of a neighboring apartment building—he used precast-concrete panels. The parallel north wall conceals a row of steel columns behind copper-clad exterior sheathing that provides a warm and attractive finish within the courtyard space.

Inside, a multipurpose room dominates the first floor. It



A new classroom building forms a courtyard with the original 1950s school structure at Chicago's Akiba-Schechter Jewish Day School. Envisaged as a warehouselike expression, the new building features prepatinated copper cladding and ribbon windows (above), as well as concrete panels precast with Hebrew letters (facing page).

can function as an auditorium, large classroom, or lunchroom. Ronan chose the interior materials—rubber sheet flooring and mostly concrete walls—that allow the room to serve also as an indoor playground. Its sturdy surfaces are immune to destructive childhood uses.

At the east end, adjacent to the glass entry pavilion connecting the new and old buildings, is a main stair that is widely configured at its foot, with the rest of its run set behind an elevator shaft and mechanical rooms. Here, Ronan sheathed the wall with what he jokingly calls his one “lavish” interior embellishment: panels of oriented-strand board with a clear finish. The staircase itself is utilitarian, an exposed-steel frame with concrete pan treads. Set beside the textured panels and dramatically lit by circular skylights, the space is far more than the sum of its very simple parts.

The second floor has a colorful locker-lined corridor along the south side of the building; three ample classrooms face the courtyard to the north. A second stair that leads directly to an exterior exit at the west end of the hallway brackets the simple plan, but it's strictly fire egress, cleverly concealed beyond the building perimeter to shield it from the students' typical experience within the facility.

SPARE ELEGANCE

The building's design delicately rests on a narrow knife's edge between spartan economy and minimalist elegance.

“If there's a feeling of sparseness, it's due to the budget,” explains Ronan, pointing to his interest in getting the most out of each material he selected for the building. The imported copper cladding was selected for its warm tone, the result of a preoxidation process by the German fabricator. And the precast-concrete exterior works on many levels: as structural bearing wall, a durable cladding surface, a self-insulating envelope, rugged interior finish, and a canvas for the building's most memorable gesture, the cast letters.

It comes as a bit of a surprise that Ronan—a gentile—suggested the idea of the distinctive Hebrew characters cast in the concrete panels. There was debate among the school's building-committee members about the idea, but Ronan conceived it with a convincing double meaning: The letters are first just a simple expression of an alphabet—literally, the ABCs of Hebrew—but they are also a strong affirmation of the institution's cultural heritage.

“This makes it very clear that this is a Jewish school and we're proud of it,” principal Schiller explains. ■



Akiba-Schechter Jewish Day School, Chicago

client: Akiba-Schechter Jewish Day School **architect:** John Ronan Architect, Chicago—John Ronan (principal); Brian Malady (project architect); Yasushi Koakutsu, Sonja Mueller (project team) **landscape architect:** Terra Engineering **engineers:** Robert L. Miller Associates (structural); CCJM Engineers (M/E/P); Terra Engineering (civil) **general contractor:** The Meyne Company **area:** 9,000 square feet **cost:** \$14 million

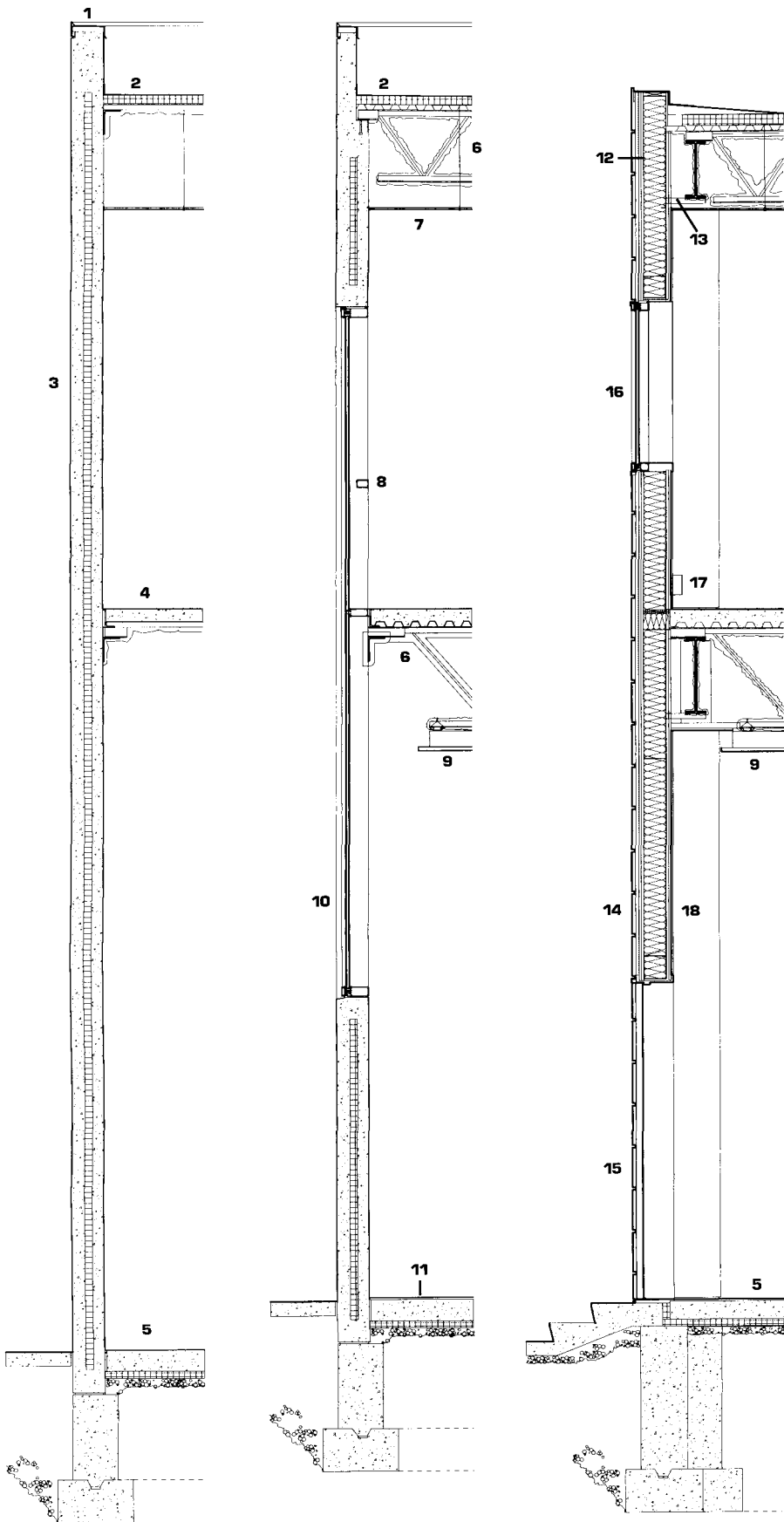
Photographs by Steve Hall/Hedrich-Blessing, Nathan Kirkman, and Yasushi Koakutsu

Specifications and Suppliers

precast concrete: Lombard Architectural Precast Products **metal/glass curtain wall:** Vistawall **preoxidized copper cladding:** Tecu Oxid/KM Europa Metal **single-ply TPO roofing:** Firestone **glass:** Oldcastle **fire glazing:** Fyre-Tec **skylights:** Wasco **locksets:** Schlage **hinges:** Hager **closers:** LCN **exit devices:** Von Duprin **ceiling systems:** Tectum, Armstrong **cabinetry laminate:** Formica **paints and stains:** Benjamin Moore **flooring:** Armstrong **recreation-room flooring:** Mondo **interior ambient lighting:** Metalux **downlights:** Halo **task lighting:** Alkco **exterior lighting:** Lumiere **elevators:** Otis **plumbing fixtures:** American Standard

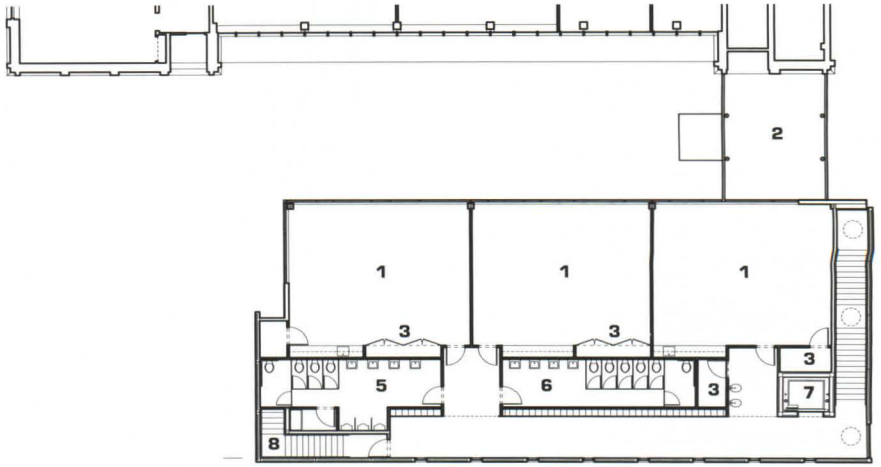


Flanked by residential zones, the school features an entry sequence similar to that of many *midblock apartment* buildings in Chicago: a narrow courtyard leading to a setback lobby (top). A typically spartan second-floor classroom benefits from the light and ample views afforded by generous ribbon windows (above). Rubber flooring in the gym and colorful lockers in the corridor add dashes of playfulness (facing page, bottom left and right).



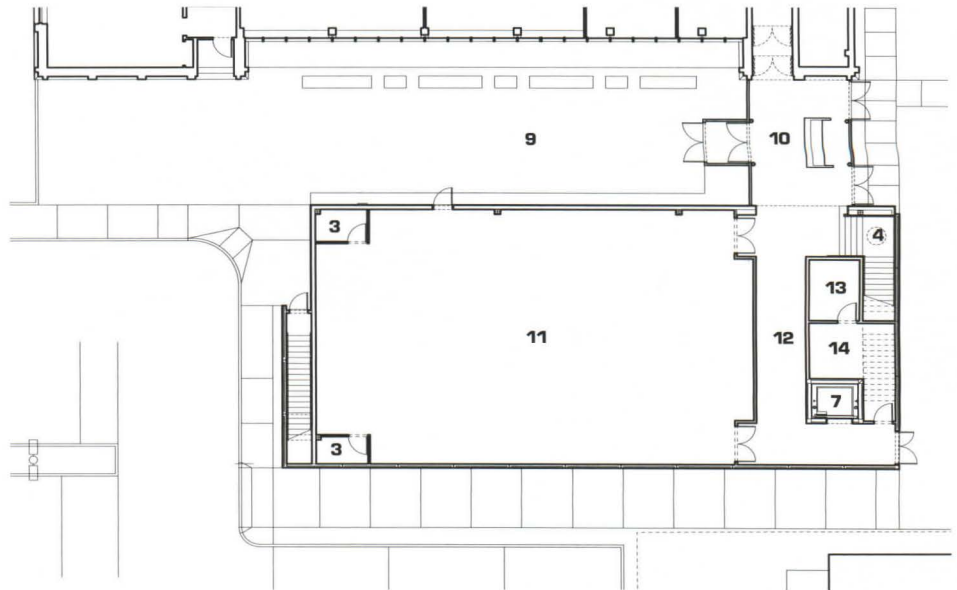
- 1 anodized aluminum coping
- 2 TPO roofing on rigid insulation and steel deck
- 3 insulated precast-concrete panel
- 4 concrete slab on steel deck with steel bar joists and angle
- 5 concrete slab with vapor barrier and rigid insulation
- 6 steel bar joists
- 7 acoustical tile ceiling
- 8 hollow steel guardrail
- 9 acoustical wall panels
- 10 tempered wire glass with low-emissivity coating in steel glazing
- 11 rubber sports flooring
- 12 6-inch metal-stud framing with vapor barrier and batt insulation
- 13 light-gauge framing support
- 14 preformed copper panels on ice/water shield and gypsum board
- 15 hollow steel door with matching copper panels
- 16 insulated aluminum ribbon window
- 17 electric base heater
- 18 gypsum board

typical wall sections ——— 16"

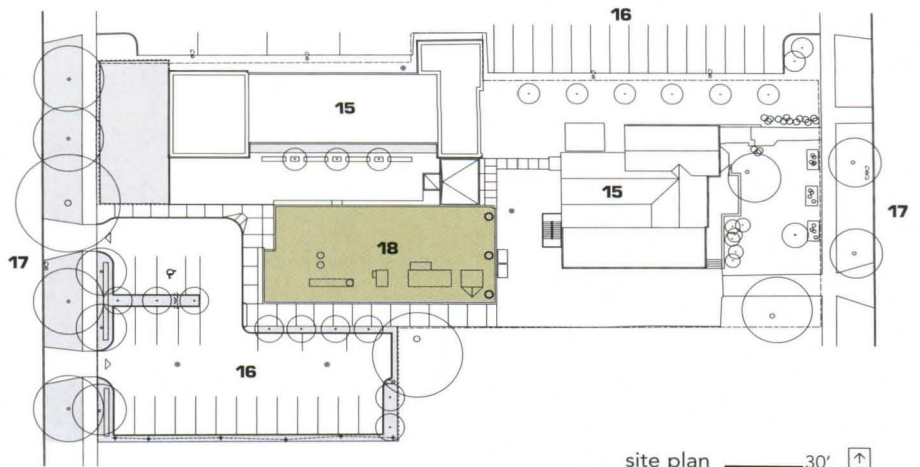


second-floor plan

- 1 classroom
- 2 open to below
- 3 storage/closet
- 4 main stair
- 5 boys' bathroom
- 6 girls' bathroom
- 7 elevator
- 8 emergency stair
- 9 courtyard
- 10 lobby/reception
- 11 recreation/lecture room
- 12 lobby
- 13 machine room
- 14 electrical room
- 15 existing school building
- 16 parking
- 17 street
- 18 new building



ground-floor plan — 12'



site plan — 30' ↑

SCREEN PLAY

A community center by Studio Gang Architects connects Chicago to its Chinese heritage. **BY CHERYL KENT**

Among the challenges Studio Gang Architects faced over the long gestation of the new community center for the Chinese American Service League (CASL) in Chicago was the death of the project's feng shui master advisor. He had required the entry (as originally proposed) to be repositioned, two city-owned trees to be replaced at the client's expense, and the offices of the center's president and executive director to be relocated and furnished with dropped ceilings. What if the advisor's replacement wanted other changes when the revised plans were nearly final? Fortunately, the new advisor was largely satisfied when he reviewed the documents and visited the construction site in the summer of 2003, only requiring some modifications in the placement of electrical outlets.

Such are the difficulties in designing a community center for a distinct cultural group in a land that is not its home. CASL president Bernarda Wong says the design firm led by Jeanne Gang won the commission from a field of seven because the architects struck her as open-minded and sensitive. Both qualities would be needed, it turned out, as the program changed over the roughly seven years it took to raise the money and construct the building that opened last summer.

CULTURAL EXPRESSIONS

Named for the project's main donor, the Kam L. Liu Building sits tight and tidy to the edges of an urban lot on the fringe of the city's growing Chinatown. Without hokum, the architects have tried to evoke traditional Chinese iconography. This is most evident in the building's elegant, understated exterior. The three-story structure has a roughly granulated, gray concrete base and a luminous titanium cladding on the upper two levels. Over most of the building, the titanium is cut in diamonds and layered like shingles to resemble, the architect says, the scales of a dragon. The cladding has two subtly different finishes—one more lustrous than the other—that are randomly interspersed over the building's surface.

The fenestration, with its staggered black framing, calls to mind the familiar Chinese screen. This motif is repeated at the main entrance on Tan Court where the concrete base is broken, leaving an exposed support column at the glass doorway. A west-facing, double-height sunscreen of welded steel reiterates the theme. Its dramatic black metalwork is set

flush with the façade and fronts an open-air balcony. The balcony is accessible from CASL's multipurpose room, and it is the best space in the building, reminiscent—on a smaller scale—of transitional spaces in Le Corbusier's Mill Owners Building in Ahmedabad, India, where he designed a brise soleil device in concrete to create an open-air space and screen between indoors and outdoors.

FUNCTIONAL CHALLENGES

The 38,000-square-foot building consolidates five programs with different functions and serves various age groups that

had been housed in separate rented facilities in Chinatown. The first floor of the new building is evenly divided between daycare for preschoolers and facilities for seniors. In Chinese culture, where it is traditional to live with the extended family, bringing the generations together in one building where they can and do interact was, by itself, an improvement for CASL. The second floor holds classrooms, a training kitchen, and the multipurpose room. The top floor contains staff offices.

Given the hard use the building will have, interior finishes are, of necessity, simple and robust, including linoleum, carpet tile, and paint. But these materials are used to great advantage, making the most of color to dramatize a room or identify a zone, for example, or alternating the grain of the flooring module to create compelling pat-

terns. The contrast between the modest interiors and luxurious exterior is marked. A CASL trustee with investment interests in titanium offered to pay for the cladding, if that material were used. (Who would turn that down?) In the multipurpose room, the architects made ingenious use of truck-tire inner tubes: They were fashioned into half-doughnut-shaped hanging light fixtures.

On a recent visit to the Kam L. Liu Building, the activities underway included: a Tai Chi class; a group of women learning traditional songs and harmonies; citizenship instruction; help with forms to get assistance with energy bills; Chinese-cuisine cooking class; meal preparation for seniors; and snacks being served to preschoolers. Plainly, there are rewards as well as challenges in designing community centers.

Cheryl Kent is a Chicago-based author and design critic.



A Chinese Fu dog statue at the entrance (above) is the center's most literal reference to tradition. Titanium shingles and a black-painted steel sunscreen (facing page, top, and overleaf) are more abstract evocations, suggesting dragon scales and Chinese screens, respectively.

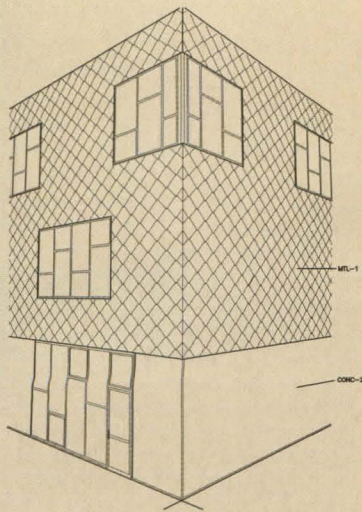




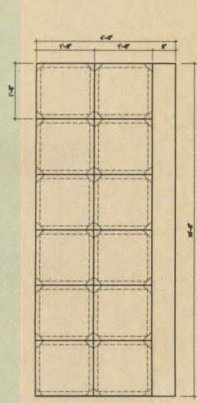
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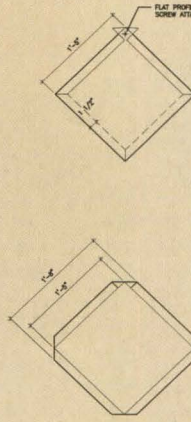
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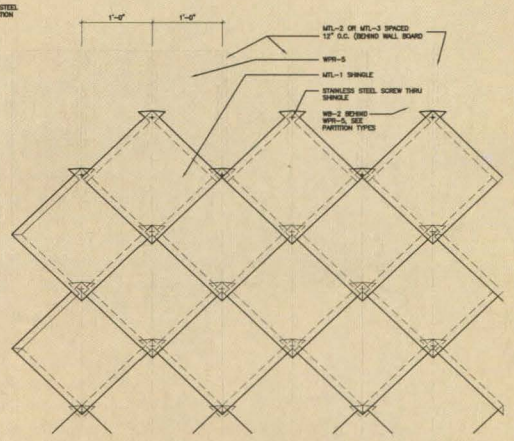
D TYPICAL CORNER DETAIL
SCALE: NOT TO SCALE



C METAL SHEET CUTTING DIAGRAM
SCALE: 3/4" = 1'-0"



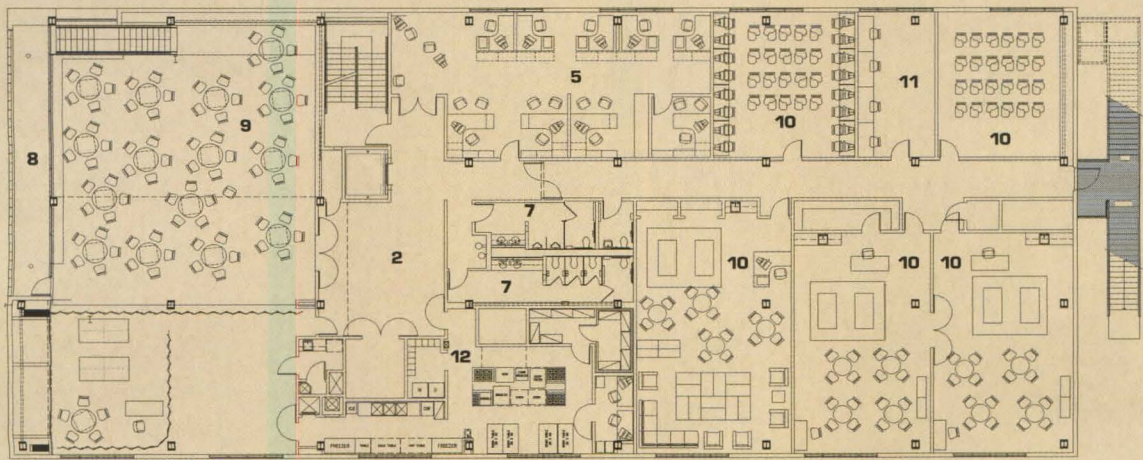
B TYPICAL SHINGLE DIMENSIONS
SCALE: 1-1/2" = 1'-0"



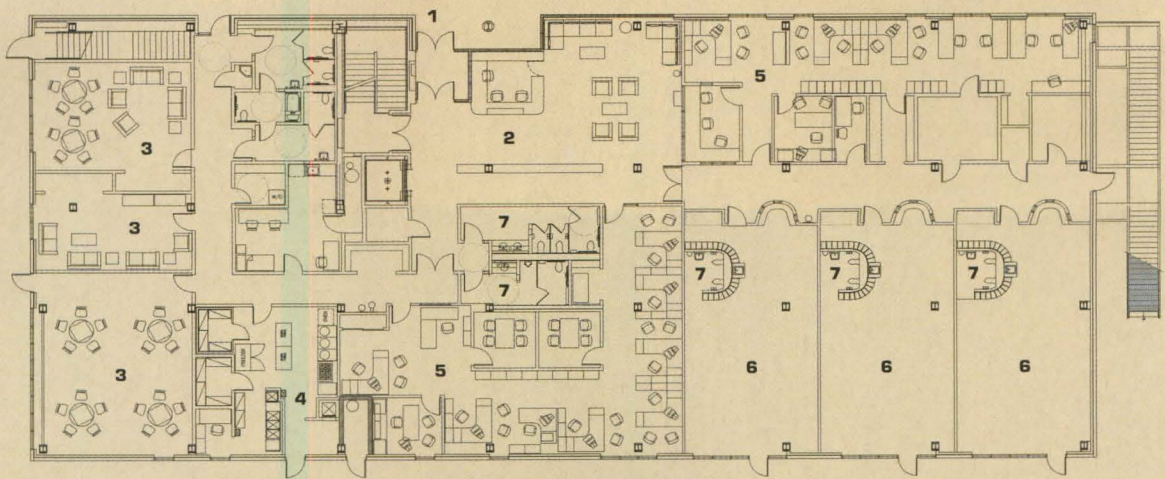
A CUSTOM SHINGLE LAYOUT
SCALE: 1-1/2" = 1'-0"

shingle details

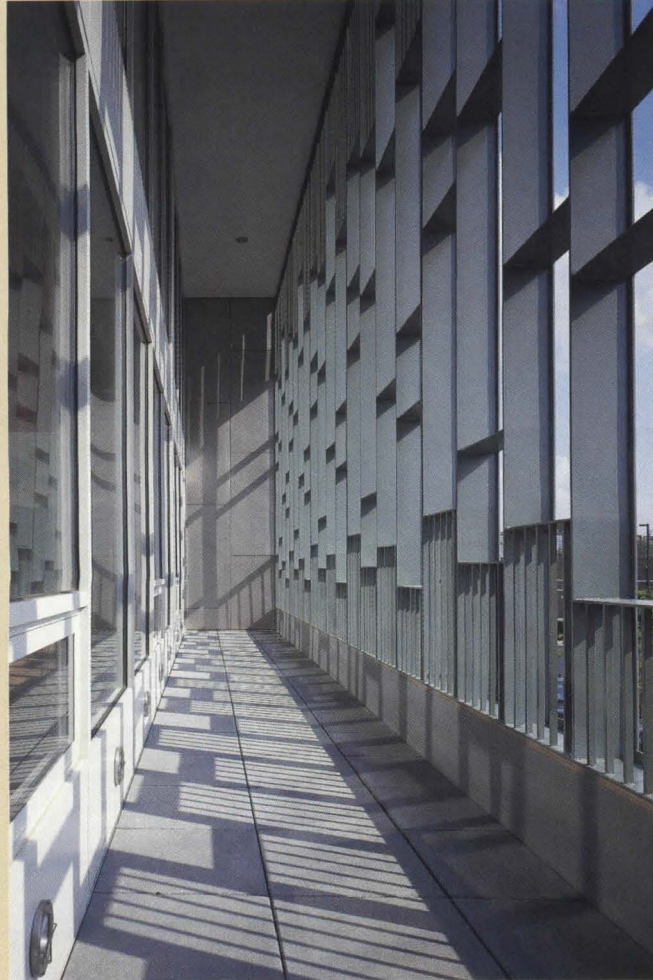
- 1 entrance
- 5 offices
- 9 multipurpose
- 2 lobby
- 6 child daycare
- 10 classroom
- 3 seniors room
- 7 restroom
- 11 resource room
- 4 kitchen
- 8 balcony
- 12 culinary training



second-floor plan



first-floor plan 12' ↑



The Chinese-screen motif is evident in the lobby (top left), the balcony (above left), and the daycare cabinets (top right). Programs at the center include ping-pong for kids (middle) and social activities for seniors (above right).

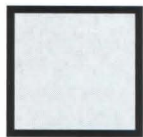
Chinese American Service League, Kam L. Liu Building, Chicago

client: Chinese American Service League—Bernarda Wong (president); Esther Wong (executive director) **architect:** Studio Gang O’Donnell (now Studio Gang Architects), Chicago—Jeanne Gang (lead design principal); Mark Schendel, Kathy O’Donnell (principals); Kara Boyd, Odile Campignon, Yu-Ting Chen, Lynda Dossey, Junko Goseki, Jenny Snyder, Juliane Wolf (architects); Paul Beningo, William Emmick (project team)

landscape architect: Site Design Group **engineers:** Thornton-Tomasetti (structural); BES: Building Engineering System (M/E/P); Terra Engineers (civil) **consultant:** R.M. Chin and Associates (developer/owner’s representative) **general contractor:** Paul H.

Schwendener **area:** 38,000 square feet **cost:** \$5.6 million

specifications at www.architecturmag.com



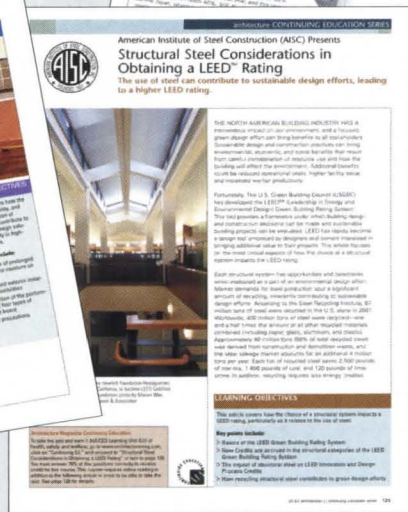
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THE FLOATING HEDGE

Has green-wall technology reached full maturity?

by C.C. Sullivan

The green façade, a practical if clichéd element of environmentally oriented design, is hardly in widespread use. Reasons run from the costs of procuring and installing **wire-rope** frameworks or **metal lattices**, to nagging questions about how to best maintain the systems. (High-profile failures in the mid-1990s included copper trellises, such as one for the Finnish Embassy in Washington, D.C., that turned rain into ivy poison.)

Today, however, off-the-shelf trellis systems guarantee workable, inexpensive support structures, if not always top-notch aesthetics. At the low-cost end of the spectrum is "Webnet," a retrofit-friendly solution by Jakob (jakobstainlesssteel.com) of Delray Beach, Florida. On the higher end, Jakob has hardware and cable for **column greening**, freestanding barriers to hide unsightly areas, and anchors for brick façades. The modularized trellising system by Los Angeles-based Greenscreen (greenscreen.com) adapts to both wall-mounted and **cantilevered**

installations. Another easy-to-install product is from QMH in Chino, California (qmharchitectural.com).

For custom designs, many architects favor the **handcrafted hardware** of Tripyramid (tripyramid.com) from Westford, Massachusetts. When LEED points for **locally produced materials** aren't at stake, many designers turn to old-line European stainless-steel fabricators, such as Germany's Waltermann (waltermann.de) and Carl Stahl (its U.S. arm is Chicago-based DecorCable, decorable.com).

In addition to local climate and building orientation, critical design factors for the **vegetation supports** include façade coverage area and plant species. Horticulturalists or landscape architects can provide growth rates, climbing ability, and full-growth loads for vines and ivies; some may recommend mixing compatible **annuals and perennials** for year-round foliage. Generally, flexible stems that curl and twine are more suitable than plants with aerial roots or "suckers" or those that grow very heavy, such as wisteria and bougainvillea.

But variations in planting weights needn't be a concern anyway: Stainless-steel cable nets support high loads and stresses, and most offer **overload devices** and flexible couplings to prevent cable grids from detaching. ■

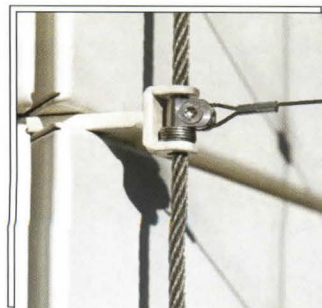
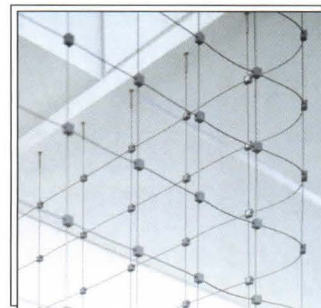
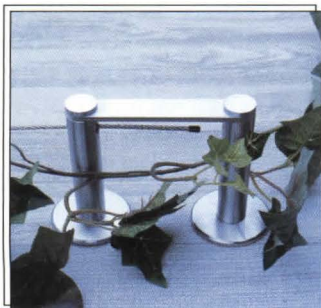
FOR MORE INFORMATION ON CABLE STRUCTURES, CIRCLE 125 ON PAGE 129.



Europeans pioneered the "green wall." An instructive example is Swiss Re's Munich offices (2001) by BRT Architects with landscape architect Martha Schwartz. Its perimeter galleries feature three layers of cables, forming a net hung from spring-loaded housings.



Many green-wall systems were originally wire-rope railings. For Richard Meier's city hall and library complex in The Hague (1995), the austere geometry of the square cable-grid railings installed in 2003 seems an apt addition to circulation areas in the tall atrium.



ACCESSIBILITY IN PLAY

When it comes to recreational structures for children, accommodating kids of all abilities takes ADA compliance to a whole new level.

by Katie Gerfen

Accessibility is about more than just generous door widths and gentle ramp grading: It is also important to the business of play. And at this year's **da Vinci Awards** (davinciawards.com), an annual program sponsored by the Engineering Society of Detroit and the National Multiple Sclerosis Society that honors outstanding universal design, there was a distinct focus on recreation.

FUN FOR EVERYONE

The award-winning All Kids Playground in Waterford Township, Michigan, for example, is an environment where children of all abilities can play together. Creating this type of inclusive fun-land requires a great deal of planning and ingenuity, as Judy Rosenberg discovered. Cochair of the planning committee for the project sponsor, the Detroit-area chapter of the National Council for Jewish Women (NCJW), she worked with local experts on juvenile disabilities to determine what different children need. "Kids with autism, for example, need a quiet place to be alone," says Rosenberg, "so we have enclosed areas with benches under the bigger structures so they can do that."

Rosenberg and other members of the NCJW teamed up with **Landscape Structures** (playsi.com), a Delano, Minnesota-based manufacturer of playground equipment. "The idea was that just getting kids in wheelchairs 3 or 4 feet off the ground is an accomplishment—they may never have been that high before" says Rob Nalli, a certified playground-safety inspector, and a consultant with Landscape Structures's local equipment supplier, **DP & Hoffman PlayWorks**. The playground includes a ramp leading to one of four towers connected by bridges wide enough for wheelchairs to cross. Slides have sufficient room at the top for children to be



The All Kids Playground (top) and the Crothed Mountain Treehouse (above) were recognized at this year's da Vinci Awards for making recreational structures that allow disabled kids to engage in able-bodied fun.

transferred from wheelchairs in order to use them. Attractions on the ground allow all children to play together.

AN UPHILL BATTLE

The Crothed Mountain Treehouse in Greenfield, New Hampshire, lets disabled children do something a wheelchair doesn't: climb a tree. The brainchild of Burlington, Vermont-based **Forever Young Treehouses** (treehouses.org), the tree house is located at the Crothed Mountain school and rehabilitation facility for children who require around-the-clock medical care. The project centers on 150 feet of ramp, zig-zagging between five hardwood trees. The ramp terminates at an enclosed structure 18 feet off the ground, supported by three more hardwoods. A rest area halfway up the ramp allows kids to enjoy the journey to the tree house as much as the enclosure itself. "It has created a sense of whimsy in that part of the campus,"

says Michael Redmond, vice president of advancement for the facility.

"The crucial thing," says Bill Allen, founder of Forever Young Treehouses, "is that you have to have someone to design and build them, you can't just hand off a set of plans. It is really a design-build process." The designer and builder behind all the company's projects is B'fer Roth, known internally as "the treehouse guy." The main hurdle is planning the trajectory and the supports of the ramp, says Roth, adding that "the ramp kind of steals the show."

The tree house was a labor-intensive job—the project team actually lived at the Crothed Mountain facility during the three-month construction process. But "when you see a kid rolling up that ramp with a big grin on his face," says Roth, "you know that it was worth it."

FOR INFORMATION ON RECREATIONAL STRUCTURES, CIRCLE 126 ON PAGE 129.

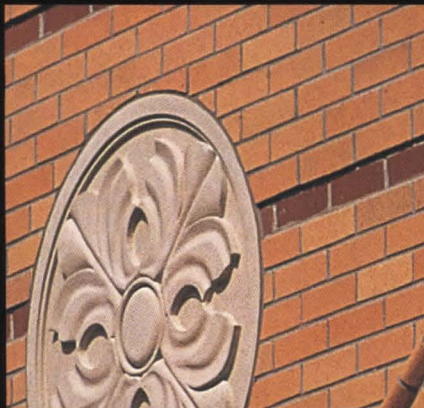
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THE COMMONER'S CATIA

Gehry Technologies brings a specialized CAD/CAM system to the masses.

by Katie Gerfen

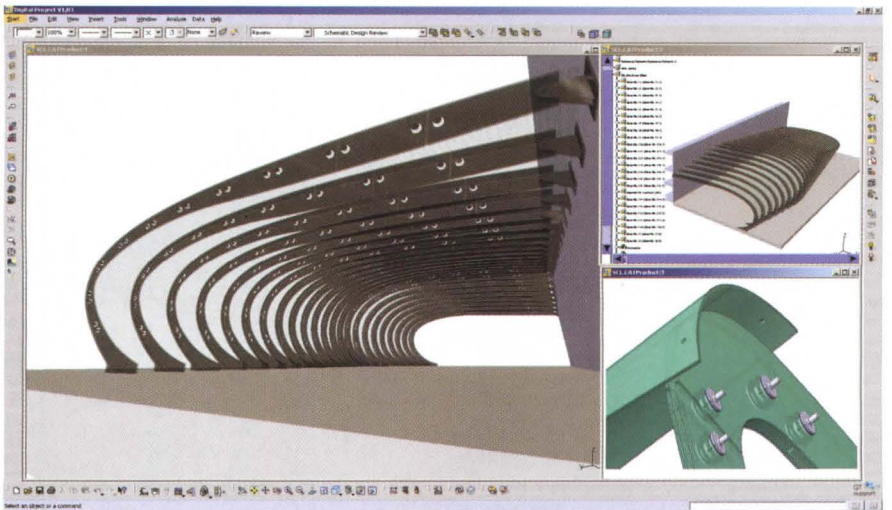
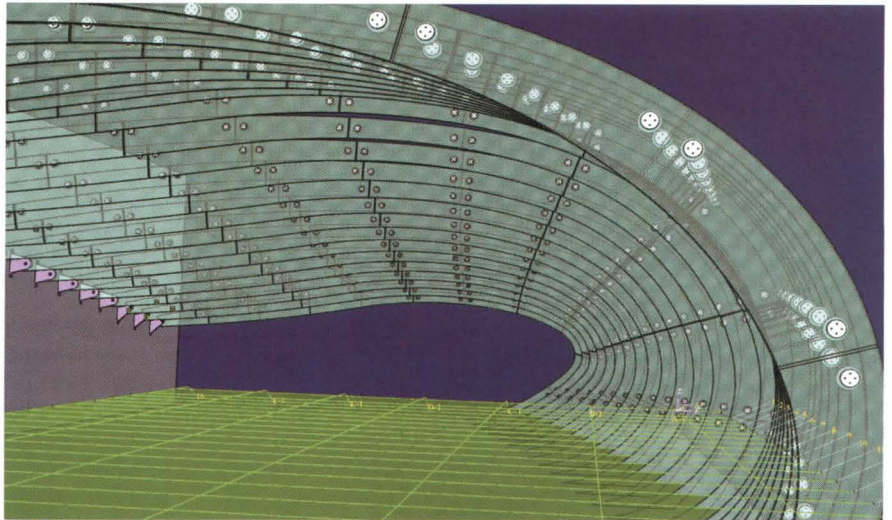
Perhaps bored with revolutionizing the built environment, Frank O. Gehry has taken on the task of shaking up a new territory: architectural software. Gehry Technologies recently announced the release of a new program, **Digital Project**, in an attempt to bring its long-favored **CATIA** to other practitioners. Centered on Dassault Systemes' CATIA 3-D modeling system, and released at the same time as that software's fifth version (V5), Digital Project is a suite of independent products that are compatible with each other as well as with the programs in the V5 line.

With the release of Digital Project, **Gehry Technologies** (www.gehrytechnologies.com) aims both to more successfully serve the needs of architects and to make the software more financially feasible for smaller design studios.

But Digital Project is more than "CATIA light" notes Andrew Witt, a design-computation researcher with Gehry Technologies. "We have augmented the functions of Digital Project to include things that weren't at all in CATIA: specific input/output formats and A/E/C standards," he explains. "There are a lot of additions and functionality in Digital Project that make it more useful for the average architect."

THE WHOLE PACKAGE

The added functionality includes several new software products to assist with the design process. **Foundation** provides basic geometry and parametric modeling for architects. It includes over 200 commands and allows users to overlay construction information onto the building model. **Systems Routing**,



The glass ribs for the Australian SCL Glass Headquarters (top) were designed in CATIA by the New York City façade-design firm, Front. The same project is shown above in the Digital Project interface.

an M/E/P application, allowing space to be reserved in the model of a project for HVAC ducts, piping, and tubing to prevent interference during build-out.

Mark Malekshahi, vice president of the New York City-based engineering firm Cosentini Associates, says that his firm used Systems Routing to design the building systems for the new Charles and Dee Wylly Theatre at the Dallas Center for the Performing Arts [August 2004, page 31], designed by the Rotterdam-based Office for Metropolitan Architecture. "The building is so dense," says Malekshahi, "that we had to put the mechanical systems

on the 3-D model in order to make sure that they fit appropriately."

Other Digital Project programs include: **Designer**, providing more complex modeling capabilities for architects who want to design structures entirely in 3-D; **Knowledge Template**, which allows architects to store components of a design and then apply them to the same or other projects; **Viewer**, an information-management interface; and **Structural Steel**, which uses a series of specialized design tools and built-in databases to allow detailed steel structures to be directly incorporated into the modeling.

MAKING THE TRANSITION

Several of the firms who might use Digital Project have been CATIA customers for a number of years. Among them, many started using CATIA after collaborating on projects with Gehry Partners. Front, a New York City-based firm that specializes in façade design, for example, first used CATIA while working with the iconoclastic firm a year and a half ago. Front has continued using the program for its own projects,

and feels it has allowed them to design projects that other, more established CAD technologies would not. For example, the SCL Glass Headquarters in Australia has a shell formed entirely out of laminated-glass ribs. Building each rib involved a complex series of calculations, which the CATIA modeling engine computed for them. "We could not have drawn that without some kind of automation," says Martin Riese, a founding partner of Front.

But such progress does not come without problems. "It's a new tool and it's fairly complicated," says Cosentini's Malekshahi. "It's hard to get used to." But, he adds, "Once you do, it is very helpful. One needs to make the proper investment in the product and the learning curve required to use it. But that's a problem with every new tool."

FOR INFORMATION ON C.A.D. SOFTWARE, CIRCLE 129 ON PAGE 129.

➔ Go Direct-to-Fabrication, and Cut Out the Middleman

The worlds of large-scale industrialized construction and smaller, conceptual CAD/CAM applications are converging on each other at an accelerating clip. The result is that more architect-produced CAD data for commercial building projects is being translated directly into end product. This abbreviated value chain is a good thing for designers—fewer middlemen means fewer markups—if they have the tools and the guts to go fab-ready.

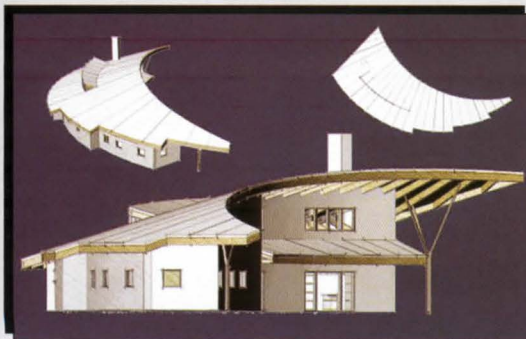
Fortunately, a few self-help groups bring together the more audacious architects to share best practices and secrets of the trade. The AIA and the Association for Computer-Aided Design in Architecture, or ACADIA, collaborated last month on "Fabrication," a conference hosted by the University of Waterloo School of Architecture in Canada (fabrication.ald.utoronto.ca). One of the event's more powerful workshops, an annual affair hosted by the **SmartGeometry Group** (www.smartgeometry.org), examined the use of "parametric CAD technology for direct manufacturing in the architectural context." Participants used Bentley Systems' brand-new **MicroStation GenerativeComponents** (www.bentley.com) on their own Win2000 or WinXP computers, and output scale models created with a 50-watt laser cutter from **Universal Laser Systems** (www.ulsinc.com); a 3-D printer by **Z Corporation** (www.zcorp.com); and a three-axis router by **Techno-Isel** (www.techno-isel.com).

Of course, architects don't need to have rapid-prototyping equipment in their model shop to join the cutting edge. (Although some will say it's critical to the process,

and there are many low-cost alternatives.) But an advanced graphical solution to 3-D building modeling, such as **GenerativeComponents**, is vital. Another novel tool in this category is **Digital Project** from Gehry Technologies (www.gehrytechnologies.com), which may help speed acceptance of its underlying engine, Dassault Systemes' vaunted CATIA (see main story, facing page).

The benefits of **GenerativeComponents** and **Digital Project** are that they were programmed by people who understand something about building construction, not just complicated parts engineering. Still, some designers prefer the more freehand, manufacturing-focused software like **FormZ** by Autodesk (www.formz.com), which now boasts a new script-editing window, or **Rhino 3D** (www.rhino3d.com), which is even more painterly now that it comes with "**Penguin**," a conceptual scan-line renderer that produces images stylized to look like sketches and cartoons.

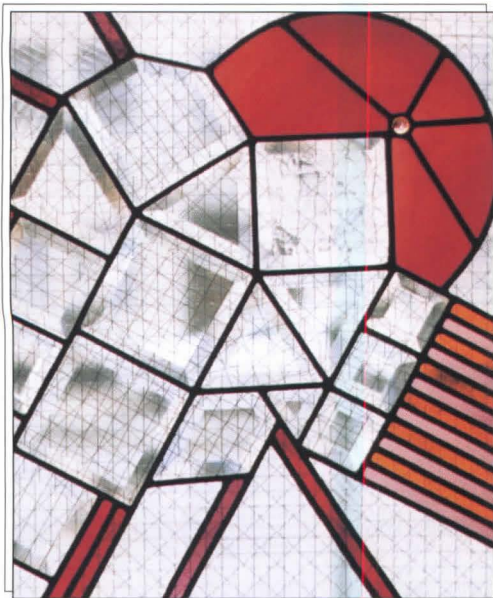
In the CAD/CAM world, however, the design software is only as strong as the translator used for fabrication, and many architects have been experimenting with 3-D printers and CNC milling equipment, as at the **SmartGeometry** workshop. **VisualMill Basic 5.0** from MecSoft (www.mecsoft.com) is ideal for the entry-level buyer, and many firms use it with GIS data as a "terrain modeler" to build scale replicas of existing site conditions. For more sophisticated needs, products such as **OneCNC** (www.qarm.com.au) provide a well-evolved, all-Windows environment and the potential for five-axis milling. **C.C. Sullivan**



Architectural "design for manufacturing" or DFM, integrates industrial-process information in the design phase. In a recent meeting of the **SmartGeometry** Group, Georgia Tech researcher Eduardo R. Lyon presented **Column-Ceiling**, a DFM parameterization of the two architectural elements created in **MicroStation** with a beta version of the new **GenerativeComponents** software.

product: **beveled wire glass**
 manufacturer: **Larry Zgoda**
 web: **larryzgodastudio.com**

Updating the centuries-old tradition of stained glass, Zgoda has created a line of colorful and clear patterned panes using a modern material: wire glass. Thick enough to be beveled and faceted as in Victorian-era motifs, the glazing commonly used for fire doors adds an updated look to an old standby.



product: **700 Series**
 manufacturer: **Peachtree**
 web: **peachtreedoor.com**

Especially relevant after the series of hurricanes that hit this past summer, Peachtree Doors and Windows has added Hurricane Impact Products to its 700 Series, which are outfitted with a layer of PVB measuring nominally one-tenth of an inch bonded between two panels of annealed and laminated glass. Because the PVB prevents flying glass, these products are compliant with wind-borne debris codes in the Eastern United States.

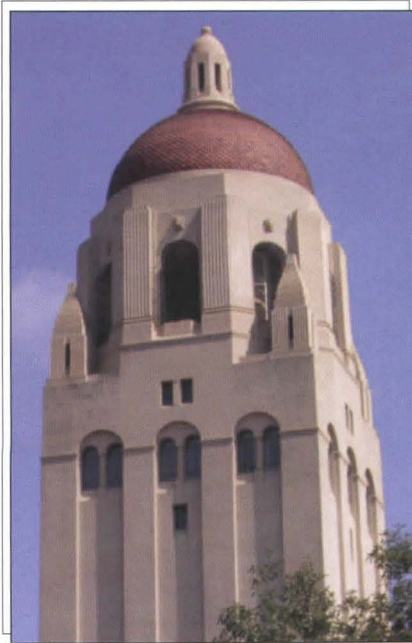


product: **blast-resistant translucent panels**
 manufacturer: **Kalwall**
 web: **kalwall.com**

Having recently undergone a series of blast tests, the translucent systems from Kalwall are now deemed compliant with the stringent antiterrorist guidelines set out by the Department of Defense and the General Services Administration. As previously the only certified material was laminated, structural sealed glass with steel framing, the polycarbonate panels offer designers an alternative that is both energy efficient and thermally broken. It is also useful in daylighting scenarios.

product: **window film**
 manufacturer: **V-Kool**
 web: **v-kool.com**

With an ultraviolet rejection rate of 99 percent and infrared rejection of 94 percent, V-Kool's applied films are effective tools for promoting energy efficiency in new or existing buildings. A clear film that bonds to window panels, the "spectrally selective" products permit the transmission of light while reducing heat transfer to cut down on cooling costs during the hot summer months. Already in place in 18 buildings at Stanford University (right), the material was originally developed for the U.S. space program and has since been adapted for commercial use.



- ☑ product: **FOG Series; Arrowhead Series**
- ☑ manufacturer: **Valli & Valli**
- ☑ web: **vallievalli.com**

The Italian manufacturer of designer door and cabinet hardware Valli & Valli has come out with two new door levers designed by architect Frank O. Gehry: the FOG Series and the Arrowhead Series. Gehry's new sculptural levers reflect his interest in organic forms and structures, especially fish. The FOG Series is crafted in brass and available in polished-brass (below), polished-chrome, and satin-chrome finishes and comes in a range of handle and knob sizes. The stainless-steel Arrowhead Series is available in both satin and polish finishes and also comes in a variety of sizes.



- ☑ product: **Series 200**
- ☑ manufacturer: **L.E. Johnson Products**
- ☑ web: **johnsonhardware.com**

The heavy-duty Series 200 track hardware is designed for sliding and folding doors and features four-wheeled hangers with large nylon wheels for smooth rolling action and extended life. The folding panels withstand weights up to 125 pounds, and the sliding doors up to 300 pounds. Perfect for commercial applications where durability and trouble-free operation are priorities, the product is designed to be used in offices, factories, schools, hospitals, hotels, and other industrial and commercial buildings. It features precision-extruded aluminum I-beams that stand up to heavy-duty applications. The hardware also includes a lever that allows installers to lock the doors into the hangers quickly, easily, and securely.



FOR INFORMATION ON DOOR HARDWARE, CIRCLE 123 ON PAGE 129.

- ☑ product: **door portholes**
- ☑ manufacturer: **Idaho Design**
- ☑ web: **idaho1.co.uk**

Founded in London, Idaho Design now has offices in Santa Barbara, California, and since branching out stateside has found success with their range of contemporary portholes. Idaho's round stainless-steel windows are suitable for use in hotels, bars, restaurants, and restrooms. They can be used in any door, cabinet, or wall and come with a choice of finish, hardware, and glass.



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Circle 221 or www.architecturemag.com/productinfo

- ☐ product: **SB Series Boilers**
- ☐ manufacturer: **Buderus USA**
- ☐ web: **buderus.net**

For sustainably heating commercial and residential projects alike, architects should know about the highly efficient blue boxes made by German engineers at Buderus (pronounced boo-DEHR-es). A brainy alternative to many mediocre boilers produced domestically, these hydronic systems are ideal for tie-in to radiant-heat panels and even towel warmers, which the company also offers. The first dual installation of SB boilers in North America was for the Vancouver School District in Washington (right); the compact system met strict air-quality standards for the region without sacrificing energy efficiency.



- ☐ product: **Series GK**
- ☐ manufacturer: **Giacomini**
- ☐ web: **giacomini.com**

Another alternative in radiant heat comes from on high—from dropped ceilings, that is. The Italian GiacoKlima system features zinc-plated steel ceiling tiles


hiding aluminum diffusers piped with hot water. It's analogous to an acoustic ceiling, except for short polyethylene pipes connecting the element-bearing tiles.

- ☐ product: **fabric ducts**
- ☐ manufacturer: **DuctSox**
- ☐ web: **ductsox.com**

Post-tensioned concrete arches reaching 58 feet high, designed by Hastings & Chivetta Architects, St. Louis, enclose the once-outdoor Olympic natatorium at Georgia Tech in Atlanta (below). A 56-inch-diameter fabric air-dispersion duct is threaded through the arches and bow trusses, hung by an H-track suspension system, to deliver conditioned air into the newly contained facility. While the architect originally specified round aluminum duct, the visually pleasing snake of gray fabric was more cost-effective.



FOR MORE INFORMATION ON M/E/P SYSTEMS AND COMPONENTS, CIRCLE 124 ON PAGE 129.




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To take the quiz and earn 1 AIA/CES Learning Unit (LU) of health, safety, and welfare go to www.architecturmag.com, click on "Continuing Ed," and proceed to "Choosing Entry Door Systems For Residential Construction" or turn to page 108. You must answer 70% of the questions correctly to receive credit for this course. This course requires online reading in addition to the following article in order to be able to take the quiz. See page 108 for details.

What is the first thing you notice when looking at a home? For home builders, as well as buyers, it is probably the front door. As the focal point of a home, the entry door gives the first indication of a home's character—whether it's welcoming, imposing, quaint, or distinguished, or even whether the house is built in a certain style, such as colonial, mission, or arts and crafts. Builders need to take advantage of this opportunity to make a positive first impression, but it takes more than an eye for style to choose an entry door that will be both attractive and effective for the homeowner over the lifetime of the home. When choosing an entry door for a home, builders should consider the following points:

- Durability of construction and materials
- Energy efficiency
- Aesthetics
- Added value to the home

Entry door materials and construction have evolved significantly over the past 50 years, giving builders a variety of options from which

to choose. One of the most notable changes in construction is the emergence of the "entry door system," which consists of a door pre-hung in its casing, a bottom edge that interlocks with the threshold, and weather-stripping that encircles the door frame's perimeter. Also designed as part of the system are the hinges and the lockset, as well as optional sidelites to flank the door and other decorative elements that are becoming increasingly important to home design today. Within a system, all components are designed and manufactured to work together reliably and efficiently. Before turning to a discussion of entry door systems as a whole, however, let's take a look at the construction of a traditional door and the common materials from which they are made.

TRADITIONAL DOOR CONSTRUCTION

Nearly all doors—no matter what material they are made of—fall into two basic design categories: flush or paneled. Flush doors are flat on both the interior and exterior surfaces and are the simpler of the two types. Paneled doors, in contrast, have rectangular recesses framed by rails and stiles (see figure 1 in supplementary online reading). Rails are the horizontal parts of the door framework, and there are four types: bottom, top, intermediate (on doors with three or more rows of panels), and the lock rail. The bottom rail is generally the tallest, while the lock rail is positioned around the mid-section of the door and is named for its proximity to the lock bore and housing. Stiles are the vertical supports that form the right and left edges of the door

Learning Objectives

This article covers the evolution of entry door construction and how an entry door system contributes to the design, value, and energy-efficiency of single- and multi-family homes.

Key points include:

- A comparison of traditional and current door construction
- Advantages and disadvantages of common entry door materials
- Current trends in decorative glass elements for entry doors
- Adding value to a home with entry door choice.

Choosing Entry Door Systems for Residential Construction

Understanding Efficiency Ratings

What Is the R-Factor?

Door efficiency and insulation is often given in terms of an R-Factor. This value quantifies the rate of heat loss allowing the consumer to understand the insulation value of the product. Glass types, sizes, glazings, frame materials, and installation affect these values. If the R-value is high, there is less heat loss. Standard R-values range from 2.0 to 9.0. This standard is set by the American Society of Heating, Refrigeration, and Air-Conditioning Engineers.

What Is the U-Factor?

U-Factor is another measurement used to rate the efficiency and insulation of entry doors materials. Like R-Factor, this rating also measures the rate of heat loss. The practical indication given for the material is opposite that of the R-Factor rating, i.e. the lower the U-value number, the better the heat loss rating for that material. For entry door materials, U-Factor generally ranges from .14 for fiberglass to .54 for solid wood. This rating was created by the National Fenestration Ratings Council (NFRC).

What To Look For

Despite the fact that wood has been overtaken by fiberglass and steel as the preferred material for entry door construction in single- and multi-family homes, wood doors still set the benchmark for warmth and beauty. When choosing a fiberglass or steel door embossed with a wood-grain pattern, make sure the direction of wood grain is oriented in the correct direction: horizontal grain on the rails and vertical grain on the stiles. Also look for simulated joints where the rails and the stiles meet.

framework. The lock stile houses the lock, while the hinge stile supports the hinges. Running down the middle of the door are the mullions, which run vertically between the rails. All of these elements work together to support the panels, which, in a traditional wood door, are either jointed into grooves in the framework or attached with dowels in accordance with traditional door construction.

In addition to the aesthetic appeal, the construction of the paneled door originated as a solution to the hygroscopic tendencies presented by the most traditional door material—wood—which expands and contracts in response to changes in moisture. The jointed or doweled construction practice provides enough room for the rails, panels, and stiles to shift without compromising the integrity of the door, even though wood doors have a tendency to crack and warp over time.

Construction, however, is just one way to address the challenges presented by time-honored materials. Door manufacturers have worked to bring new types of door materials to the market, such as steel and fiberglass, that are less vulnerable to the elements. Yet each material has its advantages and disadvantages when it comes to aesthetics, durability, and energy efficiency.

Wood

Wood is the most traditional type of material used in door construction. Doors are available in both softwood and hardwood species and can be constructed of either solid or veneered components. Softwood species are used most frequently, with Douglas fir the most prevalent, followed by Ponderosa and Idaho pines. Hardwood species, such as birch, oak, cherry, and mahogany, are more often used as veneers to cover softwood cores, but solid hardwood doors can be obtained through custom manufacturers.

Wood offers a great deal for a home when it comes to appearance. It is a warm and natural material that also provides a pleasing tactile experience for the user. Wood can also be milled and carved into intricate designs to create a one-of-a-kind product, which is especially important for very high-market homes that require a truly customized look.

But wood presents significant challenges when it comes to performance and

maintenance. It is particularly vulnerable to moisture and sunlight, which can cause the material to show its age long before the rest of the home. Common problems with wood entry doors include rotting, swelling, and warping when left exposed to the elements. Because of this, the exterior surface of a wood entry door must be treated regularly with sealant or a coat of protective paint to maintain its appearance and integrity.

In addition to requiring significant maintenance, wood doors have lagged behind in the area of energy efficiency, which has become increasingly important both to builders and buyers. High-market products have turned to innovative split construction that includes insulating material to achieve R-Factors around R-5. A conventional solid wood door with traditional rail and stile construction, however, maintains an R-Factor around R-2 (see "Understanding Efficiency Ratings," at left for more details). Faced with these challenges, door manufacturers have introduced alternate materials to the entry door market that have overtaken wood door sales significantly in residential construction (see charts 1 and 2 in online material).

Insulated Steel

The insulated steel entry door was first introduced in the early 1960s to overcome the performance issues presented by wood doors. Construction methods differ considerably from a traditional wood door. Most steel doors consist of primed or galvanized steel faces applied over an insulating foam core. Thicknesses range from 24- to 26-gauge steel* for high-quality residential doors. The edges of the door are constructed of wood stiles and rails or an interlocking steel frame with a thermal break to ensure energy efficiency (solid steel edges would be prone to heat transfer, which can cause condensation build-up and freezing).

Alternatively, some door manufacturers depart from the rail and stile construction, using hollow door panels that are filled with expandable polyurethane foam insulation. In addition, some steel doors feature interlocking steel panels that do not require a stile and rail skeleton.

Regardless of construction, insulated steel provides a variety of advantages for entry doors—in particular, its superior strength

* Steel thickness can vary based on the quality of the door. 24-gauge is a commonly used thickness in high-quality residential door panels. 25- and 26-gauge steel is also available.



and durability. The steel face is impervious to the effects of moisture, and the insulating core can achieve an efficiency rating anywhere from R-5 to R-8 for a steel door.

When it comes to aesthetics, insulated steel is not as industrial as it might seem. The doors can be pressed to create decorative recesses that imitate the look of a traditional paneled wood door. Many are embossed with a wood-grain pattern, which enhances the look of both flush and “paneled” types. The galvanized steel facing, however, will not absorb a natural stain, so it cannot achieve the look of natural wood. Rather, steel-faced doors are better suited to a paint finish.

In addition to aesthetic limitations, steel presents its own set of challenges for an entry door. Steel facing is highly vulnerable to denting and generally requires periodic repainting.

Fiberglass

Fiberglass is the most recent material introduction to the entry door market, as well as the fastest growing sector, due to its excellent energy efficiency and durability, and its ability to mimic the look and feel of wood. A fiberglass door isn't entirely constructed of fiberglass, however. Similar to insulated steel door construction, a fiberglass door consists of a compression-molded fiberglass facing over a framework of wooden stiles and rails. The spaces within the framework are filled with polyurethane foam insulation.

The fiberglass facing can be textured to create a realistic wood grain, and because fiberglass is slightly porous, it can be stained to match most popular wood materials, including oak, cherry, walnut, and mahogany. This creates a natural look that steel cannot attain, and the finish is typically maintenance free. In addition, fiberglass will not dent and is not prone to variations in size due to weather conditions.

ENTRY DOOR SYSTEMS

No matter what kind of entry door a builder chooses, there is always the option of purchasing a simple door with parts to assemble at the shop or the building site, or a pre-hung entry door system. Entry door systems actually originated with the

advent of the steel entry door. Because steel is more difficult to machine and cut to size than wood, field application of hardware and last-minute size alterations were cumbersome for builders. As a result, the pre-hung and pre-assembled door system was developed, and both wood door and fiberglass door manufacturers have followed this lead.

Entry door systems are manufactured so that all parts of the door work together: the door itself, the locks, hinges, casing, sweep system, as well as optional transoms or sidelites. There are many advantages to choosing an entry door system over installing doors onsite. Because they are already assembled, they provide quick installation, no jobsite installation of weather-stripping, sweep, or threshold, and they offer a more energy-efficient sealed unit (see figure 2 in online content).

One of the most important innovations of the entry door system was the introduction of the continuous head and sill—essentially, a one-piece frame that can house the door itself as well as sidelites and transoms. The benefit of the continuous head and sill is severalfold: Because it is made in one piece, it prevents water from wicking up into the seams and joints of a traditional frame assembled from multiple pieces. It is manufactured from composite materials that will not rot when exposed to moisture. Plus, the single-piece unit provides additional stability for sidelite and transom installation. All of these factors working together increase the integrity of the entry area and make it less vulnerable to heat loss, heat gain, and air and water infiltration.

It is important to note, however, that when working with dealers instead of directly with the manufacturer, builders should make sure that an entry door system is comprised of parts that were meant to work together. If they are not, many of the benefits of the system are lost. In addition, builders may still choose to hang their own entry doors, especially if immediate turn-around is needed, or if the project is a remodel and only the door itself needs replacing. In doing so, however, the builder may sacrifice an extended warranty, especially if assembling components from multiple manufacturers.



Glass Innovations

According to the NFRC, today's door lites are three times as energy efficient as the ones installed in the early 1980s. Advances in door lites are comparable to those in windows—use of multiple layers, heat-reflecting coatings, and low-conductivity gases, such as argon and krypton seals have also improved. Visit www.nfrc.org, for more information on efficiency ratings.

For the balance of this AIA/CES Learning Unit, proceed to www.architecturemag.com, click on “Continuing Ed,” and proceed to “Choosing Entry Door Systems for Residential Construction,” where you will find supplementary online reading and additional figures and charts referenced in this article.

The following quiz includes questions derived from online material not included in this printed article. You are required to read the additional online material in order to take the quiz and complete this continuing education unit. Please go to www.architecturemag.com, click on "Continuing Ed," and proceed to "Choosing Entry Door Systems For Residential Construction" for the additional information.

Test Questions

- What type of entry door is the fastest growing in the market?
 - Steel
 - Fiberglass
 - Wood
 - Glass
- What is the difference between U-Factor and R-Factor?
 - There is no difference
 - They measure the same phenomenon, but report the measurement differently
 - U-factor measures heat loss and R-Factor measures heat gain
 - None of the above
- Which of the following materials is hydroscopic?
 - Wood
 - Glass
 - Fiberglass
 - Steel
- What is the purpose of an entry door sweep?
 - To prevent air leakage with a tight seal at the jamb
 - To prevent moisture intrusion
 - To create an air lock
 - All of the above
 - Both a. and b.
- Which of the following are benefits of an insulated steel door?
 - It does not expand and contract in response to weather changes
 - It is the strongest common entry door construction on the market today
 - It provides an R-Factor rating of up to R-8
 - All of the above
 - Both b. and c.
- True or False. If a home is located in a mild year-round climate, heat transfer is not a concern.
 - True
 - False
- What are the benefits of purchasing a pre-hung door system as opposed to the parts to assemble on the building site?
 - The parts work together seamlessly
 - The turn-around is quick
 - They are easy to install
 - Both a. and c.
- Of the reasons below, what is the strongest argument for using decorative glass in an entry door system?
 - Provides curb appeal, visibility, and privacy
 - Provides curb appeal, increased home value, and visibility
 - Provides individual choice, increased home value, and security
 - Provides individual choice, increased thermal properties, and visibility
- Which innovation of an entry door system has contributed most to the overall energy efficiency of the unit?
 - Stamping panels onto the door, rather than assembling them piece-by-piece
 - Pre-cutting the door to the correct size and pre-cutting the lock bore
 - The continuous head and sill, which houses the elements of the door system
 - The adjustable sill and sweep to reduce air and water infiltration
 - All of the above
- Which entry door material is usually reserved for the highest-market homes—and why?
 - Wood; despite its vulnerabilities, its characteristics lend themselves to the most unique design variations
 - Fiberglass; it has the best balance of energy efficiency and appearance
 - Steel; it has the strength needed to protect a valuable home
 - None of the above



Choosing Entry Door Systems For Residential Construction

Successful completion of this test (a score of 70% or higher) will earn 1 AIA/CES LU hour of health, safety, and welfare. Non-members will receive a certificate of completion (please provide e-mail address).

To take the test, go to www.architecturemag.com and click on "Continuing Ed" to download a PDF of this unit, or mark your answers to the test questions at right. Mail or fax the completed form to:



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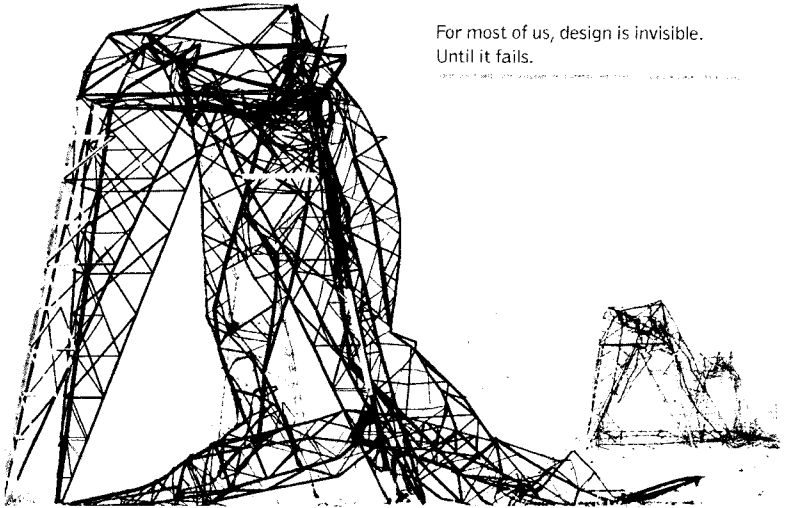
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BOOK

Massive Change | Bruce Mau | Phaidon

Interested in a hugely optimistic, visually brilliant accounting of the ideas and movements that are radically changing global society? While he starts out with disconcerting images of natural and human-incurred disasters (right), Bruce Mau actually delivers such a thing in *Massive Change*, a book—and accompanying exhibition at the Vancouver Art Gallery through January 3—created with his Institute Without Boundaries (IWB), a group that seeks to “produce a new breed of designer.” For those not familiar with terms like aerogel, biomedica, grid computing, or social entrepreneurship, this image-laden work is a useful entrée into the cutting edge of social and technological progress. Similar to the multidisciplinary design conferences that seem omnipresent nowadays, Mau’s approach taps 30 sources, mostly from far outside of the design world, for big-picture interviews on the practical ways their work is affecting the world. And this is no geekfest, nor a Bucky Fulleresque take on our future in space: It’s a designers’ handbook of “massive” ways to make our work more relevant and powerful. **C.C. Sullivan**



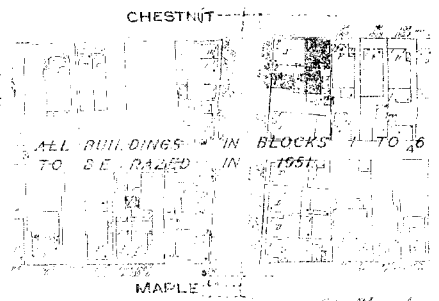
For most of us, design is invisible. Until it fails.

PHOTO COURTESY OF BRUCE MAU

BOOK

Lafayette Park Detroit | Edited by Charles Waldheim | Harvard Design School/Prestel

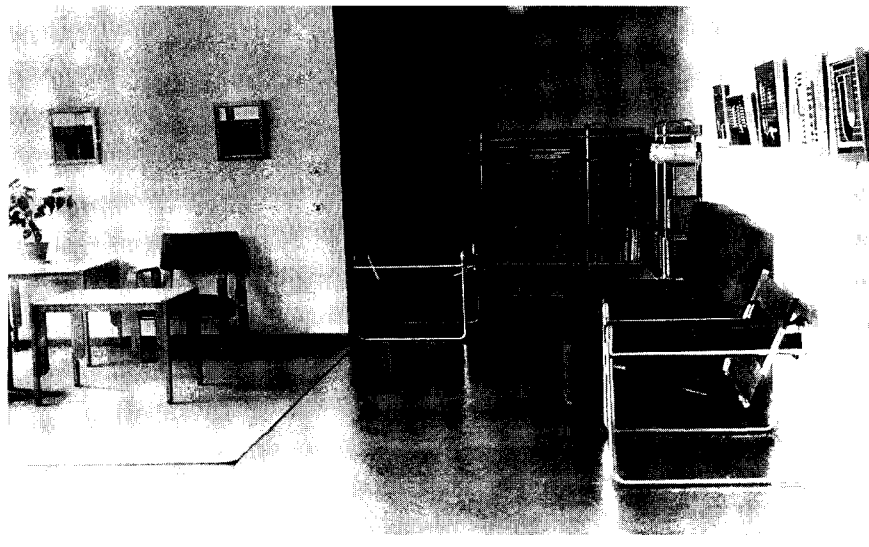
Detroit’s oft-overlooked Lafayette Park is analyzed here as social experiment and cross-disciplinary opus. One of the first major urban-renewal projects in postwar America—and the world’s largest concentration of extant Ludwig Mies van der Rohe structures—the development tried to bring suburbia to a 129-acre urban parcel where a racially and economically diverse population would live amidst Mies’s International Style edifices and Ludwig Hilberseimer’s urban planning. Photographer Jordi Bernadó’s recent images show the precinct beckoning with its original promise: As essayist Jerry Heron points out, Lafayette Park’s population remains diverse, its property values strong, and its spaces safe. **Jamie Reynolds**



EXHIBITION

Josef and Anni Albers: Designs for Living | Cooper-Hewitt National Design Museum | Through February 27, 2005

This retrospective of works by the German-born husband and wife who attended the Bauhaus school and came to America in 1933 after the school’s closure focuses on the everyday objects the artists designed, together and separately, from the early 1920s through the 1950s. By showcasing Anni Albers’s weavings—including several wall hangings that revolutionized abstract textile art as well as commissioned works for Philip Johnson’s Rockefeller Guest House (1950)—

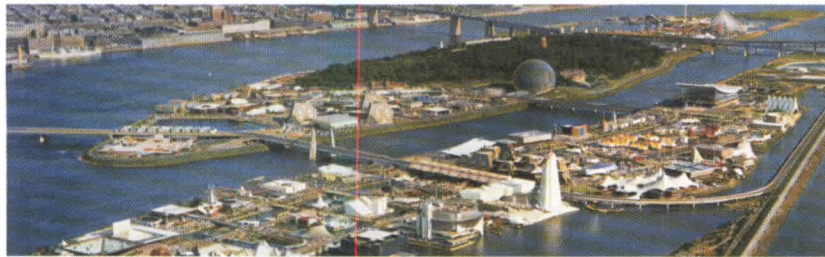


and Josef Albers’s glass-top nesting tables and stained-glass panels, curators Matilda McQuaid and Nicholas Fox Weber highlight the couple’s influence over domestic design objects such as curtains, tables, and fruit bowls. The Alberses believed that any item could be made extraordinary. Anni Albers, for example, designed several pieces of jewelry using ball chains, kitchen strainers, and paper clips. (To drive the point home, the Cooper-Hewitt is selling do-it-yourself kits in its store.) The four-room exhibition employs light-box installations for the stained-glass and fabric panels suspended from the ceiling mid-room so viewers can examine both the right-side pattern and the weaving construction. **Katie Gerfen**

The 60s: Montreal Thinks Big | Canadian Centre for Architecture, Montreal | Through September 11, 2005

This new exhibition celebrates Montreal's turn on the world stage. In a remarkably vibrant decade, revolutionary infrastructure projects—including expressway and subway systems—both modernized and decimated the city's urban fabric. Architects, critics, and tourists traveled to the city to see innovative large-scale buildings such as Moshe Safdie's Habitat 67, Buckminster Fuller's geodesic dome for the U.S. pavilion at Expo '67, and Reyner Banham's favorite urban megastructure, Place Bonaventure. Indispensable for anyone interested in modernist Montreal, the show's lasting influence will depend on the reaction to curator André Lortie's plea that we see the city as a crucial case study of urban development in the western world.

Lortie organized the historical drawings, films, models, and photographs to fit neatly into the Canadian Centre for Architecture's elegant galleries, a strategy that has turned some of the radical architectural propositions into precious art objects. Luckily, the catalog examines the social costs of all this development—the uneasy mixture of heroic buildings and horrendous physical upheaval—more judiciously. Finally, *The 60s* boasts a parallel exhibition of Olivo Barberi's dreamlike photos, taken this year from a helicopter, that transform today's Montreal into a diminutive toyland. **David Theodore**



LEFT: NATIONAL ARCHIVES OF CANADA, OTTAWA/GUTHRIE INC./THE MONTREAL GAZETTE; RIGHT: COLLECTION CANADIAN CENTRE FOR ARCHITECTURE, MONTREAL/PATRICIA ANDRÉ BLOUIN/GORDON F. CALLAGHAN

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EXHIBITIONS

HOUSTON, TEXAS

Kenneth Noland: The Nature of Color
Geometric paintings that explore the optic nature of shape and color.
MUSEUM OF FINE ARTS, HOUSTON
mfah.org
Through March 6

LONDON

Zaha Hadid's "Paintings"
Nine conceptual renderings, developed in parallel with drawings and models, that illuminate the architect's design process.
THE GILBERT COLLECTION
gilbert-collection.org.uk
Through January 16



MIAMI

Beyond Geometry: Experiments in Form
Works from the 1940s through the 1970s engaging abstraction as experimentation in form.
MIAMI ART MUSEUM
miamiartmuseum.org
Through April 24

NEW YORK CITY

The Vertical Dimension
Frank Lloyd Wright's designs for 14 high-rise projects, with his original drawings.
THE SKYSCRAPER MUSEUM
skyscraper.org
Through January 9

NEW YORK CITY

Spheres
Installation pieces by artist Eveline Feldmann that address issues of space and form.
C3: GALLERY
pompeiad.com/c3gallery
Through January 28

NEW YORK CITY

Yoshio Taniguchi: Nine Museums
Museum designs by the architect of the MoMA renovation and expansion.
MUSEUM OF MODERN ART
moma.org
Through January 31

ORLÉANS, FRANCE

Archilab 2004: The Naked City
An exhibit focusing on 30 teams of young architects involved in city planning and urban development.
FRAC CENTER
archilab.org
Through December 30

ROTTERDAM

The City as Loft
Dutch architect and city planner Kees Christiaanse's new strategy for city centers.
ETH ZENTRUM
gta.arch.ethz.ca
Through January 20

SAN FRANCISCO
Glamour: Fashion, Industrial Design, and Architecture

Furniture, jewelry, and architecture that share rich materials and patterning.
SAN FRANCISCO MOMA
sfmoma.org
Through January 17

SANTA BARBARA, CALIFORNIA
Picturing Tradition

Lutah Maria Riggs's photographic images of Mexican architecture.
UNIVERSITY ART MUSEUM, U.C. SANTA BARBARA
uam.ucsb.edu
Through January 30

SCOTTSDALE, ARIZONA
Josef Albers: Seeing in Color

The artist's silkscreen portfolio as an exploration of color and perception.
SCOTTSDALE MUSEUM OF CONTEMPORARY ART
scoma.org
Through January 2

TOKYO
New Experiments in Architecture, Art, and the City

More than 100 international architects from the 1950s to the present.
MORI ART MUSEUM
mori.art.museum
Through April 4



VANCOUVER

Massive Change: The Future of Global Design
Bruce Mau's new book (see page 119) translated to an exhibit employing sound, video, objects, and photos.
VANCOUVER ART GALLERY
vanartgallery.bc.ca
Through January 3

VIENNA

SocioPolis
Explorations of a new city zone outside Valencia and architects' responses to the future of hybrid urban planning.
ARCHITEKTURZENTRUM WIEN
azw.at
Through January 31

VIENNA

Barefoot on White Hot Walls
Work by Peter Eisenman as architect, writer, theoretician, and teacher.
MAK EXHIBITION HALL
mak.at
December 15–May 22

WASHINGTON, D.C.

Washington: Symbol and City
An updated look at the capital city, with models of five monuments.
NATIONAL BUILDING MUSEUM
nbm.org
Ongoing



EVENTS

BOSTON
Contemporary Boston Architecture

A survey of modern Boston architecture by Jeffrey Stein, architecture critic for *Banker & Tradesman*.
BOSTON PUBLIC LIBRARY
architects.org
January 26

NEW YORK CITY
Prussia in the Time of Soane: Gilly, Schinkel, and their Contemporaries in Berlin and Potsdam

An illustrated lecture by Barry Bergdoll.
THE UNION CLUB
soane.org/foundation
January 11

PHILADELPHIA
Traditional Building

The renamed Restoration & Renovation Exhibition, offering over 80 seminars on historic preservation.
PENNSYLVANIA CONVENTION CENTER
traditionalbuildingshow.com
April 27–30

COMPETITIONS

red dot design award

The Design Zentrum Nordrhein Westfalen annual product design awards, celebrating its 50th year.
red-dot.de
Registration deadline: January 31

2005 EDRA/Places Awards

Awards for planning, design, and research that demonstrate "good places and how to inhabit them."
edra.org
Deadline: February 7

Buzzards Bay Design Competition

A call for bridge/park designs for the Cape Cod Canal.
buzzardsbayvillageassociation.org
Program available: January 15

SEGD Design Awards

The Society for Environmental Graphic Design's annual awards for architectural graphics, placemaking projects, and themed environments.
segd.org
Deadline: January 31

The Parachute Pavilion

An open design competition for a pavilion as part of a 21st-century vision for Coney Island.
vanalen.org/competitions/ConeyIsland
Registration deadline: February 25

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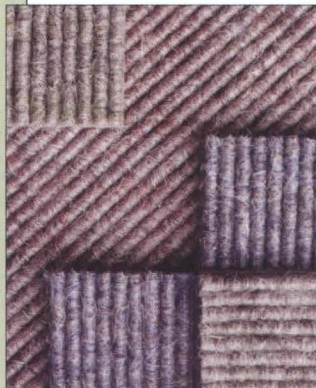
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PRO PRO BONO

BY DUO DICKINSON

Architects often aspire to have the recognition—and pay—of the other licensed professions: law, medicine, engineering. Unfortunately for our bottom line, we don't save lives, keep people from the electric chair, or prevent bridges from collapsing: Our value is found more in enhancing the quality of life than in preserving life itself.

Our desire for recognition can lead to a perception that we are megalomaniacal, self-promoting empty suits, obsessed with our own agenda and used to treating others as a "means to an end." This persona, of course, is a caricature, but it seems viable to the general public, which sees design hipsters on TV spouting words that make little sense to those outside of the profession (and not much more to those of us inside). Most of these trendsetters create structures that have little to do with context, comfort, or usefulness but that do project the image of something never before built. These buildings are often aesthetic paradigms that can be viewed as having no social value.

Yet this state of our art is not true of the many architects who realize they have a gift, work hard to refine it, and think they'd be wasting it if they didn't help make buildings better for those who can't afford to hire an architect. By donating their time to efforts that have few resources beyond moral sway, these professionals beat against the tide sweeping architecture into fashion.

FOR RICHER AND FOR POORER

My office works for a demographic kaleidoscope of clients ranging from the very rich to the poorest of the poor. In the early 1990s, for example, I designed a 15-unit rental complex for the formerly homeless at the same time as a 16-foot-square master bathroom with no straight



lines and 8,000 precisely located custom tiles—and a budget that far exceeded the cost of an entire rental unit. New owners later ripped out the bathroom, but the affordable housing (above) still keeps 15 families off the street. Both projects won awards, but which was more important?

The answer came to me during a final inspection of the complex, when a fairly hostile voice from four floors up called out, "Who are you? What are you doing?" I looked up, abashed, and said, "I'm the architect." The woman, a new resident, widened her eyes and yelled in a similarly declarative tone, "God bless you!" From then on, I knew that there were no meanings more important to my work than those found in helping people who could never afford to hire me.

Working for the non-elites does have some baggage, however. Several eulogies for the heroic architect Samuel Mockbee noted that his social conscience was rare in a field where style so often trumps substance. "For the last couple of decades, you could pretty safely presume that any architect who focused his or her talents on helping the poor did so at the expense of design," wrote Paul Goldberger (March 2002, page 67), applauding Mockbee as an exception. Indeed, Sambo's influence is still widespread, and his design ethic was shared and lives on in his Rural Studio and in others who aspire to create innovative projects that touch people in need. From Michael Pyatok and Studio E to the designers supporting Habitat for Humanity or their own religious communities, these architects toil to make the world better with almost no recognition.

PRO BONO C.E.U.S.?

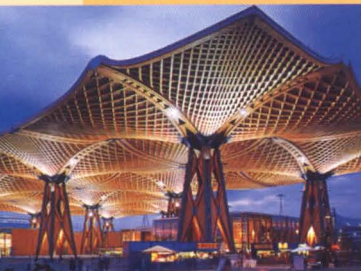
Meanwhile, Legal Aid and Doctors Without Borders receive well-deserved praise for their high-profile work. And now a group of architects in San Francisco, Public Architecture, offers a benchmark—"The One-Percent Solution"—proposing that all architectural professionals dedicate 20 hours per year to "work in the public interest." Nowhere is expertise better used than where there are scant resources to effect change. Why not offer continuing-education credits for donated time?

Whereas cash streams constantly into the medical and legal professions, architects serve a boom-or-bust industry where there is either too much work or not enough time to donate resources to projects without pay. This reality can suggest that architects are either "too good" to do pro bono or that such jobs are "second best" and can be abandoned when "real" work comes in the door. While my assessment may seem harsh, it rings true to those of us who do this work for the underprivileged on an ongoing basis, through good times and bad. In the end, doctors, lawyers, and architects have to live with themselves and how they conduct their professional lives. Ego is present in all of us, but ego to the exclusion of our common humanity is elitism, which inevitably means relevance for the few and irrelevance for the rest. Is that the legacy we want?

Architect and author Duo Dickinson's practice is based in Madison, Connecticut. His most recent book is *The House You Build* (Taunton, 2004).



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