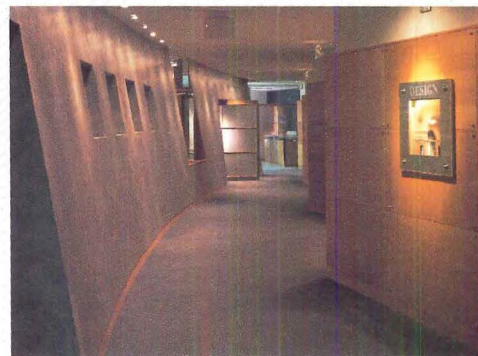
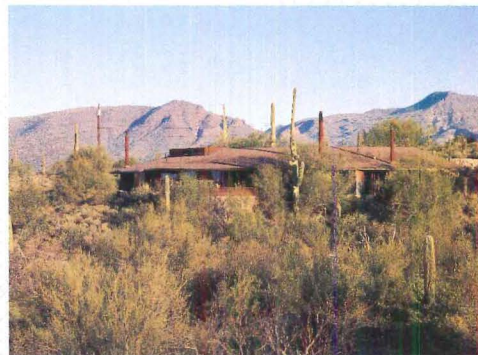


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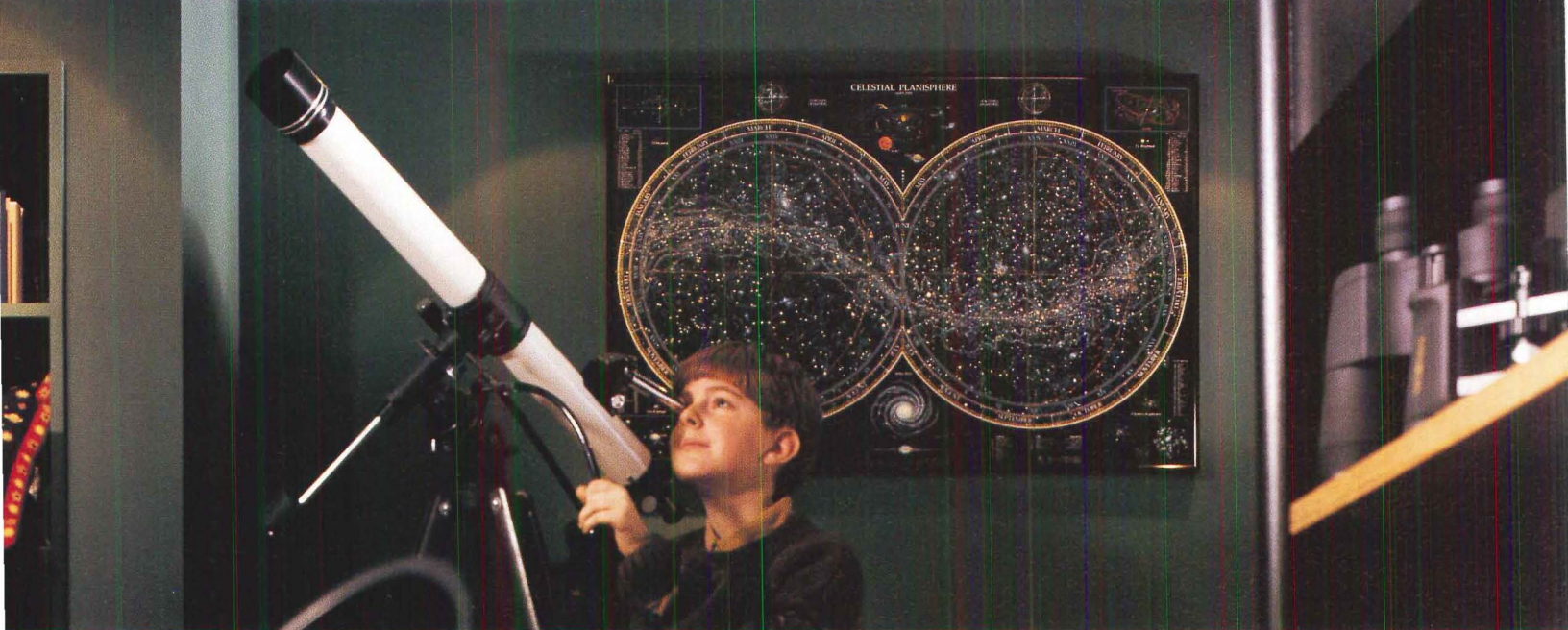
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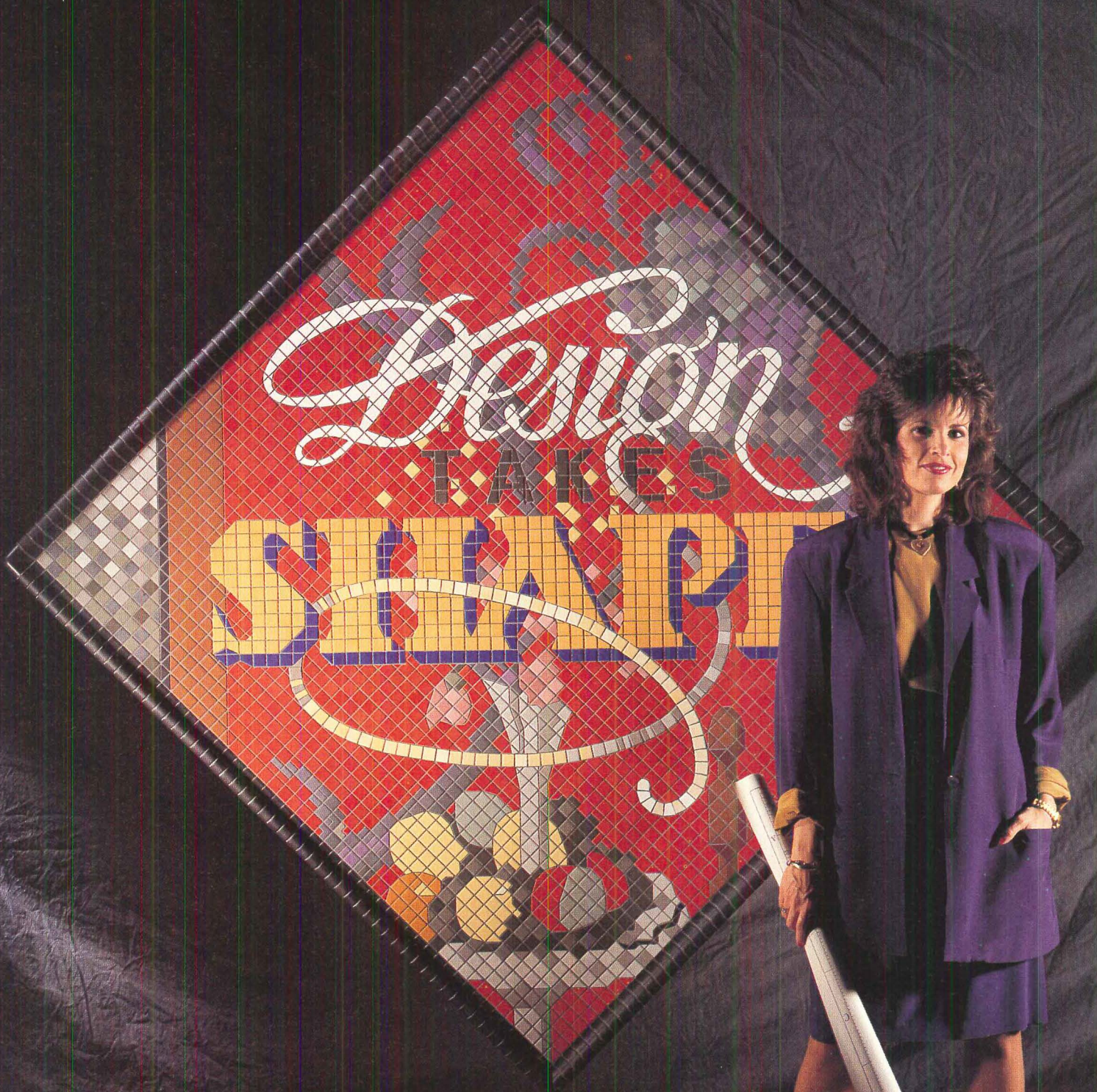
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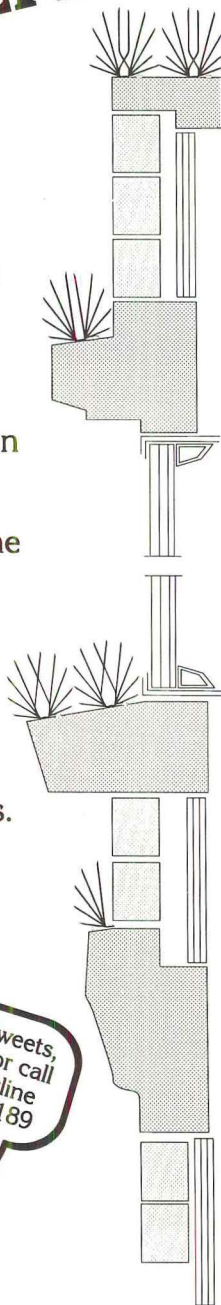
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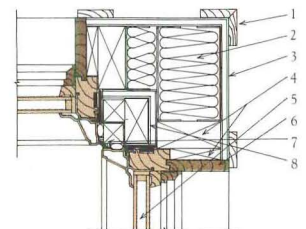
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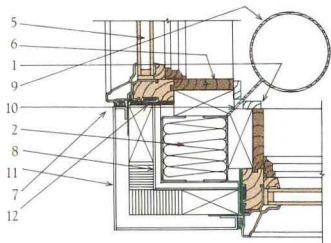


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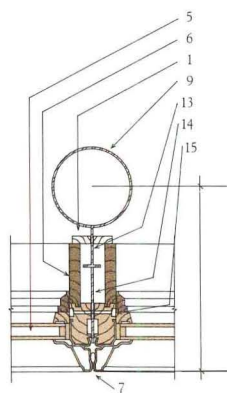
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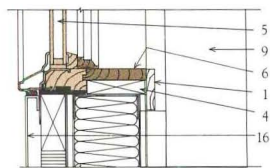
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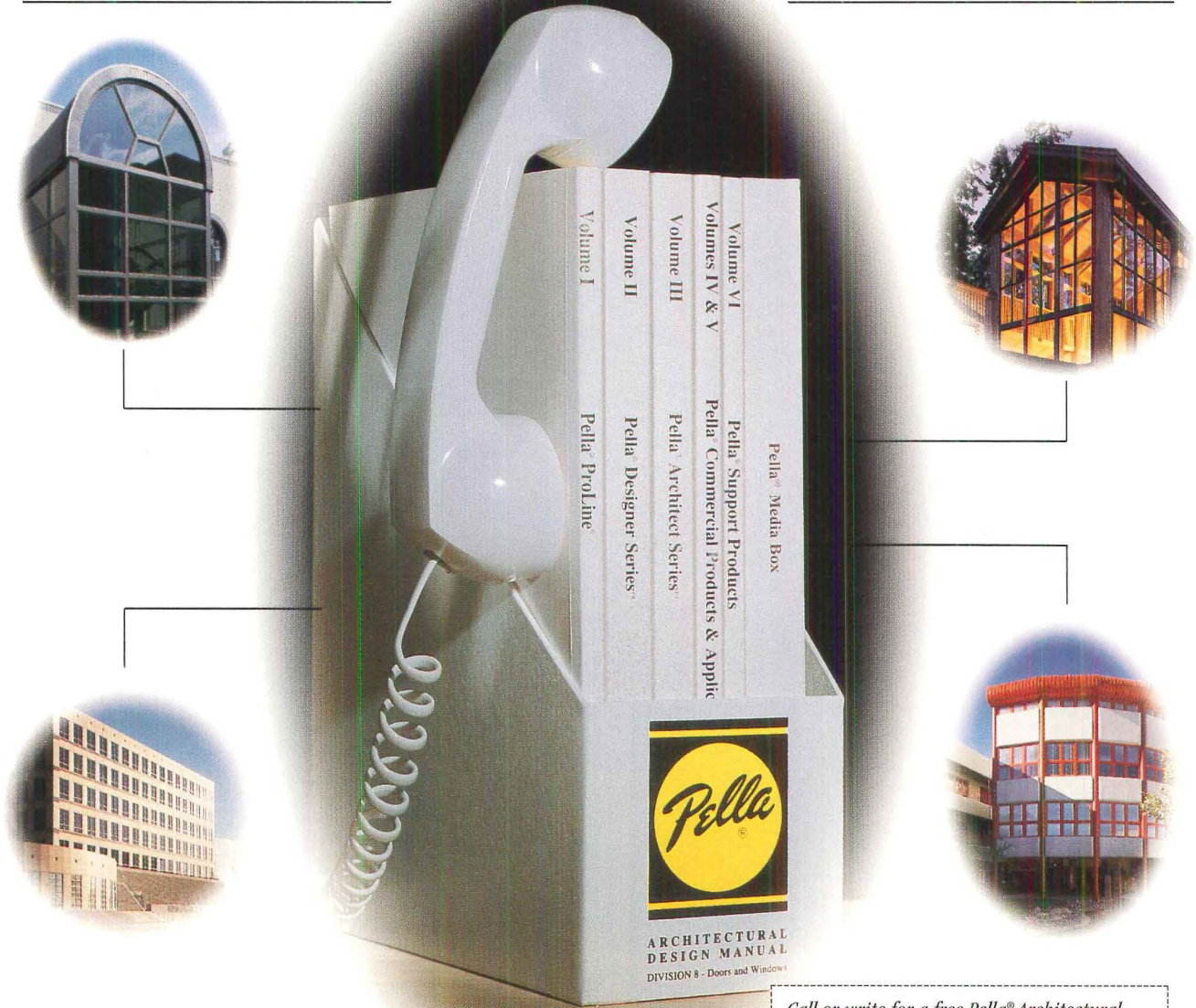
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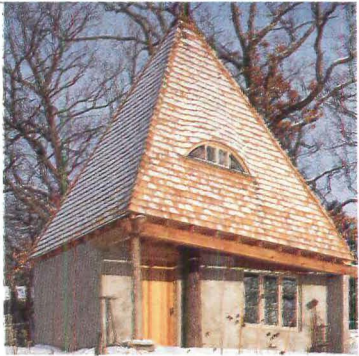
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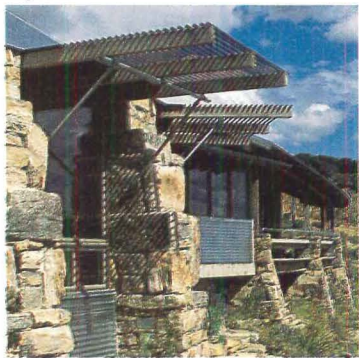
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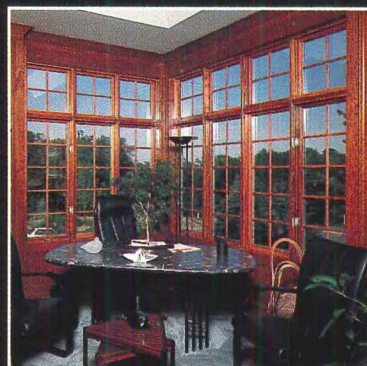
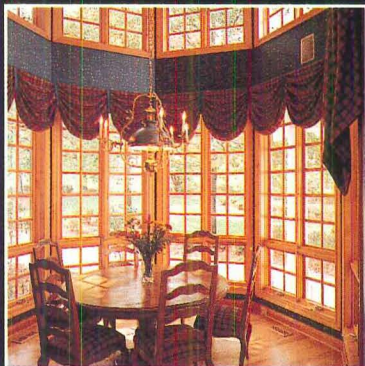
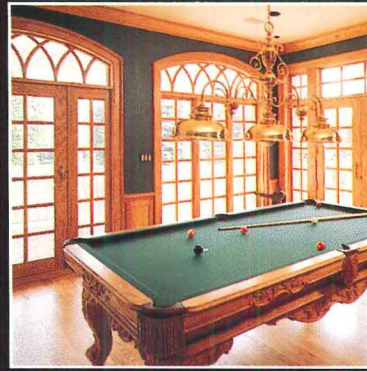
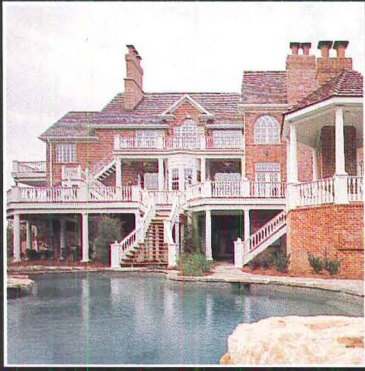
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The Art of Architecture

In the rush to redefine their role, architects are losing sight of the importance of design.

Many architects and observers believe the profession today is in a steep decline, blaming its demise on an overemphasis on esthetics. These critics argue that clients are more interested in delivery than design and contend that construction managers, contractors, and engineers are being hired over architects, who have for too long concentrated on artistry, rather than on business. Handwringing and moralizing over this cruel fate is the order of the day. Anyone who discusses or presents buildings in purely theoretical or formalist terms is dismissed as promoting the stars.

Ironically, this esthetic backlash comes at a time when architects are gaining a more prominent position in the minds of the public. The consumer market for architect-designed products, from furniture to jewelry, is growing; Michael Graves recently opened his own store in Princeton (pages 30-31 this issue) to sell his popular wares directly to the public. Several recent Hollywood films—*Jungle Fever*, *Sleepless in Seattle*, *Intersection*, *Indecent Proposal*—include architects as lead characters, portrayed as sensitive individuals concerned with human relationships. And the biggest blockbuster exhibition of the season, “Frank Lloyd Wright: Architect” at the Museum of Modern Art (MoMA) in New York City, treats the public to an old-fashioned portrait of the architect: an artistic genius with a forceful vision of how buildings can change our society for the better. The popularity of the Wright show and its spin-off exhibitions, books, and reproductions indicate that the public is still buying the value of architecture as art, even if the profession isn't.

Granted, given the recession and architects' shrinking role in the construction industry, steps must be taken to encourage new project delivery methods and alternative careers in the public and corporate sectors. But in their newfound rush to right professional wrongs, architects shouldn't point the finger at design, blaming the so-called star system for the downfall of lesser talents.

Nor should esthetics be segregated from building technologies and social responsibility as an either/or proposition. The best architecture, as underscored by Wright's oeuvre at MoMA, combines form, technology, and functionality into a unified, uplifting whole.

While architects must diversify their practices to gain a competitive advantage, they should not denigrate the role played by design, but educate their clients to its importance. We not only need movies and television shows with architects in leading roles, but also more risk-taking exhibitions on contemporary architecture as well as public consciousness-raising events focused on architects' singular talents.

Rather than pretend design doesn't matter, architects should fight for its survival. Design skills, after all, are what primarily distinguish architects from contractors, engineers, facility managers, and other players in the construction process.

Securing more commissions, leading project teams, and changing the face of communities are all meaningless if the tangible results lack artistic conviction. Architects must disavow the notion that esthetics are superfluous and become impassioned about the ability to shelter, inspire, and humanize society through the design of buildings. The art of architecture matters.

Debra K. Dietz

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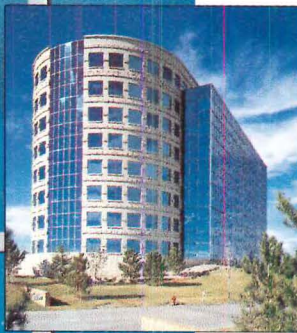
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Letters

Defending the Met

I take issue with Jayne Merkel's criticism of the new 19th-century galleries at the Metropolitan Museum of Art (ARCHITECTURE, February 1994, page 39). Merkel says that she looked in vain for limestone, plaster, and brocade only to find sheetrock. Apparently, she did not see the French limestone door surrounds and baseboards, the heavy plaster cornices and coves, and the carefully glazed walls—which are not sheetrock but heavy blue-board covered with three coats of plaster. She says the new galleries lack a "formal entrance sequence." Yet visitors entering from the second-floor elevator pass through four impressive portals. She calls the moldings "insubstantial," but once again she is wrong. They are custom-cast plaster, and the proportions are taken directly from Vignola and Palladio.

*Gary Tinterow
Engelhard Curator
The Metropolitan Museum of Art
New York City*

In her article, Jayne Merkel laments the choice of an architect who is not well known for the reworking of the galleries. Since when is popularity a criterion for awarding work? This exclusiveness only reinforces the monopoly that a relatively few firms have on high-profile projects.

*Brian J. Billings
Norristown, Pennsylvania*

Criticism of the Met's new galleries should focus on design, detailing, and construction rather than cheap shots at design work by people who aren't registered architects. Design quality, not registration, is the matter at hand. The Met's new galleries deserve serious analysis, as do the issues of Classical architecture and contemporary museum design.

*John Robbins, AIA
Oxford, Mississippi*

The redesign of the galleries is a remarkably sensitive—and sensible—response to the Beaux-Arts context of the Met. It is not Neoclassical,

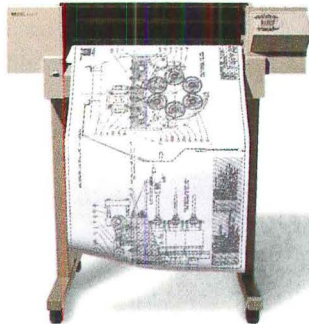
though it shares some of Neoclassicism's bias in favor of design expression versus material construction. Lighting and ventilation for the preservation of antique objects was no less of a challenge when the galleries were first designed than it is now, and the Tinterow-Harvey-Holm response to it is more sophisticated and certainly more informed by experience than the installation that preceded it.

*Stephen Falatko, AIA
Institute for the Study
of Classical Architecture
New York City*

I found the new galleries at the Met to be a vast improvement over the stark and confusing Andre Meyer Galleries, which formerly held the artwork. Each individual space is well proportioned and thoughtfully detailed in the Classical mode. The galleries are anything but cramped and shoddy as Merkel suggests.

*Martin Brandwein, AIA
Brooklyn, New York*

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May 13-16

AIA National Convention at the Los Angeles Convention Center. Contact: (202) 626-7395.

May 21

Symposium on wood timber trusses sponsored by the Delaware Valley Chapter of the Association for Preservation Technology. Contact: (610) 565-1131.

June 1

Materials submission deadline for the 1994 Hudson Valley Design Awards, cosponsored by Westchester/Mid-Hudson and Eastern New York AIA chapters. Contact: (914) 485-7844.

June 3-4

Forms for the 21st Century, a courthouse design symposium, sponsored by New York AIA chapter's Committee on Architecture for Justice, in New York City. Contact: (212) 529-8131.

June 5-7

Wallace Clement Sabine Symposium on Architectural Acoustics, held in conjunction with the annual meeting of the Acoustical Society of America, in Cambridge, Massachusetts. Contact: (617) 253-1703.

June 13-15

NeoCon '94: The Building Show, at the Merchandise Mart in Chicago. Contact: (800) 680-4636.

June 14-18

Remaking the Classics: Historic Theaters Performing in Today's Markets, a conference sponsored by the League of Historic American Theaters, in Los Angeles. Contact: (202) 783-6966.

June 20-23

Architecture/Engineering/Construction Systems '94, a conference on automation systems for building designers, in Washington, D.C. Contact: (203) 665-0153.

June 22

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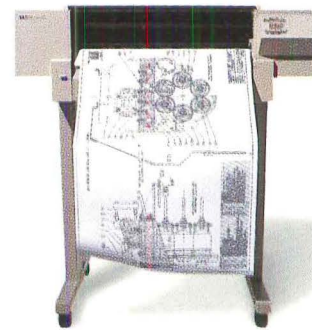
June 24

Design Pride '94, the first international lesbian and gay design conference, in New York City. Contact: (212) 969-8773.

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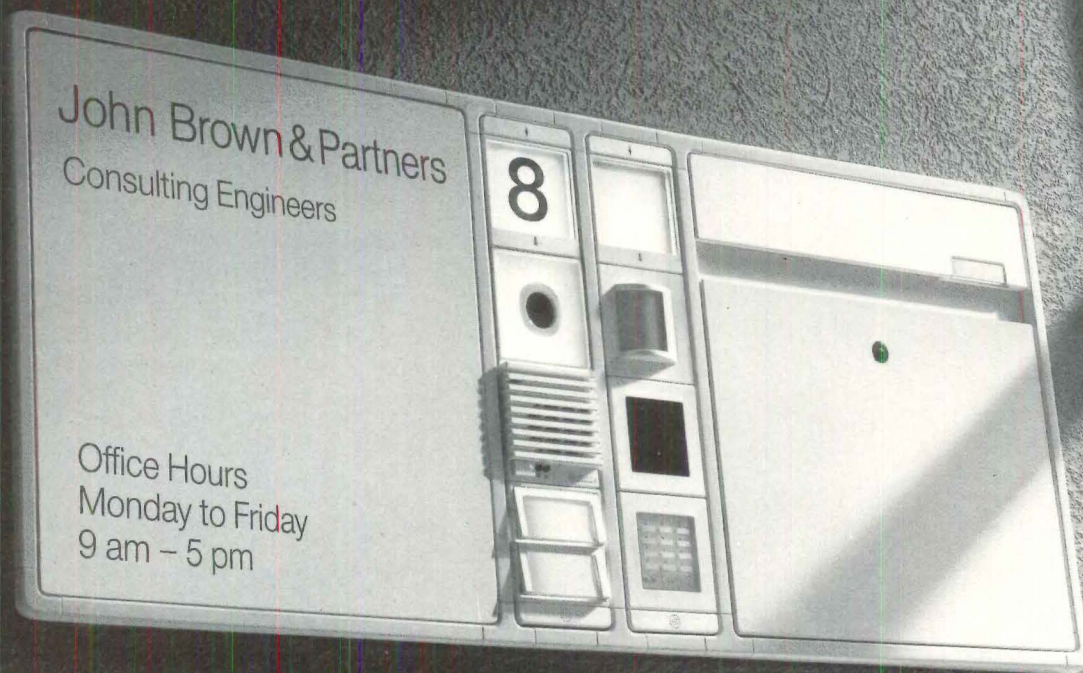
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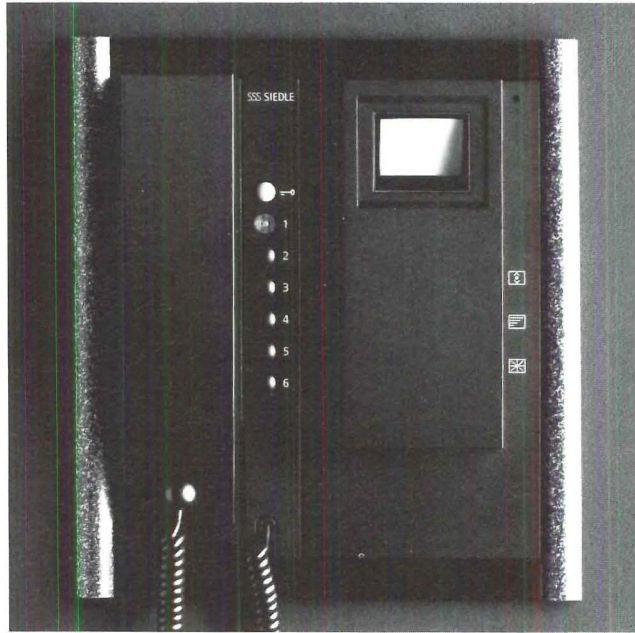
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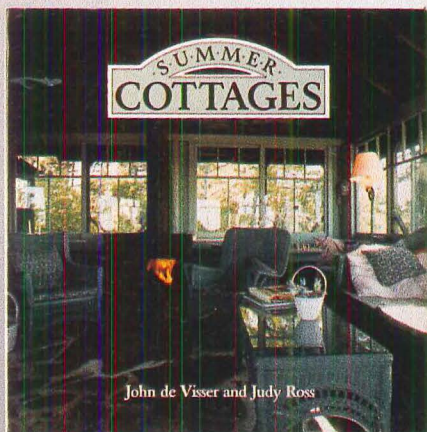
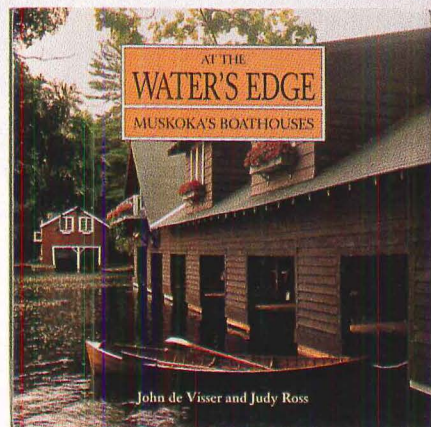
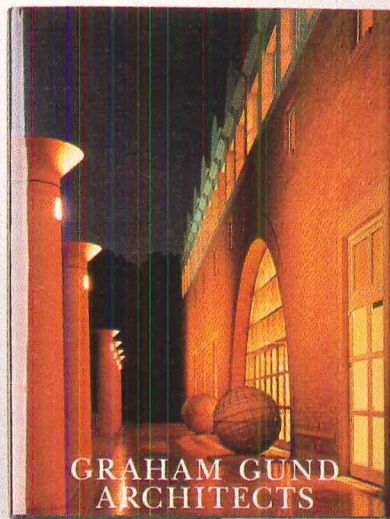
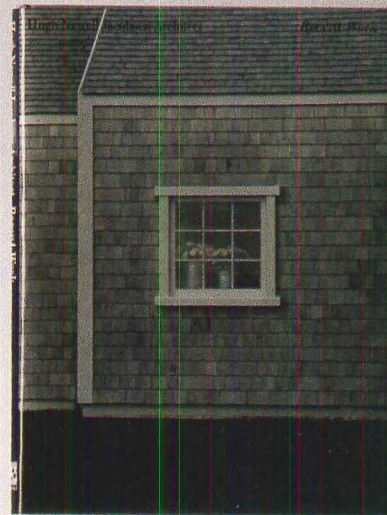
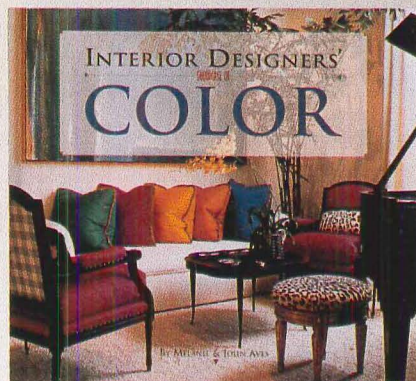
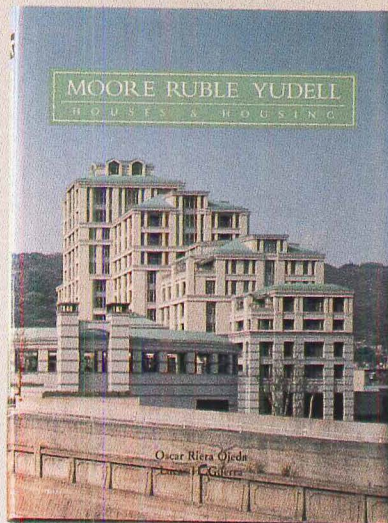
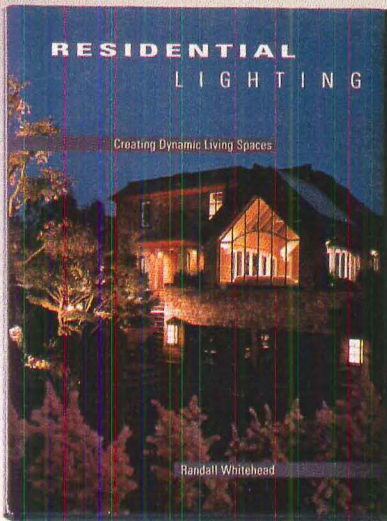
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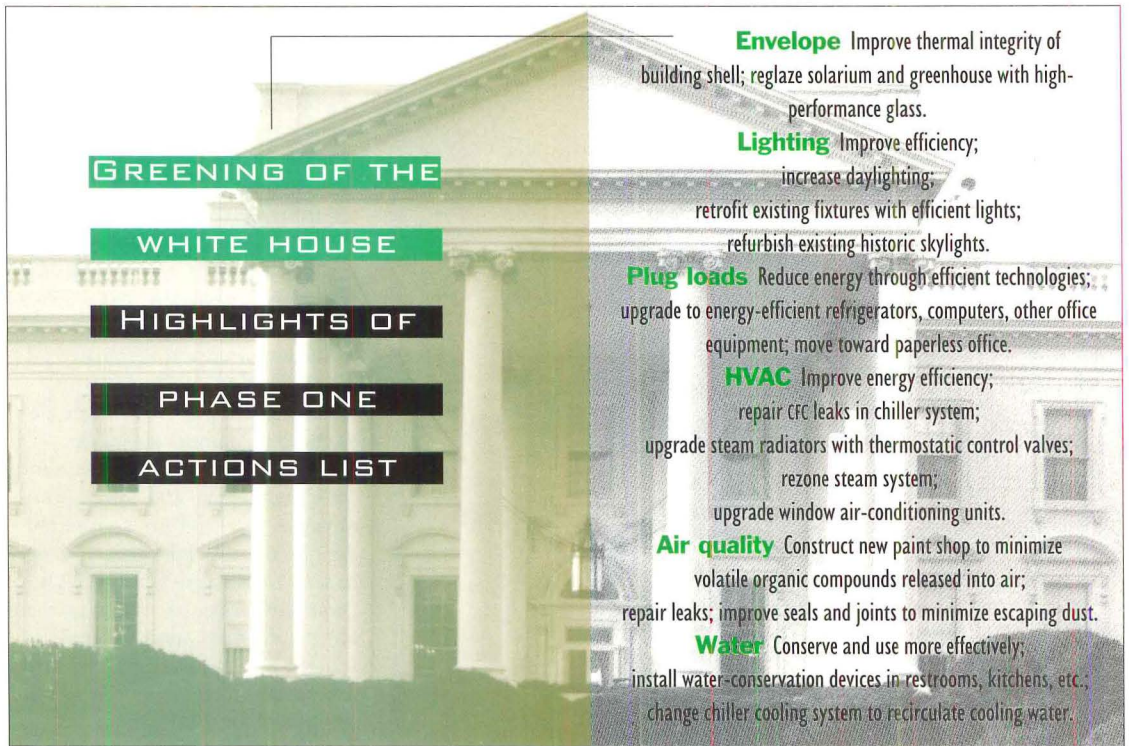
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Green Plan Unveiled for White House

On Earth Day last year, President Bill Clinton issued a directive to make the White House a model for energy efficiency and waste reduction and a showcase for new environmental technologies. To help the president meet this challenge, the AIA coordinated a three-day "Greening of the White House" workshop last summer that involved 100 experts in architecture, engineering, building management, and other related fields. The team investigated the heating and cooling systems of the Executive Mansion and adjoining Old Executive Office Building, their building envelopes, indoor air quality, water and waste management, and lighting systems.

The results of the July 1993 workshop and those of earlier energy and environmental audits conducted by the Department of Energy and the Environmental Protection Agency were compiled into a comprehensive report released in March. The "Phase I Action Plan" outlines more than 50 retrofit measures and system upgrades that will be undertaken in the White House, the Old Executive Office Building, and support facilities.

The measures include upgrading lighting systems with energy-efficient compact fluorescent and metal halide fixtures to reduce electricity consumption by 65 percent to 75

percent; installing thermostatic control valves on existing steam radiators; replacing air-conditioning units with more efficient models; and increasing recycling and conservation efforts. Historic skylights will also be refurbished to increase daylighting, and insulated windows will be installed throughout the Old Executive Office Building. A number of the proposed retrofits have already been accomplished, including upgrading lighting systems and installing energy-efficient appliances; other recommended measures should be completed by spring 1996.

Preliminary work on the second phase of the White House project has already been completed by a team coordinated by the AIA and the Department of Energy. This phase is scheduled for completion in the fall and includes the construction of mock-ups of energy-efficient offices. These offices will integrate daylighting with more efficient lighting and cooling systems. The third and fourth phases of the project, which require congressional authorization and will comprise such large-scale measures as a full HVAC system upgrade, are targeted for completion by the end of the decade.

As part of the AIA's ongoing commitment to the greening of the White House, the Institute plans to develop an educational package—a "workshop-in-a-box"—that will help Americans replicate the success

Envelope Improve thermal integrity of building shell; reglaze solarium and greenhouse with high-performance glass.

Lighting Improve efficiency; increase daylighting; retrofit existing fixtures with efficient lights; refurbish existing historic skylights.

Plug loads Reduce energy through efficient technologies; upgrade to energy-efficient refrigerators, computers, other office equipment; move toward paperless office.

HVAC Improve energy efficiency; repair CFC leaks in chiller system; upgrade steam radiators with thermostatic control valves; rezone steam system; upgrade window air-conditioning units.

Air quality Construct new paint shop to minimize volatile organic compounds released into air; repair leaks; improve seals and joints to minimize escaping dust.

Water Conserve and use more effectively; install water-conservation devices in restrooms, kitchens, etc.; change chiller cooling system to recirculate cooling water.

of measures implemented at the White House in their own houses.

The greening of the White House is a step in the right direction, but the project does little to satisfy environmental groups lamenting Clinton's disappointing track record on environmental issues in his first year of office. The retrofits should cut the mansion's \$1.6 million annual energy bill by about 30 percent, but the benefits are mainly symbolic.

"The Clinton administration has done a good job putting the environmental issues on the table, but it has not exerted the leadership necessary to move them through Congress," notes Carl Pope, executive director of the Sierra Club, a grass-roots environmental group.

For example, environmental advocates point to the approval Vice President Al Gore gave to a controversial hazardous-waste incinerator in East Liverpool, Ohio, that he had initially opposed; they cite Interior Secretary Bruce Babbitt's compromise with sugar farmers in Florida that allows continued polluting of the Everglades; and they count the dismantling of the Council on Environmental Quality—along with the failure to elevate the Environmental Protection Agency to cabinet status—all as disturbing signs that the Clinton administration is settling for an environmental policy that does not live up to its campaign promises.—*Raul A. Barreneche*



CERVIN ROBINSON

ADELBERT HALL: Klimt & Halsband.



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CHRIS J. ROBERTS

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STEVE ROSENTHAL

ARROW INTERNATIONAL: Stephanie Mallis.

AIA Announces Honor Awards for Interiors

Eight projects were selected this January to receive the AIA Honor Awards for Interiors. A four-person jury, chaired by Graham Gund, critiqued the projects according to three categories: design resolution and advancement, technical or environmental innovation, and preservation and restoration. In recognition of the importance of design excellence in interior architecture, the awards, initiated in 1992, were elevated to the same status as the Honor Awards for Architecture and for Urban Design and will be presented at the 1994 AIA convention. As a group, the eight projects range in scale from single-family houses to corporate headquarters, and all share a meticulous attention to detail.

In the category of design resolution and advancement, two projects were recognized for their distinct interpretations of house. The Lawson/Westen house designed by Los Angeles-based Eric Owen Moss Architects "makes you rethink the elements that are taken for granted," claimed the awards jury. Planted on the center of the site, the kitchen determined a series of structural bearing points, which in turn suggested the evolution of plan and section throughout the house.

The Modern spaces of Elliott + Associates Architects' glass and steel Connecticut residence were inspired by the client's Modern and African art collections. Calling it a mixture between museum and home, jury members applauded the house for "impeccable detailing and a total relationship of its parts."

Similarly, two exhibition spaces—the Seafirst Gallery in Seattle designed by NBBJ and the Knoll International Showroom in Frankfurt, Germany, designed by the San Francisco and London offices of Studios Architecture—create strong design elements without subordinating the artwork they house. Awarded for its distinctive technical solutions, the NBBJ-designed gallery features movable walls on bronze wheels, allowing for multiple spatial configurations within the 3,000-square-foot space. The Knoll International Showroom by Studios transforms unfinished spruce-timber posts into a lattice that screens offices and support spaces from the showroom.

The Arrow International headquarters in Reading, Pennsylvania

(ARCHITECTURE, October 1993, pages 58-65), designed by New York City interior designer Stephanie Mallis, is one of two corporate headquarters that received an Interior Award this year. Recognized for its design resolution, the space unites offices, laboratories, and manufacturing in a "carefully thought out solution," noted the jury. The other corporate interior is San Francisco-based Swatt Architects' renovation of the Icehouse for Levi Strauss & Company. Built in 1924 to manufacture ice, the masonry structure was revamped to expose brick walls, timber columns, and beams and upgraded with seismic steel bracing and new mechanical systems.

Two New York City architects were also recognized for restoration and renovation work: Prentice & Chan, Ohlhausen for the John Tishman Auditorium at New York City's New School for Social Research and R.M. Klimt & Frances Halsband Architects for the Adelbert Hall Administration Building on the campus of Case Western Reserve University. Prentice & Chan, Ohlhausen were charged with renovating the Tishman Auditorium, originally designed by Viennese architect and stage designer Josef Urban in 1931. Extensive paint analysis revealed the original, bright colors of the interior, which had been painted white for years. An expanded stage coupled with new mechanical systems, lighting, and audiovisual and acoustic systems created "a one-of-a-kind auditorium," the jury remarked.

Due to alterations and fire damage, only the sandstone exterior walls and floor structure remained when R.M. Klimt & Frances Halsband Architects began new construction at the Adelbert Hall Administration Building. Extensive structural upgrades, new mechanical systems, and handicap-accessible circulation accommodate new programmatic requirements, while maintaining a "consistency of detailing," according to the jury.

Governed by the physical restrictions of a building's envelope, these designs prove that the interiors of facilities need not necessarily be subordinated to their exteriors. They demonstrate architects' ingenuity in manipulating structural confines—old or new—to their advantage. In the configuration of space, the utilization of materials, and the interpretation of program, flexibility predominates.—Ann C. Sullivan



TOM BONNER

LAWSON/WESTEN HOUSE: Eric Owen Moss Architects.



TOM BONNER

LAWSON/WESTEN HOUSE: Cylindrical kitchen.



ENGELHARDT & SELLIN / ARCHITEKTURFOTO

KNOLL SHOWROOM: Studios Architecture.



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KNOLL CONFERENCE ROOM: Metal vault diffuses light.



CHAS MCGRATH

THE ICEHOUSE: Swatt Architects, San Francisco.



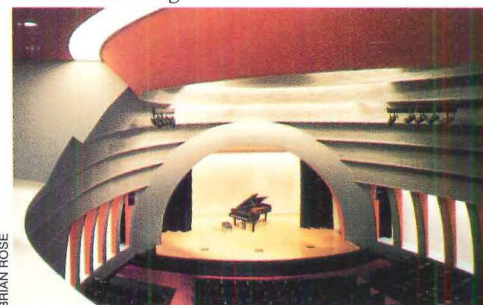
CHAS MCGRATH

THE ICEHOUSE: Original timber structure.



BRIAN ROSE

TISHMAN AUDITORIUM: Prentice & Chan, Ohlhausen.



BRIAN ROSE

TISHMAN AUDITORIUM: Renovation reinstates colors.

Details

Steven Holl has won a competition to design a new chapel at Seattle University. **Richard Meier & Partners** has been selected to design the Museum of Television & Radio in Los Angeles. **McClier**, the award-winning firm that rehabilitated the historic Rookery in Chicago, has been commissioned to restore the 1895 Reliance Building. The design team of **Quennell Rothschild Associates/Signe Nielsen**, in association with **Beyer Blinder Belle**, has been selected to design a 4.5-mile master plan for New York City's waterfront on the Hudson River. Washington State University has commissioned **The Callison Partnership** to design a 93,000-square-foot engineering research laboratory. The University of Oregon School of Architecture and Allied Arts has announced the **Pietro Belluschi** Distinguished Visiting Professorship in Architectural Design. **Dawn Clark Netsch**, wife of former SOM partner **Walter Netsch**, is running as the Democratic candidate for Governor of Illinois. **Mayers & Schiff Associates** has been selected to renovate Columbia University's 1912 Fernald Hall, designed by McKim, Mead, and White. **Hanson Lind Meyer** is designing the \$132 million Orange County Courthouse complex in Orlando, Florida. Korea's largest national television network has awarded **Tai Soo Kim** with the Korean Overseas Compatriots Prize. **Cambridge Seven Associates** is developing a plan to renovate Baltimore/Washington International Airport's main terminal. **The Prince of Wales' Institute of Architecture** in London has launched a new magazine, titled *Perspectives on Architecture*. **Lenore M. Lucey** has resigned from the position of Executive Director of the AIA New York chapter to join the business development group of Lehrer McGovern Bovis. Piano & Rogers' 1977 Pompidou Center in Paris will undergo a \$110 million renovation under the direction of **Renzo Piano**. Former Ellerbe Becket design principal **Mehrdad Yazdani** has joined Los Angeles-based Dworsky Associates as a principal. **John Gaunt**, former CEO of Ellerbe Becket, has been named the new Dean of the School of Architecture and Urban Design at the University of Kansas. **Vivian Loftness** has been appointed head of Carnegie Mellon University's Department of Architecture in Pittsburgh, Pennsylvania.

Holocaust Memorials at Jewish Museum

Few events reveal our century's urge toward visual representation like the Holocaust. Architects and artists give physical form to its dark spirits in a provocative exhibition at the Jewish Museum in New York City. "The Art of Memory: Holocaust Memorials in History," on view through July 31, is the first American exhibition to examine how museums and monuments in Europe, Israel, and America have shaped public memory of the Holocaust since the mid-1940s. More than 200 images and objects, including photographs, sculptural maquettes, videos, sketches, and architectural models, illuminate the show's point. "Depending on where these memorials are constructed and by whom," writes guest exhibition curator James E. Young in the exhibition literature, "these sites recall the past according to a variety of national myths, ideals, and political needs."

"The Art of Memory" exhibition underscores that Holocaust memorials induce an extreme sense of anxiety and displacement. None is accompanied by the celebratory lift associated with traditional memorials; the Holocaust's mass murders are so outside everyday experience that reliving them through symbolic imagery is nearly impossible.

"Daily language," wrote Italian author Primo Levi upon revisiting Auschwitz-Birkenau, "is for the description of daily experience, but here is another world, here one would need a language 'of this other world,' a language born here."

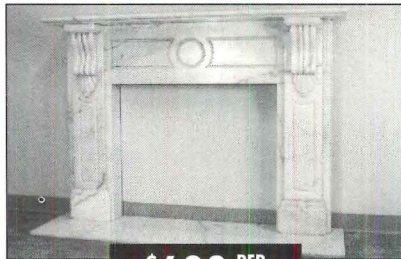
Architects and artists often abandon the figurative for abstraction as a way to approximate Levi's alternate-world language. Replicated in architect Lynne Breslin's excellent installation by a photographic panorama, the 1964 memorial at Poland's Treblinka extermination camp by Franciszek Duszenko and Adam Haupt is a great example, a symbolic graveyard of 17,000 jagged

granite stones, hundreds of which bear the names of Jewish communities in Poland that were destroyed.

Architecture, given its capacity to abstract, may seem the ideal art of memory, but it, too, offers unique dilemmas. The U.S. Holocaust Memorial Museum in Washington, represented here with a model, drawings, and sketchbook by architect James Ingo Freed, sits between the Washington Monument and the Jefferson Memorial as a symbol of America's role in liberating the camps and of our own egalitarian ideals. Freed's design evokes the high-functionalist style of the death camps by choosing their bridges, towers, and details as points of departure. Well-intentioned, the result nevertheless conveys an industrial chic, turning the camps' machinery of death into decorative detail.

In contrast, the jagged and discontinuous forms of Daniel Libeskind's design for the Jewish Museum extension of the Berlin Museum suggests, according to curator Young,

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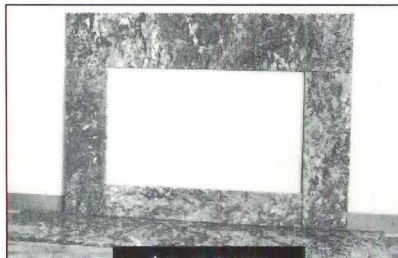
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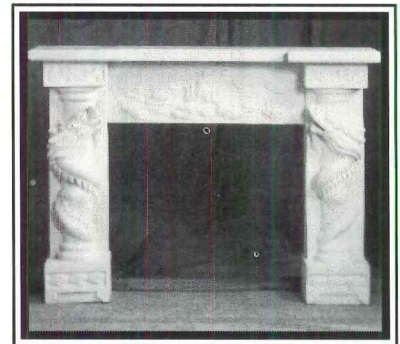
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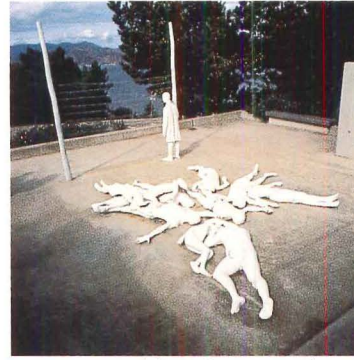
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"a futility in reconciling past and present." A broken Star of David, Libeskind's building also encodes the Holocaust-produced rupture of Jewish life in Berlin. For Germans, the Holocaust assaults national identity, but Libeskind conveys continuity with its dark past by incorporating the names of German Jewish victims into his building. In fact, the listing of names is a motif that occurs in many of the exhibited projects, perhaps acknowledging that one language capable of conveying the Holocaust is the banal recitation of murdered victims, desecrated towns, and destroyed families.

For some artists, architecture is a dangerously susceptible way to memorialize Nazi victims, considering the Third Reich's penchant for monument building. Sculptor Henry Moore described the 1957 competition for a memorial at Auschwitz-Birkenau as an attempt to create "a monument to crime and ugliness, to murder and horror." Following Moore's admonition, artist Shimon

Attie projected slides of former Jewish residents onto existing Berlin buildings, as ghost images of a forgotten past. Artist Hans Haacke rekindled the past for the Austrian citizens of Graz by re-creating the swastika-emblazoned banners that Nazis draped over the town's patron saint in 1938. Although Haacke's antimonument challenges the very premise of memorials, the relevance of his work became clear when Neo-Nazis firebombed the installation.

Because "The Art of Memory" reveals how nations, their artists, and architects create public memory, the show at New York City's Jewish Museum is especially timely for Americans seeking to integrate the raw edges of our past into national monuments, museums, and historic sites. Literal and metaphoric, real and simulated, Holocaust memorials take shape through rich and complex forces. Interpreting American history, complete with its racism and intolerance, requires the same nuanced layering.—*Donald Albrecht*



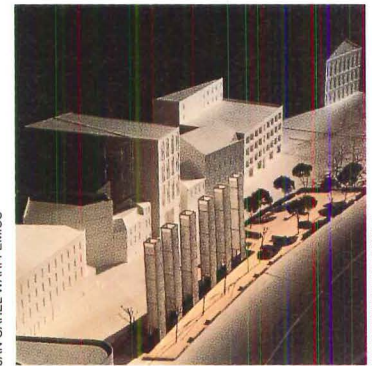
GEORGE SEGAL: *The Holocaust*, 1984.



HANS HAACKE: *Victorious*, 1988.



KARIN DAAN: *Homomonument*, 1987.



SAITOWITZ: *New England project*, 1990.

DESIGN COMPETITION

The Pittsburgh Cultural Trust and the City of Pittsburgh invite artists, landscape architects, architects and other designers to submit qualifications for preparing the schematic design, design development and contract documents for a two-level riverfront park system with a budget of \$5.75 million in Pittsburgh, Pennsylvania. Individuals may submit separately or combine to propose the complete team needed for the project.

Submissions should include resumes of all applicants and a description of relevant projects, including up to 20 2" x 2" slides. All questions should be directed to (412) 471-6070 ext. 109.

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Graves Design Store Opens in Princeton

The sign out front reads: "Graves Design Studio Store—Objects for the Home." But a better name might be simply Gravesland, given the hundreds who have been making a Graceland-like pilgrimage to the yellow house at 338 Nassau Street in Princeton, site of local architect Michael Graves' newest venture. Inside is a 250-square-foot store devoted to Graves-designed teapots, jewelry, desk clocks, picture frames, and other "essential details for the well-designed life."

Graves opened the store in February to provide a one-stop shop for his entire collection of designer gifts and "tabletop" housewares. The 1850s wood frame house also contains Graves' product design studio and a museum-quality archives and conference area lined with shelves featuring products past, present, and future. For more than a decade, individual manufacturers have marketed

Graves' items through their own distribution networks. But there wasn't one place where Graves' admirers could find his wares all under one roof—until now.

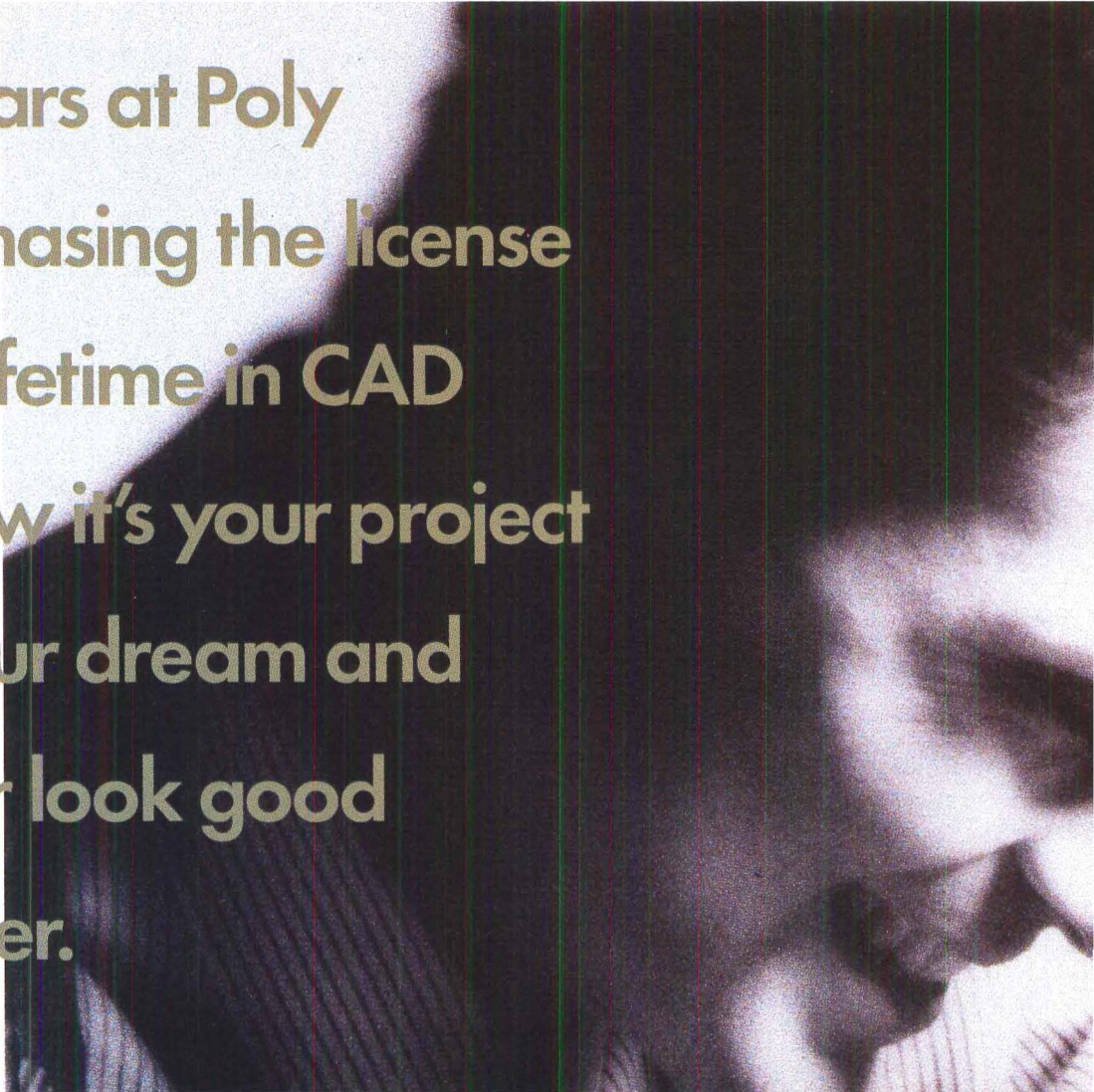
Lined with shelves and painted in the architect's signature shade of gray-blue, the shop is filled with objects priced from \$2,375 for a Steuben glass vase to \$10.95 for a box of 10 note cards that depict some of Graves' best known buildings. A surprise best-seller has been "fortune cookies"—colorful leather cases that contain customized messages (\$16 each). Another top seller is a sterling silver charm bracelet featuring miniature versions of kitchen wares by Graves (\$725). For those who can't make it to the store, there's a Graves Design Collection Catalog.

Graves makes no apologies about the fact that he sees the retail operation as a way to supplement his income from teaching and practice. But he claims the venture isn't a retreat from architecture. Over the past 20 years, he has always spent

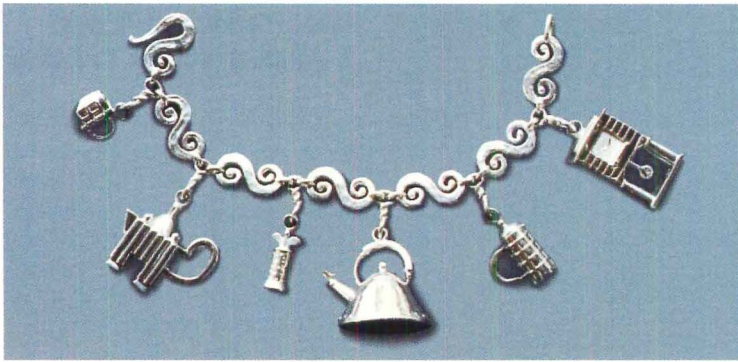
one-quarter to one-third of his time designing objects rather than buildings, and he doesn't expect that percentage to change.

Graves' career as a product designer took off in 1983 when Alessi asked him, along with several other architects, to design a silver tea service. Pleased with the result, Alessi returned with a request for a tea kettle. The commercial success of the Graves-designed whistling bird model, with more than half a million sold, led to additional work from Alessi and other manufacturers. Formally established in 1990, the product design department of Graves' firm now boasts six full-time employees.

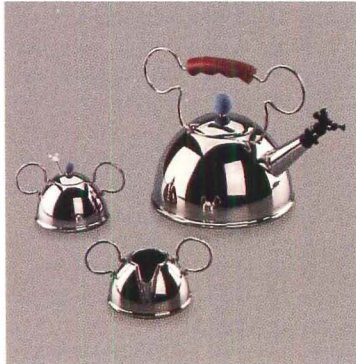
If the store has one overriding message, it is that product design is another way for architects to touch people's lives. Not many, after all, can afford a house designed by Michael Graves. But anyone yearning for the "well-designed life" can afford something from his store. Can a Graves discount outlet be far behind?—*Edward Guntz*



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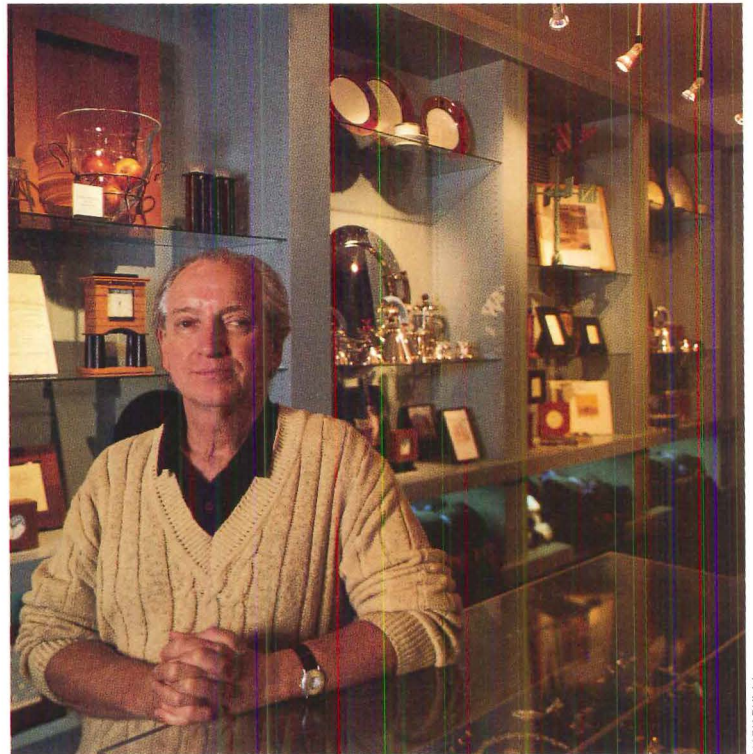
BRACELET: Graves' design for Belvedere Studio incorporates kitchen charms.



TEA SERVICE: Mickey Mouse for Möller.



BOOKENDS: By Gilbert International.



PROPRIETOR: Michael Graves opened Princeton store to sell his designer wares.

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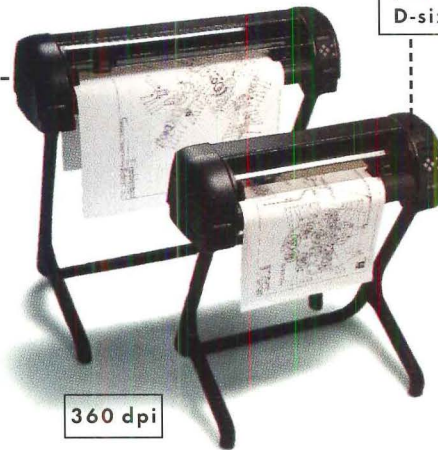
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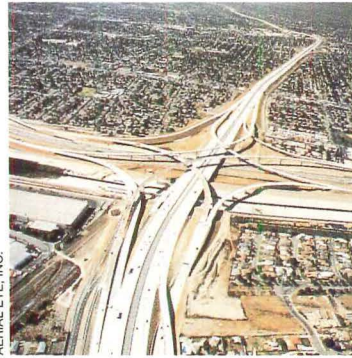
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MERRETT T. SMITH

YOUNG CITATION: Ki Suh Park.



AERIAL EYE, INC.

CENTURY FREEWAY: Urban infrastructure.



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KOREATOWN PLAZA: Shopping center.



LINDA L. SALZMAN

PLAZA INTERIOR: Skylit central court.

Gruen's Ki Suh Park Awarded Young Citation

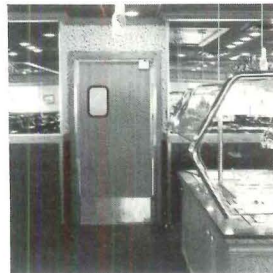
Ki Suh Park, managing partner of Gruen Associates in Los Angeles, has been named by the AIA as the 1994 recipient of the Whitney M. Young, Jr., Citation. Named for the late civil rights leader, the award recognizes an architect who is actively involved in solving social problems and promoting cultural diversity.

Park immigrated from South Korea to America in 1953. He received a bachelor's in architecture from the University of California at Berkeley, and a master's in architecture and in city planning from MIT. Since joining Gruen Associates in 1961, Park advanced to managing partner, directing projects worldwide. This January, Park increased his firm ownership to 51 percent, making Gruen Associates an official minority business enterprise.

A Los Angeles resident for more than 33 years, Park has long been

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active in community development. He is currently involved in several organizations, including Rebuild L.A. and the Korean American Coalition. "I have spent enormous effort to return the favor that society has given to me," Park explains, "to give back to the area and help the Korean-American community."

The first Korean-American named to the AIA College of Fellows, Park has earned an international reputation as an architect and planner. He was Partner-in-Charge of the Los Angeles Convention Center expansion, site of the 1994 AIA National Convention. He is serving as Host Chapter Chair of the convention and will be presented with the Whitney M. Young, Jr., Citation during the ceremonies this month.

Park's vision influences the Los Angeles area most in infrastructure projects such as the I-105 Glenn Anderson (Century) Freeway Transitway, which has led Park to practice a policy of "empathy," an approach that allows him to effec-

tively deal with conflicting interest groups. "Empathy is not sympathy," he explains. "It is to look through the eyes of the other person, detached from personal values."

When Park becomes involved in a community conflict, he studies the issues from different positions. "When I go to a community meeting, the success of the meeting is not measured by the number of times the participants applaud or criticize," the 62-year-old architect points out. "It is judged by how many of the comments I have anticipated."

California Architect Wins Kemper Award

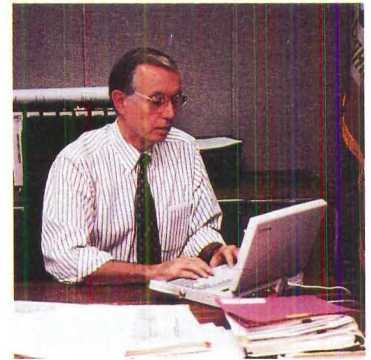
The Edward C. Kemper Award—named for the AIA's first Executive Director—recognizes contributions to the profession through the AIA. In recognition of over 20 years of service at local, state, and national chapters, the AIA board named

Harry C. Hallenbeck, state architect of California, as the 1994 recipient.

Hallenbeck's leadership is characterized by skillfully managing finances and promoting the public profile of the architect. While an officer at California's AIA East Bay chapter and at the AIA California Council (AIACC), Hallenbeck implemented programmatic budgeting, which led to the adoption of his financial methods at the national chapter.

As state-level president, Hallenbeck championed architects' involvement in the state legislature. He was instrumental in moving the AIACC headquarters from San Francisco to Sacramento, a decision that afforded greater visibility and increased access by the AIA to the state legislature and regulatory agencies.

Hallenbeck's efforts have targeted the practitioner as well as the chapter. He initiated professional development programs at the AIACC and directed surveys of salary and benefits and professional liability insurance. In 1991, Hallenbeck was



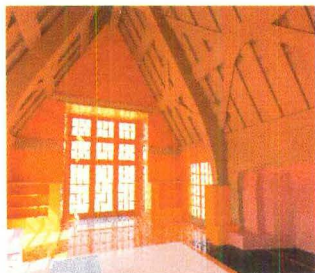
KEMPER WINNER: Harry C. Hallenbeck.

appointed State Architect by California Governor Pete Wilson. He has improved the architect selection process for state projects and is rewriting the state's owner/architect agreements. Hallenbeck likens the 450-person State Architect's office to the AIA and to any practice: It is easy for a business to become fragmented when it focuses on singular issues. With his broad view of the profession, Hallenbeck's leadership encourages efficiency.—A.C.S.

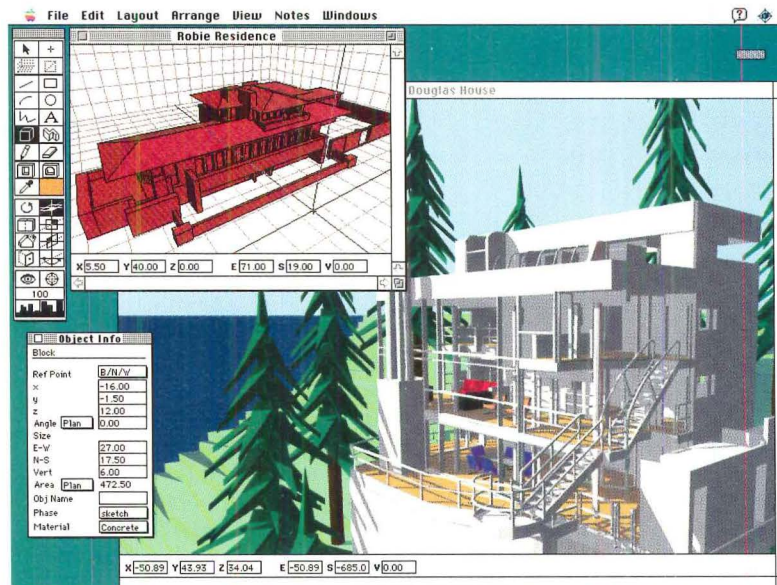
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News

AIA Announces Photo Contest Winners

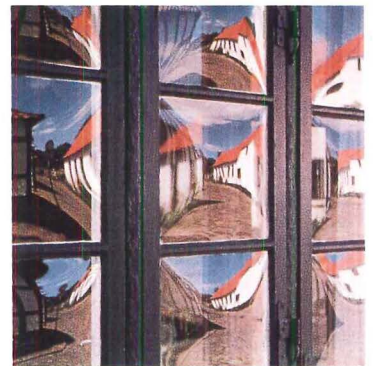
Coordinated by AIA St. Louis, the national AIA annual architectural photography competition is open to architects and associate members of the AIA, excluding professional photographers. All entries must contain an element of the built environment.

This year's first-place winner is Jens Henry Vange of St. Paul, who received \$1,000 for his photograph of a window in Ebeltoft, Denmark, which captures reflections of the house across the street. The second-place prize of \$700 was awarded to Steven House of San Francisco for his image titled "Mysterious Glow," a combination of natural and artificial light captured in an abandoned courtyard house in Zacatecas, Mexico. The third-place image, "Collage," was taken in Arcos, Spain, by Andrew Goldman of New York City, who received \$300.

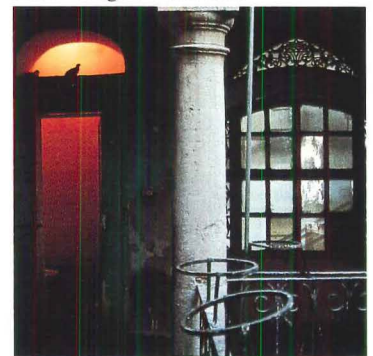
Thomas V.S. Cullins of Burlington, Vermont, won the Louise Bethune Award, named for the first woman AIA member, for his image titled "Long Red Barn." This \$500 prize is presented each year for an image photographed in the U.S. Ten additional entries received Special Commendation Awards.

The 14 winning images will be featured in an exhibit at the AIA National Convention in Los Angeles this month and will travel to numerous AIA chapters across the nation. The photographs will also be published in the AIA's 1996 calendar.

The distinguished judges of this year's AIA photography contest were Grant Mudford, a Los Angeles-based photographer; Cynthia Weese, dean of the Washington University School of Architecture; and Kiku Obata, president of the St. Louis-based graphic design firm Kiku Obata & Company. Contest details are available from the AIA St. Louis chapter: (314) 621-3484.—A.C.S.



FIRST: Vange's "Reflected."



SECOND: House's "Mysterious Glow."



THIRD: Goldman's "Collage."



BETHUNE WINNER: Cullins' "Red Barn."

AIA Establishes New European Chapters

The AIA is establishing chapters abroad to create opportunities for American design professionals outside of U.S. borders. The Institute opened its first international chapter in London last June, known as AIA London/U.K. The 45-member chapter elected officers at its first annual meeting in March.

Of primary concern to the newly elected officers of AIA London/U.K. are the issues of registration and reciprocity of licensure. Last year the British government moved to abolish legal protection of the professional title "architect" (ARCHITECTURE, September 1993, page 15). Although this proposal was defeated last November, recognition of the importance of registration remains of paramount concern to all practitioners. To share ideas about the current architectural climate with their British colleagues, AIA London/U.K. will hold a joint meeting with the Royal Institute of British Architects (RIBA) in June.

Last October, AIA members gathered in Paris to petition 1994 AIA President L. William Chapin II for a continental chapter. AIA Europe was chartered in early 1994, and its membership comprises American architects working in the countries of the European Union—except the U.K.—as well as all countries extending from Ireland in the west to Russia in the east, and from Scandinavia in the north to Greece in the south. The first general membership meeting of the newly founded AIA Europe was held this March in Geneva, and the chapter's first president and officers were elected. General meetings will be held twice each year in major cities throughout Europe; an October 1994 meeting is scheduled to take place in Brussels.

The international chapters will spearhead efforts to gain full recog-

nition of U.S. practice and education credentials by foreign registration bodies and will strive to increase U.S. participation in European design competitions. Membership is targeted at the more than 200 current and former AIA members who permanently reside in Europe. Additionally, AIA members in Hong Kong and Singapore are discussing plans for future chapters.—A.C.S.

AIA Bicycle Tour Aids Scholarship Fund

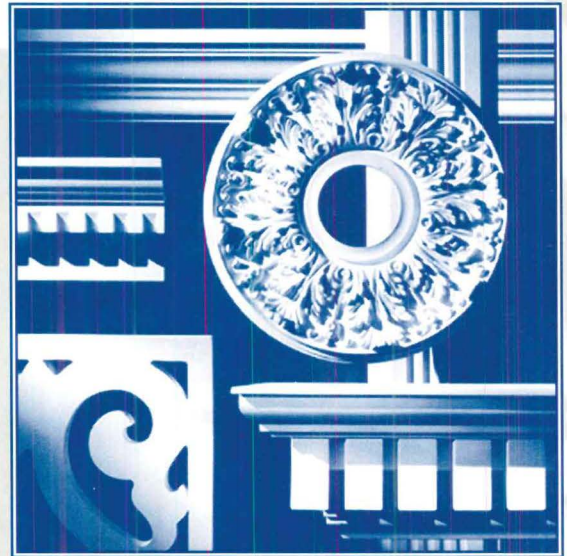
The AIA is bicycling across America to raise money for its minority scholarship program. Called "Pedal for Power," the 3,500-mile trek begins after the Los Angeles convention. The AIA hopes to raise \$35,000 through individual and firm sponsorship of cyclists on a per-mile basis. AIA members are encouraged to join the tour, which is sponsored by the League of American Wheelman (LAW) and Xerox Corporation.

Architect Richard Bundy of Richard Bundy & David Thompson in San Diego; Gregory Franta, principal of the Boulder-based ENSAR Group; and Frimmel Smith, AIA director of membership and awards, will begin the tour in Los Angeles and lead the team through Albuquerque and into Topeka. Margaret McCurry of Tigerman McCurry and James Miller of Flad & Associates will pick up the pace through Indianapolis; Erie, Pennsylvania; and into New York. Kohn Pedersen Fox principal William Pedersen and Boston architect Richard Moore will pedal through Rochester, Syracuse, and Albany. Mary Felber, AIA director of scholarships and honors, will conclude the tour in Boston on July 1.

The proceeds will be split equally between the AIA/AAF Minority Disadvantaged Scholarship Fund and LAW's environmental initiatives.

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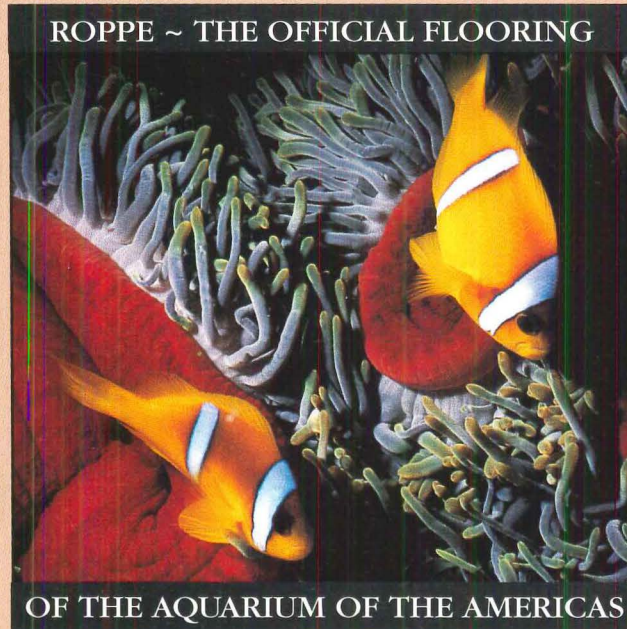


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Boston Society of Architects; Warren W. Gran, New York City; Willard E. Gwilliam, James River; Dan Heinfeld, Orange County; Robert Herman, San Francisco; Robert G. Hershberger, Southern Arizona; David M. Hewitt, Seattle; Charles Clinton Hight, North Carolina; Mark Larson Hinshaw, Seattle; Jeffrey A. Huberman, North Carolina; Timm L. Jamieson, Blue Ridge; Anthony N. Johns, Jr., Baltimore; Bendrew Gilbert Jong, East Bay; Duane A. Kell, St. Paul; Steven Y. Kodama, East Bay; Edward J. Kodet, Jr., Minneapolis; Ronald J. Labinski, Kansas City; James Lambeth, Arkansas; William C. Louie, New York; Frederic P. Lyman, Los Angeles; John E. MacAllister, San Francisco; Victor C. Mahler, New York; Robert E. Martin, Toledo; Marshall D. Meyers, Philadelphia; Linda Harris Michael, Northern Virginia; David E. Miller, Seattle; L. Kirk Miller, San Francisco; Lamberto G. Moris, San Francisco; Michael Mostoller, New York City;

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Architects Named to AIA College of Fellows

The AIA has elevated 104 architects this year to its College of Fellows for their commitment to the standards of architectural education, the public environment, and the profession in general. The 1994 jury was chaired by W. Kirby Lockard of Tucson, Arizona. The following new Fellows are being invested in the College of Fellows this month:

Jan M. Abell, Tampa Bay; Michael Alderstein, New York City; Laurin B. Askew, Jr., Baltimore; James Frazier Barker, South Carolina; C. Errol Barron, New Orleans; Richard E. Barrow, Birmingham; Alan Jennings Beard, Portland; Kenneth Norman Berry, Central Kentucky; Gary A. Bowden, Baltimore; Jennie Sue Brown, Seattle; Barry B. Bruce, Houston; C. Joe Buskuhl, Dallas; Harold Buttrick, New York City; Donald Edwin Carlson, Seattle; Donald K. Carter, Pittsburgh; Ann R. Chaintreuil, Rochester; Edith Ann Cherry, Albuquerque; Gordon Hing Quon Chong, San Francisco; Marshall Fenn Clarke, South Carolina; Doris Cole, Boston Society of Architects; David S. Collins, Cincinnati; David Cox, Washington; Metcalf Crump, Memphis; Evan D. Cruthers, Honolulu; John Wilson Cuningham, Minneapolis; Ben H. Cunningham, Houston; James L. Cutler, Seattle; Peter H. Dominick, Jr., Denver; Brian Paul Dougherty, Orange County; Rand L. Elliott, Central Oklahoma; Joseph L. Fleischer, New York City; Robert M. Ford, Mississippi; Bob J. Fowler, Abilene; Gregory Esser Franta, Colorado North; Edward C. Friedrichs, Los Angeles; Richard Edwin Fry, Huron Valley; Frank Lanneau Fuller, East Bay; Duncan Thomas Fulton III, Dallas; David F. Furman, North Carolina; John C. Gaunt, Minneapolis; Barbara Geddis, Connecticut; Roger Neal Goldstein,

AIA Bestows Honorary Fellowships on Foreign Architects, Educators

The AIA's Honorary Fellows jury has selected eight foreign architects to receive honorary fellowship in the AIA, based on their contributions to architecture and society. The following architects are being invested as honorary members of the AIA College of Fellows this month:

Juan Bassegoda-Nonell of Spain; A.J. "Jack" Diamond of Canada; Toyo Ito of Japan; Azusa Kito of Japan; Dogan Kuban of Turkey; Juha Leiviskä of Finland; Robert Peter McIntyre of Australia; and J. Brian Sim of Canada.

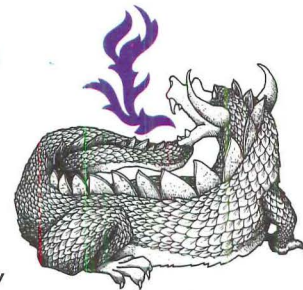
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Gyo Obata On Originality



Gyo Obata, FAIA

“Good design does not occur in a vacuum. It is created in response to the needs of a client and the opportunities of the site. This is

where originality comes in. How well a building fulfills its human purpose is the standard by which we judge whether a building has meaning. If it does not ease the spirit as well as stir the imagination, then it is not a significant success.”

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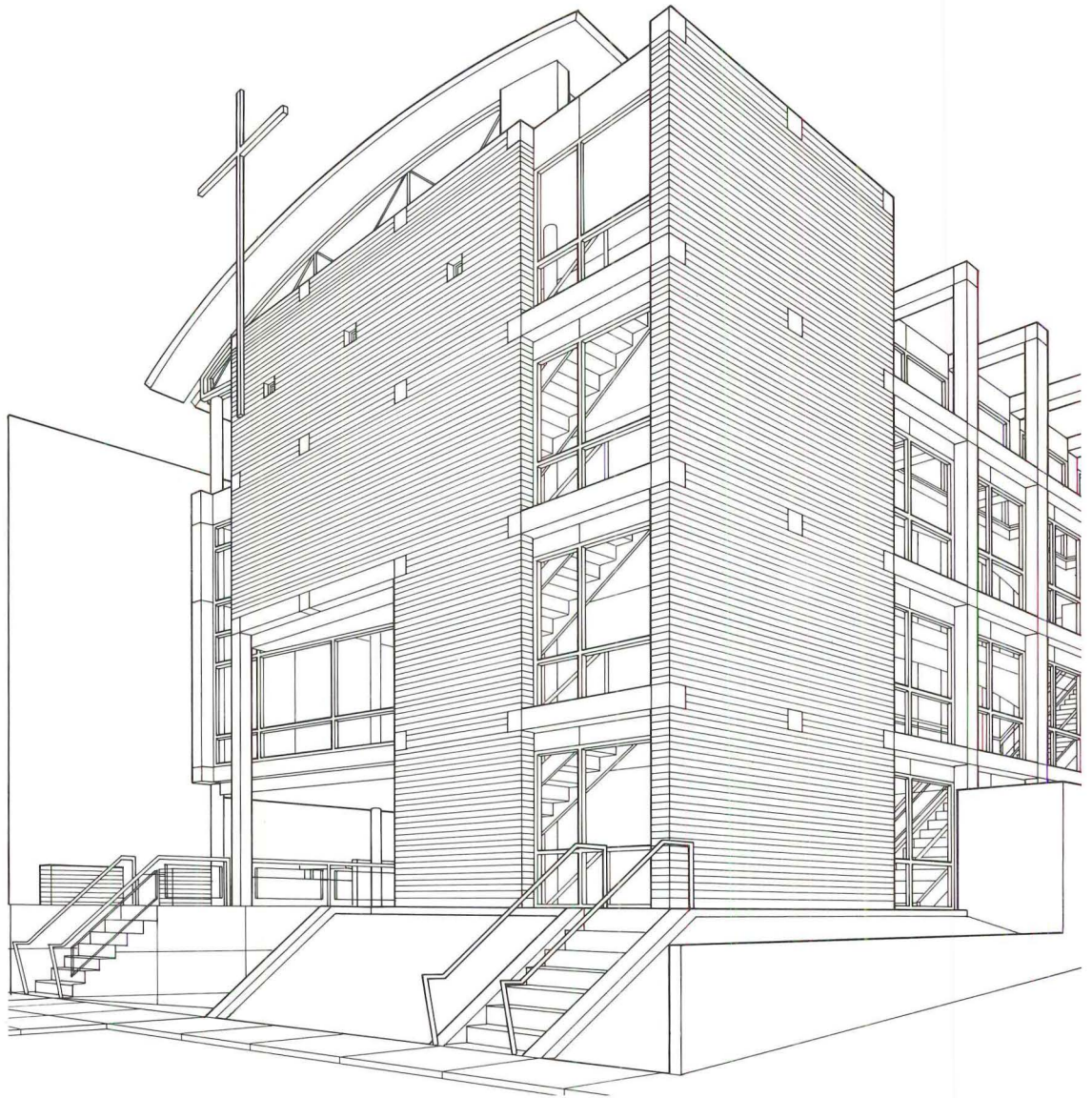
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TECHNOLOGY BROUGHT TO LIGHT

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OSRAM
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A campus religious center mediates a difficult site.



**University Catholic Center
University of California at
Los Angeles
Westwood, California
Dworsky Associates, Architect**

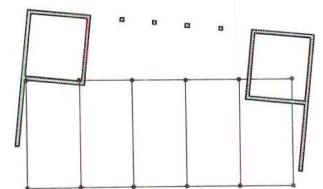
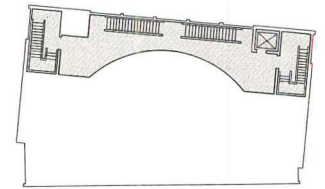
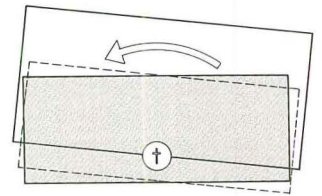
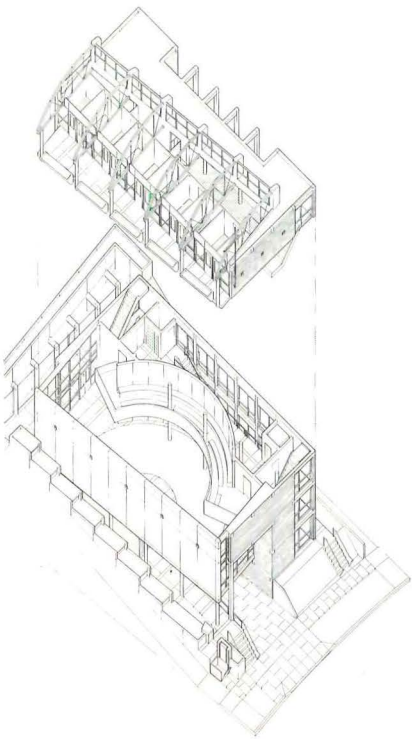
A restrictive site and complex program generated Dworsky Associates' design of the University Catholic Center at UCLA. The narrow, sloping parcel on the western perimeter of the campus suggested a traditional rectilinear chapel; the parish requested a more intimate radial plan. Dworsky resolved these two challenges by organizing the plan as a pair of overlapping rectangles, aligned with the boundaries of the site, with the altar centered on the building's south face, and circulation flanks the northern edge.

More than half of the 13,700-square-foot facility will be reserved for secular functions—dining facilities, conference rooms, offices, and dormitory rooms. Separation of pub-

lic and private functions is reinforced by different structural systems and materials. Lightweight steel frames infilled with metal and glass panels will enclose the second-floor worship space; masonry loadbearing walls and concrete will frame perimeter service areas. Clad in light-colored brick with concrete lintels, in deference to the campus esthetic, stair towers on the northern corners (above) will lead to fourth-floor offices and dormitory rooms, which incorporate south-facing balconies.

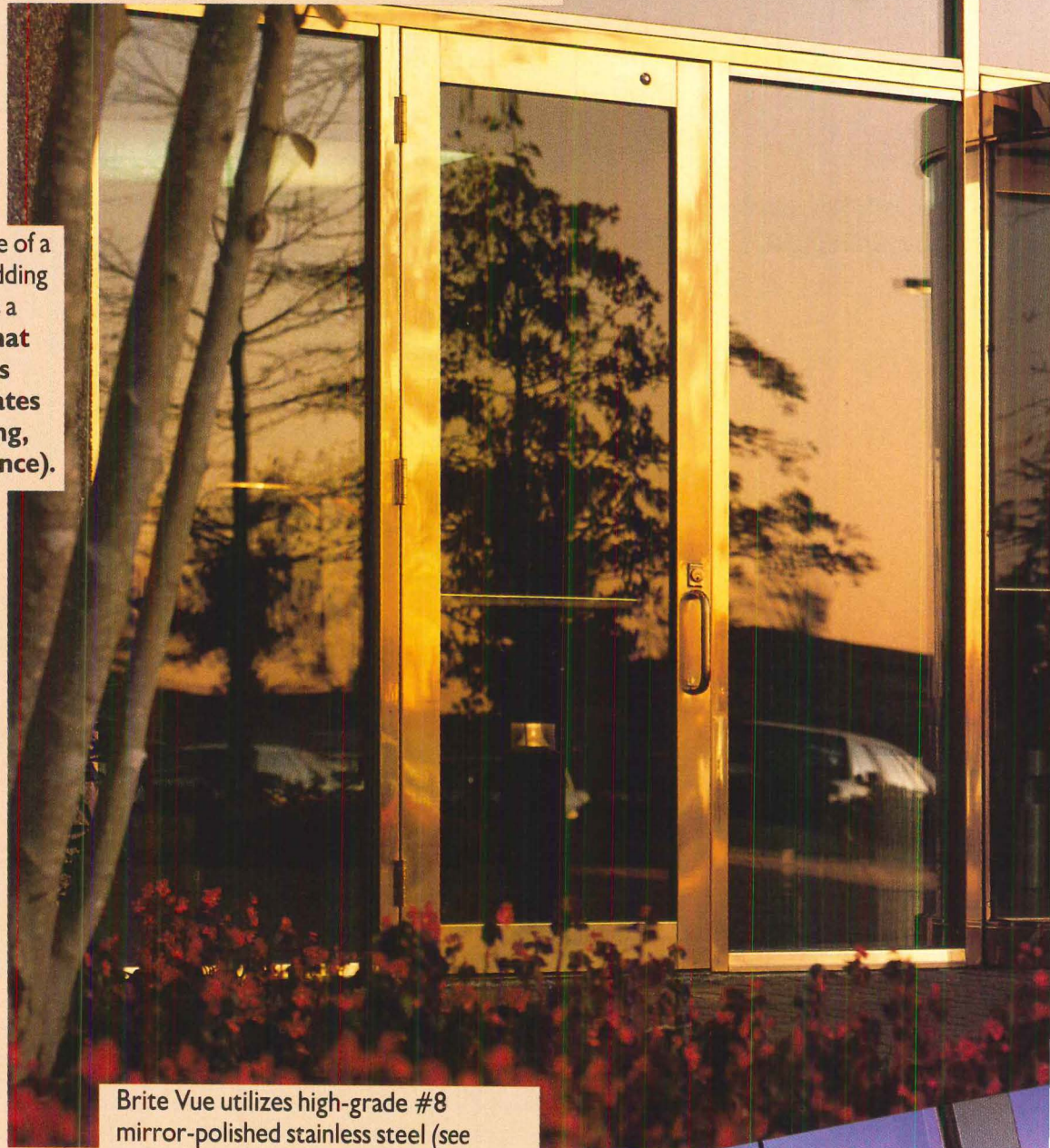
The double-height sanctuary will receive natural light from east- and west-facing windows. On the south facade, 1-foot-by-1-foot stained-glass windows will alternate with porcelain metal panels, illuminating a screen behind the altar. The sanctuary's ceiling will be constructed of maple acoustic panels.

Construction of the \$2.7 million UCLA Catholic Center is scheduled to begin this fall.—A.C.S.



Brite Vue's .050-thick stainless steel cladding alloy #304 or brass cladding alloy #280 Muntz Metal are systematically **(actually, it's easier to say that these are incredibly tough doors and despite the abuse they may receive, they'll always look great).**

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Brite Vue utilizes high-grade #8 mirror-polished stainless steel (see *inset*) engineered to **(the point is, our stainless steel is absent of the grainy lines found in cheaper materials).**



High Tech Landscape.



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Technically, this is an ad for Brite Vue Full-Framed Clad Doors.

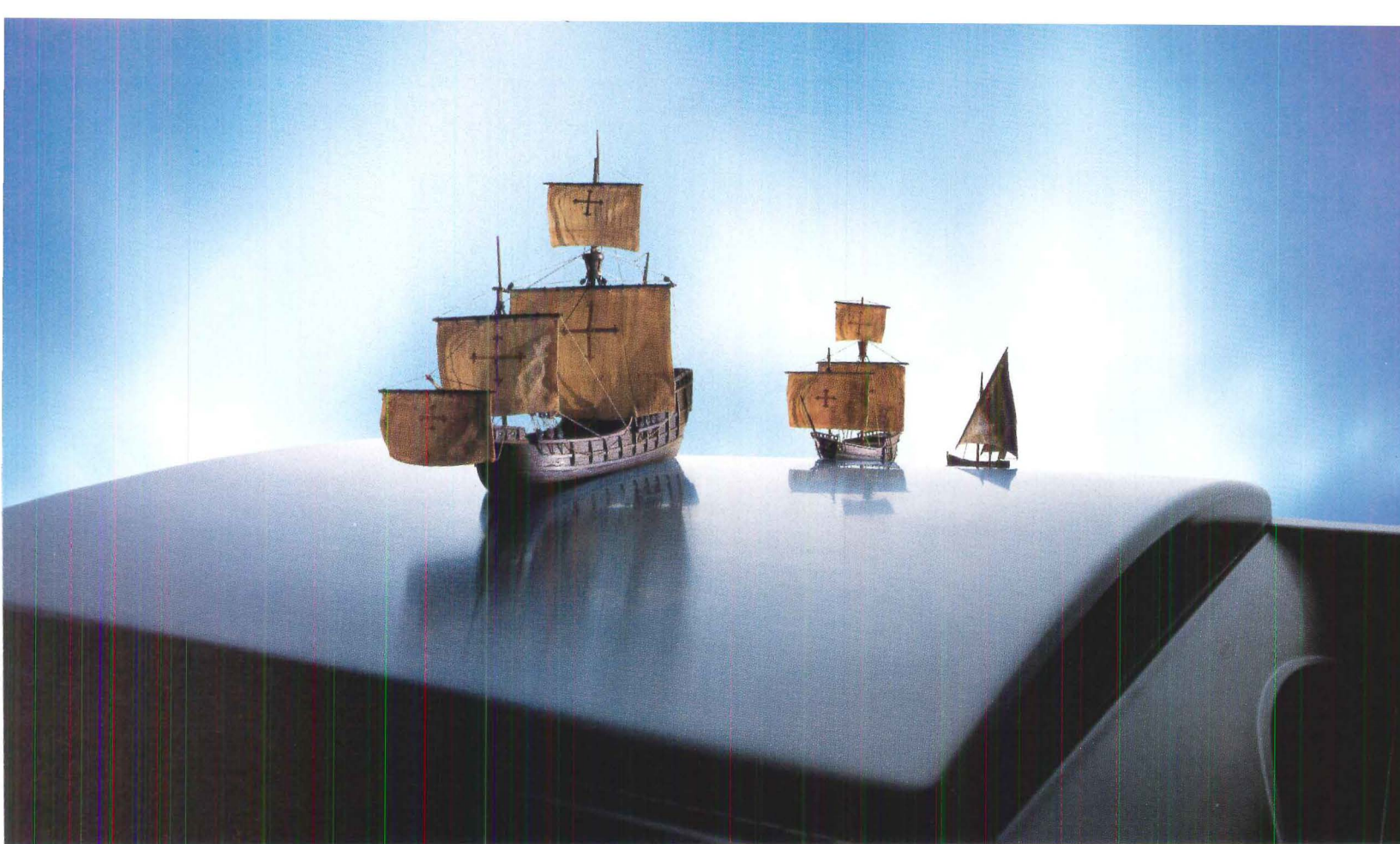
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Circle 76 on information card

Spare the Brooks Act

The value of good design in federal building projects is under siege, as some members of Congress contemplate drastic changes to the Brooks Act. Sponsored by Representative Jack Brooks (D-Texas) and passed in 1972, the Brooks Act—Public Law 92-582—requires the federal government to hire architects strictly on the basis of their qualifications. However, in the context of “reinventing government”—a movement prompted by Vice President Al Gore—some officials are advocating badly misguided means of saving taxpayers’ money. In this case, lawmakers would render adherence to the Brooks Act “optional.”

Recently, Senator Carl Levin (D-Michigan), chairman of the Senate’s government management subcommittee, was poised to amend a federal procurement bill so that some awards of federal projects could be based on the lowest bids. This proposal is fraught with problems that contradict its purported benefits.

Commissioning federal jobs to the lowest bidder will not save money through increased competition, as Brooks Act revisionists claim. The act allows for ample competition already, competition so intense that profits on federal jobs have been whittled to less than 1 percent of architects’ net revenues, compared to 5.8 percent profit on commercial projects. Thus, scant savings are to be realized from an even tighter rein on architects’ earnings.

If the commissioning process were steered in that direction, the design quality of government buildings would suffer enormously. Compensation connotes the client’s expectations of a project. Architects willing to work for less might also be less willing to work, but the bid-based selection formula does not account

for the far higher cost of low-fidelity design throughout the life of a building. The Brooks Act, on the other hand, recognizes that the relatively small extra margin paid for high-quality design produces exponential returns over many years. That is why Congress, in 1972, rejected price as a basis of selecting architects to design federal buildings.

But suppose that the government does decide to shop only for false bargains: How would architects arrive at the cost estimate, that is, the low-ball bid? How mature is the building program at the selection stage, and who has developed it? If bureaucrats were to supervise programming, considerable new costs and delays would likely enter the process of selecting architects.

For example, in 1985, the AIA published a 95-page report comparing the selection process of Maryland, which chose architects according to estimated price, with that of Florida, which ran a Brooks-type selection process. The study found that from 1975 to 1983, Maryland spent \$776,000 developing building programs alone—a cost “unique” to Maryland’s bid-based system of selecting design professionals. Project delays during that same period cost Maryland an estimated \$41 million. The A/E portion of Maryland’s capital construction budget, consuming 13 percent of construction costs, was nearly twice as high as Florida’s at 6.8 percent. Maryland’s A/E selection time took at least twice as long as Florida’s and created considerable ill will among architects in the state. Maryland abandoned its price-based system the same year of the AIA’s study.

Such state-level experience only buttresses the wisdom of selecting the most qualified architect, avoiding irrelevant programs and mean-

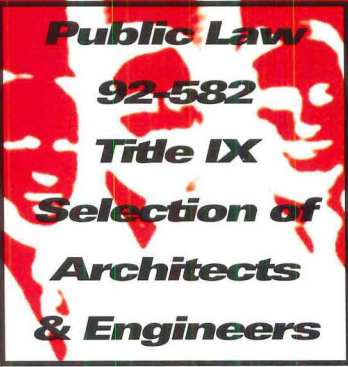
ingless maximum costs, toward which the architect would be forced to grope speculatively.

Yet, alternative delivery systems such as design/build may warrant variations from the Brooks selection process, new solutions that truly provide more value to the government. As it happens, design/build deals are exempt from the Brooks Act rules because more than just design services are proffered—design/build yields a product.

At least one federal entity, the U.S. Postal Service, has adopted a reasonable design/build selection protocol. Phil Ferrari, manager of major facilities for the Postal Service, explains that his office ultimately chooses design/build teams based on the lowest bid. But the Postal Service only does so, Ferrari notes, after a rigorous, standardized prequalification of all teams responding to calls for proposals—a formidable hoop-jump comprising a top-to-bottom review of the teams’ management plan, financial soundness, and safety record. The Postal Service’s procedure departs only from the letter of the Brooks law, not the principle.

Fortunately, after lobbying efforts by the AIA and legions of architects to preserve the Brooks Act, Senator Levin has decided to back off—for now. And while most architects don’t need to be persuaded of the Brooks Act’s inherent good sense, they do need to articulate it to their legislators, even as a refresher, as Congress’s institutional memory is fading fast: Only 34 members remain in the U.S. House of Representatives from when the Brooks Act was passed more than two decades ago. Left alone and uninformed, the rest of Congress could well downgrade the federal interest in architecture to the lowest common denominator.—Bradford McKee

A federal law requiring that architects be selected based on qualifications, not price, must be upheld.



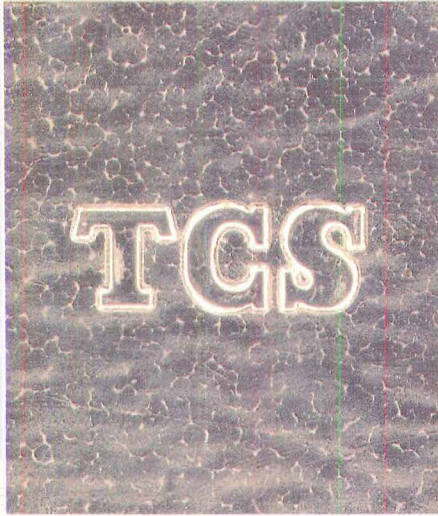
Sec. 902. The Congress hereby declares it to be the policy of the Federal Government to publicly announce all requirements for architectural and engineering services, and to **negotiate contracts for architectural and engineering services on the basis of demonstrated competence and qualification** for the type of professional services required and at fair and reasonable prices.

Sec. 903. In the procurement of architectural and engineering services, the agency head shall encourage firms engaged in the lawful practice of their profession to submit annually a statement of qualifications and performance data. **The agency head** for each proposed project, shall evaluate current statements of qualifications and performance data on file with the agency, together with those that may be submitted by other firms regarding the proposed project, and shall conduct discussions with no less than three firms regarding anticipated concepts and the relative utility of alternative methods of approach for furnishing the required services and then **shall select** therefrom, in order of preference, **based upon criteria established and published by him, no less than three of the firms deemed to be the most highly qualified to provide the services required.**

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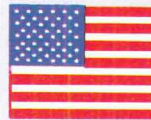
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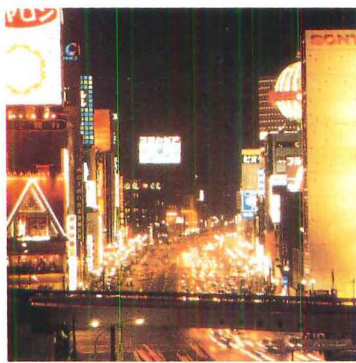
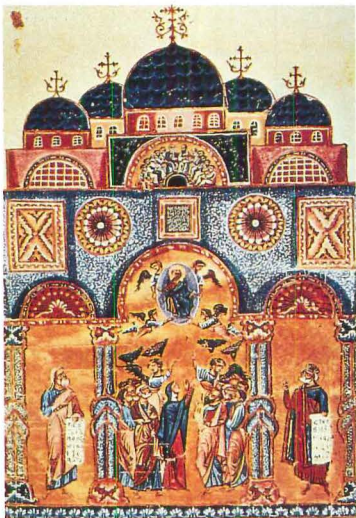
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Sweet and Sour

Robert Venturi argues for generic architecture as a vehicle for electronic iconography.



TOP: Byzantine surface ornament is independent of basilica's planar form.

ABOVE: Neon signs in Tokyo parallel earlier iconographic tradition.

Sweet

A gentle manifesto that acknowledges the demise of a universal architecture as expressive space and industrial structure:

Let us acknowledge architecture for now that is not ideologically correct, rhetorically heroic, technologically obsolete. Let us acknowledge the elemental quality of architecture as shelter and symbol—buildable and usable shelter that is also meaningful as a setting for living. Shelter and symbolism are inevitable, admitted, and explicit elements employed to modulate space. Let us acknowledge these elements as the genesis and basis of the art of architecture:

—Shelter that admits within its imagery form *and* symbol—and whose symbolism can be explicitly juxtaposed on generic form, sometimes independent of it and sometimes contradictory to it so we should say that in our time form *followed* function;

—as a medium for symbolism that accommodates technical realities of our time and acknowledges cultural variety in our world, that promotes a vivid background for living and not a dramatic setting for acting;

—Symbolism that evolves *not* out of Renaissance tradition, whose architecture of form abstracts references to a Classical order from an ideal past—*not* out of recent Modern and current Modern-Revival tradition, whose architecture of form incorporates veiled references to an industrial order from an ideal past—and *not* out of Postmodernism, which promotes a 19th-century eclecticism with irrelevant Romantic-historical associations;

—but a symbolism that derives from ancient Egyptian, Early Christian, and Byzantine traditions whose generic architectures of surface project ornamental images—hieroglyphic bas-relief on masonry Egyptian temples, and iconographic murals and mosaics in Early Christian basilicas and Byzantine domes.

These images are signs—explicit sources of information virtually independent of the planar forms and sheltering surfaces of the generic architecture they are applied to—

they evoke video projections where, projected onto architectural surfaces, the foot of a saint on the wall of a basilica might be amputated by the opening of an arch.

This iconographic analogy suggests the relevance of the ornamental surfaces of temple exteriors and basilican interiors—and the supergraphics that adorn the Constructivist designs of Konstantin Melnikov of the 1920s. But it demonstrates as well a difference in our electronic age when computerized images can change over time, information can be infinitely varied rather than dogmatically universal, and communication can accommodate diversities of cultures and vocabularies, vulgar and tasteful, Pop and highfalutin. In this context, the grand advertising Jumbotrons atop buildings in Tokyo can, along with temple hieroglyphics and mosaic iconography, work as precedent for a generic architecture employing video display systems—where electronic sparkle can parallel the glitter of mosaics.

There are dangers in an architecture of representation that makes art out of information. Ideologues can exploit it to promote ideology over art. Abstract Expressionism is safer. But techniques available now can help us achieve accommodation to change, balance via flexibility, and richness through variety.

And it is important to remember that it is a generic architecture that acknowledges symbolism for our time, that accommodates ornament rather than exemplifies it, and whose flexibility—spatial, mechanical, and iconographic—can make change doable.

What are explicit implications for this vivid but incipient approach to design? Who knows for sure? Perhaps guidance concerning this artistic medium can come from our children—certainly not from our aging avant-garde, but from those who are attuned to computer techniques of our time, who can exploit the substance of a real electronic technology rather than continue to depict the image of an old engineering technology—make of architecture kids' stuff, not *ancienne garde*.

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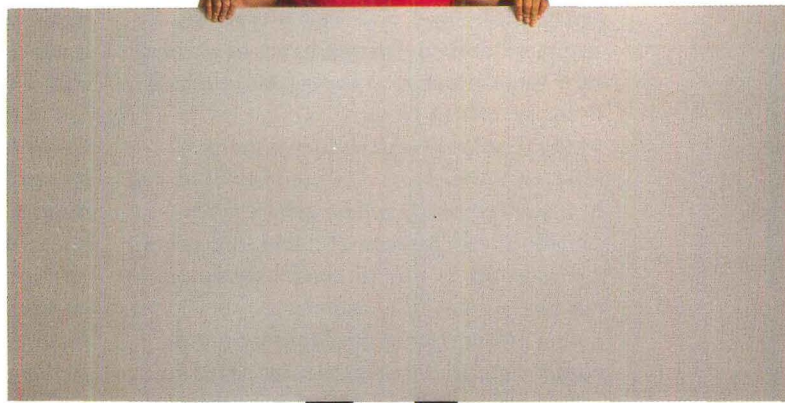
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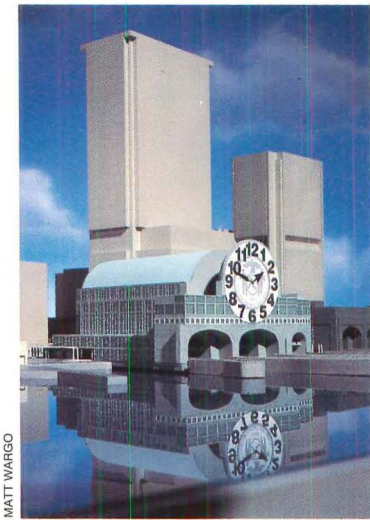
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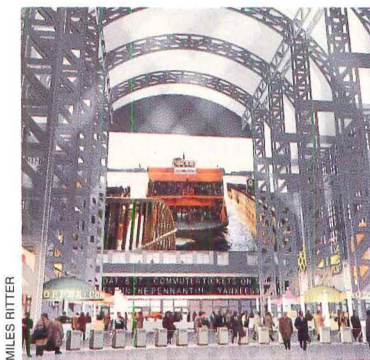
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Circle 84 on information card



MATT WARGO



MILES RITTER

TOP: Venturi, Scott Brown and Associates' scheme for Whitehall Ferry Terminal, New York City, 1992.

ABOVE: Interior of ferry terminal incorporates electronic imagery.

Architecture was late in stylistically acknowledging the Industrial Revolution in the vocabulary of Walter Gropius's Fagus Shoe Works around 1910: Let us acknowledge not too late the technology of now—of video electronics over structural engineering: Let us recognize the electronic revolution in the Information Age—and proclaim ourselves iconoclasts for iconography!

Sour

A complementary sour description of *fin-de-siècle* architecture in blank verse (sort of):

Multiple oxymorons may best identify the retardataire avant-garde that dominates American architecture today:
 —an academic, self-proclaimed, journalistic, and, above all, heroic avant-garde representing the architectural establishment;
 —proclaiming outré is okay when outré is passé;
 —promoting a Modern-Revival style as the latest thing esthetically, technologically, theoretically, sentimentally, and heroically;
 —promoting hyped and askew versions of architectural sculpture, paradoxically garbed in decoration representing heroic-functional, exposed-frame structures that symbolize 19th-century engineering, while everybody knows the Industrial Revolution is long dead;
 —proclaiming a monocultural ideal for a universal context out of fear perhaps of exposing a lack of the education necessary for engaging historical symbolism and multiculturalism. Could it be Neo-Modernism is the last resort of ignoramuses?
 —justifying a conceptualization, a dematerialization, of architecture via pompous and esoteric transformations of theory questionably borrowed from other disciplines;
 —substituting polemics for theory, ideology for sensibility;
 —where content and relevance in the end evoke the emperor's lack of clothes (not to mention create a void in the social dimension of architecture);
 —while amply meeting today's journalistic

qualifications as it promotes architecture as trend, poster, and slogan.

—But this particular and ironical form of Postmodernism (meaning stylistic-revival-with-a-twist that disguises the inherent historicism of this Neo-Modern architecture) does connect in a way, a tiny way, with real high-tech of our electronic age.

—It connects in that its twists—the characteristic formalist distortions dominating this architecture—derive from computers;
 —from the graphic opportunity afforded by a CAD system and exploited by Deconstructionists who simply punch “rotate” and “stretch” on their computers to project forced-decorative expressions of complexity and contradiction that weirdly exploit a deference toward the forms of classic Modern architecture while really profaning its principles;
 —causing Gropius to puke in his grave;
 —as in the last decades we've had to suffer decennially the dry arrogance of late Modernism, the urbanistic heroics of megastructures, the idiotic applications of semiotics, the *parvenu* historicism of Postmodernism and now sado-masochistic Expressionist applications of Deconstructionism as complexity and contradiction gone rampant—while complexity becomes picturesquely motival and contradiction becomes paradoxically consistent and ambiguity becomes pompously arch.
 —Oh, for a complexity and contradiction that derive from modern experience rather than Modern ideology—promoting spatial fantasy as a picturesque whole.
 —It was so much easier in the old days when the establishment was conservative rather than cutting-edge.

Down with *fin-de-siècle* Mies-mash where organic becomes orgasmic, where complexity and contradiction become contradiction and contradiction, where engineering imagery as ornamental frames sticks out of incidental shelter—all of which is less relevant than ancient Egyptian pylons.

Oh, to be bored in our Neo-Modern Age of Minimalist-Hype!—*Robert Venturi*

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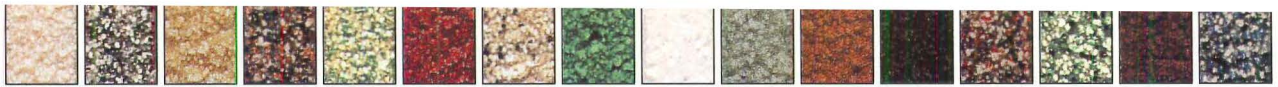
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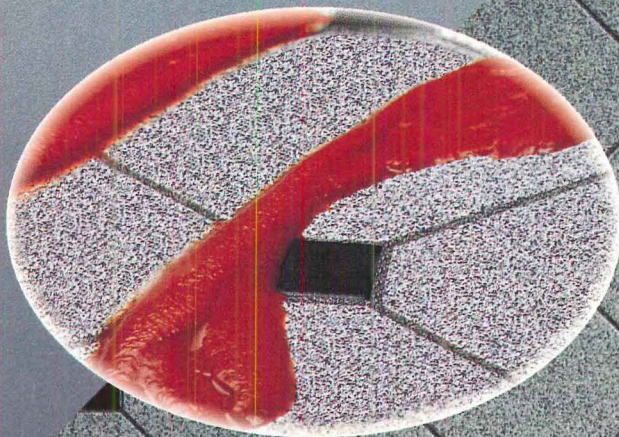
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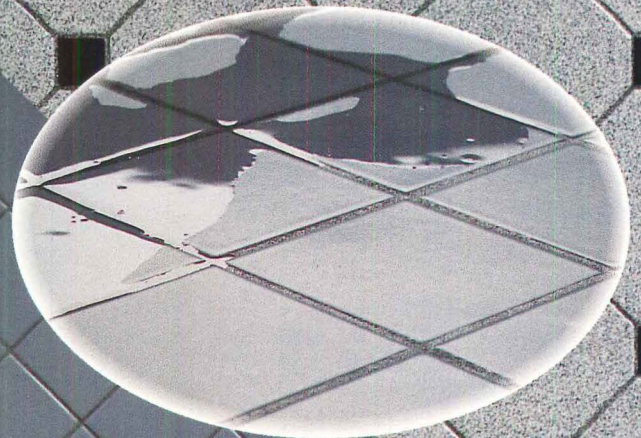
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ARCHITECTURE

ANNUAL REVIEW OF

American Architecture

Six portfolios of American buildings represent our nation's regional diversity.

This year's review of American architecture encompasses a broad spectrum of buildings, from a modest, single-room cabin in rural Washington to a district courthouse in Maine. Dividing the country into six regions, we chose projects that represent both the diversity and the sensitivity of local responses to context, program, and site. These projects embody the best of American architecture by practitioners who, in many cases, are not well known.

The West, Southwest, and Midwest focus on houses that evoke the mythical spirit of each region: a coastal withdrawal into nature; a southwestern accommodation of a hot climate; and a midwestern evocation of an agrarian vernacular.

In the South, New England, and Mid-Atlantic, we discovered an impressive array of small-scale civic, institutional, and corporate designs. A newfound pride in rejuvenating urban centers prevails in the South, while the skillful manipulation of natural light distinguishes a group of institutional buildings in New England. And, given the ongoing recession, many architects are designing their own studios or spaces for colleagues, as our Mid-Atlantic portfolio illustrates.

A review of this year's AIA Honor Awards, also included in this issue, reveals the profession's emerging social agenda. For all their circumstantial differences, the winning projects reflect an inspired approach to placemaking in America.



Rural Heritage

The real American spirit," Frank Lloyd Wright once remarked, "... lies in the ... Middle West, where breadth of view, independent thought, and a tendency to take common sense into the realm of art" are characteristic. Indeed, the nascent United States' first national territory, including present-day Ohio, Indiana, Illinois, Michigan, Wisconsin, and Minnesota, was an early example of the very enlightenment extolled by Wright. Barring slavery and ensuring religious freedom, the Midwest attracted independent-minded settlers from more restrictive regions: the Lutherans of Scandinavia; the Pietists of the Black Forest; Mormons; Shakers; and even the Scottish reformer Robert Owen, founder of New Harmony, Indiana. These iconoclastic farmers erected utilitarian log cabins or sod houses, incorporating the materials at hand to provide little more than protection from the elements.

Assuming the construction methods of their adopted country, some immigrants built in styles that evoked their homelands. In Minnesota, for example, homesteads grew in the clustered fashion characteristic of Scandinavia: first a log house, then a barn, finally a main house; the initial log cabin was converted to a sauna. Duluth architect David Salmela, whose father was born in the sauna of a Finnish homestead, explains that the farmers covered their log houses with lapsiding as soon as they could afford it: "They wanted to make them American."

These assemblages of farm buildings are a fixture of the midwestern landscape, and our portfolio of projects is dominated by the imagery of these clusters. Today's rural retreats, though hardly modern-day Xanadus, provide their occupants with access to nature, rather than protect them from it. Wells Woodburn O'Neil's garden shed for a Des Moines house is rough-hewn: A shagbark hickory log supports its roof. A writer's studio on a Wisconsin bluff, designed by the Minneapolis-based Stageberg Partners, measures only 12 feet square. Duluth architects Salmela & Fos-

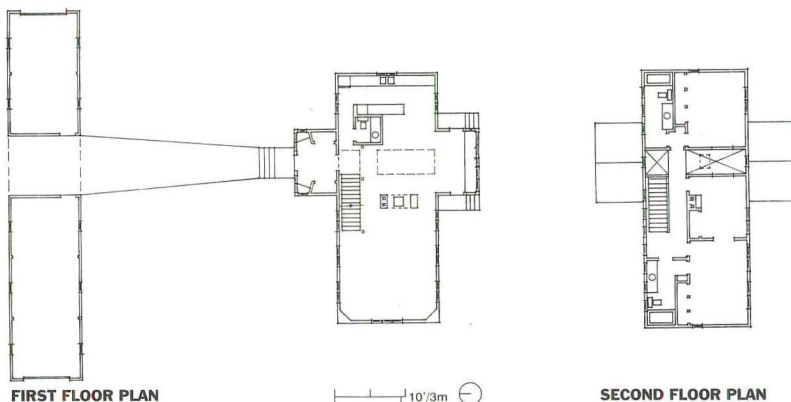
dick's three-bedroom house at the edge of a Minnesota grainfield evokes the character of a Finnish farm. Even the largest building, Linda Searl's 3,500-square-foot getaway for a Chicago family, takes its design cues from the agrarian architecture of Galena, Illinois.

Like Midwesterners themselves, these buildings are solid and unpretentious. "We're not trendy," points out James Stageberg, who crafted the cedar-shingled writer's studio upon a treated wood foundation, so as not to disturb his site with concrete trucks. The interior of Salmela & Fosdick's Minnesota house is a single span, with exposed fir beams and joists. Posts and trusses are similarly exposed in Linda Searl's Galena house, which is clad in barnlike siding. The honest connections and details of the Iowa garden shed showcase the experienced hand of the European carpenter who built it. Points out design team member Voneelya Simmons, "What holds the building together is what you see, and there's nothing to hide it." Therein lies its beauty, and ample reflection of what Wright meant by taking "common sense into the realm of art."

For all their structural integrity, these buildings exude a whimsical spirit that belies the solid, humorless image of the Midwest. The curved roof of the writer's studio evokes a habitat for woodland trolls. Salmela's two-car garage is hidden in gabled sheds, arranged like houses on a Monopoly board. Even the earnest garden shed reflects the odd juxtapositions of an adjacent cottage.

Surprisingly, all the architects of these regionally influenced, joyful structures profess Modernist roots. Stageberg admits that he worried about the colors of the studio, but adds, "It's one of the nicest environments I've finished." David Salmela, whose contemporary design echoes, but doesn't imitate, a Finnish bottomland house, believes that it is crucial for Americans to recapture the essence of our rural heritage in contemporary architecture. Notes Salmela, "In the Midwest, we can dare to be regressive."—Heidi Landecker

Smith House
Lakeview, Minnesota
Salmela & Fosdick Architects



Tia and Brian Smith's house, just 30 minutes south of the Twin Cities, seems transplanted from the Finnish countryside. Although the colors and forms are true to Scandinavia, the arrangement of outbuildings, window shapes, and open interior are distinctly American. The Smiths, of Finnish and Norwegian extraction, were captivated by the bottom-land farmhouses of Scandinavia. Architect David Salmela anchored the project with a large existing rockpile, which forms the western edge of a rectangular courtyard, flanked by the house and garages. Vehicles enter through the east or west ends of the 72-foot-long garage, which appears as a row of six gabled sheds, which appears as a row of six gabled sheds, which appears as a row of six gabled sheds. Echoing the profile of ordinary peak-roofed outbuildings, the sheds are contemporary in their arrangement and application. "We're trying to incorporate the romantic memory of our past," explains Salmela. "We can make the suburbs into better environments."



PRECEDING PAGES: A house with rural Scandinavian roots in exurban Minneapolis is designed by Duluth architects Salmela & Fosdick.

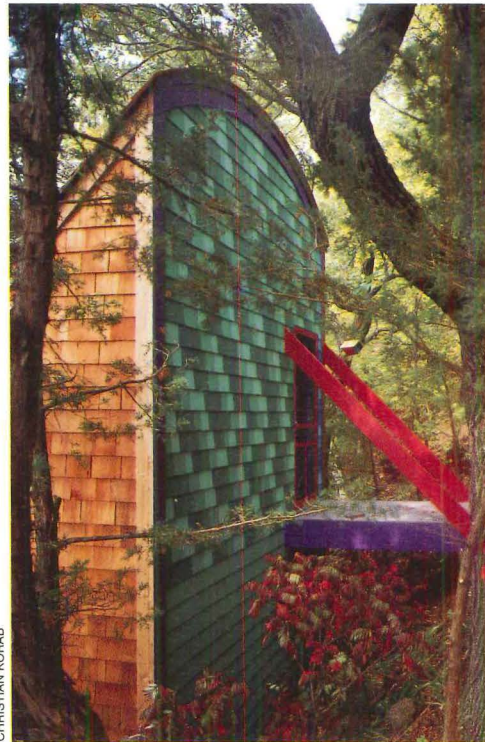
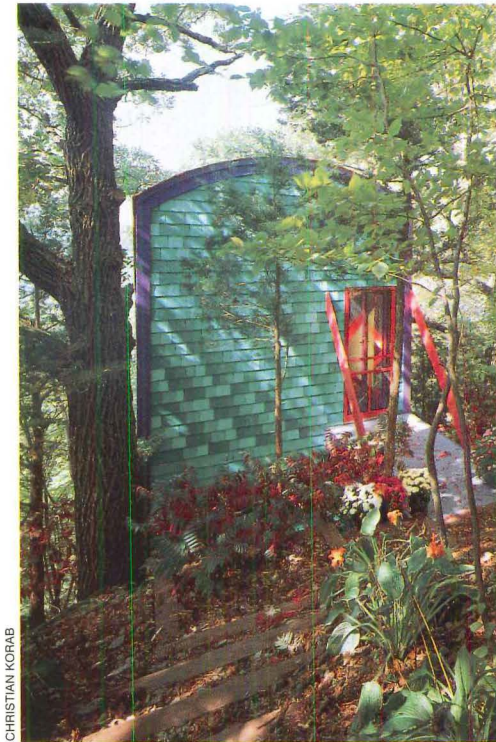
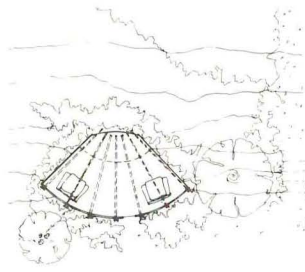
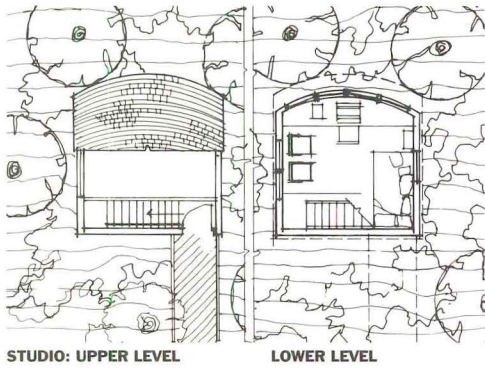
PLANS: Garage, on axis with entrance to house, is arranged as a series of sheds that echo agrarian outbuildings.

ABOVE RIGHT: Stained fir plywood with cedar batten clads house exterior.

RIGHT: Garages echo farm buildings in rural Minnesota and Scandinavia.

PETER KERZE PHOTOS

Writer's Studio
Stockholm, Wisconsin
The Stageberg Partners, Architect



A “retreat from a retreat” is how architect James Stageberg refers to the 144-square-foot studio he designed for his wife, a writer who found their Stageberg-designed weekend home too confining for her work. The studio echoes the 1,286-square-foot house, a playful adaptation of an English cottage with an open, pine-clad interior. Tucked into a wooded Wisconsin bluff high above the Mississippi, the studio, like the house, is supported by a treated fir foundation. “I didn’t want concrete on my site,” explains Stageberg. “I wanted my carpenters to build everything.” Carved out of the forest, with trees preserved as close as possible to the footings, the studio is approached via a steep staircase and footbridge. A colorful facade introduces the building. Inside, a cedar stair steps down to a 12-by-12-foot room with a vaulted ceiling. On the north side of his 5-acre property, Stageberg also designed a shelter that takes in views of a garden to the south.



PLANS: Studio is entered at upper level.
TOP LEFT AND RIGHT: Wooden footpath provides a drawbridgelike approach to secluded writer’s studio.
CENTER LEFT: View from entrance into workspace reveals bowed window, oak floor, and stained pine interior.
CENTER RIGHT: Twenty-foot-high vaulted ceiling, colorful walls, and triangular window enliven studio.
BOTTOM LEFT AND RIGHT: Whimsical garden shelter is composed of bent steel tubes that support wooden lattice.

Segall House
Galena, Illinois
Searl and Associates, Architect

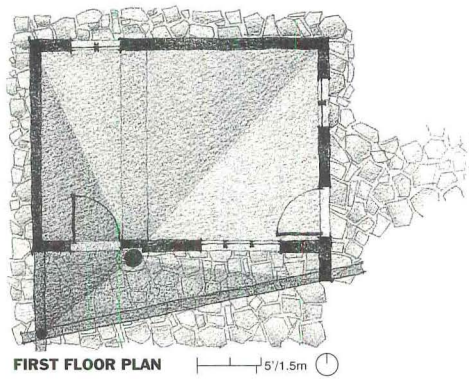


The metaphor of a bird opening its wings to take flight guided architect Linda Searl's scheme for a weekend house in Galena, Illinois. Overlooking the original stagecoach trail through Illinois, the house perches on a sloping site within a development of conventional houses. To blend in, the architects crafted a relatively small, inobtrusive main entrance. "We wanted the house to look like it belonged to the rest of the community," Searl explains. "At the same time, we wanted to take advantage of the views on the back side." The house "takes flight" on the interior, where spruce columns support trusses that increase in height, opening the main living room out toward the view. To emphasize the intimate relationship of the house to nature, the architects consciously attempted to carry exterior materials to the inside. For example, two spruce columns frame the main entrance, and a slate doorstep is carried into the foyer.

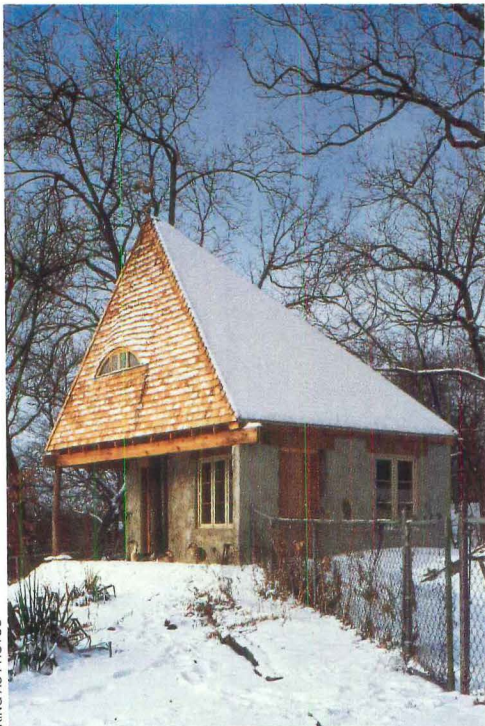


SECTIONS: Pitched roofs and exposed interior structure recall regional barns.
ABOVE RIGHT: Main entrance to house is designed as a miniature of rear, which towers above steeply sloped site.
RIGHT: Balcony wraps main living room and overlooks stagecoach trail.
FAR RIGHT: Fireplace of Galena limestone recalls historic buildings in nearby mining town. Stair with pine railing ascends to bedroom and loft.

VAN INWEGAN PHOTOS



FIRST FLOOR PLAN 5/1.5m



Garden Shed
Des Moines, Iowa
Architects Wells Woodburn O'Neil

For the owner of an Arts and Crafts-style 1930s cottage in a Des Moines suburb, Architects Wells Woodburn O'Neil conceived a 260-square-foot shed for potting plants and storing tools that establishes a transition between formal and informal gardens. The one-room folly, positioned at the terminus of the main driveway onto the property, addresses an overgrown meadow overlooking the Racoon River; the house and formal gardens lie behind it, to the north. In keeping with the asymmetrical volumes of the house, the shed's cedar-shingled roof is angled, allowing its 19-foot-high peak to focus upon the center of the meadow. Masonry walls are clad in stucco on the exterior to evoke the idea of the garden shed emerging from the ground; interior walls are unfinished concrete block. Cedar lintels support a roof overhang, which shades a simple stone terrace. An eyebrow window permits a view of the river from a loft tucked within the roof.

PLAN: Asymmetrical garden shed forms a 13-by-20-foot rectangle; its cedar-shingled roof is angled to create an overhang sheltering a terrace.
ABOVE LEFT: Stucco-clad shed echoes Arts and Crafts-style cottage.
FAR LEFT: Shed roof is designed to make shed appear taller from garden.
LEFT: Interior of loft reveals cedar decking and shagbark hickory column.



Civic Pride

Self-knowledge has replaced self-consciousness in the South, as the eye of the nation's racial maelstrom has shifted to other parts of the country, and the region's older agricultural hegemony has dissipated in a high-tech haze. New civil rights museums in Birmingham and Memphis, and memorials in Montgomery and Atlanta signify the confrontations of the past. Today, the diversity of southern culture is celebrated worldwide, a world in which Paul Prudhomme, Elvis, and Maya Angelou are national ambassadors, representative of the American experience.

No longer need Piedmont or Delta cities ape the latest international trends to prove parity with their northern kin. As the U.S. population shifts southward, local architects are finding ample clues to develop a civic architecture appropriate to the South, reinterpreting older forms in new light.

The stylistic palette has broadened to embrace the diversity of a 1,000-mile-wide region. Previous generations adopted the trends of the moment, from 19th-century Greek Revival to the International Style; today's southern architecture reflects clear-eyed choice.

One clue to a new direction in civic architecture lies in the soil. Native clays make superb brick; forests supply abundant wood. For 350 years, Southerners have developed strong traditions of public building in both masonry and wood. Yet what early builder made an airport? What pioneer could foresee a tourist pavilion? The challenge has been to adapt, to reinterpret the materials at hand to new ideas and new building types. Indigenous models, the broad-roofed house and the voluminous metal-topped barn, have been expanded to new uses.

Scale seems to be the primary determinant. Small-town Conway, Arkansas, can build its new justice center just off the square in context with the existing courthouse—a new masonry building for that place and for nowhere else. By respecting the scale and materials of the original, the entire block is reinforced rather than fragmented.

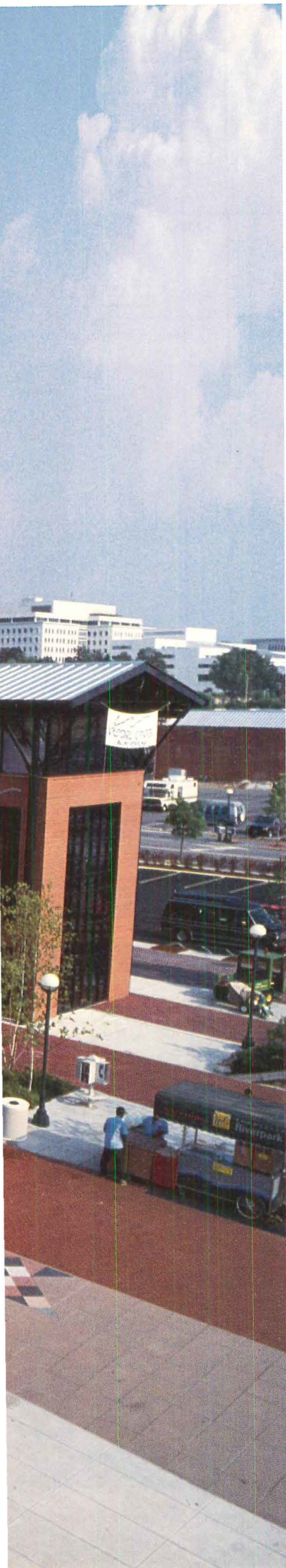
Where decades ago, Edward Durrell Stone and Paul Rudolph headed for New York, young southern architects now find real options nearby. Encouraged and inspired by the presence of gifted local designers like Atlanta's Mack Scogin, Arkansas' Fay Jones, or Auburn's Sam Mockbee, they are finding a lifetime's challenges down southern roads. Large firms based in Atlanta or Charlotte join forces with local architects with increasing sensitivity to the character of the community. Chattanooga's new visitors center, which evokes an earlier industrial structure on the site, was designed by a Nashville architect.

The challenges are legion; not all the battles have been won. Alabama will address its woefully deteriorated school buildings with a billion dollar bond issue this year; Mississippi hopes to convert free-flowing gambling dollars to neglected public infrastructure. Too many people still cannot read, and too many people remain poor, particularly in small communities removed from urban prosperity.

Yet new schools and courthouses, libraries, and even jails offer tangible hope for change. It can be read in the russet masonry of a new airport wall in Newport News, Virginia, or in the receding form of an environmental education center, quietly inserted into the Louisiana woodland.

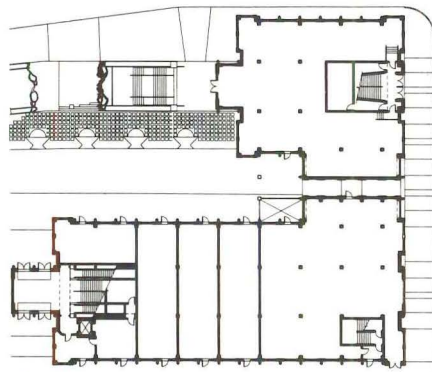
At their best, the South's new civic buildings synthesize futuristic technologies with genteel memories into a vigorous present. Actually a sophisticated, computer-driven machine, the Newport News Airport combines ideas from NASA and Colonial Williamsburg into a single structure. The stylistic model for the Jean Lafitte Environmental Education Center, replete with laboratory equipment and audiovisual display, seems to be the vernacular Louisiana bayou house.

Respectful of a hard-fought past without imitating that past, embracing contemporary technology and culture without leaping into a stylistic void, these are confident civic buildings, reminders of a region that is coming of age.—Robert A. Ivy, Jr.

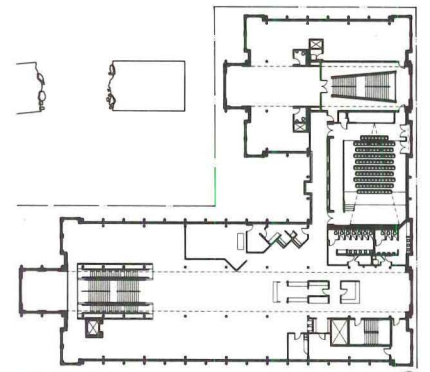


ROBERT BOYER

Chattanooga Visitors Center
Chattanooga, Tennessee
Tuck Hinton Architects



FIRST FLOOR PLAN



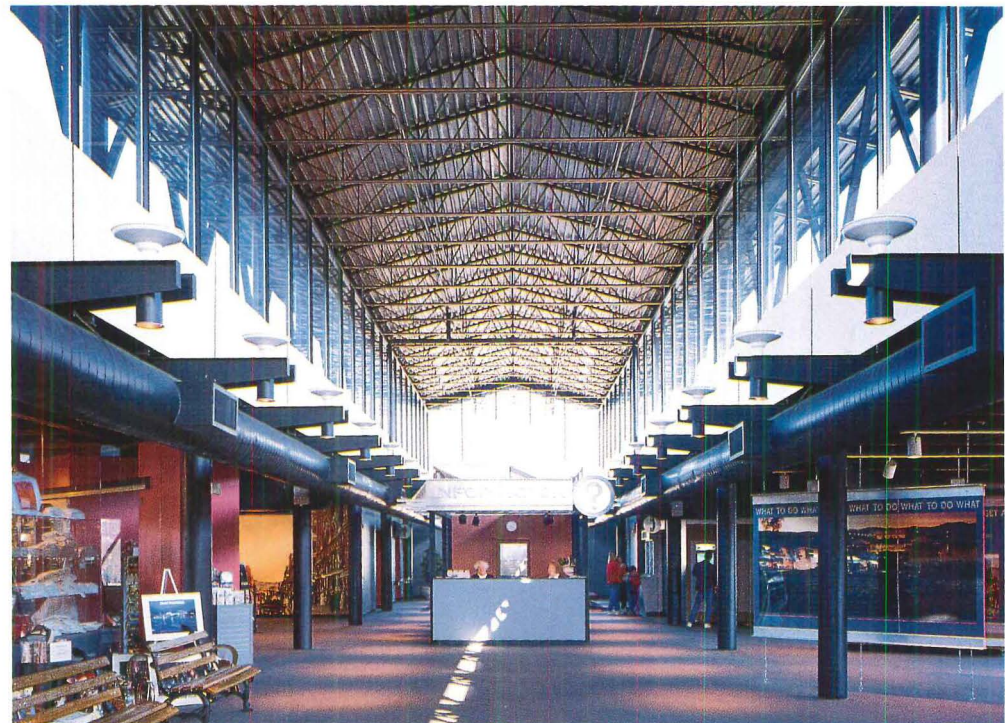
SECOND FLOOR PLAN



Chattanooga has returned to the river. A new, 38,000-square-foot visitors center welcomes crowds to Ross's Landing, site of the city's original settlement. The \$3.3 million visitors center is the latest addition to an ambitious complex, including the city's successful freshwater aquarium at Ross's Landing Plaza.

The twin sheds of the visitors center, designed by Tuck Hinton Architects of Nashville, recall earlier industrial buildings that had blocked the city from the river. Glass-filled metal framework rises above masonry walls in two rectilinear sections.

In a twist on expected planning, the visitors center and auditorium occupy the second floor, while commercial spaces and ticket offices greet the public at grade. A monumental stair and escalator entice the public to the upper level, where exhibits and a slide show, devised by Boston's Sherry Kafka Wagner, orient tourists to Chattanooga and Hamilton County.



PRECEDING PAGES: Metal gable roofs and masonry walls recall industrial past of Chattanooga Visitors Center's site.

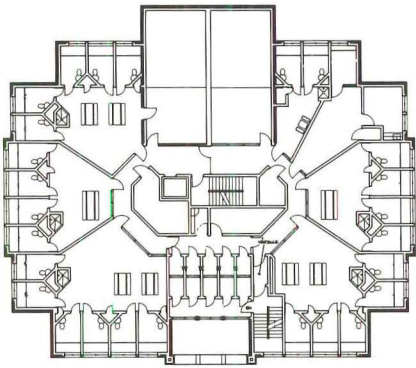
PLANS: Monumental stair leads from commercial spaces to visitors center and auditorium on upper level.

ABOVE RIGHT: Twin sheds anchor Chattanooga's new gateway park. Tennessee Aquarium looms behind.

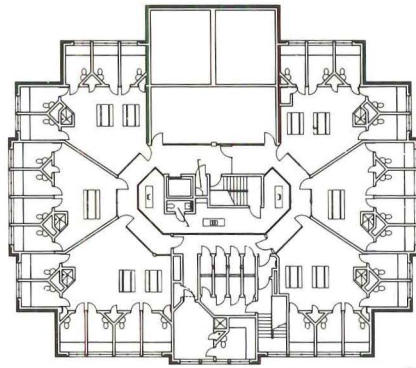
RIGHT: Interior of second-floor visitors center is lightened by tall clerestories and exposed metal framing.

TIMOTHY HURSELY PHOTOS

**Faulkner County Detention Facility
Conway, Arkansas
BT&A Architects**



SECOND FLOOR PLAN



THIRD FLOOR PLAN



Conway, Arkansas, a small town outside of Little Rock, had outgrown its jail. A new 130-inmate building replaced inadequate facilities, formerly housed in a penthouse above the adjacent courthouse. A blond brick structure built in 1936, the courthouse was “an important building in the community,” according to its designer, architect Jerry Currence of North Little Rock’s BT&A.

Respecting this landmark, BT&A sited the new \$3.3 million jail on a side street and reduced its apparent scale with a stepped volume. Low walls tie the building to the neighborhood. Masonry color and details respond to the earlier structure; banding reflects original stonework.

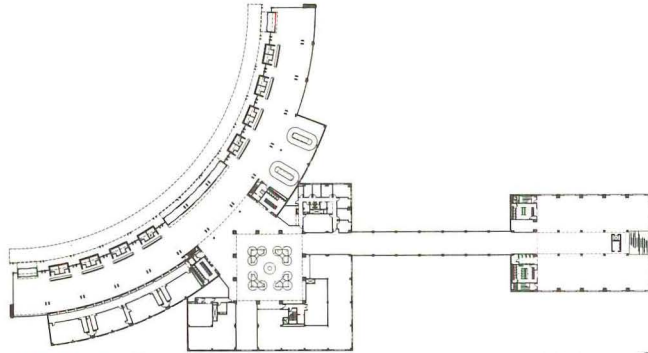
The jail’s facade successfully masks a complex interior program, including two levels of detention with shared security observation zones, screened activity yards on both levels, and cells for women. First floor includes cells for juveniles, administration, and kitchen.

PLANS: Cells line perimeter and open into dayrooms. Exercise yards are to north on each level. Central bilevel security monitors both floors.

ABOVE LEFT: Exterior stepped massing and buff brick of new detention facility on side street respect 1936 county courthouse (right).

LEFT: Potentially overwhelming blank walls are enlivened by horizontal banding and masonry grid. Entrance bay abstracts earlier details.

**Newport News/Williamsburg
International Airport**
Newport News, Virginia
Odell Associates, Architect



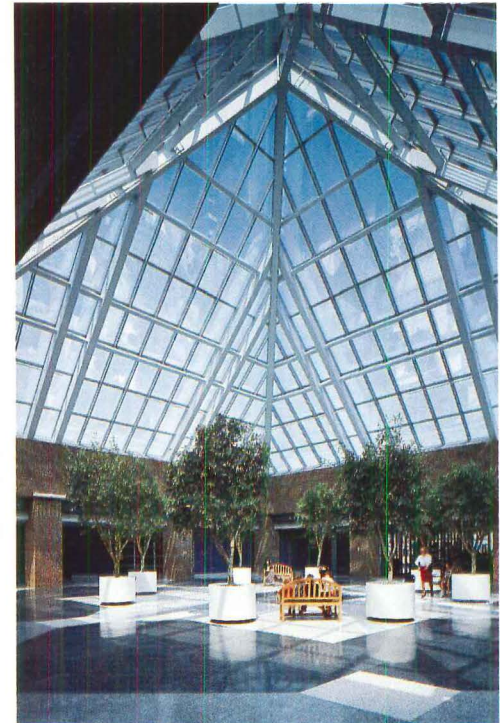
SECOND FLOOR PLAN



The monumental Newport News/Williamsburg International Airport crowns a crescent-shaped hill outside the ship-building city with a strong presence. The 120,000-square-foot airport's framework is obliged to nearby NASA; its memories, to the Old Dominion. Blending new-age technology with traditional materials, Odell Associates developed sweeping forms with historical references.

The Richmond office of Odell designed the airport's symmetrical crescent to be repeated for future growth. A huge berm sets the stage for passenger arrival, masking the terminal's internal machinations.

Inside, a grand gallery housing ticketing and baggage claim interweaves the present and the past: Angular metal framework and high glass walls announce contemporary technology, while the brick details and patterns were developed by Odell in consultation with Colonial Williamsburg; banners of early Virginians line the light-filled gallery.



PLAN: Terminal curves in welcoming crescent for arriving passengers. Single concourse can be easily expanded.

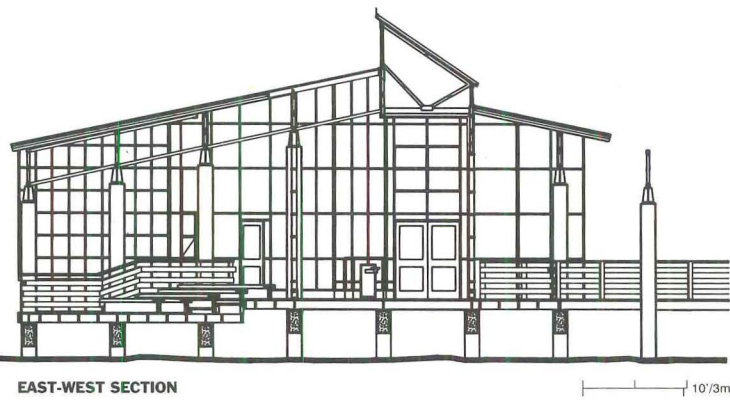
TOP RIGHT: Symmetrical terminal creates monumental sense of arrival.

CENTER RIGHT: Baggage handling and support services occupy lower level beneath main terminal. Concourse to aircraft stretches to right.

RIGHT: Grand, curving terminal is daylit by clerestories.

FAR RIGHT: Skylit central atrium leads to boarding lounges and airport gates.

**Environmental Education Center
Jean Lafitte National Historical
Park and Preserve
Barataria, Louisiana
Eskew Filson Architects**



The Environmental Education Center at Jean Lafitte National Historical Park outside New Orleans slips into the woodland like a log. Surrounded by overscale palmetto swampland and overshadowed by a grove of pecan and oak trees, this 8,600-square-foot building artfully steps back into the undergrowth, masking its true mass and height.

Designed by Eskew Filson Architects as a showcase of the Barataria, Louisiana, bayou/swamp for the National Park Service, the steel-framed, wood-walled pavilion houses a glowing, screened amphitheater overlooking the green lowland—an ideal setting for lectures on native habitat. Circulation along an open spine connects a breezy auditorium/meeting room, laboratories, rangers' offices, and a commercial kitchen.

Gray concrete piers lift the wood-clad volume above the forest floor; steel trusses span the intervals and serve as framework for the corrugated-metal roofs.



SECTION: Pitched gables echo regional vernacular forms. Concrete columns lift building's metal structure above sensitive ecosystem.

ABOVE LEFT: Wooden entrance bridge carefully threads through tree canopy. Stringent construction requirements minimized education center's impact on pecan and oak forest.

FAR LEFT: Translucent roofing daylight circulation spine of pavilion.

LEFT: Screened central amphitheater opens to swampland forest.



Boundaries of Light

Wallace Stevens, the Hartford, Connecticut, insurance executive who became one of America's greatest poets, personified a mythic New England of purposeful enterprise and lyrical grace. This dual spirit, when translated to architecture, is evident in several recently completed institutional buildings that fuse frank, forthright forms with a pellucid sensibility of light: a courthouse by Winton Scott in West Bath, Maine; a chapel by Moshe Safdie at Harvard University in Cambridge; an observatory at Milton Academy by Leers, Weinzapfel; and Chan Krieger's entrance hall to the Discovery Museum in Bridgeport, Connecticut.

These architects realize that light knows no boundary until it hits a wall. At Scott's Maine District Court, subtly reflective pediments and shadow-casting colonnades signify in the blink of a passing motorist's eye the civic actions of the building. The heart of its interior is a square, sunlit courtroom that rises to a broad, hipped roof. Crowned by a pyramidal skylight, the courtroom reaches out to its rural site via clerestoried corridors ending in stripped classical porticoes. The result of this pragmatic parti is a courtroom that Scott hopes will evoke a sunny town square, surrounded by a village of ancillary judicial functions, where justice is administered in the light of day and seems, in the architect's words, "psychically accessible."

While Winton Scott seeks to illuminate the workings of democracy, Moshe Safdie manipulates the rays of the sun to suggest the light of God. The drama of his Class of 1959 Chapel for Harvard's School of Business is almost invisible from its exterior, a cylindrical bunker of green copper that's situated among the red brick walls and white Georgian windows of McKim, Mead, and White's 1928 campus. Contrasting color and abstract form distinguish its spiritual role within Harvard University's bastion of secular finance. The chapel is defined by a circle inscribed within the copper bunker that is surrounded by five semicircular apses. Exquisitely fin-

ished in concrete, it is subtly modulated by a cornucopia of lighting incidents. When the sun is low or the sky overcast, the pearl gray light of the apsidal skylights is as chaste as a Puritan minister. But when the sun comes out of hiding, the chapel erupts into a sensual riot of color worthy of Hester Prynne. To achieve these effects, Safdie worked with artist Charles Ross to fit each skylight with acrylic prisms that are filled with mineral oil and controlled by computer to deflect the sun's rays into kaleidoscopes of color.

Art and science intersect again in Bridgeport's Discovery Museum. The first phase of Chan Krieger's master plan for upgrading the institution comprises a new frontispiece that is rigorously Modern and more likely to recall the work of 1930s settlers to New England, such as Walter Gropius, than their Mayflower-born ancestors. This entrance hall shines with the light of discovery by assembling brightly colored boxes of brick and glass block that plug into and electrify John Johansen's original building, a svelte exercise in midcentury Modernism. While Chan Krieger compresses these materials into graphic signage, the interior explodes in a promenade of Neo-Corbusian spirit.

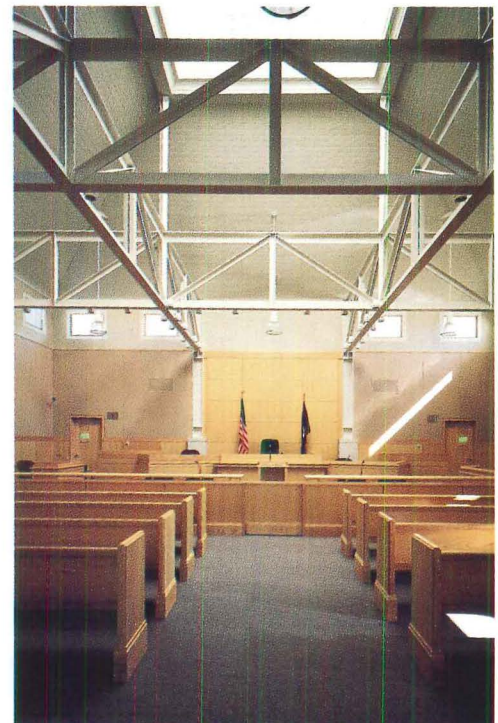
Like the Discovery Museum, the Robert M. Ayer Observatory at Milton Academy near Boston focuses on the light of science. This tiny "nocturnal garden" for stargazing, as partner Jane Weinzapfel terms the design, sits on a slightly elevated piece of land between two sports fields and elevates the role of astronomy to a visible part of the school's curriculum. Leers, Weinzapfel fleshes out its garden metaphor by expressing the observatory's 2-foot-on-center wood structure as a square, latticelike grid. The pattern reappears in a trellis marking the outer limits of an outdoor arboretum of concrete telescope stands.

Within the boundaries of their diminutive scale, each building casts a shining glow. Formally savvy and culturally adept, they elevate justice, religion, and science to a higher, more illuminating plane.—*Donald Albrecht*

West Bath District Courthouse
West Bath, Maine
Winton Scott Architects



Maine hadn't commissioned an architect to build a regional courthouse in almost 50 years, when a new, design-conscious state architect facilitated the selection of Winton Scott for a state facility serving the area around Bath. Scott, who was project architect for Louis Kahn's library at Phillips Exeter Academy, met the challenge with a nod to his mentor, creating a building of stark formalism tempered with Classical finesse. A steel structure clad in cream-colored brick forms a symmetrical facade of colonnades flanking a pronounced entrance portico. Corner reveals break the mass of the portico's columns. Simplified capitals, cornices, and other types of trim are precast concrete, and leaded copper covers the roofs. All public spaces are daylight. Artificial illumination shines through the central courtroom's sloped fiberglass skylight at night, making it appear to glow in civic splendor, like the radiant pyramid on a dollar bill.



PRECEDING PAGES: Courthouse by Winton Scott exemplifies civic-minded architecture in New England.

SECTION: Central courtroom rises above brick-columned entrance corridor.

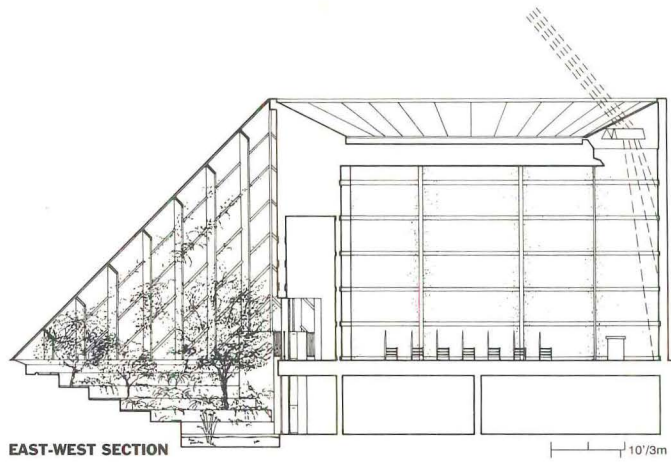
ABOVE RIGHT: Scott created clerestories by raising roofs above envelope.

RIGHT: Light bounces off corridor ceiling lined in painted, tongue-and-groove poplar boards.

FAR RIGHT: Exposed steel trusses and columns give honest structural expression to main courtroom.

BRIAN VADEN BRINK PHOTOS

**Class of 1959 Chapel
Harvard University
Cambridge, Massachusetts
Moshe Safdie and Associates**



Circle, square, and triangle form the building blocks of Moshe Safdie and Associates' Class of 1959 Chapel for the Harvard School of Business in Cambridge, Massachusetts. Like a miniature version of I.M. Pei's Grand Louvre master plan, this chapel welcomes visitors through a glazed pyramid, where plantings cited in the Bible surround a black granite pool filled with goldfish. The circular chapel expresses its non-denominational status by rejecting all religious imagery and any sense of axial, navelike planning. Instead, five apses of flexible function ring the chapel, which the architect furnished in Shaker-inspired chairs of his own design. Completing Moshe Safdie and Associates' composition is an exterior tower of glass and black granite, which is inscribed with the names of the chapel's donors. Square in plan, the tower contains an abstract clock by Karl Schlamming, a gold-leafed globe that rises and falls with the passage of time.

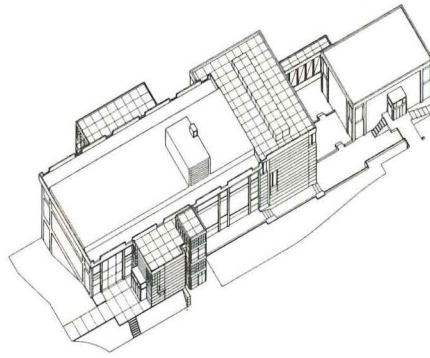


SECTION: Glazed pyramid leads to circular chapel with skylight prisms that refract the sun's rays.

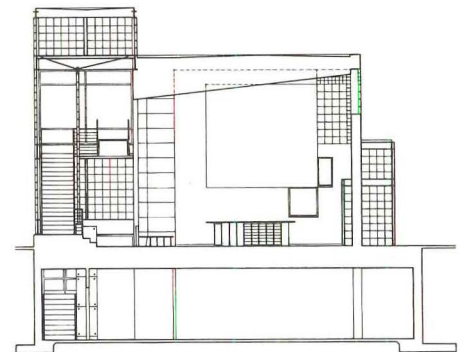
ABOVE LEFT: Abstract forms and contrasting color distinguish Harvard chapel from Safdie's brick-clad, contextual Morgan Hall (background).

LEFT: Stripes of painted gypsum board cover poured-in-place concrete joints. Prisms create colored lighting that suggests Gothic stained-glass windows without religious iconography.

Discovery Museum
Bridgeport, Connecticut
Chan Krieger & Associates



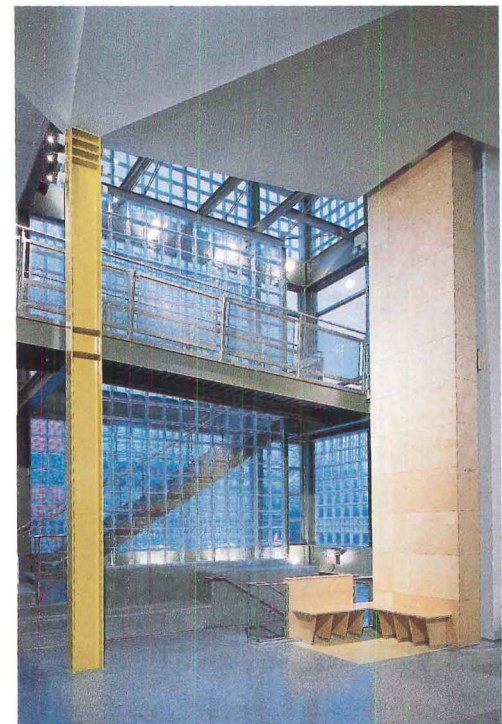
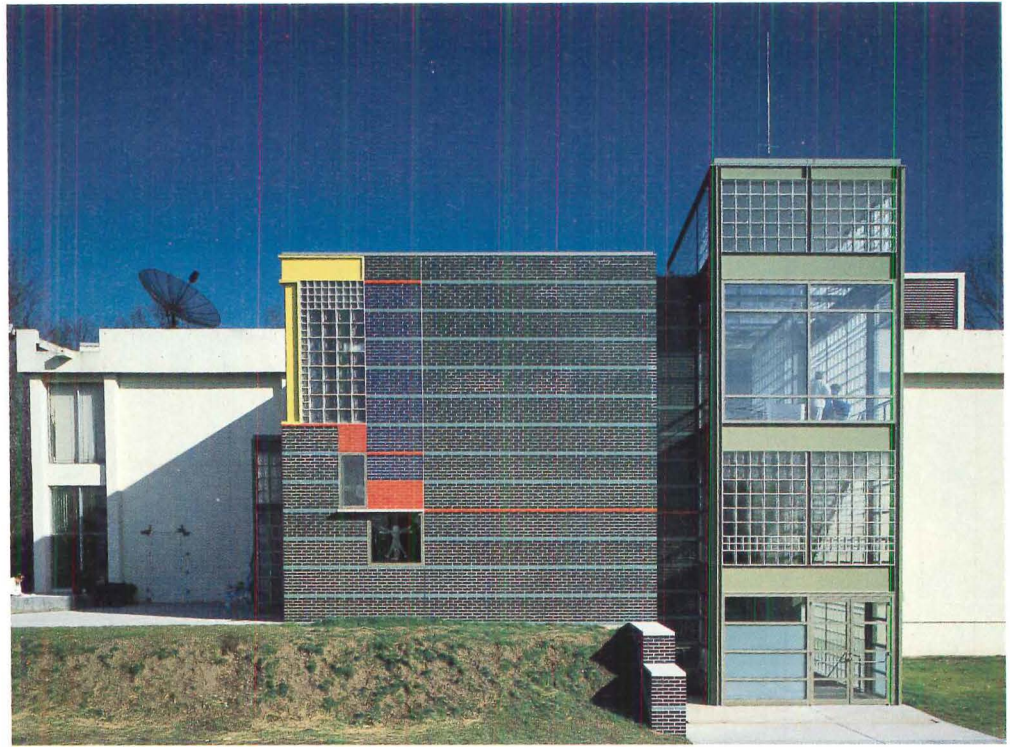
AXONOMETRIC



EAST-WEST SECTION

10'/3m

Bridgeport was a robust manufacturing town when the Museum of Art, Science, and Industry opened in the early 1960s. Today, postindustrial Bridgeport declines, but the re-named Discovery Museum thrives by educating school-age children in art and science. Better known for urban design schemes than individual buildings, Cambridge-based Chan Krieger promoted architecture as a strategy to reposition the museum for a new context and community. Announcing the transformation is the bold first phase of the architect's master plan. Building repairs were undertaken; mechanical systems upgraded; and a two-story entrance hall, classroom, and assembly space constructed. The addition's most welcome amenity is a stairway-cum-ramp that replaces two inconveniently located fire stairs and an elevator. Slipped between planes of glass block and perforated metal, the stair and ramp entice visitors on a seductive path of exploration and discovery.



AXONOMETRIC: Master plan shows completed entrance hall (lower left) and cafeteria (top) now in design.

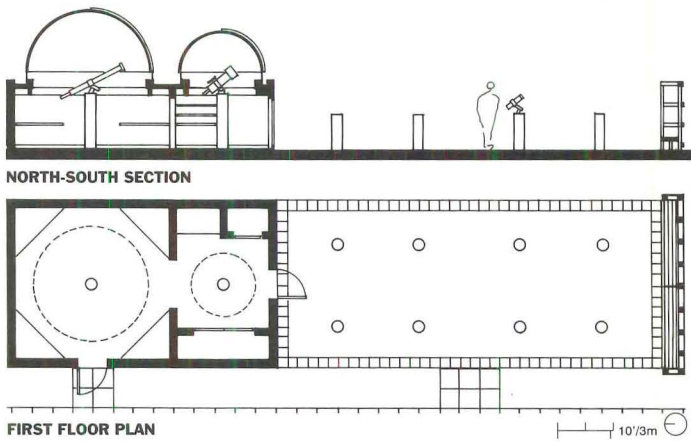
SECTION: Glass-block-enclosed stair tower rises above roof.

ABOVE RIGHT: Eero Saarinen's 1955 General Motors Technical Center inspired museum's glazed brick facade.

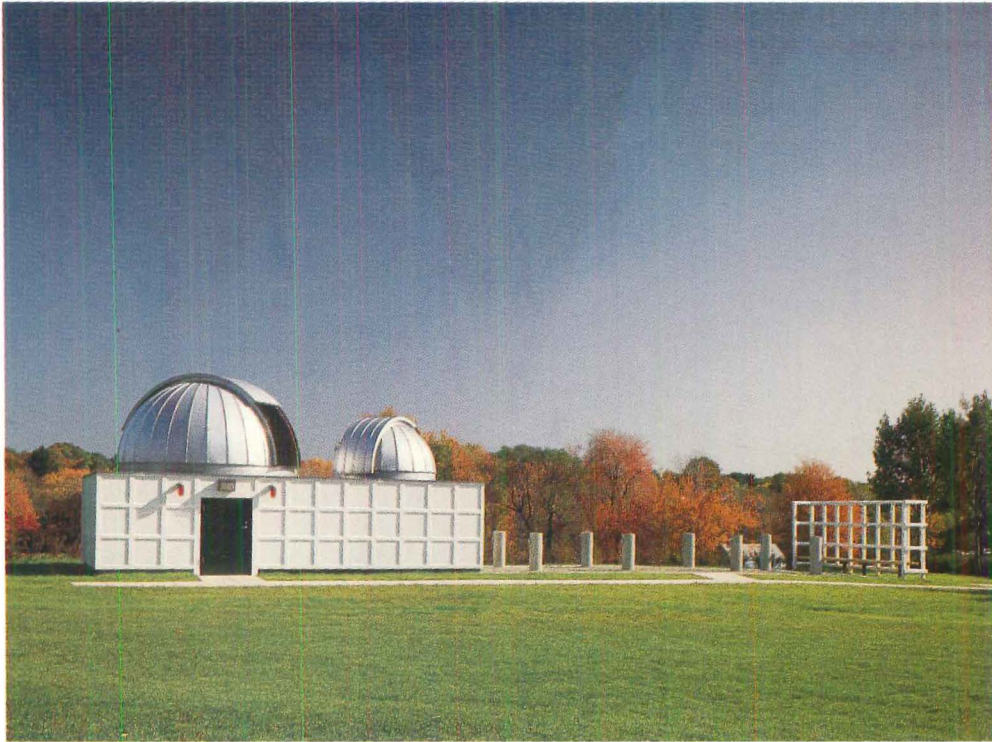
RIGHT: Design of stair tower conflates steel-framed Miesian rigor and Chareau-like sensuousness in glass.

FAR RIGHT: Glazed corner of stair tower opens entrance hall view to exterior.

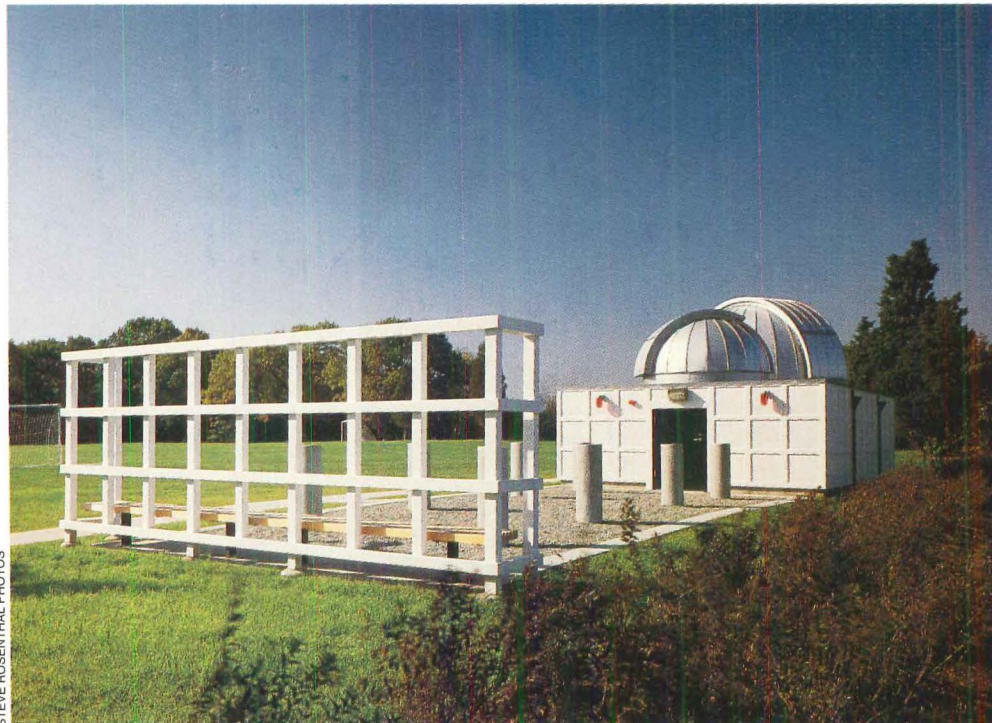
PETER VANDERWARKER PHOTOS



Robert M. Ayer Observatory
Milton Academy
Milton, Massachusetts
Leers, Weinzapfel Associates



“On Spaceship Earth,” Buckminster Fuller once said, “there are no passengers, only crew.” Fuller, one of Milton Academy’s most famous graduates, would be proud of the Ayer Observatory, a functional yet spirited environment where students chart the sky. Designed by Boston-based Leers, Weinzapfel Associates, the observatory is a Modern box, gridded in the style of Sol Lewitt, that is also subtly deferential to its historic campus. White checkerboard walls and green doors allude to the academy’s Georgian style, and concrete pavers expand the building’s orbit toward the campus beyond. Inside, two square rooms, each with a single telescope, function without mechanical systems. Walls and workstations of clear-sealed plywood sit on a concrete floor and support a pair of glistening, prefabricated domes. Unusually low ceilings allow students to access the telescopes without climbing ladders, bringing the sky within earthly grasp.



SECTION: Observatory houses a 1927, 5½-inch-diameter reflecting telescope in larger room and a 9-inch-diameter telescope in smaller chamber.

PLAN: A 2-foot-by-2-foot module determined plan, spacing of outdoor telescope stands, and paving pattern.

ABOVE LEFT: Observatory walls measure just over 6 feet, although scale of grid creates illusion of greater height.

LEFT: Outdoor area contains concrete pedestals for mounting telescopes.

STEVE ROSENTHAL PHOTOS



Architecture for Architects

During the economic downturn in the Mid-Atlantic region, many architects have turned inward, designing their own studios or spaces for other architects. The Design Collective of Baltimore and the Lee H. Skolnick Architecture + Design Partnership of New York City took advantage of recent office moves to explore new design directions, raise their profiles, and rethink the way they do business. For the offices of two AIA chapters—New York and Philadelphia—local architects developed innovative solutions to the design issues many architects are investigating in the 1990s, while offering new visibility for their members.

Unlike many New York City firms, the office of Lee Skolnick grew steadily during the recent recession, from six employees in 1986 to 30 in early 1994. When a large loft space in downtown Manhattan became available at low rates, Skolnick seized the opportunity not only to accommodate the firm's growth, but also to create a studio environment that makes a statement about the firm. In recent years, his practice has shifted from a "boutique" to an established specialist in museum design and high-end residential work, with clients such as the Smithsonian Institution. The firm's new office is a juxtaposition of seemingly incompatible forms and materials, with surprisingly harmonious results.

Similarly, in Baltimore, principals Richard Burns, Dennis Jankiewicz, and Ed Kohls of the Design Collective initiated their move to make a strong statement about the way their 15-year-old business has grown and changed. The firm has evolved from a suburban-oriented shop primarily serving local builders and developers to a national, interdisciplinary firm with a project list that includes academic buildings and major civic projects. To underscore the change and reposition the 42-person firm, the partners leased space on the 14th floor of an office tower overlooking Baltimore's Inner Harbor. The bright, open design of the studio was conceived in part to show clients how the firm can create a suc-

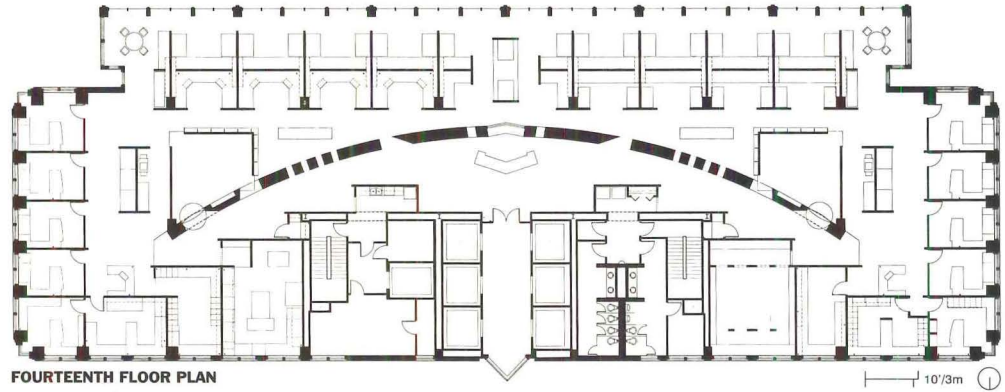
cessful work setting while staying within a strict budget and tight timetable.

Architect Edwin Bronstein also shows how architects can enliven small spaces without exceeding a client's budget in the 2,200-square-foot headquarters he designed for the Philadelphia AIA. Bronstein collaborated closely with artisans and contractors, created nontraditional workspaces for the staff, and centered the space on a public gallery for rotating exhibits of architects' work. Because the AIA's directors wanted the space to be a model of sustainable design, Bronstein also immersed himself in the AIA's *Environmental Resource Guide* and other research material. The light and airy space offers a veritable sampler of design approaches, including subtle nods to the work of such local luminaries as Louis Kahn and Robert Venturi.

To choose an architect for its new headquarters in the New York Design Center, the New York AIA held a competition and selected architects Thomas Hanrahan and Victoria Meyers. "This is a statement about the urban character of the city," Meyers explains of the 1,800-square-foot interior. "It's not a space for a suburban chapter, but for architects working in the most sophisticated urban center in the country. We wanted to reflect that urbanity in the way we designed the space." Meyers and Hanrahan pared down the design elements of the competition-winning entry to stay within budget, but the close working relationship with the AIA board helped them preserve the most salient features—including a custom-crafted reception desk and long wooden storage wall.

Common to these four projects are clarity of spatial planning, attention to detail, and adventurous applications of inexpensive materials. Each is distinctly different, from the fresh informality of Skolnick's workshop to the sleek sophistication of the AIA New York offices. The recession may mean smaller budgets and tighter spaces, but it clearly hasn't prevented these Mid-Atlantic architects from expressing themselves.—Edward Gunts

**Design Collective Headquarters
Baltimore, Maryland
Design Collective, Architect**

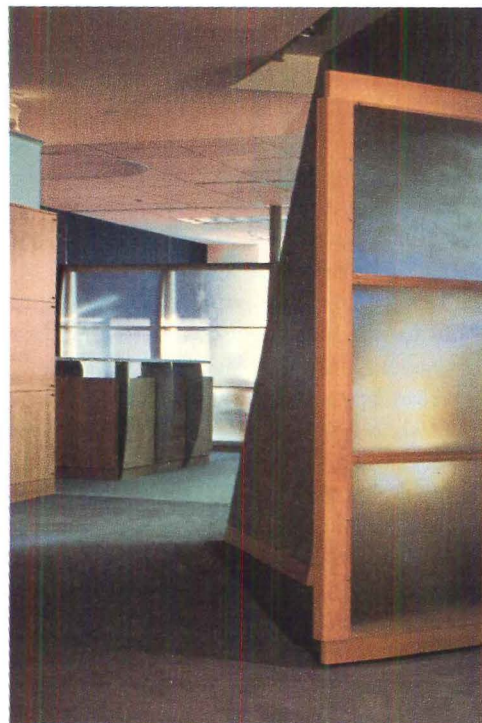


To reflect its commitment to the urban environment, Design Collective moved from suburban Maryland to space in a high-rise office building overlooking Baltimore's inner harbor. The building's location at the edge of the waterfront, and the linear footprint of its 14,000-square-foot floor plan, became starting points for the office design, which was conceived as a metaphor for the way land meets water.

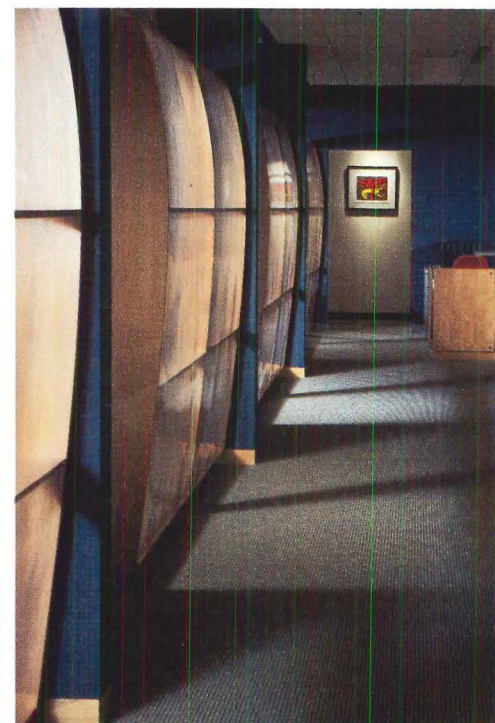
Service spaces are located on the north side of the building, leaving an open studio with unobstructed south-facing views to the water. Back-of-the-house elements are organized on an orthogonal grid in line with that of the city, while the studio workstations are expressed as marinalike slips in an open harbor. Separating these two zones is a sweeping, curved wall, symbolizing the point where land and water meet. This wall creates a gallery for public gatherings and display space for the firm's current projects.



ERIK KVALSVIK



ANNE GUMMERSON



ERIK KVALSVIK

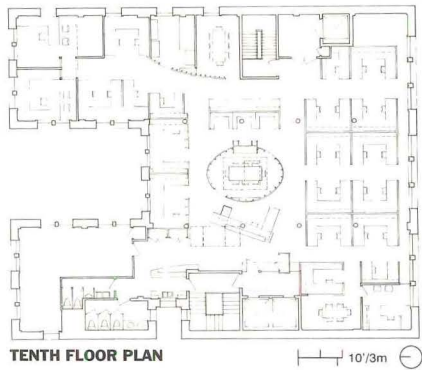
PRECEDING PAGES: Central corridor of Design Collective's offices is defined by a sweeping, curved wall.

PLAN: The Baltimore firm occupies 14,000-square-foot floor of tower whose south wall (top) faces the harbor.

ABOVE RIGHT: Reception desk is constructed of maple, brushed stainless steel, and brushed aluminum.

RIGHT: Translucent conference room door pivots from main corridor.

FAR RIGHT: Partitions are designed as "sails" of translucent fiberglass.



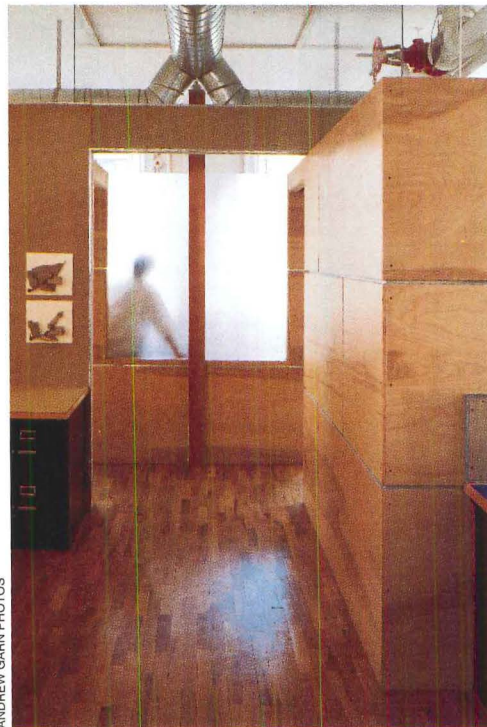
TENTH FLOOR PLAN



**Lee H. Skolnick Architecture +
Design Partnership Offices
New York City
Lee H. Skolnick Architecture +
Design Partnership, Architect**

Founded in 1980, Lee Skolnick's firm has become well known for juxtaposing incongruous forms and materials in surprisingly harmonious ways. The Skolnick office is an amiable assemblage of its own; contrasting materials and construction techniques give the space a comfortable sense of relaxed informality.

Visitors are greeted by a closet covered with five shades of vinyl composition tile, placed together to evoke a city grid. The center of the room is occupied by a round conference space with a smooth plaster surface on the outside and rough, textured plaster on the inside, pushed through metal lath. Translucent fiberglass walls along one side of the studio demarcate the semiprivate spaces for associates, while curving and angled walls screen work and storage areas. Freestanding objects set against wood floors and plastered ceilings impart serenity to the common spaces and prevent the office from seeming too chaotic.



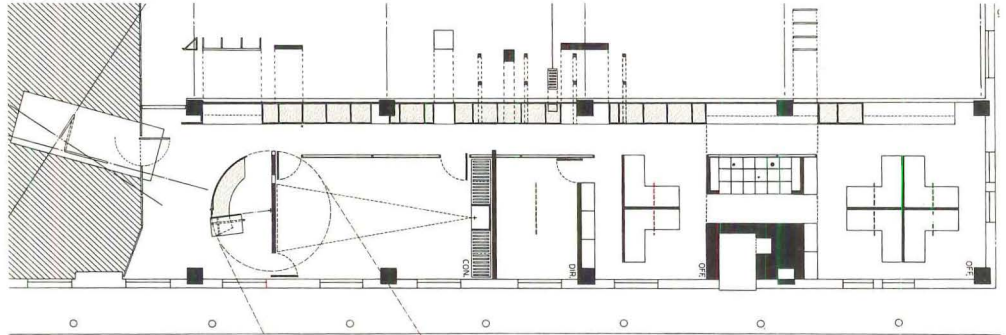
PLAN: Architecture firm's offices occupy 8,200 square feet on skylit top floor of 1920s-era loft in lower Manhattan.

ABOVE LEFT: Coat closet clad with five shades of vinyl composition tile sets the tone of informality.

FAR LEFT: Partitions are constructed of patterned birch plywood with aluminum reveals.

LEFT: Round plaster conference room exterior contrasts sharply with corrugated surface on inside, formed from plaster pushed through metal lath.

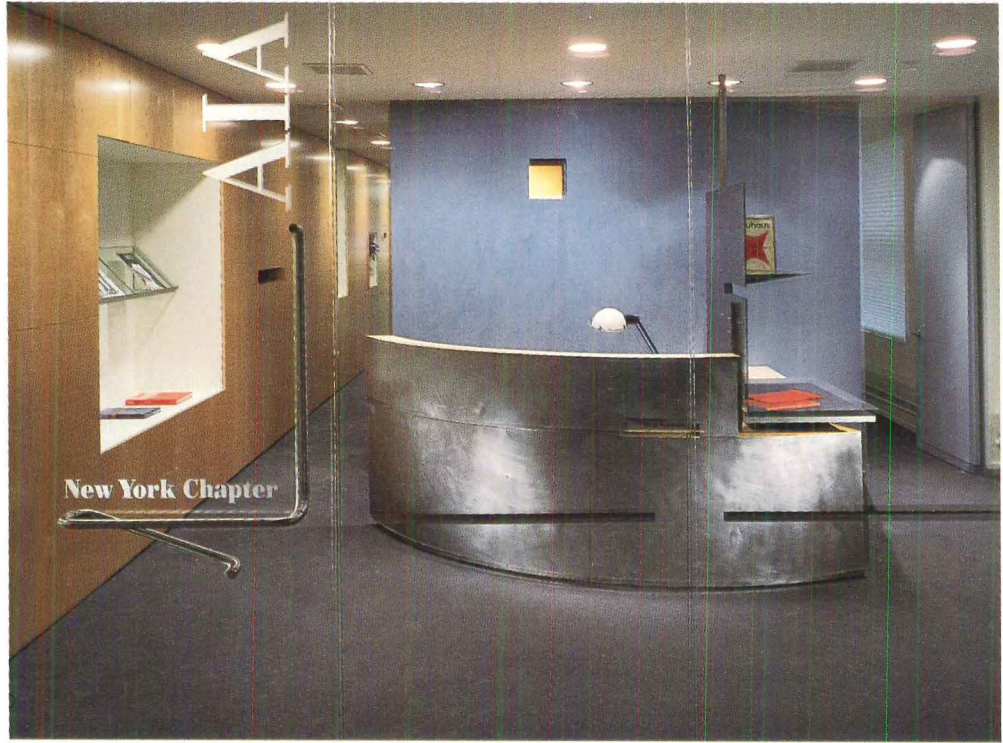
**AIA New York Chapter Headquarters
New York City
Thomas Hanrahan and
Victoria Meyers, Architects**



SIXTH FLOOR PLAN

The AIA New York chapter held a design competition for its new headquarters in the New York Design Center. The three jurors—architect Philip Johnson, Columbia University Graduate School of Architecture Dean Bernard Tschumi, and ARCHITECTURE Editor-in-Chief Deborah K. Dietsch—selected a design by local architects Thomas Hanrahan and Victoria Meyers.

Hanrahan and Meyers won by proposing a bold, forward-looking identity for the offices, while creating the sense of moving through a city streetscape. They envisioned the space as the fragment of a city grid, with a broad avenue on the west side interrupted by cross streets that divide the space into three distinct zones—lobby/library, boardroom, and offices. The transition from zone to zone is marked by clearly articulated elements, such as a curved information desk. A long wooden storage wall binds the public area to the private offices.

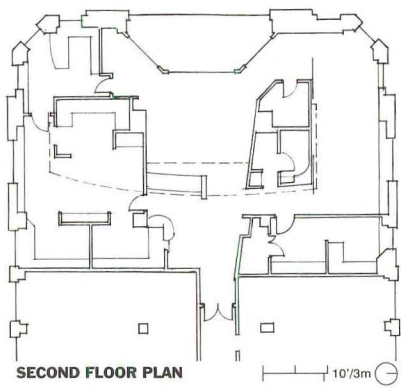


PLAN: In a loft building originally designed by Ely Jacques Kahn, the 1,800-square-foot chapter offices are organized into three distinct zones.

ABOVE RIGHT: Information desk at the entrance to the offices provides the public face of the chapter.

RIGHT: Desk is constructed of maple and steel with perforated-metal doors. Shelf is for a future computer station.

FAR RIGHT: View from conference room through aluminum-on-glass wall reveals long maple storage cabinet.



**Philadelphia Chapter of the AIA
Philadelphia, Pennsylvania
Edwin Bronstein, Architect**

For many years, the Philadelphia AIA chapter's offices were located in the basement of the Architects Building, a 1930s-era high rise. When space opened up on the second floor, the AIA directors decided to relocate the headquarters to project a higher public profile.

After issuing a request for proposals, the chapter selected Edwin Bronstein of Philadelphia. Bronstein created a series of inviting spaces in a variety of design approaches and construction techniques, as if to show what the chapter's members are capable of producing.

Forms in the public areas subtly refer to the work of others, from Le Corbusier's curves at Chandigarh to Louis Kahn's textured gallery walls at Yale. Since this is the home chapter of architect Susan Maxman, the former AIA president who stressed environmentally sensitive design, Bronstein reused existing materials; installed low-energy lights; and incorporated replenishable hardwoods.



PLAN: Philadelphia AIA chapter's offices occupy 2,200 square feet on second floor of the Architects Building.

ABOVE LEFT: Large internal window provides focal point of central gathering space, which doubles as a gallery for rotating exhibits of work by architects, artists, furniture designers, and others.

LEFT: View from conference area to gallery shows maple cabinetry; rough-hewn plaster wall; slate floor; and steel frame, which supports sliding door.

Climate Control

The Southwest is equal parts scarcity and excess: too little water and not enough grass; too much sun and a superfluity of sky. It is a region that calls for pragmatism and a respect for limits, not that Dallas or Phoenix necessarily listen. Anything that is shallow, or that tries to deny geography, climate, or history usually dries up and blows away. Architects who design west-facing rooms or forget which way the dust flies in April court disasters that no amount of air conditioning can circumvent.

The pioneers understood these limits and built accordingly. The 19th-century settlers of Central Texas constructed low, blocky houses of local limestone, with small square windows and deep overhangs for coolness and shade. The houses were oriented to the prevailing Gulf breezes and located upwind of corrals and compost piles. Vast and desolate West Texas generated introverted houses, with thick walls blocking wind and sand, and interior courtyards framing an atmosphere of order and civility in a humbling landscape.

These no-nonsense vernacular traditions were continued and refined by O'Neil Ford in the 1940s and 1950s, and subsequently by protegés like David Lake and Ted Flato, who discovered in native materials and climatic responsiveness the basics of a contemporary Texas architecture. As illustrated in this portfolio, their work is both abstract and securely anchored to place.

It is likewise no accident that the architecture of New Mexico and Arizona is dominated by thick flat walls that deflect the scorching heat while dramatizing the play of slanting desert light. Building mass evokes mesas and other dramatic land forms of the region and, thereby, serves as a symbol of rootedness. The work of architect Luis Barragán in Mexico and his many disciples in the Southwest only confirms the timeless appeal of these vernacular traditions.

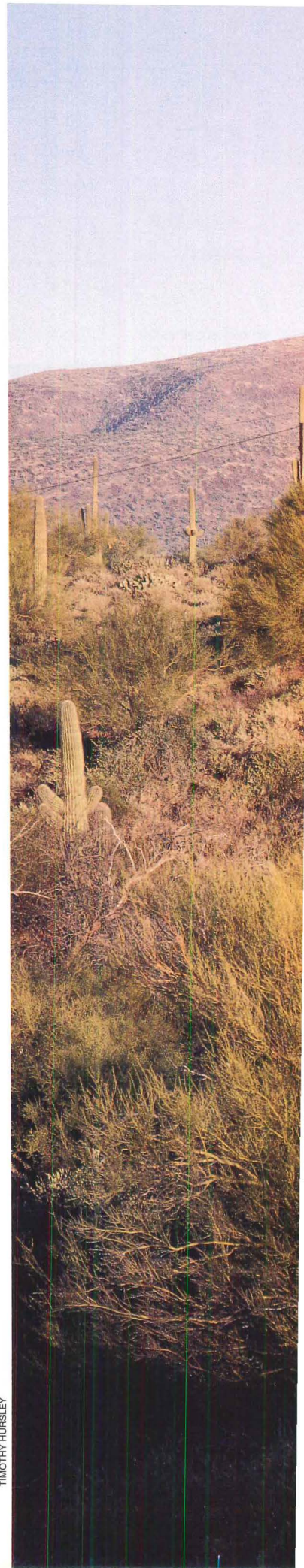
In the Southwest, the challenge is to capture the vistas, which are the essence of desert. Out West, there is no middle scale or

middle distance, only near and far, big and little. Western cities are highly abstract compositions of floating planes that reward the long view instead of the close up. No wonder Texas is the birthplace of the edge city.

But the southwestern landscape is as fragile as it is dramatic. Small scars take decades to heal. The dilemma is how to design for people who love 110 degree weather, as well as for those who move to the desert only because there is air conditioning. Phoenix is a desert city, yet until recently, it masked its identity with palm trees, Bermuda grass, and artificial lakes reminiscent of Wisconsin. As the imported species die out—sometimes exploding from the heat—the city is rediscovering native plants. Its new freeway landscaping is superb and shows what can happen when architects work with climate and topography instead of against them.

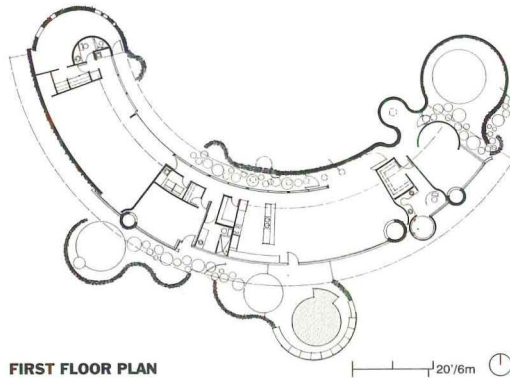
Southwestern architecture has traditionally been organic and earthy: stone, mud, bleached wood, corrugated metal, and bits of canvas, put together in unfussy, craftsmanly ways. While this tradition has been reduced to kitsch in the Conquistador Modern and Santa Fe Style subdivisions that are creeping across the desert, it is hardly dead. Antoine Predock in Albuquerque, New Mexico, has expanded his material and metaphoric range in such projects as the Nelson Fine Arts Center in Tempe, Arizona, and the American Heritage Center and Art Museum in Laramie, Wyoming. These are landscapes of the imagination as well as the eye.

Lake/Flato Architects in San Antonio have adapted the rural Texas palette of stone and stucco to create clean, often abstract, buildings that fit the landscape without copying pioneer prototypes. Likewise, William Bruder in Phoenix reaches beyond shelter magazine scenography to explore the mythic and ceremonial qualities of the desert Southwest and, in both grand and subtle ways, to celebrate its vistas. In different ways, these architects are striving to make Modernism come to terms with place and history.—*David Dillon*





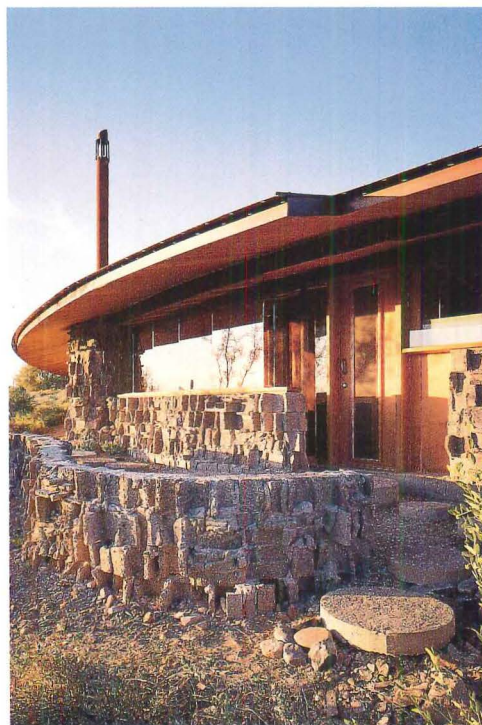
Cox House
Cave Creek, Arizona
William Bruder, Architect



FIRST FLOOR PLAN

Around Phoenix, William Bruder is known as the guy “in the desert” because his studio is located 45 miles from downtown. But as the Cox residence shows, Bruder is also a guy “of the desert.” This house sits half-buried in a rugged setting, its low arcing form blending into a background of sandstone and saguaro. The organic shapes and muted colors show the influence of Frank Lloyd Wright as well as Bruder’s keen sense of what fits a fragile landscape.

Bruder uses familiar materials unconventionally: broken concrete block, laid up rough and sloppy as in Antoni Gaudí’s Park Güell; bands of copper; black plate steel that weathers to the color of an old penny. The house’s curving south wall becomes a window on the desert, encouraging movement back and forth between natural and architectural worlds. The most compelling space of the house is a sunken chamber, a kiva really, that evokes the spirits and the mythology of the desert.



PREVIOUS PAGES: William Bruder practices an architecture of concealment by setting the Cox house into the desert.

PLAN: Cox house forms a 180-foot-long arc; the architect bermed part of north facade into the earth.

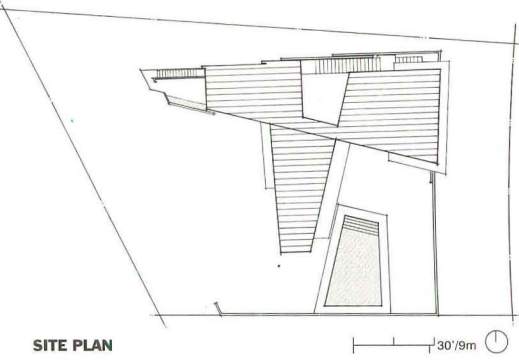
ABOVE RIGHT: Deep overhangs shade the living room and bedrooms.

RIGHT: Patio extends into desert.

FAR RIGHT, CENTER: Entrance integrates concrete block wall.

FAR RIGHT, BOTTOM: Central space combines kitchen and living area.

Hill-Sheppard House
Phoenix, Arizona
William Bruder, Architect



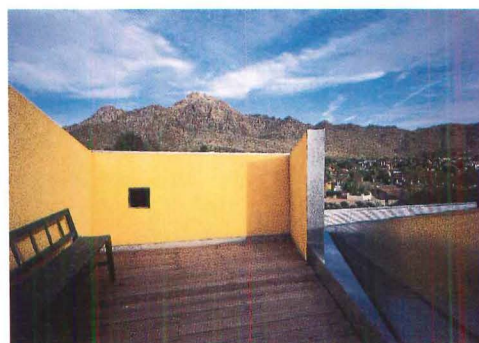
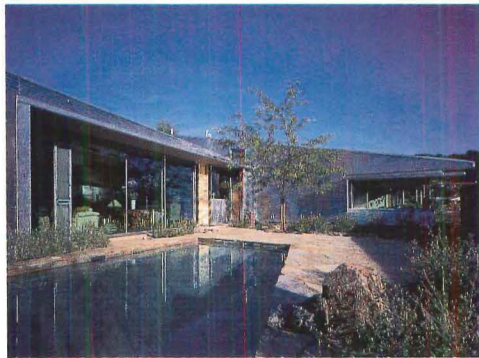
SITE PLAN

30/9m



The Hill-Sheppard house is as vertical and angular as the Cox house is low-slung and curvilinear. Set in the middle of a nondescript Phoenix subdivision, it celebrates an authentic vernacular of mud and metal instead of ersatz developer fantasies.

The site is a cross between a road cut and a rock slide, in which Bruder carved out plateaus for pool, garden, and house. A narrow rock staircase, like a miniature side canyon, rises from the street to a cadmium yellow courtyard, beyond which is a fascinating, if occasionally inscrutable, sequence of rooms and passageways. Unremarkable from the street, the house turns kaleidoscopic within, featuring surprising edges and angles and dramatic cross views. The living room, which doubles as a folk art gallery, provides a cannily edited view of Squaw Peak: all mountain and no subdivision. Bruder employed stone, stucco, and corrugated-metal siding, the latter with reverence instead of Postmodern glibness.



PLAN: Bruder carved spaces for garden courtyard, house, and pool courtyard out of the sloping, rocky site.

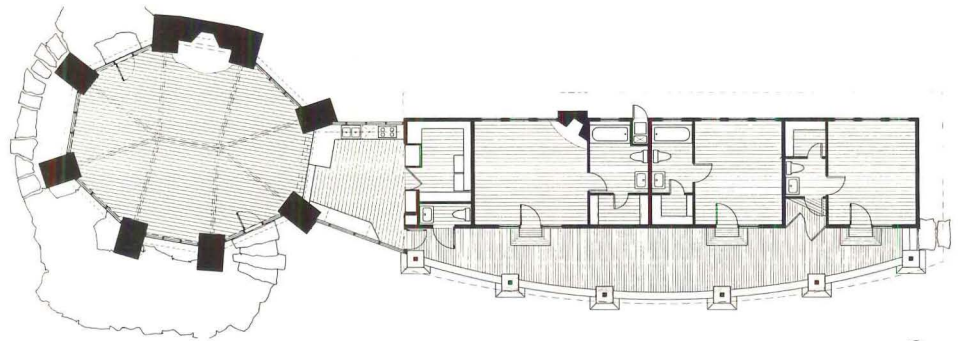
ABOVE LEFT: Rear courtyard is framed by walls of corrugated metal.

FAR LEFT: Narrow exterior staircase terminates in a rooftop deck that looks out to Squaw Peak.

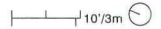
CENTER LEFT: Central living room/art gallery opens onto a pool and garden that is hidden from the street.

LEFT: Bruder designed roof deck for both panoramic and edited views.

Chandler House
Mason, Texas
Lake/Flato Architects

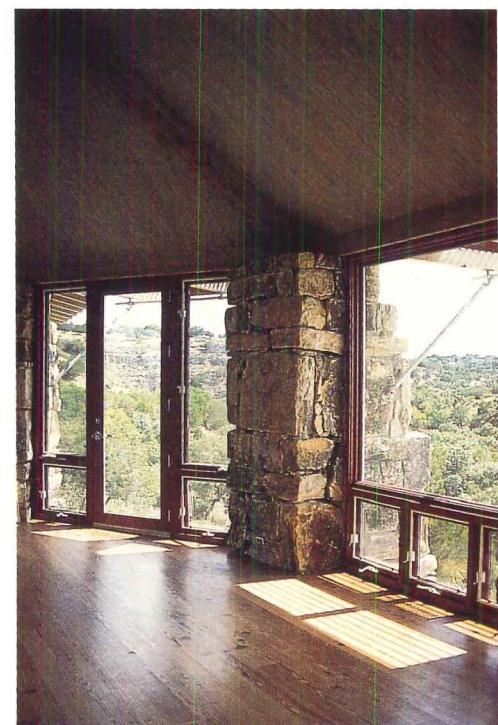
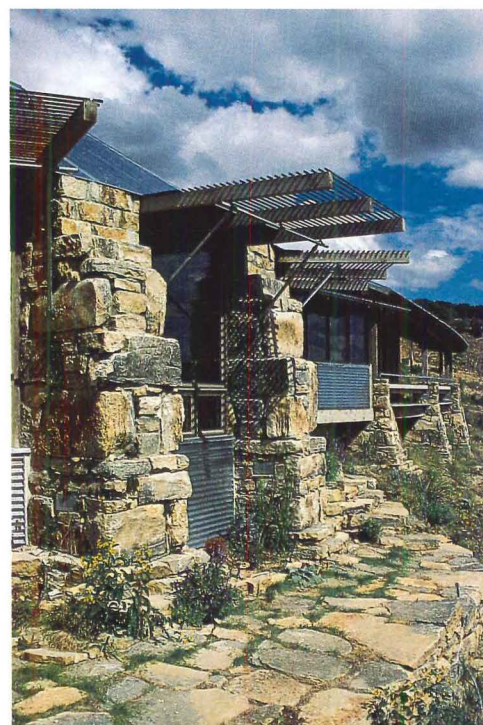


FIRST FLOOR PLAN



The Chandler residence to the northwest of Austin sits on a rugged limestone bluff above the Llano River, capturing the prevailing southeast breezes in summer, while escaping the harsh “northers” of winter. The site is so steep and fragile that Lake/Flato had to keep its forms light and simple. A shallow bedroom wing, like a ranch bunkhouse, wraps the brow of the hill, its arcing porch offering dramatic views up the river. The living room, an octagonal space with a beamed ceiling and Wrightian hearth, provides the house’s social and ceremonial focus. It is both gathering place and lookout.

Massive stone piers, quarried on the site, anchor the house in the style of Taliesin East. The materials—corrugated metal, stucco, and oil field pipe for columns and sun shades—belong to the “make-do” ranching vernacular of the area. Native plants surround the house and, once the site heals, will creep up to reclaim it.



PLAN: Design combines linear bedroom wing with octagonal living and dining room; kitchen serves as knuckle.

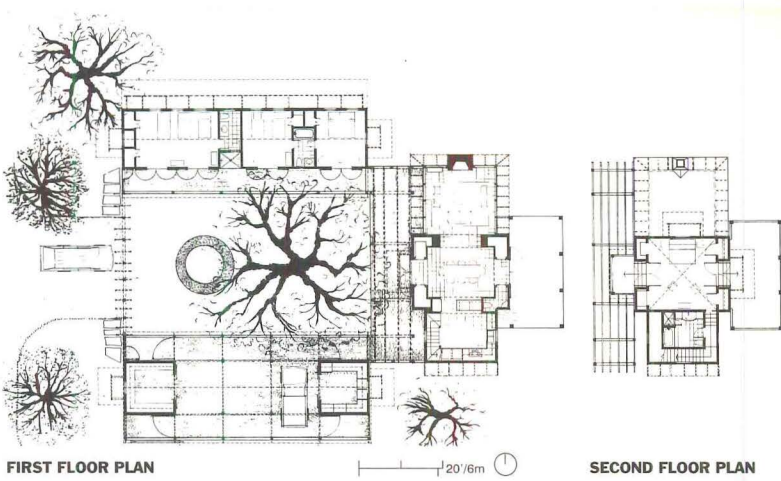
ABOVE RIGHT: The house sits low on an exposed bluff; native vegetation creeps up to the foundation.

RIGHT: Weathered limestone piers, quarried on site, anchor the house. The sun shades are made of oil field rods.

FAR RIGHT: Octagonal living room of Chandler residence exploits dramatic views up and down the Llano River.

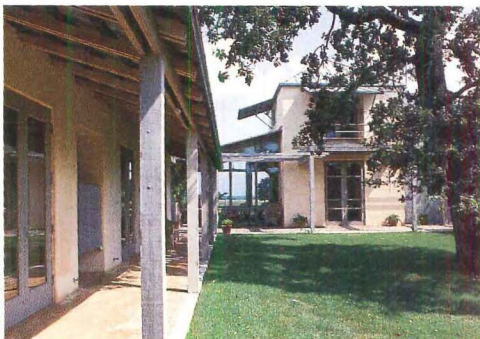
JOHN GRABLE PHOTOS

Carter House
Millican, Texas
Lake/Flato Architects



If the Chandler house is defined by its landscape, the Carter house north of Houston makes its own. Just as the early settlers built compounds to wall out the wilderness, Lake/Flato Architects erected sheds, barns, guest houses, and porches to cordon off a swatch of flat coastal plain. A massive oak tree focuses the composition, but otherwise the site is open and forgiving, unlike the Llano bluff.

The architects have not puffed up the ranch vernacular to give it a special currency. They have instead taken it at face value and tried to honor its integrity. The main house is a simple two-story structure, to which a shed/kitchen and an enclosed porch have been added with what appears to be an improvisational flourish. Construction is uniformly crisp and simple: two-by-fours, wire fencing to keep out the cows, corrugated-metal roofs, and drill pipe columns that locate the buildings in the ad hoc ranching tradition of deep East Texas.



PLANS: Embracing a courtyard, Carter ranch frames massive oak tree.

ABOVE LEFT: Two-story main house is flanked by one-story guest quarters (left) and a garage (right) that can be thrown open for parties.

CENTER LEFT: Galvanized shed roofs echo ranch vernacular.

BOTTOM LEFT: Architects Lake/Flato incorporated overhangs to shade bunkhouse porches.

LEFT: Lake/Flato opted for simple framing and fencing in Carter compound.

PAUL HESTER PHOTOS

Retreat Into Nature

Implicit in the notion of regionalism is looking backward, preserving the unique qualities of a particular locale in the age of instant communications. For the architects of the Bay Area and Pacific Northwest, regions that constitute America's "last frontier" in the minds of many, looking back does not mean recapturing the myth of the frontier, but rather translating Modernist principles into site-sensitive architecture.

Traditionally, people have come to the Northwest to get away from somewhere else; reflecting that, the region's residential building ethos embodies, in some respects, the idea of retreating into nature. Couple that sensitivity to the landscape with the Modernism expressed in many of the houses built in the region during the past few decades, and what has evolved are site-specific yet tough-minded buildings that challenge their locales by contrast as much as integration.

The Bainbridge Island house and studio by Seattle's Miller/Hull Partnership and the Portland, Oregon, house by San Francisco architect Michael Harris demonstrate two different approaches that challenge and embrace the landscape. Both houses employ the northwestern strategy of extensive fenestration to connect with the exterior through expansive views, and to admit light. Relative to the terrain, however, the Friedman House in Portland is about contrast: By the singular extremity of its color, texture, and form, this stark-white cube challenges and reinforces the power of its woody setting.

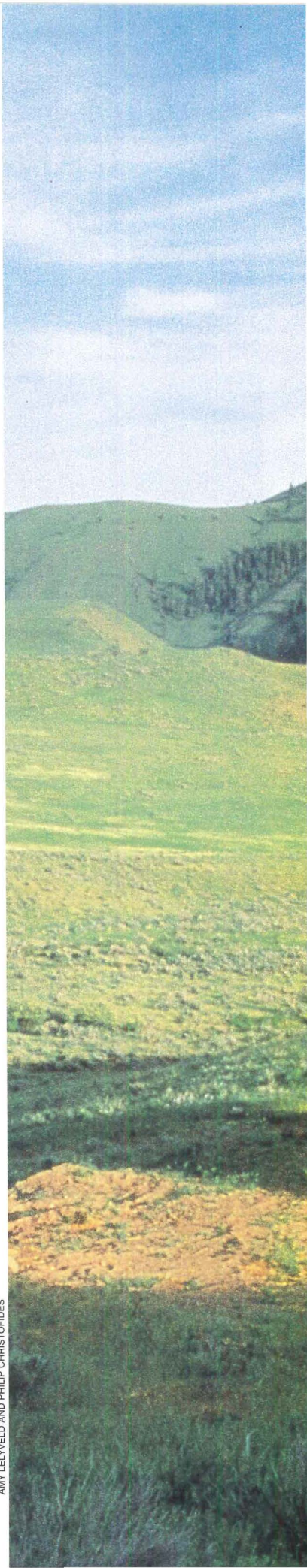
The Weaver/Bergh project on Bainbridge Island is also set apart from its site by virtue of its tough, industrial materials—metal siding, raw steel, unpainted stucco and wood—and its shedlike forms. But Miller/Hull arranges the two buildings in a loose L, enclosing a small meadow, and creates a sense of integration into the sylvan site. The house and studio, for all the material toughness and careful detailing, are at ease with their surroundings. And the other Miller/Hull project, a small cabin in the mountains, is crafted

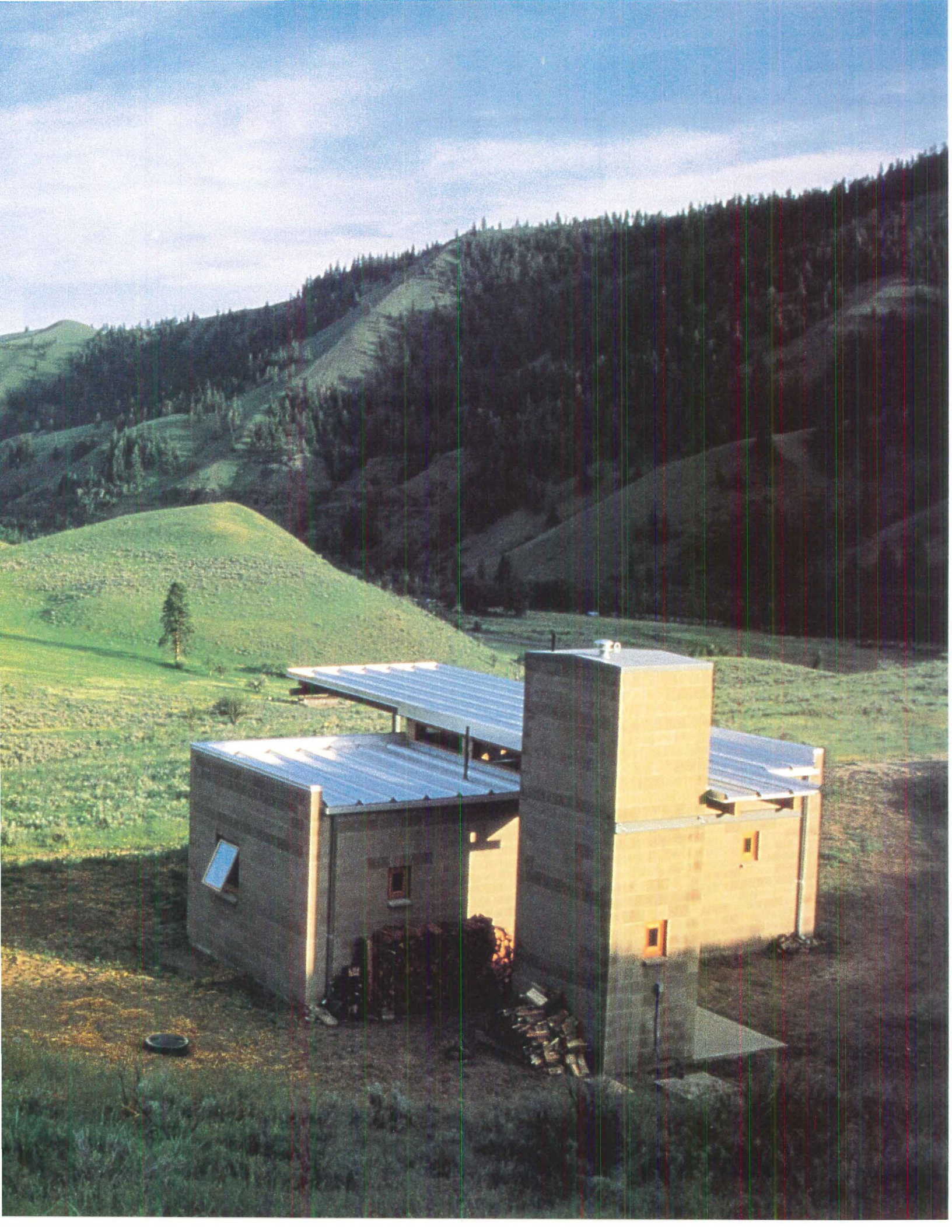
from the most basic of off-the-shelf materials into a rustic retreat that stands apart from the landscape, yet is thoroughly attuned to it.

In the fire-scarred hills of Oakland, the Dixie Jordan house by Ace Architects rises to meet a different set of environmental challenges. In California, where fire, flood, earthquake, and drought are almost identified as the four seasons, in terrain as barren as the surface of the moon, the architects looked to California's Arts and Crafts tradition, crafting a residential-scale interpretation of a Neo-Gothic "great hall" from a turn-of-the-century Maybeck building, Hearst Hall, that was destroyed by fire in 1922.

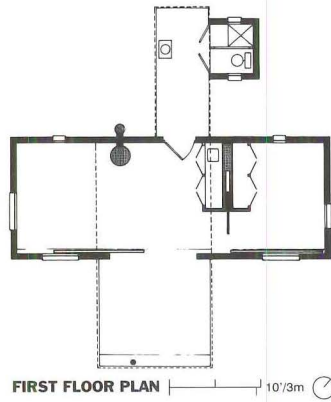
Today, urbanism is part of the texture of the West, too, and so, in spite of their apparently isolated and organic settings, three of the houses in this portfolio are located in suburbs, in or near large metropolitan areas with growing populations and extensive industrial sectors. In light of that fact, retreat into nature not only implies escape from the pressures of the crowded, urban, older East Coast vision of America, but also an escape into the embrace of the western wilderness, of benevolent and spiritual nature.

As is evident in these houses, that ambiguity fuels the paradoxical architectural spirit of the region: naturally sited houses constructed in austere Modern forms, of industrial materials; seemingly isolated buildings near major downtowns. One implication of increasing suburbanization is the responsibility of the architect to enhance, or even to create, the qualities—siting and fenestration, in particular—that make these buildings "retreats," even if downtown Portland, in one instance, is 10 minutes away. Another paradox: As Californians so painfully have learned over the past few years, the natural world in the West is often anything but benevolent. The Dixie Jordan house replaces a house destroyed by a fire, and the Marquand retreat is built to survive fire. Hardly a benevolent environment, by any measure, yet a regionalist reality of the West.—Justin Henderson





Marquand Retreat
Yakima, Washington
Miller/Hull Partnership, Architect

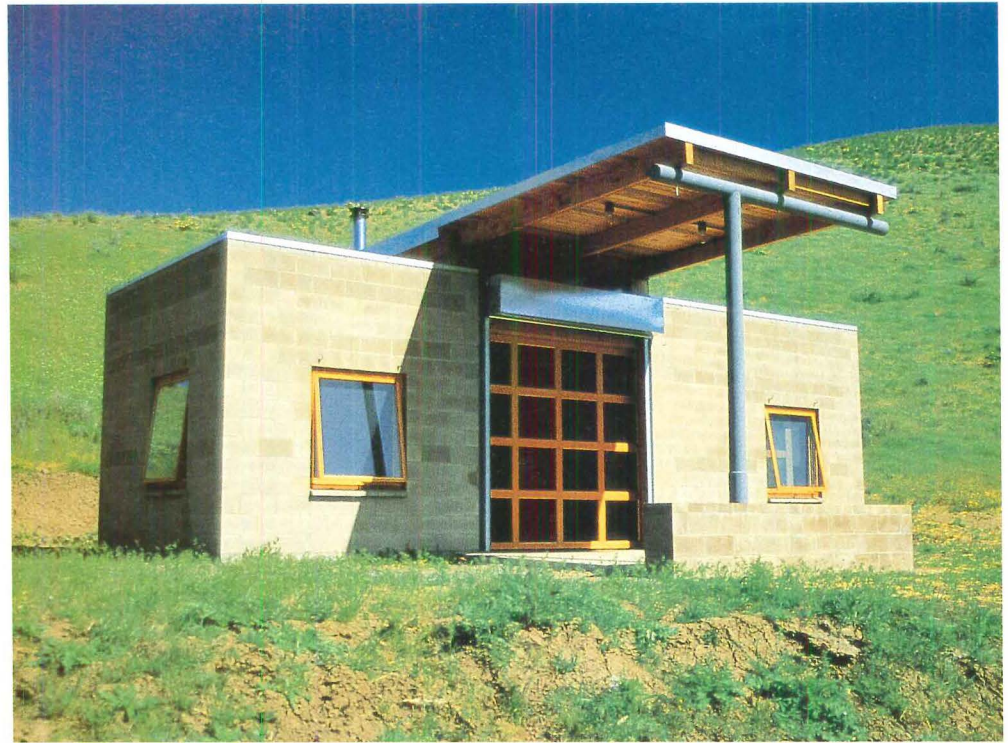


This rural retreat is located in the barren foothills of the Cascade Mountains. The 14-by-30-foot cabin has no electricity; water is trucked in and waste is trucked out by a dirt road; and the materials are as rough and raw as the surroundings.

Inspired by industrial and agricultural buildings, the floor is formed from poured concrete, the walls from concrete blocks. Two sliding panels—one screened, one glazed—cover the portal, with an overhead steel door for security. A rear door leads to the adjacent water tower.

Composed of two planes crossing on the perpendicular, the roof is galvanized metal over wood decking supported by wood beams. Light-giving clerestories are positioned between the two roof levels.

Inside, a plywood-sheathed counter with a laminate top divides the one-room space; the wood counter and ceiling contrast with the concrete floor and walls, but the ambience is austere and minimal.



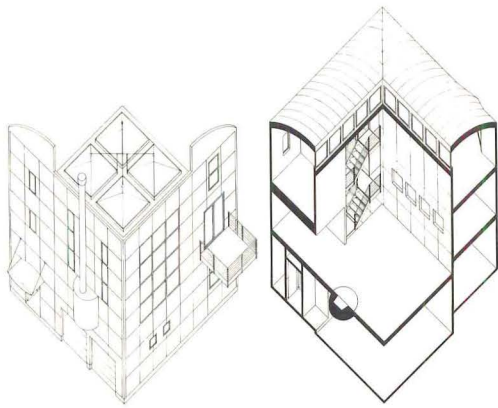
PREVIOUS PAGES: Miller/Hull Partnership drew on industrial and agricultural building imagery for its Marquand retreat in the foothills of the Cascade Mountains.

PLAN: Living and sleeping areas are divided by counter and flanked by water tower with bathroom.

ABOVE RIGHT: Roof canopy over poured-concrete porch is supported by a single, asymmetrically placed column.

RIGHT: The 10-by-10-foot portal (right) incorporates sliding doors.

AMY LELWELD AND PHILIP CHRISTOFIDES PHOTOS



AXONOMETRIC



SHARON RISESDORPH PHOTOS



Friedman House
Portland, Oregon
Michael Harris, Architect

Built of concrete, metal, and glass, the Friedman house appears to relate to its surroundings primarily by contrast: The white cube gleams against a forested background. However, the house is physically grounded in the hillside. More importantly, extensive fenestration permits natural light to flood into the building and provides expansive views.

The 2,700-square-foot structure is clad in concrete panels hung on an extruded-aluminum grid. The roof and window frames are metal, as are the entry canopy, fireplace, and bay window. The interior is a cube within a cube: The skylit living room is wrapped on two sides by bedrooms, studies, and support spaces and linked by a corkscrew stair. Windows and punched openings expand the interplay of volumes.

This house is fueled by a contradictory energy: When viewed from outside, it appears singularly apart from the landscape; from inside, it feels deeply attached to the terrain.

AXONOMETRIC: Bedrooms, dining area, and balconies wrap around inner cube of skylit living room.

ABOVE LEFT: The 34-foot-by-34-foot cubical house in Portland is clad in fiber-filled concrete panels hung on a grid of extruded aluminum.

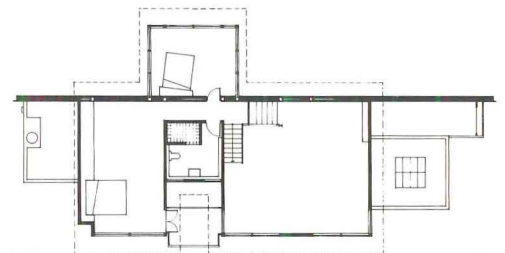
FAR LEFT: Dining room deck on east elevation overlooks wooded site.

LEFT: Double-height living room is washed by daylight from pyramidal skylights and large windows.

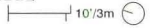
Weaver/Bergh House and Studio
Bainbridge Island, Washington
Miller/Hull Partnership, Architect



FIRST FLOOR PLAN



SECOND FLOOR PLAN



The tug between urban Seattle and its rural Bainbridge Island suburb is revealed in the relationship of this house and studio to their site: The buildings form an L to capture a small meadow. While the shedlike forms and industrial materials contrast with the wooded terrain, their flat-roofed volumes appear like trailers trucked into the site.

House and studio share fundamental traits: metal siding, steel roofs, extensive fenestration. Unlike the house, which is firmly grounded on concrete slabs, the studio “floats” on piers. The studio interior is divided into a central conference room, flanked by an office and a bathroom.

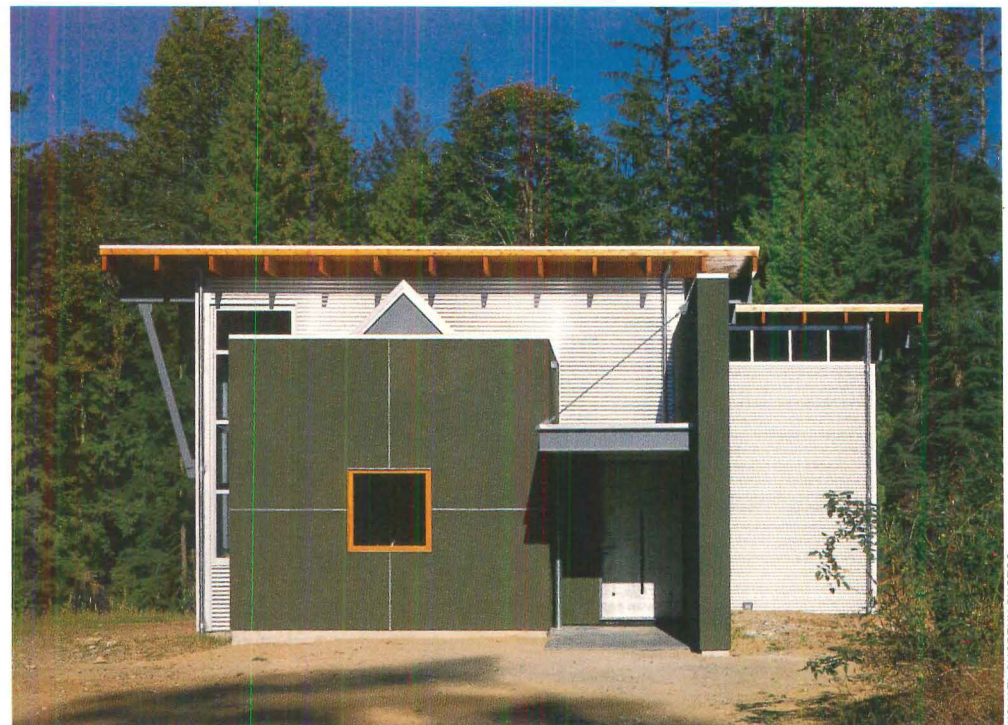
The house began with the idea of an organizational spine with rooms plugged onto the face. A stucco-finished cube with windows and a skylight houses the kitchen. Beyond lies the living room, with exposed steel beams supporting a high wooden ceiling. This carefully detailed building embraces and challenges its site.



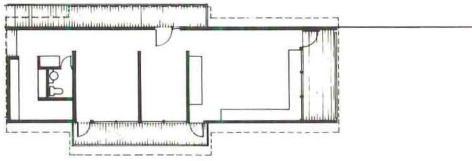
PLANS: House (top) and studio (facing page) form an angle, which captures a meadow and faces the forest.

ABOVE RIGHT: House is entered from stuccoed volume containing kitchen.

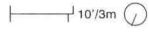
RIGHT: Stuccoed and metal-clad volumes establish De Stijl-like composition.



MICHAEL SHOPPENN PHOTOS



FIRST FLOOR PLAN



LEFT: Steel-framed structure is exposed in living area of house.

FAR LEFT, CENTER AND BOTTOM: Studio is housed in structure on piers.

LEFT BOTTOM: Stained concrete floor and sculpted-steel staircase enliven loftlike living room of house.



MICHAEL SHOPENN PHOTOS

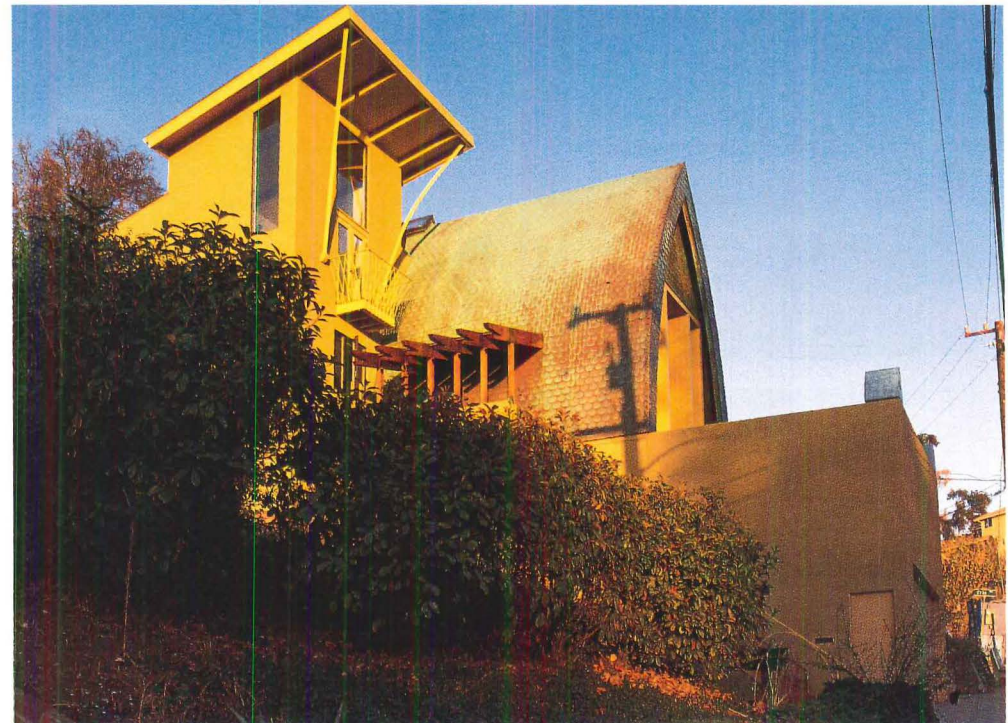
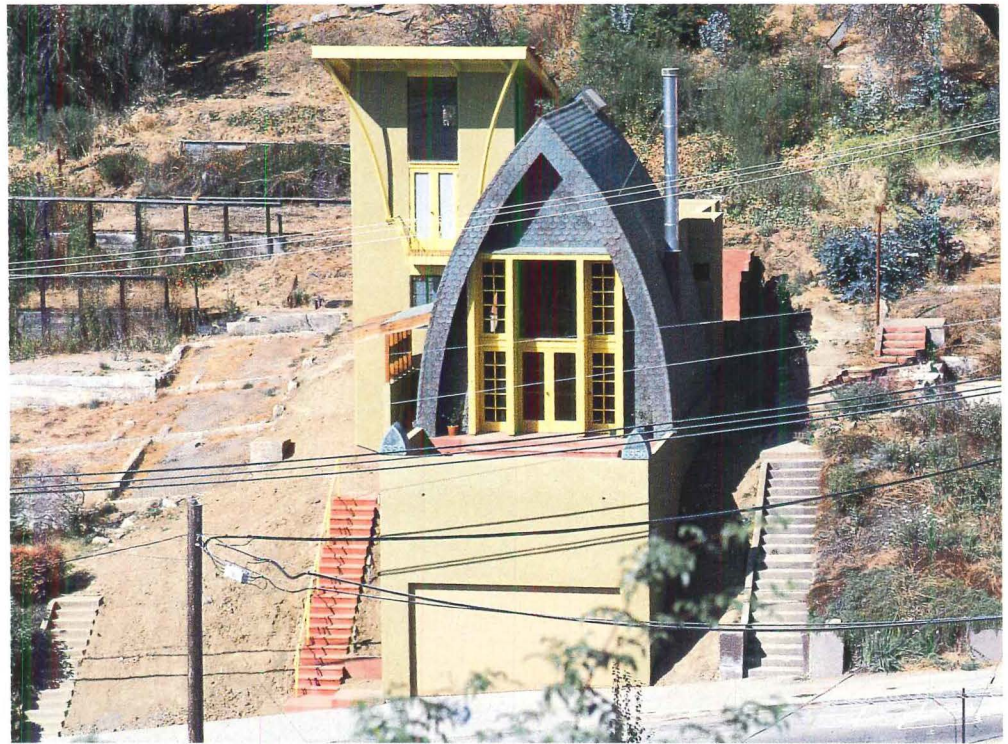
Dixie Jordan House
Oakland, California
Ace Architects



FIRST FLOOR PLAN

In designing a home for Dixie Jordan, a strong-willed newspaper publisher, Ace Architects incorporated forms from another publisher's project—Hearst Hall, a Bernard Maybeck design completed in 1899. And, like Hearst Hall, which was destroyed by fire in 1922, Jordan's previous Spanish Colonial house burned during the Oakland fire.

The new Jordan house centers around a rib-supported "great room," a vaulted, Neo-Gothic chamber with a bank of windows facing a terrace above the street. A bedroom occupies an upstairs tower, reached via stairs with a carved internal balcony overlooking the great room. At the rear, the owner's bedroom and dining room open onto a sunny patio, through trellises with pieces sculpted into forms suggestive of dragon heads. The exterior is finished in unpainted stucco, copper-clad asphalt shingles, and redwood beams. The great room's interior is clad in stained wood chip panels.



PLANS: Terraces, dining, and bedrooms are organized around great room.

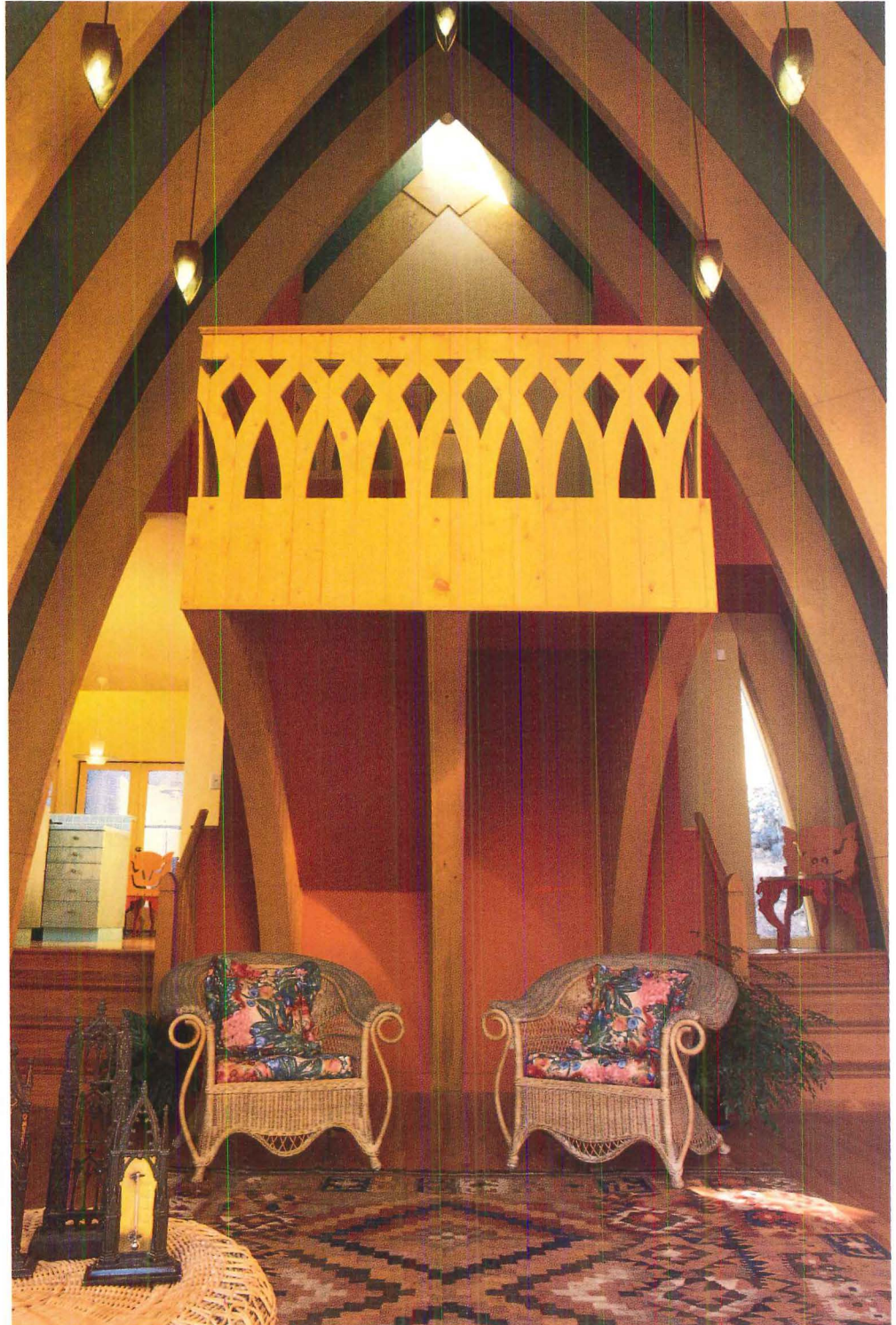
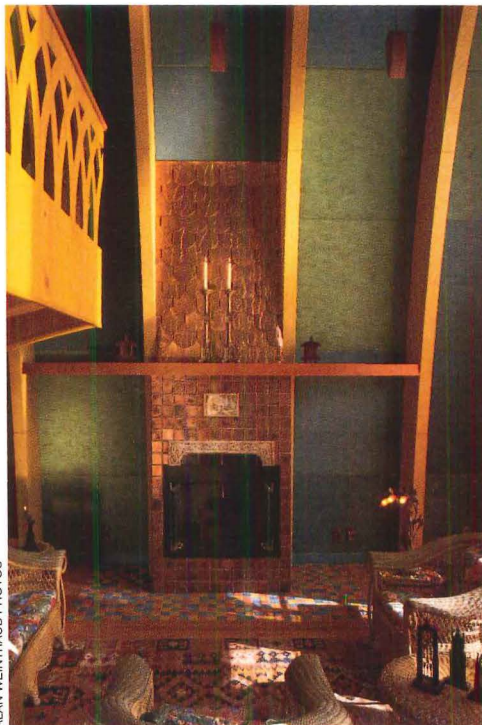
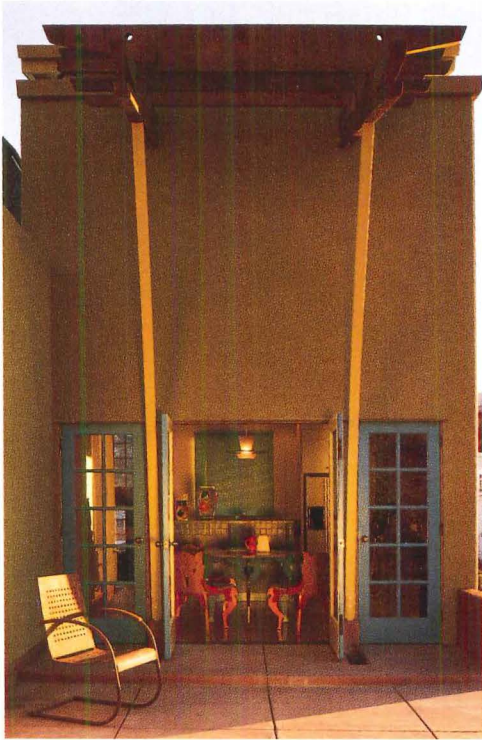
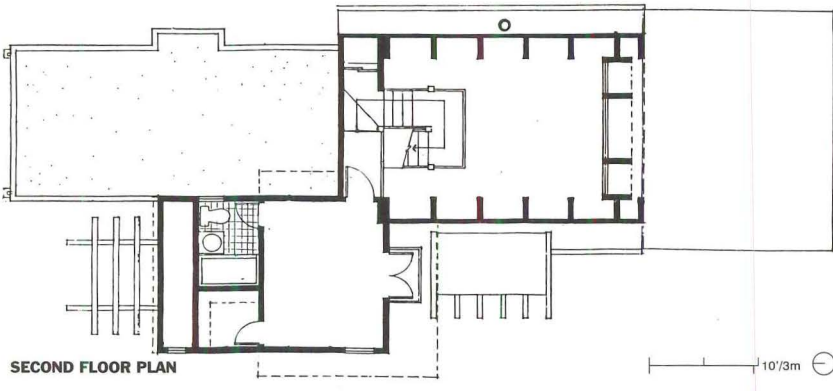
ABOVE, RIGHT: Front view shows copper-roofed, Neo-Gothic living room and tower bedroom (left).

RIGHT: Profile reveals purlins extending from living room.

FACING PAGE, TOP LEFT: View from rear terrace into dining room is framed by high trellis with elongated supports.

FACING PAGE, BOTTOM LEFT AND RIGHT: Gothic vaulting and stair landing punctuate double-height living area. Fireplace features copper-fired tiles and a copper-clad wooden mantle.

ALAN WEINTRAUB PHOTOS



ALAN WEINTRAUB PHOTOS

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MAY COME INSIDE,
AND THE INSIDE
MAY, AND DOES,
GO OUTSIDE.



PFEIFFER CHAPEL, FLORIDA SOUTHERN COLLEGE, LAKELAND, FL. 1938-41

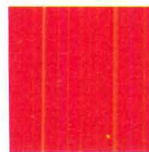
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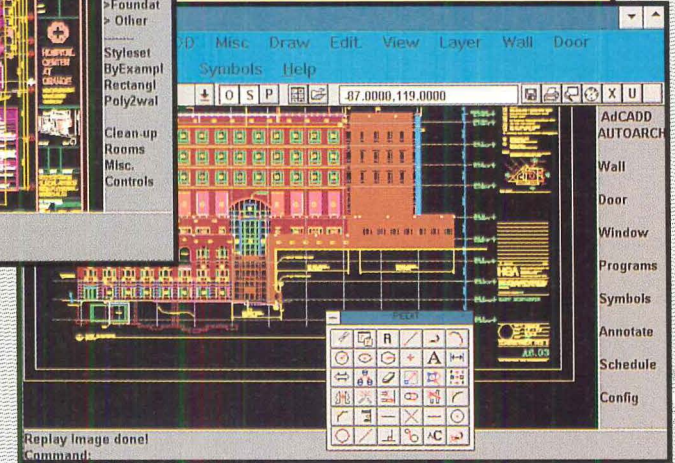
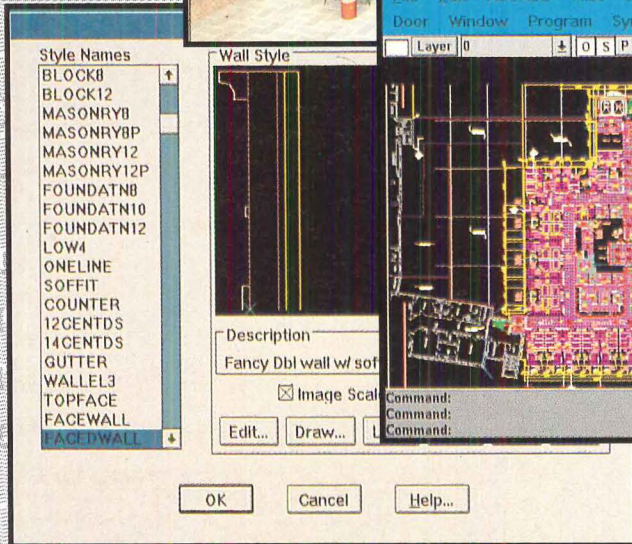
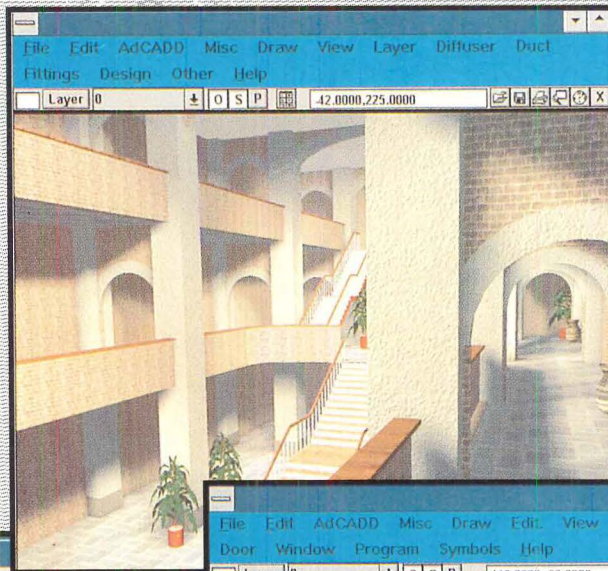
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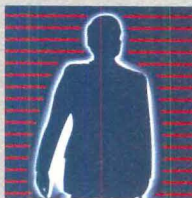
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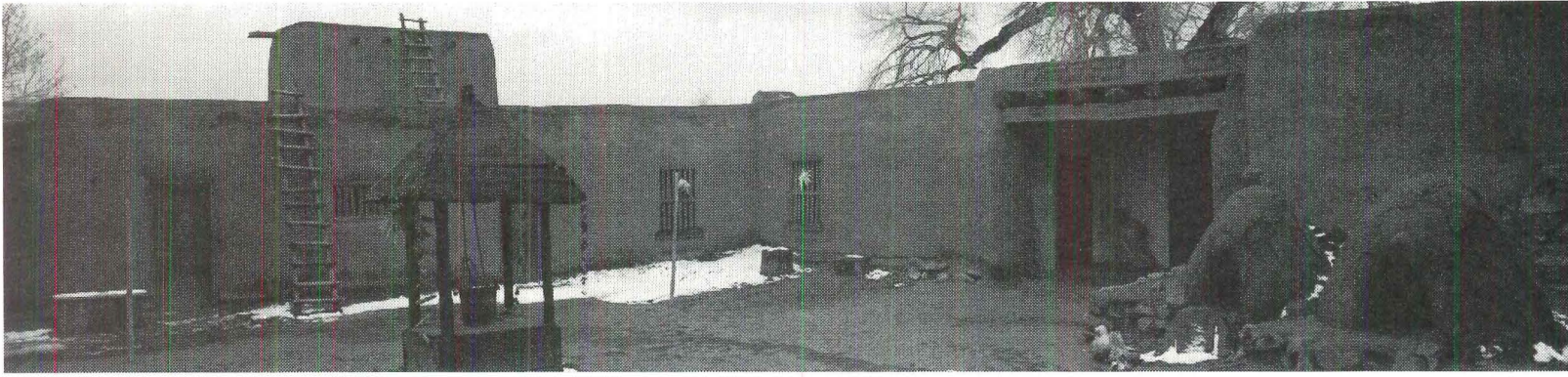
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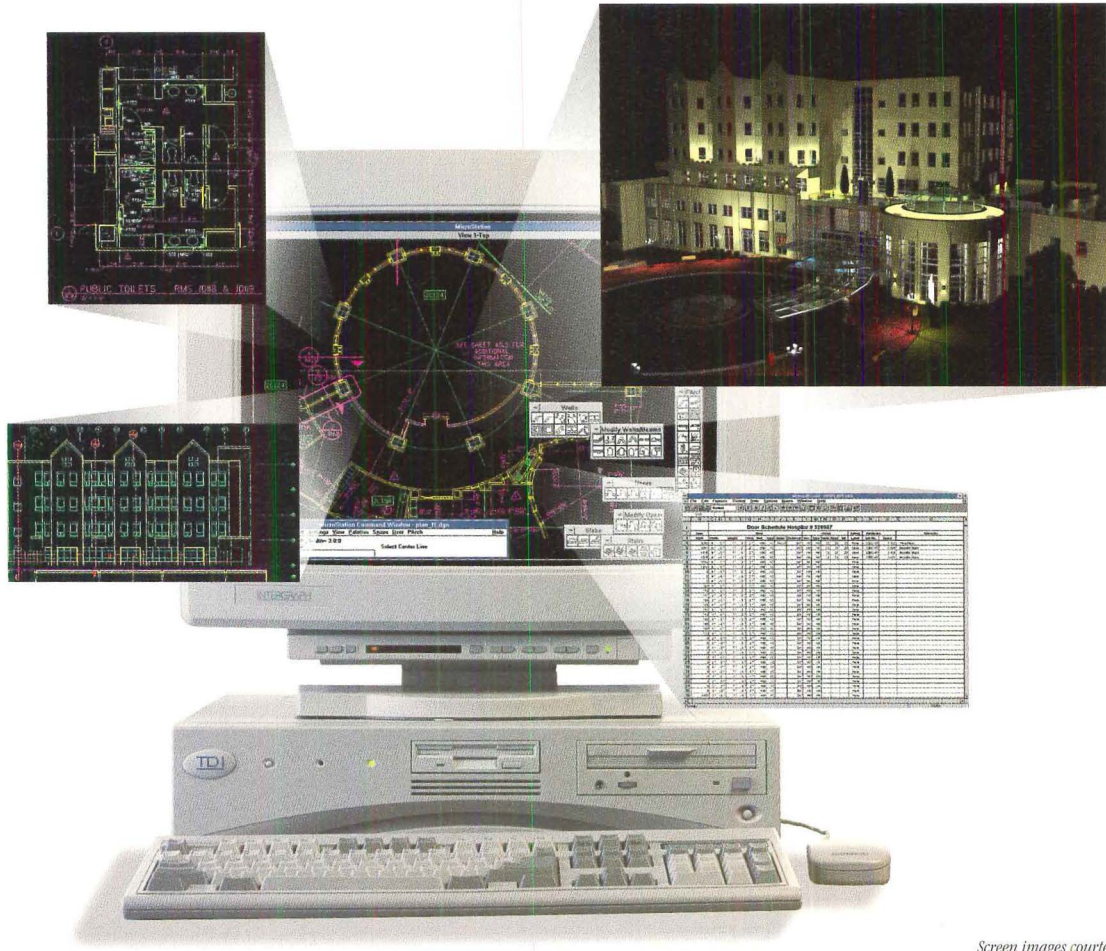
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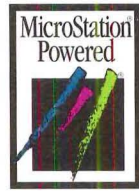
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DISTINCTION IN PLACE



This year's Honor Awards activate their communities through contextual sensitivity and social responsibility.

Taken as a group, the 1994 AIA Honor Awards offer a good account of how architects devote their skills to the places our society builds. As individual works, each embodies a special insight into the ways we build and the qualities of space, form, and light that can embellish our lives. The 17 projects vary in scope and style, yet they are consistent in adding something important to the place of which they are a part.

The Honor Award winners lead us to see that architecture which is attentive to its context can play an important role in shaping the structures of community. The Rowes Wharf and Charlestown Navy Yard Rowhouses, for instance, continue the decades of renewal and transformation that have laid claim to Boston's waterfront as an integral part of the city. Both projects include pierlike elements that reach out toward the water; both are formed with a terminal point celebrating its position at the edge of the harbor; both help to shape their harborside streets. They are vigorously formed in materials common to their context. Yet each has a distinct personality, appropriate to its position in the city and to its uses. Rowes Wharf extends the urbane forms of the downtown financial district right to the water's edge, combining offices, hotel, upscale housing, and public passage in a complex structure that speaks more of its place than of distinctions in use. The Charlestown Navy Yard Rowhouses similarly lodge modest housing within the cadences of an historic maritime frontage.

Oriole Park at Camden Yards in Baltimore directly connects the traditional urban ritual of ball games to the structure of the city. The complex incorporates existing historic buildings and street patterns and opens views from the stadium directly to the skyline of downtown. The architects fashioned a great stadium that is undeniably rooted to its place, recognizable immediately as distinct within its type; a fitting physical, experiential corollary to the loyalty that fans traditionally give to their local team.

The Carnegie Hall Tower in Manhattan; the Firehouse Civic Center in Newburyport, Massachusetts; and the Chrysler Museum renovation and expansion in Norfolk, Virginia, all extend the usefulness and presence of institutional buildings that occupy strategic locations and have been historically important in their context. The first exploits air rights associated with the renowned Carnegie Hall; the second transforms a market hall turned firehouse into a community performance space; the third involves the reorganization and expansion of a notable museum that had been subjected to unsympathetic alterations.

Carnegie Hall Tower is set back to allow the historic concert hall to maintain its pre-eminence at street level, while the slender high rise forms a distinctive figure on the Manhattan skyline. The brick structure of the Firehouse Civic Center is restored and expanded to accommodate performance spaces and galleries, adorned with new forms that mark the center's pivotal role within a water-

front park. The renovation of the Chrysler Museum returns the original Italianate building to center stage. New additions, recalibrated to match the dignity of the original structure, recover a stately sense of presence for a building that had become incoherent, incapable of playing its proper civic role.

The schools that received Honor Awards also partake in this spirit of community building. The Troy High School's cluster of forms, set in the open fields of suburban Troy, Michigan, give a sense of locus and coherence to the site. The César Chávez Elementary School is located in an altogether different, tightly constrained site in the Back-of-the-Yards neighborhood in Chicago. It sets forth its public presence with equal vigor and cheer, casting its simple, brightly colored blocks to shape sunny spaces along the street while providing the security required of inner-city schools. Primary/Intermediate School 217 on Roosevelt Island in New York City fits clearly within the street frontage of its Main Street location, while positioning a play yard, central passage, and specialized spaces to take advantage of their outlook to the East River and Manhattan. All three schools demonstrate that the rigorous programmatic and maintenance demands of public schools can be met with lively imagination.

At Princeton University, the Computer Science Building accommodates new and changing uses within a vocabulary that is explicit about the location of its comfortable public spaces. Its massing and location of en-

trances establish a long-term plan for this segment of the campus. The residence hall constructed by Cooper Union in New York City assembles apartments in masses that are directly a consequence of the city's urban pattern; the building intensifies the character of the street and punctuates the skyline with forms that are spare, yet carefully adjusted to the cadence of their surroundings.

The several different varieties of housing that appear among the Honor Award winners this year indicate that the profession and its clients are once again turning imaginative attention toward the most intimate and fundamental of human spatial needs. The Simone Hotel and Daybreak Grove are both built with modest means by nonprofit corporations dedicated to providing housing for the segments of society most in need. Each does so with distinction. The Simone single-room-occupancy hotel is arranged with clarity; it gives an element of pride and social presence to a street bordering on despair. Daybreak Grove introduces a new and cohesive form of housing into the confusions of an arterial strip. A common courtyard in the center and diminutive courts inside each of the units weave pleasant qualities of air, light, vegetation, and sociability through the daily lives of their inhabitants.

The Corson-Heinser live/work building in downtown San Francisco explores the integration of living and working spaces into an existing, incrementally changing neighborhood characterized by small-scale industrial

and warehouse buildings. The building suits its place, while partaking in its gradual transformation. The Cook residence, located in a rural Mississippi landscape, is built to accommodate the very specific interests of its owners. It takes its most essential form from the local vernacular of protective sheds over modest structures to deflect sun and rain.

It is both odd and telling that the Honor Awards this year should include two memorials dedicated to the remembrance of injustice. They indicate our society's self-consciousness and vigilance, as well as the maturity of an art form that can accommodate the confusions of tragedy and subtly evoke ambivalent sources of evil. The U.S. Holocaust Memorial Museum and the Salem Witch Trials Tercentenary Memorial are both masterfully conceived and crafted. Both like and unlike their contexts, they each remind us powerfully that indifference and acquiescence must be actively resisted.

The projects that received Honor Awards this year are excellent in many ways, reflective of the complexity of the architect's task and the adaptability of educated imagination. These buildings and spaces serve their communities well in tangible, experiential ways. They are the places which, in the jury's judgment, contribute most to those who live and work within them.—*Donlyn Lyndon*

Donlyn Lyndon, FALA, principal of Lyndon Buchanan Architects in Berkeley, California, was Chairman of the 1994 AIA Honor Awards jury.

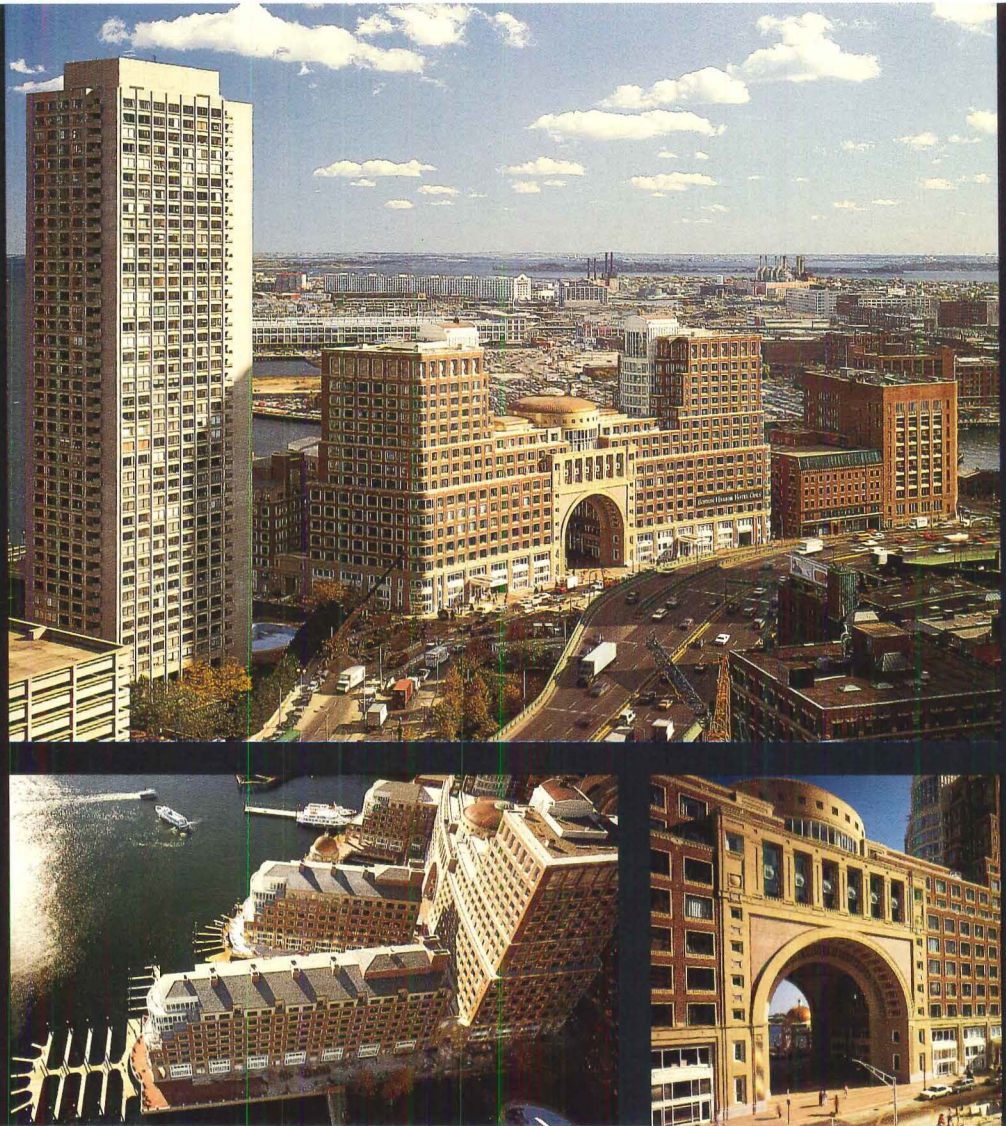
Charlestown Navy Yard Rowhouses
Boston, Massachusetts
William Rawn Associates, Architect



Developed through close collaboration between skilled architect and visionary client, the Charlestown Navy Yard Rowhouses fulfill the often elusive goal of creating housing that is affordable yet of the highest quality. The project responds well to its context on Boston Harbor, using familiar forms and materials to connect with the surrounding neighborhood, removing the stigma that might be attached to moderately priced units in an area of high-cost housing. The round tower by the water's edge anchors the project and ties it to the harbor; the broad, gabled section fronting the street establishes the building as a worthy and welcome neighbor. This project reaffirms that the combination of design excellence and affordability can strengthen a community.—1994 AIA Honor Awards jury comments

Rowes Wharf
Boston, Massachusetts
Skidmore, Owings & Merrill, Architect

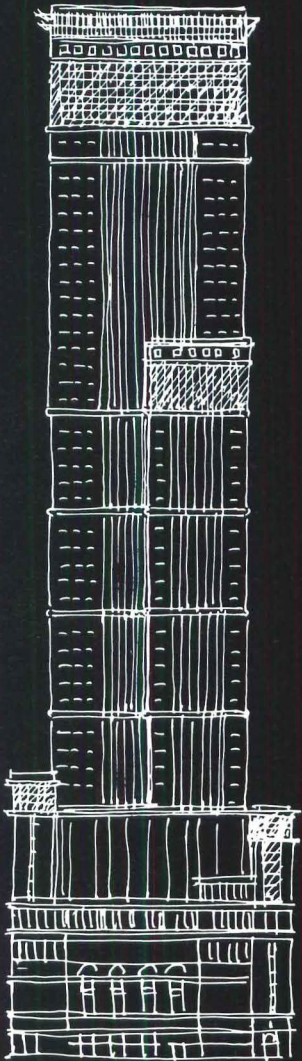
Rich in detail and civic in scale, Rowes Wharf sets a standard for waterside development, demonstrating the power of architecture to capture the public imagination and restore life to neglected parts of the urban landscape. On the city side, the curving wall of the building frames a great domed space whose enormous arch serves as a spectacular gateway to the water, while on the harbor side, wharflike buildings reach out like welcoming arms to those entering the city from Boston Harbor. The combination of harborside forms, high-quality materials, and water plaza make this complex, mixed-use project a genuine and integral setting for city life. By carrying the urbane vocabulary of downtown right to the water, Rowes Wharf creates a lively civic space that, although privately developed, is supremely public in spirit.



STEVE ROSENTHAL PHOTOS

**Carnegie Hall Tower
New York City
Cesar Pelli & Associates, Architect**

Respectfully bowing to its revered, 100-year-old neighbor, Carnegie Hall Tower discreetly steps back from the street to allow the concert hall to retain its well-earned prominence. By ingeniously tucking itself around Carnegie Hall, the tower does not overwhelm the shorter structure in spite of its considerable height. Due to the adroit use of materials and colors and ingenious setbacks, the building is a model of contextual design. Dashing, slender, and neat as a pin, the tower is as successful from up close as it is from a distance, enhancing the skyline.



Oriole Park at Camden Yards
Baltimore, Maryland
Hellmuth, Obata & Kassabaum
Sports Facilities Group

A unique solution to the problem of a specific place, Oriole Park at Camden Yards seamlessly unites a stadium with its city through its respect for architectural heritage, its orientation to the skyline, and its location at the hub of a multi-modal transportation system. By preserving and assimilating the magnificent B&O Warehouse, creating vistas into and out of the park, and sinking the field below grade to ensure a humane scale, the architects and their enlightened clients have built not merely another ballpark, but a very important public place. Deftly blending elements drawn from traditional baseball parks with the demands of modern technologies, every aspect of the design of Camden Yards is lively and good natured, making a baseball game a wonderful experience from beginning to end.

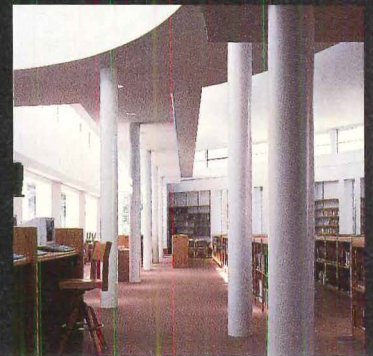
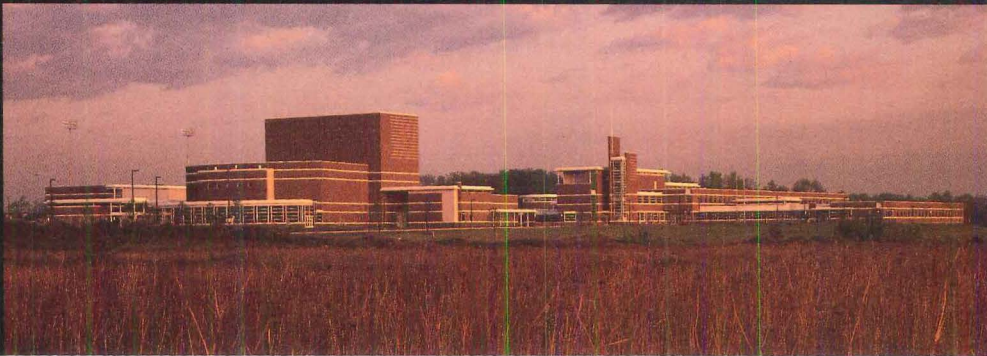


JEFF GOLDBERG/ESTO PHOTOS

Troy High School
Troy, Michigan
Perkins & Will, Architect



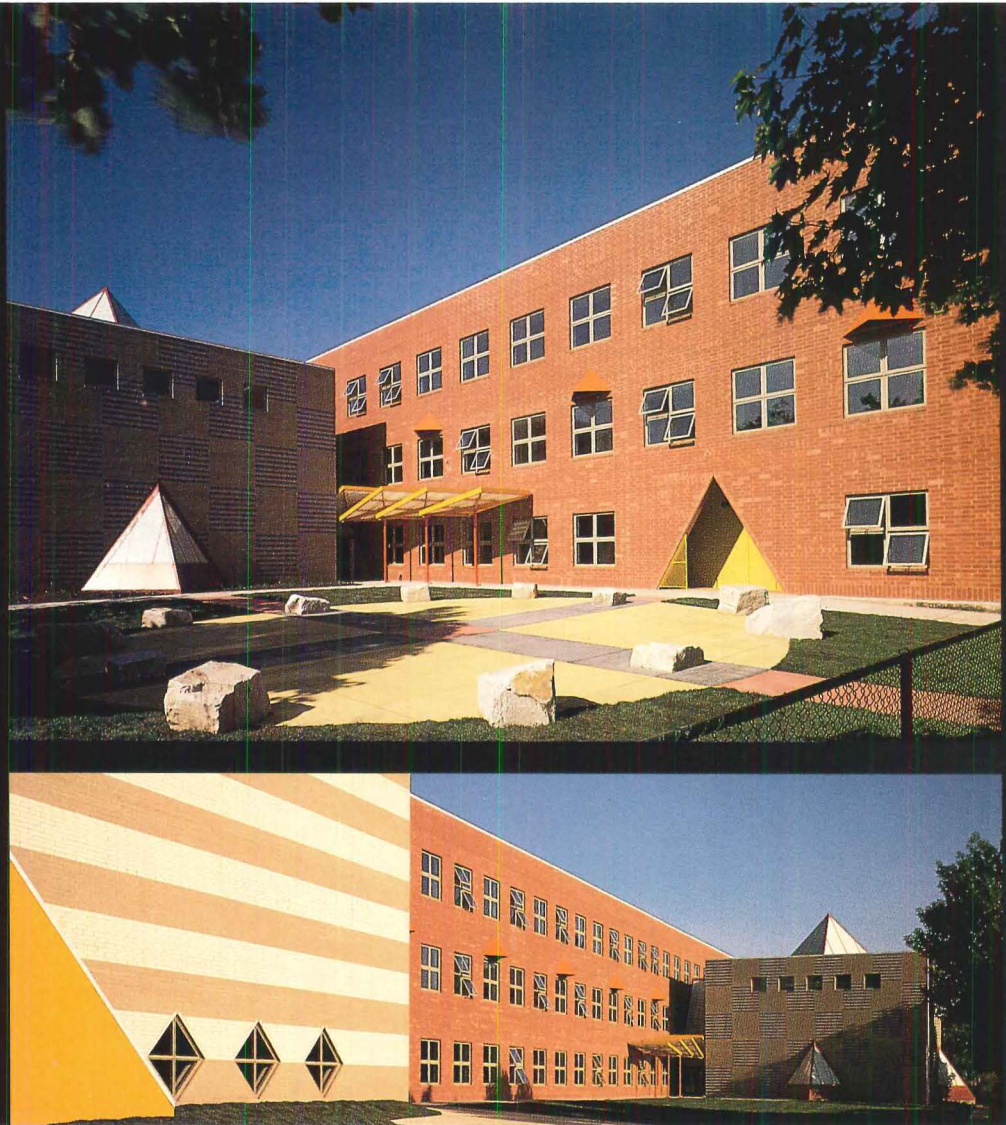
Troy High School is hand-somely detailed and well planned. Though the school is quite large, its insistent horizontality allows it to be simultaneously monumental yet unimposing on its suburban site. Its elegant, villagelike plan extends classroom wings rearward toward a grove of trees to isolate the school from its neighbors, while another wing faces the town as a connection to the community. Through superb siting, strong forms, and an engaging floor plan, the architects have created a focus for community activity, identity, and pride.



NICK MERRICK/HEDRICH-BLESSING PHOTOS

César Chávez Elementary School
Chicago, Illinois
Ross Barney + Jankowski, Architect

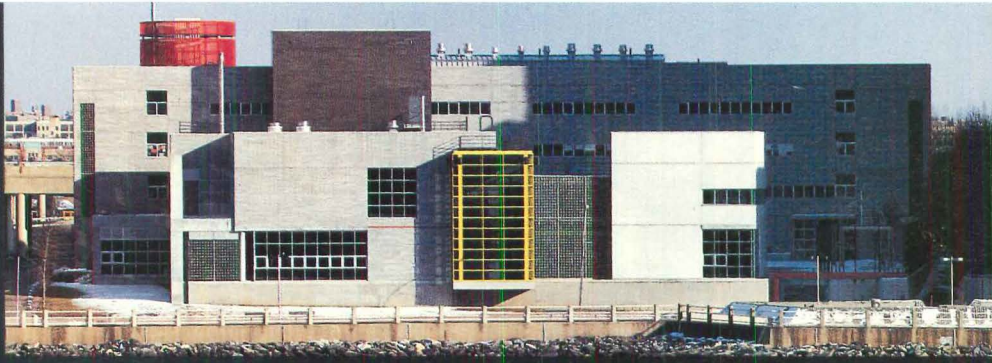
A safe haven from a tough Chicago neighborhood, the César Chávez Elementary School celebrates the joy of learning. Like pieces of a giant Lego block set, the building's patterned brick exteriors, pyramidal skylights, and colorful finishes are playful and fun while demonstrating that seemingly diverse parts can be united to form an integrated whole. The open spaces of the site are located in front of the building so that they become a neighborhood amenity watched over by the school. Reassuringly confident, this delightful elementary school is very much a good neighbor and a positive addition to this troubled urban community.



STEVE HALL/HEDRICH-BLESSING PHOTOS

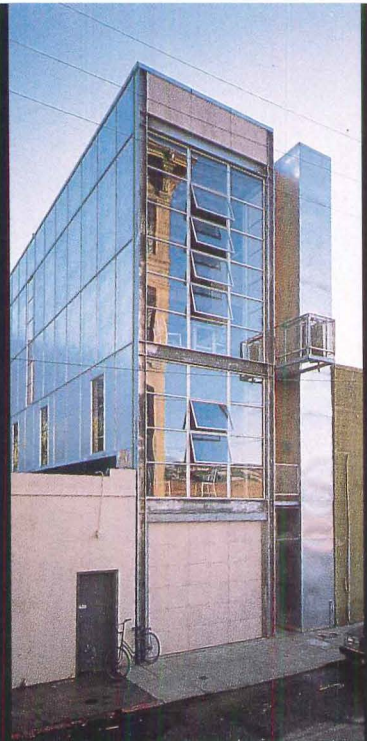
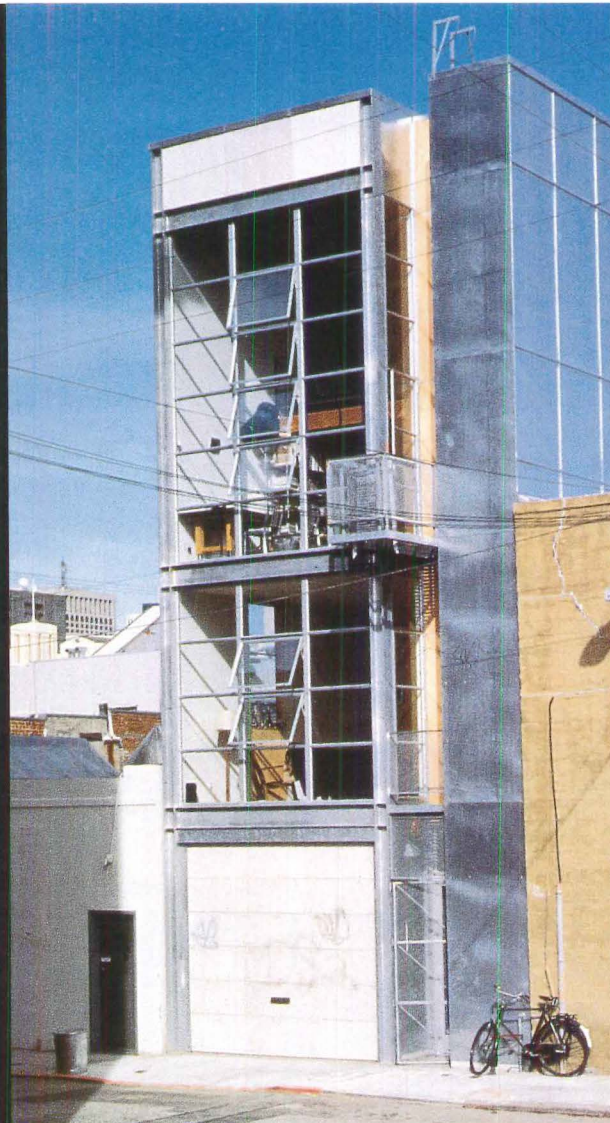
Primary/Intermediate School 217
New York City
Michael Fieldman & Partners, Architect

Primary/Intermediate School 217 is unapologetically urban, providing a serious and secure environment for learning. Its formal geometry is enhanced by vivid colors and child-friendly details, making it a lively, inspiring place to go to school. Singularly appropriate for its riverfront site, this dignified and tough-minded structure is tied to the bigger community, while its campus-like plan creates a sheltering community for children. By offering spectacular views of Manhattan, the building visually connects children to the city and their future.



Corson-Heinser Live/Work Building
San Francisco, California
Tanner Leddy Maytum Stacy Architects

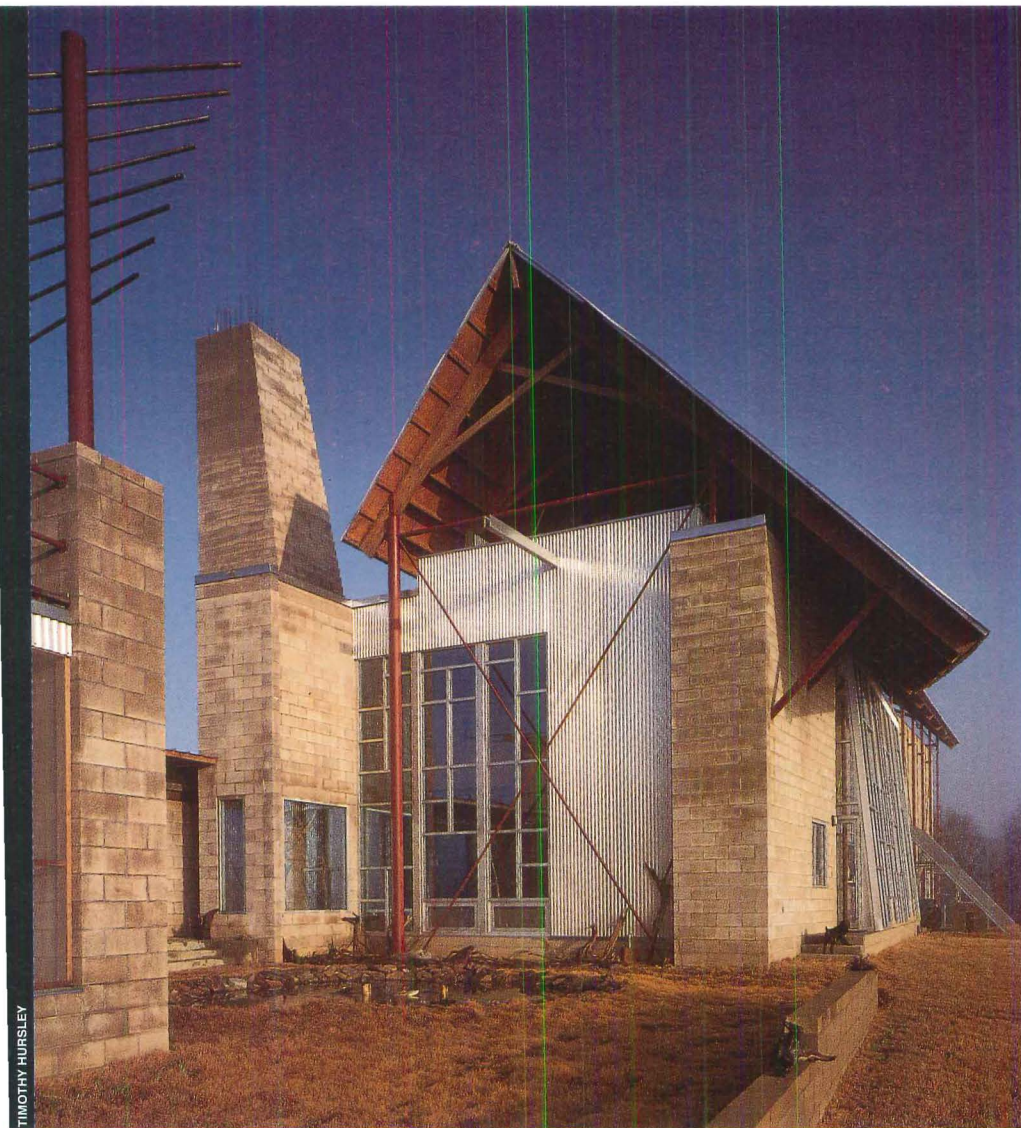
Built on a sliver of a lot in a gritty San Francisco neighborhood, the Corson-Heinser live/work building is a model of infill architecture, creatively reclaiming productive and livable space through tight, efficient design. The architects have recast galvanized metal, plywood, industrial windows, and other homely and economical materials into a beautiful, rich spatial magic. Although the building is very narrow, the living and working areas are remarkably spacious and airy, thanks largely to natural light that is allowed to pass through the house via imaginative details like metal grates in the stairs. Both the exterior and interior are carefully detailed in an unabashed celebration of connections and joints, adroitly transforming the intersections between materials—metal, glass, and wood—into ornament.



THOMAS HEINER PHOTOS

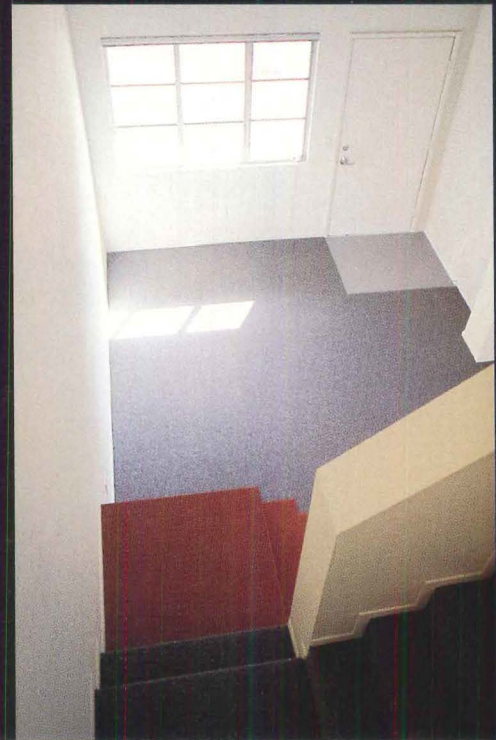
Cook Residence
Oxford, Mississippi
Mockbee/Coker Architects

This quirky, eccentric house in rural Mississippi celebrates local building traditions while accommodating the special needs of the owners as well as their exotic pets. Bold without straying too far from its southern roots, the house reinterprets the vernacular architecture of the house trailer covered by a shed roof. The expansive metal shed roof suspended over this residence serves to protect the structure from the fierce sun and shelters an exciting upper deck. Contrasting with the utilitarian quality of the exterior, the colorful interior, bathed in natural light, exuberantly expresses the individuality of the owners. In this unique house, the architects have found singular beauty in humble materials and local building forms.



Daybreak Grove
Escondido, California
Dauids Killory, Architect

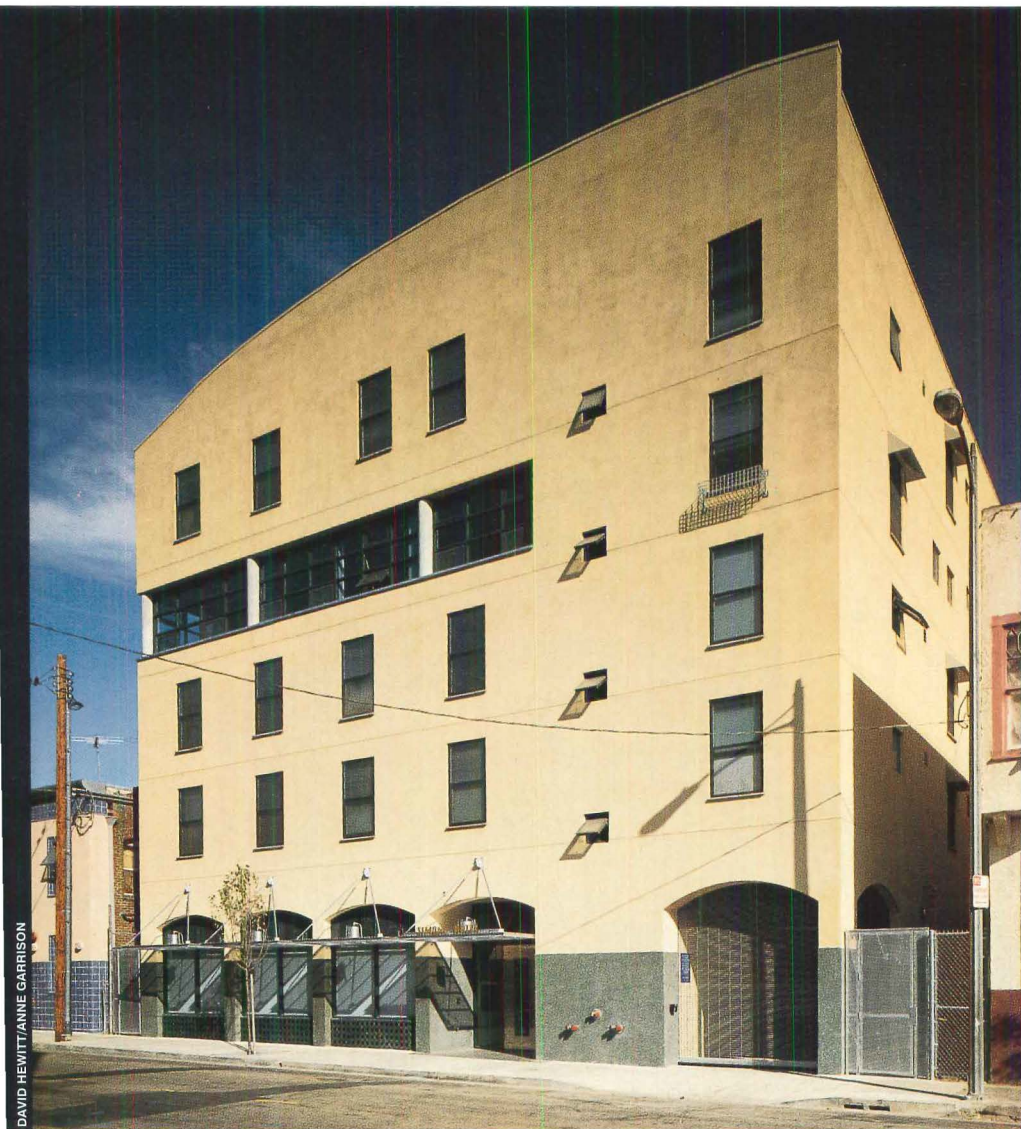
The architects of Daybreak Grove housing in Southern California present a refreshing solution to the problem of providing high-quality, low-cost housing to low-income families. Organized around a central courtyard, the colorful stucco duplex units with their bold forms and striking geometry establish a place of special pride. The raised sidewalks at the front of the building separate the houses from the busy street, while the patios at the center of each unit expand the living space and bring natural light and cross ventilation to each room. The beautifully landscaped common area, with its central courtyard, laundry building, and community gardens, provides supervised places for children to play and adults to socialize. Cheerful, practical, economical, and appropriate to its context, this project is a model for other communities.



DAVIDS KILLORY PHOTOS

The Simone Hotel
Los Angeles, California
Koning Eizenberg Architecture

A single-room-occupancy hotel in the Skid Row section of Los Angeles, the Simone Hotel provides comfortable, affordable living quarters for low-income residents. The creative use of durable, low-cost materials, combined with the skillful detailing of the entry desk and ground-floor kitchen, the rich colors and patterns of the vinyl flooring, and the metal detailing of the entranceway, creates a feeling of understated elegance. By incorporating a light court and punching the facade with expansive windows, the architects bring in natural light at every turn. Large windows and the positioning of the lobby along the street connect the building to its place. Respectful of its context and the dignity of its residents, this project demonstrates how good design can enrich a neighborhood and address important societal issues.



The Cooper Union Residence Hall
New York City
Prentice & Chan, Ohlhausen

Unpretentious and inviting, familiar without being old-fashioned, this skillfully executed Cooper Union student housing complex draws its forms from the neighborhood and makes the most of a limited budget and a difficult corner site. Bringing order to a cluttered New York City neighborhood, the high-rise tower carefully marks its place without overwhelming its neighbors. Immaculate, well-ordered interior spaces offer comfortable apartments as well as communal areas for socializing and working. The architects' generous use of windows provides ample natural light and gives residents interesting views of the city, constantly connecting them and this residence to the larger urban context.



BRIAN ROSE

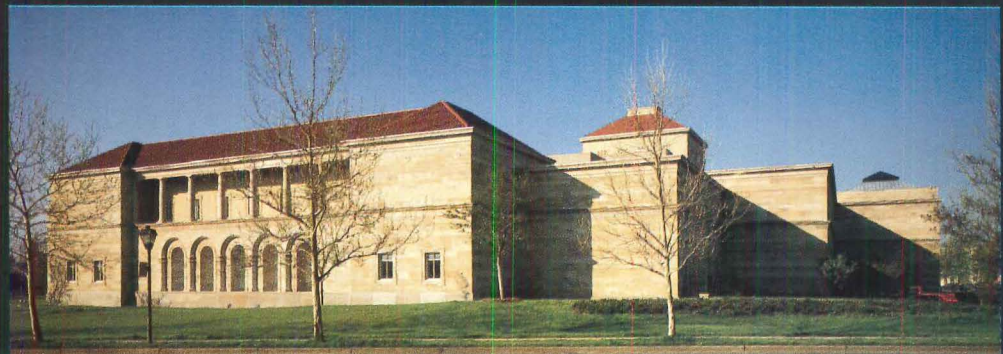
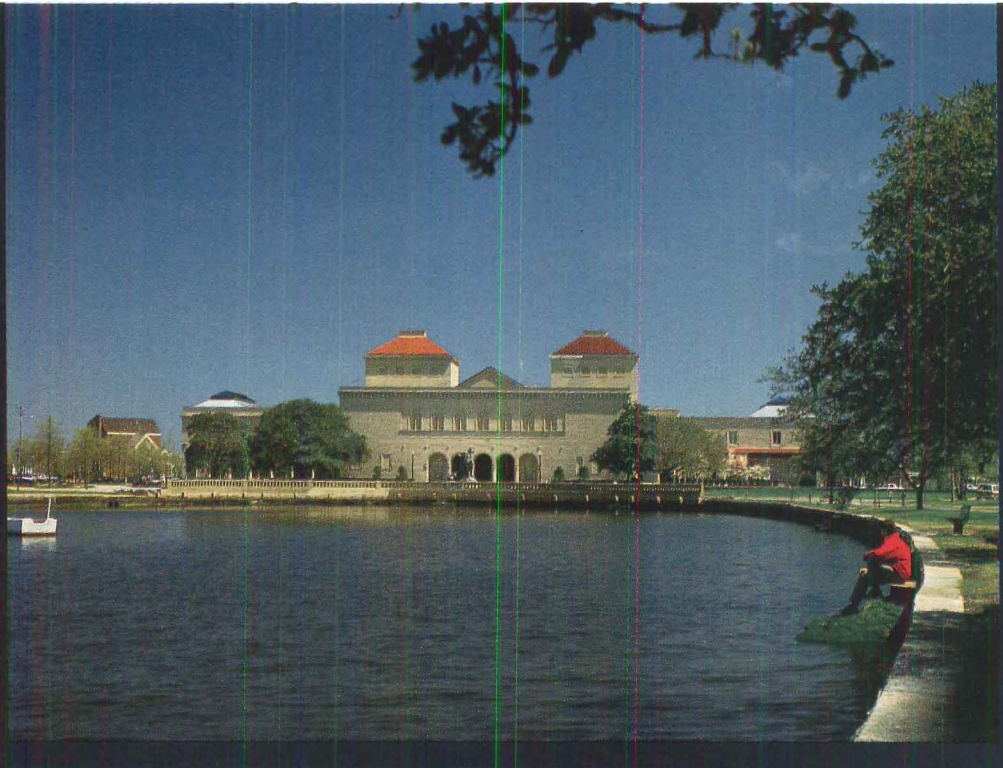
**Computer Science Building
Princeton University
Princeton, New Jersey
R.M. Kliment & Frances Halsband**



The computer science center at Princeton University serves the round-the-clock needs of students and faculty by skillfully blending a human touch with state-of-the-art technology. Light-drenched offices and classrooms, rich oak paneling throughout, and the wide windowsill in the main hallway evoke the feel of turn-of-the-century educational buildings, creating a comfortable, user-friendly environment that encourages human interaction and conversation. An open shelf system for cables in the corridors, as well as hollow walls in the offices, allows for easy, low-cost rewiring of cables as technology changes. With its careful siting and restrained brick and limestone exterior, this project quietly establishes a dignified presence on the edge of the Princeton campus and enriches the setting around it.

**The Chrysler Museum
Norfolk, Virginia
Hartman-Cox Architects**

This skillful renovation and expansion of the Chrysler Museum brings order to a building that had become a chaotic jumble of disorganized additions and gallery spaces. By matching the proportions and style of the original and reestablishing the Italianate facade as the major point of entry, the architects have created a symmetrical, balanced exterior that gives this project a powerful sense of place. Inside, the dramatic central courtyard with its majestic staircase and wooden trusses helps to organize the galleries and provides an exquisite public space. Playing the role of surgeon, the architects carefully removed, replaced, and reconfigured elements that no longer functioned and, in the process, breathed new life into this building and reestablished the museum as an important cultural presence in Norfolk, Virginia.



PETER AARON/ESTO PHOTOS

**Firehouse Civic Center
Newburyport, Massachusetts
Schwartz/Silver Architects**

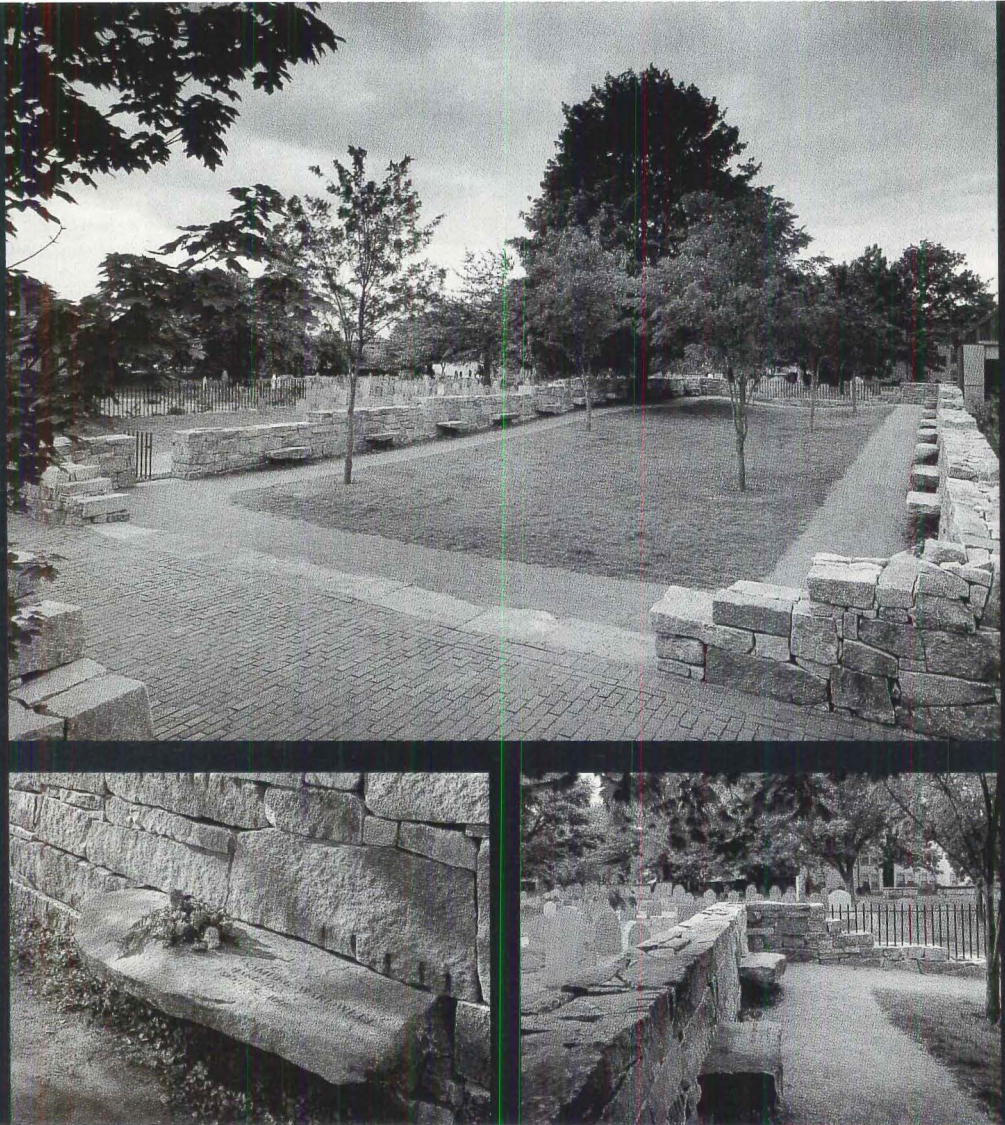


Perched on the banks of the Merrimack River, this masterful restoration/addition of the Firehouse Center preserves the architectural integrity of the original landmark while creating a fitting home for a performing arts center, gallery, and restaurant. Taking cues from the building's long history of alterations and varied uses, the architects injected contemporary forms into the existing architectural fabric. At the same time, older elements such as the front facade, the 1930s firehouse tower, and windows and trim were restored. Engaging in a rich dialogue between past and present, this highly successful and popular project has reestablished the link between the town and its waterfront and demonstrated that seemingly out-of-date buildings can serve as a catalyst for urban revitalization.



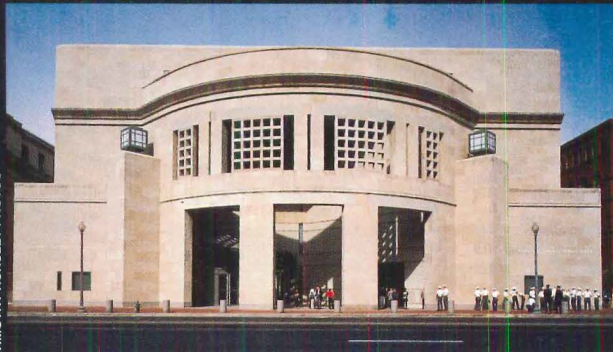
**Salem Witch Trials
Tercentenary Memorial
Salem, Massachusetts
James Cutler Architects**

Starkly simple and calmly eloquent, the Salem Witch Trials Tercentenary Memorial is a remarkable collaboration between artist and architect, a profound and moving tribute to 20 victims of intolerance and fear. The subtle symbolism of the design is epitomized by the use of the plaintive, desperate words of the condemned, which disappear in mid-sentence under stone walls, as if obliterated by indifference and ignorance. By placing the memorial in the midst of the graves of the victims' denouncers, the designers have symbolically reenacted the confrontation. The rough granite walls and barred iron fence deliberately create a stark boundary between the accusers and the accused, now divided yet forever linked in a solemn, tragic tableau, reminding us that the crime was not witchcraft, but silence in the face of injustice.



STEVE ROSENTHAL PHOTOS

**United States Holocaust
Memorial Museum
Washington, D.C.
Pei Cobb Freed & Partners**



Precisely controlled and often deliberately unsettling, the U.S. Holocaust Memorial Museum masterfully employs the power of architecture to evoke the raw emotion of unspeakable human tragedy. The brick walls and industrial steel detailing recall the efficiency and precision of the machinery of death. Hauntingly beautiful and sculptural, yet often laden with anguish, sorrow, and remembrance, the building constantly engages all of the senses. The architecture reinforces the profound messages of the exhibits, while quietly telling its own story. Just a few blocks from America's most significant monuments to freedom and the structures of bureaucracy, this memorial stands as an unflinching witness to the horrors that can be unleashed in the absence of democratic ideals and as a reminder of the necessity of vigilance.

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1994 Design Awards

This was the second year for this special design awards program. What is unique about it is the attempt to award not just quantitative energy efficiency in buildings, and not just the design of beautiful structures, but the successful realization of architectural solutions that contribute greatly to energy use reduction and conservation. As one attendee at the review of the awards program stated, "If I learned one thing from this awards program, it is that if a project is to be truly energy efficient, one must begin the very design of a project with energy conservation in mind and keep at it throughout the project." Only through an integrative process can one achieve a truly energy efficient building.

Norman Kurtz of the firm of Flack and Kurtz articulated this concept most vividly, when he compared the elegant design solution of an energy efficient building to the design of a sailboat. For due to the sailboat's efficient design, it requires only the smallest of motors to move it along. This awards program hopes to find the "sailboats" of the built environment.

The Public Administration Building for a Women's Corrections Center in Gig Harbor, Washington is designed in a way that minimizes its cooling load to the point where no mechanical cooling is provided, a fair-

ly gutsy thing to do in an office/gymnasium complex. The shape of the building's roof and the building's section allows light to penetrate the offices and corridors, maximizing the use of daylighting and minimizing the need for artificial lighting during daylight hours. This in itself lessens heat build up, thus lessening the cooling load. The south facing wall is very skillfully designed to create a thermal mass to serve as a reservoir for interior heat build up in the summer. By insulating the exterior of the solidly grouted CMU wall, the designers have allowed the CMU to act as an interior heat sink. Glazing in that wall is very carefully placed to be shaded when required in summer when the sun is high in the sky and allow for direct sunlight to penetrate when desirable in winter. Again, the blend of energy concerns and architectural solutions contribute greatly to a very successful project.

Juror's Comments

The building envelope and form responded to climatic issues in a way that minimizes energy use.

The jury appreciated the different materials used for the south wall as it is expressed the difference between conditioned and unconditioned spaces behind "the wall".

Air conditioning was eliminated because the orientation, solar control and thermal mass made cooling unnecessary. By eliminating mechanical cooling the design team achieved tremendous initial cost and energy savings.



Design Award for the Integration of Architecture + Energy

**Administration Building,
Washington Correction Center for Women**
Gig Harbor, WA
Architect/Firm:
INTEGRUS Architecture, PSC of Seattle, WA
Engineer:
MW Consulting Engineers, Spokane, WA

Contractor:
Bodenhamer, Inc. of Olympia, WA
Owner:
State of Washington Department of Corrections
Photographer:
Robert Pisano



Energy Retrofit Award

Juror's Comments

The 100 Market Building displays the innovative use of technology in a common office building type.

It effectively saves over 60% of energy operational costs and applies a mechanical system appropriate for the region. The technologies used are widely marketable and transferable.

This retrofit allowed for a great improvement in the air and lighting quality for the persons working in this environment.

The 100 Market Building

Portland, OR

Architect/Firm:

MicroGrid, Inc. of Portland, OR

Engineer:

The Hartman Company of Seattle, WA

Contractor:

MicroGrid, Inc. of Portland, OR

Owner:

Blue Cross & Blue Shield of Oregon

Photographer:

MicroGrid, Inc.

When architectural solutions already exist in built projects, one can achieve amazingly grand energy consumption reductions through innovative technology. This was the case in the 100 Market Building project, achieving a 60% reduction in energy consumption. The designers changed the glazing on the building, from single to high performance double glazing. The remainder of the energy savings was accomplished through mechanical and technological solutions, namely new lighting and the installation of an advanced Direct Digital control system using custom Terminal Regulated Air Volume software. Indoor air quality was greatly improved through the addition of outside air and isolation of the print shop. Without disrupting the entire building and, in fact, keeping it operational during the retrofit, the designers greatly improved the comfort level of the user while significantly reducing energy use. Materials removed from the building were recycled. The project achieved the impressive results through an integrated design approach of all disciplines. All systems were commissioned at the completion of the project thus assuring their proper operation.

The Medical Clinic and Physical Therapy Suite in Medford, Oregon, completed in 1988, represents a very innovative attempt at integration of building and technological solutions at a time when technology was not as advanced as it is in 1994. Though this project does not embody the sophistication of more current projects, its designers certainly considered the integration of energy conservation and architectural design. The designer was concerned that all patients experience the beneficial effects of day-lit spaces, thus two large skylights were placed in the clinic waiting room and physical therapy.

Juror's Comments

The building envelope attempted to respond to the energy design strategies. The combination of skylights and high wall area to floor area ratio allows for almost all rooms to have direct access to daylight. The daylighting strategies enhance the wellness of people as well as save energy.

Considering this building was completed in 1988, the Jury applauds the integration of architecture and energy for this clinic.

Design Award for the Integration of Architecture + Energy

**Physical Medicine and
Rehabilitation Associates Clinic**
Medford, OR

Architect/Firm:

Bruce W. Richey, Architect, AIA of Medford, OR

Engineer:

Marquess & Associates of Medford, OR

Contractor:

Paul Hartsook Construction Company

Owner:

Rogue Valley Health Services

Photographer:

Robert Jaffe & Brian C. Prechtel



The skylight decreased the amount of energy use and also created a very pleasant atmosphere for the patients. However, the designers were sensitive to the need to mitigate and control the negative effects of the skylights through the use of a mechanical shading device operated by photocells and micro-processor controls. A "scavenger" duct was also placed in each skylight to exhaust the heat build up in summer and recirculate it in winter. The area of the building envelope was maximized to allow many opportunities for light penetration. However, the selected materials exceeded code requirements for u-value by a factor of three, thus reducing the heat loss that buildings experience from large areas of perimeter walls. Windows were triple glazed and deciduous trees were planted to screen sunlight in summer months, allowing the sun to penetrate in winter. The scale of the building was minimized to fit in with the neighborhood. The project shows concern for balancing the effects of each design decision regarding energy efficiency. Its holistic approach to problem solving is exemplary.

The design of Skamania Lodge in the Columbia River Gorge reflects environmental sensitivity in the way it is sited and in the use of materials. A lodge in the forest on such a grand site must "tread lightly on the Earth." The designers of this project very carefully sited the 20,000 sq. ft. conference center and 195 room hotel in such a way that when viewed from the river its mass is barely discernible.

There was great concern not only to preserve the view for the passerby but also to allow the visitor to experience the great forest upon arriving at the lodge. The driveway was carefully placed in such a way as to skirt the woodland. Parking was separated from the entry by a wooded knoll that one passed through to approach the building from the parking area; the automobile does not destroy the landscape and its presence is barely noticed -- the ultimate goal of environmental sensitivity. Respect for the great Northwest forests was shown in the use of recycled wood throughout the complex. The large timber beams came from a Bumble Bee Tuna factory in Astoria and the heart pine flooring was recycled from the southeastern United States.



Design Award for Environmentally Sensitive Design

Skamania Lodge in the Columbia River Gorge
Stevenson, WA

Architect/Firm:
Ankrom Moisan Associated Architects of Portland, OR

Engineer:
Kramer-Gehlen & Associates of Vancouver, WA

Contractor:
Walsh Construction Company of Portland, OR

Owner:
Salishan Lodge, Inc.

Photographer:
C. Bruce Forster of Portland, OR

Juror's Comments

The siting, building form and color show a design sensitivity to the beauty of the natural environment.

The Jury applauds the use of salvaged woods with recycled timbers. The image of an indigenous timber structure was achieved not with new precious timber but by being innovative and resourceful in seeking environmentally responsible solutions.

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This type of program exists in very few regions of the country and both Bonneville Power Administration and the AIA/Portland Chapter are to be commended for their foresight in creating a program of this type. As in any prototypical project, this one is constantly evolving and changing. This year the submission requirements were made more stringent and exacting so that the jurors would have a better sense of the performance of the building. It is thought that this change might have deterred many architects from entering the program. Next year there will be further changes to accommodate those concerns. We encourage other communities to celebrate the innovative designs in architecture and energy and hope that in the future, these awards will be commonplace.

By Susan A. Maxman, FAIA, Jury Member, 1993 President of the American Institute of Architects and principal of her own fourteen person firm, Susan Maxman Architects, located in Philadelphia, PA.



We would like to thank all the jurors involved with the 1994 Architecture + Energy Design Awards Program:

David Baylon, Seattle, Washington

Virginia Cartwright, Eugene, Oregon

Greg Franta, FAIA, Boulder, Colorado

Susan A. Maxman, FAIA, Philadelphia, PA

Naomi Miller, Troy, New York

The Architecture + Energy Steering Committee and the AIA/Portland Chapter extends its thanks and appreciation to Bonneville Power Administration for its continued support and sponsorship of this Design Awards Program. For more information, please call Otina Monary, Assistant Director, AIA/Portland Chapter, 503-223-8757.

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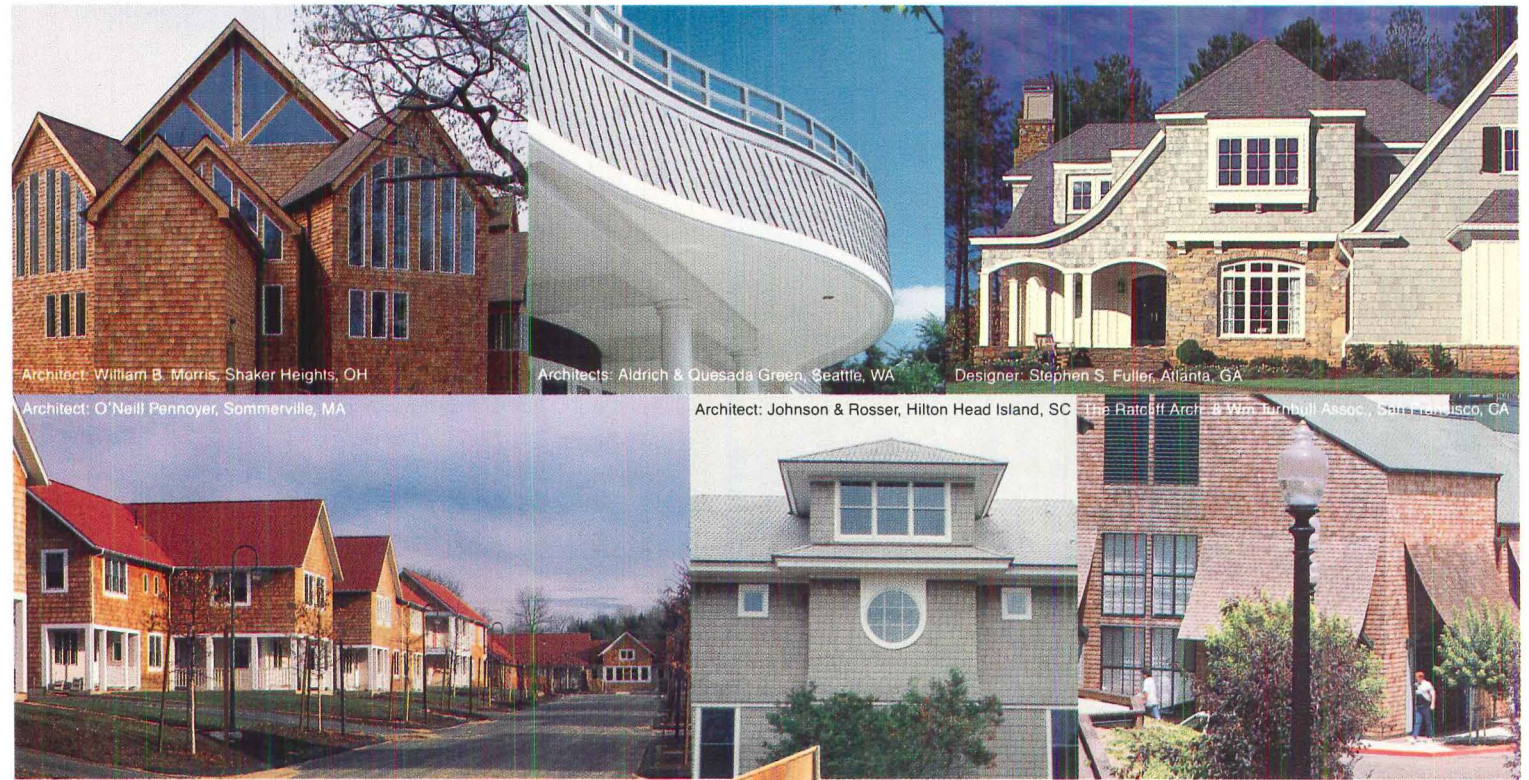
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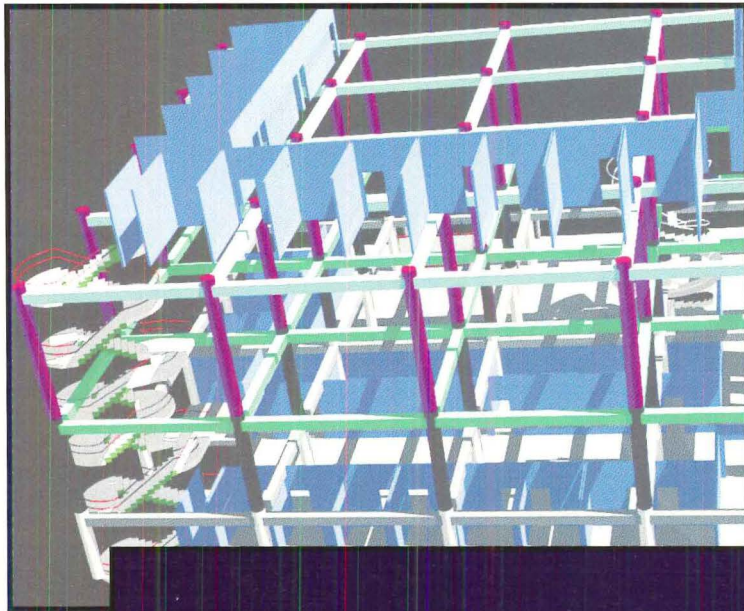
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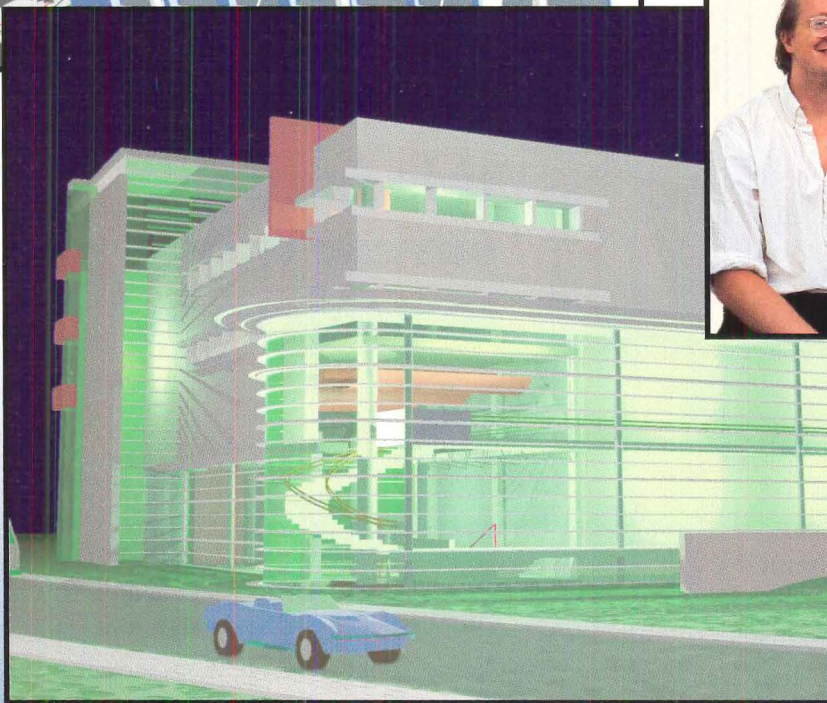
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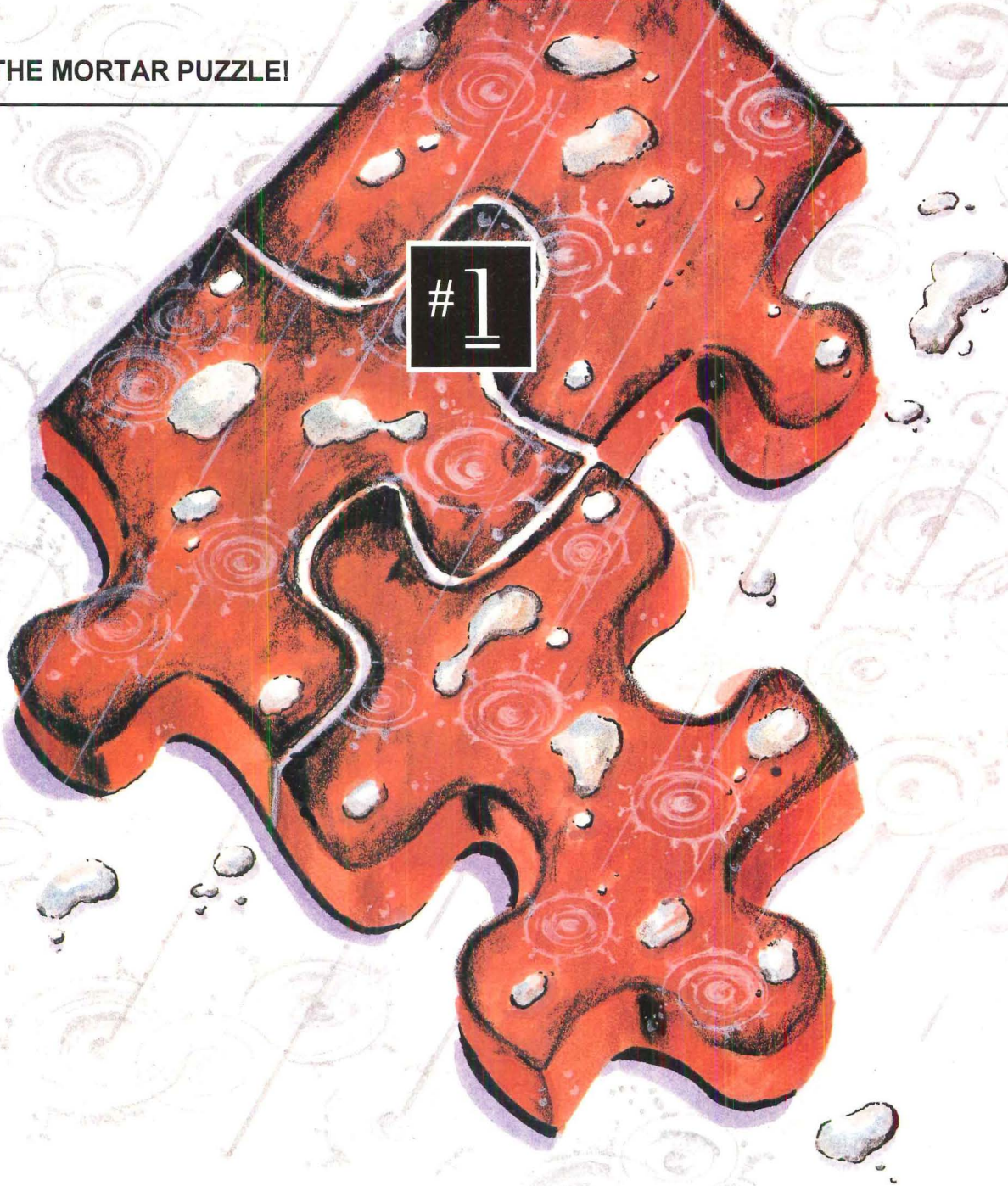
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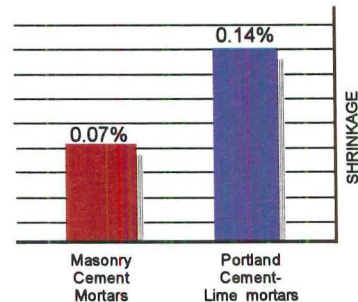
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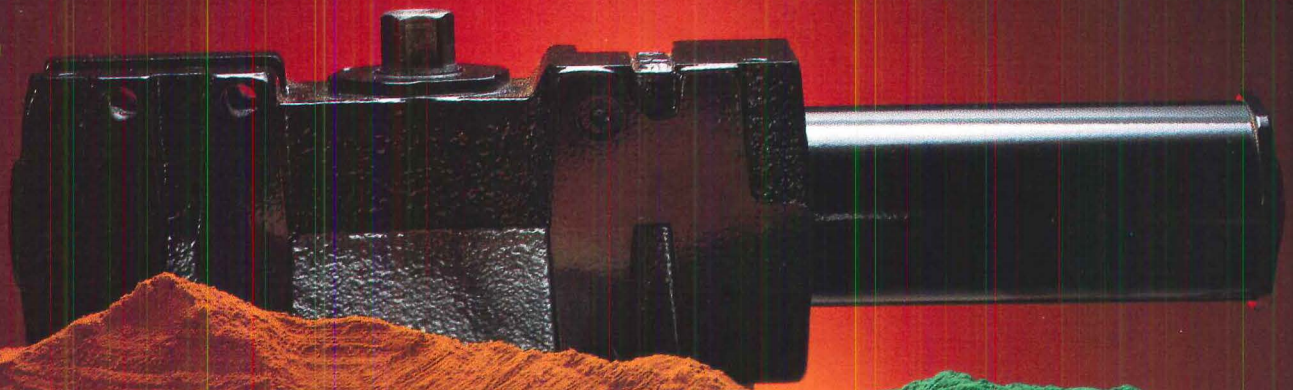
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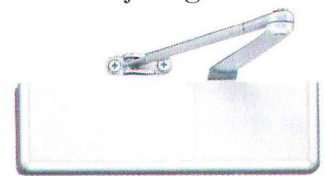


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Technology & Practice

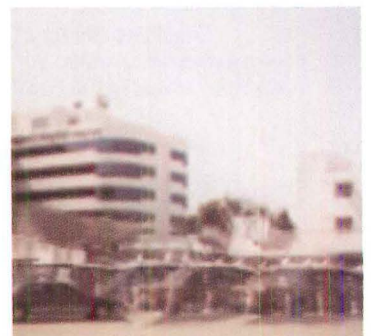
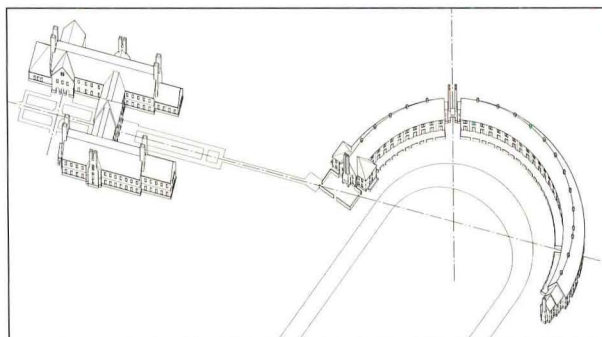
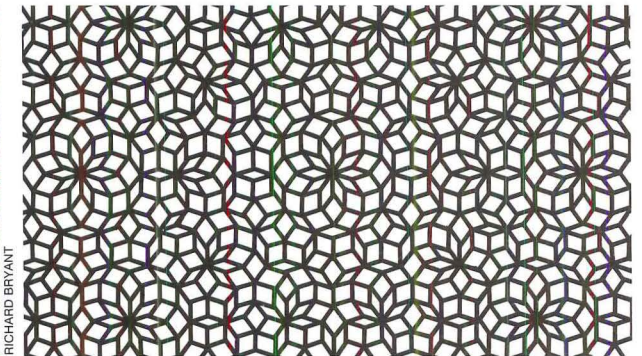
- 139 **High Tech Idealist**
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- 169 **Info**

AIA Gold Medalist: This year's AIA Gold Medalist, Sir Norman Foster, presides over one of the most globally influential architectural practices in the world. Although his practice is synonymous with British High Tech, the 59-year-old Foster has moved beyond the spare functionality of his earlier buildings toward a more environmentally sensitive "new vernacular."

AIA Firm Award: The 1994 AIA Architecture Firm Award winner, Bohlin Cywinski Jackson, is recognized for the enduring humanism of its architecture since the firm's founding in 1965. Rather than imposing a signature style, the firm's buildings are tailored to site, context, and program.

Fritted glass: Glazing that is silk-screened with ceramic coatings is being discovered by architects for its energy-saving as well as decorative applications. Fritted patterns reduce glare and solar gain and eliminate the need for window shades.

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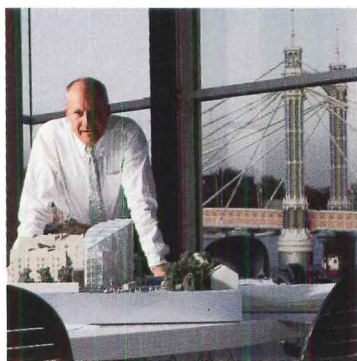


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Marquette Hospital
Marquette, Michigan
Architect: Bruce Partnership
General Contractor: Barlow Malow

High Tech Idealist

With signature precision, AIA Gold Medalist Norman Foster addresses the environment.



ABOVE: American Institute of Architects Gold Medalist Norman Foster.

ABOVE RIGHT: The office of Norman Foster and Partners focuses on a two-story drafting room overlooking the Thames River. The desk furthest from the entrance is Foster's own.



RICHARD BRYANT / ARCAID PHOTOS

In 1951, when Norman Foster left school at the age of 16, he dreamed of becoming a famous architect. But by a rational assessment of Foster's background, such a dream was unlikely to come true. In postwar England, the architectural profession was still dominated by the sons of affluent families. They attended the best schools and universities as a matter of course, used the "old boy" network to secure their jobs in Britain's burgeoning public sector offices, received their first private commissions from friends of the family, and generally benefited from all the security and confidence that a well-to-do English upbringing can confer.

Foster had none of these advantages. His father managed a pawnbroker's shop in a poor area of Manchester before World War II; after the war, he worked in a factory as a painter. Expectations for the young Foster were modest and certainly didn't extend to a university education. Even Foster himself, though ambitious, could not have predicted that he would become Sir Norman Foster, the winner of the 1989 Royal Institute of British Architects (RIBA) and 1994 AIA Gold Medals, the head of an international practice employing 250 people, and one of the great English architects of the 20th century.

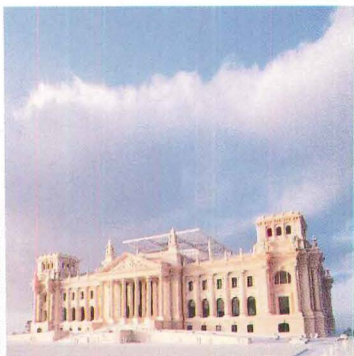
Foster's first job was in the treasurer's department of the city hall in Manchester. Eighteen months' national service training as a radar engineer in the Royal Air Force followed, after which he secured a clerical job in a local architecture practice. There, his prodigious

talent for drawing was soon recognized. He was quickly transferred to the drafting studio and encouraged to seriously consider architecture as a career. With no state grant and little financial support from his family, he worked his way through the architecture program at Manchester University. A star student, he won a Harkness Scholarship in 1961 for postgraduate study at Yale.

American education

Coming to America, as Foster recalled in his recent AIA Gold Medal speech, was like coming home. Here, ambition and hard work were respected more than upbringing or family connections. The dean of the Yale architecture school, Paul Rudolph, called for a total commitment from his students. For Foster, who worked hard and learned quickly, that was no problem. But in retrospect, the most important event of the architect's stay in America was his introduction to another English student at Yale, Richard Rogers.

Suave, cosmopolitan, with an artistic Italian family background, Rogers was everything Foster was not. Rogers had a powerful personal presence and vivid architectural imagination, but, a self-confessed dyslexic, he lacked the technical proficiency and command of detail that Foster had to spare. The two were complementary characters, and they soon became close friends, collaborating on studio projects and travelling around the country together to visit the buildings of Frank Lloyd Wright and Mies van der Rohe.

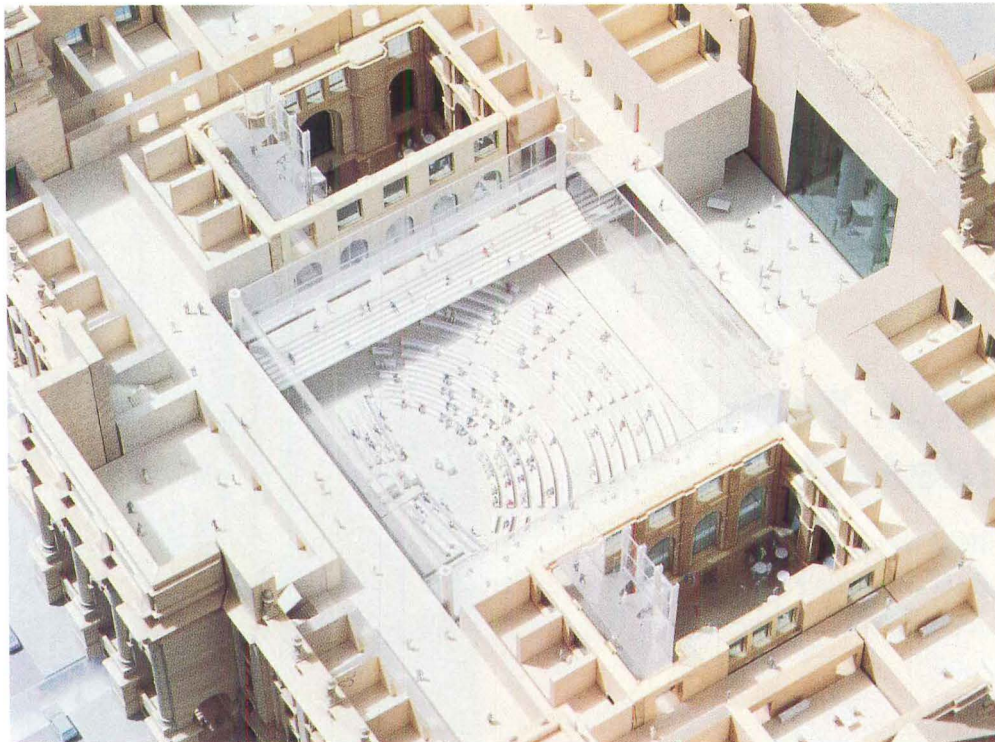


ABOVE: Foster won the 1993 competition to convert the ornate 1894 Reichstag in Berlin to house the new parliament of united Germany.

ABOVE RIGHT: Cutaway model displays the new parliament chamber with its semicircular seating plan.

FACING PAGE, TOP: West-east section reveals new courtyards on either side of the parliament chamber, which is conceived as a daylight atrium.

FACING PAGE, BOTTOM: Parliament chamber's new glass roof creates the impression of an open-air courtyard.



When the pair returned to England in 1962, they set up an embryonic practice called Team 4 with two old friends of Rogers, the Cheeseman sisters, Wendy and Georgie. Their first office occupied the front room of the Hampstead flat of Wendy Cheeseman, whom Foster later married.

Early commissions

Team 4's first worthwhile commission came, in the traditional way, through a family connection. Marcus Brumwell, the father of Rogers' wife Su, asked them to design a house on a sloping site overlooking Creek Veau in Cornwall. A picturesque exercise in concrete block and glass, the house shows the influence of Frank Lloyd Wright. It attracted instant critical acclaim and was the first private house ever to win a RIBA architecture award. The combined talents of Foster and Rogers were already proving to be a powerful force. And yet there was no hint in the Creek Veau house of the radical new direction that Team 4's architecture was about to take.

This change came through a commission to design a single-story factory and office building for a company called Reliance Controls in Swindon, 70 miles west of London. Completed in 1967, this simple, elegant building with an exposed steel frame was clearly influenced by Mies, but its utter simplicity and directness also owed something to the California Case Study Houses.

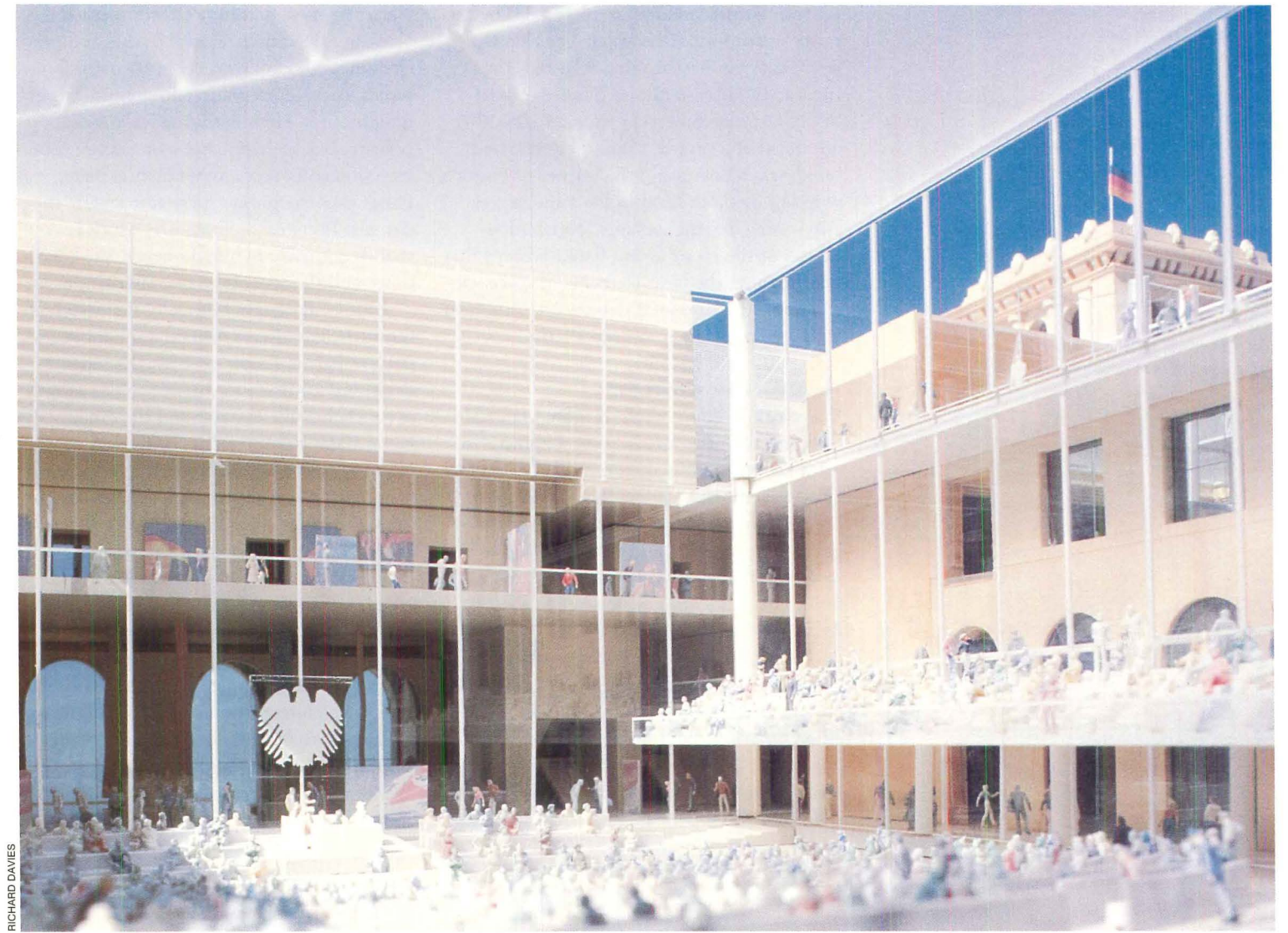
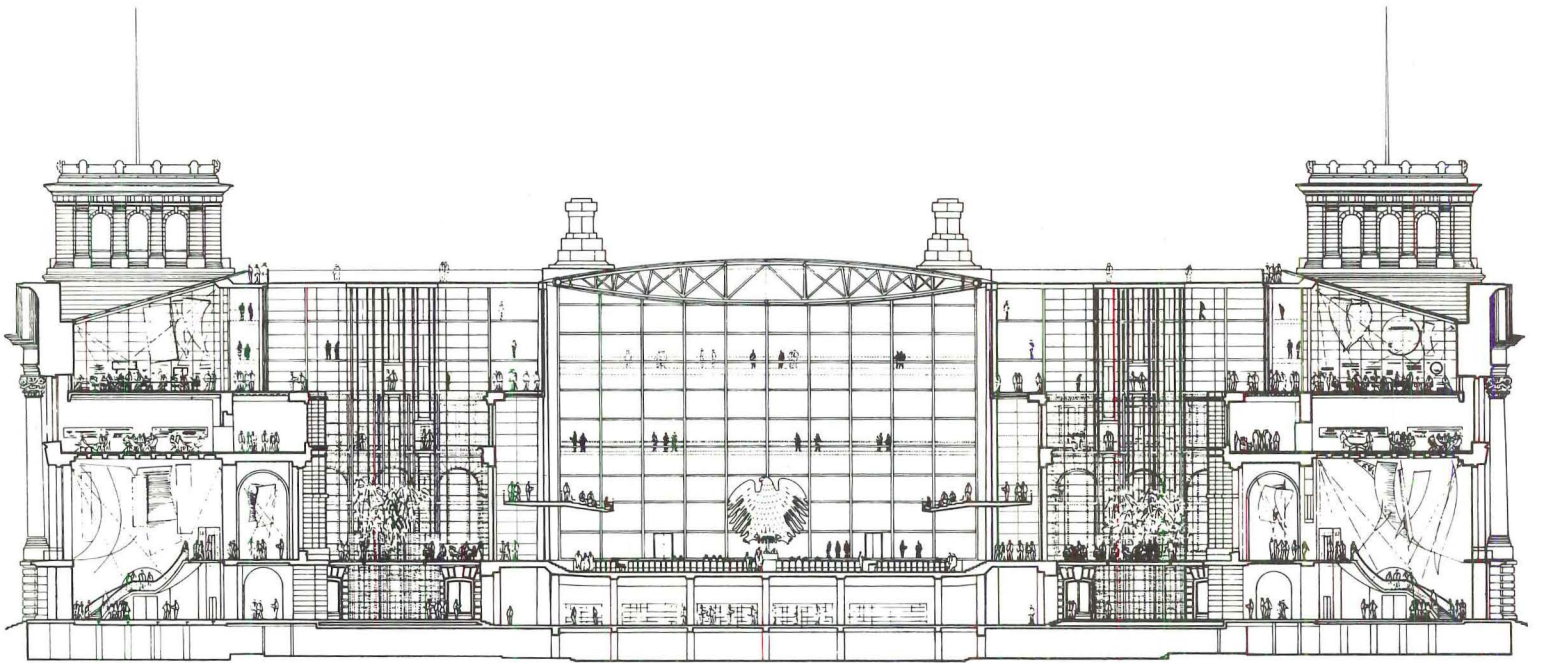
Reliance Controls has now entered the history books as the first example of British

High Tech—the stylistic label usually applied to buildings designed by either Foster or Rogers over the next 20 years. But the first High Tech building was also the last to be designed by Foster and Rogers in partnership. The once complementary relationship had become strained, and they decided to go their separate ways. Since then, both architects have prospered equally, and they are once again close friends.

High Tech evolution

The names Rogers and Foster are even now often confused in the public mind. The parallel styles developed by the pair in the 1970s and '80s grew from a common root and display certain common features: factory-made components of metal and glass; the preference for simple, flexible plans; the honest expression of materials and structure; and the frequent use of exposed steel frames. But there are also important differences. Rogers' habit of exposing pipes and ducts on the outside of his buildings, exemplified by the Pompidou Center in Paris or the Lloyd's of London headquarters, was never adopted by Foster, whose buildings are less flamboyant and more controlled and dignified.

After the break with Rogers, Foster set about developing his style and, equally important, his design method, in a succession of buildings of steadily increasing scale and complexity. Some of these are now acknowledged masterpieces. The Willis Faber building of 1975, for example, was the first



RICHARD DAVIES



RICHARD DAVIES

TOP: Street kiosks are designed by Foster for the French company JCDecaux.

ABOVE: Foster is involved in projects that are not strictly architectural, including the Oresund Bridge, designed to link Denmark and Sweden.

ABOVE RIGHT: The electric vehicle designed by Foster transports disabled and elderly visitors around the botanical gardens at Kew in London.

FACING PAGE: Hong Kong Airport, the largest airport infrastructure project in the world, is designed to serve 87 million passengers annually by the year 2040. Like Foster's smaller Stansted Airport, it will be assembled from square modules of prefabricated steel.



NORMAN FOSTER

postwar British building to be "listed" by the government for preservation. The Sainsbury Art Gallery in East Anglia; Stansted Airport; the Carrée d'Art in Nîmes, France (ARCHITECTURE, September 1993, pages 106-109), are essentially simple, thoroughly resolved buildings, representing the essence of Foster's working method. Even in the more expressive works, like the Renault Distribution Center or the Hong Kong Bank, Foster's first tall building, the basic elements of space, circulation, structure, and services are combined with an almost diagrammatic clarity.

Toward a new vernacular

The way a building works is more important to Foster than the way it looks. Characteristically, the main influence on his design philosophy was not an architect, but an inventor and a visionary: Buckminster Fuller. Before Fuller died in 1983, Foster invited him to his London office to discuss possible collaborations, but mainly to pay homage to the American prophet of High Tech.

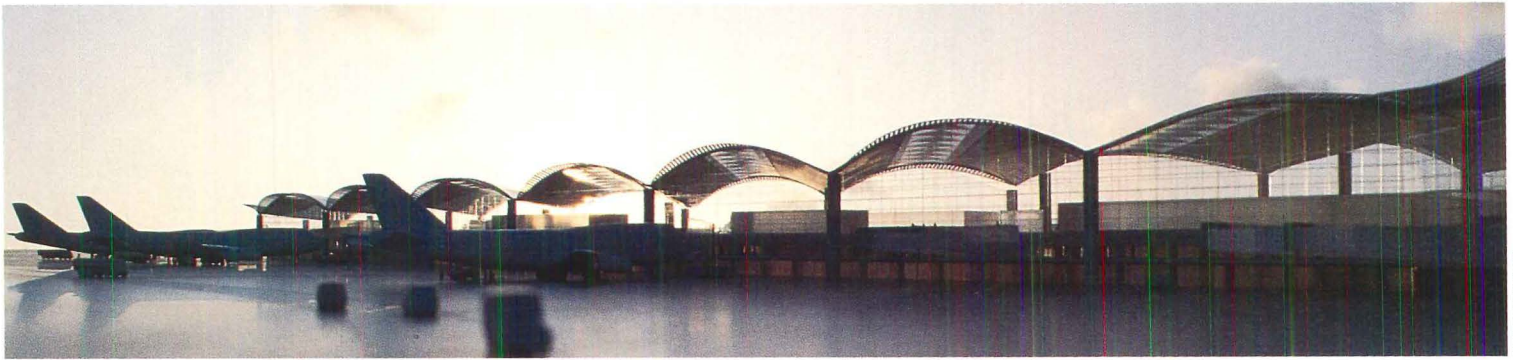
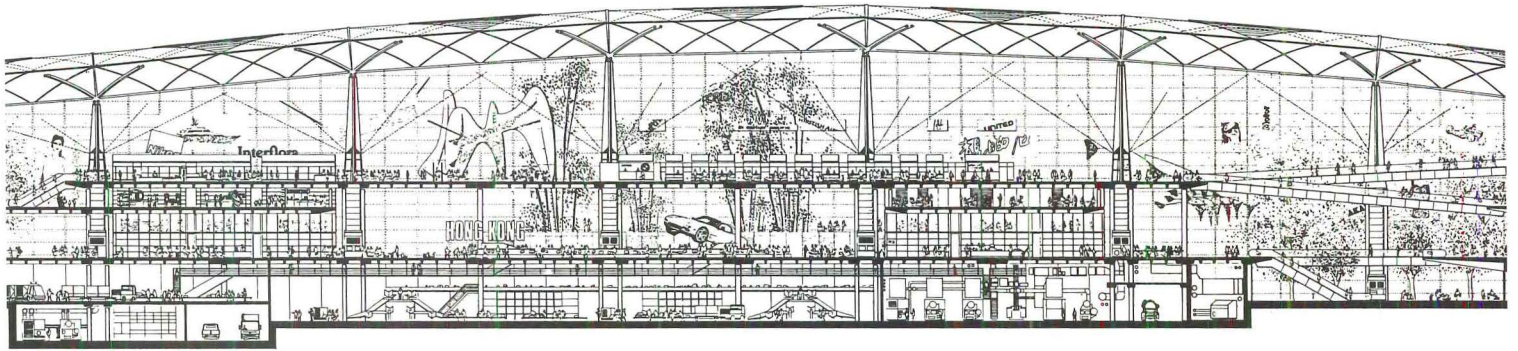
The products of engineering, rather than architecture, have most consistently inspired Foster. When he was invited to make a television program about his favorite building recently, the 59-year-old architect chose to extoll the architectural virtues of a Boeing 747. He holds a pilot's license and often flies to site meetings in his own helicopter.

After the completion of the Hong Kong Bank in 1986, Foster modulated his designs from the aggressive rhetoric of High Tech to

a gentler, more accommodating manner. Gone are the muscular steel frames and gray cladding. Now his projects boast natural materials, curvaceous plans, and ground-hugging profiles. High performance is still a priority, but the emphasis is on energy conservation and other environmental issues. Foster uses the phrase "new vernacular" to describe his latest architecture, which responds naturally to human needs, site conditions, and the economics of construction.

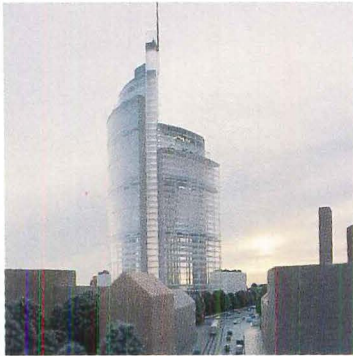
Industrial design, especially the design of furniture, has always formed a small but important part of Foster's job list. Experience designing furniture for his own office as well as for clients like Renault and the Hong Kong Bank culminated in 1986 with Foster's Nomos line for Tecno. Recently, the range of nonarchitectural projects has extended to include the superstructure of a luxury yacht, an electric vehicle for transporting persons with disabilities, a wind turbine generator, and a variety of transportation-related structures like bus shelters and street lighting. Foster sees no fundamental distinction between industrial design and the design of buildings—both are architecture to him. After all, he points out, these days, buildings are made from industrial components.

Foster is an obsessively thorough designer, proposing dozens of alternative approaches to every problem and testing each rigorously until he is absolutely sure that he has arrived at the optimal solution. This method applies equally to the largest plans and the smallest



RICHARD DAVIES

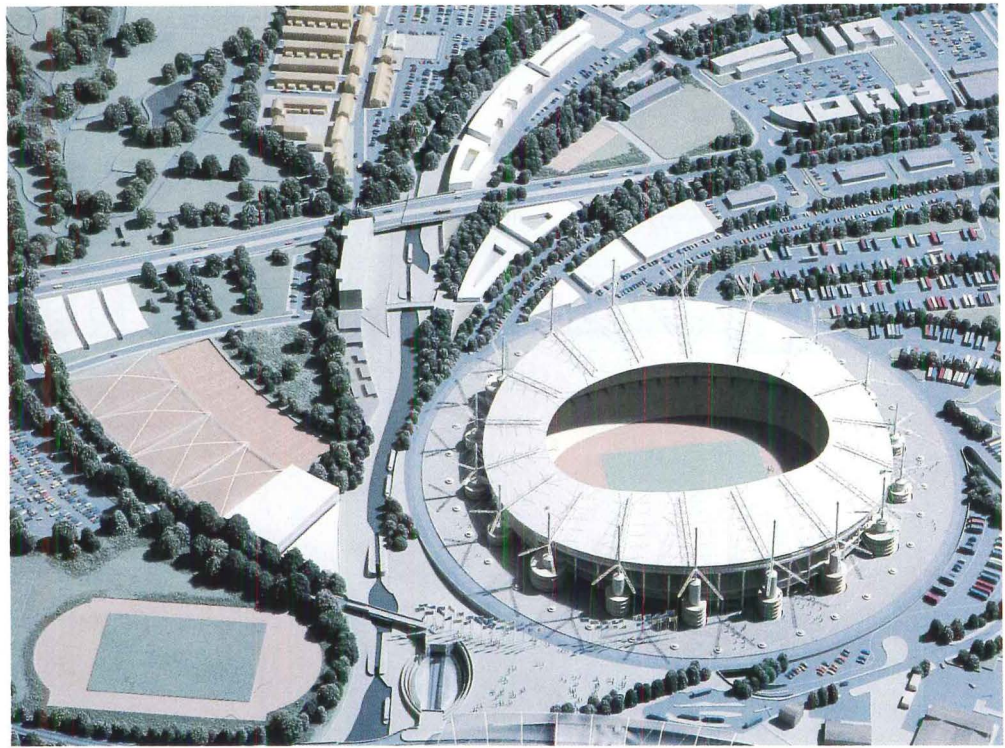




ABOVE: For ARAG, one of Germany's largest insurance companies, Foster designed a new 150,000-square-foot headquarters in Dusseldorf.

ABOVE RIGHT: Foster master-planned a sports complex for Manchester, England's, bid for the 2000 Olympics, including a track and field arena.

FACING PAGE: Millennium Tower, a half-mile-high vertical city for 50,000 people, is a theoretical project that is being sponsored by the Japanese construction company Obayashi.



details. Not content to simply make use of readily available building components, Foster visits factories and workshops, influencing the design of everything from cladding systems to door handles, persuading manufacturers to develop new lines and test them in mock-ups and prototypes.

International office

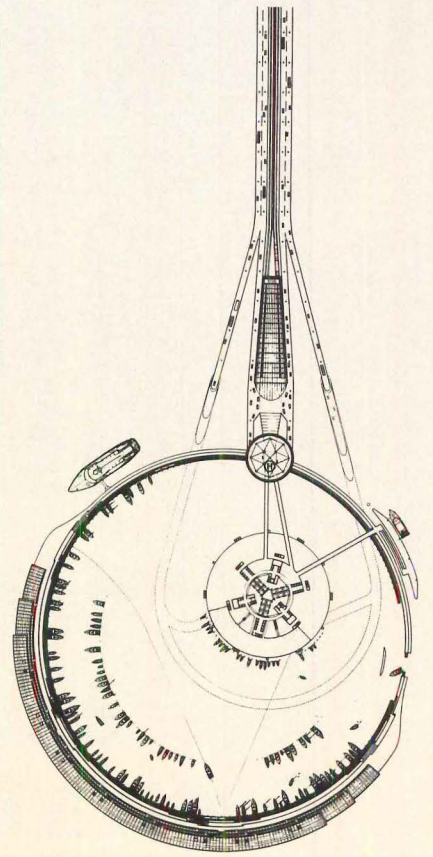
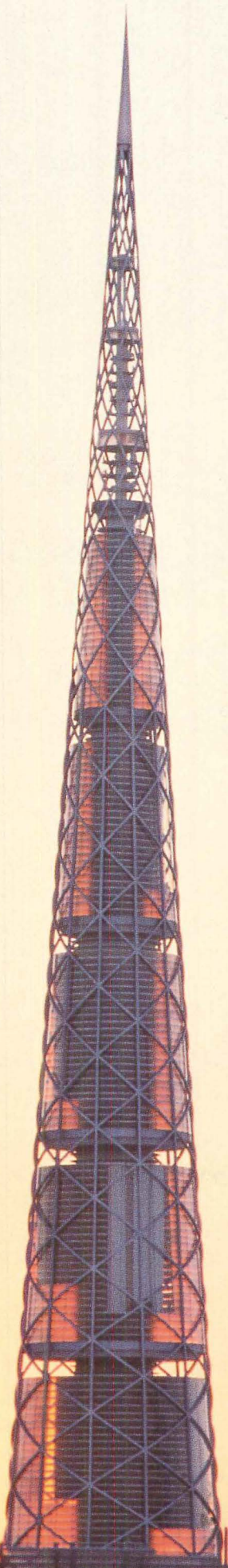
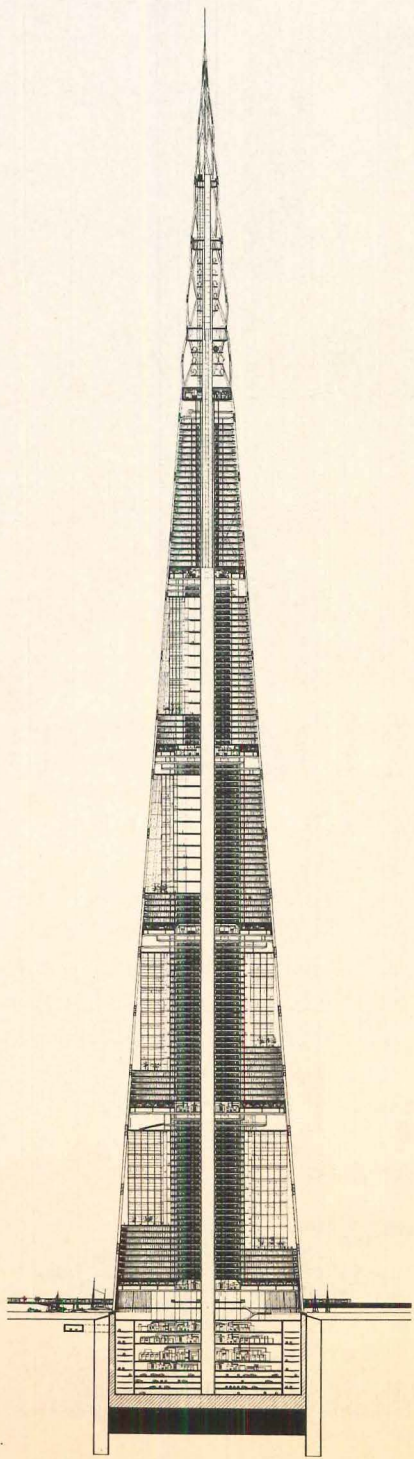
These days, the firm's workload is far too large for Foster to be involved in the design of every detail of every project. But the Foster design method has become so pervasive in the office culture that it is now second nature to a group of long-serving partners like Spencer de Grey, Kenneth Shuttleworth, and David Nelson. Foster cheerfully admits that the recently completed library at Cranfield Institute of Technology (*ARCHITECTURE*, September 1993, pages 110-111) was actually designed by Shuttleworth, but that doesn't make it any less a Foster building. Despite his willingness to share credit, not all of Foster's talented partners have stayed on. The rising star of British architecture, Michael Hopkins, winner of this year's RIBA Gold Medal, is one of many who have left to forge reputations for themselves.

The Foster team now includes the architect's second wife, Sabiha. Wendy Foster died of cancer in 1989, leaving four children, two of them adopted. Sabiha is a self-educated Pakistani who is said to have left Lahore to avoid an arranged marriage; Foster is her third husband. Though not an architect, she

is nevertheless a director of the practice and makes an active contribution, designing furniture and cataloging the firm's work.

The couple live in an enormous apartment on the top floor of the practice's Foster-designed headquarters on the Thames River in Battersea. The nerve center of the organization is a double-height, hall-like office entered from a monumental, stone staircase. Visitors are left in no doubt that they are entering the office of an architect. The office is typical of Foster's mature style: simple and rather austere, with a glass wall facing the river and a single row of round columns placed off-center to give it scale and perspective. Long parallel desks stretch across the whole room in a nonhierarchical arrangement. The desk furthest from the entrance is Foster's own. From here, he directs his talented and well-trained work force in the realization of some of the world's most exciting building projects: the new Bangkok Airport, the replanning of London's museum district, the Congress Center in Valencia, the Reichstag Parliament in Berlin.

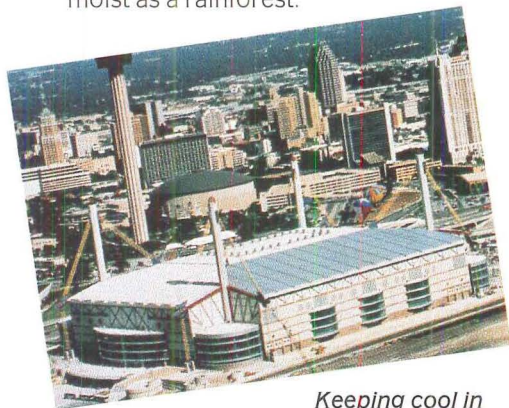
Norman Foster and Partners now has a global reach. Eighty-five percent of the firm's commissions come from abroad; there is a network of branch offices in Europe and the Far East; and inroads are beginning to be made into the American market with Foster's competition-winning design for the addition to the Joslyn Art Museum in Omaha. The dream of a working class boy from Manchester has come true.—*Colin Davies*





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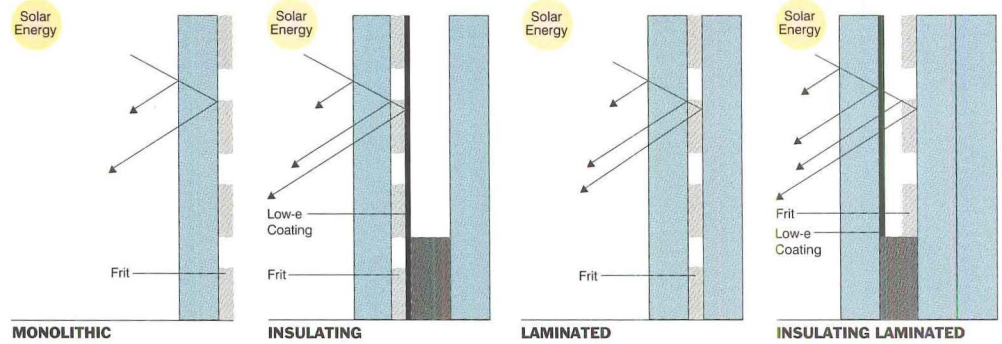
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Designing With Fritted Glass

Silk-screened, patterned glazing offers both environmental benefits and new design possibilities.

ABOVE RIGHT: Frit patterns can be applied to a variety of glazing types to increase solar control.

Fritted glass—glazing onto which patterns have been silk-screened with ceramic-based paints—is enjoying a tremendous surge in popularity. Architects cite the inherent energy-saving benefits and the design opportunities afforded by this innovative glazing. “It’s one of our firm’s most important design tools,” notes architect Kristin Hawkins of Cesar Pelli & Associates. “Fritted glass allows us to treat windows as a canvas and eliminates the need for sunshades.”

Silk-screen-based process

Fritted glass was first developed by PPG Industries over 40 years ago for applications in curtain wall spandrel panels. But it was not until 1985 that PPG began offering standard fritted patterns for architectural applications. The company no longer manufactures this type of glass, however, and only a few companies offer fritted products—among them are Owatonna, Minnesota-based Viracon and the Interpane Glass Company of Clinton, North Carolina. The frit process involves silk-screening a ceramic-based paint comprised of tiny ground-glass particles and pigment onto window or skylight glazing, typically to its interior surface. The painted panels are oven-dried, and the pattern is then permanently fired into the glass in a tempering furnace.

Fritted-glass manufacturers typically offer several standard patterns: dots, holes, and both horizontal and vertical lines. In addition, designs ranging from simple grids to complex geometric patterns can be manufactured according to architects’ specifications. The screens for custom patterns can be created from full-scale drawings, including CAD plots; for more complex patterns, CAD files may be sent to the glass manufacturer. Solid-colored glazing elements can be created by employing an opaque frit, as is often applied to the spandrel panels of exterior glass curtain walls. Such glazing represents a relatively inexpensive type of polychromatic cladding.

Frit patterns can be applied to any type of glass substrate and have been successfully

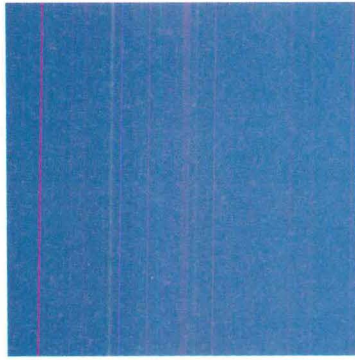
tested on structural glazing. The frit can be translucent or opaque, and the underlying glass clear or tinted, depending on the visual effect and energy control desired. Manufacturers often recommend creating mock-ups, particularly for customized patterns, to test both the visual and sunshading properties of the proposed fritted glazing.

Solar control

Fritted glass represents a relatively inexpensive way to control excess solar gain and reduce glare in glazed building surfaces. The frit can also reflect up to 25 percent of solar heat, depending on the pattern density and type of glass specified. In general, daylight transmission through fritted glass is reduced by approximately the same amount as the area covered by the frit coating.

This type of glass also represents a potential cost savings in construction. As sunshading is already integral to the glass, there is no need for extraneous shades or screens to cut down on excess solar gain. Fritted skylights, for example, can diffuse and control daylight without obtrusive and potentially expensive louvers, especially in light-sensitive settings such as museum galleries.

In addition to the environmental efficiency of fritted glass, its design possibilities are increasingly being tested by architects. Elizabeth Ericson, principal of Shepley Bulfinch Richardson and Abbott, is excited about future applications. “Fritted glass has the potential to become an entirely new medium,” Ericson asserts, “because it allows architects to take a more painterly approach to glazed surfaces.” Several major projects currently in construction, including Shepley Bulfinch Richardson and Abbott’s New England Deaconist Hospital and a laboratory at Case Western Reserve University, promise elaborate, layered patterns and colors of fritted glass. Such projects should inspire architects to investigate further the possibilities afforded by this innovative, energy-saving glazing.—*Raul A. Barreneche*

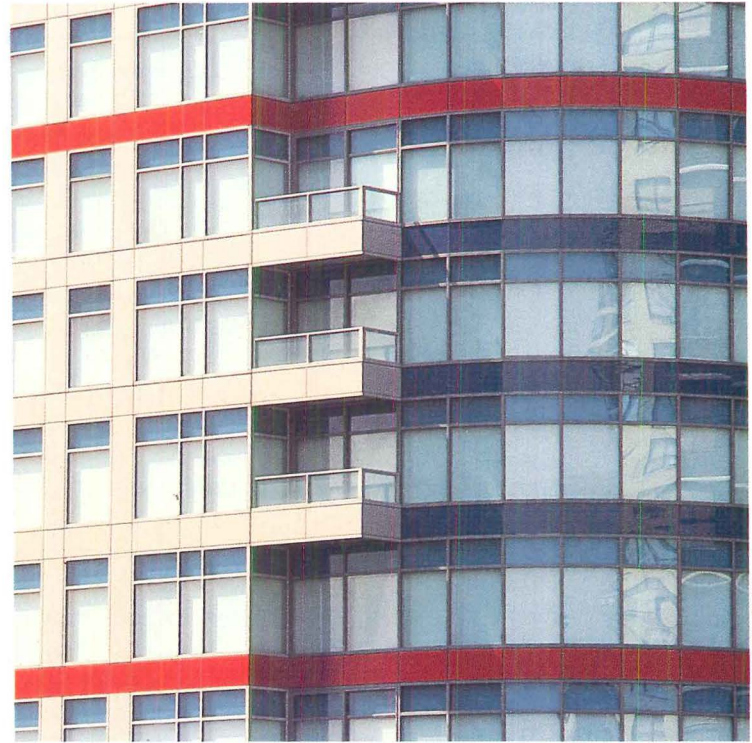


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New York City
Fox & Fowle Architects**

Fox & Fowle employed colored curtain wall spandrel panels to enrich the palette and break down the scale of a 40-story residential tower in Manhattan. The tower comprises a rectilinear shaft and a curving, glazed volume. According to partner Bruce Fowle, the architects wanted to emphasize differences between the two towers through a change in materials. The curved volume is therefore clad entirely in glass, with blue fritted-glass spandrels, while the tower is clad in rose-colored aluminum spandrel panels. The two volumes are joined by red fritted-glass spandrels at every fifth floor; blue vision glass window transoms also extend continuously through both volumes.

Fox & Fowle Architects chose fritted glazing for the horizontal bands



CURTAIN WALL: Fritted-glass enhances hues of spandrel panels.

over a traditional metal spandrel system to increase color possibilities and to reduce costs. Because manufacturers can utilize any color in the fritting process, the palette available to architects is virtually unlimited. Fritted color also offers richer, more deeply saturated hues than conventional aluminum panels.

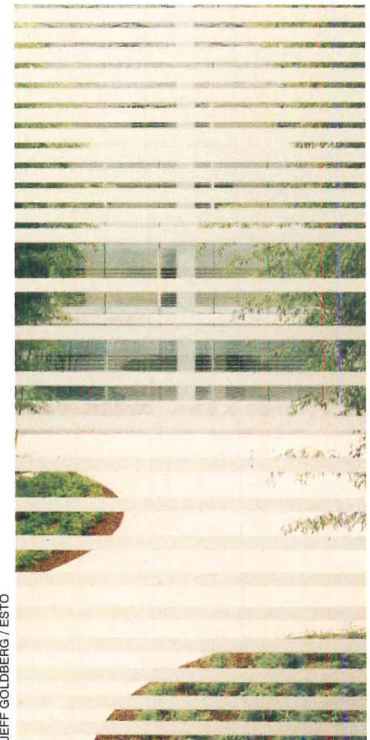
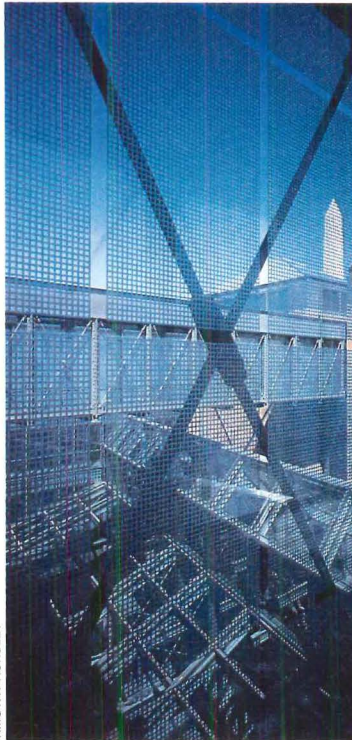
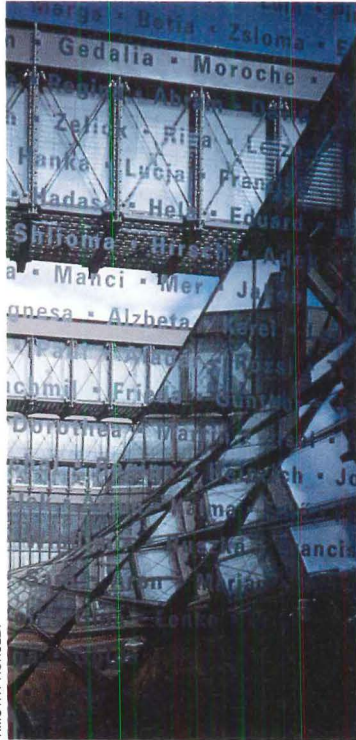
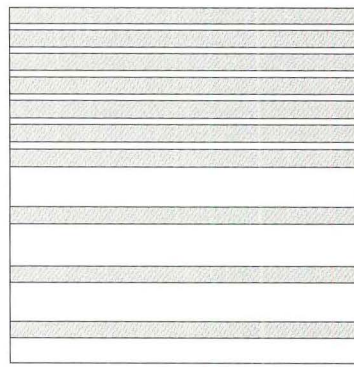
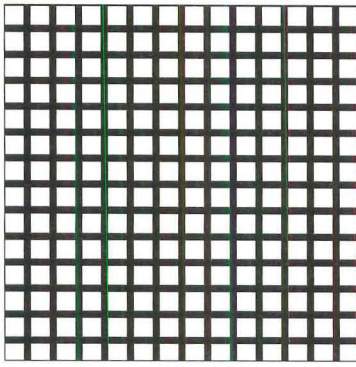
Fox & Fowle decreased construction costs by specifying a standard metal curtain wall system, to which both glass and aluminum panels could be attached. "Fritted glass represents an economical way to create a colorful, sculptural form," notes Fowle. "It allowed us to achieve the maximum amount of variations using as few materials as possible."

In such applications of solid color, the frit is roller-coated, not screened, directly onto the glazed panels for increased durability. The 3 $\frac{1}{2}$ -by-4-foot spandrel panels are composed of $\frac{1}{4}$ -inch clear, heat-strengthened

glass, which was treated with custom red and blue frit applied on the interior surfaces. Applying the frit coating to the interior surface of glass panels creates a slicker, glossier finish. But frit can also be applied to the exterior of glazed surfaces in order to achieve a matte appearance. The roller process creates a surface that is more weather-resistant than the typical silk-screening process, but some manufacturers also apply a tin oxide coating over the ceramic frit for increased durability.

Exterior applications of fritted glass offer additional design opportunities for architects. "There's a great potential for using it on the outside surface of glass in terms of how light is reflected and how textures are created," claims Fox & Fowle project architect Susan Dobin. "Fritted exterior glass can create colored shadows that change in response to sunlight variations."

ANDREW GORDON PHOTOS



TIMOTHY HURSLEY

TIMOTHY HURSLEY

JEFF GOLDBERG / ESTO

JEFF GOLDBERG / ESTO

MUSEUM GLASS BRIDGE: Fritted text.

GRID PATTERN: Filters views.

ATRIUM WINDOWS: Pattern as sunshade.

FRITTED LINES: Office privacy.

United States Holocaust Memorial Museum Washington, D.C. Pei Cobb Freed & Partners

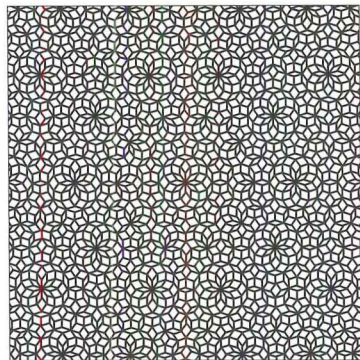
The fritted glass employed in the U.S. Holocaust Memorial Museum in Washington, D.C., represents a more purely ornamental application of this type of glazing than other examples in this portfolio. On the glass walls of the memorial museum's third- and fourth-floor bridges—which connect the north and south exhibit spaces—the names of 5,000 Eastern European towns whose populations were decimated by the Holocaust are inscribed in a white translucent frit, as are the names of victims from these cities. Because the fritted words are translucent and integral to the glazing, they subtly defer to the architecture while communicating graphic information to the museum visitor.

Fifth-floor bridges connecting the museum's library and photo archives feature a grid pattern applied to the glass enclosure. While the pattern reduces glare and solar gain, its primary purpose is more decorative than environmentally responsive. The pattern also screens views of surrounding buildings and monuments. The 5-foot-by-8-foot windows of the glazed bridges are treated with a 1/8-inch fritted-grid pattern, separated by 1/4-inch squares of exposed glazing. These grids are assembled to form a composition of rectangular blocks inscribed in the full 8-foot height of each glazed bay. In most instances, the frit pattern is applied to the interior surface of the double-paned, clear insulating glass. Because this particular frit was a more ornamental application, mock-ups were not created; the architects instead chose to evaluate patterns with full-scale drawings.

Federal Judiciary Building Washington, D.C. Edward Larrabee Barnes/John M.Y. Lee & Partners

The heart of the Federal Judiciary Building is a five-story, skylit atrium framed by a glass wall, surrounded by perimeter offices. To reduce solar gain and glare in these offices, Edward Larrabee Barnes/John M.Y. Lee & Partners designed a striped frit pattern on the windows facing the atrium. The pattern also affords privacy and masks mechanical equipment and ceiling plenums directly behind the glazed surfaces. The architects applied the graduated pattern of lines to 9/16-inch clear laminated glass. The 1 3/4-inch bands of translucent white frit are spaced as closely as 3/4 inch at the top and bottom of each 10-foot glazed panel; at the center, the stripes measure as far apart as 4 1/2 inches.

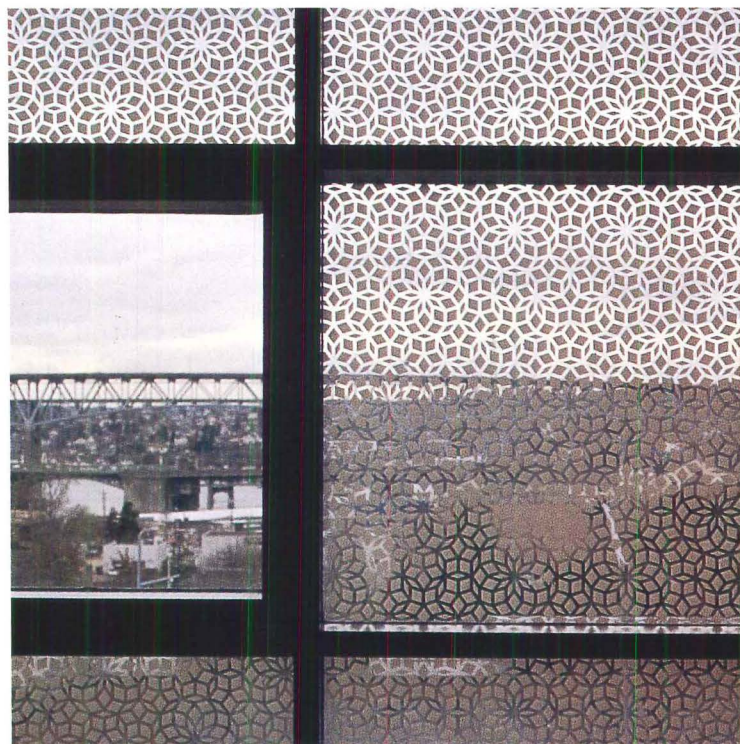
The office windows facing into the building's atrium comprise heat-strengthened laminated glass panels, which are formed from a PVB interlayer sandwiched between two panels of clear glass. In this instance, the frit is applied to the inside surface of the outermost layer. In addition to providing increased safety, laminated glass affords greater acoustical protection and greater reduction of ultraviolet light transmission than other types of glass. The architects eventually retrofitted the offices with motorized, operable shades behind the fritted stripes, in response to workers' requests for increased privacy. According to project architect Michael Barratt, these light-gray shades were initially planned to supplement the fritted screen of the glass. "They provide a neutral background," Barratt maintains, "which sets off the fritted lines and makes them appear bolder."



STAIR TOWER: Fritted windows.

**Physics and Astronomy Building
University of Washington
Seattle, Washington
Cesar Pelli & Associates with
NBBJ Architects**

In designing a complex of physics and astronomy buildings at the University of Washington, Cesar Pelli & Associates worked closely with the university's scientific faculty to embellish the new laboratories and classrooms with motifs describing their fields of study. Pelli suggested incorporating graphics related to physics and astronomy into the new structure. The labs therefore feature atomic tile floor patterns, a large exterior sundial, and scientific formulas inscribed in the cast stone piers. In addition, University of Washington physics professor Robert Ingalls designed a pattern that describes the structures of metallic alloys called quasicrystals. The architects elected



FRIT PATTERN: Design by physics professor Robert Ingalls represents quasicrystals.

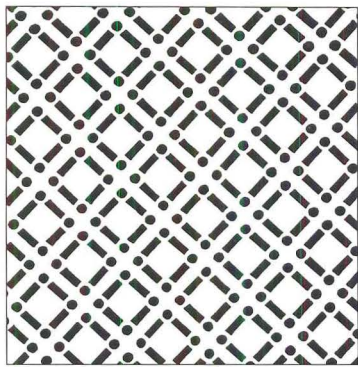
to transform this complex geometric pattern into a frit pattern for the windows of five-story stair towers on the northern lab building.

Drawings of Ingalls' pattern were translated into CAD so the architects could manipulate the designs and evaluate them at full scale. According to design team leader Kristin Hawkins, the architects evaluated a number of options based on issues of figure-ground and scale: The Ingalls-designed pattern had to be clearly discerned at a large scale, without losing any of the graphic detail.

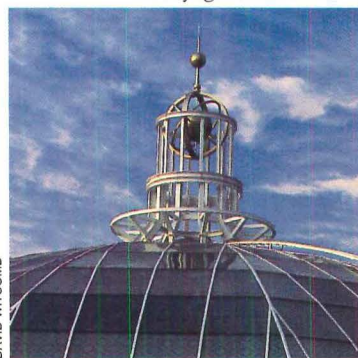
The architects eventually selected a scheme that reversed the figure-ground of Ingalls' original pattern. Working with Pelli's own in-house paint shop, they created full-scale window mock-ups to evaluate color options. According to Hawkins, the light gray that was chosen rendered the window more a neutral screen than a decorative surface.

The frit was applied to two large glazed areas in a pair of five-story public stairwells of the north lab building. The 3 1/2-foot-square windows clad in clear insulated glass punctuate the building's east and west elevations. While the fritted glazing acts primarily as a graphic element, it also operates as an integral sunshade on the exposed west facade. The east-facing stairwell is naturally shaded by large cedar trees, but the frit provides another visual layer to augment the shade provided by the trees.

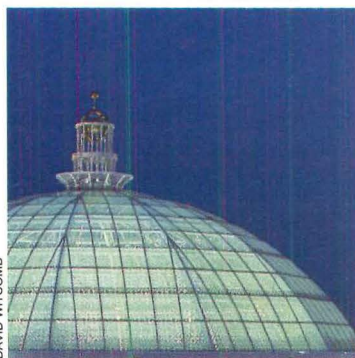
Hawkins notes that while fritted glass was more costly than untreated glass, it is significantly less expensive than low-e glass. "Being able to employ frit instead of low-emissivity coating for sunshading represents a significant cost savings," according to Hawkins. "It also allows you to create something visual on the glass and still see out of it."



ROTUNDA: Fritted skylight reduces solar gain and increases thermal comfort.



DOME: Diamond frit pattern.



EXTERIOR: Dome glows at night.

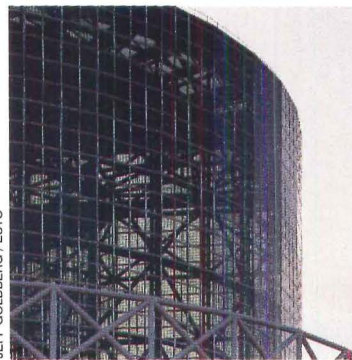
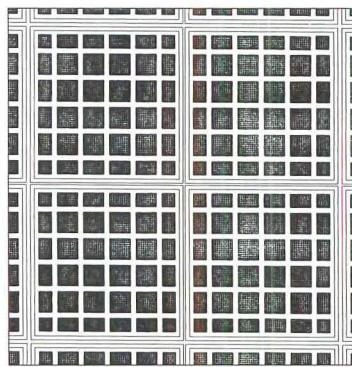
**Towson Town Center
Towson, Maryland
RTKL Associates**

For the glass dome of a Maryland shopping mall, Baltimore's RTKL Associates employed an ornamental yet highly energy-efficient frit pattern. The opaque ceramic frit was developed in collaboration with the firm's graphic design team, as the visual appearance of the pattern was as critical as its energy control. The design team generated patterns using Macintosh-based graphics software.

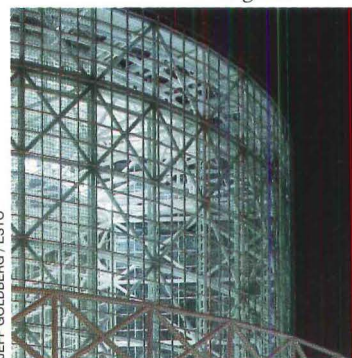
After evaluating scores of variations, the architects selected a diamond-shaped scheme that recalls the trellis structures and patterned glass of 19th-century conservatories, according to RTKL designer Phil Engelke. Mock-ups were created to evaluate the pattern's visual and shading properties before the final scheme was put into production.

The white frit pattern is overlaid onto green 1¹/₄-inch-thick laminated insulating glass, to comply with codes that require laminated overhead glazing for safety reasons. The pattern density was designed to reduce the harsher glare of morning and afternoon sunlight filling the interior. At the base of the dome, the pattern density is predominantly opaque frit, with sparse amounts of clear glass. As the dome curves upward and inward, the ratio of solid frit to clear glass is reversed, allowing a greater amount of light to penetrate the dome.

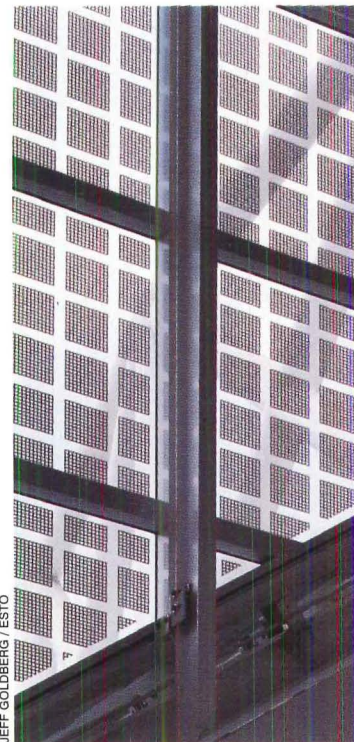
The fritting significantly cuts down on solar gain, reduces air-conditioning bills, and allows the interior to remain comfortable even on the hottest and sunniest of days. Project architect Raymond Peloquin also notes that when uplit at night, the fritted dome becomes a prominent and identifiable beacon.



GLASS TOWER: Frit reduces glare.



NIGHT VIEW: Interior emits soft glow.



FRTT PATTERN: Squares within squares.

**Los Angeles Convention Center
Los Angeles, California
Pei Cobb Freed & Partners with
Gruen Associates**

The recent overhaul of L.A.'s convention center features large expanses of roof glazing. To significantly reduce solar gain beneath giant glass towers and in other skylit areas, Pei Cobb Freed & Partners and Gruen Associates installed glazed panels finished with a custom frit pattern. The translucent white frit is comprised of 8-inch gridded squares; these are set into a 10-inch grid pattern internal to the roughly 5-foot-by-5-foot window frames.

According to Gruen Associates' Debra Gerod, the architects would have preferred specifying clear glass. But to minimize heat gain from the California sun, tinted glazing with reflective coatings of 30 percent, 40 percent, and 50 percent were se-

lected instead. "One benefit of working with the frit is that it made the reflective glass look more like clear glass," Gerod notes. Simple mock-ups were erected during the design phase to evaluate both the graphic quality and the sunshading properties of the fritting.

Since the convention center opened earlier this year, the fritted glass has clearly cut down on the amount of solar gain in the convention center's concourses and lobbies. It also allowed the architects to create large open spaces without shades or louvers that are still comfortable for visitors. In addition, partner Michael D. Flynn of Pei Cobb Freed & Partners claims the frit pattern offers "another dimension to perceiving the glazed volumes." Because the fritting reduces glare and creates a more translucent surface, it allows the glazed volumes to emit a softer glow from interior lights at twilight.

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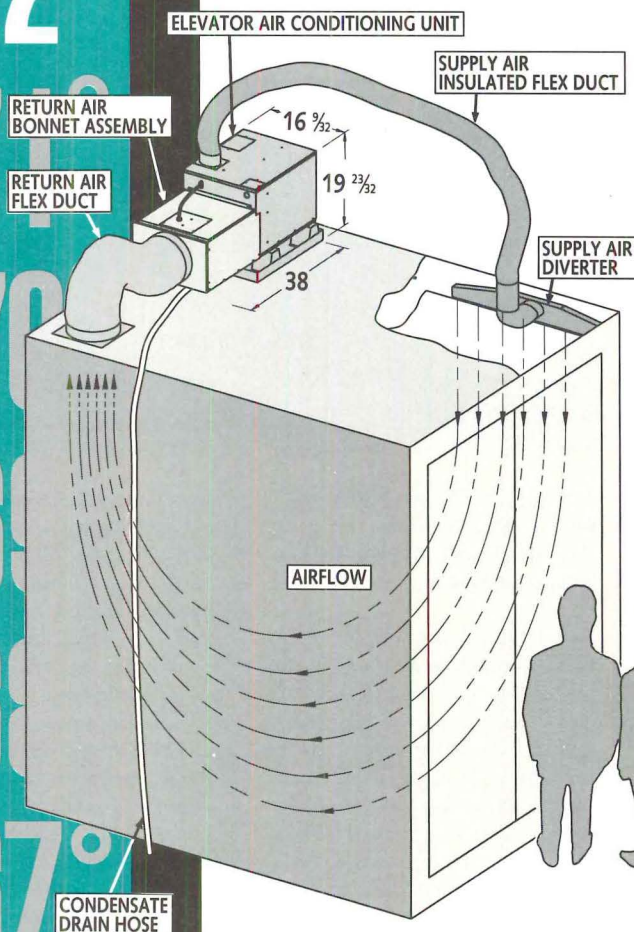
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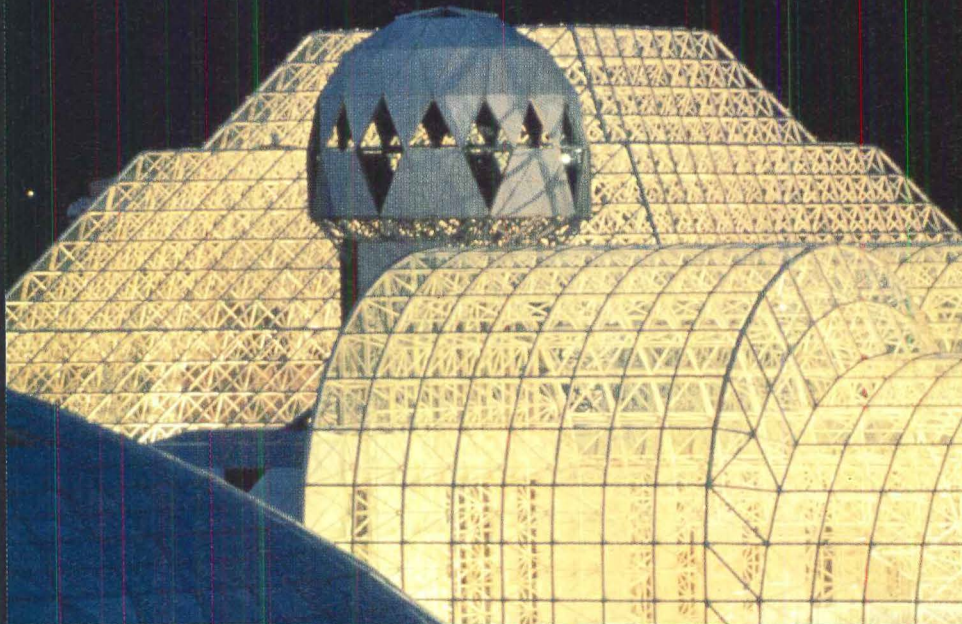


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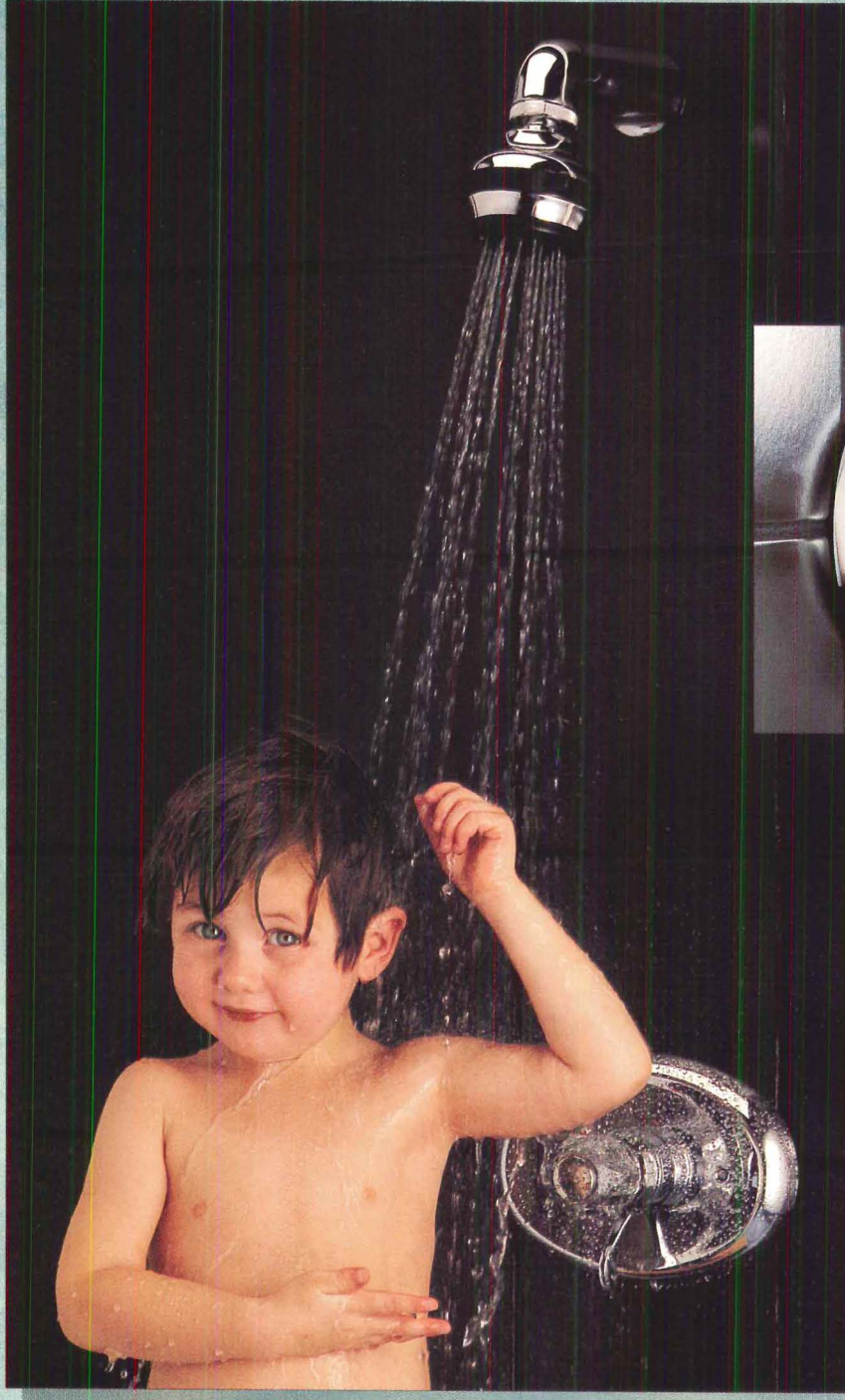
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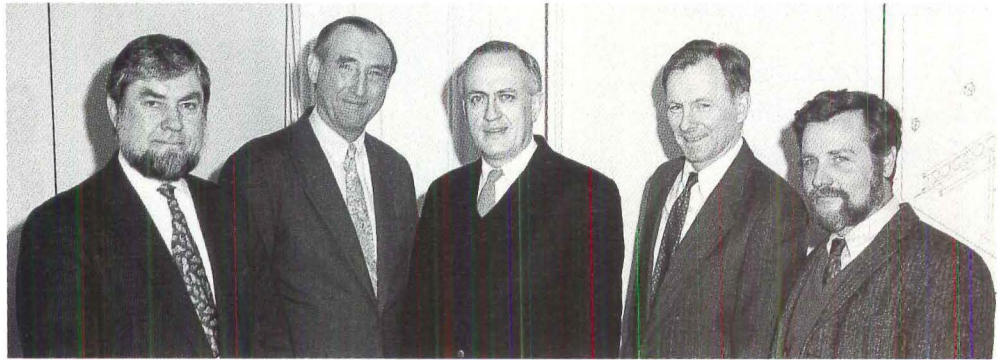
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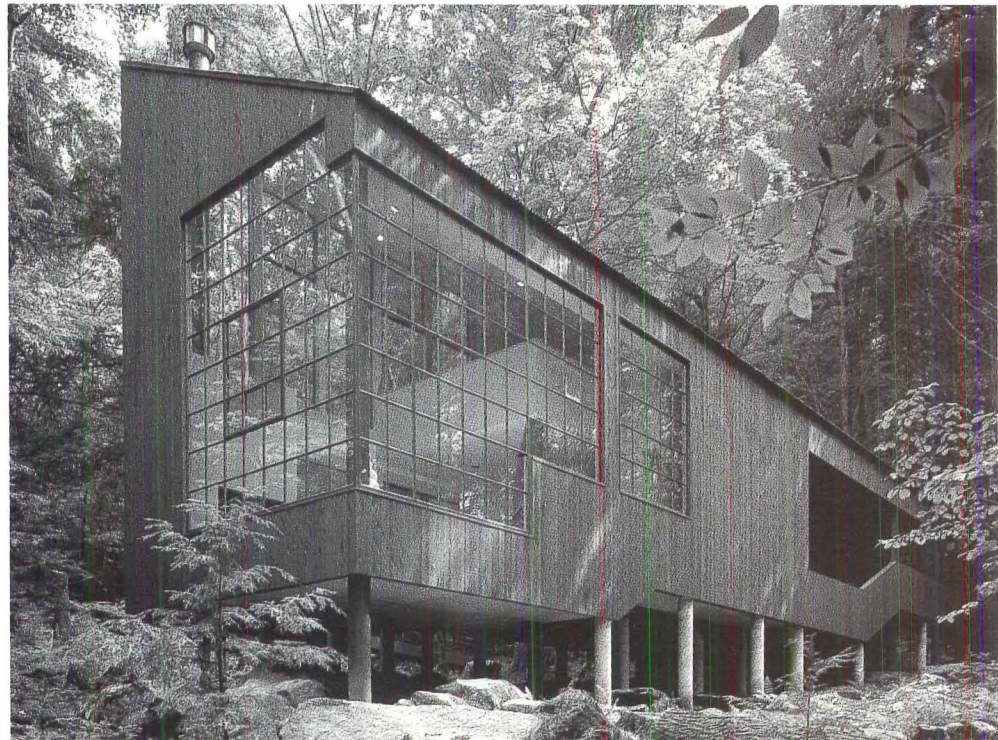




MARK COHEN

## Context and Responsibility

*This year's AIA Firm Award honors the rigorous eclecticism and democratic vision of Bohlin Cywinski Jackson.*



JOSEPH W. MOLITOR

**TOP RIGHT:** AIA Firm Award winner Bohlin Cywinski Jackson is headed by (from left) Bernard Cywinski, Peter Bohlin, John Jackson, W. Dan Haden III, and Frank Grauman.

**ABOVE RIGHT:** Summer house (1974) for Bohlin's parents combines primitive form and precise detail. Concrete pylons support shedlike mass above site.

The work of Bohlin Cywinski Jackson (BCJ), winner of this year's AIA Firm Award, transcends the limitations of a signature style. True to the conflicting demands of a city street, a rural landscape, and the poetics of space, BCJ's site-specific eclecticism achieves what jury Chair James Stewart Polshek calls "a remarkably consistent rigor." Given the firm's varied portfolio of details—ranging from the faceted-glass enclosure of a newly completed pool house to the taut brick facades of a new college compound—it is impossible to attribute BCJ's work to the talent of one designer. Indeed, this breadth of expression stems from a familial exchange between the firm's five partners: Peter Bohlin, Bernard Cywinski, John Jackson, W. Dan Haden, and Frank Grauman. As Grauman puts it, "Students don't join our office to work at the feet of a master."

The egalitarian organization of the 60-person firm verges on the irrational, with the partners scattered among three offices in

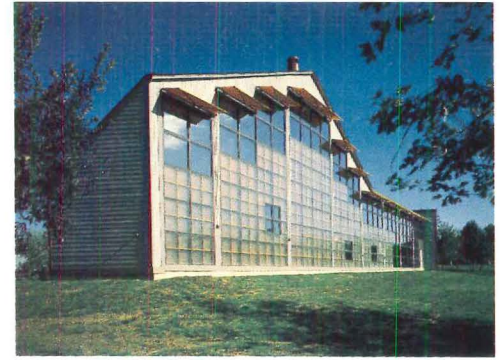
Pennsylvania—Pittsburgh, Philadelphia, and Wilkes-Barre—and a fourth office in Seattle. Explains Bohlin: "We're always close to our clients, to be more responsive and produce better buildings." BCJ's offices, however, do not operate independently, like those of Skidmore, Owings & Merrill. Cywinski describes the practice as a "community of work groups—not islands"; if one of the offices slows down, another will absorb staff or send work. As a result, BCJ avoids the recessionary pattern of temporary hiring (and abrupt firing) that has transformed otherwise respectable architecture practices into sweatshops.

For all of BCJ's corporate trappings in Philadelphia and Pittsburgh, the firm's soul remains in the gritty, former coal town of Wilkes-Barre, where it was founded in 1965. Here, 24 architects work out of a charming, if shabby, three-story Victorian house on one of the town's dense, tree-lined blocks. Desks and drawings have gradually engulfed every available room since Bohlin and Richard



## Tradition and Invention

*BCJ's early commissions synthesize regional forms and industrial materials.*



### Shelly Ridge Girl Scout Center, 1983 Miquon, Pennsylvania

**TOP LEFT:** Entrance facade evokes 1880s Shingle Style house.

**TOP RIGHT:** Thermal wall faces south to capture light and store heat.

**RIGHT:** Timber frame, industrial glazing, and brick panels form thermal wall (left). Wood trusses support roof. Brick hearth doubles as stage.

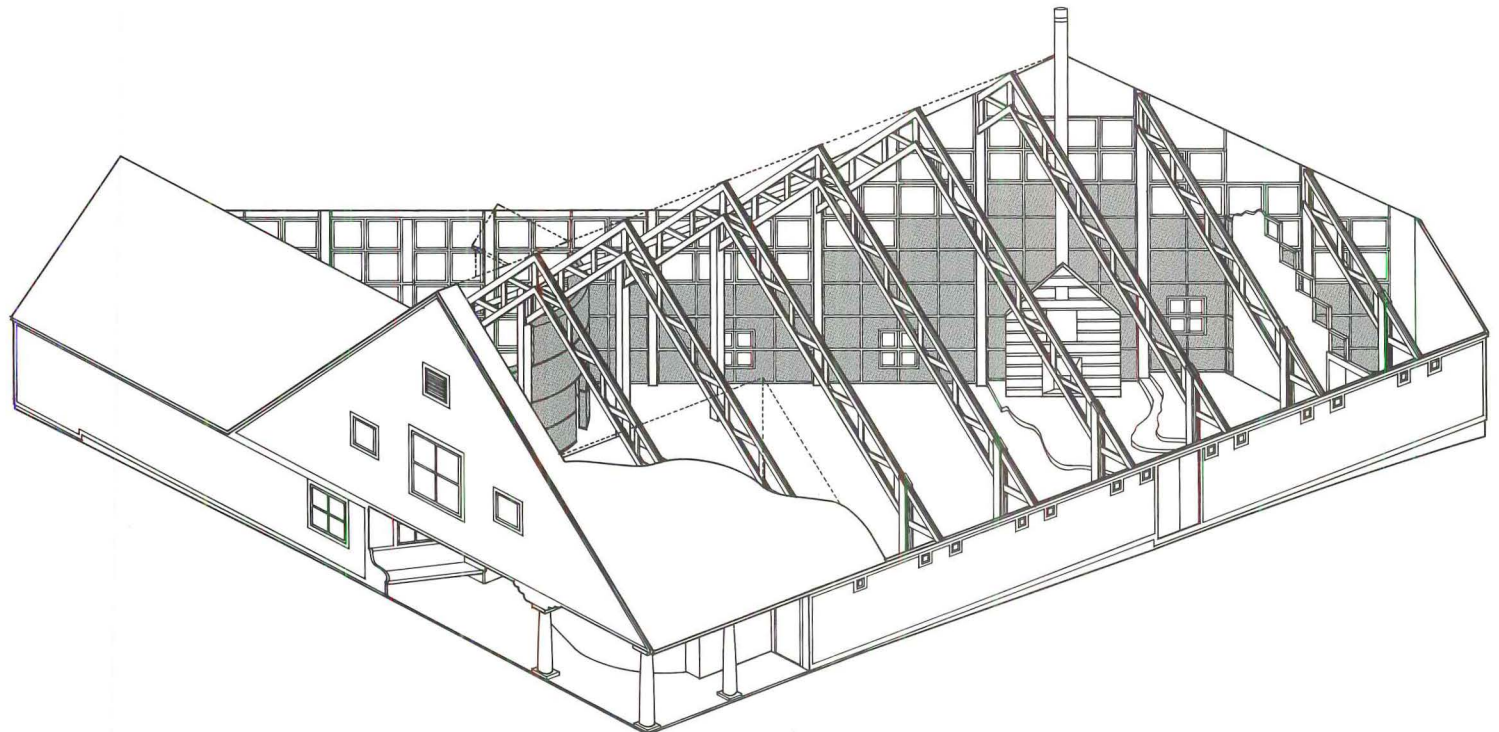
**AXONOMETRIC:** Trusses mediate between gabled facade and thermal wall.

### Gaffney House, 1981 Romansville, Pennsylvania

**FACING PAGE, TOP:** House is oriented to distant views across meadow.

**FACING PAGE, BOTTOM:** House is integrated into stone foundations of barn.

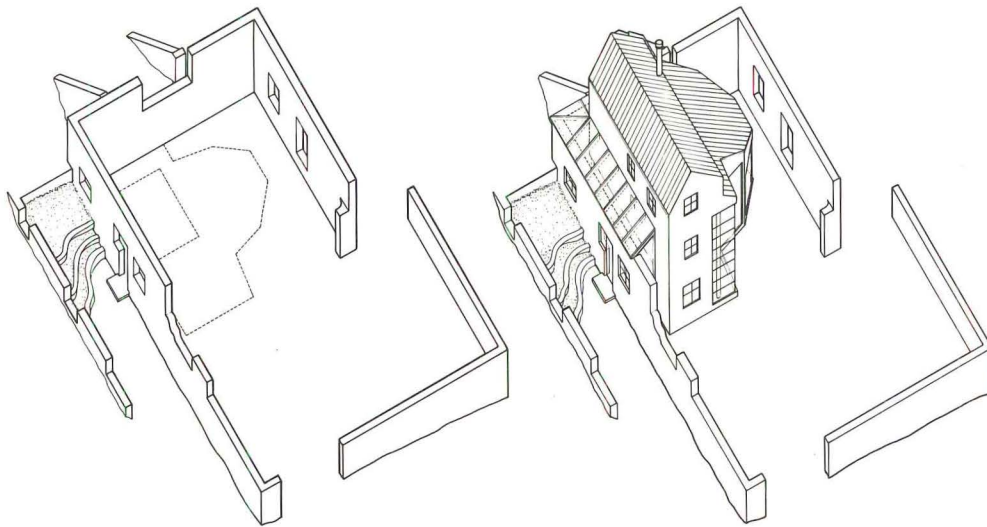
**FACING PAGE, AXONOMETRIC:** New building is set away from old wall.







JOSEPH W. MOLLITOR PHOTOS



Powell launched the practice from a rented, first-floor parlor. The firm now owns the narrow property, complete with swimming pool, patio, and garden, which are used for summer barbecues. Occasionally, the architects are distracted by the television of an elderly writer who lives in the building's garret apartment, across the hall from the office library.

Only the youngest of BCJ's partners permanently resides in Wilkes-Barre: the erudite, 42-year-old Grauman, who, despite his beard, looks remarkably like Hollywood actor Richard Dreyfuss. If the firm has a "star" architect, however, it is 57-year-old Bohlin; but he is loath to admit it and ever sensitive to recognize what he learns from his partners and associates. Although Bohlin divides his time between the three Pennsylvania offices, he still calls Wilkes-Barre his home—this from a nomadic architect who habitually telephones en route to and from Seattle, where he is collaborating with James Cutler on a 47,000-square-foot mansion for Microsoft founder William Gates III.

### Humanist impulses

While the Gates house is the firm's highest profile commission, the small summer house Bohlin designed for his parents nearly 20 years ago remains the most poignant expression of BCJ's enduring humanism. Supported on concrete pilotis above a forested hillside in West Cornwall, Connecticut, the house is a contemporary version of Thoreau's Walden. Like BCJ's later work, it synthesizes modern construction and traditional form, evoking both the delicacy of a glass vitrine and the crude form of a lean-to. From the interior, one feels afloat in the wilderness, as if in an aquarium: Light filters through the surrounding wall of trees and penetrates the vast, glazed corner of the living room. The fluid, dramatic procession from the front of the house to the back manifests the architect's fervent, lifelong struggle to orient the human figure in the landscape.

The firm's subsequent work retains Bohlin's fundamental, humanist impulse, from massing to detail. For this reason, BCJ won two AIA Honor Awards in the early 1980s: one for a residence in rural Pennsylvania, and the other for a Girl Scout Center near Philadelphia. In these projects, too, the architects fuse traditional form and modern detail, but in a more integral relationship to the site: Completed in 1981, the Romansville, Pennsylvania, Gaffney house is carefully oriented to distant views in the landscape, incorporating the existing stone foundations of

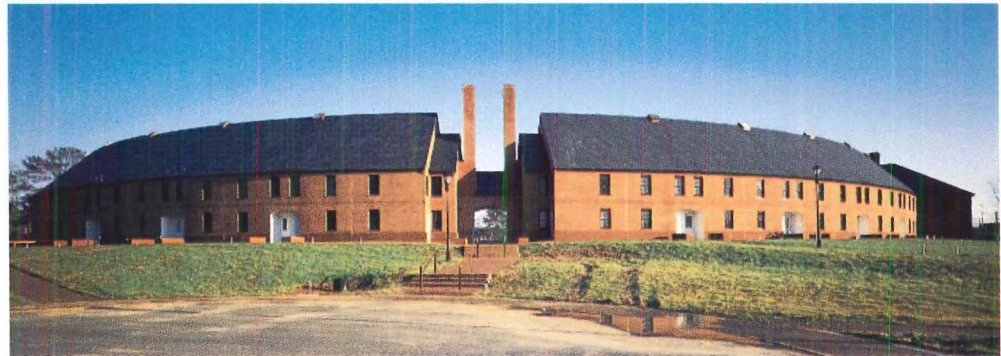


## Site and Context

*A comparison of two academic buildings reveals BCJ's site-specific eclecticism.*

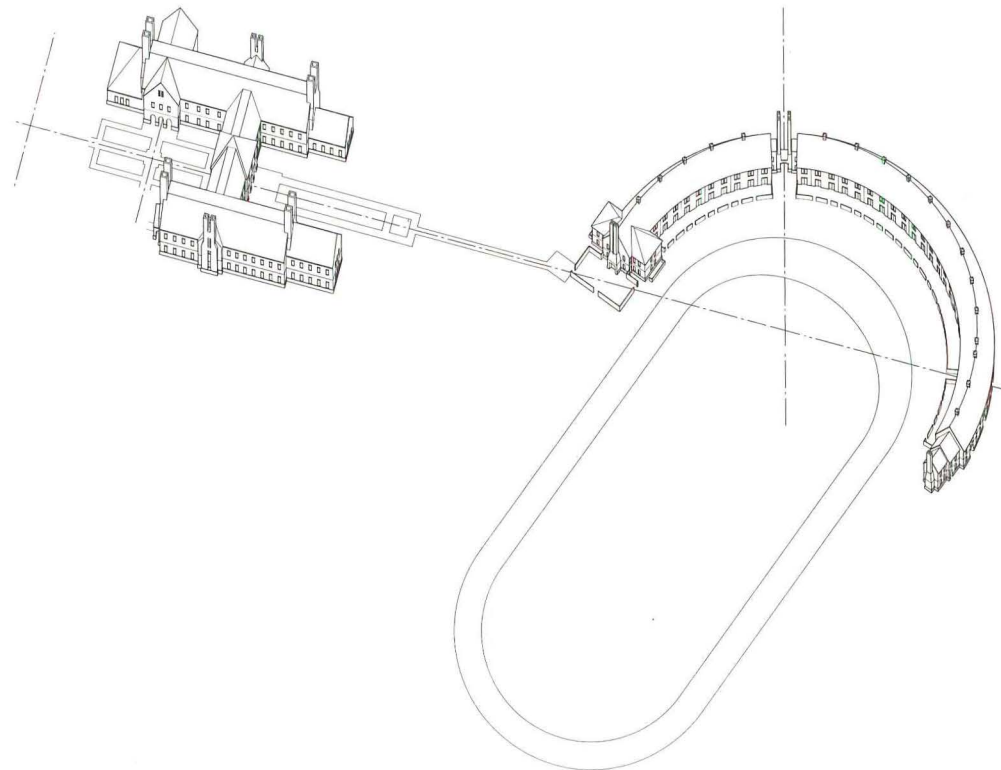
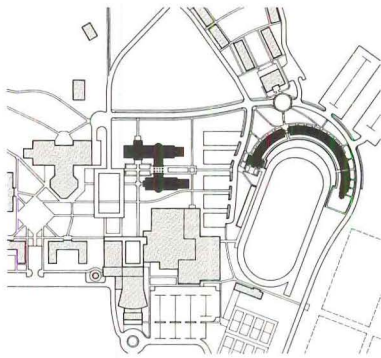
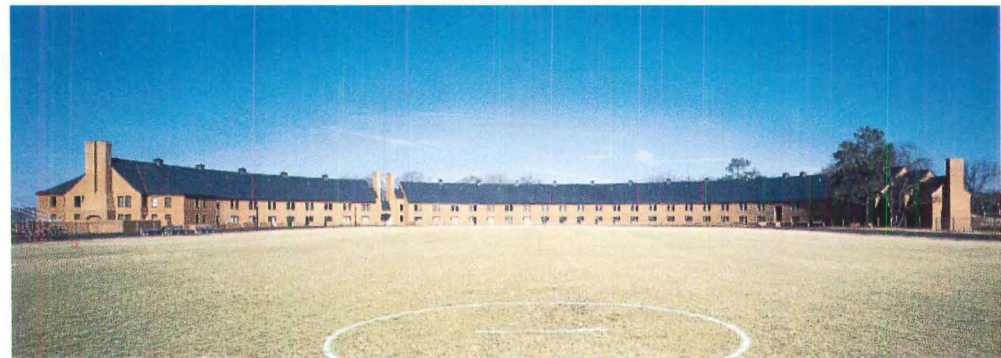
### St. Mary's College, 1994 St. Mary's City, Maryland

**TOP:** Chimneys house exhaust stacks.  
**CENTER:** Chimneys of student townhouses mark gateway to playing field.  
**BOTTOM:** Crescent of townhouses follows running track.  
**SITE PLAN:** Science building and townhouses define heart of campus.  
**AXONOMETRIC:** Architects aligned passage through science building (left) with garden at head of crescent.



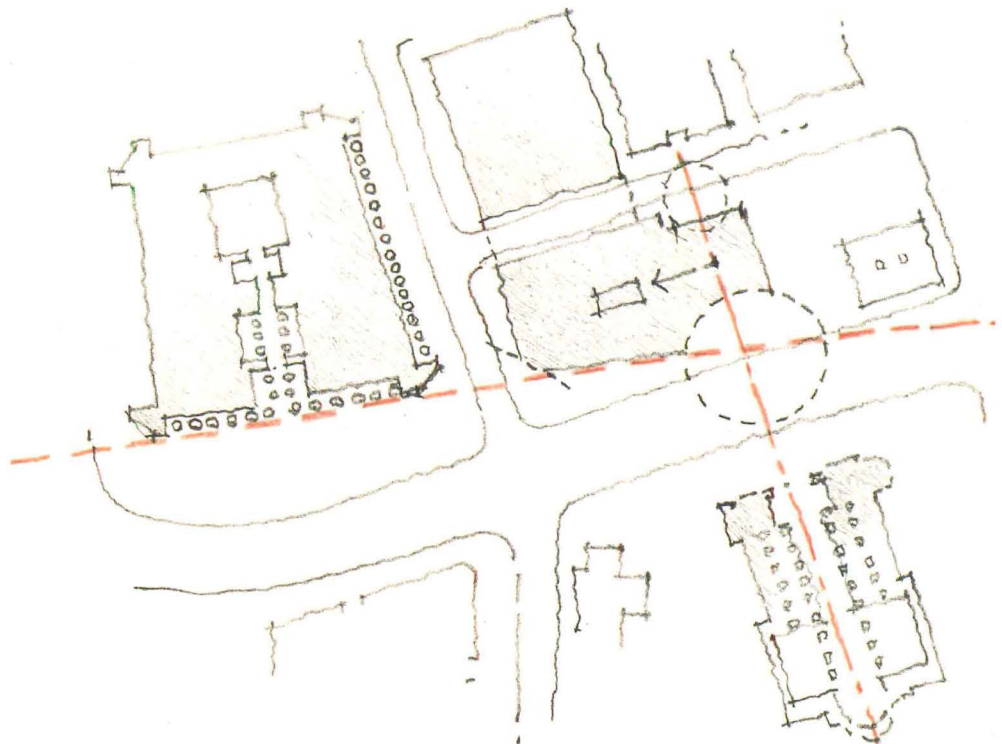
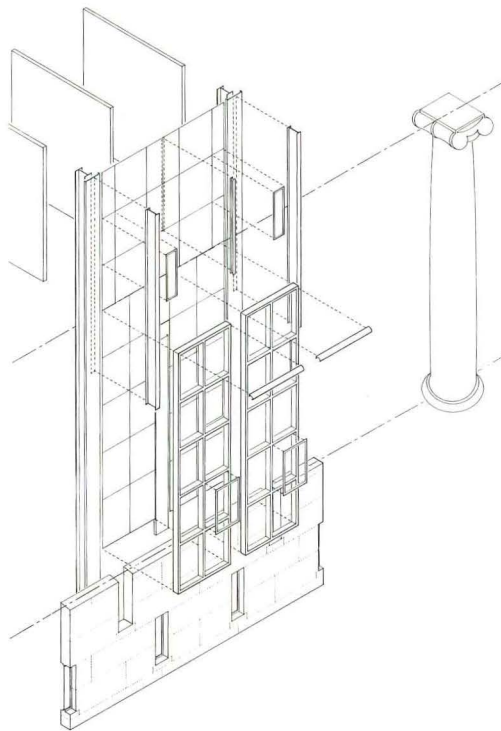
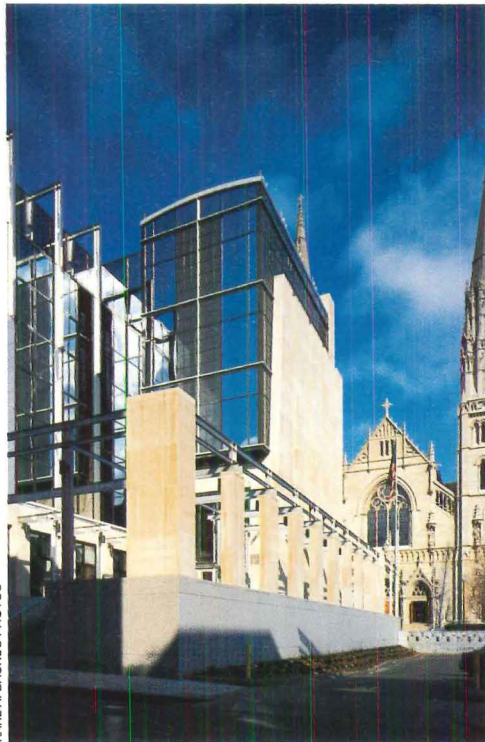
### Software Engineering Institute, 1987 Pittsburgh, Pennsylvania

**FACING PAGE, TOP:** Curving glass wall announces corner entrance to SEL.  
**FACING PAGE, BOTTOM:** Metal supports (left) echo delicacy of cathedral (right).  
**FACING PAGE, AXONOMETRIC:** Curtain wall relates to columns of neighbor.  
**FACING PAGE, SKETCH:** Architects located entrance across from nave of cathedral (left). South facade conforms to angle of adjacent colonnade (right).



KARLA A. BACKUS PHOTOS





a demolished barn. With characteristic restraint, BCJ roots the mass of the building into the crest of the field, articulating at once a vivid memory of the previous building, the careful tectonics of the new house, and the spatial continuity between indoors and out.

The principal facade of the Girl Scout Center, completed two years later, hints at the firm's brief encounter with the formalist abstractions of Postmodernism. (Grauman admits that there are more comprehensive examples, but photographs of these are tucked away in permanent storage.) At first glance, the massive front gable, supported by Tuscan columns, brings to mind Postmodernist interpretations of the 1880s Shingle Style. However, the architects derived the plan from the position of the sun, transforming a wooden barn into a precisely delineated, passive-solar shed.

### Stewards of place

Despite the sway of Postmodernism and its marketable imagery, BCJ's early Modernism evolved into a confident hybrid of traditional principles and emerging technologies. Throughout the 1980s, the architects' commissions became increasingly complex, encompassing the challenges of large corporate clients, institutional programs, and historic contexts. These include campus buildings for Syracuse University; Rensselaer Polytechnic Institute; and the University of Pittsburgh (ARCHITECTURE, March 1994, pages 76-81). Richard Maslow, chairman and CEO of Wilkes-Barre's InterMetro Industries, is among these faithful clients because, "No detail is too small for Bohlin."

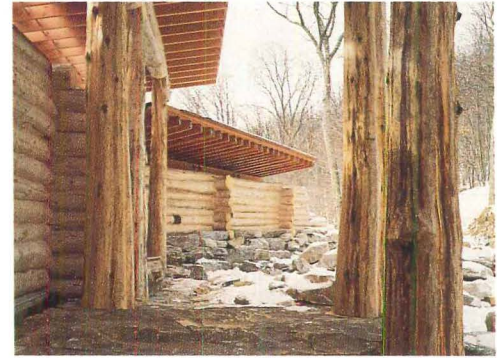
Ironically, the two most skillful examples of BCJ's mature, conciliatory approach to site represent extreme poles of contextualism: Carnegie Mellon University's Software Engineering Institute (SEI), located in downtown Pittsburgh; and new buildings for St. Mary's College, in rural Maryland (these pages). The former is surrounded by vigorous stone buildings, most notably a century-old Gothic cathedral across the street and an imper-turbable, 1930s Classical neighbor. In plan, the architects established an axial relationship between SEI's entrance and the nave of the cathedral, aligning the principal facade with that of the neighboring building. More convincing, however, is BCJ's translation of rhythmic, Classical tradition into a modern tapestry of indigenous glass and steel.

BCJ's design for a science building and student housing at St. Mary's College similarly reconciles old and new, but in the contrasting



## Craft and Detail

*A pair of BCJ's current residential projects are stylistically opposed but similarly meticulous.*



### Weekend House, 1994 Catoctin Mountains, Maryland

**TOP LEFT:** BCJ assembled heavy timber structure with steel fasteners.

**TOP RIGHT:** Log columns support rafters.

**CENTER:** Rustic materials and log wall recall early 1900s camp buildings.

**FRAMING PLAN:** Architects conceived house as a series of pavilions.

**SECTION:** Exposed timber frames form interior partitions and cabinets.

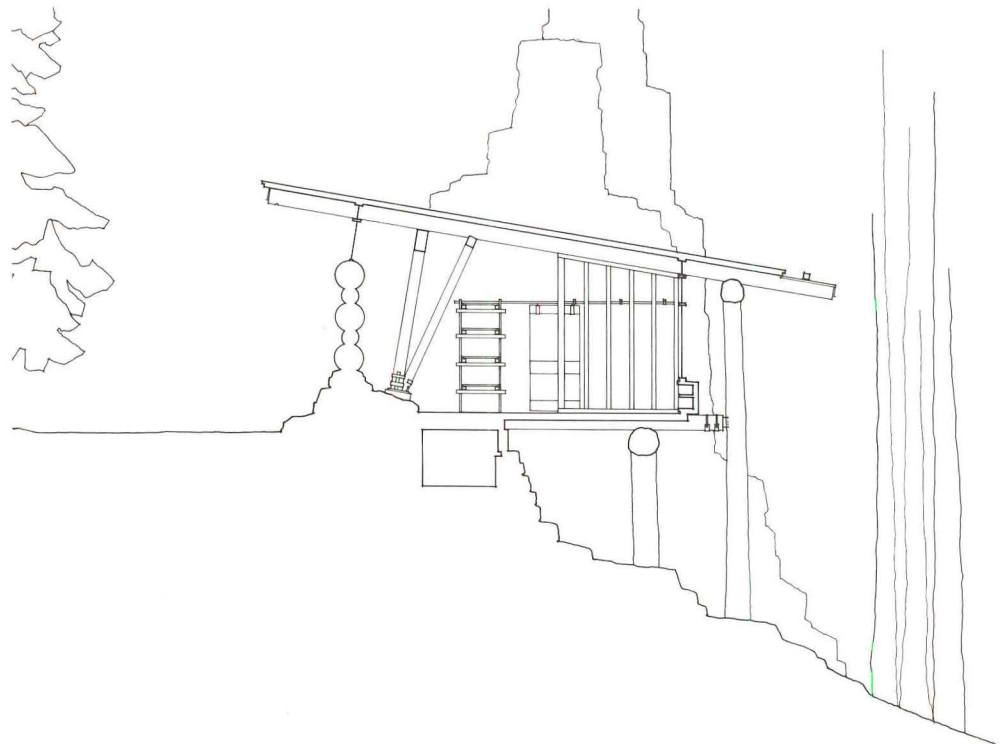
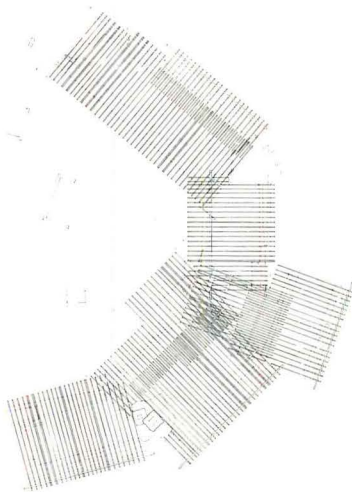
### Pool Pavilion, 1994 Montgomery County, Pennsylvania

**FACING PAGE, TOP:** Pavilion extends from existing greenhouse to fern-shaded glen. Concrete wall adjoins greenhouse facade.

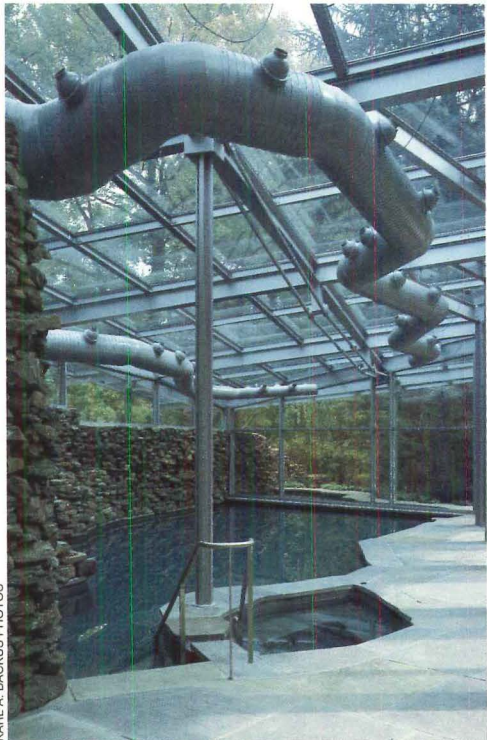
**FACING PAGE, CENTER LEFT:** Duct hangs beside naturalistic stone wall (left).

**FACING PAGE, CENTER RIGHT:** Cruciform steel columns support glass canopy.

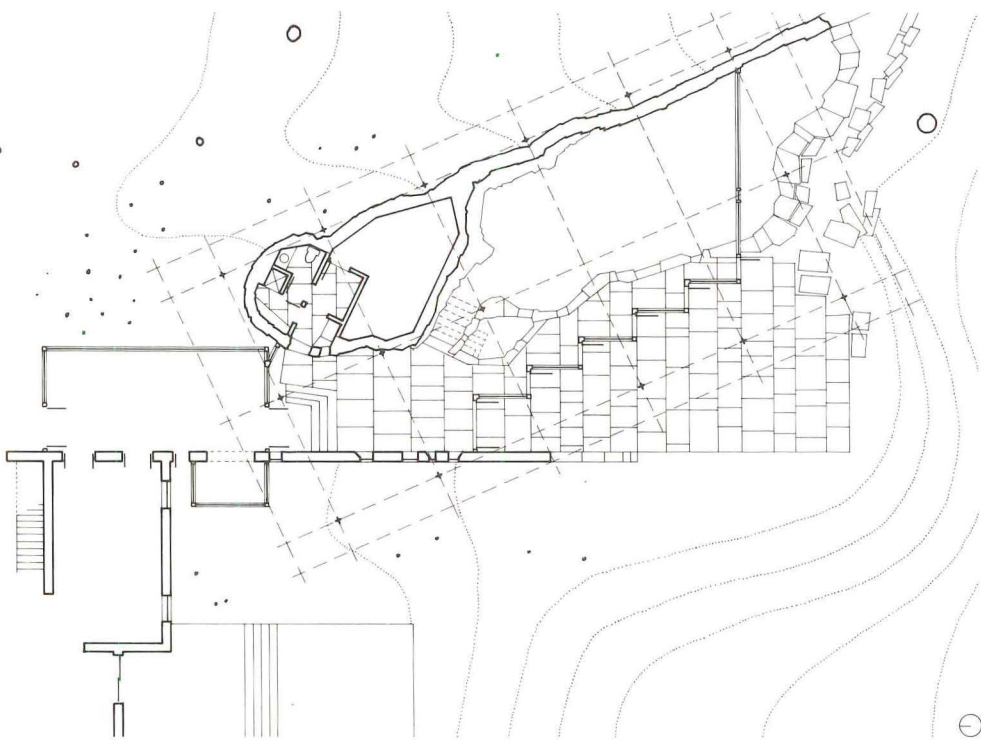
**PLAN:** Pool and support space are contained within structural grid.







KARLA A. BACKUS PHOTOS



language of a spare, Tidewater Classicism. The architects arranged the houses in a great crescent, imposing an urbane order upon the landscape. As a result, a disparate campus that stood adrift in a vast plain now appears more deeply rooted. As the college's Executive Vice President John Underwood observes, "Even the science building, which could have been a banal box with vents, contributes to the historic identity of the campus."

Lest anyone dismiss the stylistic disparities between St. Mary's College and SEI as ideological schizophrenia, a closer examination reveals an affinity of craft and detail. This fine-tuned assemblage is the architects' greatest strength; and in the firm's current residential work, the freedom from institutional budgets and schedules allows an even tighter focus on the art of joinery: Spatially and tectonically, they resonate the emotive force of great architecture. As Jackson affirms, "Emotional effect isn't cheap and easy. It takes discipline, focus, and experience."

**Art of joinery**

BCJ's houses leave a deeper impression upon the psyche than the firm's commercial and institutional work. While, superficially, the firm's designs for a pool pavilion near Philadelphia and a log house in the Catoctin Mountains of Maryland seem even more diametrically opposed than St. Mary's and SEI, they represent equally appropriate responses to different natural environments. In the pavilion, a biomorphic duct slithers across the glass ceiling, as if to escape the dark recesses of the stone wall that rises beside the pool. These natural forms are domesticated by a regular, metallic structure.

The log house in Maryland is similarly pavilionlike, but it shares the rustic qualities of an early 1900s Adirondack cabin. Convincingly, the architects fuse this camp aesthetic with Modernist spatial ambiguities. A quarrylike entry court leads into the heavy-timbered lodge, which opens to the south onto a valley. This rite of passage through the forest, recalling the early house for Bohlin's parents, furthers BCJ's humanist agenda.

The 1994 Firm Award, along with the new monograph of BCJ's work (to be published this summer by the AIA Press), recognizes Bohlin Cywinski Jackson's rite of passage from small-town practitioners to renowned placemakers. Of that rare achievement, Jackson avers: "We can only design for ourselves. But, as architects, we have confidence that others will perceive the very humanity that we value."—*M. Lindsay Bierman*





**Not only are you looking at a building that doesn't exist. You're about to ride the elevator to the 6th floor, walk across the boardroom and watch the city as the fog rolls in.**



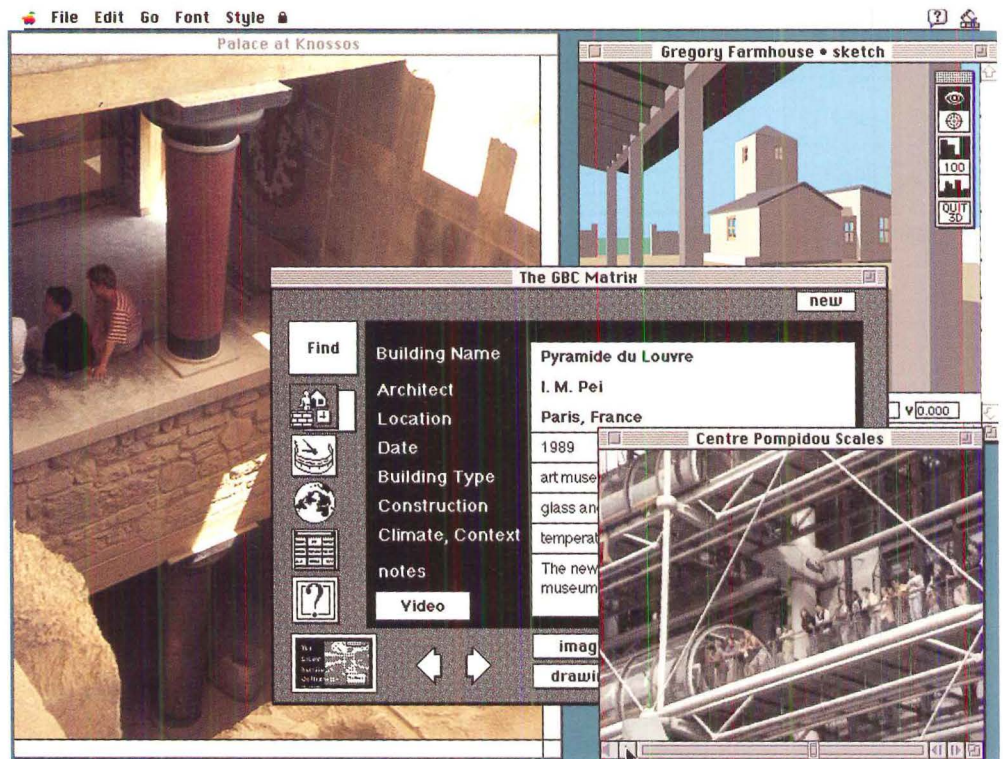
Too bad this is only a magazine. Because if this page could move, you'd be seeing a workstation-quality, high-speed 3D graphics tool that lets you create designs right on your PC. You'd be seeing 3D Studio® Release 3, animation software that provides such vivid walkthroughs of mechanical and architectural designs, it's hard to believe they haven't already been built. ● Since it makes it easy to control both cameras and objects, you'd not only be able to stroll across the boardroom, you'd be able to look down at the lobby as the elevators move up and down. Even lights can be animated with ray-traced shadows to accurately simulate the shadow-play on the courtyard below. The fog? That's just one of the countless special effects and backgrounds you can create. ● Of course, you don't have to let the fact that this is a magazine keep you from seeing 3D Studio software. For a free demo disk, just call 1-800-879-4233 and ask for Demopack D251 or visit your local Authorized Autodesk Multimedia Dealer. Outside the U.S. and Canada, fax 415-491-8311.





## New Roles for Multimedia

*By creating a multisensory experience through computers, architects portray their ideas with greater realism.*



**ABOVE RIGHT:** The Great Buildings Collection, an architectural encyclopedia on CD-ROM produced by the University of Oregon, incorporates walk-through models for 600 historic and contemporary buildings.

Architects have created multimedia presentations since the dawn of the profession, combining drawings, models, written descriptions, photographs, and stand-up explanations to convey their ideas to others. Now computer technology enables many of these media to be combined electronically. In computer circles, the term “multimedia” has as many definitions as proponents, but it refers generally to the combining of several components, such as 2D drawings, 3D rendered and/or animated models, on-screen text, scanned photographs, music, and the spoken word. These components are typically created or recorded in disparate software environments and then combined through “authoring” software, which controls their display and timing.

Most multimedia productions are available in two forms. In interactive encyclopedias and catalogs, they are collections of information stored on high-capacity CD-ROM discs. The architect as consumer views, learns from, and interacts with the information, but does not alter it. In the second form, architects produce the presentations, and clients are the consumers.

One example of the first form is an electronic version of the most familiar catalog in the profession. Packaged in an unmistakable green, SweetSource is a multimedia index to the familiar 16-category *Sweet's Catalog File*. This CD-ROM disc is updated quarterly to reflect product changes and added manufacturers. Through the graphic Windows interface,

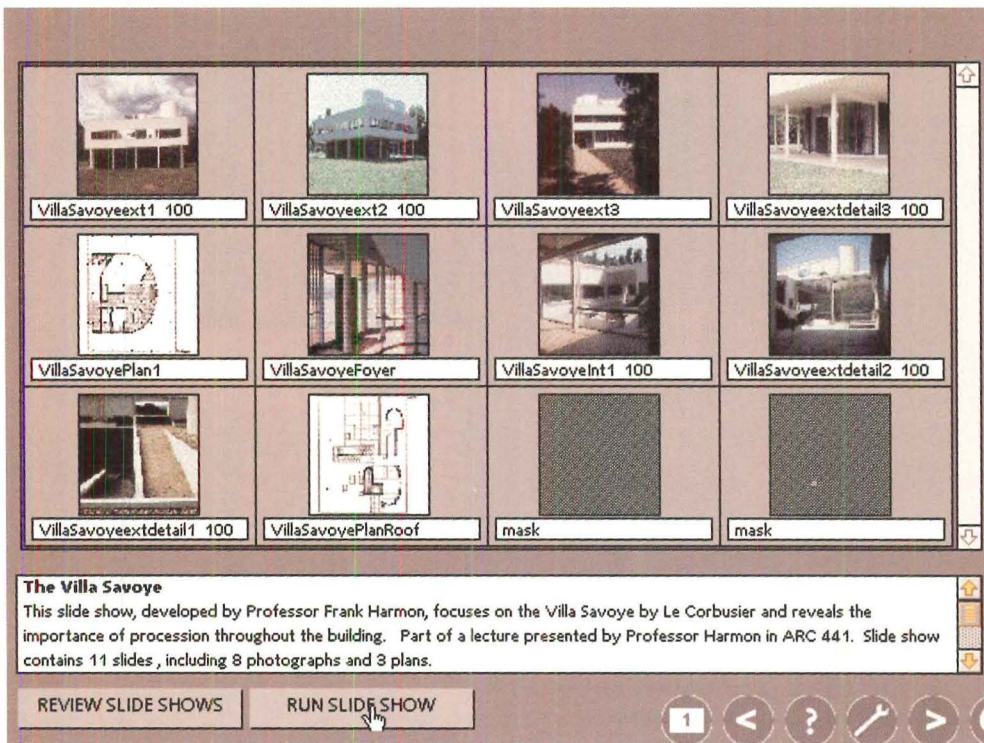
architects can search for products by one or several criteria. For example, they can search by CSI number, manufacturer, trade name, or descriptive keywords. They can then view related information such as product photos, drawings, and specifications. This material can be copied into desktop publishing software for producing presentations to clients or into CAD or word processing files for incorporation in construction documents. The disc provides a cross-reference to additional product information in the more complete traditional catalog. As of this month, the disc contains information for over 23,000 products, from more than 700 manufacturers.

### History made visible

Multimedia techniques have been adopted in Macintosh-based prototype “courseware” under development at the Virtual Environments Laboratory of the School of Design at North Carolina State University under the direction of architecture professor John O. Tector. This interactive program combines photographs, drawings, text, walk-through 3D models, videos of lectures, and lessons in analysis as a supplement to the history of contemporary architecture course taught by professor Roger Clark. Tector and his team used Virtus WalkThrough to create the 3D models, and Aldus SuperCard and MacroMind Director to compile the database components.

The courseware was designed to overcome limitations of the traditional slide lectures: Students did not have access to the images

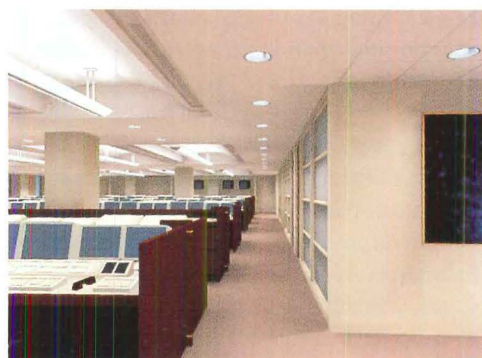
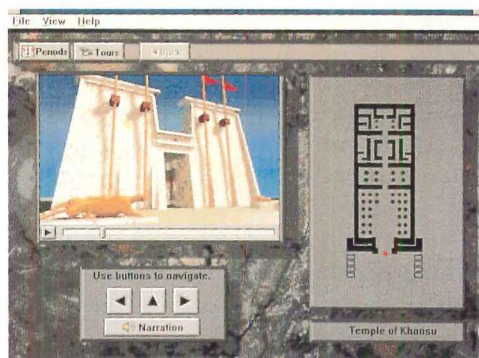
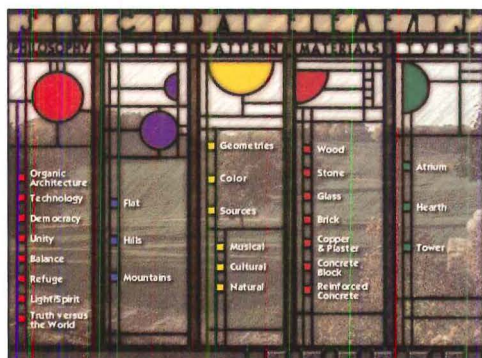




after the fast-paced presentations, and those whose learning styles were better suited to slower, more thoughtful review were not being accommodated adequately.

Tector notes, "Comparing visual images provides students with an understanding of the ideas that gave the buildings form. This technology allows us to create educational experiences that will stimulate their visual perception while meeting the needs of a broad base of learners." This fall, a version of the software containing selected slide images will supplement the course.

Also available on the Macintosh is the Great Buildings Collection (GBC), a CD-ROM disc-based encyclopedia developed at the University of Oregon under the direction of architecture professor Kevin Matthews. Soon to be published by Van Nostrand Reinhold, the disc contains photographs, drawings, video clips, and walk-through models of about 600 famous buildings as well as textual information, such as biographies of the architects. Built with the HyperCard authoring software, the GBC offers several indexing systems. Users can search the database by architect, construction type, climate type, building name, and so on. In addition, buildings can be sought by geographical location or historical period by selecting from on-screen maps and time lines. Unlike other information sources, the GBC also allows random browsing, the electronic equivalent of thumbing through a magazine. Regardless of how the building data are found, they can then be studied, printed, and combined with other material to produce student reports or professional presentations.



**TOP:** Macintosh-based courseware from North Carolina State University includes an electronic slide lecture.

**CENTER LEFT:** An interactive CD-ROM of Frank Lloyd Wright's work features photographs, models, and illustrated explanations of his philosophy.

**CENTER RIGHT:** The Temple of Khonsu is one of seven ancient buildings in Exploring Ancient Architecture.

**ABOVE LEFT AND RIGHT:** HOK's animations portray realism through simulated light and ambient sound.

### Electronic building tours

Frank Lloyd Wright fans will want to look for the interactive CD-ROM of Wright's work, due out later this year. Created by the New York City-based Byron Preiss Multimedia Company, the disc will present a number of Wright's buildings, including some that were never built or have subsequently been destroyed. Through text and photographs, viewers can study the master's life and ideas. The disc will also feature interactive walk-throughs of the Robie House, the Ennis House, and the Larkin Building. Editorial consultant for the project is David Larkin, editor of Rizzoli's *Frank Lloyd Wright Masterworks*.

Though designed for a lay audience, Exploring Ancient Architecture, by the new Redmond, Washington-based Medio Multimedia, is based on historical record and the contributions of Ball State University profes-



sor of architecture Bruce F. Meyer. The disc includes 3D models of seven ancient structures, including Stonehenge, the Parthenon, and the Ecclesiastion. Each structure has been modeled in its original form, and viewers may navigate their own paths around and through them. During the tour, accompanied by an audio narration about the structure's history and contemporary culture, the viewer can stop and study the details and artifacts.

### Architect as producer

John Voosen, principal of John C. Voosen Architects in Chicago, has produced several multimedia works to present his church remodeling projects to congregations. Although his pieces are finally viewed in the form of videotapes, he compiles them from a variety of media. With AutoCAD, he draws existing and proposed floor plans. Then with Autodesk's Animator Pro, he illustrates the proposed remodel by showing walls and furnishings in the existing floor plan literally moving into new positions. His videos also include text, still images, and narration to explain the building's history, accompanied by music from the church choirs and footage of the client groups discussing the project.

By combining everything onto videotape, Voosen doesn't have to worry about having esoteric equipment for making presentations. With an ordinary VCR, he can show his ideas to church groups and even give copies of the tape to people to review at home. Voosen explains, "These tapes generate discussion among church members about what their church means to them. This has been much more effective for parish fund-raising than if I'd given the congregation a typical four-page brochure." His imagery is deliberately simple. By explaining concepts through animated diagrams instead of photorealistic images, Voosen believes that he succeeds in portraying the church as a social and cultural phenomenon rather than as a set of architectural objects. "These animations represent a shift in perspective from pre-Vatican II to after," Voosen explains, "so their message also contains a large component of religious education, which is woefully lacking in most architectural presentations."

For several years, David Munson, director of architectural animations of Hellmuth, Obata & Kassabaum Architects (HOK) in St. Louis, has been developing architectural animations with state-of-the-art hardware and with software that was developed in-house. The rendering software applies light calculations that make direct and indirect light look

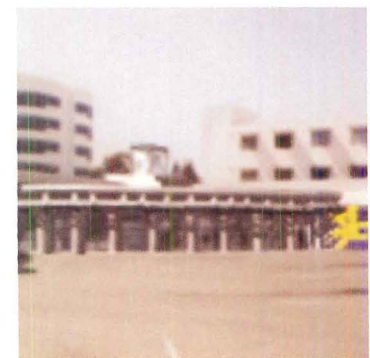
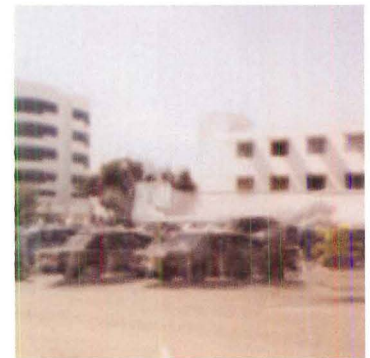
more realistic than in most commercial programs. Also adding realism are works of art that have been scanned in and placed on the wall of the electronic spaces.

But most striking about Munson's work is his treatment of sound. Many architectural animations have either no sound track or, worse, electronic Muzak that bears little relation to the visual presentation. By contrast, Munson's recordings of real ambient sounds spliced into the animations further enhance the sense of realism. For example, as the viewer "walks" through an office building, subtle sounds such as footsteps, elevator bells, and telephone conversations are available. "I think sound doubles or triples the quality of the video," Munson maintains. "And you can change people's perception of a space in subtle ways. For instance, you can make a room sound larger or smaller by changing the reverberation."

### Morphing and animation

Architect James Lennon, principal of the Del Mar, California-based Lennon Associates, also produces architectural animations, but with a twist. His work features "morphing" (from the word "metamorphosis"), a software process of transforming one object into another, recently made popular in Hollywood. For the Children's Hospital of Orange County, Lennon used the technique to show his proposed building emerging from the site (right). He modeled the building with form-Z from autodessys, merged it in Adobe Photoshop with scanned photographs of the existing site, then applied Gryphon Software's Morph to create a QuickTime animation. Through morphing, the cars in the parking lot gradually transform into the columns of the portico. Lennon has also created animations that simulate different patterns of use over time from the perspective of both patients and staff. He asserts, "I like to show not only how the building will look, but also how it will work."

How a particular building will work, sound, relate to its site, and connect to its history are only the beginnings of how architects will explore concepts and designs with multimedia. Most of these media make intensive demands on computing power. Now that new multimedia hardware and software are becoming both more powerful and less costly, the emerging technologies will enable architects, over the next few years, to approach their ultimate goal of "building" simulated environments before they build actual buildings.—*B. J. Novitski*



**ABOVE:** Architect James Lennon of Lennon Associates demonstrates how a building will develop through "morphing." In an animation, the building gradually grows out of the parking lot, while cars transform into the porte cochère. "By growing the building out of the site," Lennon explains, "we display our intentions about how we want the new building to relate to the existing site. It helps both architects and clients test our assumptions."



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## NIST Fosters New Systems Standard

The federal government and building industry groups are developing a new standard that may soon allow individual building systems—such as fire, security, and energy controls—to “communicate” interactively. The National Institute of Standards and Technology (NIST) has assembled a group of experts to develop the protocol for the communication standard, called the Building Automation and Control Network, or BACnet. The BACnet standard would align the controls of mechanical systems in buildings so that components “talk” to each other as they regulate.

BACnet also would bring about more easily interchangeable parts for building systems. “Right now, building owners are captive customers,” notes Steven Bushby, an electronic engineer at NIST’s Building and Fire Research Laboratory who directs the consortium. Building owners replacing control-system components, he notes, must return to the original manufacturer. “With products conforming to BACnet, the building owner could choose devices based on service, features, and cost, rather than being locked into a specific vendor.”

The American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) recently published BACnet as a draft standard. NIST and consortium members initially will apply the convention to upgrading single control systems.

Testing is scheduled to conclude with the issuing of a final standard—optimistically by the end of 1994. To learn more about the draft BACnet standard, contact ASHRAE at (404) 636-8400; for information on the industry consortium, call Bushby at NIST: (301) 975-5873.

## Specifications Hotline

SpecLine, a new telephone subscriber service offered by specification consultants Heller & Metzger of Washington, D.C., offers professional advice to architects on figuring out new products and translating standards. SpecLine is open weekdays from 9 a.m. to 5 p.m. eastern standard time; the cost to subscribe runs on a sliding scale, depending on the number of professionals in your firm. To find out more, contact Heller & Metzger at (800) 664-SPEC.

*Teaching building systems to talk; cutting healthcare costs; and phasing out CFCs.*

## Healthcare Costs for A/E Firms

### Small firms (1-25 employees)

7.4% of net revenues  
Average deductible range for individuals: \$322 to \$479

### Midsized firms (26-150)

5.5% of net revenues  
Average deductible range for individuals: \$234 to \$297

### Large firms (more than 150)

5.3% of net revenues  
Average deductible range for individuals: \$195 to \$391

Source: PSMA/ACEC healthcare survey

## Healthcare Costs Rose More Slowly in 1992

Architecture and engineering firms of all sizes still struggle to contain healthcare costs, according to a new study of 262 firms, but average costs rose more slowly in 1992 than in the preceding years.

The survey, conducted by the Professional Services Management Association (PSMA) of Charlotte, North Carolina, in conjunction with the American Consulting Engineers Council, finds that in 1992, average healthcare cost increases for design firms ranged from 10.7 percent for small firms (one to 25 employees) to 14.1 percent for larger firms (more than 150 employees). In 1990, healthcare cost hikes were higher—between 13 percent and 16 percent for most design firms.

Two common strategies help firms keep their cost increases below 10 percent, according to PSMA analysts. One strategy is to have employees pay higher deductibles, which can be offset by pretax payroll deduction plans. Fifty-one of the firms surveyed raised deductibles. The second strategy, employed by 31 firms in the study, is to join a preferred-provider organization, or PPO, a type of healthcare network that offers modest discounts on medical care, but does so by limiting care options.

“The choices for architects are either to reduce benefits or increase costs,” asserts Susan Middleton, vice president and human resource director at RTKL Associates in Baltimore. For more information on the healthcare cost containment study, call PSMA at (704) 521-8890.

## New CADD Council

The National Institute of Building Sciences (NIBS) has formed a new council to support computer-aided design and drafting, or CADD, in design and construction firms. The CADD Council is open to all interested members, free of charge, to provide a nonproprietary, noncompetitive forum for ironing out the complexities of utilizing CADD in architectural practice.

The very success of CADD—a raft of often-confusing products and services—may be hindering its best applications to design and production, notes Dana Smith, volunteer chairman of the CADD Council. “CADD is becoming indispensable for firms of every size,” Smith says, “but significant problems exist for users.”

The first council meeting is set for June 23 at the A/E/C Systems '94 show in Washington, D.C. To learn more, call Earle Kennett of NIBS at (202) 289-7800.

## How the U.S. Consumes CFCs

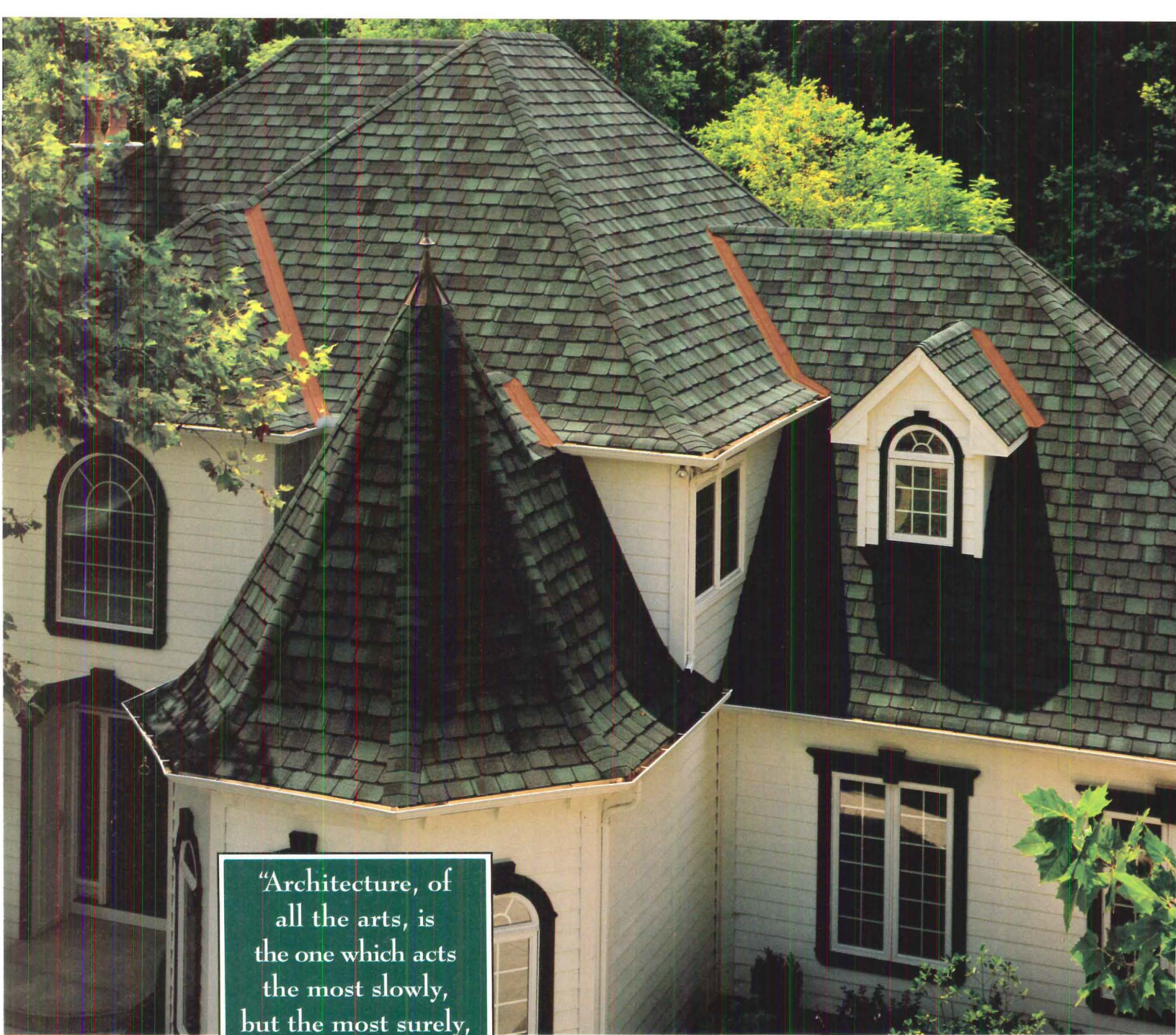
|               |       |
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| Refrigeration | 35.3% |
| Foam blowing  | 34.6% |
| Solvent       | 18.1% |
| Sterilant     | 5.4%  |
| Other         | 6.6%  |

Source: U.S. EPA

## CFC Case Studies

In 1996, to honor the Montreal Protocol’s mandate to protect the stratospheric ozone layer, the United States no longer will allow ozone-depleting chlorofluorocarbon (CFC) coolants and refrigerants to be produced or brought into the country. To help with the transition to non-CFC coolants, the U.S. Environmental Protection Agency (EPA) has assembled 10 case histories of major projects that employed alternatives to CFCs for cooling. Each case study details the costs of a specific application, ranging from air-conditioning in high rises to the reengineering of supermarkets’ refrigerated storage. To obtain the publication, *Moving to Alternative Refrigerants*, contact the Stratospheric Ozone Information Hotline at (800) 296-1996.—B.M.





“Architecture, of all the arts, is the one which acts the most slowly, but the most surely, on the soul.”  
—Ernest Dimnet

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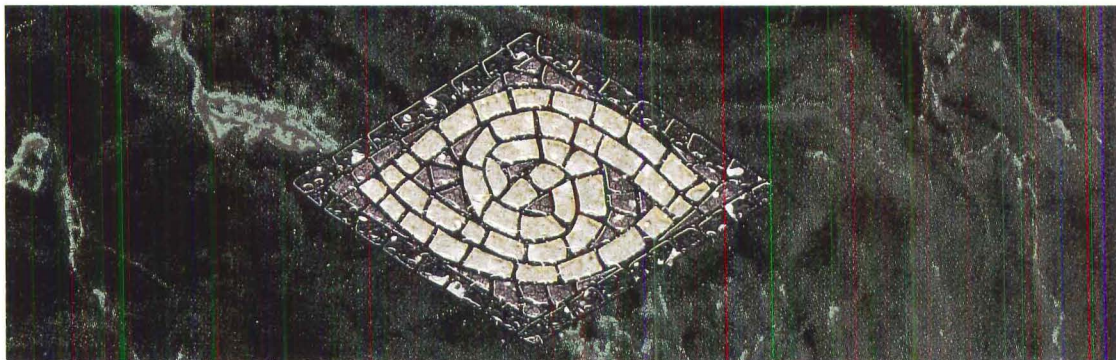


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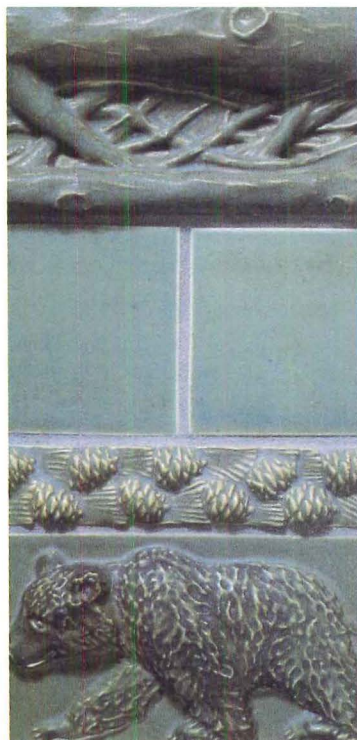
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## Products



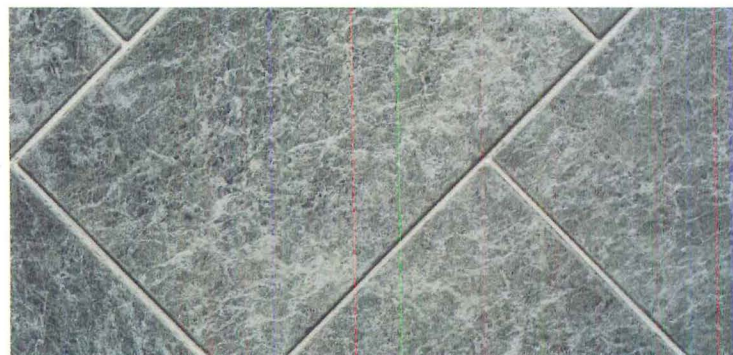
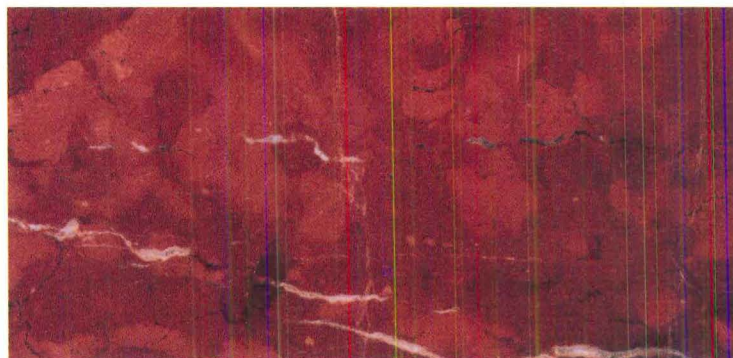
*Tiles from the International Tile & Stone Exposition held in Anaheim this June.*



**TOP:** American Olean, an Armstrong Company, offers color ensembles for wall and paving ceramic tile. Its Overtures collection features a glaze that resembles a heavily veined natural onyx with accents and borders that resemble ancient mosaics. The line is suitable for both commercial and residential applications. The collection's glazed floor tiles measure 12 by 12 inches with wall tiles measuring 8 inches by 10 inches. Coordinating 8-by-10-inch accent tiles and 8-by-2-inch accent strips are raised, translucent, and beaded. Bullnose, outcorner, and quarter round trim shapes are available to finish the tile edges.

*Circle 401 on information card.*

**ABOVE:** Country Floors, based in New York, is reviving the Arts & Crafts movement for ceramic tiles through nature-inspired ornamentation. Its border tiles and friezes are sculpted to simulate intertwined branches, staggered pine cones, leaf designs, flowering vines, and animals. These tiles are



recommended for wall applications and backsplashes. Color-coordinated, plain field tiles are also available. Country Floors also manufactures a series incorporating seashells and starfish with textured backgrounds resembling tide-swept sand and fishnets.

*Circle 402 on information card.*

**ABOVE CENTER:** Bermarmol offers a new red Spanish marble that is quarried from Alicante, an area near Valencia, in the eastern region of Spain. Rojo Alicante's terra-cotta-colored units are accented with distinctive blue-green and beige veining that stretches through the marble surfaces. The marble tile is available in three large-size formats,  $\frac{1}{2}$  or  $\frac{3}{8}$  inch thicknesses, and polished surfaces for residential and commercial applications. This tile will be featured in the Pavilion of Spain at the International Tile & Stone Exposition in Anaheim, along with products from 45 other tile and stone manufacturers of Spain. Dolores Mestre, chief of the Department of

Architecture & Logistics for ICEX, the Spanish Institute of Foreign Trade, designed the pavilion, which will encompass 19,000 square feet. ICEX and the Miami office of the Trade Commission of Spain are sponsoring the exhibit under the direction of Cecilio Oviedo, trade commissioner.

*Circle 403 on information card.*

**ABOVE:** Senatus is an imitation antique marble paver that is manufactured by Emilceramica and distributed by Creative Tile Marketing in the United States. It will be spotlighted at the 1994 International Tile & Stone Exposition held in Anaheim June 22 through 25. This single-fired paver is now offered in shades of dark green, yellow, and beige. The pavers are available in 13-inch and  $4\frac{1}{2}$ -inch squares and are appropriate for housing, hospitality, and institutional projects. Emilceramica will also spotlight its Preda Stoneware and the Medicea series during the tile exhibition.

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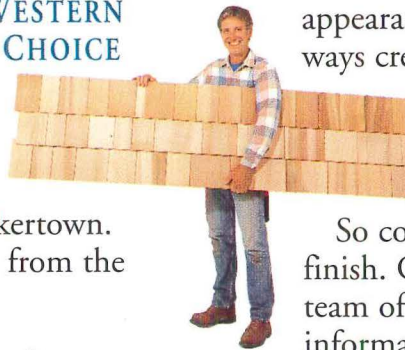
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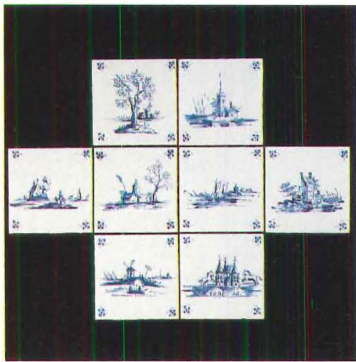
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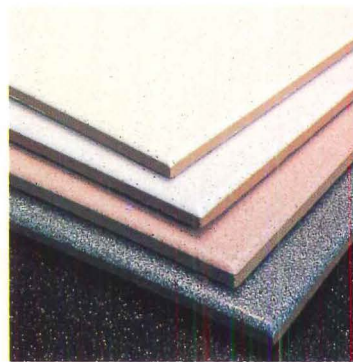




Delft blue, duplicating early glazes.  
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#### Flashed quarry tile

Metropolitan Ceramics offers low-maintenance interior and exterior paving that is resistant to soil penetration and able to withstand heavy traffic. Metropolitan's flashed colors feature subtle, random variations from tile to tile that are achieved during the firing process. This variation hides soils and stains; each color is available with matching trim.  
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#### Nonporous tile

Balgres, a Caracas, Venezuela-based tile manufacturer, will occupy 3,250 square feet of booth space at the International Tile & Stone Exhibition and introduce its newest line called Monoperfecta (above), a ceramic tile that integrates clay and dry glazing into a single pressing operation. The process creates a fine porcelain appearance that is both durable and stainproof. This series is backed by a 10-year warranty.  
Circle 408 on information card.

#### Decorated tiles

Masterpiece series is offered by British tile manufacturer Original Style, which reproduces classic paintings from the Renaissance through the Impressionist periods onto ceramic tile. English Victorian picture tiles with matching floral patterns are available, in addition to plain, molded, and patterned tiles in 12 reflective colored glazes.  
Circle 407 on information card.

#### Installation specifications

The Tile Council of America has compiled a packet of literature that will be available to representatives of qualified architecture firms during the tile show. The packet contains three reference guides: One clarifies installation specifications; the second lists 16 existing industry standards for ceramic tile setting methods and materials; and the third provides various classifications of tiles for specifiers and acts as a quality-control guide for manufacturers.  
Circle 409 on information card.

#### Concrete paving

Wausau Tile introduces its complete line of precast concrete pavers, paving systems, and accessories in a new catalog. The company's pavers are recommended for roof decks and plazas and are available in many styles, surfaces, colors, and sizes. The catalog includes information on installation techniques, components, color swatches, and finishes.  
Circle 410 on information card.

#### Colonial motifs

Colonial Williamsburg Foundation has formed a partnership with Summitville Tiles. The Governor's Palace Delft series (above), designed by Jackie Smith, depicts ceramic wares of the British colonies of early America. This series' designs were inspired by tile fragments unearthed on the palace grounds in Colonial Williamsburg, Virginia. The 5-inch-square tiles feature farm, mill, castle, tower, and harbor themes, among others. They are painted in the traditional

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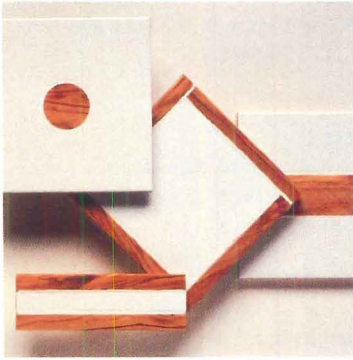
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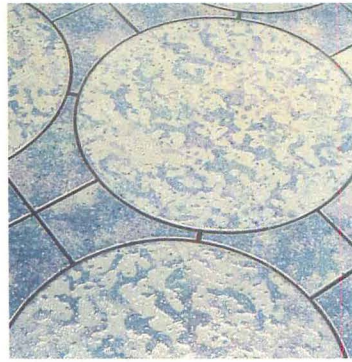
### Wood inlay

Ceramic Tiles of Italy, an exhibit designed by James Wines, principal designer of New York-based SITE, features a layer-on-layer, double-wall concept focusing on the range of colors and materials produced by the Italian tile industry. Represented at this exhibit, Edilcuoghi will introduce a wood inlay series called In-tarsi in Legno (above) created by fashion designer Krizia. This residential wall tile is bicottura, or twice-baked, with olive tree wood inlaid in

8-by-8-inch porcelain white glossy tiles. The exhibit is jointly sponsored by the Italian Trade Commission, known as Assopiastrelle, an association of Italian ceramic tile manufacturers, and the Italian Tile Center, a division of the trade commission. *Circle 411 on information card.*

### Tile literature

Dal-Tile's newest product catalog highlights the company's various types of ceramic tiles. Included is the Marmi series, a marbled glazed floor tile, in five natural shades, that can be applied to floors and walls for residential and light-traffic applications. Also featured is the Couture collection, which creates a linenlike texture pattern on the tile. Four light natural shades are available. Dal-Tile also offers a natural stone series in Cambrian black granite and Carrara white marble. The natural stone has a polished surface and is recommended for interior walls and floors with moderate traffic. *Circle 412 on information card.*



### Circular tiles

La Fabbrica di Faenza offers Planetti (above), a new series of large circular tiles with inserts that offer a contrast of color and configuration. The tiles measure 18<sup>3</sup>/<sub>4</sub> inches and are manufactured of a single-fired vitreous china that is 100 percent moisture-resistant. Planetti is heavily textured and appropriate for residential and commercial installations. This tile series is available in seven colors, from beige to dark green. *Circle 413 on information card.*

### Exterior wall tiles

Seneca Tiles offers glazed and unglazed tiles for exterior wall applications. The extruded tiles measure 6 by 6 inches and are manufactured one at a time. The unique characteristics of these tiles include slightly rounded edges and corners and minor surface and color variations. Square-, rectangle-, hexagon-, octagon-, and pentagon-shaped tiles are available. Custom sizes, shapes, and glazes can be specified. *Circle 414 on information card.*

### Weathered tile

Florida Tile Industries offers Aspen from its Natura series, a floor tile that simulates weathered stone with a rubbed, matte finish. Teakwood, oxide, ironstone, sand, clay, and vertigree are available from the palette. The tiles measure 12 by 12 inches and are appropriate for residential and commercial floor applications in dry areas. The tile is stain-resistant and does not require waxing. *Circle 415 on information card.*

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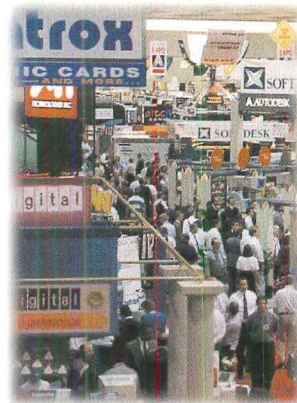


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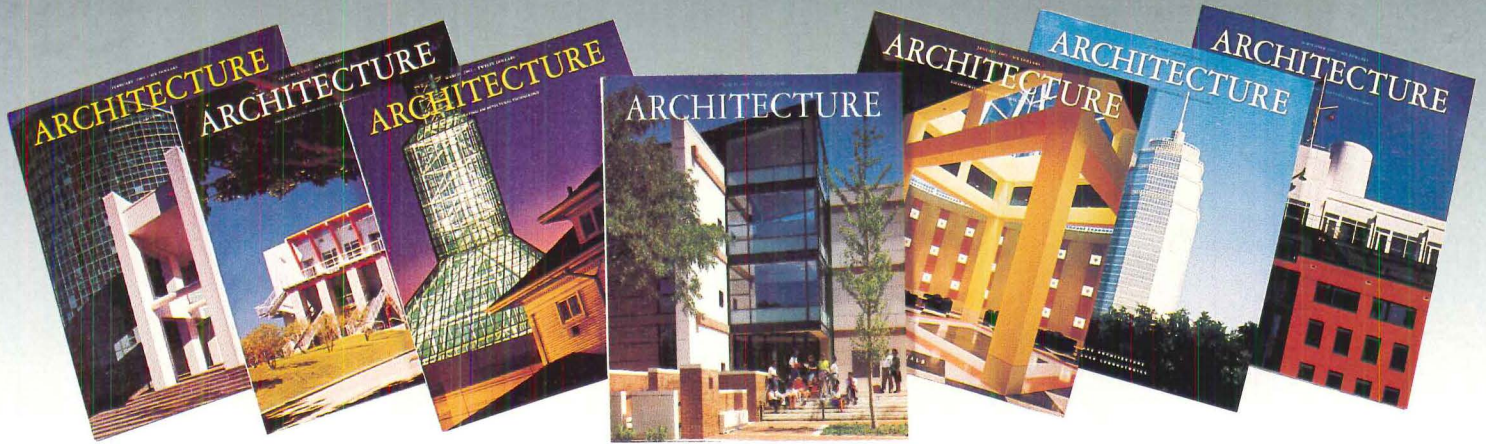
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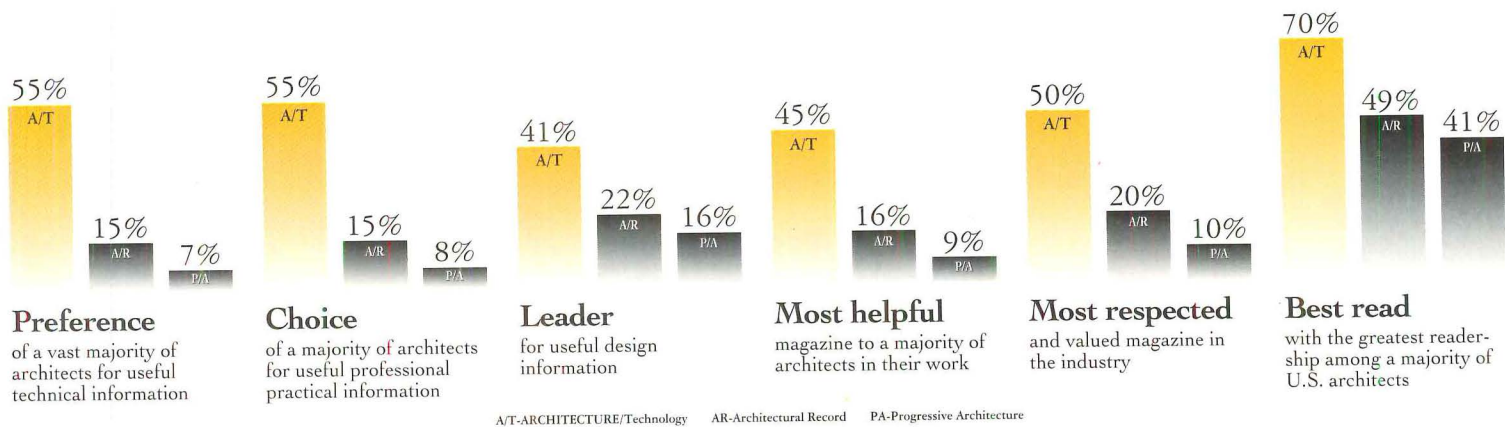
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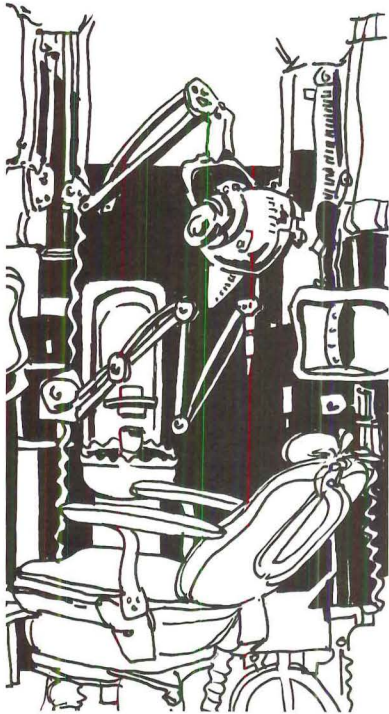
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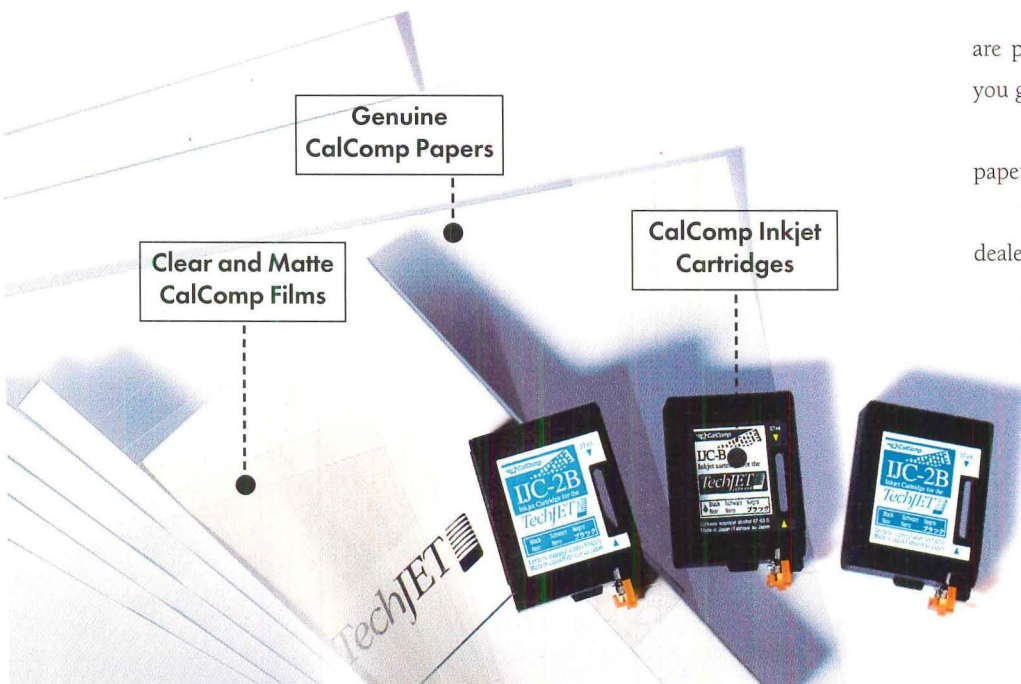
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## Glazed Curtain Wall

CSI Section 08900

### Structural silicone glazing

When specifying structural silicone glazing, architects should consider off-the-shelf systems. For large projects, custom systems can be designed for a small additional cost. Whether a standard or custom system is specified, proper joint sizes must be employed to obtain adequate safety factors. The joint size should always be recalculated for each job, because wind loads and the sizes of openings vary greatly.

Unless an architect is faced by unusual circumstances, the structural silicone joints should be sized based on a maximum designed stress of 20 pounds per square inch (psi). The maximum 20 psi is an accepted industry standard that is also endorsed by major structural silicone suppliers. To calculate the required structural silicone depth—the “bonding surface”—a relatively simple formula can be employed:

structural silicon depth =  $[0.5 \times \text{smallest dimension of largest window opening (ft.)} \times \text{wind load (psf)}] \div [20 \text{ (psi)} \times 12 \text{ (in./ft.)}]$ .

To put the bonding surface formula into practice, consider a window opening that measures 5.2 feet wide and 6.5 feet high, with a designed wind load of 30 pounds per square foot (psf):

structural silicon depth =  $[0.5 \times 5.2 \text{ (ft.)} \times 30 \text{ (psf)}] \div [20 \text{ (psi)} \times 12 \text{ (in./ft.)}]$ .

The resulting value for the structural silicone depth— $\frac{3}{8}$  inch—can then be applied with confidence to construction documents.

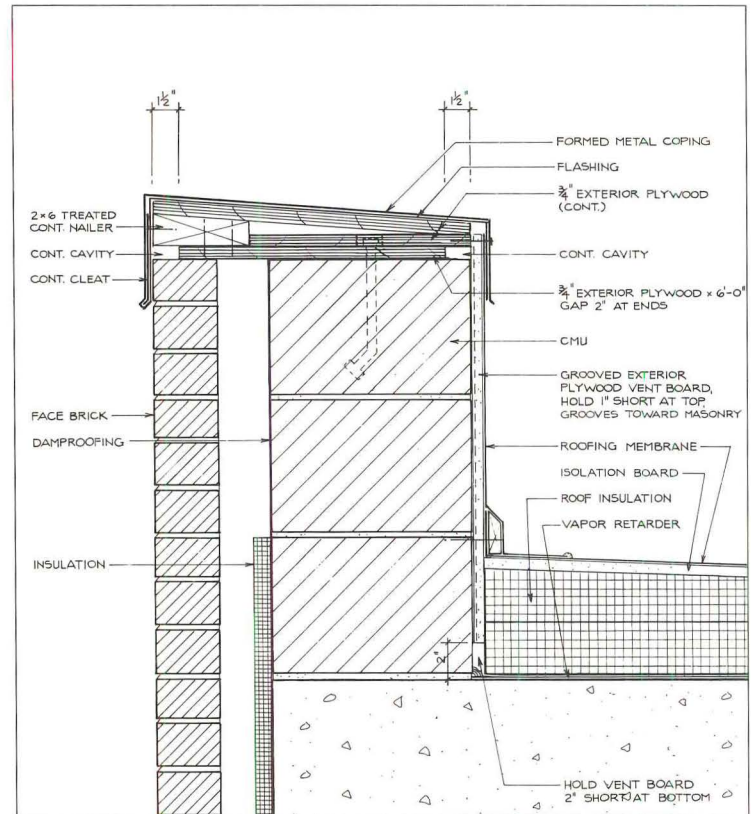
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## Elastomeric Sheet Roofing

CSI Section 07530

### Vapor relief at roof

When a vapor retarder is required in a low-slope roofing system, special care must be taken to allow for the release of any vapor that becomes trapped between the retarder at the bottom of the roofing and the membrane at the top. If it remains, this trapped vapor can cause the mem-



**ROOF EDGE VENT DETAIL:** Incorporates continuous cavities along front and back.

brane to blister and the insulation to deteriorate. Installation of small metal membrane vents or hoods, recommended at a spacing of one per every 1,000 square feet of roof, and edge vents at the fascia or parapet are two methods of venting that allow vapor to escape.

Membrane vents require the creation of roof penetrations and may eventually cause problems, depending on the degree of care taken during installation. They are not favored by roofing manufacturers and are typically unacceptable for long-term roofing guarantees. Edge venting along parapets requires careful placement of the various elements of construction to permit passage of the vapor to the outside—along with additional gasses generated by the building insulation.

A venting system against a masonry parapet that is “tighter” than a stud-and-sheathing parapet incorporates grooved vent board and several horizontal cavities or passages within the coping support construction. When spring clip-type copings are installed, ample air circulation space is available. With the more common wood support system (above), it is critical not to block off the grooves to permit vapor to find exits along the back or front of the coping.

For better quality assembly, it is preferable to specify plywood instead of dimensional lumber, which has a tendency to warp. The coping must not be sealed along the drip edges.

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