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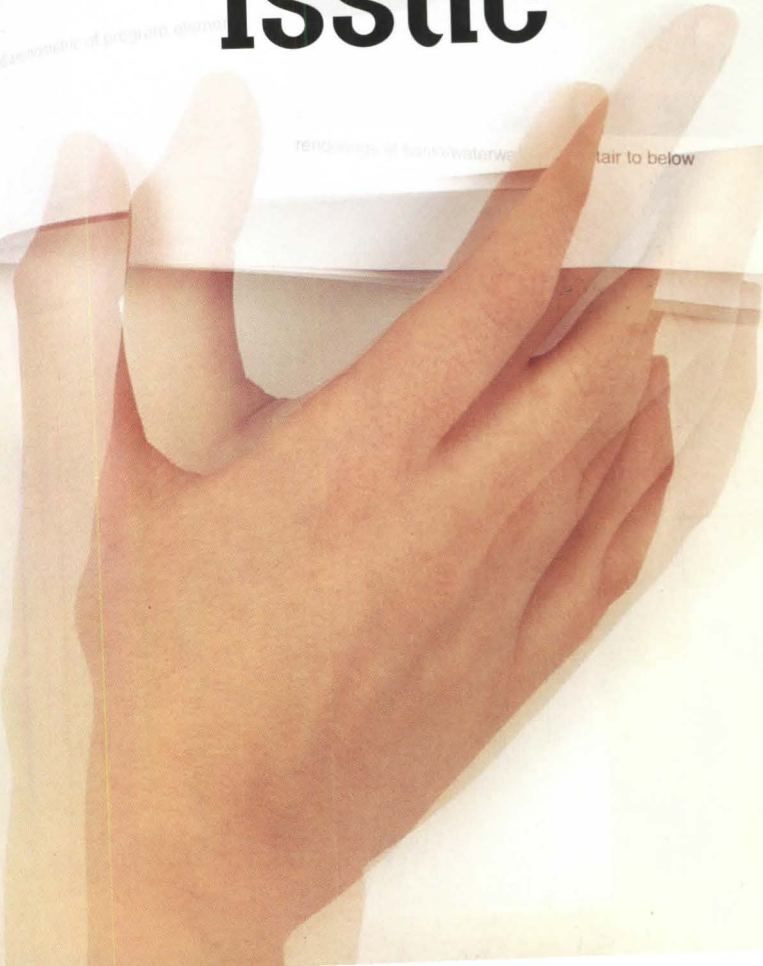
Annual Awards Issue

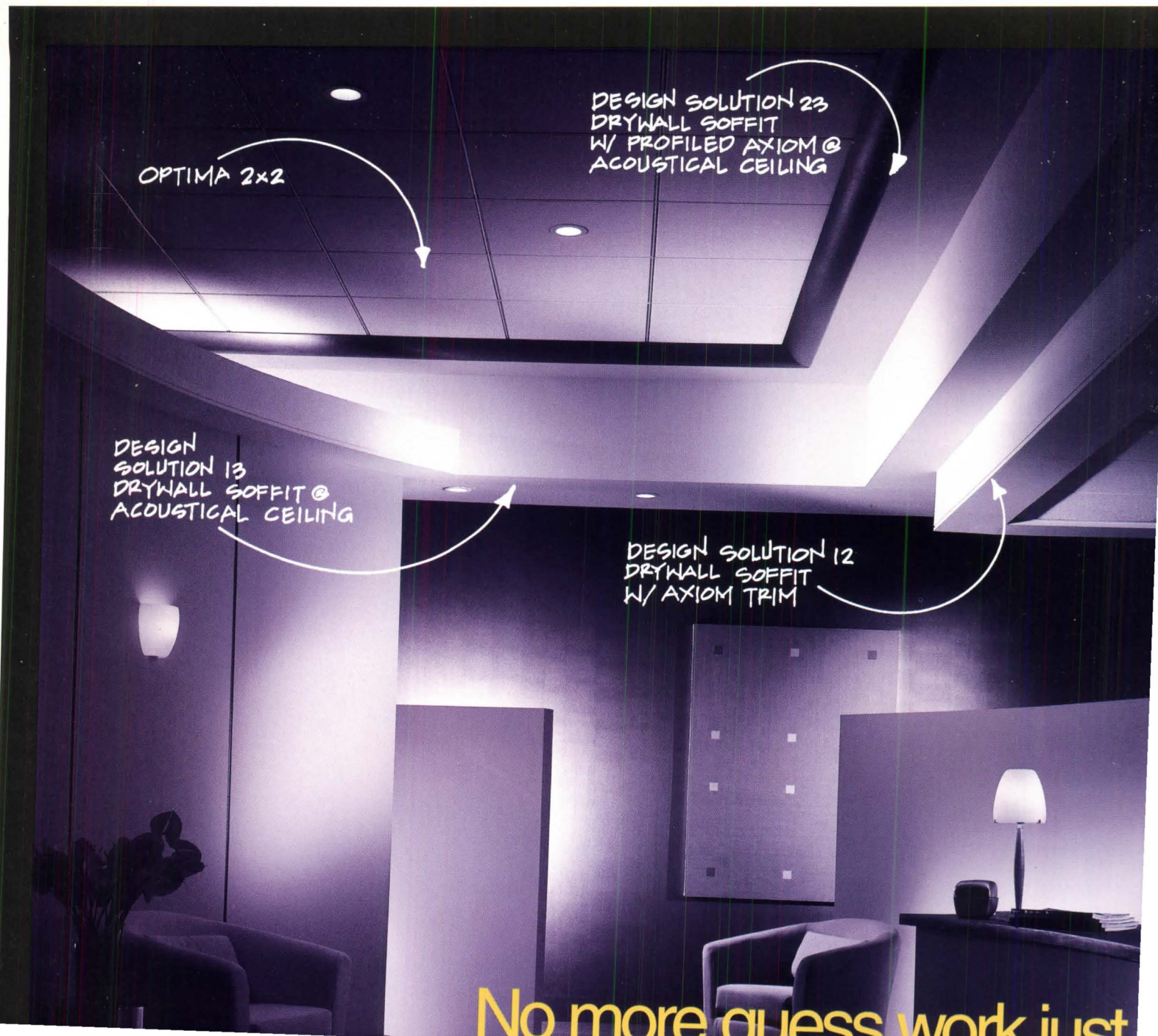
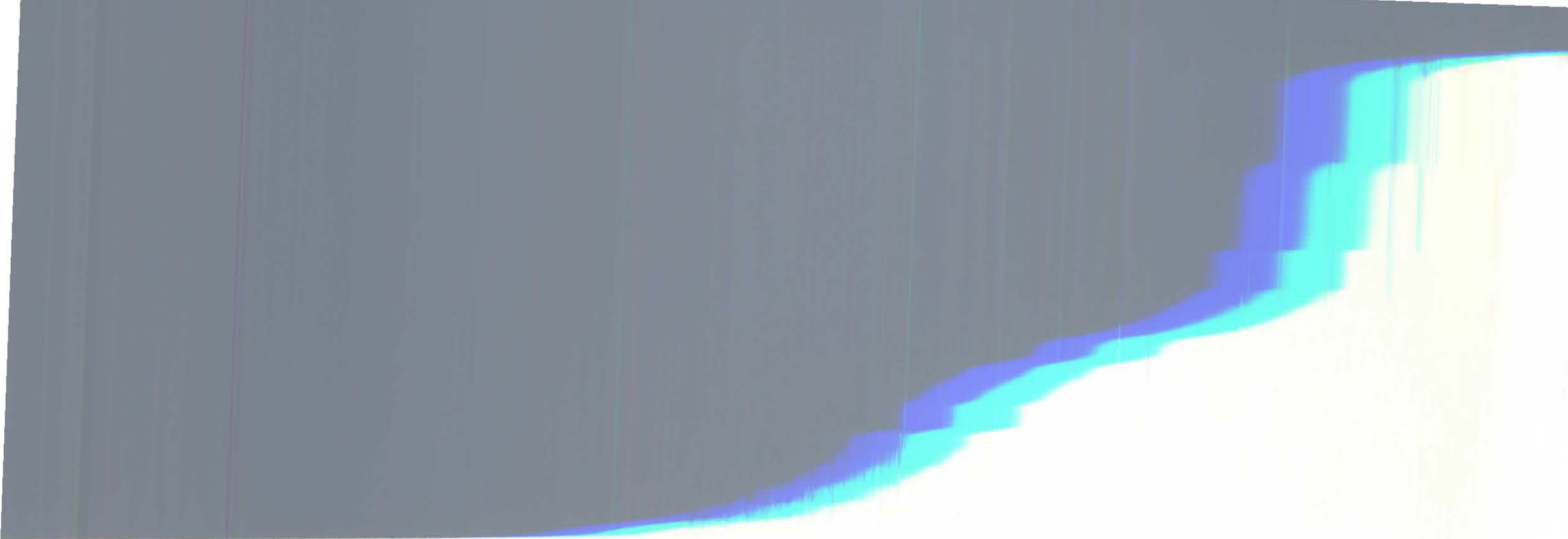
P/A Awards

Allied Works Architecture
Andrews / LeBlanc
Cho Slade Architecture
Gabellini Associates
Leers Weinzapfel Associates
Morphosis
Office dA
Pasanella + Klein Stolzman
+ Berg Architects
Patkau Architects
Shim-Sutcliffe Architects
SHoP
Skidmore, Owings & Merrill
SPF:a
Studio Works
Thomas Phifer and Partners
Vincent James Associates
Wendell Burnette Architects
Willis, Bricker
& Cannady, Architects

Awards for Architectural Research

Georgia Institute of Technology
Lawrence Berkeley
National Laboratory
René Davids
Siegel & Strain Architects
The University of California,
San Diego and the
Chinese University of Hong Kong





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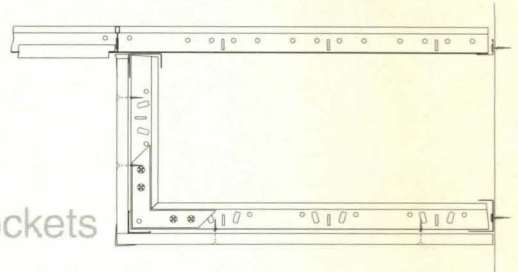
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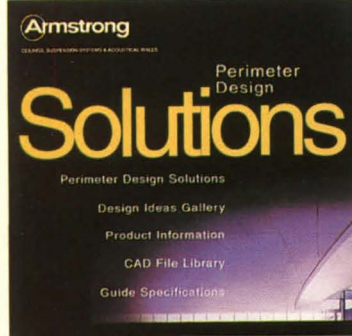
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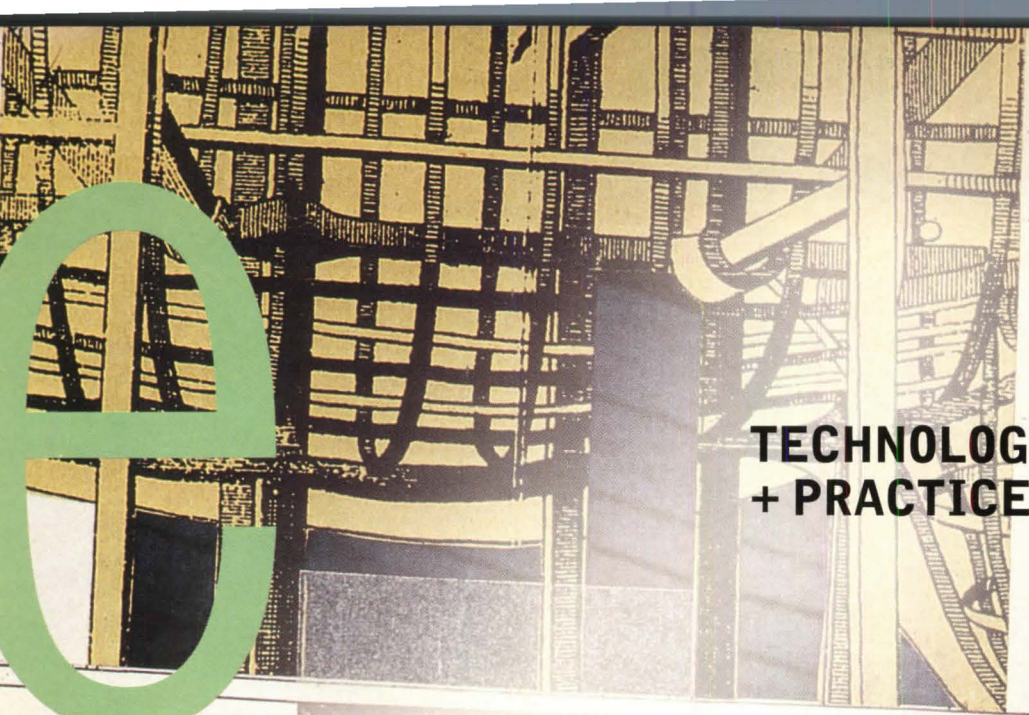
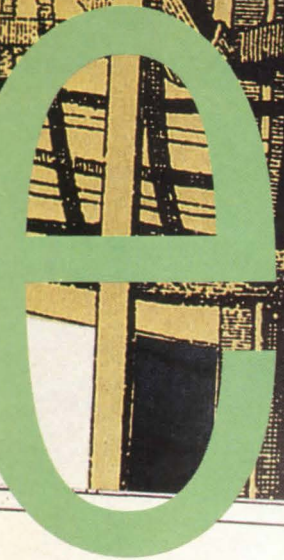
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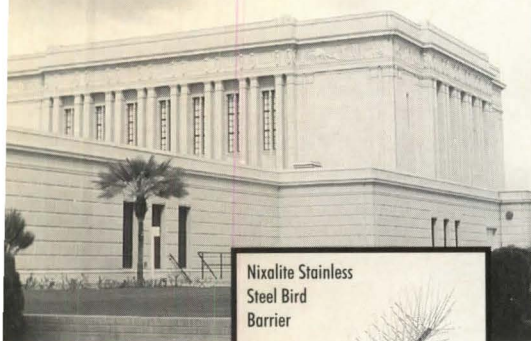
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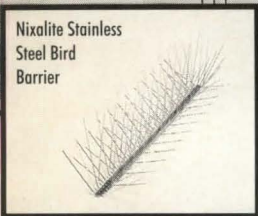
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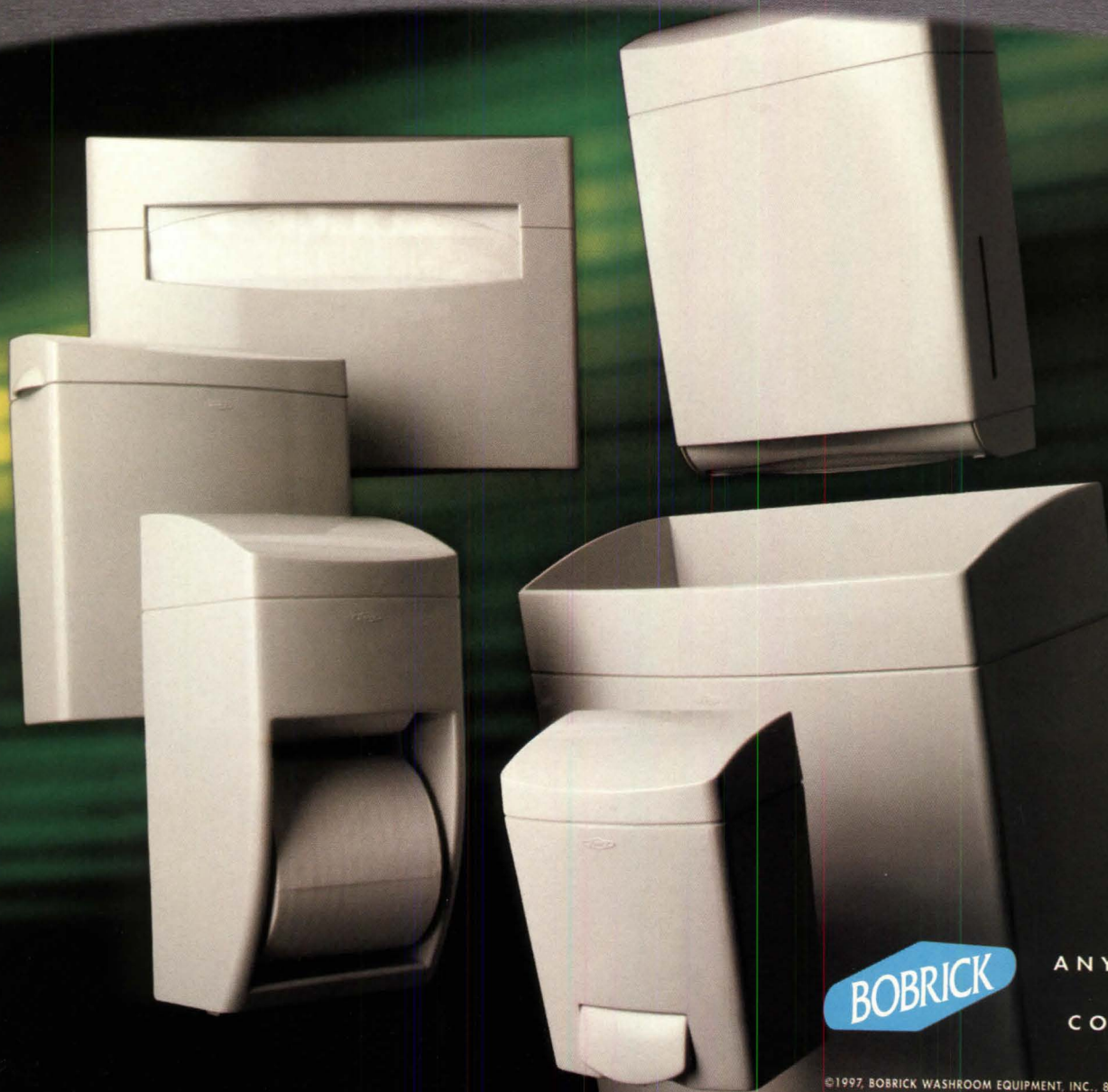
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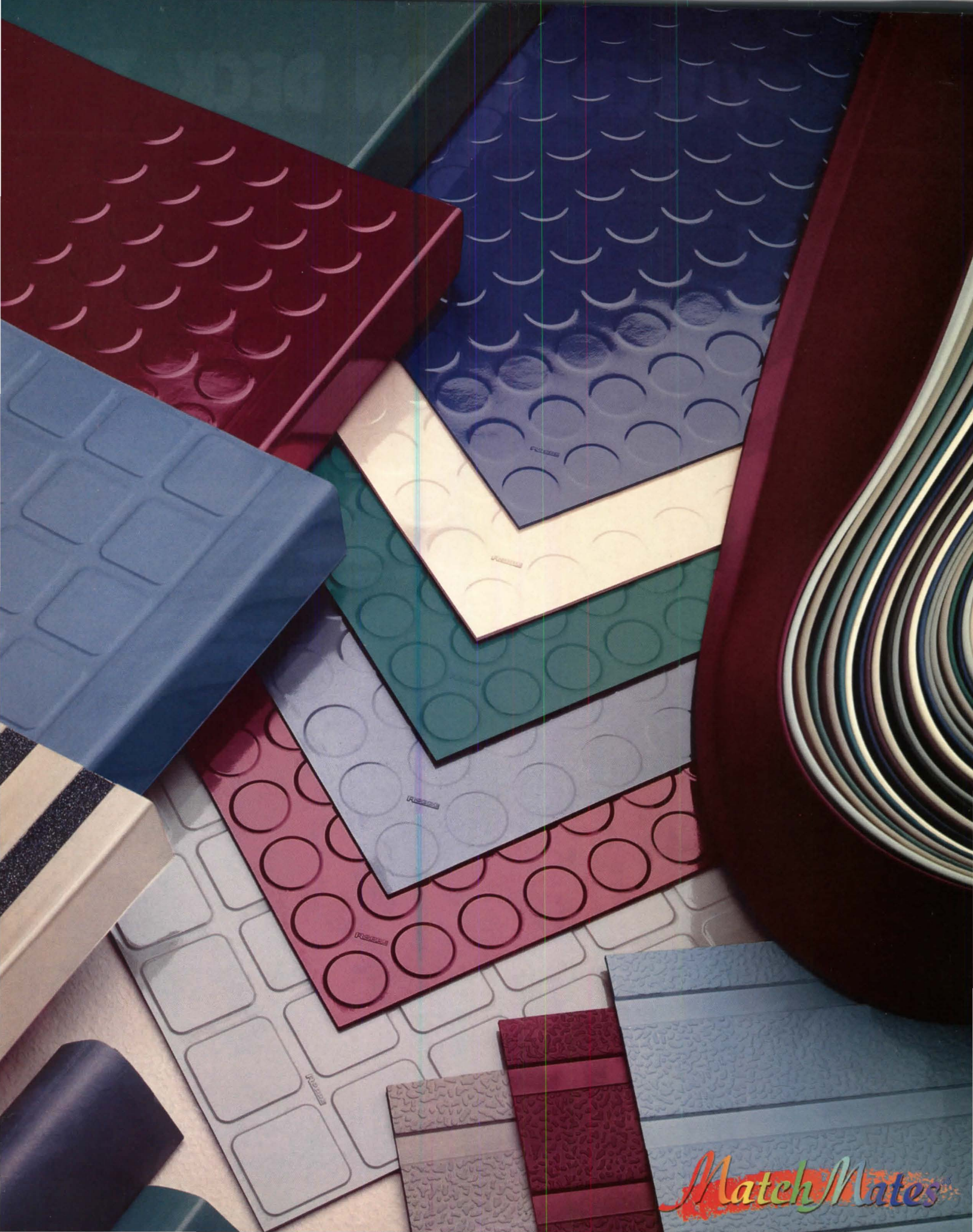
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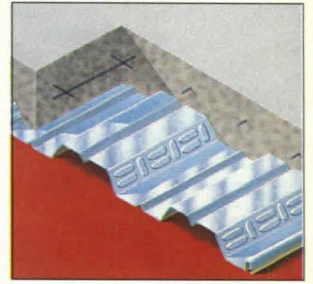
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Sound like a fantasy? It isn't. Right now, British Prime Minister Tony Blair's New Labour government is undertaking exactly this search. Architect Richard Rogers (now Lord Rogers) is one of several candidates on the whisper list for the job. Applications were due

administer grant programs that occasionally trickle down to architects. But these efforts are small, disparate, and localized. They do not add up to a visible rational commitment to architecture and design.

So why do British architects get all this governmental attention, while their American counterparts fly well below the federal radar screen? Several reasons. First, the postwar rebuilding of Great Britain's ruined infrastructure brought architects deep into the halls of government. According to Paul Finch, editor of *Architect's Journal*, nearly half the country's architects were government employees until the late 1970s. Second, the recently improved British economy, combined with the publicity

Architecture needs good advocates.

By Reed Kroloff

in mid-February, and Culture Secretary Chris Smith will make the appointment this spring.

The advocate's job description is not yet entirely clear. What is certain is that he or she will lead a currently unnamed architecture commission that centralizes several existing governmental agencies and administers an annual budget of \$2.5 million to, as the British Ministry of Culture, Media, and Sport explains, "offer advice to government and other public bodies on how to achieve better design quality; encourage education and public understanding of architecture at all levels from primary school to lifelong learning; liaise with business and industry to promote design quality; [and] make grants and commission research in furtherance of these objectives." In other words, architecture will have a designated, official voice in British government—a domestic ambassador of sorts—with a direct line to the cabinet and a ministerial mandate to spread the good word across the country.

There is nothing in this country to compare. The General Services Administration's Design Excellence program has introduced the federal government to the notion of peer review in the design process. The National Endowment for the Arts and other agencies

machine of the country's millennium programs, has made several architects into mainstream celebrities. The government and the public see the profession as creative and important. Finally, British architects have taken political advantage of their new prestige. They have thrown glittering parties and staged huge conferences on important national issues—and then invited politicians to address the thousands of assembled participants (read: voters). Tony Blair first announced his support for reviving local government for London at just such a conference.

Could any of this happen in the United States? Maybe. But Washington will never employ half the nation's architects. It's also unlikely that there will be a Lord Gehry of Santa Monica. Sadly, due to the profession's damaged self-image and its politically impotent professional organizations, many American architects assume that they are unable to affect public policy. They're wrong. Andrew Cuomo shapes HUD policy with the advice of Andres Duany, just as Tony Blair consults with Richard Rogers. When wielded astutely, institutional advocacy can be a powerful asset, and the American profession must develop an effective instrument of this type if it ever hopes to flourish. ■



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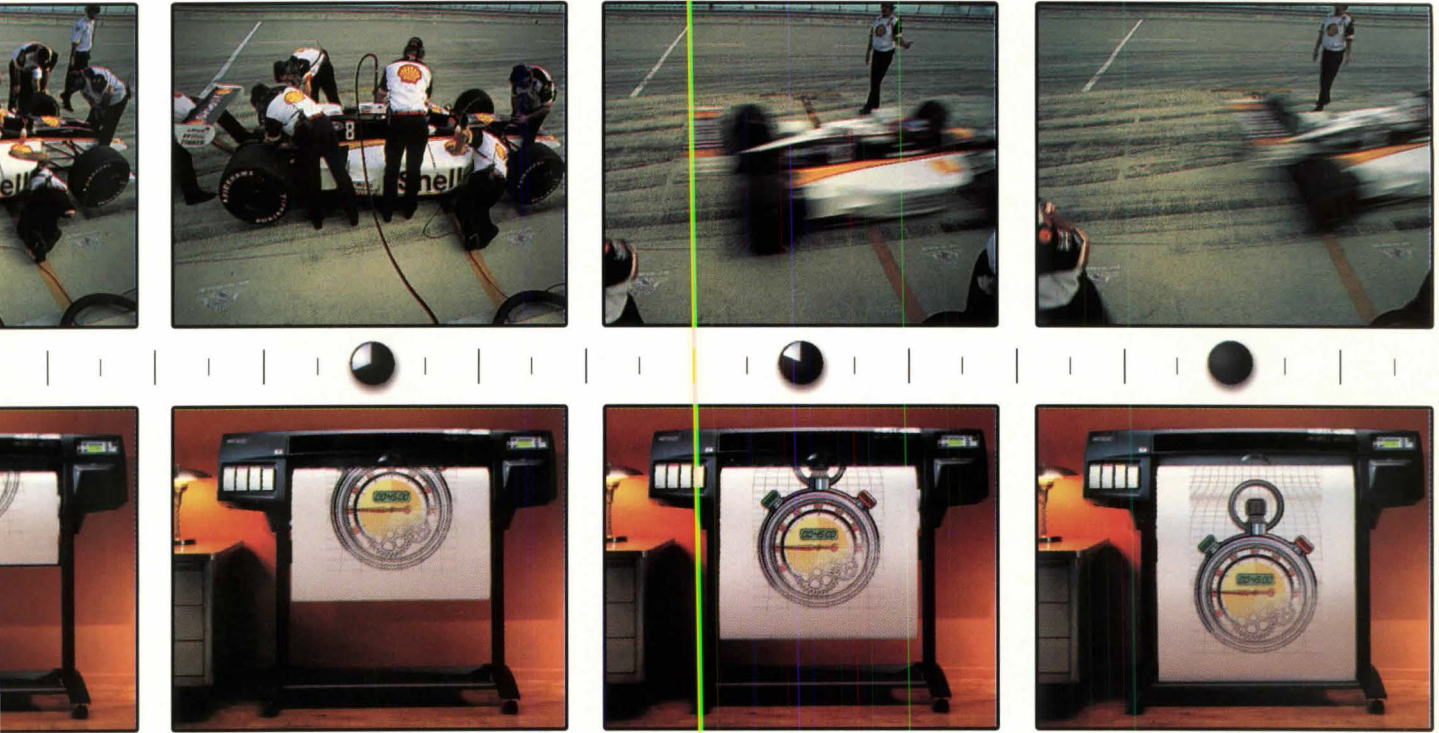
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JURY/JUDGE

The jury will be composed of residents and tourists in Roswell, New Mexico at the time of judging.

Judging proceedings will be held at the Roswell Museum and Art Center and Robert H. Goddard Planetarium in Roswell, New Mexico and shall be open to the public.

The jury will hear arguments and presentations by the Advocates and Critics regarding works submitted by all registrants. Final jury deliberations shall be closed.

The jury will be unpaid.

The presiding judge will be a neutral dispute resolution professional. The presiding judge is Anonymous.

ADVOCATES/CRITICS

The Advocates consist of:

Barbara S. Solomon
Dwight Atkinson
Thom Wilkins
James Scott O'Brien.

The Advocates will advocate Modernism and oppose the Critics.

The Critics consist of:

Duo Dickinson
David Rockwood
John Bryant
Michael Pinto.

The Critics will advocate the New Urbanism and oppose the Advocates.

The Critics and Advocates will be compensated as determined by the jury.

CALENDAR/DOCKET

Registration closes
June 30, 1999
Submissions due posted
September 20, 1999
Submissions due received
September 30, 1999
Judgment proceedings
October 6-10, 1999

Judgment proceedings coincide with the eastern New Mexico rodeo and parade to be held in Roswell.

Submissions in this competition need not be anonymous and may bear the mark of the designer.

An appeal, with costs borne by the appellant, may be filed after judgment proceedings.

The appellate judge is architect Arthur Erickson.

PRIZES/JUDGMENTS

Prizes will total between \$5,000 and \$25,000.

The jury alone will determine compensation for the authors and designers of the prevailing schemes as per the procedural rules laid out within the official ROSWELL competition book.

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Colorful history

Thank you for the issue devoted to color (*Architecture*, February 1999), an area rarely addressed by architects. While much of the text and photos are thought-provoking, you shed little light on why there has been so much reluctance to explore and use color. The reasons are deeply rooted in Western culture; even a cursory review of building history in other cultures reveals the Western world's fear of exterior color. It is interesting that the use of interior color has always been more acceptable because it is not publicly displayed. One major step forward in breaking down this centuries-long aversion would be a concerted effort on the part of architecture schools to explore the theory, history, and experimentation with architectural color.

Mark Karlen
Professor and Chair
Interior Design Department
Pratt Institute
Brooklyn, New York

Pavilion plagiarism?

I was disturbed by some erroneous remarks by Peter Blake in his article, "World's (Un)Fair," on the demise of the American Pavilion for Expo 2000 that appeared in your February issue (*Architecture*, page 57). For one thing, to suggest that an architect did not pay attention to budget requirements is very damaging from a career perspective. SITE did meet the original budget (\$17 million as of last April) and then tried everything possible to lower costs when it became evident that Commissioner [William D.] Rollnick was having difficulties raising money and reduced the budget to \$12 million in June.

The so-called pavilion "competition" was held in secret, using German contracts that SITE introduced to Rollnick. My firm was never "fired"—in fact, SITE was not even informed in any way of what was going on until Ben Forgey of *The Washington Post* called us with the story. SITE is presently preparing a lawsuit against Rollnick, Hochtief Construction Company in Germany, and the U.S. Information Agency for unethical treatment and the blatant plagiarism in the subsequent Barkow/Leibinger project, which uses at least a dozen ideas—including site plan and building configuration—from SITE's original pavilion concept. The actual

American Pavilion story is infinitely more interesting than Blake's report. It certainly has greater implications for the architectural profession as a whole, since it involves both copyright infringement and unethical business practice.

James Wines
President
SITE
New York City

Contract conflicts

I thank Barry LePatner for his article about the new American Institute of Architects (AIA) standard agreements (*Architecture*, February 1999, pages 106-109). I have sent the new B141 to several owners, and, typically, they are uncomfortable that the agreement limits the architect's role. They suspect that a required service is not listed in the schedule of services, which will incur additional fees.

The B141 format is intimidating, and it appears as though it favors the architect. Although many owner-architect contracts created by owners favor the owner, a fair contract should favor neither party. As LePatner mentions, architects are not known as hard-nosed negotiators; the perception is that there are many competing for available work. While we need to stand our ground in negotiations, the AIA does need to revisit the new B141 contract's content.

Terrence E. O'Neal
Terrence O'Neal Architect
New York City

CORRECTIONS

In "Guiding Light to Energy Efficiency" by Jack Klein (*Architecture*, February 1999, page 126), T8 lamps and T12 lamps should have referred to the arc tube diameter, measured in eighths of an inch.

Wank Adams Slavin Associates worked in joint venture with Agrest & Gandelsonas Architects on the Melrose Community Center in Bronx, New York (*Architecture*, February 1999, page 38).

Thomas Phifer was a partner on the Office Building, Viaduktstraße, project (*Architecture*, February 1999, pages 82-87) by Richard Meier & Partners.

The tile that appeared in Products (*Architecture*, February 1999, page 130) is Le Gemme by Bisazza.

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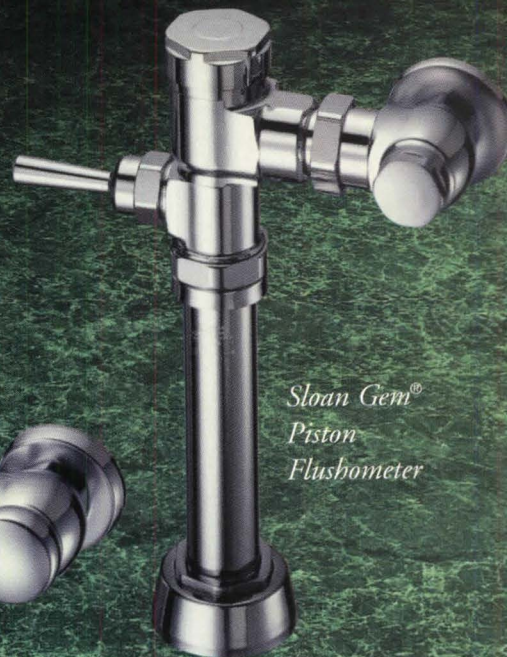
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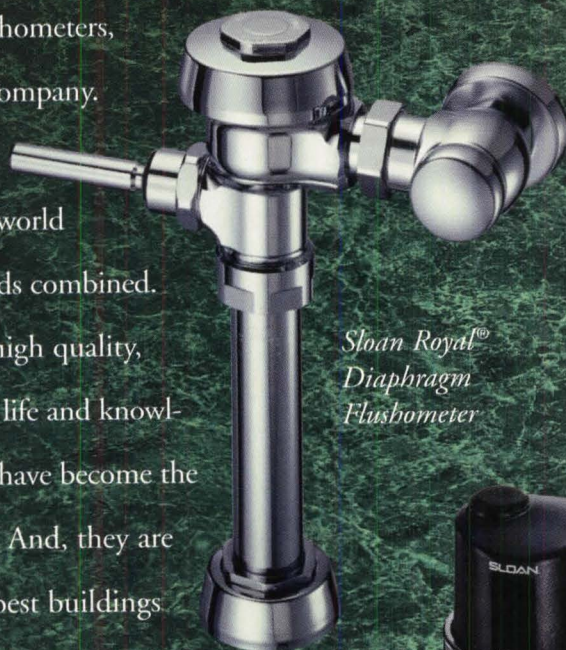
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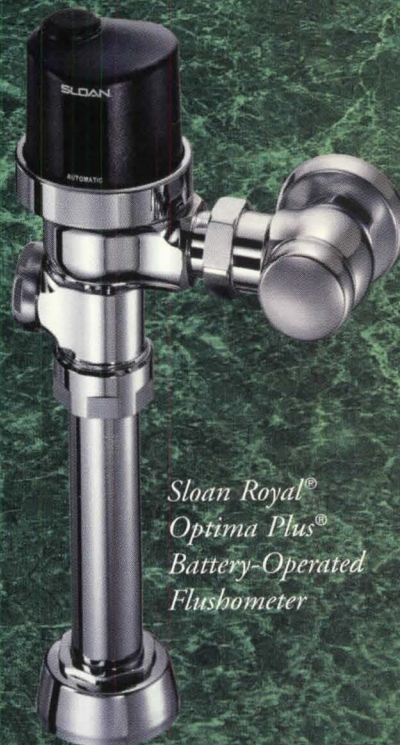
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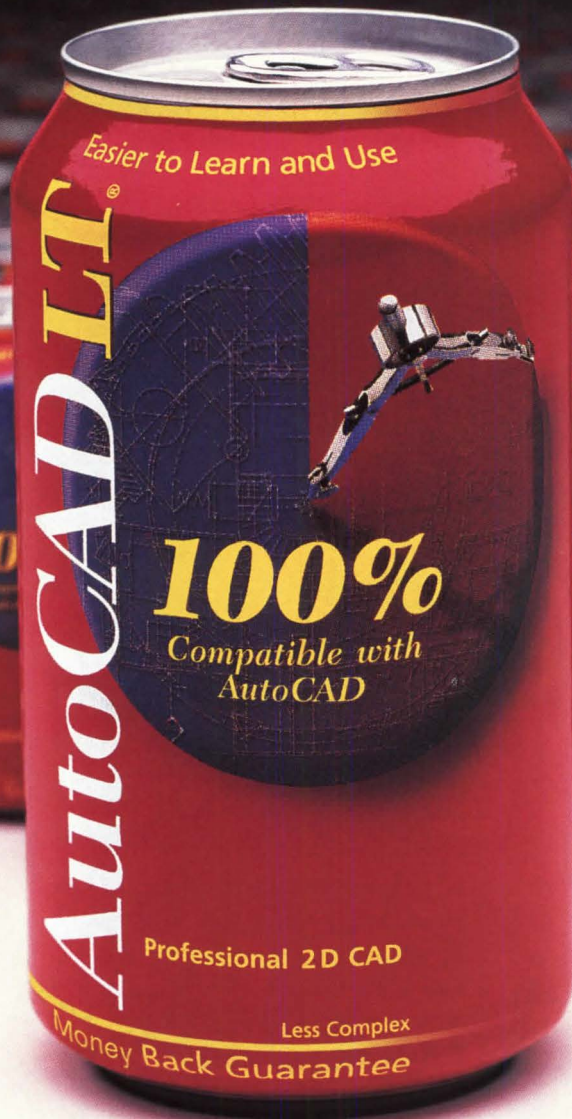


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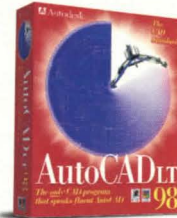
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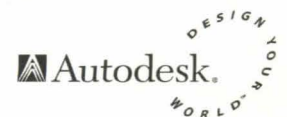
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exhibitions

calendar

city	dates	exhibition	contact
Denver	through October 3	Paper Architecture: Hand Versus Machine at the Denver Art Museum	(303) 640-4433
Los Angeles	through May 30	Architecture and Revolution: Escuelas Nacionales de Arte en la Habana at the MAK Center for Art and Architecture Paolo Gasparini's photograph of architect Ricardo Porro's School of Plastic Arts in Havana appears in MAK Center's survey of Cuba's national abandoned art school.	(323) 651-1510
Milwaukee	May 14-August 8	Under Construction: Photography, 1900-2000 at the Milwaukee Art Museum	(414) 224-3200
New York City	through May 2	New York Vertical by Horst Hamann and New York Horizontal: Cirkut Camera Views by William Hassler at the Museum of the City of New York	(212) 534-1672
Pittsburgh	June 20-October 10	The Architecture of Reassurance: Designing the Disney Theme Parks at the Andy Warhol Museum	(412) 237-8300
Washington, D.C.	May 20-September 4	The Work of Charles and Ray Eames: A Legacy of Invention at the Library of Congress	(202) 707-4604



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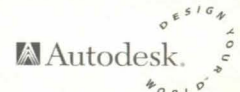
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conferences

city	dates	conference	contact
Boston	September 12-16	Annual Meeting of the American Society of Landscape Architects	(202) 898-2444
<p>U.S. Postal Service will unveil new Frederick Law Olmsted stamp at ASLA's annual meeting.</p> 			
Charleston, South Carolina	October 7-9	Urban Waterfronts 17 , sponsored by the Waterfront Center	(202) 337-0356
Chicago	June 7-9	NeoCon 99 at the Merchandise Mart	(312) 527-4141
Dallas	May 6-9	The 1999 AIA National Convention and Expo	(202) 626-7395
Detroit	May 2-5	National Town Meeting for a Sustainable America , sponsored by the President's Council on Sustainable Development	(202) 408-5296
Philadelphia	May 7-8	New•Land•Marks Symposium at the University of Pennsylvania, sponsored by the Fairmount Park Art Association	(215) 546-1087

January 1998

architecture

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1999 Ermanno Piano Scholarship for a six-month internship with the Renzo Piano Building Workshop in Genoa, Italy

May 31

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June 4

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Peter Lynch received NEA grant for his proposal for urban housing in Pittsburgh.

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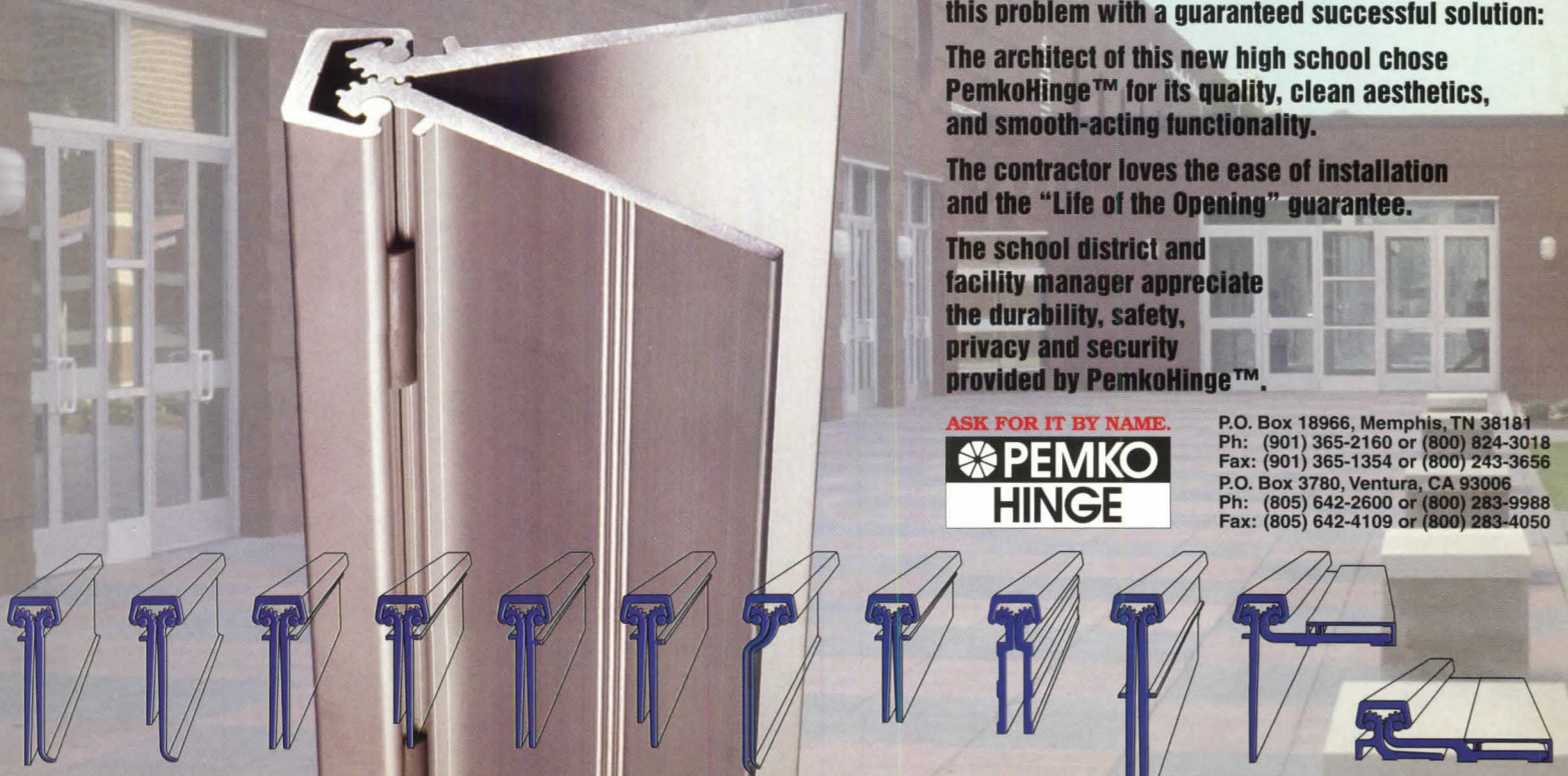
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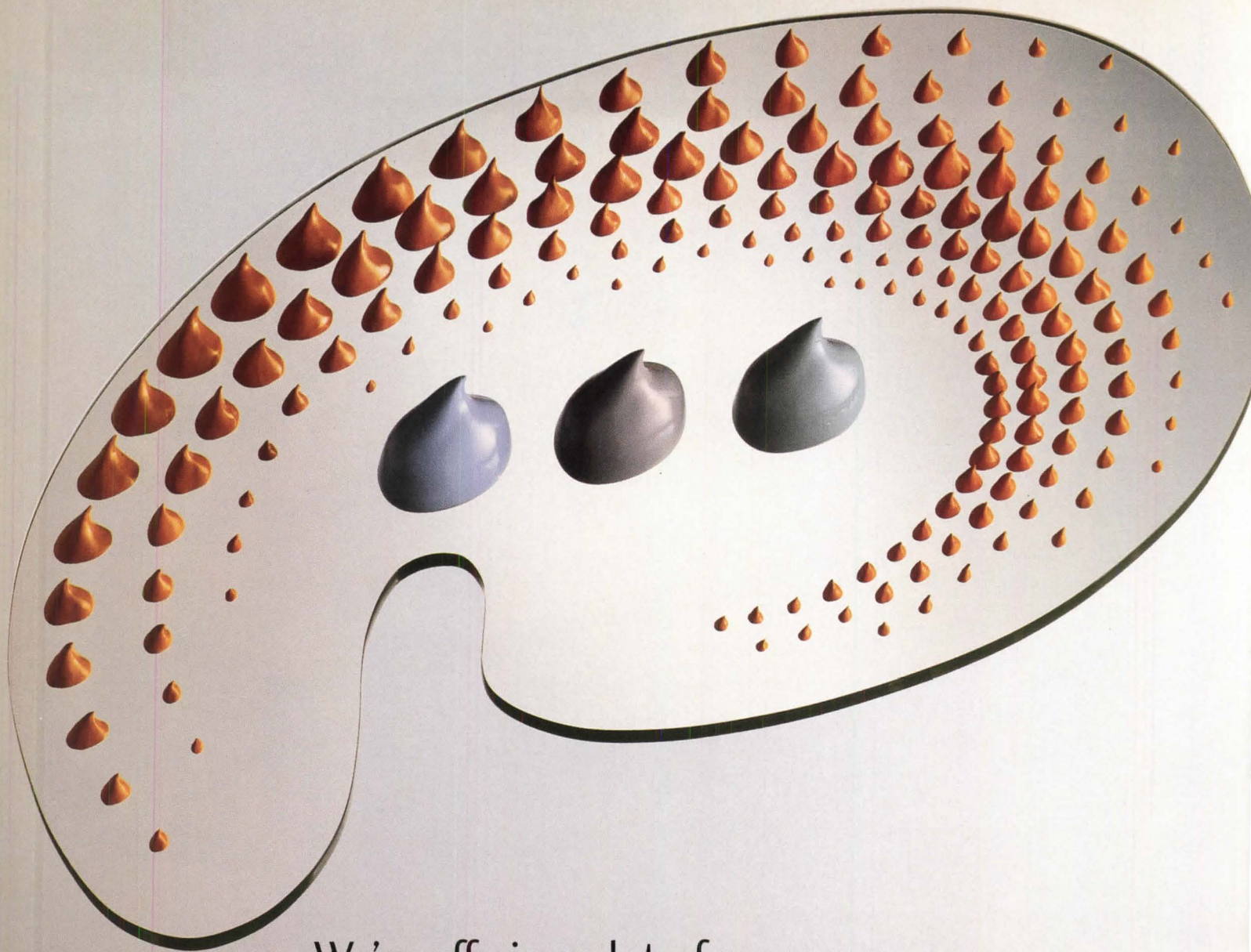
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ON THE THAMES



The Greater London Authority—home to the elected officials of the British capital's 33 boroughs—will take up residence in new, ecofriendly headquarters designed by Foster and Partners. The 10-story, 185,000-square-foot assembly building will be poised on the south bank of the Thames like a crystalline catcher's mask, overlooking local landmarks such as the Tower of London and Tower Bridge. *Raul A. Barreneche*

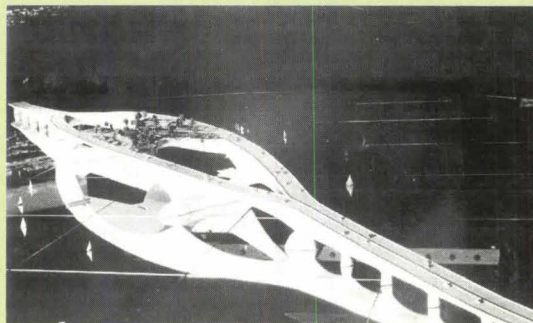
POLITICS

Burning Bridges

The quake-damaged San Francisco-Oakland Bay Bridge is supposed to have a new eastern span built by 2004—if its opponents will allow it. Retrofitting enabled California's Department of Transportation (Caltrans) to stabilize and save the western side, which crosses the bay between San Francisco and Yerba Buena Island. But public outrage over Caltrans' proposed designs in 1997 propelled the Metropolitan Transportation Commission (MTC), an agency that oversees Bay Area transit, to review other designs.

Last June, in a closed-door meeting, MTC picked a winner: T.Y. Lin International's 2-mile-long concrete viaduct that connects to a single-tower steel suspension span anchored onto prime shorefront on Yerba Buena. This irks San Francisco Mayor Willie Brown because infringing on the island will jeopardize revenues expected from future development on the island, which the city will purchase from the U.S. Navy. Oakland Mayor Jerry Brown considers it ugly, a "freeway on stilts."

On February 11, the two mayors jointly requested a redesign. On February 24, Annemarie Conroy, director of development for San Francisco's Treasure Island, in a last-minute bid to MTC, said economic losses to San Francisco could amount to millions of dollars. She threatened that if the current Caltrans/T.Y. Lin proposal (with insufficient



Wright's 1947 proposal for bay crossing incorporates park.

environmental impact studies) remains unchanged, a legal battle will ensue.

California Governor Gray Davis's first public comments on the bridge debate on March 12 seem to indicate such an impending battle. He wants to proceed on schedule next spring with MTC's current design, citing delays that could cost lives, not to mention an added \$100 million to the already substantial \$1.4 billion price tag.

But Oakland-based architect Leal Charonnat's proposal to revive Frank Lloyd Wright's 1947 "Butterfly Wing" bridge design may provide an instant solution. (When Jerry Brown saw it, he said, "I could go for that.") Wright's prestressed concrete viaduct could have 10 lanes, five in each direction, arcing upward to 195 feet and sweeping around a suspended park at the center. *Zahid Sardar*

Zahid Sardar is the architecture and design editor of the San Francisco Examiner Magazine.

Buzz

The International Foundation for the Canadian Centre for Architecture (IFCCA) has invited five architects to compete for its first IFCCA Prize: Eisenman Architects and Reiser + Umemoto RUR Architecture, both of New York City; Santa Monica, California-based Morphosis; Cedric Price Architects of London; and Amsterdam's van Berkel + Bos UN Studio.

Chermayeff, Sollogub and Poole (the firm formed by three former principals of Cambridge Seven Associates) has gotten its first major job: the \$65 million, 97,000-square-foot Long Island Aquarium in Bay Shore, New York.

Atlanta's Scogin Elam and Bray will design a new architecture school for The Ohio State University. The State University of New York at Albany has selected The Hillier Group to design a \$40 million, 160,000-square-foot life sciences complex. The University of Chicago has announced two high-profile commissions: Cesar Pelli



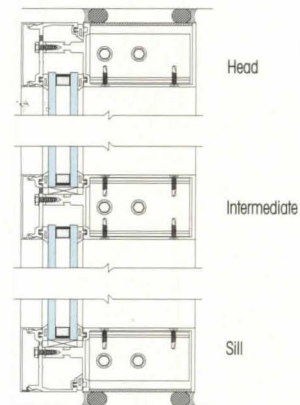
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NODS

Columbia Dean Nabs FIU Architecture School Commission



New York City- and Paris-based architect and Columbia School of Architecture Dean Bernard Tschumi has won the commission to design a new \$15.5 million school of architecture at the Florida International University (FIU) in West Miami, Florida. Tschumi bested Spillis Candela & Partners, Mateu Carreno Rizo & Partners, and Arata Isozaki & Associates with a 100,000-square-foot, U-shaped complex. FIU has never had a dedicated building for its architecture program. The project will break ground in April 2000 and will open in 2001. *Michael J. O'Connor*

PHILATELTY



Postage, International Style

The U.S. Postal Service's (USPS) sudden interest in architecture continues with the release of a new stamp that depicts New York City's United Nations Secretariat Building (1947-50). Part of the USPS's Celebrate the Century program, the "International Style of Architecture" stamp is one of 15 that honors the 1940s. *M.J.O.*

SPACE



Viñoly Defies Convention in Pittsburgh

In February, Pittsburgh officials unanimously selected New York City-based Rafael Viñoly Architects to design the 1.2 million-square-foot David L. Lawrence Convention Center, which will overlook the Allegheny River. The signature of Viñoly's design is a giant, sloping, stainless steel roof, inspired by and structured like the city's many suspension bridges. Supported by cables strung on masts at 60-foot intervals, the roof will enclose a column-free, 250,000-square-foot exhibition space.

In warm weather, water pumped to the roof's apex will run down the channels of the corrugated stainless steel decking, helping to cool the building and creating reflections visible from afar. (Locals have joked that the reflections will blind batters at the proposed Pirates baseball stadium across the river.) At the river's edge, a cantilevered terrace will create a waterfront promenade with sweeping views of the river and skyline. *Steven Litt*

Steven Litt is the architecture critic of the Cleveland Plain-Dealer.

& Associates will design the new Gerald Ratner Athletics Center and **Ricardo Legorreta** will design a residence hall complex. **Pei Cobb Freed & Partners** will design the \$100 million, 100,000-square-foot Broad Center for the Biological Sciences at the California Institute of Technology.

Rumblings in Cambridge say Harvard University Art Museums Director **James Cuno** is actively pursuing a Charles River site to build a **Renzo Piano**-designed museum for the university's contemporary, modern, and Asian art collections.

Piano is also slated to design a gallery expansion and garden addition for The Art Institute of Chicago. Also in the Windy City, the ubiquitous **Frank Gehry** will design a bandshell structure in Millennium Park.

The shortlist for the commission to design a new library in Salt Lake City comprises **William P. Bruder Architects, Moore Ruble Yudell Architects and Planners, Moshe Safdie and Associates,** and **Gwathmey Siegel & Associates.** The winner will be announced at the end of this month. Bruder will also compete with **TEN Architects, Gigon + Guyer Architects, Carlos Ferrater, Philip Durham and Elva Rubio, Rafael Viñoly Architects, Allied Works Architects, Peter Zumthor,** and **Herzog & de Meuron Architects** for the commission to design a new facility for the Forum for Contemporary Art at Washington University in St. Louis.

Kent State University has unveiled a Cleveland-based graduate program called the **Cleveland Urban Design Collaborative**, in which students will work with city officials to redevelop downtown neighborhoods. The fourth of *Time's* 20-issue *Time* 100 series included green architect (and former University of Virginia School of Architecture dean) **William McDonough** among its five "Heroes for the Planet."

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AWARD

Zumthor Receives European Mies Prize

Swiss Modernist Peter Zumthor is the 1999 recipient of the Mies van der Rohe Prize for European Architecture for his luminous, glazed Art Museum in Bregenz, Austria (*Architecture*, October 1997, pages 98-101). The award includes a 50,000-euro (\$54,000) discretionary cash stipend. Zumthor beat out a veritable Who's Who of European architecture, including Rem Koolhaas, Norman Foster, Daniel Libeskind, José Rafael Moneo, Renzo Piano, and Juan Navarro Baldeweg. *M.J.O.*



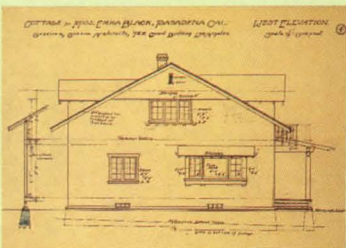
TELEVISION

Good Neighbors Make Good Video

Diggs Town, a run-down public housing project in Norfolk, Virginia (above left), needed a revitalizing shot in the arm. With \$17 million and ongoing input from its residents, architects added private porches, yards, and picket fences (above right). Social services helped residents adjust to the new design changes, and the result was a successful, livable community. This project, along with three others in Gaylord, Michigan; Mashpee, Massachusetts; and Bonaparte, Iowa, are examined by host Charles Royer (Seattle's former mayor) in the American Architectural Foundation (AAF) video, *Becoming Good Neighbors: Enriching America's Communities By Design*. The AAF released the hour-long documentary last month; the syndicated program will air on local public television stations through April 2000. *Michelle Patient*



MOBILE HOME



One Greene & Greene Bungalow: \$1

After an initial rush of inquiries, the phone has stopped ringing in Pasadena, California, where a developer of two lots on South Madison Avenue has offered a two-story Craftsman bungalow by Greene & Greene for \$1, provided it is moved by the purchaser from its current location. Potential buyers with visions of a mini-Gamble House in their heads have been disappointed: The clapboard Emma Black House (1903, left) is

delightful but workmanlike, with few signature details. Developer Greg Yerevanian ((818) 368-3431) has declined to weave the house into the apartment complex he intends to build because it would lower the total number of units (though he is offering additional financial incentives to defray relocation costs). Pasadena's Cultural Heritage Commission can review the case before demolition, a time-consuming, developer-discouraging process. Ultimately, the legal and financial incentives in place may be insufficient to protect the house: The Black House is a seriously endangered charmer. *Joseph Giovannini*

Assault on humanity: The Mayo Family of Canton, Ohio, is suing **Habitat for Humanity** for \$25,000. The Mayos claim their daughter fell off a stoop and was injured because volunteers built it to the wrong height. Habitat denies the charges and says all their projects comply with applicable building codes. State legislators in Michigan have introduced an innovative plan to reinject life in downtown Detroit. By reinvoking the 1862 act that allowed homesteaders to stake claim on land as they migrated westward, low-income residents may purchase one of the city's 39,000 abandoned residences for \$1. The bipartisan-supported act is expected to be passed this spring.

Paola Antonelli and **Peter Reed** have been promoted to curators of the department of architecture and design at New York City's Museum of Modern Art. **Drue Heinz**, the wife of the late Heinz Architectural Center Founder **Henry J. Heinz II**, has donated \$1.13 million to the Pittsburgh organization.

After a 47-year, one-tenant history, **Skidmore, Owings & Merrill's** (SOM) seminal Lever House on Manhattan's Park Avenue is up for grabs: Unilever (the soap and detergent manufacturer) has vacated all but four of the tower's 21 stories. An SOM-led facade and lobby restoration is planned.

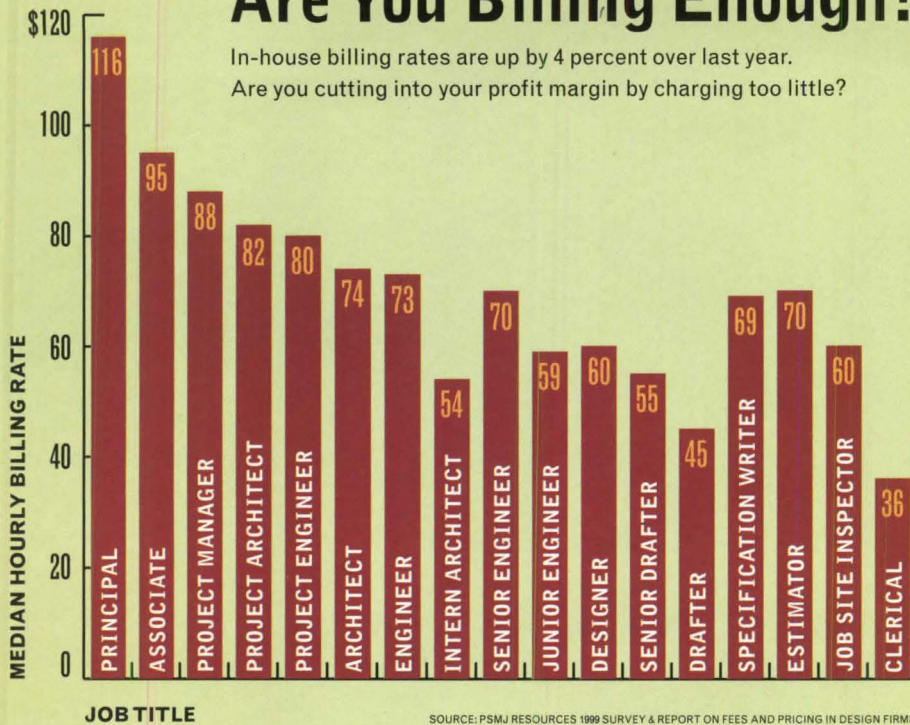
Sturm und Drang: After exhausting (and ultimately successful) attempts to convince **Chancellor Gerhard Schröder** of the merits of his scheme for a Holocaust memorial in Berlin, **Peter Eisenman** is again the recipient of bad news. The German Parliament—whose approval of the project was seen as a formality—has canceled their vote and would like to further examine the New York City-based architect's proposal.

OBITUARY: Wayne Berg, 52, founding partner of **Pasanella + Klein Stolzman + Berg** in New York City and designer of the P/A citation-winning Stabile Hall at Pratt Institute in Brooklyn (this issue, pages 106-107).

THE BOOKS

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ACQUISITIONS

Flush From IPO, HLM Design Continues Growth

HLM Design is continuing its rapid growth. Less than a year after becoming the first architecture firm to go public, and only three months after it purchased Dallas-based JPJ Architects, the Charlotte, North Carolina-based firm has acquired GA Design International, a London-based design firm. President and CEO Joseph Harris says the acquisition would have been virtually impossible if HLM were a private company. "The public is a source of capital, both cash and stock," Harris said. "Being public makes us considerably more liquid than a privately held company." HLM expects the purchase to increase revenues up to \$2 million annually and earnings per share up to \$0.03. *Eric Adams*

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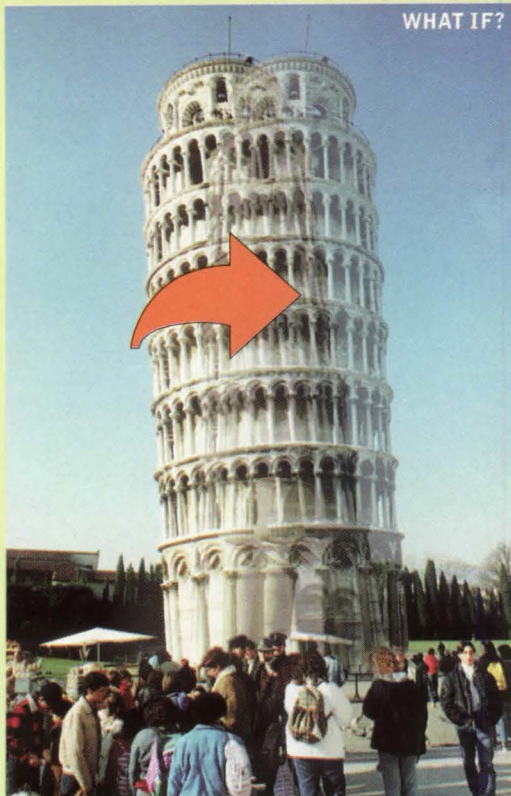
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WHAT IF?

Ancient Chinese Secret

Engineers have been struggling to correct the slowly settling foundation of the Leaning Tower in Pisa, Italy, since it was erected by the Catholic Church in 1173. Unsuccessful attempts to remedy the listing have included everything from pouring a new concrete foundation for the "lighter" side to the present plan (let's call it the Rube Goldberg Plan), in which Italian preservation officials will strap plastic tubing around the body of the tower while sucking mud out from beneath its foundation.

Now, structural engineer Cao Shizhong of the Slanting Building Correction Research Institute claims he can easily fix the tower using proven ancient techniques he has used to right Buddhist pagodas and university buildings in his native China. But there's a catch: His methods are secret. True, they are patented, but the necessary filing papers are worded vaguely enough so as not to reveal Cao's methods. Italian officials met for the second time with Cao in China in February. *M.J.O.*



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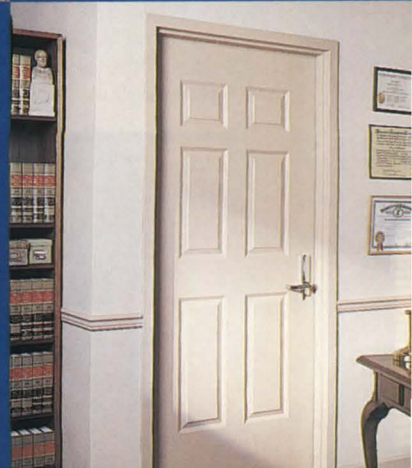
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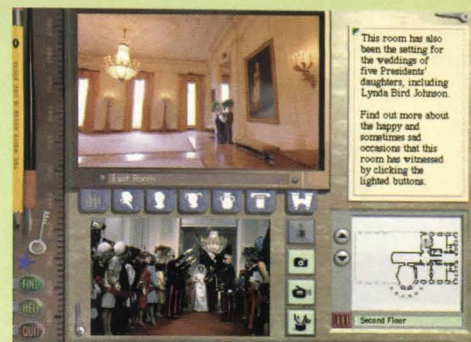
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RHETORIC

Dogma Fight at GSD

The New Urbanism train chugged into Harvard University in March, carrying its resonant images of bustling city streets and front porch-equipped houses, but often conflicting messages of how to achieve them. It was a moment of both triumph and risk for the movement that promotes everything from tighter regional planning to isolated new subdivisions built well outside town.

On the one hand, Harvard's Graduate School of Design was taking New Urbanism seriously enough to hold a conference on it. (The title changed several times, settling finally on "Exploring (New) Urbanism.") On the other hand, the rapacious minds assembled, mostly Harvard faculty, were poised to slice and dice a philosophy that many regard as decidedly lightweight in its assertions and premises. Would New Urbanism solve urban problems or help people flee from them, they asked? Would it enliven a city street or "homogenize" it? Would it revive public life or further weaken it by encouraging private homeowners associations? Would it control sprawl or add to it? "The majority of sprawl is produced by people fleeing sprawl," reminded Alex Krieger, head of Harvard's urban design department, who led and organized the conference.

A high point of some sort occurred when Andres Duany, charismatic New Urbanism kingpin, debated Rem Koolhaas, noted individualist architect. Duany championed the infiltration of the New Urbanist code into all areas of the built environment, while Koolhaas advised caution in imposing rigid prescriptions on a dynamic, rapidly changing world. "I am horrified that you talk of this group of misfits that have to be retrofitted," Koolhaas challenged Duany. "The messianic attitude is horrifying." Responded Duany: "Imagine believing in something." *Alex Marshall*

Alex Marshall is the author of the forthcoming book How Cities Work (University of Texas Press, 2000).

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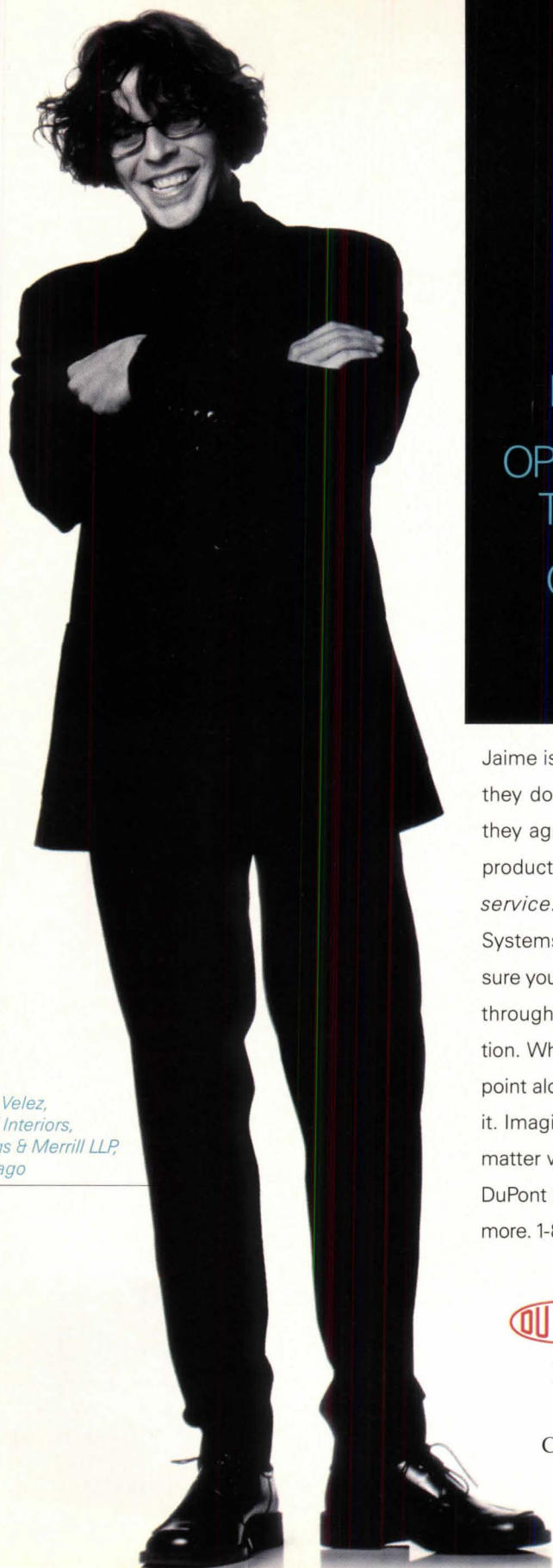
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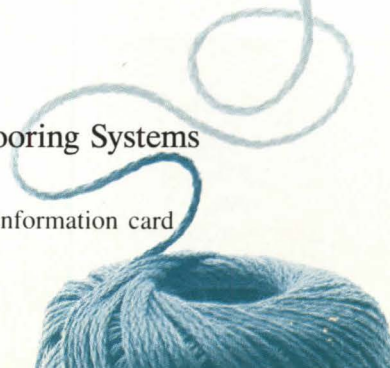
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Inner-City Innovations

A pair of urban interventions—a housing project in Vienna, Austria, and a pedestrian bridge in Denver's business district—create new life within vague contexts.

MACK ARCHITECTS and **ROLAND HAGMÜLLER ARCHITECTS**,
Breitenleerstraße Housing, Vienna, Austria

On a 1.7-acre triangular site that sits between a city park, a cemetery, and suburban single-family houses in Vienna's 22nd District, an urban-density housing complex attempts to redefine its context. Working with public-private funding of \$41.6 million, Venice, California-based, Austria-born architect Mark Mack has designed nine multifamily, mixed-income buildings in three types around irregularly shaped public spaces. Vienna-based associate architect Roland Hagmüller Architects designed a bar building that forms the site's eastern boundary, leaving the first two stories of its southern end open to allow glimpses of the park beyond and to incorporate the entrance to an underground parking facility.

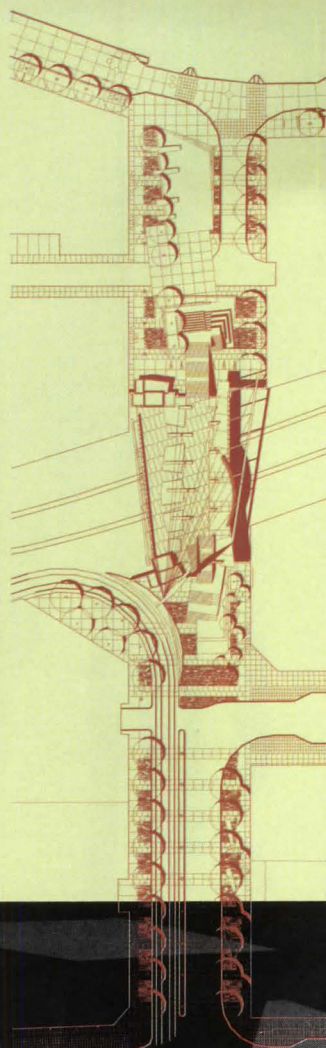
Mack's three- and four-story buildings house 124 units: studios and one-, two-, and three-bedroom apartments. The western ends of all but one of the buildings hug the street edge, some incorporating garage-style doors for live-work studios.

The nonreflective, galvanized metal-roofed buildings feature balconies, exterior stairs, and technicolor stucco finishes that add dimensional interest to the otherwise sheer facades. Mack's trademark palette of alternating vibrant and muted colors creates multiple tonal combinations when viewed from different angles. Construction will begin in the fall; developers hope to complete the complex by the year 2000.



Aerial view (top) shows **interrelationship** of Mack's and Hagmüller's buildings.

Three building types (center) demonstrate range of approaches to enriching boxlike buildings. Along eastern **street edge** (above), garage-style doors allow live-work space.

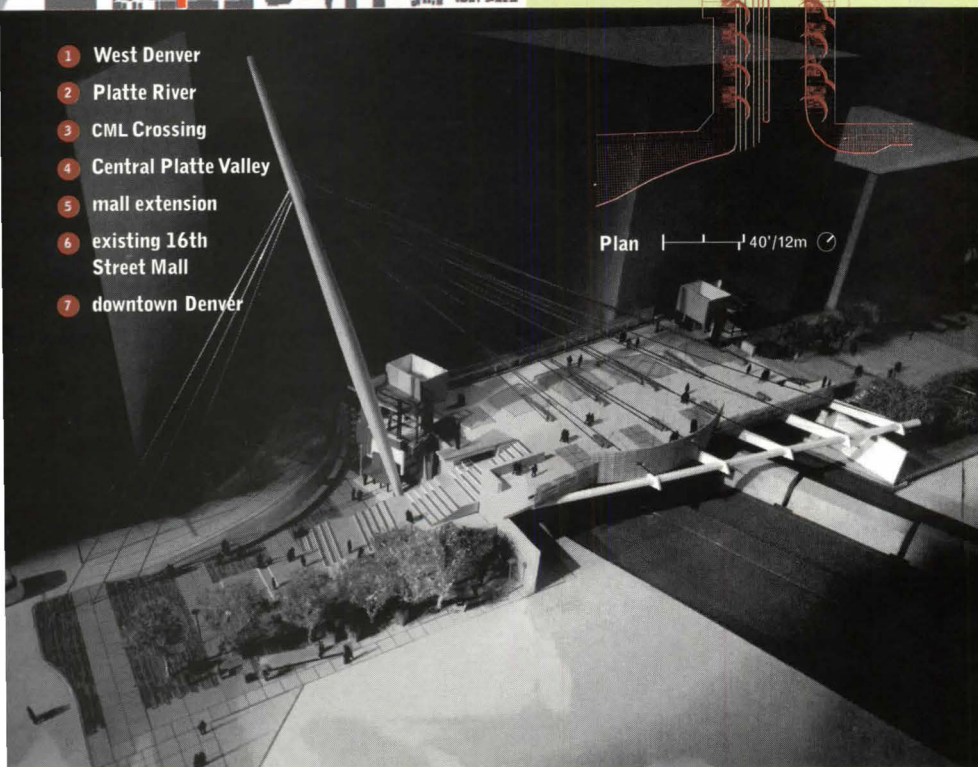


ARCHITECTUREDENVER, 16th Street Extension and CML Crossing, Denver

The **Central Platte Valley** area of downtown Denver acts like the rings of a tree: It tells the story of the city's development. Flooding along the banks of the Platte River forced early 19th-century settlers to abandon the area for higher ground to the east and west. The water level eventually receded, leaving a chasm of undeveloped land left that splits the city in half.

Hometown firm ArchitectureDenver—in conjunction with a comprehensive city master plan that also calls for a 30-acre urban park—attempts to mend that rift with a dramatic infrastructural centerpiece that extends I.M. Pei's 16th Street pedestrian mall (1982) toward the riverfront and West Denver. A 165-foot-tall, cable-stayed, steel-and-concrete mast anchors an asymmetrical pedestrian bridge that passes over the Consolidated Main Line (CML), the convergence of a tangle of light and heavy rail lines, surface streets, and pedestrian byways.


Dense plantings and contemporary seating, lighting, and signage by Design Workshop creates an urban oasis in the heart of the business district, converting what could have been an environmental hazard (all those exhaust fumes) into a pleasant public space. Construction will begin this fall and should be ready for a fall 2000 unveiling. *Michael J. O'Connor*



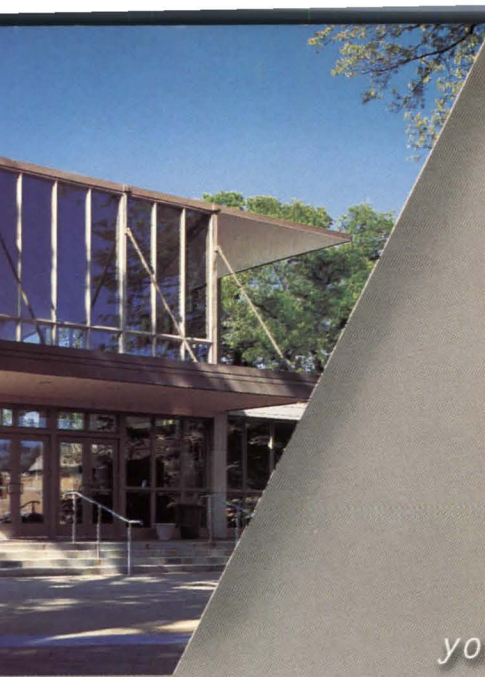
- 1 West Denver
- 2 Platte River
- 3 CML Crossing
- 4 Central Platte Valley
- 5 mall extension
- 6 existing 16th Street Mall
- 7 downtown Denver

This project is part of **citywide effort** to connect downtown Denver and river (top left and right).

Urban oasis that incorporates light-rail station and asymmetrical pedestrian bridge (above) passes over tangle of train lines. Boxes (at rear) represent **future development** in area.



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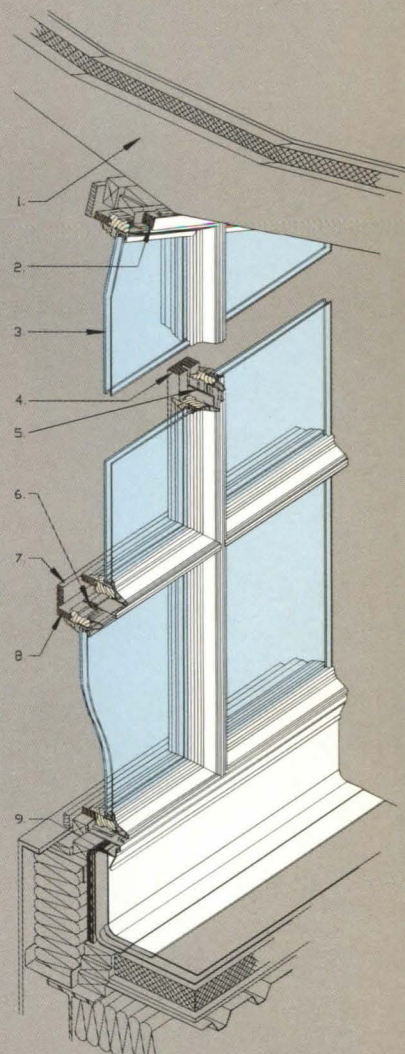
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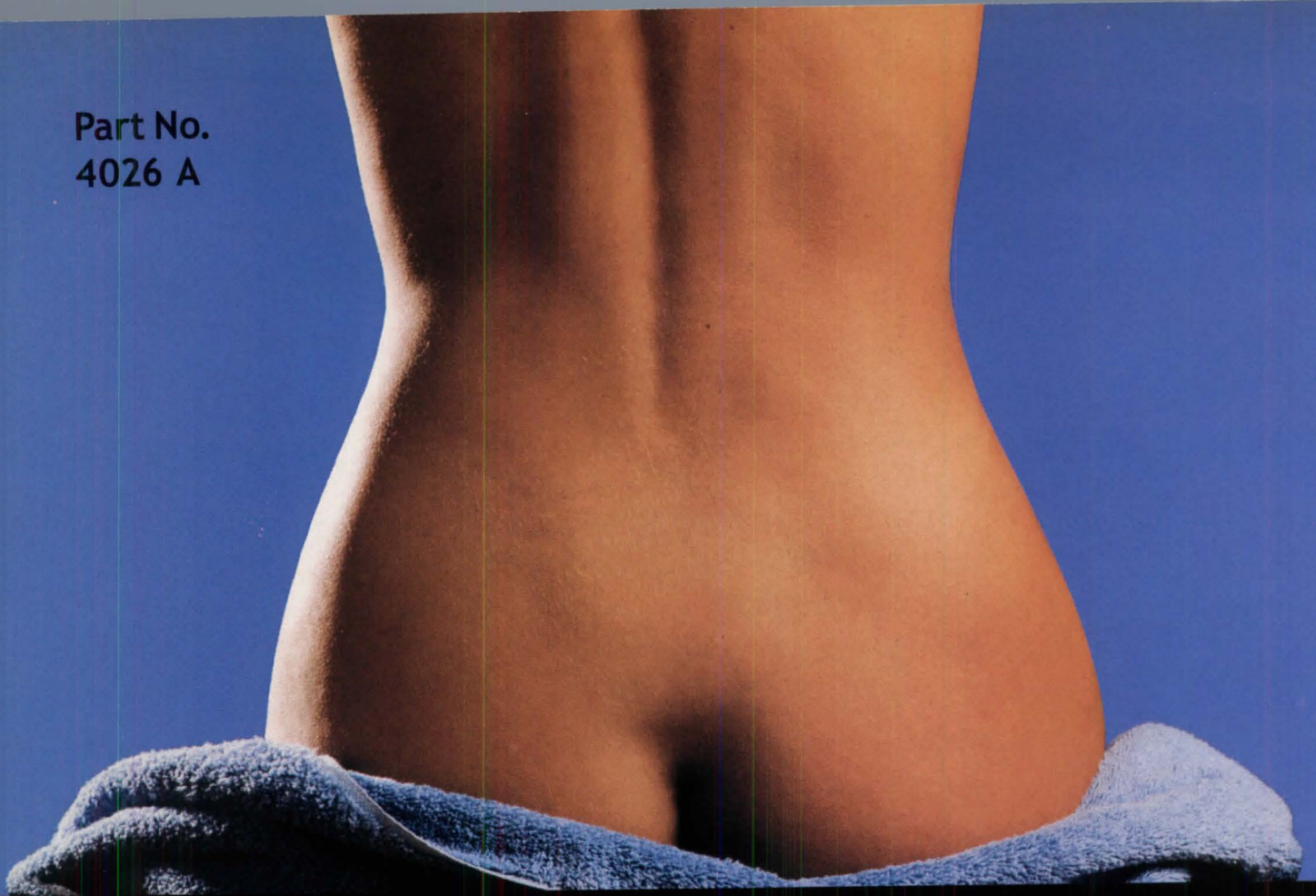
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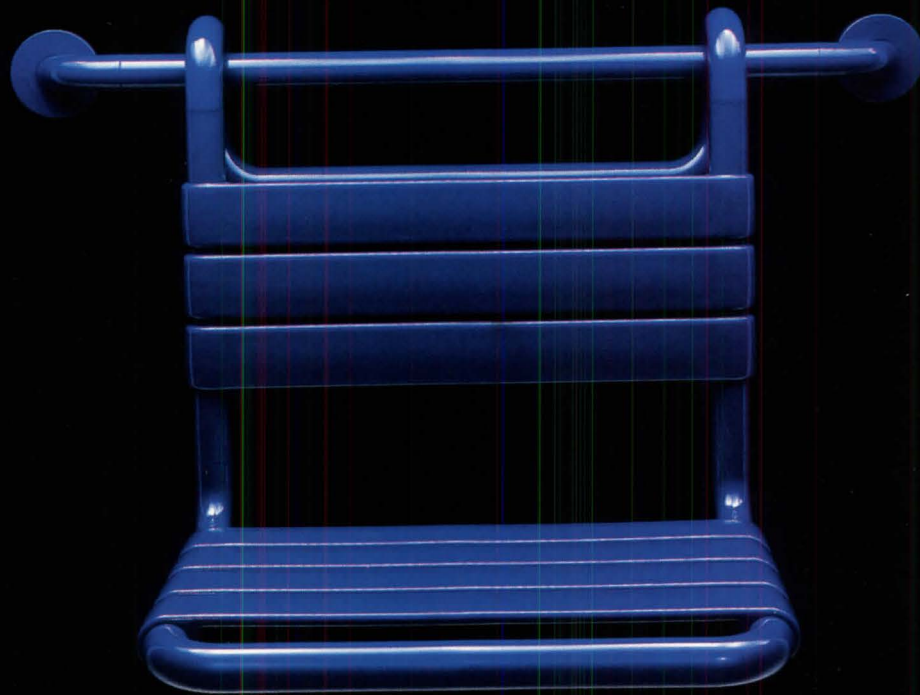


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Sullivan in the City: The Art and Architecture of Louis Sullivan
City Museum, St. Louis, through May 30

Before you can enjoy the triumph of *Sullivan in the City*, on view at the City Museum in downtown St. Louis, you must first confront the tragedy. At the entrance to the show, in a large, airy space on the museum's third floor, the sounds of "Ave Maria" issue out of nowhere, as a video replays scenes of Sullivan's buildings, succumbing to the combined forces of gravity, dynamite, and misbegotten notions of progress.

This is a deeply political show pitched at a populist frequency, and it owes part of its poignance to its context: The City Museum is a young, visionary institution founded in 1993 by the husband-and-wife team of Bob and Gail Cassilly, clever agitators for a more vibrant downtown. It restores faith in the viability of this diseased district, where old buildings are treated like old shoes. Their museum resides in a 1930 warehouse, a few blocks from Sullivan's most sacred opus, the exceptionally preserved Wainwright Building (1891). And though the City Museum is, for the most

Salvaging Sullivan



A new museum in downtown St. Louis introduces Louis Sullivan, and the city, to a suburban audience. By Bradford McKee

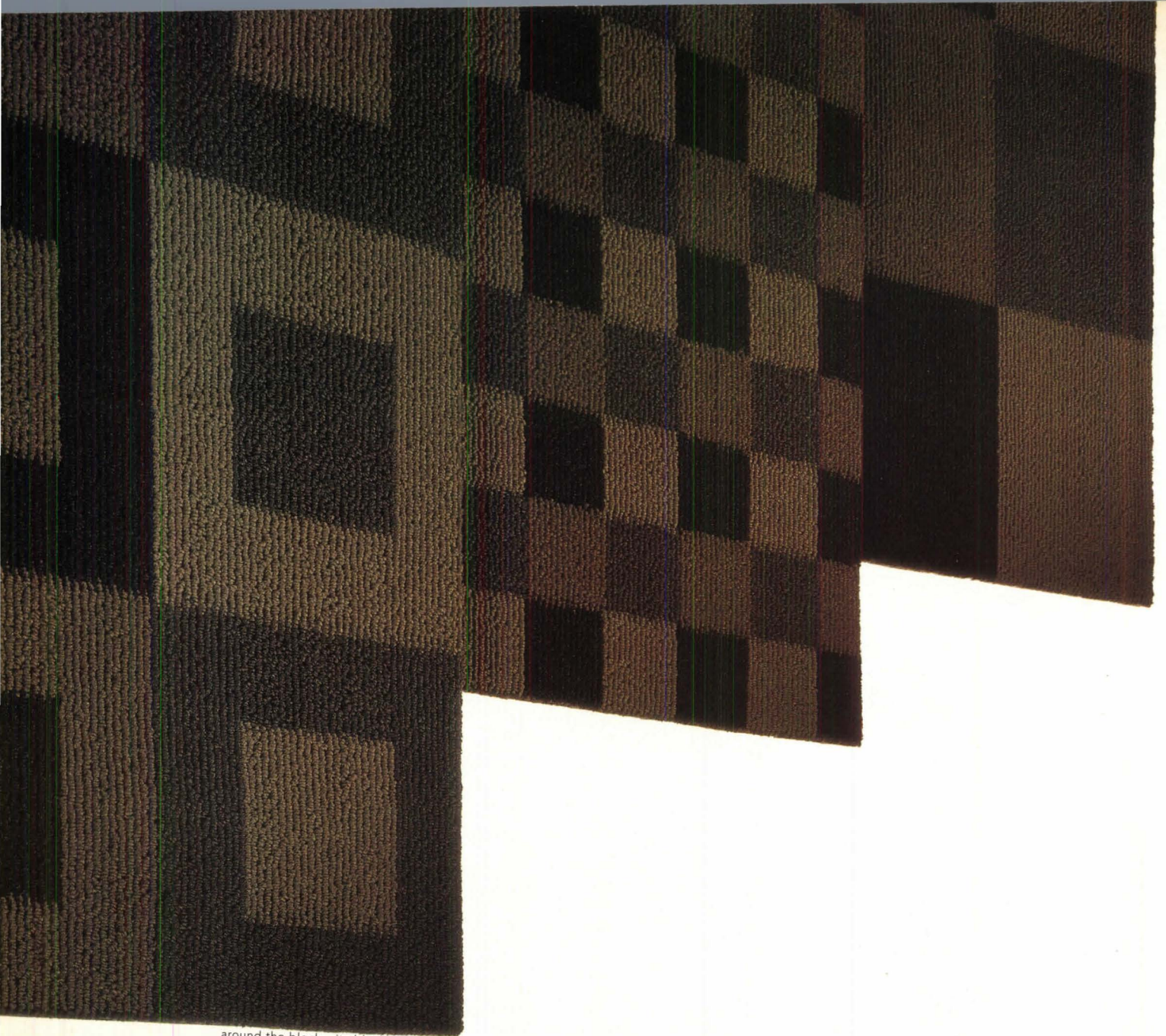
part, a delightfully off-the-wall place for kids to run wild and parents to go deaf, the Sullivan show turns, by contrast, somber and reflective.

It celebrates what Frank Lloyd Wright, Sullivan's protégé, called the "supreme erotic adventure of the mind that was his ornament," by putting forth remnants of the master's lyric feats in terra-cotta, cast iron, copper, and stained glass, plus some extravagant stencil drawings. But it silhouettes them conceptually against the haunting truth that most of these objects have been rescued from rubble and shallow regrets.

The man who collected many of the show's artifacts, architectural photographer Richard Nickel began obsessing over Sullivan's buildings in the 1950s, and made it his life's mission to document surviving examples and preserve parts of them—filigreed balustrades and elevator cages, limestone lunettes, a cast-iron letter-slot cover, and a terra-cotta spandrel, among others, arrayed in a rich but straightforward ensemble on the gallery walls. In 1965, Nickel sold 97 of the pieces he had retrieved to Southern Illinois University; he sold more to the school over the next several years until 1972, when the Chicago Stock Exchange Building collapsed on him, burying his body for 26 days.

Sullivan's (and Nickel's) legacy speaks for itself at the City Museum. The significance of this show lies not in its erudition—there is no great emphasis on Sullivan's architectural lineage, his contemporaries, or his disciples, and there is not supposed to be. It is aimed at a clientele of largely suburban families rediscovering the city for the first time. (In one corner of the show is a big play space full of wood blocks, where kids can erect their own buildings and, inevitably, knock them down.) The beauty of *Sullivan in the City* is that it represents a coup of programming, springing Sullivan with such generosity on a largely unsuspecting public that only needs to be reminded how much latent affection it vests in its cities and their landmarks. ■

Sullivan designed **St. Louis tomb** for Wainwright building client in 1891; interior (above left) hadn't been photographed until now.



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Small Town Center

Mississippi State University's
Small Town Center program wins
Architecture's 1999 scholarship award.
Interview by Philip Arcidi

The revenues from entries to the PJA and annual research awards enable Architecture to add an academic scholarship to the awards it gives to practitioners. This year, the winner of the magazine's third scholarship, which premiates an ongoing curricular program in architecture, is the School of Architecture at Mississippi State University.

Over the past 20 years, hundreds of Mississippi State students have participated in the school's Small Town Center. It positions undergraduates as architectural consultants and designers for rural, often disadvantaged communities in a state with only one large city. Shannon Criss, associate professor and director of the Small Town Center, spoke with Architecture about the insights she and her students found in their ventures throughout Mississippi.

ARCHITECTURE: What is a small town?

SHANNON CRISS: Small towns here in Mississippi are places where there's an identity, a history, a group of people that know each other. Mississippi is made of small towns. We've got the city of Jackson, which has a population of 200,000 or so, and a couple of communities in the range of 30,000 to 60,000, but most of the state is made up of small towns, with 30,000 or fewer residents.

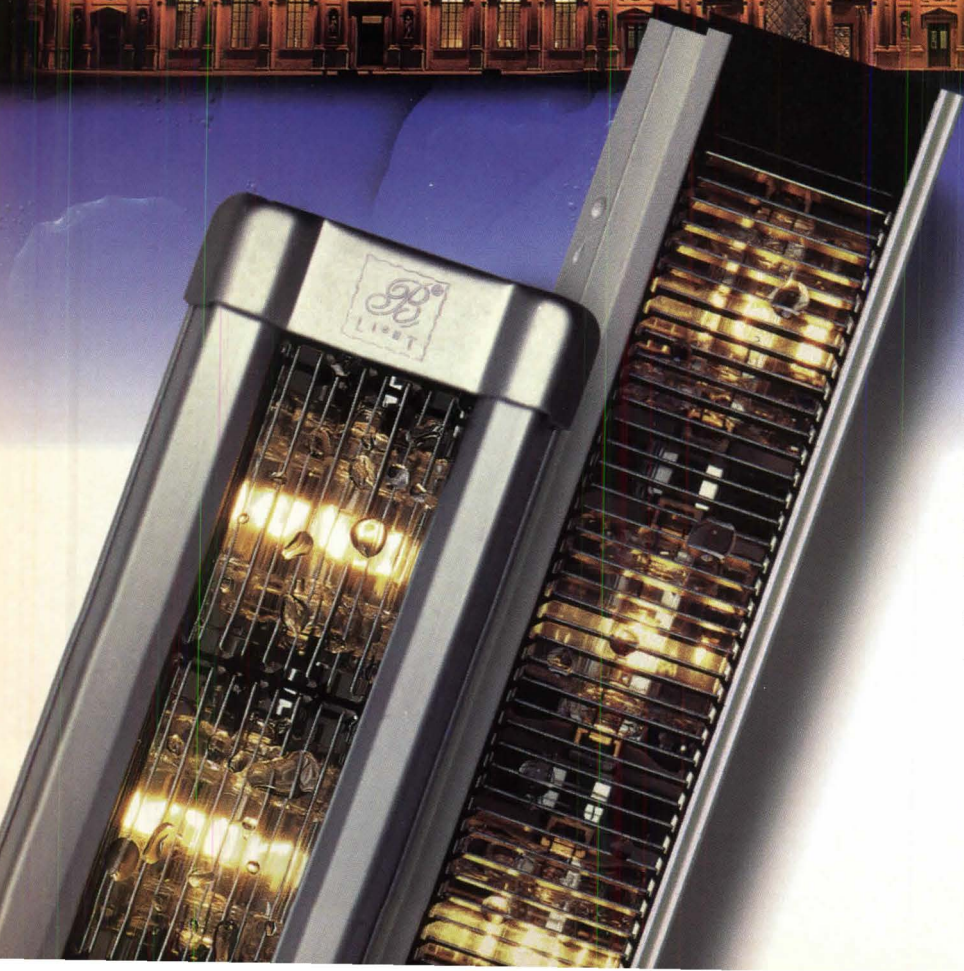
Most of these towns and communities started at the turn of the century, some in the 1880s; some are a little younger. They responded to a geographic condition, such as a river, on which they found their

Mississippi State student talks with young Jonestown resident (left); photograph by another student (right) is part of Small Town Center's downtown Booneville study.



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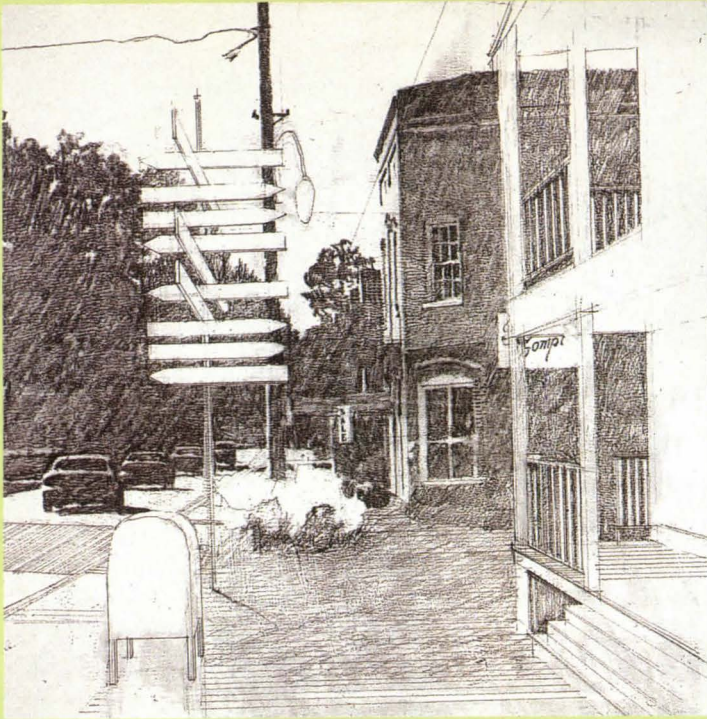
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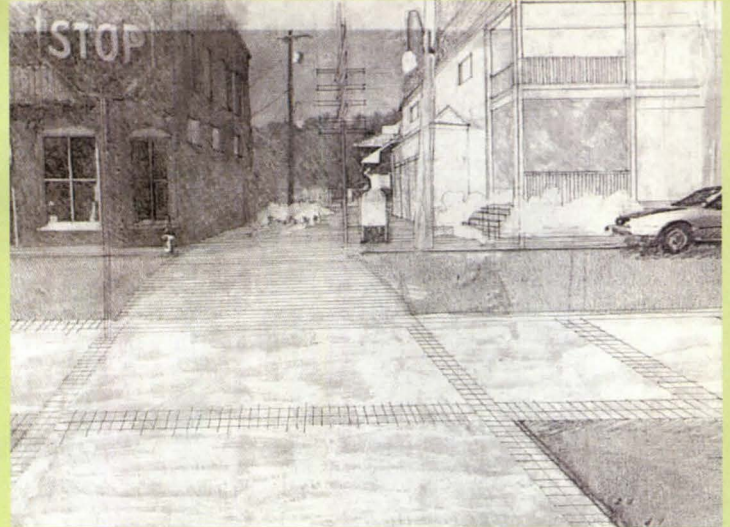
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In a case study report for town of Madison, Mississippi, Small Town Center created **graphite renderings** (above left and right) to demonstrate how proposed design strategies could enhance an established neighborhood.



livelihood. Others started as points on the railroad. Public spaces and the ways in which individual properties were developed had a different nature than we find today. Buildings shared party walls and lined streets. At the turn of the century there was a vision about the future; towns laid out grids. There was a larger plan, a larger order. Since World War II, we have residential enclaves and separation from a shared public space. I haven't found any new small towns, that is, any established within the last 40 years. Every town that I've worked with has roots from the turn of the century.

What can architects who aren't working with small towns learn from your work?

Originally I understood architectural practice as something within defined property lines, built for a distinct client. I was thinking in terms of a specific response; I saw it as a reactive profession. Architecture can be more proactive, a catalyst to looking at a larger network of conditions through the vehicle of a small town.

How did the Small Town Center come into being?

It grew from the efforts of James Barker, who developed the program in 1979. We're up in the northeast part of the state, in a very rural setting. It seemed natural that the school address small-town and rural needs. In the early days the professors worked with small towns out of commitment, with the help of a few National Endowment for the Arts grants, rather than from any funded position. They emulated the Rural and Urban Design Action Teams (RUDAT) of the American Institute of Architects (AIA); designers would spend several days charetting in a town, and then produce reports that communities could build upon.

The Small Town Center is under the aegis of the school of architecture?

Yes. It presently runs on the grants and contracts that we write. The school is very supportive and has given us space and equipment. There are three active faculty members involved. We probably have about 20 students involved either through grants or contracts. Some of them are taking independent studies; we are engaging the entire third-year class in studios where one of the professors and I are working with 32 students. I probably have 20 percent of the fourth year class involved. In total, we have an impact on 60 or 70 students this year.

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Finish It Right - Anodize It

What do the students produce for the Small Town Center's clients?

We're architectural consultants: We've produced written reports for several towns that describe their architectural qualities and outline strategies to restore or develop buildings and neighborhoods at risk. Our 1997 report for Booneville, a town of 8,000, suggested that its community college, hospital, and factories are as fundamental as the courthouse and prewar commercial core to the town's identity. We suggested that the town use landscaping, lighting, and signage to create arrival points for cars entering town; we highlighted the attributes of some established neighborhoods, and suggested tax incentives to help residents sustain and restore the traditional features of their houses. We tabulated parking requirements and proposed better trash collection strategies for downtown merchants. Our report suggested the town consider a new industrial park; it even proposed ways to rehabilitate an abandoned Wal-Mart.

In Mississippi architects do not have any particularly strong stature. This means that our school of architecture is a significant player in the profession; we've become a statewide resource. People come to us because they know that their downtowns are economically fading but still have cultural significance; they know that new commercial development shows little, if any, planning intelligence. All sorts of people approach us: economic development groups, mayors, chambers of commerce, and individual property owners. We've developed a reputation as a place for advice that's not beholden to commercial interests. Some think we offer free services, like an agricultural extension service at a land grant college. In fact, we do charge fees; each community we work for contributes something. We often look for funding to supplement what a town provides, so we can cover costs of transportation and the production of documents. We work on projects that impact the public realm, and have educational merit for our undergraduates; we refer most individual property owners and specifically architectural commissions to local AIA offices.

How do you deal with the time frame of a semester when you try to realize a proposal?

Ultimately I and other faculty have to make a long-term commitment to a place. It's very important that the community understands that we are there to address ongoing issues. We are often a bridge between a town's initial interest and implementation by practicing architects. They read about us in the paper and visit advisory council groups. They're becoming more and more aware of us. At first they offer pro bono services or participate loosely, but I can imagine that ultimately these projects become contracts for them.

About one-fifth of our small town projects—one each year—include a built project. This semester, in the town of Okalona, we have a \$20,000 grant that will enable 32 third-year students to build a simple structure on a 50-by-100-foot site virtually surrounded by warehouses. Community leaders and high school students talked with us about what they'd like to see there; we're working with laborers from prison to cut concrete slabs left on the site; we will build footings for a retaining wall and construct a stage and an overhead steel structure. We hope the site will be a catalyst for more public events in the area, a place for gospel choirs, farmers' markets, and crafts fairs, a place where people can sit, a space that belongs to everyone in town.

Are the architecture students at Mississippi State predominantly white, as at architecture schools everywhere?

Yes. Suburban.

They often work with poor black communities, for people that few architects would have as clients. How does this affect the students?

I can answer that by talking about the work students have under way in Jonestown, a town of 1,500 African-Americans in the Delta. Our students couldn't understand why people would stay in a town with 40 percent unemployment, deteriorated housing, and a chemical odor in the air at harvest time when farmers defoliate cotton. Mothers work in the casinos a couple of hours away; they're away from their kids from six in the morning until seven at night. Why not move? People in Jonestown told us about the generations of their families that had lived there, and their dreams of leaving something for their children. We learned that a community is sustained by how the people relate to their town.

In Mississippi, we live in a place where an intense climate and dense vegetation seem to conspire against the very survival of any physical artifacts. But we saw how poor people were committed to their community. They showed us that architecture is not a ground zero proposition; it starts with the pride people have for their hometowns, their perseverance. These people gave architecture lessons to us, the ostensible experts in this discipline. We learned from people who didn't realize that they're creating architecture.

Do Mississippi's small towns have any lessons to offer the New Urbanism movement?

We took students down to Seaside, Florida. The town has a nice set of guidelines; they're very succinct and offer good lessons. But Seaside is a community born on a blank site; a beautiful site, but one that is separate from ways in which we've been working. I can't think of any projects in Mississippi that have taken the New Urbanism approach.

My concern with the small towns of Mississippi is that a lot of them are forgetting their roots. I don't want to be nostalgic but I think there are ways to redevelop and increase density close to the core rather than continually expand. I think one of the largest challenges we have is to help communities understand how to reinvest. We have to learn to reconstruct shopping strips from the 1950s and 1960s or take buildings down and reinvest with new projects. To build within the context is extremely important.

What do small towns need?

These communities love discovering that what they might take for granted has value. They may not think that their community offers a lot or has specific qualities or an identity. Most people aren't aware of their particular environment in the way that architects are. When students, faculty, and practicing architects engage a community it increases the community's appreciation and awareness of their own place.

I often find that communities are tired of just another study. Those often just live on the back shelf. But if you engage the community in a real, tangible way—maybe a park bench, a specific proposal for a site that they know—and help them implement that, then we have a meaningful engagement. Small towns need those kinds of footholds. ■

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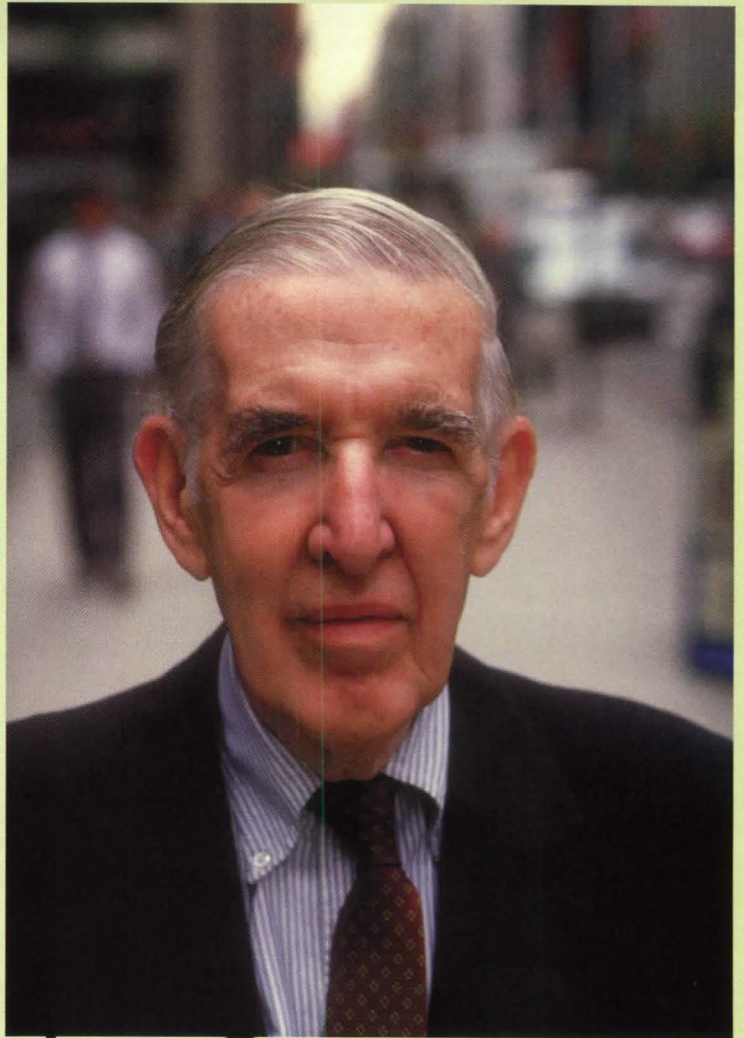
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Urban theorist William H. Whyte determined that it's people, not architects, who make cities.



Champion of the City

By Paul Goldberger

William Hollingsworth Whyte, Jr.—“Holly” to many urbanists in the United States and around the world—died in January, age 81, at his home in New York City. A writer and social critic who began his career as an editor of *Fortune* magazine, Whyte first came to public attention in the late 1950s with the publication of his book *The Organization Man*, which suggested that the postwar corporate culture might not be the wellspring of creativity it was cracked up to be. His great passion, however, was in celebrating the potential of urbanity in contemporary society, and the studies he undertook with the assistance of the Rockefeller Brothers Fund on the uses of public space became a second career that filled the final decades of his life. Whyte’s work led to the creation of the still-active nonprofit Project for Public Spaces, and to several books, including *The City*, which summed up his belief that density, far from being a problem, was the very energizing force that cities need to be successful. “What attracts people most, it would appear, is other people,” Whyte wrote, and this notion formed the basis for his prescription for urban success. The following is excerpted from remarks delivered by Paul Goldberger, the architecture critic of *The New Yorker*, at a January memorial service for Whyte in New York City.

I had a wonderful experience the other morning, just after Holly died. I was walking down Sixth Avenue in New York City, and as I was about to cross 46th Street I ran into Bryant Park Restoration Corporation Executive Director Dan Biederman. We stopped, and stood on the corner and talked about Holly, and what he had done, and what he had meant for the city, and for planning, and for the way we see the world. Dan reminded me that Holly was in every way the guiding philosopher behind the resurgence of Bryant Park, and how critical his thinking, his advice, his wisdom had been to what was done there. Dan’s words made clear how everyone who has struggled with how to make civilized public space in New York is in Holly’s debt. We said goodbye, and I crossed the street toward my office, and then, somewhere in the middle of Sixth Avenue, it struck me—that very conversation was itself proof positive of all that Holly has ever tried to say. It could not have been more perfect—to run into each other on a street corner, and to have done the little dance that Holly documented so perfectly in his extraordinary films; here were the two of us, Holly Whyte students for much of our lives, and we didn’t even realize that we were doing it, that Holly Whyte *pas de deux* on the street corner.

But we were—moving ahead, back, circling round, almost parting, starting again, finally saying goodbye. And how perfect that this accidental meeting was to talk about Holly, and what he meant. I cannot think of a better way to celebrate Holly than that—a serendipitous conversation on a street corner.

Holly was a prophet of common sense. He did not approach the city with a preconceived vision; he came to it as an observer, and he based his philosophy of open space, his prescription for the civilized way of making cities, on what he saw. He was in every way an urban anthropologist, and he had the objectivity of a great scientist, prepared to gather evidence and be guided by it. He cared more than anything about how people used the spaces they were given, and he told us more than we had ever known about that. When architects and planners designed by intuition, Holly gave them facts.

But that, as all of you know, was only the beginning. We might have admired Holly as much as we did had he been only a gatherer of facts, but we would not have loved him as much as we did had that been all he was trying to do. His facts were gathered for a purpose. His objective research on the city, on open space, on the way people use it, was set against what I think I must call a moral context. Holly believed with deep passion that there was such a thing as quality of life, and that the way we build cities, the way we make places, can have a profound effect on what kinds of lives are lived within those places. That is why,

surely, Holly never set himself up as a high-powered consultant, though he probably could have made a fortune doing so. He never wanted to be beholden to rich real-estate developers, though many of them would surely have been willing to pay high fees for the privilege of a Holly Whyte endorsement on their plazas. Selling himself like that would have destroyed the purity and integrity of his mission, and he knew it.

Holly, unlike so many people who work in urban design, was also never one to exaggerate the importance of physical form. He had no illusions that a well-designed street or plaza was the same as bread on the table or justice in the courtroom. But he was never inclined to minimize the value of physical form, either. Indeed, one of the greatest contributions he made was in putting all of this in perfect perspective, making it neither too important nor too unimportant in the scheme of things.

He deeply believed that quality of life was enhanced by the urban experience, by the street, by the notion of the public realm. In the last generation, we have seen what we might call the triumph of the private realm in this country, as malls and atriums and gated communities take over from streets and parks and squares. Holly would have none of this. He was our prophet of the public realm. He believed in the urban values of engagement and serendipity, and not the suburban values of disengagement and separation and unchanging order. He believed that the greatest achievement of the city is the street, and he complained in his 1988 book *City: Rediscovering the Center* that our

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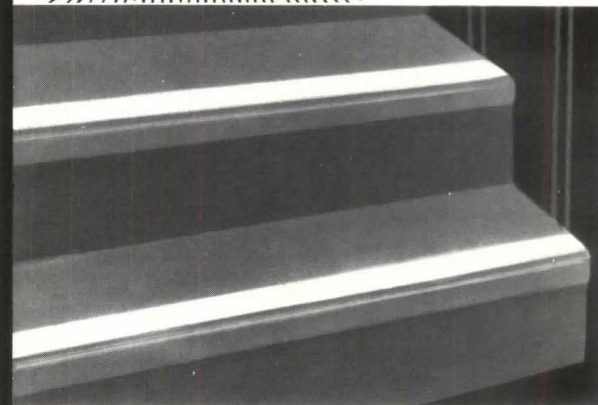
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urban planners and public officials were engaged in what he called "a holy war against the street." He was right. Holly knew that, as the architect Louis Kahn once said, "a street is a room by agreement," and he loved the conceptual notion of the agreement as much as the physical notion of the room itself, for Holly always believed that the greatest lesson the city has to offer us is the idea that we are all in it together, for better or for worse, and we have to make it work.

Holly believed with deep passion that there was such a thing as quality of life, and that the way we build cities, the way we make places, can have a profound effect on what kinds of lives are lived within those places.

He put his facts where his heart was, and he put his heart where his facts were. Holly was the first to cut through the hypocrisy of the economic arguments companies often trumped up for leaving the city, and to point out that they were really just excuses for indulging in the suburban values of disengagement—not to mention excuses for allowing the boss an easy commute home or to the golf course, since Holly was also the first to demonstrate that almost every company that left Manhattan departed for turf close to the chief executive's

backyard. To Holly, the selfishness of this gesture summed up a certain anti-urban attitude that he had committed himself to reversing. In his mind, cities were where community was to be found. And as Holly so deftly demolished the corporate rationale for leaving Manhattan, he cut right through another common hypocrisy of our time: architects who design sterile, unpleasant, and hostile places and pretend they are esthetic experiences. Holly knew better. He had the empirical facts to prove it, and as usual, those empirical facts never hardened into a rigid esthetic viewpoint. His love of easy, casual human use, as exemplified in his insistence that there be movable chairs in Bryant Park, did not blind him to the virtues of the ultimate spare modernist plaza, the Seagram Building on Park Avenue, because he could see how well it worked. Holly's mind's eye had every place filled with people. He only began to see things when the people were in them.

Every time I think I've had an idea about cities and streets and how they work, I look back and discover that Holly saw it first. He taught all of us, more than anything, to look hard, with a clean, clear mind, and then to look again—and to believe in what you see. That is the first of his lessons, and the one that informs all the others. Believe in what you see, and believe in the fact that the people who use cities are often way ahead of the people who design them—that is what Holly Whyte taught us all, and what was central to his passion for civic engagement, for community, and for the enlightenment of urban life. ■

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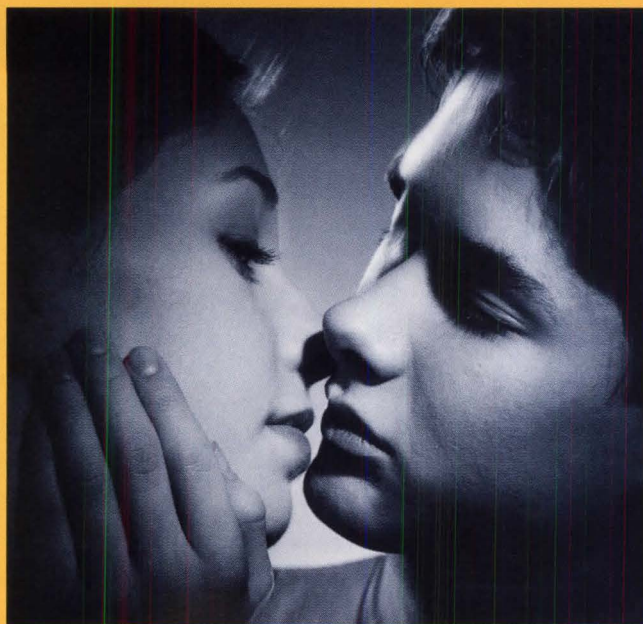
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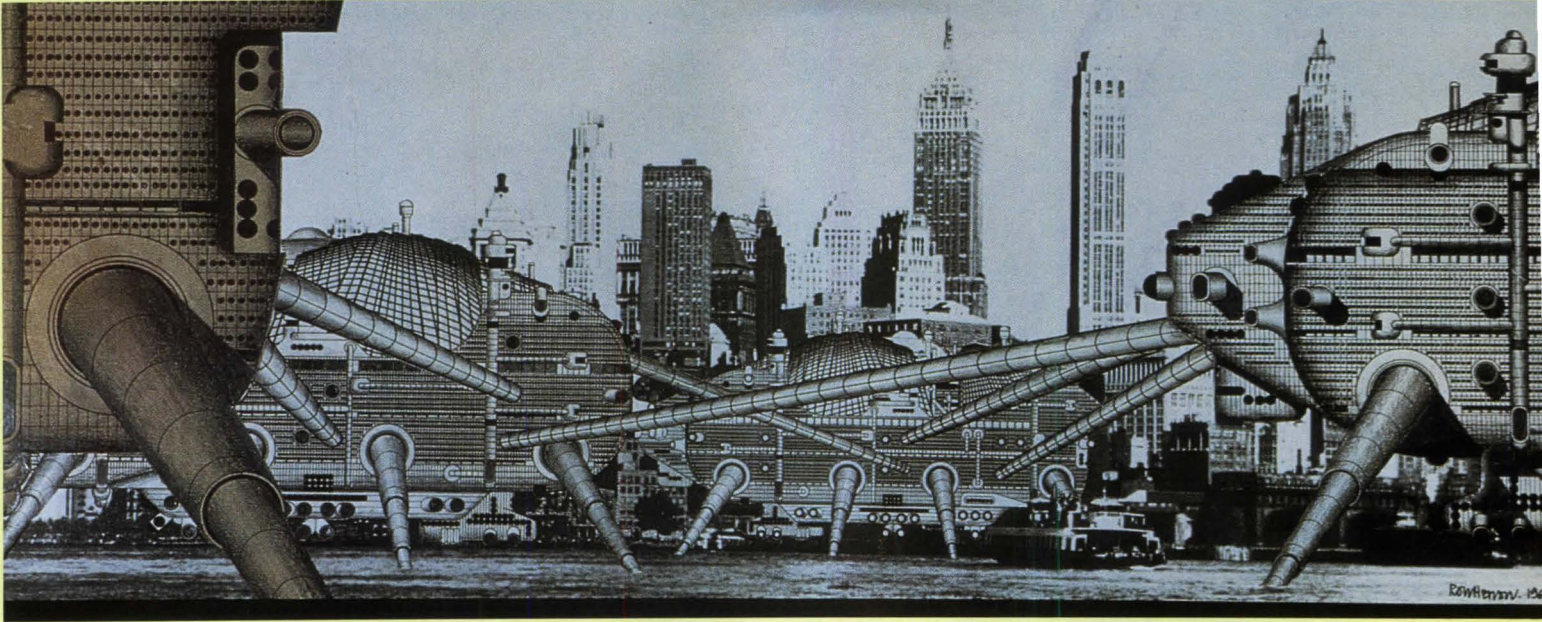
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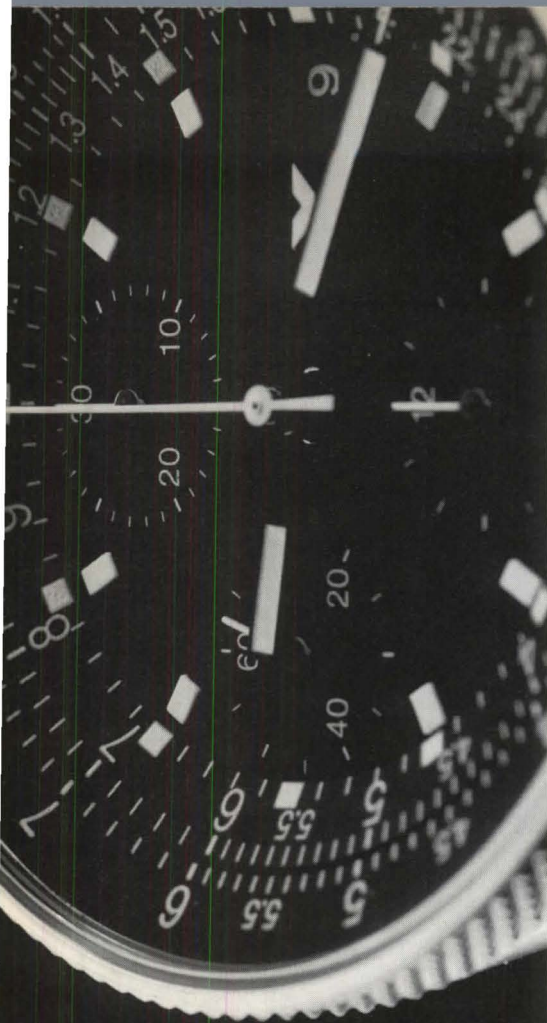
Archigram's remarkable influence on contemporary architectural culture proves the group's subversive 1960s vision amounts to more than retro chic. By Aaron Betsky

With a zap and a pow, Archigram is with us again. The zoomy shapes, snappy graphics, and walking cities that Peter Cook, David Greene, Michael Webb, Ron Herron, Warren Chalk, and Dennis Crompton dreamed up between 1961 and 1974 are on display on gallery walls and in bookstores across the United States. These texts, drawings, and models draw us back (and forward) into a world where technology is our friend, buildings move, and cities are as organic as our bodies.

The name "Archigram" was an abbreviation of *Architectural Telegram*—the title of a publication that the group first produced in 1961 and continued to appear occasionally for more than a decade. In its pages, and in various competition projects, the members of Archigram envisioned a modular, fairy-tale world. They portrayed mankind wandering through nature in a plastic bubble or plugging into an electronic information network through a television set encased in a plastic log. The visions that Archigram presented to us more than three decades ago are fun, but do they have any relevance today?

Archigram is certainly hip. It is the architectural equivalent of London's "Swinging Sixties"—the mainspring for such magazines as *Wallpaper**. The set designers of last year's cinematic revival of the 1960s television show, *The Avengers*, built some of Archigram's ideas as sets for chases and battles. Prices for period accoutrements of the Archigram lifestyle, such as bean bags, modular furniture, and steel systems components are approaching those of the finest Chippendale or Duncan Phyfe. A generation of architects and

Archigram member Ron Herron's seminal walking city (1964, above).



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Richard Rogers and **Renzo Piano**'s Pompidou Center (1977, top) owes debt to Archigram's technophilia. **Robert Venturi** and **Steve Izenour**'s signs of life exhibition (1976, above) at Smithsonian's Renwick Gallery in Washington, D.C., echoes Archigram's pop sensibility.

installation artists is drawing new inspiration from the still-fresh work of these aging hipsters.

The legacy of Archigram also surrounds us every time we board an airplane or visit European offices, shopping malls, and government buildings. The British High Tech movement, spearheaded by the likes of Richard Rogers and Norman Foster, has become the International Style of the end of the millennium. Rogers and his one-time partner Renzo Piano drew on Archigram's legacy in their designs for the Pompidou Center in Paris. Today, the tallest building in Europe (in Frankfurt, Germany), the largest airport in the world (in Hong Kong), and the Law Courts in the city of Bordeaux, France, are open structures with plug-in components.

It is true that these vast, flexible spaces—in which we sit, attached to walkmans, computers, and cellular phones—might further the Archigram dream of a plugged-in utopia. But the idea that the miniaturization of technology would liberate us by restoring our bodies' relationship with nature, one of Archigram's central tenets, has turned out to be false. Instead of meandering naked through a high-tech Eden, we scurry through fluorescent-lit environments whose scale overwhelms us, pace unsettles us, advertising blares at us, and corporate-chic streamlining numbs us.

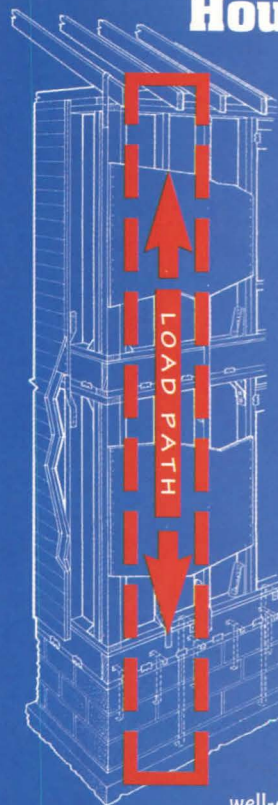
The side of Archigram that concentrated on the merger of form and mass images reverberates more strongly. Even if Robert Venturi has forgotten his dream of an "electronic expressionism," conceived at the same time Archigram was imagining an "idea circus" that would connect us to the currents of electricity and information coursing through the modern city, many architects have made buildings that disappear into the messages they convey. Some of the them are "serious" bits of architecture, such as Jean Nouvel's department store in Berlin, but most of them are Target stores or movie theaters.

The group's dreams survive with even greater force in the avant-garde. Picking up on Archigram projects such as Living 1990 (a 1967 department store prototype for future domestic environments) and Arena (a 1969 multimedia exposition of the group's projects), Diller + Scofidio in New York City have explored architecture as an installation. They make designs, as Archigram did, that fuse information technology with architectural frameworks. The recent TV Tank installation, designed by New York City firm LOT/EK, continues Archigram's notion of adapting outdated technology (a fuel tank) to create a cushy (rubber-padded) environment in which to tune in and out (by watching television). While these efforts remain in the isolated world of galleries, or in an occasional public art installation, they help the public see architecture as a form of criticism: examining consumer culture, teasing out its technology, and posing architectural alternatives. Yet these firms do not succeed at doing what Archigram dreamed of most: They do not make serious architecture an essential and fun part of our consumer culture.

It is outside of the discipline of architecture that such dreams are still alive. Some of Archigram's best acolytes, such as Mark Fisher, went on to design stage shows for The Rolling Stones and Pink Floyd. Barbarella and James Bond embedded the Archigram sensibility, at least stylistically. If only for a moment, if only in an image flickering on the screen, Archigram zapped us into techno-utopia.

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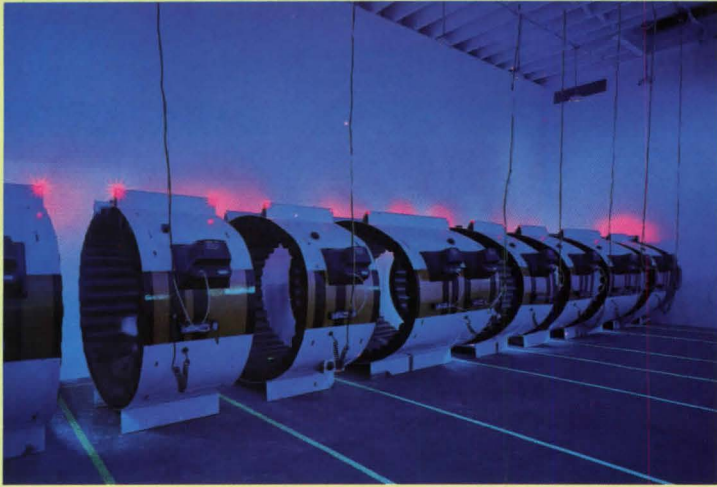
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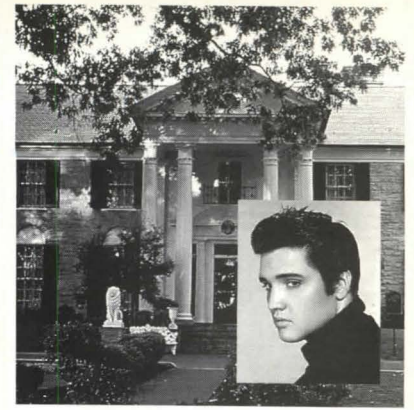




Contemporary installations by LOT/EK (top) and Diller + Scofidio (above) build on Archigram's interest in the connection between **architecture and electronic media**.

if not through "open cities" or "fun cities," then through sunlit, electronically animated departure lounges and stadium concourses. We slither through these molded-plastic environments while wearing lycra suits and watching ads for an infinitely rich variety of goodies.

Archigram, in other words, predicted the world in which we now live. Unfortunately, it did not build it. Instead, surviving members are teachers and thinkers: Peter Cook heads London's Bartlett School of Architecture; David Greene teaches at Westminster University's School of Architecture in London; Michael Webb teaches at Cooper Union in New York City; and Dennis Crompton teaches at the Architectural Association in London, while minding the group's archives. Most of the contemporary environments that Archigram inspires, directly or indirectly, have relinquished utopianism to become mere means for making the public buy something. We're not juiced by technology and freed by flexible systems, but live in bland boxes and accept the most minimal, remote-control relationship with the social, commercial, and political forces that shape our world. Yet the Archigram dream remains alive. If we can impart the verve of a rock-and-roll show upon the power of technology, and make our cities as energized as science-fiction movie sets, these architectural telegrams from the past might yet reach our Webbed world, where interconnectivity is still only a virtual promise. ■



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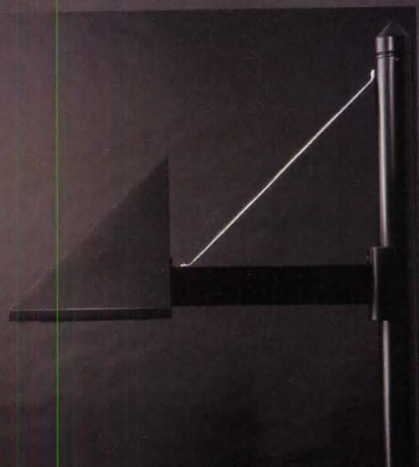
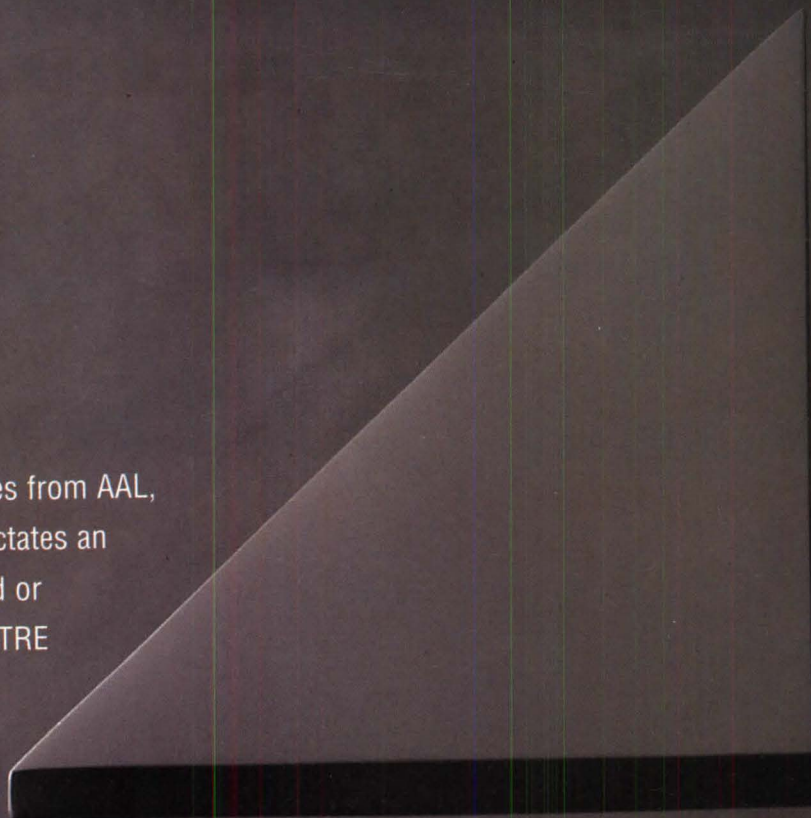
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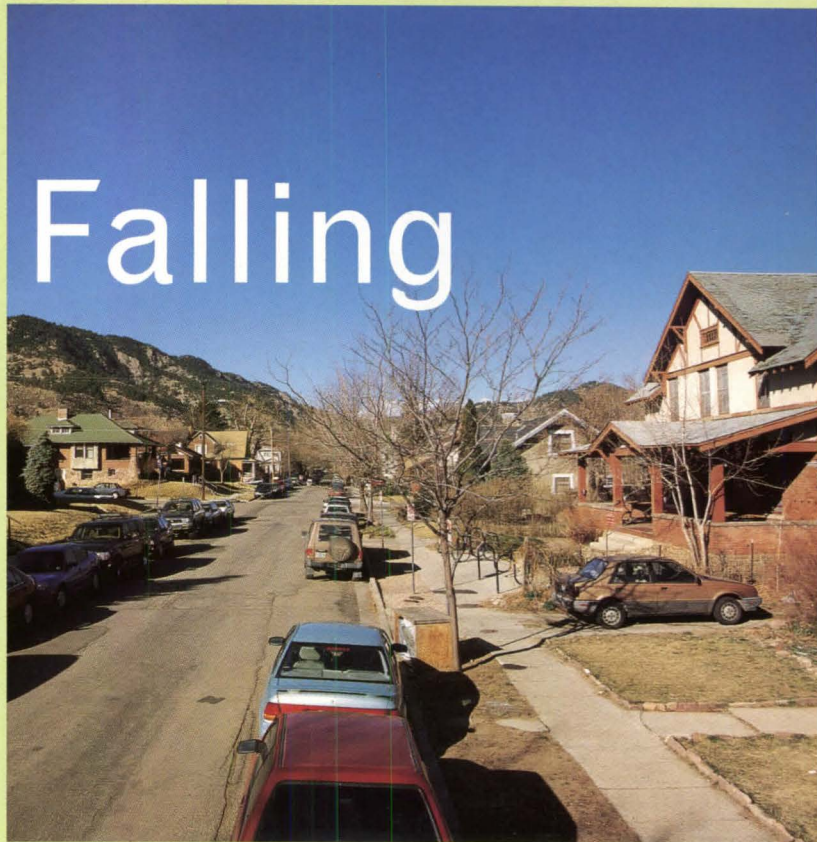
Boulder's Falling

Why is preservation-minded University of Colorado leveling blocks of Craftsman bungalows to build anonymous megastructures?
By Sarah Massey-Warren

A passerby can't miss the inscription on the facade of the University of Colorado's (CU) Norlin Library: "Who knows only his own generation remains always a child." The library sits at the heart of the Norlin Quadrangle Historic District, which opens westward to Boulder and the Flatiron Mountains. Preservation pulses throughout CU's 321-acre campus, from the patriarchal Old Main building (1877) to the 1938 Mediterranean-style ticket office that stands sentinel to CU's prized Folsom Stadium. History, like football, was the name of the university's game until last November, when CU officials unveiled a 10-year master plan for Grandview Terrace, the 12-acre neighborhood immediately to the north of campus. The plan replaces 30 Craftsman bungalows with formulaic institutional buildings flanked by regimented planting and "pedestrian links" to campus—a cookie-cutter solution to expansion needs that will delete intrinsic historic fabric.

A pinch of history will remain. The plan saves nine peripheral Mission Style and Tudor buildings, including the Armory (1915), a National Historic Landmark that will house CU's journalism school. Others, once fraternities and sororities, will house administrative and continuing education offices. Should CU's proposal materialize, however, it will scrape away Boulder's last Craftsman enclave of two-story residences and bungalows built between 1900 and 1930. In its place will stand 11 massive academic buildings and two monolithic parking garages, one of which will surely blight a bluff that stands between historic downtown and the university.

Reverberations rocked Boulder's preservation advocates, including Betty Chronic, an advisor to the National Trust for Historic Preservation, whose "jaw dropped" when she heard the news. Her dismay echoes that of the preservationist group Historic Boulder, which has led the efforts to maintain a dialogue with CU. The State Historic Preservation Office has deemed Grandview eligible for listing on the National Register as a Historic District. Once listed, government funding could reimburse rehabilitation efforts, thus making saving the enclave financially feasible.



Locals call **Grandview Terrace** neighborhood "Faculty Row," a nickname that refers to its mostly academic tenants.

However, the university, who owns most of Grandview, insists that the bungalows must go. In what amounted to insincere efforts to pacify preservationists, CU and a community task force generated alternatives for increasing space for academic, administrative, and parking facilities while saving the core bungalows—plans that CU subsequently discarded. Remarkably—and disingenuously—CU still claims preservation. After all, reports Vice Chancellor Paul Tabolt, who has shepherded the master plan, nine buildings will be saved. The smaller structures, he claims, are "inefficient, lack institutional character, and would be cost-prohibitive to rehabilitate," an argument that side-steps the even greater expense of new buildings. CU's proposal lacks the sustainable ethic of recycling buildings and preserving mature trees practiced elsewhere on campus and will wreak havoc on the nearby Andrews Arboretum, the surrounding neighborhood, and its already overloaded streets.

In June, the university's board of regents will vote to accept or reject the proposal. Before that happens, the university needs to explore innovative preservation solutions with the community. Emphatic support of the Craftsman core of Grandview Terrace could return CU to actual, not academic, preservation. ■

Sarah Massey-Warren is a Boulder, Colorado-based landscape architect and freelance writer.

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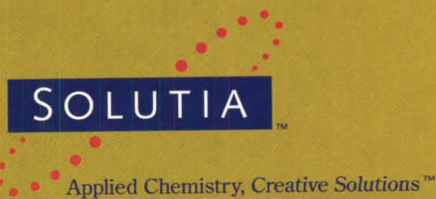
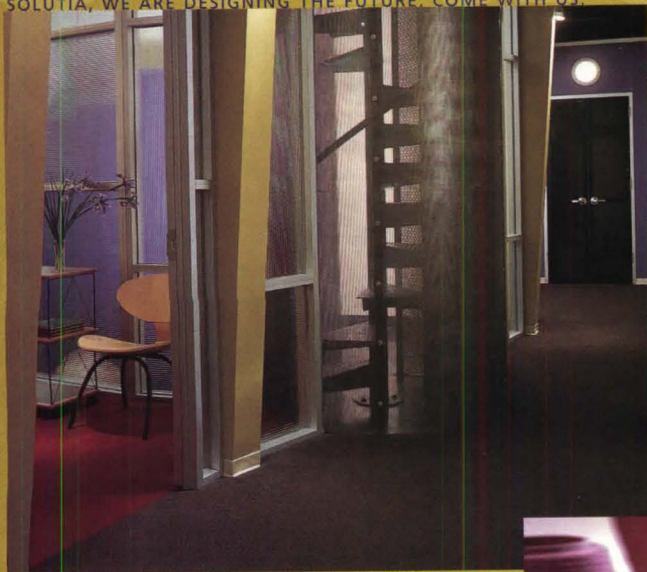
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Annual Awards Issue

This issue marks the fourth time *Architecture* has had the privilege of presenting the P/A Awards. Since *Progressive Architecture* magazine founded the program in 1954, each jury's charge has been the same: to recognize design excellence in unbuilt projects. However, the way jurors select winners—the way they discover themes, apply standards—is a process that changes each year. This year's jury pored over more than 400 binders for two days before agreeing on five awards and 14 citations.

Most architects—including the winners—presented simple portfolios in which computer-generated images predominated. (Samples from the award winners' portfolios appear on the following pages.) The jury was divided on the issue of image presentation, prompting juror Mehrdad Yazdani to remark:

“Realistic computer images take away from the mystery of a project. When we see a model or a hand drawing, we fill in the gaps with our imagination, and that's when the poetry of the work comes into play.”

Fellow juror Tom Fisher disagreed:

“We're seeing a positive effect of working with computers—an interest in transparency, ephemerality, depth of skin. In the best schemes they're using tissue-like skins to good effect. The computer screen has become a kind of reality affecting the forms we make.”

For the jury of our Awards for Architectural Research, clarity and completeness of presentation, not the evocative nature of drawings, were key. As juror Janet R. White attests,

“The submissions that were awarded were complete, thoroughly documented, and very well presented, both graphically and textually.”

Judge for yourself.

The 1999 P/A Awards



An overture for a new century

This year, on the brink of the millennium, the P/A Awards offer proof that modernism has weathered a generation of growing pains, and is all the stronger for it. "Modern" implies more diversity than dogmatists of years past could have imagined: Today no one can claim a monopoly on good design. The array of projects shown here, selected by a jury of five (right), emerged during two days of judging that saw remarkably little dissent. Eclecticism prevailed over orthodoxy: Most were as comfortable with Shim-Sutcliffe Architects' "sophisticated hut"—a boathouse with a heavy timber wrapper—as they were with a cantilevered steel-and-glass office tower by Skidmore, Owings & Merrill. The reductive yet craftsmanly esthetic of a wood boathouse by Vincent James Associates shared space at the jurors' table with Sharples Holden Pasquarelli's museum, whose undulated glass facade evokes the sensuality of the human body.

Many but not all of the ideological and stylistic debates that once polarized the profession have become less divisive. Explicitly traditional work remains—as it has been for years—a tough sell to the P/A Awards jury, which often considered the historicist work they reviewed more nostalgic than rigorous. But when they encountered projects that both sustain and reinterpret traditional construction, they had no fears that rigor might succumb to sentiment: The roofs on Andrews/LeBlanc's vernacular houses—architectural scuppers—embodied, at least rhetorically, the functionalist credos in which each juror had been schooled. These heroically scaled downspouts seemed to validate the architects' foray into tradition. In other projects, the jurors showed that figurative plans, if not elevations, have earned legitimacy in modern design. They praised Office dA's proposal to convert an obsolete defense plant into a new town center with figural spaces scaled to suburbia's car culture.

None of the prizewinning designs are utterly new. They need not be: Several of the best projects—at once inventive and multivalent—are recombinations of modernist elements. Office dA's house in Bilbao, Spain, is exemplary, a synthesis of the 19th century's pochéd figural rooms and the free plan pioneered in the early 20th century. Thomas Phifer and Partners' house in the Hudson Valley is another noteworthy hybrid: Like the work of Ludwig Mies van der Rohe, it is a lucid structure of steel and glass, yet its massing, a pavilion on a plinth, borrows as much from beaux arts classicism as it does from Miesian country houses.

Buildings like these do not overhaul modernism; they mine it. Their architects plumb correspondences latent in the work of their precursors to propose combinations once thought untenable. Intelligent recombinations, such as this year's P/A winners, are the work of modernism's excavators—architects enlarging its foundation for the century ahead.

PHILIP ARCIDI

Rodolfo Machado

has been principal of Boston-based Machado and Silvetti Associates with partner Jorge Silvetti since 1974. Born in Argentina, Machado received his diploma in architecture from the University of Buenos Aires and later a master of architecture from the University of California at Berkeley. He is currently professor in practice of architecture and urban design at Harvard University. Machado has also taught at Carnegie Mellon University; the Rhode Island School of Design, where he was chair of the department of architecture from 1978 until 1986; the University of Virginia; and Yale, Princeton, and Rice Universities. Machado and Silvetti has received eight Progressive Architecture awards and citations, as well as three awards from the American Institute of Architects and in 1991, the First Award in Architecture from the American Academy of Arts and Letters.



Thomas Fisher

is dean of the College of Architecture and Landscape Architecture at the University of Minnesota. He holds an architecture degree from Cornell University and a degree in intellectual history from Case Western Reserve University. The former editorial director of *Progressive Architecture*, Fisher is a frequent lecturer and prolific author. He is currently coeditor of *Architectural Research Quarterly*, published by Cambridge University Press, and has a forthcoming book of essays on architecture.



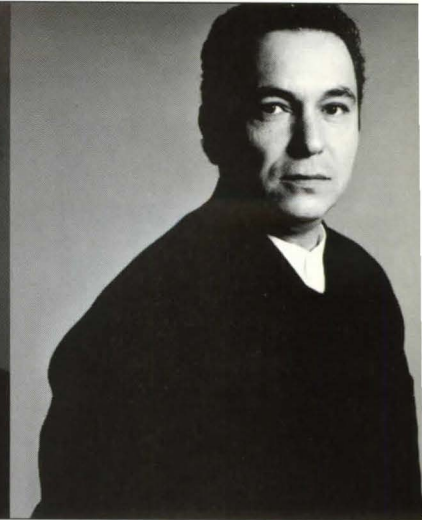
Eva Jiricna

was born in Czechoslovakia and studied architecture at the University of Prague and the Academy of Fine Arts. She established her own firm in London in 1984. Jiricna was designated royal designer for industry in the United Kingdom in 1991, and was elected to the Royal Academy of Arts in 1997. She has lectured widely and taught at Harvard University and the University of Pennsylvania. Jiricna's newest projects include an exhibition in the Millennium Dome in London and a new orangery building for Prague Castle in the Czech Republic.



Billie Tsien

has been principal of Tod Williams Billie Tsien and Associates since 1986. She received an undergraduate degree in fine arts from Yale University and a master of architecture from the University of California, Los Angeles. Tsien has taught at the Southern California Institute of Architecture, the University of Texas at Austin, Parsons School of Design, and Yale and Harvard Universities. Her firm's work has received numerous awards, including an honor award from the American Institute of Architects for the Neurosciences Institute in La Jolla, California. Tsien has served on panels for the National Endowment for the Arts, the Percent for Art juries in New York City and Seattle, and is on the board of trustees of the Public Art Fund, the Architectural League of New York, and the Municipal Art Society.



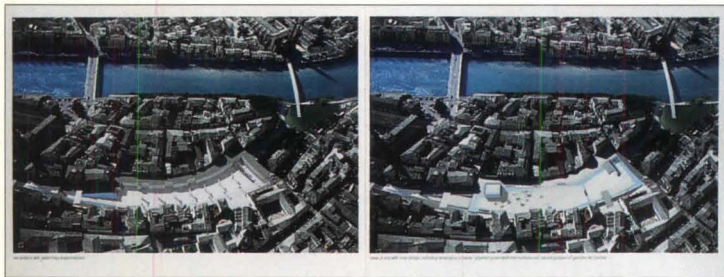
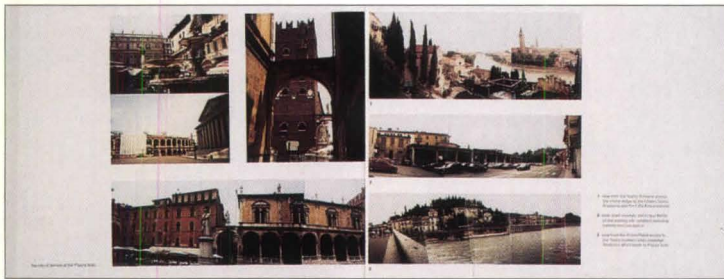
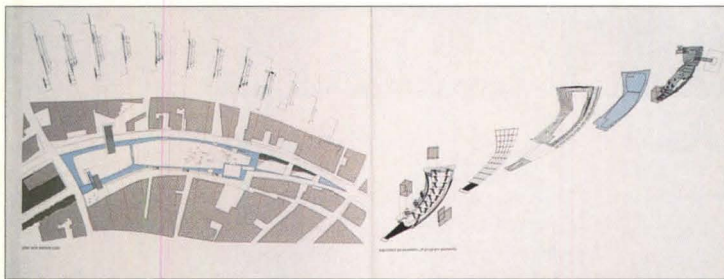
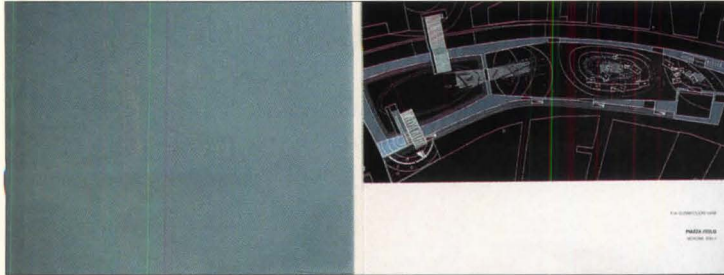
Mehrdad Yazdani

is principal, director of design at Dworsky Associates in Los Angeles. Yazdani holds a bachelor of architecture from the University of Texas at Austin, where he has taught, and a master of architecture from Harvard University. His work has received recognition from the California Council AIA and a Progressive Architecture award. Yazdani has served on numerous design awards juries and lectured widely. Among the projects nearing completion at his firm are the new federal building and United States courthouse in Las Vegas.

Gabellini Associates

Piazza Isolo

award



Project presentation

CLIENT: The City of Verona
ARCHITECT: Gabellini Associates, New York City—Michael Gabellini (design principal), Dan Garbowit (managing principal), Carmen Carrasco, Ben Fuqua, Catherine Jones, Vincent Liano

PROJECT: Piazza Isolo, Verona, Italy

SITE: An 80,000-square-foot, wedge-shaped plaza, currently used as a parking lot, in the medieval neighborhood of Veronetta.

PROGRAM: The proposed scheme, winner of a city-sponsored design competition, calls for the demolition of the parking surface and a crumbling bus station. In their place will be a new public piazza and marketplace atop two levels of new underground parking that accommodates 500 cars.

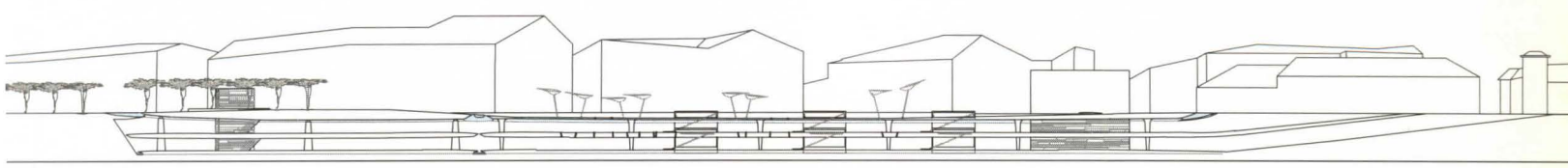
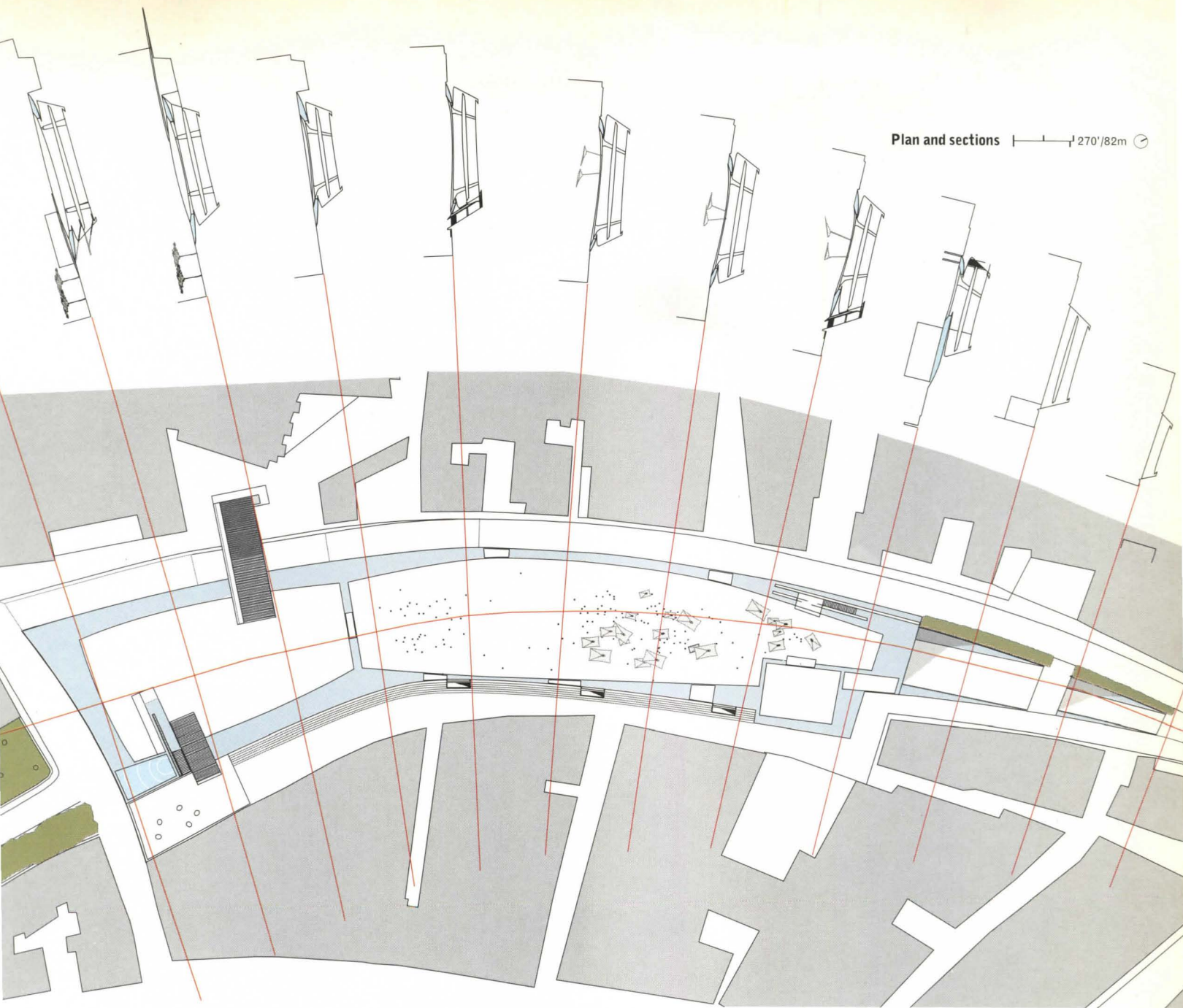
SOLUTION: The scheme invokes the history of the site—formerly an island, later absorbed into the city fabric with the infill of a canal—by reintroducing water. A shallow, water-filled basin surrounds the plaza's pair of inflected, trapezoidal ground planes. New bridges link the pieces both to each other and the city. A new marketplace on the plaza reintroduces a role the site had from the late 19th century to the 1960s. Narrow incisions around the piazza's perimeter allow light and air to filter down into the garage's canted spaces; light and cascading water surround stairs that lead into the parking garage.

Machado: The icy minimalism of this scheme is rarely seen in urbanism, and it constitutes an appropriate strategy in the context of old cities. Sadly, it

would never be approved in this country. I would love to see the buildings and spaces this concept will produce.

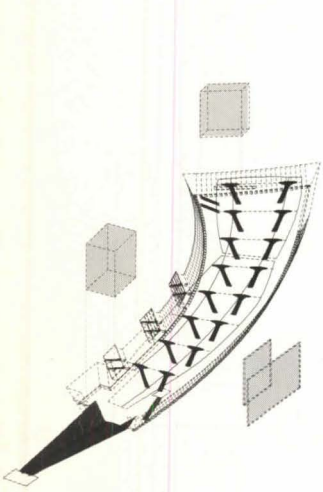
Yazdani: The elements are taken apart one by one, studied carefully, and put back together very carefully. I was initially disturbed by the separation of the plaza from its context by the water.

Fisher: I like that the plaza is a memory of what the space used to be, an island in the middle of a channel.

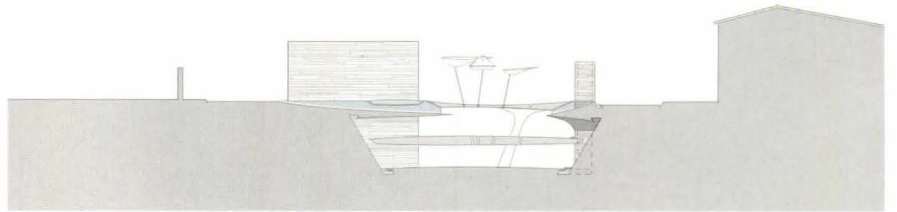
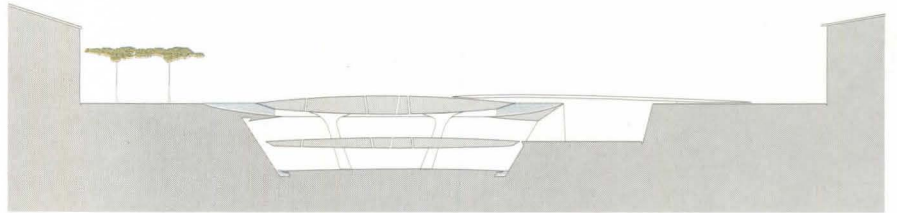
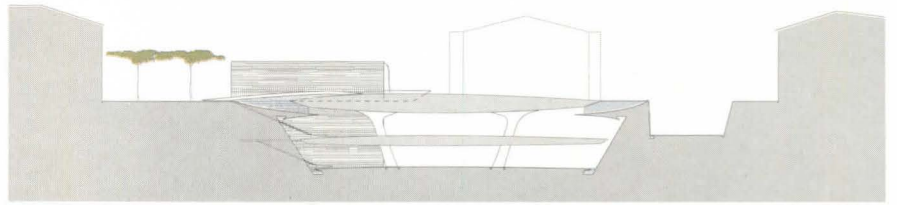
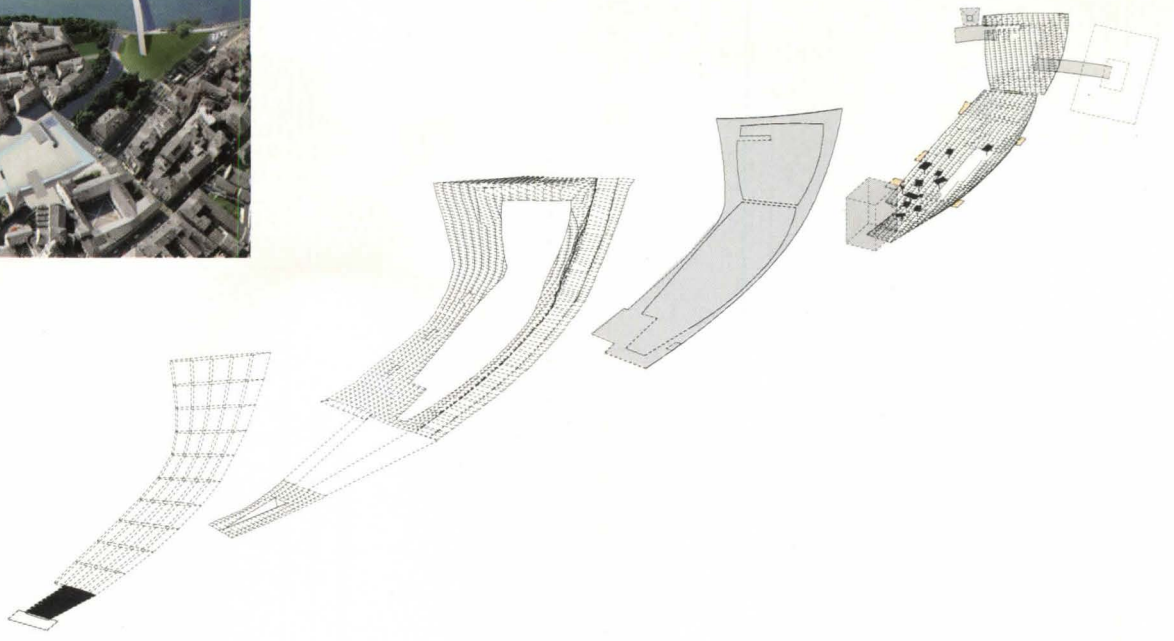




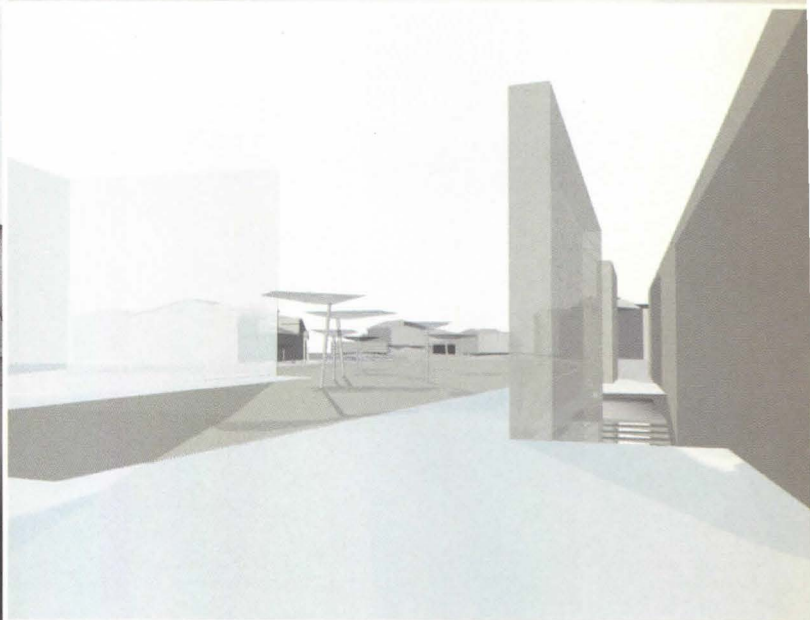
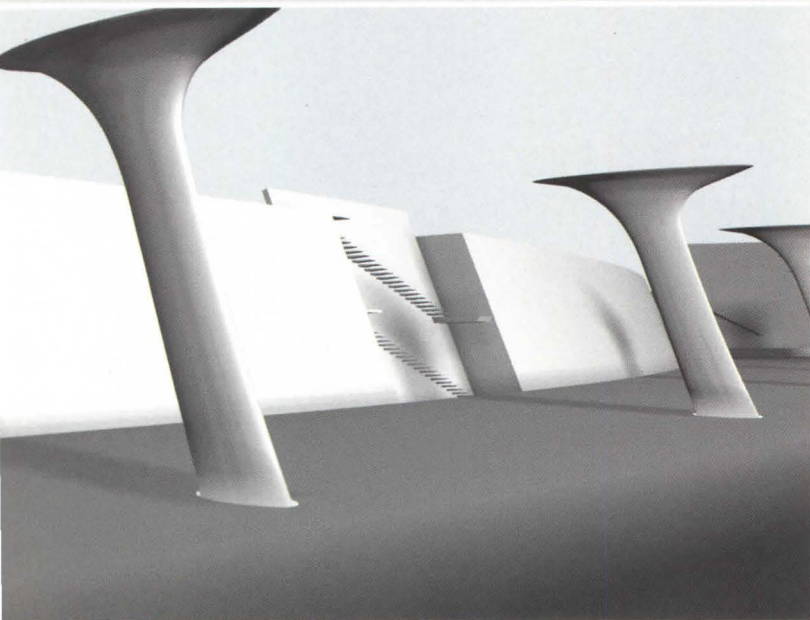
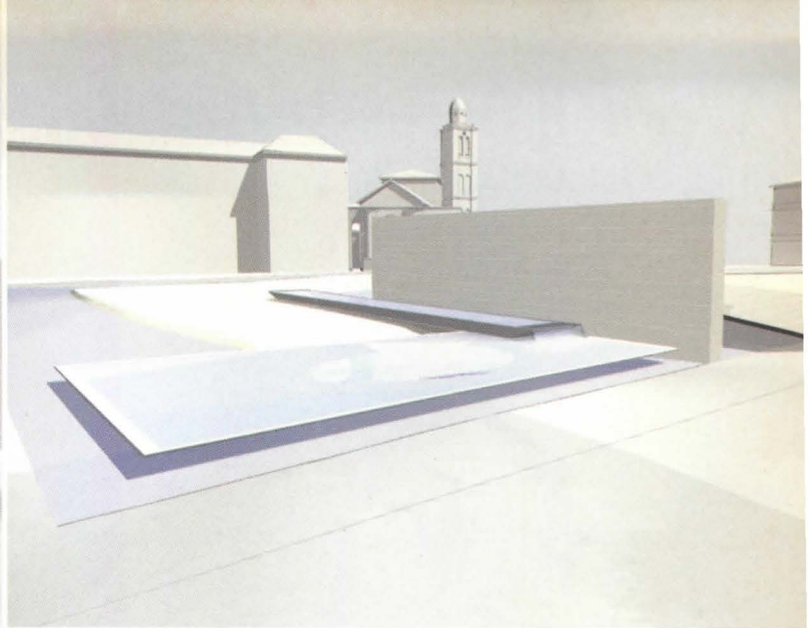
Aerial view of site



Exploded axonometric



East-west sections | ——— | 165'/50m



Views of parking garage

View of basin at south end of plaza

View of stair to garage at south end of plaza

Tsien: I like that the architect addressed the problem of parking in an Italian city. This project is not about making a lyrical public place—Italy is full of lyrical public places. It's taking care of parking and then leaving behind something quite wonderful.

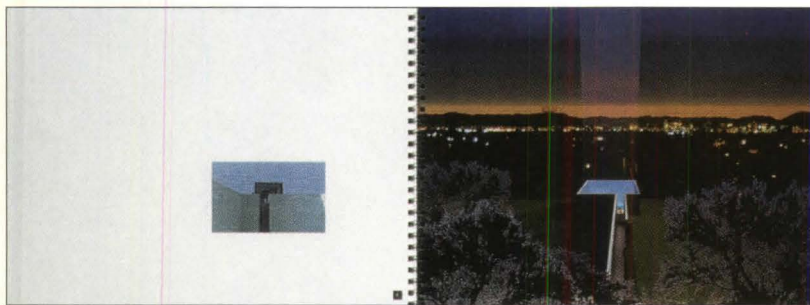
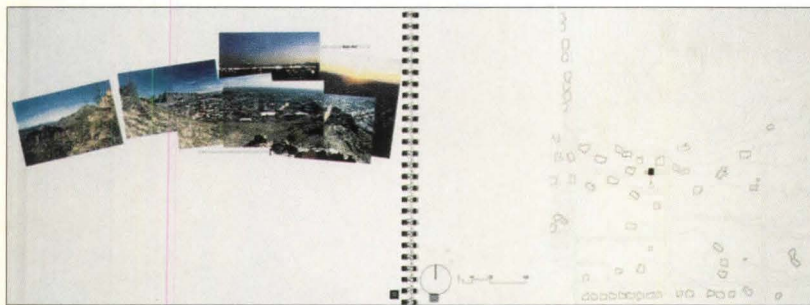
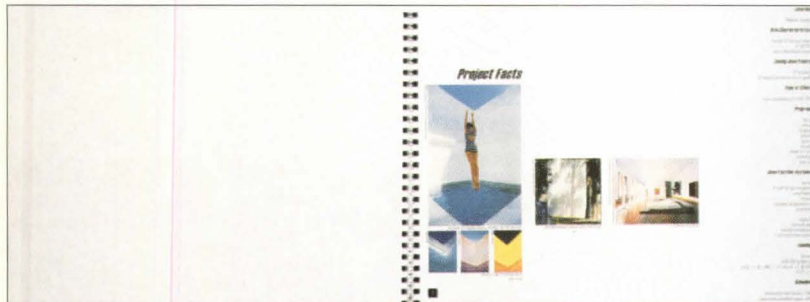
Fisher: I love the section through the parking garage. The exterior walls are canted, so light comes down on the sides and through the deck. I love bringing the light into the garage through the water.

Jiricna: Everything is neatly put together. The architect thought about lighting, construction, circulation. Everything is consistent. I also love the colors.

Wendell Burnette Architects

Tocker/McCormack House

award



Project presentation

CLIENT: Brad Tocker
ARCHITECT: Wendell Burnette Architects, Phoenix, Arizona—Wendell Burnette (principal), Christopher Alt (design team)
LANDSCAPE DESIGNER: Debra Burnette Landscape Design
ENGINEERS: Rudow + Berry (structural); C.A. Energy Designs (electrical); Foree & Vann (geotechnical)

PROJECT: Tocker / McCormack House, Phoenix, Arizona

SITE: A 0.6-acre parcel on the south ridge of the Echo Mountain Foothills, with views of downtown Phoenix and a distant mountain range.

PROGRAM: A 2,000-square-foot house built atop the existing foundations of a demolished structure. Amenities include a three-car garage, guest wing, dog run, and swimming pool.

SOLUTION: The simple rectangular volume of the living spaces appears to float above a densely planted bosque of mesquite. The architect raises the house on pilotis to edit out neighboring houses from panoramic views of the cityscape and mountains. Extending from the house are a pair of intersecting, axial paths: An east-west walkway connects a cactus garden and parking area; another, oriented north-south, leads to a detached swimming pool. The pool takes on a defined architectonic character, as high, whitewashed walls surround the water to create an almost cubic roomlike enclosure.

Jiriena: I really like its simplicity, and the simplicity of the presentation.

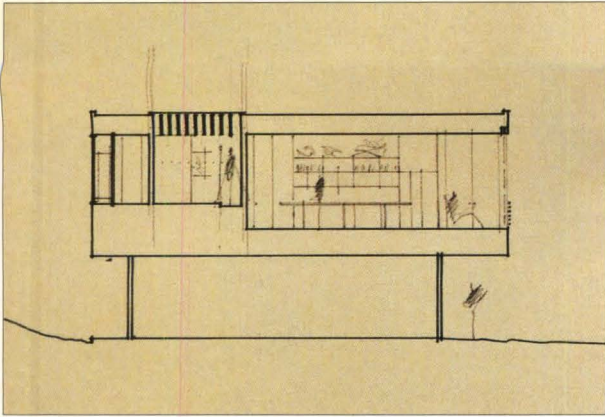
Yazdani: It seems Swiss architecture has had a tremendous influence on American architecture.



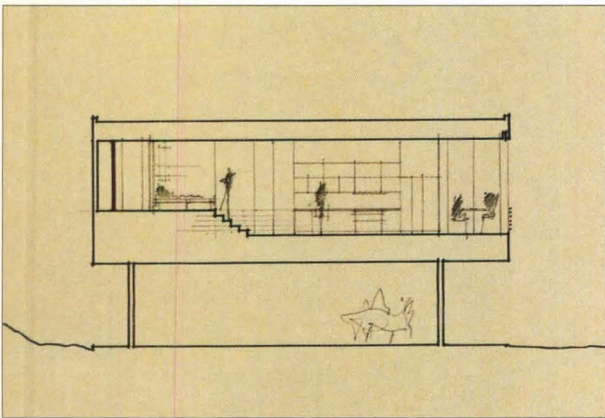
View north to house

Machado: The poetics of the desert and the myth of Phoenix are alive and well in this project. There is a certain level of poetry in the way that the swimming pool is connected to the house as

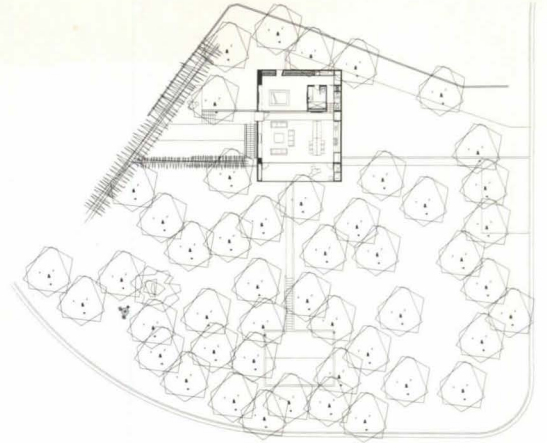
well as the experience of being in the pool itself. That's very beautiful. The pool is the most important, densest, and most alluring moment in the scheme.



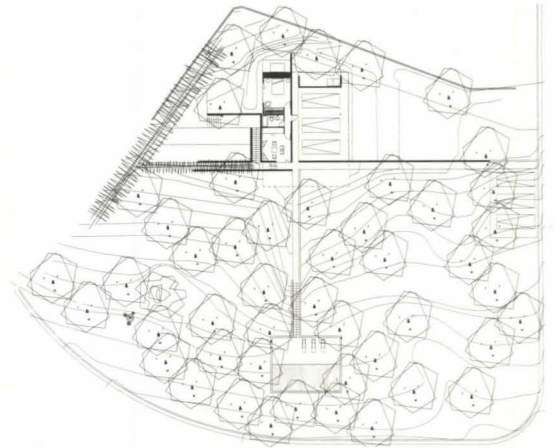
North-south section



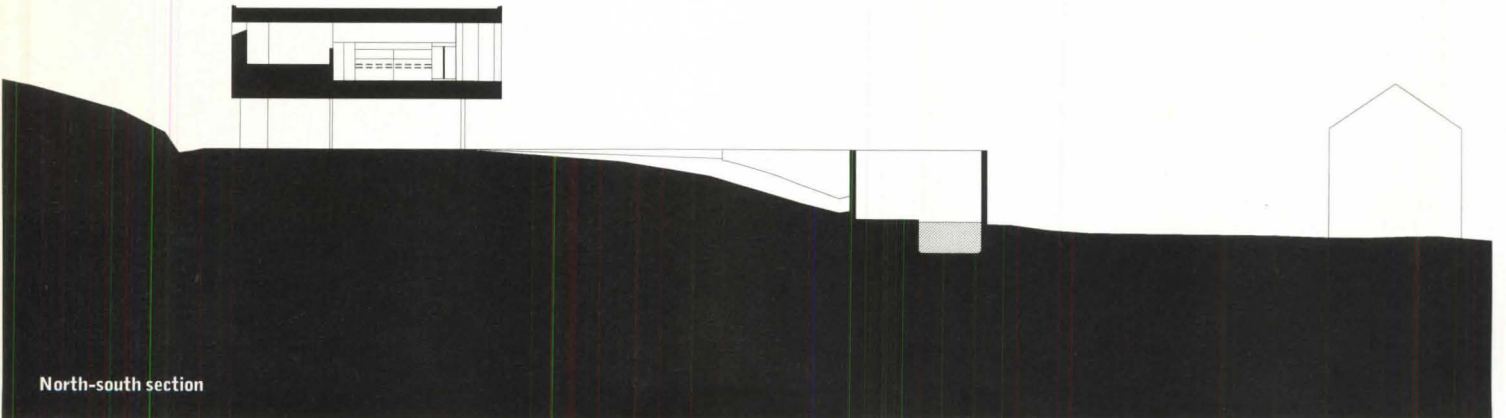
North-south section | — | 7 1/2m



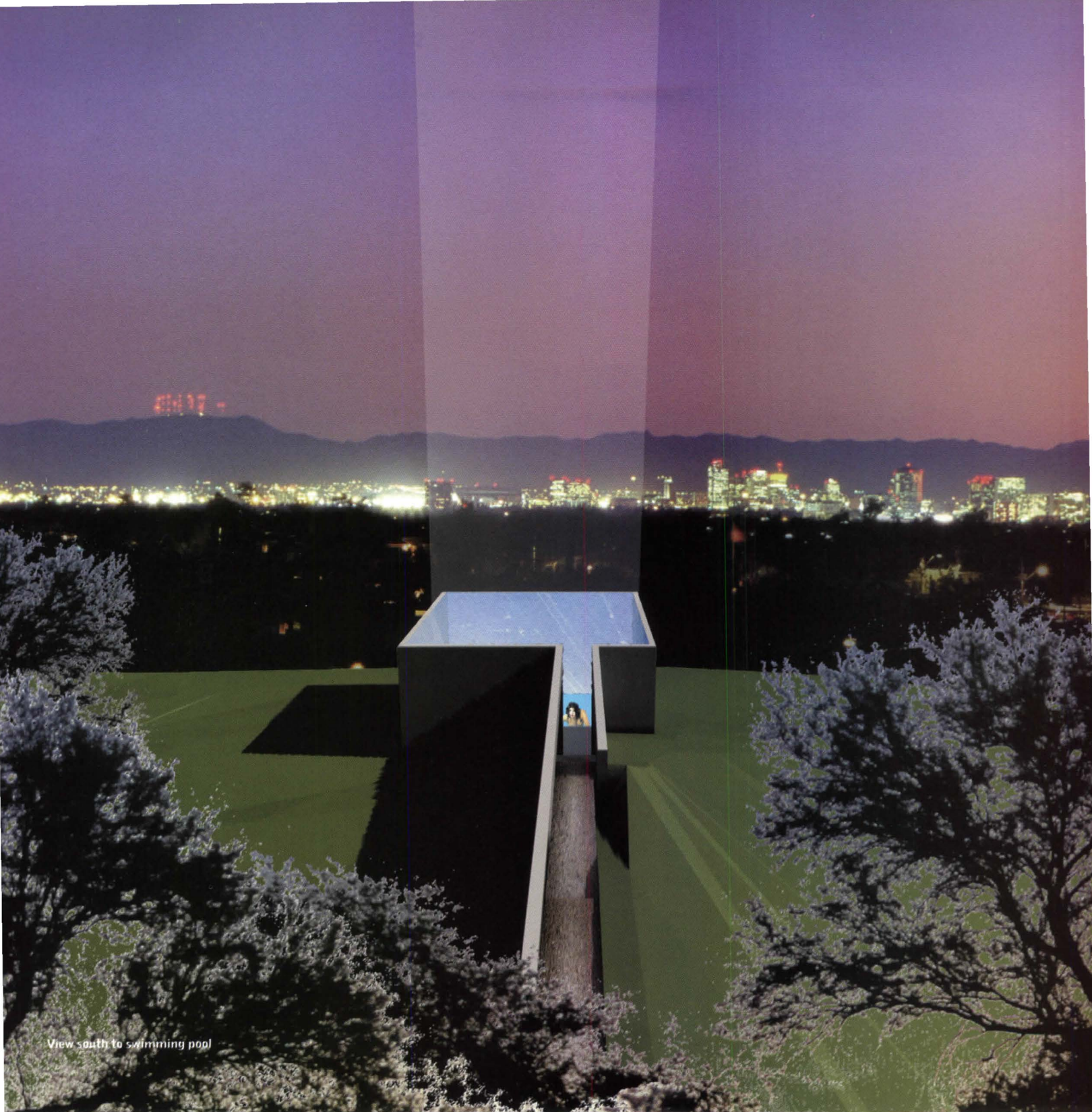
Second-floor plan



First-floor plan | — | 22 1/7m Ⓢ



North-south section

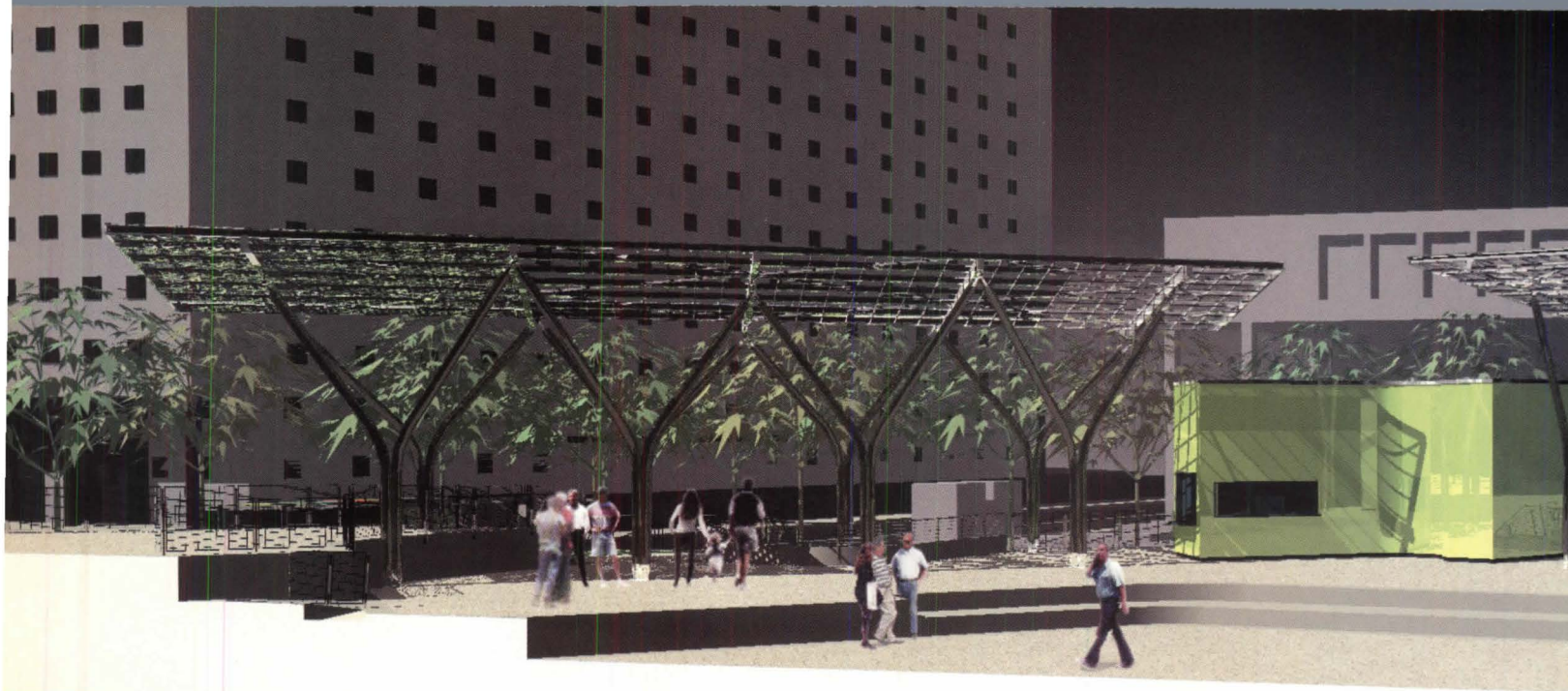


View south to swimming pool

Yazdani: I like the reductive quality of it. The elements are reduced to their bareness.

Fisher: I like the way the pool is actually made into a room. It's very powerful.

Machado: There are some very strong places made, particularly the pool.

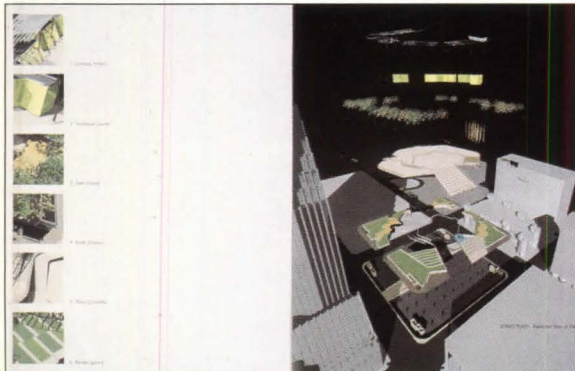


Sectional view looking west

Willis, Bricker & Cannady, Architects

Jones Plaza Renovation

award

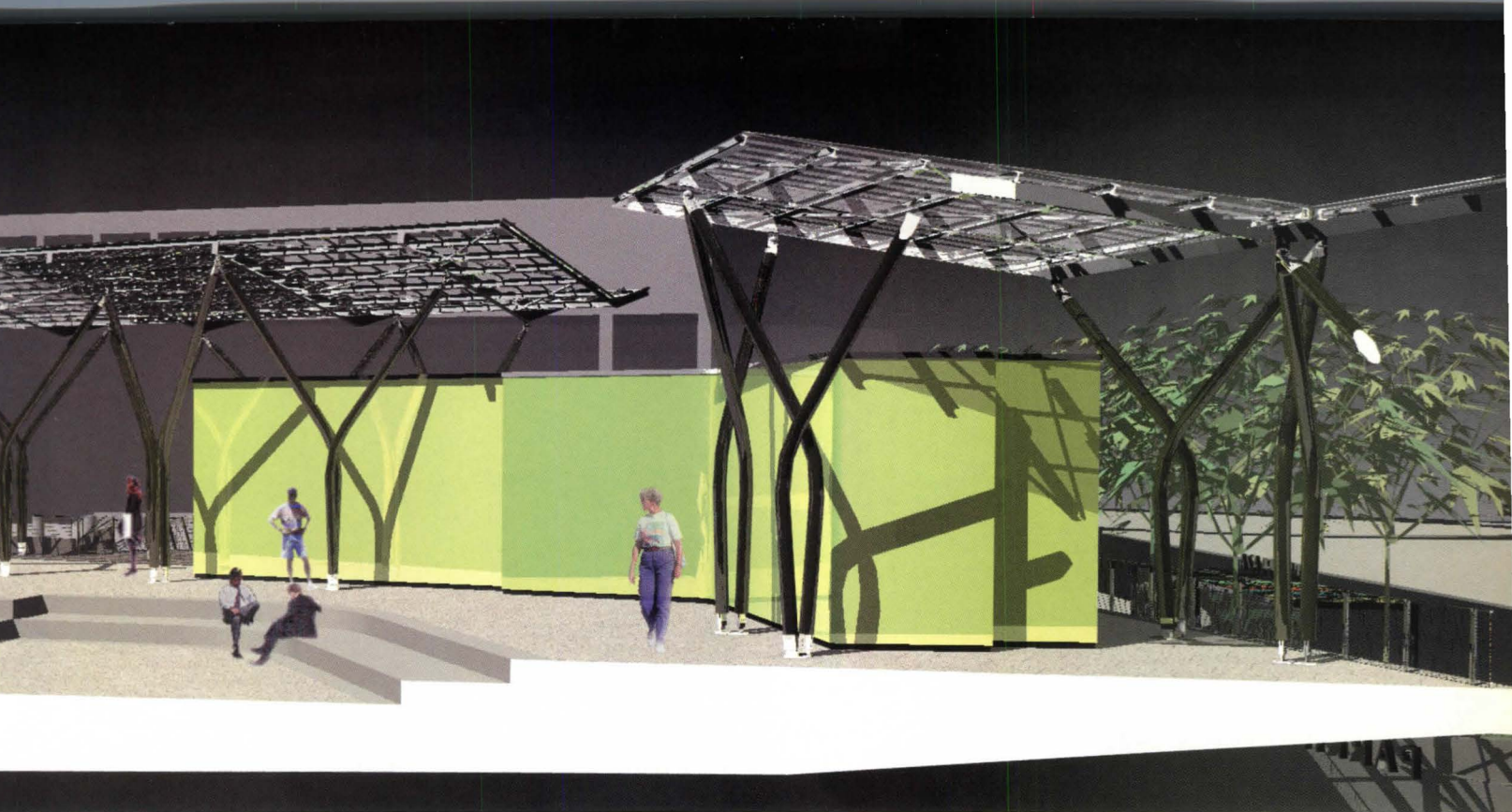


Project presentation



Tsien: It has a huge amount of imagination in what could be an incredibly dry, nasty sort of project. Also, I love the scenario of how people inhabit it. The stories that

this person wrote at the end had to do with really imagining the people who are there, and that helped those who designed the project give it life.



PROJECT: Jones Plaza Restoration, Houston

SITE: An existing public plaza in downtown Houston over an underground parking garage. The city's opera house and symphony hall, a major theater, the federal courthouse, and several large office buildings bound the full-block plaza.

PROGRAM: The renovation of the existing plaza, including the incorporation of the parking garage below, with its entrance ramps, air vents, and stair housings. The plaza is frequently used for large planned events, and therefore requires standing room and restrooms for a crowd of 2,000, a level area for tents, a permanent concession stand, and a stage with an adjacent green room.

SOLUTION: The four elevated corners of the plaza, accessed by various stairs, are landscaped with trees, wild grasses, and flowers. Five canopied steel pergolas separate these landscaped areas from a slightly sunken, hexagonal paved plaza at the center of the block. Several of the pergolas shelter small, freestanding blocks clad in glass mosaic tiles, which house the concessions, bathrooms, and other services. The colored tiles create a pattern that abstracts a landscape painting by the French Impressionist Claude Monet. On the northeast side of the site another pergola covers the stage. A broad walkway on the east side of the plaza aligns with the main entrance of the symphony hall across the street.

CLIENT: City of Houston
Department of Public Works & Engineering/
Convention & Entertainment

ARCHITECT: Willis, Bricker & Cannady, Architects, Houston—Nolen Willis (managing principal), William T. Cannady (design principal), Mark Wamble (design architect), Rob Owens, Bruce Heiberg (project managers), Bob Fluke (production architect), Jason Anderson, Blaine Brownell, Elizabeth Chen, Kyle Fisher, Julie Hendricks, Doug Lipscomb, Andrew McFarland, Kim Neuscheler, Matt Seltzer, Jim Spearman, Mark Swackhamer, Mike Sweebe (project team)

LANDSCAPE ARCHITECT: Clark Condon Associates

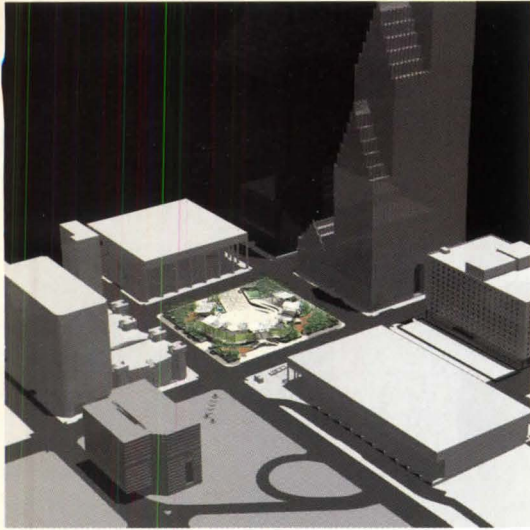
ENGINEERS: CBM Engineers (structural); MAS & Associates (mechanical, electrical); Sunland Engineering Company (civil)

CONSULTANTS: Studio of Richard Jeter (lighting); Hoover & Keith (acoustics); Churchill International (crime prevention analysis); Hanscomb Associates (cost estimating); Waterscape Consultants (fountain)

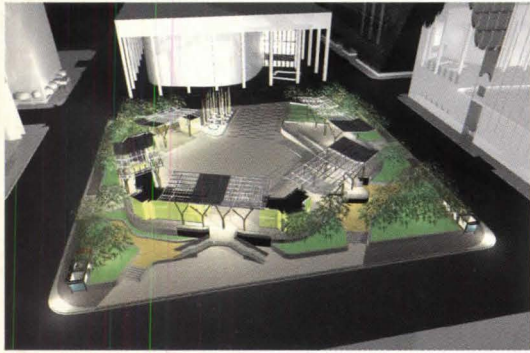
Yazdani: I like the fact that it was supported by the city. In an American city like Houston, most of the time public space is ignored or sacrificed to the will of the developer. Here, the city, probably in conjunction with some sort of private

entity, is trying to reinvent those public spaces. I am concerned about the similarity of the shade structures. I would have liked to see some difference from one side to another.

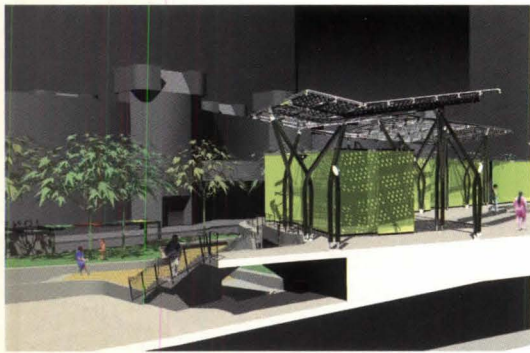
Fisher: That didn't bother me.



Aerial view looking southeast

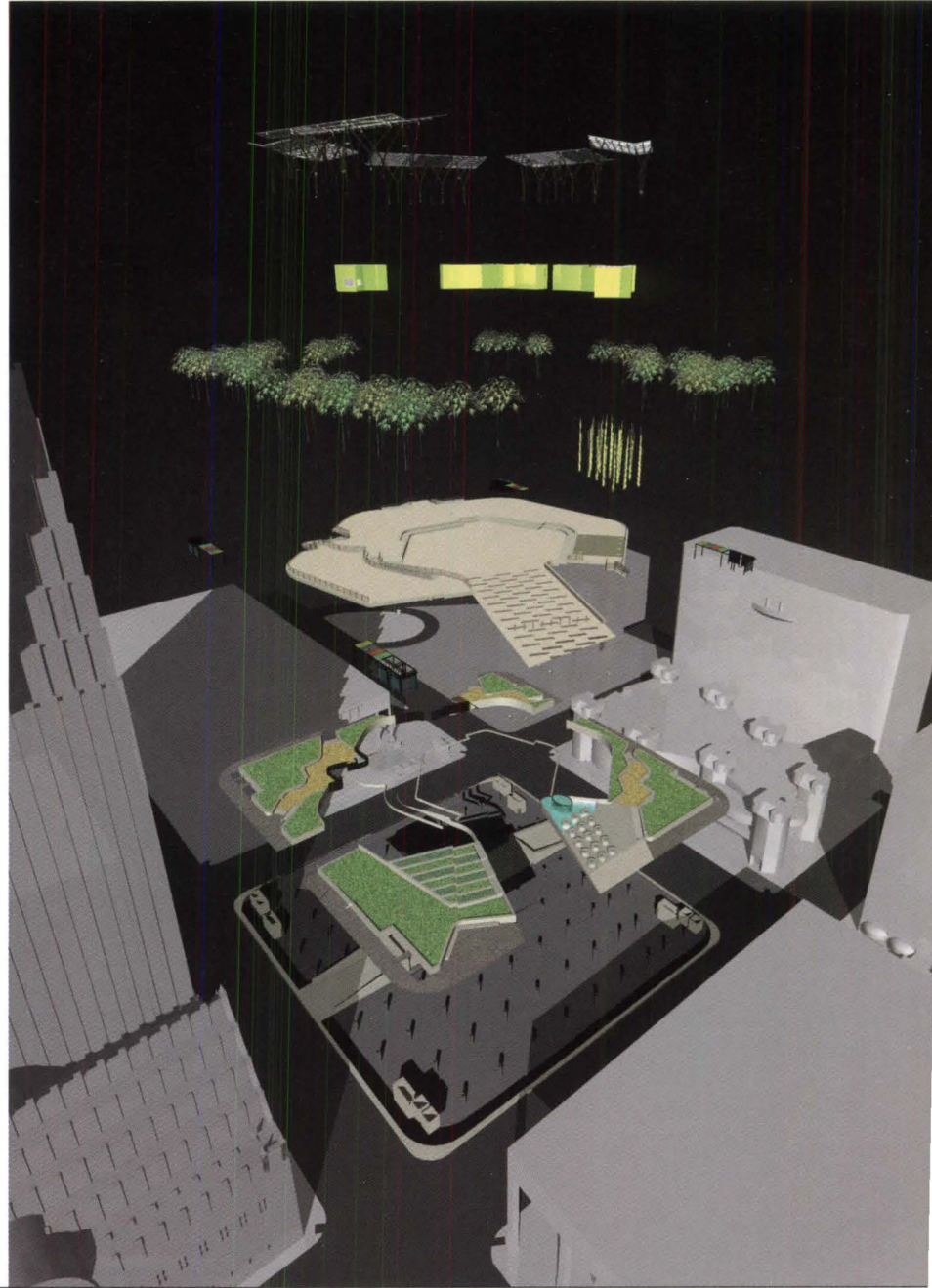


View looking east



Sectional view looking north

Exploded aerial view looking northwest





Canopy



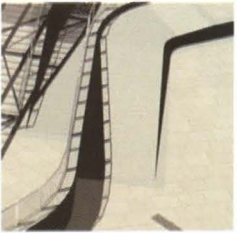
Enclosure



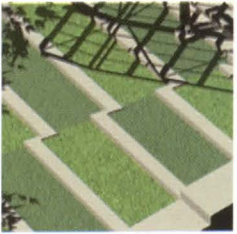
Tree



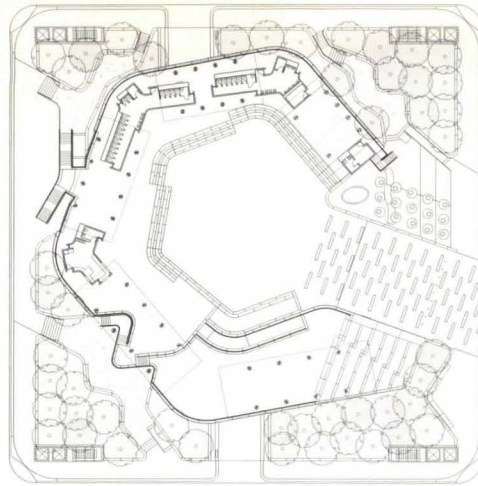
Kiosk



Plaza



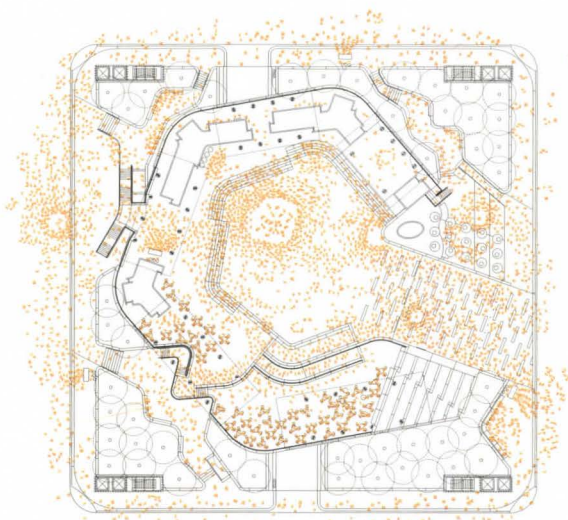
Planter



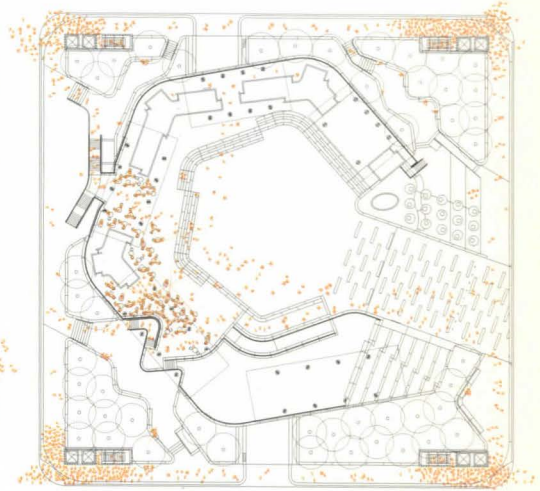
Plan | ——— | 45'/15m | ⌚



Use study: weekdays, 12:30pm



Use study: December 31, 1999, 11:00pm



Use study: Friday, 7:30pm

Machado: It is a perfect public space for Houston. It has a very large underground garage.

Jiricna: I really appreciate the form, because it's something that I haven't seen before. It is inventive and well done.

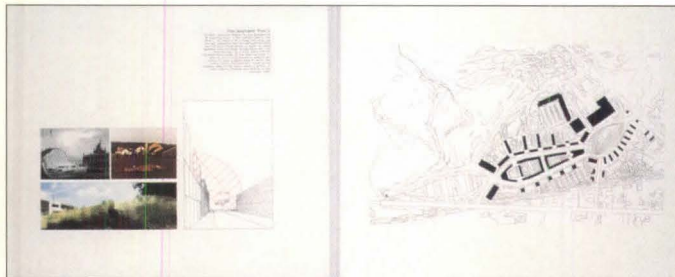
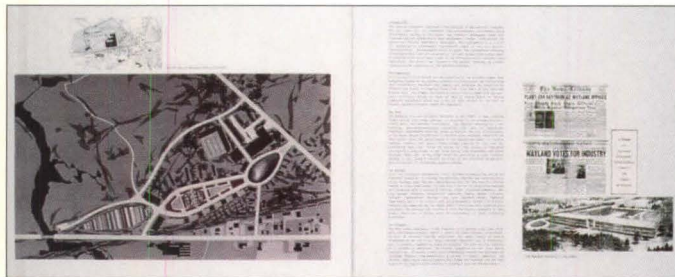
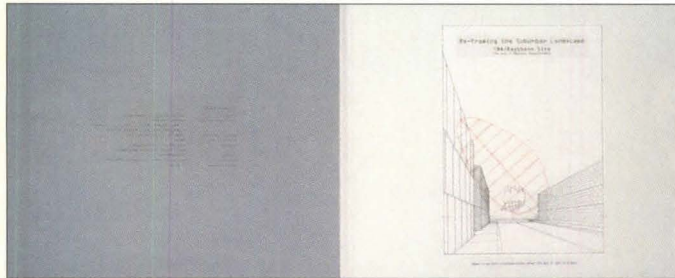
Fisher: I like the connection of the forest—that the structures are treelike. And the geometry, the way they pull the entrance right off the angled entrance of the symphony. Yet there is a

quirky, flowing quality to the symphony and the theater. It's picking up and abstracting the forms of what's around it.

Office dA

Reframing the Suburban Landscape: A Masterplan for the Town of Wayland

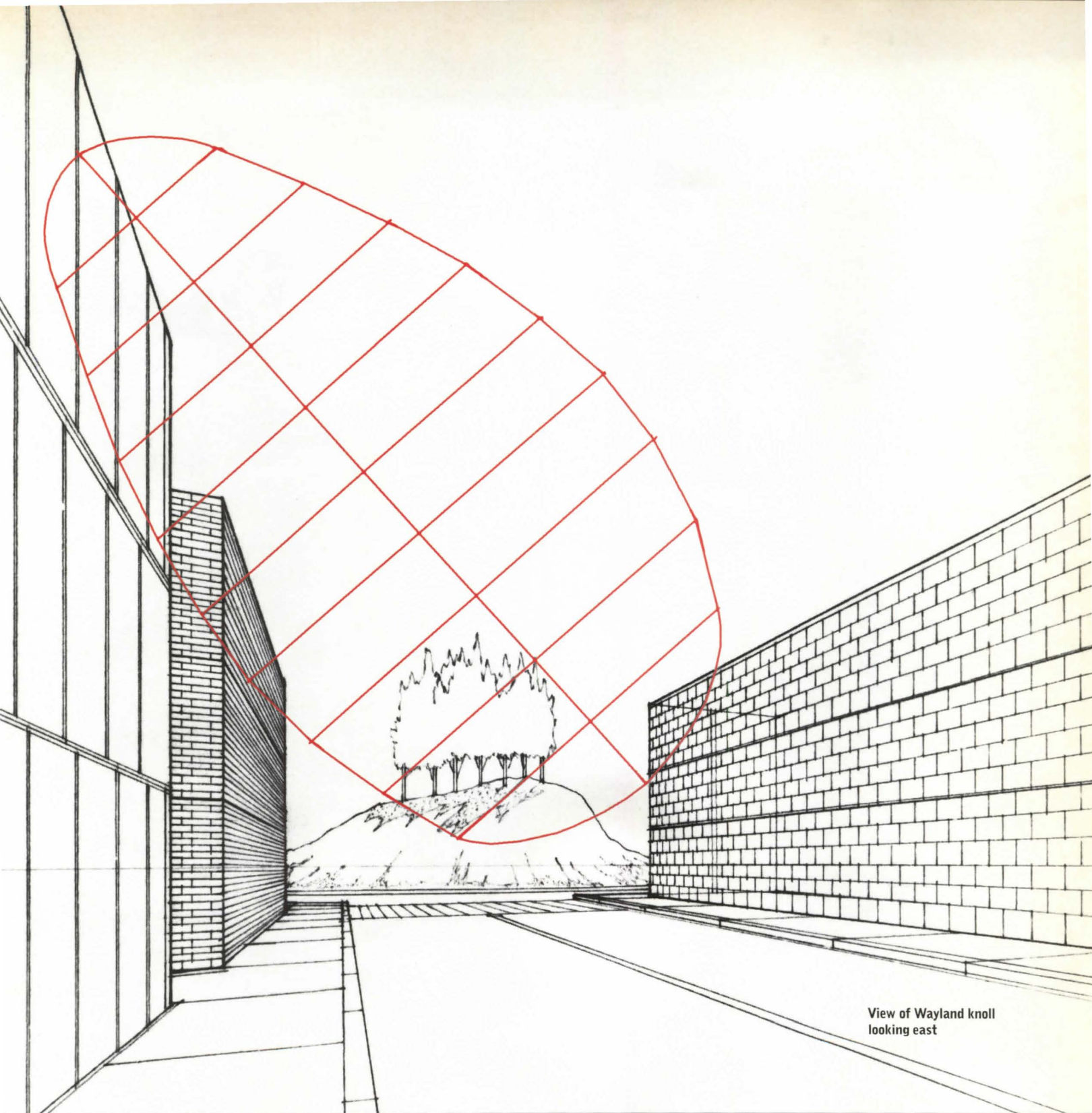
award



Project presentation

CLIENT: The Town of Wayland—Martha Taub (committee head)
ARCHITECT: Office dA, Boston—Monica Ponce de Leon, Nader Tehrani (project designers), Jeffrey Asanza, Timothy Clark, Kirsten Gay, Richard Lee, Jill Porter, Lee Su, Phillip Smith (project team)
CONSULTANTS: Alex Krieger, Ann Tate (urban design)

PROJECT: Reframing the Suburban Landscape: A Masterplan for the Town of Wayland, Wayland, Massachusetts
SITE: An 83-acre parcel that surrounds a now-defunct Raytheon armaments plant in suburban Boston, which adjoins a natural wildlife refuge.
PROGRAM: The phased master planning of a new town center that incorporates the abandoned factory.
SOLUTION: The scheme attempts to reconcile the conflicting dispositions of the site's surroundings—unspoiled natural landscapes and suburban strip malls. A sequence of new public spaces, to be carved into the existing site in phases over an extended period of time, starting in 1999, will link two traffic arteries that bound the site. The architects will add new amenities such as a teardrop-shaped knoll, a boat launch, and a parking grove; reconfigure the empty factory; and add new mixed-use buildings.



View of Wayland knoll
looking east

Tsion: This scheme uses landscape very thoughtfully as a way of organizing and understanding an existing town. It asks the question, "What do you do after the Cold War?" When the Cold War ended, the economic bases of communities like this were gone.

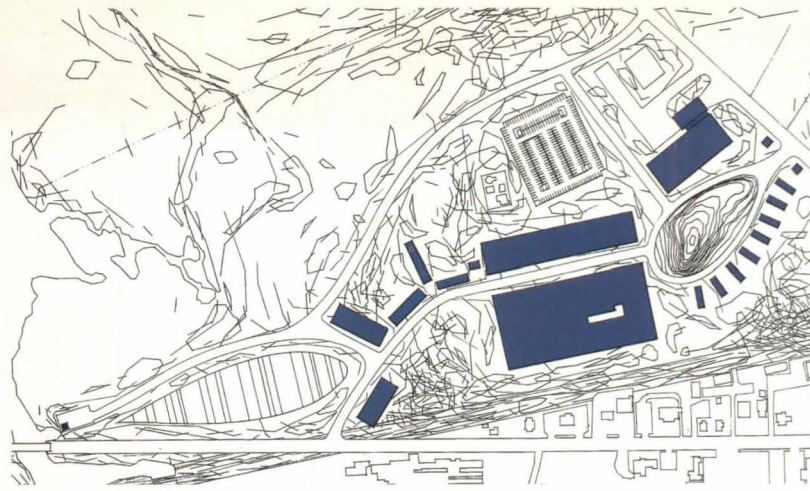
Fisher: That's what is really powerful about this scheme: How you bring urbanistic ideas to a suburban town without making it overly dense, as New Urbanism might try to do. So much of New Urbanism

assumes an almost pedestrian speed; what I like about this scheme is that its forms, like the lozenge shape, are forms for automobile culture.

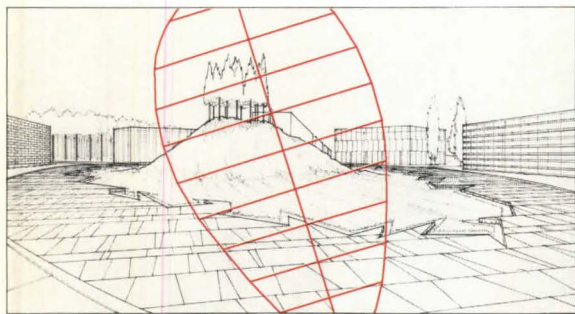
Machado: ...which I find more realistic. The scale of this town is one that is usually neglected, a very small suburban town. To have worked on it with that intensity is remarkable.



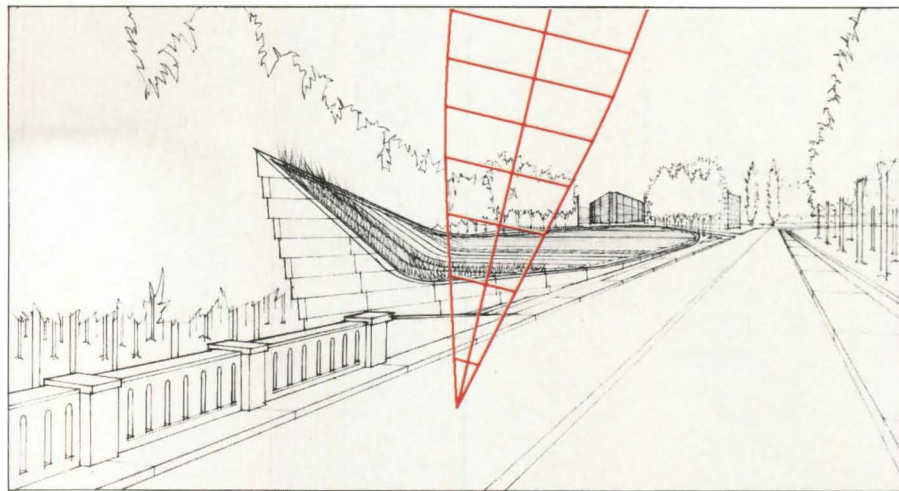
Phase one site plan | 315'/96m



Phase three site plan



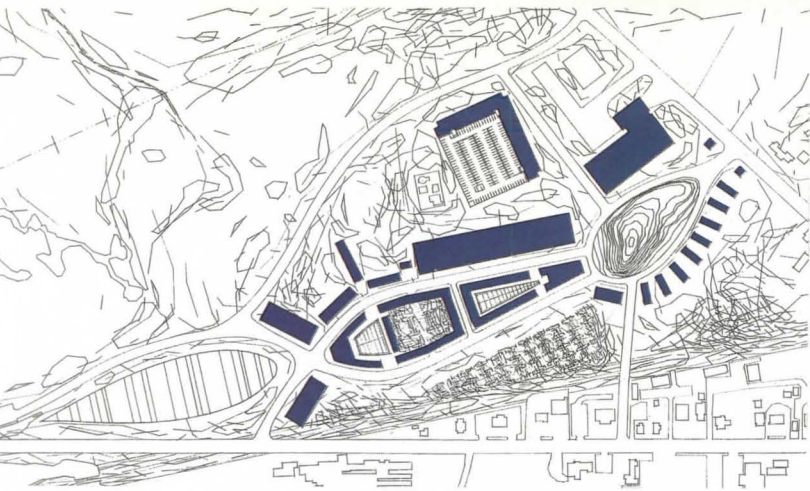
View of Wayland knoll looking southwest



View of teardrop meadow looking east

Jiricna: There is a tremendous modesty about it. It really goes into the details and human scale; it is human in all aspects. But it still addresses the overall scale of an urban design. The presentation is absolutely delicious

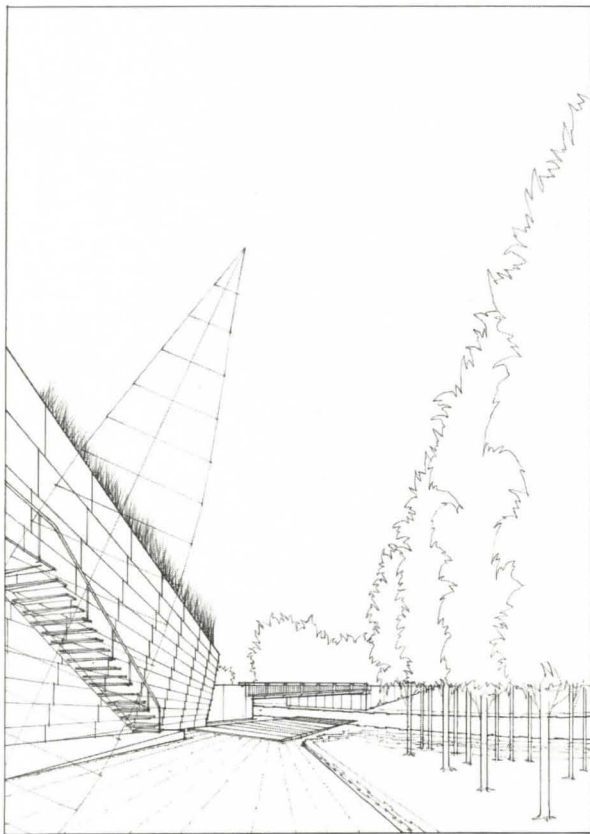
Yazdani: Every element, whether it's two-dimensional or three-dimensional landscaping—like the grid of trees or the houses—has been carefully thought through. Nothing has been taken for granted



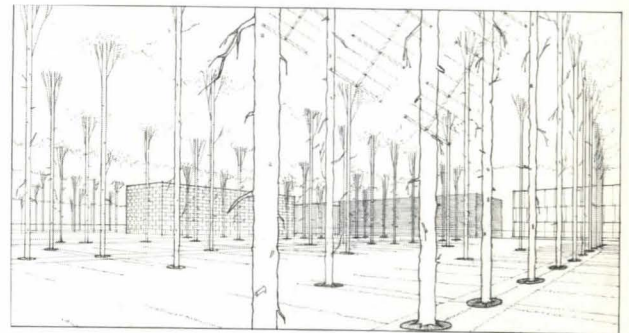
Phase four site plan



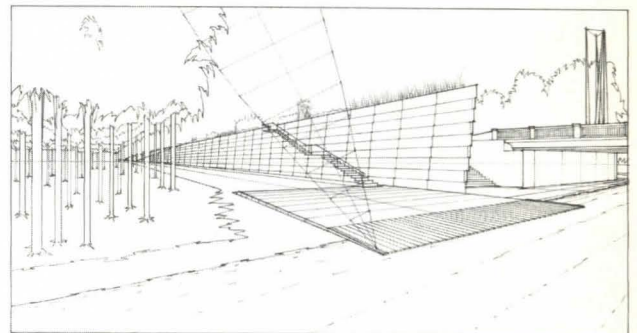
Phase five site plan



View of boat launch looking west



View of parking grove



View of boat launch looking east

Fisher: Some parts of the plan might have problems, like the parking grove, which wouldn't work with the trees so close together.



Exercise area on second floor

Vincent James Associates

Minneapolis Rowing Club Boathouse

award

PROJECT: Minneapolis Rowing Club Boathouse, Minneapolis

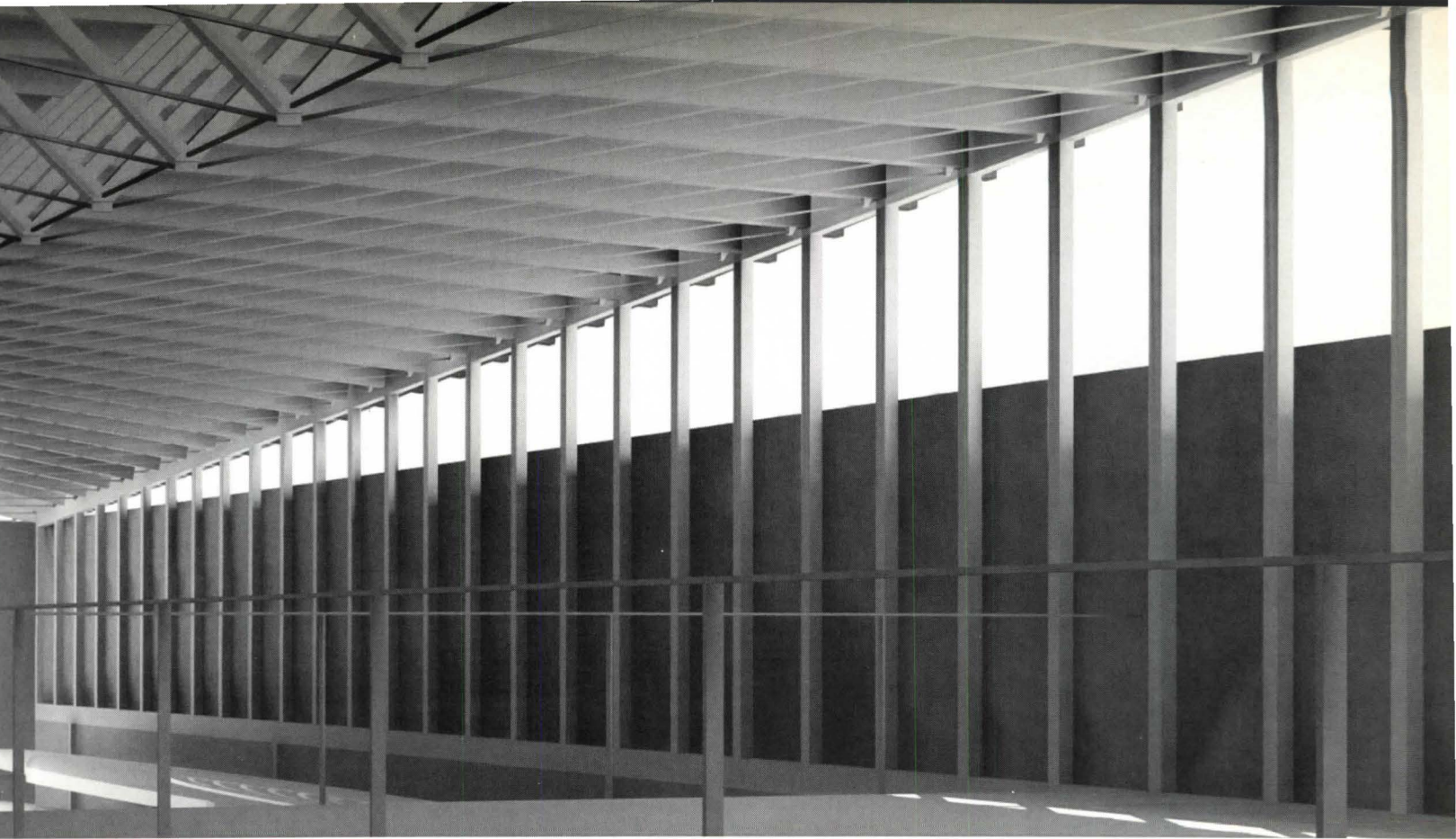
SITE: Along the Mississippi River, next to the Lake Street bridge, in a heavily wooded area between Minneapolis and St. Paul, Minnesota.

PROGRAM: The two-building project will be completed in phases. The first 9,000-square-foot boathouse contains boat and equipment storage, activity and exercise rooms, a boat maintenance area, and long-term storage. The second 5,500-square-foot boathouse incorporates bathrooms and locker rooms. There is a rectangular wooden dock along the river.

SOLUTION: The boathouses are simple, site-cast concrete boxes. The saddle-shaped roofs above these boxes are steel and laminated wood V-truss beams that span 30 feet. Reflecting the act of rowing—of an oar in motion—the slope of the roof gradually changes direction along the buildings' length. A precast concrete mezzanine floor provides space for exercise equipment.

Fisher: I love the roof's connection to rowing: It has a pivot point and the trusses move the way the oars move on a boat. That abstraction of movement in the roof and the building's function is elegant.

Jiricna: I just think that it's so beautiful, whether it has something to do with rowing or not. It is a simple statement, with an absolutely minimal amount of fuss, no pretension.



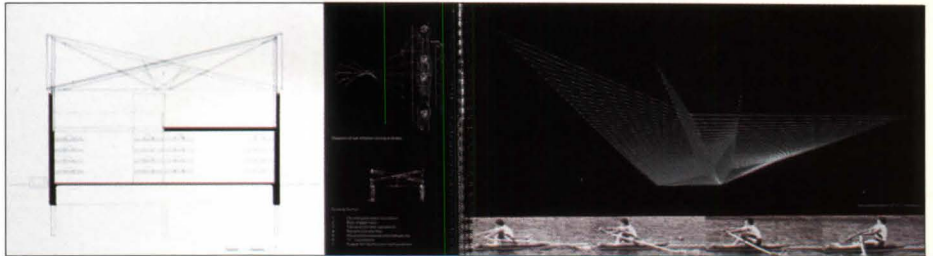
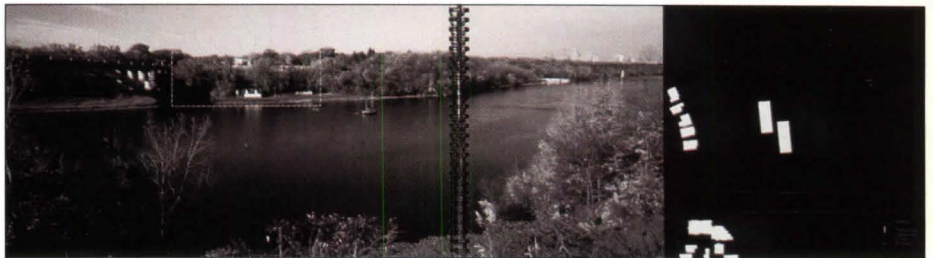
CLIENT: Minneapolis Rowing Club

ARCHITECT: Vincent James Associates, Minneapolis— Vincent James (principal), Andrew Dull (collaborator), Nathan Knutson, Bob Loken, Scott Muellner, Taavo Somer, Paul Yaggie, Jennifer Yoos (design team), Jay Lane Randy Newberg, Ann Schley (building committee)

LANDSCAPE ARCHITECT: Coen + Stumpf + Associates

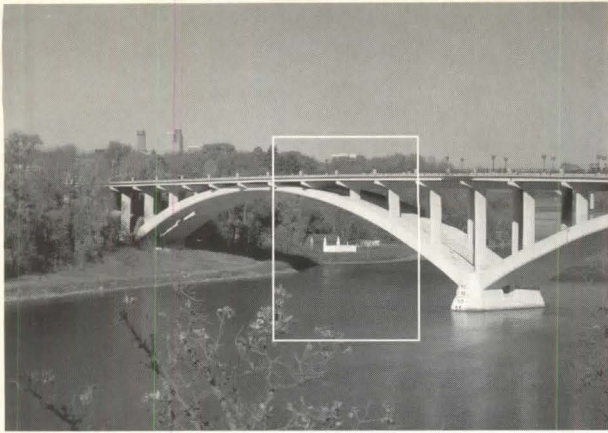
ENGINEER: Carroll, Frank & Associates (structural)

PHOTOGRAPHER: Peter Kerze

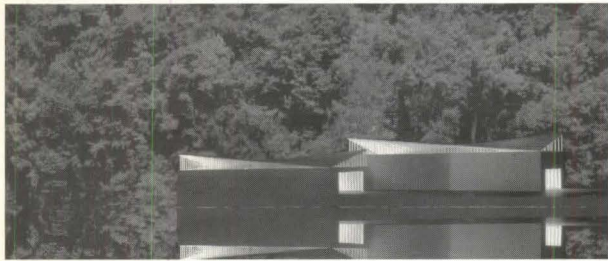


Project presentation

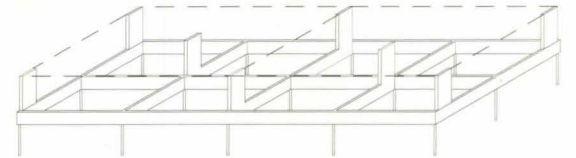
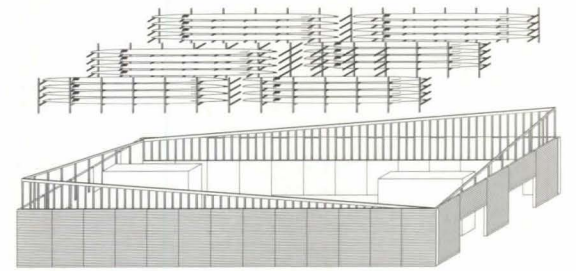
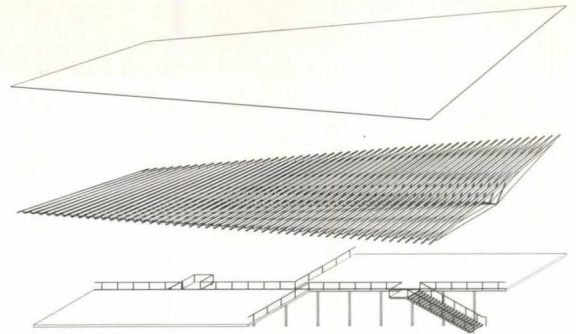
Tsien: The constraints of budget and program required that the building be simple. It's hard to be simple and direct; so much of what we're looking at these days tells us that it's interesting to be complicated.



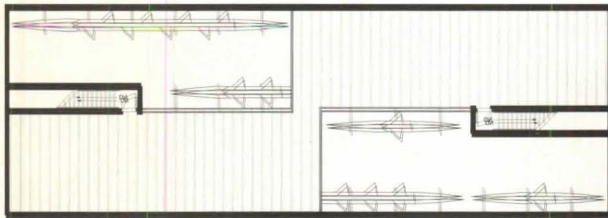
View of site



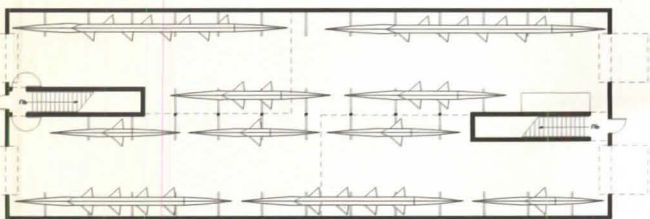
View across river



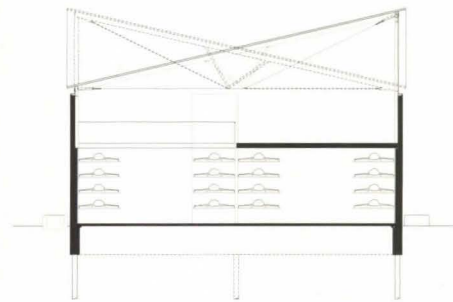
Exploded axonometric



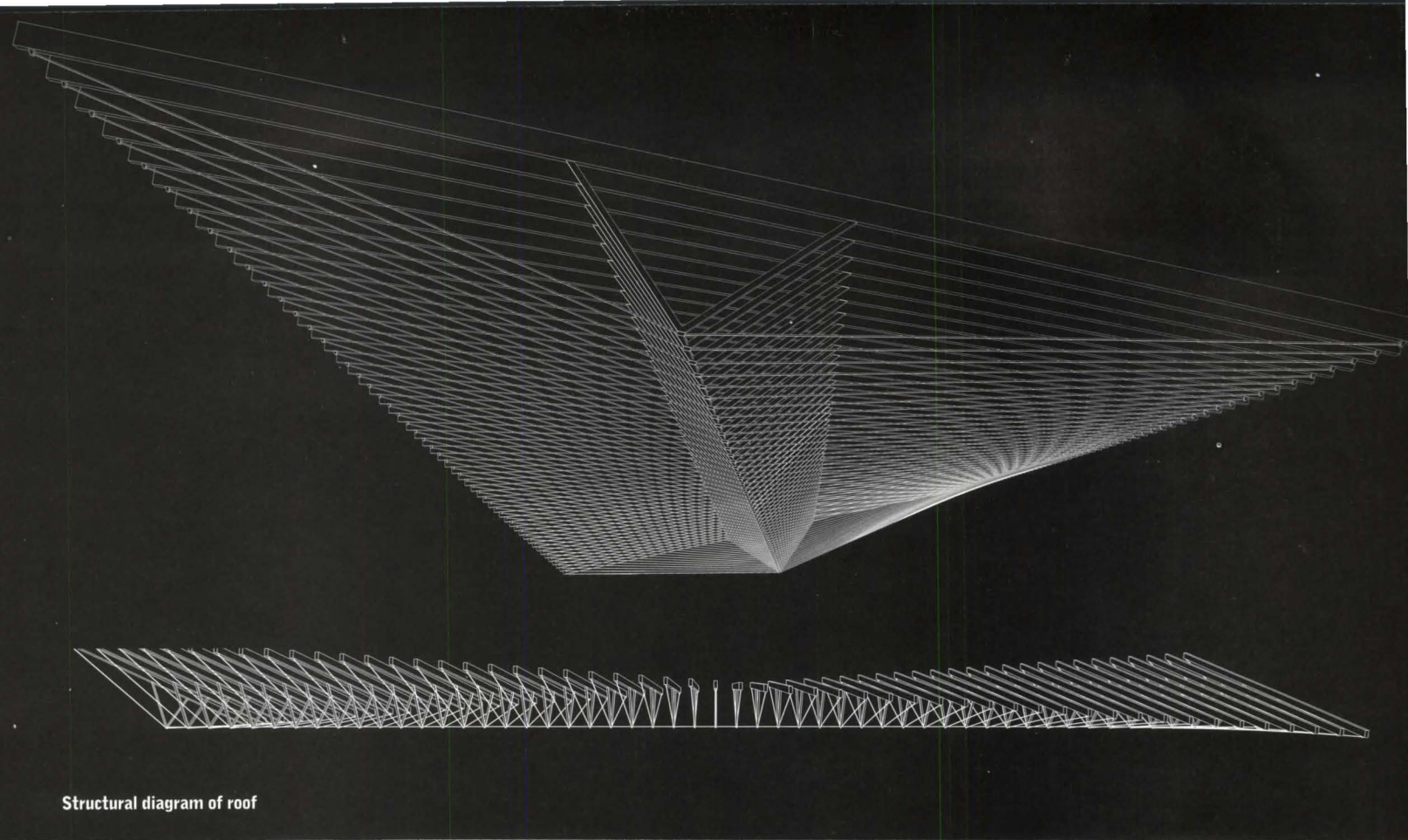
Second-floor plan



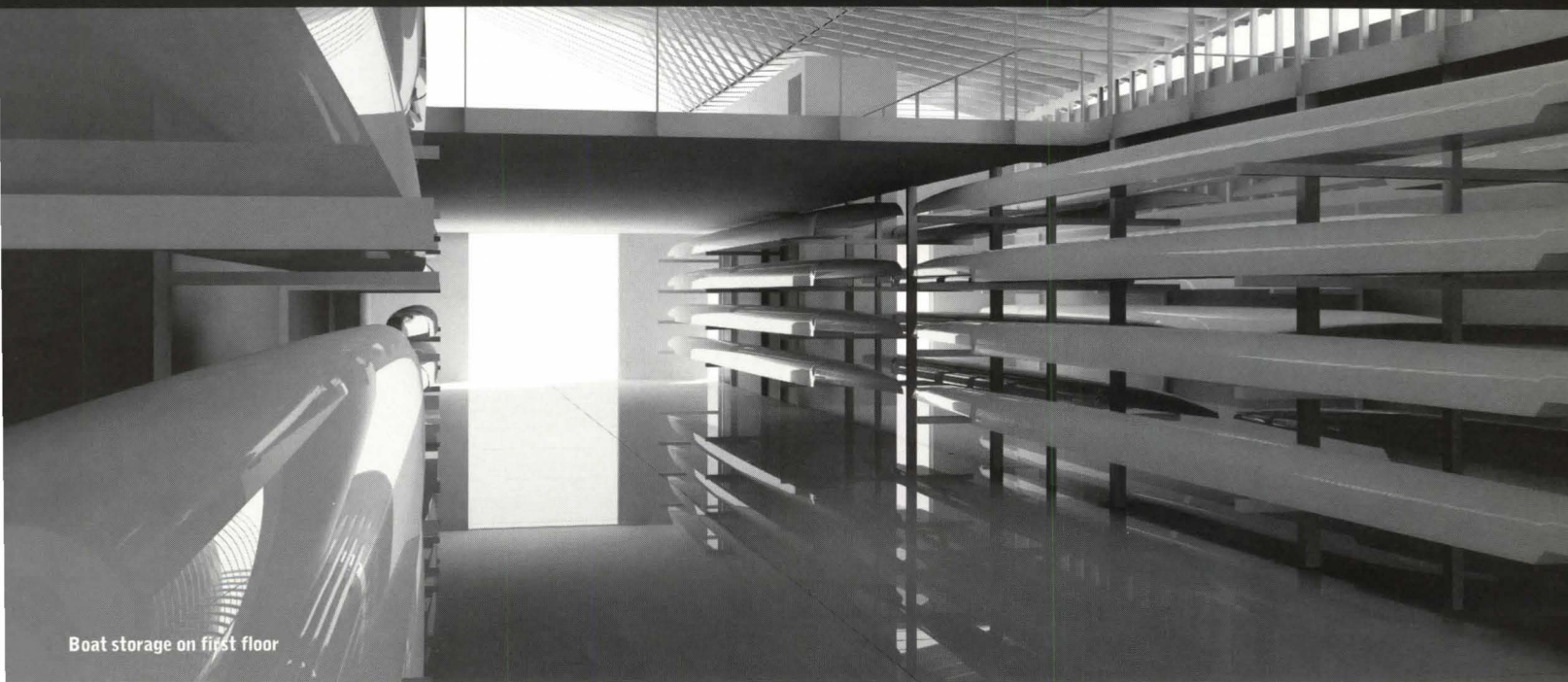
First-floor plan | ——— | 16'/5m



East-west section | ——— | 10'/3m



Structural diagram of roof



Boat storage on first floor

Machado: The average boat house, at least on the East Coast, has to be a Victorian building. It is very good that this is free from that.

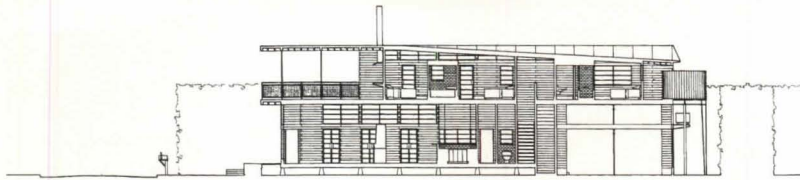
Yazdani: I like the empty interior, but where the boats are stored, it feels too tight and cluttered. Maybe the interior perspective is distorted.

Jiricna: When you look at the section, it fits quite comfortably.

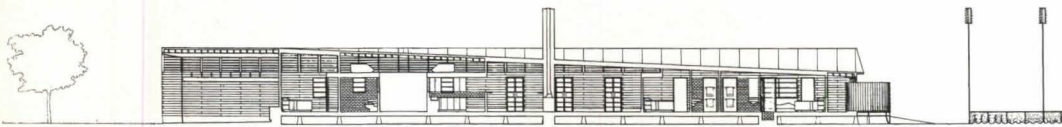
Andrews / LeBlanc

Two Scupper Houses or The Dogtrot and the Shotgun, Revisited

citation



North-south section of shotgun house



East-west section of dogtrot house | 170'/52m

PROJECT: Two Scupper Houses or The Dogtrot and the Shotgun, Revisited, Pensacola, Florida

SITE: Two contiguous residential lots in a typical suburban housing development in semitropical Florida.

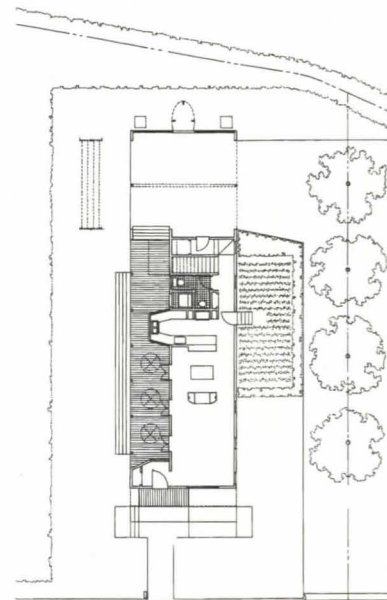
PROGRAM: The client will reside in one house and build the other speculatively.

SOLUTION: A pair of wood-frame houses whose indented roofs collect water in large cisterns are inspired by southern prototypes: The client's is modelled on the shotgun; the speculative house on the dogtrot. Each is a long, thin building with high ceilings, louvered windows, and large openings to favor natural ventilation and minimize the need for air conditioning. The 1,264-square-foot shotgun house has three bedrooms and a deep veranda upstairs; its first floor has a porch nearly as long as the living spaces that flank it.

The 1,920 square-foot, one-floor dogtrot has a porch that separates a semi-autonomous apartment from a two-bedroom household; both living quarters share a long veranda and screened porch.

CLIENT: Withheld at owner's request

ARCHITECT: Andrews / LeBlanc, Atlanta / Syracuse, New York—Brian D. Andrews, W. Jude LeBlanc (principals), Derek Johnson, Christen Kaiser, Clark Manning, Elena Sadar (assistants)

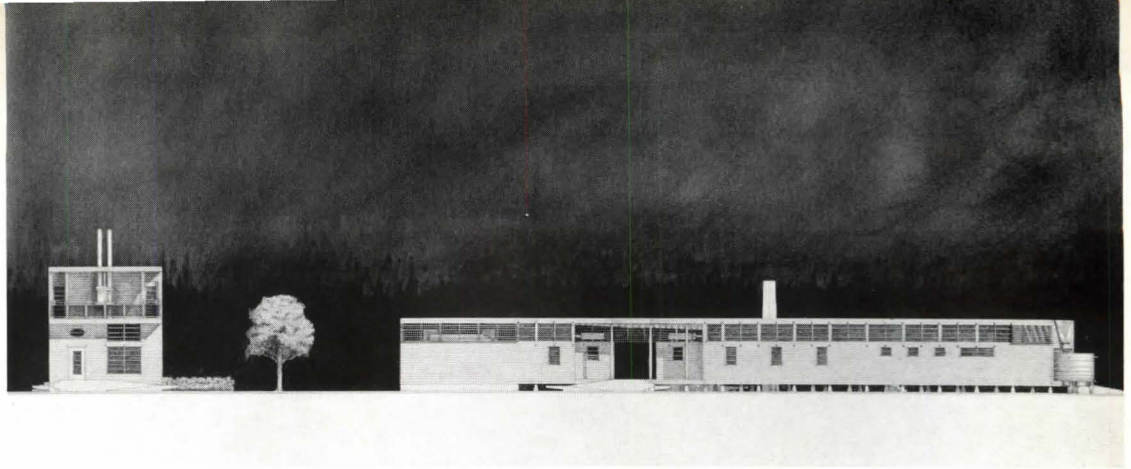


First-floor plan of shotgun house

| 10'/3m

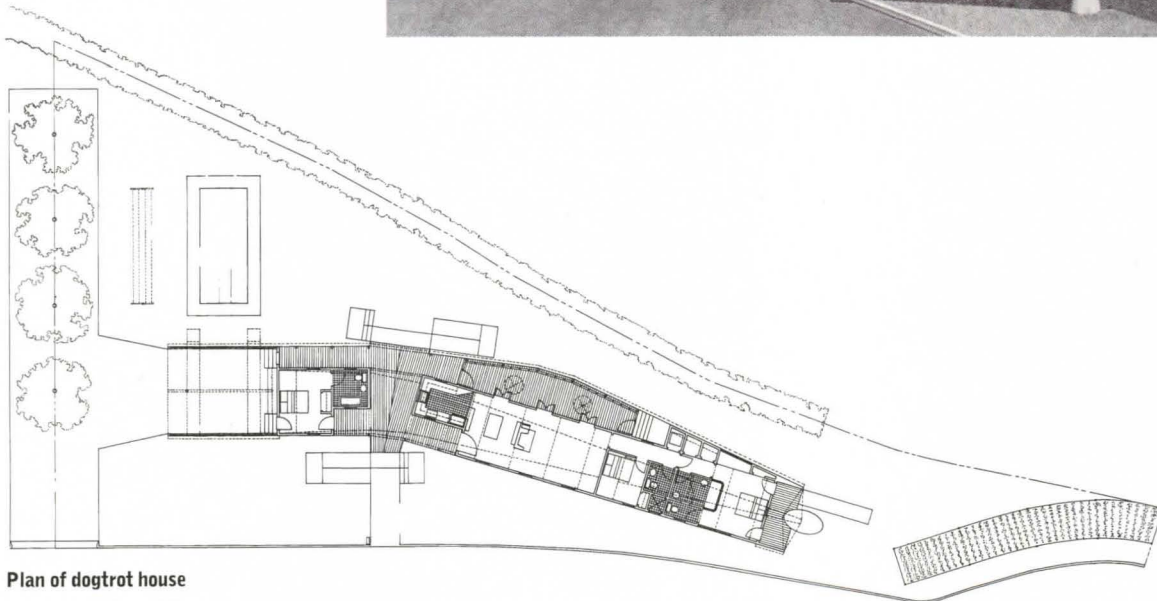
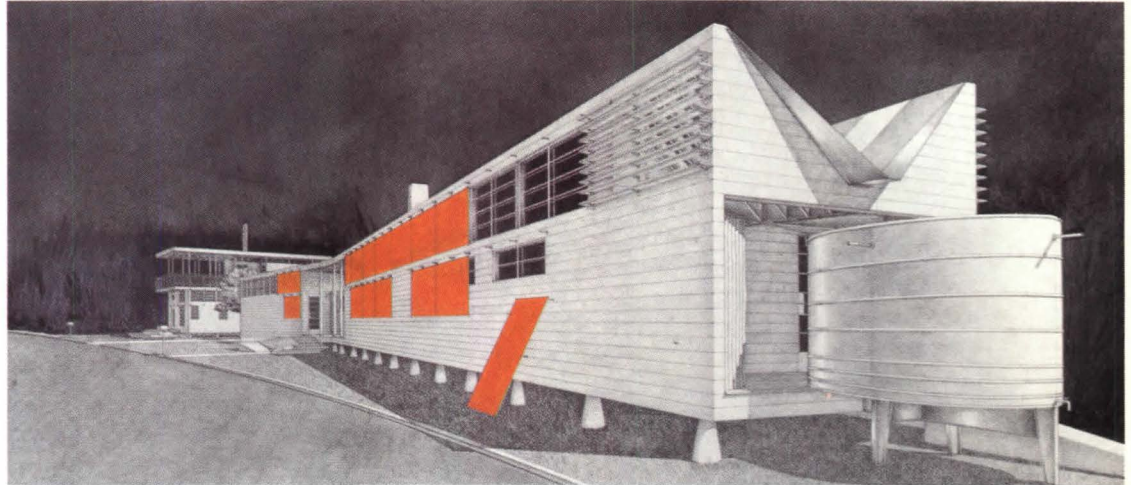
Machado: Charming, charming. The architects understand local culture.

Fisher: I love the idea of making the entire roof the scupper. Clearly, they're concerned about wind. They even show how the windows get boarded up when hurricanes come.



North elevation

View looking east along dogtrot house to shotgun house with storm shutter installation



Plan of dogtrot house

18'/5m

Jiricna: The interior space, to me, has got absolutely no excitement, it doesn't have the right balance. I don't feel the proportion is right in the inside spaces.

Fisher: I like the way the houses inflect, given the site. The design actually plays with the type too. It's not too rigid.

Tsien: The design is very pragmatic, but then it has romantic elements that manage to escape the level of nostalgia that is trying to tie into vernacular architecture.

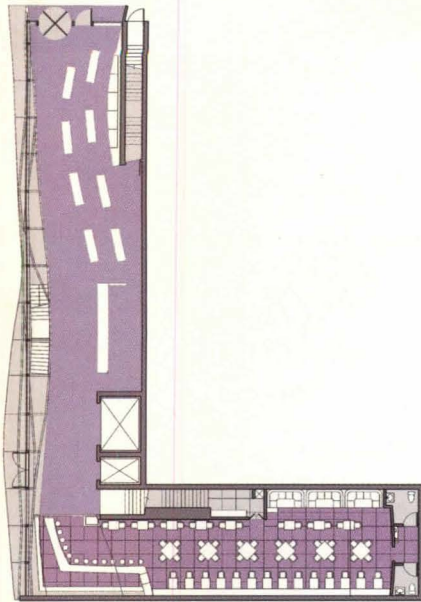
Machado: It has echoes of Southern writers' narratives.

Fisher & Tsien: Flannery O'Connor.

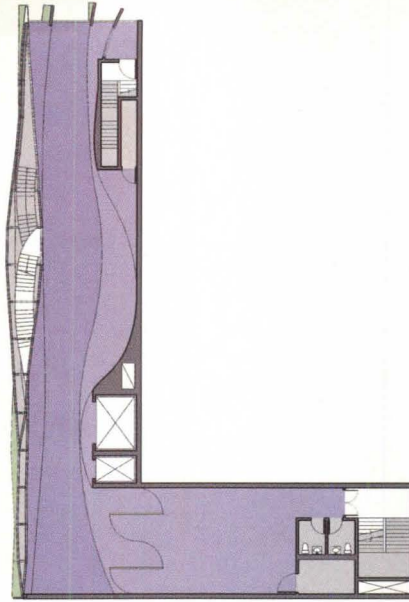
SHoP

Museum of Sex

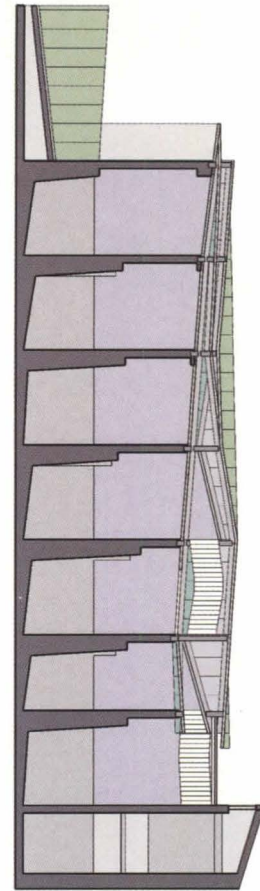
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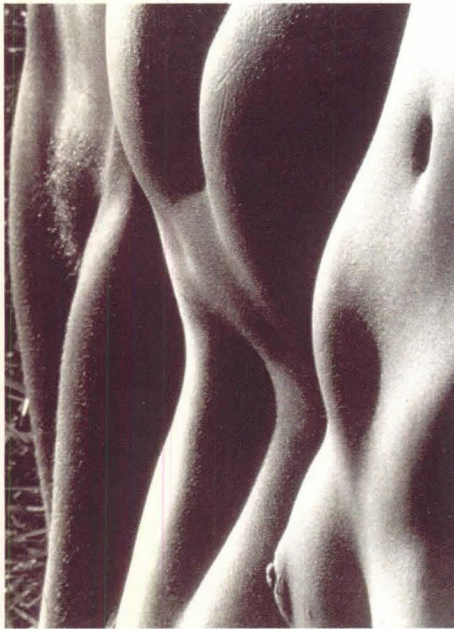
Typical gallery floor plan | 15'/6m



First-floor plan



North-south section



Architect drew inspiration from body curves.

PROJECT: Museum of Sex, New York City

SITE: An L-shaped lot at the corner of Fifth Avenue and East 27th Street.

PROGRAM: A cultural institution for a candid presentation of the history, evolution, and significance of sex.

SOLUTION: A space for human sexuality is enclosed in an undulating glass wall that alludes to the surface of the body. Its translucent layers are alternately fused together and pulled apart to create an institution that reveals itself through passages within its skinlike enclosure. The fluidity of the building facade alludes to the 36,000-square-foot museum's curatorial intention: to present sex as a universal aspect of humanity that needs to be understood from multiple perspectives.

Fisher: I love the idea that so much of the appeal of sex is tactile. It's about the skin and so the whole building is about the skin and not just undulating walls.

Yazdani: I'm quite fascinated with the skin. But there are a couple of interior views of the building that reveal how this skin or the glass is constructed that concern me. Maybe the simplicity that

in the end, be translated into built form. Ultimately this horizontally gridded surface fights the vertical curvature of the skin.



CLIENT: Daniel Gluck,
Alison Maddex

ARCHITECT: SHoP / Sharples
Holden Pasquarelli,
New York City—
Kimberly J. Holden,
Gregg A. Pasquarelli,
Christopher R. Sharples,
Coren D. Sharples,
William W. Sharples
(principals), Shigeru
Kuwahara, Max Strang
(project team)

ENGINEERS: Buro Happold
New York (structural);
Laszlo Bodak Engineer
(mechanical, electrical)

CONSULTANT:
Andreas Frösch
(stereolithography)

Machado: I wish the interiors would have also been explored more. The same operation that they've got in the front could have been carried out inside, because otherwise, the vision is of very sterile, orthogonal space. I guess the installation

or gallery designer could bring to the interiors the quality of the exterior.

Tsien: That's true. I think that's very important because the interior needs to have a correlation to the exterior.

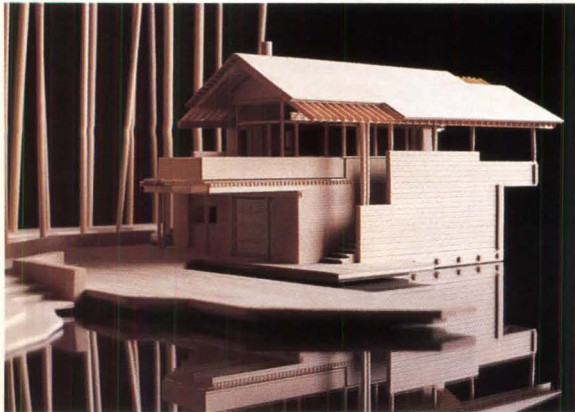
Jiricna: They don't necessarily need to express the inside on the outside. This, like most of the other projects we are judging, is in a stage where we can't actually criticize the building on the real issues, just on the concept, unfortunately.

Yazdani: It's very similar to the human body where you have a skeleton and then you have a skin.

Shim-Sutcliffe Architects

Muskoka Boathouse

citation



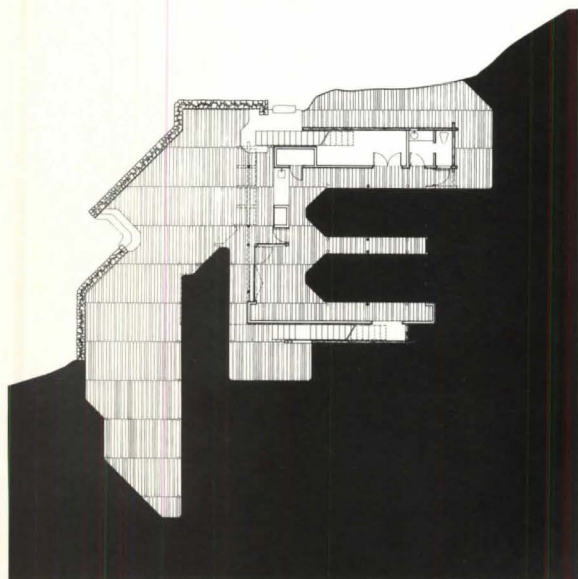
Model view from southeast

PROJECT: Muskoka Boathouse, Lake Muskoka, Ontario, Canada

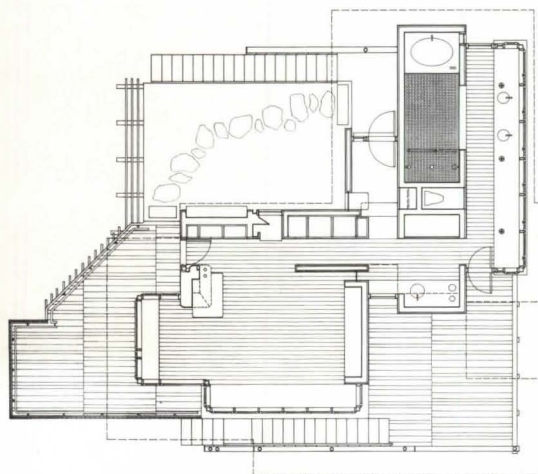
SITE: The southwestern shore of Lake Muskoka, Ontario.

PROGRAM: A boathouse with two indoor boat slips, a covered outdoor boatslip, storage spaces, and a sleeping cabin.

SOLUTION: The architects looked to Adirondack cabins and Le Corbusier's 1952 rustic cabin in southern France to create a "sophisticated hut" in the Canadian wilderness. The two-story structure is a box within a box: A heavy timber exterior wrapper protects a delicately crafted interior of fir plywood and mahogany. The boathouse is sited on the water; its construction will start in the winter, when the lake freezes. Cribbs will be lowered through holes in the ice, then filled with granite ballast to create rustic underwater foundations. The first level of the boathouse contains storage space, an outdoor boatslip carved into a dock, and two indoor boatslips. The second floor comprises a sleeping cabin (a bedroom and sitting room with a kitchenette and shower), an outdoor deck and covered porch, and a moss garden.



First-floor plan | 1" = 8'/2m



Second-floor plan

CLIENT: Gerald Sheff and Shanitha Kachan

ARCHITECT: Shim-Sutcliffe Architects, Toronto—Brigitte Shim, Howard Sutcliffe (principals), Donald Chong, Jason-Emerly Groën (associates), Andrew Chatham, John O'Connor, James Song (design assistants)

ENGINEERS: Atkins + Van Groll Engineering (structural); Toews Systems Design (mechanical)

CONSULTANTS: List Planning (planning); Suzanne Powadiuk Design (lighting); Margaret Priest (colors)

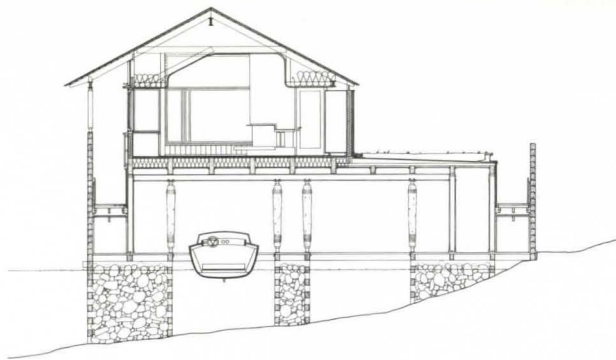
GENERAL CONTRACTOR: Judges Contracting

PHOTOGRAPHER: Michael Awad

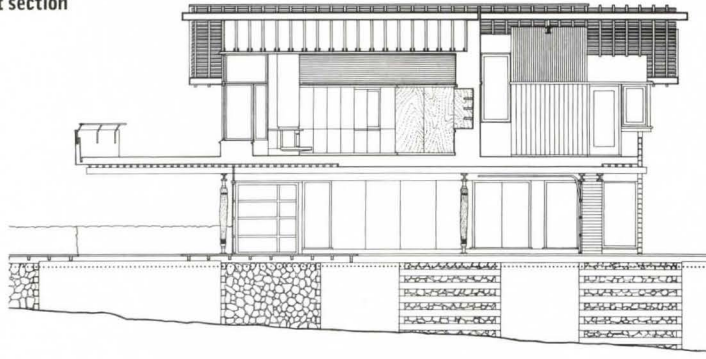
Machado: This is a lesson in excellent construction, I hope. The detailing is very refined. A hypothetical European Greene & Greene kind of architect comes to mind.

Fisher: Yet there is a modernist quality to it. There is an incredible attention—to almost an obsession with—the way elements go together. Every stud, every piece is drawn.

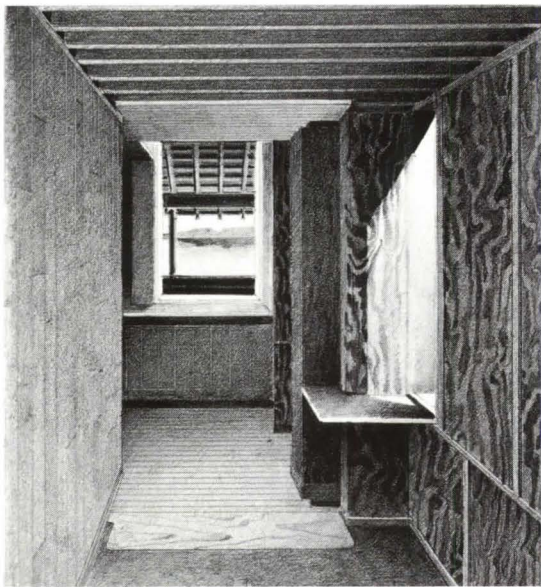
Machado: It's a carpenter aesthetic. It's very well crafted.



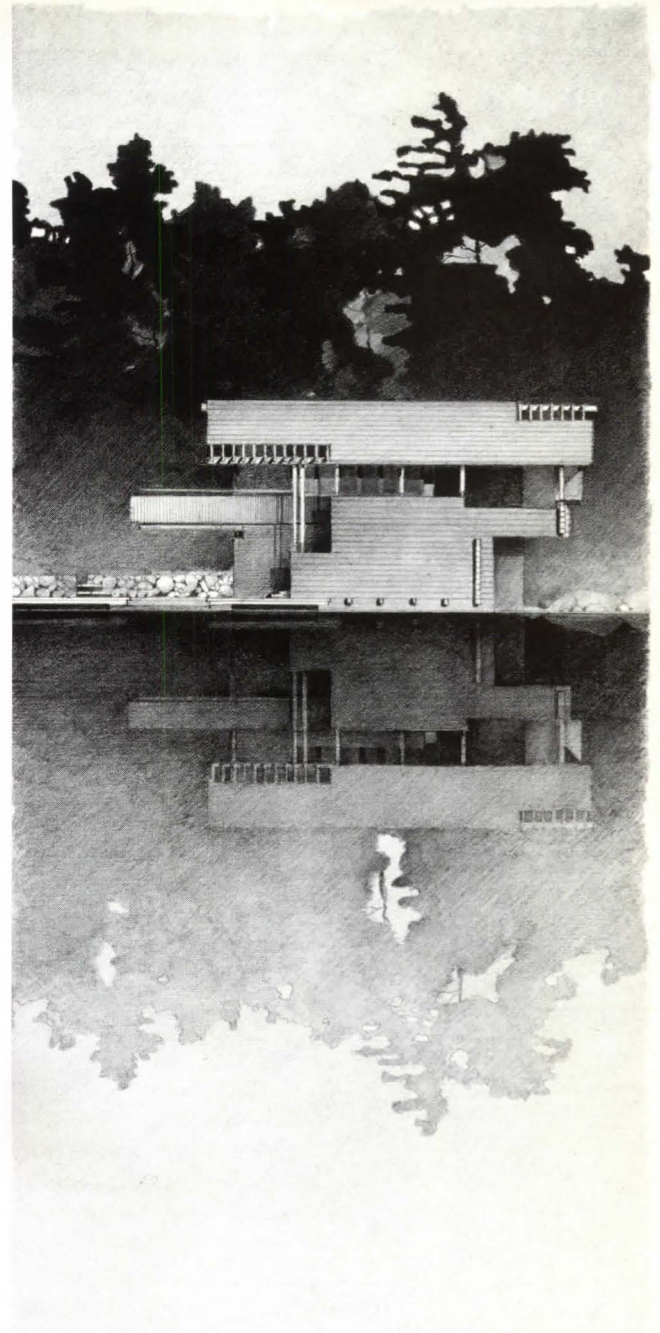
East-west section



North-south section | 4/1m



Interior view of second-floor kitchenette



East facade

Tsien: This project is about craftsmanship balanced with a sense of art. I think it's very attuned to what it is and what it needs to be in that place, where it's freezing.

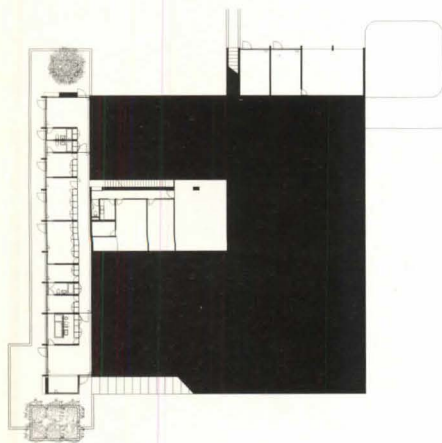
Fisher: The architects have a boat maker's sensibility about joints. That's the most important thing in a boat.

Jiriena: I admire it, but I don't really like the composition of the roof floating above the other elements. I feel uncomfortable about the proportions.

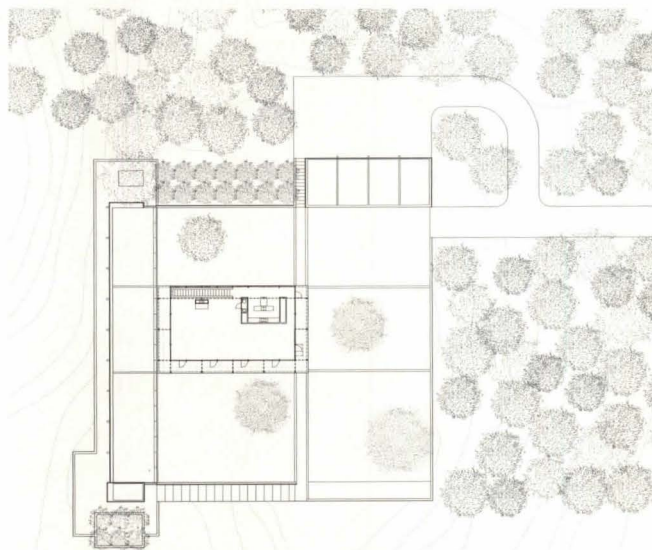
Thomas Phifer and Partners

Taghkanic House

citation



First-floor plan | ——— 40' / 12m ———



Second-floor plan

CLIENT: Withheld at owner's request

ARCHITECT: Thomas Phifer and Partners, New York City—Thomas Phifer (partner), Greg Reaves (project architect), Yoon Choi, Stephen Dayton, Victor Druga, Tom Graul, Patrick Keane, Rayme Kuniyuki, Aaron Whelton (design team)

LANDSCAPE ARCHITECT: Gail E. Wittwer

ENGINEERS: Gilsanz, Murray, Steficek (structural); Altieri, Sebor, Wieber (mechanical, electrical); Crawford and Associates (civil)

CONSULTANTS: Reginald D. Hough (concrete); Fisher, Marantz, Renfro, Stone (lighting); NoahWorks (specifications)

PHOTOGRAPHER: Jock Pottle

PROJECT: Taghkanic House, Taghkanic, New York

SITE: A hilltop at the center of a 380-acre farm in the Hudson Valley. A dense forest to the north and east gives way to open meadows and orchards to the south, with views of the Catskill Mountains to the west.

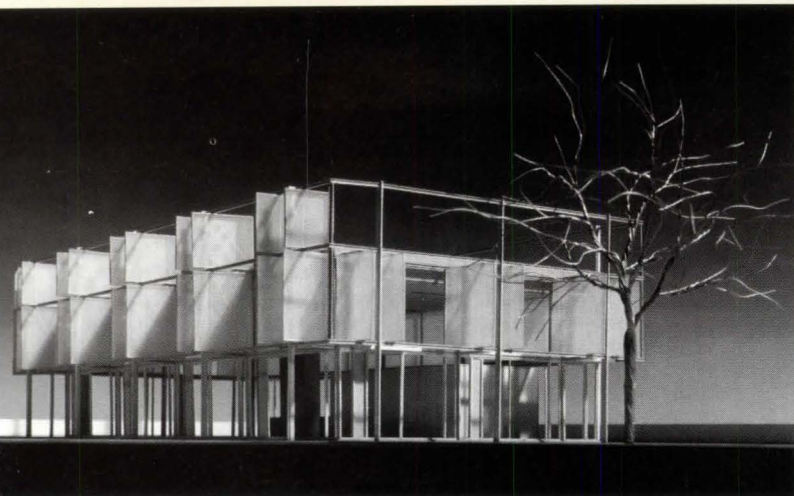
PROGRAM: A three-bedroom, 6,700-square-foot house, including a guest suite, wine cellar, and cheese storage room.

SOLUTION: The parti of the house is simple: A boxy steel and glass pavilion that contains living and dining areas sits atop a concrete plinth bermed into a hillside. The base shelters bedrooms, a guest suite, and study organized along a linear spine. Glass doors in each space open onto a patio that flanks the length of the base. Set within the orderly grid of the glass pavilion is a system of operable exterior sunshades. These delicate scrims open and close the house's volume as they pivot open and shut to control sunlight.

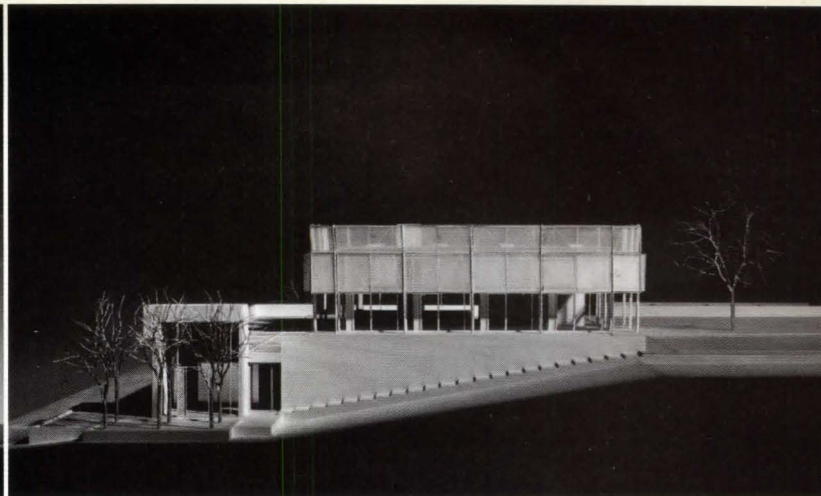
Fisher: This takes a Miesian esthetic further than others have taken it. All the shading devices respond to orientation.

Jiricna: It has a lot of intelligent aspects: proper ventilation, shading, and so on. But I find the two elements fighting each other; I feel uncomfortable about the relationships. It's

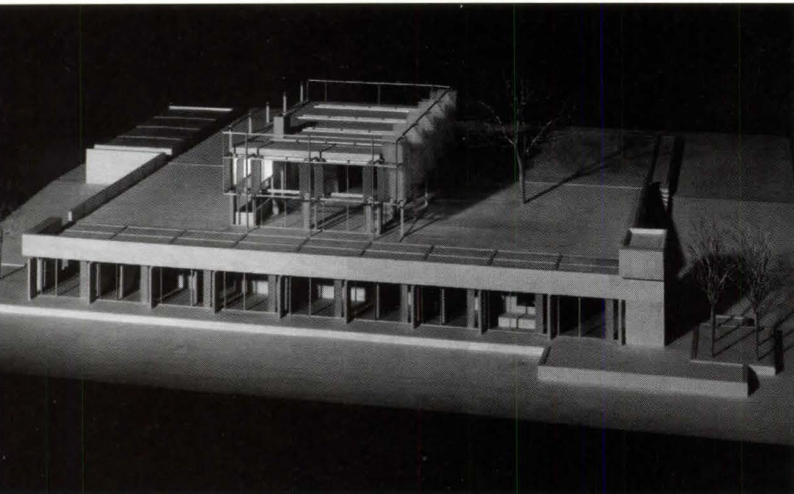
Fisher: To me, this is a good way to interpret a kind of modern classicism, rather than putting Ionic columns on it. It has all of classicism's strengths and limitations.



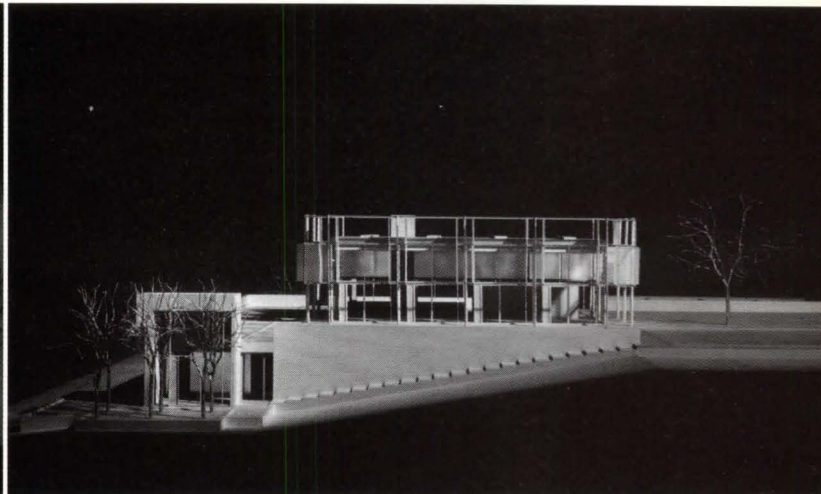
Model view of living and dining room pavilion



Model view looking north with sunshades closed

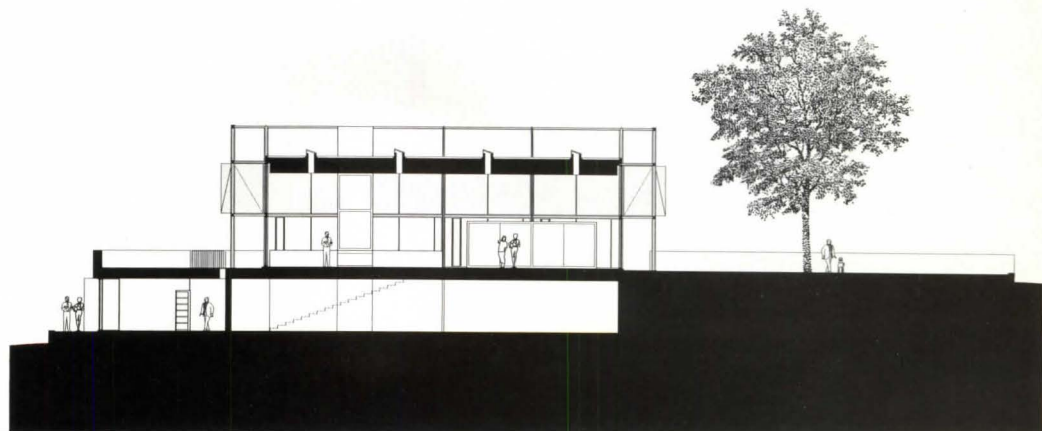


Model view looking east



Model view looking north with sunshades open

East-west section | ——— | 14' / 4m



Machado: I like the rigor of it. It's beautiful.

Tsien: It's very cold.

Fisher: It's not a warm and fuzzy house, but it's handled with a certain rigor that I like.

Studio Works

WRAPPER: 40 Possible City Surfaces for the Museum of Jurassic Technology

citation



Project display



Existing building

PROJECT: Wrapper: 40 Possible City Surfaces for the Museum of Jurassic Technology, Culver City, California

SITE: A two-story storefront building on Culver City's main commercial street.

PROGRAM: A new facade treatment for the small, eclectic Museum of Jurassic Technology. The museum's founder, David Wilson, displays natural history specimens and scientific and technological artifacts in a cluttered collection of traditional wood-and-glass vitrines.

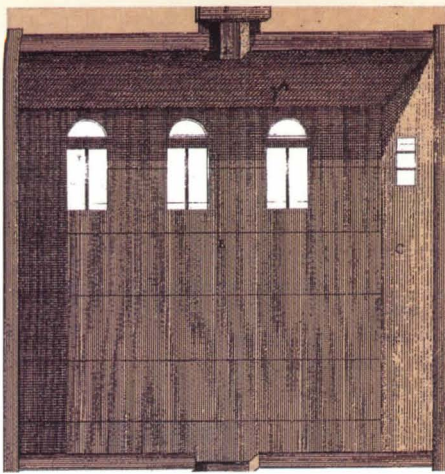
SOLUTION: The architects have envisioned 40 alternate proposals for the museum's street facade. The client dictated that the design should lie somewhere between the 19th-century classicism of British architect John Soane and the 20th-century, pop-culture sprawl of Culver City. The architects grouped the proposals into categories: Miniature/ Gigantic: Great Big and Real Small; and Building as Container: The Ark, for example. To develop a common visual language, they drew largely upon 18th- and 19th-century engravings for the imagery used on different facade treatments, though the sources also include such contemporary images as computer chips and theater marquees. The proposals would be built as surface applications to the original facade, ranging in construction technique from lacquered canvas over a wood frame to refrigerator doors applied to metal stud framing.

CLIENT: The Museum of Jurassic Technology

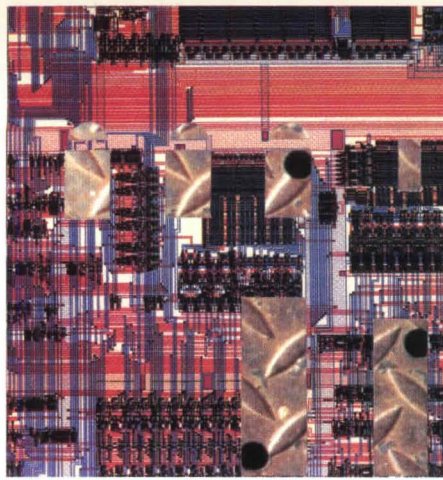
ARCHITECT: Studio Works, Los Angeles—Robert Mangurian, Mary-Ann Ray (principals), William Hogan (design team), John Zorich (model assistant)

Tsien: The series of facades has very fresh ideas. I turned the pages of this project and thought, 'I'm really interested, I'm excited, and I'm having thoughts as a result of reading this.'

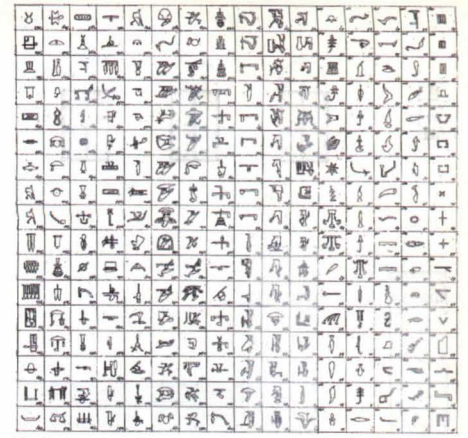
Fisher: I love the undecidability of it. They never come down in favor of one scheme or another; it's as if they're laying out a field of options.



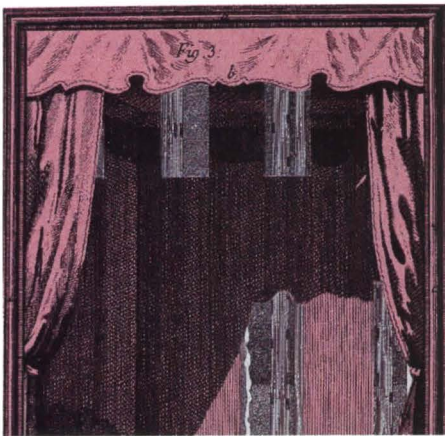
Inside out



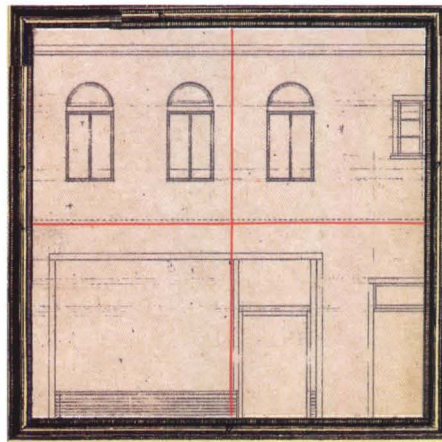
Chip chip



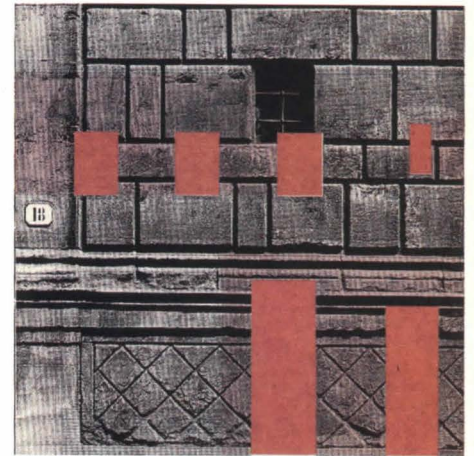
Text



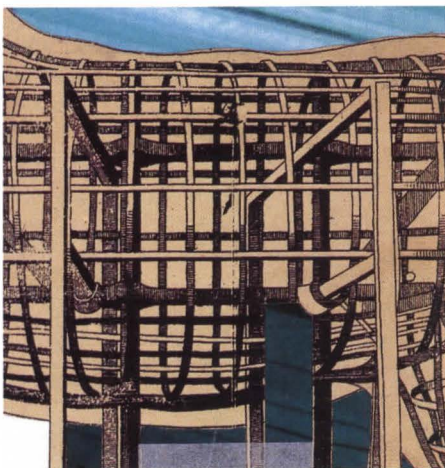
Urban drapery



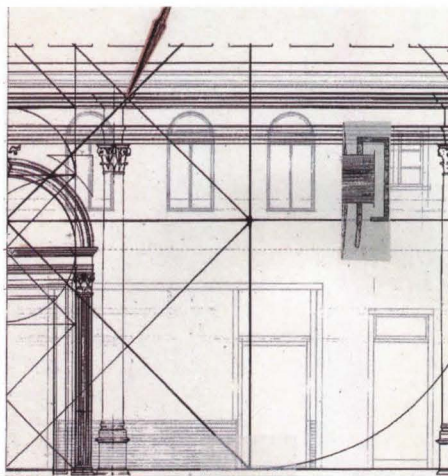
Case of display



Layers of reinhabitation



Under construction or, post the future #2



Drawn out



Memnon #2

Yazdani: I think it's a skillful and thoughtful composition, but I am disturbed by the fact that they don't ultimately resolve it with one solution. Are we suggesting that every so often they go back and change the facade?

Tsien: That's part of the excitement of this proposal.

Machado: The poetics of the proposal appeal to me. It is mind expanding in that sense and mentions things that we have not thought before. But it still disappointingly refuses to engage in choosing or selecting one thing.

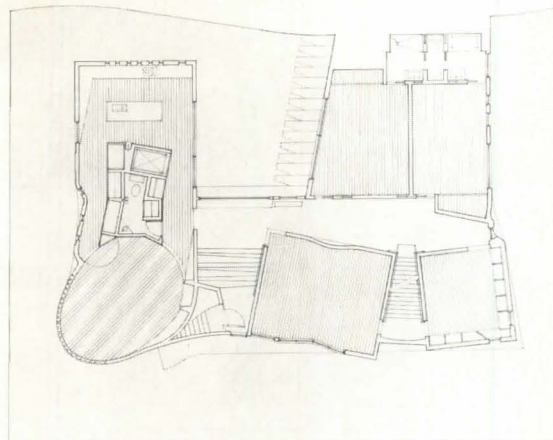
Jiricna: It would kill the idea if they did, I think.

Tsien: It's in tune with the way the museum operates. The person inside makes something weird. It's still the Museum of Jurassic Technology, but it's also that thing he's made. And then it changes; he makes something else.

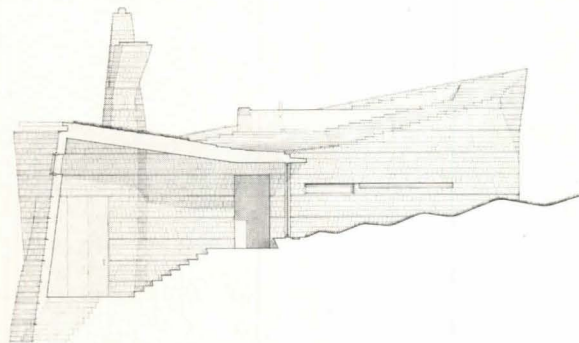
Office dA

The Toledo House

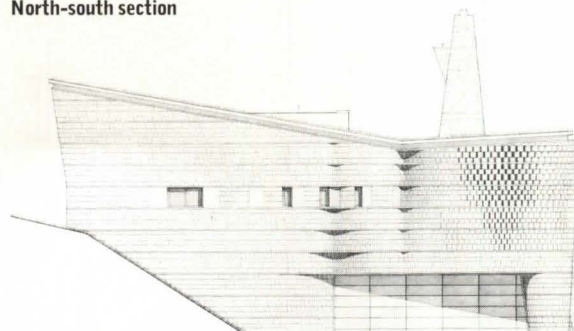
citation



Plan | 11'/3m



North-south section



East elevation | 74'/23m

PROJECT: The Toledo House, Bilbao, Spain

SITE: A hillside that overlooks a valley on the outskirts of Bilbao.

PROGRAM: A 2,500-square-foot retirement home.

SOLUTION: The single-story house contains a series of independent, highly figural volumes that shelter the primary functions of dining room, living room, and study. These rooms are expressed on the exterior as subtle undulations in the banded, rough masonry skin. The house draws on the Basque building typology of timber framing with masonry infill. A plywood scaffolding system is filled with a rough stone veneer and concrete block cavity wall, a composite construction system that accommodates complex spatial configurations.

CLIENT: Mr. and Mrs.

Diego Toledo

ARCHITECT: Office dA, Boston—

Monica Ponce de Leon, Nader Tehrani (project designers), Phillip Smith (model coordinator), Chris Arner, Jeffrey Asanza, Timothy Clark, Jake Cormier, Karen Hock, Richard Lee, Kayoko Ohtsuki, Jill Porter, Sergio Rodriguez (project team) Mario D'Artista, Patricia Szu-Ping Chen, Jennifer Cho, Christian Dagg, Kristen Giannattasio, Matt LaRue, Victor Sant'Anna, Jess Smith, Lee Su, Thamarit Suchart, Mariko Yoshii (project assistants)

ASSOCIATE ARCHITECT:

Diego Toledo Architecture, Madrid, Spain

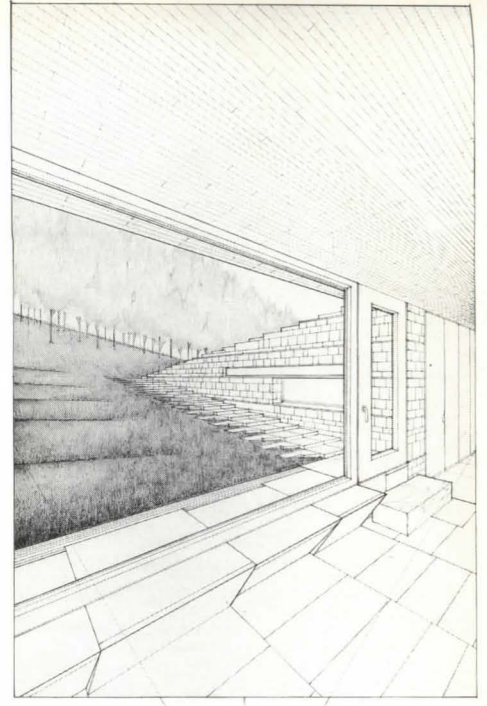
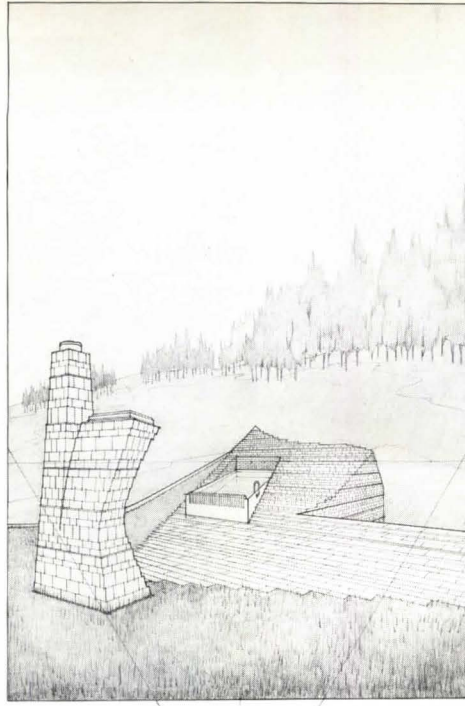
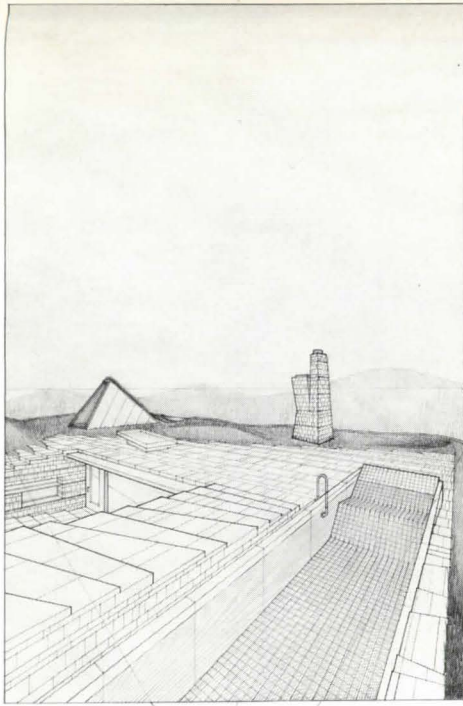
PHOTOGRAPHER: Dan Bibb

Yazdani: This scheme is sensitive to the flow of the building, yet confrontational to the construction and materials. On one hand, it becomes an extension of the landscape; on the other, it confronts it very seriously. The

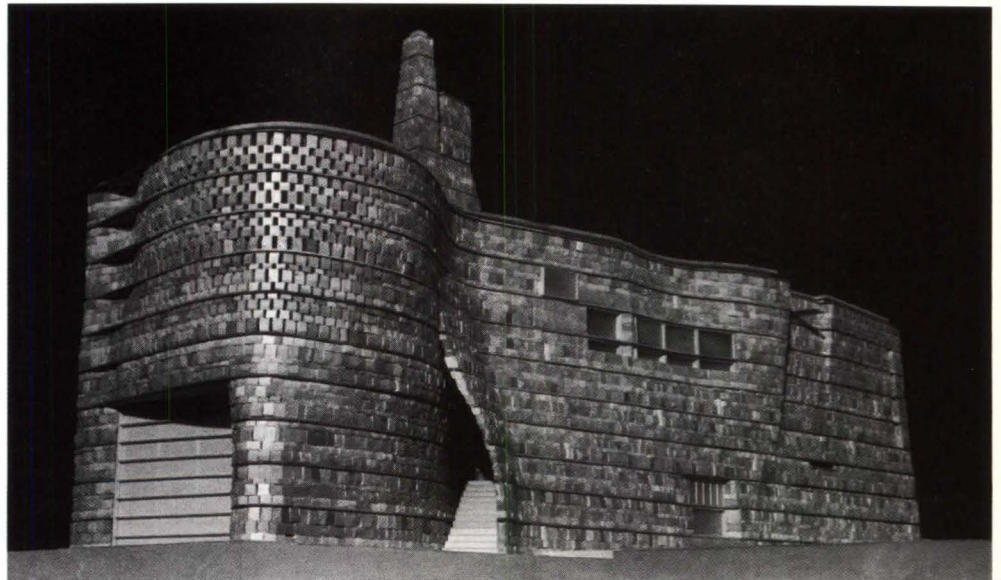
the landscape. There is a great flow from the entrance out to the landscape and back into the building. The rusticated skin then challenges that flow. It's a masonry skin, which isn't usually seen as warping and floating. I like that tension,

Tsion: I think it's very beautiful. The house is somewhat in the spirit of Gaudi. People talk about Gaudi's work as being very surreal architecture, but actually it's very logical. And the logic is based on an observation

of gravity. This building seems surreal; it's both traditional and groundbreaking.



**View of model
looking southwest**



Jiricna: It has great ideas, but the greatest problem is the way the wall meets the roof.

Yazdani: I'm not disturbed by the way the roof meets the wall, because I don't think the roof is a roof. I think the roof is the ground, and the wall is the retaining wall. In a way, the indoors and outdoors are the same.

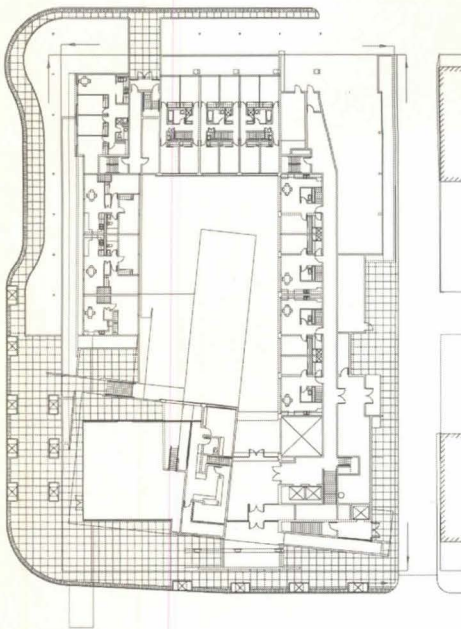
Fisher: It's absolutely gorgeous. I love the way the horizontal bands are treated so that one can understand the undulation by seeing the shadow. There is a very modern quality about it. It keeps shifting, from resembling part of an ancient

fortress or Spanish house, to being something that suggests a modern conception of spatial infinity and integration with the land.

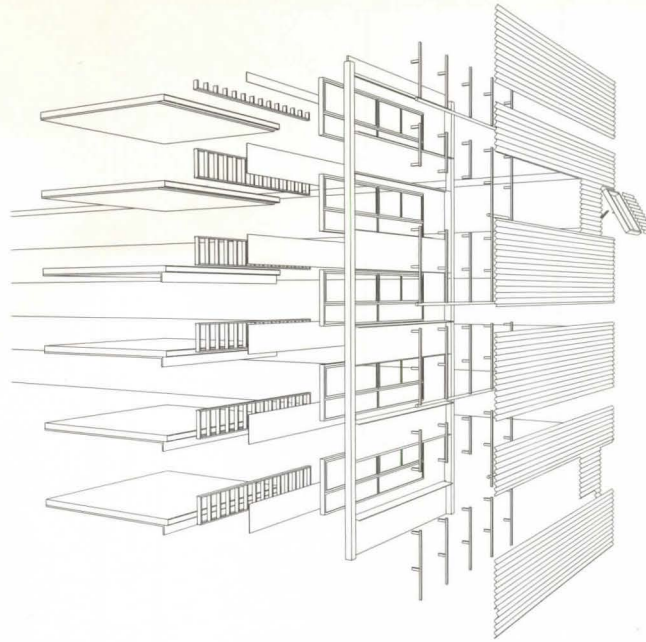
Morphosis

University of Toronto Graduate / Second Entry Residence

citation



First-floor plan | 1/35' / 11m



Cladding study

PROJECT: University of Toronto Graduate / Second Entry Residence, Toronto

SITE: The northwest corner of the University of Toronto's downtown campus.

PROGRAM: Housing for 480 graduate students, with 2,100 square feet of retail.

SOLUTION: The architect organized the building around a central courtyard, which is sunk one level below grade. Each of the four building blocks that surround the court comprises a different number of floors in response to the immediate context. The block to the south is seven stories and houses the lobby, retail, and a common room on the basement and ground floors. The floors above contain single rooms along a double-loaded corridor. The northern block comprises four floors, the eastern block 10 floors, and the principal, western block, seven. All three blocks house student rooms. On the sixth and seventh floors of the building's east facade, an exterior corridor becomes a giant billboard for the school. This "human cornice," which projects from the building to the south, spells out the name of the school in giant letters. The building is clad in precast concrete and corrugated perforated aluminum panels.

CLIENT: University of Toronto
ARCHITECT: Morphosis, Santa Monica, California—Thom Mayne (principal), Kim Groves (project architect), David Rindlaub, Stephen Slaughter, Brandon Welling (project team), Felix Cheng, Ben Damron, Dave Grant, Ryan Harper, Joey Jones, Fabian Kremkus, Silvia Kuhle, Ung Joo Scott Lee, Julianna Morais, Ulrike Nemeth, David Plotkin, Tarek Qaddumi, Ivan Redi, Robyn Sambo, Jose Valeros, Sandrine Wellens, Oliver Winkler (project assistants); Stephen Teeple Architects, Toronto—Stephen Teeple (principal), Chris Radigan (project manager), Bernard Jin, Rob Knight (project team), Tom Arban, Tania Bortolotto, Marc Downing, Joseph Jones, Grazyna Krezel, Jeff Lotto, Madeleine Moore, Kael Opie, Matt Smith, Adolfo Spaleta (project assistants)

LANDSCAPE ARCHITECT: Janet Rosenberg & Associates

ENGINEERS: Yolles Partnership (structural); Keen Engineering (mechanical); Carinci Burt Rogers Engineering (electrical)

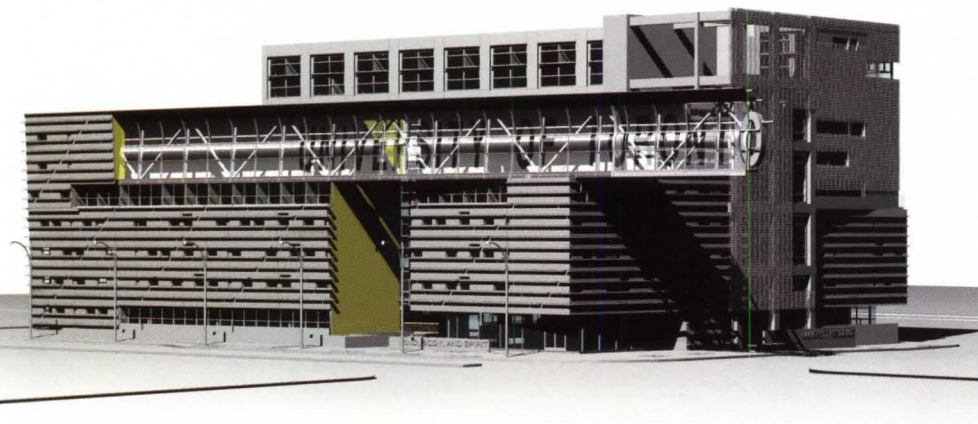
GENERAL CONTRACTOR: Axor Construction Canada
COST: \$13 million

Machado: It's a very modern typology for a campus dormitory. It's wonderful that this university has selected an architect that is doing that type of building, because most campuses are so incredibly conservative that if the net

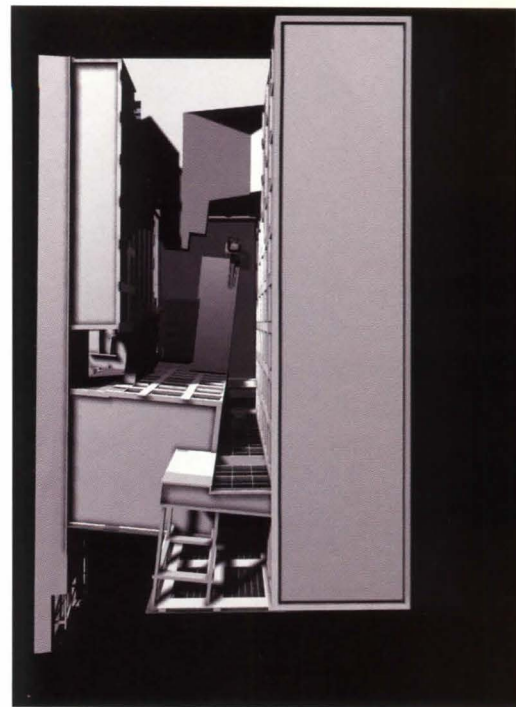
Jiricna: It's a nice surprise to see an unusual treatment of something that is usually a complete mess.

Machado: The weakest point is that bombastic, rhetorical sign, but the back I love.

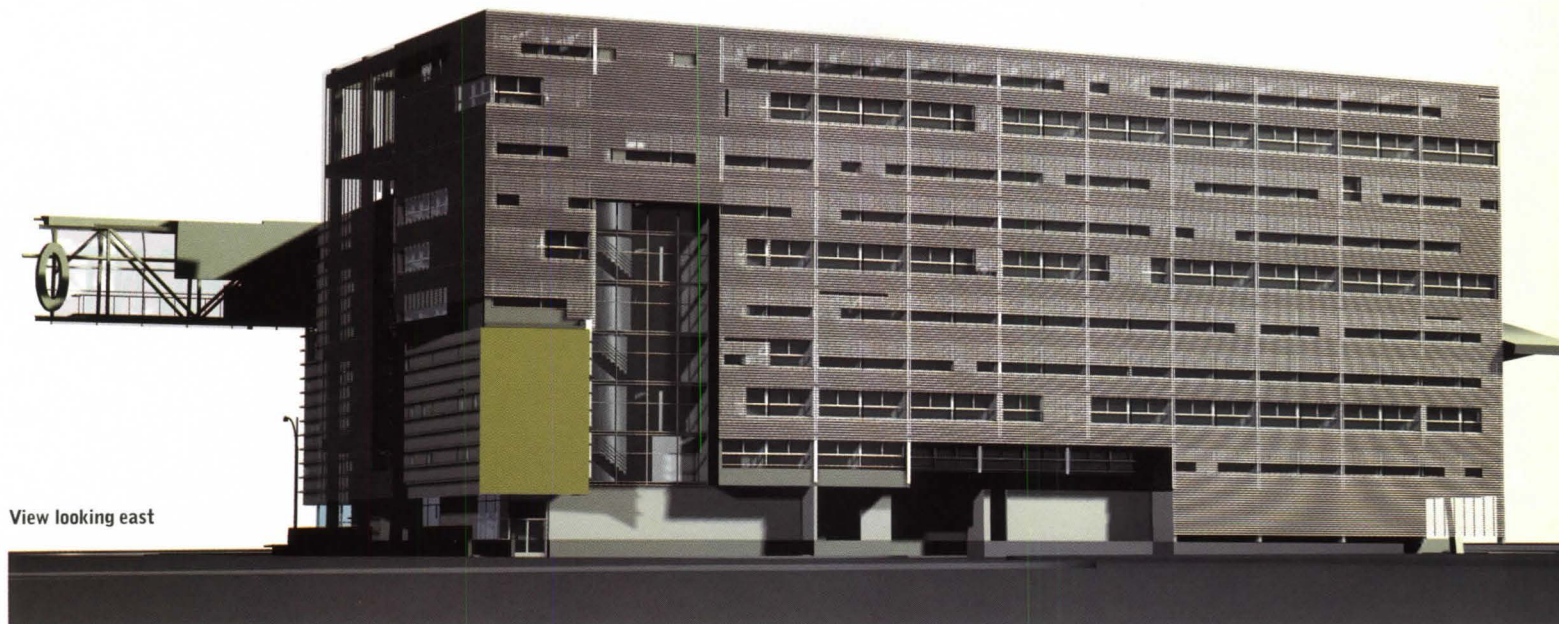
Tsien: This is a dormitory on a busy street that's got to have a lot of nasty little stores down in the bottom. The building is strong enough so that you can see it as a building, understand it as a place where students live, and not feel overwhelmed



View looking west



Aerial view



View looking east

Yazdani: It's hard to understand how it relates to the rest of the campus. If the buildings around it are small-scale, I think this would be a very overwhelming, overpowering monolith in the area. I'm seduced by the skin. It's skillfully done.

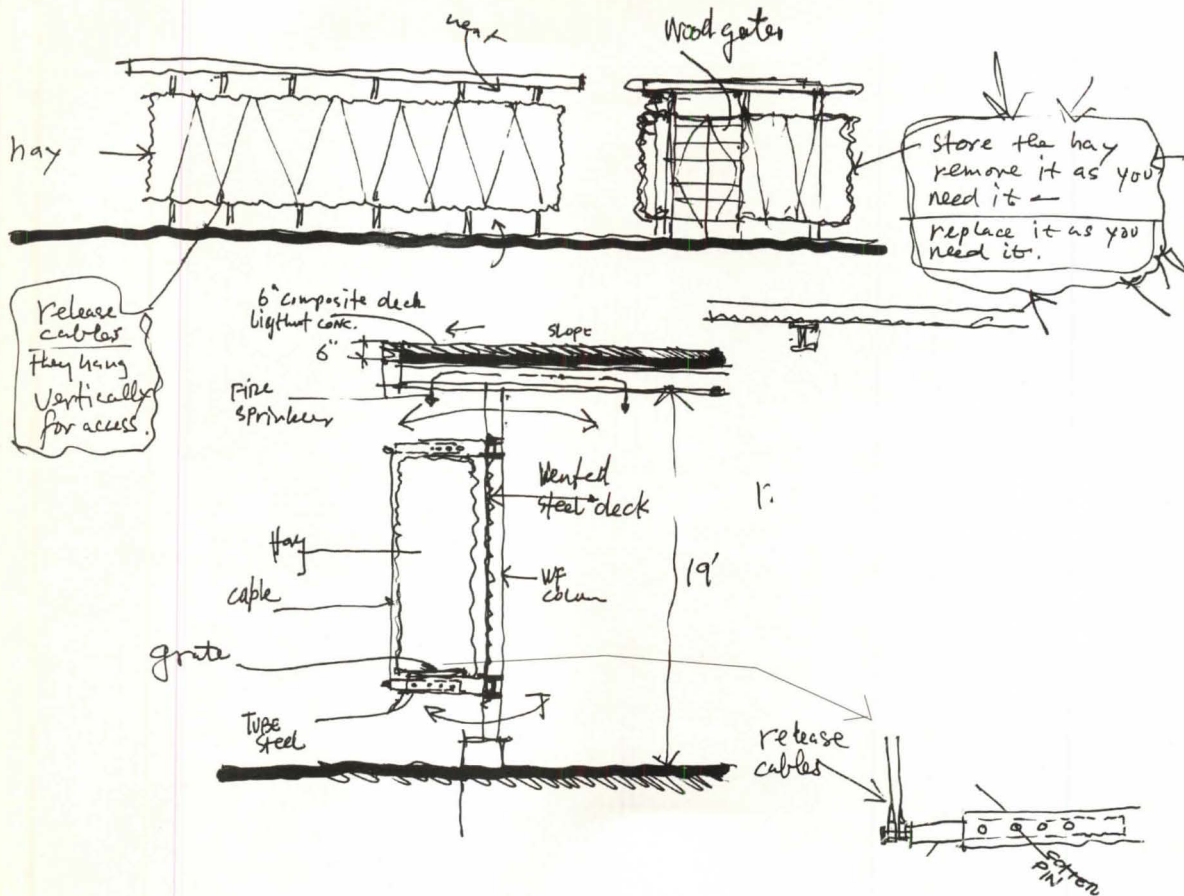
Fisher: I am a little bothered by this sign. It seems gratuitous.

Tsien: You know what's going to happen? Value engineering will take care of it.

SPF:a

Somis Hay Barn & Stable

citation



CLIENT: Steve M. Sharpe
ARCHITECT: SPF:a, Los Angeles—
Zoltan E. Pali
(design principal),
Judith M. Fekete,
Jeffrey S. Stenfors
(principals),
S. Daniel Seng (job captain)
COST: \$100,000

PROJECT: Somis Hay Barn and Stable, Somis, California

SITE: A 40-acre lemon grove and ranch in Somis, California.

PROGRAM: A barn for light farm equipment, horses, and hay.

SOLUTION: The facade is stored hay; the structure an exposed steel brace frame. Movable cables hold hay bales stacked like bricks on a low shelf cantilevered from the frame; one removes bales as needed, by hand. Behind the bales is an interior wall of galvanized vented steel deck. Inside the 2900-square-foot barn, a 12-foot-square structural bay accommodates machinery and partitioned horse stalls.

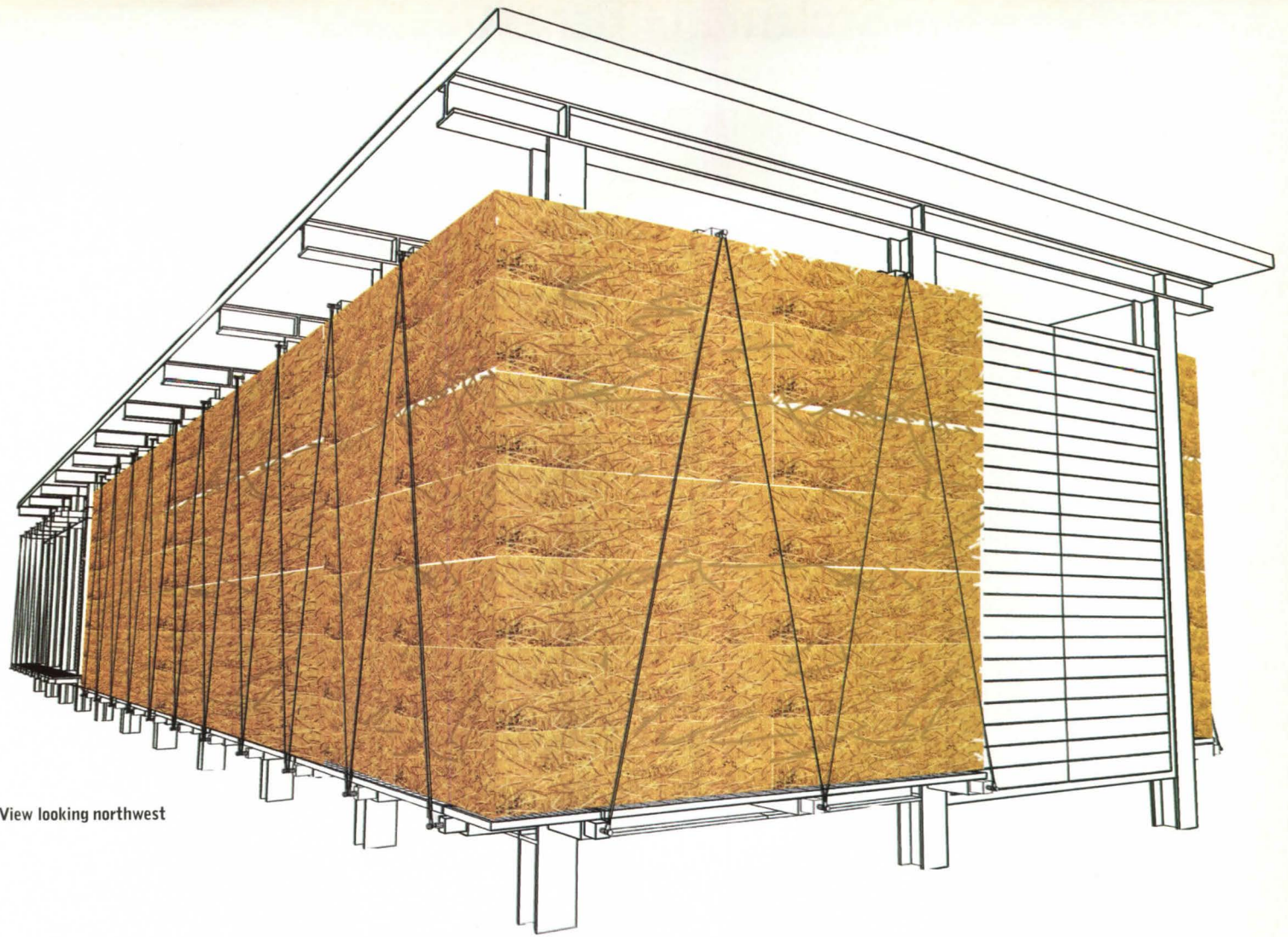
Jiriena: It's appealing. I thought the idea was great, but I don't know in reality whether it would work.

Tsien: Cows eat the hay right from the face of the building?

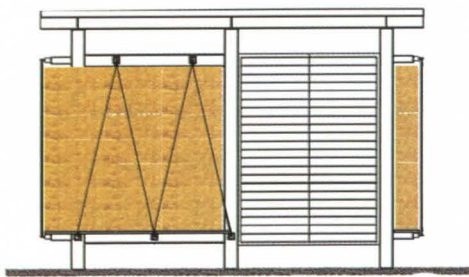
Fisher: No. People have to undo these cables, pull the hay off, and take it into the barn. There's a perforated wall behind the bales so there's air movement and the hay doesn't rot.

Machado: It's up from the ground so rats won't get to it.

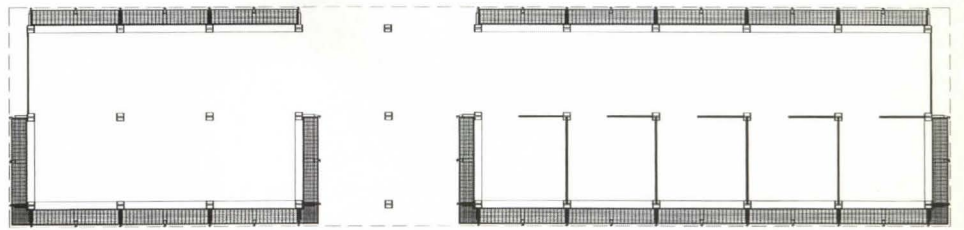
Fisher: And yet it also has this insulating quality; it will keep air from moving right into the stalls.



View looking northwest



East elevation



Plan 10'/3m

Yazdani: It has rigor. It has intelligence. And a good sense of humor.

Fisher: I love it. It's the horse's version of the gingerbread house; you eat it as you go. It solves the problem in a new way, yet it's just a horse stable. How many architects are rethinking the stable?

Jiricna: I think it's great. I just don't know enough about it in practical terms. Can you actually leave hay exposed?

Fisher: But it has a roof to keep the rain off the hay.

Yazdani: It takes you out of barn typology. It combines a very industrial structure with a very agrarian program.

Pasanella + Klein Stolzman + Berg Architects

Stabile Hall

citation



First-floor plan | 17'/5m



Typical floor

CLIENT: Pratt Institute
ARCHITECT: Pasanella + Klein Stolzman + Berg Architects, New York City—Wayne Berg (principal-in-charge), John Kelleher (project architect), Timothy Archambault, Howard Chu, Taiji Miyasaka, Jonathan Schecter, Christine Wentz (project team)
LANDSCAPE ARCHITECT: Signe Nielsen P.C. Landscape Architects
ENGINEERS: Tor Smolen Calini & Anastos (structural); Goldman Copeland Associates (mechanical); Leonard J. Strandberg and Associates (civil)
CONSULTANTS: Kugler Tillotson Associates (lighting); Wolf and Company (cost estimating)
GENERAL CONTRACTOR: E.W. Howell
COST: \$13 million
PHOTOGRAPHER: Jock Pottle / Esto

PROJECT: Stabile Hall, Brooklyn, New York

SITE: The northeast corner of the Pratt campus in Brooklyn. Two-story rowhouses on the National Register of Historic Places house faculty on the western edge of the site.

PROGRAM: A 256-bed dormitory for Pratt's first-year art and architecture students. Pratt required suites of two two-person rooms that share a bathroom. The architect expanded the brief by incorporating group study rooms, or "homework rooms," as well as a large art gallery.

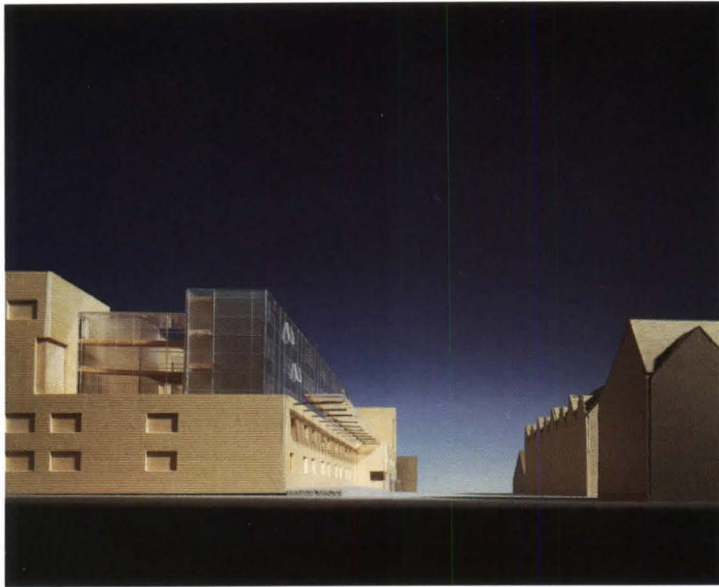
SOLUTION: The building is organized along a linear bar that runs north-south: On the block's western facade, the first two levels are clad in brick, which reflect the rowhouses across the street; the three upper levels are glazed; and the transition between the two materials is marked by a step-back and a projected canopy. The southern tip of the bar houses the art gallery and marks the principal entrance of the building from the heart of the Pratt campus. Three wings that house student rooms project from the main block to the east; the architect locates the double-height "homework rooms" at the point of intersection between these wings and the linear main block.

Machado: It's very formalist—responsible, correct modernism that is well-grounded in the site.

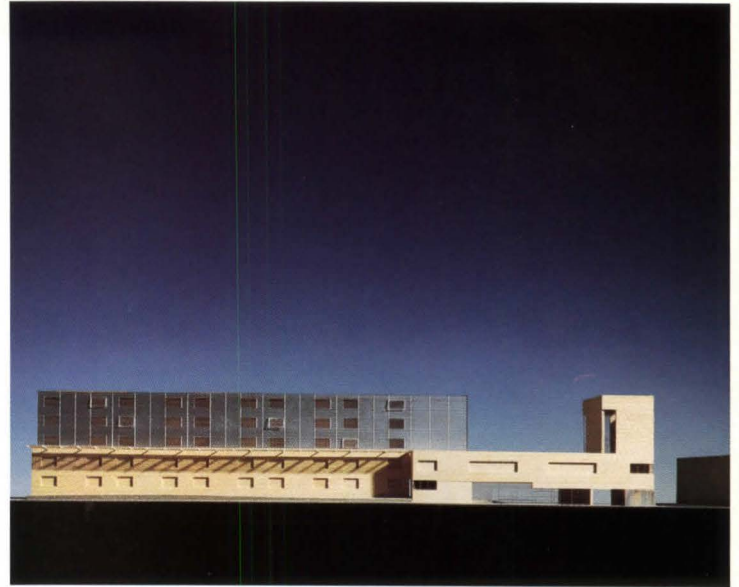
Fisher: I found it a little bit of a Steven Holl knock-off. It's urbanistically intelligent and formally nice, but not that nice.

Machado: I don't know about that. Look at those plans. They have integrity.

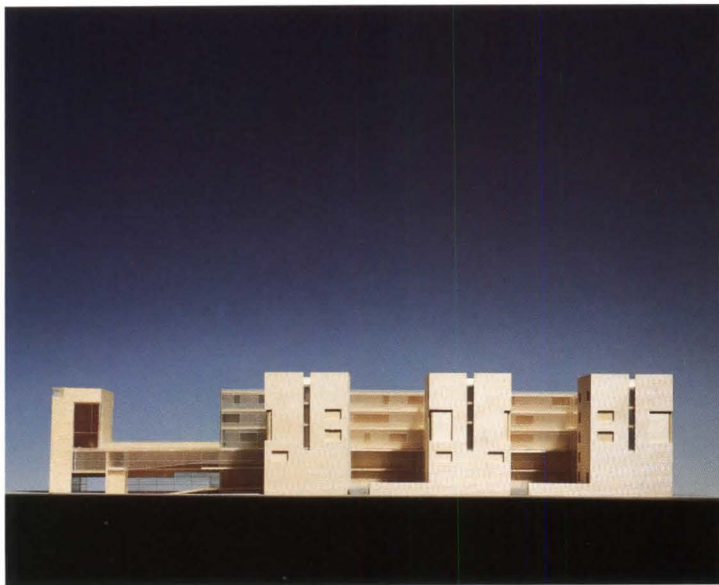
Jiricna: It's not a bad building, but it doesn't make me feel, 'Wow.'



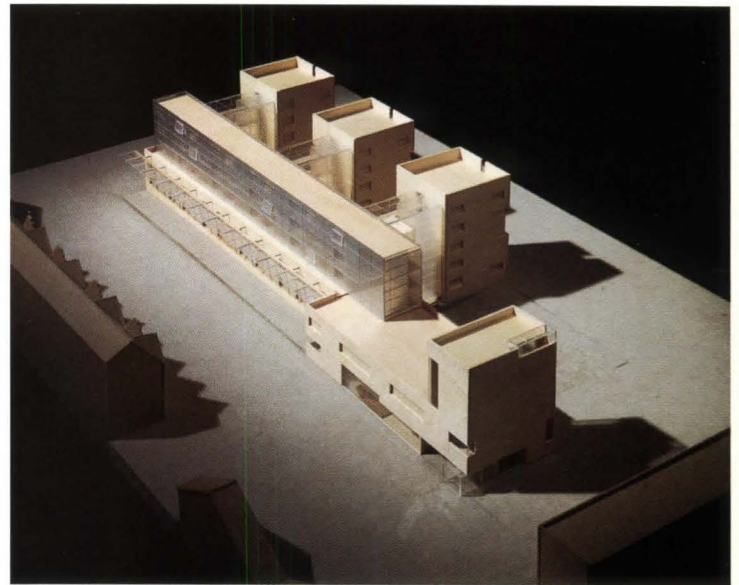
View of model with rowhouses



View of model looking east



View of model looking west



Aerial view of model

Yazdani: I like the rigor of it. I question the spatial qualities between the cubes, and the severity of the wall, but I think it's an elegant parti and building.

Fisher: A whole city of buildings like this would be horrendous, but as a beautifully minimalist fragment in the existing city, it's something we can simply enjoy.

Tsion: Generally, programs for dorms have very little sense of the elegance that appears in this project, which takes what are the driest of program elements and, in a sense, lifts those pieces up to the light.

Allied Works Architecture

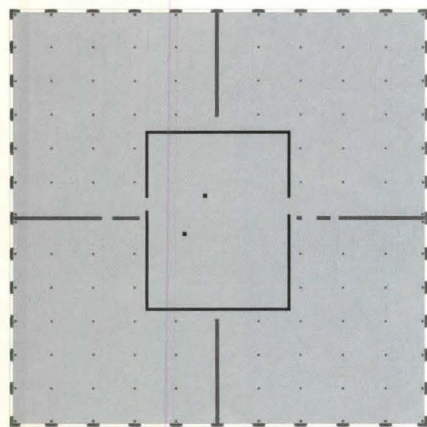
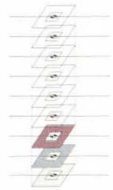
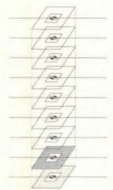
Wieden & Kennedy World Headquarters

citation

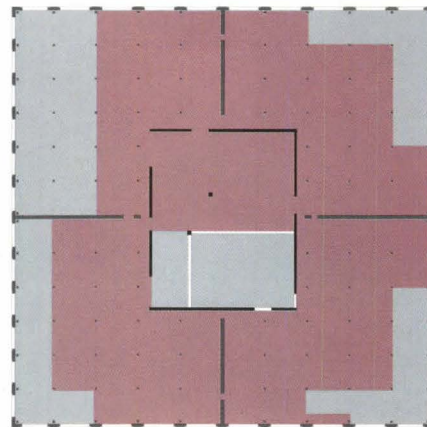
PROJECT: Wieden & Kennedy World Headquarters, Portland, Oregon
SITE: A former warehouse in the industrial Pearl District in south central Portland.
PROGRAM: The renovation of a five-story warehouse into the 220,000 square-foot headquarters of an international advertising agency. In addition to offices and meeting rooms for 500 employees, the client required a large conference space that would accommodate public musical and theater performances and a health club, screening room, café, and library.
SOLUTION: The architects restored the existing windows, storefronts, and an entrance canopy to meet local preservation ordinances. At the core of the former warehouse, they removed an 80-by-100-by-70-foot portion of the building's heavy timber frame and inserted concrete shear walls to form a five-story box within the resulting void. Bridges, catwalks, and large sections of floor plates penetrate the soaring volume and create vertically staggered layers of activities. Ribbons of skylights above a new penthouse level, as well as a grid of small punctures in the concrete shear walls, bring light deep into the building's new core, a collective space for the office and a performance space for after-hours art productions.

CLIENT: Wieden & Kennedy; Gerding/Edlen Development Corporation
ARCHITECT: Allied Works Architecture, Portland, Oregon—Brad Cloepfil (principal/project design), John Weil (project lead), Lorraine Guthrie, Paul Kinley (project architects), Chris Bixby, Jake Freauff, Jeff Lee, Kyle Lommen (project team), John Carhart, Erin Flynn, Nathan Hamilton, Angela Kim, Rob Lamb, Darlene Levy, Brian Malady, Doug Skidmore, William Ullman, Ben Waechter, Jeff Woodward (project assistants), Jody Lewis (interior design)

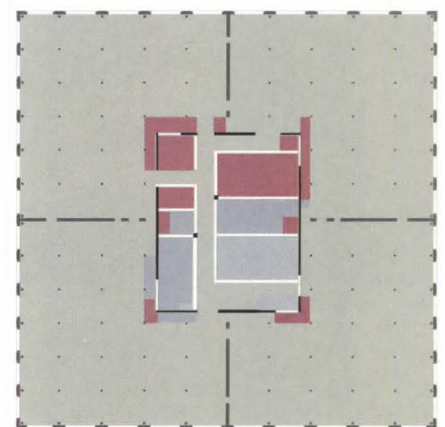
ENGINEERS: kpff (structural, civil); Manfull-Curtis; Glumac International (mechanical); James D. Graham (electrical)
CONSULTANTS: Horton*Lees (lighting); Ove Arup and Partners (acoustics, audiovisuals); Theatre Projects (theater); Donald Kaufman Color (color)
GENERAL CONTRACTOR: R&H Construction
PHOTOGRAPHER: Sally Schoolmaster



First-floor plan diagram | 1"=30'/9m



Second-floor plan diagram



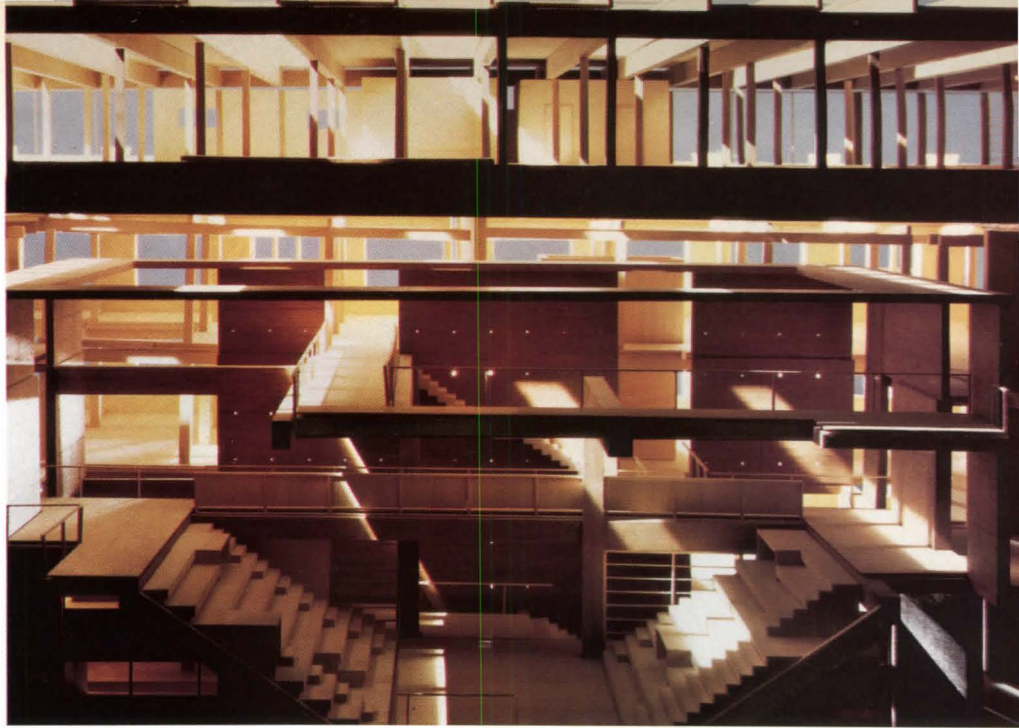
Fourth-floor plan diagram

Tsien: This is like a breath of fresh air. I think it's a very simple container that is carved in quite an ingenious way. It's very difficult to understand, but I appreciate

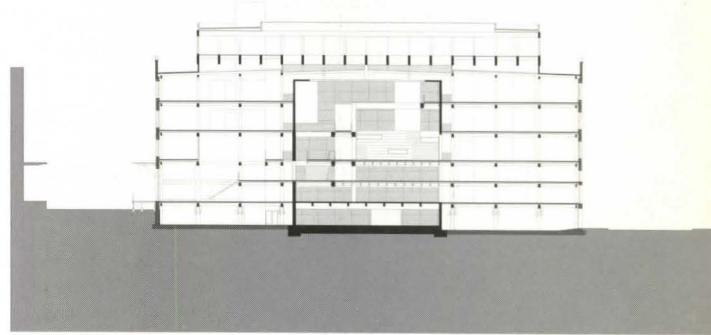
the desire to balance strength and clarity with an insinuated grace and surprise.



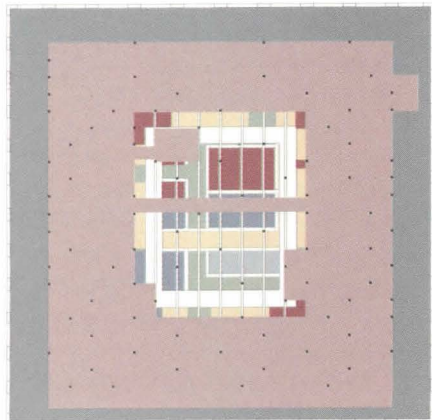
Existing building



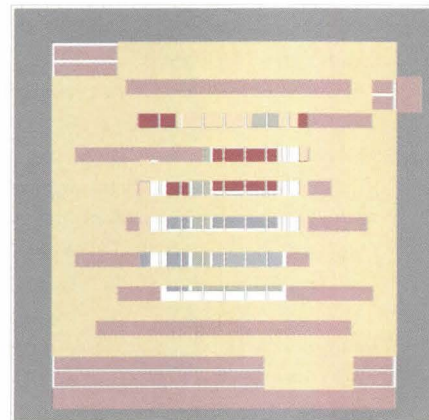
Model views of interior



East-west section | 42'/13m



Sixth-floor plan diagram



Roof plan diagram

Yazdani: The complexity of the section is the biggest strength of the project.

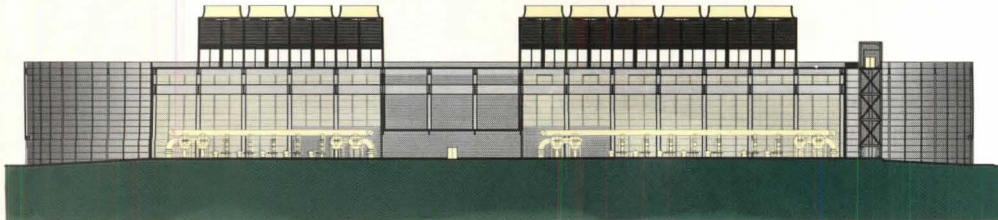
Fisher: They've taken the same idea of solid and void, and used it in making the plan, too, which is quite intelligent.

Yazdani: In atrium buildings, once you go beyond two stories it becomes a rather complex code issue.

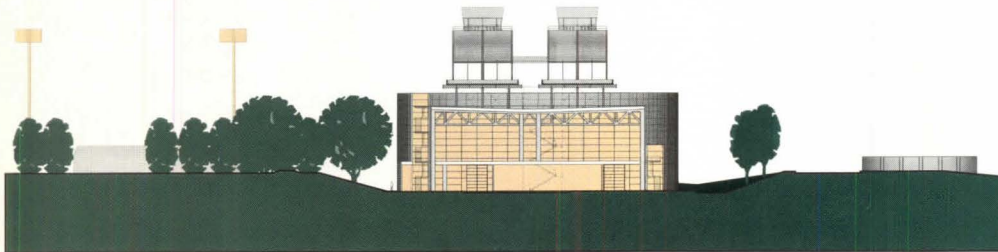
Leers Weinzapfel Associates

Module VII Chiller Plant at the University of Pennsylvania

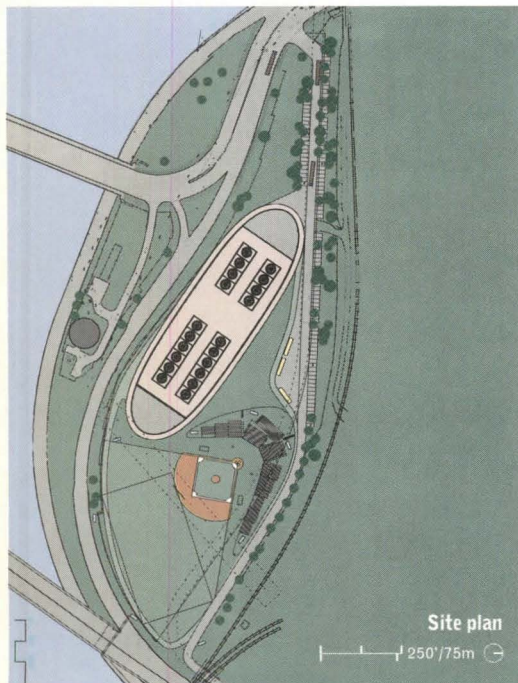
citation



North-south section



East-west section | 45'/14m



CLIENT: Trammell Crow Company for the University of Pennsylvania
ARCHITECT: Leers Weinzapfel Associates, Boston—Jane Weinzapfel (principal-in-charge), Andrea P. Leers (consulting principal), Joseph Raia (project manager), Catherine Lassen (project leader), Ellen Altman, Tom Chung, John Kim, Anne Snelling Lee, Mee Lee (project team)
ENGINEERS: Keast & Hood (structural); William Trefz Consulting Engineers (mechanical, electrical); Boles, Smyth Associates (civil); Richard Mabry (geotechnical)
CONSULTANTS: Lam Partners (lighting); Shen Milson Wilke (acoustics)
GENERAL CONTRACTOR: Sordoni Skanska
COSTS: \$15 million

PROJECT: Module VII Chiller Plant at the University of Pennsylvania, Philadelphia

SITE: A prominent edge of campus flanked by the Schuylkill River, adjacent to an athletic field and parking lot; a railroad right-of-way and the Schuylkill Expressway flank the site.

PROGRAM: The plant is an attempt to give the university an architectural presence on a highly visible site, while ultimately providing 50,000 tons of chilled water. It houses lockers and facilities for athletes; a tennis court will occupy half of the fenced enclosure of the chiller plant when the first half of the two-phase project is executed; the court will eventually be supplanted by the second set of chillers.

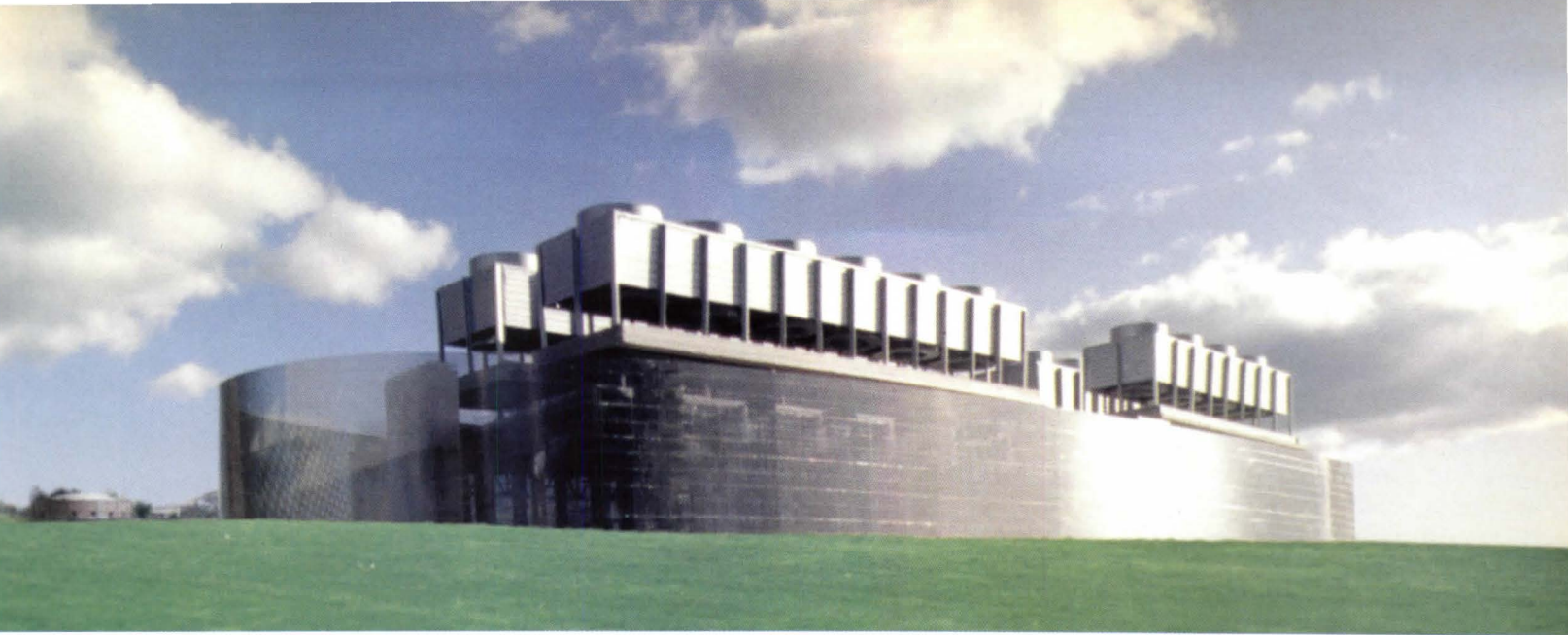
SOLUTION: An elliptical anodized aluminum screen encircles the 58,000-square-foot chiller plant. The screen is the skin of a double-layered enclosure; the chillers stand on top of a glazed rectangular structure within the screen. This glass enclosure and its aluminum wrapper alternately obscure and reveal the building's program. By day, the screen is a metallic backdrop to adjacent athletic fields; by night, the chiller plant, which sits atop a glazed base, is lit from within, its industrial components discernible through the glass box and filtering ellipse of aluminum.

Machado: To make architecture out of a program of that kind in that location is very good. Also, the fact that the screen doesn't pretend to hide the whole thing is perhaps a plus. It will make a beautiful garden piece

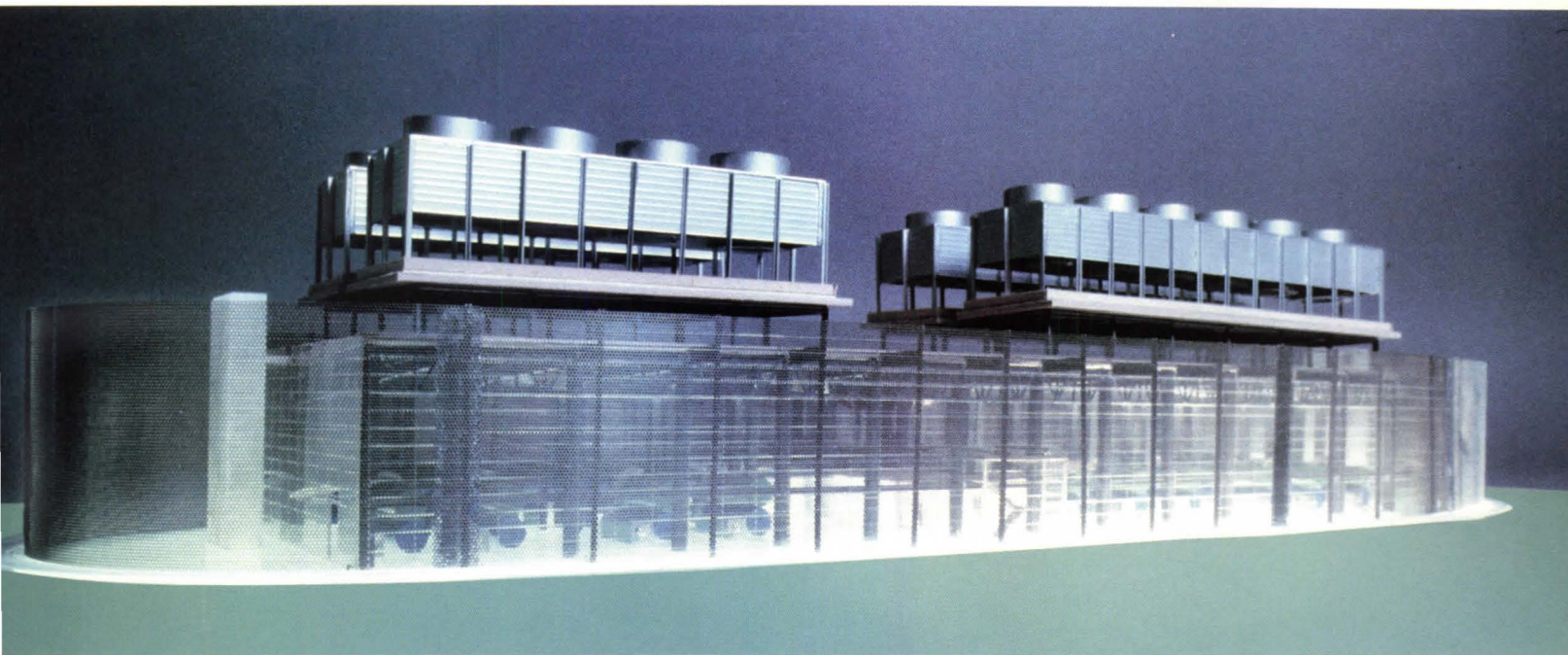
Jiricna: I usually think about things getting heavy close to the earth and getting lighter as they rise; the architect here did the opposite by putting the heavy stuff on the top. The light stuff is transitioned between the earth and what functions

Yazdani: That's the beauty of it.

Jiricna: Exactly. I just thought it was so simple and straightforward.



View of plant looking west



View of plant illuminated at night

Tsien: It's a tough project, and the standard way of doing it has become very masculine: Even if things aren't really there one makes them look like they're there. This harks back to the idea of a machine as an elegant thing.

Yazdani: Do you like the tension between the masculine part of the top and, for lack of better description, the feminine softness of the veil? To me, the beauty of the veil is that it hides things you want to see, like the Islamic veil. And when those pieces of the

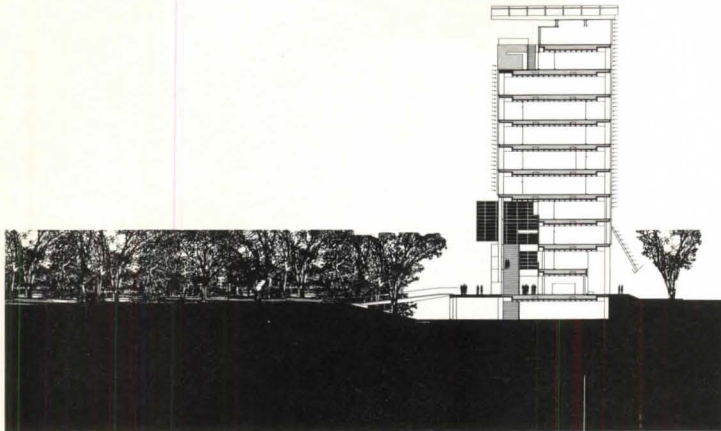
chiller plant pop out, it gives it away. I think if the architects had it in their budget or if the scale allowed it, they would have pushed the veil all the way up.

Fisher: I'm not so sure about that, actually. I find tension in not trying to disguise. In Islamic society, you don't cover your whole face; you cover part. And this is all the more powerful because you don't cover the whole.

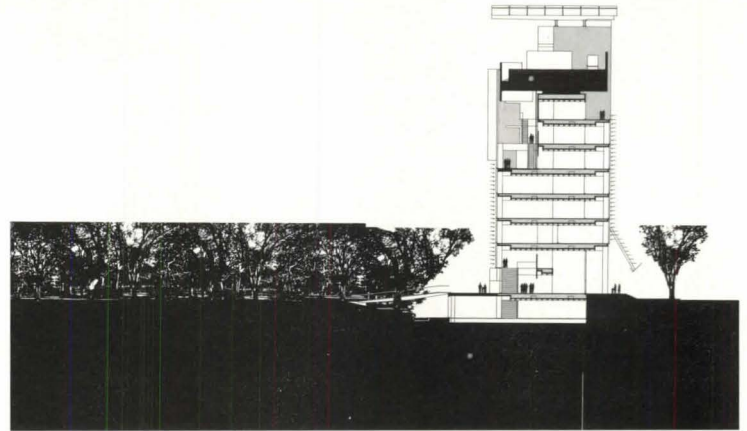
Patkau Architects

Nursing and Biomedical Sciences Building

citation



East-west section | 1" = 50'/15m



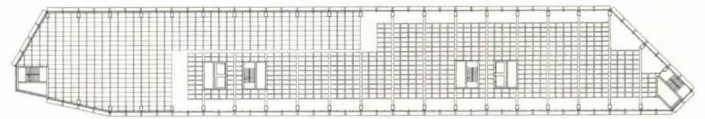
East-west section

PROJECT: Nursing and Biomedical Sciences Building, Texas Medical Center, Houston

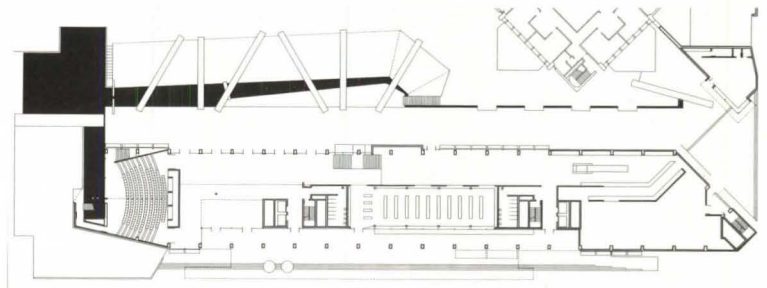
SITE: A flat, narrow site in Houston's giant Texas Medical Center complex, which borders a small park to the east.

PROGRAM: Classrooms and offices totalling 250,000 square feet. The project is the last building projected for the University of Texas-Houston Health Science Center, and is intended to serve as a symbol for the school.

SOLUTION: The large program and comparatively small site required the architects to build up; by locating the building along the full length of the site, the architects minimized the building's height, but created a building with extremely large eastern and western facades. To protect the building's flanks from Houston's torrential rain, intense sunlight, extreme heat, and high humidity, the architects encased the building in operable louvers that remain shut when the building is largely unoccupied, and open during business hours to provide shade. Additional environmental measures include a rooftop canopy that extends the length of the building; photovoltaic cells on the canopy produce energy for the building's ventilation system. The canopy also collects rainwater and deposits it in a storage tank.



Typical floor plan



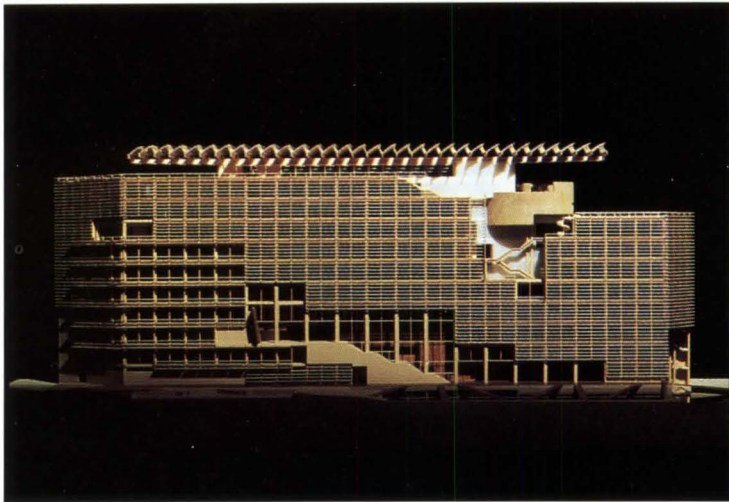
First-floor plan | 1" = 45'/14m

Fisher: I find the skin quite wonderful. I find the plan very banal.

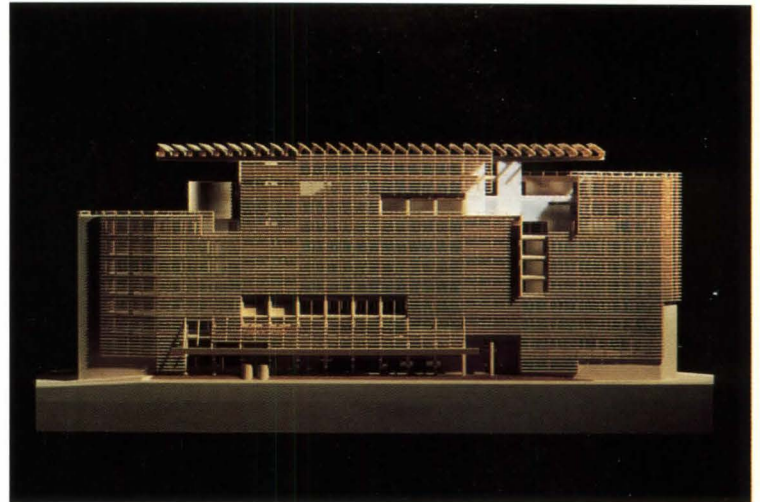
Machado: You have to understand that the rectangular figure was a given. It is a sustainable building in Houston, so it has all these devices to protect it from the rain and the sun.

Tsien: I hope there are not more P/A entries with horizontal battens next year. This is a good building, but there have been so many this time, it's like horizontal batten disease.

Yazdani: It recalls Le Corbusier's slab buildings. I like the fact that it's a massive, linear building yet, because of the skin treatment, the holes in it, and the pieces that push out of it, it's not a severe wall



East elevation



West elevation

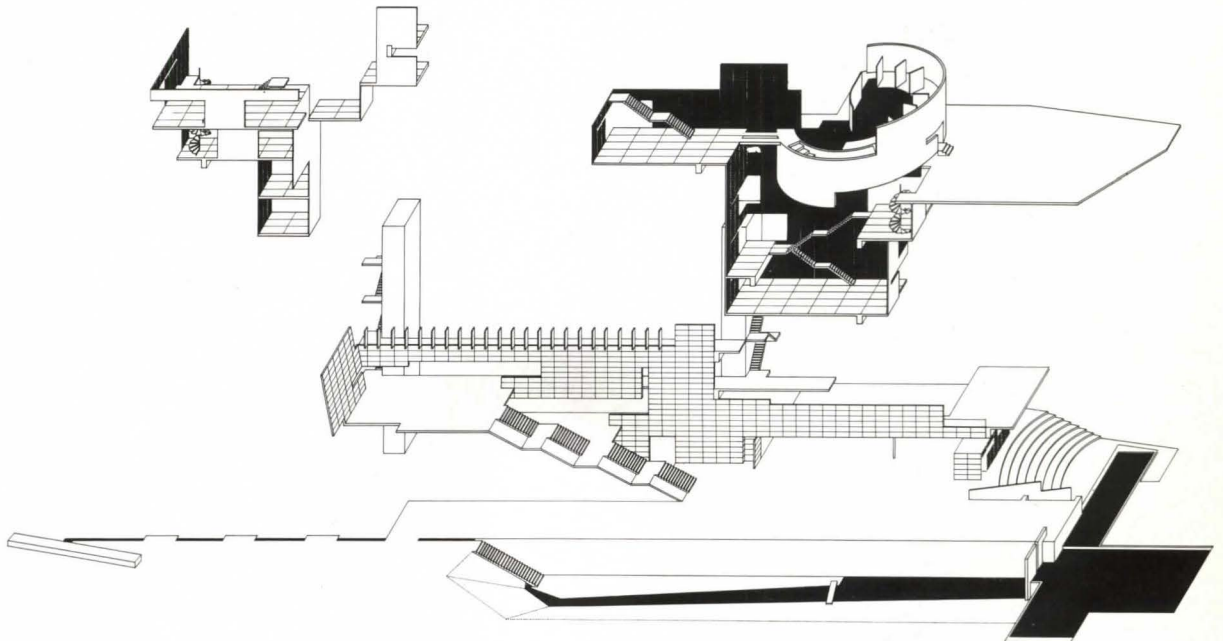
CLIENT: University of Texas-Houston, Health Science Center

ARCHITECT: Patkau Architects, Vancouver, British Columbia, Canada—John Patkau, Patricia Patkau, Michael Cunningham (principals), Tom Bessai, Greg Boothroyd, Maria Denegri, Joanne Gates, Jeff Gilliard, Felix Harbig, Julie LaFreniere, Timothy Newton, Martin Schwarzenbach, Lydia Schymansky, David Shone, Peter Sturzenegger, Steve Suchy, Peter Suter, Jason Tang, Tamara Ullisko, Kevin Wharton, Sabine Wohlfahrt

ENGINEERS: Ove Arup & Partners California (structural, mechanical, electrical)

CONSULTANT: BTY Group (cost estimating)

PHOTOGRAPHER: James Dow



Exploded axonometric of public spaces

Tsien: Here it makes more sense because in Houston it's hot; they've got real sun problems.

Fisher: I really love the idea that the section gets reflected in the facade.

Jiricna: Does it actually work? Because it only works with a certain height of the sun. I think that in Texas the sun actually gets quite low.

Fisher: I think this would work in Texas. It's much closer to the equator; the sun is higher.

Skidmore, Owings & Merrill

330 Madison Avenue

citation

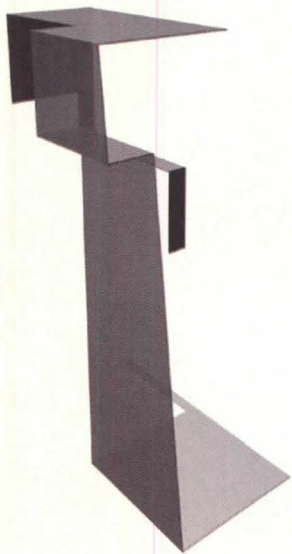


Diagram of metal panel

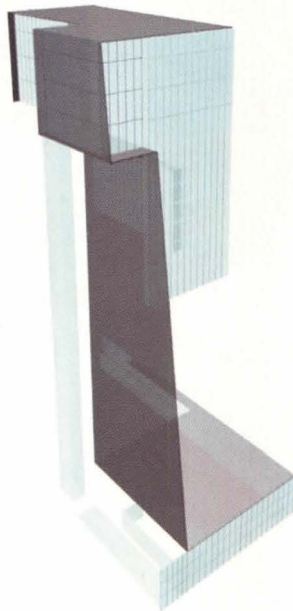


Diagram of metal panel and curtainwall

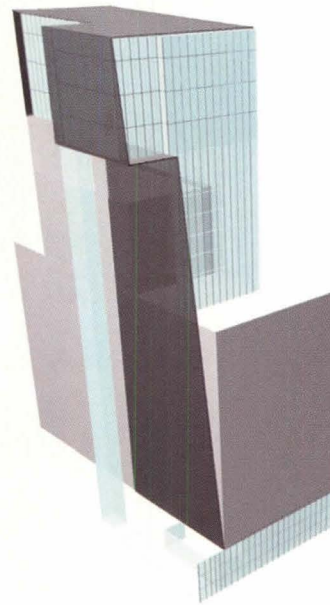


Diagram of metal panel, curtainwall, and existing building

CLIENT: Max Capital Management Corp.
ARCHITECT: Skidmore, Owings & Merrill, New York City—Roger Duffy (design partner), John Winkler (managing partner), Terry Dunn (project management), Ross Wimer (senior designer), Hilary Sample, Matt Williams (designers), Jim Christerson (technical), Lois Mazzitelli, Neil Katz (zoning)
ENGINEERS: Gilsanz Murray Steficek LLP (structural); Sidney Barbanel Consulting Engineers (mechanical, electrical)
PHOTOGRAPHER: Jock Pottle

PROJECT: 350 Madison Avenue, New York City

SITE: An existing building on the corner of Madison Avenue and 45th Street.

PROGRAM: Renovation and expansion of retail and office space.

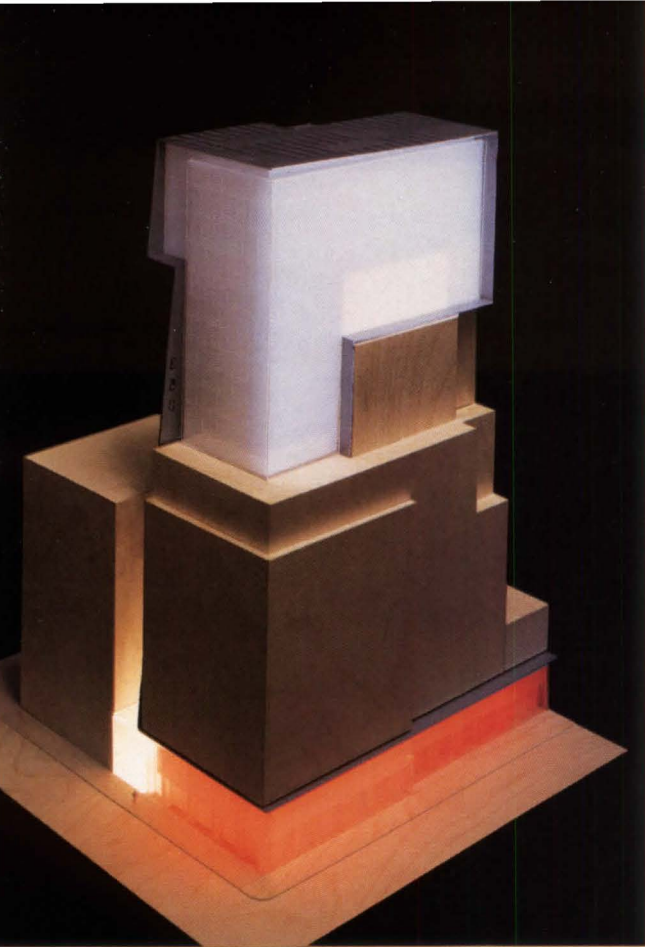
SOLUTION: A 26-floor cantilevered extension provides views of Midtown Manhattan landmarks and creates a new profile for a 24-floor office block built in 1920. Light projects upward from within the two-floor skylit lobby, sited between 350 Madison Avenue and an adjacent building to create a shaft of light that extends from the street to the underside of the cantilevered addition. A metal-and-mesh panel system clads the facade above the lobby and wraps over the roof, seaming the 50,000-square-foot new structure with the original 332,000-square-foot masonry volume. Glass panels enclose the lobby and storefronts on the first two floors; a curtainwall clads three sides of the cantilevered addition above the prewar facades.

Machado: It's all wrapped so very intelligently that it becomes a new thing.

Yazdani: I liked it for that exact reason. It is a new way of looking at high-rises: You don't have to have four sides treated identically. But my biggest fear is that if it

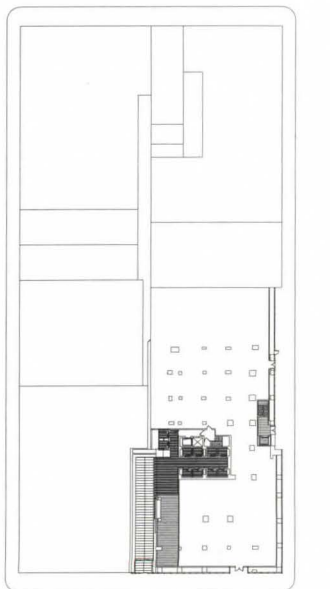
Machado: That's like everything else.

Fisher: I love the form, but also I like the idea of creating a crevice in the street wall and penetrating it. In terms of a more prototypical idea, this may even be more powerful:



Model view looking southwest

Model view looking northwest



First-floor plan | 60'/18m

Tsien: It's nice to think that there could be a building in Manhattan that isn't simply a maxing out of the allowable floor to area ratio.

Jiricna: It looks very beautiful. I just wonder how in reality the architect can achieve that contrast because the most beautiful thing about it is the lightness...

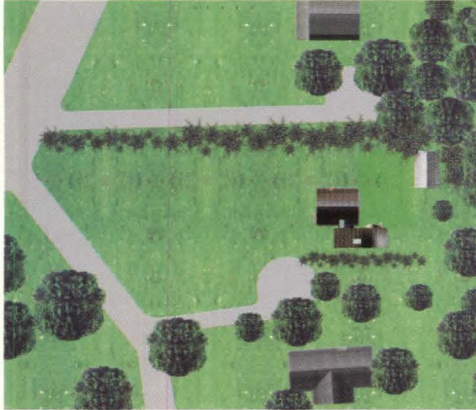
Fisher: ...the abstraction of it.

Jiricna: Yes. This heavy metal panel that seams those two components together: It's very powerful in its presentation. I would love to see it finished, if it could look like that.

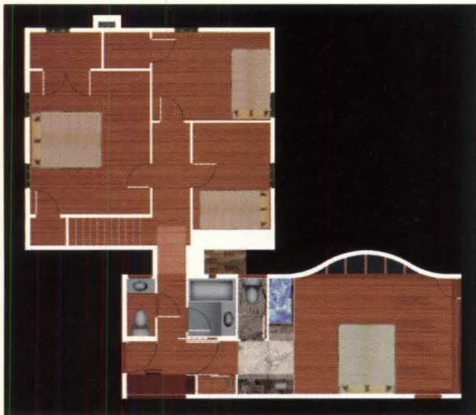
Cho Slade Architecture

Von Erlach House Addition

citation



Site plan



Second-floor plan



First-floor plan | 10'/3m

CLIENT: Alex and Sancha von Erlach
ARCHITECT: Cho Slade Architecture, New York City—Minsuk Cho, James Slade (principals)
ENGINEERS: Gilsanz, Murray, Steficek (structural)
GENERAL CONTRACTOR: Rich Tupper
COST: \$130,000

PROJECT: Von Erlach House Addition, Shelter Island, New York

SITE: A two-story, 1860s shingle house on a 1.3-acre lot in a residential neighborhood used largely by vacationers.

PROGRAM: An addition to a weekend house. Dining area, kitchen, three bathrooms, main bedroom, and study in addition; existing house to be renovated into living area and bedrooms.

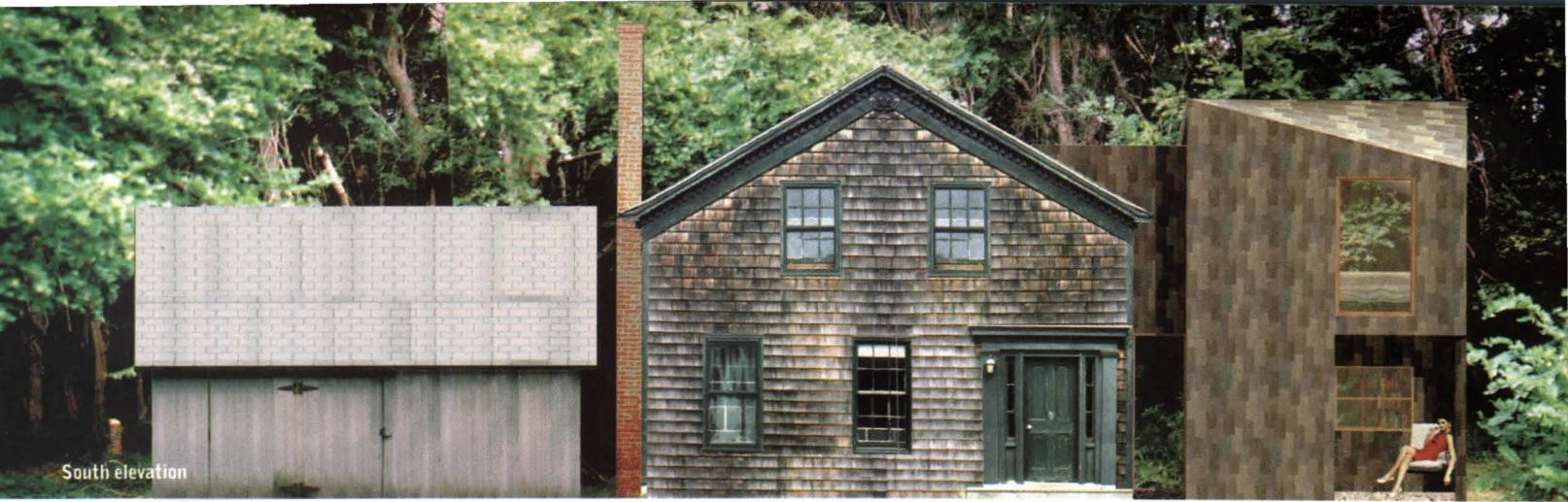
SOLUTION: Clad and roofed in cedar shingle, the 1000-square-foot addition is a two-floor box inflected to alternately emphasize and minimize the relation between inside and outside. In the plywood-finished, first-floor dining area, a west wall of sliding glass panels opens the interior to a yard; a north window frames a view of the forest; a waist-high east window restricts the view of the house next door. Upstairs, the addition comprises discrete rooms, including a study that captures distant views of water and a main bedroom whose coved gypsum-and-plaster surfaces accentuate its isolation from the household.

Tsien: The graphics are so startling. It's one of the few successful computer renderings, because it has a sense of humor about itself.

Machado: They're good.

Jiricna: I don't see that it's very funny. I find it quite heavy. Doesn't it worry you to have no elements that kind of fight each other?

Yazdani: But look at the existing building; it has tension. I wish the addition had left those curves behind.



South elevation



North-south section



East elevation

Fisher: Look what the architect does here; the floor bulges out and becomes a glass plate. In other words, it's a lighting device.

Machado: It's a window.

Fisher: You bring light up into the room. In New England you find a lot of houses that are slightly failing structurally; they have these walls that bulge out. This project has this echo of degradation to it, which I think is quite in keeping with old shingle-style houses.

1999 Awards for Architectural Research

Multidisciplinary researchers forge new territory

From design studios in cyberspace to turn-of-the-century hillside elevators in Chile, the work recognized in the 1999 Awards for Architectural Research program is impressive not only in its variety, but also its adventurousness and depth of insight. The winners delved into the impact of technology in urban design, proposed new models for teaching design studios, and argued that environmental sustainability and affordable housing are not mutually exclusive. They also took on the ever-vexing issue of light: how to create it and how to use it.

Indeed, this year's winners shared few traits with the exception of vigor, enthusiasm, and investigative tenacity. "Research is characterized by clarity of purpose, rigor of method, self-discipline, and constraint of findings," explains juror Richard Eribes. "It is by nature continuous rather than episodic, and as such has an obligation to suggest the next investigation necessary for increased understanding. The award winners in this year's program, by any measure, are superb examples of research."

The Awards for Architectural Research are produced in collaboration with the Initiative for Architectural Research, which comprises the Association of Collegiate Schools of Architecture, the American Institute of Architects (AIA), and the Architectural Research Centers Consortium. They are designed to recognize outstanding research in architecture and urban design. Researchers submitted entries in four general categories: energy and sustainable design; history; behavioral and social sciences; and technology, computing, and materials. (Categories were not considered during judging.)

In addition to Eribes, this year's jury included Robert Berkebile and Janet R. White. The jurors weighed many fac-

tors in their deliberations, including projects' considerations of social problems or concerns, entrants' integration of research and design, and multidisciplinary approaches to developing solutions. Also key was the quality of the researchers' articulation of purpose and documentation of findings. "Without question, the submissions that received awards are complete, thoroughly documented, and very well presented graphically and textually," said White.

The jury was, however, disappointed by the number of entries that failed on many of these fronts. "I felt that a lot of the entries weren't, in fact, research," Berkebile noted. "They were just the normal process of preparing to design a project—simply what an architect or architect-engineer team would do to prepare an appropriate design. In other cases, there was an attempt to prove a predetermined position—without much evidence that that was an appropriate proposition."

White added, "There needs to be a better understanding of what research means in this profession, a shortcoming indicative of our general lack of experience in this arena. The more opportunities we can create to engage in research and submit it, the more the definition of that context will be known and the better we'll get at it." Eribes agreed, but hastened to add that architecture is not the only discipline confused by what constitutes research. "This is true of some fields that view themselves primarily as research disciplines. We're in good company," he concluded wryly.

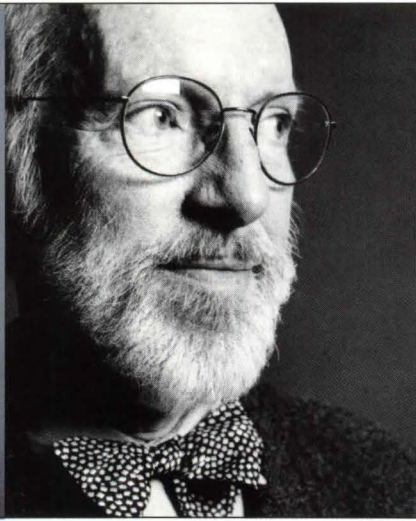
The award and citation winners are in good company as well, in that they share a purity of purpose and degree of success that separated them from their competitors. "There is a certain clarity and elegance in the manner in which the research and the findings are pursued," Eribes says. "They increase everyone's knowledge. And what architect would be against elegance?"

ERIC ADAMS



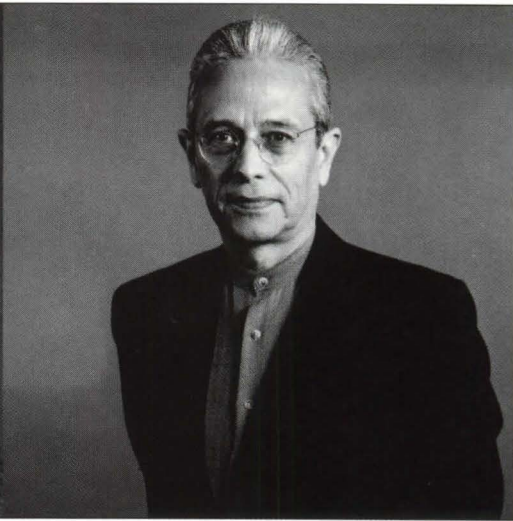
Janet R. White

is vice president of professional development/education at the American Institute of Architects (AIA) in Washington, D.C. Her leadership in the AIA, the Association of Collegiate Schools of Architecture, the National Council of Architectural Registration Boards, and the National Architectural Accrediting Board has been instrumental in furthering diversity and collateral collaboration in the building community. White served as director of the Hammons School of Architecture in Springfield, Missouri, as well as on the faculty of Washington University in St. Louis. She has created numerous broad-based national, state, and community architectural education programs, including the National Symposium on Architecture and the Liberal Arts, and her research has been recognized by the Graham Foundation and the Alliance for Arts Education.



Robert Berkebile

is a partner with Berkebile Nelson Immenschuh McDowell Architects in Kansas City, Missouri. A founding chairman of the American Institute of Architects' Committee on the Environment, Berkebile was instrumental in collaborating with the U.S. Environmental Protection Agency, manufacturers, and environmental groups to create the now-ubiquitous Environmental Resource Guide. He has participated in numerous national demonstration projects, including the Greening of the White House, the Greening of the Grand Canyon National Park, and Solar Atlanta. Berkebile is currently working with the National Park Service, the Department of Energy, the Department of Defense, and other organizations to develop sustainable guidelines for their projects.



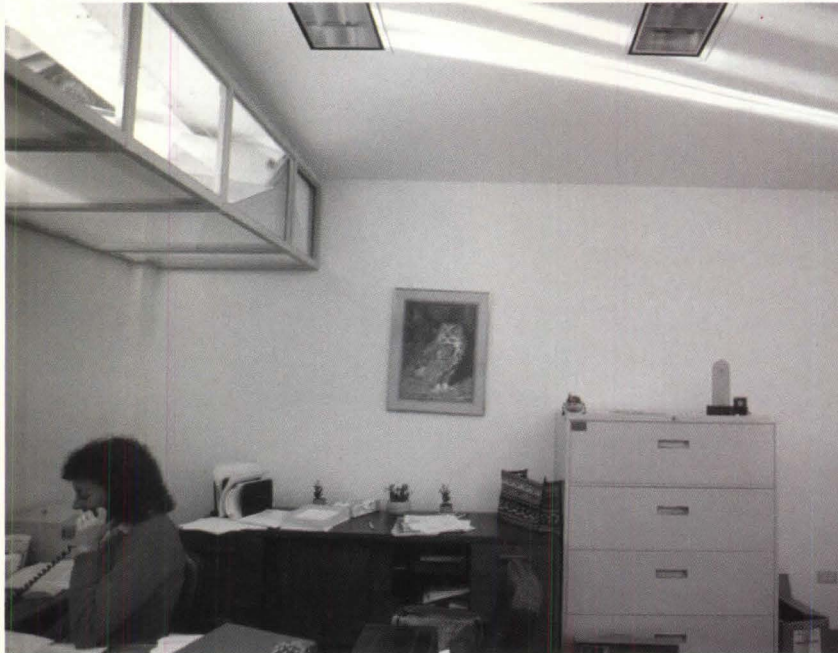
Richard A. Eribes, Ph.D.,

is dean of the College of Architecture at the University of Arizona. Prior to his appointment in January 1997, he spent three years as dean of the University of New Mexico School of Architecture and 20 years at Arizona State University, where he was assistant dean for research in the College of Architecture and Environmental Design. He is also former director of Research and Publications for ASU's School of Public Affairs and was the school's first director of the Center for Urban Studies. Eribes' extensive research has been published in *Public Administration Review*, the book *Reagan and the States*, the proceedings of the 1993 Architectural Research Centers Consortium Conference, and the 1993 National Conference on Teaching the Beginning Design Student, among other places.

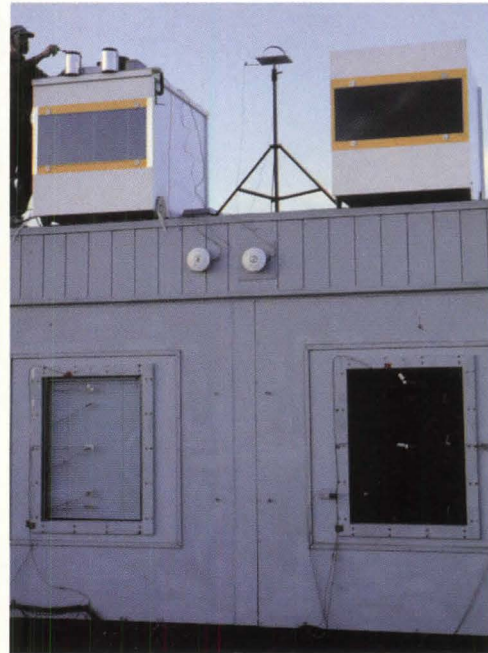
Lawrence Berkeley National Laboratory

Daylighting With Integrated Envelope and Lighting Systems

award



Light redirection demonstration



Dual-chamber calorimeter test

In this ambitious and comprehensive effort, researchers from Lawrence Berkeley National Laboratory in Berkeley, California, investigated and presented a method for combining window and lighting systems as an integrated whole. Their goal: increased energy savings and healthier work environments. This five-year, \$1.5 million research effort produced a series of methodically produced reports on combined lighting systems, several built demonstrations of effective prototypes, and a guidebook for designers to follow.

The researchers recognized that several barriers stand in the way of effective daylighting: balancing window cooling loads with required illumination levels; a lack of innovative daylighting technologies that are energy efficient and can be applied to a variety of projects; and the necessary involvement of a variety of disciplines—architecture, lighting design, and mechanical system design—in each project. To improve daylighting's potential, the team designed a variety of solutions, including an automated venetian blind system that operates in conjunction with a light dimmer to balance daylighting with man-made light; prototype lightshelves, light pipes, and skylights that expand daylighted areas and improve the consistency of light levels throughout a room; and a "how-to" guide that recommends design solutions as well as hardware and software improvements to conventional daylighting. They also addressed the design and construction process by arguing—based on real-life experience—that the building process can accommodate integrated daylighting design through the dissemination of standards for evaluating new daylighting products.

PRINCIPAL

RESEARCHERS/AUTHORS:

Stephen E. Selkowitz (principal), Eleanor S. Lee (project manager), Liliana Beltrán, Robert Clear, Dennis DiBartolomeo, Joseph Klems, Francis Rubinstein, Robert Sullivan, Edward Vine (support)

CLIENT/FUNDING SOURCE:

California Institute for Energy Efficiency; U.S. Department of Energy; Pacific Gas and Electric; Southern California Edison; U.S. General Services Administration

Berkchilo: They tackled the integration of technology and design so that design is more elegant. In this case, they looked at the window not just as access to light but as an alternative to electricity and

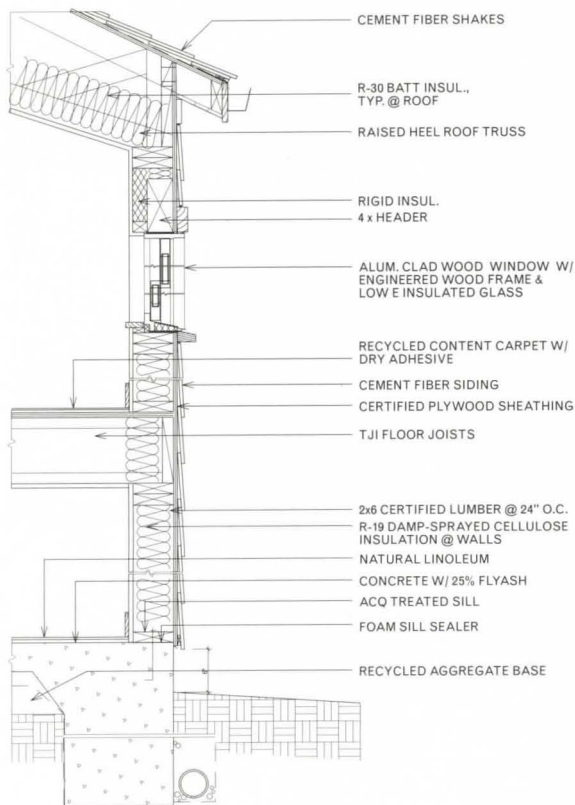
White: This project is excellent research involving a high degree of systems.

Eribes: This is an excellent example of applied research in which the results are greater than the sum of the individual components because of an integration of scientific knowledge—a real

Siegel & Strain Architects

Emeryville Resourceful Building Project

award



Typical section



Perspective view

Researchers from Siegel & Strain Architects in Emeryville, California, proved that affordable housing and environmental sustainability are not mutually exclusive goals—even in homes for first-time buyers. Their three-year project, budgeted at \$547,000, focused on increasing energy efficiency, lowering operating costs, reducing resource consumption, creating healthy indoor environments in new homes, and encouraging builders to meet these criteria. The program resulted in a newly constructed three-unit house in Emeryville that proved the feasibility of such efforts.

Addressing disciplines that range from design to life-cycle assessment to energy analysis, and conducting research in the office as well as at the construction site, the team discovered that the cumulative effect of small environmental improvements combined with selected cost-saving measures can generate significant results. Findings include: Optimizing structural design reduced wood consumption by 19 percent; optimizing wall assemblies reduced fuels used in material production by 37 percent; cement-fiber siding lasts 30 years longer than standard wood-compost siding; and energy efficiency measures, such as shading windows to keep interiors cool, save homeowners \$200 per year in operating costs and reduce carbon dioxide emissions by 22 percent. The research relied on measurable and quantifiable data on environmental and cost impacts, and, the researchers argue, it proves that careful selection and installation of mainstream materials can result in cost-effective "green" buildings on all economic levels.

PRINCIPAL RESEARCHERS/AUTHORS:

Larry Strain, Henry Siegel (principals-in-charge), Nancy Malone (research architect), Jacqueline Lange (project architect); Davis Energy Group (energy analysis and mechanical engineering); Boustead Consulting and Associates (life-cycle assessment); Baker Pre-Construction (cost estimating); Juri Komendant (structural design)

CLIENT/FUNDING SOURCE:

Emeryville Redevelopment Agency, Alameda County Waste Management Authority

White: This project addresses affordable housing reaching for sustainability. It is courageously broad in integrating sustainability issues that normally are not addressed in affordable housing, which usually comes down to issues of budget and space.

Berkobill: I liked that they didn't accept the usual approach to affordable housing, which is, 'This is a tough problem, we have a limited budget, so drop all the environmental issues. We can't afford that stuff.'

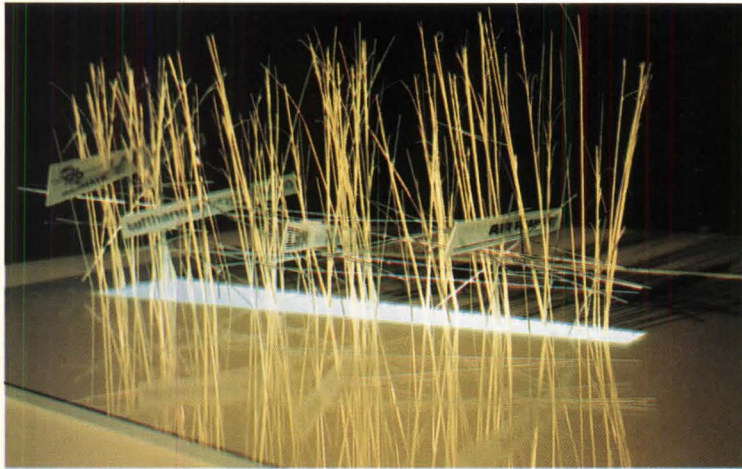
They enlarged the definition of quality in affordable housing. They establish a methodology for evaluating the design of environmentally sound and affordable housing.

Eribes: The project addresses a difficult problem in a systematic and innovative way: Examining seemingly disparate factors produces a comprehensive and integrated set of findings that can have a positive impact on both people and the environment.

The University of California, San Diego and the Chinese University of Hong Kong

An Alternative Light Source for Architectural Spaces

award



Model of Gateway demonstration project



Aerial view of Gateway model

In a collaborative effort that stretched from Southern California to Hong Kong, a team of university researchers—operating within a meager \$9,000 budget—developed an innovative and potentially groundbreaking new lighting application for a newly discovered material: silicate phosphors. The silicate phosphors, which come in powder, granular, and liquid form, are compounds that contain silicon, oxygen, and carbon and radiate a bright white light when heated or excited with ultraviolet light. Noting that the mercury and other metal-based phosphors typically used in fluorescent lighting are expensive and toxic when disposed of, the research team sought an inexpensive, nontoxic alternative that was also more energy efficient. They found it in the silicate phosphors, which were discovered by coinvestigator Michael J. Sailor from the University of California, San Diego (UCSD).

To test their proposals, the chemists and architects from both UCSD and the Chinese University of Hong Kong, led by architect Steven Lombardi, developed a prototype—a decorative entry marker, called Gateway, for the Hong Kong airport that combines light with bamboo sculpture—and experimented with different chemical ingredients to make the silicate phosphors brighter and more stable. The researchers discovered that adding aluminum to the ingredients generated the most efficient light and held the greatest promise for brightness and chemical stability. Silicate phosphors could be employed in everything from task lighting to general building lighting. The researchers are now conducting a second phase of research in which they refine their system and test its feasibility for commercial production.

Silicate phosphors



PRINCIPAL

RESEARCHERS/AUTHORS:

Steven Lombardi, associate professor of architecture, Chinese University of Hong Kong; Micheal J. Sailor, professor of chemistry, University of California, San Diego (principal researchers); Laurent Gutierrez, Valerie Portefaix, Chinese University of Hong Kong; Michael Ansel, Will H. Green, Khoa P. Le, University of California, San Diego (support)

CLIENT/FUNDING SOURCE:

The Chinese University of Hong Kong; the University of California, San Diego

Borkobilo: They tackled the integration of technology and design so that design is more elegant. In this case, they looked at the window not just as access to light but as an alternative to electricity and temperature control.

Eribos: This is an excellent example of applied research in which the results are greater than the sum of the individual components because of an integration of scientific knowledge—a real model of what architecture can bring to the table.

White: This project is excellent research involving a high degree of systems integration. It had a remarkably clear presentation of complex issues. This project showed great

finesse with technology—lighting—that has made architects irresponsible. This type of comprehensive study can change that.

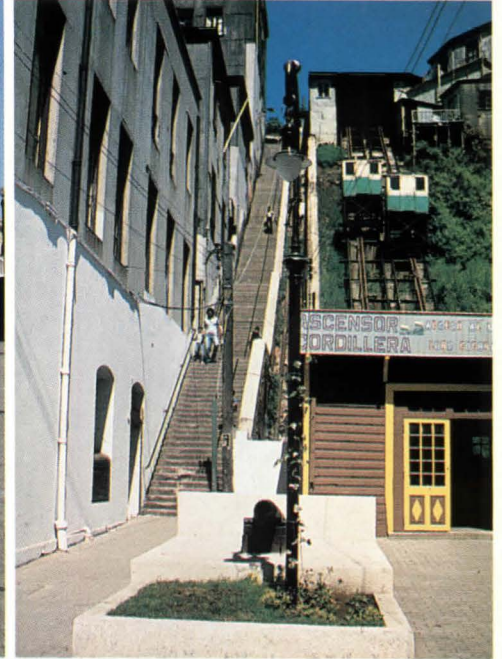
René Davids

The Hillside Elevators of Valparaíso, Chile: Neighborhood Transportation as a Generator of Urban Form

citation



Ascensor Baron



Ascensor Cordillera

With its dramatic topography, which features an abrupt, city-dividing elevation change of several hundred feet, Valparaíso, Chile, is one of the most distinctive urban environments in South America. But the city's solution to this challenge—15 pedestrian elevators constructed at the turn of the century—makes it one of the most interesting models of urban growth anywhere. In this \$25,000 effort, René Davids studied the development that followed the construction of the elevators—several of which still ferry residents up and down the town's perilous precipices—as well as the relationship between technology and urbanism in the early 20th century.

The researcher discovered that topographical features in Valparaíso affected social and functional relationships, and the elevators, or *ascensores*, marked the transition from lower to upper city—or the world of work and commerce to the world of family and neighborhoods. Furthermore, the expansion of Valparaíso into the coastal mountains created an unusual urban layout as well as an exception to the rule in most Latin American cities that land ownership and development of services and infrastructure is controlled by class. Specifically, while settlement on many of Valparaíso's hills was indeed segregated by income level and class, people of diverse backgrounds appropriated different areas according to their own interests and resources. City dwellers divided into specialized transportation paths and community relationships, but the problems of group isolation common to many metropolitan centers did not materialize. City life focused on the urban center surrounding the port, but the elevators created local neighborhood subcenters where residents generated their own clearly defined sense of community.

PRINCIPAL

RESEARCHERS/AUTHORS:

René Davids (principal researcher), Nina Hormazábal, Christine Killory (assistant researchers)

CLIENT/FUNDING SOURCE:

René Davids; Committee of Research, University of California, Berkeley

Borkhilo: There are a lot of lessons that serve us well today when we reconsider the transportation systems in the United States. This project went beyond even that to look at racial and gender divisions that were a part of those decisions and choices for technology

Eribos: This is an elegant project whose impact is more theory-building than theory-testing. By juxtaposing technology and city design, it offers a new theoretical position that could have a major impact in urban design.

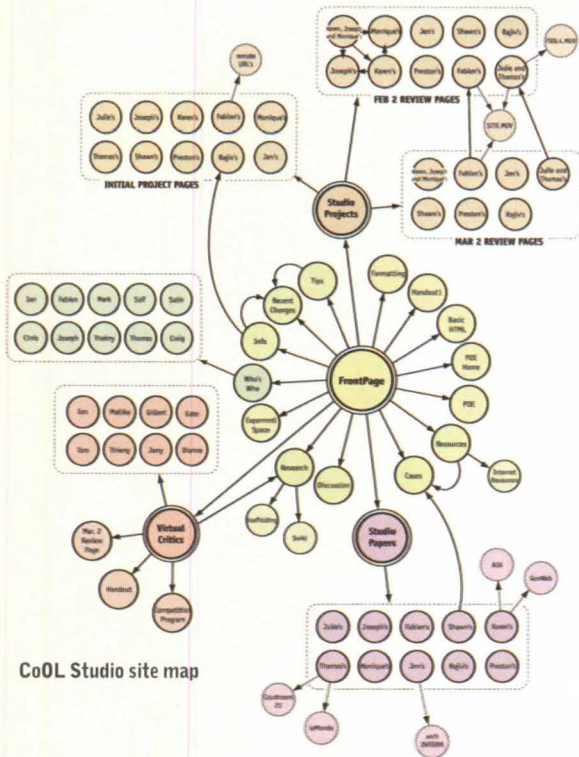
This project is refreshing and provocative in its expansion of the three dimensional conceptualization of cities.

Whito: The research they've done here documents and celebrates technology at the turn of the 19th century that is a precursor to the metro stations of our present culture. It is very well done.

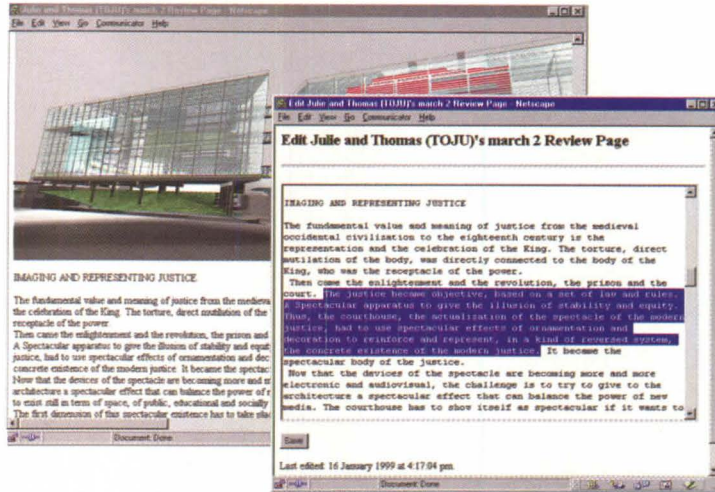
Georgia Institute of Technology

CoOL Studio: Expanding the Discursive Space of the Design Studio With Educational Technology

citation



CoOL Studio site map



Project proposal and comments

Researchers at the Georgia Institute of Technology are attempting to make design studios more collaborative—both geographically and within schools themselves. In this project, the team, led by professors Sabir Khan and Craig Zimring of GeorgiaTech's College of Architecture and Professor Mark Guzdiel of the College of Computing, created a new, Internet-based studio environment that allows for discussion of projects and

critiques by often geographically distant participants. The \$18,000, six-month project, which culminated in June 1998, produced a new teaching model as well as a specially designed, user-friendly, and collaborative software package that its creators think will increase input from a greater variety of students and experts, improve communication between architects and their clients and critics, and generate an accessible archive of the design process.

The researchers created the system as a collection of Internet "rooms" in which students post their projects and then solicit and monitor feedback. To develop the pilot studio, the instructors had the students, all with varying degrees of computer expertise, address the same problem: the design of a federal courthouse for an international student design competition. They posted their plans on their Web pages, accessed resources on courtroom design, and communicated with their instructors and critics via Internet postings. Eight distant critics, which researchers chose for their experience in courthouse design and their varying computer skills, reviewed the projects and commented on-line. Throughout the process, the participants discussed the nature of on-line interaction, the effectiveness of the program, and the quality of the evaluation. The participants also helped improve the design of the program by criticizing it and suggesting changes as they tested it—just as they would for the design projects themselves.

- PRINCIPAL RESEARCHERS/AUTHORS:**
 Sabir Khan, Craig Zimring, Georgia Institute of Technology College of Architecture, Mark Guzdiel, Georgia Institute of Technology College of Computing (principal researchers), David Craig, Saif-ul-Haq, Sharon Tsepas (assistants), Jens Brinkmann, Julie Fernandez, Fabian Gantois, Preston Johnson, Monique Livey, Karen Mahoney, Joseph E. Minatta, Thomas Saint-Guillan, Shawn Turanchik, Rajiv Wanasundera (students), Ian Bader, Mallika Bose, Gilbert Delgatto, Gate Lew, Tom Phifer, Thierry Rosenheck, Jerry Thacker, Dianne Walters (critics)
- CLIENT/FUNDING SOURCE:**
 University System of Georgia Board of Regents

Erihes: On the one hand, it is an example of numerous efforts currently taking place in architectural programs across the country. But it is much more than ordinary in its clarity of purpose and

methodological rigor. In this regard, it is outstanding. It establishes a benchmark against which the rest of us can compare, contrast, and assess our own efforts.

Berkbile: It's important that they are transforming the traditional design studio from an individual creative act—student under tutelage of professor—to a more collaborative process that connects, in a virtual studio, both critics

White: It was a well-executed documentary of the electronic studio of the present and the future. It is a commendably collaborative effort that I think will advance discussion of the architectural system, in that it has broad implications for

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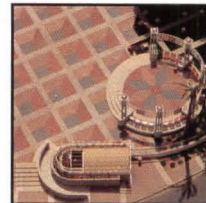
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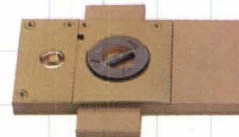
Cast bronze bottom arm

+



Cast bronze semi-automatic hold open device

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Cast bronze floor box

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Cast bronze door roller guide

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Cast bronze door bottom pivot

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Cast bronze top arm

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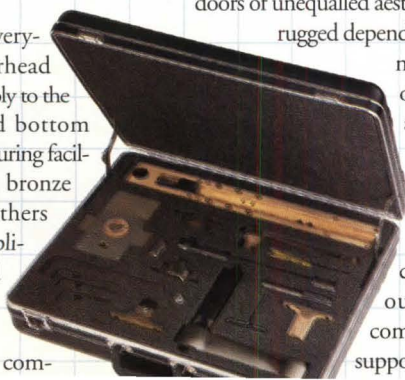
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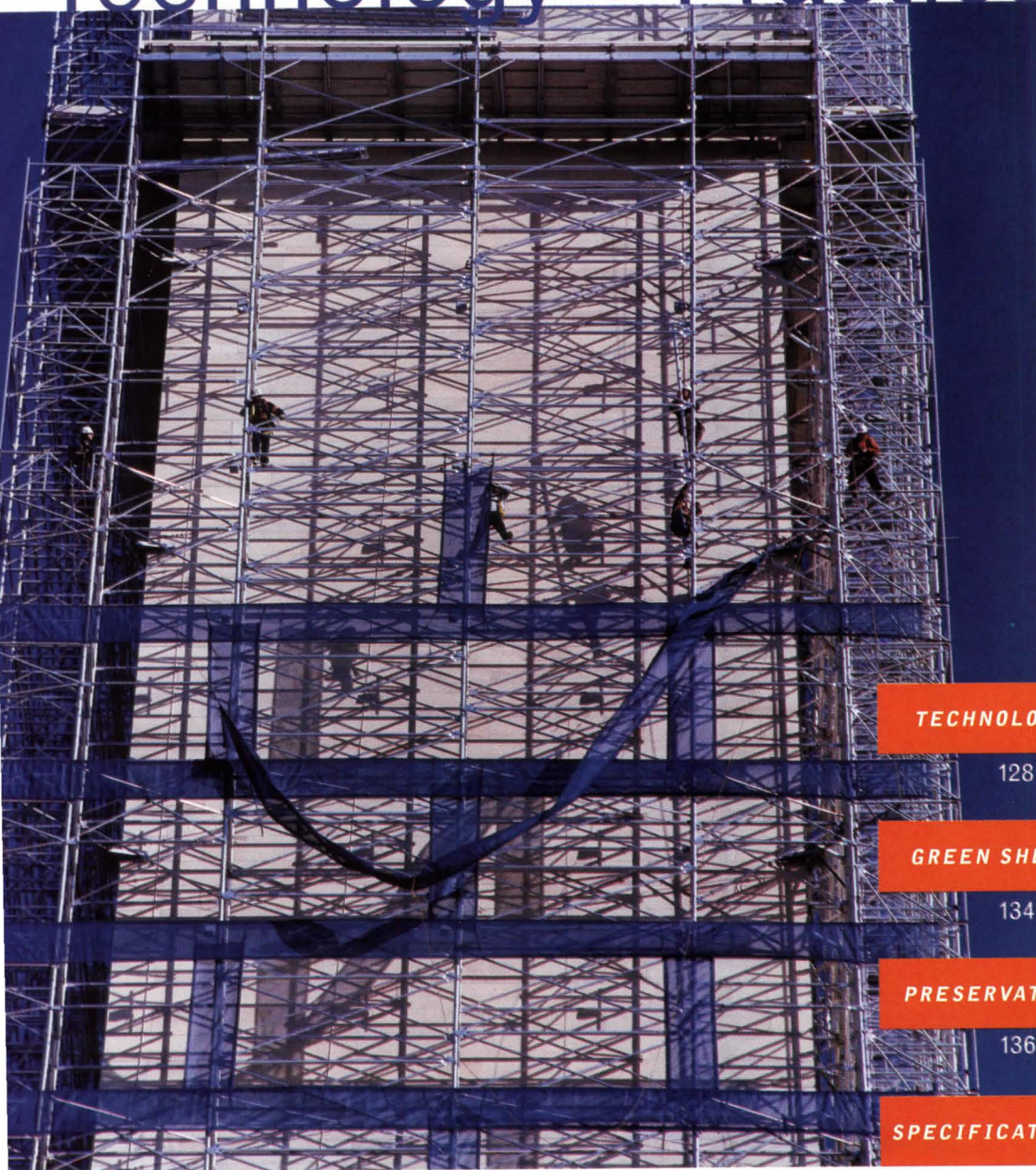
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Workers install Michael Graves-designed decorative mesh over scaffolding at Washington Monument.

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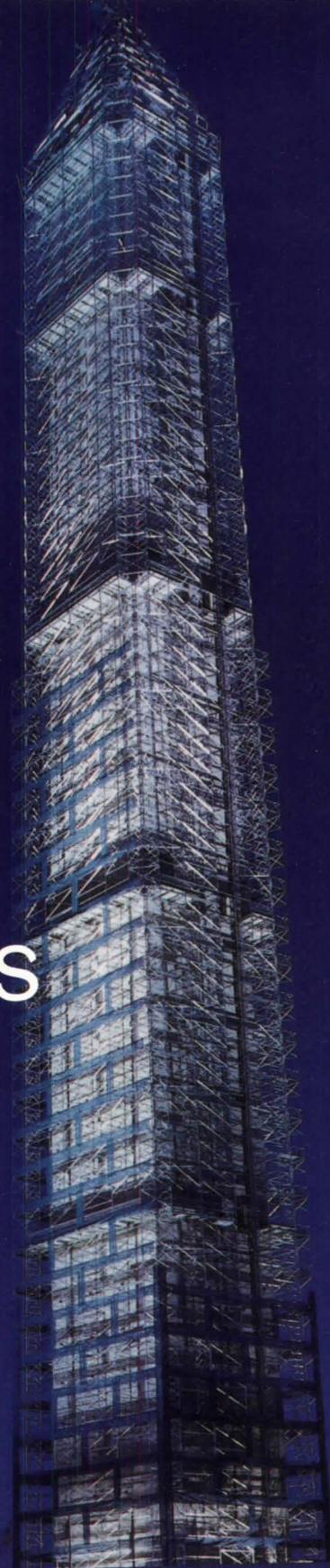
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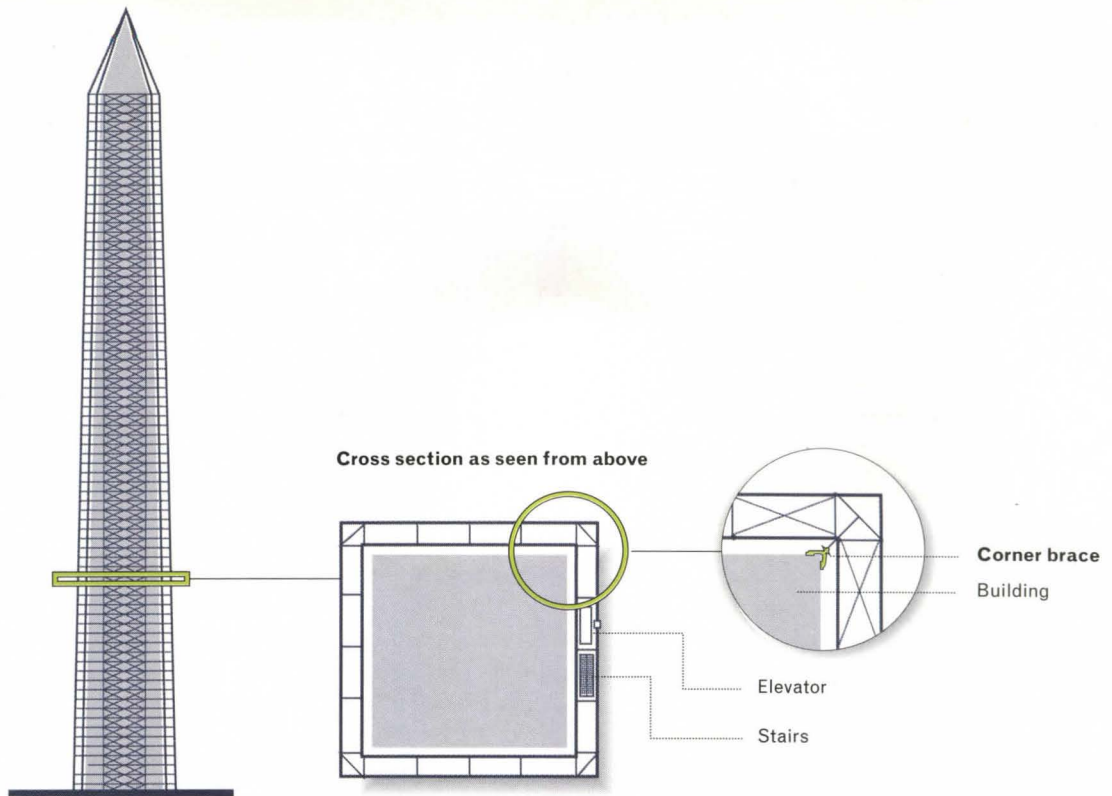
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Monumental Achievements



Scaffolding now encasing 555-foot-tall **Washington Monument** (facing page) never penetrates structure. Instead, foam-padded, V-shaped corner braces hug monument's exterior (right). Architect Michael Graves designed blue mesh fabric (visible in photograph) that emulates stone pattern.



Advances in scaffold design and technology help architects get their work done and owners keep their buildings open. [By James Parsons](#)

The sight of an historic structure enveloped in scaffolding ordinarily stirs few emotions other than annoyance. But in the nation's capital, scaffolding has taken on a life of its own. As part of the 115-year-old Washington Monument's \$5 million restoration program, one of the country's most enduring symbols sits wrapped in a cocoon of aluminum tubing that matches the 555-foot-tall obelisk's gentle slope, right up to the scaffold's aluminum-capped pinnacle. Concealed by wide sheaths of blue mesh fabric that emulate the stone pattern of the monument's exterior, workers will spend the next 18 months carefully cleaning the huge blocks of marble, repairing cracks and mortar joints, and taking other measures to ensure the integrity of the world's tallest free-standing masonry structure.

The scaffolding system represents more than an innovative way to turn an otherwise mundane component of the construction process into a prominent curiosity. Alan Shalders, chief engineer of the Mt. Vernon, New York-based scaffold contractor Universal Builders Supply (UBS), says the system is just the latest example of how scaffolding is helping to untangle the growing complexity of restoration and maintenance projects. "Many historic structures are more than museum pieces; they're active facilities that serve an important function within

the community," says Shalders, who designed the Washington Monument scaffolding with architect Michael Graves and structural engineering consultant James Madison Cutts. "When construction work is needed, architects and contractors must frequently balance worker efficiency and public safety with the owner's desire to keep the facility operational."

While steel systems are still the most economical and widely available type of scaffolding, the advent of high-capacity aluminum components has given designers added flexibility. Aluminum, though more expensive, doesn't rust, handles larger vertical and horizontal loads, occupies less space, and better accommodates unusual shapes. "It takes more aluminum to support a given load than steel," Shalders explains. "The difference is that aluminum is only one-third the weight of steel. So although more is needed, there is greater flexibility for unique structures."

The Washington Monument scaffolding system provides a uniform working area from top to bottom, and houses a heavy-duty personnel and supply hoist. Furthermore, he adds, its light weight allowed for quick assembly. "We erected the scaffolding in just nine weeks," Shalders notes. "We expect disassembly to go just as smoothly, even after being exposed to the elements for nearly two years."

Loren Rapp, general manager for restoration contractor Grunley-Walsh Joint Venture of Rockville, Maryland, says the scaffolding's artistic form had to accommodate a number of functional considerations. "Schedules and deadlines are always a consideration when you're doing extensive cleaning and masonry work such as this," he explains. "We needed a freestanding system that could accommodate quick and easy transport of materials from the staging areas, as well as extensive power, water supply, and drainage needs."

That's a lot of activity to support within a 565-foot aluminum cage, especially when the monument itself cannot bear the weight of the scaffolding—the system could only lean against the corners of the historic monument, as per National Park Service restrictions. UBS's Shalders and Project Engineer John O'Conner developed a 2½-foot-long, V-shaped corner brace with foam isolator pads that allows the scaffolding to hug the monument without placing additional weight on the structure. What's more, tourists will still be able to enjoy the spectacular panorama of the city from the monument's interior observation deck while the extensive restoration work is in progress.

Stability and mobility

Along with strength, aluminum also offers the advantage of portability. Aluminum's lack of weight allows large work platforms to be bridged between mobile towers and mechanically moved to the desired work location—all without interfering with ground-level activities. "Why erect a huge scaffolding system when we only have a small number of workers, or invest time and effort in constantly dismantling and reassembling the system?" Shalders says. "Instead, we can move the smaller system to wherever restoration workers need to be, and leave the remainder of the facility open for business."

At New York's Grand Central terminal, restoring the intricate mural on the station's barrel vault ceiling without getting in the way of a half million daily commuters

The scaffolding provided a stable, comfortable work environment for the restoration experts 100 feet above the terminal's busy floor. "The mobile scaffolding provided a grand solution to our problem," says Rhodes.

Skidmore, Owings & Merrill, working with Grunley Construction, used a similar approach to renovate the ceiling of Dulles Airport's main concourse without stalling the commuters and airport personnel who pass through Eero Saarinen's famed 1962 terminal every day. The 168-by-160-foot platform, also designed by UBS, consisted of two independent 80-foot platforms erected on custom-built dollies, which were elevated to the proper level and rolled on rails to each swath of ceiling that needed attention. Atop the platform were full clean room facilities for the asbestos remediation work, flexible piping for utility connects, and extensive work space to facilitate upgrades of the building's HVAC, fire protection, and security systems. Since the majority of the renovation activity took place during the terminal's off-hours, the scaffolding and equipment could be stored in place, leaving pedestrian traffic unimpaired.

New tricks for familiar materials

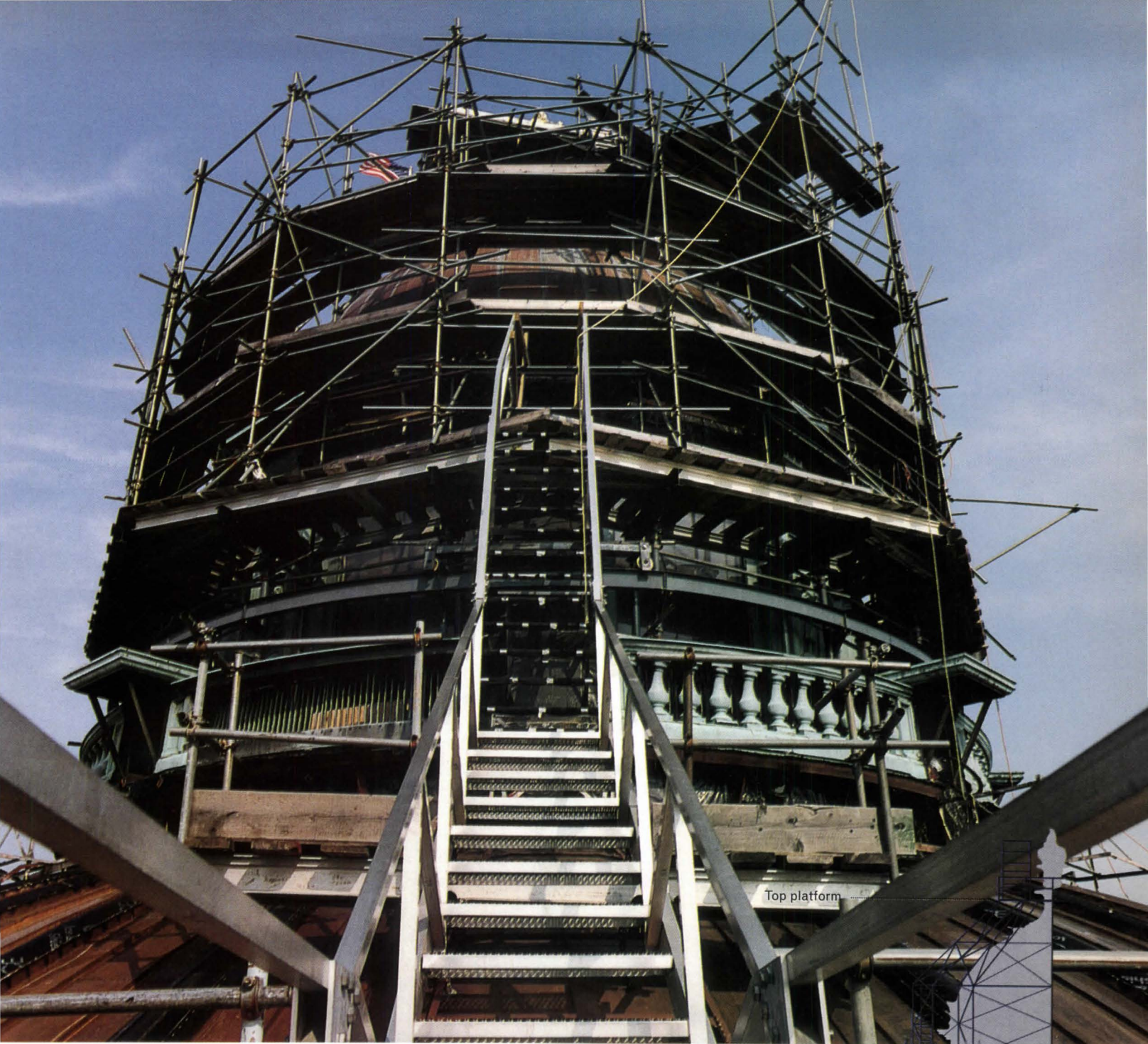
While aluminum is making many inroads in restoration and maintenance projects, there are still plenty of applications for steel. "Steel scaffolding has the advantage of being less expensive and available in every supplier's inventory," says Mike White, chief engineer at the St. Louis headquarters of Brand Scaffold Services. But even steel has changed with the times. "Newer modularized steel scaffolding, like new aluminum systems, snaps together just like an erector set, saving both time and manpower," White says. "We're also seeing steel systems augmented with fiberglass, wood, and aluminum elements that reduce the overall weight and stand up better under harsh weather conditions. And, of course, CAD systems help us create the best scaffolding system—whether steel or aluminum—for each job."

Aluminum's lack of weight allows large work platforms to be bridged between mobile towers and mechanically moved to the desired work location.

was the challenge. "We concluded that the system of suspended steel rods and cables used in the 1945 renovation just wasn't appropriate or cost effective for this project," said architect James Rhodes, director of historic preservation for Beyer Blinder Belle (BBB), the project architect. "It would have placed an excessive load on the ceiling truss supports and limited our ability to return to areas that needed additional work."

UBS developed a 12-ton arched aluminum truss with a

These and other factors have helped architects and contractors find innovative applications for traditional scaffolding materials, as they did for the restoration of Chicago's historic Old Water Tower, designed as a lighthouse in 1867 by architect William Boyington. One of the few survivors of the great 1871 fire, the venerable Gothic Revival landmark overlooks one of the city's most prominent intersections. The challenge for project architect Bauerlatoza Studio was to clean and restore the distinc-



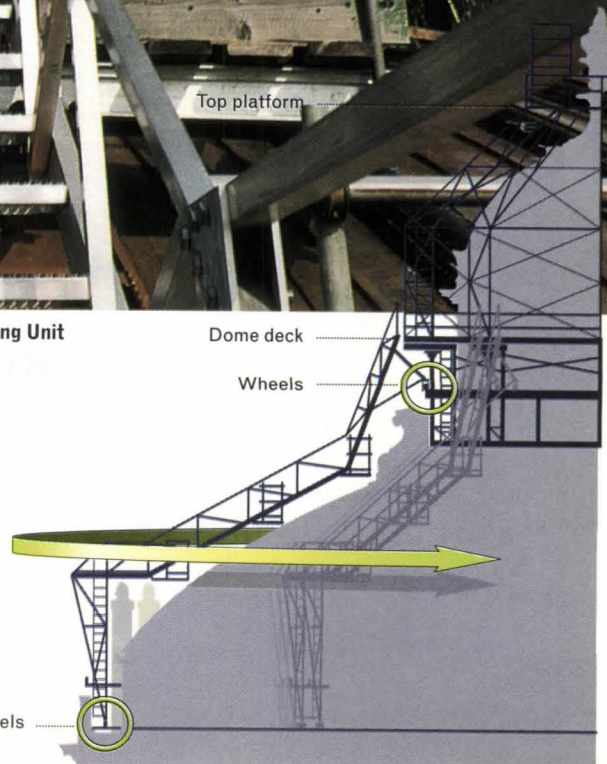
Universal Builders Supply (UBS) created rolling scaffold that swiveled around domed roof of **Library of Congress in Washington, D.C.** (above), during renovation that culminated last year. System facilitated repairs to roof and minimized weight placed on structure.

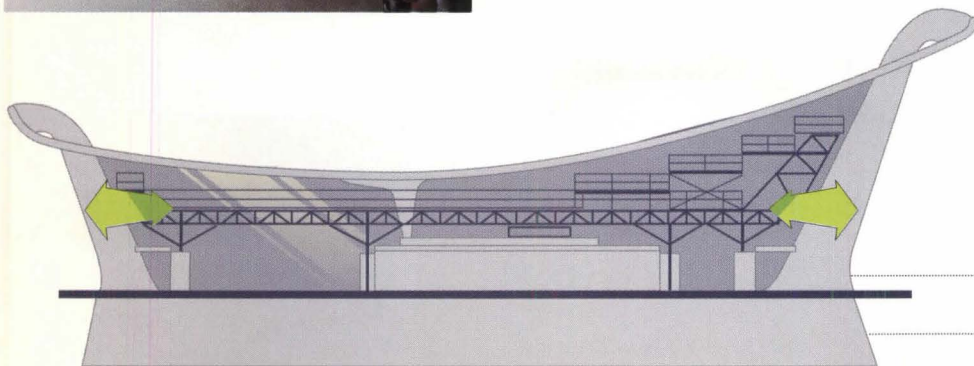
Rolling Unit

Dome deck

Wheels

Wheels





UBS placed scaffolding on rails to help with renovations to **Eero Saarinen's 1962 Dulles Airport terminal**. Rolling platform (above and left), which measured 168-by-160 feet, enabled crews to repair roof and store equipment overnight without disrupting activity below. **Scaffolding rolled through length of terminal** on four rails (below left).

Main floor

Ground floor

With the increasing versatility of today's scaffolding systems, architects and builders can save considerable time and money.

cleaning the limestone, then find rust stains left by the scaffolding," says architect Bill Latoza. "And given the high-profile location, the city was naturally concerned about the work site's appearance."

Brand's answer was to coat the scaffolding components with silver zinc-rich paint, which took care of the rust threat and earned valuable public relations points. "The scaffolding looked brand new, which enhanced the positive image of the restoration," notes Latoza.

The scaffolding supported a welded wire fabric grid system of 300 nozzles, which misted the limestone with both a water repellent and a consolidant to retard scaling, at two-minute intervals, eight hours a day. Latoza says the approach helped preserve the limestone's distinctive color and eliminated the risk of spraying pedestrians and vehicles on Michigan Avenue with harmful chemicals. "We never had to close the sidewalk, which was just 3 feet away," Latoza says. "That's a good track record considering that 30,000 people walk by the water tower every day."

To expedite work on the 200-foot tower, the project team removed the cupola's eight windows and erected outriggers that supported two 180-degree independent swing scaffolding lift units. Connected to each other inside the tower, the outriggers also supported rigid scaffolding for performing the detailed reconstruction of the copper cupola. "Essentially, the swing scaffolding was the same type of system that's been utilized for years," says White. "I think that as an industry, we're becoming more creative about how to adapt available technology."

Solving project hang-ups

Few projects could offer a more daunting test for suspended scaffolding than the repainting of Seattle's famed Space Needle, which is currently under way. The 605-foot tower's unique design posed a number of challenges for contractor Certified Coatings of Concord, California. The three elevators that run the length of the Needle's center core would remain operational throughout the 15-month project. Then there were containment issues—workers and the public had to be shielded from the layers of lead-based paint that the contractor would scrape off the Needle's legs, while they needed to protect the new coating from rain and humidity so it would dry properly.

"We decided to take a multiple approach to the Space Needle that offered the best combination of efficiency and containment strength," explains Scott Soldis, scaffold and containment division manager for Certified Coatings. Soldis designed a modular steel scaffolding from the ground to the 200-foot level for the Needle's center core. For the legs, engineer John Wright developed a "stacked

ring" containment structure, which consists of oval 3 1/2-inch-diameter aluminum rings spaced 10 feet apart. The rings are assembled as two 12-foot diameter half-circles, and two 21-foot straight sections. High-strength, silicone-coated nylon sheets seal the containment area.

Above the 200-foot level, Certified Coatings suspended a hexagonal platform from the underpan of the tower's saucer section. The platform assisted in the erection of modular steel scaffolding that completely encircled the tower legs and core. To protect the contained scaffold structure from twisting under the load of Seattle's famed high winds, Wright developed an innovative cabling system that functioned much the same way as a bicycle wheel. With the Needle's center core acting as a hub, the cable "spokes" provided stability under the harshest of conditions. "The University of Washington suggested that we design the scaffolding to accommodate 88 mile-per-hour winds, and they were right," says Certified Coatings Engineer John Wright. "But even with that kind of force, the scaffolding held up well."

"This approach enabled us to leave a 3-inch gap between the scaffolding and the elevators," Soldis says. "We were also able to conform the scaffolding to the shape of the Space Needle. From a distance, it was hard to tell that there was any scaffolding at all." He adds that the real "star" of the project was the heavy-duty suspended modular truss platform, made by Beeche Systems. "That platform made a big difference in the assembly process," he says. "We needed only four or five workers to get everything erected overnight."

When the repainting effort moves to the Needle's saucer section, Certified Coatings will employ another suspended platform that will operate from a curved track to be installed on the top of the structure. "The versatility of these suspended systems has made a big difference in our ability to do high-altitude projects," says Soldis. "They're easy to assemble and operate, and can handle a lot of weight. But most importantly, they save us and our clients a lot of time and expense."

Saving time and money are key considerations in almost every renovation project. And with the increasing versatility of today's scaffolding systems, architects and builders have more options to achieve those goals. "Thanks to these developments, we now keep an open mind when evaluating scaffolding requirements," says Brand Scaffolding's Mike White, "and we very seldom have to walk away from any kind of project." ■

Manassas, Virginia-based James Parsons writes frequently about building technology.

Steel recycling saves enough energy
Wood products make up 47 percent
the households in the United States
manufactured in the United States,
for one year. A typical 2,000-square-
SOURCE: STEEL RECYCLING INSTITUTE
energy needed to manufacture these
50 trees, while a steel-framed house
more energy is required to produce a

Wood vs. Steel: Two industries scuffle in a public

Last year contractors built approximately 2.1 million residential units in the United States and Canada. At an average 1,810 square feet per unit, that's over 3.5 billion square feet and a lot of posts, beams, and studs. Not surprisingly, the steel stud industry is eager to get in on this lucrative game and has set a goal of a 25 percent market share for light gauge steel framing by 2002, according to the American Iron and Steel Institute (AISI). Historically, lumber has been the residential framing material of choice, and the timber industry is pretty unlikely to hand over a quarter of its market share voluntarily. As the steel industry deploys its public relations machine to convince architects and builders that steel is greener, cheaper, and stronger than wood, the timber industry is working hard to prove the opposite. But nowhere is the battle being waged more fiercely than over claims of environmental superiority.

The steel industry insists that timber industry practices lead to deforestation. Moreover, steel promoters claim that the disappearance of old-growth trees, widely considered the superior grade for construction, has caused lumber prices to soar and quality to drop. The timber industry rebuts these allegations with data that evidences that the United States has about the same amount of forest land that it did in

Both arguments are true at face value, but both are tainted by the absence of some important qualifiers. The trees that are harvested now are of lesser quality than the timber of several decades ago. In the 1930s, most lumber came from trees 4 feet in diameter. Today, the average diameter is about 12 to 14 inches. By contrast, steel studs don't warp, twist, or shrink; they're lightweight and precisely cut. They're resistant to decay, mildew, termites, and don't require pesticides or resin adhesives. However, as several timber industry advocates are quick to point out, it takes nine times more energy to produce a light-gauge steel stud than it does a wood stud. True again, but The Steel Alliance counters that energy requirements for steel production have been reduced by 34 percent since 1972, and, furthermore, steel does not degrade as wood fibers do and is completely recyclable, so energy consumption can be amortized over a much longer period.

The Steel Alliance insists that clearcutting and logging roads cause erosion and adversely affect wildlife. Apparently conceding this claim, the timber industry has supported several certification initiatives to ensure that commercial forests are responsibly maintained. The Forest Stewardship Council (FSC)—a nonprofit organization with members from both the timber and steel industries—has developed a framework for

to power about one-fifth of all
of all industrial raw materials
(or about 18 million homes)
yet consume just 4 percent of the
foot house requires about 40 to
industrial materials. Nine times
can be made from six recycled cars.
steel stud as a wood stud.

SOURCE: APA-THE ENGINEERED WOOD ASSOCIATION

SOURCE: THE STEEL ALLIANCE

SOURCE: SOUTHERN FOREST PRODUCTS ASSOCIATION

relations battle for green bragging rights. **By Sara Hart**

investigation, forest product label claims of sustainability and has designated other third-party programs, such as SmartWood and Scientific Certification Systems (SCS), to certify forest management operations.

Nadav Malin, editor of Brattleboro, Vermont-based *Environmental Building News*, has been following this controversy for years and agrees that the issues are more complicated than the sound bites suggest. "Statistics about growth exceeding harvest are misleading. The numbers include growth in all forests, even those not managed for commercial use. In fact, replanting where there has been actual harvesting does not exceed the harvesting in all situations," he says. "On the other hand, the high percentages cited for steel recycling include the tons that are exported and never even reused in the United States, as well as those scraps that never leave the factory."

Thermal bridging, the transfer of heat and cold through a structure, is the one area of debate that relates to both material properties and construction methods. Wood is a natural barrier against heat and cold and requires insulation only between the studs. In contrast, a 20-gauge steel stud conducts 10 times more heat than a wood 2 by 4 when used for exterior walls. To solve this thorny problem, the steel industry has gone beyond simply specifying more insulation to researching new framing systems that would move steel away from being a direct substitute for

wood. In the meantime, builders are realizing that they can space steel studs farther apart or use smaller members and thus reduce the material consumption as well as the thermal bridging.

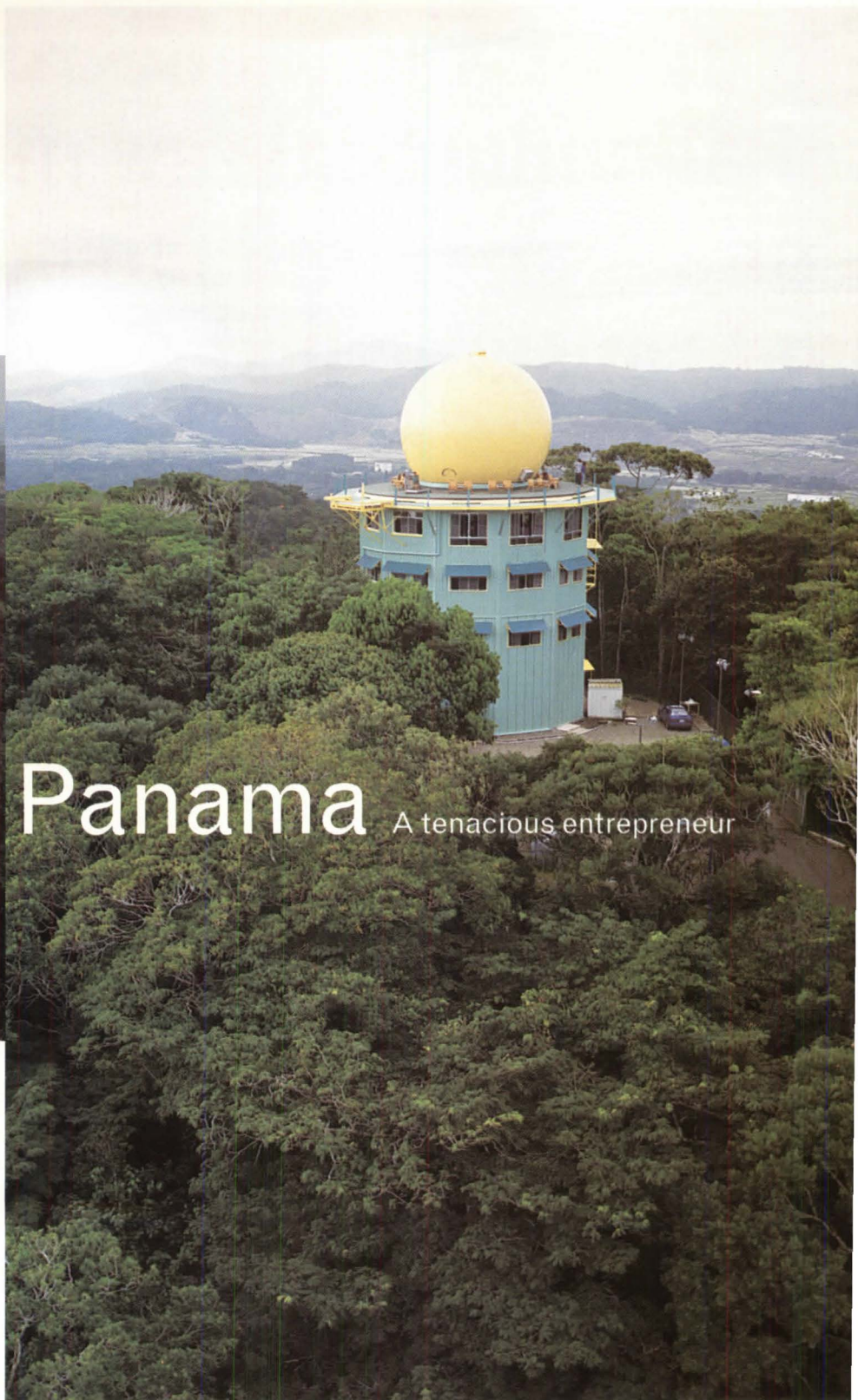
Steel manufacturing's investigation of new techniques suggests that the industry is moving away from a point-counterpoint exchange with the timber advocates. Likewise, wood manufacturers are perfecting engineered wood products, such as plywood, glue-laminated beams, veneer on composite cores, and oriented strand board that are stronger, use less wood, and create less waste. Still, every manufacturing process uses energy and has an impact on the environment. So the question remains: wood or steel? The answer, fortunately, is not formulaic. It depends. It no longer makes sense to choose a material based on its chemistry alone. Sustainable building is achieved with integrated building systems—heating and cooling respond to lighting and occupancy, for example. The burden is on architects and builders to weigh not only one material against another but to consider all the materials as part of a whole, and it's the whole that must remain sustainable throughout the entire life cycle of the building. Finally, buyer beware. Competition among manufacturers has prompted many to exaggerate the "greenness" of their own products, while distorting the claims of their competitors. Alas, the truth is often in the landfill. ■

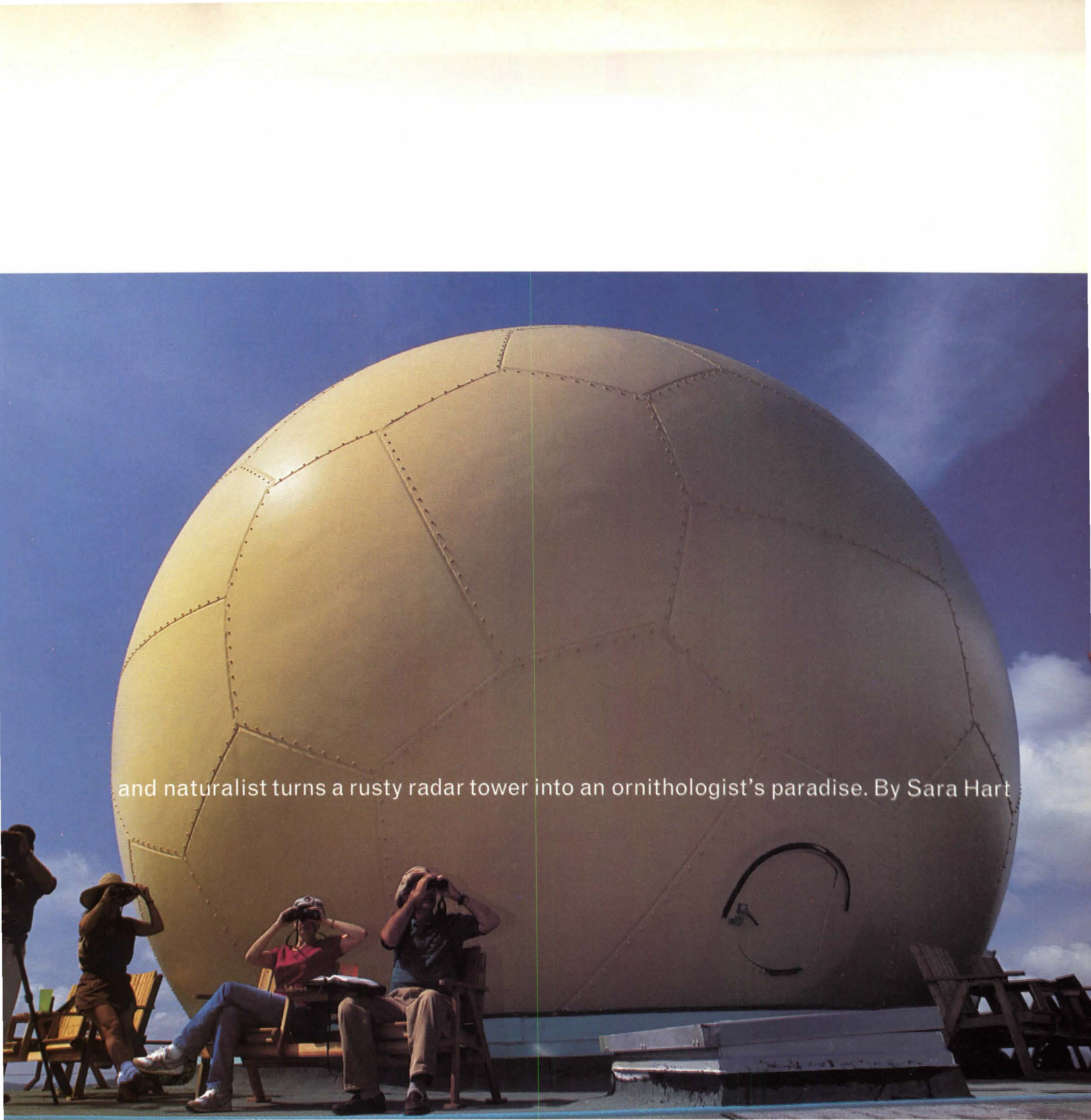
PRESERVATION

Birdman of Panama

A tenacious entrepreneur

Canopy Tower, 900 feet above sea level in Soberania National Park, Panama (above), provides guests with rare opportunity to observe and study as many as 380 species of birds (facing page). Container ships and cruise liners in distance pass through Panama Canal locks (above right).





and naturalist turns a rusty radar tower into an ornithologist's paradise. By Sara Hart

First, do no harm. This was Raul Arias de Para's credo when he began transforming an abandoned radar tower in a lush jungle in Panama into a comfortable ecolodge for ornithologists and naturalists. Owner of Divertimento Ecologico, a successful Panamanian tourism company, Arias de Para is also a dedicated conservationist and an avid promoter of what is often called ecotourism: economic and land development for the tourist industry that

is compatible with conservation. The Canopy Tower, as it's now called, is 50 feet tall and situated on a promontory 900 feet above sea level in the semideciduous rain forest of Soberania National Park, 30 minutes from Panama City. From the roof terrace that circles the 30-foot-diameter, geotangent dome, visitors have contrasting views. In the distance, container ships and ocean liners rise and fall as they pass through the canal locks. But within a few yards and at eye level, toucans, harpy eagles, macaws, parrots, raptors, and hundreds of migratory birds nest at every level in the thick foliage.

As tropical paradises go, Panama has never had the exotic image enjoyed by its neighbor, Costa Rica, or any other Central American tourist destination. Since 1914, when a 50-mile ditch sliced the isthmus and Continental Divide and connected the Atlantic Ocean to the Pacific, Panama has instead been synonymous with shipping and trade. On December 31, 1999, in compliance with the 1977 Carter-Torrijos Treaties, the United States will turn over sovereignty of the Canal Zone to the Panamanian people. The government, in concert with private investors, sees this as an opportunity to build a tourist economy, promote the country's cultural heritage on a global scale, and sponsor environmentally sustainable development. Arias de Para is one of those private investors.

In August 1995, he began searching for a site on which to develop his first ecotourist project.

On a tip from an American employee of the Panama Canal Commission (PCC), he discovered an abandoned radar tower in Soberania National Park. The U.S. Air Force built the tower in 1965 to house a powerful radar used in the defense of the Panama Canal. By 1969, the site was jointly used by the Federal Aviation Administration (FAA) to control air traffic, and by the PCC as a communications tower. The FAA permit terminated in June 1979, but the PCC continued to use a small area of the tower. In June 1995, after a brief revival to help the army detect drug-smuggling airplanes from South America, the installation was permanently closed.

On his first visit, Arias de Para became convinced that the radar station, a rusty corrugated steel shell with

approval process. First he gained support from the Interoceanic Regional Authority (ARI), the agency created by the Panamanian government in 1993 to oversee and promote investment in the 86-acre Canal Zone. Then he maneuvered through the park service, tourist bureau, PCC, U.S. Army Southern Command, and U.S. Air Force. "I convinced everyone that I did not have to cut a single tree or use a bulldozer. I simply proposed to remodel a military building for visitors interested in observing the rain forest and its inhabitants," Arias de Para explains. He is not without influence in high places or powers of persuasion, and in September 1997, he signed a concession contract to convert the installation to an ecolodge.

With local architect Omar Cedeño, Arias de Para created a functional scheme to adapt the tower's interior by retaining the four existing levels and introducing windows for viewing at several elevations within the jungle canopy: ground level for future exhibitions, a mezzanine level for viewing, guest rooms with large windows and private baths at the third level, communal and dining facilities on the top level, and an observation deck on the roof. The plan was simple enough, but Arias de Para couldn't find a local contractor willing to undertake the renovation. Citing the tower's remote location and modest scope (6,000 square feet), those he approached warned him that their bids would be exorbitant. Undaunted, he appointed himself general contractor and hired a crew.

Dependable access to the tower was the first order of business. Arias de Para spent his first month patching a narrow road leading to the tower and reinforcing a termite-damaged bridge with steel salvaged from the radar site. Before work could begin on the tower's interior, Arias de Para had to replace the narrow stair that rose without landings at a dangerous 60-degree

Architects to Play a Major Role in Panama's Future

In an admirable show of public-private cooperation and farsightedness, the Panamanian government has enlisted architects to help it plan environmentally responsible development after the reflagging of the Panama Canal on December 31, 1999.

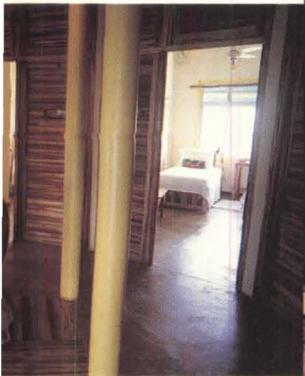
Last December, architects, environmentalists, scientists, journalists, and investors from around the world convened at a conference in Panama City to debate the ramifications of the recently developed Action Plan for the Development of the Tourism-Conservation-Research (TCR) Strategic Alliance. Conference organizer Hana Ayala, president of Irvine, California-based EcoResorts International, invited architect Frank O. Gehry to give the keynote address and set the tone for workshops that explored ways Panama might reuse its existing infrastructure while planning for controlled, environmentally responsible development. Gehry was candid in his criticism of Panama City's banal skyline. By the end of the conference, however, optimism was high and Gehry announced the formation of a Panamanian-American task force called Architects Strategic Alliance for Panama (ASAP), whose first assignment is to create a master plan for Fort Sherman, a former U.S. Army training facility.

Architect Patrick Dillon, a Panamanian member of ASAP, is coordinating the preparatory work for this TCR/ASAP flagship project. "The plan will involve converting many of the 150 military buildings on the 25,000-acre site to tourist use. "The army took good care of its installations, so the infrastructure is in excellent shape," explains Dillon. "We've never done this before here, so we have to build a consensus between the local government and private investors." The master plan will also include a site for Gehry's first Panamanian commission: an interpretive information center to showcase the country's outstanding ecosystem and cultural heritage.



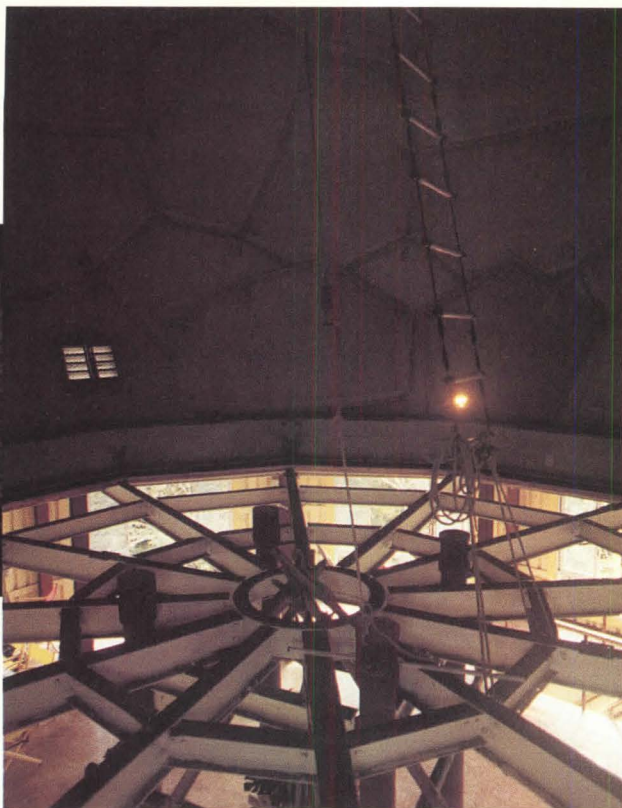
Rusty steel structure (above) contained powerful radar for U.S. military. During renovation, contractor carefully removed lead-based paint and installed windows (facing page, left). **Near completion,** contractor painted tower painted bright yellow and aquamarine (facing page, right), recalling colors of toucan.





Six two-person bedrooms (above) on third floor have teak doors and trim harvested from from Arias de Para's commercial plantation.

Communal living area below structural members (right) is seen from inside dome's shell.



rainy season began, workers climbed an improvised, curving ladder and sealed leaks in the fiberglass dome with silicone.

Most work occurred on the guest room floor. In its military incarnation, technicians monitored the radar in two large spaces with a toilet. "The U.S. Air Force didn't want its employees admiring the rain forest instead of watching for incoming missiles, so they built it with no windows," Arias de Para speculates. He hired a welder to cut openings in the steel and a window-maker to install sliding aluminum windows.

Fortunately, what the air force lacked in amenities, it made up for in sturdy, low-maintenance construction. The galvanized steel structure and the foundation were in excellent condition and required little repair. An underground grid, built by the air force, distributes electricity to the tower. The transformer nearby has the capacity to power a 60-unit apartment building, 10 times more power than the Canopy Tower needs.

In contrast, water, though adequate, is not abundant. The air force used only stored rain water to supply the toilet and shipped drinking water in daily. Luckily, Arias de Para ran into Dick Warren, a retired civilian employee of the U.S. Department of Defense, who recalled that he had helped drill a well on the site 25 years before. With his help, Arias de Para located the artesian well 200 feet below ground. The well provides only two gallons of water per minute, but that meets the tower's conservation-motivated demand. He installed low-flow toilets that use only 1.5 gallons per flush. Water is warmed for each

waste goes to a typical septic tank, and solids are removed periodically by a pumping truck. Soon, however, Arias de Para will begin treating soapy kitchen water in a holding tank and using it to supply water to the toilets instead of draining the kitchen water directly into the septic tank.

Once gutted, interior wall construction was routine. Gypsum wallboard was used everywhere except the bathrooms, which were built with a Costa Rican version of plycem—a noncombustible, structural, moistureproof cement board—rather than the asbestos cement board common to this area. As the spaces took form, Arias de Para began to consider finishes. Interior designer Ruth Møllergaard, president of New York City-based Grid 3 International, arrived to advise him on a color scheme and furnishings. Inspired by her first sighting of a Keel-billed toucan, Møllergaard developed a color scheme based on the seven colors of the toucan's beak. The result is gleaming yellow beacon atop an aquamarine-colored cylinder. The hollow dome sits on a base on the roof structure, which is supported by steel beams that radiate from the building's center. The beams are exposed in the ceiling of the communal floor below. Arias de Para removed drywall that hid the dome's unpainted interior shell. The result is a intriguing dark void that is the inverse of the exterior's beckoning orb.

In December, the Canopy Tower opened to guests, many of whom are researchers. The Smithsonian Tropical Research Institute (STRI) and Clemson University will conduct a long-term study of bird migrations with volunteers from the University of Panama and the Panama Audubon Society. However, this project has significance beyond its immediate function. With the reflagging of the canal next December, Panama will inherit from the United States assets worth billions of dollars in infrastructure and architecture—schools, single-family houses, barracks, clubs, clinics, storage buildings, recreational facilities, churches, theaters, and office complexes—and the opportunity to become a world leader in adaptive reuse and conservation. Although unpretentious and self-consciously deferential to its surroundings, the Canopy Tower must be considered a role model for a country with few good precedents and a lot to lose. ■

THE CANOPY TOWER,

SOBERANIA NATIONAL PARK, PANAMA

CLIENT: Raul Arias de Para, Divertimento Ecologico

ARCHITECT: Omar Cedeño

CONSULTANTS: Ricardo Bermúdez; Alvaro Gonzáles; Gaspar Silvera (design); Grid 3 International (interiors); Luis Corella (construction manager)

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Circle 153 on information card

SPECIFICATIONS



Remote spying

For the security professional on the go, CCS International introduces SpyCam-11, a security camera that transmits images anywhere in the world through a built-in modem. This affordable system operates under low-light conditions and can send high-resolution images over standard telephone or cellular lines. A single computer—in either a security office or in the hands of a roving owner or employee—can access and control many remote cameras, which system can be programmed and send images immediately after an alarm is tripped.

Circle 290 on reader service card.

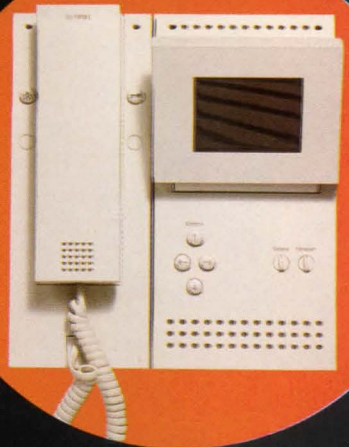
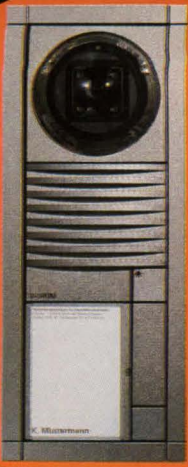
High-tech electronic security systems require buildingwide integration—but offer considerable bang for the buck.
By Michael Maynard

Making Room for Big Brother

The range of electronic security devices now on the market would make 007 proud: modem-equipped, low-light surveillance cameras that can be accessed over the Internet; scanners that recognize a person's hand and fingerprints; and camera-equipped control panels that allow security guards to permit or deny visitor access to any room in a building. These devices—all affordable and applicable to a wide range of building types and security needs—are on the cutting edge of a field that advances nearly as fast as the computer industry on which most of its systems depend. For architects and specifiers who frequently work on projects with high security needs, such as courthouses and other government buildings, keeping up with these advances can seem like a full-time job. "It's so specialized that you really have to be involved with it all the time to know what's happening," observes Clifford Isom, an architect and security specialist with Hellmuth Obata & Kassabaum (HOK) in St. Louis.

But security concerns are quickly spreading beyond

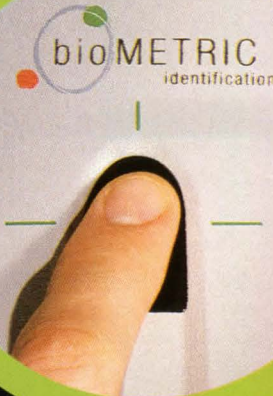
terrorism to industrial espionage are causing more clients to request that their architects include advanced security measures with their designs. But integrating surveillance and access-control systems into a design scheme often generates a major rift between the architect's vision and the need to protect building users. Specifying security systems that both protect and blend with a designer's vision requires early, teamwide collaboration. HOK's Isom frequently participates in design meetings to learn how a building will function, map out potential security conflicts, and advise the architects on areas of concern. Then, during the design documents phase, he will add the specific security products and systems. When the electronic equipment is exceedingly complicated, security consultants and manufacturers bridge the gap between design and technology. "In general, electronics consultants know that architects don't want equipment to be visible," says architect Fred Wilmers of Rafael Viñoly Architects in New York City,



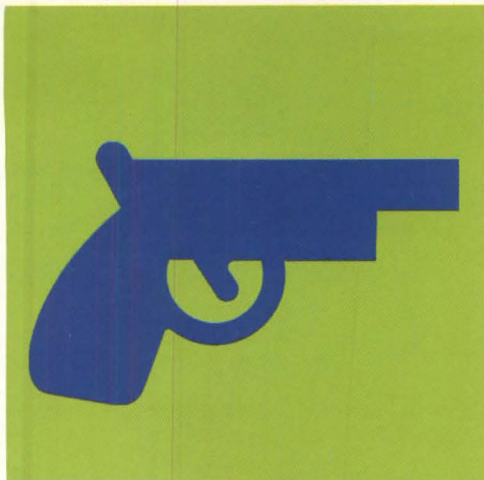
High-tech doorbell To secure buildings against uncontrolled visitor traffic, Siedle Communications introduces its Vario door communication system. The Vario units can be installed at main entrances or at multiple locations inside buildings to permit or deny visitors access to specific rooms or areas. The units feature modern designs coupled with clear audio and visual communications. Desk- or wall-mounted telephone receivers allow security personnel to control numerous access points simultaneously. *Circle 291 on reader service card.*



Digital surveillance COHU's new 3810 series digital color camera (above, left) features an integrated zoom lens and advanced computer imaging technology that allows the camera to capture clear color images under very low light conditions. The lens includes auto and manual focus, variable speed zoom and focus control, and 64 zoom and focus preset positions. *Circle 292 on reader service card.* **Handy system** Recognition Systems offers a new alternative to card-based access control systems. Handkey II (above right) maps and verifies the size and shape of a person's hand in less than one second. Each Handkey II unit is a complete door controller, providing door lock operation, exit control, and alarm monitoring, and operates either independently or within a network. *Circle 293 on reader service card.*

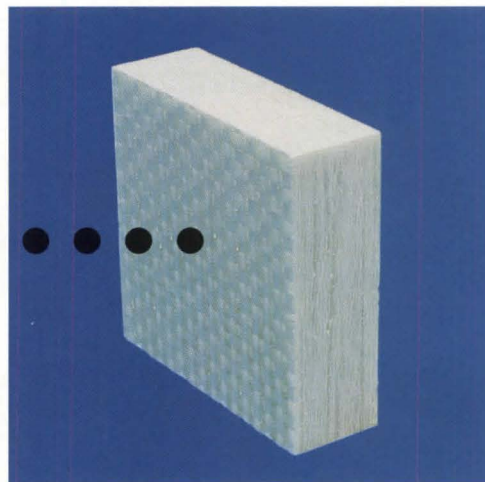
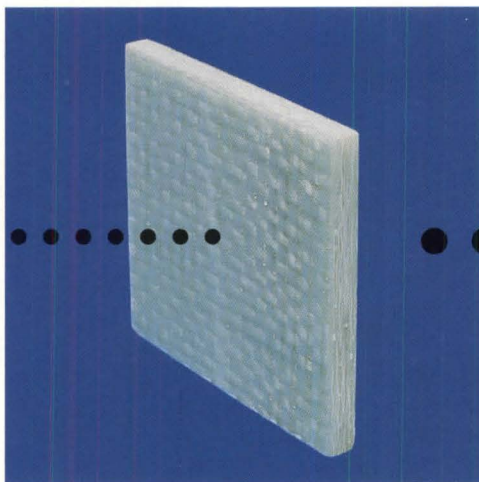
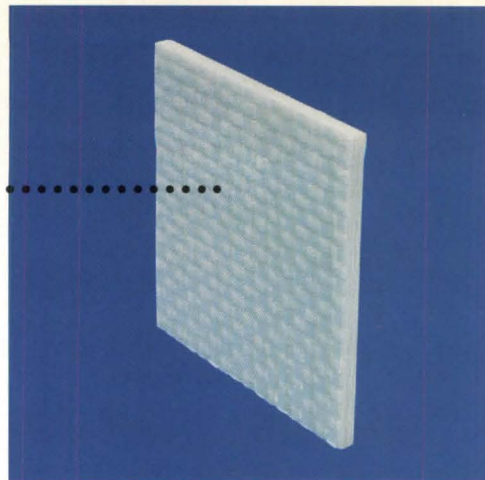


Fingers do the talking Another alternative to card-based access systems, the VeriPrint 2100 recognizes fingerprints rather than entire hands. Manufactured by Biometric Identification, the V2100 is a self-contained identification and verification device that stores thousands of fingerprint records, is unaffected by day-to-day variations such as cuts, swelling, and dirt, and has only a one in one million chance of false acceptance or rejection. The system features a user-friendly display and keypad, visual and audible indicators, no-maintenance operation, and flexible communication options through either modems or cables. *Circle 294 on reader service card.*



Stopping power

Waco Composites offers security-conscious building owners a high degree of protection with its ArmorCore bullet-resistant panels. The lightweight fiberglass panels come in a range of thicknesses to protect against a variety of ballistic threats, can be installed with adhesives or bolts, and remain concealed behind wood or other decorative surfaces. ArmorCore panels are most frequently applied in such locations as courtrooms, cashier areas, postal facilities, corrections facilities, convenience stores, and safe rooms. Circle 295 on reader service card.



City scheduled for completion in 2002. "For this project, we shared what we were going to do architecturally and went back and forth with the consultants." That enabled the security experts to put together an inventory and budget for security—which included metal detectors, X-ray equipment, card access systems, panic buttons for judges, and, of course, video surveillance.

Indeed, with their growing sophistication, cameras are playing larger roles in security systems. Recent products include a wide range of capabilities: A camera by Cohu has a zoom lens with autofocus that operates under extremely low light levels and can be maneuvered by a remote computer; SpyCam 11, a new system from CCS International, allows owners to dial into the modem-equipped cameras over the Internet; and Asset Security in Jupiter, Florida, sells a system that will, when a sensor is tripped, automatically swivel a camera to a preset location to record the activity going on there.

When deciding where such cameras will be placed, specifiers should identify access points, lighting systems, windows, and columns or other barriers, and then match the cameras to each observation point. Sometimes, architects shift designs to facilitate surveillance: In Viñoly's New York City court project, concerns over columns in the building's lobby that could block camera views prompted the architect to replace two 40-foot

stop at the lobby or front door—nor at simple hallway monitoring. Building owners and security specialists are increasingly focusing on scanners and camera systems that allow authorized users into buildings but may actively restrict access to certain sections. By formatting separate circulation patterns for the various users of the building, access-control systems become more targeted, with hand and fingerprint readers for employee areas and security cameras at main access and egress points. Access control specialist Siedle, for example, offers a system that allows owners to mount microphone and speaker-equipped, full-color cameras in different interior and exterior locations, including elevators, to control visitor access. Fingerprint and hand readers are also becoming popular, largely because of their dropping costs and small size. Recognition Systems has a new, attractively styled hand reader and Biometric ID sells a fingerprint scanning system for under \$300 per unit.

Lower costs of such equipment will allow owners and tenants to better monitor activities in and around their buildings. Of course, the most sophisticated security system is still vulnerable to threats. Just when one enemy is eliminated, there's always a new villain ready to step in—one doesn't need to be James Bond to figure that out. ■

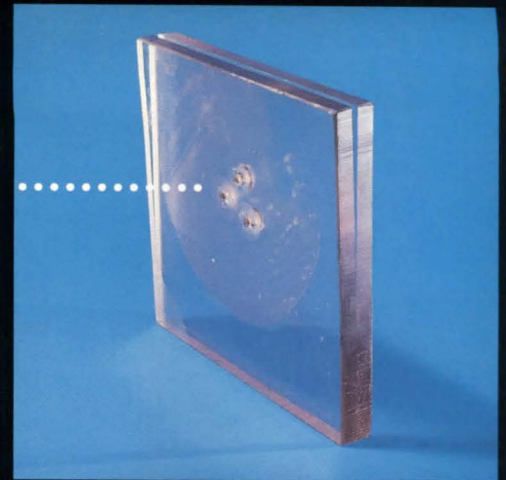
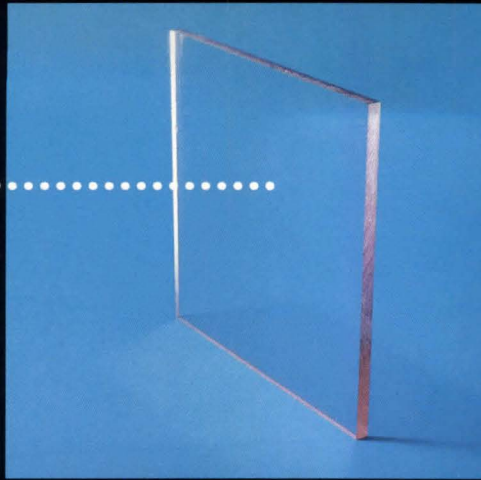
Michael Maynard is a Providence, Rhode Island-based free-

Bulletproof glass

When threats are severe enough, sometimes it's better not to take chances. CCS International offers several varieties of bulletproof

glass—shown intact and following test shots fired from a handgun at close range—that can stop bullets from most guns. Though considerably heavier than conventional panes, bulletproof glass can be fitted in any size in both buildings and automobiles.

Circle 296 on reader service card.



Safety First

Specifying impact-resistant materials means anticipating how well armed intruders will be. By Michael Maynard

High-tech electronic security systems such as night-vision cameras and fingerprint readers can effectively keep intruders out of places they shouldn't be. They can't, however, always protect against break-ins, explosions, or gun-wielding criminals who somehow gain access to a facility. In those cases, the facility to be protected needs windows and doors that offer stopping power—products that rely on material properties rather than lenses and microchips to thwart criminal activity. Bulletproof glass, impact-resistant glass, and bullet-resistant panels have long been de rigeur for courtrooms and banks, but these days they are turning up in more traditional workplaces and residential environments as well.

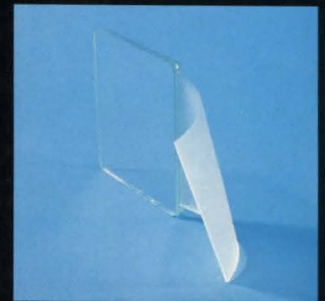
Specifying these systems means knowing not only the potential intruder, but also how well armed they are. For instance, products such as ArmorCore bullet-resistant panels—planks of dense, green fiberglass, manufactured by Waco Composites of Waco, Texas—come in a variety of sizes designed to stop weapons that range from small pistols to shotguns and rifles. "Architects sometimes think that the way to specify panels is to throw out an approximate thickness and weight," says Wayne Hampton, president of Waco Composites. "But that doesn't tell you what level of ballistic protection they want."

Instead, he continues, architects must know the most powerful weapon a client wants to stop—a factor usually derived from guidelines established within the client's

own industry. A Level 3 ArmorCore panel, for example, will resist a .44 Magnum weapon, while a Level 8 panel will stop several blasts from a shotgun or high-power rifle. Specifiers integrate the panels into designs by concealing them behind woodwork, vinyl, or other decorative surfaces.

Blast-resistant glass is also gaining prominence. Leaders in this field include Viracon, who manufactures polyvinyl-laminated glass that features an abrasion-resistant outer shield and durable inner layer that will not break or shatter, and Saflex laminated glass, which incorporates a similar clear, tough plastic interlayer. Both systems include variations for different applications and require that specifiers pay careful attention to window frames, selecting ones that will keep glass in place in the event of a blast or impact.

Of course, niche products such as these are highly specialized, and there are often no standards for specifications beyond what the manufacturer provides and what client's respective industries recommend. Thus, it is often up to the architect to determine which products are most effective. "When a product performs well, we will usually specify around it," says architect George Jezek of the Wallace Group in Waco, Texas, explaining that he will frequently modify designs to accommodate a particularly effective system. "But we also try to keep it open to approved equals." That, he concludes, helps keep the process competitive and his clients' interest—and safety—protected. ■



Safety glass

To protect buildings and their occupants against forced entry, bomb blasts, hurricanes and earthquakes, and other threats, Saflex laminated glass incorporates a tough plastic interlayer that prevents glass panes from shattering. Made of polyvinyl butyral (PVB) that is bonded together between two panes of glass under heat and pressure, the interlayer becomes transparent and thus preserves the esthetic appearance of the glass. If the glass is broken, fragments adhere to the PVB, reducing the risk of personal injury and property damage. Specifiers can select annealed, heat strengthened, or tempered glass.

Circle 297 on reader service card.

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CLOCKWISE FROM TOP LEFT: **Glass System**

Pilkington introduces Integral, a new fitting, to its Planar line of laminated glass products. The laminated glass maintains a flush appearance with fittings eliminated from the exterior panel and instead attached to the interior. Since drilling is not necessary, Integral allows for textured and reflective glass. *Circle 298 on information card.* **No Solar Gain** AFG Industries redefines solar control by incorporating titanium into Comfort Ti, a new line of residential glass that suits a variety of regional climates. The available selection consists of Comfort Ti-AC, Comfort Ti-PS, or Comfort Ti-R, each of which is tailored to different energy requirements. Due to the physical properties of titanium, the glass is ultra-hard, which allows more light to pass through while exhibiting low emissivity and *U*-value, thus reducing energy costs. *Circle 299 on information card.*

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Warm Comfort Bask Technologies introduces SunTouch, an engineered woven mesh that electrically heats tile and marble floors for the same cost of operating three 100-watt bulbs per square foot. The 1/8-inch material is purportedly easy to install and can be placed in retrofit situations. SunTouch is listed by Underwriters Laboratory and is available in 12- and 24-inch widths and in areas up to 160 square feet. *Circle 300 on information card.*



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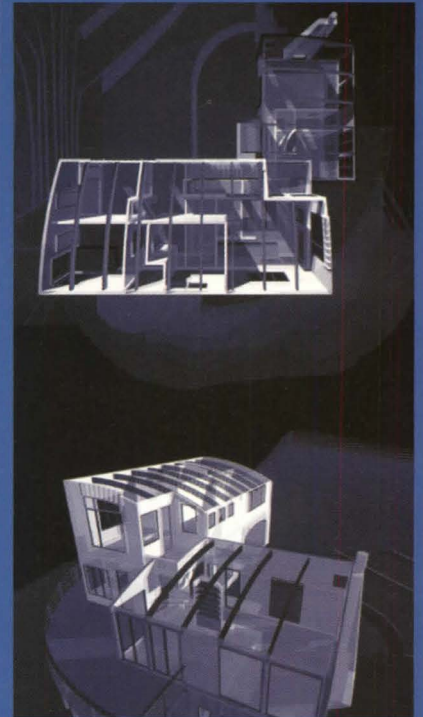
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Circle 157 on information card

New and Noteworthy

A steady flow of upgrades, add-ons, and value-added software products keep architects on the cutting edge. **By Geoffrey Moore Langdon**

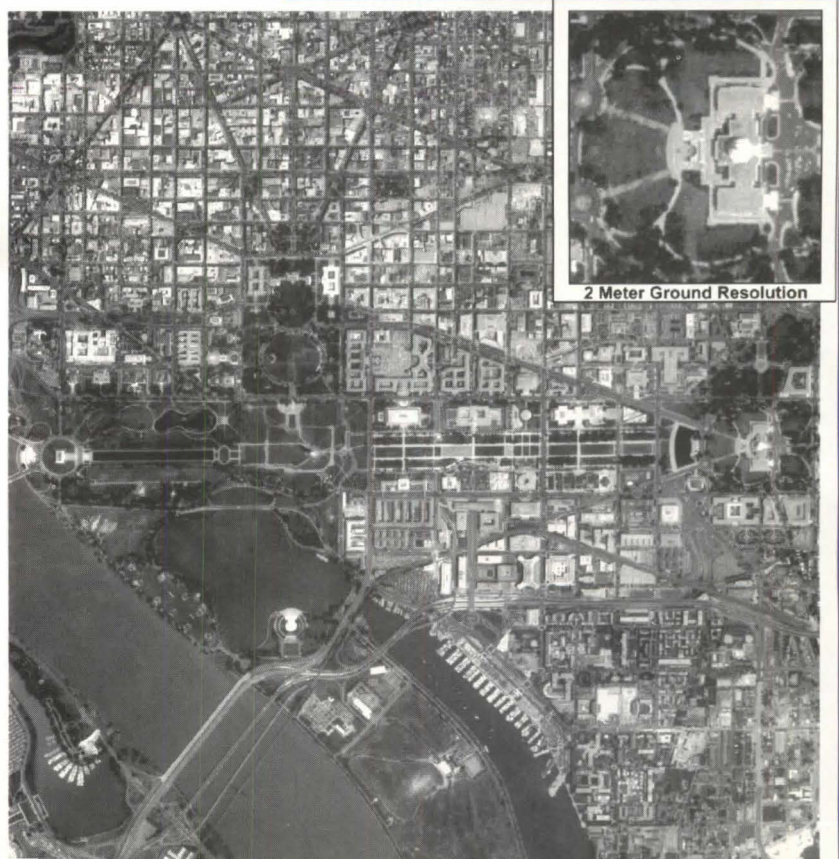


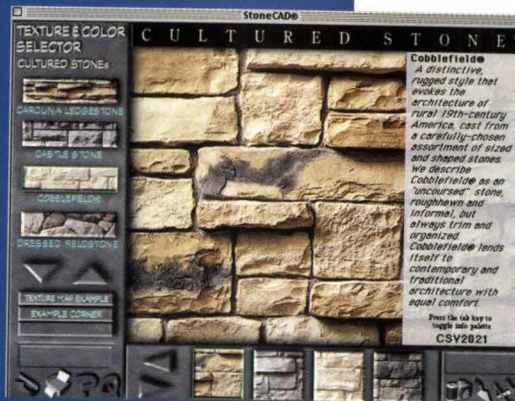
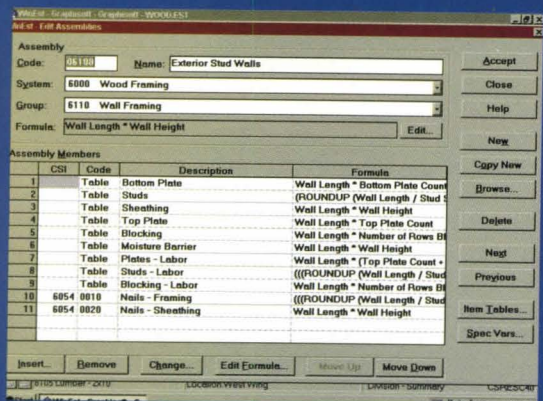
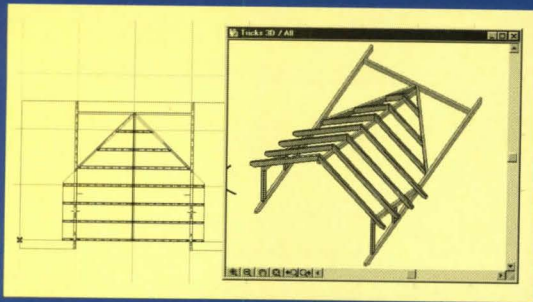
Developers of software for architects continue to keep pace with the profession's demand for more design tools, simpler and quicker operations, and databases brimming with drawings, products, and information. Advances come in many forms, from new Web or CD-ROM-based products, to add-ons and upgrades of well-established CAD packages.

TerraServer

What began as a demonstration of Microsoft's powerful NT server software has quickly become a surprisingly useful Web tool for architects. TerraServer (www.terraserver.com) is a rapidly growing database of satellite images provided by the U. S. Geological Survey (USGS) and SPIN-2, a joint venture consisting of the Russian space agency that controls declassified spy satellite images, Aerial Images of Raleigh, North Carolina, and Central Trading Systems of Huntington Bay, New York. The images are digital and panchromatic (256-shade gray scale); the resolution for commercial satellite images is the finest currently available and allows one to identify objects as close as 2 meters.

Architects can search for a location almost anywhere in the United States as well as many locations abroad (over 800,000 square miles to date), and TerraServer can display the image in the user's Web browser. A user can zoom and pan images, arrive at an appropriate size to be





Graphisoft's new **Design/Build Series** for ArchiCAD 6 has several tools. When **modeling a project** (facing page, top), San Francisco-based House + House Architects employs all ArchiCAD 6 tools. RoofMaker (far left, top) creates ridges, valleys, and rafters in 2-D and 3-D. **Cost estimating tool interface** (far left, bottom), which includes list set-up and WinEst filter, ties ArchiCAD elements to residential construction databases' parametric assemblies. StoneCAD (left), a **design & detailing tool** from Cultured Stone, includes 80 textures, 36 installation details, and 20 hatch patterns.

Satellite photograph of Washington, D.C. (facing page, bottom), with two-meter ground resolution (inset) is an example of the thousands of images available online from TerraServer.

and CD-ROM fulfillment service, provided in a strategic agreement with Aerial Images. However, the usefulness of the images to architects may lie with Geographical Information Systems (GIS) software, which allows data in these images to be stored, manipulated, analyzed, and referenced by spatial or geographic coordinates, such as longitude and latitude or elevation. Aerial Images uses a variety of GIS software to isolate layers of information about building footprints, transportation, public safety, and land use. Users can also create digital elevation models (DEM) and 3-D digital terrain models (DTM) for fly-throughs with GIS applications.

TerraServer sells high-resolution TIFF/JPEG images or Kodak prints of satellite images starting as low as \$12.50. For quotes for GIS services, contact Aerial Images at 800-478-8898.

ArchiCAD 6 Builders Edition

ArchiCAD is an extremely powerful and comprehensive CAD program with which a designer can sketch schematic design, develop complete 3-D architectural models, and produce a set of construction documents. Two new ArchiCAD Design/Build Series solutions (www.graphisoft.com) are subscription-driven supplementary software, drawing files, and information. Each series is delivered on a CD-ROM three times a year. The Design and Presentation Series and the Production and Estimating Series are directed toward residential builders and design-build firms in the United States and

include new add-ons (an automatic wood roof-framing macro or an automatic schedule generator), modular building pieces that can be popped in and modified (complete kitchens and living rooms), samples of entire projects contributed by various architectural firms, and library objects (columns, railings, and skylights).

Graphisoft now uses the open programming environment Application Programming Interface (API). It allows anyone to write special-purpose mini-programs for ArchiCAD. For instance, a number of designers who do timber-frame log homes have found that ArchiCAD 6, which has an intelligent and parametric log wall generator that automatically accommodates windows, doors, and corners, makes an excellent office tool. As soon as the Design and Presentation Series was released in API, an architect wrote a macro to generate 3-D models of log homes. According to Graphisoft, 90,000 users worldwide have ArchiCAD as their primary CAD software. Most others use it as a supplemental design tool, because it offers features that their primary CAD program doesn't: cost estimating, photorealistic rendering, animation walk-through, and space planning.

CADSPEC

Finally, a company has made the Internet measurably more useful for the construction industry. CADSPEC (www.cadspec.com), a four-year-old Novato, California, company, applies the theory that Architectural/Engineering/Construction (AEC) professionals want

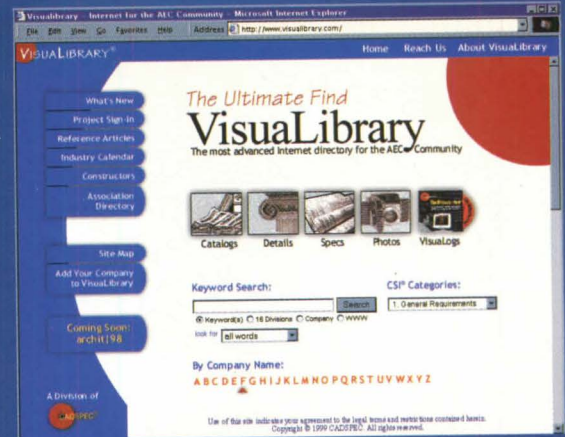
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available product information, not manufacturers' tear sheets. Traditionally, architects have laboriously thumbed through product catalogs until finding just enough general information to call a sales representative. CADSPEC takes Internet technology, which allows users to download data directly to their desktops, and applies it to its Visual Library, a Web site that represents the products of 1,000 manufacturers in a searchable database.

On a visitor's first visit to the Web site, the system automatically installs Autodesk's Whip!—a plug-in for viewing and downloading online CAD drawings in either DWG or DXF format—into the user's browser. The user can modify the CAD drawing and paste it into the CAD on which he or she is working.

CADSPEC also produces custom CD-ROM catalogs through its Visualog service. Even though commercial Web sites have proliferated, transmission of large amounts of data over the Internet is still too slow for manufacturers that want to make CAD drawings and specifications available electronically to architects. Although a Web site can be updated continuously, potential customers can search a large database more quickly on a CD-ROM. CADSPEC has combined the strengths of both tools: A CADSPEC CD prompts the user to go to a Web site when new information is available to update data. CADSPEC has reprogrammed all information on the Virtual Library in hypertext mark-up language (HTML), which makes it interactive and more useful than a scanned tear sheet. In an effort to corner the AEC information market, CADSPEC is uploading 8,500 pages to the Virtual Library per month.

DataCAD 8 for Windows 95/98/NT

With over 250,000 users throughout the world, DataCAD (www.datacad.com) is the predominant CAD software specifically developed for the architectural profession. (AutoCAD has 3,000,000 users, but it's a generic draft-



last May to compete with DataCAD, and sales have been strong.) DataCAD's rise to prominence is largely due to its low price and excellent quality, which is why many architects tolerated its DOS-only format. Firms that use DataCAD appreciate its simple and fast two-dimensional production capabilities. The new DataCAD 8 (version 8.06) for Windows95/98/NT still has speed and simplicity and a low price (\$695 for the first license), but its 3-D modeling component has new rendering and visualization tools and new multi-scale plotting and pentable tools.

DataCAD has 1,800 architectural "macros," which are actually mini-programs—small, special-function programs that run within a main CAD program. Architect-users of software often write macros (not the original programmer), which are usually distributed as free or inexpensive add-ons. DataCAD macro programs range from Victorian Stair Macro to Roofbuilder to EZ Elevations generators. Framelt, for instance, appeals to architectural design-build firms because it can build a complete wood-frame model. The designer need only provide a diagrammatic plan indicating where interior and exterior walls will go, and the program generates an entire 3-D wood frame.

The VisualReality software package—a freeform modeler, RenderizeLive photorealistic rendering software, and DC Viewer, a tool that offers walk-throughs, color shading, and generation of virtual reality markup language (VRML) Web files—comes free with DataCAD. The company has just added a digital terrain modeling tool, which allows the user to generate a 3-D site model from a contour plan. Finally, the latest version of DataCAD now has the ability to read and write AutoCAD 14 and earlier files, making it a real powerhouse for any size design firm. ■

Geoffrey Moore Langdon, based in Beverly Farm, Massachusetts, is an architect and the founder of Architectural CADD consultants.

Visual Library (facing page) is CADSPEC's **Web site for manufacturers.**

Hundreds of catalogs and thousands of details and photographs are available for architects to download. DataCAD 8's Visual Reality Suite provides **photorealistic rendering tools**, as demonstrated in rendering (above) from Erickson, Herscoe Architecture, as well as animation and photo editing functions.



Terra-Form Site Furnishings

Circle 161 on information card



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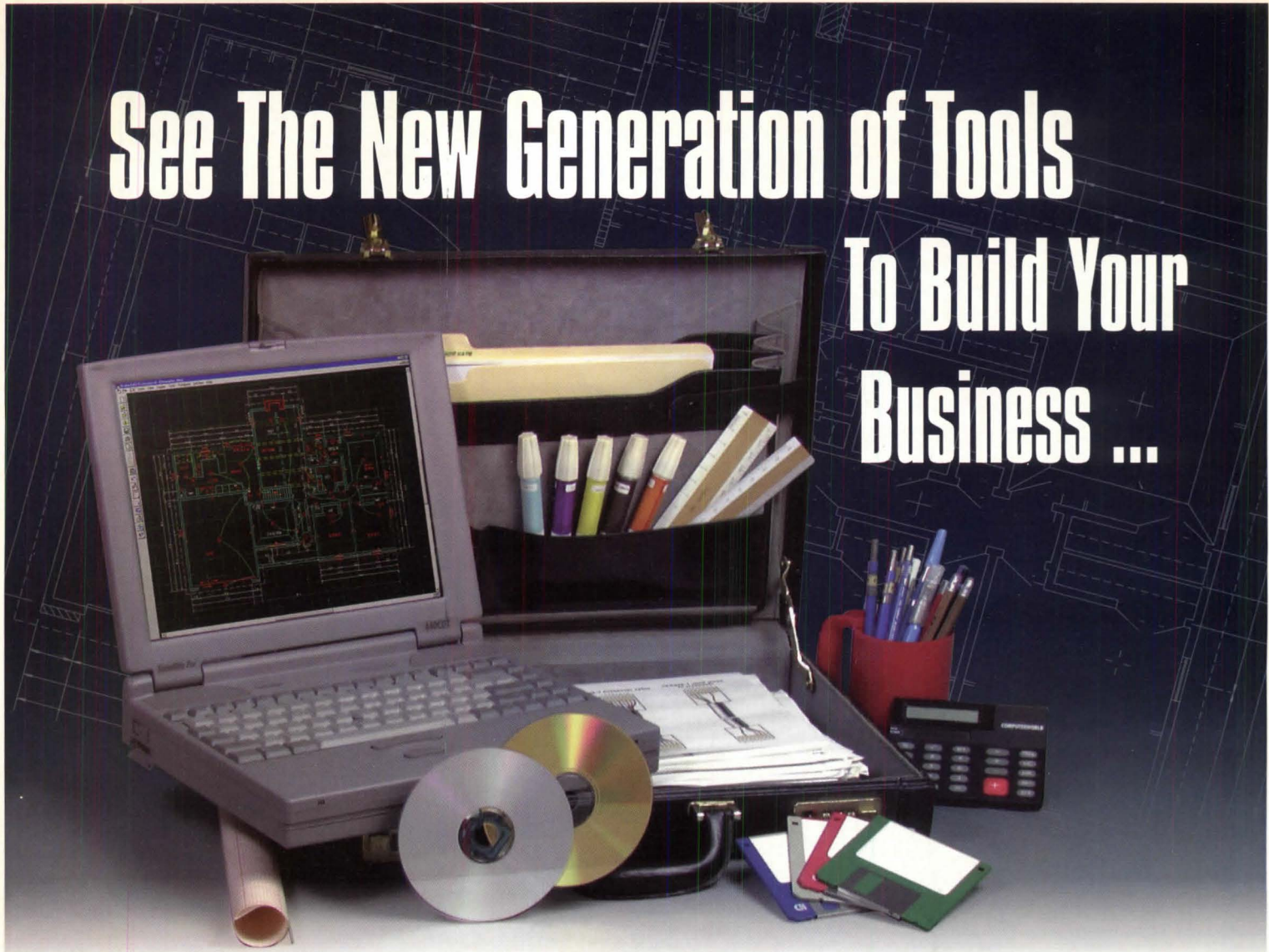


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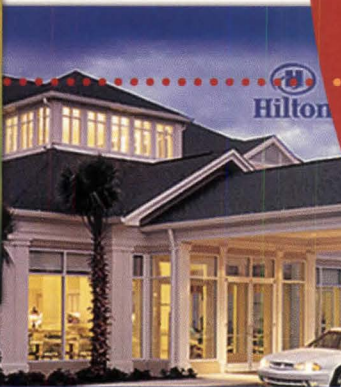
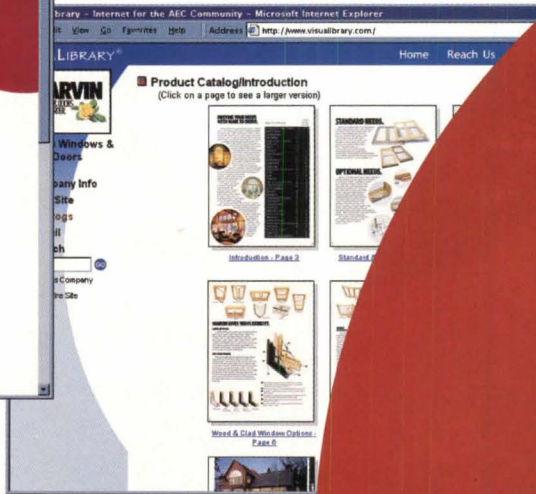
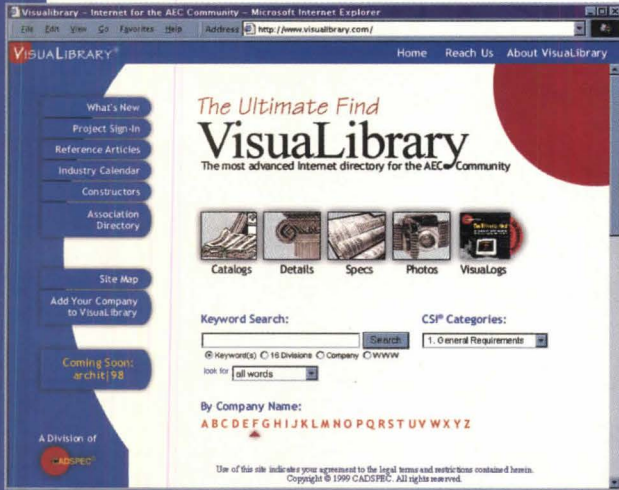


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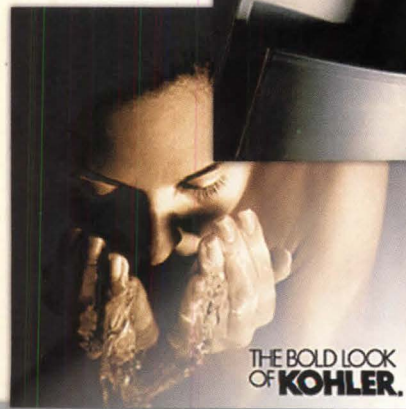
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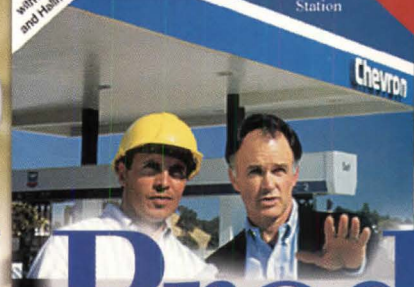


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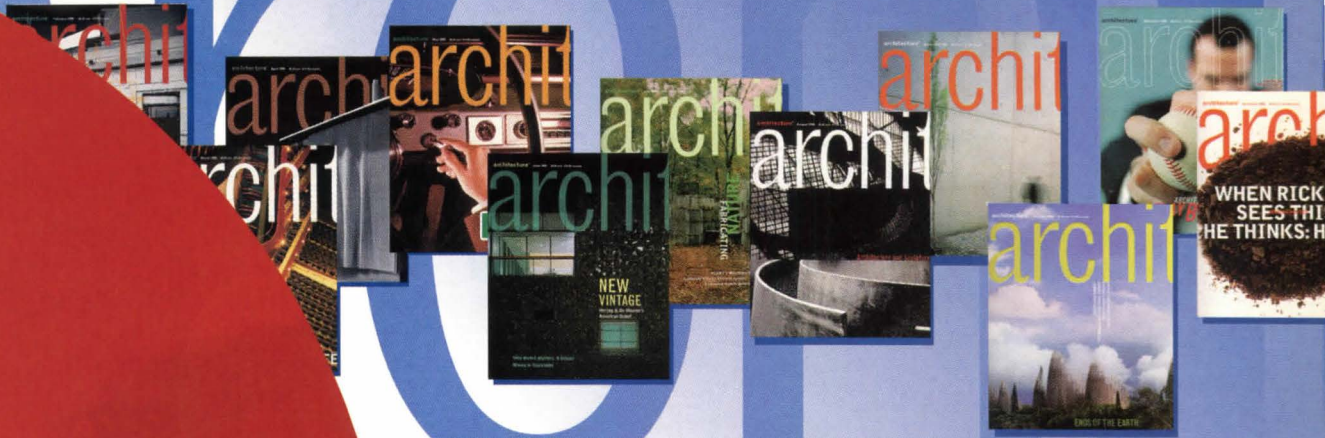
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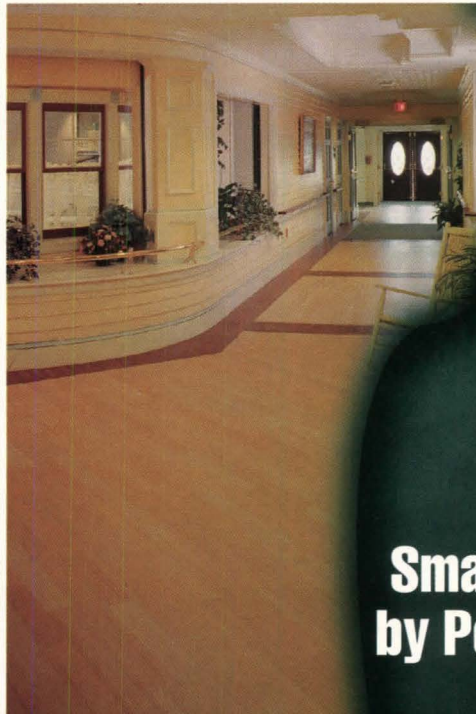
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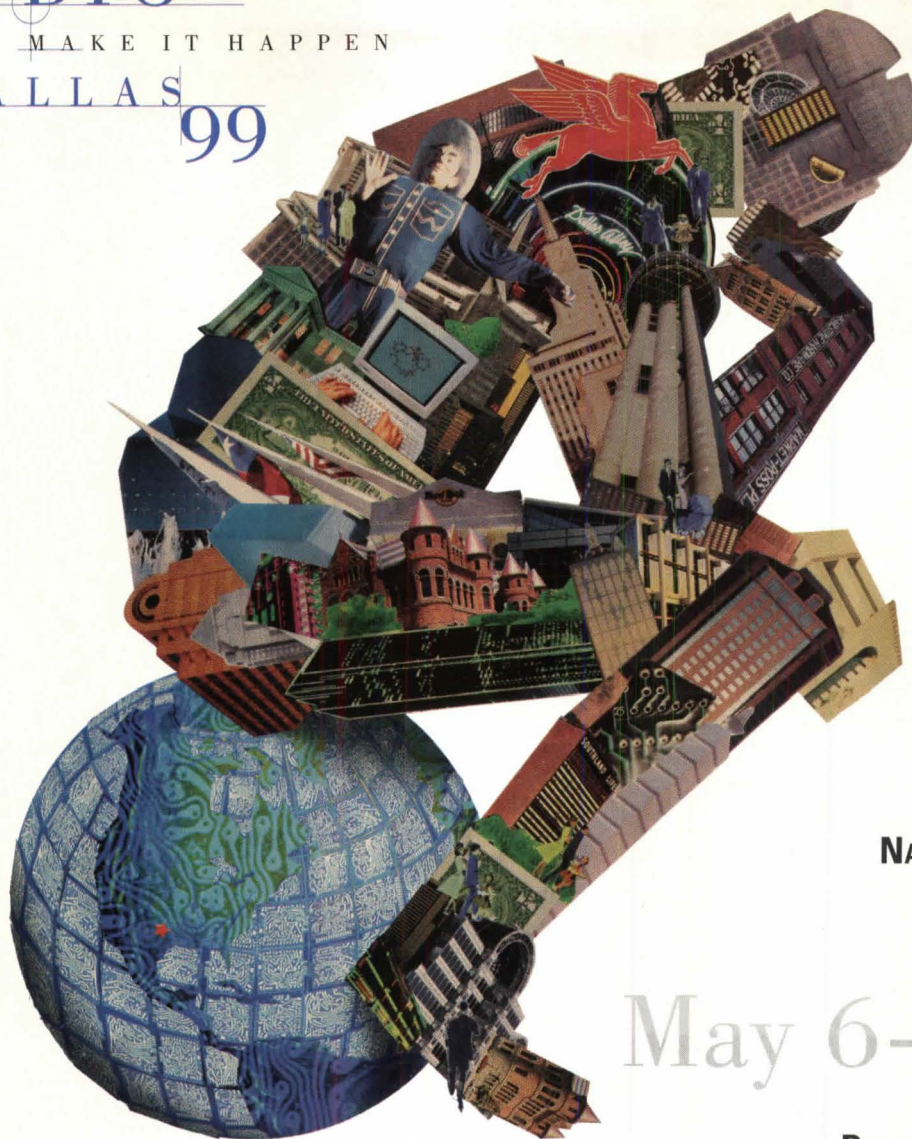


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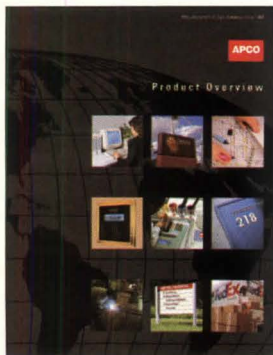
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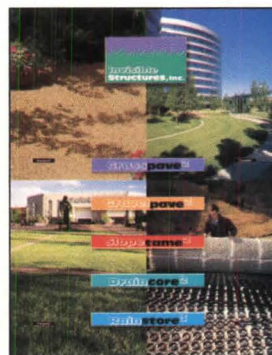
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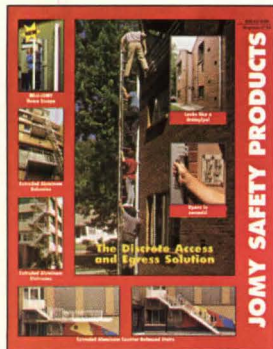
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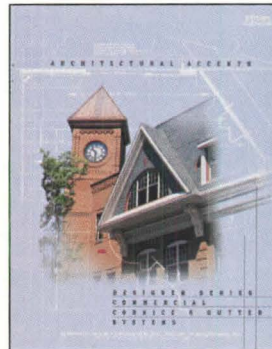
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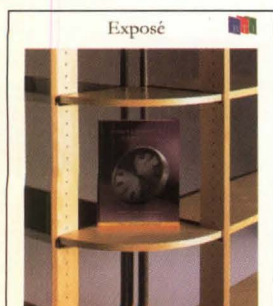
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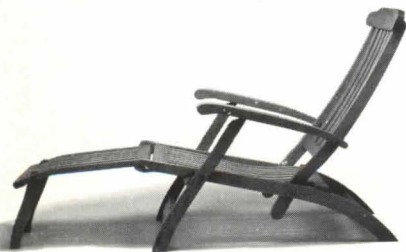
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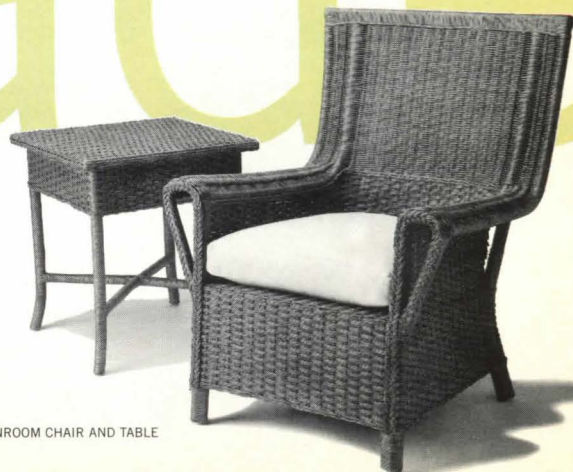
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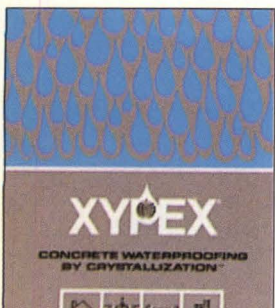
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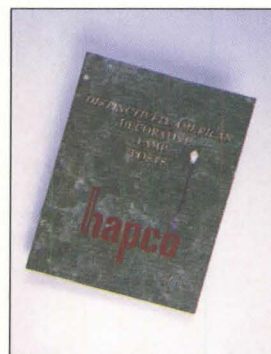
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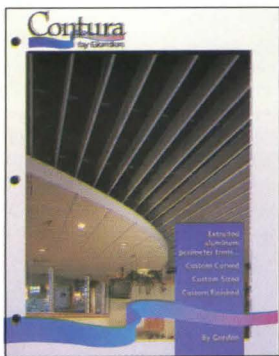
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Ludowici Roof Tile—After more than 100 years, Ludowici clay roof tiles remain the preferred choice of architects and building professionals. No other clay tile manufacturer offers more colors, styles, fittings, textures, or finishes. And every tile is backed with a 75-year limited warranty (see actual warranty for details). Call for full-color brochure or visit www.ludowici.com.
Circle 43.

Gordon, Inc.



Extruded Aluminum Perimeter Trims—Designed to create a perimeter within or below a ceiling area. Contura can be used with ceiling grid, beam systems, panels and lighting to accentuate or isolate a ceiling area. Available in 2", 4", 6", 8", 12" and 16" inch widths. For more information and a complete product manual, call 1-800-747-8954 or fax 1-800-877-8746.
Circle 47.

Heat-N-Glo



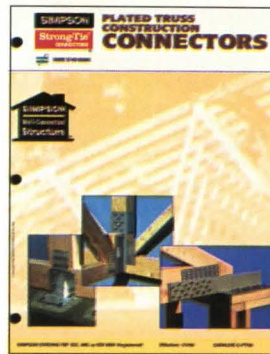
Three-Sided Fireplace for Unlimited Installations—Heat-N-Glo introduces model PIER-TRC, a three-sided direct vent fireplace that can be terminated vertically or horizontally to accommodate nearly any application. The PIER-TRC is perfect as a room divider, bar, end of counter or a wide variety of creative installation possibilities. As with all Heat-N-Glo fireplaces, the PIER-TRC can be operated by remote control for the ultimate in convenience. Call (888)427-3973(GasFyre).
Circle 51.

Bomanite Corporation



Bomanite Quality Architectural Concrete Paving and Flooring—Bomanite - colored, imprinted and textured cast-in-place architectural concrete-has the experience of over four decades of quality concrete paving. Bomanite adds a creative touch to any commercial, municipal or residential project. Available in more than 100 patterns and 25 standard colors. Custom colors are also available. Call (559) 673-2411 or visit www.bomanite.com.
Circle 55.

Simpson Strong-Tie® Company, Inc.



Plated Truss Construction Connectors—Simpson's newest truss hangers featured in this 1999 edition include the new THGW series with load capacities over 20,000 lbs., plus higher capacity embedded truss anchors. A necessary reference for architects, structural engineers, and building officials, the catalog includes specifications, load charts, drawings, and building code acceptance - and available custom hanger options. ISO9001 registered company.
Circle 45.

Willamette Industries, Inc.



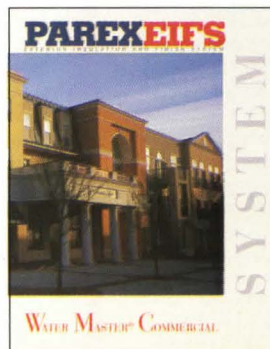
Duraflake FR fire-rated particleboard provides Class A fire protection in wall systems, store fixtures, furniture and case goods. It has a UL flame spreading rating of 20 and a smoke-developed rating of 25. Its smoothness, machinability and uniformity make it an ideal substrate. It even resists warping and won't leach chemicals. To request information call 1-800-887-0748 ext. 300 or refer to Sweets Catalog 06070/WIL.
Circle 49.

Springs Window Fashions



Springs provides the best value in commercial mini blinds with its Bali S3000. Premium features include curved headrail face, rear light blocking lip, aluminum slats with anti-static, anti-microbial paint finish, hidden brackets, clutch tilter, all at standard cost. Privacy slat option provides enhanced light control with hidden cord holes. Call 800-327-9798. See us in June at the CSI Exhibit in Los Angeles, Booth 805.
Circle 53.

Parex



Parex Water Master® Commercial EIFS is designed for commercial buildings including non-combustible and multi-story construction. Specially developed Liquid Membrane protects the sheathing from moisture infiltration and the patented Water Master insulation board with drainage channels is designed to remove any incidental water from behind the insulation.
Circle 57.

SMART Technologies, Inc.



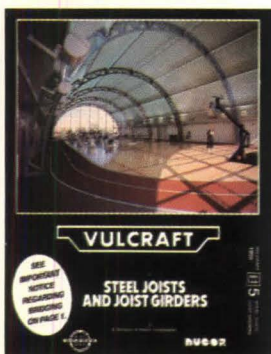
The **SMART Board** is an interactive whiteboard that allows you to control projected Windows® or Macintosh® applications and other multimedia by pressing on the Board's large, touch-sensitive surface. Write over top of applications and your notes are saved for future reference and distribution. Architects, specifiers and design consultants can request the SMART Product Kit by calling 1.888.42.SMART or by visiting www.smarttech.com/productkit.
Circle 59.

Marvin Windows & Doors



All NEW! Marvin Clad Ultimate Double Hung Window Brochure—Details Marvin's completely redesigned Clad Ultimate Double Hung Window. Marvin has replaced the obtrusive jamb liner with a narrow jamb carrier. Now, the wood interior can be painted or stained to match any décor. This also aids in the operation—making the Marvin Clad Ultimate Double Hung smoother and more natural to tilt and operate. To assist in cleaning, the window features a cleverly concealed tilt lever in the sash lock. FREE 888-537-8268.
Circle 63.

Vulcraft



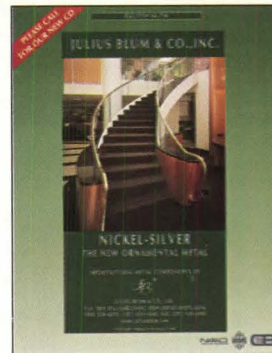
Steel Joists and Joist Girders. This 128-page design manual provides in-depth information for the optimum use of steel joists and joist girders. As the largest producer in the United States, Vulcraft has the most experience and expertise in the application, design and manufacture of these products. The economies of steel joists and joist girders contribute to their increasing utilization.
Circle 67.

Landscape Forms™



Petoskey™ Bench from Landscape Forms combines sturdy steel supports and metal rod, wood, PolySite™ or perforated metal seat inserts. Metal parts are finished with a hard, yet flexible powdercoat that resists rusting, chipping, peeling and fading. The Petoskey group also includes litter receptacles, an ash urn and a picnic table. For more information on Petoskey, visit our website at www.landscapeforms.com, or call 800.430.6201 for a catalog.
Circle 71.

Julius Blum & Co., Inc.



Julius Blum & Co., Inc. is proud to reintroduce nickel-silver for use in architectural applications. Components available from stock include traditional and contemporary handrail mouldings, brackets, spindles, posts, collars as well as tubing, bars, and shapes. Nickel silver is a copper alloy which, when polished, has the appearance of stainless steel with a touch of gold.

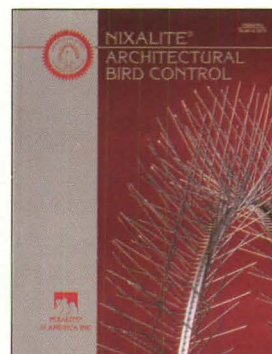
Circle 61.

Transatlantic Apparel



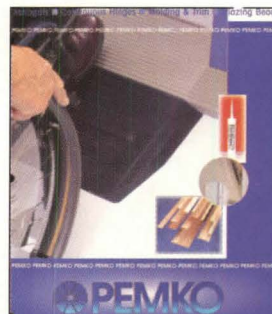
#31775 Dune Walker™—An adventurous, sea and shore hat fitted with two brass eyelets each side, removable chinstrap—3" brim offers great protection from the sun. 100% cotton duck. Color: natural with green underbrim. Sizes: M, L, XL, ...\$40.00 + \$7.00 shipping. To order call 1-800-825-4602 or fax 1-610-825-6644. Made in USA—Brochure available.
Circle 65.

Nixalite®



Nixalite® Architectural Bird Barriers Keep Buildings Clean—Stop birds from defacing architectural treasures. Nixalite® eliminates the maintenance and cleaning caused by pest bird infestation. Effective, and humane, these stainless steel strips provide a physical barrier to birds that is long lasting and inconspicuous. With the addition of Colorcoat™, Nixalite® can be colored to match any surface. Call 1 (800) 624-1189 or visit our web site at <http://www.nixalite.com>.
Circle 69.

Pemko



New Pemko Full-Line Catalog—Beyond new thresholds, door bottoms, perimeter gasketing, and astragals, Pemko's new catalog includes HSS2000 (an intumescent fire life-safety product), FS3000 (an unbelievable glazing compound which allows for much larger lites in rated doors), security door bottoms, new continuous geared hinges, ADA compliant rubber and aluminum ramps, and an expanded line of nylon brush products.
Circle 73.

CONSTRUCTION COST COMPARISONS PER SQUARE FOOT • APRIL 1999



POST OFFICE

1 story building with 14' story height and 13,000 square feet of floor area

APARTMENT

6 story building with 10'4" story height and 60,000 square feet of floor area

COLLEGE DORMITORY

3 story building with 12' story height and 40,000 square feet of floor area

	POST OFFICE		APARTMENT		COLLEGE DORMITORY	
	2nd Q 1999	2nd Q 1998	2nd Q 1999	2nd Q 1998	2nd Q 1999	2nd Q 1998
Atlanta	\$64.81	63.46	80.16	80.06	76.56	76.02
Boston	85.66	84.85	106.11	106.00	101.27	100.70
Chicago	80.81	78.85	100.19	100.02	96.15	94.27
Dallas	63.56	61.89	78.16	77.90	75.08	73.87
Kansas City	71.05	68.12	87.99	85.90	84.53	81.42
Los Angeles	81.18	80.35	100.52	100.38	95.89	95.38
New York City	98.28	97.24	122.54	122.42	116.09	115.87
Phoenix	66.21	65.20	81.68	81.52	78.46	77.47
St. Louis	75.38	73.05	92.69	92.20	89.04	87.24
San Francisco	91.16	89.97	112.76	112.62	107.94	107.04
Seattle	76.78	75.49	95.39	94.81	91.64	90.07
Washington, D.C.	70.17	69.05	87.18	87.07	82.89	82.27

Each month Architecture takes a snapshot of U.S. construction – looking at average costs and upcoming projects for different building types. News on projects is provided by Construction Market Data and cost information by R.S. Means – both CMD Group companies.

NOTE: Cost comparisons shown here are for the basic building without site work, 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

Hialeah Post Office

Location: Adjacent to Hialeah Race Track, Hialeah, FL
Project Value: \$1.1 – \$1.2 million
Size: 16,000 sq ft, 1 floor above grade, 1 structure
Current Project Stage: Working Drawings
Status: Working Drawings to Begin 02/99; Bid Date to be Set Approx. 04/99
Project Scope: Lobby, Customer Service Area, Office, Mail Processing Areas, Loading Dock; Concrete Masonry Walls, Stucco Exterior, Metal Deck On Steel Bar Joist Roof, Modified Bitumen Roofing on Lightweight Concrete, HVAC System
Owner: USPS Facilities Services Office; Leslie Martin; 4000 Dekalb Tech Parkway 300; Atlanta, GA 30340-2799
Phone: 770.454.0600; **Fax:** 770.454.0608
Architect: Russell Partnership Inc.; Terry Holt; 5815 SW 68th Street; Miami, FL 33143
Phone: 305.663.7301; **Fax:** 305.663.5411

USPS King Haigler Brach

Location: Camden, SC
Project Value: \$.7 – \$.9 million
Size: 8,012 sq ft, 1 floor above grade, 1 structure
Current Project Stage: Role Proposal Due
Status: Developer Proposals Due 03/99
Project Scope: Branch Facility
Owner: US Postal Service – Facilities; Martin Petry; PO Box 27497; Greensboro, NC 27498-1103
Phone: 336.665.2800; **Fax:** 336.665.2865

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Cortez Hill Apartments

Location: Beech Street, San Diego, CA
Project Value: \$15 million
Size: 230 units, 4 floors above grade
Current Project Stage: Working Drawings
Status: Working Drawings Complete; Bid Schedule Not Set
Project Scope: 4-Story Apartment Complex with Mezzanine
Developer: Forest City Residential Developer; Greg Anderson; 11601 Wilshire, Suite 1900; Los Angeles, CA 90025
Phone: 213.488.0010
Architect: Togawa & Smith, Glenn Togawa; 44 W Green Street; Pasadena, CA 91105
Phone: 626.449.4449; **Fax:** 626.449.4440

Silver Spring Town Center Residential

Location: Silver Spring, MD
Project Value: \$35 million
Size: 324,000 sq ft, 160 units, 5 floors above grade, 1 floor below grade, 1 structure, 172 parking spaces
Contract Type: Negotiated
Current Project Stage: Design Development
Status: Design Development Underway; Bid Schedule Not Set
Project Scope: Five Story 324,000 sq ft Residential Complex with 160 One and Two Bedroom Units. Parking Garage to Accommodate 172 Cars
Owner: The Peterson Companies; Jim Todd; 12500 Fair Lakes Circle, Suite 40; Fairfax, VA 22033
Phone: 703.227.2000; **Fax:** 703.631.6481
Architect: Heffner Architects; Shawn Glerum; 604 Montgomery Street; Alexandria, VA 22314
Phone: 703.549.7766; **Fax:** 703.684.6212

Barton County Community College Dorm

Location: Great Bend, KS
Project Value: \$2.15 million
Size: 22,200 sq ft, 3 floors above grade, 1 structure
Contract Type: Negotiated
Current Project Stage: Working Drawings
Status: Working Drawings 80% Complete; Subbid Schedule Not Set
Project Scope: Living Areas, Restrooms; Concrete Foundation, Concrete Masonry Unit Walls
Owner: Barton County Community College; Veldon Law; Route 3; Great Bend, KS 67530
Phone: 316.792.2701
Architect: Architectural Services International Inc.; Dick Ross; 24705 Timberlake Trail; Greenwood, MO 64060
Phone: 816.537.4090; **Fax:** 816.537.4091

Gettysburg College Student Housing

Location: Park Avenue, Gettysburg, PA
Project Value: \$5 million
Size: 32 units, 2 floors above grade, 4 structures
Contract Type: Negotiated
Current Project Stage: Design Development
Status: Design Development Underway; GC to Take Subbids 02/99
Project Scope: Four New Residence Halls to Accommodate Eight Units Each with Five Students Per Unit
Owner: Gettysburg College; Dean Ramsey/Mark Miller; 105 Park Avenue, Gettysburg, PA 17325
Phone: 717.337.6000
Architect: Bohlin Cywinski Jackson; Frank Garuman; 307 4th Avenue, Suite 1300; Pittsburgh, PA 15222
Phone: 412.765.3890; **Fax:** 412.785.2209

In an age of indulgent new airport terminals, why can't the airlines design a comfortable seat? By Andrei Codrescu

The Unfriendly Skies



The same Grinch that has stolen all our free time has been quietly shrinking our space. I have just completed a mind-boggling 12,000 miles of American travel in one week and am here to report that the human body (mine) can only take so much of the fin-de-millennium interiors of our current means of travel. Airplanes are the worst. Despite the fact that Americans keep getting fatter, airplane seats have gotten smaller and aisles narrower. Air travel, once the province of the elite, now approaches cattle-wagon density, with travelers jammed without ceremony into ever-shrinking cages.

Air travel in the 1960s is a subject of some nostalgia for those who can remember that far back. On a recent flight from New Orleans to Seattle, an elderly gent sitting practically on top of me whispered in my ear—which was conveniently located just next to his mouth—that he remembered a time when he had enough leg room to stretch out fully. It was an awesome proposition. The

shrinking of aircraft, he mused, has been proportional to the growth of airports. While the planes are being miniaturized, American airport terminals have expanded to become veritable cathedrals. Walking from the ticket counter to the gate is a lengthy pilgrimage through soaring atriums and mighty temples of commerce. Like everything else in our society, the comfort of the individual is being sacrificed for the worship of the corporate ego. Every inch stolen from your body ends up in the communal space where the corps is being worshipped. The less time and space we have for our private selves, the grander the corps grow.

Once there were staterooms on ships, lovely wagon-lits on trains, and airships appointed like bedrooms. Even the carriages of the 18th century were designed with an eye toward the comfort of the daring traveler. Travel itself was an adventure worthy of respect. While it is true that only the wealthy traveled back then, the design of the traveling conveyance was in itself a considerate art. Increasing democracy has led to increasing greed instead of greater comfort. Ships, trains, and buses today are no better than airplanes. Human beings have become units, mere appendages to the craft that ferry us (badly) from one terminal to another.

In my childhood, I read about zeppelins, wide-bodied airplanes, and the luxury of the Orient Express. At the dawn of the 20th century, we seemed on the verge of a great age of travel. Enter two world wars, which redesigned trains, airplanes, and ships for maximum efficiency in transporting troops and prisoners. When peace came, we didn't return to comfort and ease. We maintained the efficiency of wartime; the contempt for humans continues as if war were still raging. ■



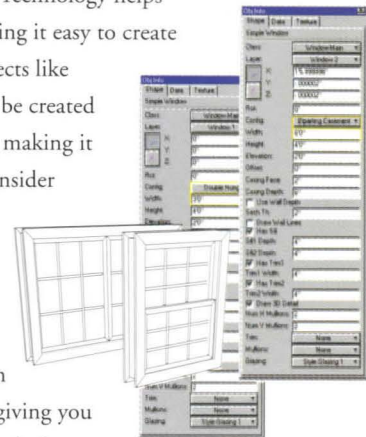
Bronskill & Co., Rendered with RenderWorks

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After 14 years of constant research and development, Diehl Graphsoft is proud to introduce VectorWorks—the next generation of MiniCAD. VectorWorks improves MiniCAD's proven CAD technology and merges new state of the art Object-Based design philosophy. This integration makes you more productive without sacrificing flexibility and control.

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The Strength of a Proven CAD Technology

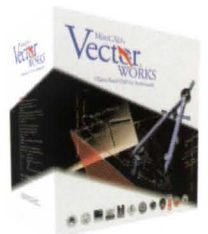
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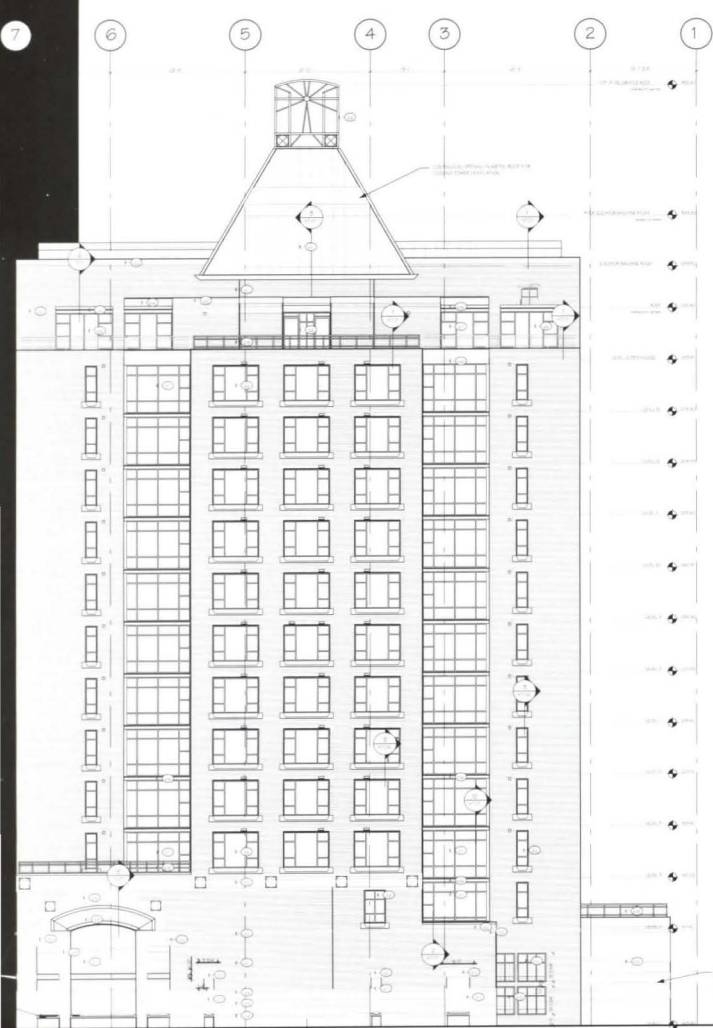
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