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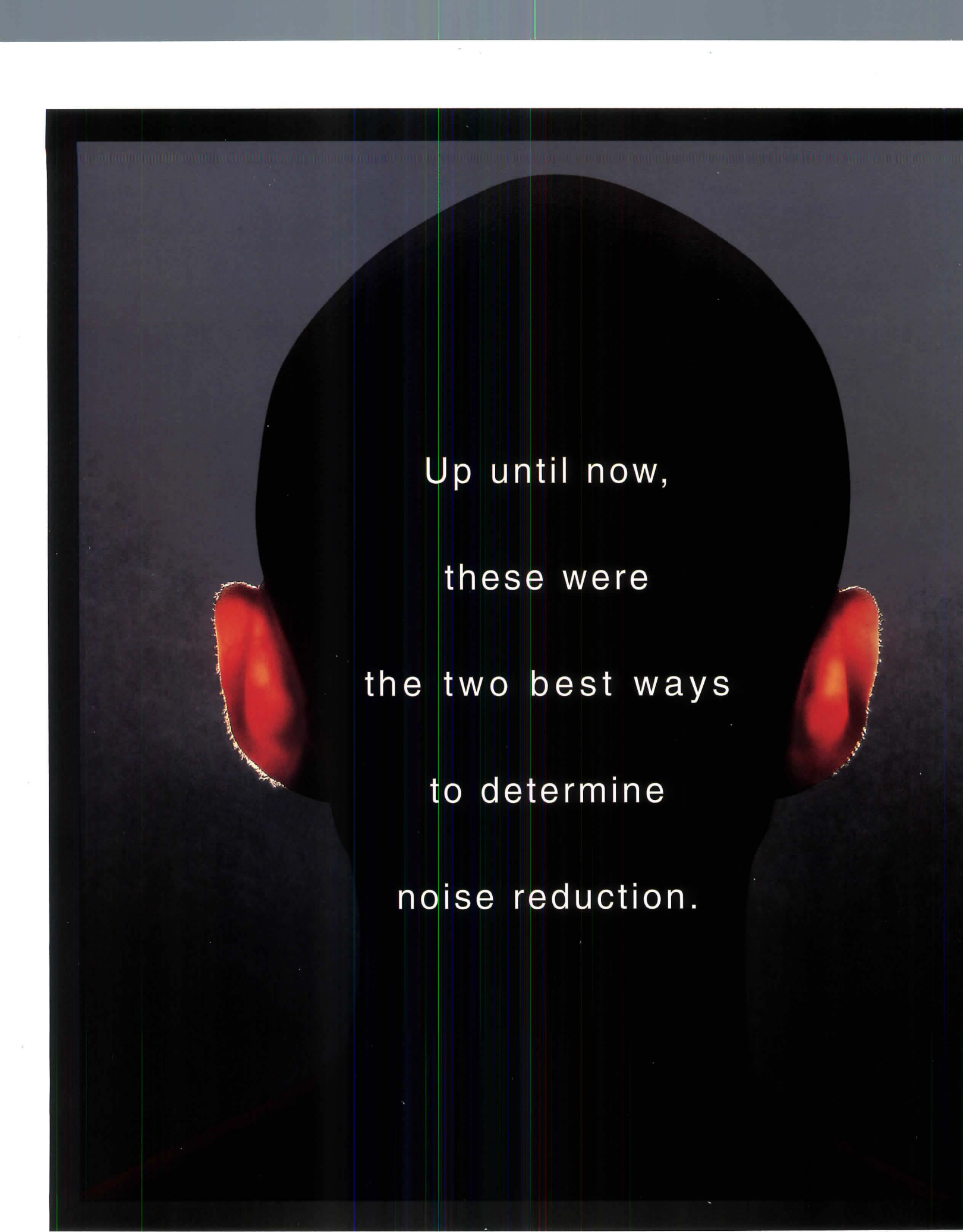
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NATURE FABRICATING

PLANT's Woodland Walk

Lakeside Villa by Vincent James

Lawrence Speck Sets Up Camp

A silhouette of a human head is centered against a dark, textured background. The head is filled with a solid black color. Two earbuds are visible, glowing with a bright red light that fades into the dark background of the head. The text is centered within the head's silhouette.

Up until now,
these were
the two best ways
to determine
noise reduction.

Well, we dodged another bullet. Last month, California voters rejected a ballot initiative that would have devastated institutional and governmental practice there and could have led to similar trouble in other states as well. Proposition 224 called for a state Constitutional amendment eliminating qualifications-based hiring on all state-funded projects with budgets exceeding \$50,000, replacing it with a low-bid system that also would have required architects to indemnify the state for any project-related negligence.

Drafted by the Professional Engineers in California Government (PECG), a union of state-employed engineers and architects, Proposition 224 essentially would have shut out private-sector architects and engineers because PECG's bids for the same jobs wouldn't have

But before we break an arm patting ourselves on the back, let's keep in mind the lessons of this experience. First, the mere existence of Proposition 224 indicates that architects are still losing the public relations battle over their place at the economic table: Nearly a third of California voters agreed that price should substitute for quality as the standard by which architects are selected. In other words, many people don't recognize that architecture returns more to the bottom line than it takes. Put another way, architects are still failing to prove they "add value" to a building project. It's hard to imagine most people failing to understand how a doctor adds value to a surgical procedure or how a lawyer adds value to a trial. We may try to modestly regulate the prices of the

Close Call

Architects avoid disaster in California—for now.

to account for little things like insurance, office overhead, salaries, and profit: California, like most states, is self-insuring and pays PECG's bills, and state employees (allegedly) don't seek profit.

In short, Proposition 224 was indeed a "competition killer," a gross and underhanded play for job insurance by PECG, and an internecine knife aimed directly at the heart of private practice in California. Voters apparently saw it that way too. They rejected 224 by a margin of 62 percent to 38 percent.

Good for the voters for being clear-sighted. And good for a coalition of private-sector engineers, architects, and concerned parties—led by the American Institute of Architects, California Council and the American Consulting Engineers Council—that rounded up more than \$8 million to fight the initiative. Architects from across California and the country contributed, including \$12,500 from the Boston Society of Architects and \$150,000 from L.A.-based DMJM/Keating. Intelligently, the coalition hired respected political strategists to run their campaign.

former or the liability of the latter, but few question their role in the process.

Then there's the issue of how this proposition ever reached the ballot in the first place. Granted, California seems hell-bent on eliminating representative government in favor of a paralyzing process of direct initiatives. But Proposition 224 was born out of a protracted legal battle between PECG and the state; where were the architects' lobbyists when controversy over the hiring process first came to light?

A well-organized industry could have put this thing away with ease. But the architectural profession just isn't very well organized. In a recent *Fortune* magazine ranking of Washington lobbyists, the AIA failed to make the top 100, lodging itself somewhere between the National Association of Dog Groomers and the People in Sympathy with West Texas. This might be funny if it weren't so pathetic and if it didn't so adversely affect the profession. The hard fact remains that architects seem incapable of maneuvering effectively in the political process—until their backs are against the wall. *Reed Kroloff*

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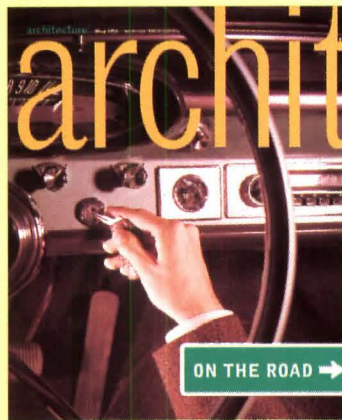
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Gensler's new McDonald's restaurant in Colorado Springs, Colorado (left), seems to evoke curves of Morris Lapidus's dizzying Rainbow Shop interior (far left, 1935) in Brooklyn, New York.

Roadside attraction

I have just finished going through your May issue and was amazed to see work using the same design elements that I used a half-century ago: bold signage; light; color; curved, flowing walls and ceilings; mirrors; and extensive ornamentation. It is a source of personal delight to see these free-flowing buildings dominate today's architecture and, hopefully, the architecture of the 21st century.
Morris Lapidus
Miami Beach, Florida



I don't usually write magazines to say, "Wow, what a great issue!" I have broken with precedent, however, to compliment the staff of *Architecture*. The May issue was fabulous. The greatest success was not the articles, advertising, or graphics independently, but in its integration of these usually divergent elements. For the first time, I have read a publication that has the continuity of a novel. Thanks for putting "On the Road" together.
Randy Gerner
Gerner Kronick + Valcarcel
New York City

Your manifesto in the May issue of *Architecture* is appealing, reinforcing how big a subject architecture is. Although your magazine is written for the profession, I hope it will continue to address subjects with the public in mind. We should benefit the public as well as advance the individual theories or concerns of practitioners.

The continuation of the P/A Awards (*Architecture*, April 1998, pages 62-93) is of consummate importance because they bring the iconoclasm of unbuilt ideas to the profession's attention even before they achieve constructed form.

The poignant fate of America's cities is well represented by the coverage of St. Louis in the April issue (pages 35-41). This sad place has been separating into dissimilar parts for several generations now and stands as clear proof of a basic disinterest in urban life. It is a subject worthy of your attention, and I am pleased that it's part of your new charge. It's good to see all these explorations in a single publication. I wish you every success with an ambitious agenda.
Hugh Hardy
Hardy Holzman Pfeiffer Associates
New York City

The May issue of *Architecture* is something quite extraordinary—interesting, literate, thoroughly engaging from cover to cover. Can it be that there is now an architectural journal that one actually wants to read?

I have a bone to pick, however, with one small phrase in your otherwise excellent editorial (page 11). You refer to the "anti-automobilism" of the Congress for New Urbanism. Our attitude toward automobiles is not "anti-," but rather Jeffersonian. Some of our best friends are automobiles.

Sometimes, as in the case of my twin-turbo RX7, emotions go far beyond the normal bounds of friendship. But we do not believe in the emancipation of automobiles. However attractive and amusing they may be individually, they are and must remain in bondage. (The same goes for computers.) If this attitude is taken to be illiberal, so be it.

Daniel Solomon
Solomon, Inc.
San Francisco

Un-Reston

Eric Adams' protest on the recent development in Reston, Virginia (*Architecture*, May 1998, page 91), appears to be a rhetorical flight of fancy. His article contains a plethora of inaccurate statements. Adams suggests that Reston's development "originated" around four lakes. Anyone familiar with Reston knows that three of the four lakes weren't developed until the late 1970s and mid-1980s and were not developed by Robert E. Simon.

Adams incorrectly states that all of Reston's current developers, planners, and architects are under the control of Westbrook Communities. There are many developers in Reston and none are under the control of Westbrook except their own.

His gratuitous assertion that the Reston Town Center is "parking-oriented development" fails to see the future planning efforts for this area. He claims that the Town Center "lies within walking distance to nothing," when in fact soon there will be nearly 2,000 residential units, a hospital, library, millions of square feet of office space, elderly care facilities and day-care centers.

Comparing Lake Anne Village Center to Reston Town Center shows that the Lake Anne center has less than 100,000 commercial square feet while Reston Town Center has over 1.2 million square feet. This distinction certainly requires it to have more parking.

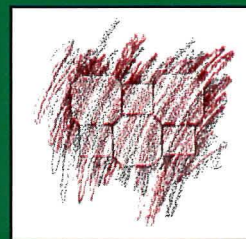
In his last paragraph, Adams takes a final opportunity to insult and discredit the very people who have strived to uphold the vision of Reston as a planned livable community. Both Westbrook

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Communities and Supervisor Robert Dix have made considerable strides toward keeping its character intact and consistent with good design principles heralded by architects and planners.

*Warren L. Almquist
Alexandria, Virginia*

Hizzoner regrets

Bradford McKee's article "St. Louis Blues" (*Architecture*, April 1998, pages 35-41) reflects poor journalistic integrity and paints an inaccurate picture of St. Louis in its omissions. Our city is not without challenges, but accomplishments over the past year demonstrate our ability to rise to those challenges. Government reform, the city's commitment to the revitalization of downtown, and the creation of a strong coalition of civic groups have succeeded in producing measurable results and a new climate of confidence.

Driving my effort to revitalize downtown is a public-private partnership comprised of St. Louis 2004, the Regional Commerce and Growth Association, the Downtown St. Louis Partnership, and the St. Louis Development Corporation. This group, known as Downtown Now!, although criticized by McKee as old school, has succeeded in breaking down boundaries which traditionally impeded progress. Downtown Now! is committed to an innovative, inclusive development plan that addresses racial divisiveness in our region by ensuring minority-owned firms will have a role in rebuilding our city.

The picture in St. Louis is brighter than McKee portrayed. With an office vacancy rate of just 9.25 percent, downtown St. Louis is well under the national average of 11.6 percent. Furthermore, in the past year, there has been a tremendous resurgence in the downtown real estate market. New buildings now under way include the Federal Courthouse and the FBI Headquarters. In 1998, we expect construction to begin on the City Criminal Justice Center, the Multi-Modal Facility, and the Sigma Chemical Research and Development Campus. Major renovations and expansions include the Holiday Inn Riverfront, the Drury Hotel, the City Museum, and Planet Hollywood. Just last year, the *Travel* section of *The New York Times* said of the city of St. Louis:

"It is in the neighborhoods that much of St. Louis' vitality, creativity, and diversity is apparent."

*Clarence Harmon
Mayor, St. Louis*

Form-phobia

I am tired of reading apologetic arguments for architecture as form. It is in the form of architecture that a designer and an inhabitant can dialectically seek out the "ideal self" amongst the alienating "other." This semiotic and purely subjective relationship with our environment is crucial in the evolution of human consciousness.

Architecture with powerful form engages the viewer viscerally: We recognize them as beautiful and give them awards. As Aaron Betsky stated in his essay "Form + Deformation" (*Architecture*, April 1998, pages 62-63), images and the usual cultural indexes have lost much of their meaning in this world market. The form of architecture, now more than ever, takes on additional responsibility.

So drop the fear of form. Quit relegating form to something we aspire to only in the absence of more "grand visions" for architecture. With the understanding that form is

the only grand vision for architecture, we can begin to critically engage it, refusing small moments in lieu of stronger, larger public contributions.

*Dulcie Horwitz
Novato, California*

CORRECTIONS

Stanley Boles is principal of BOORA Architects, designer of the Autobistro prototype (*Architecture*, May 1998, page 63).

Helga Brady and John Carter were members of Gensler's project team for the McDonald's restaurants in Darien, Illinois, and Colorado Springs, Colorado (*Architecture*, May 1998, pages 100-103).

RTKL is executive architect and Peter Fillat Architects is design architect of the St. Louis Renaissance Gateway Hotel (*Architecture*, April 1998, pages 35-41).

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Please mail your letters to the editor to: Letters, *Architecture*, 1515 Broadway, New York, NY 10036. Or fax to: 212/382-6016. Or e-mail us at: info@architecturemag.com. Please include your name, address, and daytime telephone number. Letters may be edited for clarity or length.






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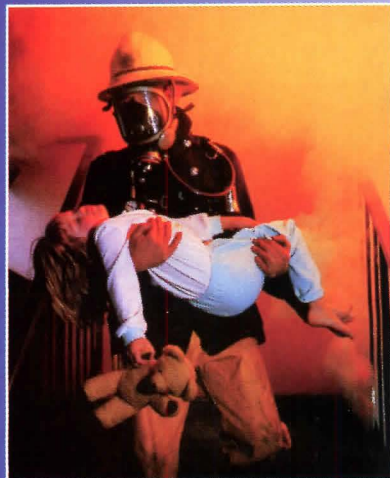
exhibitions

city	dates	exhibition	contact
Chicago	through September 6	The Architecture of Graham, Anderson, Probst & White, 1912-1936 at the Chicago Architecture Foundation	(312) 922-3432 ext. 239
Montreal	through November 8	The American Lawn: Surface of Everyday Life at the Canadian Centre for Architecture	(514) 939-7000
New York	through October 11	Fountains: Splash and Spectacle at the Cooper-Hewitt, National Design Museum	(212) 849-8300
Philadelphia	through October 23	Monument to Philanthropy: The Design and Building of Girard College, 1832-1848 at Girard College	(888) 447-2731
Washington, D.C.	through January 4, 1999	The Business of Innovation: Bechtel's First Century at the National Building Museum	(202) 272-2448



Photographer Larry Sultan's images of suburbia will be shown in *The American Lawn*.

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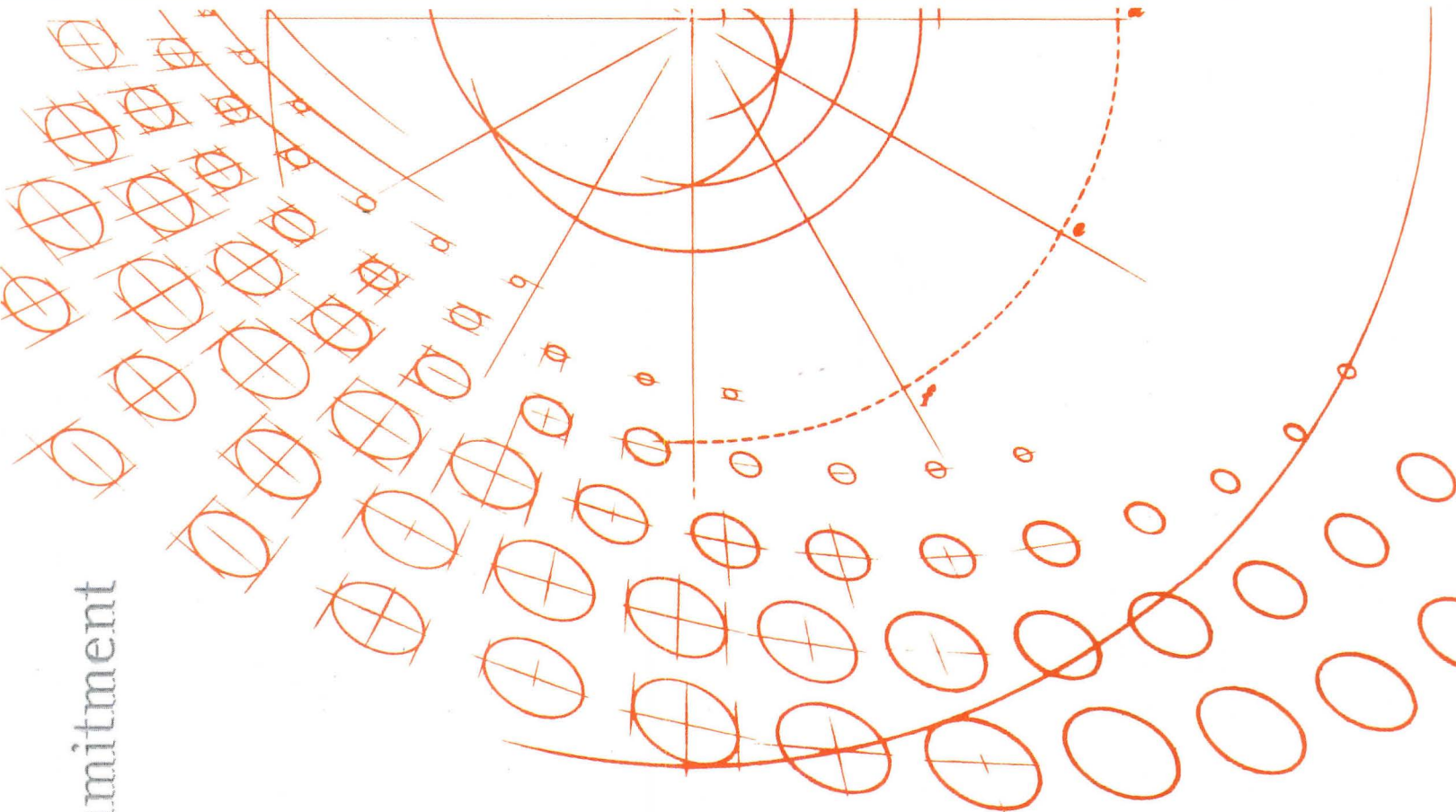
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conferences

city	dates	conference	contact
Chicago	October 9-11	The Chicago Design Show at the Merchandise Mart	(312) 527-7965
Havana and Miami	July 20-August 2	Borders/Las Fronteras: An International Summer School , organized by the College of Architecture at Texas Tech University	(806) 742-2855 fax
Minneapolis	September 14-15	Healthcare Facility Construction Management: Indoor Air Quality at the University of Minnesota	(612) 624-8747
New York City	October 28-30	design.y.c incorporates Interplan, The Design Show, the Designer's Saturday gala, the ASID Design Power conference, and Batimat Design-Build.	(800) 950-1314 ext. 2331
Portland	September 12-16	Rail-Volution Conference	(800) 788-7077



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competitions

competition

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International Competition Network Logo Competition to develop a graphic identity for a new Web site on architecture and design competitions

September 9 www.z-1.org/complicnlogo

Shinkenchiku Residential Design Competition, sponsored by *The Japan Architect*

September 10 (81) (3) 3812-8187 fax

Re:public Park Design Competition sponsored by the Australian Institute of Landscape Architects and the University of New South Wales

September 11 www.aila.org.au

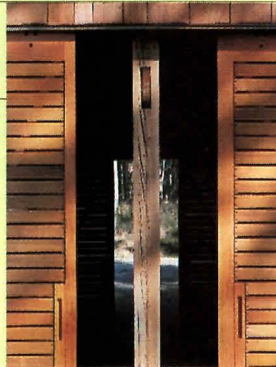
Urban Housing for the 21st Century, student competition sponsored by the International Union of Architects

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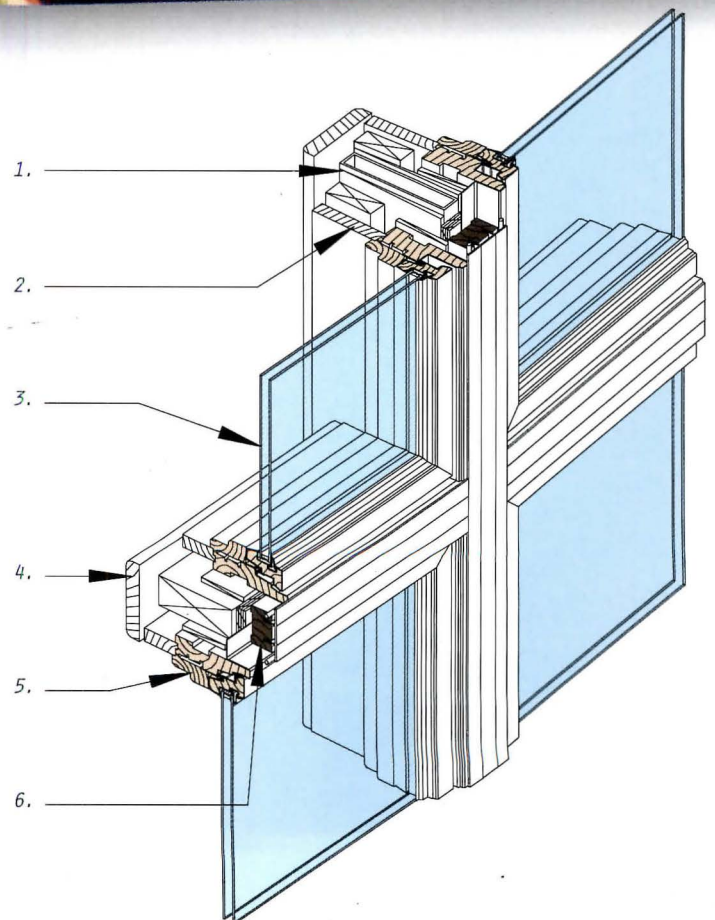
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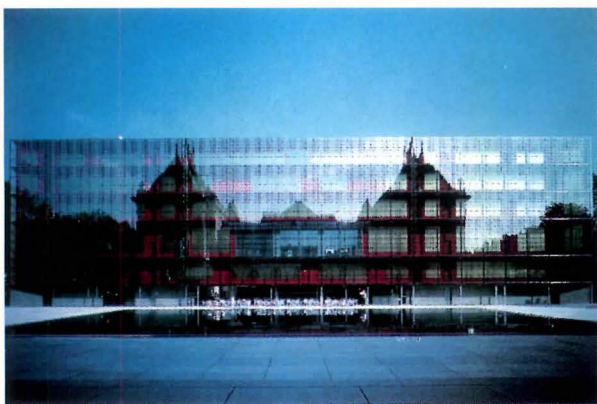
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California Voters Nix 'Competition Killer'

In California's June 2 primary election, voters overwhelmingly rejected Proposition 224, known as the "competition killer" (this issue, page 11).

The legislation would have required that all public-sector architecture and engineering commissions be awarded to the lowest bidder, effectively handing all work to state employees. Wielding a budget of more than \$8 million, a coalition of more than 900 organizations including the American Institute of Architects, California Council and the California Society of Professional Engineers unleashed an aggressive public information campaign about the detrimental effects of the proposal, leading to its decisive 62 percent-to-38 percent defeat. *Eric Adams*



Nineteenth-century museum sits behind Ibos and Vitart's Benedictus Prize-winning addition to Palais des Beaux-Arts in Lille, France.

Glass Award Winners

DuPont announced the winners of its Benedictus Awards for Innovation in Architectural Laminated Glass in June. Aneta Bulant-Kamenova and Klaus Wailzer received a first-place prize for a house expansion in Salzburg, Austria, as did the Palais des Beaux-Arts de Lille in Lille, France, by Jean-Marc Ibos and Myrto Vitart. Special merit honors went to Lipsky + Rollet's Valence, France, science building; Kauffmann Theilig & Partner's Bad-Colberg, Germany, spa; Agustin Hernandez Architects' Mexico City office park; Theo Hotz's engineering building in Baden Aargau, Switzerland; Van Den Belt & Partners' Stedelijk Museum addition in Zwolle, The Netherlands; James Carpenter's glass wall in the First Hawaiian Bank in Honolulu; Murphy/Jahn and Werner Sobek's bus shelter prototype in Paris; and IGGZ's telephone booth. *N.C.*



Rudolph's Pad On the Block

New York City's equivalent of London's Sir John Soane House is at risk. Recent ads in *The New York Times* for Paul Rudolph's Manhattan apartment house (at an asking price of \$6.2 million) indicate that one of the city's treasures of contemporary architecture is on the market.

In his will, Rudolph asked that his apartment be preserved as a study center. But he made no explicit financial or legal provisions to ensure that that happened. Instead, Rudolph left his drawings, and the assets



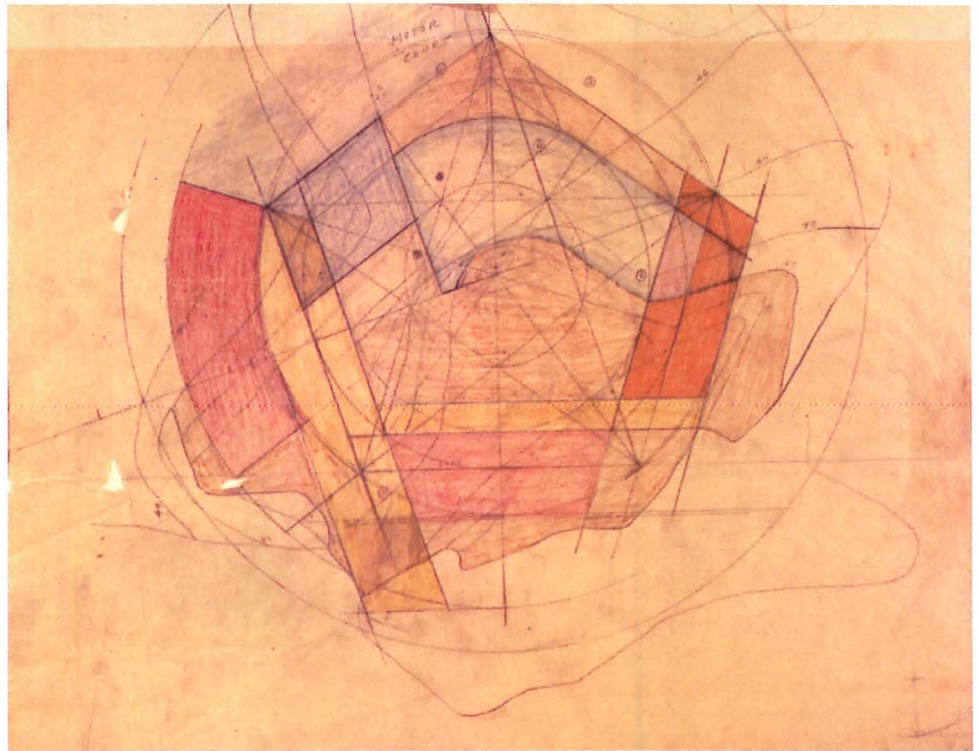
PETER AARON | ESTO PHOTOS

Chicago's Bid for Tallest Tower

Step aside, Petronas: Skidmore, Owings & Merrill (SOM) is crafting yet another world's tallest tower, returning the title to Chicago. Planned at roughly 2,000 feet tall, including an antenna, the office and condominium tower would top SOM's 1,450-foot-tall Sears Tower in Chicago, as well as the current record holder, Cesar Pelli & Associates' 1,483-foot-tall Petronas Towers in Kuala Lumpur, Malaysia.

The roughly \$300 million, 1.2 million-square-foot project is the brainchild of Chicago developer Scott Toberman, who initially planned a 1,220-foot-tall skyscraper, but decided recently to up the ante. The 800-foot height increase requires the approval of the Chicago planning commission and other authorities, which is anticipated this summer. Toberman could not be reached for comment. *Ned Cramer*

Surveying Tony Smith



ELLEN PAGE WILSON

from the sale of the apartment building to the Library of Congress, a condition that requires that the apartment building be sold at the highest price. Short of a wealthy charitable institution buying and preserving the whole property, the only feasible scenario for using Rudolph's apartment as he wished is that a white knight or a developer buy the property, "condominiumize" the lower floors, and gift Rudolph's aerie as a tax deduction to an existing or future nonprofit organization that would keep the doors open. *Joseph Giovannini*

Rooftop apartment (above) cantilevers out over Beekman Place (above right).

Celebrated Modern artist Tony Smith is perhaps most famous for sculptures like "Cigarette," a steel shaft twisted to resemble a snuffed-out butt, in the collection of the Museum of Modern Art (MoMA) in New York City. Lesser known are his paintings, with their amorphous, monochromatic blobs arrayed in grid patterns. And few remember that Smith, who died in 1980, trained as an architect with Frank Lloyd Wright and at László Moholy-Nagy's New Bauhaus in Chicago. But now, all aspects of the abstractionist's career come together in Tony Smith: Architect, Painter, Sculptor, a retrospective on view at MoMA until September 22. *N.C.*



BALANCED

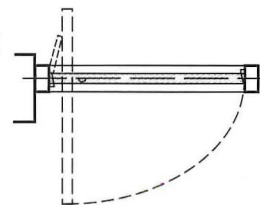
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Eisenman Unveils Dakota Jackson Showroom

Peter Eisenman has recently completed a collaborative commission to design a showroom for and with high-touch furniture designer Dakota Jackson. Accomplishing much of his characteristically mind-bending complexity in a small space—at Cesar Pelli & Associates' Pacific Design Center in Los Angeles—Eisenman created a dramatic folded aluminum, white lightning bolt of a canopy that hangs on an armature of tube steel. Eisenman intends his dynamic installation to minimize the tunnel-like feeling of the 30-foot-by-120-foot showroom and to act as a context distinct from both home and office: "I think the space will enable people to see his furniture in a new way," Eisenman explains. "There was give and take," Jackson maintains. "Now we're doing a residence in New York City together." *Morris Newman*



JOHN LINDEN / JSTO



HERBERT LOTZ

Santa Fe Celebrates Opera Reopening

Santa Fe, New Mexico's spectacular open-air opera reopened on July 3 with a performance of Puccini's *Madama Butterfly*, following a 10-month renovation by James Stewart Polshek and Partners. The New York City-based firm increased seating from 1,880 to 2,126, reconfigured the entrance sequence, and replaced the two sculptural roofs over the auditorium and stage.

As originally designed by local architect McHugh-Kidder of in 1968, the curving forms were separated by a significant gap, exposing audiences to rain. The new steel-ribbed, cable-stayed structures now overlap, and a clerestory window fills the space between them. Up to 60,000 gallons of water can collect in the roof over the stage and is used to hydrate the surrounding property. *N.C.*

Buzz

Joseph Gonzalez, who resigned under pressure from the Chicago office of **Skidmore, Owings & Merrill (SOM)** last October after the firm learned he was not a registered architect (*Architecture*, January 1998, page 28), has hung out a new shingle with another former SOM staffer, architect **Charles Hasbrouck**. (Gonzalez passed the architectural registration exam and was licensed in March.) Hasbrouck, who was project manager for the USG building in Chicago, left SOM in 1996.

Fumihiko Maki is revisiting one of his least-known projects, Steinberg Hall (1960) at Washington University in St. Louis, which the Japanese architect designed while a visiting professor at the school of architecture. Maki, with San Francisco architect **RMW**, is expanding it and the adjacent fine arts and architecture buildings into a visual arts and design center.

Several new stadium commissions have been awarded recently. **Antoine Predock** is designing a \$250 million ballpark for the San Diego Padres with **HOK Sport**. The Kansas City firm is also designing an 80,000-seat replacement for Wembley Stadium in London with **Foster and Partners** and **LOBB Sports Architecture**.

In Green Bay, Wisconsin, **Ellerbe Becket** is renovating and expanding the Packers' Lambeau Field. Washington, D.C., architect **David Schwarz**, designer of the new Bass Hall in Fort Worth (*Architecture*, June 1998, page 28), is designing a new arena for the Dallas Mavericks basketball team.

Mike Davis, Southern California Institute of Architecture professor and the author of the social and political history of Los Angeles, *City of Quartz*, was one of the 29 new fellows named by the John D. and Catherine T. MacArthur Foundation in June. Davis received \$315,000, a discretionary gift he may spend any way he chooses.

NBBJ is on a roll (*Architecture*, June 1998, pages 48-49): The Seattle-based firm recently won the commission for Scandinavia's largest building, a 2.75 million-square-foot headquarters for the telecommunications firm Telenor, in Oslo, Norway.

Landscape architect **Martha Schwartz** is reportedly designing a new entrance sequence to Disneyland in Anaheim, California. And **Hardy Holzman Pfeiffer Associates** and **David Rockwell** are collaborating on another major entertainment commission: the restoration and renovation of historic Radio City Music Hall in New York City's Rockefeller Center.



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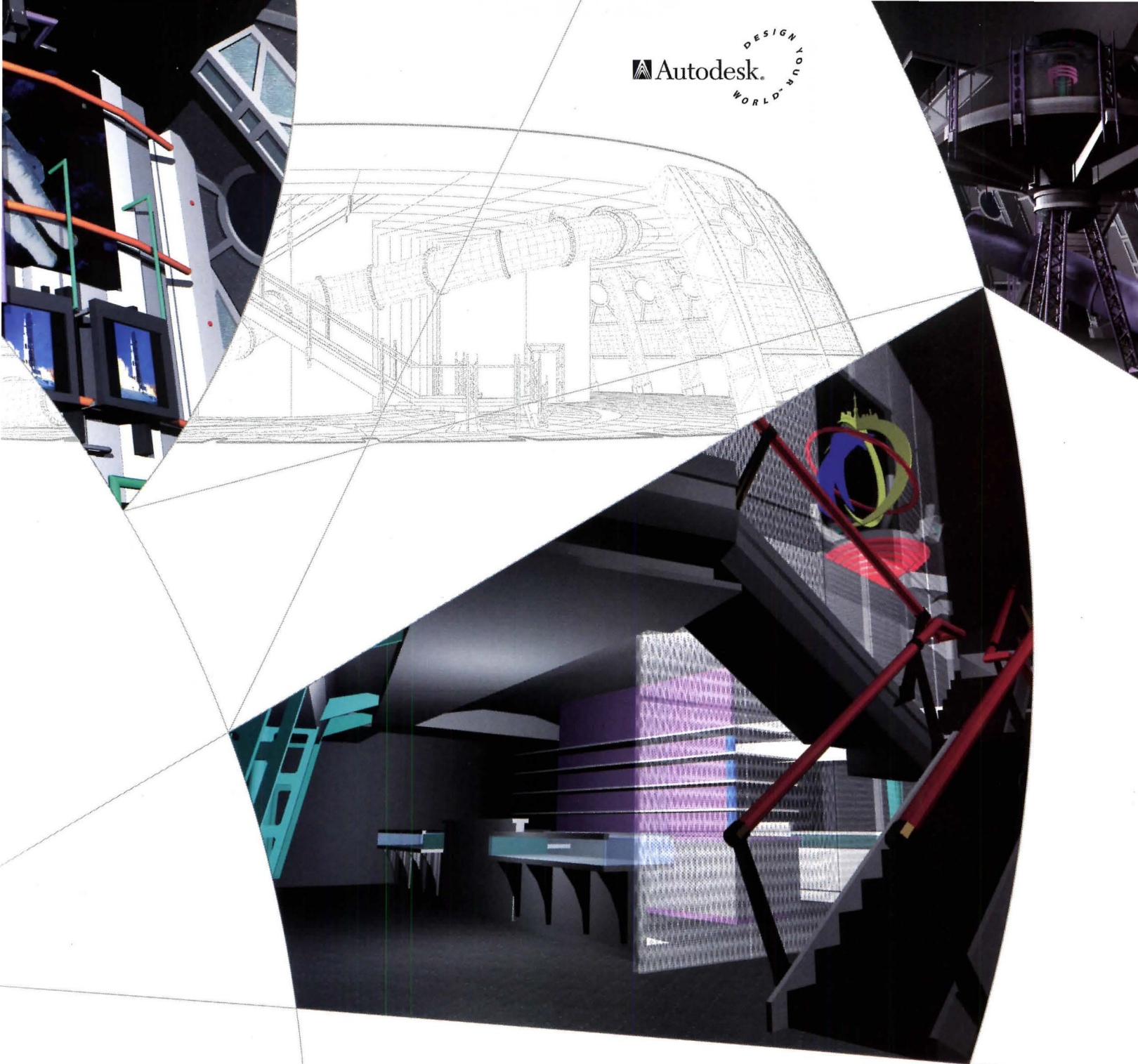
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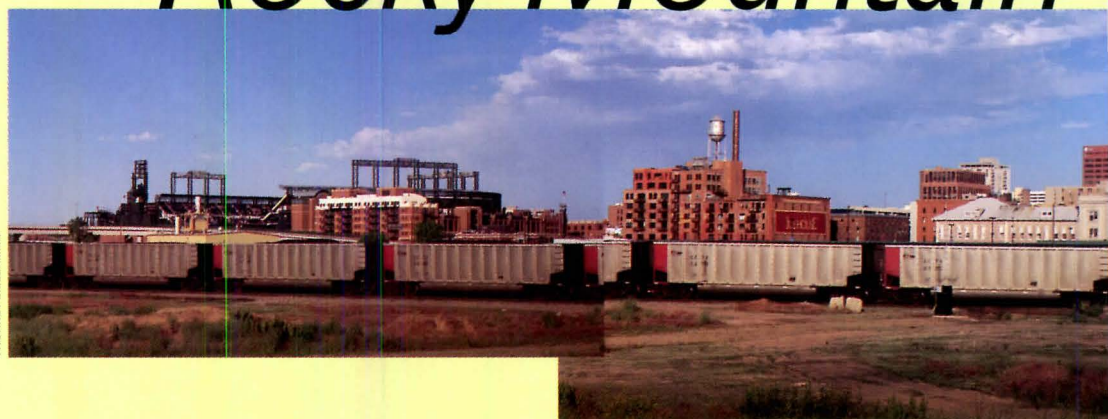
Kimble Hobbs recalls when the notion of people living in downtown Denver was “like thinking about the Berlin Wall coming down—it just didn’t seem possible.”

Yet on a snowy Denver day this past spring, the Boulder-based architect found himself leading a tour of a long-vacant Art Deco gem being renovated to his specs that will create 31 apartments in the now-burgeoning financial district.

Ten years ago, Denver’s economy was devastated. The last place most anyone wanted to live was in downtown’s 70 dowdy blocks or in the adjacent 21-block Lower Downtown (LoDo) warehouse district. Now more than 9,300 people live in or near there, and at least 3,000 apartments, lofts, and condos are proposed or under construction, along with hundreds of new hotel rooms. While other core cities have lost residents, the population of the 154-square-mile City and County of Denver has increased 6 percent since 1990, to 502,000.

Denver saw its downtown ravaged by a 1970s energy boom, which, over the next decade, resulted in the hasty construction of a banal, Houston-like skyline. Welders’ sparks flew around the clock. Tyler Gibbs, one of six registered architects in the city’s 30-member planning department, recalls seeing as many as 18

Rocky Mountain



THORNEY LIEBERMAN

Enlightened local architects and planners lead the Mile High City’s downtown turnaround.

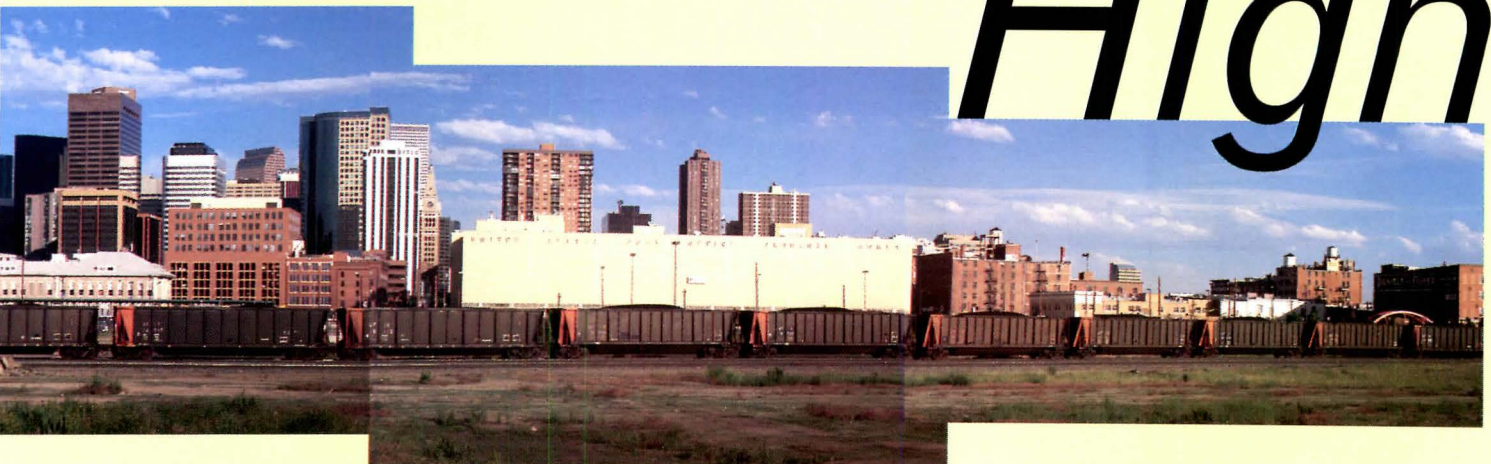
construction cranes looming over downtown at once. The city became an encampment of branch offices for national firms such as Skidmore, Owings & Merrill (SOM employed 200 in Denver at the peak of the 1980s boom) and Hellmuth, Obata and Kassabaum (HOK). When the bubble burst, Denver was left with scantily occupied office buildings and gaping parking lots.

Rather than engage in a new round of urban renewal—Denver already tried that with the ruinous 113-acre Skyline Plan of 1968—the city regrouped around sound, incremental planning and made big plans for public works. Many credit former Mayor Federico Peña’s vital interest in urban design during his 1983-1991 tenure. Peña exhorted citizens to “imagine a great city” and added 11 planners to his staff. An early result was the 1986 Downtown Area Plan, which made 16 recommendations to consolidate downtown as the region’s center. From rezoning LoDo (now a blossoming historic district) to building light rail, all 16 have been achieved or are *under way*.

The 1989 Comprehensive Plan spurred even more improvements, including measures to fight air pollution and proposed renovations to neighborhoods, downtown, and parks. In 1989, citizens also passed a \$242 million bond issue to repair crumbling parks and infrastructure. A 1990 bond issue provided \$91 million to build Michael Graves' Central Library (*Architecture*, October 1995, pages 88-95) and to upgrade every neighborhood library. The plan also viewed the future of 4,700-acre Stapleton Airport as a mixed-use community in broad terms.

New downtown residents and visitors will find plenty to do after hours. In November, the \$100 million Pavilions entertainment-retail complex will open with 18 movie screens and a Niketown store amidst 411,000 square feet of shops and restaurants. The design by ELS/Elbasani & Logan Architects of Berkeley, California, divides the volume into two smaller buildings fronting the street. These will be enveloped by a half-rectangle of shops and parking spanned by a block-long, curved "Denver" sign. The Pavilions is expected to revitalize 16th Street, the city's former main shopping street, which was converted into a mile-long transit mall by I.M. Pei and Partners and landscape architect Hanna/Olin in 1982.

High



On downtown's edge, 1,100 acres of former railyards in the Central Platte Valley are the site of the PepsiCenter, a \$160 million sports arena designed by HOK Sport, scheduled to open in 1999, and Colorado's Ocean Journey, a \$93 million aquarium designed as a joint venture between Denver architects RNL Design and Anderson Mason Dale, also opening next year. A linchpin in Mayor Wellington Webb's plan to revive the banks of the industrial South Platte River for parks and recreation, Ocean Journey wraps an undulated glass facade around a brick box containing freshwater and saltwater tanks for 300 species.

These projects follow the remarkable public works trifecta of 1995. Within a few weeks, the city celebrated the openings of the \$4.3 billion Denver International Airport (DIA), Graves' pastel-colored \$64 million Central Library (completed with local architect Klipp Colussy Jenks Dubois), and the \$215 million Coors Field, also designed by HOK Sport.

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With its patterned brickwork design borrowed from a LoDo ice house, the Neotraditional ballpark has won wide praise for complementing the surrounding neighborhood.

DIA's fabric roof (its 34 spires emulate snowy peaks to the west) created an instant landmark but the facility has received mixed reviews—and also caused the city to sue architect C.W. Fentress J.H. Bradburn and Associates for \$15 million for the cost of 800 alleged errors and omissions. In November 1996, Fentress Bradburn successfully defended their case. Then last February, to the surprise of many, the team of Fentress Bradburn and Kansas City, Missouri-based HNTB edged out HOK Sport to win the commission for a \$500 million Denver Broncos football stadium, which has not yet been funded.

With 12,000 acres—nearly 19 square miles—of urban infill proposed, the sky may be the limit for growth within the Mile High City. The most ambitious proposal springs from the 1995 plan to redevelop the shuttered, 7-square-mile Stapleton Airport. The award-winning plan was based upon the density, footprint, land uses, and street configuration of traditional East Denver neighborhoods. Planners included Philadelphia's Andropogon Associates, New York City's Cooper, Robertson & Partners, and Denver's BRW and Civitas. The plan frames an 1,800-acre network of parks and open space around the restoration of two creeks. If the overall vision can be achieved, Stapleton will become home to 25,000 people (at 11 houses per acre) and 30,000 jobs—one of the largest urban infill projects ever accomplished.

Within the region, Stapleton redevelopment is viewed as a major gambit to prevent further sprawl. (Growth in the city still pales compared to the go-go suburbs.) But the plan got off to a slow start. Only a handful of projects were announced in the first two years, and major issues like paying for millions worth of environmental cleanup remained unresolved. Last December, the city dismissed half the staff of the Stapleton Development Corporation (SDC). Stapleton-watchers remain hopeful that the city will implement the plan, rather than sell the land quickly for more pro forma, strip-style development.

Boulder architect Kimble Hobbs is converting the Buerger Brothers Building (1929), located near the "Wall Street of the Rockies," into a 31-unit apartment building.



THORNEY LIEBERMAN

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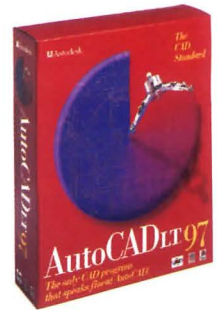
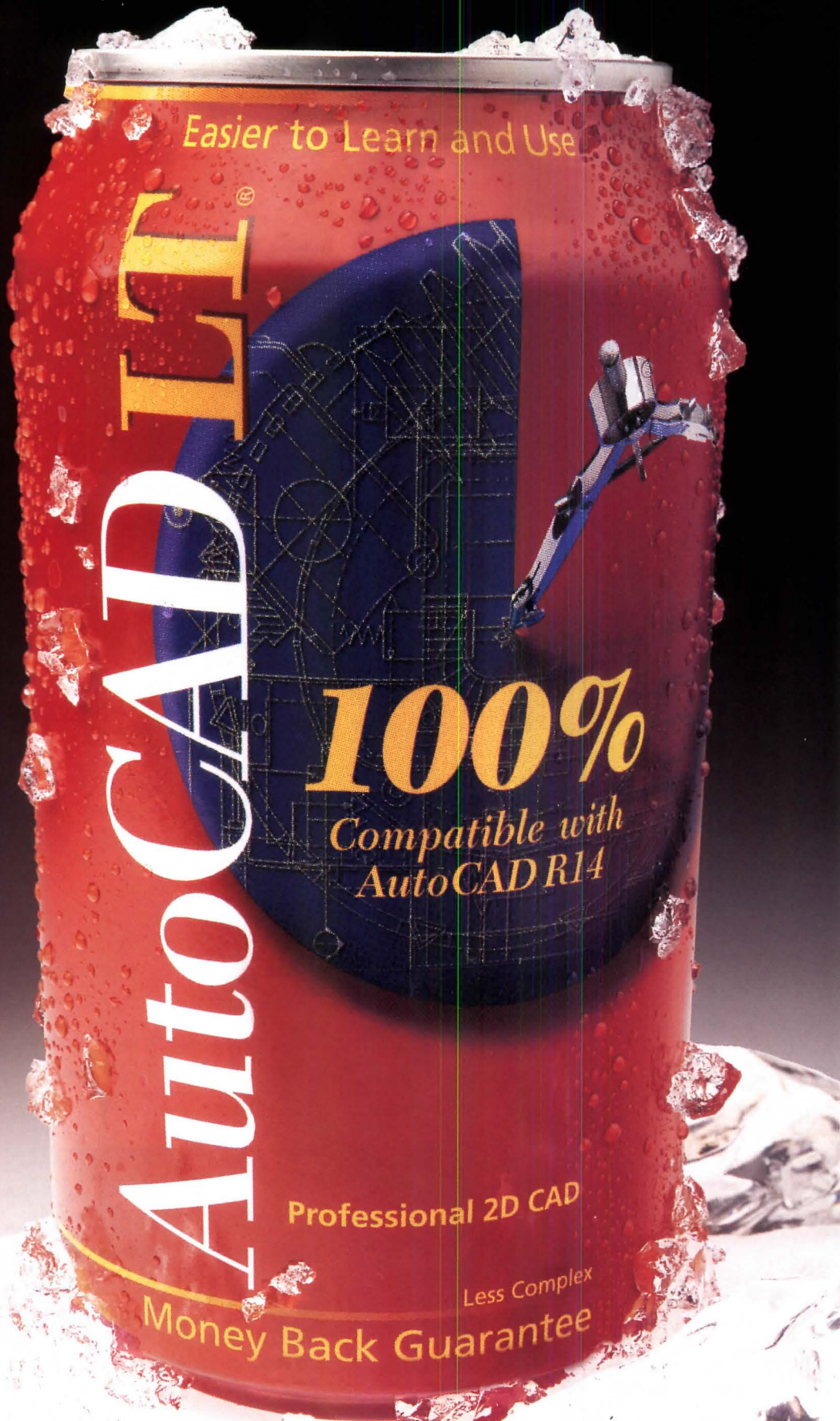
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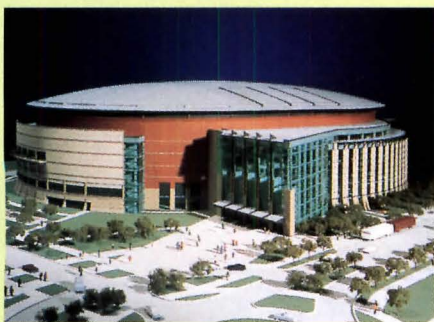
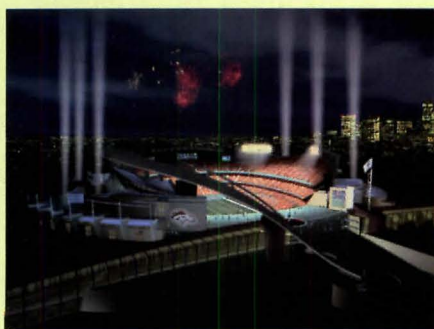
DESIGN YOUR WORLD

Denver has a growing cadre of activist architects and planners. Organizations like the Downtown Denver Partnership, Historic Denver, and the Urban Design Forum were promoting Denver's revival when it was written off as a dying cow town mantled by a "brown cloud" of smog. Now they are becoming the city's leaders. In 1992, architect Jennifer Moulton matriculated from Historic Denver to the top job in the city planning department. Husband-and-wife landscape architects Mark Johnson and Ann Mullins moved to Denver in 1984 on a mission to remake the city. Since then, their firm Civitas has been in the middle of everything from Stapleton redevelopment to creating the first formal city parks since the City Beautiful era. Now Johnson sits on the city's planning board. His former partner, Todd Johnson (no relation), was a principal planner for The Commons Neighborhood, an innovative master plan to create a dense, Upper East Side-style neighborhood on 54 acres of vacant railyards just west of LoDo.

Another crusading young architect, David Owen Tryba, virtually refuses to work in the suburbs. A protégé of noted preservationist James Marston Fitch, Tryba is one infill advocate who walks the walk. In a dicey section northeast of the Neoclassical State Capitol (1908), he is renovating and expanding the long-vacant Fisher Mansion (1896), designed by F. E. Edbrooke, as both his home and headquarters for his 17-person firm.

Denverites usually view their city through the rosy light of reflected alpenglow. A few will venture that their city rivals Portland, Oregon, as a paragon of urban revival. Others say the city still lacks artistic imagination and political will. Critics point to the erasure of 16th Street's Zeckendorf Plaza, a Modernist skating rink with a distinctive parabolic roof designed by I.M. Pei in 1956, as an example of present-day Babbitry. After a pitched preservation battle, Zeckendorf Plaza was replaced by a new lobby for a \$135 million addition to the monolithic Adam's Mark Hotel (1960), designed by the developer's in-house architect.

The Denver Post's Joanne Ditmer, a columnist who often



Among the major civic projects under way in Denver (top to bottom) are the \$93 million Colorado's Ocean Journey aquarium, designed by RNL Design and Anderson Mason Dale; the half-billion-dollar Denver Broncos football stadium, designed by Fentress Bradburn with Kansas City-based HNTB; and the \$160 million PepsiCenter arena, designed by HOK Sport.

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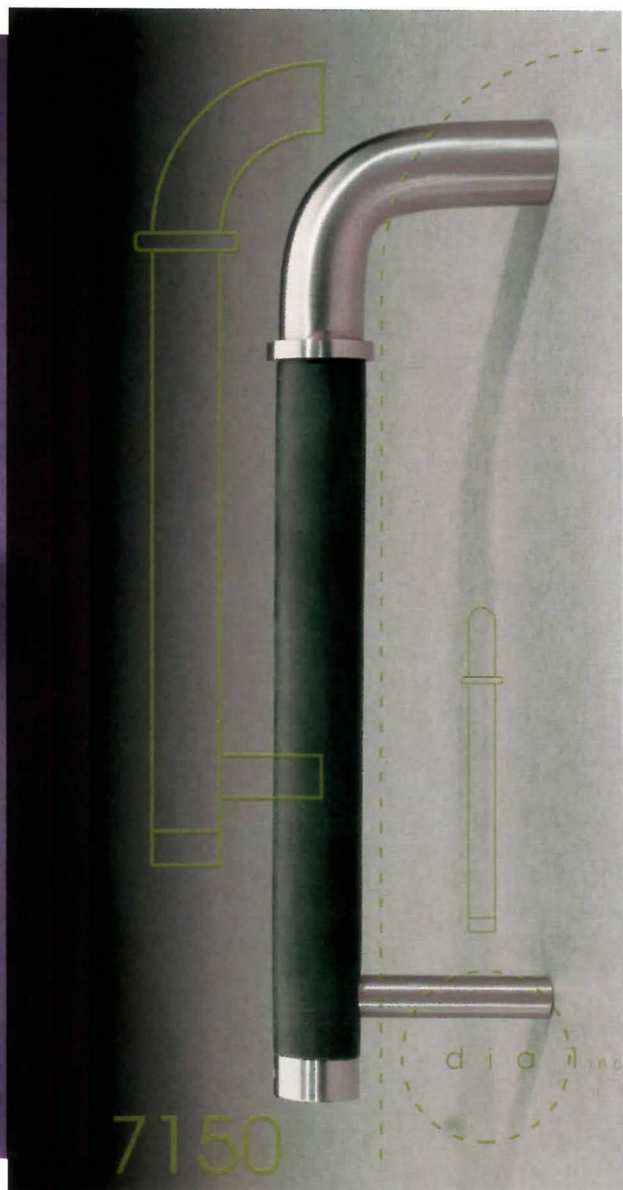
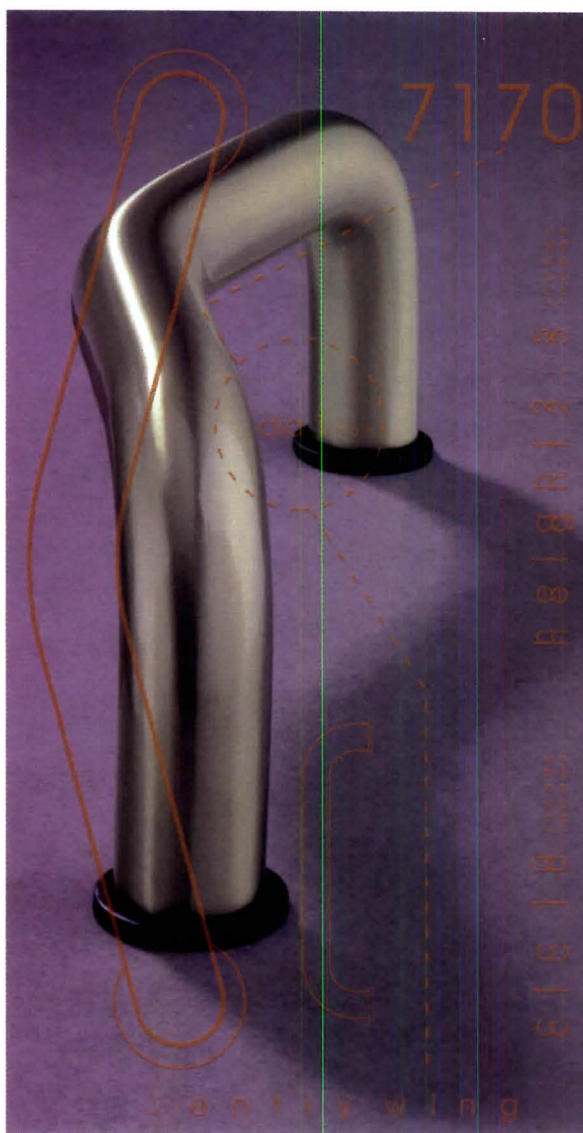
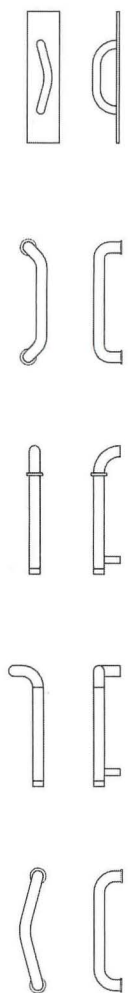
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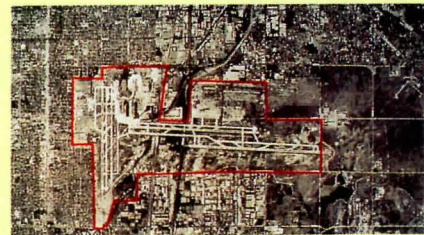
addresses architecture (neither Denver daily has a full-time critic), compared the glitzy Adam's Mark addition to a Beverly Hills auto showroom. Particularly galling to Historic Denver and other concerned citizens was the fact that the Denver Urban Renewal Authority (DURA) subsidized the Adam's Mark with a \$25 million grant. Yet DURA, which, in the heyday of urban renewal, destroyed buildings faster than a Dresden bomber, has won praise lately for investing in historic buildings and creating affordable housing.

Tyler Gibbs calls the Adam's Mark situation "unfortunate," but says the city's spine is stiffening on design issues. "Ten years ago, we had no design review anywhere in the city other than in historic districts," he says. "We've now got nine design review districts outside of historic districts, including the ballpark neighborhood, downtown, and the Central Platte Valley. Even the Adam's Mark project was held up for nine months over design review."

Whether the six-county Denver region can control sprawl is another issue. Some 770,000 people are expected to move here by the year 2020, bringing the region's population to nearly 3 million. At the current rate of expansion, metropolitan Denver will balloon from about 540 square miles to nearly 900 square miles. This year, the Denver Regional Council of Governments is campaigning to encourage voluntary adoption of its Metro Vision 2020 plan among 49 separate jurisdictions. The plan promotes urban growth boundaries within only 700 square miles. Skepticism abounds. "It's a great idea," says Denver City Councilwoman

Susan Barnes-Gelt, "except that it's totally reliant on what I call the 'Kumbaya' approach because of voluntary compliance. We'll only get there with mandated state legislation tying state transportation dollars to regional planning. But that's about as quixotic as anything we can achieve in these political times."

Many cities would love to have Denver's growth-associated problems. And few



architects would disagree that now is a good time to practice here. "Our job board is packed to the gills," says Joseph Jackson, executive director of AIA Colorado, whose membership has recently jumped from 1,300 to 1,600.

"Suddenly, salaries are on a par with places like D.C. and Los Angeles," adds Ronald Abo, president of both AIA Colorado and Abo Copeland Architecture. "And Denver is maturing into a 24-hour city, with Coors Field, the lofts, and all the public works. Although a lot being built in the private sector doesn't have soul, we're on the cusp. Now the private sector needs to respond and put up some decent architecture." *Michael Leccese*

Michael Leccese is editor-at-large of Landscape Architecture.

Planners including New York City's Cooper Robertson & Partners, Philadelphia's Andropogon Associates, and Denver's BRW and Civitas are renovating the 7-square-mile Stapleton Airport into a 25,000-person mixed-use community.

the Designer is in



Neil Frankel
Carpet and Rug
Industry Master
Designer and
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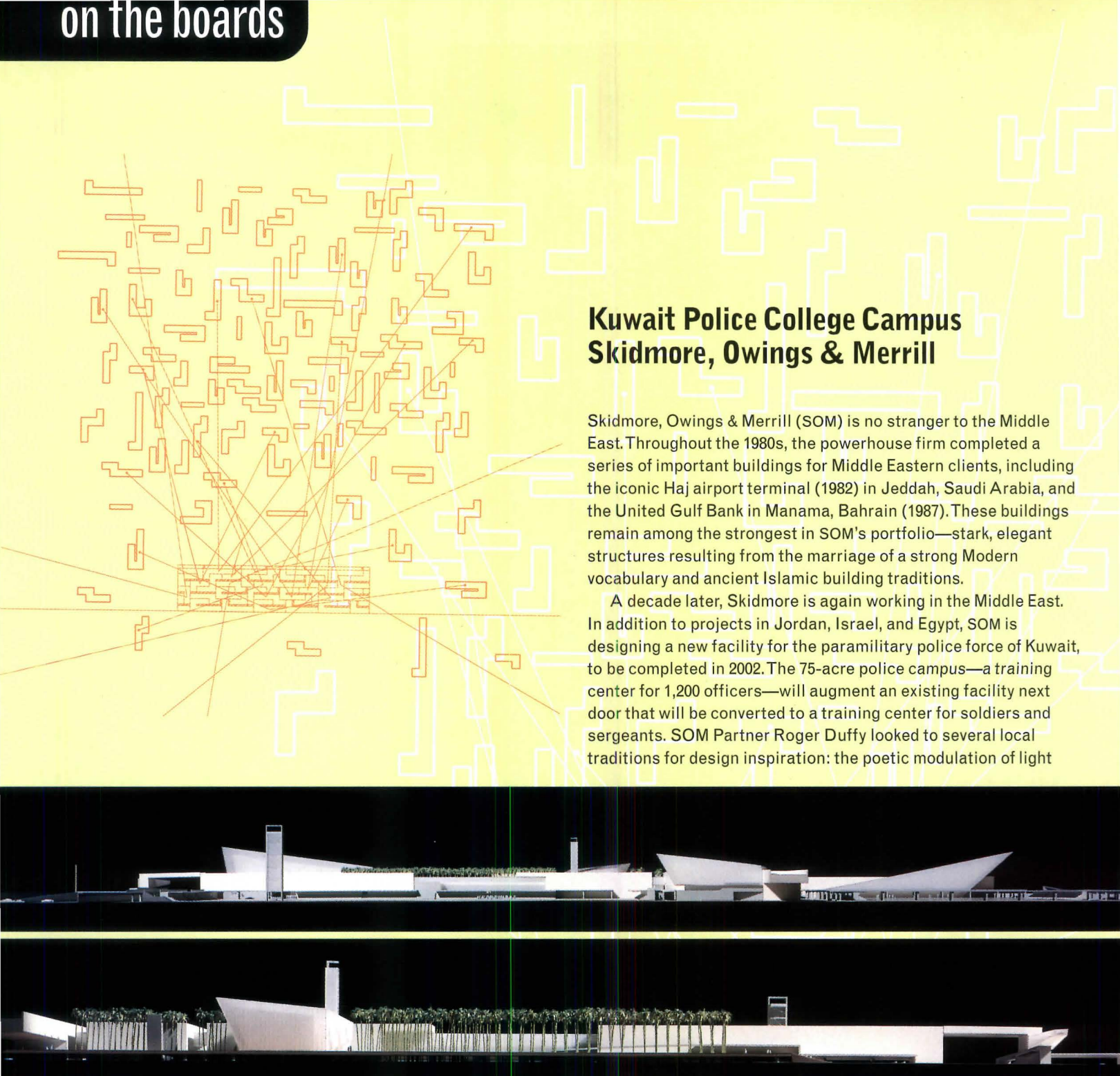
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Kuwait Police College Campus Skidmore, Owings & Merrill

Skidmore, Owings & Merrill (SOM) is no stranger to the Middle East. Throughout the 1980s, the powerhouse firm completed a series of important buildings for Middle Eastern clients, including the iconic Haj airport terminal (1982) in Jeddah, Saudi Arabia, and the United Gulf Bank in Manama, Bahrain (1987). These buildings remain among the strongest in SOM's portfolio—stark, elegant structures resulting from the marriage of a strong Modern vocabulary and ancient Islamic building traditions.

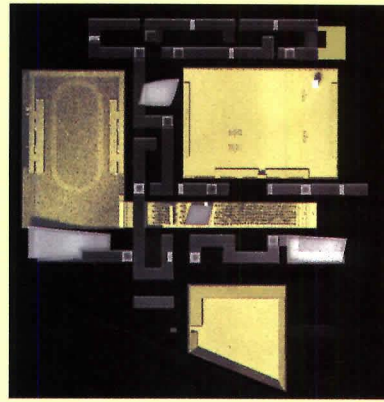
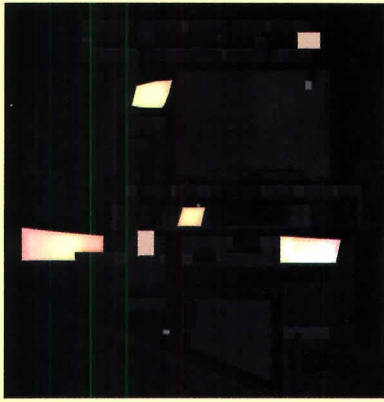
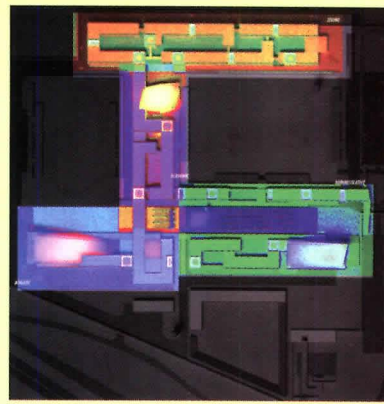
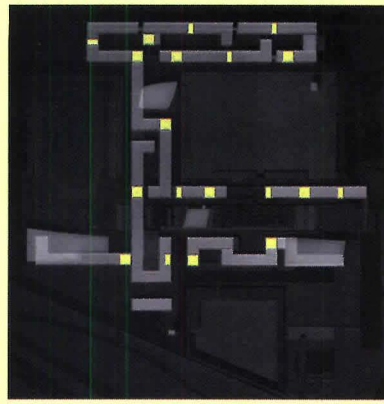
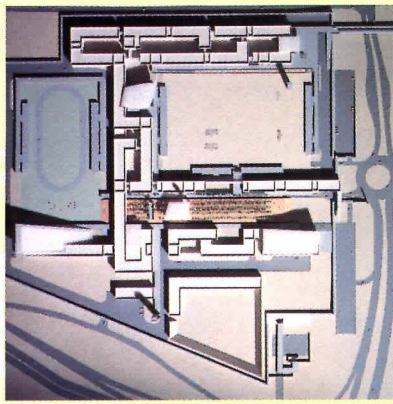
A decade later, Skidmore is again working in the Middle East. In addition to projects in Jordan, Israel, and Egypt, SOM is designing a new facility for the paramilitary police force of Kuwait, to be completed in 2002. The 75-acre police campus—a training center for 1,200 officers—will augment an existing facility next door that will be converted to a training center for soldiers and sergeants. SOM Partner Roger Duffy looked to several local traditions for design inspiration: the poetic modulation of light



North elevation (top) and south elevation (above) show masses of angular object buildings extending above datum of "rope" buildings.

in Pre-Islamic architecture; the highly graphic patterning of Islamic buildings; and contemporary Middle Eastern Modernism.

The architect divided the new site into five districts, each housing a distinct program: academic spaces, athletic areas, living quarters, administrative offices, and training facilities. The academic zone in the center of the site comprises a library, classrooms, and a two-level dining hall that seats 1,400. To the south and west, the athletic area contains a pair of buildings that enclose an Olympic-sized pool and a gymnasium that flanks an outdoor track. Four separate dormitories—one for students in each year of the four-year program—make up the residential



Diagrams show site plan (top left), circulation chambers (top center), quadrants (top right), rope buildings (bottom left), object buildings (bottom center), and courts (bottom right). Model view from northeast (below) shows expanse of paved courtyard framed by academic buildings (foreground). Glowing masses of glazed dining hall (at right), natatorium (at center), and mosque (at left) stand out from solid “rope” buildings.

district, located along the northern perimeter of the site. Along the southeast edge of the college, the administrative quadrant contains offices, a 1,500-seat auditorium, an officers' club, and an officers' dining hall. And at the southern end of the campus, the training quadrant boasts a firing range, obstacle courses, and outdoor classrooms. A mosque adjoins a palm-filled promenade—conceived as a hypostyle hall of trees—near the center of campus. The long outdoor court is finished in sturdy wooden planks, on which 300 cars can park in the shade of the palms.

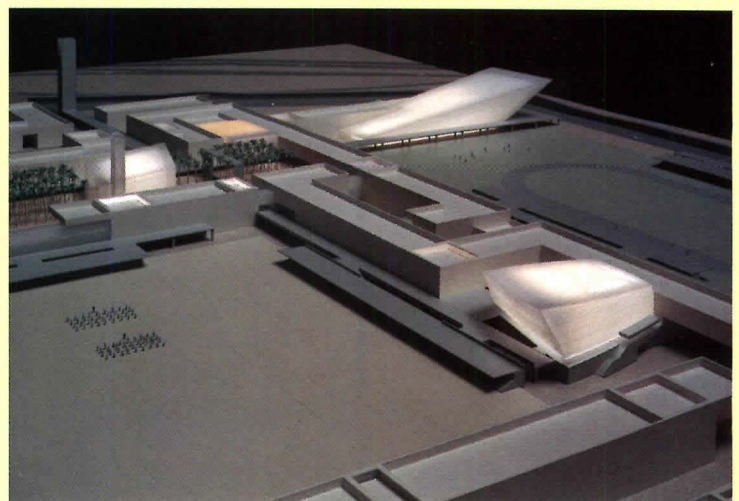
A series of large outdoor courtyards help buffer the buildings from the surrounding streets. The largest courtyard, a paved plaza at the northeast corner of the campus, is the symbolic and ceremonial focus of the sprawling complex. The courtyard doubles as a parade grounds and accommodates large assemblies. The outdoor track and sports field act as a giant forecourt on the west edge of the complex, while cadet training areas fill smaller, sand-filled courtyards at the far northeast and southeast corners.

SOM assembled the campus from two building types: modular boxes called “rope buildings” and discrete object buildings. The four-story, L-shaped “rope” structures, measuring 9 meters by 18 meters, sinuously wind their way through the campus. They define both interior and exterior courtyards and, in both plan and elevation, create patterns resembling the *kufic* style of the highly geometric Islamic script.

Glass bridges at the second and third levels connect the various buildings. The exteriors of the rope buildings are clad in interlocking, precast-concrete panels, assembled like puzzle pieces to minimize direct sunlight. Clear glazed panels fill

rectangular openings between the concrete cladding units, which are rendered in muted desert tones.

The angular, sweeping roofs of the auditorium, dining hall, pool, gymnasium, and mosque peek out above the four-story datum of the ropes. These more prominent buildings are conceived as boxes-within-boxes: An outer skin of clear, flush-mounted glass wraps an inner layer of perforated metal screens mounted to a structural frame. Lighting in the 15-foot gap illuminates the void between the two skins, creating a soft glow. During the day, sunlight will penetrate the tiny openings of the metal cladding to fill the interiors with dappled desert light. *Raul A. Barreneche*



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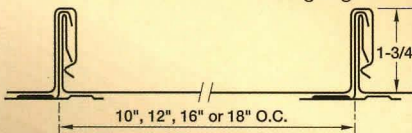
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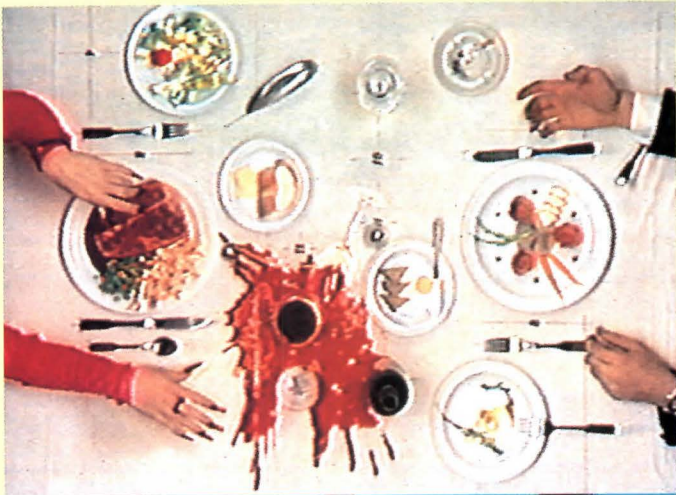


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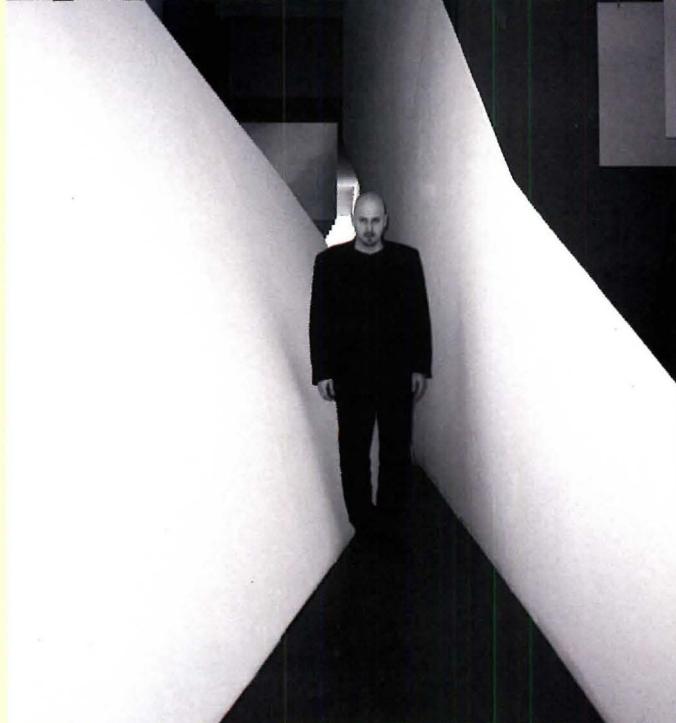
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The Plot



Architecture's dark side emerges in a disquieting novel by Douglas Cooper.

*The few architects we find in popular fiction are predictably likable. For an antidote to the fashionably sensitive, yet terminally bland architect, adventurous readers can turn to Douglas Cooper's new novel, *Delirium* (Hyperion, 1998). It obliquely traces the fate of a sinister practitioner and his malevolent biographer. This tale bears the imprint of Cooper's degree in philosophy, two years of architecture school, and collaborative forays with architects Peter Eisenman and Elizabeth Diller and Ricardo Scofidio.*

Thickens

ARCHITECTURE: How do the structures you find in philosophy and architecture inform your writing?

DOUGLAS COOPER: I believe that program and narrative are analogous. These structures all map onto each other in a way that's intelligible. I make novels in the shapes of the plans of cities and houses; arguably, this makes me a structuralist. Now that Deconstructivist heaven has arrived, my position is not chic. I call myself a Structuralist, but esthetically I'm very much drawn to post-structural and Postmodern ways of delaminating things.

Describe the philosopher's need for structure.

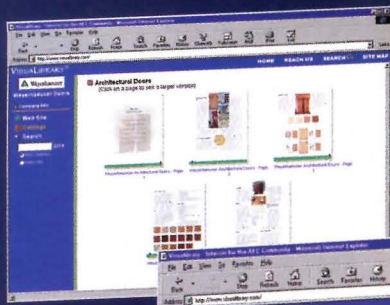
It's what prevents flux and chaos. Look at the so-called Deconstructivist movement, which is an attempt to capture flux and chaos in built structure. Someone suggested that the problem with Deconstructivist buildings is that they don't move. Zaha Hadid says, "I believe my buildings can fly until my engineers tell me otherwise." Well the fact is her buildings don't fly. They don't crawl; they don't whirl; they don't move an inch. They exist as structure. Every once in a while, an architect will design a floor that moves in his building. But that's a gimmick. Structure is how architects impose their will on chaos. They make things

Cooper wrote script for two Diller + Scofidio projects: "Indigestion" (1995, top), an interactive installation, and "Moving Target" (1996, center), a synthesis of video and choreography by Frédéric Flamand. Cooper collaborated on Peter Eisenman's Milan Triennial installation (1995, above).

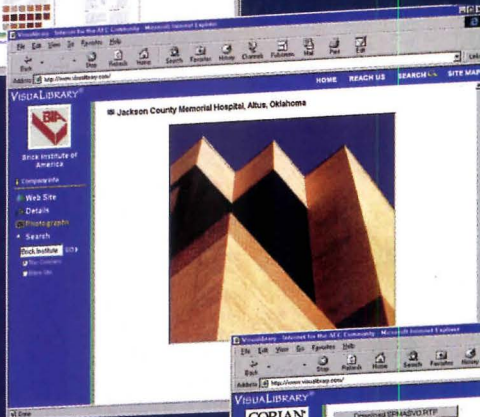
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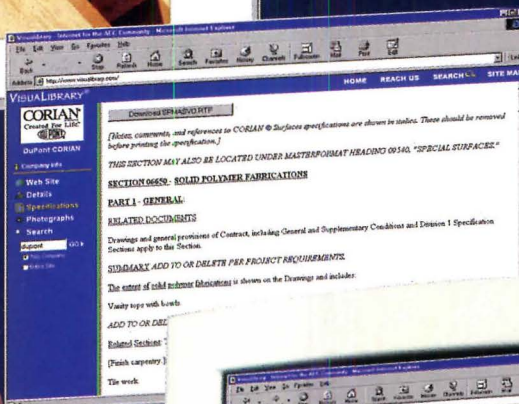
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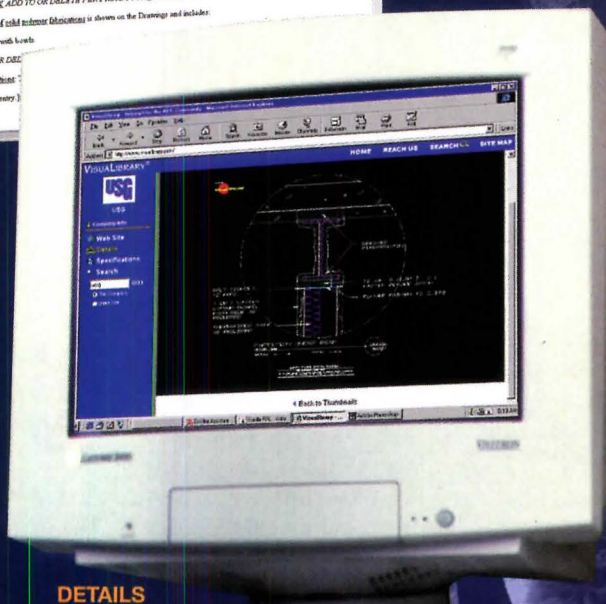
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that stand and are ordered in a specific way, with a sequence of rooms that mean something or dictate the way human beings move through them. This is exactly what a novelist does when he or she structures a narrative. You dictate the way in which somebody experiences a story. It's a way of taking the flux we're working from and paring it down to something significant.

I like Decon. It's architects experimenting with the unmoving and the built, seeing how far they can push it before it ceases to make sense, how close to chaos they can make a building and still render it meaningful. That is what I do with a narrative. My books always have a story, but they're about as far from traditional storytelling as you can get without lapsing into meaninglessness.

Philosophy is a point of contact for me with the people I respect most in architecture today: John Hejduk, Elizabeth Diller and Ricardo Scofidio, and Daniel Libeskind. There are other architects who just shovel philosophy into their work; sometimes I think Peter Eisenman is guilty of that. They simply take philosophy and transform it automatically into a building. But there are those who actually think their way through building; Peter sometimes does that as well.

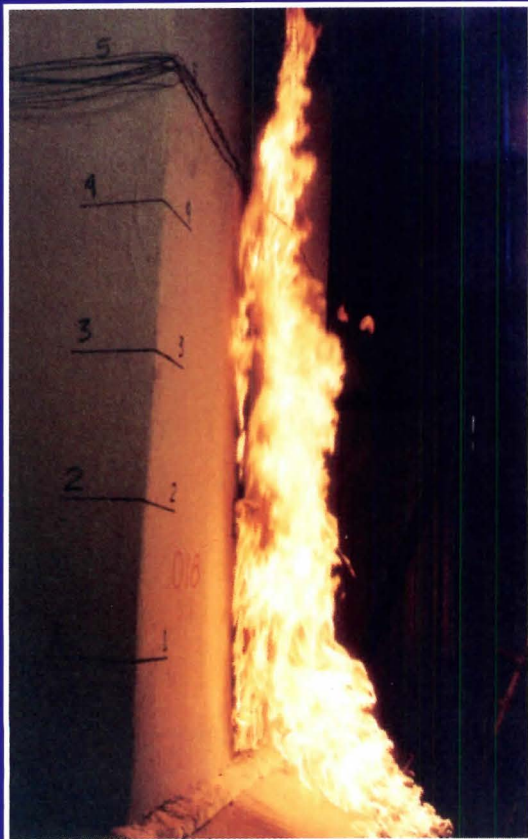
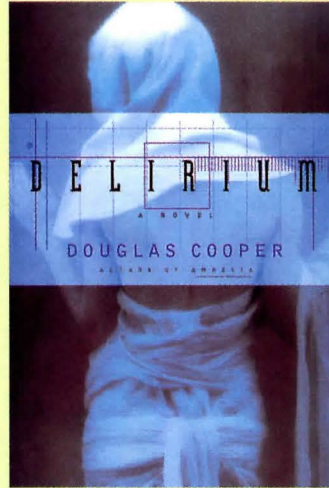
Someone like Liz Diller will not make an architectural or an artistic gesture without understanding extremely rigorously why she is doing so. We have worked together on some projects; I've watched her in a state of intellectual paralysis, which is

wonderful to watch. She just won't move until I can explain to her why we are doing what we're doing, or until she can come up with an explanation. It's deeply frustrating. Sometimes you get nowhere for a couple of hours and then you break through in a rigorous manner. That's how I work as a fiction writer.

Compare reading your novel and walking through a building.

Delirium is serialized on the Internet, where people can decide

how to read it. I am asked, "Doesn't it appall you to give so much artistic will to the audience by allowing them to navigate your text as they choose? Doesn't this diminish your powers?" It doesn't. I consider the works of architects analogous. The architect designs a floor plan; he doesn't dictate the order in which the rooms are to be experienced. He gives over the options of navigating that building to its occupant. This doesn't make the architect any less of an architect, any less



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the author of a building. The walls are set in place. The plan is the plan. Similarly, my book on the Web has an unvarying plan. You can navigate it anyway you like, but I wrote it.

The built environment does not reveal the mind of one creator. Does your analogy extend there?

Yes. Our experience of the congested city, to borrow a term from Rem Koolhaas, is closer to a fragmentary consciousness than it is to the heroic modern vision of the city created out of a single will. The city described by Jane Jacobs or Koolhaas involves an esthetic of accretion and a collision of wills and the celebration of accident and moments of chaos. All of that is in this novel.

Given what you've learned from architecture as a writer, do you see a reciprocal process? Can architects learn from a novelist?

Absolutely. Peter Eisenman imagines a building that is inextricable from its text, one that is not just inspired by a text, but is wedded to its text. There's no reason an architect can't look at a text to give him or her the structure for building. There's a Paul Celan poem at the heart of Libeskind's Jewish Museum in Berlin. But in an even more rigorous way, I can imagine constructing a building like a sonnet. A sonnet is an extremely rigid metric structure—a mathematical grid, really. The novel, while less mathematical, is structurally capable of producing

potent analogs to the city. I always look at Victor Hugo's *Notre Dame de Paris*, which architects look at as well, as the first significant architectural novel. (It's not a great novel actually.) It is built in the same way the city of Paris was, with a description of the cathedral at the center from which the story radiates outward. Cathedrals did this with Biblical texts; they were built books.

Didn't Hugo also say that the book would defeat the building?

Yes. He said the printing press would render all of this obsolete. This will kill that. Of course it didn't. I think one of the great recurring comic themes in every art form is the exaggerated rumor of its death. Every 10 years, poetry is dying. Every 10 years, drama has died. Architecture dies a thousand deaths. It makes a nice story to argue that something will kill off something else.

I see *Delirium* as an optical novel—not simply because one section is based on the Panopticon, the most explicitly optical architectural type, but because it is about judgement and shame, both of which are conditions predicated on the optical. You are judged because you are seen. My two antagonists are optically determined: Ariel Price, the architect with hiddenness at the core of his opaque structure and life, and his corrupt biographer, whose life's work is to peer into the hiddenness, into the dark spaces.

I think that the optical is becoming important in architecture: The Museum of Modern Art's recent, and much maligned *Light*

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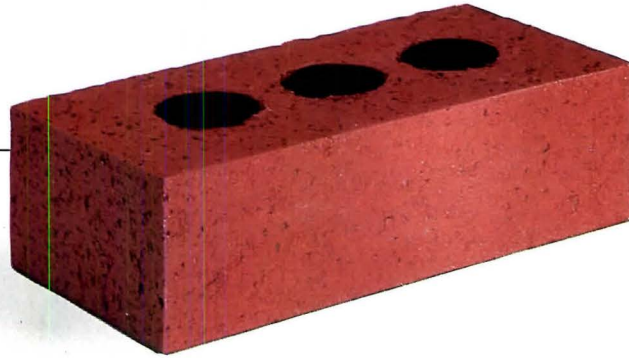
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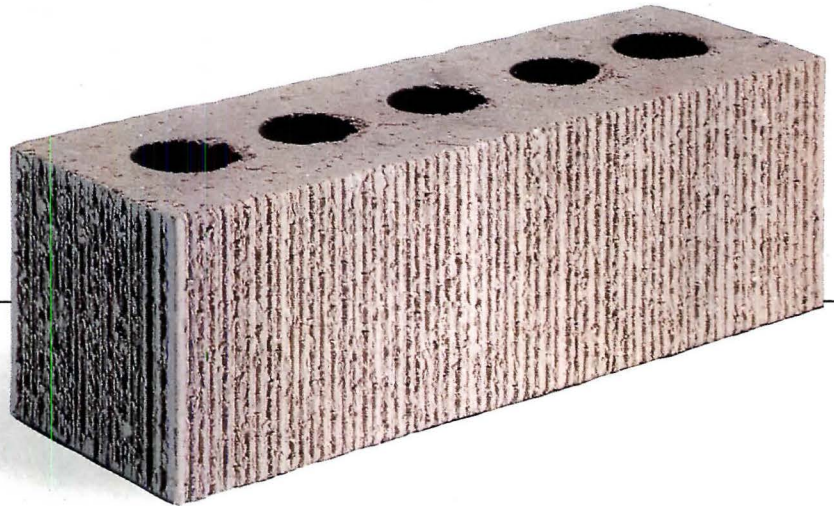
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Construction exhibition will define architectural practice for the next decade or so. People will look back at what it says about the mutability of opacity and how that alters the Vitruvian universe. It suggests that we look at buildings in a way that is more nuanced and profound, more paranoid and complex, than the Modernist obsession with glass. *Delirium* plays with these kind of things, with the idea of being able to partially see something. One of the ways the optical is resolved in the novel is in Ariel Price's prison cell, which grew out of the project I did with Peter Eisenman for the Milan Triennial.

Delirium is layered with Biblical allusions. Is it a modern morality tale? Do you present Ariel Price to comment on the profession or to comment on human nature more generally?

Both. I don't see my novel as highly moralistic. *Delirium* is an antidote to Ayn Rand's *The Fountainhead*, which is a highly moralistic book. It plays with moral constructs that Modernism itself erected, and has fun with those. My novel plays with the idea of the moralistic construct of the hero, and tries to unlayer that notion within the context of Modernism.

What is the modern hero?

Well, he looks a lot like Le Corbusier. In *Delirium*, I'm taking Le Corbusier apart and even more so, Mies Van Der Rohe and Philip Johnson. I thought it would be interesting to conflate Mies and Johnson, the great man and his plagiarist, and analyze that dual figure who is both genius and mediocrity, a great man and his mirror. That's what Ariel Price is. He looks too much like Mies to be Johnson and too much like Johnson to be Mies. He embodies both the heroic and the ludicrous of the heroic Modernist.

What are his ludicrous qualities?

Well, ludicrous is the wrong word for this, but it is deeply ironic and morally and esthetically disturbing that Philip Johnson, Nazi fellow traveler, is the most powerful architect in our democratic empire and has Jewish patrons. At least Mies and Le Corbusier had a core of genius. I find Johnson to be like a statue of Lenin. He's this empty construct who has managed to assume a great deal of power. And that points to idolatry, to the evil and nihilistic aspect of Modernism.

The first of two stories that got me started was the story of Philip Johnson, who famously has said: "I am a whore." We build for anybody. We go for a client, no matter who the client is. In *Delirium*, I tell the story of Philip Johnson, the whore who remains unredeemed, and Mary Magdalene, the whore who is redeemed; I rhyme these stories in parallel strands on the Web. That's how I started this book. So I suddenly had my heroic Modernist and my Old Testament icon occurring in parallel, winding around each other. It became an analysis of whoredom.

For whom was *Delirium* written?

My ideal reader is an architect or an art student or people who share a way of thinking about the liberal arts. Architects read differently from other people. They are some of the few people who read theory in a practical manner. That sounds like a contradiction but it's not. Architects read theoretical books to determine how to make buildings and how to think esthetically.



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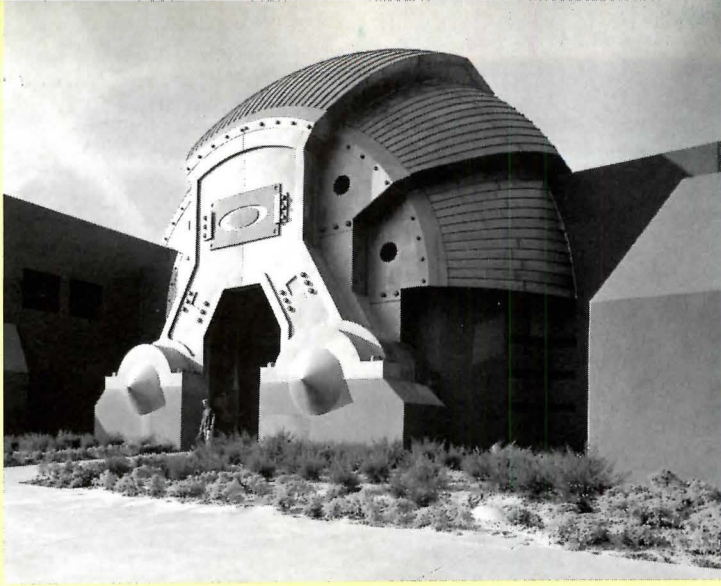
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The new Oakley headquarters in Foothills, California, in Orange County, looks like bad sci-fi: A mechanistic cyclops skull of an entrance pavilion scowls from a gratuitously buttressed facade. The moodily lit lobby within is paneled in plates of black-patinated iron, its cauldronlike reception desk better suited for molten metal than a secretary. Overscaled bolts and rivets seem to have leapt off Frankenstein's neck and onto the walls. The auditorium, with its circular iron stage and looming overhead screen, is just the place for an Orwellian brainwashing session.

The resemblances are intentional: Futuristic film noir—the best of which includes Fritz Lang's *Metropolis* (1926), Ridley Scott's *Blade Runner* (1982), and Tim Burton's *Batman* (1989)—fascinates Oakley Chairman Jim Jannard. Unfortunately, Oakley Vice President of Design Colin Baden, who crafted the building with executive architect Langdon Wilson, seems to have drawn from the worst without regard for consistency or symbolism.

Management sees the endeavor as an expression of the company's creative spirit. "No detail is left untouched by design," boasts Baden. Hardly. The exterior extravagance is limited to the

Weird Science

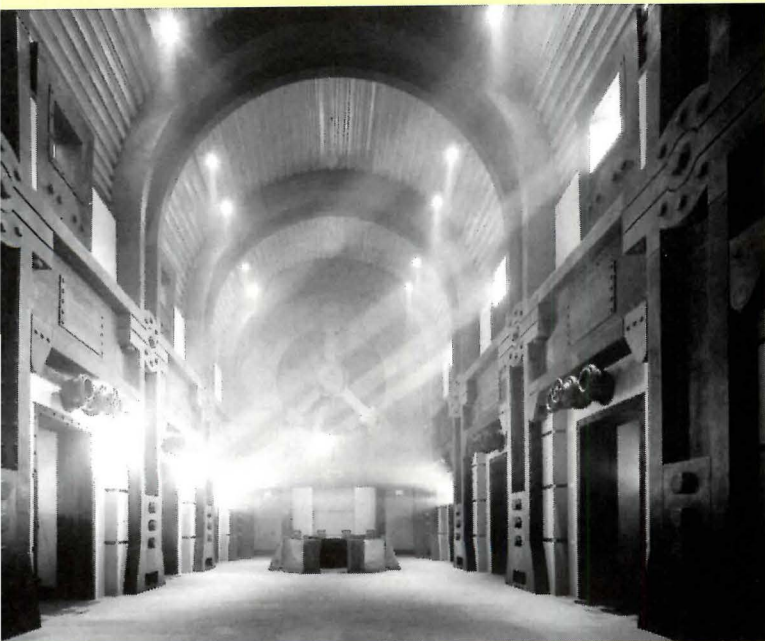
Phony Futurism touches down on an eyewear manufacturer's new headquarters.

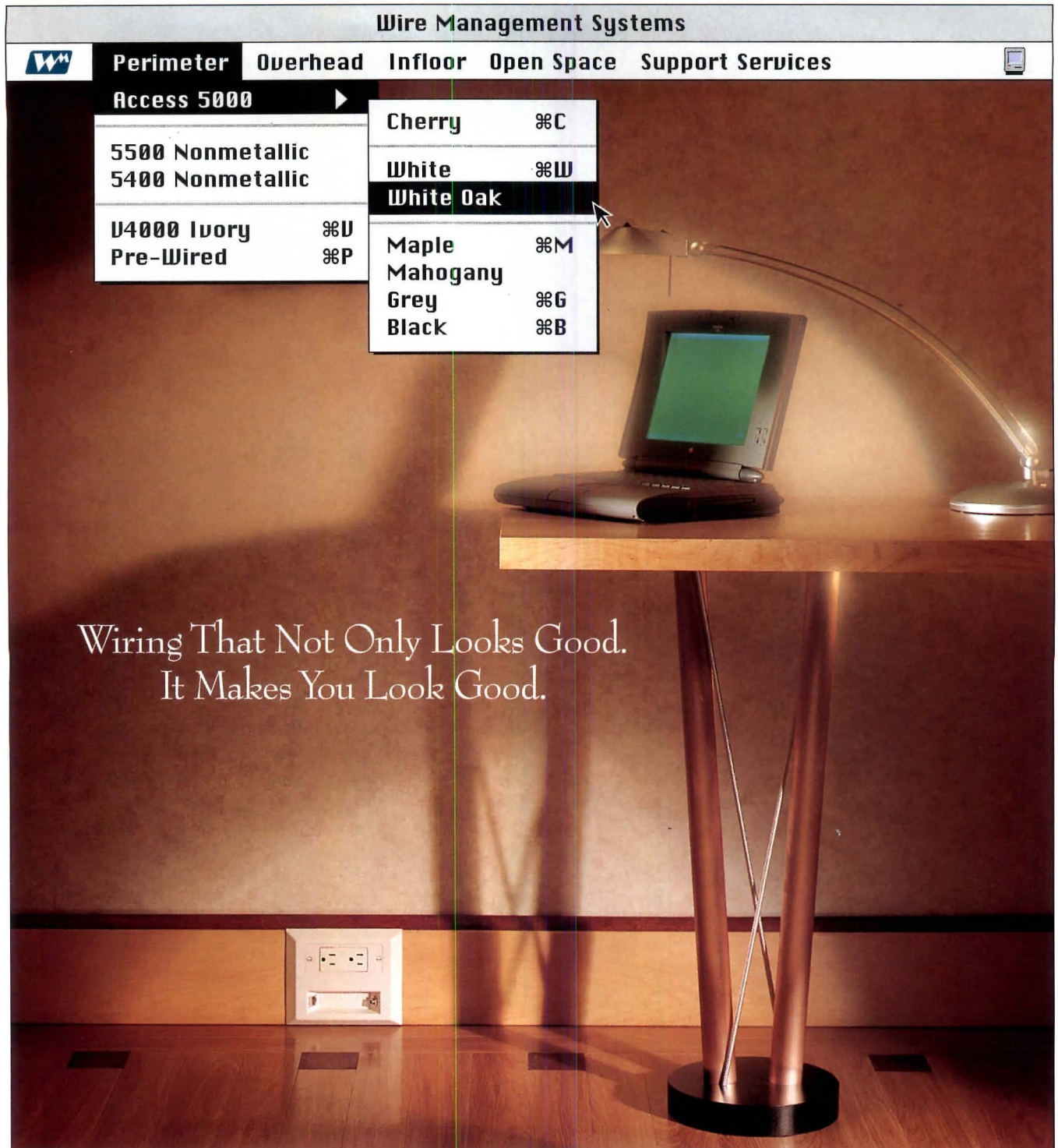
entranceway; the rest of the building is a typical office warehouse. Inside, generic cubicles and a high school-quality cafeteria surround Jannard's self-indulgent fantasy. (Did the designer of *Star Wars*' Death Star spec acoustical ceiling tiles too?)

Despite the fact that Oakley has co-opted the term "mad science" to describe its approach to technology—and parts of the 413,000-square-foot headquarters accordingly look like a low-rent *Cabinet of Dr. Caligari*—the analogy between the company's process and products and the headquarters' architecture is at once heavy-handed and superficial. The building could have been as materially and technologically purist as the company's high-tech eyewear: delicate titanium frames and sculptural, iridium-coated lenses.

Langdon Wilson claims the building's stylistic eclecticism is Mannerist. Surely, architectural signs and symbols are meant to be played with, but the architectural vocabulary the creators of the Oakley headquarters employed was Greek to them. Lang, whose *Metropolis* arguably originated the brooding esthetic that Oakley apes, intended his epic film and the fictional city it portrays to critique the social inequality of Weimar Germany. While Oakley's employees may love their funky new workplace, their bosses clearly never considered the notion that a style associated with social injustice might convey an inappropriate message to the building's occupants, not to mention the company's customers.

Despite obviously lighthearted intentions and a deliberate attempt at "corporate cool," there's an underlying message of oppression to the Oakley offices. Jannard wanted Gotham City; he got an intergalactic gulag instead. *Ned Cramer*





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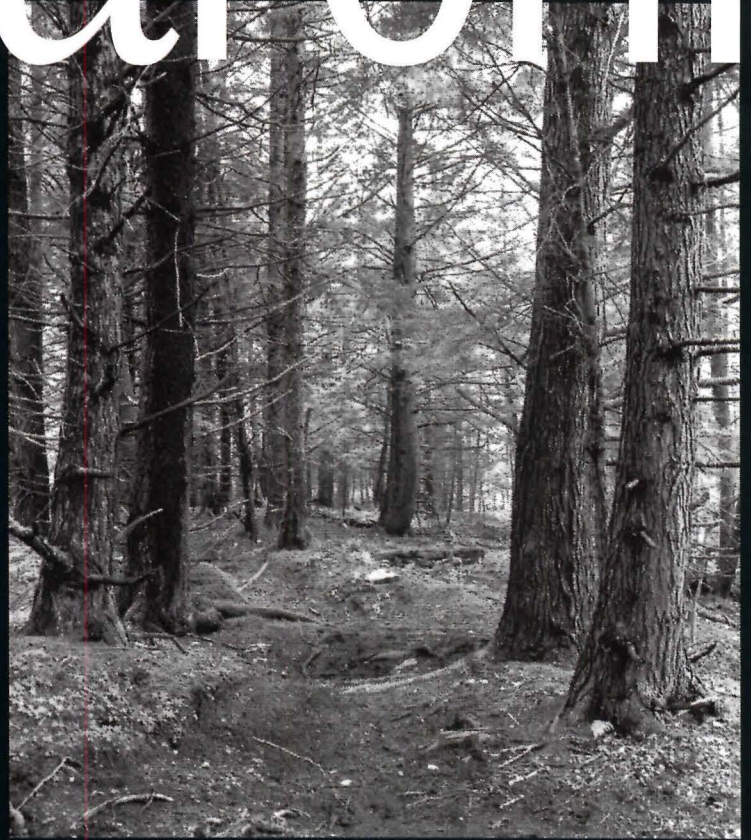
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—from *OUTSIDE LIES MAGIC* by John R. Stilgoe (Walker and Company, 1998)

A photograph of a dense forest with a wooden boardwalk path. The path is made of wooden planks and logs, leading through a thicket of trees and ferns. The text "INTO THE WOODS" is overlaid in white, bold, sans-serif font across the center of the image.

INTO THE WOODS



Marsh Porch

Walking in a marsh is like stepping on a sponge. The ground sinks beneath your feet. Rapoport and Pommer noticed that people look downward when they venture into Sweet Farm's marsh, and built an analogue to their halting gait.

Staggered hemlock planks trace a path to paired benches in the middle of the marsh. Here, visitors can linger on a raised (and dry) platform beneath a feathery canopy of foliage. Before long, they note the abundance of songbirds in the marsh and the glow of sunlight on the surrounding saplings. The young trees of the marsh, bisected by the porch and its path, become a corridor of light within the surrounding woods.

GENTLE INCURSIONS HEIGHTEN THE GRANDEUR OF A QUEBEC FOREST. PHOTOGRAPHS BY STEVEN EVANS

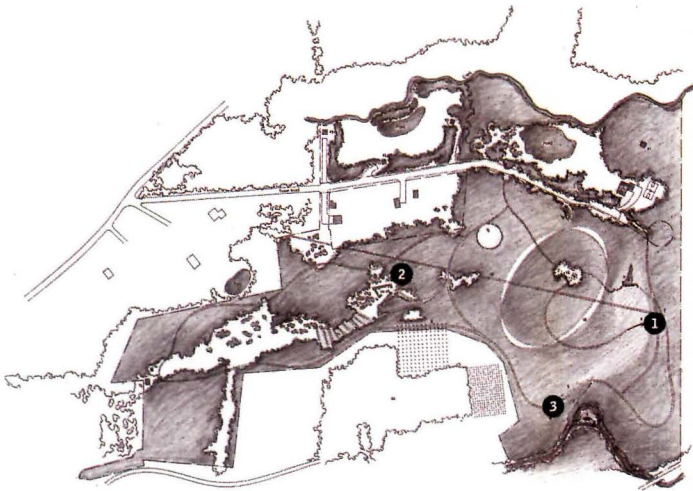
Sweet Farm is an 85-acre composite of forest, meadow, and wetlands located in the Eastern Townships of Quebec. In 1994, architects Lisa Rapoport and Christopher Pommer, partners of the Toronto-based design firm Plant, were asked by the owners of Sweet Farm to help them make the lots they had acquired into a retreat for family and friends. The architects scrutinized the farm as they would artifacts of the city: Anything they encountered was potentially valuable. Yet here, unlike the city, they envisioned architecture that would barely be seen. Their forms were to seem transparent, lenses to bring the landscape into focus.

Rapoport and Pommer encountered terrain that had already been commodified: New growth revealed where trees had been cleared for lumber; rotting cars defined an automotive graveyard; a thousand mink cages were the debris of others' animal husbandry. The architects accepted these as the forest's legacy—artifacts to be reconfigured.

In the three photographs shown here, the Marsh Porch, Mink Cage Garden, and Woven Walls, architecture is superimposed on the land, distinct from nature: It is a device to help see the nuance of the woods. —PHILIP ARCIDI

Mink Cage Garden

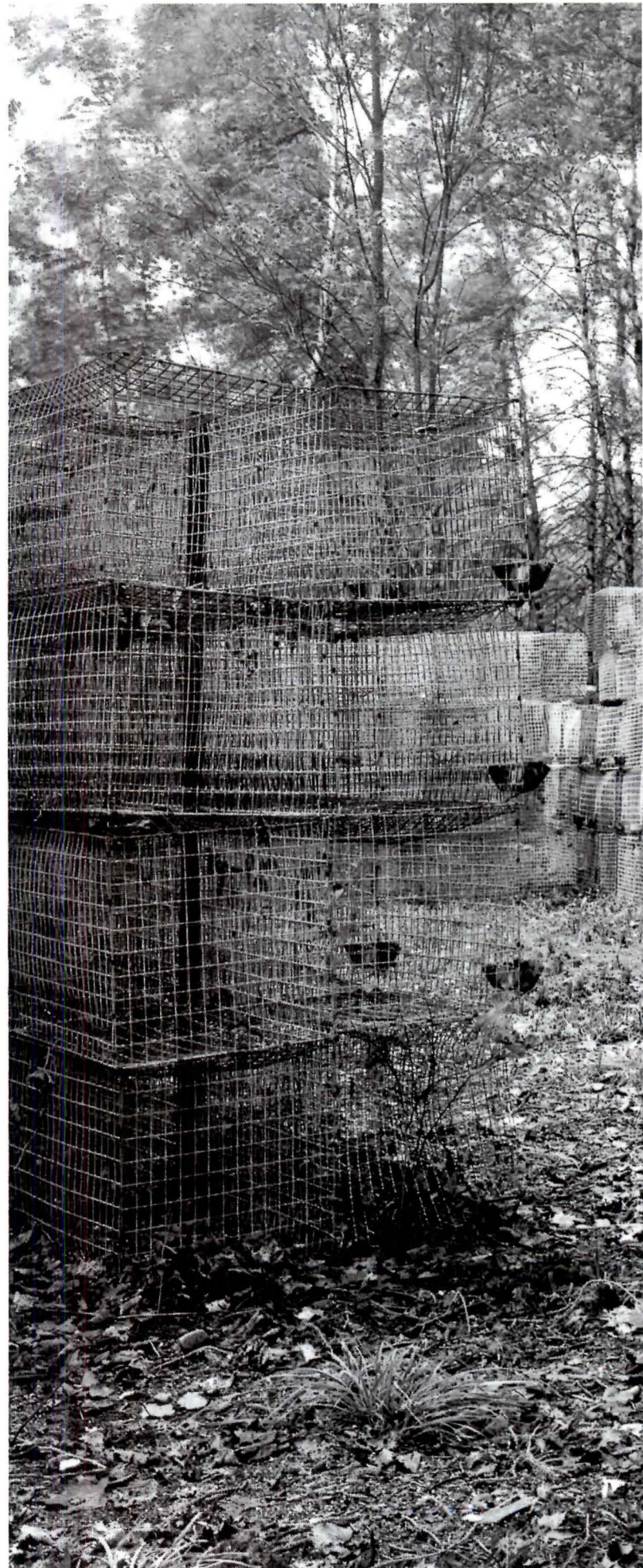
What is a mink cage?
A small room. What to do
with a thousand mink
cages? Build a large room.
To Rapoport and Pommer,
the mink cages were
artifacts to be reconfigured,
just as buildings in the
city are appropriated
by succeeding generations:
Function is recycled;
content reassigned.
The wired-together cages
create a sequence
of unfolding spaces. The
poché of stacked cages
(from one to three layers
thick) frames a progression
from room to narrow
passage to a dramatic
view over a valley.
The cages adapt Classical
floor plans with a farm
apparatus; the modulated
spaces of Baroque
Rome find a distant
successor in rural Quebec.



Site plan

415' / 125m

- ① Marsh Porch
- ② Mink Cage Garden
- ③ Woven Walls









Woven Walls

The laced branches that flank this path are part of Sweet Farm's most protracted construction project. Its carpenters are those who walk along the wall: Each is free to weave a branch onto the posts installed at 5-foot intervals. Rapoport and Pommer envision a sequence of walls that rise from hip height to the top of each pole, a slowly built screen that obstructs views into the forest.

By occluding the forest, the architects intend to dramatize the gorge on the opposite side of the path. The woven edge seems close enough to scrape your arm as you walk past, a gnarly contrast to the sweeping hemlocks overhead. The ground and the sky are each strengthened by the wall that divides your view: The gorge seems steeper, the canopy of evergreens more serene.

SWEET FARM

EASTERN TOWNSHIPS, QUEBEC

CLIENTS: Jack and Linda Kivenko

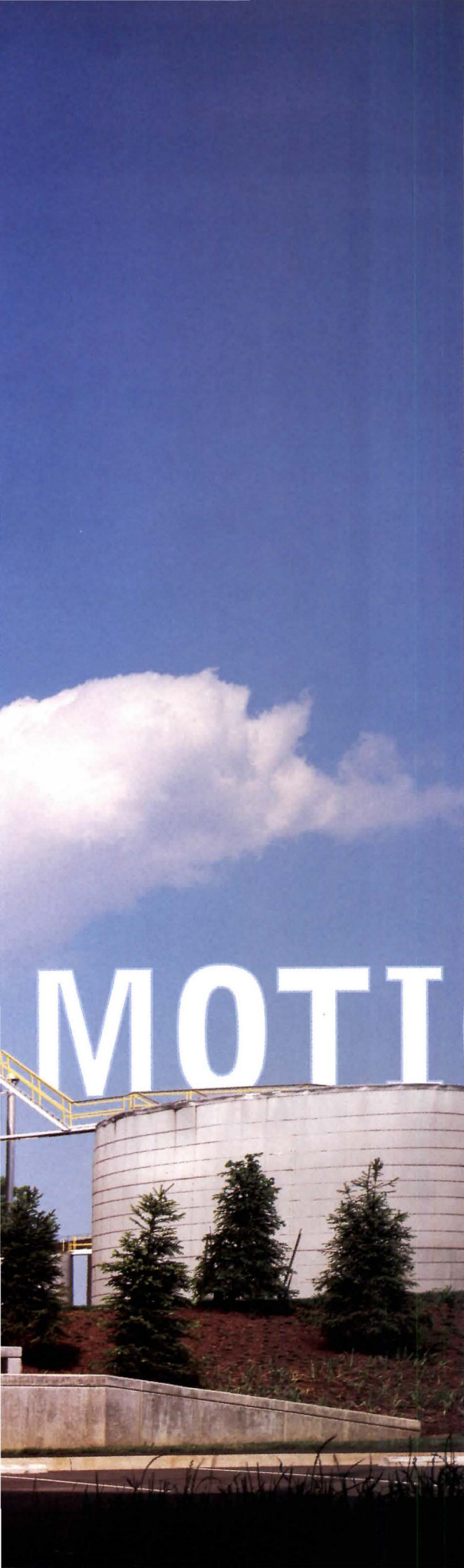
ARCHITECT: Plant, Toronto, Ontario—Christopher Pommer, Lisa Rapoport (partners)

ENGINEER: Blackwell Engineering (structural) GENERAL CONTRACTOR:

Terrains Décoratif COST: Withheld at owners' request

REST T.N.





BRAVURA'S FUNCTIONAL FOLLIES ENLIVEN A WATERFRONT PARK.

BY EDWARD KEEGAN

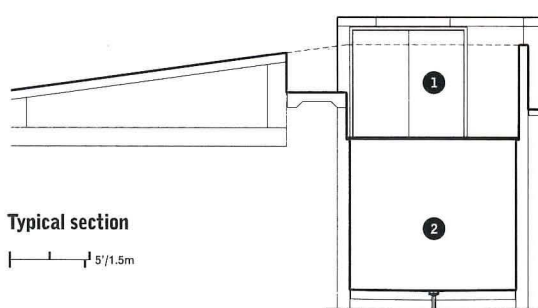
Add Louisville, Kentucky, to the growing list of American cities that have successfully revitalized their waterfront districts. Based on a 1991 master plan by San Francisco-based Hargreaves Associates, Waterfront Park's dynamic outdoor spaces lie between a series of sinuous geometric mounds along the south bank of the Ohio River. Louisville-based architect Bravura has nestled two dramatic concrete and wood public toilets at the foot of this self-consciously man-made landscape—adjacent to parking lots carefully concealed by berms from the riverfront.

Airy, clear-stained cedar constructions of standard dimensional lumber soar above two fully accessible concrete rest rooms with ancillary exterior spaces that include public telephones and benches. Set beneath the sheltering roof, a 7-foot-tall concrete structure sprouts from a series of low cast-in-place retaining walls that are parallel to the parking lot and set the entire complex apart from the landscape. The individual toilet rooms are accessed from either end and are outfitted with vandal-proof stainless steel fixtures.

In contrast to the simple plan, the structure's roof is a rollicking bipartite affair that slopes a conventional 4 over 12 toward the parking lot, but heaves at odd angles in the longitudinal direction. A regularized series of paired 4-by-4-foot wood posts attach to

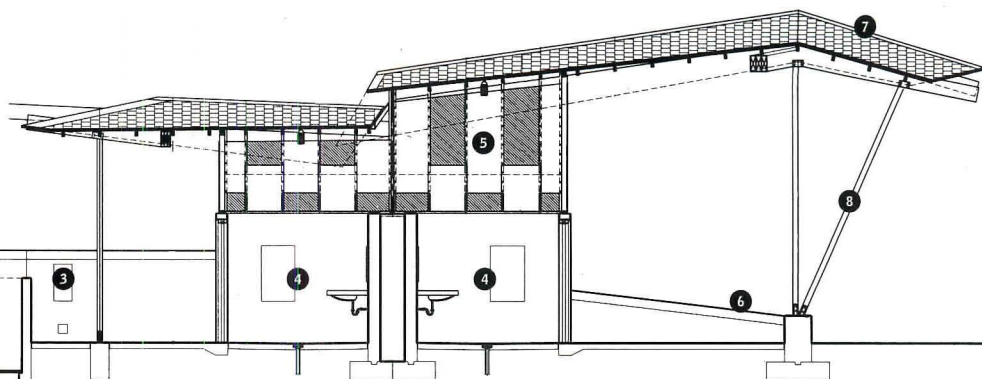
Spry cedar-framed, asphalt-shingled roof shelters concrete-clad rest rooms, cedar benches, drinking fountains, and public telephone. Overlapping translucent polycarbonate panels allow privacy, daylighting, and ventilation. Park sits on land reclaimed from industrial uses; storage tanks (background) will soon be demolished to make way for second phase of park expansion.

- ① electrical and irrigation systems
- ② transformer vault
- ③ public telephone
- ④ bathroom
- ⑤ vented clerestory
- ⑥ concrete retaining and seating wall
- ⑦ asphalt-shingled roof
- ⑧ cedar trusses



Typical section

5/1.5m



Shelters' structural expression echoes Louisville's many steel bridges (below) that span Ohio River. Partially sunken maintenance access panels (foreground) serve electrical and irrigation needs of entire park. Curving, sloping roof gymnastics (facing page) evoke man-made landscape of Waterfront Park's geometric earth mounds.

the high concrete walls and support the roof's center while more consciously contorted trusses extend from the ground to reach each end. The clearly expressed connections are generic bolted wood construction, with only minor modifications that allow Bravura's deliberately skewed geometries. A simple 2-by-4-foot wood stud wall clad in translucent polycarbonate panels bridges the gap between the orthogonal concrete structure of the toilet rooms and the underside of the pitched roof. Attached in an alternating pattern to the interior and exterior of the wood framing, the panels admit light to the interior spaces and create gaps for natural ventilation.

Louisville's newest park and its amenities suggest a civic interest in more contemporary design. "They definitely went with the most aggressive design," says Bravura Design Principal James Walters, describing the deliberations of the city fathers who backed Waterfront Park. But while Bravura's forms and materials clearly reflect a certain fin de siècle angst currently popular in architectural circles, these little pavilions also display a keen wit inherent to park follies—structures meant as much to delight as to serve.



**LINEAR PARK VISITOR SERVICE CENTERS
LOUISVILLE, KENTUCKY**

CLIENT: Louisville Waterfront Development Corporation **ARCHITECT:** Bravura, Louisville, Kentucky—James J. Walters (principal-in-charge), Roberto C. De Leon (project architect), Joseph J. Daley, Daniel S. DeYoung (project managers), Timothy T. Brown (project team) **LANDSCAPE ARCHITECT:** Hargreaves Associates **ENGINEER:** HNTB (structural, mechanical, electrical) **CONSULTANT:** Leonard Smith & Associates (cost estimating) **GENERAL CONTRACTOR:** MAC Construction **COST:** \$240,000 **PHOTOGRAPHER:** Justin Maconochie, Hedrich Blessing



FLORA FAUNA

THE U.S. FISH & WILDLIFE
SERVICE UPDATES
THE RURAL VERNACULAR IN
THEIR NEW TRAINING
CENTER. BY VERNON MAYS

Somewhere in the gap between prosaic and poetic—where the rural vernacular cross-pollinates with urban sophistication—lies the esthetic origin of the U.S. Fish & Wildlife Service's new National Conservation Training Center in Shepherdstown, West Virginia. Part barn, part laboratory, part office building, part hunting lodge, the 400,000-square-foot complex transforms an ungainly program into a refined string of buildings that fits comfortably in its agrarian setting.

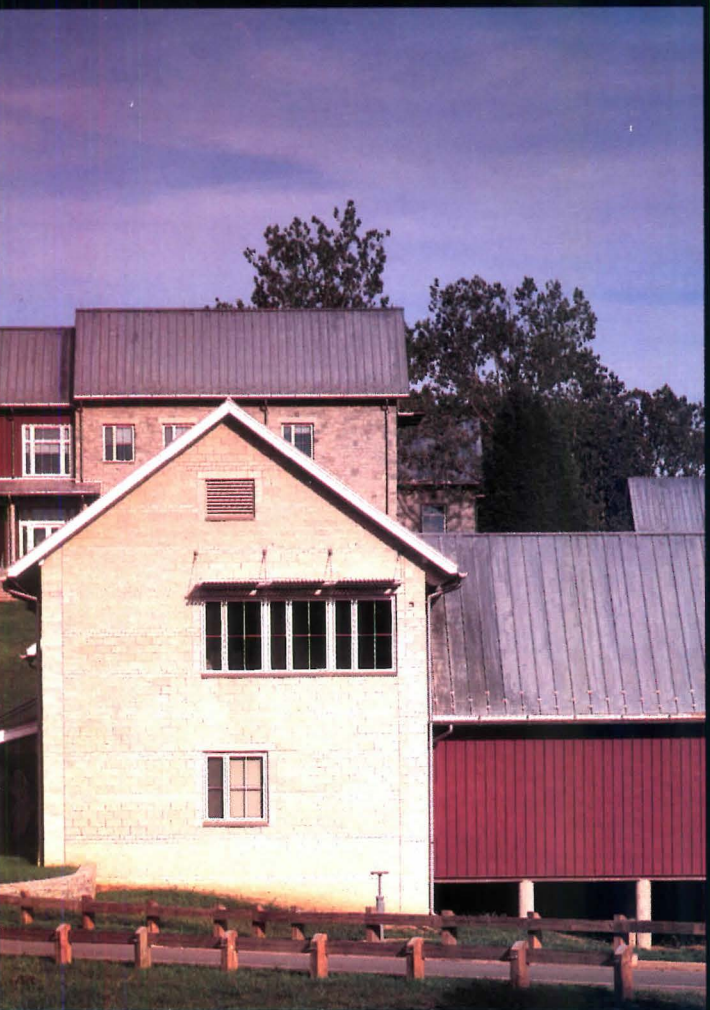
From the start, Fish & Wildlife officials stated their desire for a retreat that would be compelling but understated. "They instructed us to create a campus that was not in any sense a landmark" says Maynard M. Ball, principal of KCF/SHG of Washington, D.C., the architect who designed the \$84 million complex of buildings and planned the 540-acre site.

To familiarize themselves with local building tradition, the architects first analyzed the components of the adjacent Hendrix Farm,



KCF/SHG divided 400,000-square-foot program into smaller volumes, allowing training center to rest lightly on the landscape. Buildings' fundamental forms, proportions, and textures stemmed from study of region's vernacular buildings.





which includes an 18th-century stone residence, an assortment of barns, a smokehouse, and an ice house. Their first design followed the same genetic code—small connected pieces in a fractured composition dotted with silos intended to serve as landmarks. The clients were not impressed by the farmyard idiom. According to Ball: “They responded by saying, ‘We are not the Department of Agriculture; why are you showing us barns?’”

The designers shifted direction. Building masses got simpler. The silos disappeared. And a preference for wooden structures gave way to considerations of permanence and low maintenance, resulting in a palette of exterior materials consisting of steel, Pennsylvania fieldstone, and split-face concrete block.

Relationships among the buildings are harmonic; they merge effortlessly with the landscape. Yet somehow they steer clear of rural cliché, embodying instead a keenness, control, and hard-edged refinement that betrays the design team’s urban mentality. This sensibility emerges in crisp railing details, galvanized steel sunshades, contemporary light

1

Preformed steel cladding on day-care center (left) is painted red to evoke nearby farms. Galvanized steel sunshades provide extra sun protection for group activity rooms.

fixtures, and an exactly assembled steel bridge that spans 300 feet across a deep ravine.

Fish & Wildlife commissioned the project to fill a void in its training and education programs, which support 700 field offices across the country involved in biological research, migratory management, environmental law enforcement, fishery systems development, and wetland and endangered species protection. “If you were a refuge manager out in Minnesota, you only knew a very small number of people in the Fish & Wildlife Service whose work was related to yours,” says Ball. “This campus makes a place where all these people can come together and teach each other.”

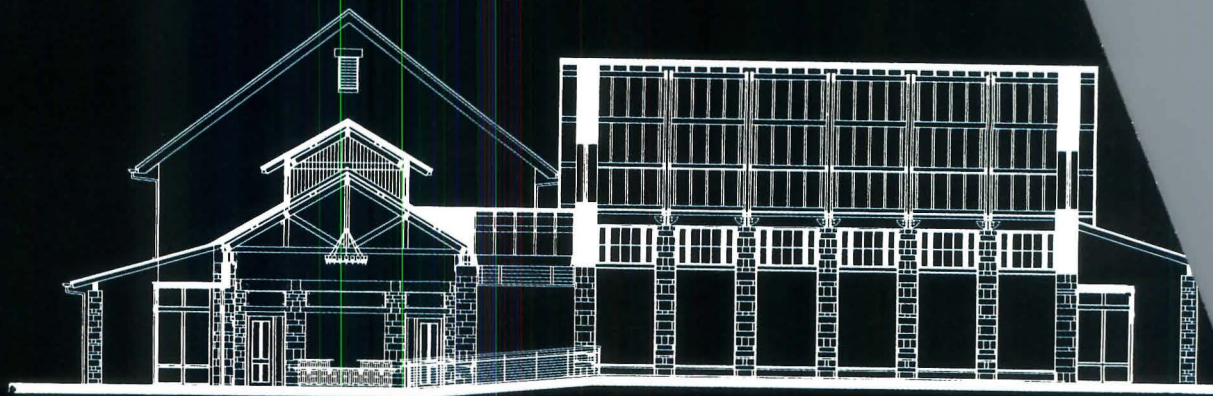
After examining a score of rural parcels in the West Virginia panhandle within striking distance of Washington, D.C., KCF/SHG recommended the Shepherdstown site, which rises high above the banks of the Potomac River. The historic farmstead’s owner was eager to find an unintrusive use for the land and had spurned offers from developers with a mind to build suburban housing. And the architects were immediately struck by the pastoral meadows and rare stand of second-growth timber on the site.

They took pains to preserve that beauty by placing the buildings below knolls, amid trees, and away from sensitive view corridors. One particular concern was keeping the complex hidden from the nearby C&O Canal Trail, a popular riverside route for hiking and biking. To test the buildings’ visibility and scale, a dozen KCF/SHG staff tethered balloons at various heights on the site to get a better sense of the structures’ optimum sizes.



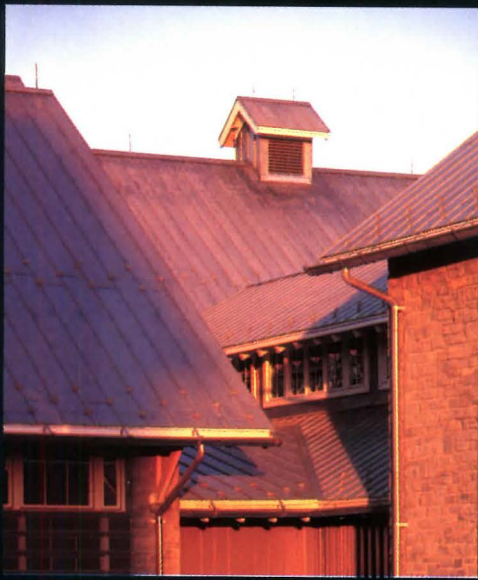
2

Clustered buildings preserve natural environment; distance of parking lots from complex saves trees and enhances pedestrian experience. Aerial view (above) shows location of education buildings (1), one of three residential lodges (2), auditorium (3), and west instructional building (4). Located 100 yards out of view to right is dining commons and physical training facility (5). Green-painted metal panels of Aldo Leopold Lodge residence (left) uses palette of other complex buildings sited in forest.



North-south section through museum and lobby

15'/4.5m



3

Range of materials used at complex is revealed in auditorium building: terne-coated stainless steel roofs; steel; concrete block; Pennsylvania fieldstone; and clerestory glass (above). Museum wing's patterning (foreground) recalls corn cribs. Auditorium (above right) seats 250 with classroom-style seating in front and theater-style seating in rear. Steel truss in proscenium bears on stone; acoustic wall panels are trimmed in quarter-sawn red oak.

"The exercise helped us understand how massive or diminutive they might be," says KCF/SHG Principal Mark Maves.

The architects organized the campus, which was completed last fall, as a series of indoor-outdoor spaces along a serpentine path through open meadows, dense groves of trees, and across the steel bridge. Major program elements are scattered through 14 buildings in four discrete groupings. One cluster houses instruction and training functions; another is composed of residential buildings; a third accommodates social and dining functions; the fourth houses outreach programs and print, video, and state-of-the-art digital production facilities.

Visitors arrive at a central building that houses the registration area, a 250-seat auditorium, and a one-room museum that



interprets the service's history. Lodging is contained in three 50-room dormitories, with land set aside for 100 more rooms as money becomes available. The center's social life converges on the Commons, which features an impressive dining room with soaring wood trusses and a lobby reminiscent of the great National Park lodges of the American West. Because training sessions can span as long as two weeks, the complex also includes a day-care center at its far western edge so parents can bring small children along when they come to the complex for training.

"We wanted a place that would lower stress and make people comfortable enough to share ideas," says Rick Lemon, director of the center. For that reason, KCF/SHG strived to give the buildings a residential scale where appropriate. Details and finishes such as small-paned,

windows, oak-veneer wall panels, Mission-style furniture, and a lattice ceiling give a quaint feel to the lounges in the residential buildings and seating areas in the educational buildings.

The importance of energy and ecology to the Fish & Wildlife Service heightened the design team's sensitivities to those issues without sending them overboard. "We wanted to be cutting edge, not bleeding edge," says Lemon. Energy that might have been expended through on-site building-component production and fabrication, for example, was minimized by specifying factory finishes. Materials selection was just as deliberate: Insulation is made of recovered materials; resilient flooring from recycled tires is used in high-impact and physical training areas; and drywall is high in recycled gypsum content. Woods, low-impact fabrics, and finishes were all selected for

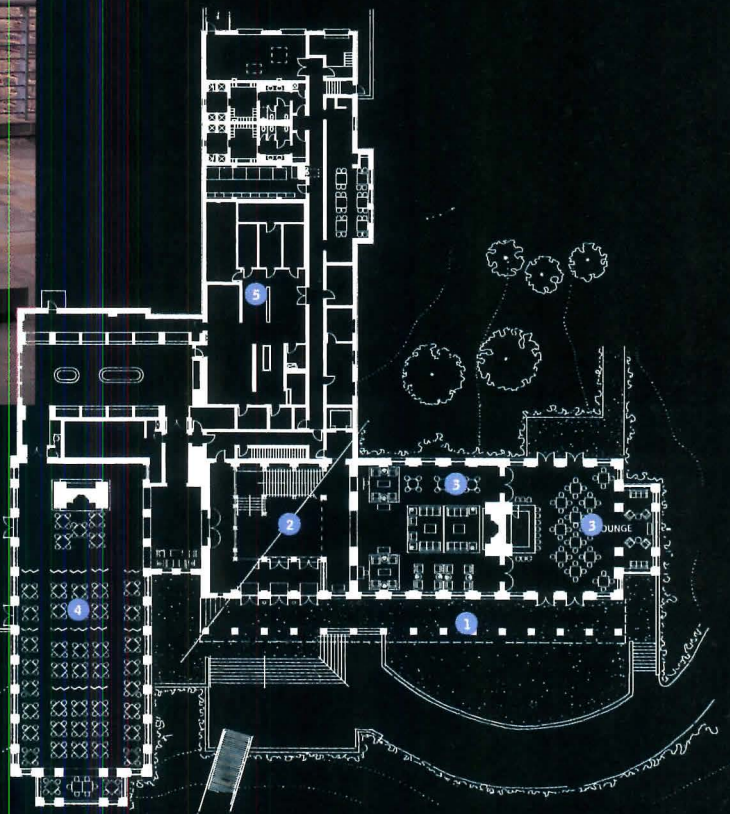
4

West instructional building (above) sits along east-west knoll. Southern exposure takes advantage of solar heat and daylight gain.

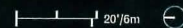


**NATIONAL CONSERVATION TRAINING CENTER
SHEPHERDSTOWN, WEST VIRGINIA**

CLIENTS: United States Fish and Wildlife Service; United States Department of the Interior **ARCHITECT:** KCF/SHG, Washington, D.C.—David R. H. King (design principal), Mark J. Maves (managing principal), Tam Nguyen (production principal), Maynard Ball (project designer), Jim Blount (project manager), Melanie Berkemeyer, Steve Cole, Glen Dasher, Lynn Field-Helmrich, Eddie Garcia, Ralph Giammatteo, Brian Harner, Lowell Hawkins, Roger Huff, Kevin Kay, Donna McIntire Kessler, Luther Miller, Krista Minotti, Ethan Nelson, Matt Oudens, Andy Singletary, North Sturtevant, Debbie Yin (project team), Toni Ayres, Cheryl Brown, Mary Lee Schott (interiors project team) **LANDSCAPE ARCHITECT:** Oehme, Van Sweden & Associates **ENGINEERS:** James Madison Cutts (structural); Altieri Sebor Weibor (mechanical, electrical, plumbing); Greenhorne and O'Mara (civil, environmental) **CONSULTANTS:** H. M. Brandston & Partners (lighting); Acentech (acoustics); Earl Walls Associates (laboratories); Gage-Babcock & Associates (security); Heller & Metzger (specifications); Lyons/Zaremba (exhibits) **GENERAL CONTRACTOR:** Centex Construction Company **COST:** \$131 million **PHOTOGRAPHER:** Prakash Patel



First- and second-floor plan



- 1 terrace
- 2 lobby
- 3 lounge
- 4 dining room
- 5 kitchen



5

Limestone terrace spreads across front of dining commons (above), where trainees eat and socialize. Steel bridge measuring 300 feet long has projecting conversation areas at regular intervals and links dining commons with instructional campus (facing page, left). Southern yellow pine glulam trusses capped with metal ravens and eagles support roof in commons lobby; cutouts in stair rail resemble salmon (facing page, right).

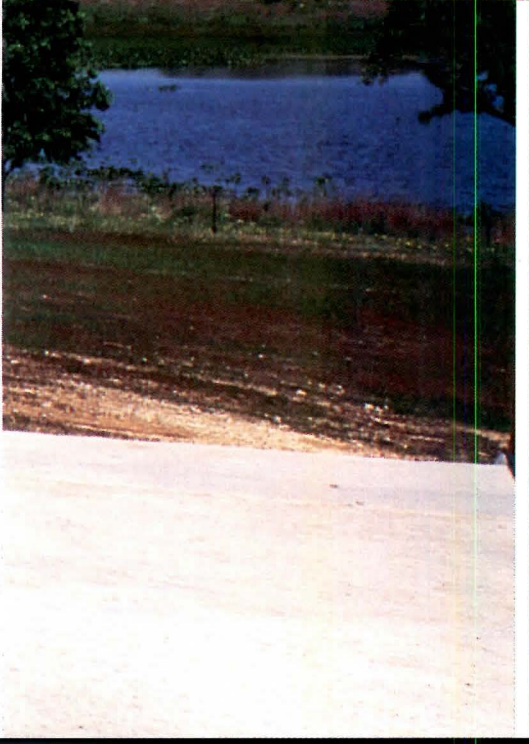
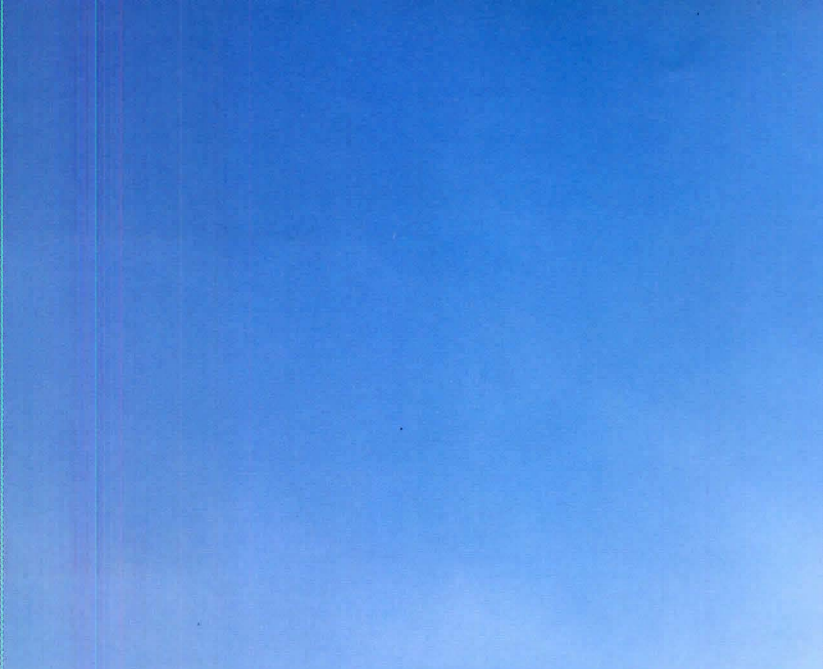
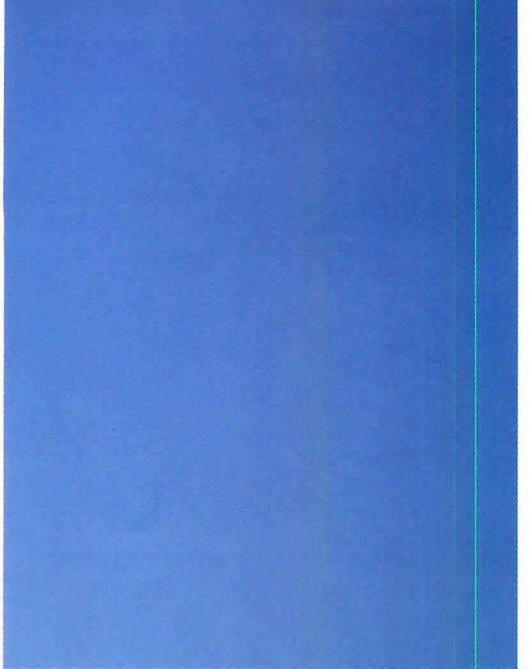
reduced off-gassing. And 75 percent of the steel used on the building envelope is recycled.

Structural designs for the buildings vary in an attempt to use the least complicated construction system for the size of the building, says KCF/SHG's Maves. Concrete-block bearing wall systems are most common, but long spans and specialized modular flooring in the lab building required steel framing. Residential buildings are stick built and the entrance building and commons feature massive timber frames in their roof systems.

One could quibble about the subpar landscaping (a budget-driven substitute for what the landscape architect proposed), the incongruous use of asphalt walks that snake through a grove of mature sycamores, and a physical plant that seems excessively large for its level of use. But such complaints in no

way diminish what is overwhelmingly intelligent architecture and a sensitive plan.

Most important, the National Conservation Training Center is showing early signs of helping the Fish & Wildlife Service accomplish the lofty goals it set out to achieve when this facility was first imagined. Using the center as a meeting place, Director Lemon has waged an aggressive campaign to bring government conservation groups together with private-industry executives and environmental groups. "That can be fairly contentious—getting those people together to talk about environmental issues," says Lemon. "But because we are always giving advice to others about treading lightly on the landscape, we wanted to be sure to do that ourselves." That they did, creating a conservation-minded center that embodies the same values it endeavors to teach.



LAWRENCE SPECK UPDATES REGIONAL REFERENCES IN A TEXAS
RETREAT CENTER AND HUNTING LODGE. BY SARAH AMELAR

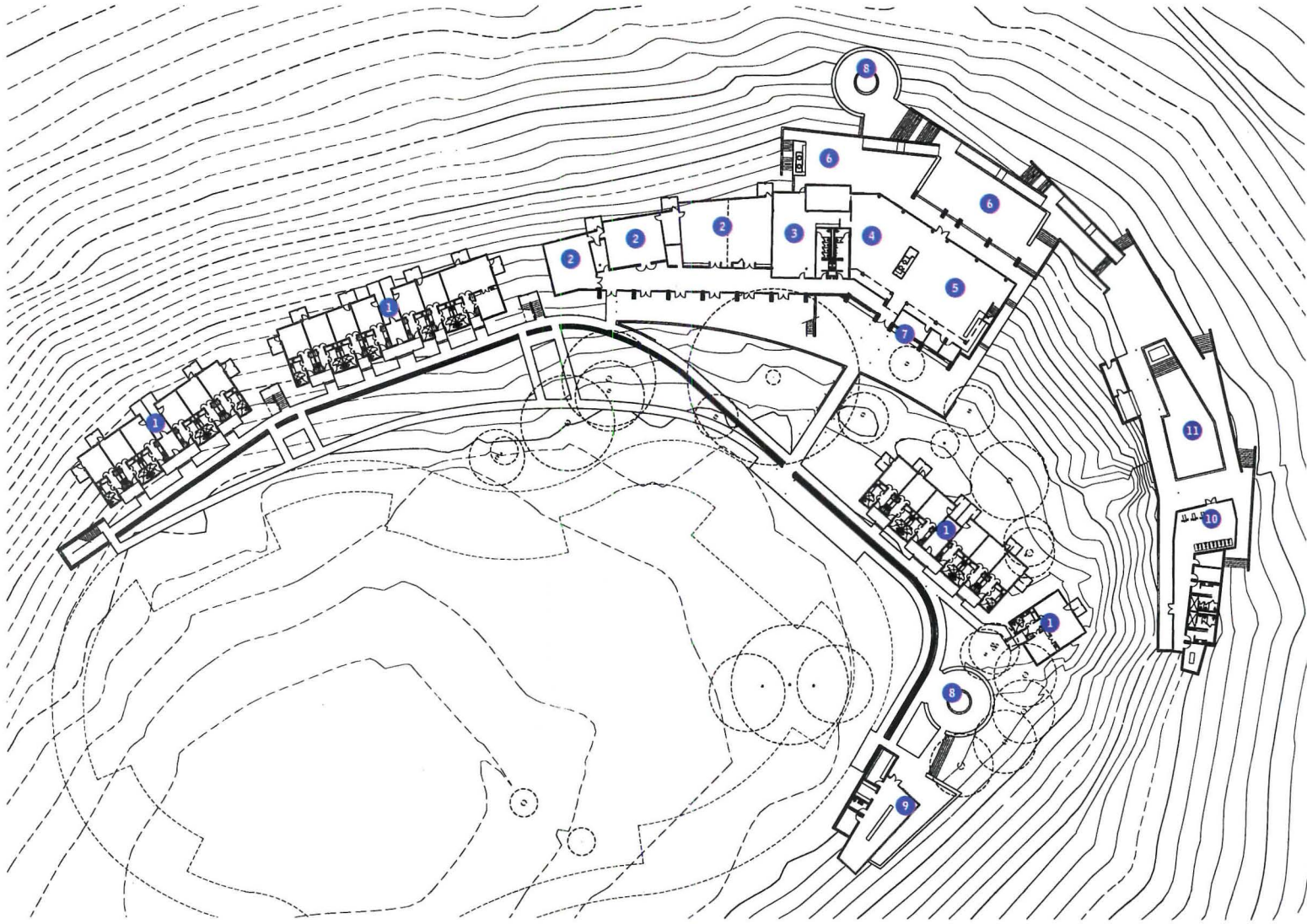
LONE STAR LODGE



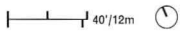
Rough Creek Lodge in Chalk Mountain, Texas, is a \$10.9 million hunting lodge—hardly the setting for ramshackle pickup trucks with rifles slung across the back windows. The 3,000-acre ranch is better-suited to gentlemen hunters and corporate executives who can touch down at Rough Creek's on-site helipad. Yet it's an unpretentious place, inspired by the gentle hills and meadows that surround it, by native materials, and the vernacular of Central Texas.

As you drive the 4-mile stretch from Rough Creek's entrance gate to the lodge—on a road crossed by an occasional armadillo and bordered by grazing cattle—a knoll with seven buildings rises into view. From a distance, these structures seem farmlike: Low-lying and embracing the landscape, they cluster around one dominant, taller structure—the lodge itself. Ascending the knoll and looping behind the buildings, the road leads to a parking court dotted with gnarly live oak trees and rimmed by a curved, 650-foot long, split-faced limestone wall. Architect Lawrence Speck carefully wove this freestanding wall and the 44,000 square feet of low buildings behind it through an

Views to south reveal complex's low-lying horizontality. Barnlike lodge (far left) has bowed aluminum-alloy standing-seam roof, window walls, and veranda, and extends (from left to right) into meeting rooms and suites. Reminiscent of motels, wood-framed guest quarters (above) feature small balconies, and are clad in cedar clapboard.



Site plan



- 1 guest rooms
- 2 conference room
- 3 kitchen
- 4 dining room
- 5 living room
- 6 porch
- 7 office
- 8 fire pit
- 9 gun room
- 10 spa
- 11 pool

existing grove of mature oaks. The masonry arc separates the arrival court from the buildings and teasingly denies visitors a view back over the entrance road.

The panorama is rediscovered gradually: Speck sited Rough Creek Lodge to frame idyllic views. From the arrival court, a long canopy—a series of galvanized standing-seam roofs supported by timber columns and trusses—penetrates the wall. Here visitors get only small glimpses of the view that unfolds as they enter the lodge’s great living-and-dining room, with its central limestone fireplace and 32-foot-high king-vaulted ceiling. From the lodge, north-facing views sweep down the hill across a lake and wildflower-speckled fields.

The northward orientation of the complex shields its interiors from harsh Texan sun and takes advantage of prevailing breezes. “Solar orientation is different here,” explains Speck. “Most of the time we try to keep the damn sun out.” The deep overhang of the lodge’s roof creates two long, shaded porches. In the winter, the southern porch is more desirable because it faces the sun and is protected from southerly winds. In other seasons, the northern veranda, with rocking chairs and lazy fans is preferable, extending the dining room into the open air.

A path following the curving wall’s northern convex face leads from the lodge to two linear buildings to the west that house many of the complex’s 39 guest rooms. Between the rough-textured limestone wall and the clapboard buildings, the path enters a deep chasmlike zone beneath cedar-planked steel catwalks that connect second-story guest rooms. While the plain exteriors of these linear buildings are reminiscent of motels, the spacious interiors—with high ceilings and huge pine-mullioned windows—focus spectacularly on the natural setting. Though a balcony extends from each room, the buildings’ siting along the wall’s curve tends to obscure views from one balcony to another. Against the dominant landscape, the balcony’s rails of taut steel cable practically disappear. Similarly, the spa building and pool, set further downhill within the terrain’s terraced contours, are barely visible from the guest rooms or lodge.

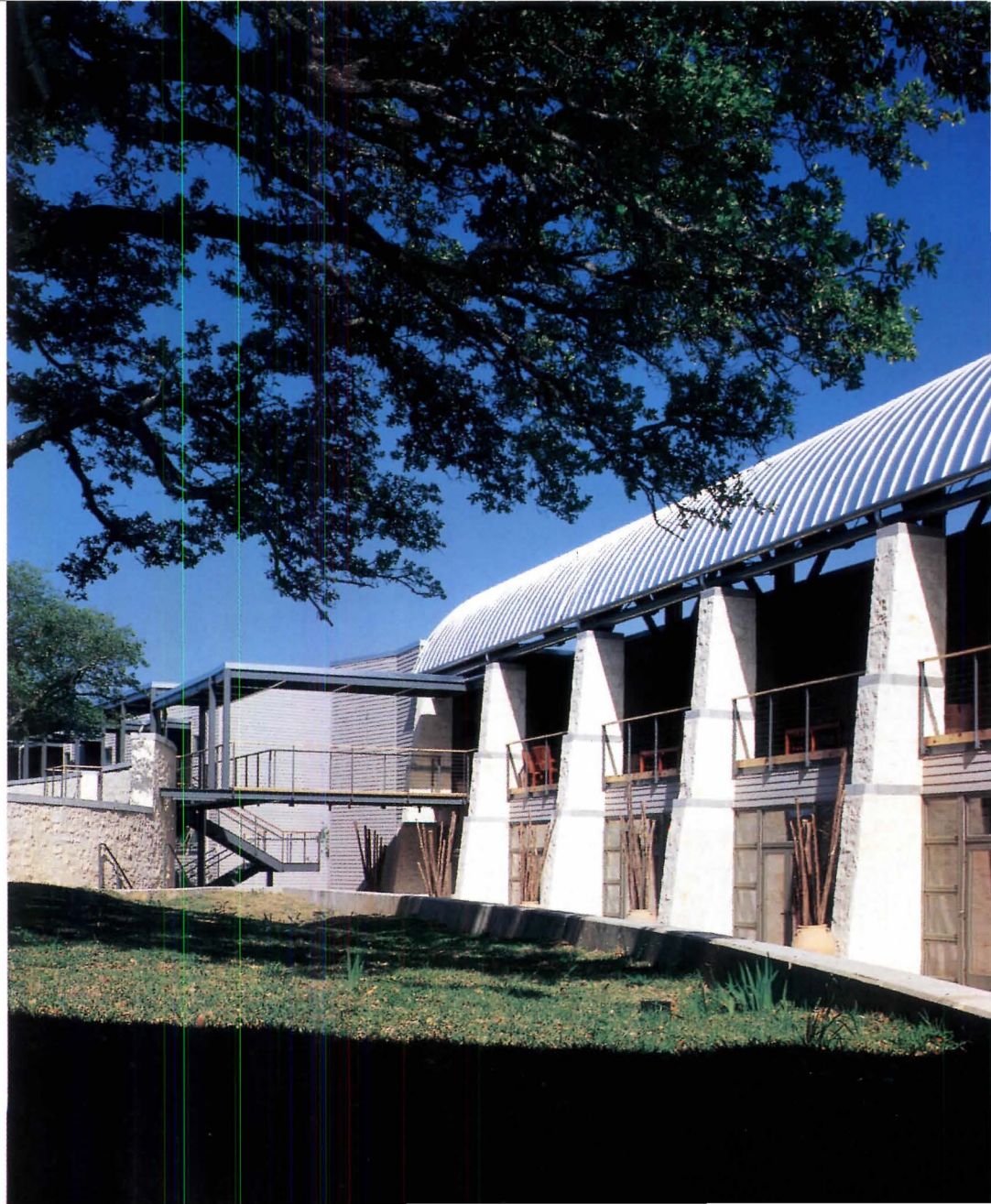
Views back toward the main buildings reveal a subtle natural palette—pale Cordova cream limestone, tawny gray clapboard, umber pine columns, and

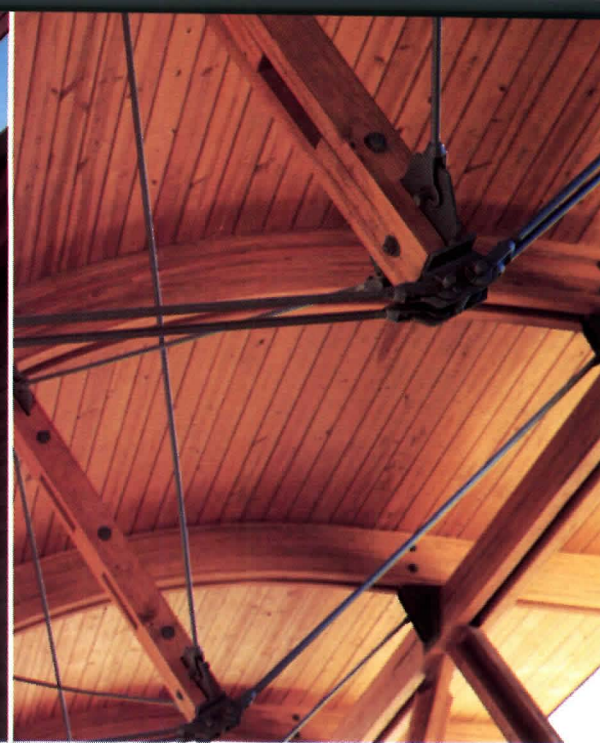
Rough-textured limestone wall (facing page, left) contrasts with such modern details as steel-cable guard rails and catwalks (facing page, right). Retreat center carefully weaves through existing grove of live oak trees (below left). Fire pit (below) provides informal outdoor space. Simple three-room villa (background) provides deluxe hunting accommodations.





SPECK'S REGIONALISM IS NOT PASTICHE, BUT A HARMONIOUS MIX OF MODERN AND TRADITIONAL FORMS AND MATERIALS, APPLIED WITH A CONSISTENT SENSIBILITY.





ROUGH CREEK LODGE
CHALK MOUNTAIN, TEXAS

CLIENT: J.Q. Enterprises **ARCHITECT:** Lawrence W. Speck Studio, Page Southerland Page, Austin, Texas, and Dallas—Lawrence W. Speck (project designer), Mattia Flabiano, Matt Kreisle (project principals), Tom Cestarte (project manager), Gwen Jewiss (project architect), David Boren, Tim Cuppett, Bob May (project team)

LANDSCAPE ARCHITECT: Site Planning Site Development **ENGINEERS:** Jaster-Quintanilla & Associates (structural); Childress Engineers (civil) **CONSULTANTS:**

Craig Roberts Associates (lighting); Vivian Nichols Associates (interiors); Armstrong Berger (pool) **GENERAL CONTRACTOR:**

Thomas S. Byrne, Inc. **COST:** \$10.9 million

PHOTOGRAPHER: Greg Hursley

silvery aluminum-alloy roofing—that complements the dry terrain. Though Rough Creek Lodge was only completed in January, it is firmly rooted in its surroundings through indigenous materials and references to Central Texas's architectural vernacular. While catwalks and bowed roofs are not typical of the region's barns, standing-seam metal roofing, timber trusses and columns, heavy limestone walls, and low, farmlike massing clearly evoke local tradition.

The complex's distinctive regional temperament is distilled from the heritage of its place as well as its architect. A fifth-generation Texan, Speck confesses a "deep affection" for this land and its rural architecture. (Though he left Texas to study architecture at the Massachusetts Institute of Technology, he was eager to return and is now the dean of the school of architecture at the University of Texas at Austin.) Speck, who's almost entirely German-American, points out that the vernacular's simple, clean-lined stone buildings owe much to mid-19th-century waves of German immigrants. The extraordinary wealth of native limestone was also a significant factor. Between Austin and Chalk Mountain (150 miles north of Austin), pale yellowish-white stone abounds. In textures ranging from smooth, creamy ashlar to bricklike rubble, this solid, enduring material shapes nearly everything from town halls to gas stations.

At Rough Creek, Speck evokes this vernacular abstractly, with a Modernist's sense of steel detailing and pure tectonics. He reinterprets the timber tree columns of Texan barns as highly articulated composite members, bound with steel straps, plates, and bolts. And while most standing-seam roofs in the region are pitched, Speck intends his bowed variation to echo the hills (though, arguably, the roof blends more with the natural setting through color than form).

Rough Creek's regionalism is not pastiche—but a harmonious mix of modern and long-standing forms and materials, applied with a consistently straightforward sensibility. Ironically, it's an architecture that lets the landscape run free around it—while tightly controlling its visitors' approach to the grand panoramas. "In the end," remarks the architect, "it's about making the landscape stronger because the building is there, making the shape of the land, the horizon, the stars, and the big sky somehow seem more intense."

South veranda (facing page) features deep roof overhang and protection from prevailing southerly winds. Split-faced limestone walls cast dramatic shadows in strong Texan sunlight. Massive two-sided limestone fireplace (top left) separates living and dining areas of great lodge. Pine composite tree columns (top center) support veranda roof. Bowed king trusses (top right) combine rustic pine timbers with modern steel tension technology.

San Jose, California, has put a lot of muscle into pumping up its decaying downtown. The city's redevelopment agency has revived antique trolley lines, introduced high-density housing, and built museums and theaters in the center of town. Yet the remedies don't seem to be infusing new life into the city center, and downtown San Jose remains by and large a lifeless, desolate district filled with a mishmash of building types and styles.

At the western edge of this ad hoc fabric, the Guadalupe River snakes along an elevated freeway through a 2½-mile-long ribbon of park. The park is part of a pragmatic flood-control project to widen the river, which the city is trying to embellish with winding trails and public plazas. The gateway to the odd drainage ditch-cum-park is a combination visitor center and ranger station designed by Jones, Partners: Architecture, Wes Jones's spin-off of the former San Francisco firm Holt Hinshaw Pfau Jones.

The hard-nosed, little steel-and-stucco building sits on a triangular sliver known as Confluence Point,

A VISITOR CENTER BY JONES, PARTNERS: ARCHITECTURE MARKS A STRANGE WAY TO SAN JOSE. BY RAUL A. BARRENECHE

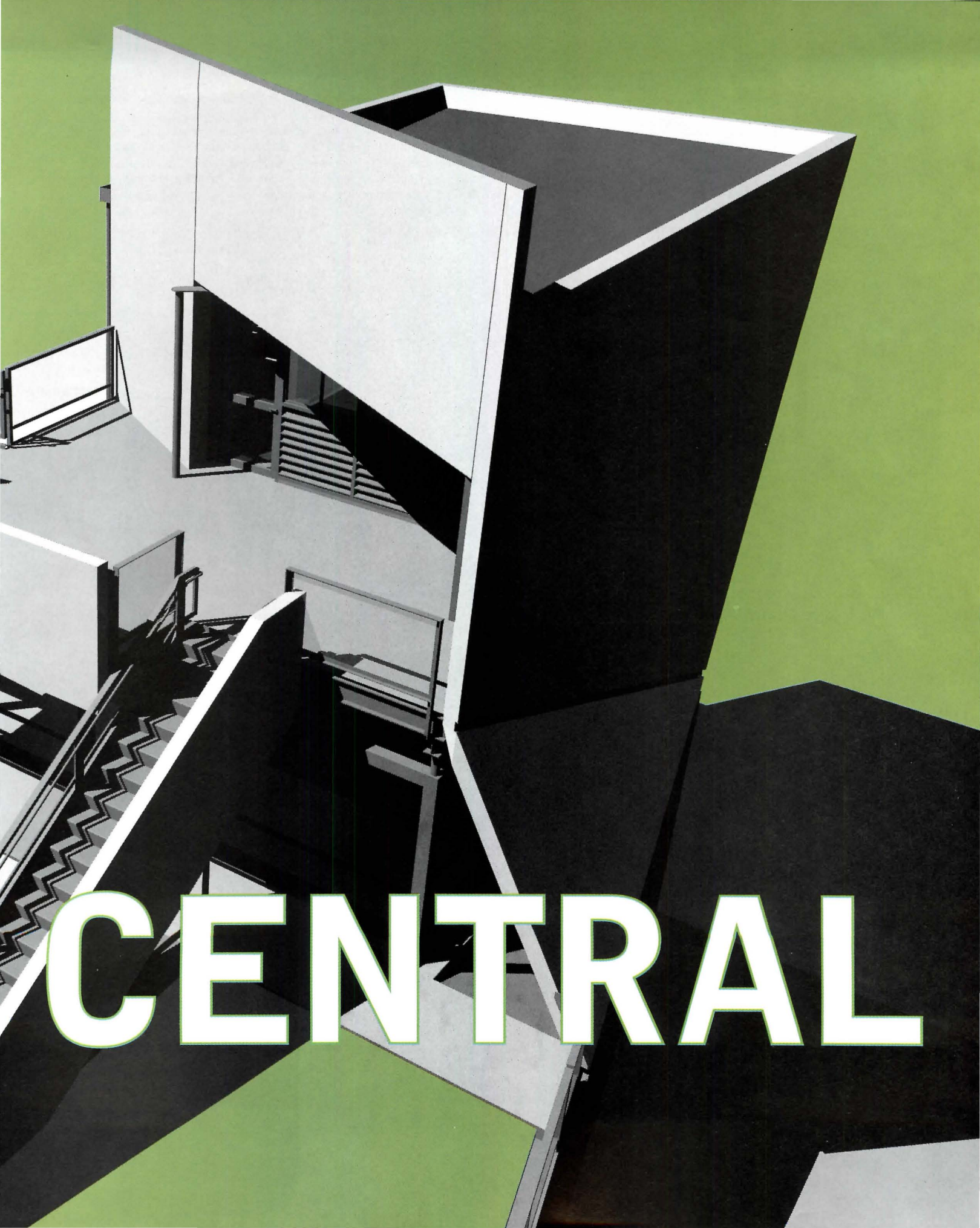
situated between the Guadalupe River to the east and the narrower Los Gatos Creek to the west. This portion of the park is a strange, interstitial zone of trees and brush pinned between the freeway and the parking lot of the San Jose Arena to the west.

On the ground floor of the two-story structure are a pair of public rest rooms hidden behind large steel

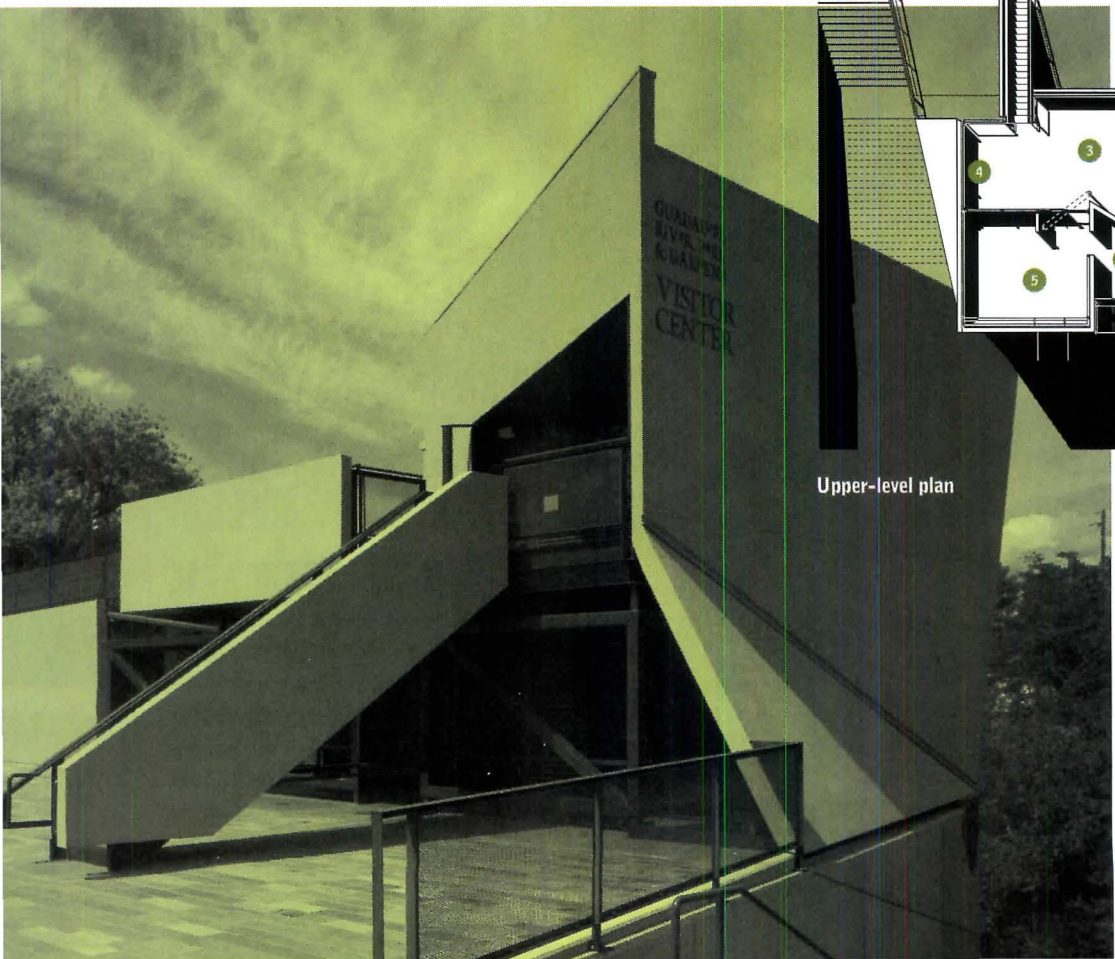
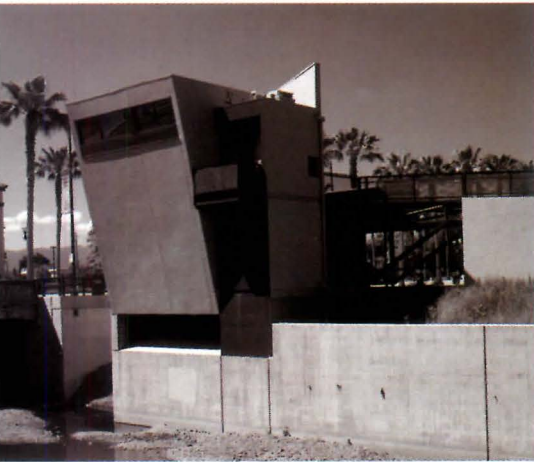
Prefabricated, preweathered steel trusses support angular ramp and stair that connect two-story visitor center and ranger station with park below.

PARK



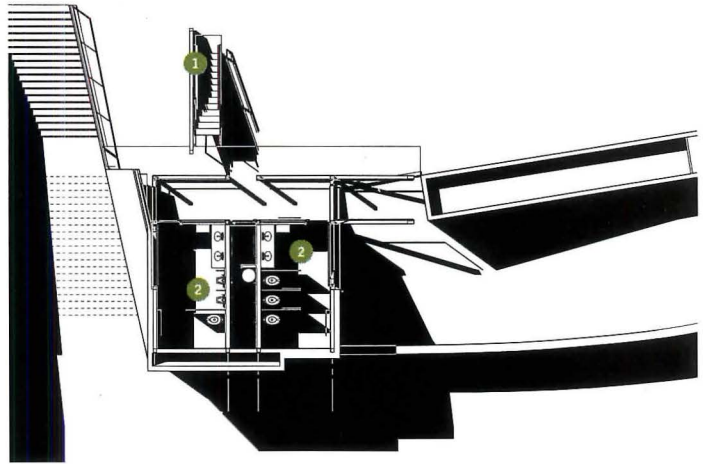


CENTRAL



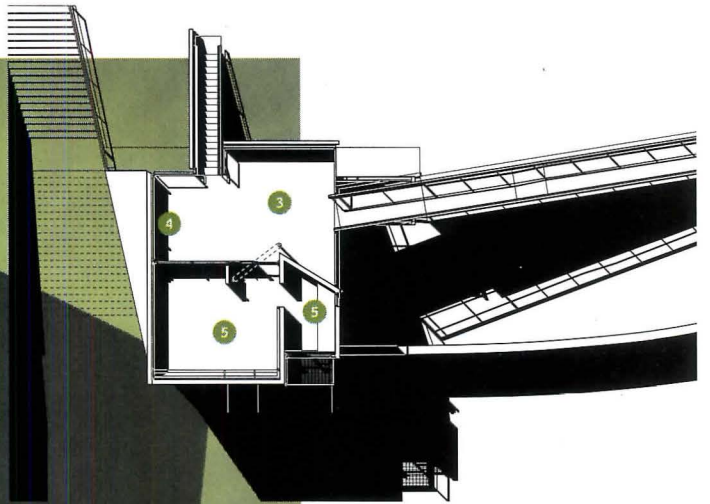
**GUADALUPE RIVER PARK AND VISITOR CENTER
SAN JOSE, CALIFORNIA**

CLIENT: The Redevelopment Agency of the City of San Jose **ARCHITECT:** Jones, Partners: Architecture, El Segundo, California—Wes Jones (partner-in-charge), Doug Jackson (project architect), Hendra Bong, Rich Curl, Michael Gough, Paul Holt, Bob Shepherd, Robert Yue (project team) **LANDSCAPE ARCHITECT:** Hargreaves Associates **ENGINEERS:** AN West (structural); G.M. Lim and Associates (mechanical); **GENERAL CONTRACTORS:** B&B Construction; Garden City Construction **COST:** \$400,000 **PHOTOGRAPHER:** Erich Ansel Koyama



Ground-floor plan

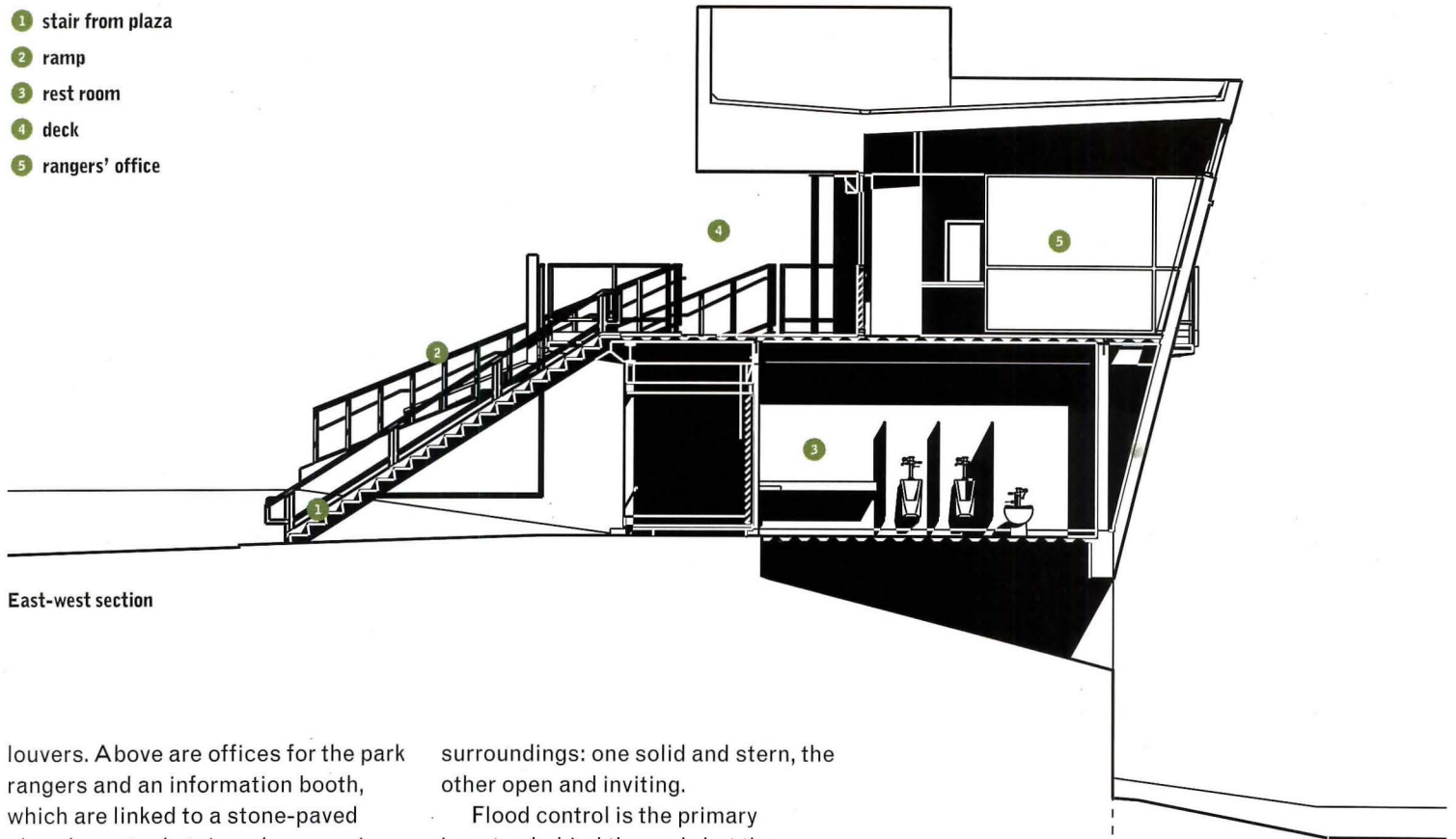
15'/4.5m



Upper-level plan

- 1 plaza
- 2 rest room
- 3 deck
- 4 information board
- 5 rangers' office

- 1 stair from plaza
- 2 ramp
- 3 rest room
- 4 deck
- 5 rangers' office



East-west section

louvers. Above are offices for the park rangers and an information booth, which are linked to a stone-paved plaza by a steel stair and a sweeping ramp supported on preweathered steel trusses. For such a small building, the pavilion contains a hefty amount of structure. "There's enough steel in the building to hold up a freeway and enough concrete to make a bomb shelter," laughs Jones. The architect suggests that the engineer's forte in highway construction explains the building's big bones, but Jones's aggressive industrial esthetic seems a more likely culprit.

The tough little sentinel seems to shift restlessly, as if it is uncomfortable sitting on its parkside perch. Its stuccoed walls cant and fold to tilt the ranger's office over the river, while peeling away on the plaza side to reveal the steel armature beneath. As a result of its contradictory program of surveillance post and welcome center, the building turns two very distinct faces to its

surroundings: one solid and stern, the other open and inviting.

Flood control is the primary impetus behind the park, but the widening of the river, which includes pouring a concrete culvert and demolishing a swath of houses to create a flood plain, has yet to begin. Once these features take shape, the building's siting might make more sense. For the moment, its position seems strange and its mass overpowers the concrete retaining wall and the tiny river below.

In the end, the building, like its surroundings, lacks a clear sense of place and purpose. It fills a site that's both urban and untamed; it feels welcoming, yet foreboding; and it's a folly with civic and surveillance functions. As an object on a tabula rasa site, the building might have held its own as a tough, thoughtful piece of architecture. But in its real context, it stands out as another quirky wrinkle in San Jose's already ignoble urban fabric.

Diminutive stucco-clad building flanks roadway connecting downtown San Jose to sports arena (facing page, top left). Long rectangular window of rangers' office overlooks retaining wall along narrow Guadalupe River (facing page, center). Stair between roadway and building will lead to pedestrian and bike path along western edge of river. West facade of building splays open to reveal steel armature (facing page, bottom). Oversized steel frame is composed of prefabricated, preweathered trusses (above right and right).





TECTONIC

SHIM-SUTCLIFFE ARCHITECTS



GARDEN

CRAFTS A SOPHISTICATED URBAN PARK IN TORONTO. BY RICHARD INGERSOLL

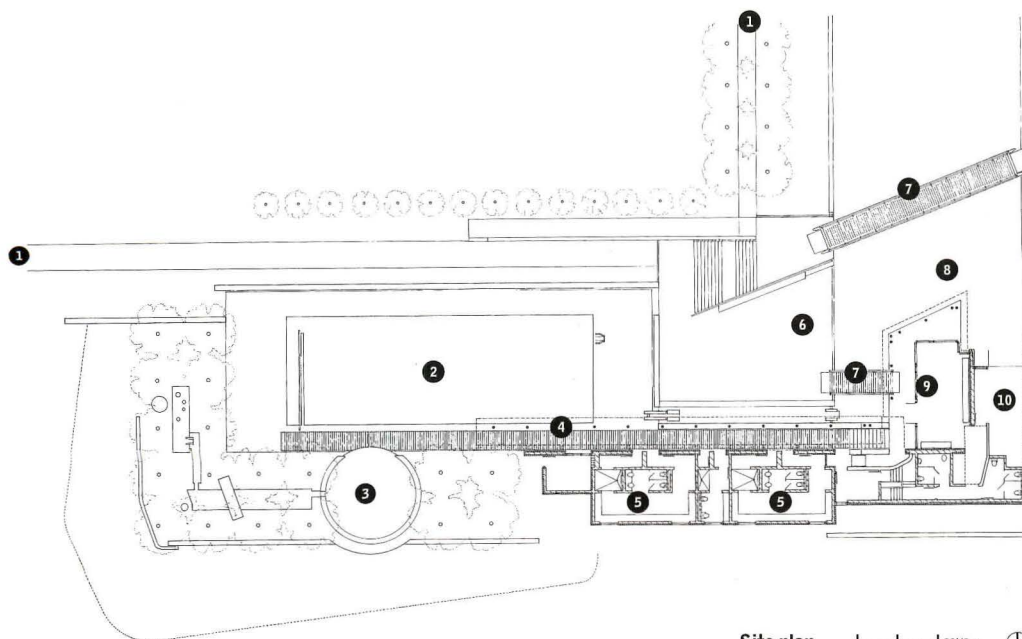


Wooden gate marks northern terminus of reflecting pool (above), framing broad vista of poolhouse. Glass pavilion anchors southern end of pool axis. Steel posts support wooden trellis over boardwalk (above right), which connects poolhouse and public swimming pool in linear promenade. Outside glass enclosure of double-height skaters' warming pavilion (facing page, right), small pedestrian bridge over reflecting pool links pair of outdoor plazas.

One of the unsolved challenges for designers in the landscape of sprawl is how to project a sense of emptiness in the middle of nowhere. Sprawl's low density propagates an open fabric, but rarely engenders a "useful emptiness," defined in the famous Taoist proverb of Lao-Tze: "...From a lump of clay one fashions a vase, the emptiness in the vase permits its usefulness..." Ledbury Park, designed by Toronto architects Brigitte Shim and Howard Sutcliffe, captures the spirit of Lao-Tze and layers it with the existential sensibility of painter Richard Diebenkorn's visual essays on the negative space found in the fields of color. Located in North York, a suburb 6 miles north of downtown Toronto, the new park replaced an existing neighborhood park. Shim and Sutcliffe's design emerged from a deep reading of the site, and like Diebenkorn, they have retrieved the potential of suburban emptiness that until now has gone unnoticed.

Inserted into the core of a superblock, the park functions as a collective backyard for the modest, postwar, single-family houses that

surround it. The park deploys an ingenious geometric system of interlocking rectangles that allows for both grand views and intimate points of rest. The program for a community swimming pool and skating pond has been infinitely enriched by treating the water elements as negative space: The smaller pool (75 by 25 feet) is raised a few feet on a brick platform perpendicular to the much larger pond (300 by 50 feet), which has been sunken a few feet below grade and surrounded by banks of earth left over from the excavation. From the park's two entrance points, one perceives architectural elements—a bridge, trellises, and a columnated porch clustered in a nodal configuration at the bend of a pathway. But the water elements can't be seen from outside the park. Visual access to these two zones unfolds as one approaches the bridge. From its gently arching crest, a long perspective north of the skating pond lined with a strict allée of braided linden trees intersects with a view west toward the swimming pool raised on its brick plinth. A preweathered steel-lined notch at the juncture of the "L" forms a small waterfall that poeti-



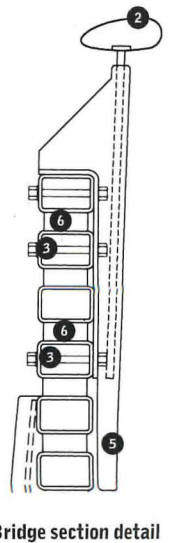
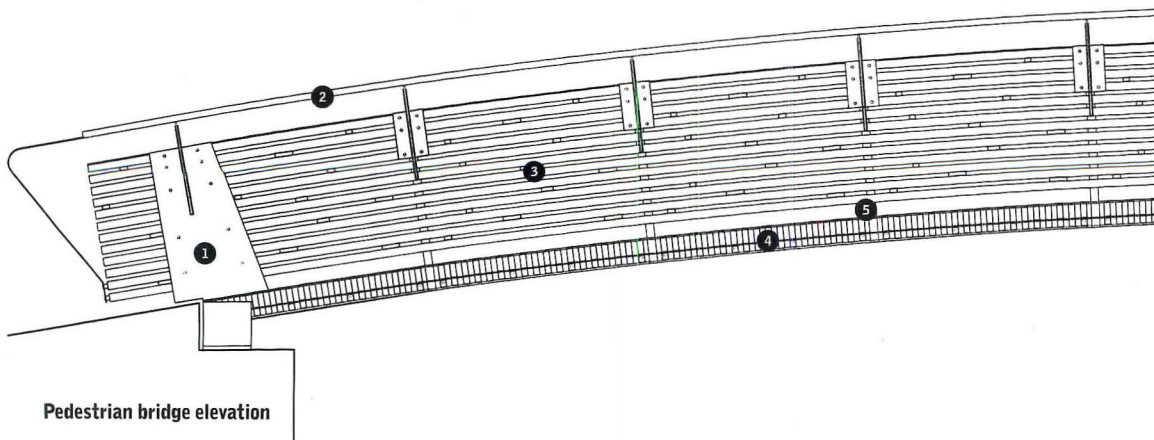
- ① pedestrian path
- ② swimming pool
- ③ wading pool
- ④ boardwalk and trellis
- ⑤ changing rooms
- ⑥ plaza
- ⑦ pedestrian bridge
- ⑧ reflecting pool
- ⑨ warming pavilion
- ⑩ maintenance

Site plan 1" = 20'/6m



Glazed warming pavilion, crowned by skewed roof on slender pilotis, projects into southern edge of reflecting pool (above). Arched, steel-and-wood pedestrian bridge spans pond. Reflecting pool (facing page, left) becomes skating rink in winter; bridge becomes viewing platform. Enclosed by brick walls with parapets, public swimming pool (facing page, right) continues east-west axis established by trellis-covered boardwalk. Surrounding concrete court echoes proportions of perpendicular void of pond.

- ① steel end plate
- ② shaped wooden handrail
- ③ steel channel
- ④ fir decking
- ⑤ steel post
- ⑥ steel block spacer



**LEDBURY PARK
TORONTO, ONTARIO**

CLIENTS: City of Toronto Parks and Recreation Department—Derek Nicholson (manager of design services) **ARCHITECT:** Shim-Sutcliffe Architects, Toronto, Ontario—Brigitte Shim, Howard Sutcliffe (partners-in-charge), Andrew Chatham, Donald Chong, Robert Ng (design team) **ARCHITECT OF RECORD:** G + G Partnership, Toronto, Ontario—Girish Ghatalia, John Greenan (partners-in-charge), Bob Goyeche, Vlad Pavliuc (project architects) **LANDSCAPE ARCHITECT:** NAK Design **ENGINEERS:** Banerjee Anderson and Associates (structural); Rybka Smith Ginsler (mechanical, electrical) **CONSULTANTS:** Lumca (lighting); Margaret Priest (color); Dan Euser Waterarchitecture; Tremonte Fabricating (fountain); Hanscomb Associates (cost estimating); Eagle Bridge (bridge) **GENERAL CONTRACTOR:** Carosi Construction **COST:** \$3.67 million **PHOTOGRAPHY:** James Dow, except as noted



cally unites the two bodies of water. "We structured the park in three layers: a top layer of trees, a bottom layer of water, and pathways in between," explains Principal Brigitte Shim.

Shim and Sutcliffe's formal decisions confirm that good design comes from creative analysis. The bend in the pathway results from a right-of-way that the architects used to tie together visual and pedestrian access to the site. At the western end of the bridge, the skating and swimming programs overlap. The elevated swimming area derives from a code that requires public pools to be surrounded by 8-foot-high enclosures to protect against drowning accidents: A brick-clad wall rises 5 feet to the deck level and continues with a 3-foot-tall parapet, fulfilling the height requirement without obstructing views from the terrace to the lower pond. This elegant solution is close to Diebenkorn's isolation of suburban voids: The emptiness of the patio is set off by its L-shaped enclosure, from which one can observe the larger emptiness of the L-shaped park. The line of deciduous trees on the western flank of the skating pond serves as a transparent barrier between the adjacent elementary school's rowdy playground and the park's quiet emptiness. The sloping depressions around the pond provide a natural amphitheater.

Not everything in the design of Ledbury Park can be explained in terms of functionality: In particular, the costly preweathered steel-and-wood bridge easily could have been eliminated if the south end of the pond were pushed north and the embankments lowered to

the path's level. But this would have deprived the project of its mythical power. The bridge establishes a dialogue between those crossing it and the swimmers above and skaters below, and ultimately functions as a stage for passersby.

Other design details demonstrate an architectural unity derived from the good sense of the plan. From the conception of the park as cross-axial water features to the design of the lamp-posts composed of red steel flanges that hold a sconce that uplifts a reflective plane, there is the same high level of research and invention. The double-height skaters' warming pavilion, which also contains public toilets, repeats the L-shape with two solid walls opposite two glazed walls. The wooden plank eaves of the pavilion's flat roof form a unified line with the wooden trellises that shade the pool-level dressing rooms and jut out 30 degrees to follow the bridge's shift off axis. The anti-Classical irregularity of this porch is emphasized by the apparently random placement of the slender cruciform-sectioned steel columns that double at the corners, subverting their regular intervals. Wading pools form a miniature replica of the park—two intersecting rectangles of brightly colored rubberized asphalt. This area has dense plantings of honey locusts to ensure natural shading. Shim and Sutcliffe manipulate the topography to create a villa landscape that bridges the community and offers North York's backyard a newfound appreciation of emptiness.

MINNEAPOLIS MODERNIST VINCENT
JAMES SLIPS A LAKESIDE PAVILION
BETWEEN THE NATURAL AND THE
MAN-MADE. BY JOSEPH GIOVANNINI

SCREEN PLAY

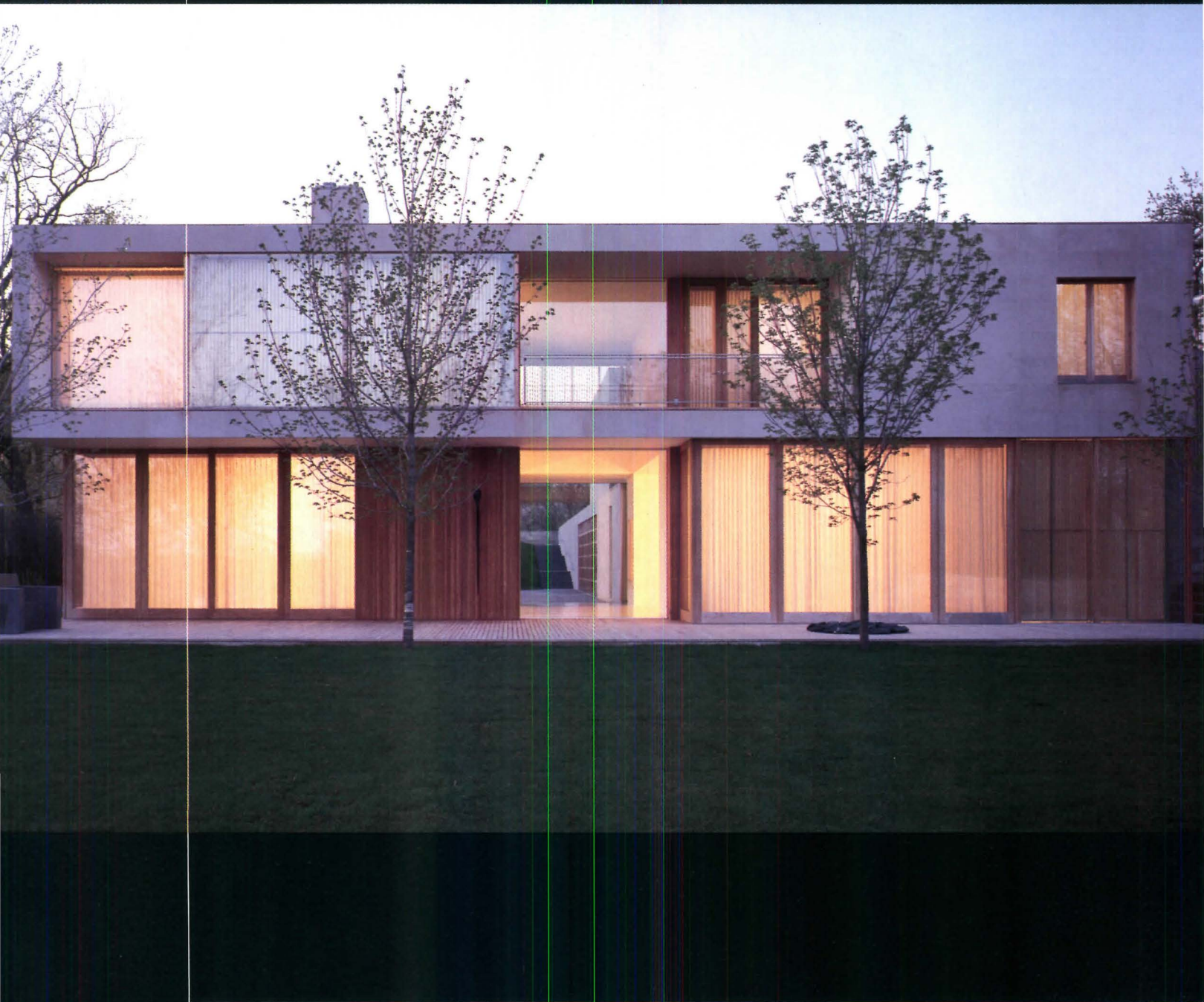
Granite-paved motor court serves garage and main entrance. Indiana limestone cladding and teak doors contrast with translucent southwest corner (at right).





The idea of a pavilion is frequently evoked by architects but rarely delivered. It is one of the most difficult building genres because its ultimate success depends on its transparency. Often, architects succumb to the sentimental image of a pavilion—a single, stand-alone structure tarted up with French doors, whimsical symbols, and other architectural teases. At the other extreme, the overly formalized glass box, like Philip Johnson's house or its model, the Farnsworth House by Mies Van Der Rohe, remains closed to the phenomena it observes because the glass expanses are fixed.

A just-completed design in the "inner suburbs" of Minneapolis by hometown architect Vincent James Associates may just be a classic case of clean-cut Modernism—volumetric solids and voids, spatial push and pull, rhythmic point and counterpoint. But on a spring day, inside a living room with glass walls and corner windows that slide away into pockets, the house vanishes, and the breezes off the nearby lake regale the senses. This architecture brings the site to the skin. The appearance of simplicity is difficult to



South facade (above) is careful composition of solids and voids. View corridor from street (facing page) bisects ground floor and provides glimpses of lake.

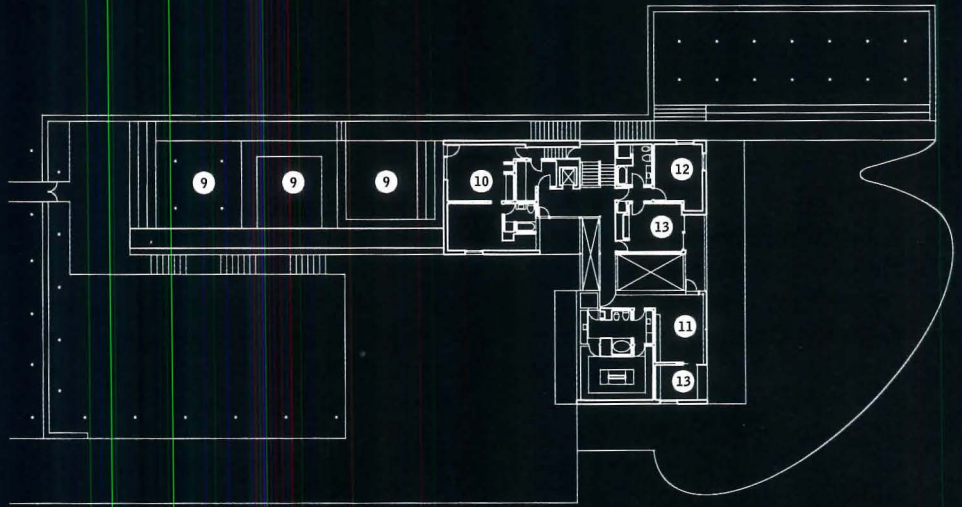


achieve, but the house that disappears, leaving sensations borne by thin air, is a rare act of architectural magic.

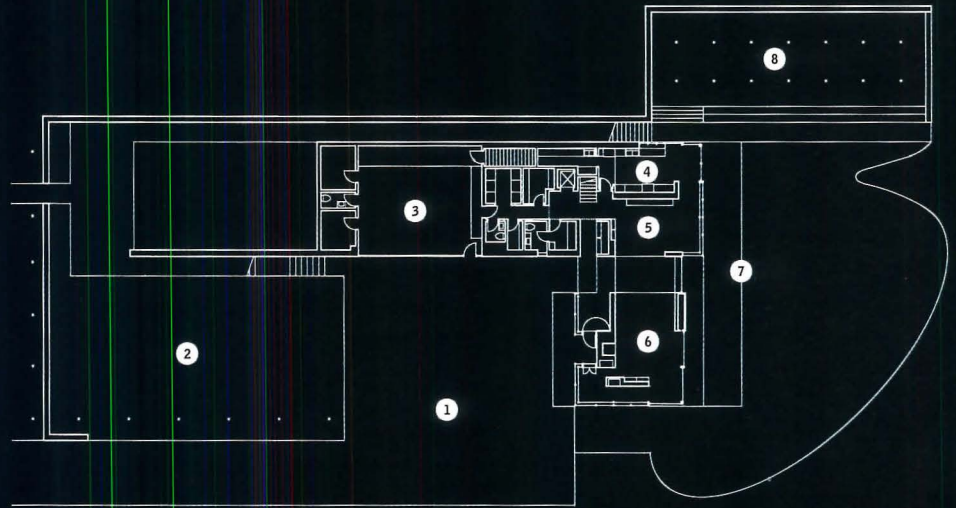
James's pavilion is embedded in a 4,800-square-foot structure that serves as a gallery, works as a retaining wall and a belvedere overlooking a suburban lake, and is home to two active retirees who are as likely to host a formal benefit as they are their grandchildren for a swim. Their pavilion must range from being a civic asset to a simple home. Kenneth and Judy Dayton are repeat architectural customers. In the late 1960s, they chose Aldo Giurgola to design a large, abstract house for their growing family and art collection. The couple lived there happily until their children grew up and out. After retiring, the Daytons realized that life would be simpler for them nearer to downtown.

"We thought we had another house in us," says Kenneth Dayton, who is active in several Minneapolis cultural groups and served on the architect selection committee for the new Getty Center. Once again, the couple decided to encourage the next generation of talent. After seeing James's boldly volumetric *Type/Variant House* (*Architecture*, February 1997, pages 64-71), the Daytons chose the local man.

The architect deployed the house to shape the site, a long sloping slice of land whose contours don't complement the direction of the view. Working with Boston- and San Francisco-based landscape architect George Hargreaves (he also heads Harvard's landscape program), James split the site asymmetrically—the



Second-floor plan



First-floor plan

20'/6m

- 1 motor court
- 2 sculpted lawn
- 3 garage
- 4 kitchen
- 5 dining room
- 6 living area
- 7 porch
- 8 grove
- 9 terrace
- 10 apartment
- 11 main bedroom
- 12 guest bedroom
- 13 office

higher ground to the northeast and the motor court and a terraced lawn to the southwest. The long leg of the L-shaped house acts as a retaining wall and comprises the garage and the service wing. This wing leads into a stairwell that pivots into the foot of the L, which faces the lake across the front of the site and houses the living and dining rooms on the ground floor and bedrooms on the second. The long granite-clad leg anchors the house in the earth, and the two-story "foot" breaks away, almost a freestanding structure. The mass of both sections is kept low—to allow neighbors their views—and the more or less closed second-floor limestone volume of the foot hovers over a plinth of glass.

A view corridor from the street bisects the front yard and carves a two-story void in the volume from the entrance to a garden on the lake side. Teak mullions and doors lend a subtext of material warmth. A teak-lined alcove off the granite-paved motor court announces the front door, which opens into a hall that leads to the staircase at the knuckle of the L. On the right is the first of several opaque walls arrayed in the sliding configuration of a De Stijl plan that articulates interior spaces within the volumetric envelope and defines the living and dining areas and a porch. Each wall is thick with functions—structure, storage, fire-



House's north-south axis originates at front walkway (facing page) and intersects entrance corridor (above left) at stair to second level, where Jasper Johns' "Usuyuki" (1978) greets visitors. For Ming Fay's "Pear" (1989) and Barnett Newman's "Untitled #1" (1950) overlook rear lawn.



place, window pockets—and they allow an easy flow between public spaces that obviates corridors and facilitates formal receptions. The concrete structural piers buried in these walls support a prestressed concrete ceiling that is the structural tray for the lighter construction of the second floor, which houses the main bedroom and bath, a guest bedroom, and his-and-hers studies.

James collaborated with New York City glass artist James Carpenter, who advised on the expansive glazed walls, designed sliding, pivoting wall panels, and created a wall of oculi that beam spots of sunlight onto a frosted glass wall. Carpenter's movable wood-and-metal panels are part shoji and part Venetian blind; they also can slide away into pocket walls.

Despite the functional requirements—not the least of which is protection from the Minneapolis winter—the design self-effacingly delivers occupants to the qualities of the site that Hargreaves and James took such pains to cultivate. Hargreaves sculpted the lakeside slope in angled planes of grass so that snow would linger on the north face long after it disappeared from the south. Facing the view, the designers carved a curved plateau that edits out a road at the foot of the hill, creating the illusion of lakeside property. The landscape design appropriates the lake for the price of what amounts to a modern-day ha-ha.

What is rare about this highly disciplined house of many functions—pavilion, reception room, gallery, belvedere, and retaining wall—is that despite all the program and site obligations, it is nearly not there where absence matters most. With its off-white and beige wood and stone, the palette minimizes contrasts, creating a visual serenity inside that works as well for the paintings as it does for the view. Its architectural discipline in no way compromises its lightness of being.



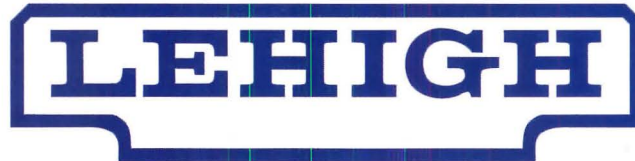
Roy Lichtenstein's "Imperfect" (1986) hangs in living area (facing page, left). Window walls open onto teak deck with polished granite "Six-Part Settee" (1984) by Scott Burton. Screens hanging from upper volume (above) allow mosquito-free outdoor space.

**DAYTON HOUSE
MINNEAPOLIS**

CLIENTS: Mr. and Mrs. Kenneth Dayton **ARCHITECTS:** Vincent James Associates, Minneapolis—Vincent James (principal), Douglas Danks (project manager), Paul Yaggia (project architect), Nancy Blankfard, Andrew Dull, Nathan Knutson, Steve Lazen, Robert Loken, Mark Noland, Taavo Somer, Kate Wyberg (project team) **LANDSCAPE ARCHITECT:** Hargreaves Associates **ENGINEERS:** Carroll, Franck & Associates; Betker/Stangeland (structural) **CONSULTANTS:** James Carpenter Design Associates (glass); Powell/Kleinschmidt (interiors) **GENERAL CONTRACTOR:** Yerigan Construction **COST:** Withheld at owners' request **PHOTOGRAPHER:** Don Wong

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Preservation Making Preservation Pay

An efficient bureaucracy, an honorable goal, and great financial benefits make the federal rehabilitation tax credit program a model of governmental initiative. How can it work for you?

By Eric Adams

Think of it as a sheep in wolf's clothing, if you like, or simply as opportunity disguised as bureaucracy. But however you think of the federal rehabilitation tax credit, just make sure that you do. Because beneath its somewhat tedious moniker lies a powerful incentive program that is giving real momentum to historic preservation and economic development efforts in this country—and the red tape isn't nearly as bad as you might think.

Indeed, architects, preservationists, developers, and building owners who have used the rehab tax credit swear by it—many have fashioned careers around the program—and thousands of rehabilitated historic buildings nationwide testify to its effectiveness. The National Park Service (NPS), administrator of the program in partnership with the

Internal Revenue Service (IRS) and state historic preservation offices (SHPOs), reports that in 20 years, nearly 27,000 projects have benefited from the program, which offers owners a 20 percent return through reduced tax liability on dollars invested in an approved rehabilitation. Private investors have leveraged almost \$20 billion in tax credit projects in that time—\$1.72 billion last year alone—and more than 275,000 rehabbed, new, and affordable housing units have been put into service. For some beneficiaries, the credit has meant the difference between a break-even development and an investment. For others, it has meant the difference between a reborn gem and a bulldozed lot.

In Asheville, North Carolina, for example, the tax credit recently proved to be both an investment and a savior—as well as a catalyst for local rehabilitation. Architect

In Asheville, North Carolina, R.S. Griffin, Architect recently completed \$3 million rehabilitation of 1899 Manor Inn using federal rehabilitation tax credits. Manor Inn Apartments, completed in March 1996, has been at 100 percent occupancy since. Project spurred preservation efforts nearby and led to neighborhood's designation as historic district. Information provided to state historic preservation office as part of tax credit application process included detailed descriptions of work with before-and-after photographs (facing page) taken from matching perspectives.

HISTORIC PRESERVATION CERTIFICATION APPLICATION— PART 1

NPS Office Use Only

MANOR INN APARTMENTS

Property Name

ASHEVILLE, NC

City Address

Project Number:

6. Statement of significance:

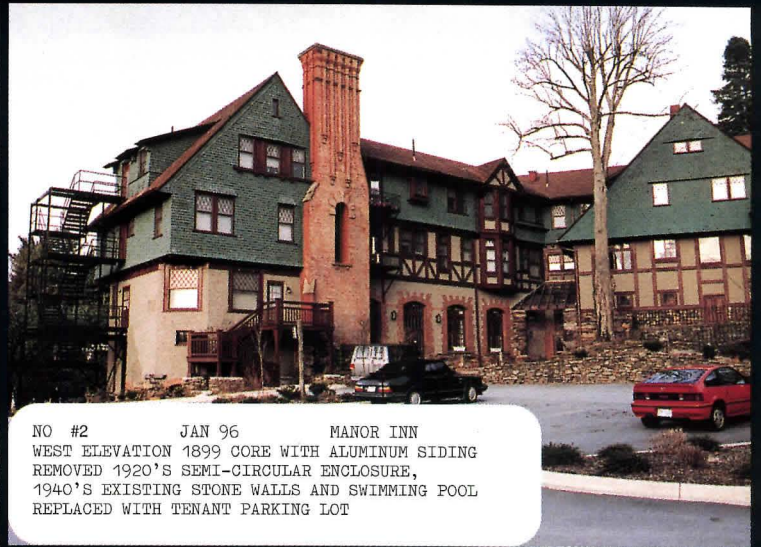
The Manor Inn constitutes the premier structure of The Manor and Cottages Historic District. Completed in 1899, this structure is one of the rare surviving examples of the picturesque resort developments so important to the history of the North Carolina mountains and to the turn-of-the-century resort town boom era of Asheville's development.

The Manor Inn became, and is, the focal point for several cottages climbing the hillside. Along with the Inn, Clover Cottage and Columbus Cottage, are the only buildings of the original twenty-two building Albemarle Park still controlled by single ownership. All other buildings have been sold to separate owners throughout the years. Clover and Columbus Cottages today serve as transitional buildings between the Manor Inn and the surrounding residential neighborhood.

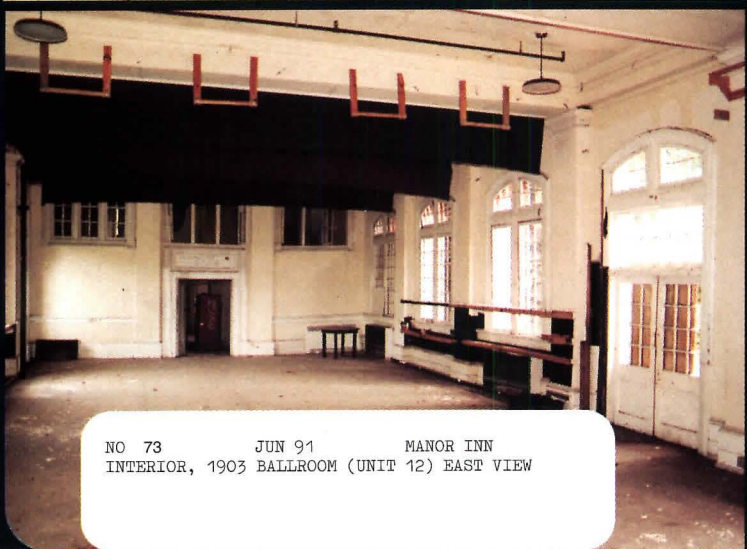
Application process begins early in project with evaluation of historical significance. Manor Inn development team, led by architect Robert Griffin and owner of Manor Inn Apartments Group, describes specific history and importance of building (excerpted at right) as well as construction details that add to its value.



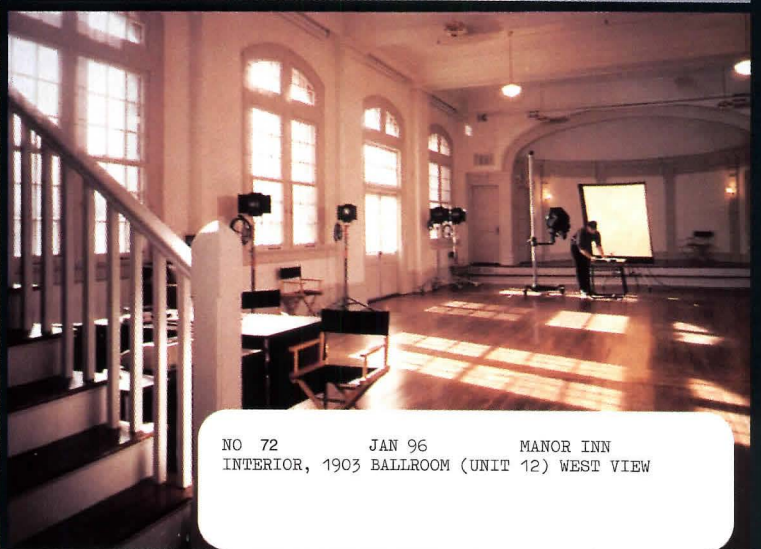
NO #1 MAR 91 MANOR INN
SOUTH ELEVATION 1903 WING WITH ALUMINUM SIDING
IN PLACE; LOCATION OF NEW COVERED ENTRANCE AT
EAST END AND NEW EXTERIOR DECK AND STAIR AT
WEST END



NO #2 JAN 96 MANOR INN
WEST ELEVATION 1899 CORE WITH ALUMINUM SIDING
REMOVED 1920'S SEMI-CIRCULAR ENCLOSURE,
1940'S EXISTING STONE WALLS AND SWIMMING POOL
REPLACED WITH TENANT PARKING LOT



NO 73 JUN 91 MANOR INN
INTERIOR, 1903 BALLROOM (UNIT 12) EAST VIEW



NO 72 JAN 96 MANOR INN
INTERIOR, 1903 BALLROOM (UNIT 12) WEST VIEW

Robert Griffin, principal of R.S. Griffin, Architect in Asheville, rehabilitated an old hotel into the Manor Inn Apartments. The 1906 structure was vacant and badly deteriorated. "There was a developer lined up who was ready to tear it down; we were within a few hours of losing it," Griffin says. He and local preservationists *persuaded* a prominent local businesswoman to buy the building and allow them to renovate it with tax credits. They did, and the project has been at 100 percent occupancy since it opened in 1996. The enthusiasm it generated spurred further development. "As a result of this project, the whole neighborhood is going through a renaissance," Griffin adds. "All the houses around it have been

restored and the city has declared the neighborhood a historic district."

Yet in spite of similar successes and steadily increasing growth, the tax credit program is still vastly underutilized. More rehabilitation projects—roughly 85 percent—that could qualify for the program proceed without tax credit benefits than with them, and 30,000 buildings, all potential projects, are added to the National Register of Historic Places each year. (Listing on the register is one of the requirements for tax credit eligibility.) Reasons for underutilization include a lack of broad awareness of the program, lingering misperceptions that the Tax Reform Act of 1986 dissolved the rehab tax credit—which it almost did—and a reluctance to engage in what might be perceived as an overly prescriptive bureaucratic

process. The tax credit program has rules that must be followed and hoops that must be jumped through. Julian Adams, historic sites restoration coordinator of the New York state historic preservation office, says they are a deterrent: "Sometimes I even hear of architects scaring developers off," Adams says with a shudder. "They say it takes a long time and that they won't be able to do the project like they want to. They fear the bureaucracy."

Still another reason for the program's relatively low usage is that people might not be aware of the magnitude of the benefit to the project and its participants. "A lot of architects and owners have heard about it, but very few have seen

Part two of application process includes specifically worded descriptions of intended work on structure, explaining how it will preserve or alter major architectural elements.

NUMBER 46	Architectural feature <u>STAIR ONE WINDOW SEAT</u>
	Approximate date of feature <u>1899</u>

Describe existing feature and its condition:
Previous roof deck partially covers glazing and creates entrapment for water.

Photo no. 77 Drawing no. _____

Describe work and impact on existing feature:

New roof deck will conceal additional glazing. Remake window bottom rail to raise new upper sill to above roof deck and to allow proper waterproofing. Provide bead board infill below new raised window sill and above existing sill.

NUMBER 47	Architectural feature <u>STAIR TWO</u>
	Approximate date of feature <u>1903</u>

Describe existing feature and its condition:
Structural settlement and deterioration has caused stairs and basement landing to slope. There has been much water damage from gutter failure. Second floor railing at landing has been removed and walled in.

Photo no. 94-98 Drawing no. R-8, R-9, R-30

Describe work and impact on existing feature:

This stair is proposed to become primary access to parking areas at west and north. Restore west entrance doors. Create new entrance at east side (Photo No. 94). Create connecting stair hall removing portion of mezzanine landing at west side to allow greater ceiling height at west entrance to match ceiling height at new east entrance. Provide structural retrofit. Relocate fire wall and door at second floor landing (Photo No. 98) and restore baluster.

The tax credit application process, like the meetings with consultants and SHPOs, should begin as soon as the project is initiated.

the dramatic economic effect to the developer's bottom line," says architect and developer Ronald Wells, principal of the Spokane, Washington-based Wells & Company. His firm has completed 18 historic rehabilitation tax credit projects since 1980. "For people who can use the tax credit, there is a huge financial incentive. If you do a million-dollar rehab, you have \$200,000 in tax savings," he explains, adding that the money can lower overall rehab costs or be used to increase the quality of the work. "It's a 20 percent rebate, and it's hard to find those dollars elsewhere in this climate. There is very little federal money around."

Architect involvement

The federal program of tax credits was created with the Tax Reform Act of 1976. It originally offered a tax credit of 25 percent of eligible rehabilitation costs, but changes introduced in the Tax Reform Act of

1986 reduced that to 20 percent and placed stricter limitations on the kinds and amounts of income against which the credit, depreciation, and other real estate-related losses can be applied. The result was a dramatic drop in the volume of projects utilizing the credits, a drop that only now is easing as the real estate market improves and as corporations and investor groups begin to realize the benefits that still exist within the program.

The tax credits can be applied only to income-producing properties—thus, no private residences—that are certified historic structures, meaning they are listed in the National Register either individually or as a contributing building in a designated local historic district. (However, a 10 percent rehabilitation tax credit is available for non-historic, non-residential, income-producing buildings built before 1936.) Projects typically associated with the tax credits range from warehouse conversions to apartment rehabs to general preservation

What the rehabilitation tax credit covers

- Rehab hard costs
- Architect and engineer fees
- Site survey fees
- Legal expenses
- Insurance premiums
- Development fees
- Interest and taxes

What it doesn't

- New construction costs
- Personal property
- Acquisition
- Land grading
- Site improvement
- Permanent finance costs
- Syndication costs

of commercial buildings to affordable housing. (The latter is among the most tax credit-friendly, because it can be combined effectively with low-income housing tax credits.) The work on the building must also constitute a substantial rehab, which is defined as the greater of \$5,000 or, more frequently, the basis of the building—its assessed value or purchase price minus the cost of the land.

Verification of these conditions comes from the three-part application process, each phase of which is sent first to the SHPO and then, upon review and recommendation, to the National Park Service in Washington, D.C., for final approval—a process that takes 30 days at each stage. Part one of the application evaluates the building's significance and requests certification or a preliminary determination that it meets the criteria for inclusion on the Register; part two offers a detailed description of the work planned; and part three is a request for the certification of completed work. Credits aren't approved and available to the owner until part three is complete.

Like most programs involving the IRS, the rules regulating tax credits are complex. Though the credits are usually pursued and handled by the owner of the building and the project's developer, with guidance from SHPOs and experienced consultants, architects should still understand the essentials of the program, including the application process and ways the program can be employed to benefit the design. This is not only so they can make developers who are unfamiliar with tax credits aware of them, but also because architects are integral to the program itself. Their designs are major components of the application, and those designs are often affected by the rules of the program. Perhaps the most influential factor in approval or denial of the credits is

Seven Tax Credit Tips

Speaking at a National Park Service conference on tax incentives for developing historic properties held in April in San Francisco, architect Bruce Judd of the Architectural Resources Group offered this advice to architects working with tax credits:

- 1 Allow enough time to conduct detailed on-site investigations of soils, foundation, and wall interiors. Learn about the structural system.
- 2 Meet with the building officials to discuss code issues, including exits, rail heights, separation walls, and accessibility.
- 3 Meet with fire marshal to discuss fire ratings, particularly in corridors.
- 4 When preparing drawings, do more details and clarifications than you think is typically necessary. When in doubt, do another detail or explain what is proposed with notes.
- 5 In seismically active regions, discuss structural alternatives with an engineer and reviewing authorities. Improper insertion of structural bracing can have a major visual impact and destroy historic materials.
- 6 Make all schedules and tables on your drawings clear and easy to understand. Most historic buildings do not have uniform doors, windows, and trim. Clarify exactly what you want.
- 7 Problems will occur. When they do, deal with them immediately and get reviewing authorities involved, if necessary. There is nothing worse than having the Tax Act reviewer require changes to a project after it has been completed.

compliance with the design-oriented Secretary of the Interior's Standards for Rehabilitation (*Architecture*, January 1998, pages 126-130), which were created in 1978 explicitly for this program.

It is during early design work that SHPOs and consultants really begin their dialogue with the architect. "I like to get to the architects before they've fallen in love with their project, when they're still forming their ideas," says New York's Julian Adams, who emphasizes that state historic preservation officers like himself function as intermediaries between project participants and the Park Service to help ensure a successful effort.

Early dialogue also helps establish strategy. William Higgins, principal of Higgins & Quasebarth, a New York City historic preservation consulting firm that specializes in leading owners, developers, and architects through the tax credit application process, stresses that designs can be manipulated to take full advantage of the tax credits. He

cites as an example an old building being converted into a restaurant, with a new addition built alongside. "Basic strategic decisions regarding what goes where can have major impacts," Higgins explains. "If you have to install a new kitchen, it might be wise to place it in the old building instead of the addition, which won't benefit from the credits. Kitchens are capital-intensive components; if they are in the part of the structure receiving tax credits, you can get much more for your 20 percent."

But architects are also useful before the design process even starts. Donovan Rypkema, a Washington, D.C.-based consultant and author of *The Economics of Historic Preservation* (National Trust for Historic Preservation, 1995), feels architects have a creative edge over developers in spotting potential tax credit projects developers may not

Beyond the Federal Tax Credit

While the federal historic rehabilitation tax credit program is one of the most significant aids for rehabilitating historic properties, it isn't the only option. Many other programs at the state and local level encourage the development of old buildings, whether by offering financial incentives or by bending the rules to permit the otherwise unpermissible.

Architects familiar with the range of historic preservation incentives will find that their projects and clients will benefit. "Owners and developers usually first go to architects to see whether a project is feasible," says Cheryl Widell of the California Office of Historic Preservation in Sacramento. "If the architect knows what can be done with tax credits, additional programs, and alternative finance that the owner or developer may not have considered, then a project that was in jeopardy can go forward."

Architects should first contact their state historic preservation office and their local government to find out what programs and options exist locally, and what steps are necessary to secure the benefits. What follows, though, is a sampler of some of the most common strategies and programs available around the country:

Parking waivers

Codes mandate the number of parking spaces for commercial properties, but in many cases, the only way to achieve that is to tear down an adjacent building. However, some cities will waive those requirements, even in cases where the density changes significantly, such as when a warehouse is converted into office space.

Zoning provisions

For cases in which historic buildings are prime candidates for adaptive reuse, local governments will often allow zoning provisions to permit the work. For example, if a farmhouse that can be converted to a bed-and-breakfast sits in an area zoned for agricultural use, special provisions will allow commercial use of the property. Similarly, multiple-use zoning will allow a developer to place apartments over retail stores, an arrangement common to older buildings.

State income tax credits

Most states have programs similar to the national program. Percentages and eligibility requirements vary, though. In Maryland, for example, 10 percent of rehabilitation costs can be applied against state income tax, while in Missouri, the benefit is 25 percent.

Property tax abatement

Similar to the tax credit, a property tax abatement reduces the tax that owners must pay annually, with varying terms. Los Angeles's Mills Act is one of the most prominent such programs.

Alternative building codes

Most older buildings cannot meet current codes. To remedy this, many states have alternative codes for historic properties to provide for life safety and allow variances.

Facade easements

Redevelopment agencies often offer preservation easements or covenants to fund facade repairs—signage, paint, and structural work—with the provision that no change be made without their permission for the next five to 10 years.

Development rights

This program allows owners of low-rise historic properties to transfer the "air rights" they are entitled to—meaning the height to which they could build if desired—to another developer who wants to put up a tall building in an area where it isn't permitted. There are numerous parameters and restrictions regarding the use of funds received by the "donor site" during the sale as well under what conditions the "receiver site" can build.

Public grants

Public improvement funds are often available in the form of grants. Usually associated with Main Street improvement programs, these grants are given by both public and private agencies for everything from handicapped accessibility to painting. Combining these grants can reduce costs considerably.

have considered. He cites what he considers to be the best example of such thought: "In New York City, there used to be almost universal conventional wisdom that old office buildings could not be converted to residences," he says. "But now look at where the \$2 million units are being sold. Architects understand the adaptability of older buildings and can spur the reluctant imaginations of developers and financiers."

Paperwork

The tax credit application process, like the meetings with consultants and SHPOs, should begin as soon as the project is initiated. But timing submittals can be something of a trick, particularly when different finance programs are being employed (see sidebar, this page). Michael Auer of the National Park Service in Washington, D.C., says people shouldn't wait for all the different financial arrangements to be in order. "Be aware that state and local approvals cannot compel final approval of a project," Auer says. "So don't wait until everything is in—state and local finance, code approvals, etc.—to send the project in. If you have to go through 10 layers of finance, don't do all 10 and come to us after you've gone through the SHPOs and say you've got to block up all the windows on the facade because HUD told you to."

The rehab tax credit application is contained in one booklet provided by the Park Service, though its physical bulk always multiplies with attachments—photos, sketches, plans, and written explanations. It includes all three components as well as instructions and examples. Part one of the application, called "Evaluation of Significance," asks for information about the history of the building and how it contributes to the community. Ronald Wells subcontracts this work to professional historic researchers. Wells says that research for this

Drawings, photographs, correspondence, SHPO evaluations, and meeting records accompany written descriptions of what the architect intends to do.

part should be undertaken even if the project is already listed on the National Register.

Written descriptions of the building's physical appearance as well as photographs and maps are also major components of this section of the application. Robert Griffin, of Asheville, North Carolina, says documentation here is as important as it will be during construction. "This is critical. People lose credits by not doing part one of the application early enough and by not documenting things well enough," says the architect, who has completed numerous tax credit projects, including several in Frederick Law Olmstead and Richard Morris Hunt's Biltmore Village, at the entrance to the Biltmore Estate in Asheville.

Part two of the application, "Description of Rehabilitation Work," focuses on the work to be done on the building, and it is here that most of the effort lies. Drawings, sketches, photographs, correspondence, SHPO evaluations, and meeting records accompany written descriptions of what the architect intends to do with the various building components. The SHPOs and the Park Service pay particular attention to such elements

as windows, HVAC, interior partitions, exterior masonry cleaning and repair, and storefront alterations.

Timing also becomes a factor. "The more complete you are in describing what you want to do, the better," Wells says. "So you have to take the conceptual design far enough along to be able to describe it. The state will not allow vague or incompletely designed projects to go forward." Wells adds that you also shouldn't wait too long because you're likely to have the credits denied if it's too late or unfeasible to change the plans. "This is a pretty high-stakes gamble because it's all or nothing," he cautions. "And if you structure your 20 percent bonus into the budget and don't get it, then what do you do?"

Michael Crowe, of the National Park Service in San Francisco, encourages architects working on this part of the application to meticulously update information as changes are made. "What frequently happens is that an explanation is written in the application but the drawings don't match it," he says.

For more information

Internal Revenue Service
Attention: E: REHAB/LIHC
Compliance Unit
1111 Constitution Avenue, N.W.
Room 5109
Washington, D.C. 20224
www.irs.ustreas.gov

National Conference of State
Historic Preservation Officers
444 North Capitol Street, N.W.
Suite 342
Washington, D.C. 20001
(202) 624-5465
sso.org/ncshpo/index.htm

National Park Service
Preservation Tax Incentives
Technical Preservation Services
Historic Preservation Services
1849 C Street, N.W., NC200
Washington, D.C. 20240
(202) 343-9578
hps-info@nps.gov
www.cr.nps.gov
Preservation Briefs Internet
archive: www2.cr.nps.gov

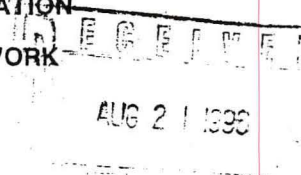
Form 10-168c
Rev. 12/90

UNITED STATES DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

OMB Approval
No. 1024-0001

HISTORIC PRESERVATION CERTIFICATION APPLICATION
REQUEST FOR CERTIFICATION OF COMPLETED WORK



NPS Office Use Only:

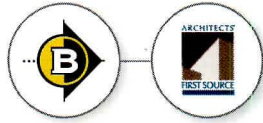
NRIS No: []

Instructions: Upon completion of the rehabilitation, return this form with representative photographs of the completed work (both exterior and interior views) to the appropriate reviewing office. If a Part 2 application has not been submitted in advance of project completion, it must accompany this Request for Certification of Completed Work. A copy of this form will be provided to the Internal Revenue Service. Type or print clearly in black ink. The decision by the National Park Service with respect to certification is made on the basis of the descriptions in this application form. In the event of any discrepancy between the application form and other, supplementary material submitted with it (such as architectural plans, drawings and specifications), the application form shall take precedence.

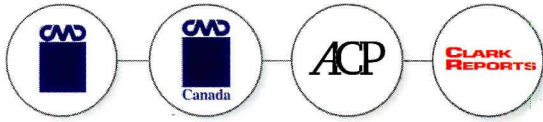
1. Name of property: The Manor Inn Apartments

Address of property: Street 265 Charlotte Street

Application's third and final step requests certification of completed work, which includes time line, final cost, and photographs of completed work.



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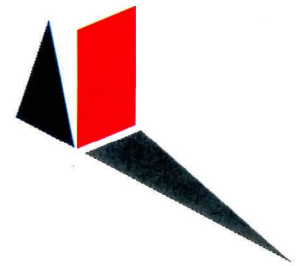
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"And if we find one discrepancy, we begin to wonder if there are others."

Part three of the application, "Request for Certification of Completed Work," is the final step. Included are data on the project, such as time, costs of the rehab work, and costs of new additions, as well as photographs showing the completed work, preferably with the same views as the "before" pictures. State historic preservation officers usually visit the property for an inspection, and then forward their comments, with the final application, to the Park Service.

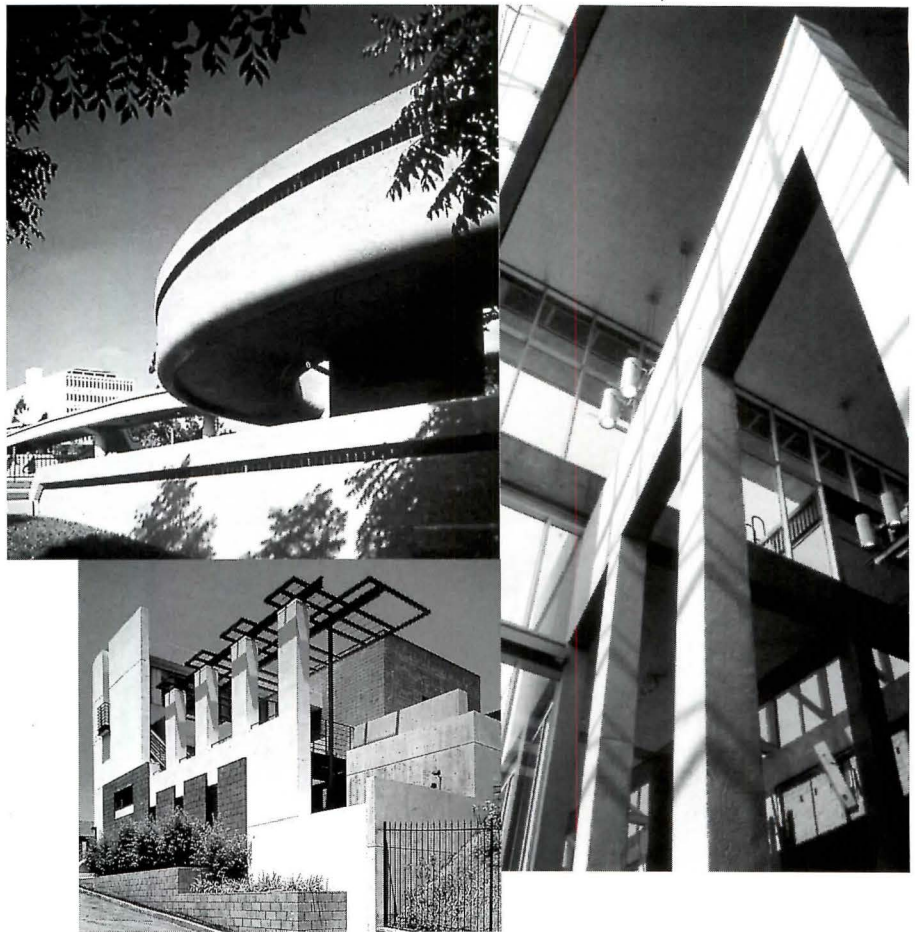
Once part three is submitted and the NPS certifies the rehabilitation, then the owner will be able to begin using the tax credits.

Multiple benefits, but some gaps

The federal historic rehabilitation tax credit program is one of the most effective historic preservation tools ever devised. However, it's not a perfect program, mostly as a result of the changes inflicted by the Tax Reform Act of 1986. "In a way, the tax credit is not as democratic as it used to be," New York preservation consultant Higgins says, citing limitations on the types of income to which tax credits can be applied. This, he explains, benefits large corporations and investor groups the most and small owners the least. "It used to apply to a much broader range of projects," he adds.

Also left out are non-income-producing buildings, such as private residences. However, a separate program is currently being developed by Congress that addresses that segment of the market.

In the meantime, historic buildings will continue to be reborn with the help of this innovative tax credit program and the numbers of eligible structures will continue to rise. If it doesn't, it won't be the government's fault this time. "They are very helpful," Wells says of the program's administrators. "Their mission is to try to encourage rehabilitations done correctly. In terms of government bureaucracy, this is a great example of a well-run organization."



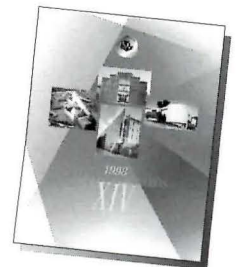
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Technology Gypsum Board Pumps Up

New wallboard materials are a lightweight yet tough alternative to cement boards or concrete blocks.



In two-story atrium of 78,425-square-foot Colden Hall at Northwest Missouri State University, light weight of impact-resistant, 5/8-inch-thick gypsum board allowed architect Gould Evans Goodman Associates to design with less steel structure (far left) than unreinforced masonry would have required. Minimal field preparation, largely due to ease of cutting material, made innovative or complex interior spaces more feasible (left).

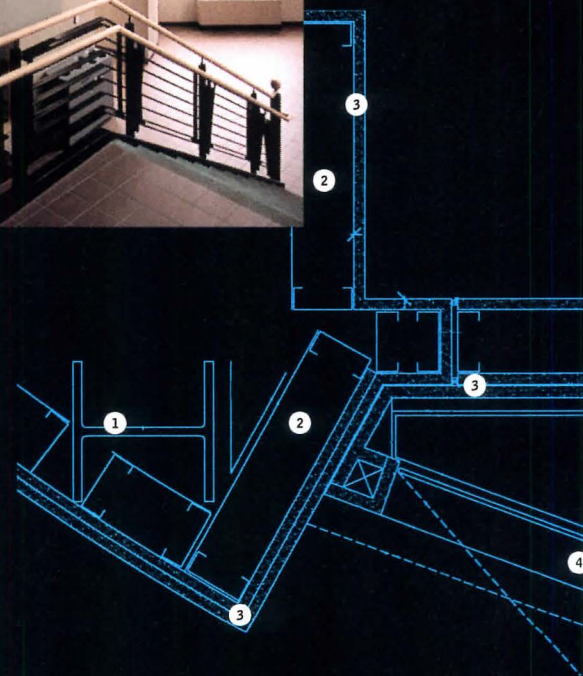
By Michael Maynard

When the cement board specified for a new 400,000-square-foot high school in Wayzata, Minnesota—the largest in the state—could not be shipped from Europe, the architects and contractors had to scramble to find a substitute interior wall system. They faced a conundrum: The material had to be light enough for a four-story building, yet durable enough to withstand the scrapes, kicks, and punches of the daily abuse of students. The architects ultimately chose a wallboard system that is part of a new generation of gypsum products emerging as alternatives to concrete and cement.

For Wayzata High, architect Mike Swanson of Minneapolis-based

Armstrong, Torseth, Skold & Rydeen selected a gypsum board from National Gypsum called Type X Hi-Impact 1000 wallboard. "We had to come up with solutions for a lighter system, while maintaining the impact integrity of concrete block," Swanson explains. Type X is strengthened by a thin cover of Lexan, a heavy polycarbonate laminate made by General Electric that is bonded to the back of the boards. "Lexan is a big development in high-impact boards," says Craig Robertson, product manager of gypsum systems for National Gypsum, based in Charlotte, North Carolina. Boards are available in widths ranging from .001 inches to .081 inches.

National Gypsum is among several gypsum manufacturers



Plan detail

- 1 structural column
- 2 metal studs
- 3 5/8" gypsum board
- 4 glass door
- 5 removable wall

taking advantage of new technologies to make boards stronger and more flexible. **These changes mean that for the first time, gypsum board is competing with such materials as concrete for commercial jobs.** "This gives it a marketing edge to compete with masonry," says Michael Gardner, technical director of the Association of Wall and Ceiling Industries in Falls Church, Virginia.

Tough construction

The Type X Hi-Impact boards, introduced last October, have been used primarily for walls and ceilings of institutional settings such as juvenile detention centers, schools, and psychiatric hospitals. "We recommend them where security and the level of penetration is an issue," National's Robertson asserts. "It takes a certain amount of time to get through that wall because of the Lexan." The most impact-resistant product of the Hi-Impact line, Hi-Impact 8000, a $\frac{5}{8}$ -inch-thick board coated with a .081-inch-thick Lexan film, was recently used in the construction of the walls and ceilings of a detention center for the New York State Division for Youth. Robertson says the boards have held up to punches and kicks.

Chicago-based USG is also offering reinforced wallboard. The company recently bought Louisiana-Pacific's FiberBond gypsum panel line and formally reintroduced the products in April. The board has



Architect gutted most interior spaces (above) during Colden Hall renovation, widened hallways, inserted "conversational" areas, and repaneled with gypsum board to provide clean, academic look that withstands abuse of high student traffic. Wall system also permits easy access to mechanical systems.

no paper face and, like National Gypsum's board, is highly resistant to abuse. "The technique that this panel uses, employing a denser, yet lighter-weight core, is completely different than that used to produce regular board," notes USG Marketing Manager Ron Bruggeman. "We're marketing it as an abuse-resistant board for all types of commercial applications."

Sales of the strong wallboard are not expected to rival those of its weaker wallboard brethren, the standard of residential construction. "It's driven on a job basis more than regular wallboard. This is much more of a specialty use. It's not nearly as tractable from a usage standpoint," notes Bruggeman.

Construction concerns

When Louisiana-Pacific Company manufactured FiberBond, the company marketed the product as a replacement for drywall, saying that it was just as easy to install as regular gypsum board. But contractors soon found out otherwise: "The minute they went

to install it, it was much more costly," says Bruggeman. It didn't work like drywall."

FiberBond took more time to install, increasing labor costs by as much as 10 percent in some cases. "It's more difficult to install from a cutting perspective," Bruggeman explains. "The labor involved is more time-consuming. It's got some advantages, but there needs to be more education about the product."

The boards themselves are more expensive than conventional gypsum products, another factor that may deter users. As Craig Robertson notes, "Everything boils down to cost." For instance, a conventional $\frac{5}{8}$ -inch-thick gypsum board from National Gypsum costs $16\frac{1}{2}$ to 17 cents per square foot. The company's Hi-Abuse board, which resists scuffing, costs more than double—35 cents per square foot—and its Hi-Impact board costs 55 cents a



In media center of 400,000-square-foot Wayzata High School, architect Armstrong, Torseth, Skold & Rydeen specified costlier but more durable impact-resistant gypsum for perimeter wall and other areas affected by student traffic, but standard gypsum board for out-of-reach areas like curved ceiling elements.

square foot. For cost-conscious government jobs, the tougher board will mean a more expensive up-front investment, especially if the job calls for large quantities of panels. For Swanson, architect of the Minnesota high school, the cost was a trade-off: The Hi-Impact boards were expensive, but they were available when they were needed.

Institutional finishes

Architect Elizabeth Mullins of Gould Evans Goodman Associates in Kansas City, Missouri, says there was little choice but to use a stronger gypsum board when her firm completed a major renovation last year of Colden Hall, the main classroom building at Northwest Missouri State University in Maryville, Missouri. An academic building was a perfect candidate for a stronger type of gypsum board. Concrete blocks would be too expensive (about \$2 to \$2.50 more per square foot than the stronger gypsum board) and too heavy

for the three-story, 80,000-square-foot building. "It's a great, low-cost solution," she says.

The stronger gypsum board allows the architect to maintain a clean, academic look in hallways and classrooms. Despite their stronger composition, "the drywall allowed us to achieve specific effects with the walls," asserts Gould Evans's Glen LeRoy. "The boards were flexible enough to allow for such effects as sloped and ribboned walls. And gypsum board, no matter its strength, is much easier to remove if internal mechanical systems or computer wiring has to be repaired or replaced."

The biggest concern in the design of the hallways and classrooms was the scuffs and marks from students and their backpacks. In a rural area such as Maryville, durability is especially important because it is often difficult to get replacement material to the campus,

While high-impact wallboards make sense in high-traffic institutional buildings, trying to convince a homeowner of the advantages of a more resistant board is difficult.

Mullins adds. She says that after one year of heavy use, the boards have held their own. The only maintenance will be an occasional repainting. The architects now plan to use the boards in a residence hall they are designing for the University of Missouri in Columbia.

While high-impact wallboards make sense in high-traffic institutional buildings, trying to convince a homeowner of the advantages of a more resistant board is difficult. "In houses, that would be a real hard sell," notes Robertson. "The builder isn't going to do it unless the homeowner specs it. But with 250 boards, you're going to pay another \$1,250. It comes down to cost on things like that." At USG, Bruggeman adds that its product is focused on institutional uses, although he says they will eventually look for specific residential applications.

Added advantages

The gypsum industry is also trying to promote the new gypsum boards to the building industry as fire-resistant products with improved sound attenuation. Manufacturers are working at improving the sound ratings of its products, says Robert Wessel, the assistant executive director of the Gypsum Association in Washington, D.C. "There is an emphasis on sound control as you start cramming more and more people into smaller spaces," he adds.

While the Lexan in National Gypsum's impact-resistant boards does not reduce sound transmission any more than regular gypsum board, adding a 5/8- or 1/4-inch-thick board to a 1/2-inch-thick board will cut down on noise, notes Steve Meima, the promotions director for the Gypsum Association in Washington, D.C. Meima says that its member companies at the local level are

working with builders at home shows to promote the benefits of gypsum.

For architects, the question becomes whether a client is willing to pay extra for a wallboard that will stand up to extra-rough treatment. In public buildings, where the bottom line is carefully scrutinized, that can be a difficult sell. In Wayzata, Minnesota, Hi-Impact wallboard was an untried, expensive product that was utilized out of necessity. Today, Minneapolis architect Mike Swanson calls it a good value. And in architecture, word of mouth is often a more valuable marketing tool for a new product than anything a trade show can put together.

Michael Maynard is a Providence, Rhode Island-based freelance writer.

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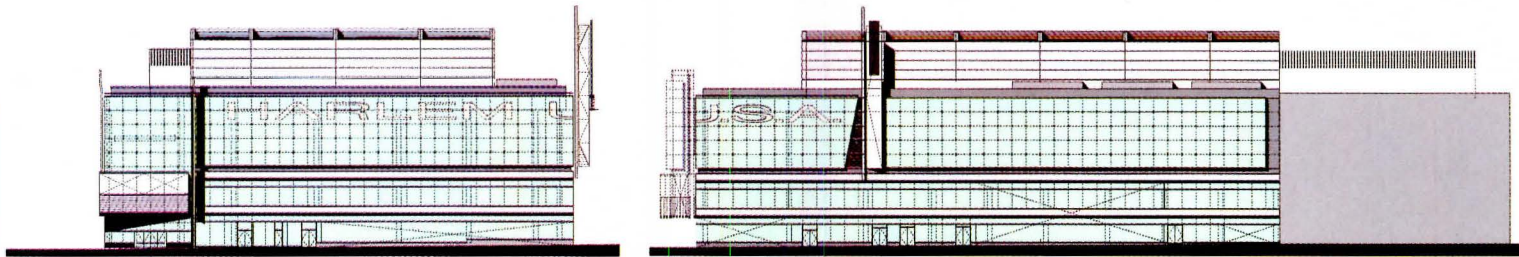


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Practice The New Master Builders

Architects and educators are recognizing expanded opportunities in the changing world of real estate development.



By Sara Hart

When New York City architect Drew Greenwald entered the graduate program at Columbia University in the 1970s, there were no courses in real estate development or finance in the architecture school. The onus was on him to supplement his study with whatever he could find in the business school.

Similarly, Wing Chao, now executive vice president of Walt Disney Imagineering, had trouble getting the educational background he wanted when he decided to pursue real estate as part of an architectural career. Chao remembers that, in the 1970s, “there were only five real estate courses between Harvard and the Massachusetts Institute of Technology. I took them all.”

Today, Chao could enroll in the MIT Center for Real Estate within the School of Architecture and Planning and receive a master of science degree in real estate development. Greenwald could do likewise in Columbia’s Department of Real Estate, also within the architecture school. Both programs were started in the early 1980s as a response to rapid changes in real estate development as it moved

from market-driven private entrepreneurship to complex public-private collaborations demanding interdisciplinary expertise. Universities responded to this shift by making real estate development a bona fide academic discipline, often a specialization within the broader field of architecture. Some have gone further and added business administration to their architecture program options as well. The University of Illinois at Urbana-Champaign and Texas Tech University are just two of several schools offering a joint M. Arch.-M.B.A. program.

This is a significant shift in the recent history of teaching land development. America’s post-World War II building boom produced legions of uninspired buildings, the products of real estate developers whose goals seemed, to architects, to be motivated by profit margins alone, with little regard for urban design issues or the quality of life. The reckless urban renewal and suburban sprawl of the 1970s and the frantic overbuilding of the mid-1980s further tarnished the reputation of developers, and their output was maligned in both the architectural and mainstream presses, as well as in architecture schools.

A more ecumenical approach to urban design and development began to emerge in the 1990s.

Public-private partnerships, community activism, preservation and environmental legislation, and new tax incentives redefined the real estate industry in the wake of the Tax Reform Act of 1986. According to Richard Rosan, an architect and president of the Urban Land Institute, a Washington, D.C.-based association for real estate professionals: “There are more opportunities now than ever—preservation, new urban developments, multiunit housing, retail, and entertainment.”

The entertainer

Entertainment and recreation are two overlapping arenas that have had tremendous momentum in the 1990s. No one has seen more of it than architect Wing Chao, who oversees the planning and design of Disney real estate holdings worldwide. For 26 years, Chao has directed some of the world’s most prominent architects in creating Disney’s staggering \$6 billion entertainment portfolio. Currently,

Architect-developers Grid Properties conceived Harlem USA retail megacomplex (above) and commissioned Skidmore, Owings & Merrill to design it. Disney Imagineering Vice President Wing Chao oversaw construction of Magic Kingdom Hotel (facing page, left) and Disneyland Hotel (facing page, right), both at Disneyland Paris.

he's planning the expansion of Disney's flagship property in Anaheim, California; in Florida, he's managing the design of a new 2,000-room convention hotel and sports complex; at Tokyo Disneyland, he's coordinating a 1 million-square-foot retail and entertainment complex.

In Celebration, Disney's themed new town of 8,000 homes at the southern edge of Disney World near Orlando, Florida (*Architecture*, August 1997, pages 114-119), Chao drives the selection and design processes. Philip Johnson, Robert Stern, Charles Moore, Michael Graves, Robert Venturi, Aldo Rossi, Cesar Pelli, and Charles Gwathmey

the right part," explains Chao of his role as architect-client.

The dealmakers

As an apprentice in Ulrich Franzen's New York City office in the 1970s, Drew Greenwald remembers, "I realized that clients need more services than an architect can provide, especially when the client is a hospital, college, or other large institution." He and his architect-wife, Mindy, started Grid Properties in 1982, believing they could have more impact on the built environment by involving themselves in all aspects of a project, including its development. But neither had ever

purchased in 1971 by the Harlem Commonwealth Council (HCC), a private not-for-profit economic development corporation. In 1991, Greenwald convinced HCC to join with Grid Properties to develop a Skidmore, Owning & Merrill-designed large-scale retail and entertainment complex that is now under construction.

The advocate

Not all development in the 1990s is about retail megacomplexes and theme parks, of course. Growing attention is being paid to social issues in the private sector now that many government social programs and housing subsidies have been discontinued.

In 1979, architects Katrin Adam, Joan Forester Sprague, and Susan Aitchison and community advocate Alma Felix Green founded the Women's Development Corporation (WDC) in Providence, Rhode Island, inspired by a desire to serve a constituency largely ignored by the private sector and often inadequately supported by the public one: low-income families and people with special needs.

WDC began with a modest federal grant to study the needs of low-

Innovative public-private partnerships, community activism, preservation and environmental legislation, and new tax incentives have forced changes in the real estate industry.

are some of the architectural media magnets giving Celebration a notoriety unprecedented in town planning. "I recommend designers to [CEO Michael Eisner] and we discuss the type of building needed and the theme it will carry. Sometimes there are competitions; sometimes three or four architects are invited for an interview. The goal is to cast the right designer in

worked for a developer. They just hung out their shingle and began pounding the pavement in search of undeveloped properties, then cold-called owners, saying, "I've got an idea for your property."

Grid's development of Harlem USA, a \$65 million retail and entertainment complex, illustrates how persistence has paid off. The property in this historic upper Manhattan neighborhood had remained undeveloped since it was





All said they chose development over private architectural practice to have more control over their work and, by extension, more influence over the built environment.

income single women with families. Using the results of this study, they developed nontraditional housing prototypes, a proposal for 76 units of housing, as well as a new model for real estate development that allowed tenant participation in the planning process.

Since this modest beginning, WDC has developed over 550 housing units and has assets of \$15 million. Its client list has expanded to include housing nonprofits and cooperatives, mental health centers, shelters, elderly and handicapped housing sponsors, the Chamber of Commerce, and municipalities in five other cities. Most recently, the Warwick, Rhode Island, City Council contracted WDC to develop the town's first low-income housing in 25 years and donated a 111-year-old abandoned schoolhouse. WDC transformed the historic Victorian into a seven-unit apartment building for about \$1 million and will own the property through a "single-purpose" corporation called School House Place, Ltd.

This project and Harlem USA were financed through complex public-private collaborations, requiring analytical business skills not typically emphasized in architecture school curricula. Aitcheson and Green, WDC's two remaining original partners, have also learned over the past 18 years to find funding anywhere it can be found. They funded the schoolhouse renovation with local, state, and federal grants; bank loans; their own money; and by selling the project's tax credits to investors.

For Harlem USA, Greenwald and his partners had to attract commercial tenants to the project before approaching investors. Four years of persistent marketing finally convinced retailers that Harlem, which had never had a brand-name retailer, was an underserved market in which they could prosper.

The developers

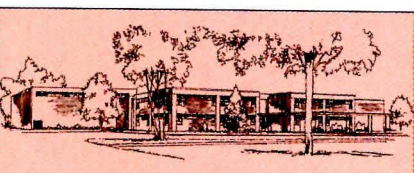
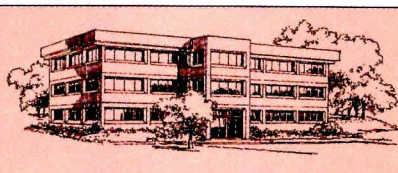
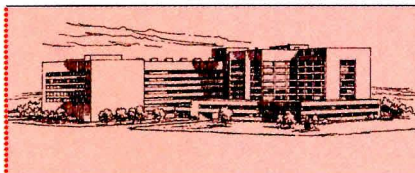
Regardless of their differences, all three architect-developers share similar motivations. They chose development over private architectural practice to have

The Women's Development Corporation facilitated conversion of schoolhouse in Warwick, Rhode Island, into affordable housing.

more control over their work and, by extension, more influence over the built environment. Furthermore, they recognized the economic advantage that development has over a restricted architectural practice: repeat business. Unlike doctors and accountants, architects can't always expect a continuing relationship with any one client. Typically, an architectural commission is executed and it's on to the next client's project. Perhaps because they've diversified their skills to serve clients with long-term goals, developers can position themselves as vital to a company's continuity. "You learn a lot when you manage the property you developed. You pay attention to detail in the beginning and try to anticipate problems. We make some mistakes, but we're the ones who have to fix them," explains Aitcheson, referring to WDC's role as managing general partner in most of its projects. Grid Properties also offers a variety of management services.

Even if most architecture firms don't negotiate ongoing management contracts with clients, they will have to offer more than traditional services to remain competitive in today's market. Corporate and institutional clients now bring with them interrelated requirements that extend program and design issues well beyond the building envelope. Many now also bring executives with design backgrounds. This should alert architects that they will be dealing with clients who are more sophisticated, expect more services, and who want to participate in the design process. However, an alert need not portend obsolescence for the profession. It is because they are architects first that the developers presented here believe that artistic vision, community advocacy, and long-term commitment are critical to the future of enduring urban environments.

CONSTRUCTION COST COMPARISONS PER SQUARE FOOT • JULY 1998



HOSPITAL, 4-8 STORY

Face brick with structural facing tile and reinforced steel frame

OFFICE BUILDING, 2-4 STORY

Face brick with concrete block back-up and steel joists

SCHOOL, JR. HIGH

Face brick with concrete block back-up and a steel frame

	2nd Q 1998	2nd Q 1997	2nd Q 1998	2nd Q 1997	2nd Q 1998	2nd Q 1997
Atlanta	\$ 97.31	95.58	60.43	59.18	72.98	71.17
Boston	128.80	128.06	79.78	79.54	96.35	95.59
Chicago	121.44	117.78	75.50	72.84	91.18	87.13
Dallas	94.99	93.53	58.80	58.18	71.01	69.64
Kansas City	104.93	102.73	64.84	63.87	78.31	76.49
Los Angeles	122.00	121.02	75.66	75.52	91.34	90.51
New York City	147.65	146.03	91.94	90.85	111.03	108.97
Phoenix	98.88	98.72	61.25	61.06	73.96	73.51
St. Louis	112.53	109.87	69.60	68.42	84.05	81.81
San Francisco	136.70	136.07	85.01	84.36	102.66	101.31
Seattle	115.76	114.42	71.69	70.97	86.58	84.95
Washington, D.C.	105.56	103.38	65.73	64.27	79.38	77.30

Each month Architecture takes a snapshot of U.S. construction – looking at average costs and actual upcoming projects for different building types on a rotating basis. News on projects is provided by Construction Market Data (CMD). Costs are supplied by R.S. Means Co.

NOTE: Cost comparisons shown here are for the basic building without sitework, development, land, specialty finishes or equipment. Actual square foot costs vary significantly from project to project based on quality, complexity and local economy.

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UPCOMING PROJECTS

Bartow Memorial Hospital

Location: 1239 East Main Street, Bartow, Polk County, FL

Project Value: \$15.8 million

Size: 125,000 sq ft, 2 floors above grade, 56 units, 1 structure

Contract Type: Negotiated

Current Project Stage: Planning; Design Development

Status: Design Development in Progress; Working Drawings to Begin 5/98

Start Date: 9/1/98

Owner: Columbia/HCA Design & Construction; 1 Park Plaza; PO Box 550; Nashville, TN 37203

Fax: 615.34432770

Architect: Gresham Smith & Partners Florio; Matt Harrell; 712 S. Oregon Avenue; Tampa, FL 33606

Phone: 813.251.6838, **Fax:** 813.251.8580

Western State Hosp Legal Offenders Unit

Location: 9601 Steilacoom Boulevard, Steilacoom, Pierce County, WA

Project Value: \$30 million

Size: 156,000 sq ft, 2 floors above grade, 236 units, 1 structure

Contract Type: Open Bidding

Current Project Stage: Planning; Schematics

Status: Schematics in Progress; Bid Date to be Set Approx. 4/99

Start Date: 6/1/99

Owner: Washington State Dept of General Administration; Phil Timpke; 206 General PO Box 41012; Olympia, WA 98504

Phone: 360.902.7272; **Fax:** 360.753.2848

Architect: BJSS Group Architects & Planners; John Lindstrom; 320 W Bay Drive, Suite 212; Olympia, WA 98502

Phone: 360.943.4650; **Fax:** 360.357.9022

Aurora Corporate Plaza

Location: Iliff & Peoria, Aurora, Arapahoe County, CO

Project Value: \$8 million

Size: 105,000 sq ft, 3 floors above grade, 1 structure

Contract Type: Negotiated

Current Project Stage: Planning; Schematics

Status: Schematics to Begin Approx. 5/98; Subbid Schedule Not Set

Start Date: 6/1/98

Owner: Lowe Enterprises; Ed Bersocchi; 1515 Arapahoe, Tower 3, Suite 65; Denver, CO 80202

Phone: 303.571.5000

Architect: RNL Design; Martin Eiss; 1515 Arapahoe, Tower 3, Suite 700; Denver, CO 80202

Phone: 303.295.1717; **Fax:** 303.292.0845

FCCI Insurance Group Corporate Headquarters

Location: Bradenton, Sarasota County, FL

Project Value: \$25 million

Size: 230,000 sq ft, 3 floors above grade, 3 structure

Contract Type: Negotiated

Current Project Stage: Planning; Schematic Design

Status: Schematics in Progress; Subbid Schedule Not Set

Owner's Representative: Robbins Bell & Kreher Architects; Jennifer Conlan; 2112 N 15th Street, Suite 300; Tampa, FL 33605

Phone: 813.247.5223; **Fax:** 813.224.9158

Architect: Robbins Bell & Kreher Architects; James Robbins; 2112 N 15th Street, Suite 300; Tampa, FL 33605

Phone: 813.247.5223; **Fax:** 813.224.9158

Middle School

Location: Route 108, Dover, Strafford County, NH

Project Value: \$15 million

Size: 150,000 sq ft, 3 floors above grade, 1 structure

Contract Type: Prequalified Bidders

Current Project Stage: Planning; Design Development

Status: Design Development in Progress; Bid Schedule Not Set

Owner: Dover School Department; Carol Berry; 288 Central Avenue, Municipal Building; Dover, NH 03820

Phone: 603.742.6400

Architect: Team Design Inc.; Scott Hughes; 40 Harvey Road; Londonderry, NH 03053

Phone: 603.434.4060; **Fax:** 603.434.4815

Selah Intermediate School

Location: North 13th Avenue & Freedmont Avenue, Selah, Yakima County, WA

Project Value: \$13.5 million

Size: 30,000 sq ft, 1 structure

Contract Type: Open Bidding

Current Project Stage: Planning; Working Drawings

Status: Working Drawings Complete; Bid Date to be Set Approx. 6/98

Start Date: 7/1/98

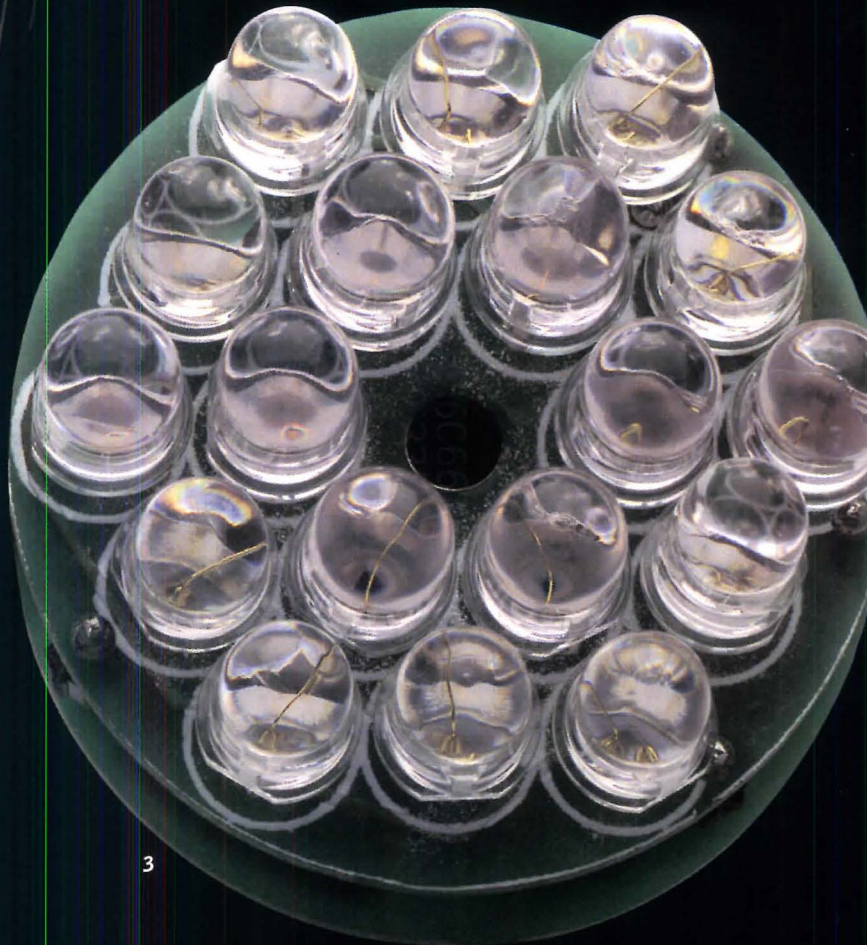
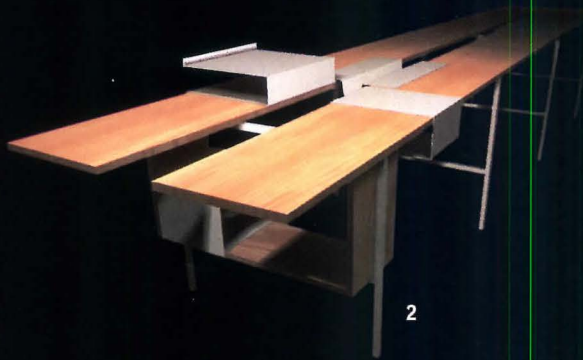
Owner: Selah School District 119; Jerry Jenkins; Administration Building; 105 W Bartlett; Selah, WA 98942

Phone: 509.697.7243

Architect: Loofburrow Architects; David Peterson; 14 N Front Street; Yakima, WA 98901

Phone: 509.457.5121; **Fax:** 509.457.6271

Products Color and Light



1 Featherweight Screen

X in Balance, created by the Austrian firm Design Wurz, is a lightweight, adjustable fabric screen that glides along a steel tension cable up to 26 feet long. Panels of balloon silk are simply stretched over X-shaped stainless steel braces. Plastic pulleys at the top of each rectangular screen guide it along a steel wire. The screens are available in nine sizes, up to 118 inches in height and 63 inches in width. Design Wurz offers six fabric colors: white, blue, yellow, red, black, and translucent gray netting. *Circle 294 on information card.*

2 Flexible Work Table

Readymade, a New York City furniture studio, has designed a table system with an enameled tubular steel frame and slotted pine tabletop and pine shelf. Predrilled legs allow shelves to be mounted anywhere. Removable enameled steel accessories, available in custom colors, include a file folder, cantilevered shelf, storage box, computer monitor stand, and a serving tray. Customers may also opt to supply their own tabletops. *Circle 295 on information card.*

3 Full-Spectrum Lighting

After introducing a digital lighting system that offers a full spectrum of 16.7 million colors, Color Kinetics is now expanding the range of fixtures into which the lights can be plugged. The new 1.25-inch-diameter, 3-inch-long Chameleon Series CMR18 lamp plugs directly into standard low-voltage MR11 and MR16 fixtures. Using internal microchips that can be controlled by computers, users can choose specific colors from pastels to highly saturated tones and create effects such as color washes and strobes. *Circle 296 on information card.*



5



4

6



7

4 Hide-And-Seek Dishwasher
The DishDrawer by New Zealand-based manufacturer Fisher & Paykel resembles an ordinary kitchen cabinet. Inside, however, is a dishwashing unit composed of one or two drawers filled with adjustable racks that double as dish and glass storage. In the two-drawer model, the compartments can be used independently or together. Both the single- and double-drawer models are available in stainless steel, black or white acrylic, or custom wood finishes.
Circle 297 on information card.

5 Minimalist Ceiling Fans
Industrial designer Ron Rezek introduces a collection of ceiling fans for his new enterprise, The Modern Fan Company. The Cirrus short model is all die-cast aluminum and available in a gloss white finish or the brushed aluminum shown here. Balanced blades are injection-molded acrylic or plywood laminate.
Circle 298 on information card.

6 Tibetan Wool Rugs
Veedon Fleece of Surrey, England, produces a small line of custom-made rugs and carpets, spun-dyed and hand-knotted (80 or 100 knots per square inch) on vertical looms in a Tibetan workshop. The workshop accepts orders for single or multiple rugs in any size and color combination. The "sample" shown here displays the 100 standard colors, but is also for sale.
Circle 299 on information card.

7 Colorful Cabinets
New York City designer Nick Dine has created a playful line of brightly colored filing systems, called Gomer Pile and Gomer File. A steel frame with wheels holds the modular systems, which are made by stacking and joining individual drawers and files measuring up to 72 inches in length. This flexible assembly method allows customers to create a variety of configurations. The powder-coated steel units are available in almost 200 standard colors and custom tints.
Circle 300 on information card.

Will computers ever replace the cocktail napkin? CAD publishers are certainly trying.

By *Bruce B. Palmer*

From gathering programmatic information to completing as-built drawings, computers have dramatically changed the way architects work. But there is one area where they haven't made much headway: conceptual design. So far, software developers have been unable to create programs that improve on the familiar techniques that architects depend upon during the initial stages of design.

When CAD made its debut over 20 years ago, it focused on streamlining the production of construction documents. The implementation of graphic standards, the reuse of symbols, and the scale-independent nature of electronic drafting all lend themselves to computerization. In the 1980s, as computer prices plummeted and their use among architects soared, CAD programmers tried to enhance their software to address other phases of the design process. New, powerful microchips enabled the creation of intricate 3-D models and allowed users to produce sophisticated renderings without specialized workstations or highly trained personnel.

But no matter how adept designers became with the new technology, they continued to develop their initial design iterations the way their predecessors had for centuries: on paper. Today, designers still prefer the simple interface and tactile feedback that only hand-drawing can produce. "Architects don't want to give up the hand sketch," says Tomas

Hernandez, associate partner and director of computer services at Kohn Pedersen Fox Associates (KPF) in New York City. "We tried to use illustration software but found that it was more effective to scan drawings done on yellow trace and insert them into CAD drawings."

Architects at smaller firms echo this sentiment. Bradley A. Martin III of Lyle•Cook Architects in Clarksville, Tennessee, has become frustrated with software that claims to be useful for the conceptual design phase, but isn't. "There's always a conflict between the simplicity of a program and its actual usefulness," explains Martin. "The inexpensive programs are easy to use, but have very limited tools. AutoCAD has lots of tools, but none work as well as a pen for sketching."

Multiple deterrents

Independent of software limitations, pointing devices for computers are also a deterrent to designers who might otherwise try to adapt to conceptualization software. The computer mouse is not conducive to drawing, and other options are not much better. The pressure-sensitive stylus on a drawing tablet, which seems the most natural option, also falls short. "There's a coordination problem because your eye is looking at the screen and your hand is on the tablet. And that is only part of the problem," KPF's Hernandez maintains. "Let's say you could draw right on the screen. It still wouldn't come close to the feeling of a felt-tipped marker on a piece of trace."

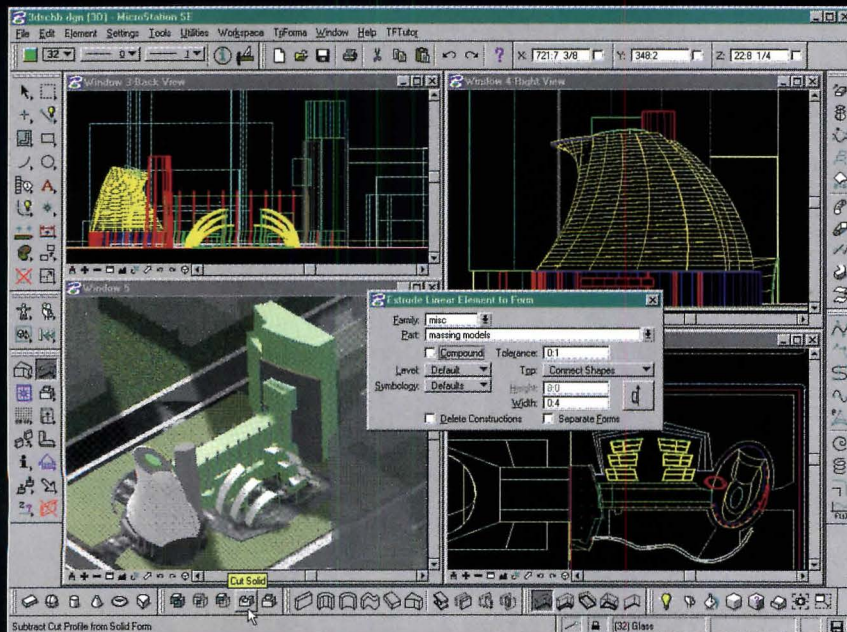
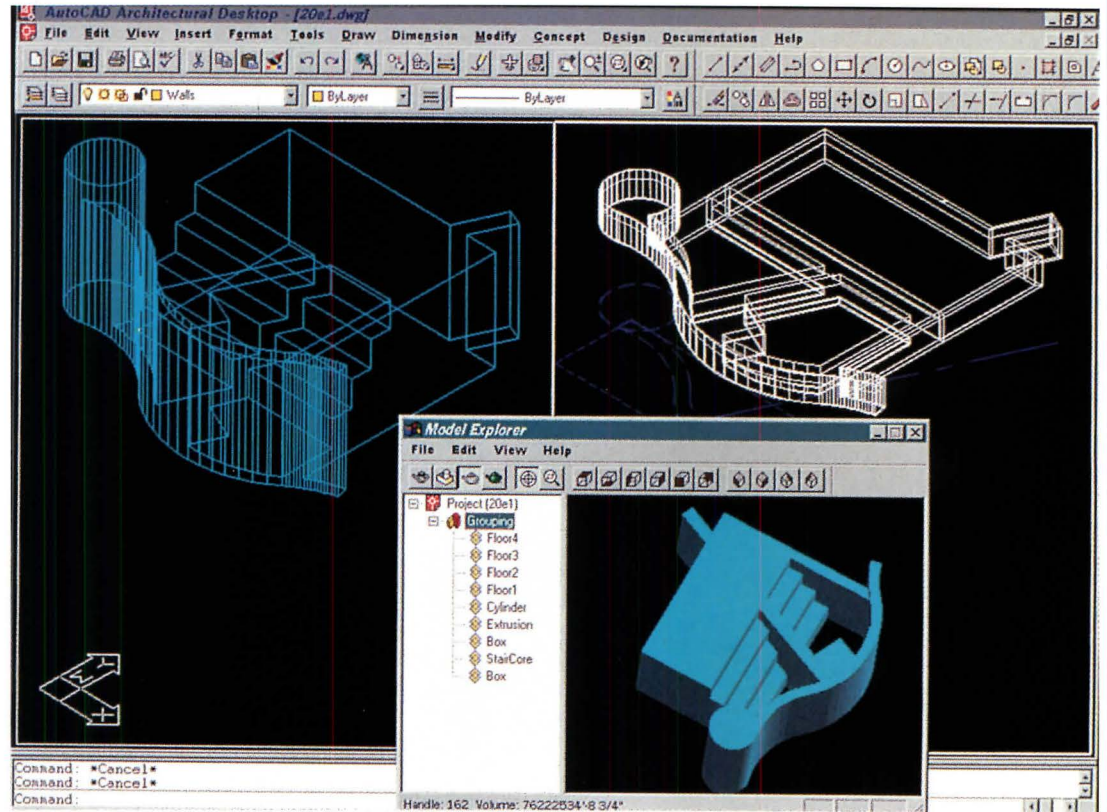
AutoCAD and MicroStation, two of the most popular CAD programs used by architects, contain commands that approximate the

freehand techniques associated with schematic design, but the process is awkward. The drawings created by these methods don't lend themselves to further refinement during design development. Capturing the broad strokes and subtle nuances of freehand sketching is far more suited to raster-based graphics programs like Adobe Illustrator and Macromedia Freehand than vector-based CAD software.

Nemetschek Systems, a German CAD software vendor, has worked around this problem in the latest version of their turnkey CAD package, ALLPLAN. The sketching mode in ALLPLAN is revolutionary. When users sketch objects that approximate common geometric shapes with the cursor, the program instantly redraws them as precise rectangles, ellipses, lines, and polygons. In essence, this is the best of both worlds: drawing naturally and allowing the computer to do the dirty work of precision placement. Nemetschek also simplified the manipulation of sketched elements. Users can activate commands such as "move" and "copy" by "writing" shorthandlike symbols in the drawing. The natural feel of ALLPLAN's sketching module is unmatched in the software world. Unfortunately, these features alone are not a compelling reason to switch from a mainstream program, and ALLPLAN's sketching capabilities are not included in any of the add-on modules that Nemetschek markets for AutoCAD.

AutoCAD Architectural Desktop

Autodesk's new AutoCAD Architectural Desktop enables users to transform amalgam of simple geometric shapes into three-dimensional conceptual design.



TriForma

Multiple views of project rendered in Bentley Systems' TriForma show new release's ability to extract workable drawings from most basic sketches to establish two- and three-dimensional spatial relationships.

3-D modeling

While most CAD vendors continue to miss the mark with regard to sketching tools, they are making huge strides in conceptual modeling. The rapid acceptance by architects of programs like form•Z from Autodesk— a powerful, three-dimensional design program for all design disciplines—has motivated Autodesk, Bentley, and others to build better mass modeling capabilities into their existing CAD software. The versatility of form•Z is a double-edged sword: Designers certainly benefit from form•Z's sculptural nature, but

positioning ConceptCAD as a tool for generating quick models for proposals and presentations. Like ALLPLAN, ConceptCAD is excellent software that is destined for limited distribution, largely because of the larger vendors' grip on the industry.

Software add-ons

Meanwhile, as Autodesk and Bentley race to produce software that exploits the single-building model approach, where one generates two-dimensional construction documents from a 3-D model, they are simultaneously touting the benefits of their latest offerings for the conceptual design stage. Again,

So far, software developers have been unable to create programs that improve on the familiar techniques that architects depend upon during the initial stages of design.

its lack of architecture-specific commands can hinder them.

Virtus Corporation, on the other hand, has fine-tuned ConceptCAD for architects. Users can place solids and shapes in any of six two-dimensional views or in a shaded three-dimensional "walk view." A designer can construct architectural elements such as walls, doors, and stairs from scratch or drop them into any view from an extensive kit of parts. Modifying the model to explore design avenues is straightforward, even for those unfamiliar with 3-D techniques in other programs.

ConceptCAD's walk view is easily manipulated by "steering" the cursor. Always rendered, the walk view is ConceptCAD's most impressive feature. Navigating through a model is much easier than in competing programs. The software is always aware of where the floor is, for example, and automatically adjusts the vantage point of the viewer when one encounters stairs or other changes in elevation. Virtus is

while both of the major players' latest offerings for architects improve on their previous mass modeling features, they barely address two-dimensional conceptualizing in plan or elevation.

According to Brad Workman, vice president of building engineering products at Bentley Systems, computer-aided drafting programs only now are coming to maturity as computer-aided design programs, as the CAD paradigm shifts to the single-building model. Workman attributes the slow development of conceptual design software to the reluctance of designers to embrace this type of new technology and therefore the reluctance of vendors to go to the expense of developing software for a limited audience. "From a commercial point of view, it is only recently that designers are adopting CAD as a design tool," says Workman. "Only a few years ago, the profit margins were still too small to attract the attention of major software developers."

In 1996, Bentley introduced TriForma, an architectural add-on for MicroStation. As with other programs organized around a single 3-D CAD model from which plans, elevations, and sections are cut

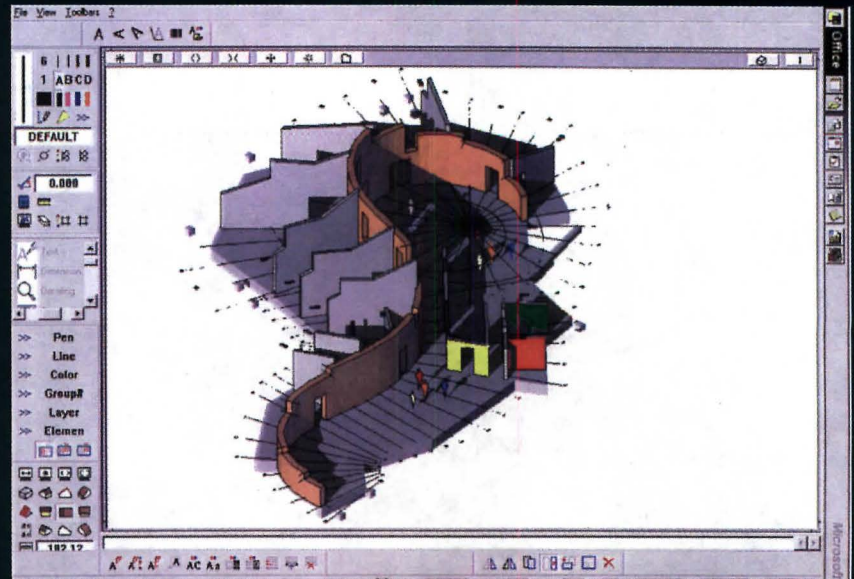
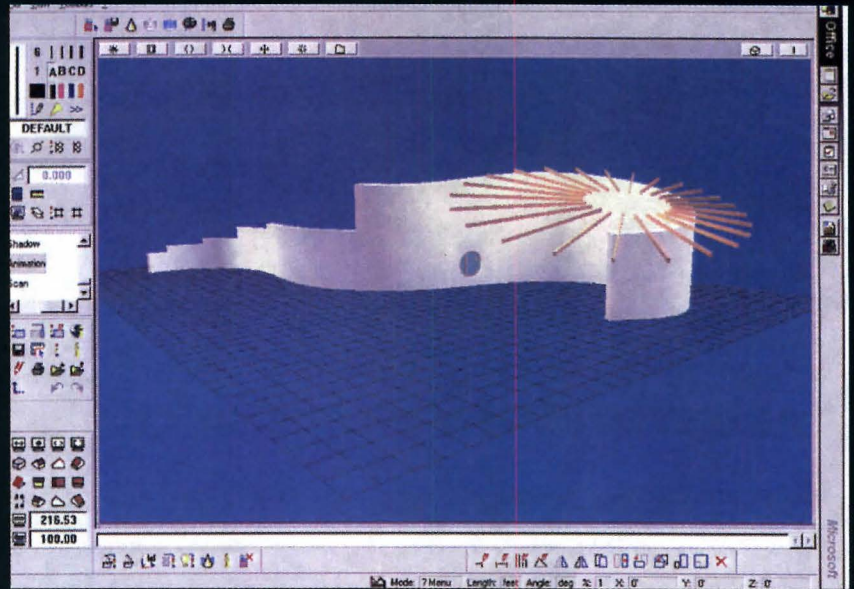
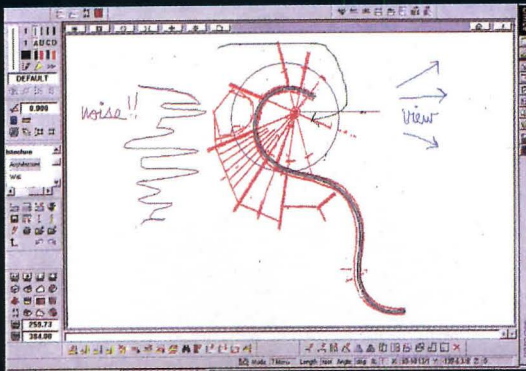
or extracted, TriForma includes tools for the creation and manipulation of abstract solid forms. These tools are especially useful immediately following the "cocktail napkin" stage. Architects can use the software to design buildings from the inside out to establish spatial relationships and use sculpting tools to create a shell to contain them.

With TriForma, designers can insert doors, walls, windows, and columns without designating their architectural characteristics. This was a weak point for the pioneers of the single-building model: Designers had to know too much early in the design process. It proved pointless to assign finish materials or fire ratings to a wall that, during schematic design, only represents a spatial division. Bentley has simplified the process by assigning the attributes of architectural elements later in the design process.

The recently introduced AutoCAD Architectural Desktop targets the same audience. Autodesk's entry into the single-building model market also provides little support for freehand sketching but includes plenty of commands to facilitate the construction of conceptual models. Although Autodesk is promoting Architectural Desktop as a unified program, they sell "AutoCAD for Architects" bundled with AutoCAD Release-14 and also as a separate add-on. The program is similar to TriForma with special commands relating the phases of architectural design grouped together on new pull-down menus.

Despite the efforts of some of the industry's strongest players, viable tools for schematic design are still lacking. Until manufacturers feel that there is a strong demand at the front end of the design process, yellow trace and cocktail napkins will continue to be the tools of choice.

Bruce B. Palmer is the director of technology at Gensler in New York.



ALLPLAN

Revolutionary sketch mode of ALLPLAN by Nemetschek Systems allows users to combine sketched elements with scanned and drafted elements. While some lines drawn on screen can remain "sketchy" (top left), software converts others to precise rectangles, ellipses, lines, and polygons. Two-dimensional drawings automatically become intelligent architectural elements such as walls and beams (top right). Program generates virtual-reality animations (above right) and shadow studies (right) at any stage of development.

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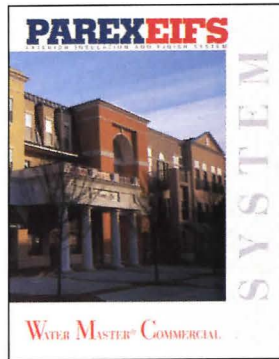
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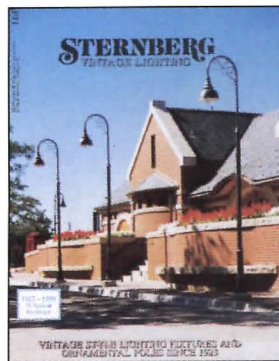
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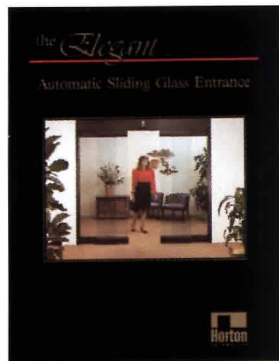
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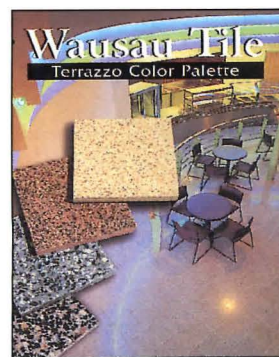
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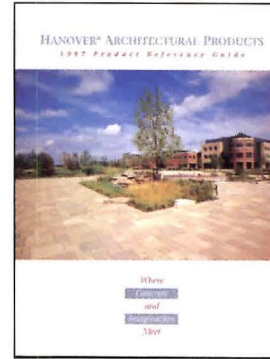
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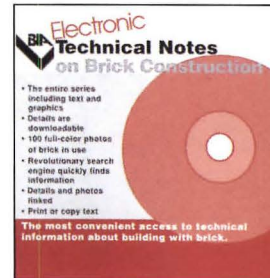
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- December '98
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- March '99
- April '99
- July '99

CLOSING DATES

- August 21, 1988
- October 23, 1998
- November 23, 1998
- January 22, 1999
- February 22, 1999
- May 21, 1999

Frank Lloyd Wright attributed the awakening of his design sense to childhood hours spent playing with the geometric blocks of Friedrich Froebel, founder of the modern kindergarten. Other architects recall similar creative births, some with toys that were improvised, others with toys like Wright's. What they gleaned from this intellectual kindling varies as much as their adult work.

Some delighted in their power over the miniature, looming like giants above tiny cities and towns. New York City architect Peter Samton was obsessed with shelter and survival. "During World War II,

cardboard chalet building set, to construct a wider variety of building types. "I still like models because they are so realistic," he says. "You can light them and photograph them and take them to bed and pretend that they are built."

As children, most architects built spaces to savor the illusion of independence. "We loved building tree forts," recalls Laurinda Spear, a founding partner of Miami's Arquitectonica. "It was dangerous: pretty high in the tree, with wood wedged between two branches to make a platform. It's amazing that my mother let us spend the night in them."

Child's Play

From tree houses to Lincoln Logs, architects trace their design skills to childhood toys.

you'd see pictures of air raids. So we'd build miniature cities and see what held up when we tried to demolish them," he recalls. Scavenging for building materials, at a time when he and other Americans were collecting tin foil for the war effort, made him appreciate the value of materials. "I still have difficulty with great luxury," he says, "building with unlimited money."

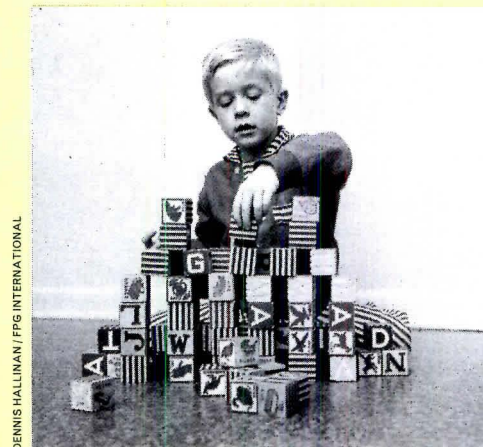
Others were fascinated with the realism of building toys like Erector sets and Lincoln Logs—the latter designed by Frank Lloyd's son, John Wright, in 1917. But they, too, enjoyed subverting the intended usage. Architect Emilio Ambasz, also of New York City, manufactured extra parts for The Little Builder, his wood-and-

Perhaps the theatricality of architect David Rockwell's exuberant spaces had its beginnings in the Rube Goldberg-like contraptions he devised as a child: "Someone would ride across the room at top speed on a door placed horizontally on rollers, slam into a mattress, and then be deluged with Ping-Pong balls."

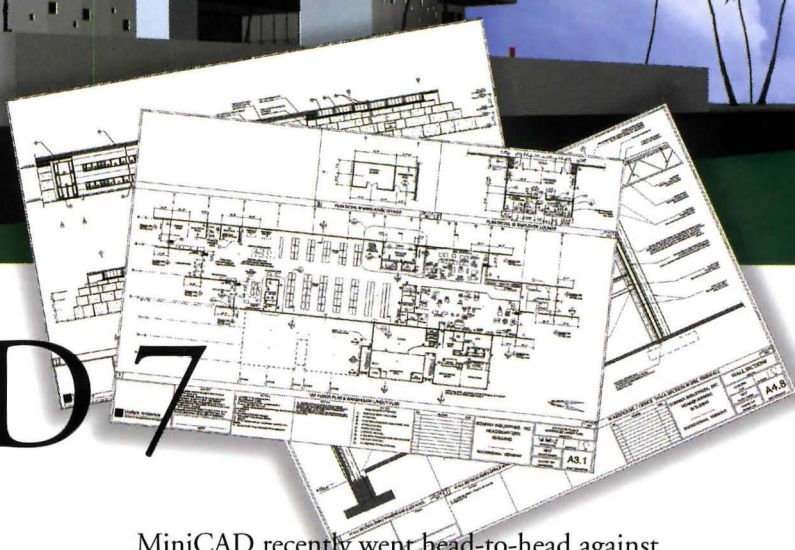
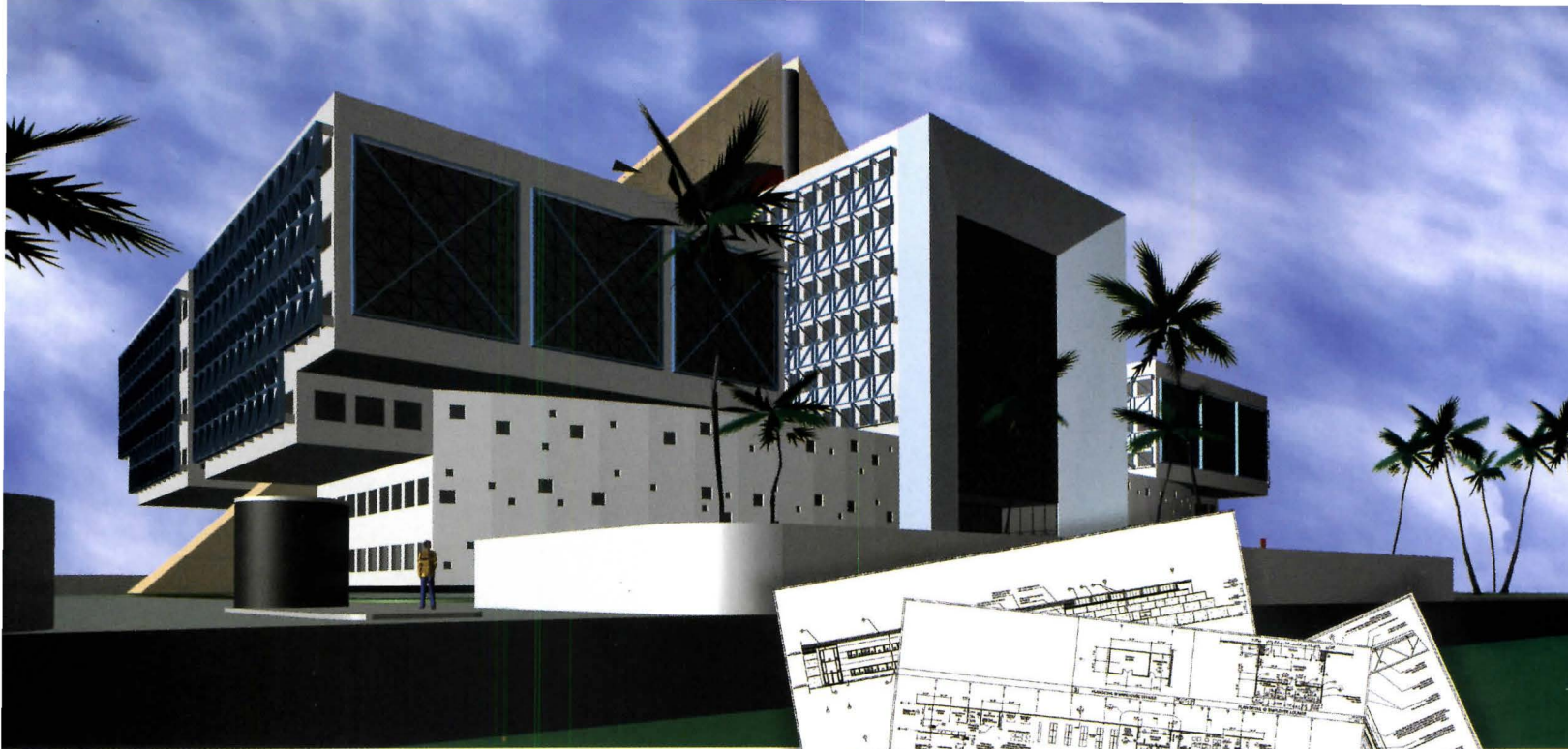
Albuquerque, New Mexico-based Antoine Predock also built with found objects, including radios, model airplanes, and—as a teenager—motorcycles. He marvels at "the miraculous possibility of all this stuff laying around that comes together out of nowhere."

It is during this blissful period of play—before the rules of physics, economics, and the social order interfere—that children shape the world. Most kids design and build, but architects are among the fortunate few who find a way to channel that play into a profession. "Part of the joy of [being an architect]," says New York City architect Andrew Tesoro, "is being in touch with that feeling you had as a child when making something. There are moments when you forget about the client, the budget, the deadline, and you're right back there with your Legos." *Andrea Truppin*

Andrea Truppin is a New York City-based journalist and documentary filmmaker.



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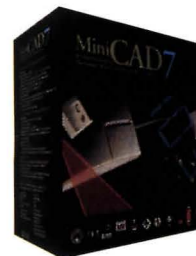
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