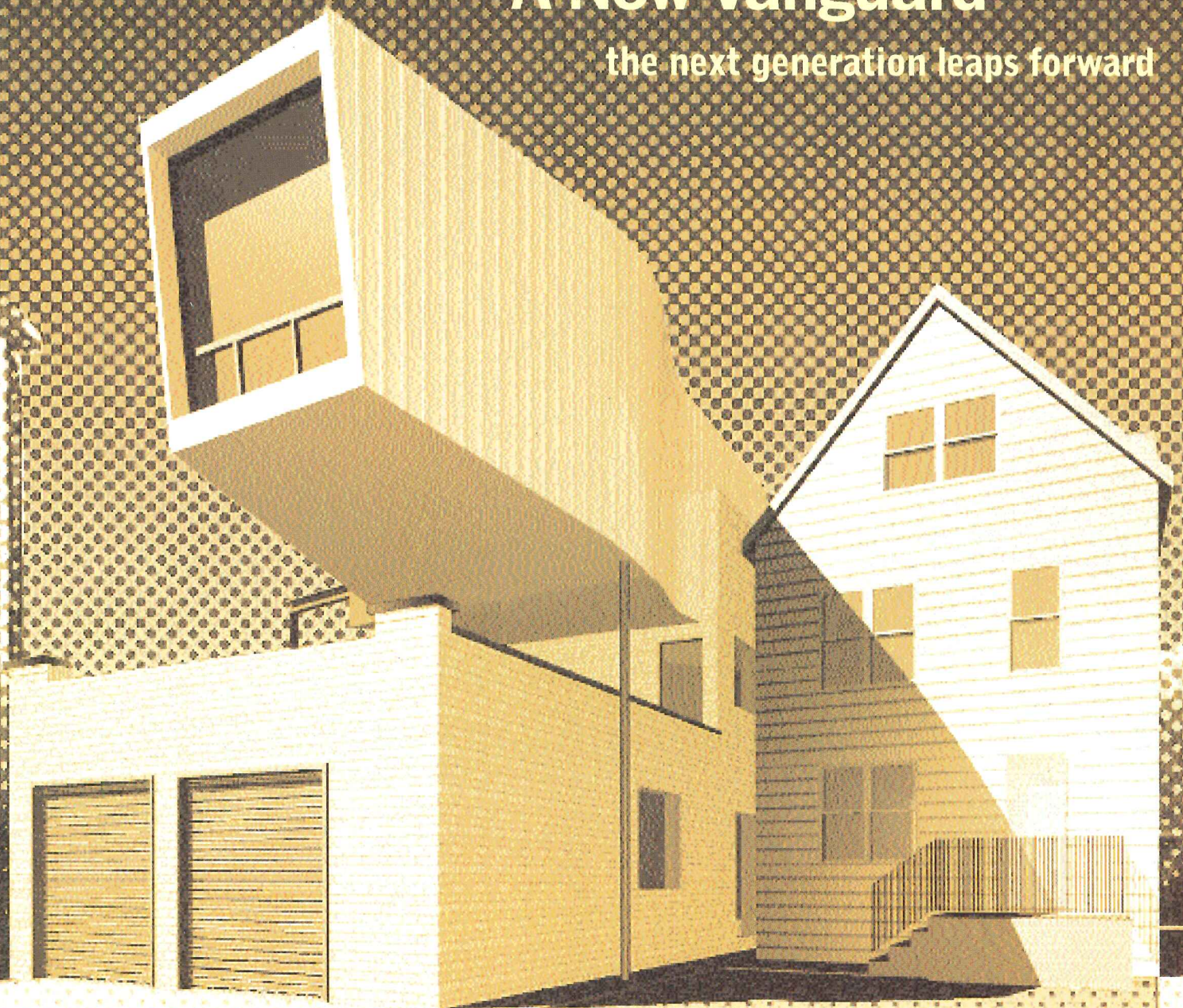


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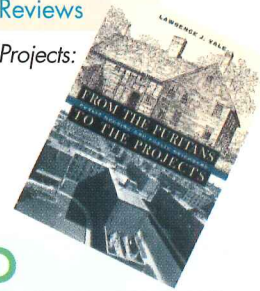
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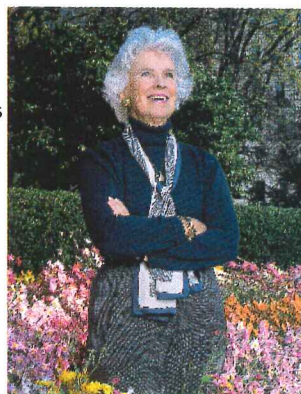
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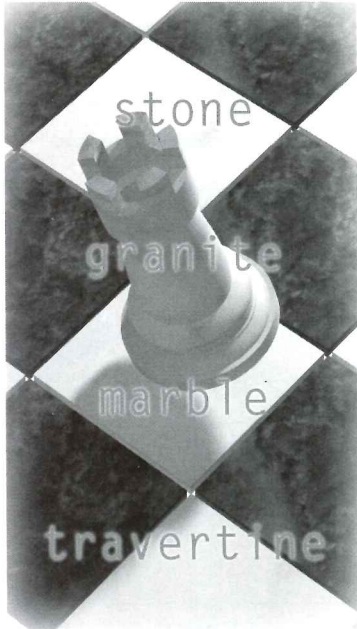
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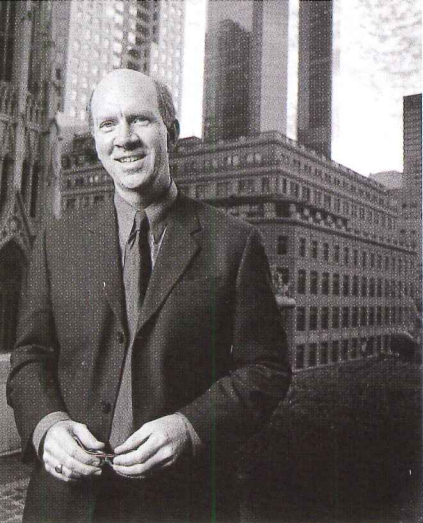
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Editorial

By Robert Ivy, FAIA

A chasm, like a great seismic rift, appears to separate two generations of architects. On one side, the buzz-cut and clunky-shoed generation, plugged in to their laptops, CDs, and cell phones; on the other, everybody else. The techie generation dresses in retro style, reads *Wallpaper* and *Wired*, works odd hours, and treats work like play. Everybody else is simply uncool, archaic, and so analog.

This exaggerated vision of a bifurcated profession points out fundamental contrast between two generations, a situation heightened by digital technology. As architects develop new tools for practice, their methods of documenting and conceiving ideas have separated them into two camps: those who draw and those who don't, those who design three-dimensional imagery on the screen and those who still sketch (read "Challenges for the Digital Generation," page 166). Concurrently, the older generation is leveling charges that the younger group lacks fundamental knowledge and skills that the schools should be providing. Aren't the young ones disaffected? Aren't their bosses hierarchical and clueless? Fingers are pointing in myriad directions, to no avail.

Peel off the hype, however, and a more subtle story emerges. A personal anecdote might help set things in perspective. When I graduated from architecture school, my first assignment was to produce the drawings for the heroically scaled louvers of a federal office building. Even though I had worked in college, I was nervous about producing real sheets of drawings for a high-rise. An old hand, a heavy-smoking architect who had risen through the experience route, took me under his wing. Through Don's alternately calm and raucous day, he taught me the strategies of sheet layout, the way to integrate drawings with specifications, and the interrelatedness of details. Though not many years separated us, Don was my mentor, and he could draw like a fiend.

Surprisingly, my personal tutelage was played out against substantive changes in production methods: the architectural world was shifting from paper to automated reproduction, from vellum to plastic, from all hand work to typed sheets, from diazo-reproduced specs to cut and paste. How we

conveyed information was completely up in the air, but my own need for information and for help was constant. To this day, it is Don I remember, and what he taught—not the shift in methodology.

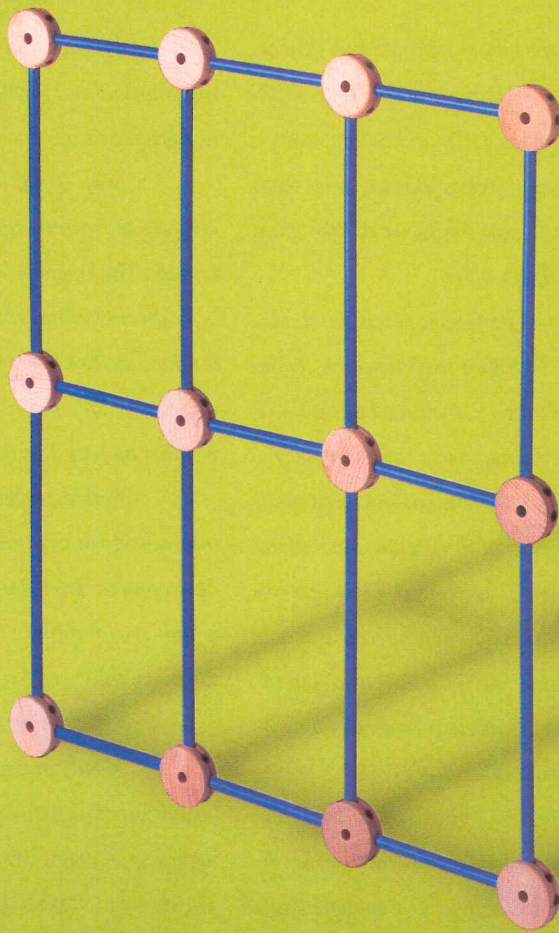
Such is still the case today. Developing architects need older ones; answers to a young architect's questions may not always be technical, but human. The language may be shifting, but we still need to know how to interact with clients and each other, and we need the knowledge that comes from human experience—what works well, what not to do, and what methods and materials make sense. We still have knowledge and experience to transfer, whether on roof flashing or project management.

Besides, architects invariably see themselves as young, even as they mature. Much of our best work comes relatively late in our chronological development. Joe Valerio summed up this passion for intellectual ferment in a panel last month in Chicago when he said that the role of the architect is to "shake things up," a statement of deep commitment, intellectual engagement, and risk taking that precludes age discrimination.

What continues to move us? The need for, and love of, learning. Social consciousness expressed in planned and built form. The love of making things, real or virtual, drawn or imagined or built. An inquiring intellect. The desire to make a life with meaning.

Technology may have divided us for the moment, but technology is a means, not an end; the values and enthusiasms we share will inevitably prove stronger than any new language, new tool, or superficial cultural difference. Although it may yawn precipitously, perhaps the gap actually isn't as wide as it appears: the architect on the far side is not an anonymous employee, but a younger version of ourselves.

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Letters

Powerful narrative

There's something significant to the history of architecture, and that is architecture's ability to tell powerful stories.

What I noticed, more than anything else in this year's RECORD INTERIORS [SEPTEMBER, page 107], is the lack of "narratives" and the reliance on form (in many cases "clichéd" form), to create so-called cutting-edge environments.

Perhaps only the work of Morphosis comes close to what I'm suggesting. The restaurant Tsunami, in particular, seems to evoke the vertiginous character of its name, in many ways serving as a certain culture shock in relation to the pan-Asian cuisine. Lutèce, as well, echoing a roulette wheel, joins Tsunami in an attempt to create real architecture in a world of the most banal artifice.

But even these examples stand at a far distance from the fairly simple idea of using form to tell a story about a specific region or site. The bloblike forms of the new baroque are, in this way, no different than the sliced, tortured forms of deconstructivism.

I believe an architecture of operatic narrative, independent of form yet aware of and capable of driving form, remains the most powerful way of creating meaningful space.
—David Kesler
Via E-mail

Stairway to heaven?

It's funny how, out of eight beautiful examples of "Beckoning Staircases" [SEPTEMBER 2000, page 94], seven came from our friends across the pond and none of the seven met today's accessibility codes in America. By worshipping at the shrine of accessibility, our country's well-meaning activists and lawsuit-fearing bureaucrats have hamstrung America's designers. This isn't to say

that we shouldn't strive to provide access to all in our architecture—it is just that the bar has been lowered to a point that mandatory handrail extensions and door-swing clearances have become more important than architectural expression.

—Michael E. Berg, AIA
Sjoquist Architects
Via E-mail

Postwar architecture at risk?

Regarding Richard Longstreth's Critique [SEPTEMBER 2000, page 59]—what has happened to our historic consciousness when preservationists focus on fighting a holy war to preserve obsolete, distressed public-housing projects in Houston, Atlanta, New Orleans, and Orlando (originally conceived to promote segregation and warehouse the poor), yet passively stand by as our modern architectural heritage goes the way of McKim, Mead and White's Pennsylvania Station in New York? Has the pendulum of Postmodernism, neoclassicism, New Urbanism, and the latest "retro-ism" blinded us to the mistakes of our past?

What act of blatant disregard will it take to rally those zealot preservationists? The demolition of Fallingwater, Ronchamp, or the UN? Must we repeat history and sacrifice a 20th-century equivalent of Pennsylvania Station before we become outraged? I certainly hope our generation is not that foolish.
—Stephen J. Hruby, AIA
New York City

Congrats to Richard Longstreth for his piece. Obviously it is a thrill for me to see such a gorgeous rendition of my building, with the clouds seemingly cooperating to emphasize the grand ramp that takes visitors to a rooftop viewing deck—the only way to gain a panoramic impression of what it must have been like for the Union troops to contemplate

Pickett's oncoming charge.

The positions of preservation organizations cited by Longstreth were taken some three years ago, when the Park Service was maligning the building as mediocre. Now that it qualifies for listing on the National Register and will again in November be offered for National Landmark Status, its preservation should be reconsidered at the same time by the National Trust at its L.A. convention. If the Trust will take note of the respect and increased admiration that have recently come to this building, let's hope reason will prevail, at least in this case.

Our support campaign, as illustrated on *neutra.org*, has to date produced over 600 letters from residents of 40 states and every continent except Antarctica. It would be an international scandal if this policy were carried out! Interested persons should now join and send letters of support to encourage a change of policy here. An adaptive reuse is eminently possible in this case, where the building is NOT in the way of any proposed development.

The motto of our campaign has been "It ain't over till it's over!"
—Dion Neutra
Los Angeles

Architects first

Apart from not being very politically correct in the title, "Technology Enables Disabled Architects" (which should be "Technology Enables Architects with Disabilities"), BJ Novitski's recent Digital Architect [SEPTEMBER 2000, page 189] was very informative and a pleasure to read. The subtle—yet important—distinction in the title is that people are architects first and have a disability second.

I am pleased to know that there are so many other architects with disabilities out there. I personally have a visual impairment that is

assessed at 20/200 vision (considered legally blind), and I'm glad that vision is not the only skill needed to be an architect.

Although I am adapting well with the minor technological improvements I have made (a larger monitor and reading glasses), I feel that the real power in the article came from two ideas: the mentoring program and the idea that architects with disabilities can be skilled designers and problem solvers.
—Kelly S. Stadnyk
Kirk Miller Associates
San Francisco

Loft-y ideas

The loft apartment in RECORD INTERIORS ["SoHo Loft," SEPTEMBER 2000, page 138] was full of great ideas for solving an old problem of getting light into a narrow, deep space, and your layout presented a good solution with clarity. However, considering that it is inhabited by a couple with two small children, I couldn't help trying to imagine it with a few refrigerator magnets, Legos on the floor, and a stuffed Big Bird in the open bedroom (i.e., taking it from simply being a good idea to being a home). This kind of detail might have better answered the architect's question posed in the third paragraph, "How do people today integrate work, family, and pleasure?" This layout reads well but does not, in my opinion, answer the question.
—H. Paul Sheffield
Kailua, Hawaii

EMP, a space odyssey

The August issue exhibits a series of photographs of Frank Gehry's Experience Music Project [EMP, page 126]. Mr. Gehry states, "No one will ever do this again," and whether he was talking of steroidal geometry of construction or expense or both, I hope he is right.

Letters

This complex reminds one of a collision of eight spaceships. And to call it architectural is giving the meaning of architecture a bad rap.

I guess I wouldn't have the courage to try to create something resembling this and I also guess that Mr. Gehry's reputation as a skillful architect will not be too tarnished.
—Robert Jenks, AIA
Palo Alto, Calif.

Architects can be snobs

I agree with your September editorial that the education of interior designers must become more rigorous regardless of whether or not they achieve licensure. But, may I remind readers that, with a few exceptions, architects generally look down their noses at anyone who is not an architect. I learned this years ago as a "civilian" member of the board of the Architectural League of New York. Interior designers are not the only

professionals singled out by architects for lack of respect.

—RitaSue Siegel, IDSA, President,
RitaSue Siegel Resources

Why would the AIA *not* insist that interior designers be regulated? Perhaps the answer lies in your statement "The stakes are large, the fees alone in the industry well exceed \$1 billion."

I find the AIA's position on this issue to be entirely self-serving. A well-written practice act will require interior designers not only to have a minimum level of education, experience and testing, but will also require continuing education—all of which contribute to the safety and well being of the clients we serve.

You stated, "Interior designers seek to distinguish themselves from less qualified decorators, protect the right to practice, establish gender equity in a field dominated by men,

and earn the respect of their fellow professionals." In addition, "Interior designers want to increase their share of the burgeoning market." What's wrong with any of those goals? We are seeking a higher level of professionalism and, yes, a larger share of fees in the market, none of which are negative goals, except that it means more competition for members of the AIA.

Diane Brandli, ASID, Certified Interior Designer, Syracuse, N.Y.

Corrections

In the October issue [RECORD News, page 36] Laurinda Spear's name was incorrectly spelled Speer. On that same page Whirlwind & Company was overlooked as the exhibit designers. In the same issue [Business Week/Architectural Record Awards, page 105], the image at bottom left should have been credited to François Bastien. The Web sites mentioned at the end of the tech brief on page 182 should be amended to: www.hydrotechusa.com/garden.html;



Due to a printing error in the November issue, the above photo was inadvertently omitted [RECORD News, page 33]. The photo depicts the site of the proposed New York Times tower by Renzo Piano at 8th Ave. & 42nd, N.Y.C. Photo by John E. Czarnecki.

www.sarnafilus.com/GreenRoofs.htm. On page 40 [RECORD News] the illustration at top should be credited to Christopher Grubbs. In the November issue [pages 98–99], image #1 should have been credited to Adam Woolfitt/CORBIS and is Castle Howard, not Blenheim Palace.

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Bright light city: Koolhaas' Vegas Guggenheim

What results when Rem Koolhaas, the Solomon R. Guggenheim Foundation, and the State Hermitage of St. Petersburg, Russia, collaborate on two galleries at the Venetian Resort-Hotel-Casino in Las Vegas? The answer is on a fast track for spring 2001.

On October 20, the Solomon R. Guggenheim Foundation revealed plans for two galleries in a joint-venture Guggenheim and State

Hermitage project at the Venetian in Las Vegas. Designed by Pritzker Prize-winning architect Rem Koolhaas, the galleries will be separated by a sea of slot machines in the Venetian.

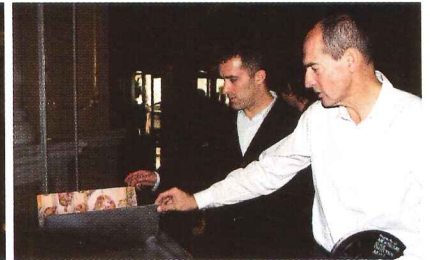
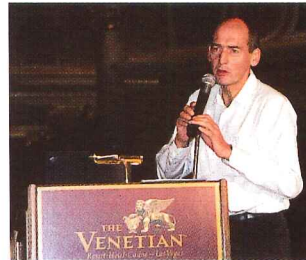
Koolhaas admits that it was "difficult to establish a place for art and seriousness in Las Vegas." His solution was to create two Guggenheims, "partly independent and yet forming a seamless mold

through the casino." He described them as a "stark contrast" to the Venetian setting, yet says they will "merge completely with the casino experience."

One of the galleries is a 7,600-square-foot "jewel box" near the porte-cochere entrance. The simple rectangular box has seven-foot-thick movable interior walls that enable the gallery to work as one large space or be partitioned into smaller rooms. The entire gallery is constructed in Cor-Ten steel, rusted to imitate a velvety fabric.

The second, more significant gallery is a

63,700-square-foot "container-like" structure wedged between the hotel and its 10-story parking garage. Although three-fourths of the stand-



Koolhaas (above) presents his Guggenheim design (left) and model (above).

alone building will be obscured, there will be one exposed facade. The raw warehouse-style interior consists of three main chambers defining a classic museum experience. A massive six-story door will stand at one end of the hall, while another door will serve as a media wall, with projected images on its surface. The 70-foot-tall ceiling, painted with a reproduction of Michelangelo's Sistine Chapel, consists of two enormous mechanical panels that open to allow fresh air and daylight into the area. When the ceiling is open, the Michelangelo painting will face outward and up; for people looking down from the

hotel tower, it will look like a giant advertisement for "art."

Construction began in September. Total costs have not been disclosed, but Venetian president Rob Goldstein calls it

"expensive." The Venetian spent \$1.3 billion building its own facilities and had a \$10.8 million net profit in the last nine months. *Tony Illia*



CALATRAVA TO DESIGN OAKLAND CATHEDRAL

Santiago Calatrava was named architect for Oakland's Christ the Light Cathedral in November. Calatrava won the commission in an invited competition with Ricardo Legorreta and Skidmore, Owings & Merrill's Craig Hartman, FAIA.

Calatrava's design will have movable glass-and-steel sections. "The idea was for a building that would be like a pair of hands," Calatrava says. "The hands can be brought together in prayer or they can be opened to the sky."

A cathedral site has not been selected and the project budget is yet to be determined. The new cathedral will replace St. Francis de Sales—demolished after the 1989 Loma Prieta earthquake. *JEC*

Guggenheim, with Gehry and Koolhaas, sets its sights on Brazil

The Guggenheim Foundation is heading south for its next venture. A feasibility study and site analysis have been initiated for potential Guggenheim cultural projects in Brazil. The Guggenheim Museum franchise is targeting Rio de Janeiro as a potential museum location, and may plan for an additional branch in Salvador or Recife in Brazil's north-eastern region. A Guggenheim team

with Frank O. Gehry, FAIA, and Rem Koolhaas initiated the study and toured potential sites in Brazil in early November. The study will be complete in spring 2001.

The Rio museum could be part of a larger complex with a concert hall, convention center, and retail. According to Edemar Cid Ferreira, president of the Brazil-U.S. Council, the likely Rio site is a waterfront

area with dilapidated shipping warehouses. In a November news conference, Gehry recommended "getting into the gritty" of Rio.

This is the Guggenheim Foundation's first South American venture. The Guggenheim has two museums in New York, museums in Bilbao, Venice, and Berlin, and facilities opening in Las Vegas in 2001. *John E. Czarnecki, Assoc. AIA*

OFF THE RECORD

Landscape designer **Lawrence Halprin** won a National Design Award for environment in November. Finalists for the award were architects **Will Bruder**, **Steven Holl, AIA**, **Thom Mayne, AIA**, and **Samuel Mockbee, FAIA**. The award [OCTOBER 2000, page 44] is given by the Smithsonian's Cooper-Hewitt National Design Museum.

Ove Arup Partnership has shortened its name to **Arup**.

President Clinton named **Hsin-Ming Fung** of **Hodgetts + Fung Design Associates**, Los Angeles, as a member of the National Council on the Arts, which advises the National Endowment for the Arts on policies and programs.

British firm **Alsop and Störmer** has been commissioned by the Ontario College of Art & Design in Toronto to create a new Centre for Design and renovate existing facilities. The firm also received the top architectural honor in the U.K., the Stirling Prize for Building of the Year, for the Peckham Library and Media Centre [SEPTEMBER 2000, page 51] in London.

Jane Frederick, AIA, lost her bid to be the only architect in the 107th U.S. Congress. It was her second attempt to defeat incumbent Republican **Floyd Spence** in South Carolina's Second House District, but she lost 57% to 41%.

Five architects are competing for a \$90 million expansion of the Carnegie Science Center in Pittsburgh: **Ben van Berkel**, **Peter Eisenman**, **Daniel Libeskind**, **Jean Nouvel**, and **Bernard Tschumi**. The winning architect will be chosen in January.

London's **MacCormac Jamieson Prichard** won the commission for a renovation and addition to the BBC's Broadcasting House.

Venturi Scott Brown Associates will design a Media Center in Gary, Ind.

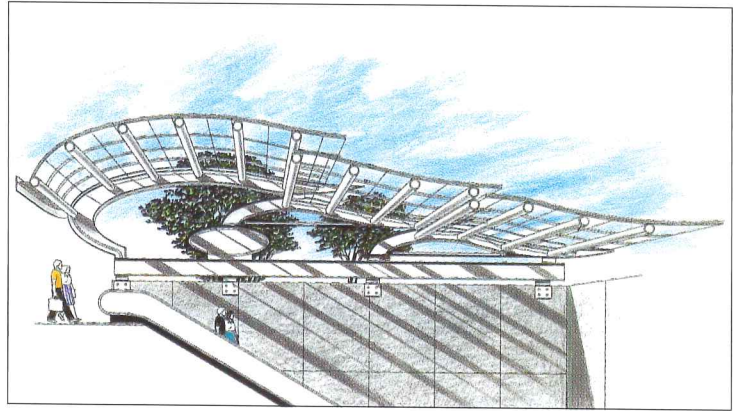
DC Metro canopy design controversy

In response to criticism about the architect-selection process for series of subway entrance canopies, the Washington Metropolitan Transit Authority (WMATA) revoked the commission from Washington, D.C., architect **Arthur Cotton Moore, FAIA**, then announced a design competition for the project.

The debate centers around the design of 53 escalator canopies intended to shelter outdoor Metro entrances from rain and snow. WMATA engineers had initially presented a design to the Commission of Fine Arts (CFA), which has jurisdiction over 21 of the 53 Metro stations in question. CFA chair **Charles Atherton**, in a *Washington Post* story on the canopies, said, the engineers' design "looked pretty heavy-handed."

After reading the *Post* article, Moore called WMATA officials and offered his design services. He was referred to WMATA contractors, who welcomed the locally renowned architect's assistance. Moore's design was unanimously approved by the CFA.

A story about Moore's design and a drawing by Moore were pub-



Arthur Cotton Moore's design for the Metro canopies was met with protest.

lished in a subsequent *Post* story. Local architects, who noted that the Metro canopies will have a significant presence in the region, protested both Moore's design and the architect-selection process. In a letter to the board of WMATA, **Julian Hunt, Assoc. AIA**, wrote that Moore's design was "nothing more than an architectural comb-over." Clarifying his attack, Hunt says, "[WMATA] bureaucratized the process. I was tired of having younger, maybe more innovative, architects without any voice at all."

AIA DC Executive Director **Mary Fitch** says, diplomatically, that "since architects involved are members, we're refraining from commenting on the quality of the design, but we do feel the process should be reevaluated."

Patricia Moore, speaking for Moore's office, denied that there

was a controversy over the design. "There is no controversy," she says. "The only controversy is this letter [by Hunt], which was overblown. The Commission of Fine Arts approved the design unanimously."

Defending the selection of Moore, **Ray Feldmann**, WMATA's director of media relations, says, "Mr. Moore is the only one who called. Maybe if we'd gotten four or five or six phone calls, we'd have done a competition [in the first place], but the fact is, Mr. Moore was the one who called."

Taken aback at the furor, the WMATA board reconsidered and voted unanimously at its November 9 meeting to hold a design competition. The time frame for the competition, which will narrow a field to three finalists and Moore, is yet to be determined. A total of \$27 million has been budgeted for the canopies. *Ellen Sands*

NAAB to clarify degree nomenclature, may phase out BArch by 2010

The range of professional degree programs offered by schools of architecture in the United States can be confusing: Master of Architecture (MArch), Bachelor of Architecture (BArch), five-year programs, and four-plus-two programs. In response to the confusion, the board of directors of the National Architectural Accrediting Board (NAAB) approved motions in October that may clarify professional degree nomenclature.

As of October, the NAAB will no longer accept applications for the candidacy and accreditation of new BArch programs. This change does not affect existing accredited BArch programs or programs that applied for candidacy of a BArch program before October 14.

The NAAB board is also exploring the possibility of re-accrediting only MArch programs after 2010—essentially requiring all existing BArch programs to convert to MArch. The NAAB will survey all professional degree programs in architecture to gauge the impact of accrediting only MArch programs, and it will not take any action until late 2001. This raises interesting questions. For example, what incentive would existing four-plus-two MArch programs have to maintain a six-year program when five-year MArch programs will have the same title? Would a four-plus-two MArch program be compelled to have a new degree title, such as Diploma in Architecture, to reflect a distinction from five-year MArch programs? The NAAB executive director **Elliott A. Pavlos** did not return calls to comment.

The NAAB board also moved to extend accreditation terms to six years from the existing five years. *JEC*

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CIRCLE 17 ON INQUIRY CARD

OFF THE RECORD

The U.S. General Services Administration has selected **Moshe Safdie & Associates** to design the headquarters for the Bureau of Alcohol, Tobacco, & Firearms, to be located at 1st Street and New York Avenue NE, in Washington, DC. Safdie won the commission over three other firms: **Shalom Baranes Associates**, Washington, D.C.; **Pei Cobb Freed Partners**, New York; and **Rafael Vinoly Architects**, New York.

In Gehry news: **Frank O. Gehry, FAIA**, received the Royal Institute of British Architects' Gold Medal. In addition, the Frank Gehry International Visiting Chair in Architectural Design was named in his honor at the University of Toronto—Canada's first visiting endowed chair in architecture. Hotel mogul Jonathan Tisch purchased a guitar designed by Gehry for \$60,000 in a Democratic National Committee fund-raiser.

Minneapolis voters approved a plan to borrow more than \$100 million to fund a new downtown library. **Laurie Savran**, library board president, said, "We want it to be the most exciting building in the upper Midwest."

Nancy Somerville, Hon. AIA, resigned as managing director of membership at the AIA national office to be executive vice president of the American Society of Landscape Architects (ASLA). **John Ray Hoke, Jr., FAIA**, resigned as publisher and editor in chief of AIA Press, and **Dale Ellickson, FAIA**, resigned as managing director of AIA contract documents to pursue other interests.

Mulvanny.G2 Architects of Bellevue, Wash., has been selected for two projects in China, including the Shanghai International Passenger Terminal.

Deaths: **Paul Genecki, Hon. AIA**, 61, former senior vice president at Victor O. Schinnerer & Company. **George T. Rockwise, FAIA**, 83, founder of ROMA Design Group in San Francisco.

Meier: Back on the East Coast in big way

Though Richard Meier and Partners practice in New York City, Meier had become best known in recent years for West Coast work with the opening of the Getty Center in Los Angeles. Now he's back in the East in full force. Meier's most significant recent New York-area project, a \$190 million United States Courthouse and Federal Building in Central Islip, N.Y., was dedicated in October.

One of two federal courthouses that the architect has just completed—the other is the Sandra Day



Le Corbusier? No, it's a U.S. Courthouse and Federal Building by Richard Meier in Central Islip, N.Y. Light fills the airy, pristine interior spaces (left).

O'Connor United States Courthouse in Phoenix—the Islip building presides from a podium on a flat 29-acre site. At 12 stories high, this is one of the tallest structures on Long Island. The 735,000-square-foot building is composed of two juxtaposed volumes—a monumental rectilinear slab with 23 courtrooms and an opaque 190-foot-tall rotunda cone.

The northern and southern facades are distinct. On the north side, metal panels punched with horizontal windows define a relatively private exterior. On the plaza side, a glass curtain wall allows uninterrupted views of the Atlantic

Ocean and fills corridors with natural light. The central circulation area is spatially spectacular—beginning at the front entrance into the enormous cone. Walls tilt slightly inward on the entry rotunda, and a large oculus floods light into this empty white space. A narrow security corridor leads to another colossal white atrium, where nine stories of identical catwalk corridors are stacked.

New York Times architecture critic Herbert Muschamp, in a November review, gushed over the building and over Meier: "If someone had to be the daddy in architecture today, I'm glad it's Richard Meier." *JEC and Susanna Sirefman*

Roche adds to his NYC Jewish museum

Museum projects are keeping architects busy in New York. The American Museum of Natural History opened its Rose Center by James Stewart Polshek, FAIA, earlier this year; the Museum of Modern Art has begun work on its massive expansion and temporary Queens home; and the Guggenheim awaits approval to build a Frank Gehry-designed scheme on the East River.

Not to be left behind, Manhattan's Museum of Jewish Heritage: A Living Memorial to the Holocaust held a groundbreaking ceremony in October for a \$60 million expansion. The existing 30,000-square-foot building, which opened in 1997, has proven so popular that the new four-story East Wing will add more than 70,000

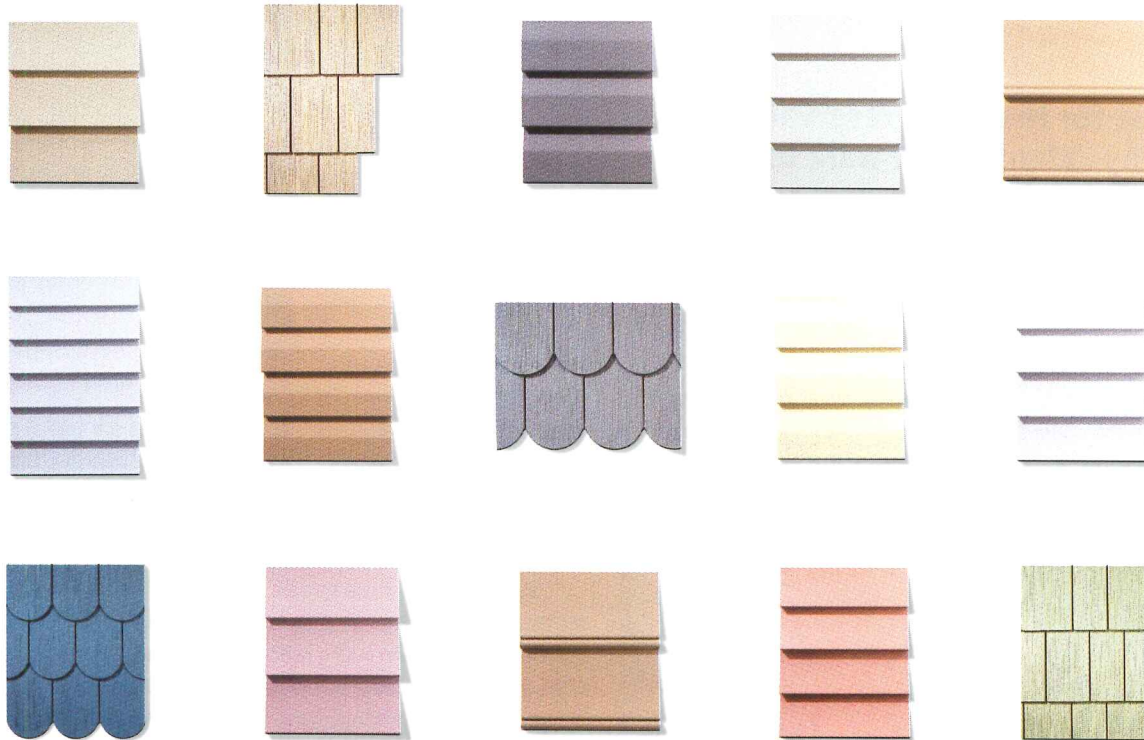
square feet when completed in 2003. The expansion, to be funded by the state and city, as well as by private donations, will be designed by the architect of the original Museum, Kevin Roche, FAIA, of Kevin Roche John Dinkeloo & Associates.

The addition will connect to the existing museum, which houses a core exhibition of more than 2,000 photographs and 800 historical and cultural artifacts. The new facility will widen the scope of programs, accommodating multimedia classrooms, a theater, a cafe with New York Harbor views, and administrative space. A Family History Center will serve as a repository for Steven



Spielberg's Shoah Foundation testimonies—an important archive of oral histories from Holocaust survivors worldwide. A Memorial Garden overlooking the harbor is also planned.

Roche's addition could transform the existing building—a heavy, rather hostile hexagonal granite structure (left in photo above) with a six-sided roof, paying homage to both the Star of David and the six million Jews who perished in the Holocaust—into a more site-sensitive building. *SS*



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National Trust for Historic Preservation reports on why Johnny can't walk to school

The National Trust for Historic Preservation has opened a new front in the fight against sprawl. In November, the Trust released "Historic Neighborhood Schools in the Age of Sprawl: Why Johnny Can't Walk to School," a report on the threat sprawl poses to the nations' historic neighborhood schools and to the communities they anchor.

The report contends that the construction of megaschools in outlying, undeveloped land, at the expense of small, community-centered schools within walking distance of students' homes, is weakening older neighborhood vibrancy. "The trend of building shopping mall-sized schools outside of town alienates students, encour-

ages sprawl, and impairs our sense of community," says National Trust President Richard Moe.

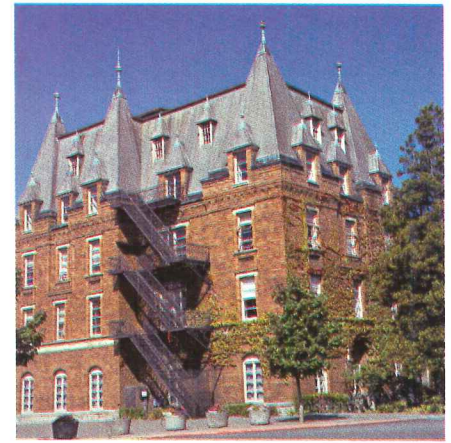
"Schools were once thought of as important civic landmarks to last a century," the report adds. "But many of today's newer schools resemble airplane hangars." In addition to the effect on communities, "Why Johnny Can't Walk to School" identifies hidden costs of school sprawl, including longer commutes, increased transportation expenses, and loss of students' independence.

In response to these threats, the National Trust's report calls for a number of changes in public policy. Chief among them is the elimination of state-mandated acreage minimums that require school sites as large as 60 acres and effectively prohibit the construction of new schools in densely populated areas. As the report points out, the acreage minimums "ignore the fact that mid-size communities might want to keep schools in town for the sake of maintaining vibrant town centers and cohesive neighborhoods." The report also recommends requiring feasibility

studies to compare the costs of new school building with renovation, and it calls for the elimination of funding biases that favor new construction over renovation.

Dan Becker, a North Carolina resident fighting to save his daughter's historic school, says, "They have recycling bins in the cafeteria, and yet they were planning to cart the whole school off to the landfill."

The National Trust has also placed the general category of historic neighborhood schools on its list of America's 11 Most Endangered Historic Places and has released a new publication, *A Community Guide to Saving Schools*. Andrew Blum



Tacoma residents will vote in February 2001 on a bond to renovate this 1906 high school.



Cincinnati's Hoffman Public School will receive deferred maintenance funds.

Nearly 40 years after *The Death and Life of Great American Cities*, Jacobs accepts Scully Prize

Urbanists gathered to hear their guru speak at the National Building Museum in Washington, D.C., on November 11. There, a sold-out crowd of more than 700 urbanists saw their heroine—author Jane Jacobs—honored as the second annual recipient of the Vincent Scully Prize, awarded by the museum.

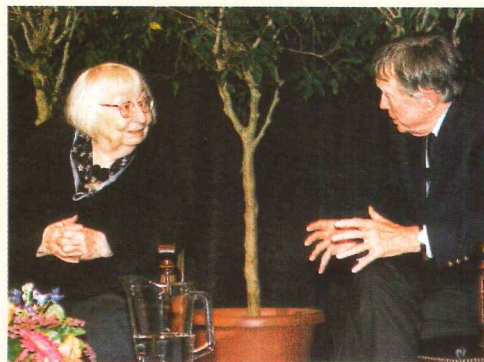
Jacobs changed the course of thought on cities and urban planning with her first book, *The Death and Life of Great American Cities* (1961), which, in the 1990s, was described by the *New York Times* as "perhaps the most influential single work in the history of planning." Her subsequent books, *The Economy of Cities* (1969) and *Cities and the Wealth of Nations* (1984), examined the impact of economic forces on cities. She was also instrumental in stopping freeway construction that would have destroyed both her neighborhood in Manhattan in the early 1960s and a neighborhood in Toronto where she moved in the late 1960s.

In the award presentation, Jacobs was honored by David Schwarz, AIA, Robert A.M. Stern, FAIA, former Toronto mayor David Crombie, and Scully. After Jacobs accepted the award, she offered her latest thoughts on North American cities and engaged Scully (right) in a discussion on urbanism

moderated by Ray Suarez. In her speech, Jacobs pointed to common failures in cities that don't evolve or adapt to time and change. "Above all," she said, "my purpose is to stir up thinking about how to enlist time and change as practical allies, not as enemies that must be regulated out and fended off on the one hand and messily surrendered to on the other."

The Vincent Scully Prize recognizes exemplary practice, scholarship, or criticism in architecture, landscape architecture, historic preservation, planning, or urban design. Scully, the Sterling Professor Emeritus of the history of art at Yale University, was the initial recipient. The prize carries a \$25,000 honorarium.

Jacobs, now in her mid-80s, does not accept just any award. In fact, she has turned down more than 30 honorary degrees, including one from Harvard University. When that was announced, Scully and Stern were all smiles. JEC



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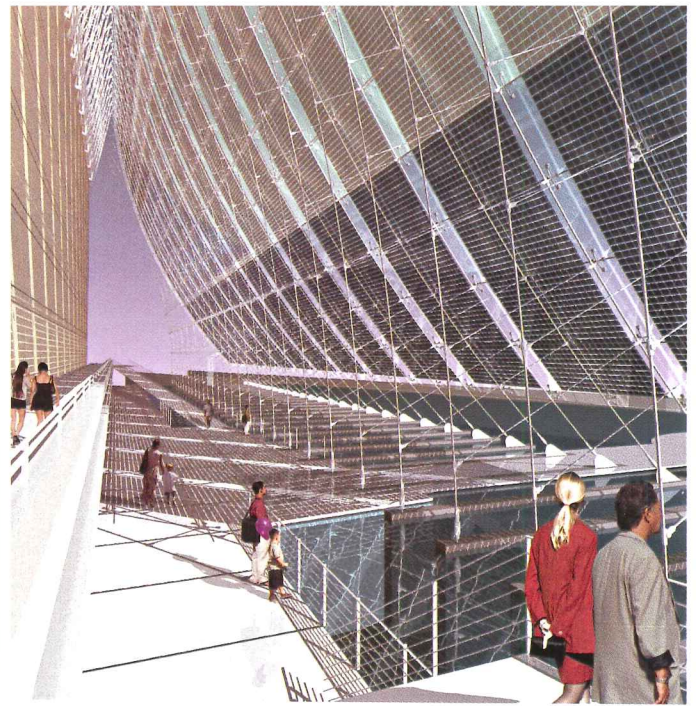
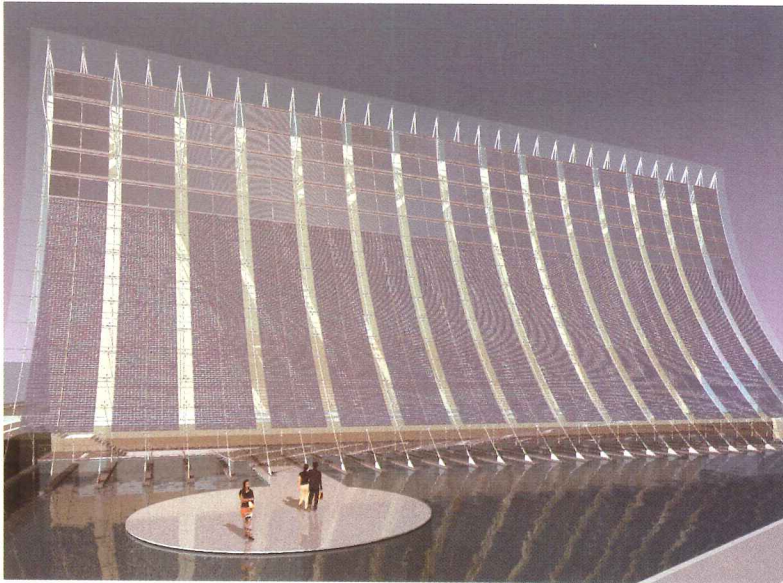
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CIRCLE 19 ON INQUIRY CARD



The Sun Wall competition-winning design, by Solomon Cordwell Buenz & Associates and Arup, incorporates photovoltaic panels with a solar thermal installation for hot water.

Sun Wall competition winner creates graceful wall for DOE building

Architects from Chicago's Solomon Cordwell Buenz & Associates and Arup of New York collaborated on "a sophisticated marriage of skin and structure" to win the Sun Wall design competition, sponsored jointly by the U.S. Department of Energy (DOE) and the American Institute of Architects (AIA). Energy Secretary Bill Richardson awarded the \$20,000 prize to the winning

team in an October 13 ceremony at the DOE in Washington.

More than 115 contestants attempted to design a solar-generating installation that made productive use of a 32,100-square-foot wall area on the south-facing facade of the DOE's massive concrete Forrestal headquarters building. This would be the largest solar energy system in a federal

government building. The site is currently a parking lot.

The winning design was completed by Martin Wolf, FAIA, Mark Frisch, AIA, Devon Patterson, AIA, and Duane Carter of Solomon Cordwell Buenz & Associates, and by Mahadev Ramon and David Scott of Arup. Their solution is a concave sweep of solar panels supported by tension trusses that span

between the existing south wall and the reconfigured landscape. "Our approach was to accept the challenge of integrating solar technology as a design element," says Wolf, a Solomon Cordwell Buenz senior vice president and design principal. "Why not make a curtain wall or a glass roof out of it? When you explore its true potential, solar design can be exhilarating."

Impetus for the design evolved from technical considerations. The concave shape is most conducive to responding to changes in the angle of the sun's rays through the seasons. A photovoltaic array is positioned along the lower two-thirds of the wall to collect the more vertical summer sun and produce electricity for air-conditioning. Solar thermal panels are positioned more vertically at the top of the wall, where they will capture the more horizontal rays of the winter sun. A pool in front of the wall will cool summer air to prevent superheating behind the wall.

Actual construction may take a while. The National Capital Planning Commission and the Commission of Fine Arts in Washington, D.C., must approve the design. Funding approval from Congress is needed, expected no earlier than spring 2001. *Karen Haas Martin*

Practice lessons for a small crowd at "Form! Function! Future!"

The challenges are immense, the choices many, and the possibilities endless in the practice of architecture. That was the message to take home from "Form! Function! Future!," a professional practice conference in Portland, Ore., sponsored by the American Institute of Architects (AIA), October 15-17. The conference offered tools for harnessing technology, exploring new definitions of practice, and surviving the pressures of a fast-paced, booming economy, but there weren't many takers. Most AIA members were too busy managing their own burgeoning workloads. Attendance, at 250, was approximately half the 500 people expected.

Design for workplace performance got high billing. Alcoa chairman and director Paul O'Neill and architect Martin Powell, AIA, of the Design Alliance in Pittsburgh told both sides of their story of close collaboration on the design of the celebrated Alcoa Corporate Headquarters in Pittsburgh. Along with O'Neill's leadership, the new facility has made Alcoa, an American industrial icon, the image of fast company growth and civic responsibility.

Judging by attendance and the titles of breakout sessions, one would think that the future of the profession belongs to facilities managers, who want to expand the definition of practice within the AIA, stretching it further into strategic planning and capital management. "Architects have done a great job of restricting their scope of services over the years," said corporate facilities manager Rod Stevens, who led one of the sessions. "People believe that all we do is design buildings."

"Architecture is only the effect it has on people," said longtime facilities manager and futurist Robbie Cook in one well-attended session. He suggested that architects take a cue from the late Buckminster Fuller, who claimed, as his own goal, nothing less than "making man a success." *Clair Enlow*



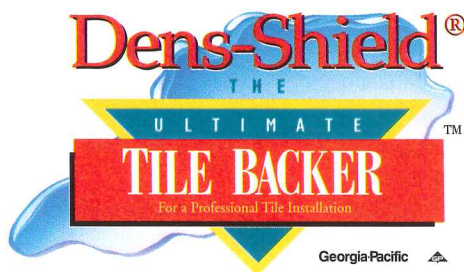
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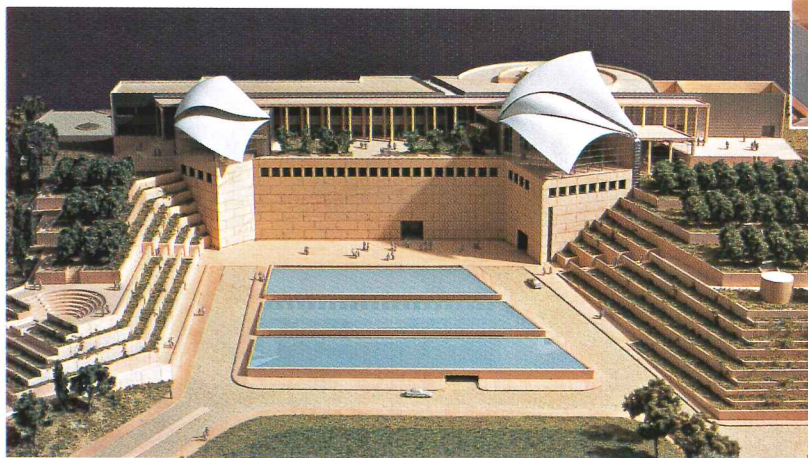
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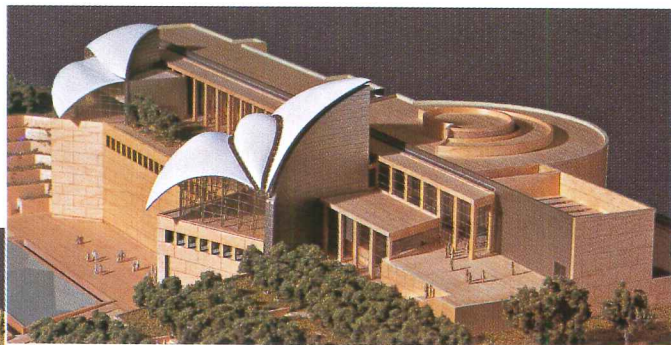
Safdie's Yitzhak Rabin Center in Tel Aviv built atop an emergency power station



Construction began this fall on the Yitzhak Rabin Center for Israel Studies, designed by Moshe Safdie, FAIA. The center includes a museum documenting the life of the slain Israeli leader.

Fittingly, the Tel Aviv complex—with dovelike winged roof

structures—is to be built atop a former wartime emergency power station. Located near three other museums and Tel Aviv University, the three-story, 129,000-square-foot complex will also house the Rabin archives, a research and educational institute focusing on Israel studies,



The Yitzhak Rabin Center for Israel Studies will house the Rabin archives, a research and educational institute, and a museum.

and a great hall and auditorium. The power station—a series of five-story-tall underground chambers—is built into an escarpment. Safdie is exposing the station's southern side, which overlooks the Yarkon River,

Tel Aviv, and the Mediterranean Sea. The massive base of the earth-colored rectangular building is “an extension of the land form,” Safdie says. The cladding is mainly acid-etched precast concrete and lead-coated copper. In contrast, the walls of the great rooms are glass

and their floating roof structures are white ferrocement, symbolizing hope. Two terraced gardens, one named for President Bill Clinton and the other for the late King Hussein of Jordan, Rabin's partners in peace, flank the center. Finding an alternate site for the power company held up the project for months. Construction will be complete in 2003.

Safdie received the commission for the \$26 million project shortly after Rabin's assassination in November 1995; he was also asked by Rabin's family and close friends to design the slain leader's tomb. *Esther Hecht*

Catalano house in danger of demolition

Eduardo Catalano's 1954 house in Raleigh, N.C., crystallized the ideals of Modernism for a generation of designers, but today it is in danger of demolition. A tour de force of science meets modern design, the house is now in a state of disrepair.

The roof, which really is the house itself, has deteriorated to the point that the city has declared the Catalano House an unsafe building. Preservation North Carolina, fending off demolition, has optioned the property and is actively seeking a buyer to reconstruct it.

Argentinian-born Catalano built the house himself shortly after he was recruited to teach architecture at Henry Kamphoefner's Bauhaus-inspired School of Design at North Carolina State College. His hyperbolic, paraboloid-roofed dwelling was built with startling simplicity on a suburban lot and seemed the perfect marriage of form and structure.

The graceful double-curved shell, constructed of three layers of $\frac{3}{4}$ -inch wood flooring, stretches 87 feet from point to point. The roof shell was vulnerable to water and was never perfected or maintained. Rot set in. In recent years, the roof has moved so much that it lifted the exterior walls off the concrete floor.

Beneath the roof, Catalano enclosed a 1,200-square-foot living space with panels of glass. The result was a space that flowed from cavelike intimacy near the roof's low points to great transparency at its peaks. The house earned rare praise from Frank Lloyd Wright and became *House and Home* magazine's House of the Decade. It merited one of 220 building profiles in the *Whitney Guide to 20th-Century American Architecture*, which notes, “Catalano's astonishing house appears to be all roof, nothing



Catalano outside the house he designed and built in 1954, now in disrepair.

more than a large glider that has drifted into the forest.”

Now 83 and living in Cambridge, Mass., Catalano recalls the house as an example of his penchant for exploring mathematical and natural ideals and pushing the limits of a design system. Catalano does want the house saved or reconstructed.

Preservation North Carolina recently negotiated an option to buy the Catalano House and sell it

for \$360,000 to anyone willing to save it in any way. However, reconstruction—the house is beyond the point of renovation—may cost \$1 million or more. An alternative proposal to reconstruct the roof and podium as an outdoor pavilion on the grounds of the nearby North Carolina Museum of Art would, Catalano believes, “capture the spirit of the house.”

Ken Friedlien



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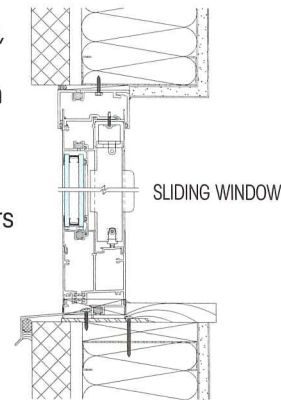
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CIRCLE 21 ON INQUIRY CARD

Conference at MoMA explores marriage of theory and practice in architecture

For some time the architectural community has been lamenting the widening gap between theory, especially poststructuralism, and practice [MARCH 1998, page 64]. Now with the increasing globalization of capitalism, more and more architects and academics are addressing the

Harvard University, was once blamed for America's instrumentalist ethos. It placed too much emphasis on doing, and not enough on questioning how we think and know. As West has written, however, pragmatism should not be judged as a philosophy, but more as "continuous cultural commentary . . . that attempts to explain America to itself at a particular historical moment."

Pragmatically speaking, the conference could have been done in half a day, limited to headline attractions Peter Eisenman and Richard Rorty, and to Cornel West and Rem Koolhaas. Stan Allen offered the best summation of pragmatism's attraction, using his own experience as an architect and theorist to elucidate the issues. These five presenters cut to the chase in ways other theorists and architects were not able to do.

It should be said, however, that in both the Eisenman/Rorty and West/Koolhaas interactions, one came away with a feeling of watching extreme wrestling between the architects versus the philosophers. In this particular combat, the match between Eisenman and Rorty was spirited and somewhat trenchant, but with no clear winners. Rorty would not play the game that Eisenman tried to set up, which involved use of upmarket theory words such as "criticality." In the round between West and Koolhaas, Koolhaas walked into every trap that West set, causing West to verbally alternate between stomping and pirouetting.

What came out of all this display? Go to www.architectural-record.com to find out more about the conference. *Suzanne Stephens*



Cornel West, Rem Koolhaas, Peter Eisenman, and Richard Rorty (clockwise from top left).

situation, as Michael Speaks notes (see page 74). One clear manifestation of this concern was the sold-out conference "Things in the Making: Contemporary Architecture and the Pragmatist Imagination," held on November 10–11 at New York's Museum of Modern Art.

Organized by Joan Ockman, director of Columbia's Buell Center, and Terence Riley, MoMA's chief curator of architecture and design, the conference explored ways in which American pragmatism provides a direction for architectural theorists and practitioners.

Pragmatism, a philosophical approach named by Charles S. Pierce in the late 19th century and resuscitated over the last 30 years by Richard Rorty, of Stanford University, and Cornel West, of

KPF's first project in Spain is energy-savvy

While the most technically advanced office buildings in Europe are known for their double-skin ventilated curtain walls, among other attributes, the upcoming headquarters for a major utility company in Madrid will have a sophisticated skin on its roof. Construction recently began on the headquarters of Endesa, one of Spain's largest electricity producers, by the London office of Kohn Pedersen Fox Associates (KPF). Located in the Campo de las Naciones business park near Madrid's Barajas airport, this is KPF's first project in Spain.

The Endesa building's central atrium will be topped by a transparent roof incorporating a field of photovoltaic cells and systems of passive ventilation and temperature control. Designed without air-conditioning, the central atrium is conceived as a thermal buffer between outdoor and indoor air temperatures. Seventeen trusses will span the central atrium, and a secondary framework of prefabricated rectangular frames will support an interior surface of clear glass. On top, an array of solar panels will cover an area of 86,000 square feet—the largest installation of its kind in Europe. The panels will supply supplementary electric power to the building and provide low-angle sun shading. Below the

internal glazing, a secondary system of motorized, frameless glass louvers will induce natural air flow and fresh-air infiltration at the top of the atrium. Thus, the design meets the client's appropriate wish



Courtyard roof of photovoltaic cells

to create a landmark model of energy-conservation techniques.

The building accommodates 375,000 square feet of office space on five floors and underground parking for 1,000 cars. KPF's design was chosen in a limited competition over submissions by Foster and Partners, the Richard Rogers Partnership, and HOK International—all of London. The project is being executed in association with local architect Rafael de La-Hoz, son of the well-known Madrid architect of the same name, now deceased. *David Cohn*



Endesa, implementing passive ventilation, is designed without air-conditioning.

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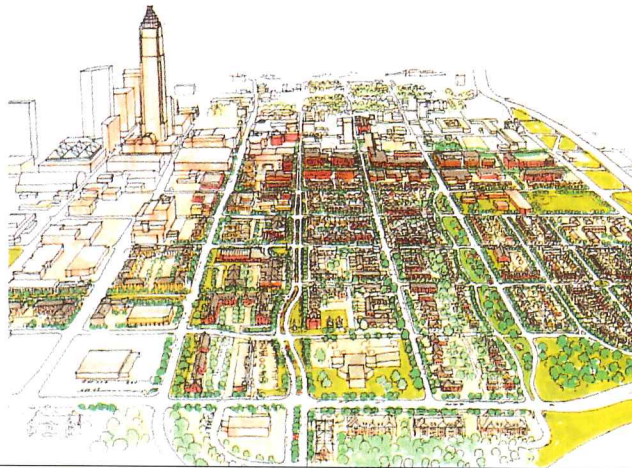


CIRCLE 22 ON INQUIRY CARD

AIA/HUD Secretary's Housing and Community Design Awards 2000 recognize the best in residential housing design

MIXED USE/INCOME

The award recognizes projects that revitalize neighborhoods through a combination of residential and non-residential uses, and market-rate and subsidized housing. First Ward Place provides a framework for developing a new district that combines housing, shops, businesses, and institutions. Vermont Village proves that affordable home ownership is the key to neighborhood revitalization.



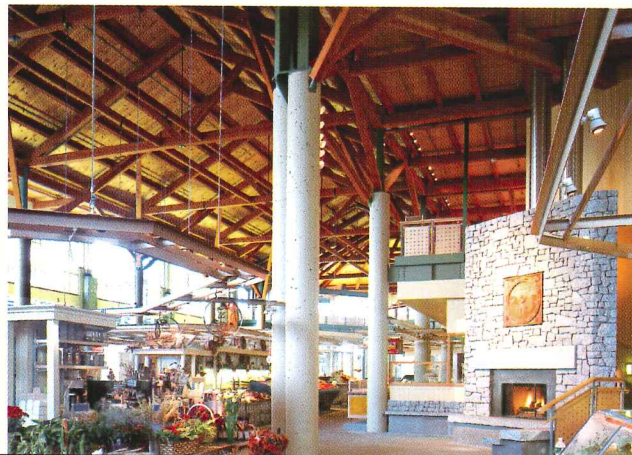
Project: *First Ward Place, Charlotte*

Architect: *Urban Design Associates—Ray Gindroz, FAIA (managing principal); Paul Ostergaard, AIA, Barry Long, AIA (principals); Donald Kaliszewski, AIA, James Morgan, AIA (associates)*

Client: *City of Charlotte, the Charlotte Housing Authority*

COMMUNITY BUILDING BY DESIGN

The award honors projects that rebuild poor neighborhoods. Portland Public Market succeeded in converting an uninviting parking lot into a community center, with booths for farmers who sell locally produced goods. Orchard Gardens, a Hope VI development, integrates mixed-income units into an urban fabric of commercial/retail and residential neighborhoods.



Project: *Portland Public Market, Portland, Maine*

Architect: *Hugh A. Boyd Architects—Hugh A. Boyd, AIA (principal-in-charge); Amy H. Boyd (principal)*

Associate architect: *Orcutt Associates—John R. Orcutt (principal-in-charge); Cynthia Plank Orcutt (landscape architect); Gary Coccoluto, Mathew G. Winch (project architects)*

Client: *Libra Foundation*

Lighting design: *The Lighting Practice*

ALLEN J. ROTHMAN HOUSING ACCESSIBILITY

In honor of HUD's late senior policy analyst, who devoted his life to improving housing accessibility for the disabled. The Leland Apartments were designed with the added challenge of incorporating input from various government agencies. The complex blends affordability and accessibility, and provides an urban streetscape as stylish as any market-rate housing in the area.



"Always design a thing by considering it in its next larger context—a chair in a room, a room in a house, a house in an environment, an environment in a city plan," said Eliel Saarinen. The AIA's Center for Livable Communities Housing Professional Interest Area, in partnership with Housing and Urban Development Secretary Andrew Cuomo, made context a priority when choosing the winners of the Community Design Awards this year. Selected for their innovative, affordable, and accessible building designs (not to mention great aesthetic expression), the five award winners demonstrate that good design can revitalize communities and improve people's lives.



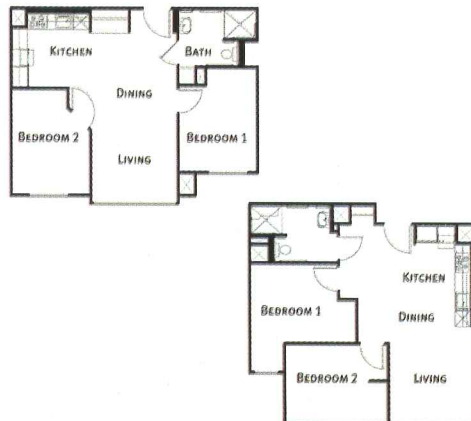
Project: Vermont Village Plaza, Los Angeles
Architect: Solomon E.T.C. Architecture and Urban Design—Dan Solomon, FAIA (principal); Anne Torney (project architect); Marcos Ancinas, Owen Kennerly, Thai Nguyen, Martha Martinez, Gabriel Ruspini, Jose Villegas (project team)
Contractor: Windjammer Construction
Landscape architect: Caleb Development Corp.



Project: Orchard Gardens, Roxbury, Mass.
Architect: Domenech Hicks & Krockmalnic Architects—Fernando J. Domenech, Jr., AIA, Alberto Cardenas, AIA, Marya Piasecki
Client: Madison-Trinity Ltd. Partnership, Adams-Orchard Ltd. Partnership, Boston Housing Authority
Engineer: Judith Nitsch Engineering (civil); Weidlinger Assoc. (structural); SAR Engineering (MEP)



Project: Leland Apartments, San Francisco
Architect: Kwan Henmi Architecture Planning—Denis Henmi, AIA (principal-in-charge); Kiyoshi Matsuo, AIA (project manager); Joseph Chance, AIA (project designer); John Tam (project architect)
Client: TODCO, San Francisco
General contractor: Cahill Construction
Engineer: Santos Urrutia (structural); FW Associates (electrical); Bill Mah & Associates (MEP)





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CIRCLE 23 ON INQUIRY CARD

News Briefs

Reach the AIA at www.aia.org

The American Institute of Architects (AIA) is developing a new members-only Web site to debut in January. The AIA's contract with Telebuild, which operated the Web site www.e-architect.com, ended on November 18 and that site will not be updated. In the interim, the AIA will provide Web services and information at www.aia.org.

Yoko, Utopia, and Wright

The New York husband-and-wife team of Tim Culbert and Celia Imrey, Inline Studio, has designed a number of Manhattan exhibitions, including *Yes: Yoko Ono*, an exhibition of the artwork of York Ono, on view at the Japan Society through January 14. *Utopia: The Search for the Ideal Society in the Western World* is at the New York Public Library through January 27. Inline Studio is currently working on an exhibition on Frank Lloyd Wright's work in Japan, to open at the Japan Society in March.

Predock's first public building in the Northeast

The Tang Teaching Museum and Art Gallery, the first public building in the Northeast by Antoine Predock, FAIA, opened at Skidmore College in Saratoga Springs, N.Y. in October. The \$10.2 million, 39,000-square-foot building includes galleries, a 150-seat interdisciplinary space, and classrooms. The first art museum in Saratoga Springs, the Tang is composed of split-face block, metal, and concrete.



Tang Teaching Museum and Gallery

The building sits at a crossroads on the Skidmore campus but does not interrupt pedestrian paths—a 140-foot steel staircase and a 120-foot concrete staircase literally cross over the building.



Utopia at the New York Public Library

Art Nouveau in D.C. Art Nouveau enthusiasts have until January 28 to go to the National Gallery of Art in Washington, D.C., to see the largest and most comprehensive exhibition ever organized on the subject. *Art Nouveau, 1890-1914*, has more than 350



Guimard's Métropolitain

pieces, including furniture, sculpture, paintings, graphics, and textiles on two floors of I.M. Pei's East Wing. The show is organized around various

cities, with items from Paris, Brussels, Glasgow, Vienna, Munich, Turin, New York, and Chicago. An original 1898 Paris Métropolitain entrance by Hector Guimard is in the exhibit and will be permanently installed in the National Gallery of Art's Sculpture Garden in late 2001.

Latrobe Fellowship launched

The College of Fellows of the American Institute of Architects has announced a new biannual fellowship. The Latrobe Fellowship offers a \$50,000 stipend for research documented in publications, exhibitions, or educational programming that will inform, educate, and provide new insights for the architectural profession. Applications, available at www.aia.org, are due March 1. Recipients will be notified by April 15.

News Briefs



On the job at Sears, Roebuck, Chicago, 1913

On the Job on exhibit The American office is celebrated and examined in the exhibition *On the Job: Design and the American Office*, through August 19, 2001, at the National Building Museum in Washington, D.C. The exhibition focuses on the physical changes in American offices throughout the 20th century, as well as the cultural shifts that have accompanied these workplace transformations.

Decker curates NBM Howard Decker, FAIA, was named chief curator of the National Building Museum in Washington, D.C., in October. Decker will lead the planning of temporary exhibitions, as well as *Building America*, which is the museum's planned core exhibition. A founding principal of DLK Architecture in Chicago, Decker was named Outstanding Young Architect of the Year by AIA Chicago in 1988. His firm won the AIA Chicago Firm of the Year Award in 1991.



Decker

Anderson begins term as 2001 AIA president John D. Anderson, FAIA, began his term as 2001 president of the American Institute of Architects on December 2. Anderson is a founding principal of Denver-based Anderson Mason Dale. Gordon Chong, FAIA, began his term as AIA first vice president/president-elect. Vice presidents for 2001 are Terrance Brown, FAIA, Barbara Nadel, FAIA, and Douglas Steidl, FAIA. Stephen Castellanos, FAIA, is 2001 AIA secretary.

Eyebeam Atelier narrows list for museum project

Eyebeam Atelier, a nonprofit media organization based in New York, has pared down a short list of architects for a 90,000-square-foot museum of art and technology to open in the Chelsea District

of Manhattan in 2004. The list is down from 30 firms to 15: Architecture Research Office, Asymptote Architecture, David Chipperfield Architects, Preston Scott Cohen, Neil Denari Architects, Diller and Scofidio, Foreign Office Architects, Greg Lynn FORM, Gluckman Mayner Architects, Steven Holl Architects, Leeser Architecture, MVRDV, Resier+Umemoto RUR Architecture, Roger/Marvel Architects, UN Studio. The 15 firms developed conceptual designs that will be exhibited at Eyebeam Atelier beginning on December 15. Three firms will be selected in January to develop schematic designs. A winning architecture firm will be chosen in May.

Philly fights blight

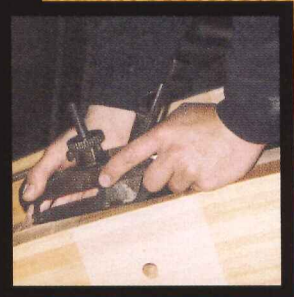
Philadelphia Mayor John Street has presented an outline for a \$250 million anti-blight program in his city. The Neighborhood Transformation Initiative, presented to Philadelphia City Council November 1, calls for \$130 million to tear down buildings deemed in danger of immediate collapse, \$40 million to demolish scattered residential buildings, \$20 million to tear down blighted commercial and industrial structures, \$55 million for home-improvement loans and property acquisitions, and \$5 million for a computerized inventory system to track the program.

The program calls for demolition of 12,000 blighted buildings, and neighborhood-based blight-removal plans will be integrated into a citywide plan.



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CIRCLE 24 ON INQUIRY CARD

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San Diego's innovative housing awakens a once-sleepy city

Correspondent's File

By David Hay

To look at San Diego today, it's hard to believe that this was once a sleepy beach city with a resolutely suburban ethos. In downtown, cranes swing high above almost every corner—one of many signs of a building boom. San Diego is busy transforming itself into a dense metropolis.

San Diego's urbanization is unlike that of other West Coast cities, such as Seattle, where the emphasis is on business developments. In San Diego, a sometimes fractious coalition of developers, city planners, architects, and residents all agree that their new downtown should be primarily residential.

According to Walter Rask, manager of architecture and planning at San Diego's Center City Development Corporation, 75 percent of new construction in downtown San Diego this year is in housing units. More than 4,000 units are being built or planned.

Building careers in San Diego

Over the last 20 years, a number of architects recognized for their innovative approaches to housing have built their careers in San Diego. Their passion for urbanism led to design that embraced the street instead of catering to the automobile. They've designed townhouses—a building type that was unheard of in San Diego only a few years ago. The smaller scale of San Diego—its blocks are usually only 200 by 300—inspired them to push the

boundaries of interior space with small unit sizes. Coupled with the warm climate, their new buildings offer abundant indoor-outdoor opportunities. All this, they believe, has contributed to built work that promotes a real sense of community.

This vision by local architects is quite distinct from that of the out-of-town and Canadian developers operating here. Plans by outside developers show standard models for their residential high-rises, emphasizing an anonymous life above the street rather than an engaged streetlife. Downtown's Marina neighborhood, where some of these buildings have already been built, resembles a ghost town at street level.

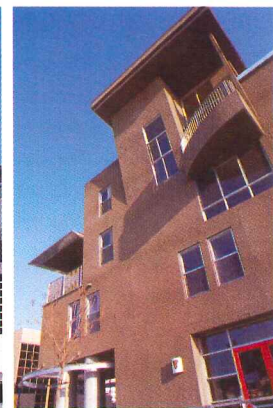
One transformed block

In contrast, the most innovative urban statement by the loose-knit San Diego school of architects is on one block in the Little Italy neighborhood [MARCH 1999, page 80]. Here, seven architects have built separate, urbane forms of housing. A three-story, nine-unit miniloft building called the Merrimac, by Smith and Others in collaboration with Lloyd Russell, is particularly innovative. Units have 26-foot-tall windows extending down from a slightly concave roof. The epitome of the "anti-condo," the Merrimac does not have underground parking or interior elevators. Rather, it boasts shared stairs and walks and common doors between lofts. Only 400 square feet each, the lofts have elevated ceilings, some as

high as 20 feet, which make them appear larger.

The biggest building on this block is a 44-unit development of market-rate and low-income rental housing designed by Rob Wellington Quigley, FAIA, and completed in 1999. Catering more to the dictates of its developer, the building has

Internet economy. DeFreitas deSign, however, created "3 in a ROWhomes," on Tenth Avenue and F Street, to encourage families to move back to the city. Completed in summer 1999, these 1,850-square-foot townhouses by Kevin deFreitas have 14-foot-tall front windows and offer a sense of openness rarely



New housing in San Diego's Little Italy includes (clockwise from above) the Merrimac by Smith and Others with Lloyd Russell, a market-rate and low-income development by Rob Quigley, and three townhouses by deFreitas deSign.

standard corridors and elevators, as well as upper-level walls that tilt streetward in an engaging fashion. "This whole block is a textbook project in so many ways," says Quigley. "The more personalities you have on the street, the more urban the feel and the more vitality that's produced."

The new buildings appeal to the younger San Diegans drawn into downtown by the city's burgeoning

associated with houses on the city's tiny blocks. The stick-frame houses are built on a concrete slab, with wood floors on the second and third levels.

The housing solutions on this Little Italy block, however, are mostly too small in scale to satisfy



David Hay is a Los Angeles-based writer on architecture and the arts.

Correspondent's File

the demands of today's booming market. Thus, members of the San Diego school are obtaining larger commissions.

For instance, when complete in summer 2001, deFreitas' latest project, "ROWhomes on F," will have 17 stand-alone townhouses built out of precast concrete panels. The homes range from 1,100 to 2,000 square feet and will be visually consistent but structurally independent units, standing two inches apart. To fit the lot, deFreitas designed the units to be only 16 feet wide. The two-bedroom units have roof decks, and many feature what urbanists insist on: stoops to the street. "This seems so revolutionary in San Diego but it's the oldest idea in the book," admits deFreitas.

Construction has begun on the U.S.S. Essex, a 42-unit expansion by Smith and Others with Lloyd Russell, who also worked on the Merrimac minilofts. The development's parking deck will resemble the deck of a World War II class of

aircraft carriers called the Essex. The units, to be completed in late 2001, are free-form lofts with exposed materials and scale exaggerated by oversize windows and high ceilings.

More personalities

Rob Quigley faced a big challenge to his philosophy of urbanism—the more personalities involved in the design the better—with his 151-unit Marina Place complex, to open in 2001. "I recommended they make it into a joint project with another architect," he said. The developer, however, balked and chose Quigley as the sole architect. So Quigley broke the project into four highly individuated structures. One structure curves like a snake through the interior of the block, partly to avoid an earthquake fault on the site. The result is a diverse stock of housing: walk-up townhouses, loft-style apartments, and traditional one-bedroom units on the upper floors.



"ROWhomes on F" by deFreitas deSign are 17 structurally independent units.

Another architect attacking the "mentality of one idea on one city block" is Frank Wolden of Carrier-Johnson. With a large, 326-condominium complex called Treo set to open in late 2002, Wolden created his own version of the Little Italy development. "We deliberately broke it down into smaller elements," he says. The 24-story high-rise tower is joined to a stepped-slab building, where the uppermost floors feature glass-walled lofts. The movement created by this cascading roofline contrasts well with the tilting roofs on the small-scale apartment buildings that meander through

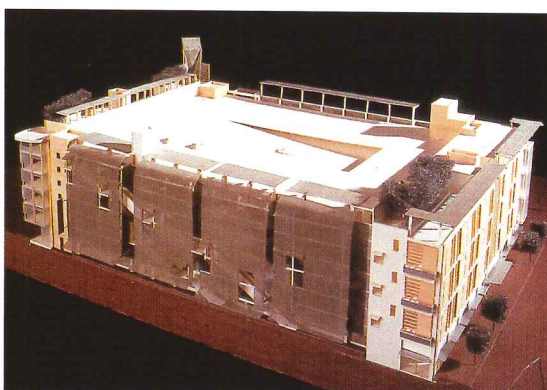
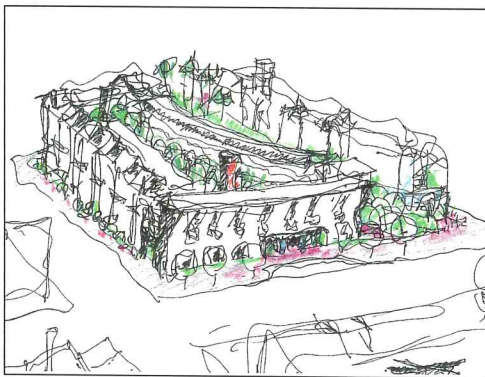
the project's center. In front of the tower are townhouses standing flush to the sidewalk with stoops.

One developer that has been responsive to what is happening in a more urbane San Diego is the ownership of the San Diego Padres baseball team. The Padres chose the underdeveloped East Village area as the site for its new 46,000-seat ballpark, designed by Antoine Predock, FAIA. The Padres' development effort does not stop with the stadium, though. "We wanted to tie this park into larger developments in this neighborhood," says Eric Jutson, the team's director of ballpark planning. Among these developments are 750,000 square feet of office space and, of course, new parking. Construction on the ballpark has been suspended since October, though, and will not resume until a financing plan is set.

Mixing parking with housing

Among the more novel housing designs for San Diego's East Village are plans by Studio E Architects to wrap two 1,000-car, parking structures with condominiums. Architects Eric Nasland, AIA, Bradley Burke, and John Sheehan have designed the garage to feature 42 loft-style units at one end and a 200-room hotel at the other.

In this maelstrom of city building, it is fitting that the city is being shaped by the work of its own homegrown urbanists. Perhaps these architects' collective passion for a humanistic downtown will have a positive impact on the city that they have worked so long to make livable. ■



San Diego housing on the boards includes (clockwise from top left) Smith and Others' U.S.S. Essex, Quigley's 151-unit Marina Place, a hotel-parking-condo complex by Studio E Architects, and Carrier-Johnson's Treo complex.

Stop building roads and consider how transportation systems affect environment

Critique

By Alex Marshall

The more I study cities, the more convinced I am that transportation systems are the central factor in shaping their form and function. How people get around is far more influential in determining the form of our homes and workplaces than zoning, codes, or other regulations.

I've recently returned to live in New York after a decade away, and the unique aspects of my new home still startle and impress me. Most of all I notice the subway, that amazing system that makes everything else in the city possible. Having just come from Boston, which has the oldest subway system in the country, I am surprised by how much better New York's system is. I can go almost anywhere at any time, on lines that often include both express and local service.

The subway system created 20th-century New York, particularly its famous skyline. Skyscrapers would not have been possible without the intricate system of tunnels beneath them. Subway lines and skyscrapers grew together, each creating demand for the other. The first New York subway line opened in 1904. The Woolworth Building, designed by Cass Gilbert and considered the first real skyscraper, opened in 1913. Over the next 25 years, more subway lines—and more skyscrapers—followed. The

Alex Marshall, author of How Cities Work: Suburbs, Sprawl and the Roads Not Taken (University of Texas Press, January 2001), was a Loeb Fellow at Harvard University's Graduate School of Design last year.

Chrysler Building, the Empire State Building, and Rockefeller Center capped this era. Midtown and downtown Manhattan, where millions of people work, can only exist as they do because people can get there quickly each day without a car. A single subway line can deliver 60,000 to 80,000 people per hour per track. New York's system, often having two tracks, can transport well over 100,000 per hour. By comparison, a superhighway can only deliver 2,400 cars per hour per lane. And all those cars have to be parked somewhere when their occupants—usually only one person—step out.

Transportation shapes place

The New York subway system is a vivid, but hardly unique, example of the way transportation shapes places. The 19th-century streetcar lines created the 19th-century streetcar suburbs. The beltway and Interstate highway system shaped our modern landscape of big-box stores and subdivisions.

Transportation influences individual buildings as much as it does downtowns or edge cities. Aesthetic considerations are often superseded or made irrelevant by the context of transportation. Richard Meier recently completed his new \$190 million federal courthouse on Long Island, built as part of the Design Excellence Program of the General Services Administration (GSA). Meier's 12-story white tower, accompanied by a lopsided silolike cylinder that serves as a grand entrance, asserts itself against the

island's low-rise world of shopping centers and subdivisions. In front of the building is a grand public plaza. It's truly a beautiful complex.

By necessity, though, a 1,600-space parking lot surrounds it. Paradoxically, the parking and the nearby highways isolate the building they access. Meier would like the courthouse to be a sort of

Corbusier loved cars and showed freeways dotted with a few Model T-style cars running between his towers. Jonathan Barnett, a professor of city planning at the University of Pennsylvania, has recently calculated that each of Le Corbusier's towers would have had to be surrounded by 241 acres of surface parking lots to accommodate the



An efficient subway system transports hundreds of thousands of people quickly.

community gathering space, but that's not likely. No one will casually walk by Meier's building on the way to the drugstore, the way people did with courthouses of yore.

One of Meier's heroes, Le Corbusier, displayed a particularly dramatic example of miscalculating how transportation and building design mesh. Le Corbusier made architectural headlines in the 1920s with his "Plan Voisin," which proposed tearing down old Paris and replacing it with soaring towers on parks interlaced with freeways.

automobiles. Instead of towers in the park, it would have been towers in the car park.

Richard Bulis, a designer of custom homes in Reno, Nev., says parking and access are the first decisions he makes for the "McMansions and starter castles" that he designs. "I have to strategically consider how the cars are going to get on and off pretty much before I consider anything else," he says. "I have to remind my clients that cars don't climb stairs, and they don't turn corners very well. They are stubborn critters."

Critique

According to Bulis, a four-car garage is now the norm for custom homes. With a 15-foot-wide driveway, as much as 2,500 square feet, or 25 percent of the buildable area of a half-acre lot, will be paved over, Bulis says.

I'm not criticizing cars. However, architects must work within the demands of a transportation system. The best architects do this assertively. They recognize that changing transportation has always affected design. The way to design a better building, it seems to me, is to look realistically at its environment. The way to produce better environments is to use transportation as a design tool.

Currently, our standard transportation policy is to build more roads to solve traffic jams. This doesn't work. Take Salt Lake City, for example: Its recent expansion of Interstate 15, from 6 lanes into 12,

encouraged so much development—instant towns made up of one-acre housing lots, car-dependent office parks, and big-box stores—that a parallel highway was soon needed to keep traffic moving. "The urban superhighway should be



Sprawling highways gobble up land.

relegated to the scrap heap of history," in the words of John O. Norquist, mayor of Milwaukee, which is tearing down portions of a highway that was supposed to cut right through the city.

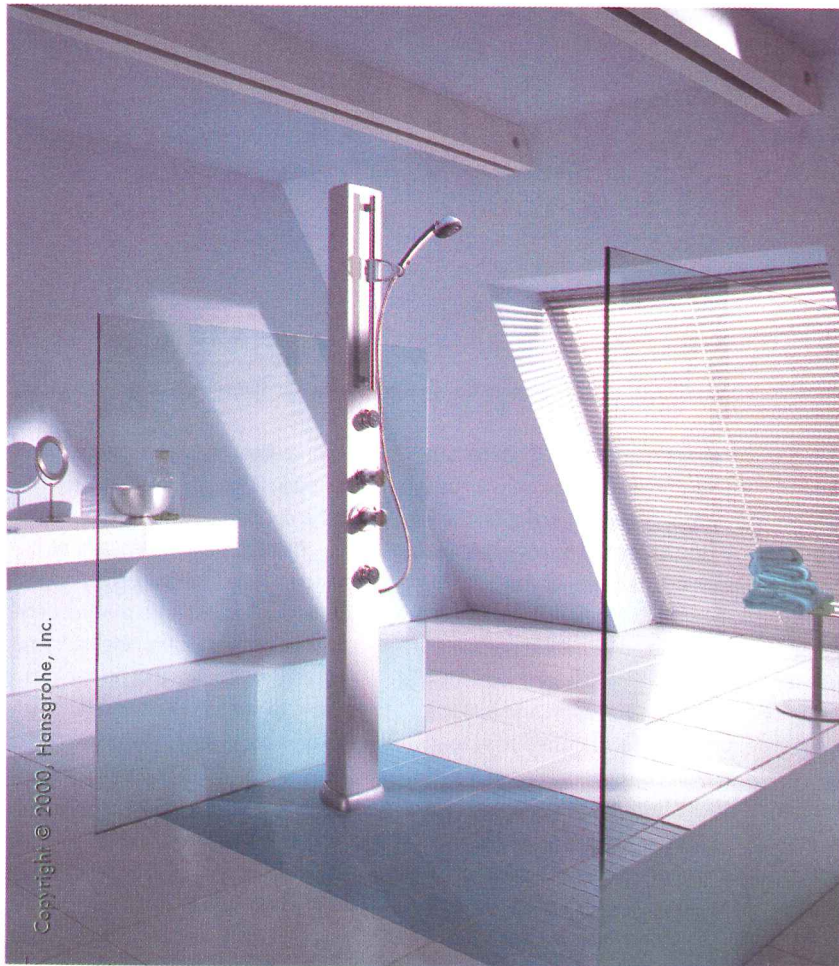
Stop building roads

The quickest way to cure sprawl is to stop building roads. Put money into mass transit of all types and accept the denser cities that result. Subways can be expanded in older cities. New York has approved the new \$10 billion Second Avenue subway line on Manhattan's East Side, which should produce a boom of development. Relatively newer edge cities may be able to increase density around subways, light-rail lines, or bus routes.

What transportation systems might be next? High-speed rail is producing different living patterns in France. During a recent trip there, I met people who were commuting daily 150 miles each way, a journey of less than an hour. High-speed rail offers tremendous advantages, particularly in the Northeast of the U.S.,

but other technologies beckon. Automated-highway vehicle control systems, which allow cars to stream along highways almost like a long train, are not yet a reality. A suspended, or supported, transportation system that rides over the terrain is newly installed in Morgantown, W.Va. Another possibility for the future comes from so-called Universal Automobile systems, fleets of small electric-powered public vehicles that passengers can pick up, drive, and drop off, paying per trip as they would for a bus ride. New small civilian aircraft that land like helicopters are in development. For short trips, we may soon find ourselves in small dual-purpose vehicles that can be pedaled or made to function as battery-operated cars with a very limited range. Even jetpacks, à la George Jetson, are a possibility.

Whether the future holds jetpacks or newfangled cars, good architects will always explore the way transportation creates the possibility for new types of buildings and new environments. ■



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Life Style, by Bruce Mau.

London/New York: Phaidon Press, 2000, 624 pages, \$70.

The bible of Bruce Mau has been published, just in time for holiday gift giving for your design-savvy friends. *Life Style*, by Toronto-based designer Bruce Mau, is a manifesto of his creative process and the work of his studio, Bruce Mau Design (BMD). Mau's

work ranges from book and magazine design to physical environments in collaboration with architects such as Rem Koolhaas and Frank Gehry, FAIA. Melding content and form, his design for Koolhaas' 1996 book, *S, M, L, XL*, won critical praise.

Similar in approach, as well as size and heft, to *S, M, L, XL*, *Life Style* weighs in at 624 pages and more than two inches thick. It has been released in a variety of luminous satin covers, so readers can choose colors based on their lifestyle. The book is organized in three major parts: Life Theories (essays and manifestos), Life Projects (BMD studio work), and Life Stories (anecdotes and musings). The imagery ranges from fanciful to disturbing—from signage for Gehry's Walt Disney Concert Hall to images of violence that are becoming commonplace.

Mau questions his own methods of practice, which is refreshing and allows readers to question as well: To what extent does culture

shape design? To what extent is design shaping culture? And at what point, if any, do design and culture blur?

In *Life Style*, we get to know Mau, his work, and his process—a rare feat for a book. Even if you've been to places designed by Mau or read publications designed by Mau, you've never really experienced Mau until you've read *Life Style*.

Then you'll see the world

around you in a whole new way. Reviewed by John E. Czarnecki, Assoc. AIA

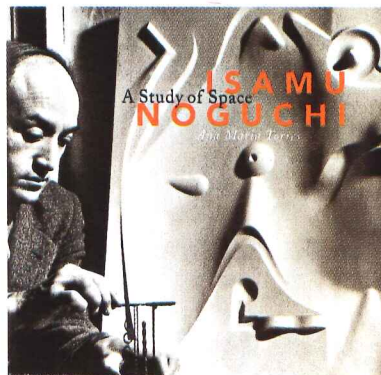
Isamu Noguchi: A Study of Space, by Ana Maria Torres. New York: Monacelli, 2000, 324 pages, \$65.

In both his life and work, the artist Isamu Noguchi was a bridge—between his father's Japanese culture and his mother's American roots, between ancient methods and modern technologies, and between sculpture and architecture. A great collaborator, Noguchi worked with choreographer Martha Graham on sets for her dance productions and with architects such as Gordon Bunshaft, Edward Durrell Stone, and Kenzo Tange on gardens and plazas for buildings around the globe. As Ana Maria Torres explains in this handsome book, Noguchi's conception of a "sculpture of space" was fundamental to all of his designs.

"Noguchi's experimentation, his

eclecticism, and his multidisciplinary character helped him create spaces in which the private sculptural object was integrated with architectural, theatrical, and environmental spaces. As a result, his projects were endowed with special harmony," states Torres.

A Spanish architect who is a principal at the landscape design firm Balmori Associates in New Haven, Torres began working on this book more than a decade ago after writing her doctoral dissertation on Noguchi. Her hard work shows in the book's smart prose and straightforward presentation. Instead of organizing the book chronologically, Torres divides projects into seven types: playgrounds; earthworks; gardens, plazas, and parks; memorials; fountains; interiors; and public sculptures. The organizational device is a good



way of looking at recurring themes and alternative approaches to similar programs. For good measure, she provides a chronological list of the artists' projects in the back of the book. Designed by Esther Bridavsky and Michael Beirut of Pentagram, the book makes good use of old

photographs and plenty of drawings. I only wish it had included some color photography to better show Noguchi's remarkable eye for the subtle hues of nature and his skill at injecting blasts of color into abstract compositions. Reviewed by Clifford Pearson

Building Images: Seventy Years of Photography at Hedrich Blessing. San Francisco: Chronicle, 2000, 192 pages, \$75.

Every architect who has seen someone else's photographs of his buildings knows how difficult it is to translate architecture into two dimensions. So when you find a photograph that captures the spirit of a building or a place, it can make your heart race. Remarkably, the photographers at Hedrich Blessing

have been making hearts race since the start of the Great Depression.

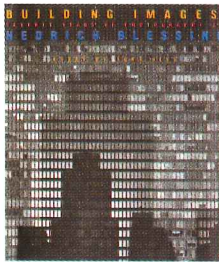
Founded by 21-year-old Ken Hedrich in downtown Chicago in 1929, the small commercial photography studio eventually became a collective firm of photographers whose work has illuminated the pages of architectural magazines (including hundreds of issues of ARCHITECTURAL RECORD), consumer

publications, corporate reports, and books. Starting with Hedrich, who was "on camera" until 1971, the firm has included 19 photographers, 11 of whom are now active. Like its hometown, Hedrich Blessing has been able to combine art and commerce in an unpretentious, clas-

Books

sically American kind of way. In the process, its photographers have earned the trust of some of the great architects of the 20th century: Frank Lloyd Wright, Ludwig Mies van der Rohe, Eliel Saarinen, and Skidmore, Owings & Merrill.

The book includes an introduction by Timothy Samuelson of the Chicago Historical Society (which is the keeper of the firm's archive of half a million photographs) and an essay by Tony Hiss. Samuelson notes some of Hedrich Blessing's precursors (such as J.W. Taylor and Ralph Cleveland, who photographed many of Louis Sullivan's buildings in the 1890s). Hiss places Hedrich Blessing in the larger context of architectural photography and explains what made Hedrich and his heirs so different and important. But



the book is really about the photographs—big, beautiful images (both color and black-and-white) that not only seduce us but inform us. Not every photograph here reaches the highest level of under-

standing, but enough do to make the reader marvel.

Clifford Pearson

American Contemporary Furniture, text by Marisa Bartolucci and Cathy Lang Ho, edited by Raul Cabra and Dung Ngo. New York: Rizzoli Universe, 2000, 208 pages, \$35 (paper).

This smashing-looking book is a bit of a tease. It has all the right moves: excellent product photography, an intriguing photo essay by Richard Barnes, insightful essays

by Marisa Bartolucci and Cathy Lang Ho, and a sizzling lineup of hot young designers. Browse through it for a few minutes and you start to fall in love with the sleek, sexy lines of the furniture and the energetic design of the book itself. But if you



spend too much time with the book or think too much about it, you can go a little crazy.

Within the book's simple geographic divisions (the East, the West, and "the great in-between"), pieces of furniture and contempo-

rary designers float around in a stylish brew with a Karim Rashid cabinet here, a Constantin Boym chair there, and then a Rashid chaise somewhere else. Although there are vague connections between pieces shown next to one another (similar lines or materials or attitudes toward transparency), there is no overt organization. So finding a particular item or designer is a hit-or-miss affair. And since a designer may have pieces strewn throughout a geographic section, it's hard to see his or her designs as a body of work.

It is also odd to find first-person essays from five of the "more than 70" designers, but little or no information on most of the others. As a jazzy, improvisational take on the current design scene, this book works marvelously. Just don't expect it to be a handy reference to the world of contemporary furniture. *Clifford Pearson*

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2001 economic forecast: Slow but steady growth

Practice Matters

Edited by Charles Linn, AIA

A look at the forces behind the outstanding growth of the U.S. economy and the future of the construction industry were some of the topics covered at F.W. Dodge's Outlook 2001 Executive Conference, held in Washington, D.C., October 17–18. Featured speakers were: David Wyss, chief economist for Standard & Poor's DRI, the largest economic consulting firm in the U.S.; Robert Murray, vice president of economic affairs for the McGraw-Hill's Construction Information Group (CIG); and Kermit Baker, Ph.D., chief economist for the American Institute of Architects. Clients, architects, and builders in the audience remained on the alert for changes in the current boom times.

The productivity miracle

David Wyss explained that he believes the economy has been energetic because worker productivity has sustained higher annual increases over the last decade than was previously thought possible. This "has been the main puzzle behind the U.S. economy's robust growth. Based on DRI analysis of recent data, the sustainable rate of productivity growth appears to be in the 3.5 to 4.0 percent range, a substantial increase over the 2.5 percent limit espoused by conventional wisdom."

Much of this is due to the personal-computer revolution. Even though computers have been used by businesses for the past 40 years, it took a generation for

them to become fully accepted and affordable. While much of the U.S. economy has traditionally been based on manufacturing, computers have made great strides in increasing productivity in the services sector. For example, in architects' offices, the shift from hand-drafting to CAD occurred almost entirely within the last 10 years. It has reduced costs while increasing the demand for technically proficient workers. This has been a fairly typical scenario in many service sectors and has helped to lessen the economy's dependence on the manufacturing sector, which has, to a large extent, been moving operations outside the U.S.

With productivity rates accelerating, employers have been getting so much more output from workers that Wyss called the 1990s "a productivity miracle." He went on to link this increase in productivity to the rate of inflation, which remains at a 30-year low. "Wage increases have accelerated in response to tight labor markets, which has allowed workers to receive real wage gains without causing price inflation," he said.

The construction-industry economy slows

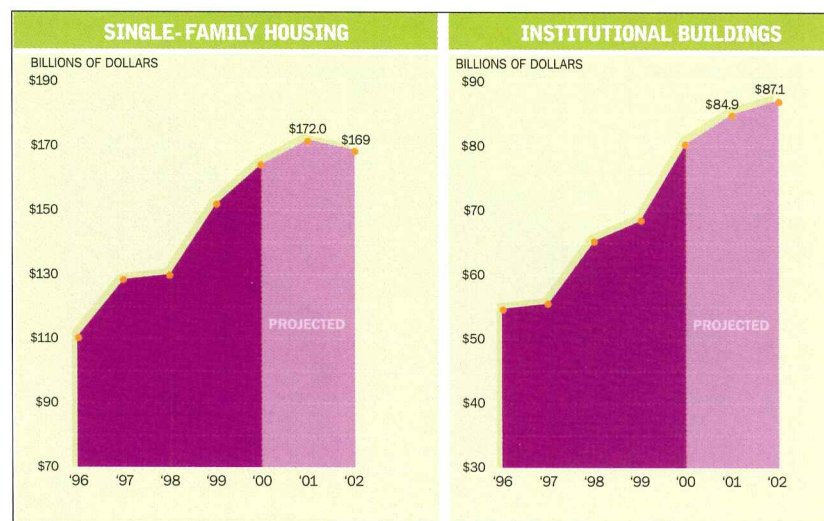
The Federal Reserve Board has also played a part in keeping inflation under control. Between June 1999 and May 2000, the Fed tightened monetary policy six times, lifting the federal funds rate from 4.75 percent to 6.5 percent. According to the Construction

Information Group's Robert Murray, these higher financing costs, combined with more restrictive lending policies at banks, which have been encouraged by Federal Reserve Chairman Alan Greenspan, will put a noticeable damper on business conditions toward the end of this year and into 2001. Total construc-

ones because currently we are not facing the imbalances that have been present in the latter stages of prior economic expansions. That is definitely a reason to be optimistic."

Single-family housing

The AIA's chief economist Kermit



Declining stock prices have slowed demand for single-family homes, but spending for education buildings will allow institutional construction to rise.

tion activity during 2000 will rise 3 percent, to \$462 billion, according to Murray. While this is not as large as the 10 percent increase recorded for 1999, it still marks the ninth consecutive year of expansion in current dollar terms. On a constant-dollar basis, construction activity will essentially match the previous year's amount.

Although Murray sees slower, more controlled growth for 2001, he remains quite positive about the future. "The immediate years ahead will continue to be healthy

Baker gave details concerning the growth of the single-family housing market, noting that home sales, home ownership, and the value of residential construction all set new records in 1999. Housing was still strong through the first quarter of 2000, and starts have not declined for the past eight years—the longest housing expansion in the past half century.

Soaring stock prices and low interest rates have also driven up the demand for second homes over the past eight years, adding 16 mil-

Practice Matters

lion units to the United States housing stock.

Murray added, however, that higher interest rates and this year's decline in stock prices have diminished the nation's pool of instant millionaires, restraining homebuyer demand. He says this trend should continue through the end of this year, pulling down the level of single-family starts from an increase of 8 percent in 1999 to 5 percent in 2000.

If the economy moves upward at only 3.5 percent next year, the growth in single-family housing will not be as great as it has been over the last several years. Still, at a projected 1.125 million new units next year, single-family housing

measures. Enrollment is increasing at high schools and colleges as children of the baby-boom generation come of age, and these building types are particularly active now. By the end of this year, Murray predicts that the educational building category will advance another 10 percent.

Healthcare facilities also registered a strong increase in 1999, climbing 18 percent as a result of strong contracts for clinics and nursing homes. A 4 percent decline is expected this year due to the financial constraints affecting the managed-care industry. The public buildings category, including detention facilities and courthouses, grew 25 percent in

Public works construction

Project contracts increased by 8 percent in 1999, with growth in most building types. Murray predicted that this will slow slightly to 5 percent for 2000 but rebound to 6 percent for 2001. Highways, bridges, and mass transit were boosted by financing from the Transportation Equity Act for the 21st Century (TEA-21). The growth shown by airport-related construction was exceptional, even though

Internet-based retailing has not, it seems, influenced store construction, except in a positive way: Growing demand for warehouse space will contribute to a 10 percent increase in warehouse construction during 2000.

Office construction during 1999 showed stability in dollar volume; however, there was a 5 percent decline on a square-foot basis. Developers and lenders are showing greater discipline, assess-

THE CONSTRUCTION INDUSTRY IS NOW "ROUNDING THE PEAK" OF ITS HISTORY-MAKING EXPANSION

runway and terminal construction is not expected to match the surge of activity that occurred in 1999, when these increased 31 percent and 143 percent, respectively. But activity should remain high through the rest of 2000, compared to the standards of recent years. A new federal aviation bill that passed in the spring of 2000 will offer additional financial support for airport construction, especially at regional airports.

ing project viability more thoroughly than in the past.

Multifamily housing improved 11 percent in dollar value during 1999, and another percent gain is projected for 2000. Real-estate financiers see multifamily housing as an attractive investment, and new downtown apartment projects are the result of the "smart growth" initiatives under way in some metropolitan areas.

Hotel construction seems to be the most vulnerable building type in the income-properties group. In 1999 a retrenchment for limited-service accommodations resulted in a 6 percent decline, with a 2 percent drop predicted for 2000.

Income-property buildings

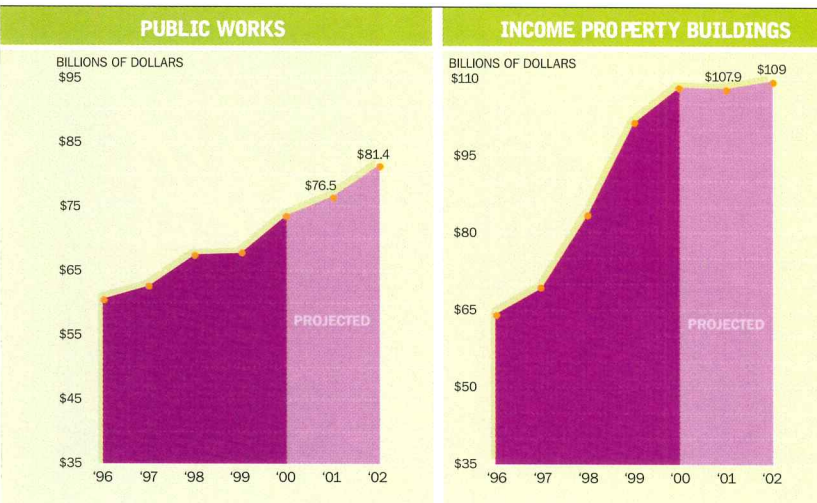
This market grew a remarkable 20 percent in dollar volume between 1997 and 1998, with a 6 percent increase reported for 1999. This year some building types in this sector have continued to gain ground while others have lost some, so no gain in this market is predicted for 2000, although there is a chance for growth of about 2 percent in 2001. Tightened lending policies have had a major impact on this sector.

Store construction has closely followed the pattern for single-family housing, with growth in the residential market spurring new retail projects. Developers and retailers have been extremely competitive, introducing new project types, such as entertainment-based complexes and large outlet centers. Considering that store construction hit an all-time high in 1999, a 4 percent drop for 2000 is no surprise.

The bottom line

Total construction contracting is projected to rise about 3 percent during 2000, down from the 10 percent increase of 1999. CIG's Murray believes the construction industry is now "rounding the peak" of its history-making expansion. A similar rate of activity can be anticipated for 2001, as the economy settles into a soft landing, although growth may come from a different mix of market sectors.

The greatest indicators of slowed growth will be seen in single-family housing and income properties, while activity in public works and institutional building will underpin these sectors with a measure of stability. ■



Federal funding for transportation will keep public works strong. Apartments lead the way in income-properties spending, as retail and office have slowed.

will be 10 percent above the annual average for the 1990s.

Institutional building

This market sector grew by 18 percent in 1999, is on track to post another 5 percent increase in dollar volume this year, and is projected to grow 3 percent in 2001. The strength in this sector is largely due to the healthy status of state and local governments. Educational building grew 24 percent in 1999 due to the passage of many school construction bond

1999 and is expected to stabilize in 2000.

Sports arenas and theaters showed steady growth during the second half of the 1990s, but both types have slipped back from their recent peaks. The big push has come from spending on large convention-center projects. During the first half of 2000, the dollar volume of convention-center work was over five times what it was in 1999, increasing because of large projects in Washington, D.C., Orlando, and Boston.

Snapshot



By Ingrid Whitehead

“You felt as if you were at the bottom of a pit,” says architect Francois de Menil about the preexisting state of the courtyard he renovated for a private New York City elementary school. Contained in what was once a brownstone with a 17-by-20-by-20-foot exterior space set 20 feet below street level, the Upper East Side school was in need of a transformation. Set back from the faculty kitchen, the outside area was ignored by teachers, who would much rather enjoy their morning coffee or between-class breaks in a more peaceful place. De Menil, who attended the school, as did his son, saw potential and offered to re-create the courtyard from the dungeon-like vault it was into a space more conducive to contemplative and relaxing moments for the faculty.

Challenged with minimal sunlight in the courtyard (numerous past attempts at live plantings had been thwarted by the lack of natural light), de Menil chose simple devices to create horizontal sightlines. He knocked out the existing tripartite facade and installed a floor-to-ceiling glass window/wall and door between yard and

Finding new horizons in an Upper East Side courtyard

Snapshot

lounge, creating an aperture that would allow sunlight in.

Drawing inspiration from the paintings of artist Bryce Marden, the sculpture of Constantin Brancusi, and from nature itself, de Menil put river-washed stones along the walls, pulling the black-granite floor away from them and creating an ambiguity of beginning and ending planes. He then reorganized the space in the yard with the introduction of colored walls—two colors, one above and one below the idealized sightline—designed to trick the eye into seeing an infinite horizon. To this effect, he also installed a row of sunken lights that wash the north-facing wall at night, reinforcing the idealized horizon. “I wanted to achieve the same sightlines you might see when staring out into the sea,” says de Menil.

References to—or substitutes for—trees followed, with the installation of three bronze totems of varying heights. Each totem consists of a welded steel structural tube that was lowered into the courtyard by crane, then fitted with patinated bronze drums in four sections that seem to balance precariously upon one another while reaching upward. According to de Menil, the totems, through their varying sizes and heights, represent the aspirations of education and amplify the sense of perspectival depth created by the horizon line. With a nod toward building blocks as well, the totems give a whimsical yet elegant, forestlike feel, activating the space. ■



In the courtyard, patinated bronze totems, 15, 12, and 9 feet high, act as a substitute for trees and stand as symbols of the aspirations of education.





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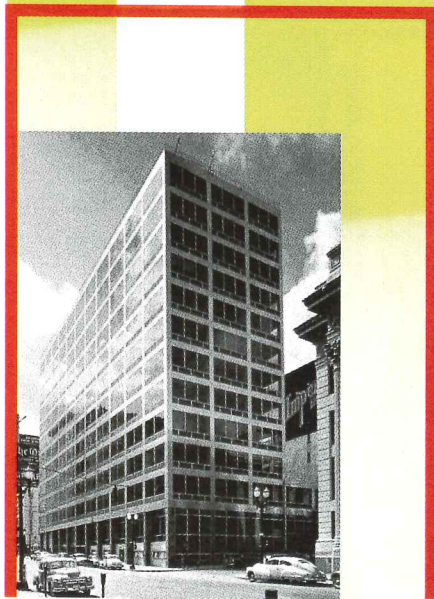
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Tales from the Avant-Garde:

How the New Economy is Transforming

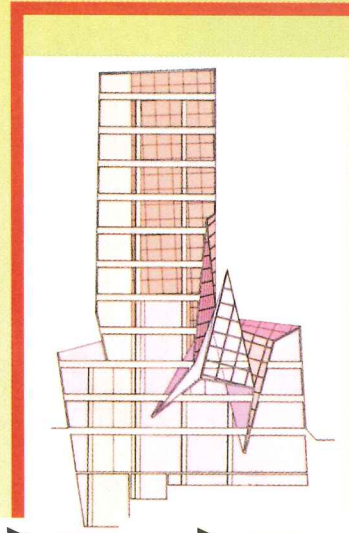
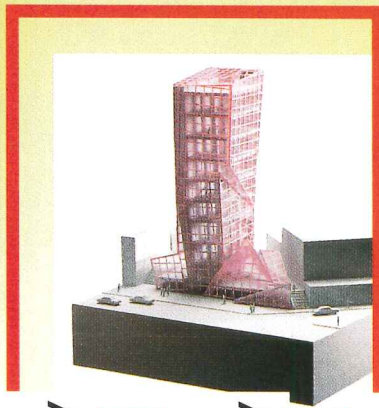
By Michael Speaks

Colin Rowe's story about Modern architecture's trip across the Atlantic Ocean in the early part of the last century galvanized a generation of would-be avant-gardists. In the introduction to *The Five Architects* (1972), Rowe told how form and ideology became separated on the journey from Europe to America. Ideology remained in Europe or dropped off somewhere in the cold depths of the Atlantic, while form arrived on American shores to become the preferred style of corporate America. It was this "International Style" architecture that was subsequently repackaged and sold to the rest of the world, including Europe, as truly modern. And it was this same architecture that inspired a generation of avant-garde architects and critics to reconnect form and ideology and make Modern architecture politically relevant.

Rowe's story line also could apply to the arrival of "theory" on American shores in the 1970s. Like modern architecture, theory made its passage from Europe to America, where it took on a lighter, more occasional existence. A collection of mostly French, German, and Italian philosophical tracts, theory was introduced into the American academy through departments of comparative literature and was immediately recognized by all as a wondrous new mode of contemporary thought. In Europe, Jacques Derrida and Gilles Deleuze were philosophers, but in America they became theorists. Theory was portable—it could be attached to almost any field of study: film, literature, anthropology, art history, even architecture. Portable too,

Left to right: Pietro Belluschi, Equitable Building, Portland, Ore., 1948; Peter Eisenman, Alteka Office Building project, Tokyo, 1992

Michael Speaks has a Ph.D. in literature from Duke University, where he worked with Frederic Jameson at the Center for Critical Theory. He is head of the graduate program and director of the Metropolitan Research and Design Postgraduate Degree at the Southern California Institute of Architecture in Los Angeles.



Theory and Practice

because it had been translated into American English, thereby freeing it from the bonds of national identity or professional affiliation.

Theory carried all the punch of philosophy without the windy German preambles and recondite French qualifications. More important, it could be mastered (so it seemed) without years of study, political affiliation, or deep knowledge. Theory was a weapon of the young, the post-1968 generation wearied by the morality and slowness of their elders. Theory was fast philosophy, but it arrived in architecture late, as Mark Wigley has so famously and so frequently pointed out. And when it did, it was inevitable that theory and the formalist Modern architecture described by Rowe would cross paths.

Word and form meet again—briefly

Rowe's story gives us a way to understand more clearly the contemporary avant-garde's ambitions to reestablish the social mission of Modern architecture, to reconnect word and form, and to do so in a formal vocabulary that is recognizably modern. Nowhere has this been more evident than in journals of the 1980s and 1990s, such as *Assemblage* and *ANY*. In these magazines and in their sister publications and conferences, theory was attached to experimental form in an attempt to create a critical, resistant, avant-garde architecture with left-leaning sympathies. The use of theory as a guarantor of avant-garde credentials began in earnest with *Oppositions*, the journal produced by Peter Eisenman's Institute for Architecture and Urban Studies from 1973 to 1984, and has continued in its progeny, *ANY* and *Assemblage*, as well as in other publications. Perhaps the last attempt to make this connection between ideology and form occurred in the 1993 *Architectural Design* issue "Folding in Architecture." Guest-edited by former Eisenman protégé Greg Lynn, the publication used Gilles

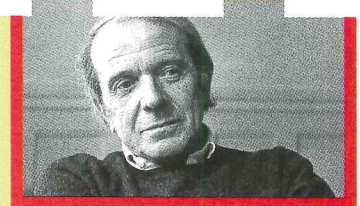
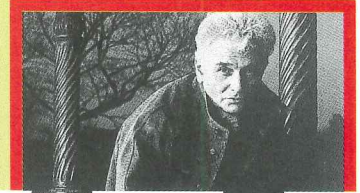
Deleuze's *The Fold: Leibniz and the Baroque* to launch a folded formal style that enjoyed a period of intense, though brief, popularity.

But sometime in the mid- to late 1990s the avant-garde desire to reconnect form and ideology diminished. Form began to melt into blobs and fields of data while ideology loosened up and became reconfigured as identity "branding" and "lifestyle" issues. As pop science, new computer-animation software, and branding became more pressing issues in architecture, the "critical" position ostensibly enabled by theory began to loosen its hold on the avant-garde. Summing up the mood in *MOVE* (1999), their aptly named guidebook for networked architecture practices, Dutch architects Ben van Berkel and Caroline Bos declared on the eve of the new millennium that architects would soon become the fashion designers of the future. Architects, they proposed, should form alliances with management consultants, engineers, marketing specialists, and other "creatives" to become change managers in a world in which change is the only constant.

The truth of this observation seemed to put an end to theory once and for all. Theory, or what little there is left of it today, remains resolutely critical and resistant to the emergent commercial reality driven by the forces of globalization. Weighed down by its historical attachment to philosophy, theory has not been free or quick enough to deal with the blur of e-commerce and networked, open systems. Ultimately, theory, and the avant-garde work it supported, has proved inadequate in the vicissitudes of the contemporary world. And so today we stand at the end of a historical period of experimentation dominated by Rowe's little story.

Another story begins

A new story has recently emerged that is not so much about ideology and form as about an emergent global fascination with dot.coms, the



Above, top to bottom: **Colin Rowe, Jacques Derrida, and Gilles Deleuze**

Opposite page: **UN Studio, Ben van Berkel and Caroline Bos, HOV Bridge, Utrecht, 1998**

> > > > > > > >

new economy, and management culture. All of these have superseded the distinction between the avant-garde and the commercial world it was forced to renounce and resist. What has emerged instead is a new distinction between two forms of architectural practice, one entrepreneurial, one corporate. Both, however, acknowledge that they are commercial enterprises competing in the global marketplace.

The ascendancy of the new economy has focused attention in the U.S. on a new breed of entrepreneurial managers who are showcased in business lifestyle magazines such as *Fast Company*, *Red Herring*, and *Business 2.0*. Elsewhere, in Britain and on the Continent, the focus has been on a fresh generation of management consultants working in think tanks such as Demos in London or the Advanced Management Program in Stockholm.

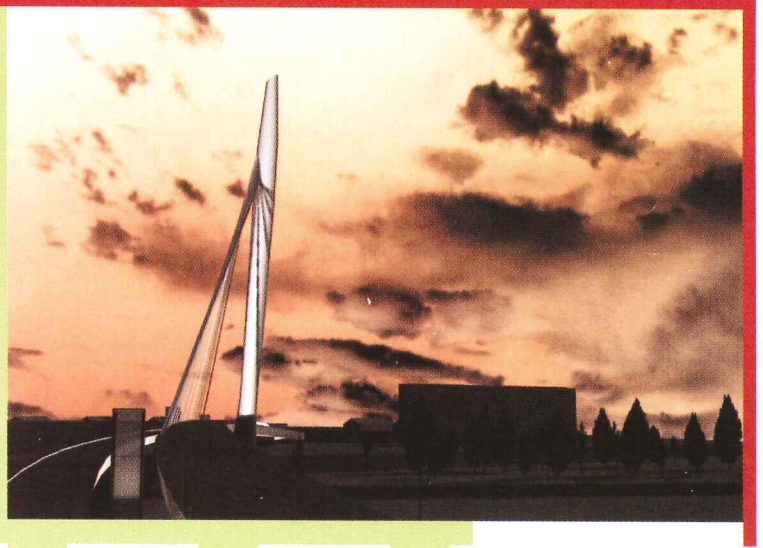
Though witnessed primarily in the fast-paced world of global business consultancies, these managerial post-avant-gardists are showing up with greater frequency in the world of high design, architecture, and urban planning, especially in architecture schools. Two of the most aggressive are the AA's Design Research Laboratory and SCI-Arc's new postgraduate Metropolitan Research and Design Program. Both programs assert that architecture should no longer recoil from the degraded world of business and managerial thinking. On the contrary, it should aggressively seek to transform itself into a research-based business. This sober assessment has become the primary motivator for a fleet-footed

generation of architects and urbanists who today must develop design strategies "soft" and flexible enough to compete in a constantly changing global marketplace.

Market model for new architectural practices

One of the most enterprising responses to this challenge has been proposed by Alejandro Zaera-Polo, principal of London-based Foreign Office Architects (FOA). In a recent essay, Zaera-Polo constructed a map of contemporary design practices based on what he calls a market model rather than a bureaucratic model. Zaera-Polo is interested in producing an instrumental map of practices that young offices can use to create flexible ones of their own, thus enabling them to respond better to the new market reality of globalization. What he calls "a niche-seeking map" is a pragmatic device for adjusting practices to changing conditions. The purpose of the map, he suggests, "is not to discover 'what's cool,' but rather what is yet to be exploited." As Zaera-Polo explains, we no longer live in a single world dominated by Le Corbusier or Mies, but in a world made of worlds, each governed by its own set of conjectures about the truth.

But what are practices in this sense? They are the techniques, relationships, intelligence, and dispositions that shape design. These intangibles add value and ultimately distinguish one firm from another. Practices result in designs and buildings: rather than requiring us to carry



WEIGHED DOWN BY ITS HISTORICAL ATTACHMENT TO PHILOSOPHY, THEORY HAS NOT BEEN FREE OR QUICK ENOUGH TO DEAL WITH THE BLUR OF E-COMMERCE AND NETWORKED, OPEN SYSTEMS.

out a design with instructions from the client, the “intelligence” gleaned from these practices allows us to manipulate the conditions under which designs and buildings are produced. At the same time we can search for new opportunities that can be exploited. Such practices, in other words, allow a greater degree of innovation because they encourage opportunism and risk taking rather than problem solving. These practices are thus more flexible than either styles or identities; they can adjust to changing conditions without being locked into formalistic or national or regional design signatures.

Another form of this entrepreneurial-managerial approach can be seen in the emerging world of “rapid prototyping.” Here the search for “new” prototypes that solve specific problems is displaced by prototypes focused on binding together teams that innovate. As MIT Professor Michael Schrage has argued, the most innovative practices today use rapid prototyping as a way of design-thinking and not as a way to move more quickly to a final design. This, I would suggest, is how offices like L.A.-based Greg Lynn Form use design animations, how MVRDV in Holland uses “datascares,” and how Crimson and MAX, also from Holland, deploy scenario learning in urban planning. The focus is on the “soft” or flexible, the global, and the networked, three features business sage Kevin Kelly has identified as significant for the emerging new economy.

The managerial disposition sketched above has made a strong

break with the avant-garde practices enabled by Rowe’s story. It is not simply another intellectual fad or crutch for architecture, however. This break requires that we reexamine the problematic relationship between thinking and doing in architecture, an issue at the heart of the work of Gilles Deleuze, perhaps the last of the great “theory” figures. Deleuze wanted to shift our attention away from thought that tethered us to fundamental truths and toward thought that would enable us to act. But Deleuze was still too much a philosopher to acknowledge the awkwardness of theory when compared to the conceptual athleticism of consultants and business thinkers whom he scorns in the introduction to *What is Philosophy?*, written with Felix Guattari (1991 French edition; 1994 English).

After the end of theory

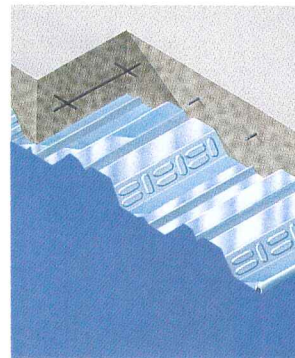
Just as theory confronted philosophy with its slowness and morality, so today does managerial thought confront theory with its historical connection to the dreams and utopian aspirations of philosophy. Despite the best efforts of his American adherents and “French theory” translators, and indeed despite his own prejudices against management thinking, Deleuze’s desire to develop a practical mode of thought free and fast enough to act in the world would never be brought to fruition. No, the freedom of movement so important to Deleuze, and indeed all theorists, will instead be realized by intellectual entrepreneurs and managers of change as they confront the fiercely competitive world thrown up by the forces of globalization.

There is indeed important work to be done in the realm of architectural thinking after the end of theory, *ANY*, *Assemblage*, and the like. But if it is to survive and flourish, this work must focus on time, interactivity, and innovation, and give up its obsession with space, genius, and the utopian search for the new. ■

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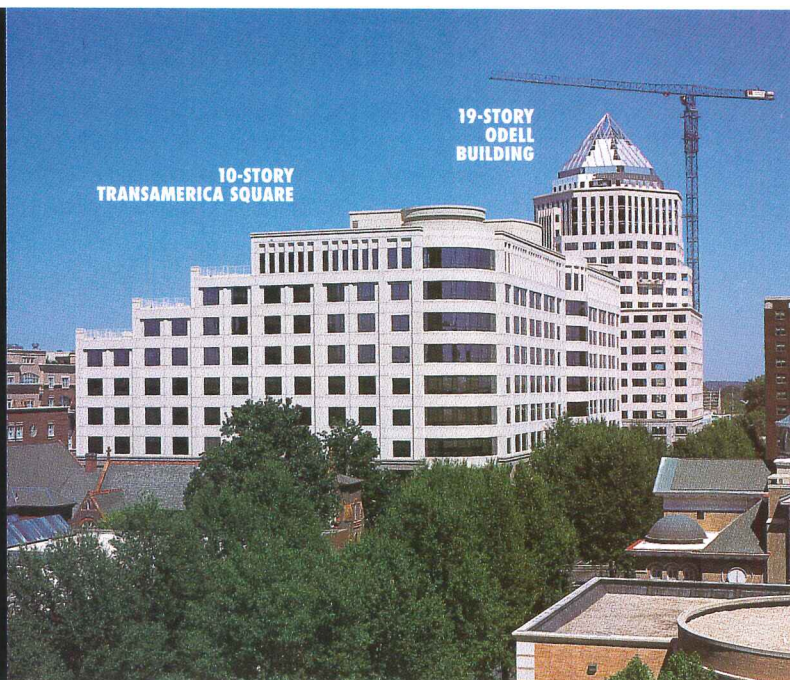


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ODELL BUILDING - DEVELOPER: The Harris Group - ARCHITECT & STRUCTURAL ENGINEER: Odell Associates - GENERAL CONTRACTOR: Shelco Inc.
STEEL FABRICATOR: Steel Fab, Inc. - STEEL ERECTOR: Williams Erectors

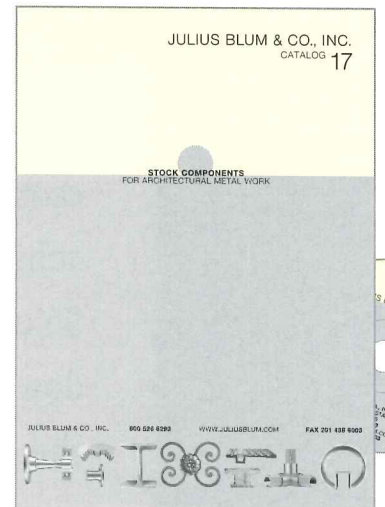


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CIRCLE 40 ON INQUIRY CARD

Design Vanguard

THIS YEAR'S GANG OF TEN YOUNG DESIGN FIRMS OFFERS INTRIGUING IDEAS OF WHERE ARCHITECTURE IS HEADED. THINK OF IT AS A ROAD MAP TO THE FUTURE.

Looking for patterns in the work of 10 young firms from around the globe is much like taking a Rorschach test: the results say as much about the observer as they do about the architects. But at least to this observer, there seems to be some common ground among the remarkably diverse firms selected by RECORD's editors as the Design Vanguard of 2000.

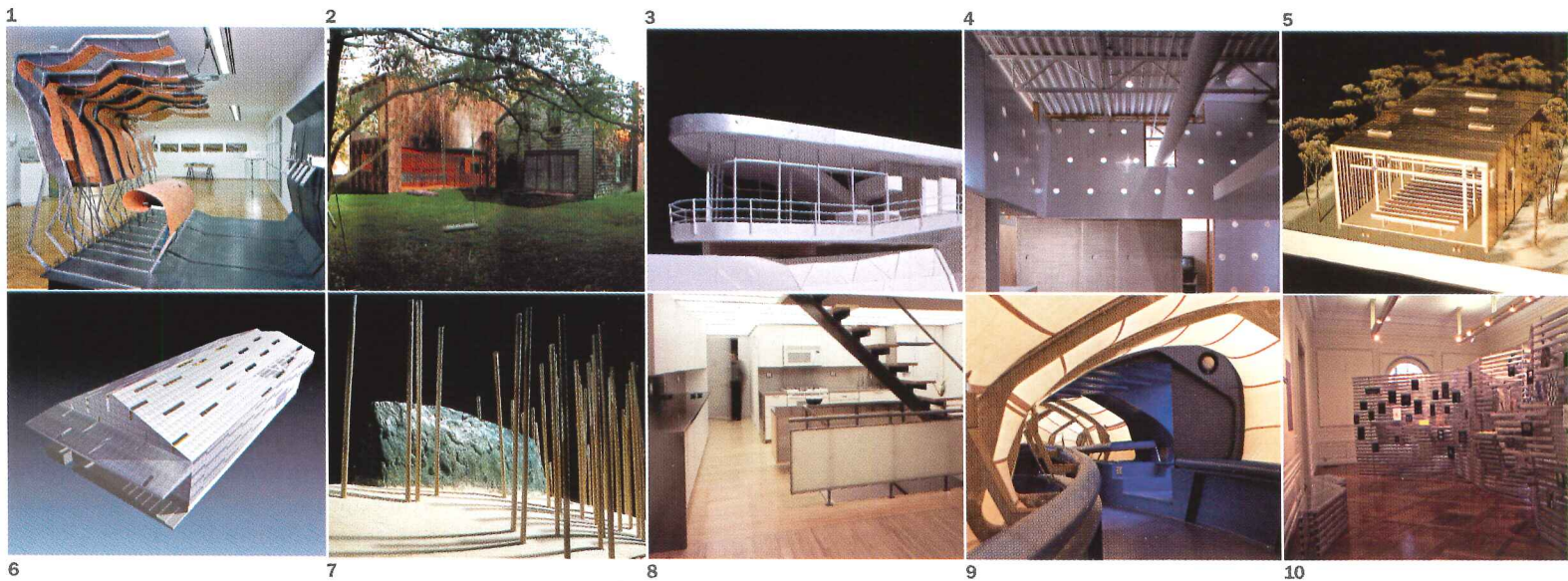
Most important, there is a common concern with the relationship between landscape and the built environment. Individual responses, though, vary—from a poetic hull tucked in the woods and a copper-clad sanctuary surrounded by trees to a brightly colored machine for living and a collagelike house that both reflects and absorbs elements of nature. At the same time, many of the firms are exploring issues of assemblage, lavishing attention on the connections between building elements and devising flexible systems for using standardized pieces. Without necessarily sacrificing the dramatic formal gesture, these architects exhibit a keen interest in the way their work gets built and a desire to get the details right.

The firms featured are:

1. Garofalo Architects
2. Cho Slade Architecture
3. Atelier Hitoshi Abe
4. Design Office
5. John Ronan
6. Kuth/Ranieri Architects
7. Sanaksenaho Architects
8. Lewis.Tsurumaki.Lewis
9. Birds Portchmouth
Russum Architects
10. SHoP/Sharples
Holden Pasquarelli

Inspired by new materials and the complexities of modern society, some of the architects are layering designs to create a series of thresholds or a sequence of skins that alternately reveal and conceal what's happening inside. All sorts of plastics, polycarbonates, and sophisticated glass products are making such strategies possible today. They also give architects the chance to explore issues of privacy and enclosure that have been brought to public attention by museum exhibitions and the intrusions of digital technologies in everyday life.

Like any small sampling, the following group of 10 design firms cannot reflect the full range of work being done by a new generation of architects. But it offers at least a partial view of the talent pool and who's making waves today. The work presented here includes both built projects and jobs that are still on the boards. Three of the firms are foreign, two include identical siblings, several involve married couples, seven have never been published in our pages before, and only one comes from southern California. The firms were selected after RECORD consulted deans of architecture and critics around the country and then reviewed design portfolios. We plan to make an annual event of showcasing emerging voices, dedicating much of our December issue to architects new to our readers. While some deserving firms may not have made it into this year's lineup, we hope they'll be included in the future. *Clifford A. Pearson*



GREG BALUTA (4); COURTESY THE ARCHITECTS (8); JONATHAN MALLIE (10)



Doug Garofalo transforms the conventional with dynamic forms

By Sarah Amelar

Architect: Garofalo Architects

Location: Chicago, Ill.

Design staff: 4

Date established: March 1992

Principal: Doug Garofalo (above)

Education: B.Arch., University of Notre Dame, 1981; M.Arch., Yale University 1987

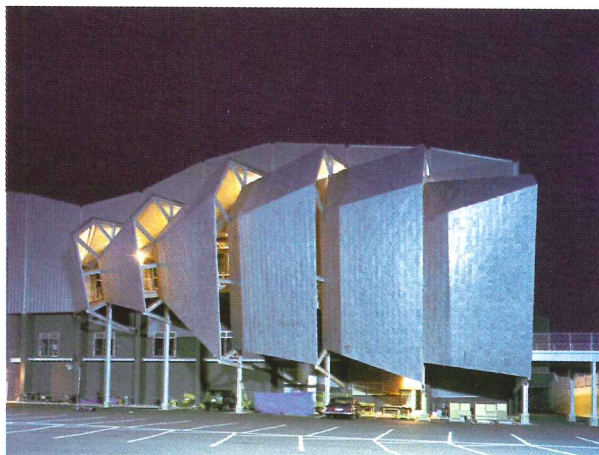
Work history: William Graham Associates (Seattle/Vancouver); Kessler Mercier Architects (Chicago); Solomon Cordwell Buenz (Chicago)

Key completed projects: Derman Residence, Skokie, Ill., 1992; Thronton Tomasetti Engineers Offices, Chicago, 1999; Korean Presbyterian Church of New York (with Greg Lynn FORM and Michael McInturf Architects), Queens, N.Y., 1999; Markow Residence, Prospect Heights, Ill., 1999

Key current projects: National Time Museum Exhibit, Chicago Museum of Science and Industry (January 1, 2001); Gosczyzcki Residence, Chicago. (Fall 2001); Manilow Residence, Burlington, Wis., (Summer 2001); 2001. Design for Space Travel exhibit, Art Institute of Chicago (March 2001)

Web site: www.garofalo.a-node.net

Korean Presbyterian Church of New York, Queens, NY, 1999.



I've never been attracted to an already-established architectural scene," says architect Doug Garofalo, the principal of his own small Chicago firm. "There's no set way to experiment in this city, and I'm happy with that; no current Chicago school or style," he continues. "It's possible to build here, and the ground is still fertile from the city's architectural [heyday] decades ago." Garofalo, who grew up in upstate New York, hadn't envisioned ending up in the Windy City, but soon after his graduate studies at Yale Architecture School, he recognized Chicago as a place where he could practice, build, and teach. He accepted a teaching position at University of Illinois at Chicago School of Architecture 12 years ago, and has since risen to the post of associate professor. Currently he teaches a studio at Yale.

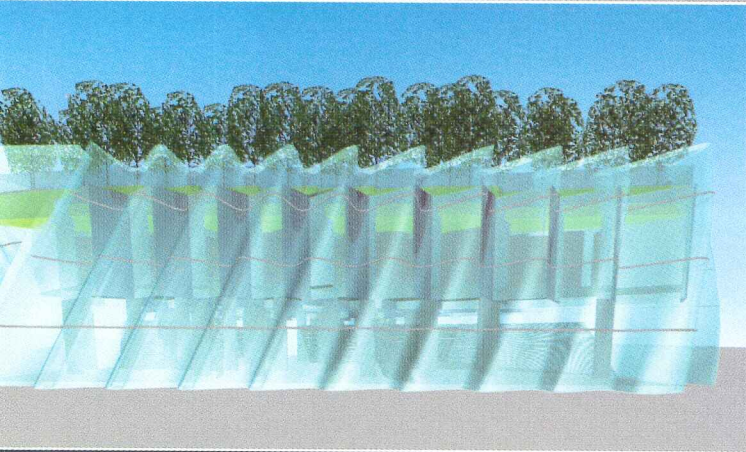
Although handwork and craft have long interested him, he, like many in his generation, has become captivated by the potential of new digital technologies. "Right now," he observes, "technology and the ubiquity of information are just tools—powerful tools—that are everywhere, changing how we do many things. We can now think about spaces and shape them in ways that weren't possible before."

Throughout Garofalo's work, complex geometries fold and bend, departing decisively from the orthogonal. As he puts it, "we're trying to push the envelope of what architecture is formally." In part because he is a relatively young architect, many of his projects have involved existing buildings, which he has transformed. In the Chicago suburbs, he has burst the seams of seven conventional ranch houses, introducing a multiplicity of dynamic forms and intense colors. His designs do not erase what is already there, but provide a potent counterpoint. Similarly, at the Korean Presbyterian Church in Queens, NY, Garofalo collaborated with architects Greg Lynn and Michael McInturf, using bold formal invention to turn a Moderne laundry building into a house of worship.

Garofalo's work, which evolves in close collaboration with his staff, has often been characterized as edgy but easy to inhabit and responsive to ethnically complex community settings. The firm has sought to confront weighty and difficult social issues, including Chicago's current

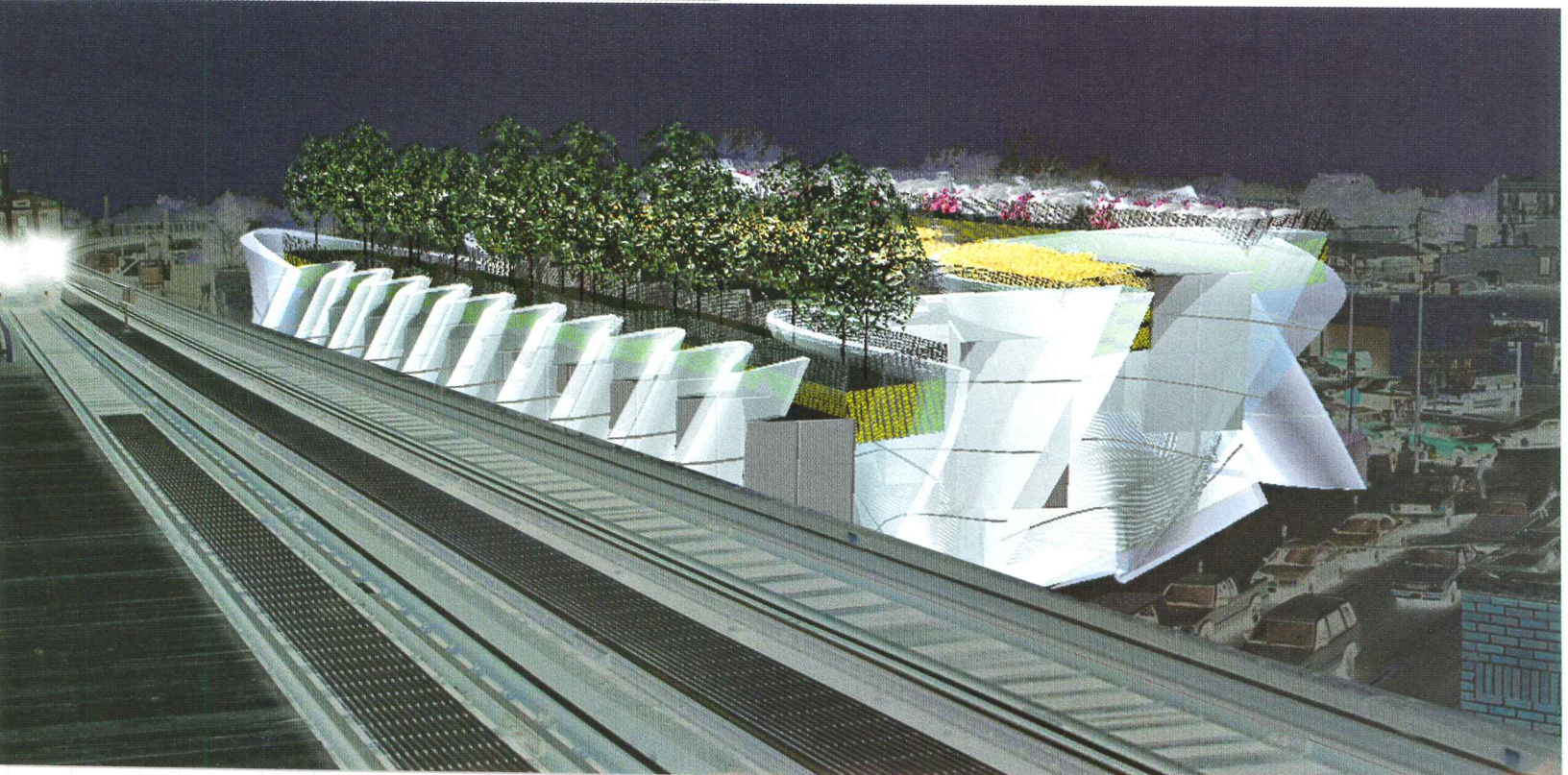
housing crisis. In designing the Loess system temporary housing (unbuilt), for example, the architect proposes an assembly of individual, but interconnected, shelters: a transitional place between true homelessness and more secure housing. An adaptable architecture, with undulating walls, the design reflects the fluid and ad-hoc character of its use. With plantlife and light penetrating the semiporous structures, Loess also attempts to create a hybrid—interconnecting ecosystems, buildings, and landscape.

In all his projects—ranging from transitional housing to a church—Garofalo intends his architecture to be, as he says, "experimental but not removed from reality." ■



**Loess.system
Temporary Housing
Chicago, Ill.**

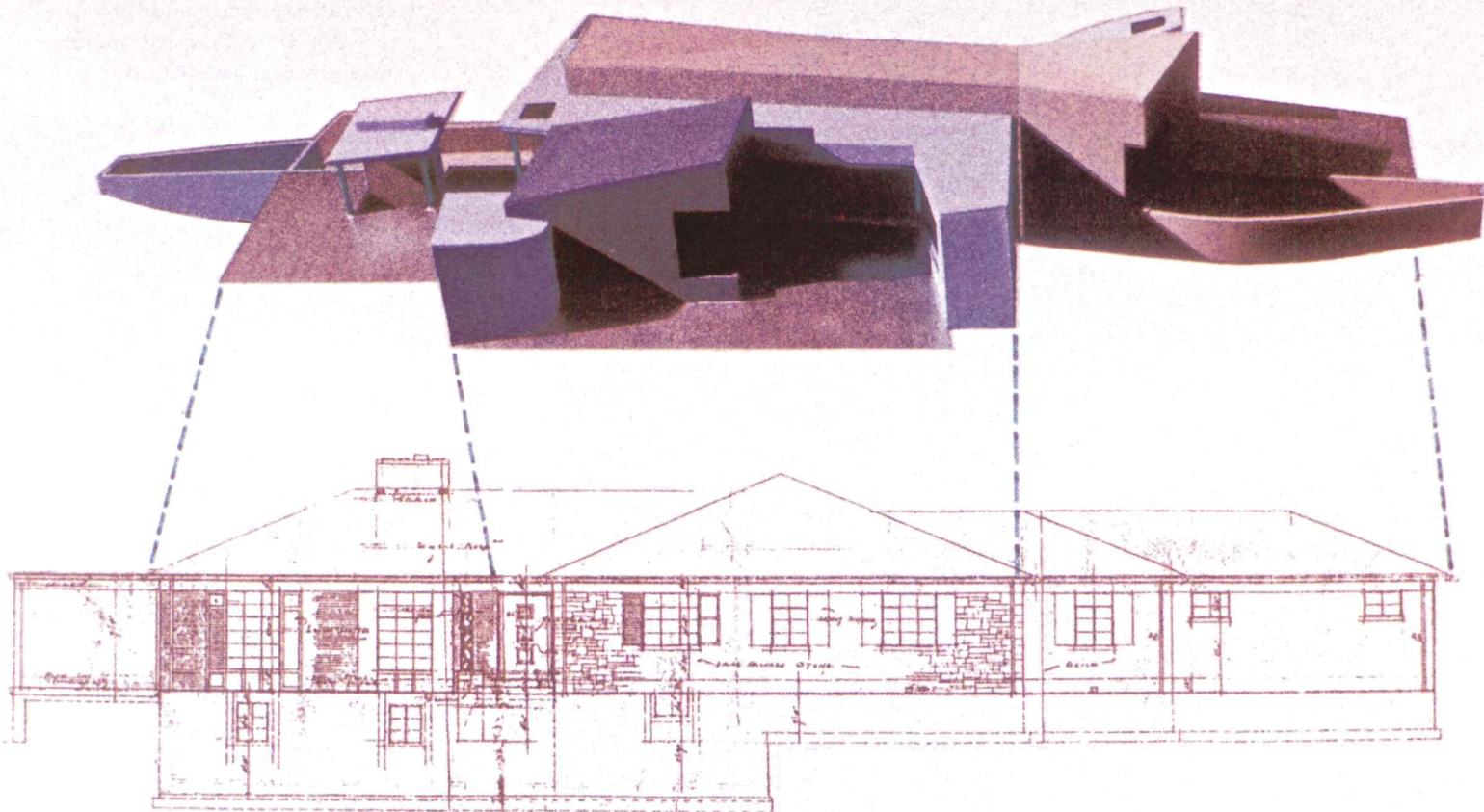
In this yet unbuilt project, Garofalo responds to difficult social conditions, proposing a transitional place between complete homelessness and more permanent housing. A small walkable city of individual but interconnected shelters, this undulating and adaptable architecture reflects the fluid nature of its use. Viewing the landscape as both therapeutic and dynamic, the architect creates a hybrid of natural and built forms.



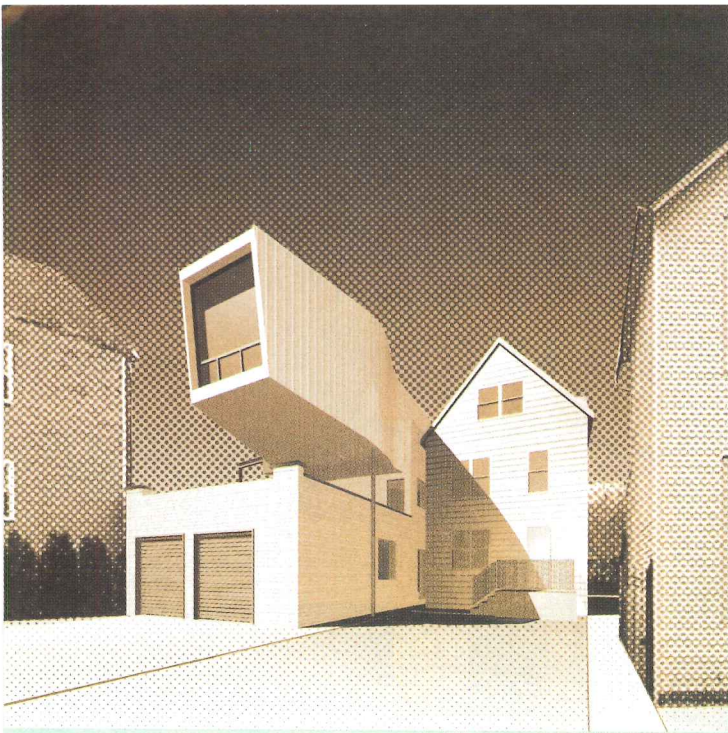
Chen Residence
Winnetka, Ill.

This renovation and second-story addition to a classic “ranch” house plays off the common practice of “landing” a standardized building and style on a suburban lot with no adjustments to specific site conditions. Adding a level with space for sleeping, bathing, storage, exercise, and outdoor relaxation, Garofalo carefully consid-

ered the views and points of entry, as well as the features of its conventional context. The architect has returned repeatedly to suburbia—to complete some seven bold renovation/additions and a few interiors—where he has evolved a vocabulary of form and color that is dynamic and nontraditional but nonetheless site-responsive.







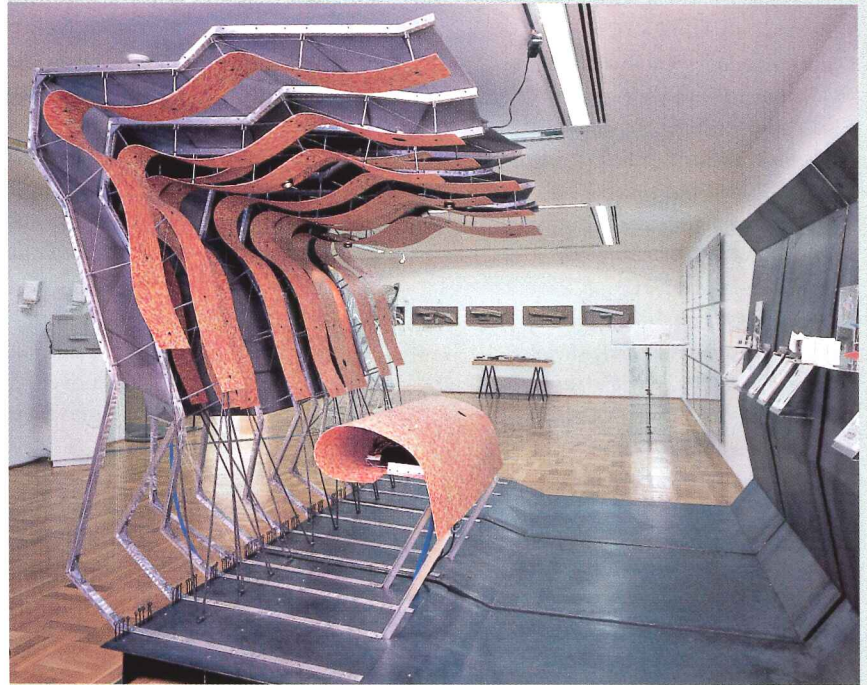
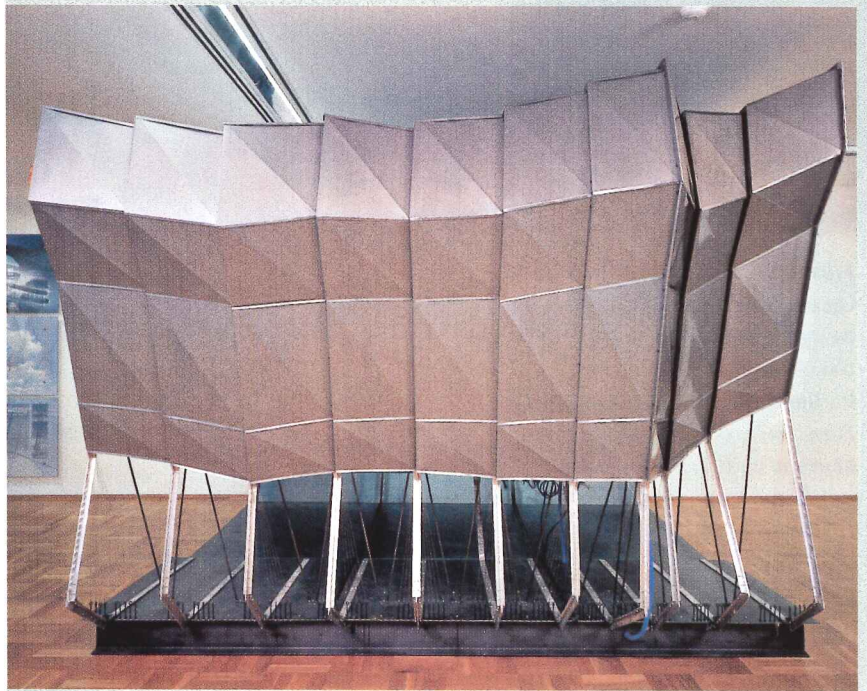
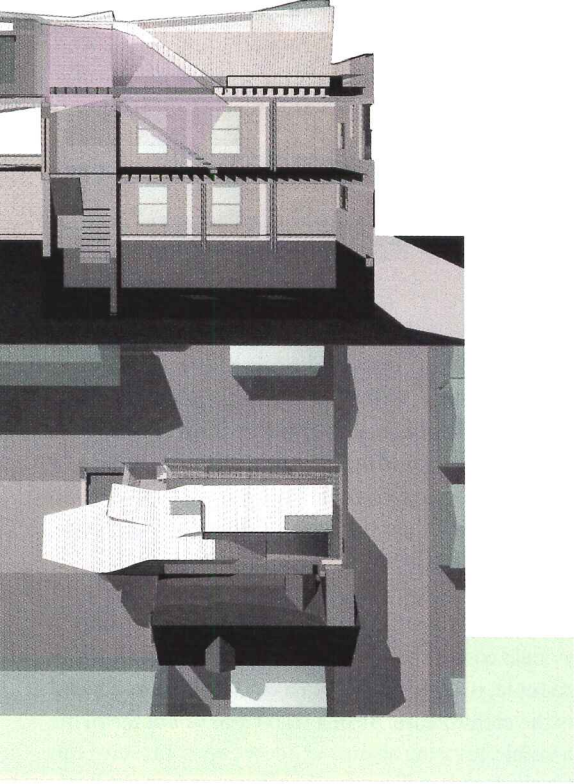
**Goszczycki Residence
Chicago, Ill.**

This project began with an eccentric pair of connected buildings: a balloon-frame house joined to a brick structure (a former gear factory) by a below-grade and an above-grade passageway. The odd condition, circa 1927, would not meet zoning codes if erected today, but Garofalo's client, a bachelor, wanted to retain the interconnectedness. Meeting current setback laws, which place upward additions near the lot's center, the architectural strategy became one of extrusion. Extending from the masonry building's existing third floor, a new volume hangs, as if afloat, from a suspension bridge.

**Offices of Thornton
Tomasetti Engineers
Chicago, Ill.**

For this 15,000-square-foot office—an entire floor of the Chicago Information Technology Exchange—the client wanted to project a forward-looking image from one of the city's most technologically advanced sites. Garofalo Architects conceived the interior as a city, designed to channel the efficient flow of people and data through open offices and communal work and conference areas.

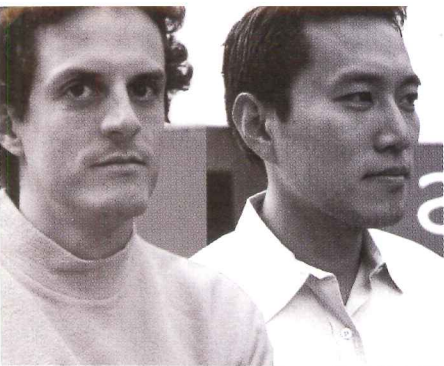




PHOTOGRAPHY: © JON MILLER/HEDRICH BLESSING

IN.FOrmant.system Chicago Museum of Contemporary Art

This full-scale prototype newsstand was originally built for the exhibit "Material Evidence: Chicago Architecture@2000" at Chicago's Museum of Contemporary Art. To consider issues of materiality in relation to a newsstands program, Garofalo seized the opportunity to project digital technology into the public realm. A swarm of zinc-clad enclosures house various time-sensitive, interactive information-disseminating programs.



Cho Slade Architecture combines nature and building in collagelike designs

By Sarah Amelar

Architect: Cho Slade Architecture

Location: New York City

Design staff: 3

Date established: April 1998

Partners: Minsuk Cho (above, right),
James Slade (above, left)

Education: Minsuk Cho—B.S. in
architectural engineering, Yonsei
University, 1989; M.Arch, Columbia
University, 1992; James Slade—B.A.,
Cornell University, 1988; M.Arch,
Columbia University, 1993

Work history: Minsuk Cho—
Kolatan/MacDonald Studio (NYC);
Polshak and Partners (NYC);
Office for Metropolitan Architecture
(Rotterdam); James Slade—
Rick Mather Architects (London);
Polshak and Partners (NYC);
Richard Gluckman Architects (NYC)

Key completed projects: Pekarsky
Residence, NYC, December 1999;
Williams Residence, NYC,
November 1998

Key current projects: Illang House,
Ansung, Korea (2002); Williams
Residence, Seattle, Wash. (2001)

Web site: www.choslade.com
(currently under construction)

Min Cho and James Slade have compared their architectural works to the large-scale pixellations that television broadcasters sometimes use to abstract and obscure pornographic images or the identities of interviewees. The architects are not likening themselves to censors, but instead underscoring their tendency to leave existing conditions intact but not fully decipherable.

Cho and Slade view the manmade and the natural as a continuum—almost as if their architecture could pass through its filter a discrete area of a larger field condition. In their yet-unbuilt Illang House in Ansong, Korea, for example, readings of the surrounding terrain depend upon how land meets the architecture: As in a terrarium or ant farm, the loose soil of a berm is visible, pressing against window panes. Elsewhere in the project, a mirror on the facade reflects a collagelike swatch of the landscape, while a stream threads beneath the house. And in the Old Residence in New Canaan, Conn., fragmented stone walls, the vestiges of ancient farms that striate the site like phantoms of its past, are drawn out and expanded upon, becoming the salient features of a house addition.

Similar principles of continuity and abstraction apply to the firm's larger-scale projects. When envisioning the city of Paju, South Korea, for a recent architectural competition in which they placed third, Slade and Cho eschewed the idea of creating an idealized image from a *tabula rasa*, supplanting or obliterating the site's topography and other features. "A city does not happen in a day, and one person does not create it," the architects have written. "The city of Paju should evolve from what is currently there: a mountain, empty fields, a wetland, an access highway, a river." Thus a lushly planted ramp weaves its way, like a ribbon of green, into their proposal's built forms.

In Paju and much of Cho Slade's work, temporality plays a key role. Seasonal changes and the circadian rhythms of daily use are factored into the design. At Paju, such infrastructural elements as ramps remain accessible as public meeting spaces after the building closes for the night. And since the competition brief mandated multiphased construction, the architects designed each stage in a way that prevents the project from feeling incomplete or "still under construction" as it progresses. Their scheme accommodates what they call "metamorphic growth"—which they compare to a tadpole becoming a frog—and "incremental growth"—which is akin to a sponge expanding over time.

In the design process, Cho and Slade have evolved a method of computer photographic collage that they say allows them to "develop material characteristics and site conditions as a continuum"—unlike traditional line drawings that tend to accentuate edge or boundary conditions. "People sometimes assume we're computer whizzes," says James Slade. "But, in fact, our method grew out of unsuccessful struggles with [software] Form Zero. We needed to devise a process we could work with, one that really reflected our thinking. We realized that you could look at many designs out there and tell immediately what software they used." Cho Slade's renderings are visually compelling and highly evocative of their abstracted ideas. So far, this young firm has yet to complete any of its ground-up designs, but it will be interesting to see the ultimate translation to built form. ■



**Paju Asia Publication,
Culture and
Information Center
Paju, South Korea**

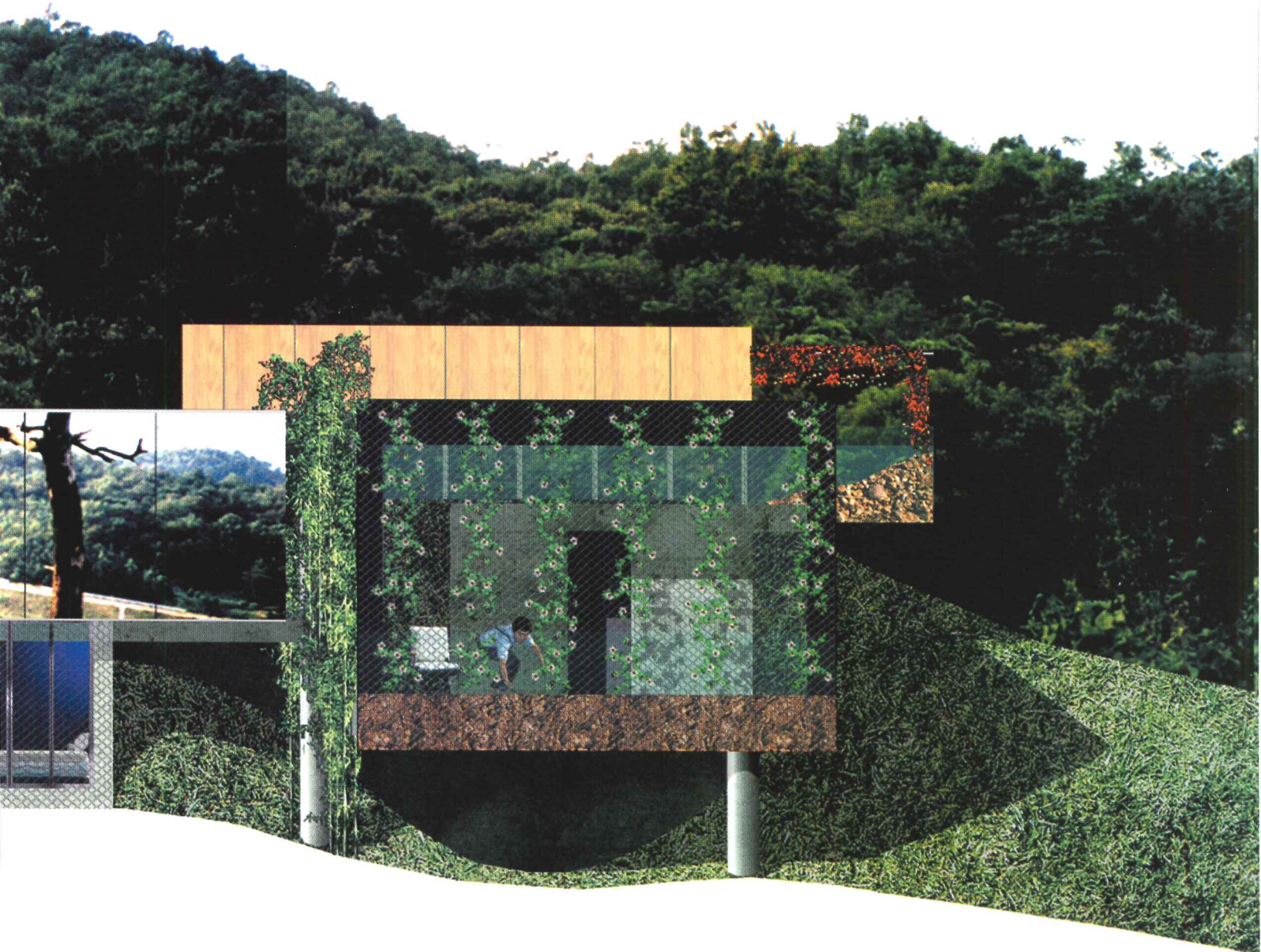
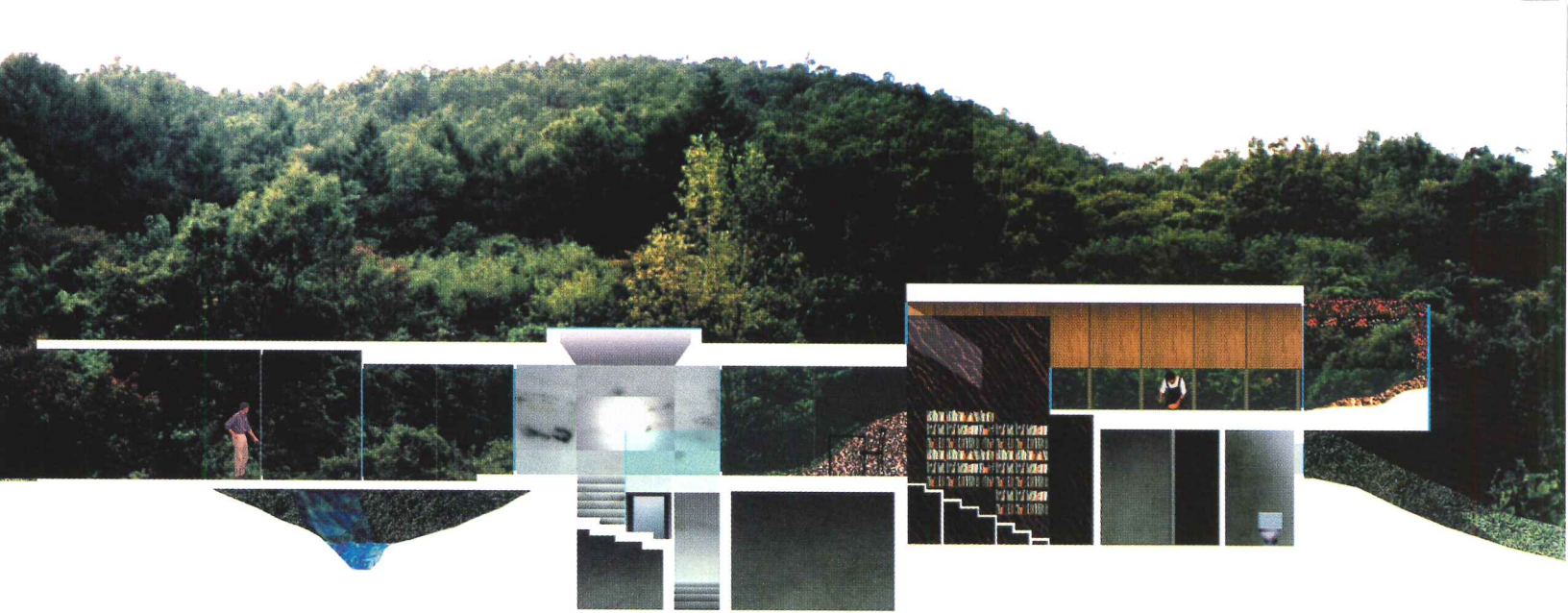
This ambitious competition entry for the city of Paju comprises three phases and 13,000 square feet to include convention and conference centers with a hotel and restaurants. Cho Slade collaborated with the Korean firm of Team Bahn. Their proposal inventively integrates landscape, infrastructure, and architecture with a particular sensitivity to temporality, be it the project's phasing, seasonal changes, or the 24-hour rhythms of use.





Illang House
Ansung, South Korea

Sited at the Illang Mural Museum Complex, the future cultural center of the city of Ansung, Cho Slade's 3,000-square-foot structure will provide a permanent home for the artist Illang and his wife and, someday, a museum of Illang's work. Based on the artist's own diagram, the house splits into separate areas for husband, wife, and guests, further dividing like the branches of a tree.



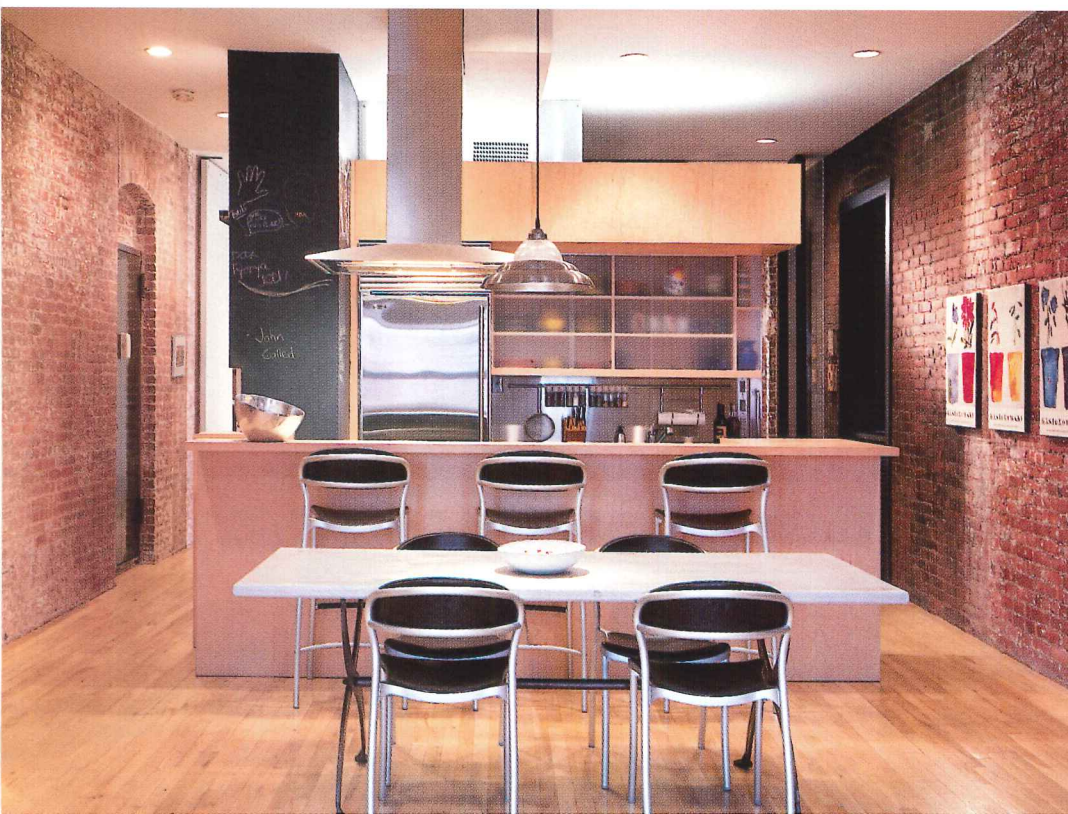


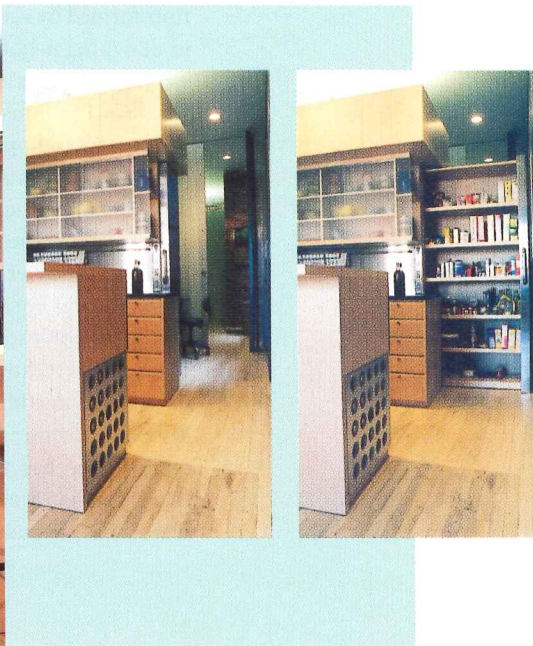
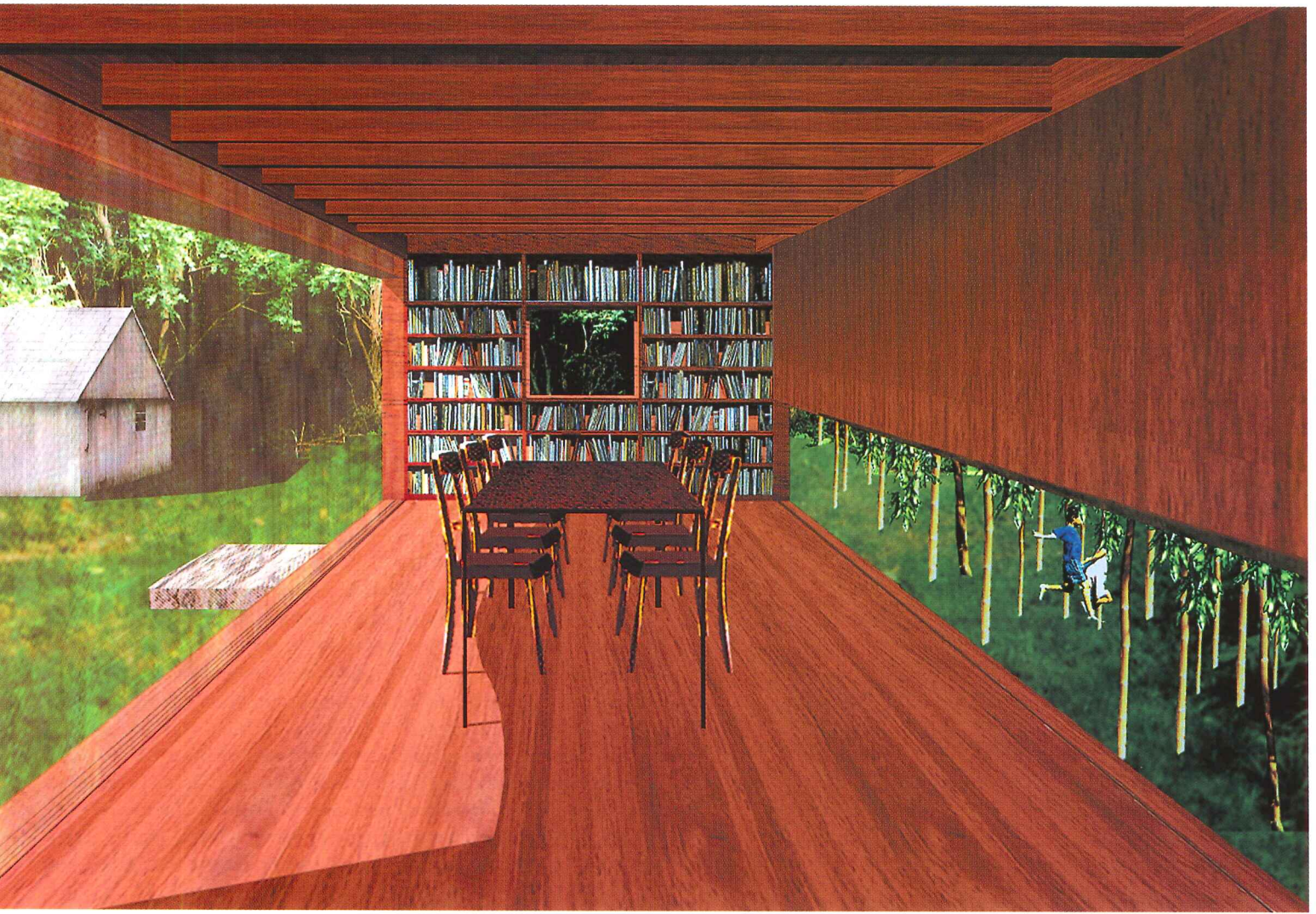
Von Erlach House
Shelter Island, N.Y.

For this summer-house renovation and addition, the clients asked Cho Slade to remove the kitchen and bathrooms, returning the existing building to its original 1880s condition. The addition would instead contain the displaced services, as well as the master-bedroom suite and the far more public family area. The project explores ideas of public and private realms in relation to the landscape.



PHOTOGRAPHY: © ELIZABETH FELICELLA (BELOW, LEFT AND RIGHT, AND OPPOSITE).





**Pekarsky Apartment
New York City**

For this New York City apartment, Cho Slade Architecture designed elegantly compact and streamlined cabinetry that sometimes fits together like the pieces of a puzzle: The sliding stainless-steel “pantry” is essentially a large vertical drawer, and on one side of the kitchen work island, a simple plane punctured by a grid of circular holes offers entry to the “wine cellar.” Subtle colors, translucencies, and reflectivities further punctuate the composition. Efficiently tucked behind the kitchen is a long narrow study.



Hitoshi Abe builds an international reputation from a regional base

By Naomi R. Pollock, AIA

Architect: *Atelier Hitoshi Abe*

Location: *Sendai, Japan*

Date founded: *1992*

Design staff: *5*

Principal: *Hitoshi Abe*

Education: *Tohoku University (1985, 1987, 1993); SCI-Arc (1989);*

Work history: *Coop Himmelblau, Los Angeles (1988–92)*

Key completed projects: *Miyagi Water Tower, Shiroishi, Japan (1994); Shirasagi Bridge, Shiroishi, Japan (1994); Yomiuri Media Miyagi Guest House, Zao, Japan (1996); n-house, Tokyo (2000); Neige Lune Fleur restaurant, Sendai (2000); Matsushima Yacht House, Matsushima, Japan (2000); Michinoku Folklore Museum, Kurikoma, Japan (2000); Miyagi Stadium, Rifu, Japan (2000)*

Key current projects: *C-Hair Salon, Tokyo; i-house, Sendai; Matsuda Dental Clinic, Sendai; Miyauchi Dental Clinic, Sendai; Furukawa Ladies Clinic, Furukawa, Japan; Reihoku Community Hall, Kumamoto, Japan*

Web site: *www2.odn.ne.jp/aak47310*

Naomi R. Pollock is RECORD's Tokyo-based correspondent.

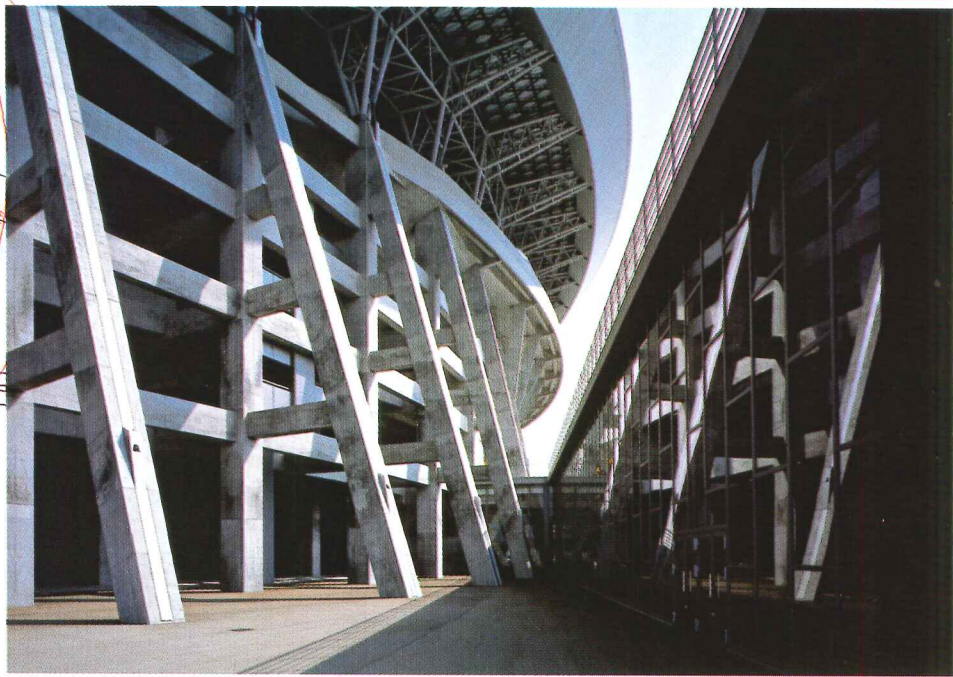
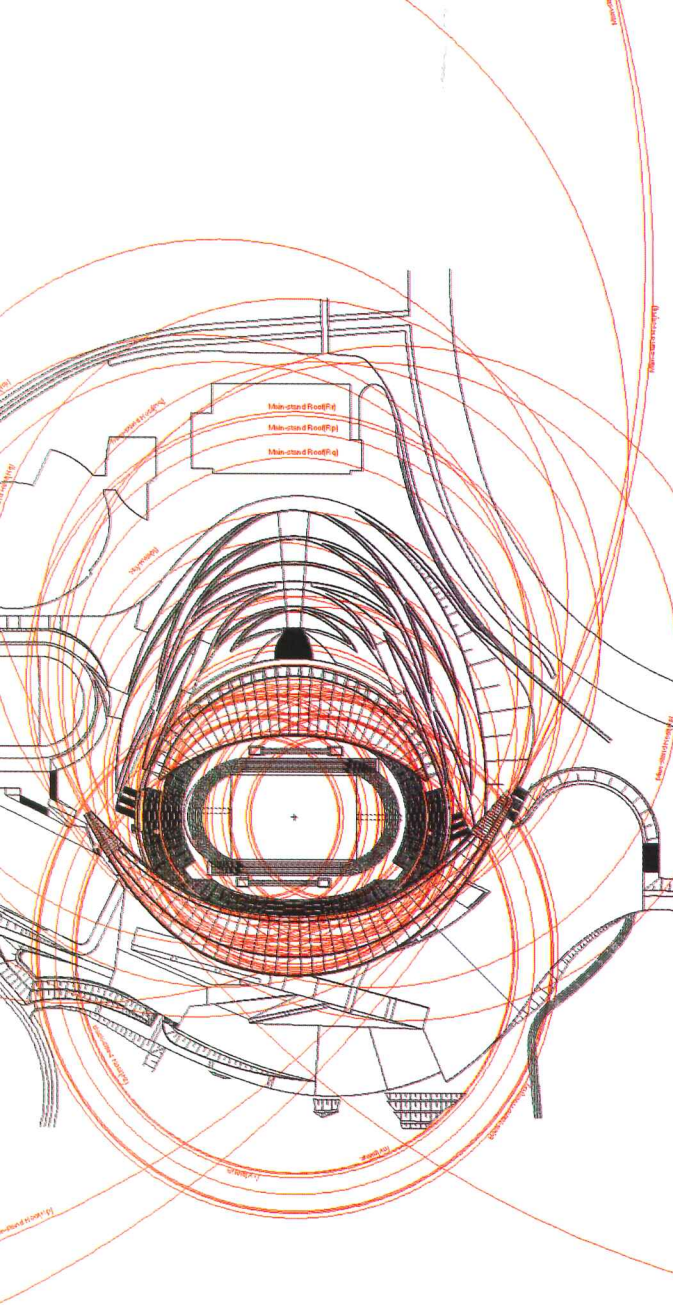
At 30 years of age, Hitoshi Abe won an open competition to design a 50,000-seat, 620,000-square-foot stadium for the city of Sendai, beating out huge construction companies and established design firms alike. So when most of his peers were cutting their teeth at large offices or hoping for that first residential job from family or friends, Abe was working on a reputation-making public project.

What attracted the jury to Abe's scheme was not only the stadium's dynamic, swirling form, but the way the building melds with its park setting. "We wanted to make a huge, heavy building that is used maybe 10 times a year into something that could also be open, relaxed and a part of local citizens' daily life," says Abe, who collaborated on the project with the local firm Syouchi Hariu Architect and Associates. Nestled into the hillside, the stadium is covered by two swooping roofs, one barely hovering above the ground plane, the other arching skyward. Though the shape and scale of the building are monumental, the skywalk threading through the building was intended to bring dog walkers, joggers, and stroller-toting parents through the building every day.

Winning the competition forced Abe to leave Los Angeles, where he was working for Coop Himmelblau, and go home to Sendai, a city of one million, two hours northeast of Tokyo. While most young architects returning from abroad head straight for Tokyo, Japan's architectural mecca, Abe has discovered there are advantages to being a big fish in a small pond. "It is easier for clients to find you in Sendai," he says. And opportunities to build locally have snowballed into commissions all over the country. On his boards at the moment Abe has three hospitals and a house in nearby Miyagi Prefecture, as well as a concert hall in Kumamoto, on the southern island of Kyushu, and a hair salon in Tokyo.

But Abe's success is not simply a function of his geographic isolation. It is as much his irregular geometry, energetic forms, and striking materials that are garnering attention. All are born of his unique brand of process-oriented design that began percolating while he was studying at SCI-Arc. Today he uses shapes as conceptual springboards that are then transformed by very real site constraints and client requests. For example, in designing n-house, a black concrete residence in the Tokyo area, Abe started with a series of square boxes representing rooms on the clients' wish list. The house's unusual curvilinear form resulted when this chain of boxes was compressed and distorted by the site's particularly rigid setback and excavation restrictions, as well as the clients' desire for a driveway up to the house.

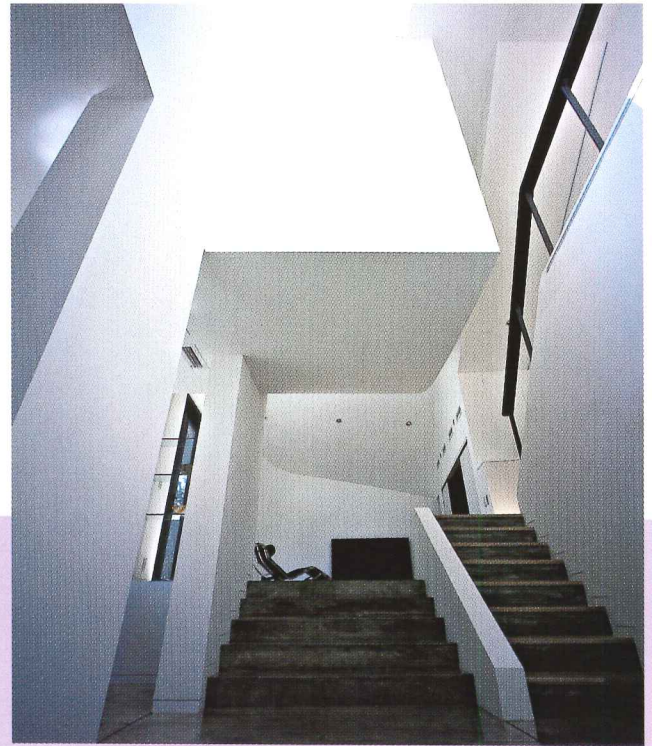
With the stadium under his belt, Abe has no pressing desire to undertake another megaproject. And he has no plans to relocate to Tokyo or some other hot spot. Instead, he hopes to use his renown and talents to draw attention to Sendai and other nearby communities through projects such as his recently completed Michinoku Folklore Museum, a renovation of and an addition to a 1933 granary in Kurikoma, a town of 10,000 located one hour from Sendai. Like the design of his buildings, Abe's career to date has not followed any preconceived path. "I didn't plan it this way, it just happened. I am here because I won a competition." But wherever Abe's work takes him next, it is sure to be watched closely. ■



Miyagi Stadium Rifu, Japan

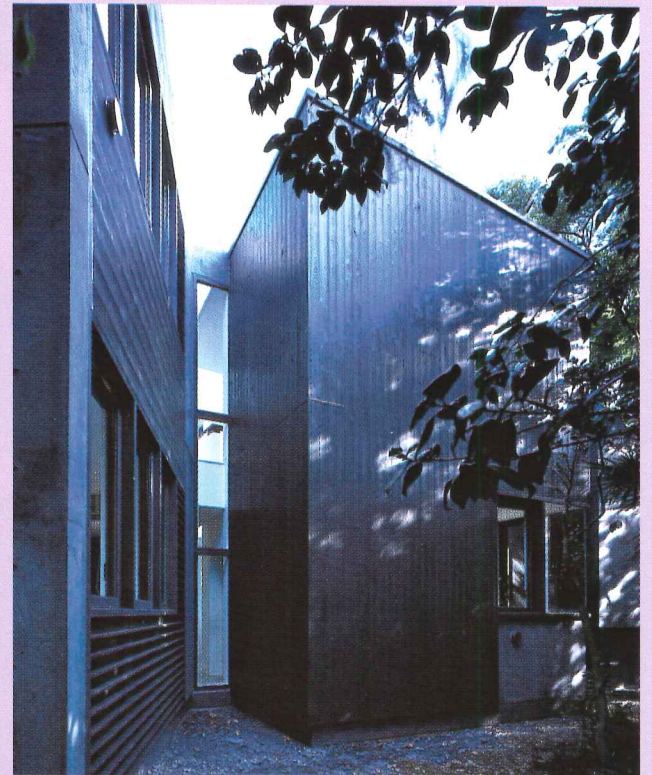
The winning entry in an open competition, the Miyagi Stadium was designed to integrate the building and its park setting. An arena with seating for 50,000 people, the concrete structure will be one of the venues for the World Cup in 2002 as well as the Japanese National Athletic Games in 2001.





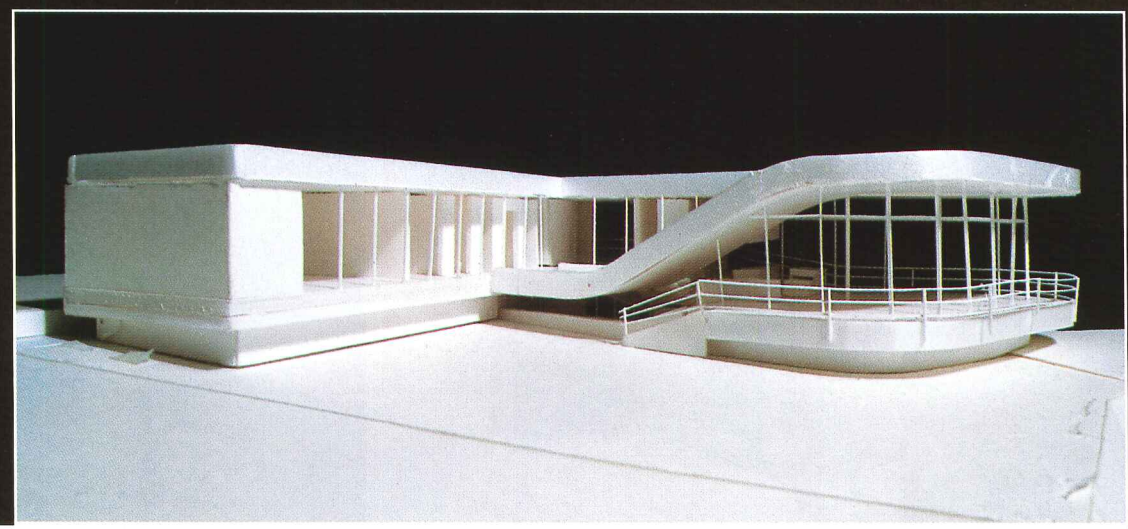
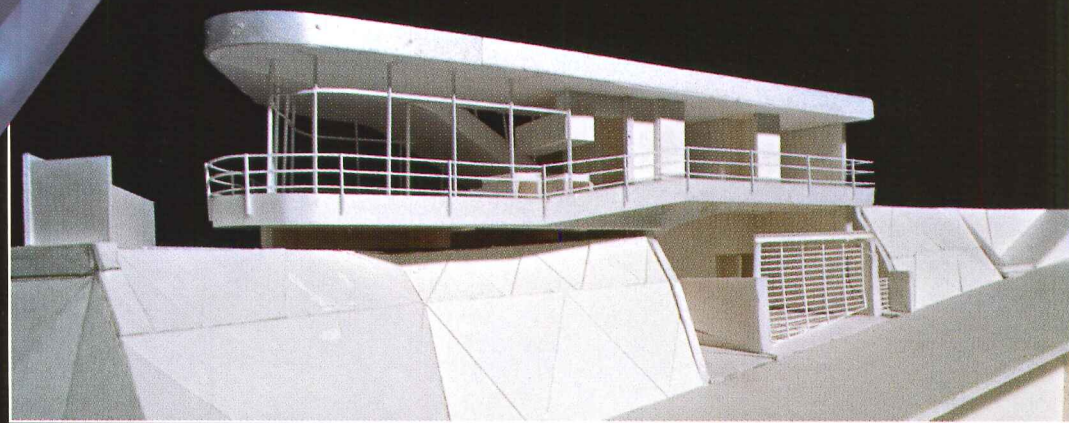
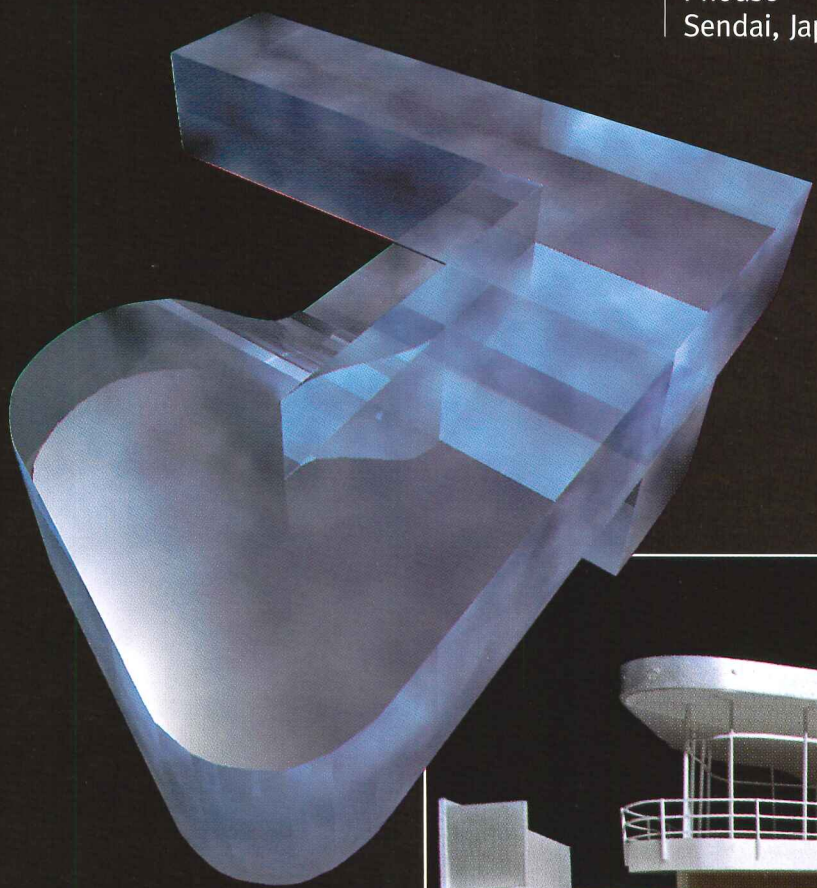
n-house
Tokyo

To accommodate a complex program, Abe started with a chain of small boxes, representing different rooms interspersed with voids. He then forced these spaces into the envelope dictated by building and zoning codes. The chain of boxes surrounds an open area containing the entry foyer, a gallery, and a living room that can be used for large gatherings.



i-house
Sendai, Japan

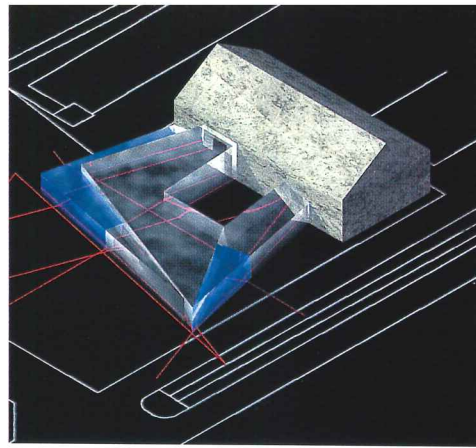
Now under construction, this 2,260-square-foot house occupies a spectacular site in Sendai with a view to the ocean in the distance. Enclosed almost entirely by glass, the steel-frame house was conceived as a hollow tube to accommodate the client's request for plenty of open space. Site conditions then deformed the shape of the house.



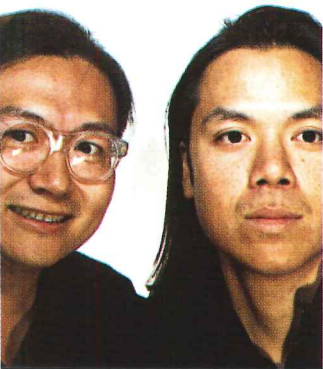
PHOTOGRAPHY: ©SHINKENCHIKU-SHA PAGE 71 LEFT

Michinoku Folklore
Museum, Kurikoma,
Japan

Completed in 2000, the 9,650-square-foot Michinoku Folklore Museum is a renovation and addition to an 80-year-old rice warehouse in Kurikoma, a rural town one hour from Sendai. Designed to draw tourists back to the town center, the museum houses both permanent exhibits and a flexible display area ringing a courtyard.







Design Office incites people to interact with space, light, and materials

By Suzanne Stephens

Architect: Design Office

Location: Los Angeles, Calif.; Vancouver, B.C.

Design Staff: 7 (Vancouver office run by associate Scott Ramses)

Date Established: 1997

Partners: (left to right) George Yu and Jason King

Education: Yu: B.A., University of British Columbia, 1985; M. Arch, UCLA, 1988. King: B. Arch University of Toronto, 1991; M. Arch Harvard 1996

Work history: Yu: Morphosis (1988-91); own studio 1992-97 in L.A. and Vancouver; taught SCI-Arc, UCLA, UBC, University of Texas at Austin. King: Williams, Tsien, Daniel Libeskind, ROTO Architects, Baird/Sampson, from 1991-94; taught UBC, Harvard GSD, University of Texas, Austin, University of Kentucky

Key completed projects:

Virgin Digital Group/Lost Boys studio, Vancouver, 1997; Netzwerk Productions office and store, Vancouver 1998 Max Studio (store), Las Vegas, 2000; Max Studio, San Diego 2000; IBM e-Business Center, Chicago 2000

Key current projects: IBM e-

Business Center, NYC (2001); own studio, Culver City (ongoing); Max Residence, LA, (undetermined); Novocom Office, L.A., 2001; Burg/Portugal house addition, Culver City, 2002; Max Studio shops, San Jose, Sherman Oaks, Corte Madera, Calif., Chicago, 2001-02

Web site: www.dodesignoffice.com

Although Design Office is primarily located in L.A., you have to go to Las Vegas, San Diego, Chicago or Vancouver (where the firm has a second office) to see its work. Principals George Yu and Jason King, who founded the firm only in 1997, do get around. Both grew up in British Columbia, but their paths did not cross for some time. Yu, who had studied architecture at UCLA and worked for Morphosis, opened an office in L.A. in 1992, and began teaching at SCI-Arc. In 1995 he took a teaching job in Vancouver, where he met King, who had been working at a number of high-profile design firms in New York, Berlin, and LA, after studying architecture at Toronto and Harvard. The two first designed a visual effects studio for Virgin Digital/Lost Boys in Vancouver. Then a year later, in 1998, they completed the headquarters for Netzwerk Records. "A lot of entertainment production studios gravitate to Vancouver," notes Yu. "It's so much cheaper. We were able to build Lost Boys studio at \$15 (US) a square foot."

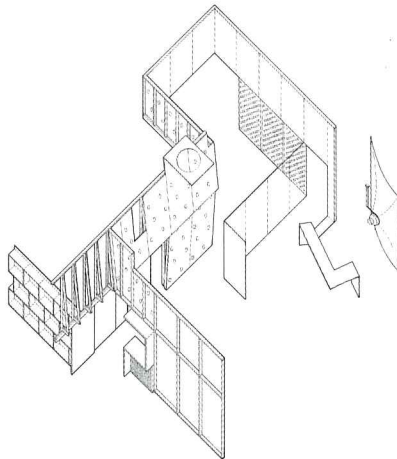
But Canada's economy began to slow down shortly thereafter. When Yu was again offered a job at SCI-Arc, the firm moved its main office to L.A. and began designing retail stores for Leon Max, a Russian-born clothing designer and retailer. Two shops, featuring backlit translucent white acrylic panels for walls and floors finished in epoxy, have just opened in Las Vegas and San Diego, with a number of others on the way.

The most compelling aspect of Yu's and King's work involves their use of light and their imaginative investigation of new and sometimes mundane materials. With the Virgin Digital studio, the two architects wanted to redirect, filter, block, and manipulate light through various materials selected for porosity, reflectivity, and plasticity. The two architects worked with the department of metal and materials engineering at the University of British Columbia to create a sheer polyester window covering. Within the covering is embedded a grid of "shape-memory alloy coils," where nickel and titanium wire has been sewn into spandex pockets. When heated by the sun, the coils expand to block light. Another wall in the animation studio reflects and distorts light through multiple lenses made of glass cereal bowls set into plywood and covered with translucent white-acrylic prismatic sheet. "The most fascinating potential of architecture is found in the phenomenological and visceral interaction of a person with the space, light, and material," says Yu.

In the Netzwerk office and store, executed on a slightly higher budget of \$26 a square foot, two lobby walls were formed by stacking 70,000 compact discs from the floor to the ceiling. Culled from the company's remaindered inventory, the CDs take recycling to another level. In the 10,000-square-foot IBM eBusiness Center in Chicago, glass kiosks with lenticular coating and plasma screens help shape lounge and lobby areas. The architects are collaborating with artists and scientists, such as a motion graphic company, Imaginary Forces, and an aerospace fabricator for an interactive conference desk. "In architecture the idea of the individual genius has given way to new collaborations," says King "We can move faster, be more fluid, offer a greater range of services, with the highest quality work." ■

Virgin Digital/Lost Boys
Studios Vancouver, B.C.

In the 1,500-square-foot visual effects studios Design Office created an animation studio, compositing suite, lounge and screening area, kitchen, and a reception/waiting room. Since controlling sunlight was important, the architects worked with a variety of inexpensive materials, including clear-plastic panels, homosote panels, and even glass cereal bowls as light diffusers embedded in plywood and acrylic in the entrance lobby (left) and lounge (right).



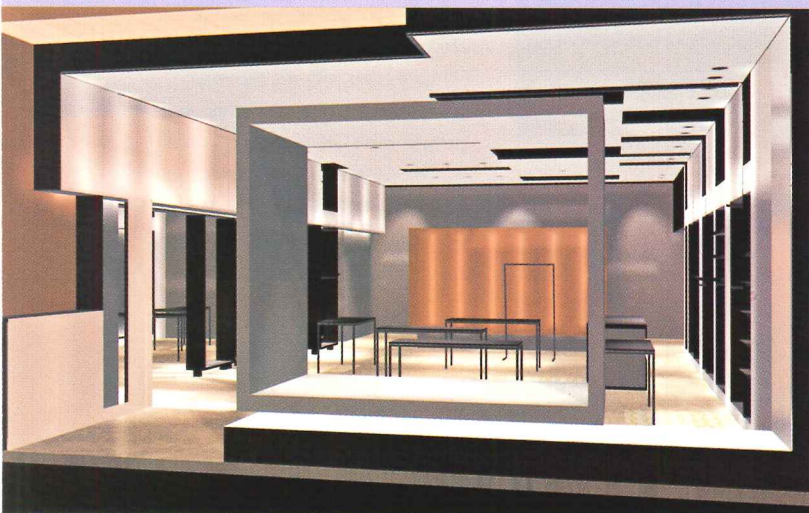
IBM e-Business
Centers, Chicago and
New York

In designing a 10,000-square-foot briefing center in Chicago and a 6,000-square-foot one near Wall Street for an IBM online business consulting program, Yu and King were able to fully explore new technologies. The conference table (left), executed in collaboration with an aerospace fabricator, will have displays on its surface onto which are projected images from the ceiling. Users can respond with styluses that pick up electromagnetic strokes.



Max Studio clothing stores

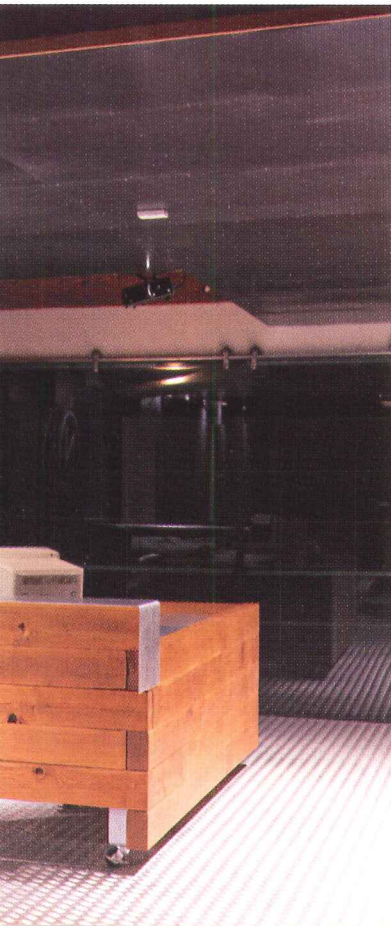
In providing architectural services for a series of clothing stores, Design Office developed a cast resin kiosk (left), in which items may be viewed and ordered from a digital catalogue. The stores themselves, as the one in Las Vegas (below) illustrates, depend on a flexible system (model, bottom) of backlit acrylic panels that wrap the clothing and accessories in an ethereal, luminescent container.

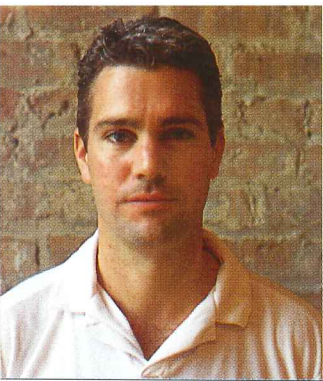




Netwerk Productions,
Vancouver, B.C.

In renovating a 10,000-square-foot space for offices and a store of an independent record label, Design Office had to work with a tight budget of \$26 U.S. per square foot. The heavy douglas fir timber furniture used in the front lobby (above), the reception area (far left), and the lounge bar (left) is made of recycled wood left from resizing existing beams.





John Ronan seeks the essence of space in structure and material

By Sara Hart

Architect: John Ronan

Location: Chicago

Design staff: 4

Date established: 1997

Principal: John Ronan

Education: Harvard (1991),
Michigan (1985)

Work history: Kruek and Sexton
Architects, Lohan Architects

Key completed projects:

Catholic Extension Chapel, Chicago
(2000); Caspe Residence, Chicago
(1999); Perry Residence, Chicago
(2000)

Key current projects: Todd Hase
Showroom, Chicago; Stroheim and
Romann Showroom, Chicago; 620
North LaSalle Street, Chicago (office
building); Kaplan Residence, Chicago

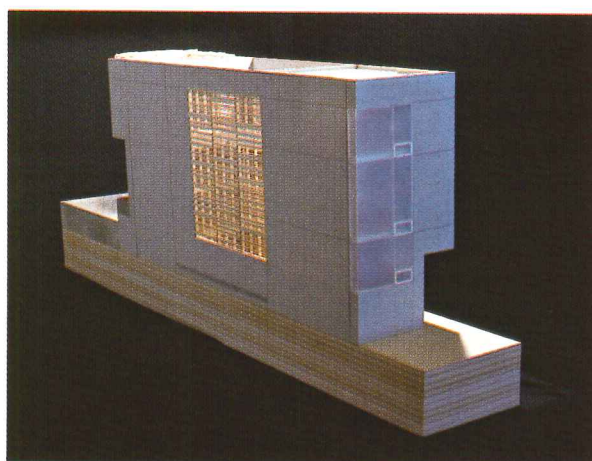
When built, John Ronan's chapel in a secluded wooded area in rural Illinois will stand on concrete piers so as to tread lightly on unspoiled land. In the abstract, the chapel will be a handsome box—a simple structure assembled from a kit of unadorned, engineered wood members essentially limited to posts and panels. The experience, however, will be more complex. Parishioners will park in a lot a fair distance from the site. From there, they will follow a path through the woods to the chapel. Stairs will take them to a platform, which will serve as an informal gathering place, the wooden-deck version of the piazza before the cathedral.

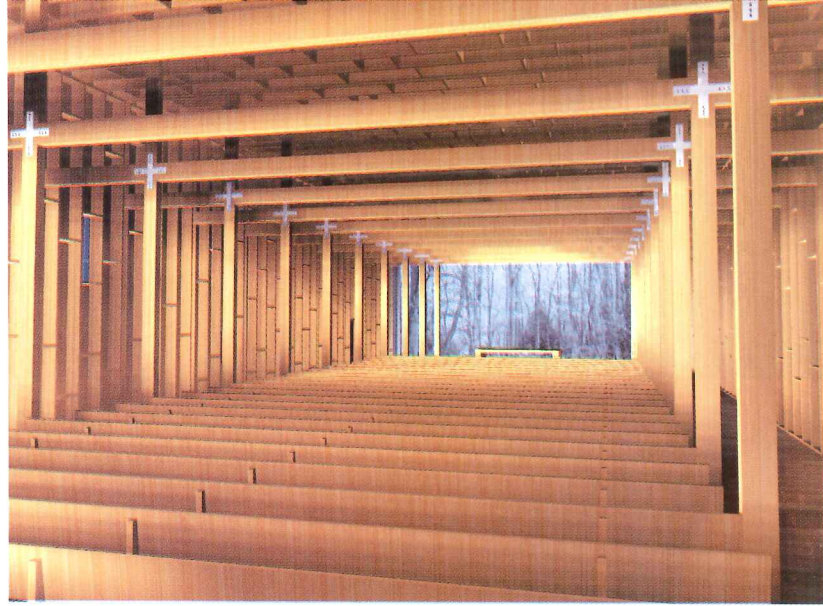
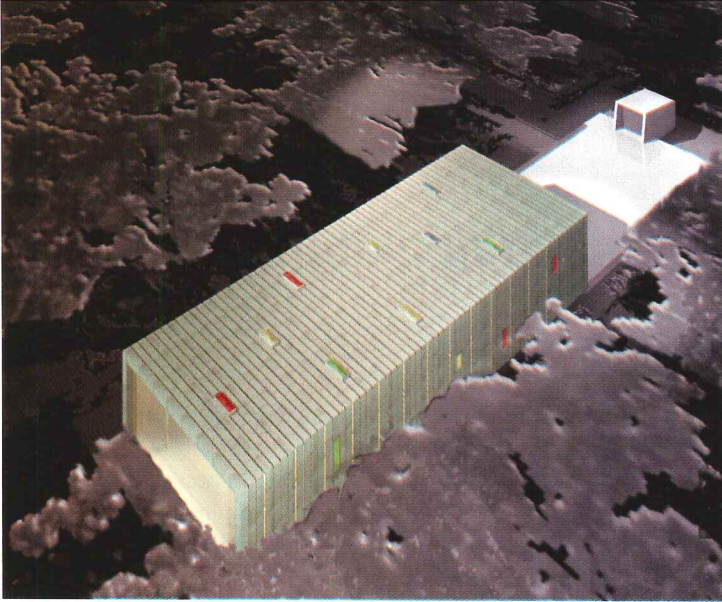
Inside the sanctuary, a simple wooden table will be the only altar. Nature then forms an ever-changing backdrop seen through a glazed wall behind the altar. Ronan maintains the connection between the natural world outside and the devotional one inside with thin glazed reveals between the wall panels that will allow tiny framed glimpses of the woods, while letting in narrow rays of sunlight. This anti-embellishment approach recurs in other Ronan projects, in which the structural members create the space, and the methods of construction produce the details.

"The character of the structure defines the space, not additives applied to the structure," he explains. Be true to the materials is a philosophy that he advocates as a studio critic at the Illinois Institute of Technology (IIT), where students learn about design through materials. First, they design with wood, then masonry, concrete, and finally steel. In some of his residences, Ronan makes a distinction between shell and program. "The shell is permanent, but the program may change many times. I meet the client halfway by giving them the option to add layers to the interior spaces," he says.

Back at the chapel, Ronan applies his collaborative convictions in a slightly different but potent way. He has interpreted the 14 Stations of the Cross as abstract columns, which will be placed along a meandering path through the woods and will encircle the chapel. By drawing the parishioners out of his sacred space into the woods, the architect creates an experience defined solely by the ceremony, rather than the space. As Ronan's practice grows and matures, it will be interesting to see where this ecumenical approach and deference to materials take him. ■

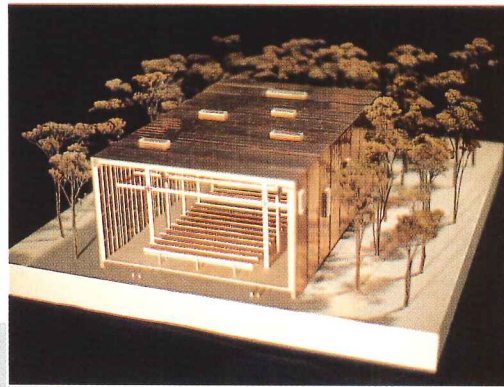
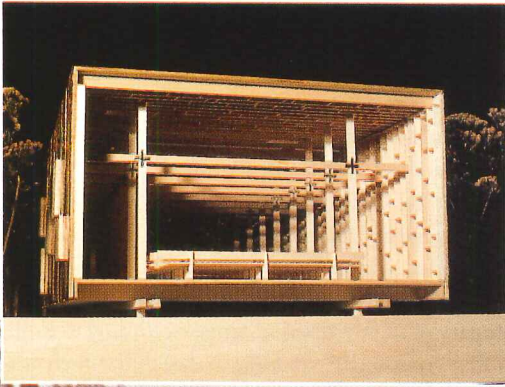
Townhouse in Chicago.





Chapel Rural Illinois

The church will be framed with parallel strand lumber and enclosed with stressed-skin paneled walls constructed of two sheets of oriented strand board separated by rigid insulation. The exterior will be clad with flat-seam copper sheets, which will weather over time to a blue-green patina. The walls will be constructed on the deck and lifted into place.





Kuth/Ranieri explores the applications and ambiguities of industrial materials

By William Weathersby, Jr.

Architect: Kuth/Ranieri Architects

Location: San Francisco

Design staff: 7

Date established: 1990

Partners: Byron Kuth, AIA, Elizabeth Ranieri, AIA

Education: Kuth—Bachelor of Fine Arts, Rhode Island School of Design (RISD), 1985; Bachelor of Architecture, RISD, 1986.

Ranieri—Bachelor of Fine Arts, Bachelor of Architecture, RISD, 1986

Work history: Kuth previously renovated historic houses in Boston. Both Kuth and Ranieri teach at the California College of Arts and Crafts.

Key completed projects: Greene Residence, Napa Valley, Calif. (1994); LEF Foundation, Napa Valley, Calif. (1994); Fabrications installation at SFMOMA, San Francisco (1998); Iann/Stolz Residence, San Francisco (1999)

Key current projects: Lerdal Residence, San Francisco (2001); Lodi Bunkhouse, St. Helena, Calif. (2001)

Web site: www.kuthranieri.com

The San Francisco firm Kuth/Ranieri embodies a blend of academic discipline, conceptual art, and tactile architecture, exploring the use of standard industrial materials in unexpected ways. Founded by the husband-and-wife team of Byron Kuth, AIA, and Elizabeth Ranieri, AIA, the firm “grew out of the hothouses of teaching and competitions,” says Kuth. Both partners have taught at the California College of Arts and Crafts since 1988 and collaborated on a series of remarkable private houses in San Francisco. They also have made waves with provocative installations at SFMOMA and galleries across the U.S.

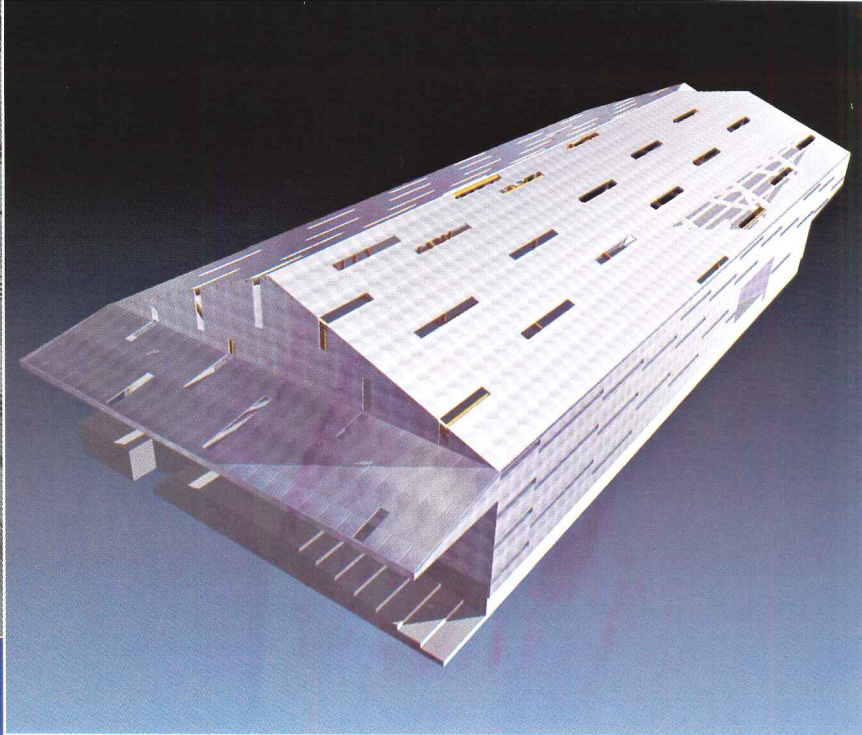
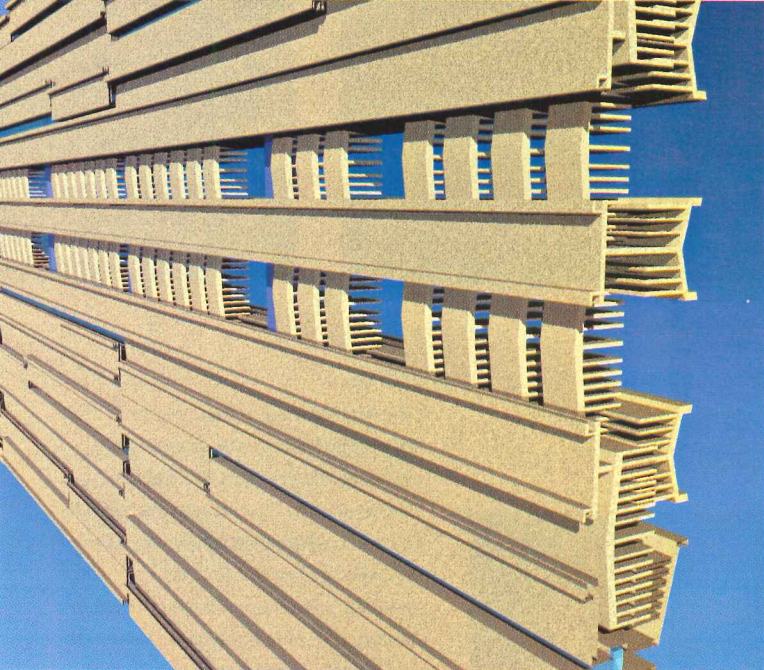
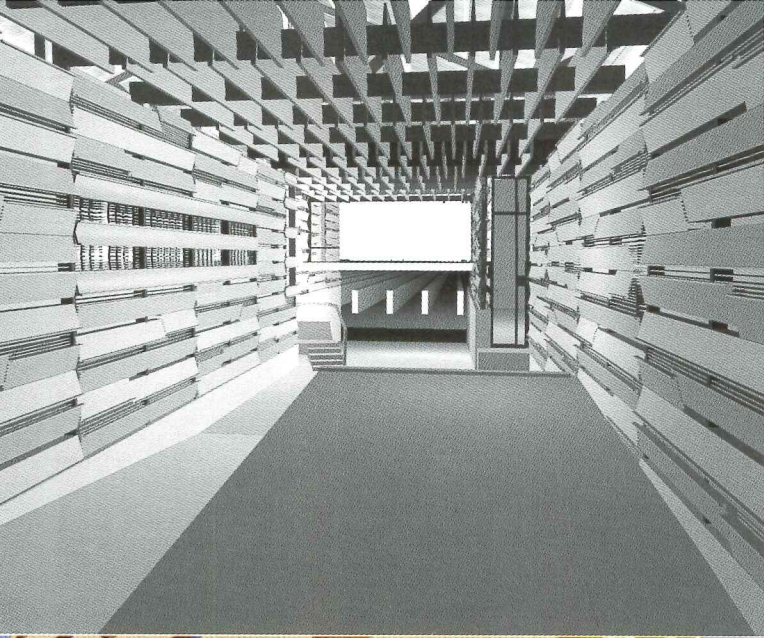
“We began to form a single-minded approach to architecture when we first settled into our teaching positions,” Kuth says. “Our designs evolve from a fast-sketch dialogue. Our hands talk faster than our brains, so we speak in the medium of drawing.”

After a career as an acoustic musician, Kuth went to architecture school at the age of 30 in 1983. At the Rhode Island School of Design he met Ranieri, who had previously studied fine art and would continue to bring a painterly approach to their architectural projects. At RISD, both architects were influenced by the work of mentor Rodolfo Machado. His theory of “unprecedented realism,” in which standard materials are employed to create unexpected connections between formal and programmatic elements, shares a kinship with Kuth/Ranieri’s “interest in appropriating the vocabulary of standardized systems,” according to Kuth. “We use common, everyday components and like to destabilize their traditional meaning.” For example, the LEF Foundation, the headquarters of an arts organization, features mobile furniture constructed from off-the-shelf components arranged in unorthodox juxtapositions. Blurring the line between furniture and architecture, the anthropomorphic mobile units are functional yet sculptural.

Kuth/Ranieri also investigates ambiguities of material and form in gallery installations. “The Architecture of Repose,” part of the *Fabrications* exhibition at SFMOMA, replaced the seamless surface of a gallery wall with an assemblage of industrial-grade felt that imparted the controlled fluidity of a finely tailored garment. Small sections of felt were cinched, clipped, rolled, stacked, and linked with 1,000 aluminum C-clamps to envelop an interior bench where museumgoers could sit. “Felt is a soft and floppy material, but we wanted to transform it into something tectonic, a form with a significant structural rigidity,” Kuth says.

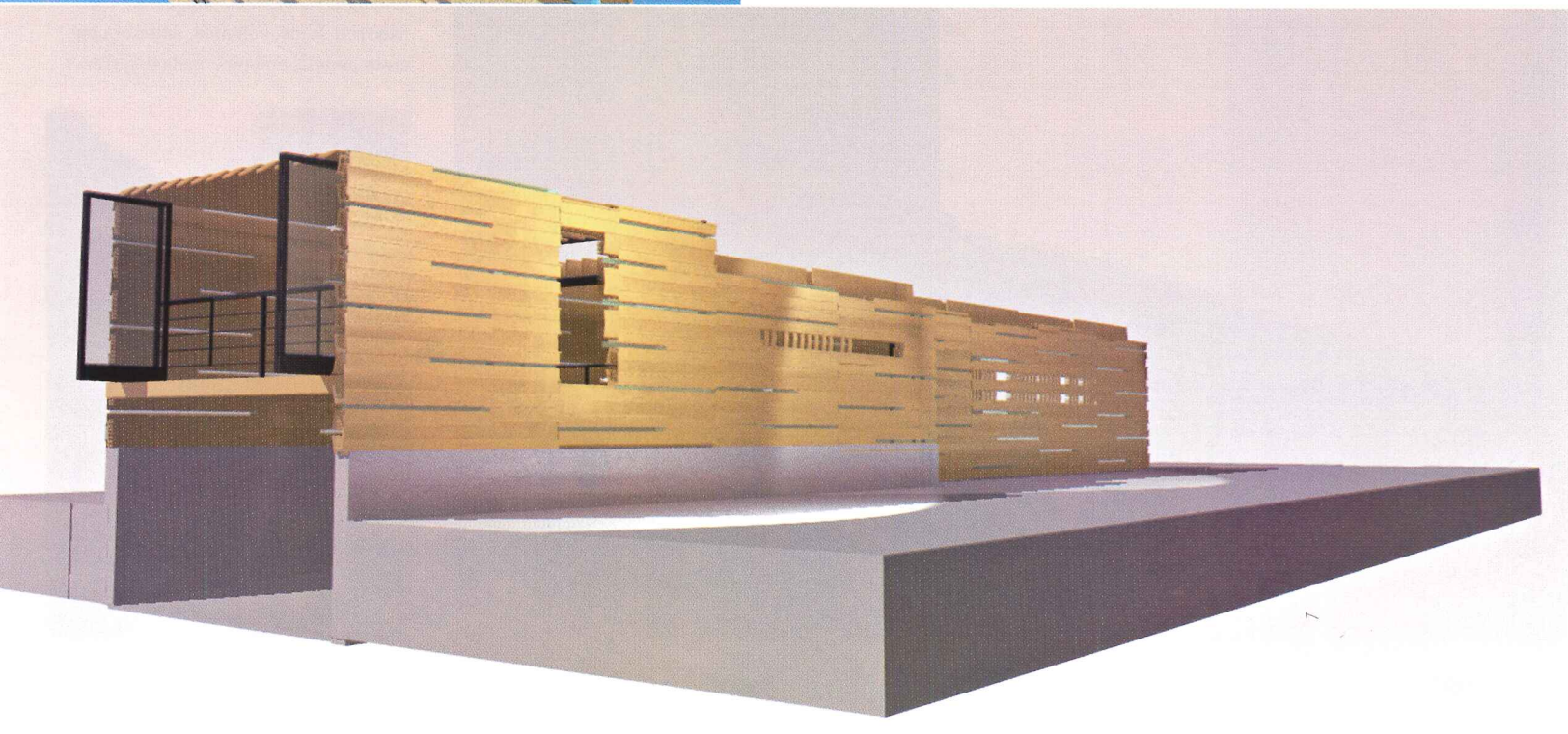
The firm primarily has built houses, they explain, because “homeowners are often more adventuresome clients.” A recent interest in tackling issues of architectural skins and membranes has been expressed in projects such as the Lerdal Residence. Set in San Francisco’s fog-shrouded Presidio Park, the house features a curtain-wall facade sheathed in translucent glass meant to capture the changing light—an expression of the clients’ extensive collection of photography. “Like the film behind the camera’s lens, the diaphanous screen of the facade records and indexes the changing phenomena of site and circumstance,” Kuth says. “It furthers our investigations of going beyond static surface.” ■

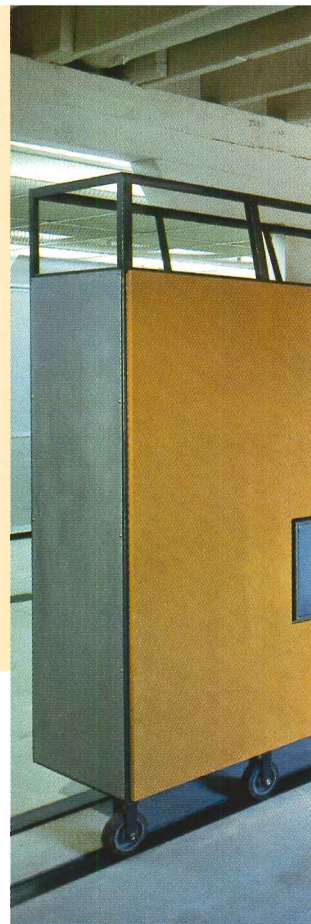
RECORD contributing editor William Weathersby, Jr., is a writer in Westport, Conn.



**Lodi Bunkhouse
St. Helena, Calif.**

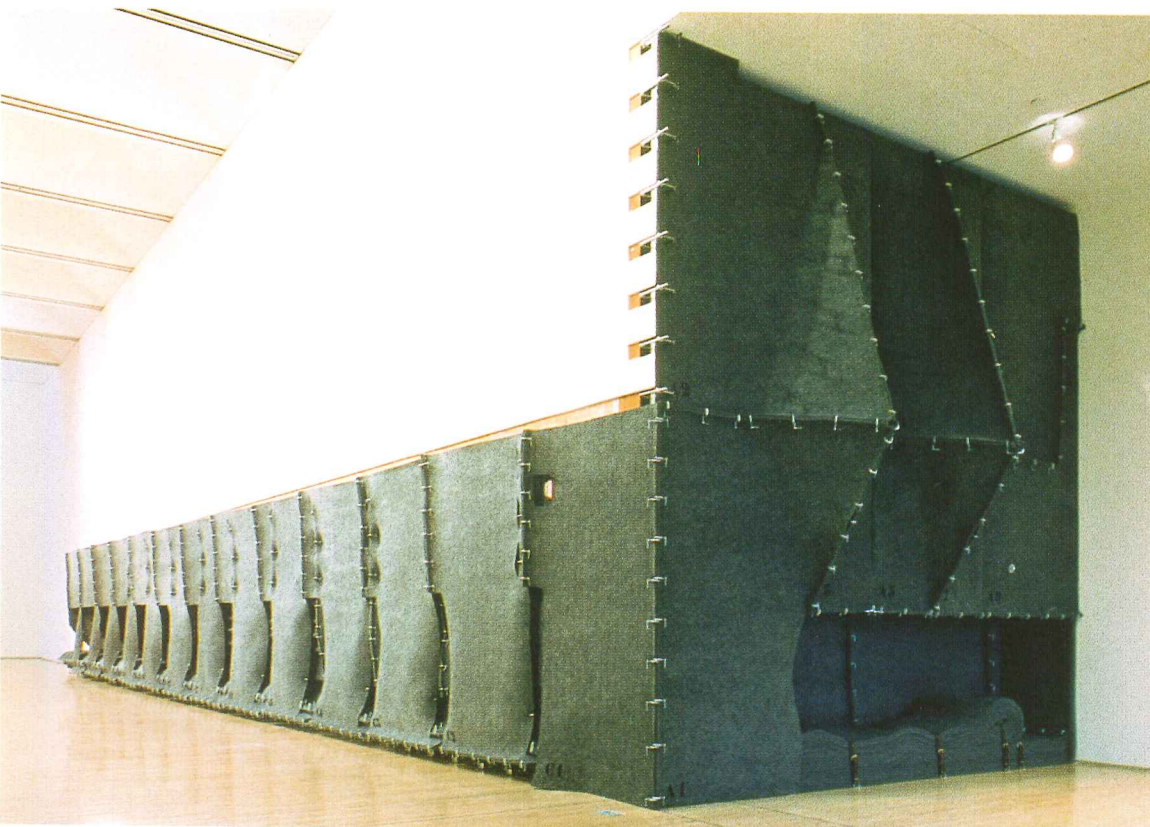
An existing industrial shed will be converted into temporary housing and studio space for artists in residence. The 6,000-square-foot facility includes sleeping quarters and studios for four artists, communal areas for intimate or larger public gatherings, and additional studios. The wood-frame shell is clad in metal siding. Interior extrusions are composed of factory-formed resin and recycled wood products.

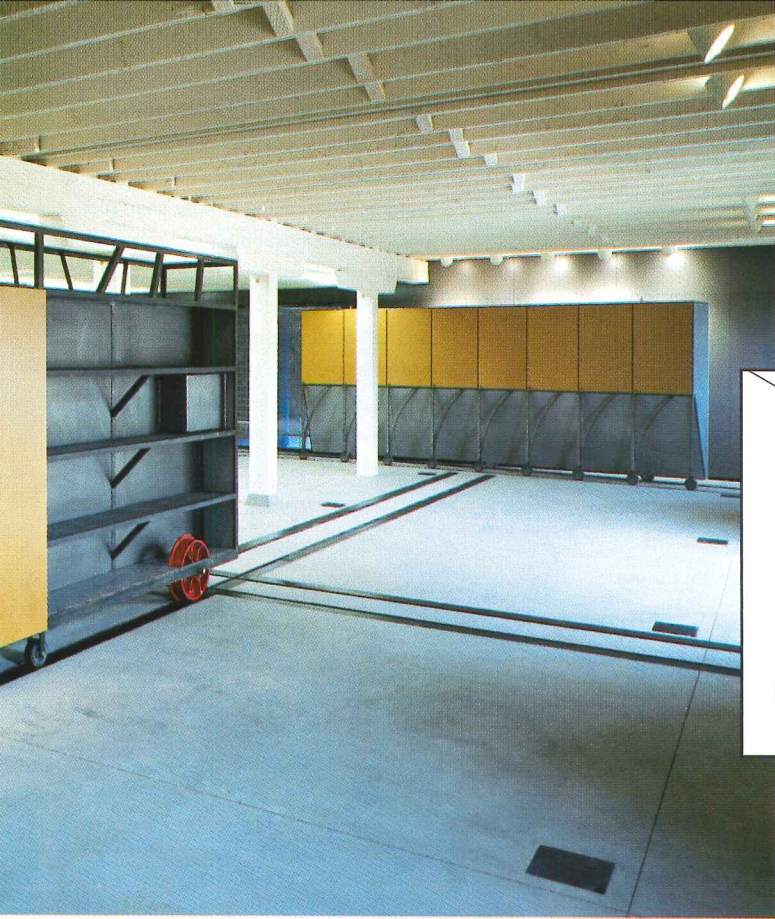




Fabrications
SFMOMA

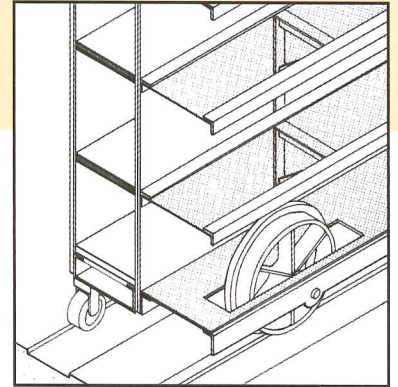
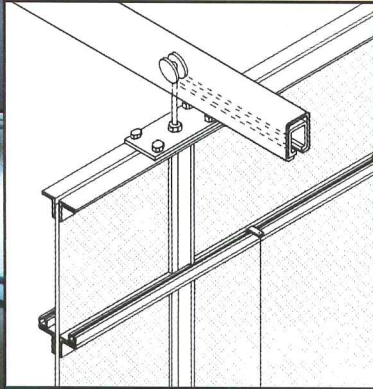
"The Architecture of Repose," an installation in the *Fabrications* exhibition, exploited the program of a gallery viewing bench. "The occupants fall into a veiled environment of shadow where sensations of sound and light are softened and the view is privileged," wrote Ranieri. Sections of felt were fastened around an excavated wall cavity that exposed studs, columns, exterior concrete panels, and mechanical systems.



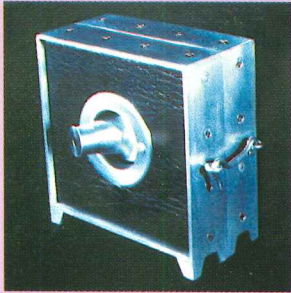


LEF Foundation
Napa Valley, Calif.

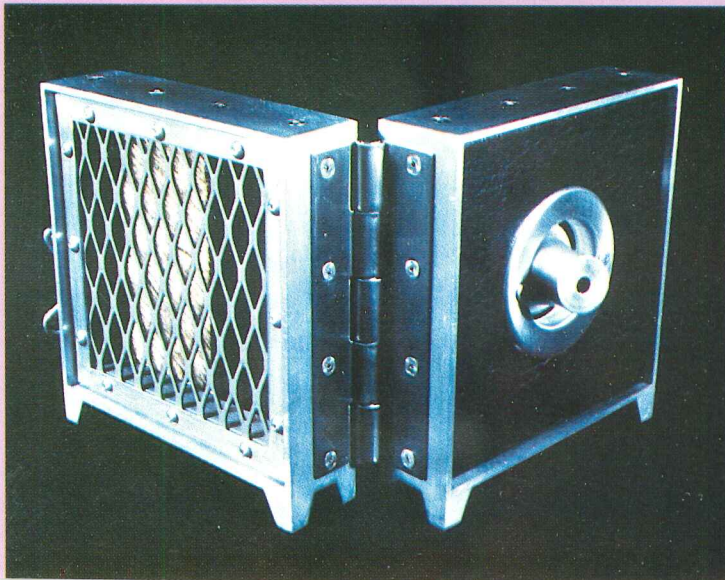
The headquarters of the LEF Foundation is housed within a century-old stone winery building. The program called for a library, director's office, conference room, gallery, and support spaces. Mobile units built from stock components—file cabinets, truck locks, movable panels—glide on tracks in the floor. The units are artful objects, while allowing flexible space configurations.



"Industrial Fetish"
Rena Branston Gallery

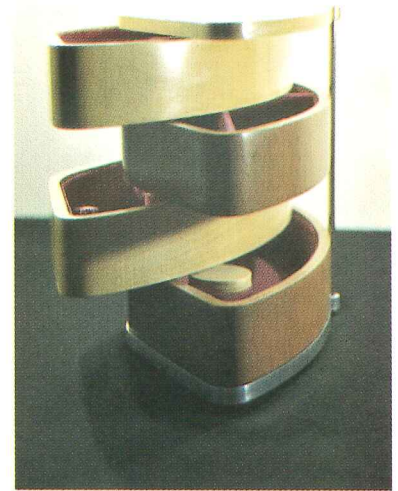


Part of an art exhibition called *Sex Sells*, a show designed to raise awareness for AIDS research, the construction represents "an inquiry into the nature of the industrial impulse," says Ranieri. "Our goal for the project was to reduce and assemble industrial materials and ready-mades into a series of signs that collectively narrate containment, territory, voyeurism, and paranoia."



E Box
SFMOMA Collection

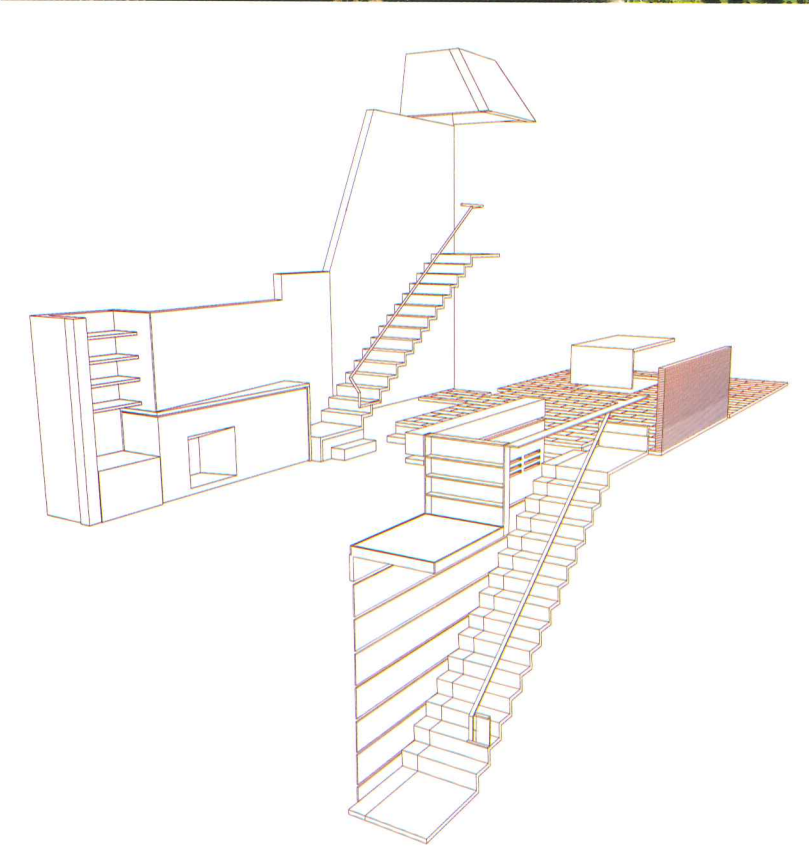
Designed by Kuth for Ranieri, the maple and mahogany jewelry box explores "the reciprocal relationship established by transporting the jewelry between this inanimate body and one's own body," Kuth says. The anatomy of the object, with four velvet-lined pullout trays, is based on the geometry of a square yielding a constant reference point for the individual elements.

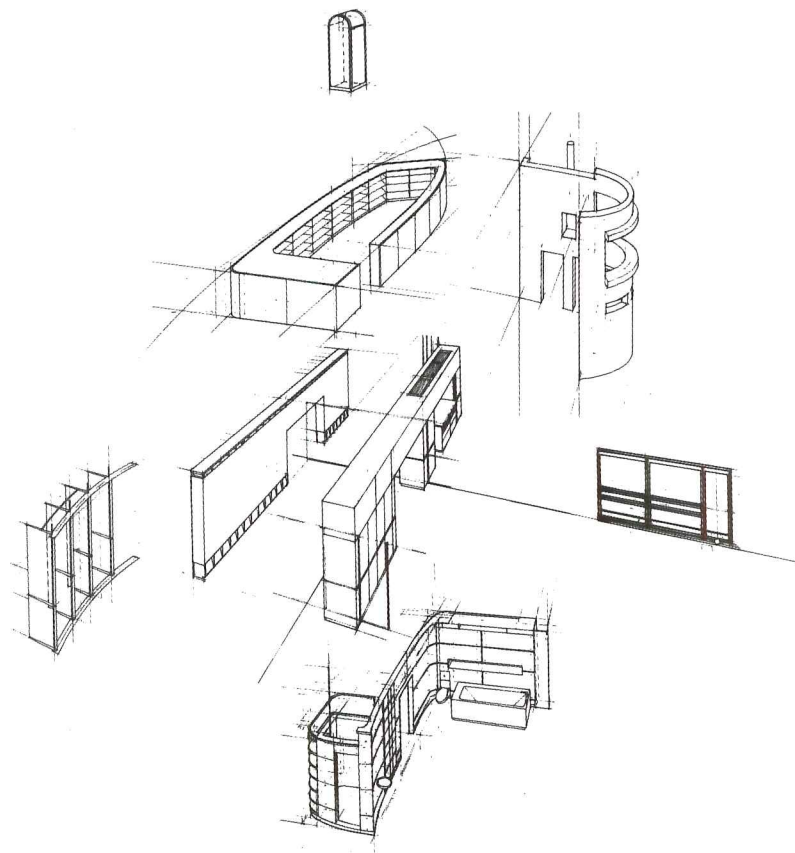
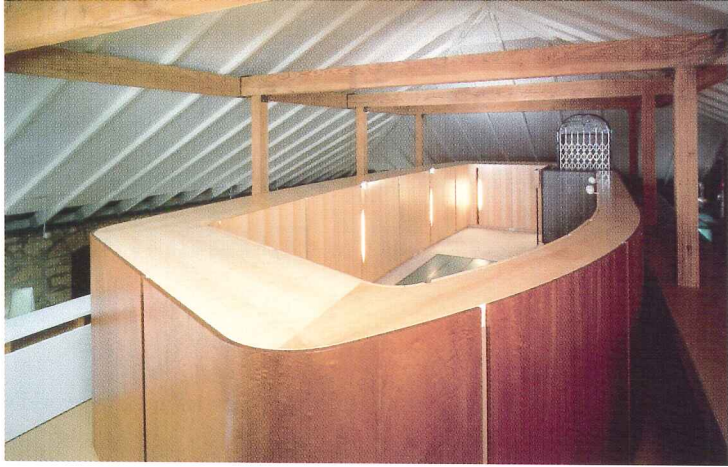




Iann/Stolz Residence
San Francisco

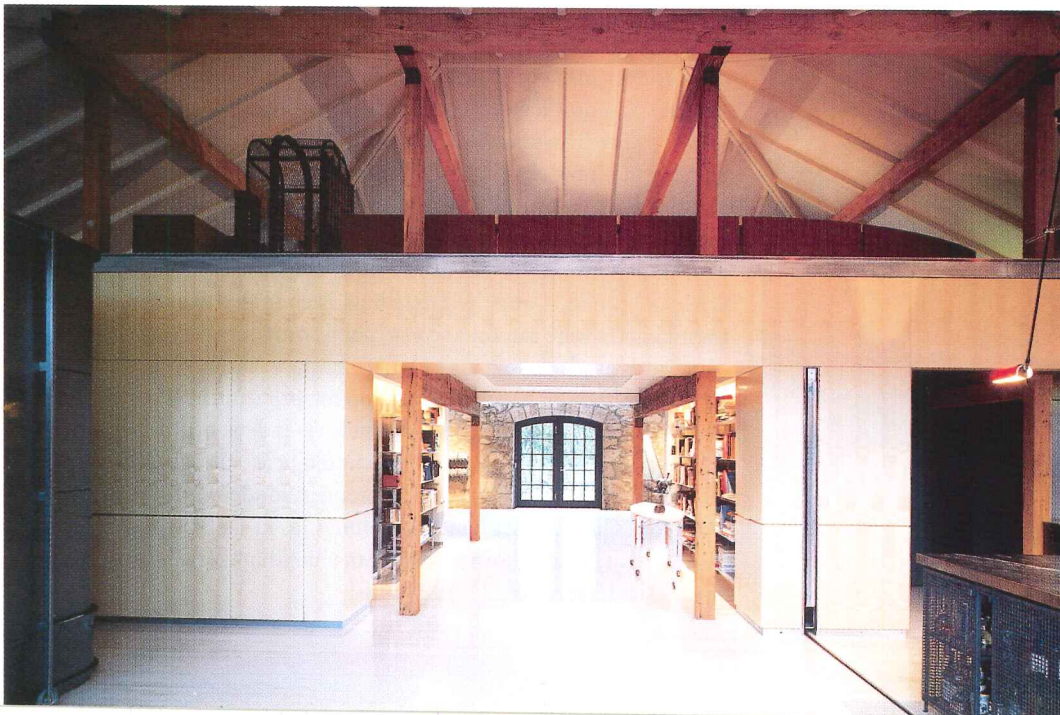
The renovation of an 1,800-square-foot single-family house folds typical Bay Area residential building elements—bay window, front-facing garage door, roof deck—into an assembly of clear-sealed mahogany panels and ledges. The facade's slats become smaller in scale and the battens that divide them become closer as they rise toward the cornice/railing. Interior planes incorporate stucco, limestone, and maple.





Greene Residence
Napa Valley, Calif.

Industrial components include a commercial loading elevator accessing the second level of a loftlike living space built within the converted stone winery that also houses the LEF Foundation. Cabinetry is constructed of lacquered fiberboard and steel. A concrete tower was added to accommodate a salon on the upper floor and a garden library at ground level. Interior space is defined via adjacency rather than enclosure.





Sanaksenaho Architects attunes its designs to both nature and modern life

By Sarah Amelar

Architect: Sanaksenaho Architects

Location: Helsinki, Finland

Designer staff: 4

Date established: 1991

Partners: Matti Sanaksenaho
(above, left) and Pirjo Sanaksenaho
(above, right)

Education: Matti Sanaksenaho—
architectural degree, Helsinki
University of Technology, 1993; Pirjo
Sanaksenaho—architectural degree,
Helsinki University of Technology,
1993

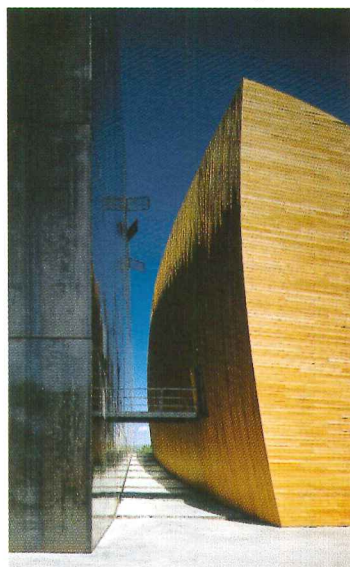
Work history: Matti Sanaksenaho—
Monark partner (Helsinki); Kai
Wartiainen Architects (Helsinki);
Pirjo Sanaksenaho—Kari Jarvinen &
Timo Airas Architects; Petri & Severi
Blomstedt Architects; Raili & Reima
Pietila Architects

Key completed projects: Finnish
Pavilion, Expo '92, Seville, Spain
(Matti Sanaksenaho with Monark);
Student Housing, Vaasa, Finland,
1999

Key current projects: Chapel,
Turku, Finland; Tammimäki House,
Espoo-Lippajarvi, Finland (2001)

Website:
www.personal.eunet.fi/pp/sanaks
(currently undergoing redesign)

Finnish Pavilion, Seville Expo '92



Matti Sanaksenaho first appeared on the architectural world's radar screen at the age of 23, when he and four architecture schoolmates, collectively known as Monark, won a competition for the Finnish Pavilion at Seville's Expo '92. Their design consisted of two simple sculptural volumes—the wooden “Keel” and steel-clad “Machine”—separated by a narrow chasm. Monark disbanded soon after the Expo, but Sanaksenaho's own small Helsinki firm, formed in partnership with his wife, Pirjo, carried forward the exploration begun in Seville. Their quiet architecture, attuned to both nature and modern life, emerges distinctly from Finland's strong architectural culture.

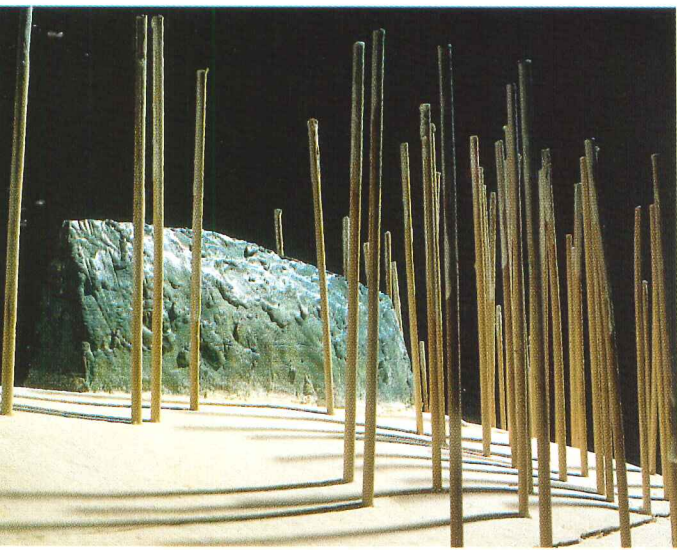
Like the Machine and Keel, each of Sanaksenaho Architects' projects evolves from a strong metaphor. “We start with an ‘empty table,’” says Matti. “And immediately the reality of what's on the table—facts about the site and the client—generate the first move.” The idea that will ultimately guide each project emerges through freehand sketches, “not from words,” he adds. “It's subconscious. . . like carving a piece of wood with a knife.” The precise forms and the words come later.

For a yet-unbuilt chapel in Turku, Finland, the architects designed a modest wooden form with a ribbed interior that abstractly evokes the hull of a ship or the belly of a great fish or whale: symbols not coincidentally appropriate to Judeo-Christian lore and traditions. And in Tammimäki House, the Sanaksenaho family's own home, currently under construction, a simple timber-clad volume curves to embrace a sloping landscape, becoming what the architects describe as a “womblike” sheltering form. For interiors of the Designor housewares shops in Helsinki and Stockholm, the architects used wood extensively, with walls and ceilings that cant and curve, folding and flowing into one another, to produce what they envisioned as an “interior landscape.”

Connecting to nature through forms, moods, play of light, and materials—even in an urban setting—may seem “romantic and old-fashioned,” says Matti, but he argues that, in fact, modern technologies make it possible to return to nature. “With the Internet, E-mail, mobile phones, etc.,” he explains, “you can as well work and live in the middle of nature as in a city. You now have the possibility to choose.”

The firm's largest and most urban project to date is the student housing at a new university in Vaasa, Finland. Within an old flour mill and their own new building, the architects have accommodated a cafeteria, students' theater, common areas, and apartments. As in other Sanaksenaho projects, this urban work emphasizes natural materials—brick and timber—and their detailing. Even in this densely built setting, the architects were careful to create public outdoor meeting spaces: green courtyards as places to pause.

Although Matti Sanaksenaho himself continues to draw only by hand, computer technologies ultimately extend his firm's range of buildable forms. “All the necessary technological solutions exist in our buildings, but our goal is that they remain hidden. They don't play the main role. On the other hand, sometimes [as in the chapel], we leave the structure totally visible on the inside of a building, revealing the tectonics of the architecture.” ■

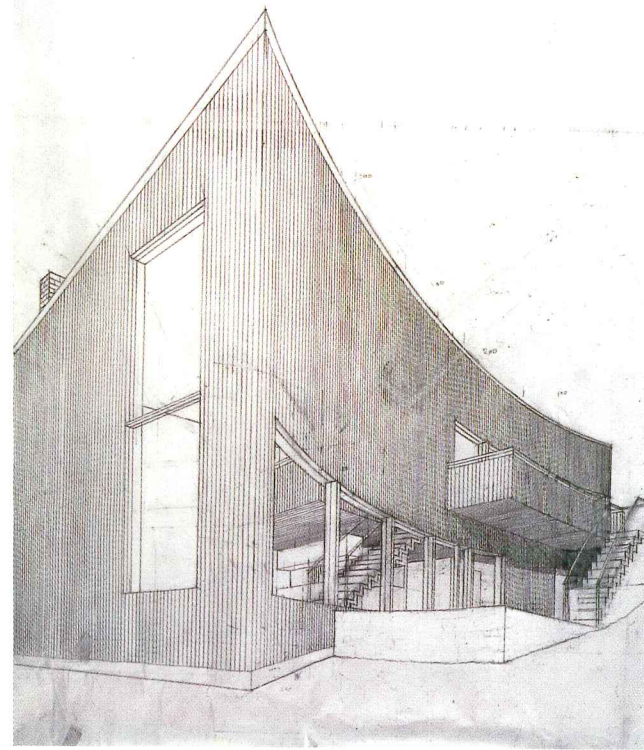
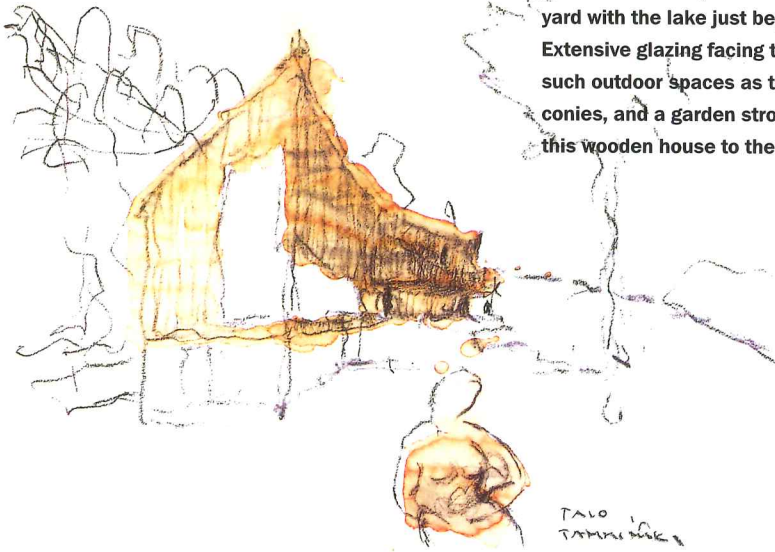


The Chapel
Hirvensalo
Turku, Finland

This chapel, designed in 1995 and awaiting construction, will stand on a forested hill on the island of Hirvensalo. Both exterior and interior forms and structure—especially the internal wooden ribs—will quietly and abstractly evoke the hull of a boat or the body of a great whale or fish. While the interior—contrasting light and shadow—will be mysterious, the green patina of the copper cladding will harmonize with the surrounding trees.

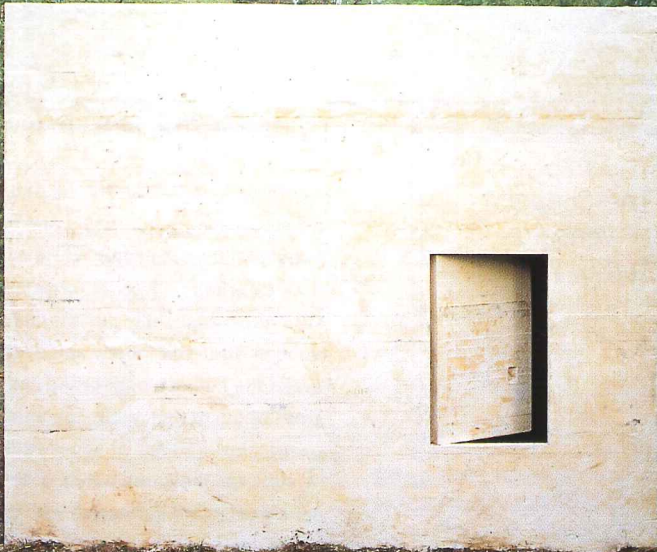
Tammimäki House
Lippajärvi, Finland

Sited on a sloped peninsula jutting into a lake near Helsinki, this house (currently under construction) was designed for the architectural partners themselves and their children. The building's curving, sheltering form embraces the yard with the lake just beyond it. Extensive glazing facing the water and such outdoor spaces as terraces, balconies, and a garden strongly connect this wooden house to the landscape.



The Empty Space
Saarijärvi, Finland

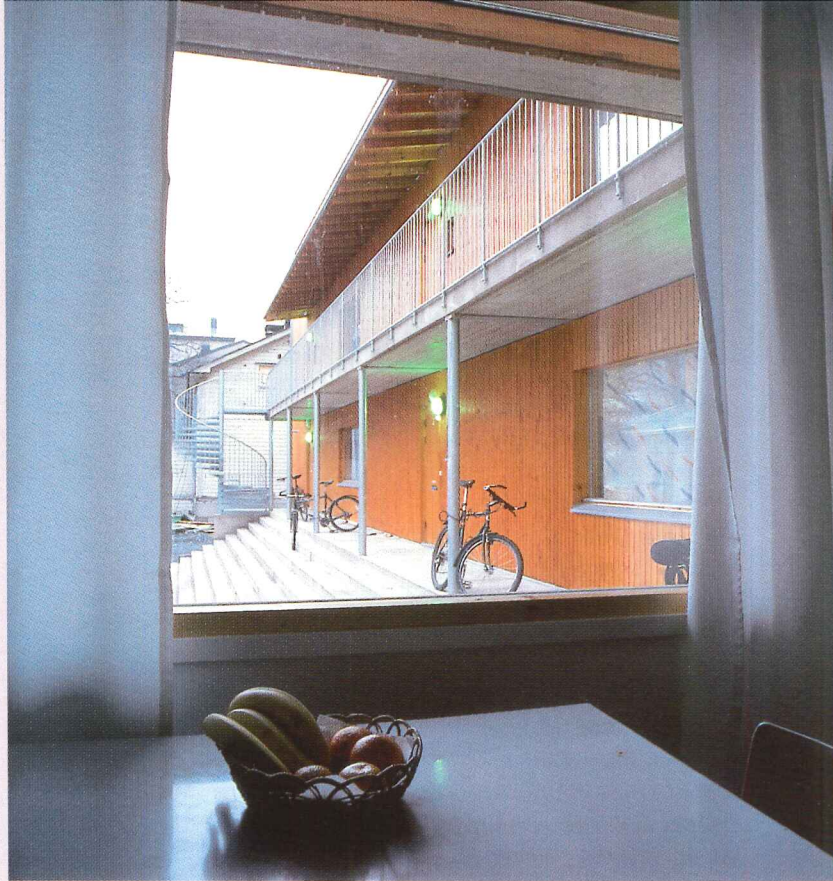
Designed in 1993 as part of Matti Sanaksenaho's architecture school thesis project, *The Empty Space* is both a building and a sculpture. It was erected in the dense forest of Saarijärvi, Finland, on the grounds of Tapper Art Institute, where an international array of artists come to live and develop ideas in an extraordinary natural setting. This wall with its tiny hinged door/window, and single small enclosed space behind it speaks of fundamental qualities of architecture and landscape.





Student Housing Vaasa, Finland

At the new university of Vaasa, on Finland's west coast, this project provides a cafeteria, student theater, study areas, and apartments. Combining buildings from the 19th century and 1950s with new construction, the architects rendered a city-within-a-city in brick and timber. They were careful to offer respite from urban density with such features as a central courtyard and a rooftop sauna with views of the sea.



Designer Shops Helsinki/Stockholm

The client, Designer Shops, which carries high-quality and clean-lined Nordic household goods, sought a new image for its stores. The architects responded with folded planes that define a continuous wood-lined interior landscape, providing a backdrop and scale for the objects on display. The design follows the story of a ceramic cup from the kiln to the human hand.





Lewis.Tsurumaki.Lewis explores ways of making the familiar strange

By Suzanne Stephens

Architect: Lewis.Tsurumaki.Lewis

Location: New York City

Design Staff: 3

Date established: 1992

Partners: (left to right) Paul Lewis, Mark Tsurumaki, David J. Lewis

Education: Paul Lewis—B.A. Wesleyan University, 1988, M. Arch. Princeton University School of Architecture, 1992; Mark Tsurumaki—B.S. University of Virginia, 1987, M. Arch. Princeton University School of Architecture, 1991; David J. Lewis—B.A. Carleton College, 1988; M.A., Cornell University, 1992, M. Arch. Princeton University School of Architecture, 1995

Work history: Paul Lewis—Diller & Scofidio, New York (1993–97); Tsurumaki—Joel Sanders Architects, New York (1991–97), currently teaches at Parsons School of Design; David J. Lewis—Daniel Libeskind Architect, Berlin (1993), Princeton Architectural Press, New York (1994), Peter Guggenheimer, Architects (1995–96), joined firm in 1996

Key completed projects:

Geltner/Parker loft, New York City, (2000), Copernicus Books, New York (2000), Everest Partners offices, New York (1999), Van Alen Institute, New York, (1998), Princeton Architectural Press (1998), and Happy Mazza Media Co. (1998)

Key current projects: Lo Zoo restaurant/bar, New York; Architectural League offices, New York; residence, Ithaca, N.Y.; curating and designing exhibition Architecture + Water, for Van Alen Institute, New York

Web site:

www.lewis-tsurumaki-lewis.com

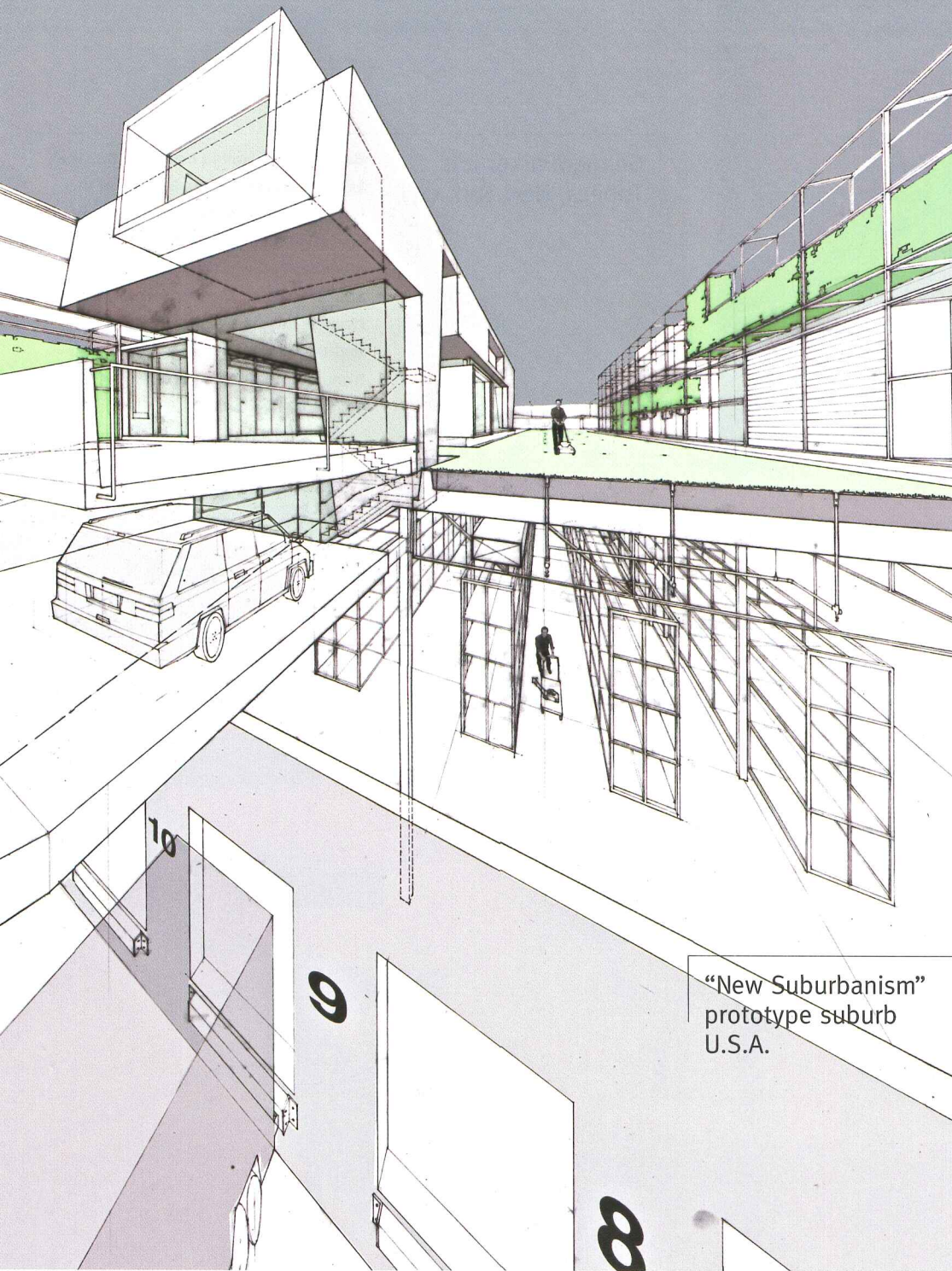
The work of Lewis.Tsurumaki.Lewis is well known to the New York City downtown crowd that frequents Storefront for Art and Architecture, the vanguard gallery where the fledgling firm (in association with Peter Pelsinski) created architectural exhibitions and installations starting in 1994. Since then, the firm has gradually expanded its scope of work. But its commitment to rethinking the nature of the program as well as the design, especially when constrained by tight budget and spaces, began with those early installations that preceded “real” projects.

The three partners, who include identical twins David and Paul Lewis and Mark Tsurumaki, gained recognition with the uptown crowd in 1997 when they presented their work at the “Young Architects Forum” of the venerable Architectural League. Last spring they designed the League’s blockbuster *10 Shades of Green* exhibition [MAY 2000, page 198], while their own piece, “Refiled,” stole the show at the Triennale of the Cooper-Hewitt National Design Museum. “We are probing architectural conventions by probing representational conventions as well,” says Tsurumaki about the inventive multimedia installation.

The first of their four projects in the Triennale installation was a witty proposal for the Seagram Building: “Mies on a Beam (*mise en abyme*).” More than just a play on Mies’ architecture and French poststructuralists’ favorite literary conceit of a story-within-a-story, the proposal displays the firm’s sense of programmatic invention. Using Mies’ famous I-beam detail on the Seagram, the three architects designed a mechanized moving platform that could be attached to the short ends of the Seagram Building. It would provide a window-cleaning operation, portable terraces, and outdoor smoking rooms for the offices. “We began with sort of a one-liner,” says Paul Lewis, “but it turned out to have more to it than that. We are trying to see what the limits are—not just formally, but in terms of the program. We believe in oscillating between the practical and the speculative, and pushing the rational to the side of the absurd.”

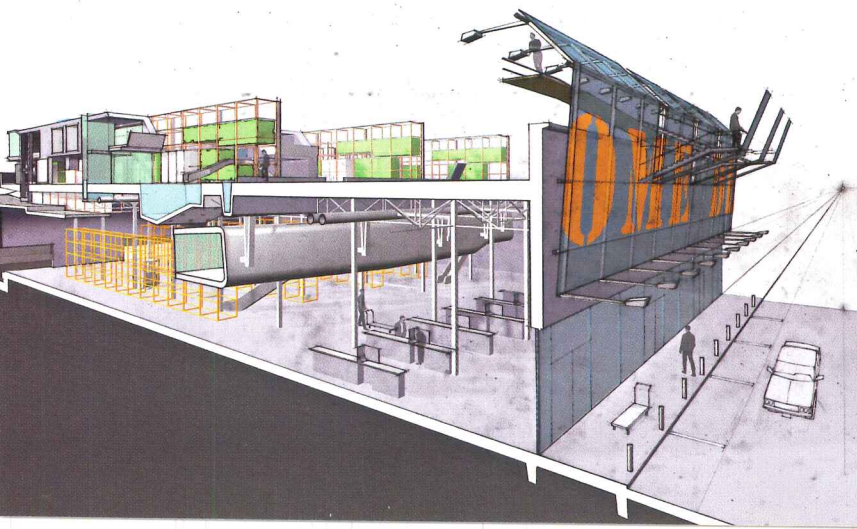
While making its reputation with such exhibitions, the firm has been increasingly called to renovate interiors, such as the offices and a gallery for the Van Alen Institute in New York. It is working on an interior office plan for the Architectural League as well, and completing the Lo Zoo restaurant in Manhattan. “We like to seek out the sense of pleasure and invention possible in the everyday world,” says David Lewis. “We look for the latent potential within found conditions, but not necessarily through form. We want to see how you can make the familiar strange.” The bar shelving at Lo Zoo, which continues in the basement to become storage, demonstrates the firm’s search for unusual “sectional juxtapositions.”

Tsurumaki explains that the firm’s basic thrust involves “a critical engagement with the normative,” so that architecture is not just a practice bound by convention. Paul Lewis agrees but qualifies that assertion: “We are looking at the ‘What if?’ part of delight. There is some level of pleasure—it isn’t just a critical gesture.” ■



“New Suburbanism”
prototype suburb
U.S.A.

Much maligned aspects of “slurbia,” the single-family house and the big-box store are efficiently combined into a two-level steel-frame structure for this speculative project. Houses are built atop the giant roof of the stores, with loop roads and cars linking the two. Roof lawns allow sports, pools double as skylights for store, and residential and commercial components share a heating and air-conditioning infrastructure.





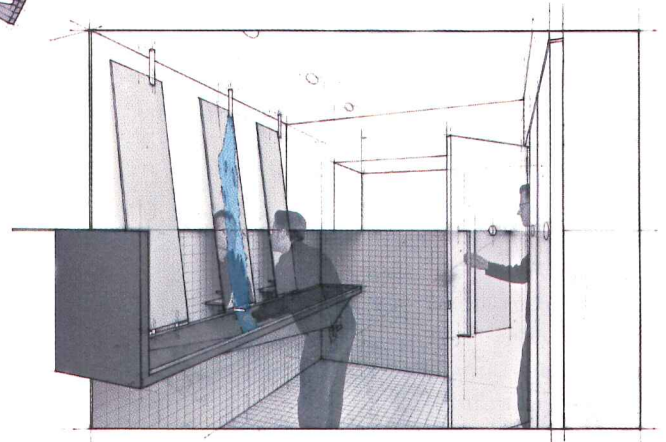
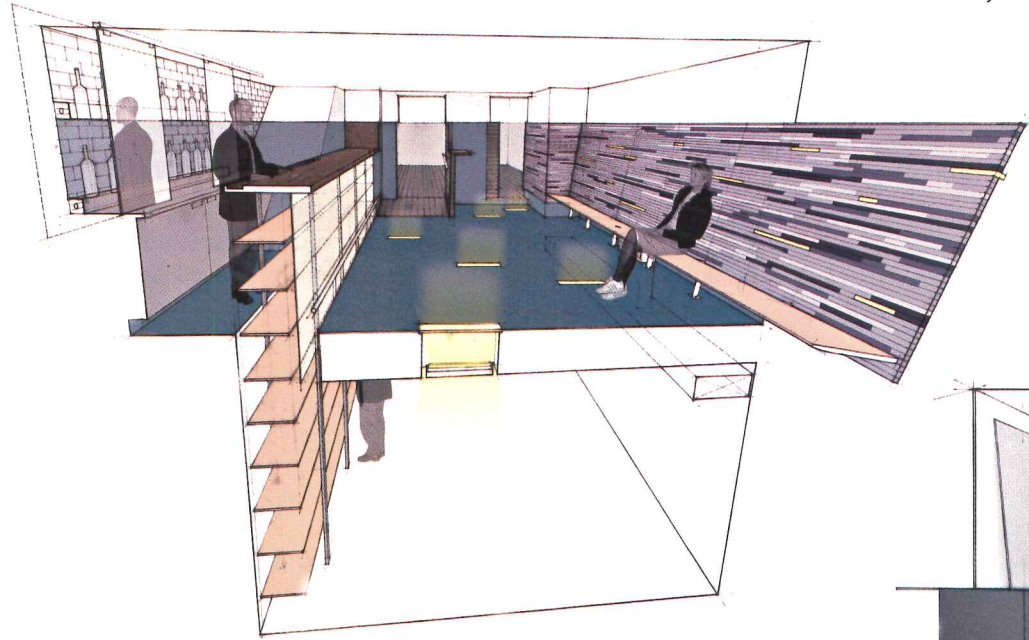
Geltner/Parker loft
Tribeca, New York City

Because of a limited budget of \$65,000, Lewis.Tsurumaki.Lewis left half of the loft untouched. Within their "territory of operation," the architects installed a luminous ceiling, a new steel-and-maple stair, a kitchen, and a storage wall. Many of the planes and details meld together, such as the extended stair treads that become part of a cabinet/desk (below).



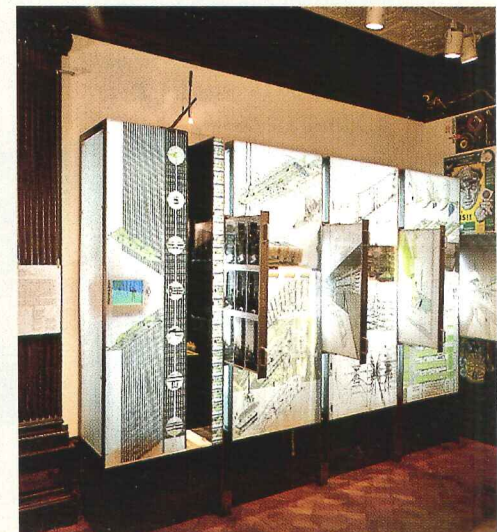
Lo Zoo restaurant
Houston Street,
New York City

In a 160-seat restaurant nearing completion in Manhattan, the architects had to work with ceiling heights of 7 to 10 feet. Slots in the floor of the bar and niches in the walls of the dining space provide ambient lighting. Built-in banquettes are covered with felt strips, and glass shelves are part of a two-level bar-though-basement storage unit. In the rest rooms (below), water for the sink pours down the mirror.



“Refilled,” Design
Triennial, Cooper-
Hewitt Museum

An imaginative mix of representational techniques presents four speculative projects by the firm in four 8-foot-high steel-framed plexiglass vitrines. Drawings, models, TV screens showing animations, and rolo-dex card holders displaying textual information are installed in the vitrines. Flat steel drawers stood on end roll out between each one to display sectional drawings of the projects in this updated cabinet of curiosities.





Birds Portchmouth Russum adds wit and color to a diverse body of work

By Adam Mornement

Architect: *Birds Portchmouth Russum Architects*

Location: *London*

Date founded: *1989*

Design staff: *5*

Partners: *(above, left to right) Andrew Birds, Michael Russum, Richard Portchmouth, Karl Jensen*

Education: *Birds—Leeds Polytechnic (1981), Polytechnic of Central London (1984);*

Russum—Kingston Polytechnic (1979, 1982); Portchmouth—Kingston Polytechnic (1978, 1981); Jensen—Rice (1989), Hunter College (1994)

Work history: *Birds—Foster (1984–85), Stirling Wilford (1985–89), Barnard Urquart Jarvis (1987–88); Russum—Ahrends Burton & Koralek (1982–83), Aldo Rossi, Fabio Reinhardt & Ignazio Gardella (1983), Stirling Wilford (1983–89); Portsmouth—Broadway Malyan (1978–79), Stirling Wilford (1981–89); Jensen—Stirling Wilford (1986–87)*

Key completed projects: *Avenue de Chartres Car Park, Chichester, U.K. (1991); the “Pacemaker” (1994); the Chase apartments, London (1999); Plashet Grove School Footbridge, London (2000)*

Key current projects: *Laganside Cross Harbour Development Area, Belfast; Bethnal Green Live-Work Housing, London; Door furniture for Dorma*

Web site: *www.birdsportchmouthrussum.com*

Adam Mornement is a former editor of World Architecture.

Andrew Birds, Richard Portchmouth, and Mike Russum started their firm in 1989, after winning a competition to design a car park in the town of Chichester in southern England. At the time, the three 30-something architects (plus Karl Jensen, who contributes from the other side of the Atlantic in New York) were working in the office of the late James Stirling. Did Stirling mind they were moonlighting? “Well I think he had his suspicions,” says Portchmouth. “And he did get a bit annoyed on the Monday morning submission deadline. Everyone in the office was helping us out,” he adds. “But it’s exactly the sort of thing he would have done,” the three London-based principals say in unison.

The BPR principals have immense admiration for “Big Jim,” and his influence is evident in their work. “Like our mentor, we’re not so bothered with taste,” says Russum. And like him, BPR has a fondness for repeatedly using eye-catching color in its work; a certain saturated blue shows up in several of its recent projects. BPR, though, is also staking out its own turf with designs that combine attention to detail with a visual playfulness that takes the starch out of architecture.

“I think what makes us different is that, while most architectural design emanates from a brief (program), we take our work back a stage further,” says Portchmouth. “In a way, we reinterpret briefs, and there’s something more meaningful about the buildings we’ve come up with as a result,” he adds. “The process is quite important,” says Birds. “We research from as broad a base as possible and try to reach a solution. The way our thinking works makes the result self-determining.”

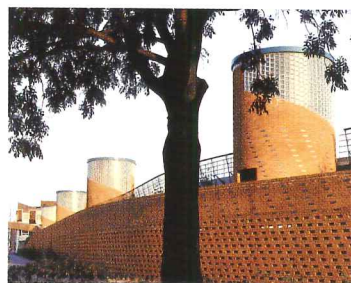
The Avenue de Chartres Car Park in Chichester is a case in point. The program was to triple the amount of car parking on a piece of land. “To get to the essence of the solution we went back to the original Roman town plan,” continues Russum. BPR’s design uses one wall of the parking structure to partially reinstate the interrupted Roman town wall, in the process creating an elevated walkway direct to the town center. Five color-coded turrets and the application of vernacular materials complete the pragmatic but creative ensemble.

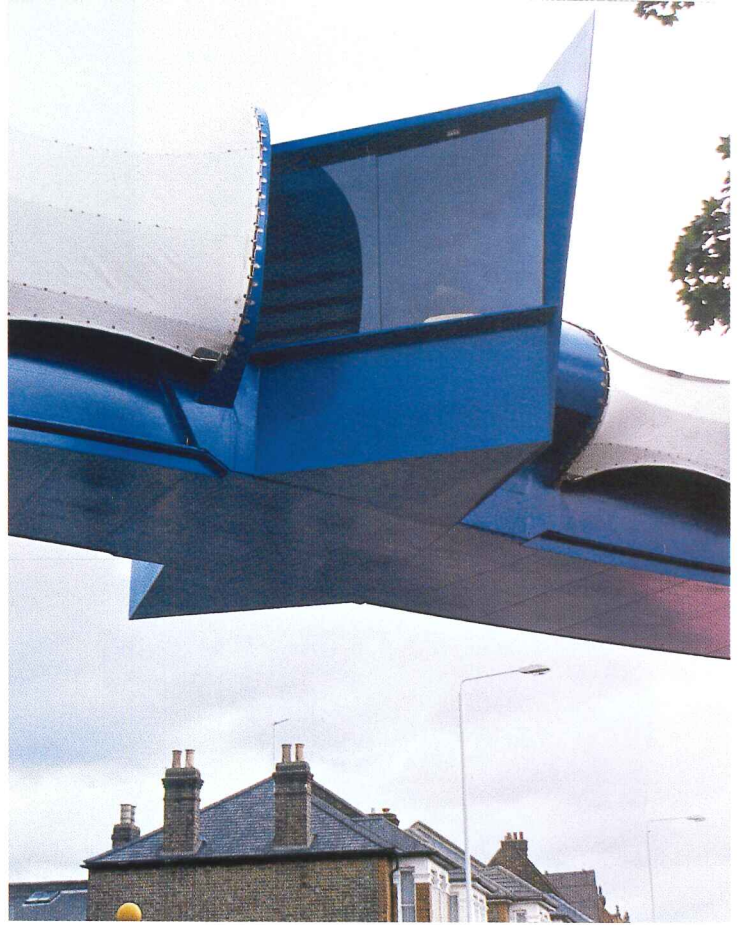
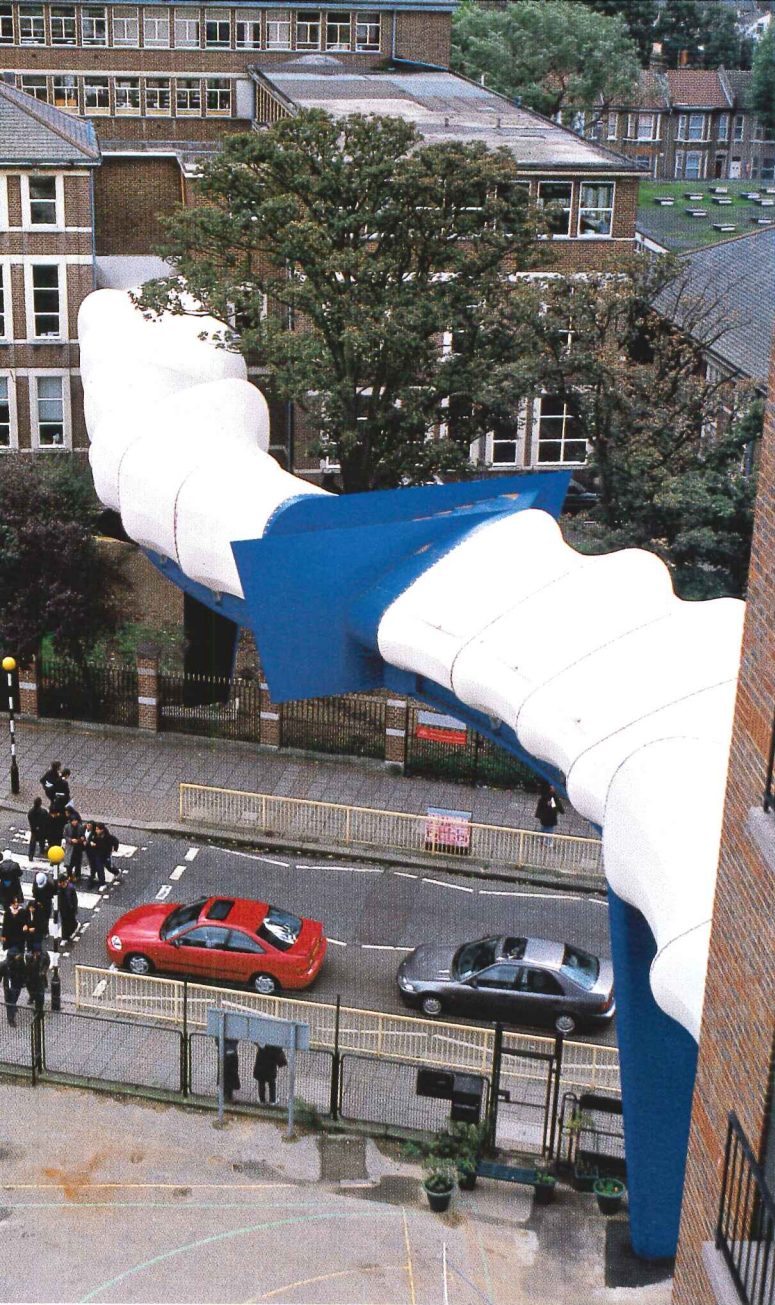
BPR’s most recently completed project, a footbridge linking two schools in east London, is an equally idiosyncratic symbiosis of cost-effective conceptualism. The undulating Teflon-coated structure has iconic qualities that belie a total cost of \$825,000.

“The buildings we have done have been successful in terms of meeting time scales and budgets,” says Portchmouth. “I think that is an important point to make because if people perceive your work to be adventurous in any way, then [there is an assumption that] it must be expensive or difficult to procure.”

To date, BPR’s output of completed projects is minimal. From a client’s perspective there is a sense that, as with Daniel Libeskind and Rem Koolhaas early in their careers, BPR offers some intriguing ideas but remains a relatively unknown quantity. At the age of 11, BPR is going through that awkward phase—too conceptual to be trusted for big work yet too young to compromise. But it has come close in some high-profile competitions and is ready for clients willing to take a risk. ■

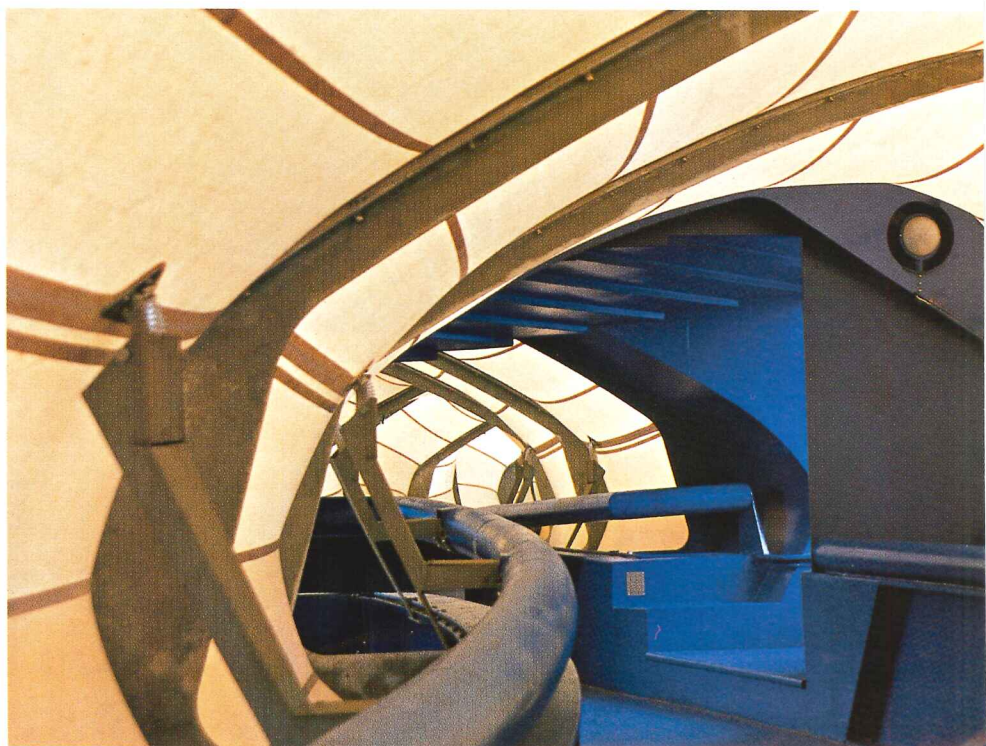
Car park in Chichester





Plasht Grove School Footbridge, London

Connecting the school's original Victorian building and an addition from the 1960s, this footbridge sweeps around trees on the school grounds and crosses a busy road. The bridge has a steel balustrade and deck supported on steel columns. White fabric stretches over a series of steel hoops to protect pedestrians from the elements. Seating and windows at the center of the bridge provide views.





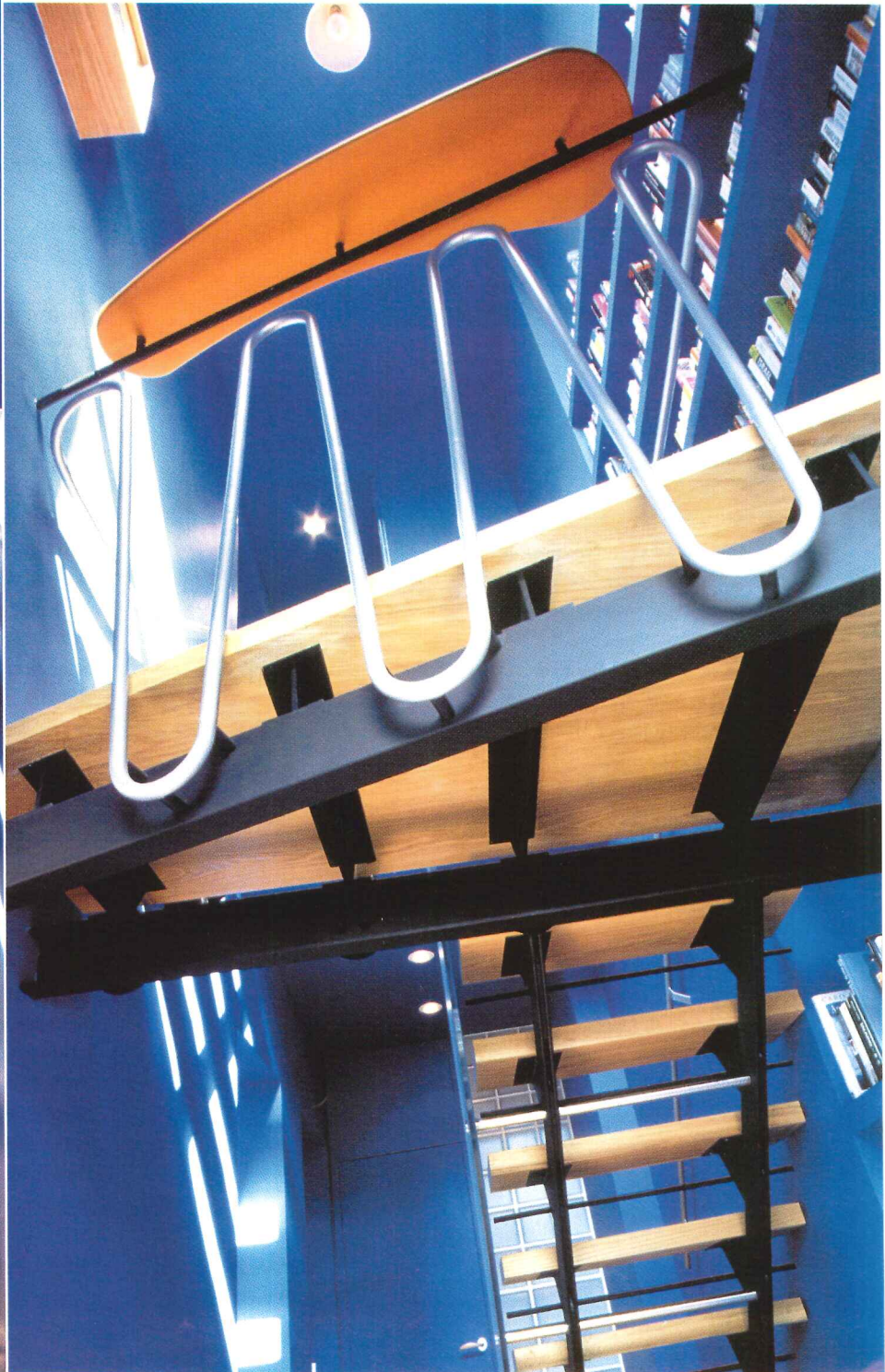
The "Pacemaker"

A manufactured building component that includes mechanical services, bathroom, and vertical circulation, the "Pacemaker" can be added to existing buildings or used as a "starter" kit for new homes. It is delivered to the site by truck and achieves structural stability when segments within the fiberglass shell are filled with concrete.



The Chase
London

This project connects two existing apartments in a Victorian townhouse via a stair inserted into a new bay added to one side of the building. The new bay, which includes the stair, a cloakroom, and a shower, freed up space on the ground floor to create a large living room. The stair's central balustrade is made of a single sheet of sandblasted glass and is supported on stainless-steel rods in the stringers.





SHoP pulls disparate pieces together to create a practice-driven firm with kick

By Clifford A. Pearson

Architect:

SHoP—Sharples Holden Pasquarelli

Location: New York City

Design staff: 9

Date established: 1997

Partners: (above, left to right)

William Sharples, Coren Sharples,

Christopher Sharples, Gregg

Pasquarelli, Kimberly Holden

Education: W. Sharples—Penn State

(1988), Columbia (1994); Coren

Sharples—Maryland (1987),

Columbia (1994); Chris Sharples—

Dickinson College (1987), Columbia

(1990); Pasquarelli—Villanova

(1987), Columbia (1994); Holden—

Vermont (1988), Columbia (1994)

Work history: W. Sharples—Clark

Construction; Coren Sharples—

Viñoly Architects; Chris

Sharples—Aoshima Sekkei;

Pasquarelli—Frank O. Gehry, Greg

Lynn FORM; Holden—Greg Lynn

FORM

Key completed projects: *Costume*

National store (1997), *Teller*

Residence (1999), *Me & Ro store*

(1999), P.S. 1 “*Dunescape*”

installation (2000); *Long View*

exhibition (2000)

Key current projects: *Mitchell Park,*

Greenport, N.Y.; V-Mall, Queens,

N.Y.; the New Church of Greater New

York, Roslyn Estates, N.Y.; Museum of

Sex, New York City; Prentis Hall,

Columbia University, New York City;

Dakota Jackson factory, Queens, N.Y.;

Dakota Jackson showroom, New York

City; mixed-use condo development,

New York City; 100 Jay Street apart-

ment complex, Brooklyn, N.Y.

Web site: www.shoparc.com

Yes, there’s a shop at SHoP/Sharples Holden Pasquarelli and it has nothing to do with acronyms. It occupies about a quarter of the firm’s office space, and it is there that the partners and associates cut wood, slice metal, and build old-fashioned, three-dimensional models. For a firm that is best known for its skill with digital technology and yet-to-be-realized projects such as the Museum of Sex in New York City, the sawdust on the floor is a reminder that SHoP is grounded in the built world. “We’re inspired by the knowledge that Brunelleschi was a metal-smith when he won the competition to design the dome for Florence’s cathedral,” says Christopher Sharples. Recent installations at P.S. 1 Contemporary Art Center in Queens [AUGUST 2000, page 59] and the Municipal Arts Society in Manhattan (opposite) show the partners’ keen interest in the nuts and bolts of assembling standardized building elements. In these projects, it’s not the final form that matters as much as the logic behind the way the pieces come together.

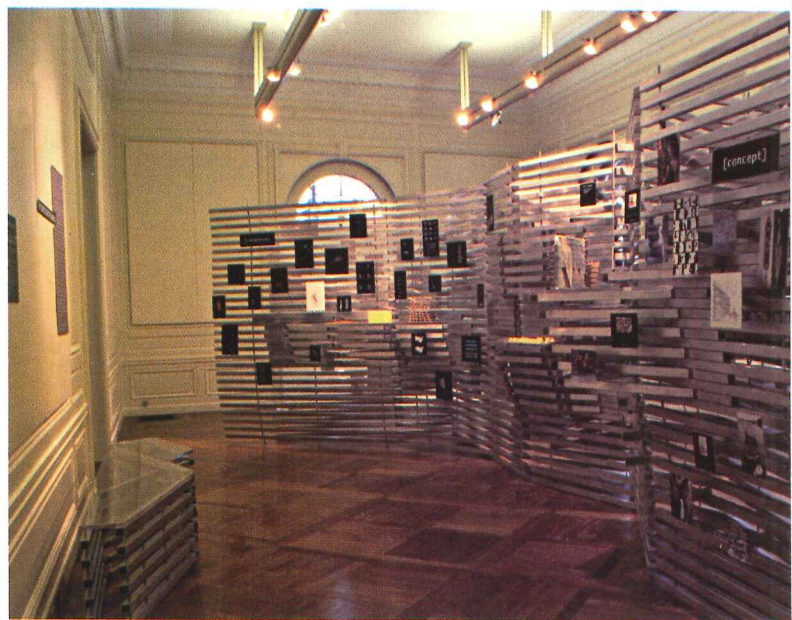
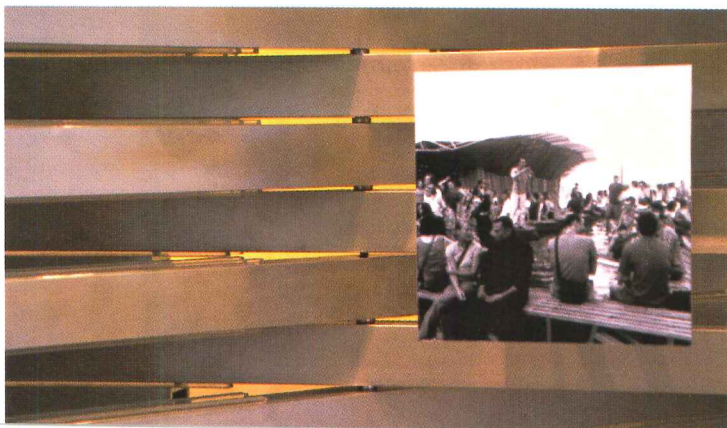
This same kind of flexibility holds true for the firm itself. While all five partners earned graduate architecture degrees from Columbia University, none of them started out in the field. Chris Sharples got his undergraduate degree in fine art; his twin brother, Bill, earned his in architectural engineering; Bill’s wife, Coren, studied business management; Holden began in art history; and Holden’s husband, Pasquarelli, worked in finance. Their backgrounds and experience in other disciplines have been a strength, says Bill Sharples, helping them understand and communicate with clients and contractors. “Our goal is to be a practice-driven and performance-driven firm,” states Coren Sharples. Indeed, the partners’ model is more that of a management-consulting firm like McKinsey or Anderson than Richard Meier, says Pasquarelli. “A practice-driven approach allows us to be fluid in our thinking,” explains Chris Sharples. How five partners work together is something the firm is still figuring out. “We don’t want to have five ateliers working on five sets of projects,” says Holden. So far, the partners’ roles have changed on each project. “We come together at various points, go off on our own, then come together again later in the process,” explains Holden.

The computer has helped SHoP pursue this new model of practice. “The computer affects our work, but it’s just a tool,” says Bill Sharples. “At this point, though, it is our primary tool,” he admits. “The computer lets us look at things faster and more accurately,” adds Coren Sharples. “And it lets a firm our size work on some pretty big projects,” says Holden. Although the firm’s completed projects so far are mostly small-scale or temporary, SHoP has some major buildings on the boards. Next spring, a four-acre waterfront park on Long Island will open with a landscape plan and buildings by SHoP. This will be followed in 2002 by the V-Mall in Queens, an ambitious project encompassing a supermarket, restaurants, commercial condominiums, and parking. Also in the works are a 20-story apartment complex in Brooklyn, a new building for Columbia’s School of the Arts, a factory for furniture designer Dakota Jackson, and—when funds are raised—the much-publicized Museum of Sex. For a three-year-old firm, such projects offer a golden opportunity to show what it can do on a bigger scale and larger budget. ■

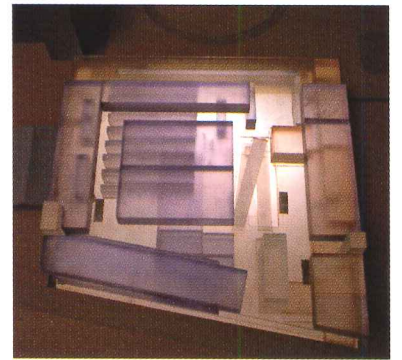
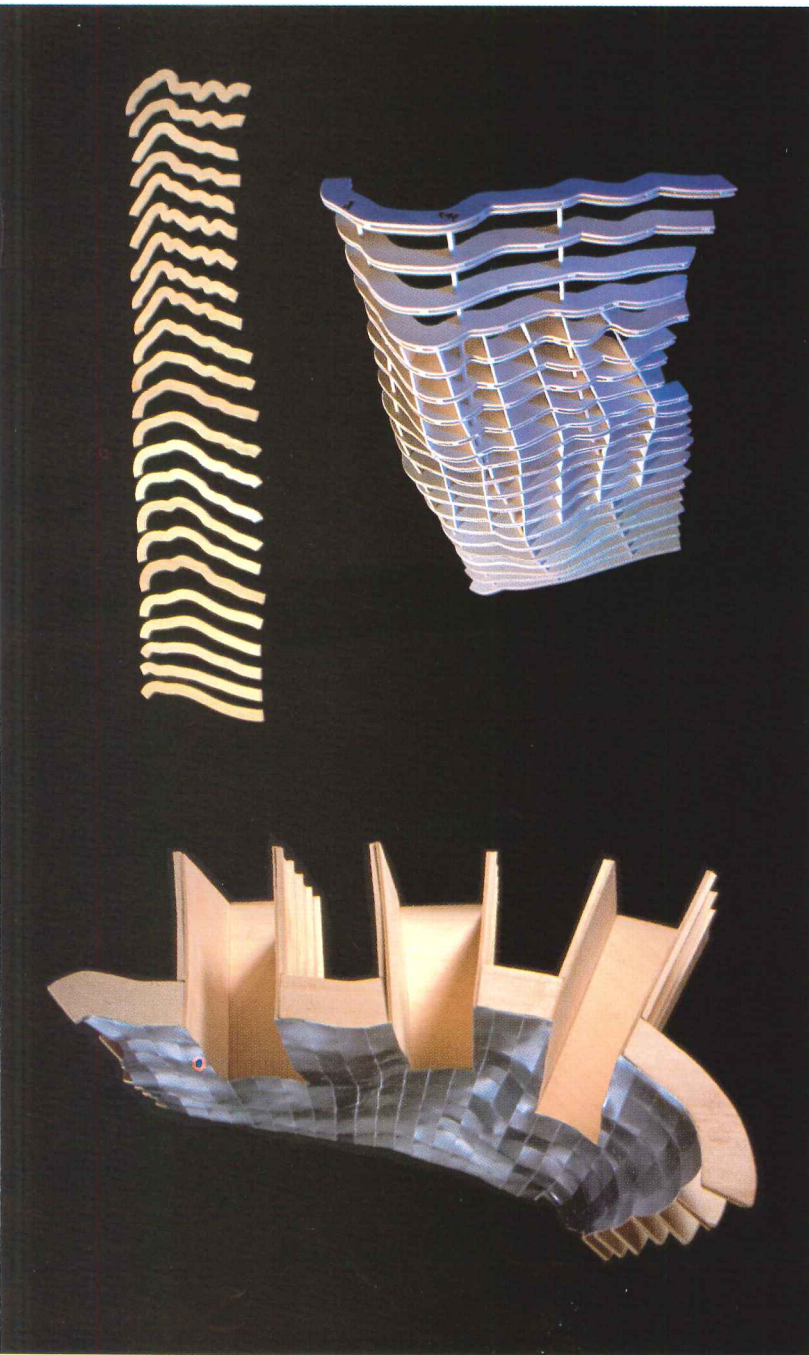
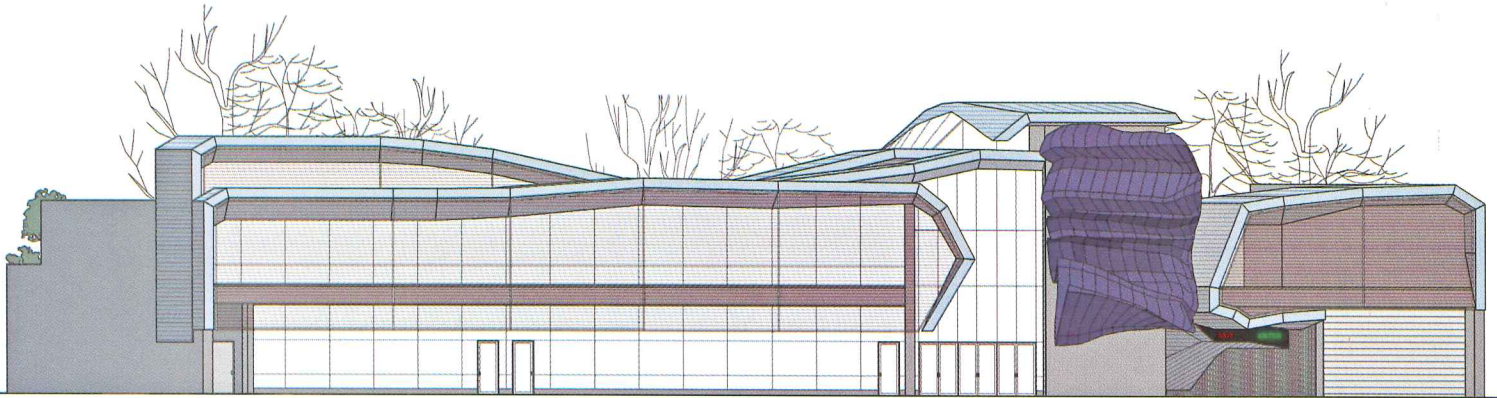


Long View Exhibition
New York City

SHoP designed an adjustable armature for a series of two-week exhibitions organized by the Museum of Modern Art, with Philip Johnson as guest curator. The armature is made of 2-by-2-inch aluminum tubes fastened with custom-designed steel hinges and movable struts. The firms featured in the shows were SHoP, UN Studio/Van Berkel & Bos, Michael Maltzan, Reiser + Umemoto, and Foreign Office Architects.

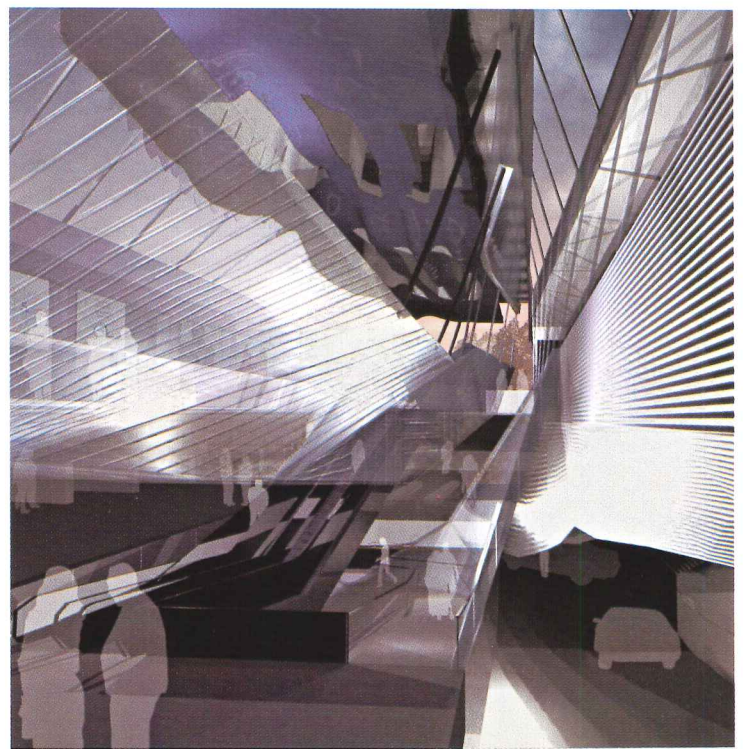


PHOTOGRAPHY: © SHoP (PORTRAIT); JONATHAN MALLIE (THIS PAGE)



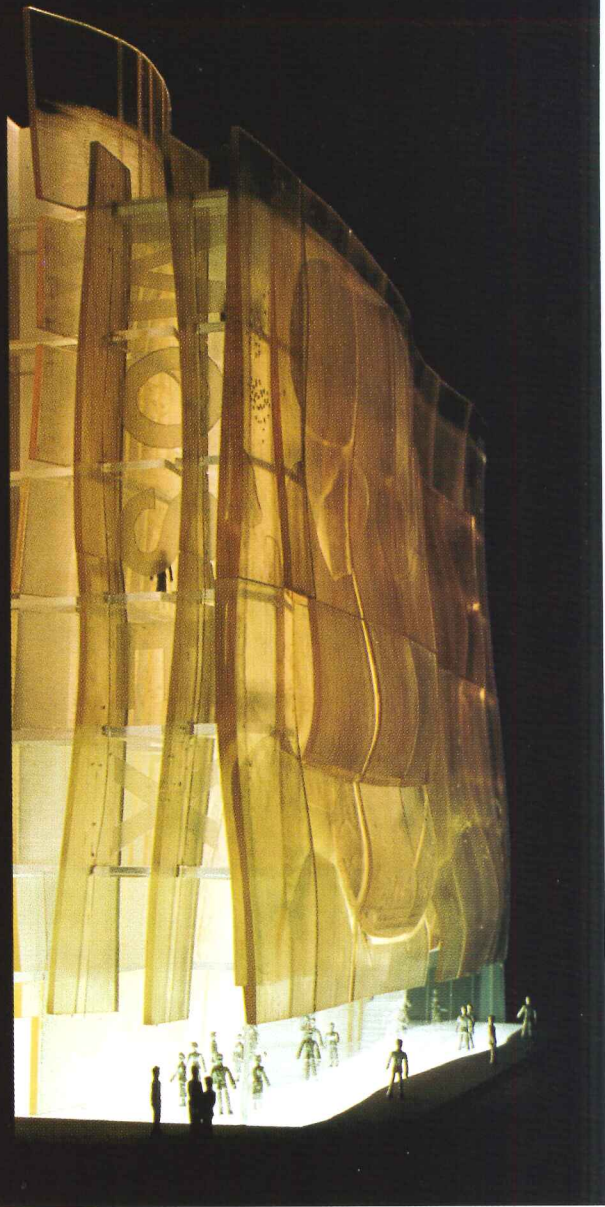
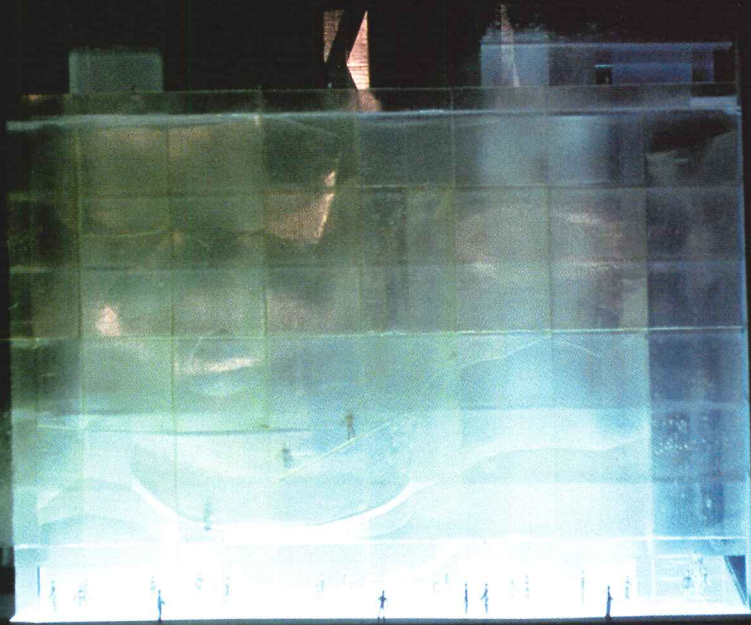
V-Mall
Queens, N.Y.

Asked to design a suburban-style strip center on a tight urban site, SHoP stacked the various components vertically with parking for 200 cars; five restaurants; a large supermarket; and 40 commercial condominiums. A vertical passageway slices through the building, creating a dramatic, skylighted gathering and circulation space.



Mitchell Park
Greenport, N.Y.

A four-acre waterfront park that will be completed next spring, this project includes both landscaping and architecture. To connect the park to key points in the village, the architects are "bridging" the site with a harborwalk that takes pedestrians past a terraced amphitheater, a commons, a skating rink, and a structure to house a vintage carousel.



Museum of Sex
New York City

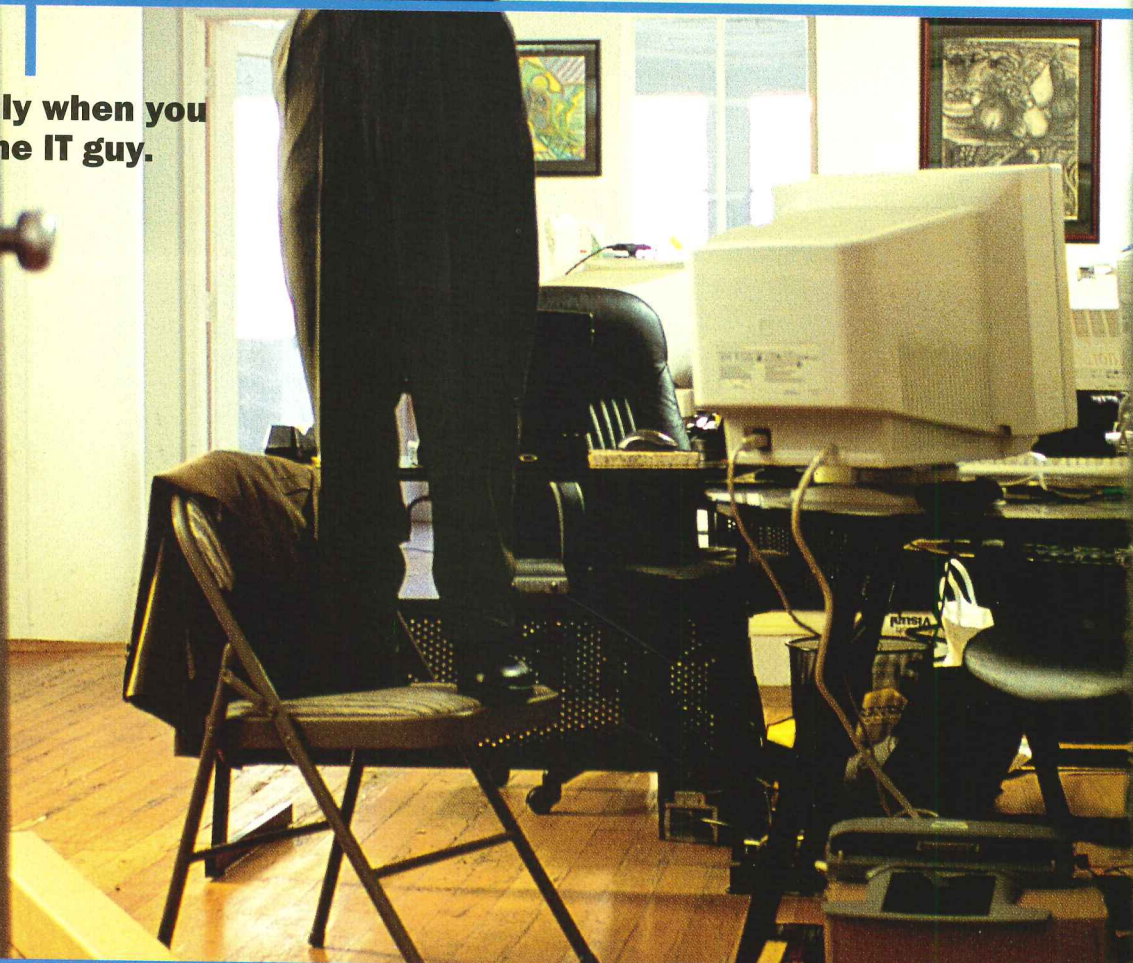
SHoP designed this building as a series of transparent and translucent glass veils that envelop various spaces while offering views or hints of activities inside. An institution examining an essential human behavior, the museum has attracted a lot of attention and is now raising funds for construction.



Talking the IT guy into the best-equipped new computer is easy.



**Especially when you
are the IT guy.**



Where Politics Dwell

TWO ESSAYS OFFER VARIED PERSPECTIVES ON HOUSING POLICY: HOW POLITICS CAN PLAY HAVOC WITH DESIGN and THE NATION'S SKEWED SUBSIDY PRIORITIES

By James Russell, AIA



1.

San Jose, Calif.

Pensione Esperanza offers a single-room-occupancy beacon of hope in one of America's least affordable cities.



2.

Hoboken, N.J.

Sergio Guardia retained the identity of industrial structures while transforming them into market-rate loft apartments.



3.

Washington, D.C.

Weinstein Associates derived new housing types from the historic neighborhood in this mixed-income public-housing replacement project.



4.

Portland, Ore.

Sienna Architecture Company assuaged a residential neighborhood's fear of higher-density infill as its Irvington Place enlivened a busy shopping avenue.

Architects often claim to be victims of the politics of housing. It's their ambivalence toward housing policy that has reduced the influence they could wield, say some advocates. They give architects credit for the benefits that their designs bring: integrating separated populations, for instance, and reducing neighborhood opposition. But housing policy is almost always politically charged, and it has been easy in the past to sacrifice design as a frill in the name of opportunistic "cost effectiveness." Architects also could do more to assuage the often knee-jerk community opposition to affordable housing because they understand the issues that fuel the debates—costs, parking, zoning, density. With housing issues becoming more challenging, architects willing to immerse themselves in policy will have more opportunities to craft solutions.

The good news is that clients and government agencies now widely appreciate the value that design adds. "The old 'do it cheap' way obviously didn't work," says Elinor Bacon, HUD's deputy assistant secretary of public-housing investment. "You want to build in a quality that will make people of all incomes want to live next to people of low income. We're definitely stressing design." This new focus is necessary in part to counteract the well-entrenched image of low-income housing as bleak towers jammed with drug dealers and gangs. The fear can be palpable and unreasoning: "We went to a council meeting in one city the day after we had been hired," says architect Rob Wellington Quigley, "and someone stood up and said how ugly my design was. I had yet to put pencil to paper."

But the means to deal with this fear are now well developed. Quigley's project eventually sailed through the same council, but only after numerous community workshops and a highly participatory design approach. Such outreach is becoming typical. "Good design can lift neighborhoods," says Marilyn Melkonian, president of Telesis, the developer of the Townhomes on Capital Hill (page 144). "First, though, you have to recognize that you are building a community, not just a project."

A well-designed project also helps solidify the track record of non-profit developers, which helps speed approval of subsequent projects. But the design itself must often walk a fine line. Local activists may demand more from affordable projects than from market-rate ones; funders may expect low-income projects to come in below market rate; managers want more costly institutional-quality finishes because they may not have the maintenance resources all-private projects do. "Market-rate developers often don't care about maintenance costs because they figure it will be someone else's problem," says David Baker, designer of the Pensione Esperanza.

Adds Amy Weinstein, architect of the Townhomes on Capitol Hill,

“You spend a lot of time figuring out how to create an affordable level of detail.” Having designed a special brick shape, she used it in a number of different ways to get a shadow play and sense of heft in the veneer in the Capitol Hill townhomes project. “We used a lot of vinyl siding,” she adds, but sales representatives weren’t initially helpful, since so few users apparently seek to disguise the crudeness of many standard details.

Affordable housing is not a market to be entered by the faint of heart. Nor is it particularly lucrative. “It’s a living” is about the best architects will say about the fees. Baker puts it succinctly: “If you don’t learn to manage these projects efficiently, you’ll go broke.” Then there are the problem clients. “Some developers are more professional than others and more adept at threading their way through the process,” says Quigley. “If we get hooked up with someone who is not adept, we have to solve many more problems within the same fee structure.” Quigley sets higher fees for lower building budgets. “The lower the budget, the more time it takes in architectural hours. The better developers understand this and realize it is cheaper to pay more to the architect.”

One of the rewards, however, is the opportunity to collaborate with clients on innovative solutions. Some tasks are prosaic: negotiating a legal status for new kinds of single-room-occupancy residences, for example. Occasionally a project offers the opportunity to redefine a housing type. In a new Oakland project, Michael Pyatok has combined low- and middle-income rentals with a co-housing scheme augmented by a children’s museum of art, stores, and a farmers’ market. “It’s as much an economic-development project as a housing project,” Pyatok explains.

Common Ground, a nonprofit that creates innovative programs to promote independence and stability for homeless or near-homeless people, had defined a need for housing that fit between the established models of overnight shelters and subsidized long-term housing. New York City architects Marguerite McGoldrick and Gans & Jelacic designed a prototype living pod intended to ease the transition for homeless people who are frightened of shelters or resistant to traditional outreach efforts. The architects invited some potential users to evaluate their prototype. “Ninety-nine percent of the guys who walk in here will say, ‘this is home,’” said “Bruce,” an alcoholic who makes money running errands for fellow residents of the lower Manhattan flophouse he lives in. “One percent will destroy it just because it’s so nice.” Another day in the life of America’s low-cost housing economy. ■

Housing Subsidies

By James Russell, AIA

While much progress has been made in successfully *designing* housing for those not served by the private market, the government-assisted housing-finance system has long been stretched to the breaking point, a victim of years of public and official neglect.

Now skyrocketing land and house prices have begun driving housing out of financial reach of more people—not just the very poor, but also working people. In some cities, decent housing is no longer affordable for policemen, clerical staff, teachers—even housing-resourceful architects.

The current system is completely unprepared to handle the developing proportions of the problem. Without a concerted public effort to increase the availability of affordable housing and to help people pay for it, the crisis could become much worse.

While architects rarely take on financing responsibilities in the housing they design, the capricious nature of the system frequently forces architects to revise designs as rules change or delays wreak havoc on already tight construction budgets. Financial and artistic rewards tend to be hard won, so it’s a system that attracts architects who want to make a difference in people’s lives. “It’s incredibly rewarding emotionally,” says David Baker, who designed the Pensione Esperanza project (see page 136). “People you’ve housed tell you that you saved their lives.”

An emerging crisis

What crisis? you might ask. After all, for much of the 1990s homeownership actually became accessible to more people, thanks primarily to declining interest rates. Homeownership is at record levels nationally, and more middle- and lower-income people have been able to buy.

Analysis of recent housing-price data by RECORD and extensive interviews with experts point to a number of circumstances that have conjoined recently to reverse this trend in many markets. While interest rates were going down, home prices were rising, outpacing inflation for

WHERE HOUSING IS LEAST AFFORDABLE



SOURCE: LOW-INCOME HOUSING COALITION

THE MOST GENEROUS HOUSING SUBSIDIES FAVOR HOMEOWNERS, BUT RISING PRICES IN MANY CITIES ARE SQUEEZING OUT MIDDLE-CLASS RENTERS . . .

America's misplaced priorities

the last six years. In the last two years, though, interest rates have crept upward without a dampening effect on housing prices. In fast-growing metro areas, they've risen from 18 percent to 27 percent over only four years (with some evidence that in desirable submarkets, prices have gone up from 15 to 20 percent annually).

The widespread nature of price gains means that even formerly lower-cost places such as Seattle, Portland, and Atlanta have significantly closed the gap with such traditionally high-cost locations as San Francisco, New York, Los Angeles, Boston, and Washington. Even inexpensive locations face significant housing challenges. In Las Vegas, faded

IN SPITE OF RECENT GAINS, A NEW HOUSING-COST CRISIS IS ERUPTING.

tourist motels, converted to daily or weekly rentals, are now one of the prime sources of housing for the casino capital's army of service workers. "It's neither safe nor secure and offers no sense of dignity," says Will Newburn, president of the Tomhom Group. That's why the city invited the for-profit developer of single-room residences for low-income workers to build a 319-unit project in the city.

According to the Low-Income Housing Coalition, 40 percent or more of renters cannot afford what HUD regards as a fair-market rent in almost half the states and more than half of all metropolitan areas. The coalition annually calculates what it calls the housing wage, the hourly earnings necessary to pay a fair-market rent on a two-bedroom apartment. Nationally it was \$12.47 in 1999, more than twice the minimum wage. But it is much higher in the urban areas where there is a reasonable diversity of job opportunities (opposite), and it increased from 10 to 20 percent in more than 100 local jurisdictions in the last year alone.

In the current hot housing market, low-income people see their options vanish. HUD tracks what it calls "worst-case" families—those who earn less than 50 percent of area median income and pay more than 50 percent of their income in rent. The number hit a new record of 5.4

million last year. That's because the supply of private-sector units available to low-wage earners declined by over two million units between 1973 and 1995. Yet, since 1980, government programs for those people who can't afford market-rate housing contracted to a fraction of their former size. There's been a net decline in public-housing units as dilapidated units are torn down. Only a small percentage have been replaced [NOVEMBER 1999, page 76].

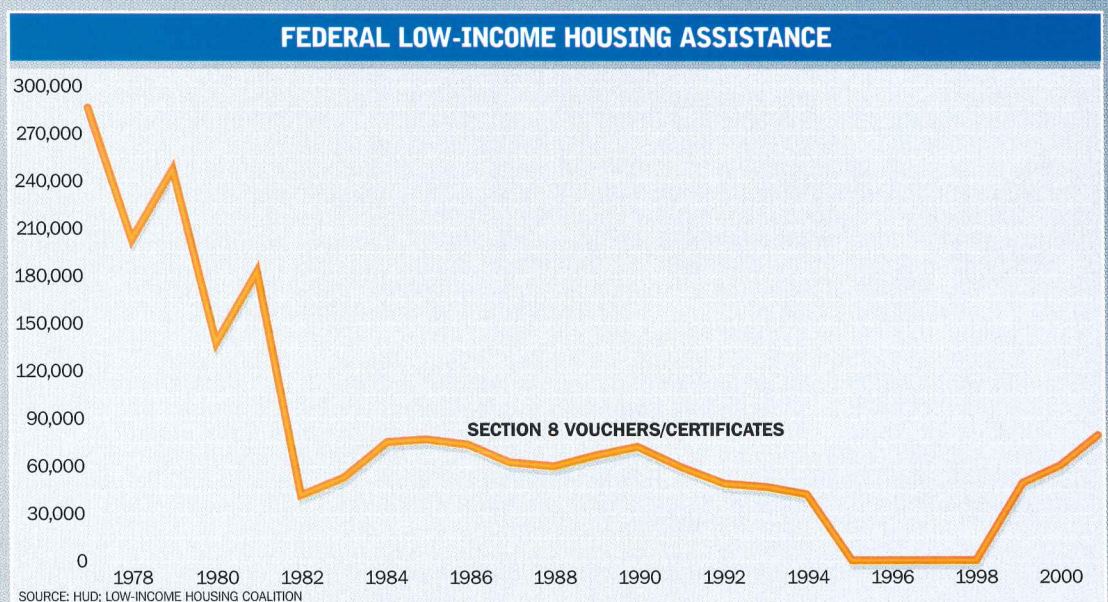
The federal Section 8 program, which is the biggest source of low-income subsidies and is the linchpin for many low-income housing projects, has also shrunk. New Section 8 vouchers and certificates, which help people make up the difference between fair-market rents and what they can afford to pay, disappeared completely from their peak of about 300,000 annually in the 1970s to zero from 1995 to 1999 (see chart below). Because of the abundance of unsubsidized renters, as many as 1 million units may be lost from the Section 8 system over the next few years.

The Low-Income Housing Tax Credit, another financial support of affordable housing production, has also lost value over the years, since Congress capped it in 1986. The number of units produced using tax credits has declined by almost half, just as rising prices have increased the need.

Who is losing out on housing

What happens to people shut out of decent housing? Those with mental disabilities or addiction problems can end up on the street or in shelters, but many more make do by illegally living in garages (renting for \$400 a month or more in places), or dividing up basements. They live in their cars or commute to jobs by bus for hours because they can't afford a car. The housing supply is so tight and the desire for decent dwellings so high that people hoping to be selected for the few subsidized units that come on the market will buck enormous odds. According to the Low-Income Housing Coalition, it would not be unusual for a big-city voucher-distribution cycle to attract 25,000 applicants, with 5,000 placed on a waiting list as a result of a lottery, only 1,000 of whom would actually receive a voucher. One New York City project received 29,000 applications for 198 apartments.

... JUST AS A LONG DECLINE IN SUBSIDIES HAS CUT THE SUPPLY OF AFFORDABLE HOUSING, ESPECIALLY FOR LOW-WAGE EARNERS.



It's no easier for housing advocates, whose projects must be assembled through the highly competitive panoply of government and private financial sources. At a panel discussion at New York's Van Alen Institute, Roseanne Hagerty, executive director of Common Ground, a nonprofit developer of transitional housing for the homeless, confessed, "We can only get a project done here or there. If you didn't think that was worthwhile, I don't know how you could go on."

Over much of the country, housing prices remain reasonable and have not increased greatly. But one of the most pernicious and hardest-to-quantify aspects of the housing-price crunch is that the largest advances have occurred in those large metropolitan areas that have rapid job growth and offer jobs with real advancement potential.

In these urban areas it is not just jobless welfare recipients who struggle with unmet housing needs. Working people, some with substantial salaries, can't find affordable homes within reasonable commuting distance of their jobs. "Even middle-class, double-income families have few options in our city right now," explains James Lima, of the New York City Department of Housing Preservation and Development. It targets homeownership aid for families with annual incomes as large as \$89,000. In California's Silicon Valley, the nation's worst housing case, the \$500,000 median home price requires annual earnings of about \$110,000. It is not surprising that, according to a report in the *New York Times* last year, teachers, police officers, firefighters, and commissioned salespeople have sought the services of area homeless shelters. In the October issue of *Urban Land*, Anthony Downs, a senior fellow at the Brookings Institution, wrote that California housing costs are contributing "to the generation of large-scale slums."

Skewing subsidies upward

Even as government resources have declined at the lower end of the housing spectrum, Congress and some states have offered steadily more generous subsidies to homeowners, subsidies that have become especially valuable to the affluent. Interest paid on home mortgages has long been deductible, as have property taxes. In recent years, Congress extended interest deductibility to home-equity loans. No other kind of personal debt is treated so kindly by the tax code. Capital gains realized from a sale also are no longer taxable for all but a fraction of owners.

There's something deeply skewed about the nation's housing priorities when it so generously rewards well-heeled owners, while subsidizing only about one-fourth of low-income urban residents eligible for aid. Indeed, because homeowner subsidies come in the form of tax deductions, there's no limit to how much they cost the Treasury. (They've been running at about a \$100 billion annual rate, however, roughly four times HUD's entire budget.) No one is denied a deduction because this year's allocation has been used up. While owners can ride the price-inflation wave (they may have to pay more but can sell for more too), people who choose to rent, as well as people who cannot afford to buy, get squeezed. If they aren't chosen for extremely competitive rent subsidies, they get no government housing assistance at all. "The long-term premise of federal housing policy," says Nicholas P. Retsinas, director of the Joint Center for Housing Studies at Harvard University, "was that if you worked you could afford a decent place to live. That was the social contract."

That contract is today a tattered document, but there is a growing realization that the housing crunch is real and that it has substantial destructive potential. Welfare-to-work programs have foundered when clients could not find decent housing, for example.

LOW-INCOME HOUSING SPONSORS MUST RAISE FUNDS FROM AT LEAST HALF A DOZEN PUBLIC AND PRIVATE SOURCES.

Groups as diverse as the Silicon Valley Manufacturers' Association and the area's Commercial Club, in its "Chicago 2020" report, advocate much-expanded affordable housing initiatives. Their member businesses find competitiveness threatened because people who live in less costly locations won't drive two and three hours daily to jobs. Without some means of making housing more affordable for those who earn median income and below, only a sustained economic downturn, driving down the last few years' price gains, is likely to keep the housing crisis from becoming much worse.

Pumping up affordable production

While some states and localities have increased their support for low-income housing (New York City claims to have aided some 65,000 units alone since 1994), none could hope to raise the kind of funds the federal

SUBSIDIES GO TO THE AFFLUENT...



Family of four earning \$200,000 a year owns a \$650,000 home

- Deduct mortgage interest (\$41,400)
- Deduct property taxes (\$9,000)
- Deduct interest on \$40,000 home-equity loan

Total annual federal housing subsidy: \$15,072

Value of capital gains taxes avoided when house is sold, assuming it doubles in value: \$105,000

Source: Braverman/Finkelstein Accountants for RECORD

... SQUEEZING RENTERS...



government once supplied. Even in its current much-trimmed size, HUD's budget per capita is still much larger than what any state or city dare devote to housing. Only a few years ago, a Republican Congress tried to eliminate HUD. Today, there is a quiet but bipartisan coalition that has modestly boosted low-income housing aid. Congress has just approved 79,000 new Section 8 vouchers for the 2001 fiscal year, up from zero in 1998. It may also boost the value of the low-income housing tax credit.

Rapidly worsening affordability conditions could spur further government action, but it will take more than money to fix what ails the low-income housing production system. Developers and managers recommend a number of strategies that would save the government money and also help architects do a better job:

- *Make it simple.* The complexity of the affordable-housing finance system is so daunting and delays projects to such an extent that only highly sophisticated community organizations and developers dare take it on. Sponsors must generally raise funds from half a dozen public and private sources and a project to take 10 years to complete. A recent project by Oakland-based Michael Pyatok is regarded as highly innovative, but it required a group of 20 funders. The system is also costly. A battery of consultants, attorneys, syndicators, and accountants must become involved, with accumulated fees that can easily exceed architects fees—a scandalous amount to spend on soft costs that in the end benefit neither the project nor its tenants.

As the process goes on, changes by funders or extensive delays can wreak havoc with already tight budgets. After long delays, one of the housing projects by San Diego architect Rob Wellington Quigley ended up with such a tenuous budget that “the subcontractors’ choice was either to supply substandard work or walk away from the job.”

The complexity of the financing system does have a rationale. It replaces the top-down, bureaucratic urban-renewal methodology of 40 years ago with a process that requires government agencies to form partnerships with developers and reach out to neighbors. It stretches federal dollars by involving more private-sector participants (some of whom are lured by tax breaks). “In this way, we have a lot of people watching the store,” explains HUD’s Elinor Bacon. But has such partnering gone too far? “You have to combine all the layers into a harmonious financing package, and that takes time and expertise,” comments Marilyn Melkonian, president of Telesis, which redeveloped

Washington’s Ellen Wilson public-housing project. She and other advocates would like to see a one-stop funding process to make it easier for developers. Bacon says HUD prefers the current system.

- *Make it easier to mix.* There is broad consensus in the housing community that even the best-designed building cannot remain viable when impoverished families are concentrated—whether in housing projects or in poor neighborhoods isolated from the economic mainstream. So almost every unit of low-income housing is placed within a development housing people with a range of incomes. Some schemes mix revenue-generating uses, too, offering job-training opportunities while offsetting costs.

But mixing families is not easy. Tenants must be carefully screened. In desirable, well-located neighborhoods, ones that can attract working families at higher incomes, land costs are often prohibitive. Advocates also must often overcome restrictive zoning and community opposition. And funding sources often underwrite one kind of tenant—a homeless person with mental illness, for example—so developers must seek a different source if they also want to house the working poor.

- *Support people and projects.* Some subsidy sources, such as the low-income housing tax credit, support housing construction. Others, like Section 8 vouchers and certificates, help people afford housing. Advocates say too often they can get one or the other, when what they often need is both. There’s not yet a methodology that coordinates the two.

- *Consider the cost of homeownership subsidies.* Homeowner tax breaks have been regarded as politically untouchable, but they deserve a more critical look. Such generous subsidies of homeownership actually prime home- and land-price inflation and exacerbate sprawl, creating ever-larger distances between “have” communities, which have a surplus of jobs, and “have not” ones filled with people who need jobs. Even the Congressional Budget Office says the social value of homeownership could be realized at a fraction of the current subsidies’ cost to the Treasury. Of course, any substantial decrease creates a dilemma for architects. They directly benefit from the current system, because affluent owners can spend more on their homes. Like everyone else, though, they also suffer from distortions introduced by that system. ■

RECORD gratefully acknowledges Allen Braverman, of Braverman/Finkelstein Accountants, New York City, who provided information for this article.

... AND OFFERING LIMITED HOPE TO THE POOR.

Single mother with two children earning \$36,000 annually who pays \$1,200 a month in rent (40% of income, 10% higher than recommended)

- Rent not deductible
- Landlord deducts property tax
- No loan-interest deductible

Total annual federal housing subsidy: \$0

Source: Braverman/Finkelstein Accountants for RECORD



Single mother with two children holding a Section 8 voucher and earning \$16,000 annually in a two-bedroom apartment at HUD fair-market monthly rent of \$900

- Tenant pays 30% of income (\$370/month)
- HUD voucher pays balance (\$530/month)

Total annual federal housing subsidy: \$6,360

Source: Center on Budget Policies and Priorities

Pensione Esperanza

San Jose, California

1

DAVID BAKER ASSOCIATES' PENSIONE ESPERANZA IS A SPIRITED YET DIGNIFIED OASIS OF AFFORDABILITY IN SAN JOSE.

By Lisa Findley

Project: *Pensione Esperanza, San Jose, Calif.*

Architect: *David Baker Associates—David Baker, FAIA, principal; Kevin Wilcock, AIA, project architect; Ted Yoon, Lark Pien, Erica Zitzke (project team)*

Engineers: *Tipping & Mar Associates (structural); Sandis Humber Jones (civil); David Penney Co. (mechanical); HCP Electrical; James Morel (plumbing)*

Consultants: *Cottong & Taniguchi (landscape); Victor Associates (energy)*

Contractor: *Barry Swenson Builders*

Size: *110 rooms, 43,000 square feet*

Cost: *\$4.2 million (construction)*

Sources

Curtain wall, entrances: *Vistawall*

Cladding: *Cement plaster stucco, Hardiplank lap siding*

Metal roofing: *BHP*

Windows: *Milgard*

Cabinets and custom woodwork: *Fabricated by architect*

Lighting: *Evergreen Columbia, Lithonia, Halo, DMR, Lightway, Stonco, Hubbell*

WWW For more information on the people and products involved in this project, go to **Projects** at www.architecturalrecord.com

Program

"There are two basic schools of thought when it comes to affordable housing," says David Baker, FAIA. "There is the 'blend-in' school and the 'stick-out' school." Baker, who has completed 24 affordable housing projects, does not adhere to one school or the other. His firm chooses a strategy based on the particular context and goals of each project. The recently completed Pensione Esperanza, for Catholic Charities of San Jose, unquestionably adheres to the "stick-out" school.

Contributing editor Lisa Findley lives in Oakland, Calif., and teaches at the California College of Arts and Crafts.

A 10-minute walk west of the dot-com prosperity of downtown San Jose, near the intersection of two freeways, the Pensione Esperanza optimistically holds the street edge on a strip of gas stations, convenience stores, and car washes. The 110-unit single-room occupancy hotel lives up to its idealistic name, Lodging of Hope, by providing clean, safe, and well-designed accommodations in the midst of one of the least affordable housing markets in the country. Its 273-square-foot rooms are conceptually enlarged by the project's many amenities: furnishings; on-site social services; Internet access; a television and library in the roomy lobby; a commu-

nity meeting room with a kitchen; bicycle storage; a laundry room, and a huge, sunny, landscaped courtyard complete with fountain. Balanced by a strict "clean and sober" policy, this generosity is intended by Catholic Charities to instill self-respect and pride in its residents.

Funding sources for the \$9.4 million project included low-income-housing tax credits and land acquisition and additional funds from the City of San Jose Redevelopment Agency.

"We serve essentially very low income people, at about 30 percent of median income," says Anne Stahr, the asset manager of Catholic Charities. "We have tenants with





598

NO PARKING

FIRE LANE

No architectural shrinking violet, Pensione Esperanza proclaims its optimistic message through spirited shapemaking and a sign's sly reference to the site's past.



With less than 200 feet to allocate for each person, Baker clustered shared amenities around the entrance. Corridors, end-lit by windows (right), offer additional opportunities to relax with neighbors.



mental illness as well as people with other disabilities,” she explains. The project also serves some elderly and formerly homeless people who have been diagnosed with AIDS or are recovering from an addiction. The majority, though, have jobs. “They go to work every day, but they earn less than \$11 per hour, which is our upper limit.” A three-tiered rent system allows tenants to pay as little as \$300 a month. The top tier, \$500, may seem like a great deal for a single room. But as Stahr points out, “It takes an annual salary of \$45,000 to afford a one-bedroom apartment in the area.”

Solution

The three-story wood-framed building is organized in a straightforward U shape around a south-facing courtyard. Density is very high, at 118 units per acre, but the units are of course small. Secure, landscaped parking is provided on the back half of the site, alongside a working-class neighborhood dotted with car-repair shops. At a construction cost of \$97 per square foot (in a raging construction market), there was little money to dress up the exterior of the project, though Baker made the most of the metal window awnings and carved, colored synthetic stucco.

The lively design of *Pensione Esperanza*'s street corner announces its uplifting intention via commercial means. The sign, a reworked version of one that once heralded a used car lot—the site's former occupant—marks the glassy double-height entry. Playfully tilted walls overhead declare the legitimacy of this descendant of the flophouse.

Inside, David Baker Associates demonstrated what it has learned over years of experience with low-income housing. “We concentrated a lot of our resources on the double-height entry and this great stair to the second floor,” Baker says. “That way people love to use the stairs—to see and be seen. We want this to be at least as good as going into the W,” a trendy, new San Francisco hotel. Baker's firm enlivened the potentially dreary double-loaded corridors with

windows placed at each end; regularly spaced artificial lighting in brightly painted recesses; and small seating areas with full-height windows that overlook the courtyard.

In the entry and reception area, the architect designed the steel-and-wood staircase and the colored-plywood mailboxes and reception desk. Even the elevator interior gets a special touch in the form of gold- and eggplant-toned plywood.

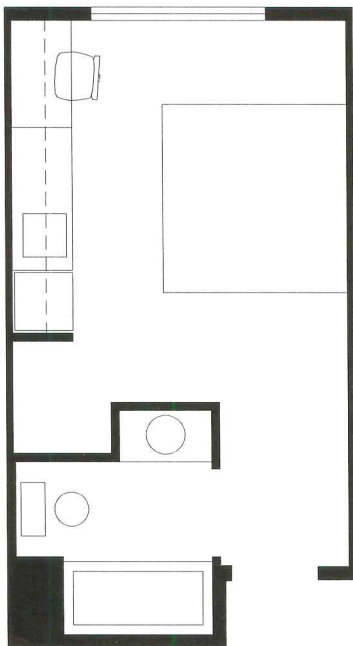
Commentary

According to Dan Wu, director of housing development for Catholic Charities, residents are comfortable at *Pensione Esperanza*, and, despite their diversity, develop a sense of community. They know the building is invested with thoughtful and skilled design.

While residents may not be aware of it, the stick-out strategy suggests with lively assurance that buildings should once again hold the street edge, mark the corner, and work at both an urban and pedestrian scale. Catholic Charities is so pleased with the results that it has hired Baker to design two more projects. *Pensione Esperanza* has also provided the City of San Jose with a building that shows how to reurbanize and revitalize an aging, down-at-the-heels corner of the city. ■



The lobby stair and mailboxes create a social focal point for the project (below). The small size of the rooms (left) limits residents to a microwave oven and hot plate for cooking.



Ballpark

Hoboken, New Jersey

2

SERGIO GUARDIA BALANCES MATERIALS AND PROPORTIONS TO ASSERT A NEW RESIDENTIAL IDENTITY IN A GRITTY INDUSTRIAL NEIGHBORHOOD.

By James S. Russell, AIA

Project: Ballpark, Hoboken, N.J.

Architect: Sergio Guardia Architects—Sergio Guardia (principal); Nathaniel Lindsey (project manager); Maarten Van Tuijl, Mathew Snethen (team)

Owner: Gotham City Real Estate Services

Engineer: Office of Structural Design

General contractor: Gotham City Builders

Size: 64 units, 22,720 square feet (new construction)

Cost: \$1.98 million

Completion date: Summer 2000

Sources:

Cladding: Trenwyth Trendstone (ground-face masonry units), TEC (exterior insulation and finish system)

Windows, skylights, glass sliding doors: Anderson

Paints and stains: Benjamin Moore

Floor and wall finishes: Limestone (flooring), Florida tile, Mohawk (carpet)

Furnishings courtesy of: Totem, Kartell, Ikea

Unit lighting: Ikea

WWW For more information on the people and products involved in this project, go to **Projects** at www.architecturalrecord.com

Program

In recent years rotting piers collapsing picturesquely into the Hudson river have framed countless photographers' views of the Manhattan skyline from Hoboken, N.J. Today, those views are fast disappearing as office towers rise over the railyards and obliterate the sagging warehouses. The blue-collar towns along the river have rapidly become burgeoning outposts of Manhattan's financial-services industry.

The streets of Hoboken's one-mile-square industrial district are choked with construction paraphernalia as developers convert the old factories into loft-style apartments for young financial-services workers, who either staff the new buildings or commute to Manhattan by car, train, or ferry.

The artists and architects who created the new nationwide mania for lofts did so by making the most of their desirable aspects—the high ceilings, the architectural details, the huge windows—while finessing the difficulties—awkward plans and odd column locations. Though loft-style apartments are the new real-estate industry darling, too many developers' formulaic impulses run aground when they collide with the idiosyncratic nature of buildings erected for other purposes.

Architect Sergio Guardia left traditional architectural practice to work with builder/developer/manager Gotham City Real Estate

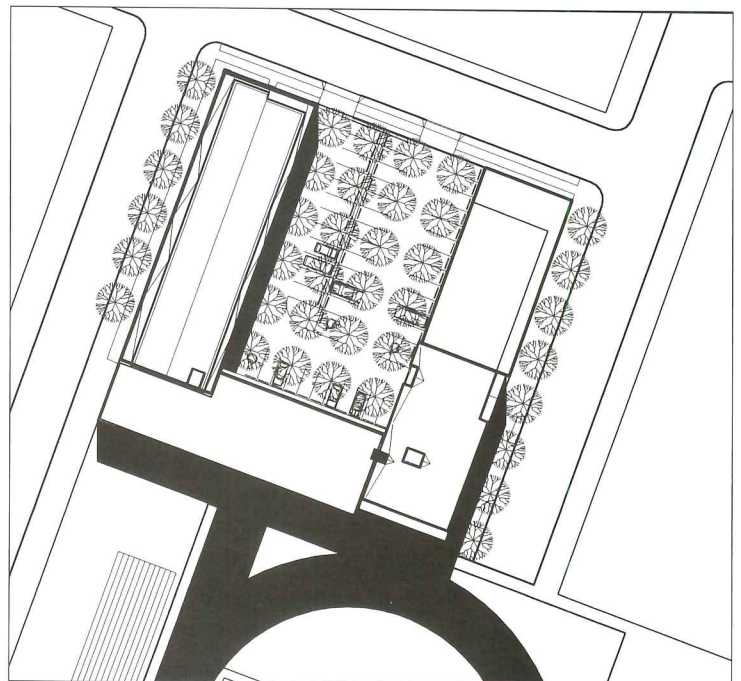
Services because he likes teasing well-designed housing out of unpromising raw material.

At the project site, now called Ballpark, two industrial buildings formed an L shape. One, built in the 19th century in a handsome if austere corbeled-brick three-story form, had the high ceilings and high windows that make such buildings desirable for conversion. Guardia had to unite it with a mundane 1940s addition built with strips windows set high above the floor. Other industrial structures in various states of decay and conversion, empty lots, and the athletic field of a high school comprised the surroundings.

Guardia was asked to make 64 market-rate rental units (the zoning maximum) that would appeal to the young, affluent office workers fleeing Manhattan's high rents and congestion.

Solution

Guardia added a new structure, creating with the older buildings a U-shaped courtyard, where the required parking was accommodated. (Below-grade parking was prohibitively expensive because of the area's high water table.) While nearby developers attempted to domesticate the industrial structures with tacked-on dormers or bays, Guardia's more

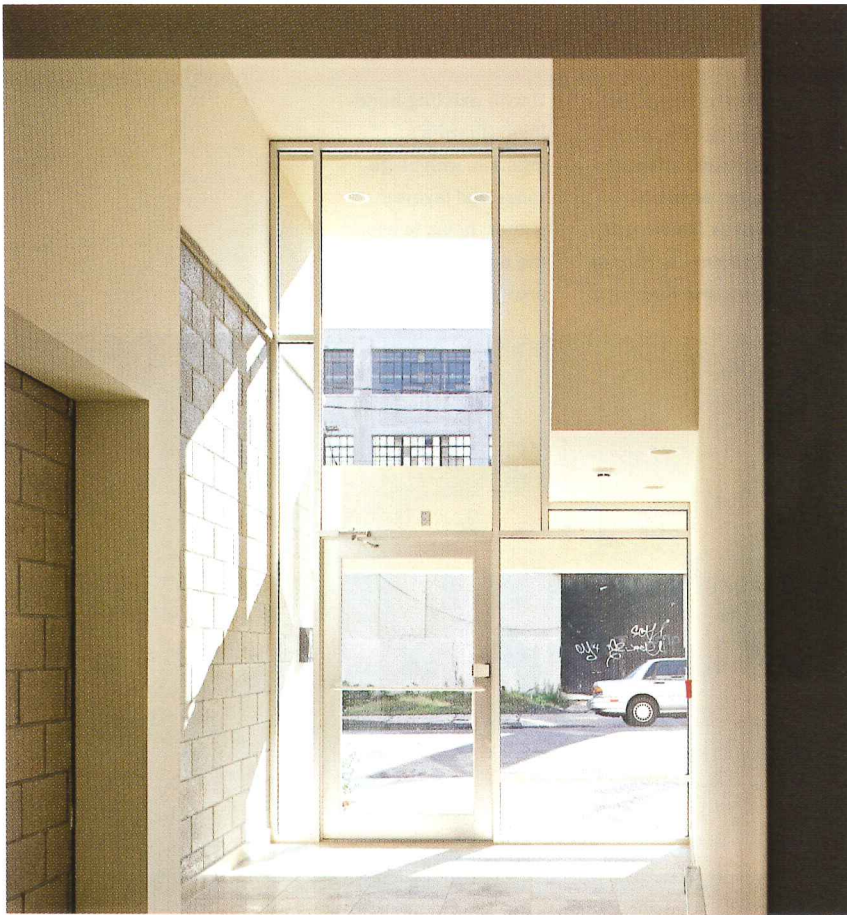




In Ballpark's built-up industrial context, a playing field offers a welcome sense of openness (below right and bottom). Anchoring a corner and forming a

U with existing buildings, Guardia's addition, with beige tones and layered planes, helps to assert the neighborhood's emerging identity.





Carefully proportioned openings (including the lobby, above) and discreetly manipulated planes at the exterior permitted Guardia to achieve a toughness consistent with surroundings while conveying the finer grain of residential use.



abstract and sculptural approach recognized the solidity and austerity of the existing structures.

He departed from both existing buildings in the forms and proportions of the addition, and signaled the new residential use with large areas of wood-frame windows and narrow terraces (some of which do double duty as secondary emergency egress).

The ground-face block exterior, accented by panels of synthetic stucco, doesn't attempt to blend in with the existing structures either. Instead, the materials and detailing echo the neighborhood's industrial toughness.

With little in the surroundings that is pleasing to look at, Guardia gave many of the units more than one outlook and borrowed light from skylights and double-height stairs (top photos and section, opposite). He generated three-dimensional stacking diagrams on a computer to work out the double-height spaces and duplex units. In close collaboration with Gotham, Guardia met the criteria for cost and construction techniques. Their joint effort paid off. The project, built at less than \$90 per square foot, exhibits more than usual construction care. It was fully rented before completion at rates near Manhattan's current stratospheric levels.

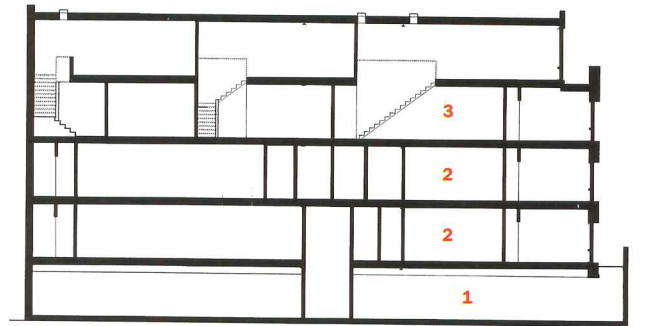
Commentary

With its big abstract gestures and evident solidity, Guardia's addition holds its own with the full-depth masonry heft of the surroundings. In a difficult context, Guardia has imbued the structure with an identity that recognizes the neighborhood's industrial past while introducing the more delicate scale appropriate to residential use. The floor plans, which in most residential buildings are either blandly functional or picturesquely idiosyncratic, are unusually well thought through, offering a high degree of amenity even in units with small footprints or a lack of views. Once the overheated housing economy cools, the owner may regret the bare-bones treatment of the courtyard, since many units face only the asphalt lot. ■



Broad window areas, as well as skylights over stairs, draw daylight deep into the structure on the upper-level duplexes. Guardia coordinated the exposed ductwork for sculptural effect.

1. Parking
2. Single-level unit
3. Duplex unit



SECTION

0 10 FT.
3 M.



THIRD FLOOR



FIRST AND SECOND FLOOR

The Townhomes on Capitol Hill Washington, D.C.

3

WEINSTEIN ASSOCIATES REPLACED ABANDONED PUBLIC HOUSING WITH A MIXED-INCOME DEVELOPMENT THAT KNITS A NEIGHBORHOOD TOGETHER.

By James S. Russell, AIA

Project: *The Townhomes on Capitol Hill, Washington, D.C.*

Architect: *Weinstein Associates—Amy Weinstein, FAIA, principal; Margaret Mook, AIA, Kathleen Lofdahl, senior project architect; Robert Karow, AIA, team*

Owner: *The Ellen Wilson Community Development Corporation, District of Columbia Housing Authority*

Developer: *Telesis*

Engineers: *Ehlert/Bryan (structural); Bansal and Associates (mechanical, electrical, plumbing); A. Morton Thomas and Associates (civil)*

Consultants: *Oehme, van Sweden and Associates (landscape)*

Size: *134 cooperative units with 13 additional townhouses to be completed*

Income mix: *One-fourth of residents earn less than 25 percent of area median income; one-fourth earn between 25 and 50 percent of median; half earn between 50 percent and 80 percent of median, with 20 units set aside for higher incomes*

Sources

Masonry: *Belden, Glen-Gery, Interstate, Darlington, Pine Hall, Richtex, Palmetto, General Shale (brick); Arriscraft (masonry units); Russell Cast Stone*
Siding: *Wolverine (vinyl); Berridge (metal shingles); Buckingham Slate (slate shingles); GAF (fiberglass)*

WWW For more information on the people and products involved in this project, go to **Projects** at www.architecturalrecord.com

Program

The proper-looking facades along I Street in southeastern Washington, D. C., may look as though they have long upheld the demeanor of this gentrifying neighborhood. They are, however, new, replacing a dispiriting sight all too often encountered in the nation's large older cities: graffiti-spattered, trash-strewn, blocked-up, abandoned buildings.

A neighborhood group asked architect Amy Weinstein, FAIA, to prepare some sketches (pro bono) to convince the District of Columbia to redevelop the site of what had once been the Ellen Wilson Homes, a public-housing project.

That was in 1989. Little did Weinstein know that her ideas would take 10 years and three city administrations to bear fruit as the Townhomes on Capitol Hill. The project was the first to be funded by HUD under the Hope VI program, the purpose of which is to redevelop severely distressed public-housing projects. Once it had won funding in 1993, however, it took six more years to put the financing in place, to survive the local housing authority's slide into receivership, to win approval from neighborhood groups and the local historic-preservation board, and to construct the buildings.

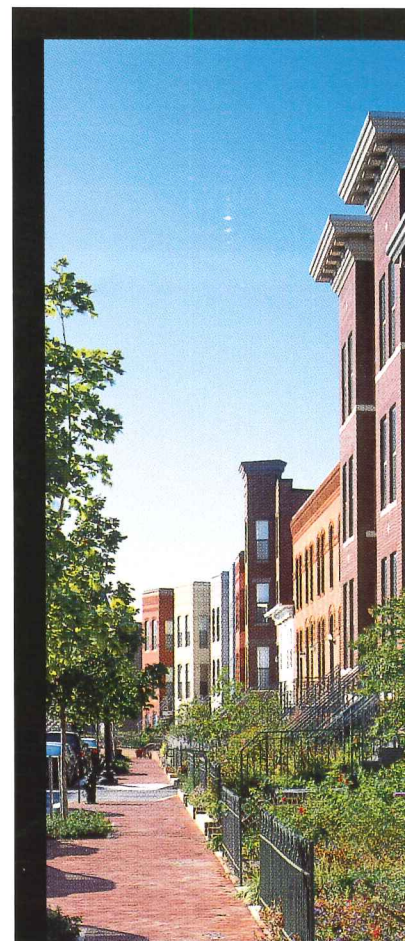
The parties involved negotiated a unique financial basis for the project as a mixed-income cooperative in which residents buy shares. This allows all the residents, regardless of

income level, to build equity as the project appreciates. Since a HUD grant covered the \$25 million cost of demolition and new construction, the low-income residents will not require any further government subsidy. The total revenue of shareholder payments covers the operating costs.

Solution

Design for the project began in earnest in 1995 after Weinstein won a competition for the project with Telesis, a long-time developer of projects in distressed neighborhoods. "We stayed with one idea throughout, which was that all the existing buildings would be torn down and we would restore the character of the historic district that surrounds the site in the new construction," says Weinstein.

She took her design cues from the surrounding neighborhood, which, though dominated by late-19th-century townhouses, had grown over a long period and included a wide mixture of housing, commercial uses, races, and incomes. A townhouse with a ground-floor apartment under a raised two-level unit (see plan, page 139) became the site plan's standard unit, to which Weinstein added variations to address specific circumstances. On the north side of the site she placed two-family houses facing a new mews, redefining a frayed but existing alley. The central part of the site wraps parking with townhouses,

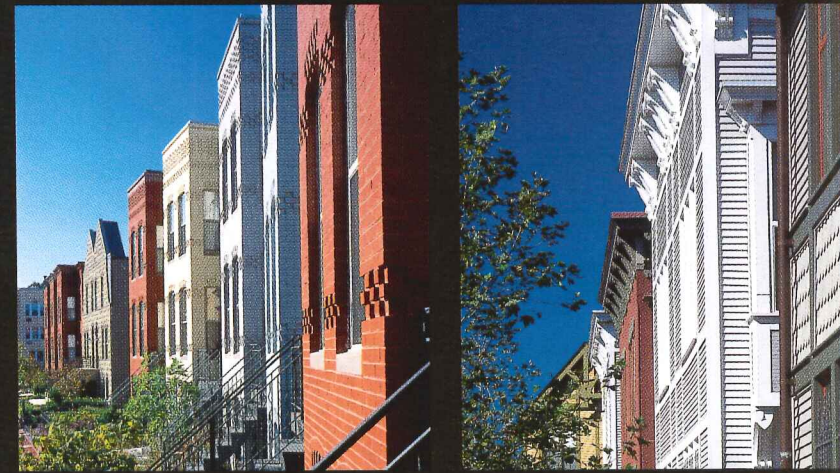
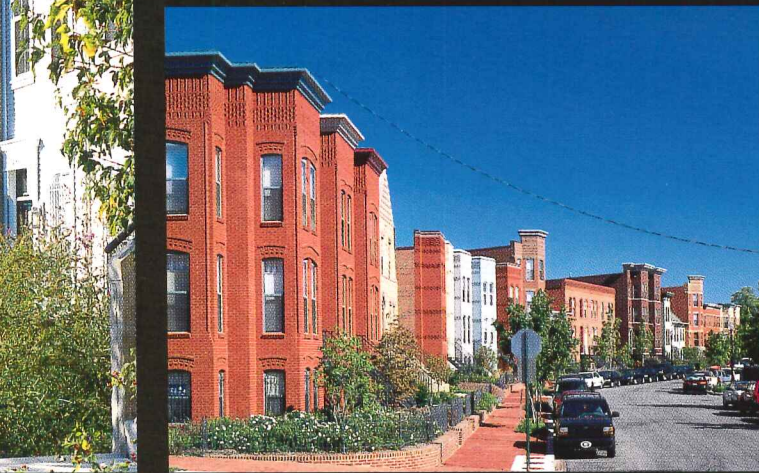
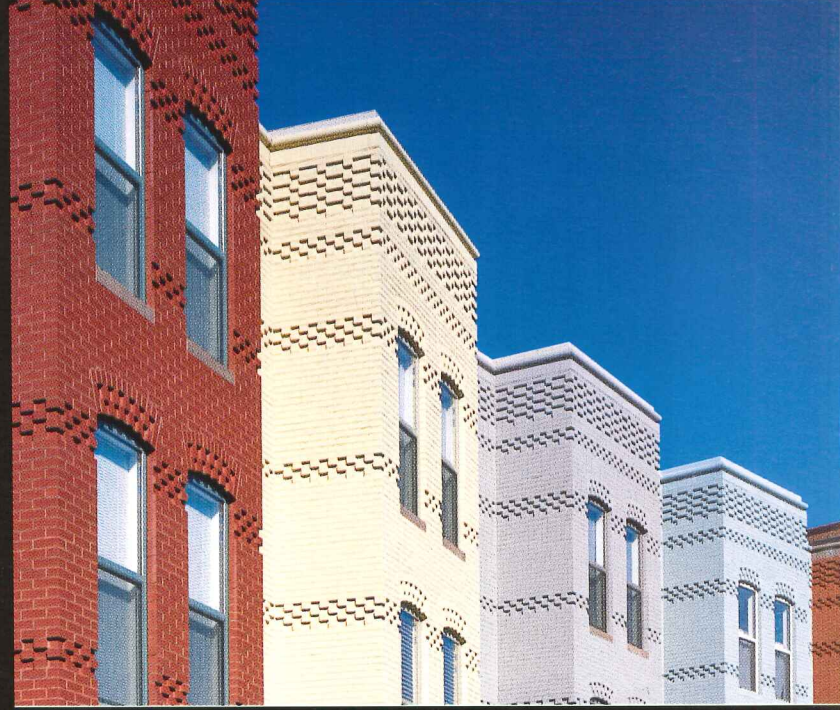


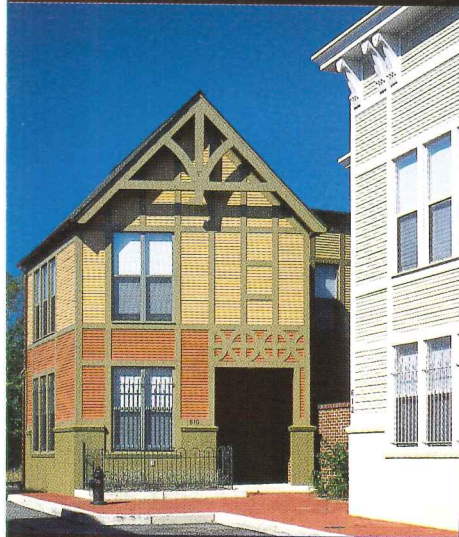
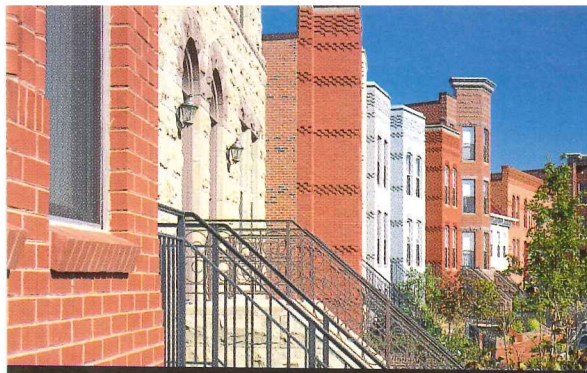
Two-family houses face a new mews on the north side (right), redefining an existing alley (site plan above).



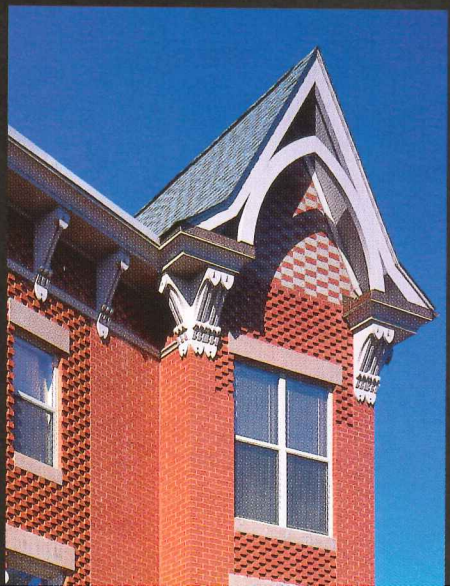
The central part of the site wraps parking with townhouses, interwoven with small apartments, two-family houses and single-family houses, all derived from types found in the neighborhood (below).

Weinstein cut a new street near the southern end of the site (middle and below left) so that the row of houses nearest the freeway would face an intimate street rather than the roar of traffic.





Special brackets were designed for the smaller-scaled mews street (left, right, and below). Victorian houses (bottom) form a gateway to the mews. Vinyl siding is set amidst wood trim; cast stone augments brick, and special cast blocks add additional texture throughout the blocks (above). Roofs mix slate and fiber-glass shingles.



interwoven with small apartments, two-family houses, and single-family houses, all derived from types found in the neighborhood. Weinstein cut a new street toward the southern end of the site, so that the southernmost row of houses would face an intimate street rather than the roar of the adjacent freeway.

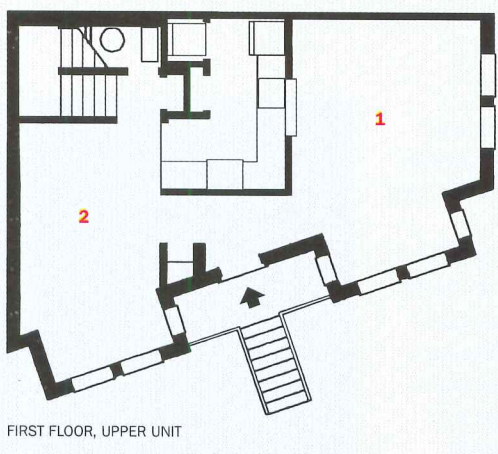
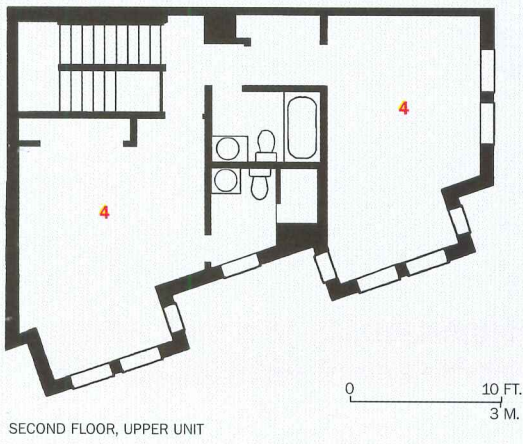
"We paid a lot of attention to developing a kind of Victorian character, which on Capitol Hill means vertical, attenuated proportions and a picturesque silhouette where the buildings meet the sky," explains Weinstein. The street frontages have been faced mostly in brick over the wood-frame construction. Synthetic stucco and wood siding appear predominantly on the mews units. The facades away from the street are clad in vinyl siding for economy. "It's very much a kind of Mary Jane on the street and plain Jane in the rear, which is common on Capitol Hill," she adds.

According to Marilyn Melkonian, the president of Telesis, "The federal side wanted good design and put tremendous emphasis on it. They say they're working with New Urbanist principles, but they are simply good neighborhood design principles."

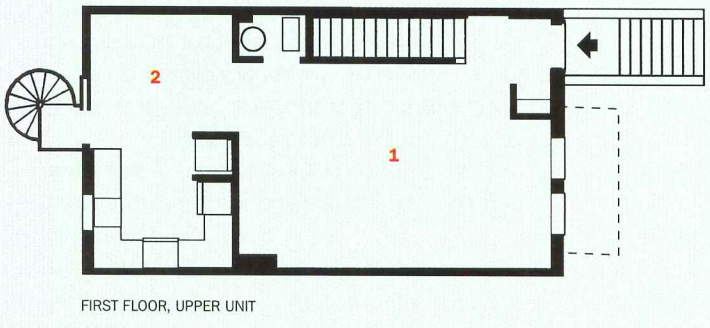
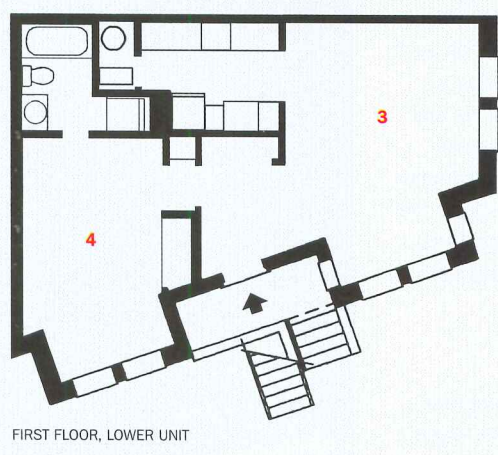
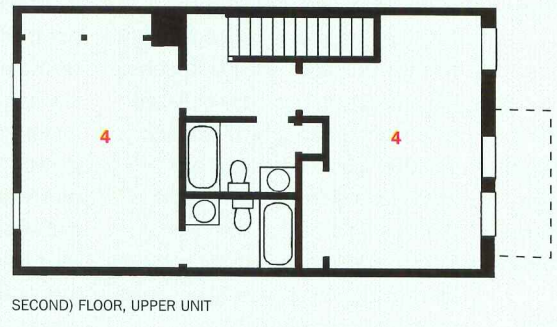
Commentary

Telesis says the hard costs were \$70 per square foot. The project looks as if it cost far more, owing to the efforts of architect and developer, who carefully allocated the budget for greatest impact. The sacrifices came in the backs of the structures, which are severe-looking, and in the interiors, which are modestly finished regardless of the income level of the occupant.

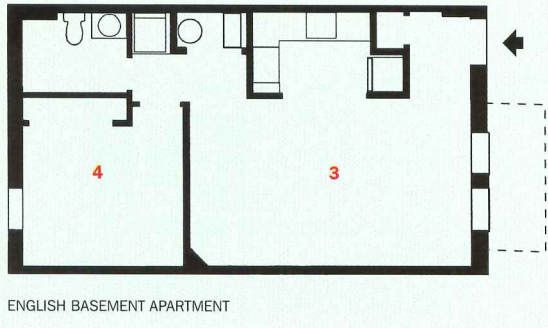
Too often, the historicist approach to design results in aesthetically dumbed-down tradition. Weinstein's approach went much deeper than facade reproduction. She built in enormous variety and functionality by carefully manipulating traditional floor plans and by using a varied but inexpensive array of materials and details. Market-rate housing is rarely built to the quality standard achieved in this redevelopment, which won an AIA award last year. ■



Weinstein studied plans of historic house types in the neighborhood, then reworked them. The plans were simple, making them easy to build, yet they accommodate contemporary, flexible living styles.



- 1. Living
- 2. Dining
- 3. Living/dining
- 4. Bedroom



Irvington Place

Portland, Oregon

4

SIENNA ARCHITECTURE COMPANY ADDS CONDOMINIUMS TO A BUSY RETAIL STRIP WHILE ADDRESSING A NEIGHBORHOOD'S FEAR OF GREATER DENSITY.

By Sheri Olson, AIA

Project: *Irvington Place, Portland, Ore.*

Architect: *Sienna Architecture Company—Gary Reddick, principal-in-charge; Robin Chard, AIA, principal; Susan Wordeman, Bill Ruecker, project managers; Jeff Lamb, Matt Janssen, design team*

Client: *Irvington Place LLC*

Engineers: *KPFF Consulting Engineers (structural); Kurahashi & Associates (civil); Geo Engineers (soil)*

General contractor: *Mega Pacific*

Consultants: *Beighley & Associates (landscape); Marx Associates (survey)*

Size: *57 market-rate units, 16,100 square feet of retail, and 25 parking spaces—108,000 square feet total*

Sources

Windows: *Alpine/Milgard*

Light soffits: *Kalwall*

Interior lighting: *North Coast Electric*

Wood doors: *Valley Mill*

Metal doors: *Benson*

Floor and wall tile: *Dal-Tile*

Carpets: *Harbinger*

Elevators: *U.S. Elevator*

WWW For more information on the people and products involved in this project, go to **Projects** at www.architecturalrecord.com

Program

When developer Barry Menashe hired Sienna Architecture Company to design a single-story of retail space backed by surface parking along one of the busiest arterials in Portland, Ore., CEO Gary Reddick, AIA, saw a lost opportunity. Reddick crusades against underusing property in this city squeezed by a strict urban-growth boundary. The 200-foot-square block was zoned for a development denser than a strip of stores. "Every time Barry came into the office I bugged him about putting housing on top of the retail," says Reddick.

Menashe was reluctant. He had already developed two profitable retail projects on the same street but had no track record with housing. But Reddick persisted, offering to do conceptual design on spec to determine unit counts and costs. The resulting pro forma—57 market-rate

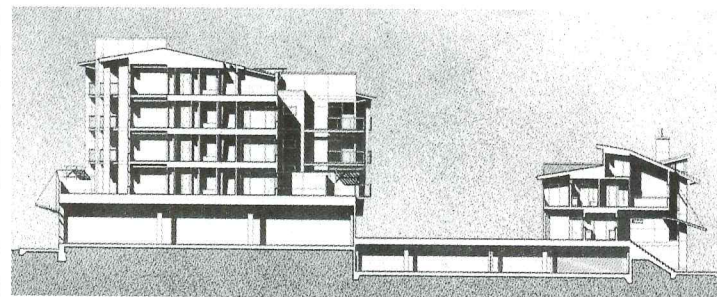
units, 16,100 square feet of retail, and 25 parking spaces—convinced the developer to move forward with a mixed-use project.

The next hurdle was calming the fears of residents of the historic Irvington district that borders the north edge of the site. "There's an unfortunate perception that inner-city neighborhoods are going to suffer from inappropriate infill growth," says Reddick. But Portland's anti-sprawl regime intends to focus higher-density development on such major transportation corridors as Irvington's Broadway, which is well served by public transportation. Sienna worked closely with community planning authorities early in the design process, winning local support as well as a 1998 Governor's Livability Award.

Solution

"We saw this project as a prototype for increasing density without sacrificing the character of the neighborhood," says Reddick. The design plugs a hole in the retail district with a five-story retail/con-

Seattle-based contributing editor Sheri Olson is author of a forthcoming monograph on the Miller/Hull Partnership.





Along Broadway, brick cladding on the storefronts gives way to maize-tinted stucco at the upper residential levels. The walls are relieved by recesses and metal-paneled balconies.





A variety of materials, proportions, and details bridge the gulf in scale and style between the project's commercial edges (left in photo above) and its residential ones (middle right). Canopies mark entrances to the parking-court (left). The vertical proportions of townhouses (top right) fit the scale of the side street.

dominium block along Broadway and transitions to the smaller-scale residential streets with a row of two-story townhouses. The angle of an overriding sloped roof on the condominium continues over the townhouses, visually tying the masses together.

As built, the 108,000-square-foot project is standard 4-over-1 construction with a single story of poured-in-place concrete at the retail and parking level, creating a plinth for the wood-framed housing above. The site's slope allows parking to slip under the townhouses. In addition, the architects provided more parking up a short ramp in a raised open-air courtyard at the center of the block.

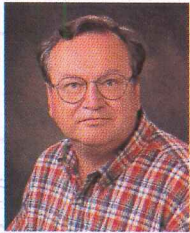
Each townhouse has a private entrance off both the street and the courtyard. A double-height living room makes the compact two-bedroom units appear larger than their 1,200 square feet. A mezzanine above the master bedroom opens onto the living room, which owners can finish as additional storage space or as a small office.

The double-loaded condominiums, a mix of one- and two-bedroom units ranging from 860 to 1,200 square feet, appeal to single urban professionals, couples without children, and seniors. "The diversity of the residents is an example of how deep the market is for people who want to live in the city," says Reddick. Interiors are finished with conventional materials, but each unit has nine-foot ceilings, generous exterior balconies, and views of downtown or snow-capped Mount St. Helens.

Commentary

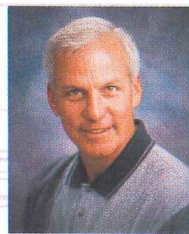
Along this busy street, the design relies on a plethora of railings, trellises, and floating beams to create shadow lines and detail, a dizzying effort to relieve what might otherwise be thought an overweening mass. The restraint of the townhouses is more successful than the metal-festooned condominium block. Overarticulation aside, the project's density adds vitality to the street, creating a lively 24-hour destination in place of what might have been an asphalt parking lot. ■





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*Bill Davis, Builder
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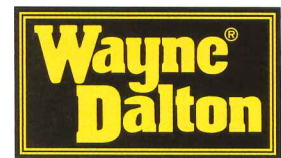
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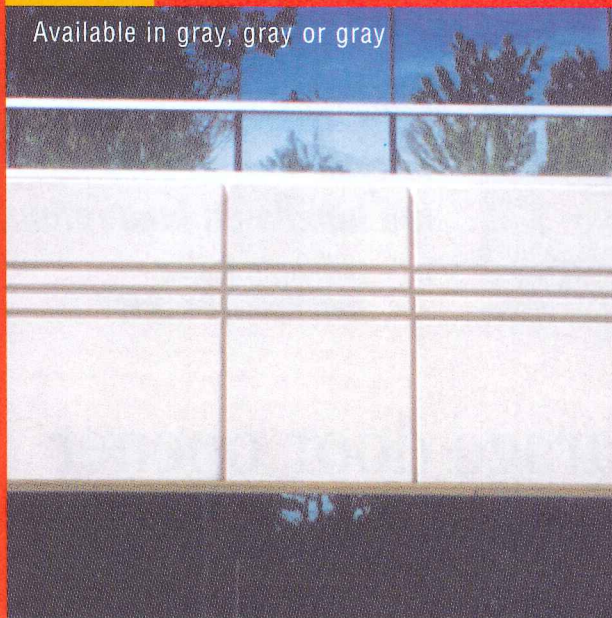
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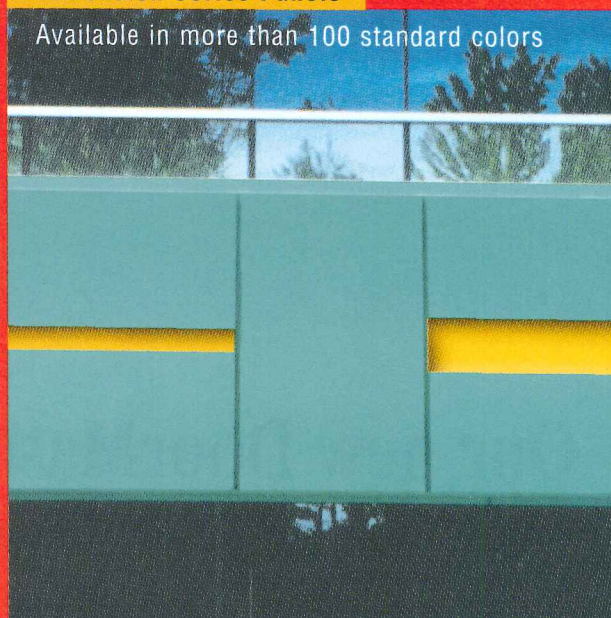
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Maintaining security in an insecure world

NEW STRATEGIES ARE EMERGING TO HELP ARCHITECTS DESIGN WITHOUT A BUNKER MENTALITY

By Randy Nason, P.E.

The destruction of the Alfred P. Murrah Building in Oklahoma City on April 19, 1995, killed 168 people and inaugurated a new era in public and private building security in the United States. This terrorist attack prompted the Department of Justice to issue a report ("Vulnerability Assessment of Federal Facilities," U.S. Department of Justice, United States Marshals Service, June 28, 1995) establishing definitive minimum standards for public buildings across the United States. The Murrah Building bombing also fostered discussion between the public and private sectors, leading to a heightened understanding of security issues. That has had an enormous impact on the design of structures perceived to be vulnerable to attack. These conclusions, long held by security practitioners, were for the first time squarely faced by those outside the security mainstream and are threefold:

First of all, there is a threat in every sector. For U.S. government facilities such as embassies and military installations, this threat is well-defined and demonstrated. However, for private industry, the threat is less quantified and is generally defined in terms of the security program.

Second, there is no truly secure building. As new buildings are designed and constructed to resist terrorist attacks, the resources and resourcefulness of adversaries increase as well. This prompts yet another round of escalating countermeasures in the built environment.

Finally, there are tools available. In spite of the fact that terrorists can usually trump the best efforts of the design community, the resistance of public and private buildings to malevolent actions can be increased. In this context, managing risk often means that building owners must find

Randy Nason is a corporate vice president and manager of the Security Consulting Group at C. H. Guernsey and Company in Oklahoma City.

ways to become a harder target than others in their category, while simultaneously providing a creative and efficient workplace. The theory of crime displacement says that an increase in security at a specific facility will divert the adversary to equally attractive but less resistant targets. Being the toughest on the block, therefore, takes on a new meaning.

CPTED strategies

Crime Prevention Through Environmental Design (CPTED) is a design model that has received broad attention recently, even though the principles have been around for more than 40 years. Drawing heavily on

BUILDING SCIENCE



Security cameras monitor activity in hallways and all public areas of Chesterton High School and feed images to a central security office.

behavioral science rather than target-hardening strategies, CPTED's fundamental premise is that the physical environment can be altered or managed to produce responses that reduce the incidence of crime. The four key elements are territoriality, natural surveillance, activity support, and access control. A simple example of the CPTED model involves enhanced lighting, which contributes to natural surveillance. CPTED has found wide application in the design of environments

CONTINUING EDUCATION



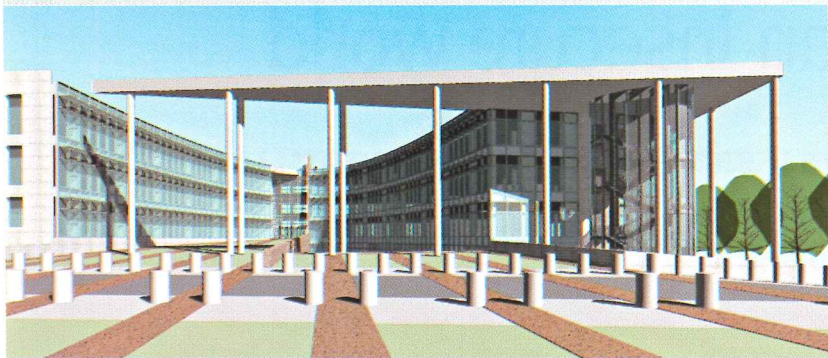
Use the following learning objectives to focus your study while reading this month's ARCHITECTURAL RECORD/AIA Continuing Education article. To receive credit, turn to page 157 and follow the instructions.

LEARNING OBJECTIVES

After reading this article, you should be able to:

1. Describe how environmental design can prevent crime.
2. Explain the theory of crime displacement.
3. Discuss the security issues of buildings in the public and private sector.

WWW For this and more continuing education go to: www.architecturalrecord.com



CASE STUDY

Oklahoma City gets a new federal building

The General Services Administration's (GSA) new federal campus in Oklahoma City will be one block north and west of the former Alfred P. Murrah Federal Building, which was destroyed by a car bomb blast on April 19, 1995.

Understandably, the client ranked security its top priority. The new \$40 million, 185,000-square-foot facility, designed by the Chicago firm Ross Barney + Jankowski

(RB+J) will be equipped with the latest security devices, but it won't be an impenetrable fortress.

The new plan originally called for three four-story buildings on a three-block site, based on the premise that employees would feel more secure in multiple low-rise buildings rather than one high-rise. Because the GSA was unable to purchase all three blocks, RB+J designed the scheme to fit on two.

involving multiple facilities such as campuses, communities, and public-housing complexes.

Keeping a distance

The effectiveness of CPTED is limited to those situations where the adversary can be deterred by the soft measures generally employed within CPTED guidelines. In cases where the threat involves terrorist groups bent on massive destruction and loss of life, more aggressive measures are required. For these high-level threats, facility and campus design plays a key role in how efficiently active security measures can be applied. For example, postulated high-level threats generally involve explosive devices.

THE DEFINITION OF SAFE DISTANCE IS DETERMINED BY THE PERCEIVED THREAT AND FACILITY CONSTRUCTION.

The only effective tool available to counter this threat is distance. Borrowing principles from earthquake-resistant facility design is expected to increase the ability of a building to survive a blast. Building failure is a clear contributor to blast-related injuries and fatalities. The major contributors, however, are the direct overpressure effects and glass. Much progress has been made in devising glazing that will withstand higher overpressure before failure. Unfortunately, the overpressures that can be withstood by current materials are orders of magnitude below that experienced in the proximity of an explosive device. For facility planners and designers, the solution to the explosive threat remains distance. Campuses with greenbelts provide the opportunity to keep potential explosive devices a safe distance from the main facilities. The definition of safe distance is entirely determined by the

With regard to protecting against bomb blasts, GSA guidelines encourage buildings to be set back 100 feet from the street. With the smaller site, however, the setback was limited to 50 feet. Carol Ross Barney, principal at RB+J, acknowledges that "distance from vehicular traffic is the easiest defense, but easiest isn't always the best." RB+J's solution employs a "hard" architectural concrete side to the public, which encloses a curtain-wall "soft" side, wrapping around a garden

courtyard. This U-shaped footprint will give employees a sense of security while allowing unobstructed surveillance of the open space.

GSA guidelines require that vehicular drop-off lanes be no closer than 20 feet from the building and that there be physical obstructions to maintain this distance. The architects sought alternatives to the bollard solution seen so often around public buildings. They considered installing grates that collapse under the weight of a car

perceived threat and facility construction. Many locations, most notably urban environments, simply do not have the space required to achieve an acceptable setback.

Personnel control

For most building owners, security is primarily related to personnel. Therefore, personnel access control is fundamental to a sound security program and is greatly influenced by facility design. The electronic access-control industry has provided a broad array of tools that control personnel flow based on a combination of memorized personal identification numbers (PINs), electronic credentials (access cards), or some physiological feature, such as a palm print, of the individual requesting access (biometrics). These types of systems have become as essential as HVAC and lighting in a building, because they are less expensive to install and manage than lock systems and are effective in controlling unauthorized access. Efficient application of the available technological tools, however, is dependent on the facility layout.

Nowhere is this more evident than in the facility lobby. In this location, the population consists of individuals authorized access to the facility, visitors who will be allowed into the facility either escorted or unescorted, and, potentially, individuals who, for a variety of reasons, will not be granted access. In addition, the lobby becomes that first point where the reception person/security officer first greets all people entering the building. Especially for visitors, that person becomes the company's ambassador and chief representative. It is important that the lobby design accomplish the following:

Effectiveness. A balance must be achieved between the aesthetics of the lobby and its ability to provide a natural flow of personnel past the security/reception desk. Personnel traffic must ultimately flow



Computer renderings show the conceptual design for the new federal building in Oklahoma City, Oklahoma, design by Ross Barney + Jankowski of Chicago. The scheme shows the architect's attempt to blend rigid security guidelines into a open and inviting work environment.

or truck—a 21st-century moat of sorts—but failure is too hard to predict. “The loads are uncertain, and there’s always the chance that a heavy cart or person might cause the grates to collapse,” explains Ross Barney. Shifts in planes either through landscaping or staircases raised issues of accessibility. Finally, the architects returned to the bollard solution, cleverly incorporating them into the design to create a ceremonial gateway into the site. Bollards will

also run around the entire perimeter of the site, but they’ll be hidden in tall, native prairie grass.

GSA now requires architects and engineers to take preemptive measures against what is called “progressive collapse.” When one or more structural elements fail, overpressure causes a vertical propagation. After the explosion ripped through the front of the Murrah building, the rest of the structure literally tore itself down. New buildings are required to be

engineered to withstand severe local damage and remain standing. For RB+J and New York–based Weidinger Associates, the structural and security engineers on the project, this means designing structural redundancy into the new complex so that the removal of any major structural member will not cause the rest of the members to fail.

The new complex will have laminated glass, which is now required in all new GSA buildings.

Laminated glass is commonly two annealed sheets bonded together under heat and pressure by a thick polyvinyl butyral (PVB) interlayer. RB+J will test a rigid frame system with structural silicone glazing, which is expected to have more flexibility if the unthinkable should happen again. Architects can expect to be designing for such grim scenarios for a long time.

Sara Hart

past a minimum number of security/reception desks from a purely economic standpoint. Close cooperation between all design parties is necessary to achieve the desired function within the defined architectural context.

Efficiencies. The security/reception desk must be designed to provide the utmost efficiency in performing a wide range of required

LIKE ALL DESIGN EFFORTS, APPLICATION OF TOOLS IS AS VARIED AS THE FACILITIES THEMSELVES.

tasks. This will involve everything from assisting lost visitors to helping longtime employees with malfunctioning access credentials. The desk should have sufficient space for closed-circuit television monitors, a PC tied to the facility’s local area network (LAN), a PC monitoring the facility access-control system, badge printers, and various communication devices.

Convergence. The lobby is also the common traffic-flow point between the above-grade and below-grade floors. Under these circumstances, all stairwells should empty into the lobby to prevent an individual from gaining access to the facility without first passing through the security/reception screening point.

Safer schools

One of the most daunting challenges facing the design profession today is securing schools. Like other public buildings, schools address a focused population of users while maintaining an open and nurturing environment. These are sometimes contradictory tasks. However, the principles discussed above still apply.

Traffic flow. The number of facility entrances must be minimized for efficient monitoring and control of incoming and outgoing traffic; at the same time, the entrances should minimize the distance a student has to travel to the classroom. The use of specific doors is normally controlled electronically to accommodate surge traffic.

CCTV surveillance. A large percentage of schools are installing extensive CCTV systems to monitor and record activities in key locations such as controlled doors, large congregation areas, and major hallways. (CCTV systems are also viewed by law-enforcement agencies as real-time response tool, allowing them to see inside the building and therefore develop an interdiction strategy.)

Contraband screening. One of the most contentious issues at a school board meeting is the topic of contraband screening to eliminate guns, knives, and other potential weapons from the school. Handheld and, to a more limited extent, walk-through metal detectors are currently employed in some situations. Just as these devices are now accepted at airports, their use in schools may also become commonplace. New facility design must provide the infrastructure to support the potential use of such devices.

In those facilities where electronic access screening is required in a lobby, optical turnstiles have been found to be widely accepted. These particular devices use an interlaced series of infrared beams to detect and categorize passage of individuals. The devices can be easily adapted to fit a wide range of aesthetic requirements ranging from corporate lobbies to government installations. Much competition in this particular market segment has resulted in increasingly competitive pricing. Downstream of the lobby, noncontact proximity cards are rapidly becoming the industry standard. These cards contain an antenna that is activated by the proximity reader. Upon activation, the

A new paradigm for a 21st-century school creates a safe place for learning

Chesterton High School in Chesterton, Ind. opened this fall with every technological device and architectural amenity that a well-planned 21st-century school should have. Designed by Fanning/Howey Associates of Celina, Ohio, the 500,000-square-foot facility on a 97-acre wooded site has 124 classrooms or teaching stations with sloped projection walls and built-in monitors. All academic spaces are served by a building-wide data network, which supports computer-science labs, multimedia centers, CAD instruction, and other applied-technology labs.

This technological sophistication carries over into specialties as well. An 1,800-square-foot space for the speech and debate program includes practice rooms and operable walls. There are art rooms with kilns, a darkroom, and machine and auto mechanics shops, radio, and television production facilities.

A fitness center supporting a wide variety of sports is a focal point of the school. The gymnasium seats 4,400, and an eight-lane, 22,000-square-foot natatorium with diving accommodates another 600 spectators.

While such state-of-the-art facilities would make any small college



envious, there are high-tech elements that make this project remarkable for less enviable reasons. The school is monitored by 125 surveillance cameras positioned throughout the interiors and around the exterior. A security center is located in the administration office suite, where a full-time director observes activity recorded by the cameras and displayed on six monitors.

All classrooms have telephones so that teachers can call

the office or the security center if there's an incident. In addition, all staff members, including cafeteria workers and custodians, carry small key-fob transmitters, coded with their names and room and phone numbers, which can relay an alarm to the security center in case of emergency. Locking double doors throughout the facility allow areas to be segregated during the many after-hours community events held at the school. The entire complex is

designed around an open, central courtyard, which is accessible from the cafeteria, science labs, and art rooms.

Several campus tragedies in the past few years have created a disturbing atmosphere of uncertainty among school administrators, students, their parents, and the community. For whatever the reasons, Chesterton is their design model and a sophisticated prototype for the new millennium. *S.H.*

card then transmits a unique code identifying the facility and user.

Keep the doors locked

Technology has also matured with regard to the means available for controlling personnel doors. The most common means involve:

Electromagnetic locks. These devices hold a door in a secure or closed position through the use of an electromagnetic field between the coil and receiver plate. Upon presentation of a valid access credential or other access identifier, power is interrupted to the coil, causing the magnetic fields to dissipate and thus releasing the door. Because these devices rely solely on electronic controls for release with no mechanical override, they are not accepted by code in some jurisdictions. Their main attractiveness is ease of installation and high holding power.

Electric strikes. Probably the most common form of door control, the strike located in the jamb is controlled by a solenoid and releases upon presentation of a valid credential or other access identifier. For retrofitting access-control systems, the use of electric strikes often requires modification of the door jamb. These are normally

specified as fail-safe and release upon loss of power.

Electric bolts. Using standard door strikes, the electric bolts utilize a solenoid to eject the bolt into the receiver plate. Electric bolts require pretreatment of the doors prior to installation and are therefore somewhat more expensive than use of the common electric strikes.

ONE DIFFICULTY IS THE INABILITY TO LIMIT ELEVATOR ACCESS TO AUTHORIZED INDIVIDUALS ONLY.

Elevator control. One of the difficulties with elevator control is the inability to limit the individuals actually using the elevator to those who are authorized. A very similar problem occurs at card-reader-controlled doors, where the first person in line swipes his card and all the individuals walk in behind him without presenting a valid access-control credential. Short of installation of additional access-control hardware, administrative procedures are the primary solution to this problem. With proper security-awareness training, employees realize

the risk associated with such tailgating activities and assume the responsibility for verifying the access authorizations of those trailing individuals. The problem seems more difficult with elevators; psychologically, it is very difficult to obtain the same level of user involvement as with a standard personnel door. For this reason, many facilities use a por-

BIOMETRIC DEVICES PROVIDE THE HIGHEST LEVEL OF RELIABILITY WITH A MINIMUM OF DISRUPTION.

tal arrangement at either end of an elevator lobby on each floor to control access into the respective office spaces. While this requires more buildout in the building, it is often less expensive than the costs associated with access-control-based elevator monitoring.

It goes without saying that any electromechanical device can fail. This is certainly true of all access-control systems. Therefore, it is prudent to plan for such failure at each access-control point. This normally involves CCTV coverage to observe all aspects of the operation. In the event that someone is trying to illicitly bypass the access-control point or an authorized individual is having difficulty operating the system, the monitoring security officers will have a first-hand view of the situation.

Intercoms should also be provided at each access-control point to allow the user the privilege of talking to the monitoring security officer to request assistance in the use of the equipment. This ease with which assistance can be provided will result in greater user acceptance of the system and more efficient operation.

Corporate environments

Corporate environments share many of the constraints of schools; however, the expectations on the environment are generally imposed internally (by management) with limited external influence. Unlike schools, corporate environments afford high priority to package screening due to the potential risk to the corporate well-being and the demonstrated threat. Noncontact and, in some cases, biometric devices provide the highest level of reliability with a minimum of disruption. CCTV systems can also be employed extensively and strategically.

While technology provides many tools to heighten security at both public and private buildings, facility design can play a key role in providing an efficient, creative, yet secure workplace. Applying basic security principles at the earliest stages of design will result in complementary blend of all design requirements, including security. In an insecure world, architects now have more tools to give their clients security without locking them in fortresses. ■



AIA/ARCHITECTURAL RECORD CONTINUING EDUCATION

INSTRUCTIONS

- ◆ Read the article “Maintaining Security in an Insecure World” using the learning objectives provided.
- ◆ Complete the questions below, then check your answers [page 242].
- ◆ Fill out and submit the AIA/CES education reporting form [page 242] or file the form on ARCHITECTURAL RECORD’s Web site at www.architecturalrecord.com to receive one AIA learning unit.

QUESTIONS

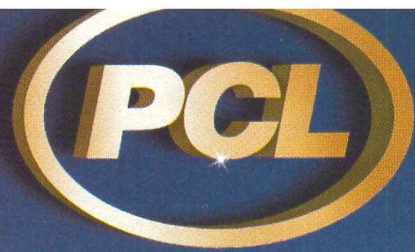
1. What were the conclusions of security discussions after the 1995 Murrah Building bombing?

2. How can environmental design be altered to prevent crime?

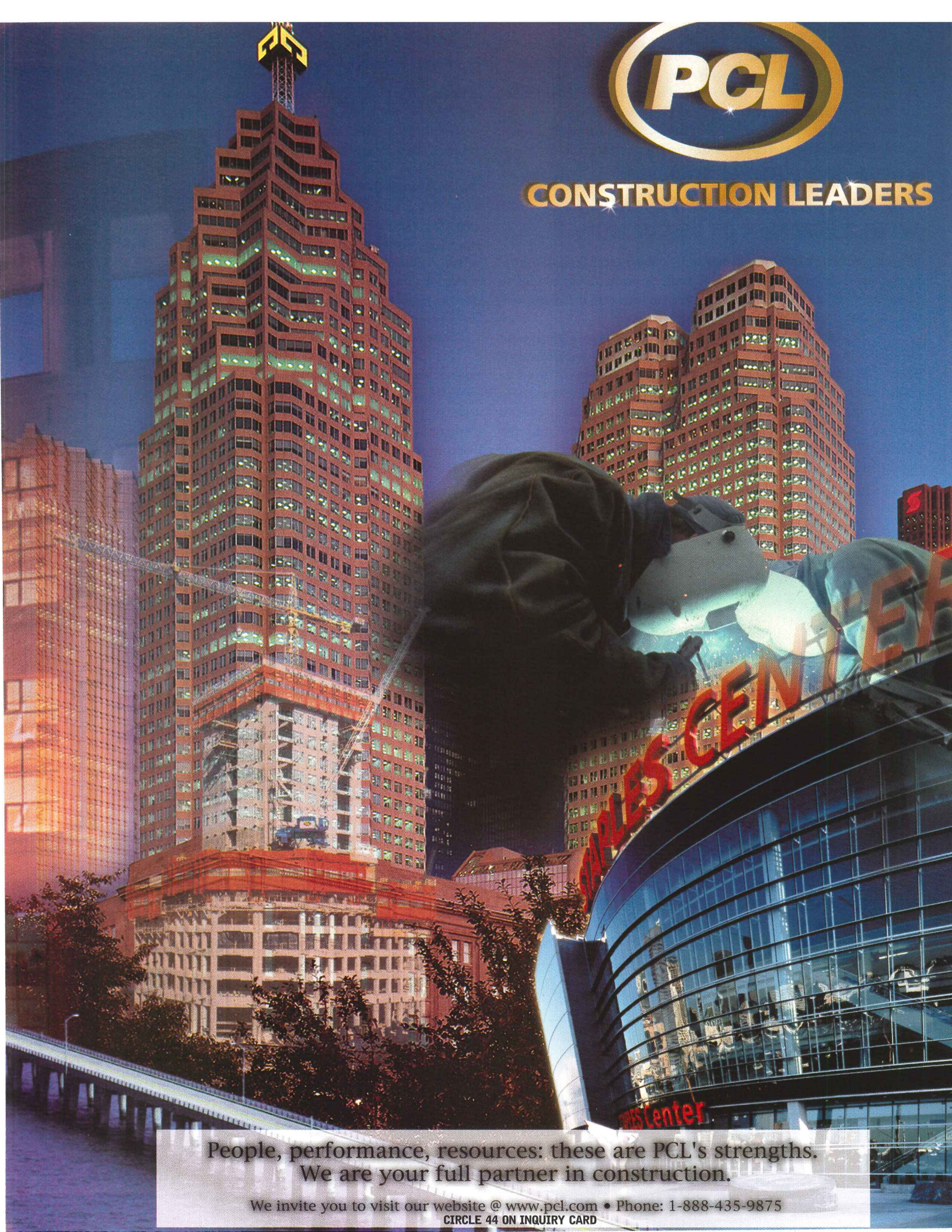
3. How is personnel access electronically controlled?

4. What is the importance of the lobby in secured buildings?

5. What are the specific problems in school security?



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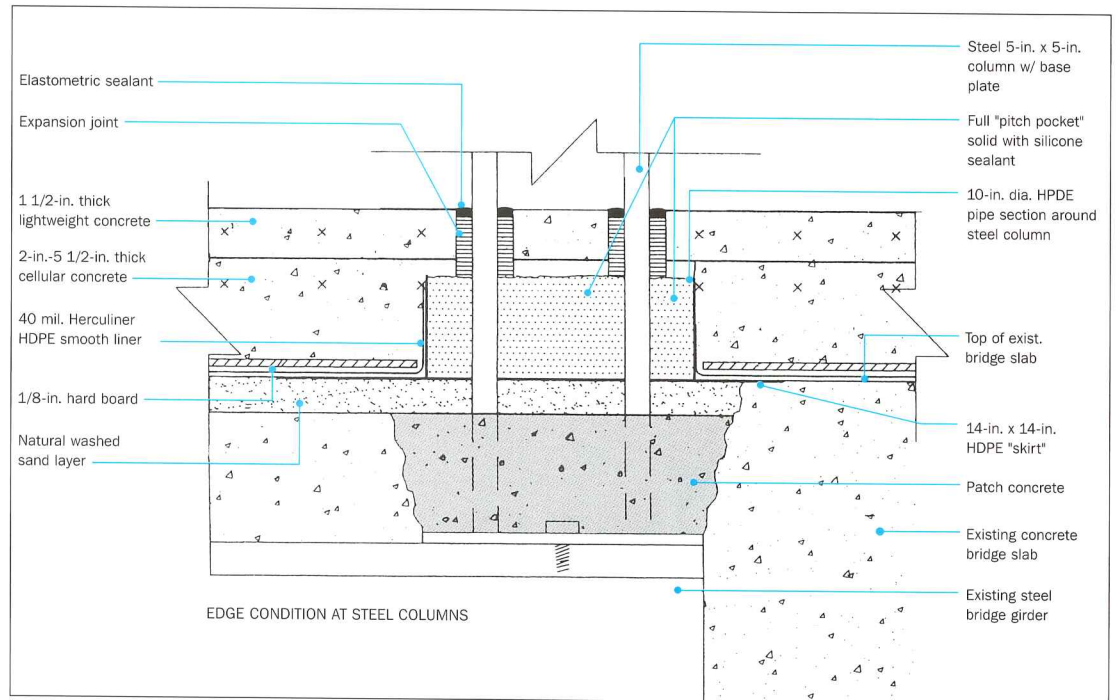
CIRCLE 44 ON INQUIRY CARD

Architects successfully detox a Brooklyn brownfield

When Kendell Christansen, chairman of the board of the Maple Street School, a private, parent-run, day-care center in Brooklyn, discovered an abandoned dry cleaner at the edge of Brooklyn's Prospect Park and adjacent to a subway station, he knew he had found the perfect location for a new center. The center's architects, the Pratt Planning & Architectural Collaborative (PPAC), determined that the 2,600-square-foot building could be adapted to house the day-care center, despite the need to remove hazardous waste left by the dry cleaner. "We were aware of the the problems a school in Harlem had when reusing a dry-cleaning store," said E. Perry Winston, PPAC's project manager, but no one predicted the additional complications caused by the building's location along a roadway that bridges open subway tracks below the street level.

In the same way that industrial waste contaminates soil substrate, it can also contaminate building structures and foundations. Highly toxic and stable perchloroethylene (PCE) is the main ingredient in dry-cleaning fluid. Initial testing at the site determined that PCE had contaminated the existing structure. During demolition, core samples confirmed that the chemicals had also penetrated the underlying concrete bridge structure. Removing the contaminated superstructure took care of a significant part of the problem, but removing the substrate was not an option since the bridge is also the Metropolitan Transportation Authority (MTA) infrastructure. The solution required that an impermeable barrier be constructed between the contaminated bridge substructure and the foundation of the new building.

In some circumstances, concrete is sufficient to encapsulate



The architects sealed off the contaminated structure with a high-density polyethylene (HDPE) liner.

hazardous materials, but not here. Vibrations from the subway and from the heavy automobile and bus traffic on the bridge was certain to cause cracks in the concrete, through which the PCE vapors would infiltrate the structure.

PPAC architects began a search for a membrane that could resist the chemicals and details that would provide resilient yet impervious joints. Based on examples of previous applications and the representations of the capabilities of the materials, the architects considered first an asphaltic and then an elastomeric membrane. Under specific testing by the manufacturer, both petroleum-based products were determined to be chemically incompatible with PCE and were rejected. Finally, consulting environmental engineers AKRF, of New York, referred PPAC to In Line Plastics in Houston. They manufacture high-density polyethylene (HDPE), a plastic so chemically resistant it is

used for everything from milk bottles to landfill liners. Working together, PPAC and In Line developed the details and specifications for the installation.

A layer of sand was laid down to level out the uneven surfaces of the bridge. This was covered with a 40-mm-thick HDPE liner with 4-inch lapped and heat-fused joints. "Because the material is so chemically resistant, like Teflon, you can't glue it to any surface," said Curtis Spencer of In Line Plastics. The manufacturer sent trained technicians and specialized equipment to the site to seam the material in a heat-fusion process. HDPE pipe "boots" surround vertical penetrations, the liner is heat-fused to the boots, and the interior is filled with silicone. The edges are secured with stainless-steel battens bolted into concrete curbs.

When the HDPE liner is laid down, it is imperative that it's well sealed, but the sheet loosely

covers the sand, leaving a considerable amount of slack. "If there is any downside to the material," explains Spencer, "it is that it has a very high coefficient of thermal expansion." The excess material permits the liner to expand and contract with temperature changes, prompting PPAC to conduct a rupture test. Once the liner was installed, air-monitor tests revealed acceptable air quality and the substrate construction finished with a 3/8-inch masonite board, a layer of cellular concrete (30 PSF), and a final layer of lightweight concrete (115 PSF).

The need to find solutions for safely building on brownfields will continue in urban and suburban sites, requiring architects to explore innovative solutions to unique circumstances. Fortunately, whereas methods and scale will change from project to project, the principles can undoubtedly be transferred from one application to another.

Barbara Knecht

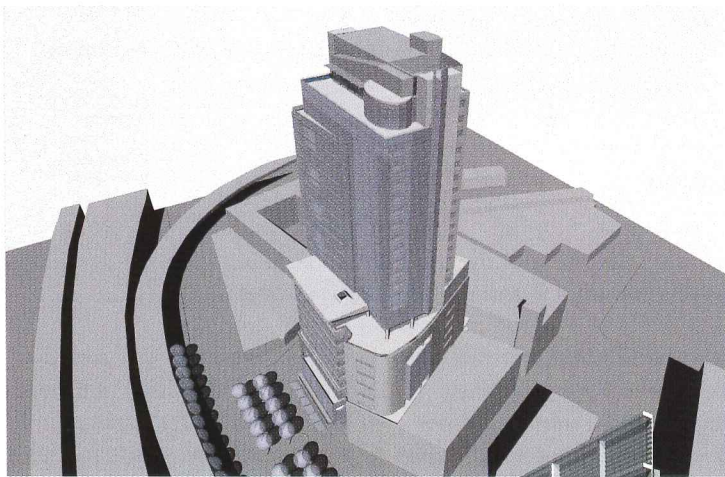
Tech Briefs

If you build it (right), they will come

If Albany has a national architectural identity, it's Harrison and Abramovitz's controversial, International Style Nelson A. Rockefeller Empire State Plaza, completed in 1979. Otherwise, New York State's capital is a low-profile, medium-size city, eager to be a player in the new economy. Mercer Companies, a real-estate and energy-development operation in Albany, believes that the new economy can flourish in this region, if the city holds onto the information-technology talent graduating each

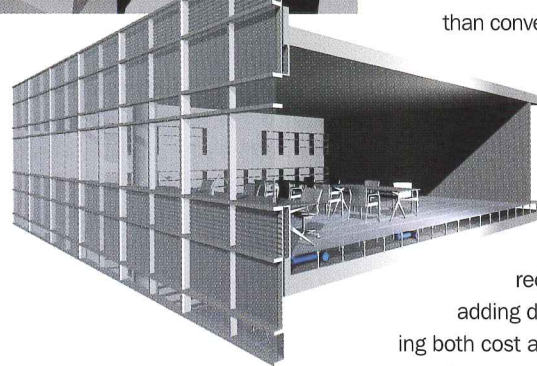
near the Hudson River. The biggest travesty visited upon the site came in the form of an elevated interstate highway, which destroyed the waterfront terminus of a grand boulevard and obstructed views and access to the river. EEK's master plan is designed to restore a sense of place to the area and brand a new commercial district for Albany.

After creating the master plan, Mercer hired EEK to design the first of several buildings, which, according to EEK design principal Ming Wu, will have "groundbreaking infrastructure."



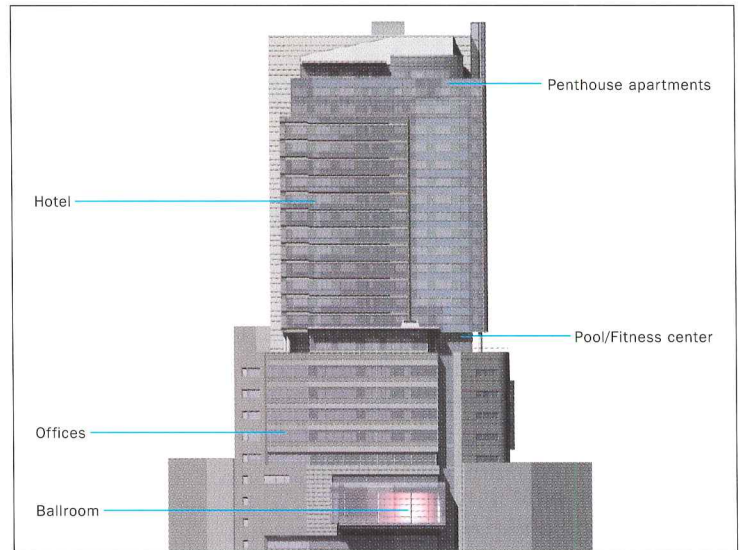
year from local universities. Mercer is speculating that an architecturally iconic commercial development with social and cultural amenities in league with its high-tech infrastructure will be Albany's magnet to attract the best and brightest. Mercer's plan does more than offer pleasant rental space to a few start-ups. Its goal is to create an environment of broad collaboration and cross-pollination of ideas that goes beyond incubating to building a live-work community.

In September 1998, the Mercer Companies asked Ehrenkrantz Eckstut & Kuhn (EEK) of New York City to create a master plan for the development of a nine-block area of downtown Albany to be called E-Comm2, located in a historic, but run-down, neighborhood



The first project, called One E-Comm Square, includes a hotel, offices, luxury apartments, a fitness center, and two restaurants, all interconnected by a high-bandwidth infrastructure, consisting of an Intel-based "plug-and-work" architecture connected to an OC 48 pipeline backbone (the equivalent of 1,270 T-1 lines).

Besides a state-of-the-art



network, EEK is leveraging the latest buildout methods to create elastic work spaces that can accommodate the demand for maximum flexibility in the familiar open office plan. The architects designed a raised floor over a pressurized plenum through which power, voice/data information, and conditioned air are distributed. This system is gaining popularity because tiles can be easily replaced when an area changes function. For example, a new tile with a register can be installed to provide local temperature control at a workstation. The initial cost is higher than conventional mechanical-distribution

methods, even without ductwork, but the payback can be quick. Spaces can be quickly reconfigured without adding ductwork, thus reducing both cost and time.

Each floor has a mechanical unit, which utilizes a variable-speed fan. When the number of registers increases, the fan speed can be increased to supply air at a constant pressure. Fresh air is conditioned in this mechanical unit and distributed to the spaces. During heating months, conditioned air in the space is collected 20 feet from the perimeter glass, heated in a hot-water reheat unit,

and washed along the window wall.

Power distribution has three components: the main distribution box, a secondary distribution box containing separate circuits or groups of circuits, and a service box where the outlets are located. The main distribution box is hardwired to the building's electrical system (allowing both general-purpose and isolated ground wiring).

Voice/data distribution is also three-tiered: two patch panels per floor, a data hub, and a service box, which is the same as the power outlet. The patch panel is connected to the building's network via fiber-optic cable. High-speed copper wire is distributed to the data hubs, which lead to each service box.

The relocation of a service box to accommodate a new workstation, for instance, can be done by disconnecting the service box, relocating it, and reconnecting it to the same cables. The same distribution and voice/data cabling is used, eliminating the need for an electrician to hard-wire or cut holes.

This project also shows that plunging into the new economy means competing for talent on levels beyond compensation packages and stock options. Mercer and EEK realize that when the competition gets really fierce, good design and thoughtful planning can become the deal makers.

Sara Hart

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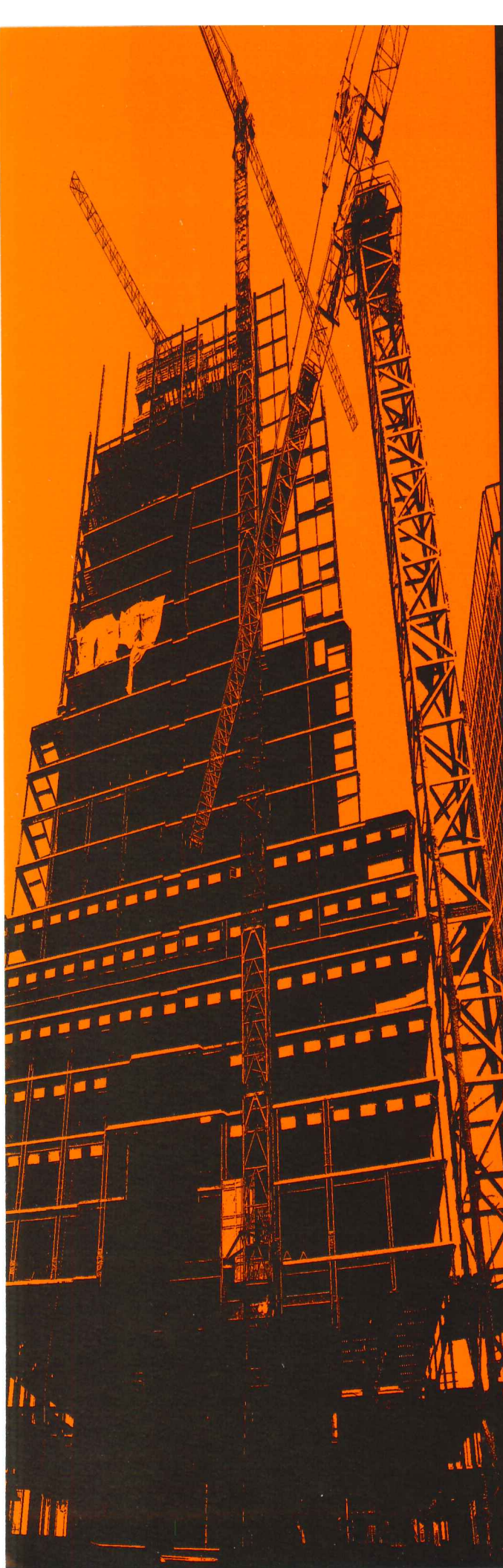
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CIRCLE 46 ON INQUIRY CARD

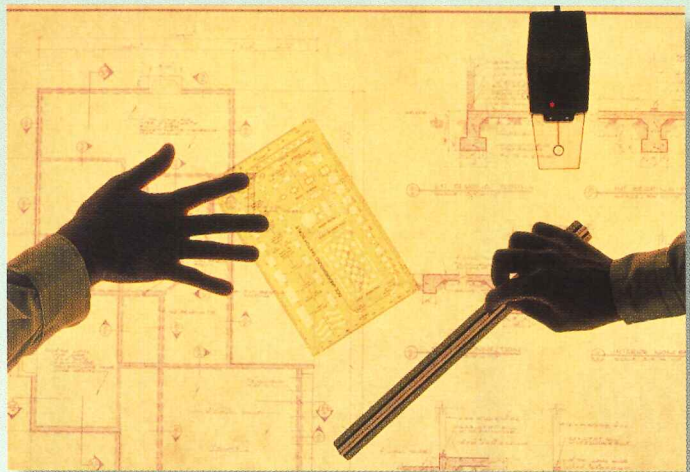
THE DIGITAL PRACTICE



BE WARY OF THE GENERATION GAP BETWEEN SENIOR ARCHITECTS WHO ARE NOT EXPERT COMPUTER USERS AND JUNIOR STAFF WHO ARE.

One of the feature stories in this section, “Challenges for the Digital Generation,” examines what has happened to our profession during its transition from a paper profession to a digital one. The end of the paper epoch began in 1985, and its digital counterpart was in full swing by 2000. During this period, powerful computers became so inexpensive that any professional could have access to one; software was sophisticated enough to do almost anything, and the Internet had reached a point where it was possible to access or transmit information instantly anywhere in the world. Our story cautions that we are still in transition. We should be wary of the generation gap that seems to have emerged between senior architects who are not expert in the use of computers and junior staff who are. The older generation may not be appreciated for what is perhaps an established office’s greatest asset: “human databases” with decades of accumulated experience in how buildings go together and what it takes to get them built.

I’ve heard that parents of video-game-playing children must occasionally embargo the techno toys and insist that the kids go outside and play baseball or ride their bikes. By the same token, I worry that students and interns who have never gone through the experience of designing and drawing a building by hand, and observing its construction in the field, are missing much of the joy that is intrinsic in being an architect. Clearly, computers are here to stay. But, to the digital generation, we say, computers are no substitute for pencils. Don’t deny yourselves the joy of learning the nuts and bolts of the building process and expressing yourselves on paper. —*Charles Linn, AIA*



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Merger marks one company's evolution in online project management

The recent merger between Bidcom and Cephren to form Citadon (www.citadon.com) signifies the start of a new epoch in the \$100 million extranet services industry: one with fewer competitors who may offer more standardized platforms along with a wider variety of online services.

"It's the kind of consolidation that has been long predicted," says Paul Orr, editor emeritus of *Extranet World*, an industry newsletter.

Estimates of the companies offering extranet services to AEC firms range from 150 to over 600. "It's clear that the demand for online project-

management tools, while growing, cannot tolerate the number of companies that exist today," Orr adds.

processes used by AEC firms on all projects, such as submittals and change orders, and Cephren's strength was managing project documents such as plans and specifications," says Sal Chavez, senior vice president of collaborative services for Citadon. "We felt that merging the two companies allows us to be more responsive to our customers' needs."

With their promise of streamlined communications, reduced paperwork, and shortened project-delivery times, it's no wonder the demand for extranet services has risen steeply since their inception

over three years ago. Extranets are essentially electronic repositories on the Internet where AEC firms can store project information. Team members in different geographic locations can view, change, and update project documents such as CAD files electronically. Calendars, schedules, and other information can also be tracked online to establish a single, paperless, easily accessible record. Citadon and Buzzsaw are also jockeying to establish themselves as one-stop portals or "vortals" for the building

industry by offering a suite of services that allow customers to transact all of their business online—searching for RFPs, submitting proposals, managing plans and specifications, purchasing building products, and so forth.

Most extranet vendors charge AEC firms a monthly fee to host projects, although some, such as Buzzsaw, allow customers to use select extranet features at no cost "to provide an easy on-ramp to project hosting," says Chris Bradshaw, vice president of marketing for Buzzsaw.

"We find that as customers realize the benefits of extranets," says Bradshaw, "they quickly become willing to pay to use optional add-on services." Probably because it offers some free services, Buzzsaw has a greater proportion of single-entity and small-business customers, whereas Citadon's clients are mostly large design firms and contractors who have more capital to invest.

On the whole, consolidation of the extranet market is good news for customers, but it raises questions about what these services will look like in the future. With fewer vendors in the playing field, AEC firms are now in a better position to push for standardization of platforms—a benefit for busy

architects who feel overwhelmed by the multitude of options available for managing projects online. Yet some industry analysts feel that standardization, although inevitable to some degree, is not imminent, and that it hamstring a vendor's ability to offer unique options. And the portal concept for the building industry—in which a firm could theoretically submit bids, select subcontractors and suppliers, revise plans and specifications, and manage construction at the click of a mouse with virtually no paper-shuffling—is intriguing but largely unproven.

The removal of the face-to-face component, in which deals were closed with a handshake, represents a radical culture shift that many firms are skittish about. And they may feel they lose competitive advantage on pricing of materials and services if they are restricted to using what's available online through their extranet service providers.

It remains to be seen which companies and business models will prevail, but one thing is certain: project extranets will one day be as commonplace in architects' offices as CAD workstations." We're not seeing just a groundswell of enthusiasm for these services," notes Bradshaw. "It's more like a tidal wave."

—Deborah J. Snoonian, PE

THE MERGER OF BIDCOM AND CEPHREN IS THE KIND OF CONSOLIDATION THAT HAS LONG BEEN PREDICTED.

management tools, while growing, cannot tolerate the number of companies that exist today," Orr adds.

The merger created a company responsible for managing over \$110 billion worth of projects from clients such as Fluor Daniel, Bechtel, and GE Power Systems, making it one of the two largest extranet vendors, along with the one-year-old Buzzsaw (www.buzzsaw.com). But Citadon will be a different entity from the two companies that formed it. "Bidcom's focus was on standardizing business

over three years ago. Extranets are essentially electronic repositories on the Internet where AEC firms can store project information. Team members in different geographic locations can view, change, and update project documents such as CAD files electronically. Calendars, schedules, and other information can also be tracked online to establish a single, paperless, easily accessible record. Citadon and Buzzsaw are also jockeying to establish themselves as one-stop portals or "vortals" for the building

One and one equals more than two

The Bidcom-Cephren merger leverages the different strengths of two companies to help it compete with the likes of Buzzsaw. Here's how:



Bidcom's focus was on standardizing business processes, such as submittals and change orders, which are used by AEC firms for all projects.

Cephren's strength was the management of project documents, such as plans and specifications.

Citadon will combine the strengths of Bidcom and Cephren but become a different entity. It will be one of the only companies to offer more standardized platforms, along with a wider variety of online services.



Challenges for the Digital

By Jerry Laiserin, FAIA, and Charles Linn, AIA

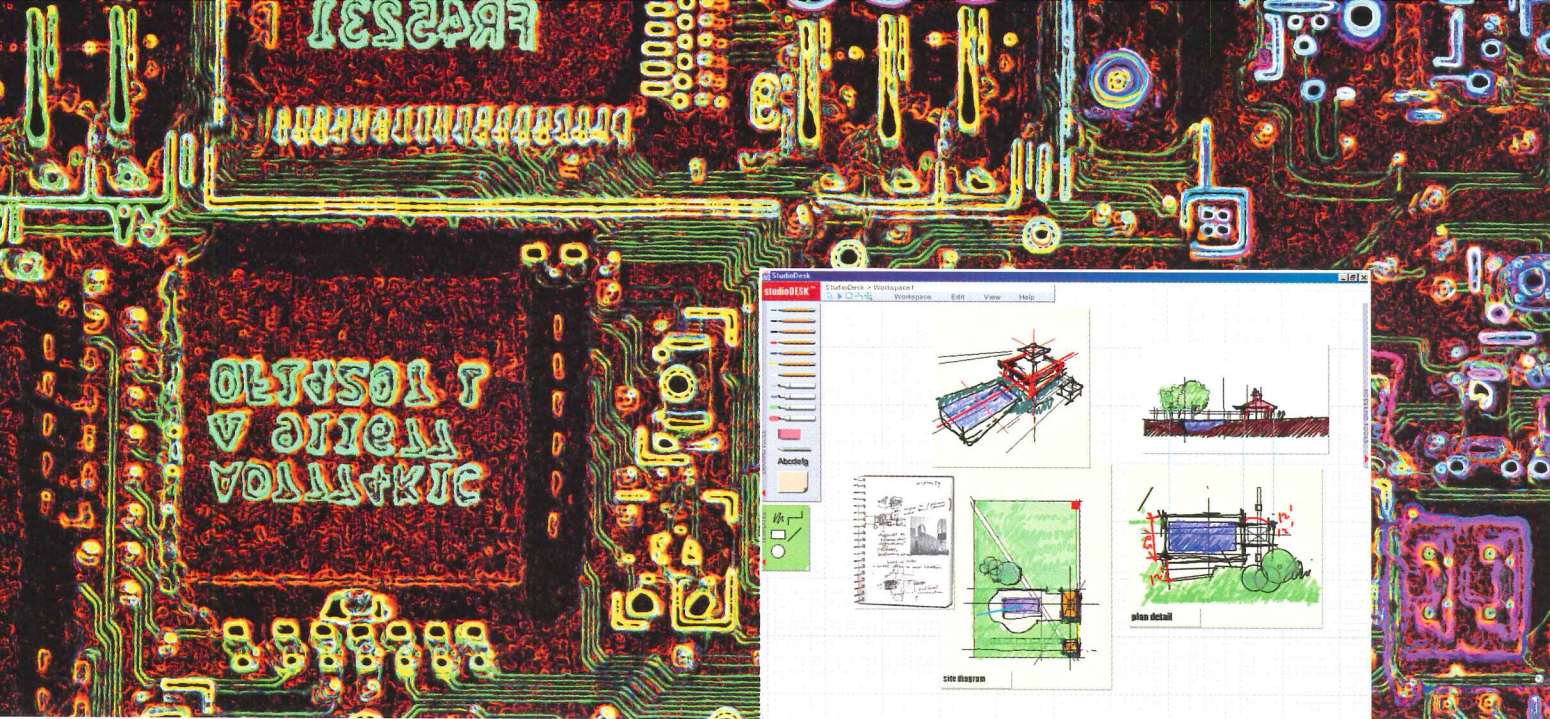
Is the emphasis on
digital tools leading
to the neglect
of **important skills**
that have
always been a
fundamental part of
an architect's
education?

Digital technology is significantly changing design culture and influencing our core understanding of what it means to be an architect. Students in almost every school of architecture today will graduate with fluency in a new language—a digital one. As students and interns, they effortlessly access suites of software tools that allow them to work more quickly and accurately than any architects have before. Even the design portion of the Architectural Registration Exam now assumes a minimal level of CAD proficiency.

But some established architects are having difficulty accepting these changes. They worry that the emphasis on teaching digital tools has led to the neglect of other fundamentals. Not too long ago, an anecdote circulated among New York firms about an architect who refused to hire a young graduate who was an extremely talented and CAD-proficient designer, but whose handwritten job application was illegible. “Architects have to know how to letter,” the architect said. This seems like a loss for both the firm and the candidate. After all, a person should be able to learn lettering much more easily than learning to design well or use a computer.

Welcome to the new generation gap

Young designers often think their seniors do not know which end of the digital pencil is up, while to seasoned practitioners, the design methodology of the younger generation looks like a video game in slow motion. Much of the current miscommunication within firms arises from the loss of hand drawing as a common medium. “It is increasingly difficult to find young architects who can draw,” says Don Weinreich, AIA, a senior



Generation

associate at Polshek Partnership in New York. Cathi House, AIA, a partner in House + House in San Francisco, is a firm believer in the benefits of digital technology, but she insists that young architects in her firm be able to draw an entire project by hand before they can switch to the computer.

Unfortunately, computer technology has not yet matured into an adequate replacement for drawing as a medium of communication. In some ways, the technology can even hinder the mentoring that has always been one of the basic building blocks of an architect's education. Older principals report that overseeing work was a lot easier to do when designs were on full-sized sheets laid horizontally on boards. Looking over someone's shoulder at an isolated detail or at a fragment of a larger drawing on computer monitors can be frustrating for mentors and protégés alike.

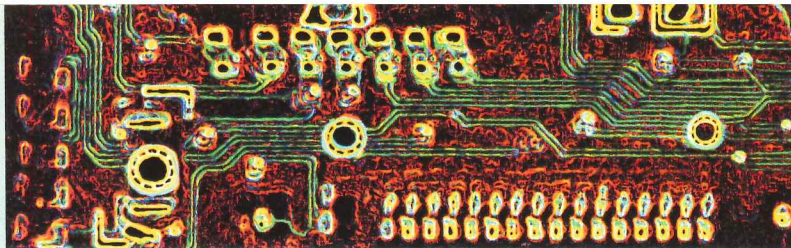
This is particularly true when the mentor fails to grasp how to use the input and output tools and commands of the new medium, for the new medium doesn't yet lend itself to easy cross-generational sharing. Older professionals find themselves having to resist the temptation to tape a piece of paper over the intern's monitor and trace over it—and some are reported to have done exactly that. As a result, the desk crit—which traditionally served as the primary exchange between teacher and student or principal and intern—has lost some of its effectiveness and at times has devolved into a forum of contention.

All of this technological ability comes at a time when, in many smaller, younger firms, no one attains—nor even aspires to—such gritty positions as job captain or senior detailer, which once were the backbones of practice competency. When you combine the scarcity of

seasoned mid-level architects, many of whom fled the field during the last recession, with the crushing workloads caused by the current boom, you find proportionately fewer senior staff members to mentor budding designers. Young architects often overlook the pragmatic quality and the emphasis on ease of construction in work they admire. The engineers and fabricators who worked with Frank Gehry on the Experience Music Project [OCTOBER 2000, page 173] make much of the fact that Gehry and his staff are extremely concerned that so complicated a building be as practical to build as possible. Although digital modeling made possible the engineering and fabrication of this extremely complex project, at some point the architects had to understand and collaborate with the other trades in order to determine how the building would be built. Without careful guidance, a generation of digital designers runs the risk of embracing form without function.

Will efficiency lead to generic design work?

The increasing efficiency and declining cost of digital technology allow small firms to appear—and, in many ways, to be—bigger than their head count would imply. It now takes fewer heads and hands to design and document the same dollar value of construction in place. Architects can use the time and money “freed up” by the computer to do more analysis, additional design studies, and further detailing. Internet connectivity and online collaboration make even the most specialized information and esoteric expertise universally accessible to designers, regardless of the location, size, or age of their firms.



But new digitally derived efficiency also can be exploited by clients who want to drive down fees while demanding more service from the architect in shorter time frames. Under that kind of pressure, it is easy for mere information to take priority. Firms have to be careful that their computers don't become repositories of standard details and specifications that serve as substitutes for creative detail development. Inexperienced architects also may be tempted to rely on standard details without understanding when or why to apply them in specific circumstances. Again, this is a situation where expecting young architects to work without the help of a mentor may be, for the firm, like walking a tightrope without a net.

The eye-hand connection

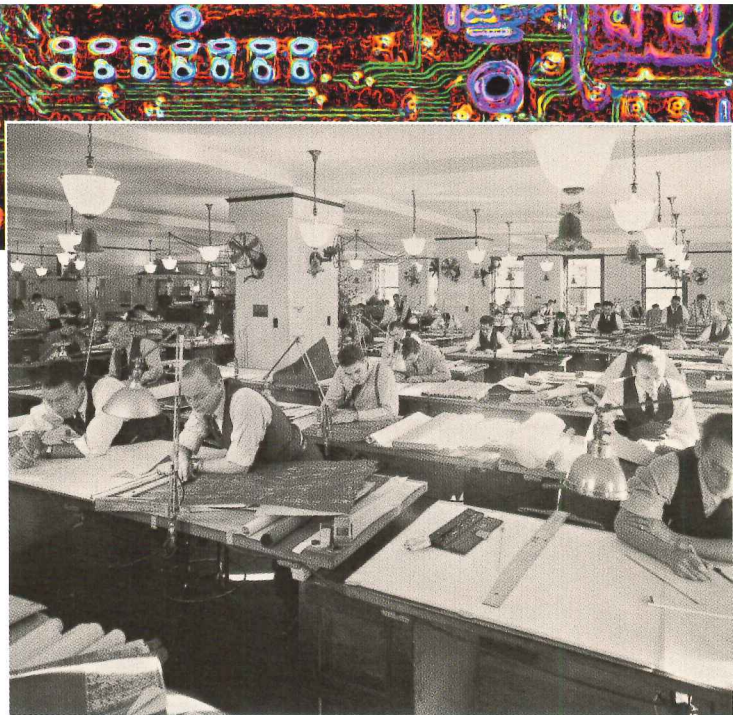
Learning to draw has long been a crucial skill for architects. It helps develop the ability to imagine spaces and to express what can be imagined. It demands neuromuscular training of the brain, hands, and eyes. Increasingly, the goal of many CAD, modeling, and visualization programs is to replace drawing as much as possible. Making the coordination of plans and elevations or the construction of perspectives completely automatic short-circuits the mastery of traditional skills. It is not yet clear that mastering the 3-D fluidity of the computer screen helps architects-to-be develop the same spatial and expressive abilities as learning to draw by hand.

The tendency today is to rely on software and more physical model building than was used in the past. Clever software designers, especially those serving graphic-arts markets, have devised drawing and paint programs that simulate much of the appearance and behavior of manual media, from gouache to pastels to airbrush. And teacher/practitioners such as Hans-Christian Lischewski have pioneered the application of filter effects from image-processing programs such as PhotoShop to computer-generated ren-

TECHNOLOGY CAN EVEN BECOME AN OBSTACLE TO THE MENTORING THAT ALWAYS HAS BEEN A BASIC BUILDING BLOCK OF AN ARCHITECT'S EDUCATION.

derings, creating a softer, more hand-drawn appearance. CAD add-ons, such as LiveStyles for ArchiCAD or Squiggle for AutoCAD, can make even 2-D CAD line work look hand drawn (Squiggle even has a "cocktail napkin" setting). Autodesk is working on a software prototype called StudioDESK that relies on a stylus and touch-sensitive display to digitally simulate tracing, sketching, and rendering with pens, pencils, or markers.

Ironically, as such computer tools evolve and become more intuitive, their output increasingly resembles work done on paper. It may seem absurd to use a computer and printer in an attempt to replicate the look of any medium that has traditionally been created through applications on canvas, vellum, or mylar. If what is wanted is a charcoal drawing, why not execute the drawing in charcoal? Of course, whether the medium is real charcoal or digital charcoal, the task is difficult if a person has not learned to draw.



Experience still counts

Digital tools also enable architects to revisit the leitmotif of non-Euclidian geometry that runs through the design canon from Borromini, Gaudi, and Mendelsohn, to Corbu at Ronchamp—and through non-canonical masters such as Lapidus and Lautner. For example, the descriptive ability of digital documentation allows Frank Gehry to build free-flowing design geometries that previously would have been impossible to realize. Architects such as Greg Lynn rely on the procedural nature of software manipulations to explore folded, segmented, and interlocking geometries. Peter Eisenman has said that he exploits the generative possibilities of design software to inform form.

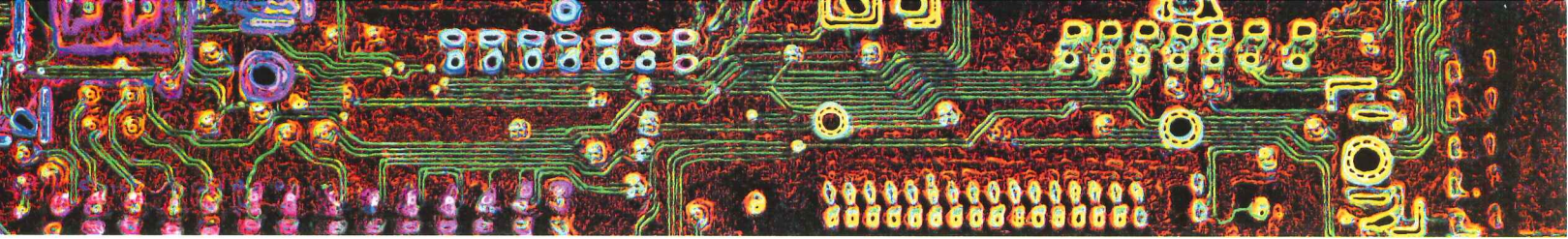
Working directly in 3-D computer models, any architect can explore hundreds of perspectives or analyze digitally animated paths and processions faster than it used to take to construct and render a single view by hand. And, the ability to focus on design issues early in their careers seems to have helped many young architects mature sooner and progress farther and faster than earlier generations of practitioners. Again, it must be pointed out that architects such as Gehry, Lynn, and Eisenman were schooled before computers were commonplace and bring decades of hands-on experience to the digital realm.

Computers can help architects not only with the generation and exploration of form, but also with the rapid execution of mathematically rigorous calculations and simulations of daylighting and electric-lighting effects, as well as a host of other design factors, ranging from structures and acoustics to energy performance. But to analyze the results of such simulations and draw intelligent conclusions from them still requires experience.

It is easy for the novice to be misled by computer-rendered lighting effects, for example. Even though a rendering can show where a beam of light would strike a wall or floor and can simulate reflections, it is beyond the capabilities of today's computer monitors to reproduce the actual brightness and contrasts that will be experienced in the room when the lighting is installed. Compensating for this distortion and predicting the true intensity is something that comes from practice, not from the program.

On the positive side

Computer technology extends the reach of architects across all practice areas, not just design. Software for financial management, project administration, marketing, proposal generation, and other practice chores has



steadily reduced the amount of time required by nondesign staff in an architectural office. Of course, much of this benefit has been offset by increased demand for computer-support personnel, as well as the capital requirements of procuring, maintaining, and upgrading all the hardware, software, and networking systems needed in order to be competitive in today's design economy.

But computers can help make money too, enabling architects to expand their service offerings into areas such as facilities management, design-build, and technology infrastructure consulting. The same technological capabilities expand clients' expectations of what architects can do—especially in the realm of “broadcast-quality” imaging and animation—as well as how quickly and inexpensively they can do it. These effects do not apply to architectural firms uniformly. Large firms enjoy economies of scale with respect to shared resources, such as file servers, plotters, fancy rendering software, and the ministrations of nonbillable technology staff. Smaller firms have the compensating benefit of being able to “practice large.” Established firms, with a mix of post- and pre-computer-literate staff, must endure the concomitant miscommunications, diminished mentoring, and so on.

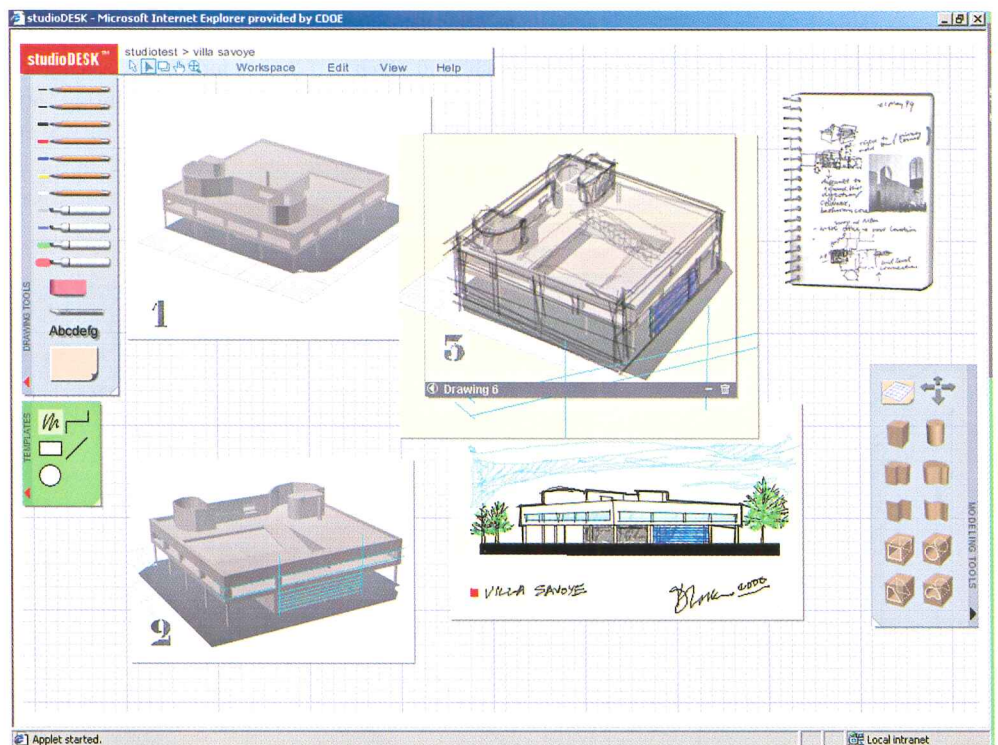
Changing what it means to be an architect

As more architects graduate with the knowledge of how to use computers and as they apply these tools throughout the profession, the generation gap in technological savvy will eventually disappear. Young firms, composed exclusively of computer-centric principals and even younger whiz kids, already operate in a uniformly supportive computer culture—so much so that most cannot disentangle computer culture from practice culture. Regardless of firm size or age, the ranks of architects who know buildings but not computers are dwindling. At the same time, architects who know computers but not buildings continue to increase their mastery of the body of knowledge that marks the seasoned professional. Demographically, these trend lines will cross within the next 10 years. That milestone will mark a “tipping point” when all practice becomes digital.

Such a tipping point occurred once before, with the introduction of the blueprint machine. Suddenly, an unlimited number of sets of drawings could be inexpensively and quickly distributed to contractors and subcontractors. This improved communications among these parties and also helped standardize the nomenclature and the presentation of drawings. But the rapid transfer of information also represented a massive

transfer of power and authority from the architect to the contractor, transforming the ways architects, owners, and builders related to one another. The resulting shift in the contractual basis of projects was the beginning of the end of the architect as master builder.

Contractually cut off from the means and methods of construction, architects have become brokers of information and services, as well as people who devise solutions to spatial problems and draw and write sets of instructions so that others can construct them. Just as the blueprint machine changed the speed with which information was transmitted, the recipients of that information, and the level of detail and completeness of information required to be transmitted, computers and the Internet are driving these changes to another level. Increasingly, architects will be val-



A prototype view of a new product by Autodesk shows how digital “tracing paper” can be overlaid on top of a live 3-D model of Corbusier’s Villa Savoye. It seems that the more sophisticated the new digital tools become, the more they resemble paper.

ued for their ability to navigate through vast amounts of Internet-supplied data to specify materials and components. In a process known as “mass customization,” every building element can be manufactured to order, enabling architects to instruct machines, rather than construction workers, to fabricate and assemble buildings. In this way, the computer, may in fact, return the architect to the status of master builder. ■

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Touch versus Tech: Hand-drawn or computer-rendered techniques

IS IT COMPETITION OR COLLABORATION FOR TRADITIONAL DRAWING AND EMERGING COMPUTER METHODS? TWO LEADING PROPONENTS FORM AN ALLIANCE TO COMBINE THE BEST OF BOTH WORLDS.

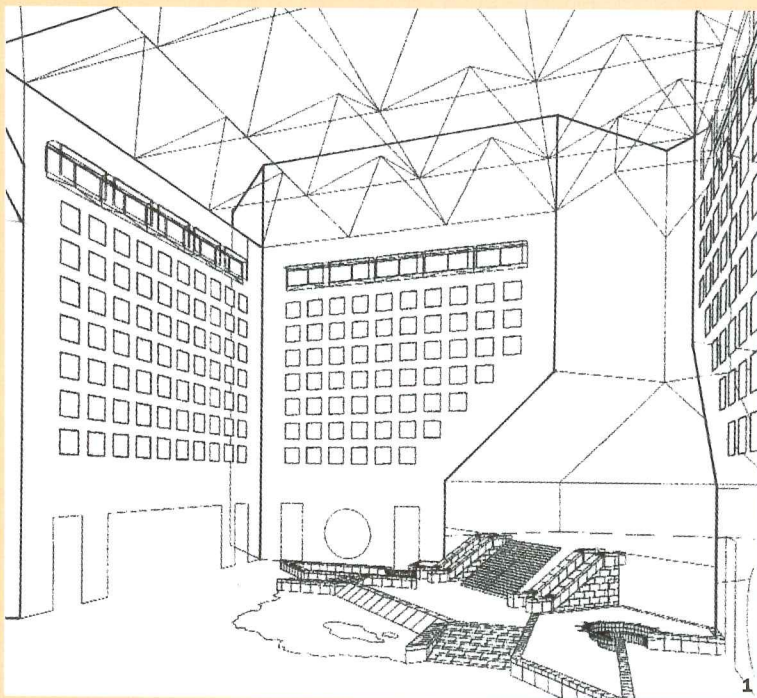
By **Evan H. Shu, AIA**

To many in the architectural profession, it has felt almost like an invasion. Over the last 15 years, emerging computer methods have overtaken the former reliance on drawing boards and tracing paper. The computer generation found its first “beachhead” in the realm of contract and production drawings and has since made substantial inroads into the areas of design and schematic representation, particularly as digital tools have gotten easier to use and less expensive. However, if there is one persistent pocket of resistance to expanding computer technology, it is in that realm that starts with the quick pencil sketch and progresses to the finished architectural illustration. This setting is providing all of us with some instructive lessons on the very nature of two competitive worlds, which might be termed “Touch” and “Tech.”

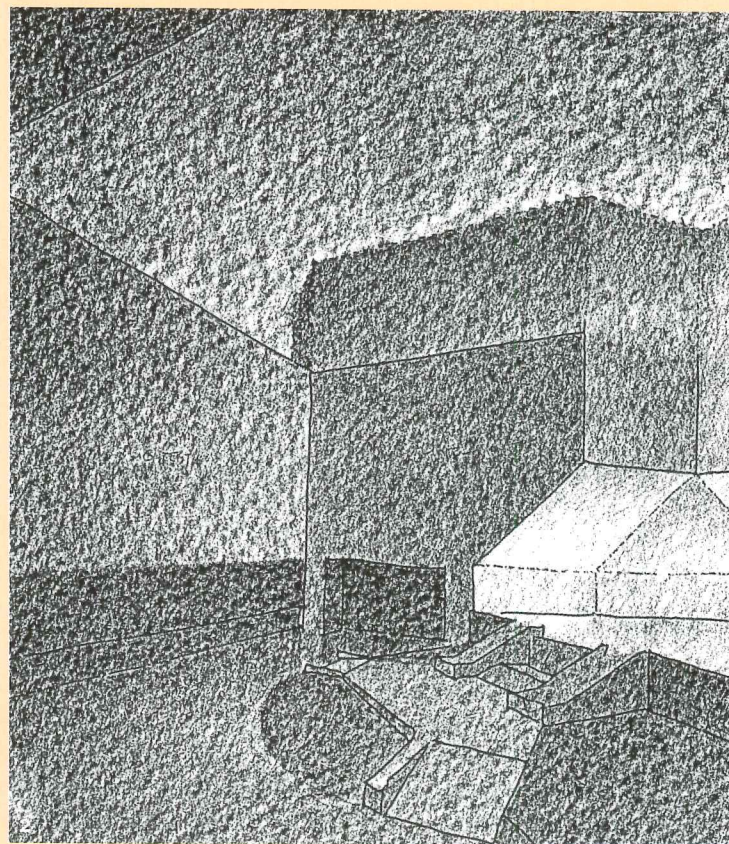
Evan H. Shu, AIA, is principal architect with Shu Associates in Melrose, Mass. He is also editor and publisher of Cheap Tricks, a monthly newsletter for DataCAD users.

In the latest awards program of the American Society of Architectural Perspectivists (as published in their *Architecture in Perspective* 14), only a small handful of the 58 award-winning entries were computer-generated images, though a much higher percentage certainly relied on underlying computer-generated wireframes to help produce their images. The jury report itself was boldly headed with the motto “As long as we draw, we are architects.”

In attempting to keep an open mind, jury chair Michael Willis, FAIA, wrote that the jury “decided to check orthodoxy at the door and concentrate only on whether or not the drawing was a convincing representation of the subject, regardless of the medium used . . . as each of the judges was a techno-dinosaur with a background only in traditional drawing and painting.” Still, there was much criticism of computer-generated work by the jury, as evidenced by comments such as “too much extraneous detail,” and “how stiff they are!” and “the light level is cranked up to a meltdown, where it’s so bright that no one would want to walk in.”



Oles worked with AMD to establish the best viewpoint to create the computer wireframe (left) for this atrium view of the Beijing Bank of China by the Pei Partnership in 1995. He then used this wireframe to create his value study to establish lighting hierarchies for the major spatial planes.



One gets the feeling that architectural perspectivists are clearly feeling the heat of the onslaught made by the brave new world of technology. Gordon S. Grice, editor of the *Architecture in Perspective* publication, writes: "Clearly, the gradual intrusion of computer imagery, with its relentless precision, has forced 'manual' rendering into a more relaxed mode."

Into this "us-versus-them" context now comes evidence of a refreshing new alliance between the worlds of Touch and Tech at the highest levels. Paul Stevenson Oles, FAIA, of Interface Architects, and the partners of Advanced Media Design—Jon Kletzien, Richard Dubrow, and James Kuhn—have each won the American Society of Architectural Perspectivists' highest award, the Hugh Ferriss Memorial Prize.

Oles won the 1996 award for a haunting wax-pencil rendering of a Paris office tower designed by Henry N. Cobb, FAIA. Advanced Media Design (AMD) won the 1997 prize for the equally powerful computer rendering of Friedrich St. Florian's entry for the World War II Memorial competition for the Washington Mall, a depiction is noteworthy for being the first and only digital rendering to have won the prestigious Ferriss prize.

As accomplished as these two firms are in using their own respective media, they are currently working to combine their skills to execute "hybrid" renderings that use the best of both Touch and Tech worlds. Both firms see enormous potential inherent in the seamless fusing of hand-drawn (or chirographic) work with digital (cybergraphic) images to create, as they write, "a new phenomenon . . . a unique, graphically integrated approach to the hybrid imaging of architecture."

Oles observes that there is natural suspicion between these worlds. "Touch lives and works in growing fear that Tech, with its invincible computers, will sooner or later 'move in' or 'take over,' obviating the need for practitioners with merely traditional skills," he says. "Tech, on the other hand, often perceives Touch as becoming rapidly irrelevant, obsolete, and

dispensable." Oles and Kletzien have done some systematic thinking and delineated each method's strengths and weaknesses. A few of these differences can be described briefly as follows.

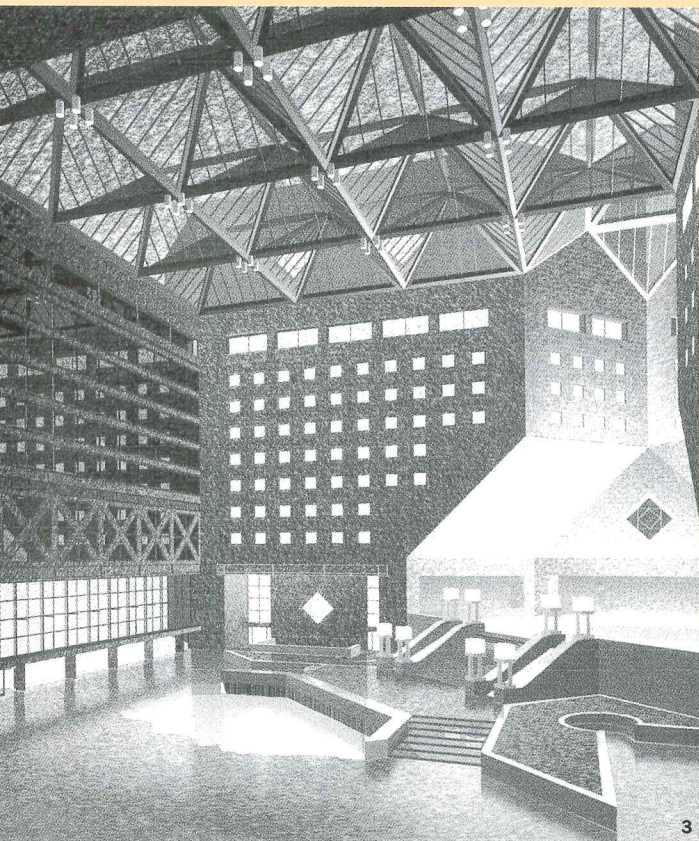
Touch employs easily accessible materials and tools for visualization (pencils, pens, markers, paints, etc.). Its ability to handle key visual and design issues, such as ambiguity (necessary for the very process of graphic investigation), and its ability to allow intuition to trigger spontaneity and creativity are as yet unmatched by computer techniques. Most observers also agree that, in general, Touch produces certain contextual items, such as landscape, sky, and people, more easily, quickly, and certainly more effectively than Tech can accomplish at present.

On the other hand, Tech is much better at conveying with precision the geometric complexity of a built form as generated via

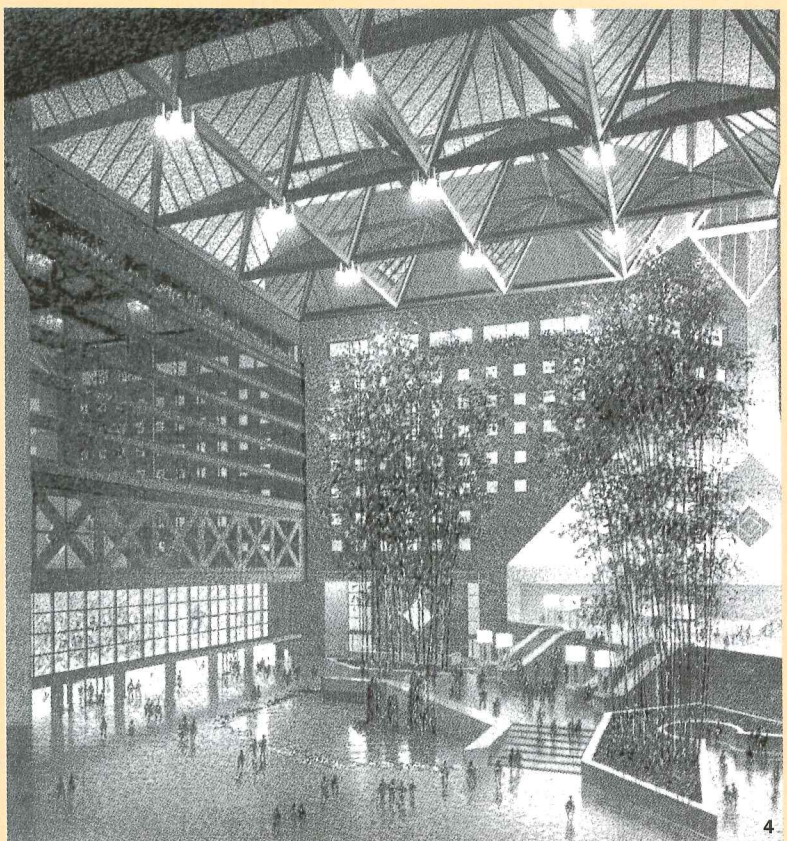
EMERGING COMPUTER METHODS HAVE OVERTAKEN THE FORMER RELIANCE ON DRAWING BOARDS AND TRACING PAPER.

mathematical means. Tech can more easily and quickly provide any number of finished variations to a computer-based model, showing altered lighting, material, or viewpoints as chosen by the designer. In addition, Tech can take a more practical team approach, allowing several people to work both independently and simultaneously on different aspects of a computer model or image.

While many architectural illustrators now routinely depend on computer wireframe work to undergird their hand-drawn work, Oles, together with the designers at AMD, has taken collaboration several steps further. Some of their early efforts were to strictly partition the imaging area, allowing AMD's digital imaging to provide the actual ren-



3



4

dered building while Oles would provide the surrounding entourage of sky and landscaping. They found that they could “ping-pong” a rendered illustration back and forth several times between their Touch and Tech methods.

A good example is work done for the interior atrium view of the main headquarters for the Bank of China building in Beijing, as designed by the Pei Partnership. Oles helped AMD select the most advantageous station viewpoint from which to generate the simple space wireframe (Figure 1). By hand, eye, and experience, Oles then did a preliminary value study (Figure 2), giving a lighting hierarchy to the major planes. Working back and forth a few times, AMD then produced a digital “pre-rendering” output of the space (Figure 3). Note that this “pre-rendering” might include scanned sky backgrounds and other entourage texture as taken from Oles’ hand-applied layerings from pre-

OLES ENJOYS SEEING THE SHOCKED FACES OF HIS COLLEAGUES WHEN HE ADMITS HIS RENDERINGS ARE TECH-TOUCH HYBRIDS.

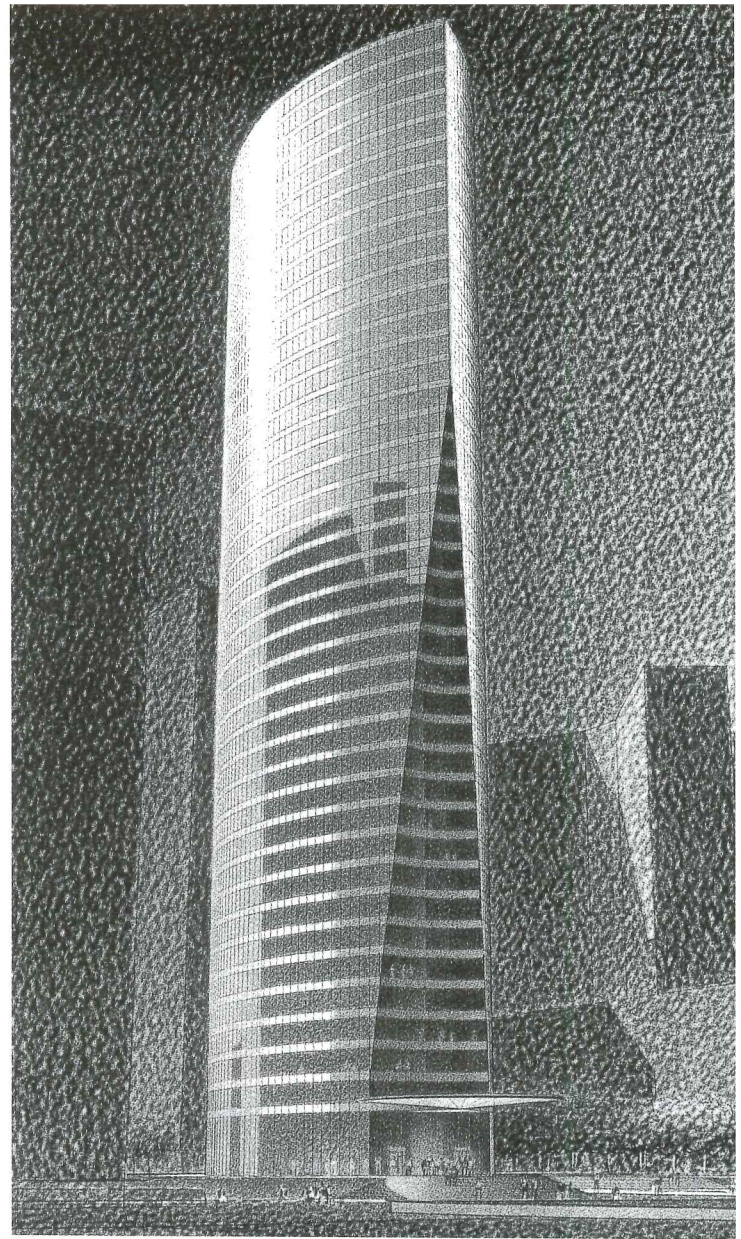
vious exchanges. In this case, Oles then took the last “pre-rendering” from AMD and applied the last layers of “value shading,” highlights, as well as lighting, landscaping, and people, to achieve the impressive final result (Figure 4).

Another example of collaboration can be seen in the rendering for the Cybercampus in Shenzhen, China, as designed by the Pei Partnership. Again Oles’ value study over the AMD generated wireframe (Figure 5) presages their ping-pong process to the final rendering. This hybrid image employs a digital Iris-print on handmade watercolor paper to which selective layers of hand-drawn, wax-based colored pencil are then added to achieve the final result (Figure 6).

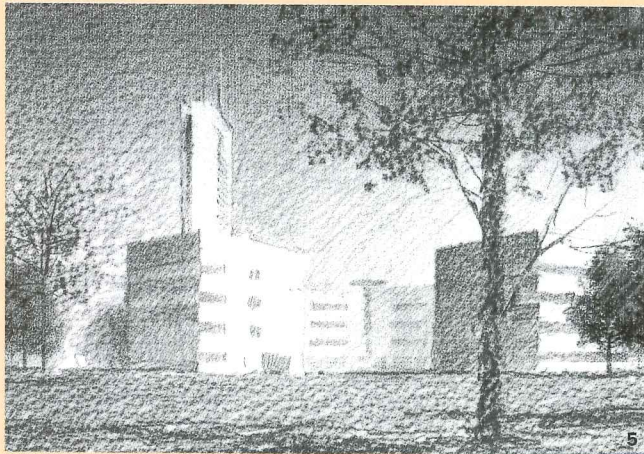
Oles says that he enjoys seeing the stunned disbelief on the faces of some of his very accomplished perspectivist colleagues when he admits that a rendering such as his Brooklyn Federal Court by Cesar Pelli and Associates is a collaborative hybrid work produced with the digital imaging firm AMD.

In this collaboration, the very efficiency that leads to a superior graphic effect also results in a fee structure that is as much as 20 percent below what Oles would charge for doing the entire work.

These two allies are firmly convinced that the worlds of Touch



Paul Stevenson Oles, FAIA, won the Perspectivist’s highest award, the Hugh Ferriss Memorial Prize in 1996, for this wax-pencil rendering of a Paris Office tower designed by Harry N. Cobb, FAIA.



Another example of the hybrid collaboration between Touch and Tech is seen in this rendition of the Cybercampus in Shenzhen, China, by the Pei Partnership, 1999.



and Tech will continue to come closer together. Already we see computer software programs that emulate impressionistic watercolor style or even an individual's unique artistic approach. "It is an evolving medium whose presence as a tool has been here for only a minuscule percentage of the time that the pencil has," says Kletzien. "Technical innovation will continue to remove many of the current barriers between the user and the product."

"I believe that Touch and Tech will increasingly rely on and borrow each other's methods and sensitivities," says Oles. "In fact," he asks, "are the two worlds so different? There are arguably more affinities than differences between the two. What is Tech or Touch? Where does one end and the other begin? It depends to some extent on when you ask."

"Today's Tech is tomorrow's Touch: the cherished T square gave way bloodlessly to the parallel rule, as did the slide rule to the calculator. The computer represents not just a drafting shortcut but a powerful and potentially revolutionary tool in the hands of designers. Therefore, it may seem particularly daunting to many who are comfortable in familiar, if less efficient, ways of working."

The inevitable result of this evolving collaboration between the worlds of Touch and Tech is exemplified by another joint image for the Christopher Newport University in Newport News, Va., as designed by the collaboration of Pei Cobb Freed/Charles Young/Hanbury Evans Newill Vlattas Architects.

In this case, Oles did not provide any hand-drawn overlays at all, but instead functioned as an "art director" to AMD for the final output—choreographing light values, sky effects, and building highlights through preliminary but detailed hand-drawn value and color

INTO THIS "US-VERSUS-THEM" CONTEXT COMES EVIDENCE OF A REFRESHING ALLIANCE BETWEEN TOUCH AND TECH.

studies. A consensus on fine tuning was reached by Oles and AMD as the work progressed to completion. The final image is fully digital, yet it achieves a certain transcendent quality that escapes most digital imagers working alone.

As Oles and AMD suggest, "Tech" may be only another synonym for the more innocuous word "tool"; Touch may have its ultimate residency not in the hand but in the human mind. And therein lies the key to uniting the two worlds. As Oles succinctly states, "Even the most powerful tool must be actuated and manipulated by human intention—at least for the foreseeable future." ■

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With this beautiful rendering of the Christopher Newport University in Newport News, Va., the Touch-Tech partnership evolves yet another step, with Oles functioning as an art director for the fully digital result (top). The first and only Hugh Ferriss Prize awarded to a fully digital rendering went to Advanced Media Design in 1997 for this powerful rendering of Friedrich St. Florian's entry for the World War II Memorial competition for Washington Mall (bottom).



Many traditional perspectivists are surprised to learn that this rendering by Oles and AMD (Brooklyn Federal Court by Cesar Pelli & Associates, 1999) is a hybrid Touch-Tech effort.



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CIRCLE 47 ON INQUIRY CARD

Digital Architect

New tools connect buildings and sites

By Jerry Laiserin, FAIA

Every serious student of the history of architecture and urban design knows about the Nolli map, considered one of the masterpieces of urban cartography. Prepared under the supervision of Giovanni Battista Nolli in 1748, the map provided a detailed view of Rome on one sheet, combining geographic features, landscape elements, streets, buildings, public and private outdoor spaces, and even major interior public spaces such as St. Peter's and the Pantheon. The integration of geography and architecture, public and private, and urban and building scales made the Nolli map a unique descriptive and analytic tool. It remains valuable today for the insight it affords into 18th-century Rome, its architectural and urban forms, and their relationship to the landscape in which they were built.

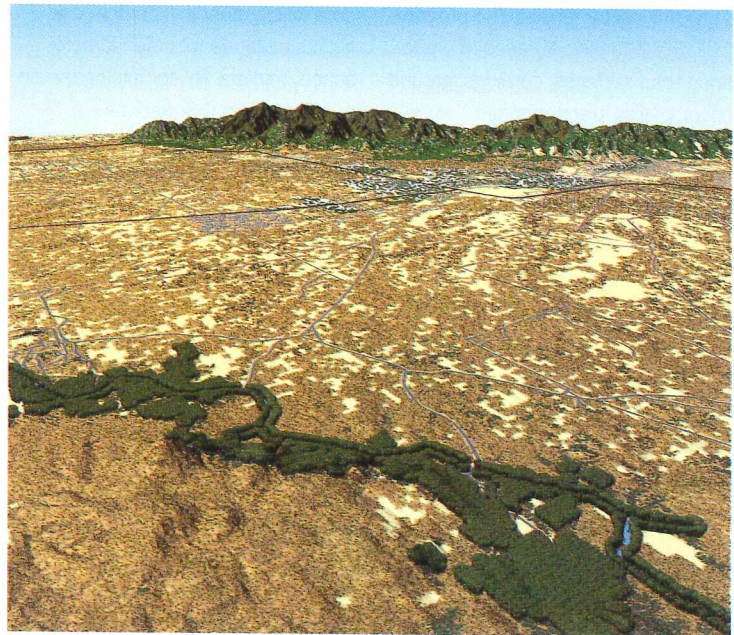
It may come as a surprise, then, to learn that the spatial integration achieved by Nolli and his team of surveyors with purely manual means 250 years ago cannot easily be duplicated by current computer technology. For a variety of technical reasons, computer software that works at the scale of individual building does not handle urban and regional information very well, while computer programs that handle maps and spatially organized data can have difficulty even defining a building's footprint. However, progress in both camps over the last few years points to new, cross-discipline software hybrids that will enable architects, landscape archi-

tects, and urban and regional planners to share information and collaborate more effectively on a wide range of project types and design scales.

Plans versus maps

CAD works well for describing the geometry of individual buildings and their immediate surroundings as vectors—mathematical descriptions of lines with specific starting points and angles—at full size (a scale of 1:1) and with several decimal places of precision. Geographical information systems (GIS), on the other hand, typically represent spatial data in thematic layers, such as political subdivisions, roads, and vegetation, with appropriate descriptive and quantitative attributes organized into a relational database [“Digital Architect,” JANUARY 2000, page 149], all related to maps. Maps, when combined with the aerial photographs, satellite imagery, and global positioning system (GPS) data that supplement them, are stored by computers as raster images (“raster” refers to the array of dots visible on a TV screen when viewed up close).

Throughout most of their respective histories, CAD and GIS have not worked well together. Until recently, most CAD software lacked the database capability to link to GIS spatial data, and many CAD programs still have difficulty handling raster images, even as backgrounds. GIS programs, for their part, can be manipulated into accepting building footprints as polygons assigned to a “buildings” layer in the spatial database, but typically they cannot handle the vector-based 3-D geome-



Large-scale regional simulations combine extensive GIS data with development models to predict alternative scenarios of ecological and visual impact.

try of a building or digital terrain.

While all designers of buildings, sites, and urban/regional developments need software that crosses over between CAD and GIS, landscape architects may experience that need most acutely, according to Patrick M. Caughey, ASLA, president of Wimmer Yamada and Caughey, a landscape and environmental planning firm in San Diego. Caughey, who also serves as a vice president of the American Society of Landscape Architects (ASLA) in Washington, D.C., says, “Landscape architects typically work in teams with architects, civil engineers, or urban designers, so 90 percent of ASLA’s 13,500 members have moved or are moving to a mix of CAD, GIS, GPS, Internet-based communication, and project collaboration.” In his own firm, Caughey downloads municipal GIS data on environmentally sensitive areas of a development site, combines it with

survey maps of existing conditions, and incorporates GPS locations of plant materials to be preserved on the site.

House and garden

Most architects have simpler site plans; they set the building on its site and design basic paving and grading. Several software tools have recently come on the market for this: TopoCAD, Autodesk Land Development Desktop, EaglePoint’s LandCADD, VectorWorks LAND-MARK, and others. For many architects with such needs, these products pose unfortunate trade-offs: One may be geared toward civil engineers; another toward larger-scale subdivision work; and yet others may be seen as too costly, too hard to use, or incompatible with the architect’s CAD program. Among the easiest and most economical solutions is EasySite, an

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Digital Architect

AutoCAD-compatible add-on (see "Digital Product Reviews," page 179).

With EasySite, an architect simply imports survey and topographic maps in their regular raster format, and the software painlessly builds an accurate 3-D terrain model in AutoCAD vector format. The program includes extensive libraries of predefined road surfaces, curbs, ground cover, plants, trees, signage—even cars, street furniture, and road markings. An AutoCAD building model (or one imported from another CAD program via a standard file conversion) can be placed on-site by drawing a pad in the shape of the ground-floor



EasySite is a new tool that combines buildings in CAD with site information.

plan at the desired spot on the site plan and setting the pad to the desired elevation. The same procedure works for multiple buildings on a large site.

Sim city

From campus or neighborhood scale, up to full-blown urban design, the hottest software action is in urban and environmental simulation. "Urban sim" combines CAD and GIS but also adds fully rendered visualizations and animations, often offering users the possibility of navigating their own virtual tours through a simulated environment. Once the exclusive province of university-affiliated design labs, such as William Jepson's Urban Simulation Laboratory at UCLA or Michael Kwartler's Environmental Simulation Center in New York, "urban sim" is now within reach of many designers, via newly available

commercial software. Among these tools are NavisWorks ["Digital Product Reviews," JUNE 2000, page 215], MultiGen-Paradigm Creator, and Evans & Sutherland's (E&S) RapidSite. The last two products emerged from their respective vendors' backgrounds in combat and flight simulators for defense/aerospace markets. By combining terrain modeling from GIS data, panoramic photographic backgrounds, and 3-D building models with digitally mapped ("pasted-on") photo-textures, these programs produce navigable views of complex environments. With a joystick or mouse, users can "walk" around, "drive" through, or "fly" over a proposed scheme, studying design impacts in ways never before possible.

For example, Architectural Design West, a 111-year-old firm with headquarters in Logan, Utah, recently designed new dormitories for 2,400 students, plus community facilities, integrated among the historic buildings of Fort Douglas on the University

of Utah's main campus. To keep the new construction from visually overpowering the landmarked Carpenter Gothic officers' quarters on the base, the project required careful study of sightlines, building heights, and locations. The project was on a fast track as well, because the new dorms will house athletes for the 2002 Olympic Games in Salt Lake City. To avoid the prohibitive cost and lengthy delays that would have resulted from conventional CAD modeling of such a large and complex project, the architects turned to E&S' RapidSite. According to principal Anthony Wegener, RapidSite makes it possible to combine CAD models of new buildings with photo-mapped mass models of existing buildings on digital terrain derived from topographic maps and aerial photographs. The resulting simulation, which permitted self-guided walk-throughs, gave both



Here E&S RapidSite merges digital photo-textures, CAD models, GIS data, and aerial photography to create realistic scenes for users.

the design team and the client confidence that the proposed scheme would work.

Alternative futures

At a regional scale, environmental simulation can be applied not just to the visual impact of single schemes but to the ecological impact of multiple development scenarios. For example, a cross-discipline, multi-organization team that includes the Harvard University Graduate School of Design (GSD), the University of Arizona, the Desert Research

binning data from an ArcInfo GIS with a development-allocation model; future land-use patterns move to a groundwater modeling system at the University of Arizona, then on to biological models at DRI and back to GSD for visualization. Projected housing and other development objects are modeled in a Hollywood-strength visualization tool called Maya and placed on the GIS terrain via World Construction Set.

No design firm or private developer could marshal the resources for this level of analysis, with multiple

THROUGHOUT MOST OF THEIR RESPECTIVE HISTORIES, CAD AND GIS HAVE NOT WORKED WELL TOGETHER.

Institute (DRI), and U.S. Army CERL has been exploring the future of the San Pedro River Valley, which comprises 100 square miles straddling the states of Arizona in the U.S. and Sonora in Mexico. With an eye on sprawl radiating from Tucson toward one of the last free-flowing riparian desert rivers in North America, the team has been generating computer simulations looking 20 years out, based on scenarios that include: a free-market based model of real-estate development; a model that extrapolates from county master plans; and a conservation-oriented model. The simulations start by com-

simulations that assess everything from housing options to hydrological impacts, biodiversity indicators, and visual impact on the landscape. Yet, just as CAD and GIS tools themselves originally emerged from university-research environments into commercial availability, the capabilities of this newest and highest level of environmental simulation will someday filter down to the realm of everyday digital practice. ■

WWW For a list of sources involved in connecting buildings and sites, go to **Digital Architect** at www.architecturalrecord.com

Digital Product Reviews

Tools in the field, at the desk, on the Net

By Jerry Laiserin, FAIA

Plan the work, work the plan

QuickGantt-Ballantine, Inc.

Figuring out and keeping track of which design or construction project tasks happen in which order is a far cry from the design skills that brought most practitioners into the architectural profession. Fortunately, a wide range of affordable computer software is available to handle every imaginable project-scheduling chore and work assignment. Unfortunately, as is often the case with computer solutions to business problems, most project-management software offers more functions, options, and formats than the typical architect needs or wants. Average architects in average firms usually need nothing more than the ability to do simple timeline schedules called GANTT charts.

QuickGantt delivers exactly what the name implies: quick GANTT charts. The core of the program is a single spreadsheet-like screen for entering the names of activities in rows and the duration of activities in columns. Drag-and-drop editing makes it possible to link the beginning of one activity to the end of another and to reshuffle the order. QuickGantt includes a wide selection of fonts (for labels and notes), line styles, and colors, along with standard project-management symbols for events such as milestones.

The resulting charts can be automatically scaled to different presentation sizes, printed, faxed, E-mailed, or exported to other documents. This last capability is especially important for incor-

Contributing editor Jerry Laiserin, FAIA, provides strategic consulting services to architects and their technology providers.

porating a planned work schedule into a business development proposal, one of the most common uses of GANTT charts by architects. (Another common use is to communicate the project timeline to clients and consultants.)

QuickGantt is capable of more than just stylish graphics. For example, it can consolidate multiple projects into one master schedule and can compare two versions of one project, such as budgeted time versus actual hours. However, architects seeking the simplest, easiest, and least expensive way to produce GANTT charts need look no further. Highly recommended.

System requirements: Pentium CPU, running Windows 95/98/2000/NT 4.0; 32MB RAM; CD-ROM; Ballantine, Inc. P.O.B. 805, Carlisle, MA 01741; 800/536-6677; www.tools-for-business.com

Physical graffiti

Mimio-Virtual Ink Corporation

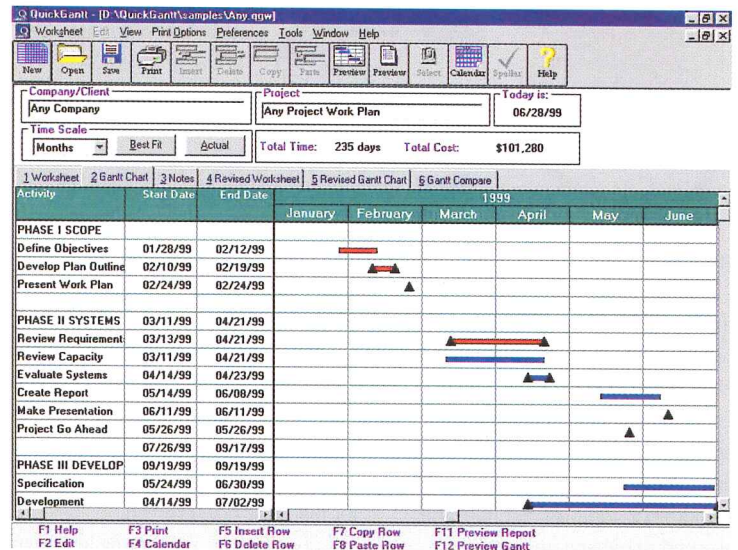
Since the prehistoric cave-painting hunters at Lascaux, humans have planned their next moves by writing on walls. Even now, communication at business meetings often revolves around a whiteboard or flip chart, on which meeting participants can make notes and sketches, share ideas, get feedback, revise concepts, build consensus, and move the job forward. While there is much value in this graffiti, it is too often transient—easily erased, overwritten, or discarded. Recent technological advances, such as digital whiteboards that electronically capture and record marker strokes, may solve part of the problem, but only for a few fixed locations (boardrooms

and the like) where their relatively high cost can be justified.

What if the ultrasonic and infrared sensing component of a digital whiteboard could be detached and made light enough to be carried around and secured to any whiteboard or flip chart? And what if this portable, graffiti-grabbing hardware could be linked to software that not only captured

puter technology that takes what people already know how to do easily and naturally, and makes it smarter and more useful without getting in the way. Significantly beyond cool.

System requirements: Windows or Macintosh PC; Virtual Ink Corporation, 56 Roland Street, Boston, MA 02120; 888/284-4092; www.mimio.com



QuickGantt

scribbings but allowed them to be edited, printed, published on the Web, or dragged and dropped into any other Windows or Macintosh software program? The result would be very much like Mimio, a suction-cup-equipped device that looks like a castoff from a high-tech glazier's toolbox.

Stick the battery-operated Mimio on any whiteboard or flip chart, connect the supplied cable to any PC or Mac, and start recording or Web-publishing every note and sketch, whether for future reference or concurrent viewing across the hall or around the world. At last, a com-

Working the land

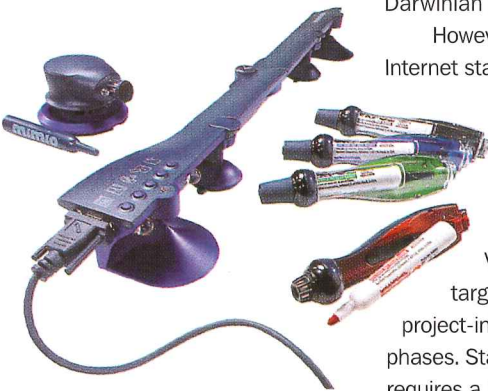
EasySite2.0-Cad Easy Corporation

For all the wonders of CAD in designing, documenting, and modeling buildings, it is surprisingly difficult to create 3-D site models in which to set those CAD buildings. The ways in which computers store and manipulate building descriptions tend to be mutually incompatible with the representation of maps, surveys, and topographic data (see "Digital Architect," page 175). Although software tools do exist to solve this problem, many of them are per-

Digital Product Reviews

ceived as too expensive or too difficult to use.

EasySite addresses these issues through an affordable combination of three easy functions: creating 3-D terrain models from survey/topographic data, inserting CAD building models at the correct location and elevation on the digital terrain, and rendering the result with a variety of road designs, sidewalks, parking, vegetation, and the like. The beauty of the resulting site



The Mimio

models is more than skin-deep because EasySite is based on a civil engineering package called EasySurf (the software developers took out all the cut and fill, drainage calculations, inverts, and similar engineering features but kept the mathematical accuracy of land forms and the software "awareness" of road geometry and the like). Whether for a single-family house or a commercial office park, any building project with a site can benefit from EasySite.

System requirements: AutoCAD (r14 or higher) and any AutoCAD-capable Windows PC; Cad Easy Corporation, 5187 SE Drake Road, Hillsboro, OR 97123; 800/627-3279; www.cadeasy.com

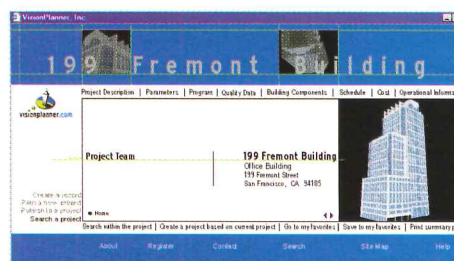
All's well that begins well
VisionPlanner-VisionPlanner.com

At the recent peak of dot-com mania, literally hundreds of

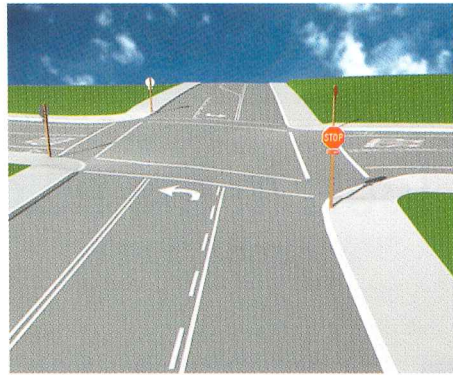
companies promised to revolutionize design and construction by consolidating all project drawings, memos, submittals, requests for information, and so forth in centrally accessible sites on the Internet. Many of these project Web site or extranet services evolved from shaky assumptions about the building business, or simple "me too" marketing hype, and the financial markets have rendered most of them extinct with Darwinian ruthlessness.

However, a few of these Internet start-ups offer features genuinely useful to architects and clients, and they are likely to survive and flourish. One of the brightest is VisionPlanner.com, which targets the otherwise ignored project-initiation and closeout phases. Starting a new project requires a lot of information about scope, budget, project team, and so on. One of the best sources of such information is the history of prior, similar projects. VisionPlanner closes this information loop by helping to build and index a database of information from closed-out projects and then recirculating it as guidance for planning new projects.

Large firms with many in-house projects can acquire and run the VisionPlanner software internally, but most architects will opt for the hosted-service version. Users may choose to keep their project histories private, or they can share anonymously (instead of planning the next hospital project based on the last two in my firm, I could use



Vision Planner's Digital Address



An image drawn in EasySite 2.0

data derived from 200 hospitals in VisionPlanner's Internet database). All the screens that users see represent clear, simple forms that can be filled out in a straightforward, logical manner. If enough people use the database and create a "critical mass" of project data, VisionPlanner will be among the few dot-coms to live up to its revolutionary reputation.

System requirements: Internet connection; Web browser; Vision Planner, 1875 Charleston Road, Mountain View, CA 94043; 650/316-3783; www.visionplanner.com

Searchin' every which way
DrawingSearcher-Docu-Point

As the information revolution progresses, more and more architects are turning to Internet and Web technologies to promote their work (via Internet Web sites), to coordinate their work internally (via intranets), and to share their work with clients, consultants, and contractors (via extranets). Much of what architects wish to publish or post to these various nets consists of CAD files, which are notoriously difficult to integrate with

Internet/Web technology. CAD files must be modified from their native format (such as DWG, for AutoCAD) in order to be visible on the Internet, and then posted—multiple steps that impede widespread use of CAD on the Web.

Furthermore, CAD files cannot easily be searched for specific content, making the right file difficult to find after a group has been posted. DrawingSearcher addresses all of these problems, at least for AutoCAD files. A batch utility called Whip-n-Post converts user-selected groups of regular AutoCAD DWG files to

Autodesk's Whip! Internet format (also called DWF) and automatically posts them to prespecified Web locations. Any standard Web browser suffices to view the published files via a DWF plug-in, such as the free version of Autodesk's Volo viewer that ships with AutoCAD. A search tool, based on AltaVista full-text Web search technology, automatically indexes the contents and can search on all text blocks, such as notes and labels, inside AutoCAD files, as well as in attached text attributes of AutoCAD drawing entities. For example, an architect could search for all instances of the term "pressure-treated lumber" in a drawing, a set, or an entire office library of AutoCAD drawings. DrawingSearcher can also be configured to search for and extract copies of title block information, so that project data can be linked to transmittals, accounting information, and so on.

Any AutoCAD user with a substantial number of AutoCAD DWG files to be Web-converted, posted/published, and subsequently searched via internal or external Internet means—whether on a one-time or recurring basis—should search out DrawingSearcher.

System requirements: AutoCAD, Internet server; Docu-Point, 573 Maude Court, Sunnyvale, CA 94086; 408/523-1815; www.docu-point.com.

WWW For more digital product reviews, go to **Digital Architect** at www.architecturalrecord.com



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CIRCLE 50 ON INQUIRY CARD

Product Reports 2000



The year 2000 has come and gone, and not much has changed in the product design industry, or has it? Keeping up with demand this year was most likely the top priority for most building product manufacturers, but that didn't stop them from turning out a number of well-designed and functional products. This year manufacturers also invested more time and money into improving their Web sites, turning them into service and sample-ordering centers instead of merely electronic advertisements, a trend that is sure to continue.

Popular materials for exterior and interior products included exotic woods (from managed forests, of course), glass, and stainless steel, with translucency remaining a major trend.

The strongest product introductions this year came from the bathroom and kitchen manufacturers, and these products received the best reader response as well. Gaggenau USA stainless-steel appliances; Ann Sacks glass tiles; bathroom offerings from Hoesch, Duravit, and Dornbracht; and sculptural sinks, such as the X-basin from Infinite

Fitting, all added high-design options to the bathroom and kitchen categories.

Building product manufacturers headed in new directions this year by boldly entering into new businesses, another trend that will most likely continue. For example, DuPont Corian has launched IntegriS, an integrated project-management offering that provides one-stop shopping for commercial products and

Cast Your Vote for the Product Reports 2000 Product of the Year

The "too close to call" results of this year's Presidential election should inspire you to vote for your favorite Product Reports 2000 product on our Web site during the month of December. The poll will offer a choice of one product from each category on the following pages from which readers can select the final "Product of the Year." The results will be updated each time a vote is cast, so you can check on the status of your pick, but visitors can only vote once (unlike voters in Palm Beach County, Fla.). If you forgot to vote in November, make up for it now. Be sure to check out the Product Reports 2000 poll the next time you visit us at www.architecturalrecord.com.

installation services for new construction and renovation projects. Other manufacturers are going retail: Turnstone, a Steelcase Company, has a new store on the first floor of Chicago's Merchandise Mart, and Herman Miller, which began offering "fast furniture" exclusively via the Internet for small and emerging companies, expects to open a retail showroom in New York for the product line. Steelcase has entered the real-estate business and, through a venture with Gale & Wentworth, has created Workstage, a new company that will design, construct, and maintain office buildings.

In September, a jury of product experts reviewed over 600 submissions to find well-designed products that propose an answer to a problem faced by architects and designers. Products that generated the best response from the jury offered something a little extra—whether it was energy efficiency, cost savings, or a custom look with all the benefits of a standard product, such as a pre-engineered modular balcony system.

Below are a few of the products that really stood out for me during the course of the year. I hope that in reviewing this list and the products selected by our jury on the following pages (there are a few duplicates), you will find something—whether it's ergonomic seating or emergency lighting—that helps you in your quest for the perfect product solution. Rita F. Catinella

Editor's Picks for 2000

1. Enameled-steel refrigerator,* Sonrisa [MARCH, page 196]
2. TableBed, Inova (see Furnishings)
3. Lucy Chair,* Vecta (see Furnishings)
4. Sky Glass & textured, solid-surface formulations, Avonite [MAY, page 368]
5. Color-changing paint, Surface Protection Industries [SEPT., page 200]
6. Imago hard-surface textile, Knoll Textiles [SEPT., page 200]
7. Microsphere ergonomic workstation, Microsphere [SEPT., page 203]
8. Carpet tile from a renewable, natural resource derived from corn,* Interface (see Finishes)
9. Pod Ens indoor/outdoor lamps,* Luceplan [MAY, page 355]
10. Anodized aluminum-panel system, Alutile [AUGUST, page 223]

*Shown on opposite page.

185 General Data	213 Specialties
189 Site Work	215 Equipment
191 Concrete & Masonry	217 Furnishings
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195 Thermal & Moisture	227 Mechanical
197 Doors & Windows	231 Electrical
203 Finishes	



The Product Reports 2000 Jury

David W Epstein, AIA (seated, right), is a design director in Gensler's Washington, D.C., office. Since joining the firm, he has completed the design of three speculative office buildings in northern Virginia and the conceptual design of One Light Street, a 44-story tower in Baltimore. While at SOM, Epstein designed the award-winning Gas Company Tower in Los Angeles, the Fubon Bank Tower in Taipei, and the Tipco Headquarters in Bangkok.

John Amatruda, RA (seated, left), is a senior architect and associate with Steven Winter Associates in Norwalk, Conn. He specializes in environmentally conscious design and the evaluation of "green" materials and systems. Amatruda has worked as an environmental consultant on numerous commercial and residential projects nationwide. He is the author of the "Environmentally Preferable Material Selection Guidelines" for the U.S. Navy and was a technical consultant for New York City's "High Performance Building Guidelines."

Craig Konyk, AIA (standing, right), formed Konyk, his Brooklyn-based firm, in 1989 as an interdisciplinary architecture design studio. He is a recipient of a New York Foundation for the Arts Fellowship in 1994 and 1998, and AIA New York Chapter Design Awards in 1994, 1995, and 1996. He was awarded a grant in 1997 from the New York State Council for the Arts for "An Architecture of Accommodation," a study of strategies to alleviate existing overcrowding in New York City public schools.

Terese Wilson (standing, left) is a principal at Lehman-Smith+McLeish, an interior architectural design and strategic planning firm with headquarters in Washington, D.C. Wilson is an award-winning interior and product designer with an extensive portfolio range of projects for Fortune 500 companies. As a product designer she has worked on the design of a line of Martin Bratrud lounge furniture and the Lehman-Smith+McLeish end table.

Katherine Sutton (seated, center) has worked in all facets of the A&D industry—as dealer salesperson, manufacturer's rep, design specifier, resource librarian, and product editor. She is chair of the New York chapter of the Resource Director's Association, an organization of materials specialists working at architectural and interior-design firms. Sutton currently consults as a materials specialist with the architectural firms of Beyer Blinder Belle and Page Ayres Cowley Architects in New York.

The following RECORD editors assisted in the judging: Rita F. Catinella, Charles Linn, AIA, and Contributing Editor Jerry Laiserin, FAIA, who is also a technology consultant and lecturer.

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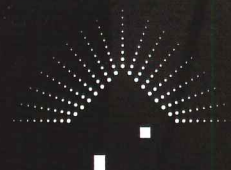
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VISIONPLANNER IS A BREAKTHROUGH OFFERING THAT BRINGS THE POWER OF THE INTERNET TO BEAR ON THE EARLIEST PREDESIGN PHASE OF PROJECTS. —Jerry Laiserin, FAIA

CAD in the palm of your hand

Autodesk introduces OnSite View, the first software for viewing design drawings on mobile devices. Using OnSite View, architects, engineers, and construction managers can view and mark up complex design drawings while on job sites. 800/964-6432. Autodesk, San Rafael, Calif.

CIRCLE 200

Web project management

ProjectTalk.com, a new online project-management community, gives AEC professionals the option of managing the lifecycle of projects over the Internet on a subscription basis.

916/641-3080. Meridian Project Systems, Sacramento. CIRCLE 201

Pre-development solution

VisionPlanner streamlines the pre-development stage of projects and up-front analysis, leveraging technology to organize projects, make information easily accessible, and source-match needs. 650/316-3712. VisionPlanner.com, Mountain View, Calif. CIRCLE 202

Seeing it through

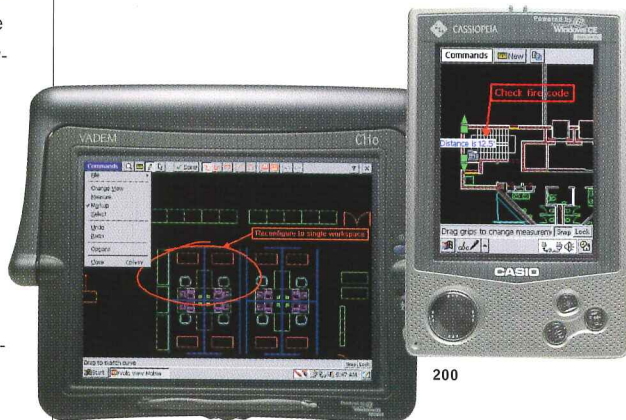
Revit 2.0, the only integrated CAD system that supports the design and documentation process from parametric massing studies through parametric detailing, presents a new way of using, integrating, and owning software. 781/839-5300. Revit, Waltham, Mass.

CIRCLE 203

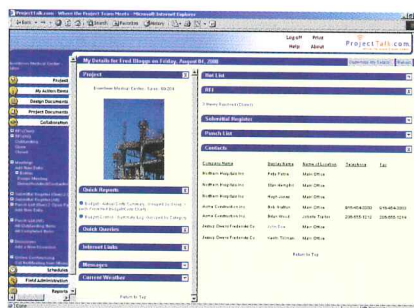
Versatile printers

CADJet 3-D offers technical designers the flexibility of printing crisp, 2-D line drawings or complex, 3-D renderings, as well as mapping images with brilliant color. It can print a two-by-three-foot full-color plot in 100 seconds. The NovaJet 850 can switch from indoor graphics to archival photos to outdoors signs at the touch of a button. 858/452-0882. ENCAD, San Diego.

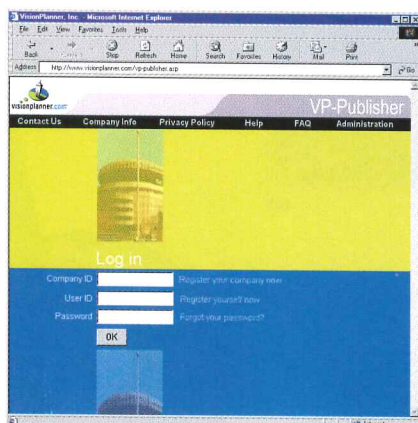
CIRCLE 204



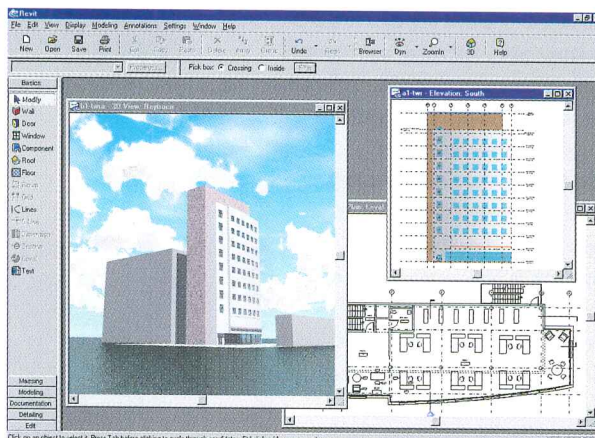
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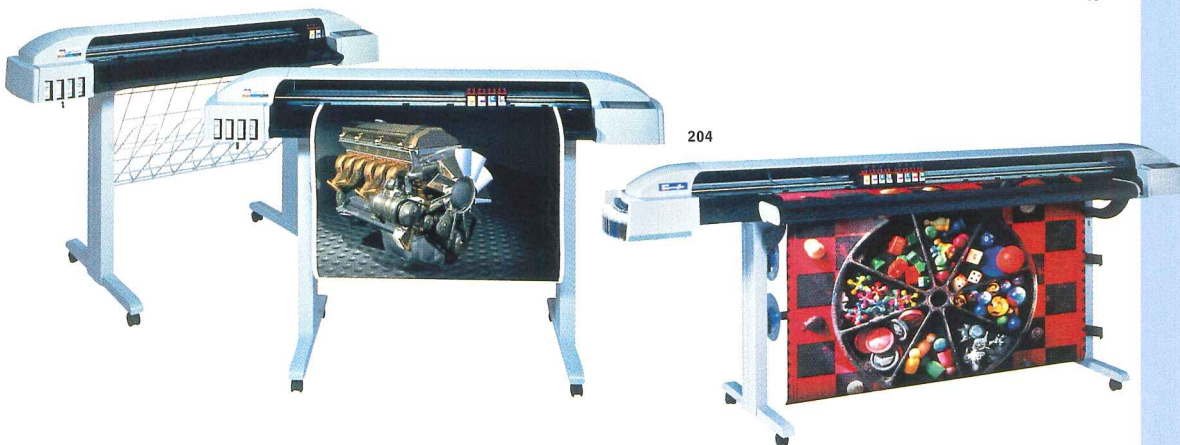
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204

So simple

Vectorworks, the former MiniCad, increases the product's architectural capabilities in an easy-to-use setup. Given its high functionality, Vectorworks is relatively inexpensive. 410/290-5114.

Diehl Graphsoft, Columbia, Md. **CIRCLE 205**

Space conservation

IBM's sleek black NetVista consumes 75 percent less disk space than the typical PC. Features include local-area-network connections, universal serial bus ports, generous hard-disk drives, and random access memory. 800/426-7255. IBM, White Plains, N.Y. **CIRCLE 206**

Share and share alike

EZ, from Sigma Design International, allows users to share files on the Internet without a Web browser or a centralized Web server. Users may also view and mark up any file without having the software that created it. 888/990-0900. Sigma Design International, Alexandria, La. **CIRCLE 207**

Changing dimensions

Bricsnet Architecturals 2.0 enables AutoCAD users to migrate from a traditional 2-D-oriented workflow to a 3-D building design approach and maintain compatibility with their data and applications. 781/756-6300. Bricsnet, Wakefield, Mass. **CIRCLE 208**

Computer-based catalog

Vetter Windows and Patio Doors' new Architectural Resource CD, available at no charge within the industry, introduces the latest product drawings, specifications, and performance information for Vetter products. 800/VETTER-2. Vetter, Mosinee, Wis. **CIRCLE 209**

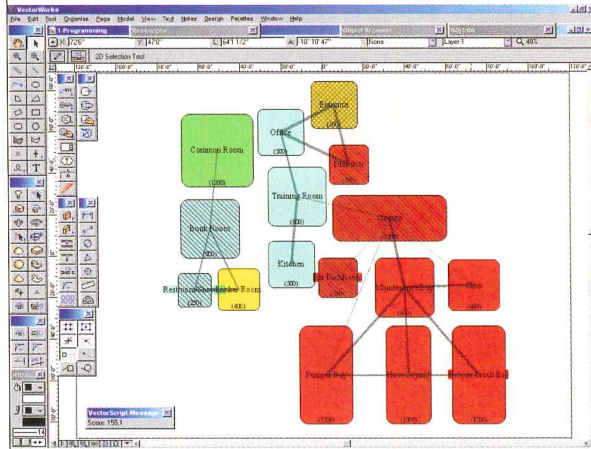
Quite a display

ViewSonic VP181 features a liquid crystal display to reduce distortion, connections for the latest multimedia technologies, and an 18.1-inch viewable display. 800/888-8583.

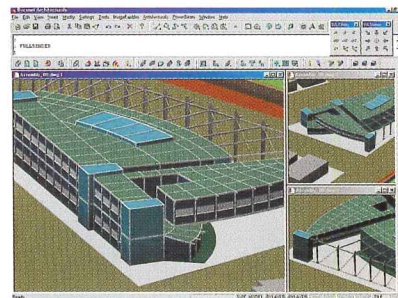
ViewSonic, Walnut, Calif. **CIRCLE 210**

Hotlinking for ArchiCAD

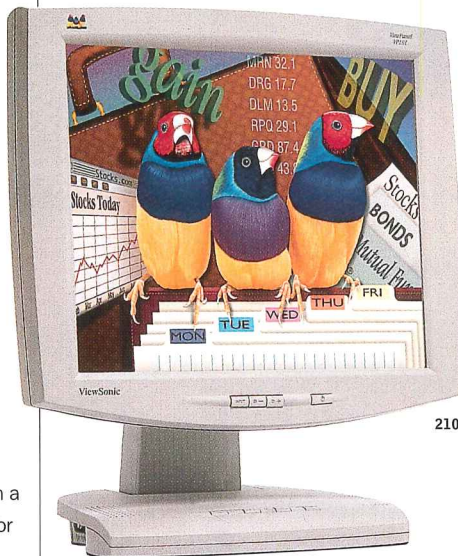
ArchiCAD adds to its 3-D CAD program a new drawing-management capability for reference files, called hotlinking. Users can switch easily from 2-D to 3-D work modes. 415/703-9777. Graphisoft, San Francisco. **CIRCLE 211**



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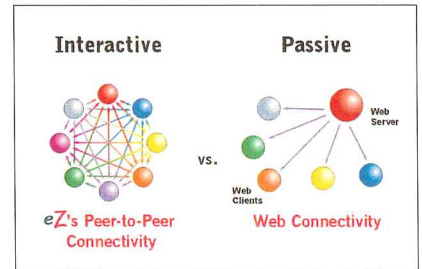
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Back to the drawing board

The latest DataCAD Plus software is offered in the DataCAD Plus Drawing Board Edition, packaged with the power of a drawing pad, the WacomPL400 LCD Pen Tablet. 800/667-4004. DataCAD LLC, Avon, Conn.

CIRCLE 212

Virtual carpet

Lees introduces the Accelerated Design System (ADS), a simulation program that produces a digital image of custom carpet products within 24 to 48 hours, rather than the timely process of making an actual carpet sample after each design adjustment. 800/523-5647. Lees, Greensboro, N.C. CIRCLE 213

Codes un-encrypted

BOCA's Electronic Library adds the 2000 International Fire, Mechanical, Energy Conservation, and Property Maintenance Codes to create a 22-code CD, which includes convenient features such as printing code text and searching. 800/214-4321, ext. 371. BOCA International, Inc., Country Club Hills, Ill. CIRCLE 214

Interactive industry

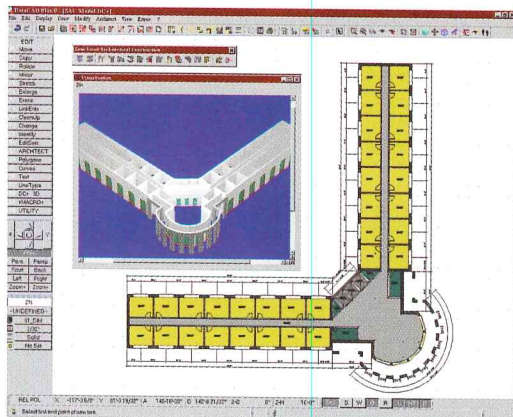
Architectural Doors and Hardware Fundamentals Self-Study Course, a three-disk CD-ROM program, uses a multimedia approach to introduce the product and application side of the door and hardware industry. 703/222-2010. Door and Hardware Institute, Chantilly, Va. CIRCLE 215

Structural selection

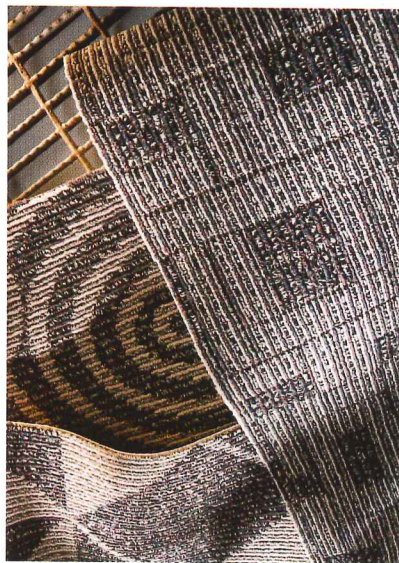
Using an intuitive graphic navigation interface, the ConSept Pro CD-ROM Version 2.0 is designed to help construction professionals evaluate and select a structural system. The program includes features such as product metrication and design tables based on U.S. and Canadian codes. 847/517-1200. Concrete Reinforcing Steel Institute, Schaumburg, Ill. CIRCLE 216

Telecommunications narrative

Through a narrated tour of actual installations, the *Introduction to Commercial Voice/Data Cabling Systems* video and accompanying guidebook provide an accessible resource for non-telecommunication professionals. 800/242-7405. BICSI, Tampa. CIRCLE 217



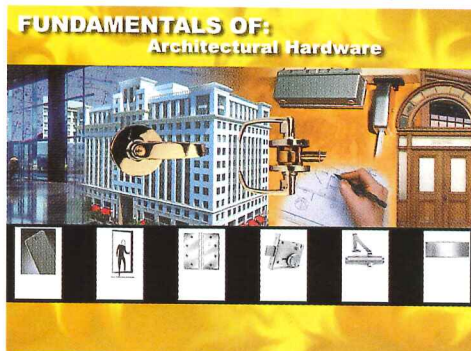
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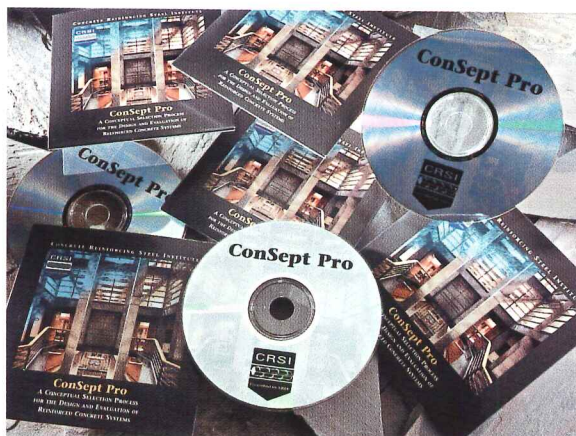
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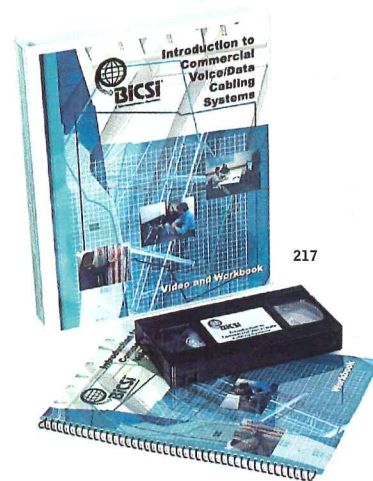
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I AM DRAWN TO SIMPLE, ELEGANT SOLUTIONS IN THE LANDSCAPE CATEGORY. FORMS AND SURFACES SEEMS TO REALLY CARE ABOUT ITS PRODUCTS. —David W. Epstein, AIA

Urban renewal

Designed by Hardy Holzman Pfeiffer Assoc. for the Cityscape Institute, the Urban Renaissance Receptacle combines street-smart durability and ergonomic functionality with a grillwork enclosure that can be customized to meet a city's specific aesthetic needs. 877/929-0011.

Siteform+, Carpinteria, Calif. **CIRCLE 218**

Plant network

DecorCable Innovations introduces the Jakob Inox Line Greensystem. Specifically designed for vertical plantscapes and other outdoor greening projects, these wire ropes and connectors are available in multiple styles. 800/444-6271. Jakob Inox Line, Chicago. **CIRCLE 219**

Garden refuge

The Arbor Bench, by Country Casual, features a contoured seat framed by panels of teak trellis. Unadorned or covered with foliage, this bench is suitable for residential or commercial applications.

800/284-8325. Country Casual, Gaithersburg, Md. **CIRCLE 220**

Coordinated receptacles

The Universal Receptacle, designed for indoor or outdoor use, offers a matrix of different size and style combinations. The receptacles are made of stainless steel and aluminum with powdercoat covering available. 877/929-0011. Siteform+, Carpinteria, Calif. **CIRCLE 221**

Modular bench

Originally conceived as stadium seating, architect Enric Miralles' design for the Vacante Bench has been translated into a standardized system of seating. Available in perforated steel with powdercoat finish or formed wood. 877/929-0011.

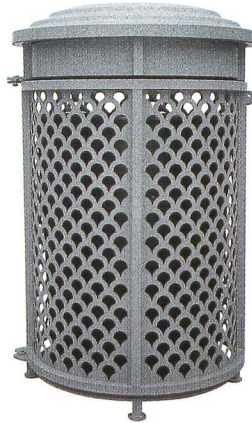
Siteform+, Carpinteria, Calif. **CIRCLE 222**

Border line

Permaloc's AsphaltEdge is an aluminum L-shaped asphalt enclosure that delineates a clean edge during asphalt installation. 800/356-9660. Permaloc Aluminum Edging, Holland, Mich. **CIRCLE 223**



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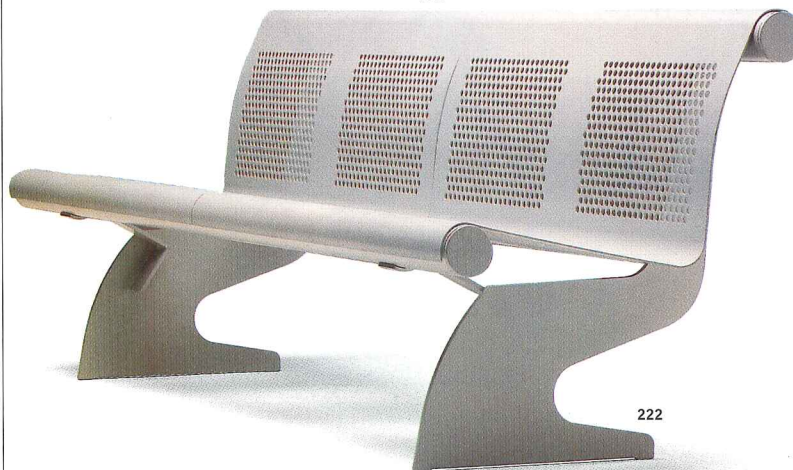
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Stone and masonry cleaner

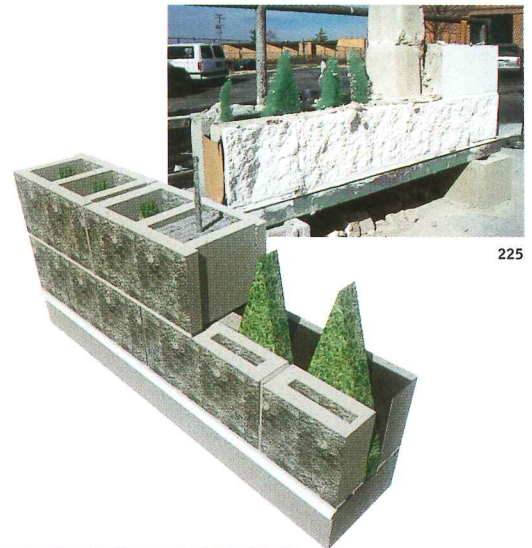
D/2 Architectural Microbial is a bio-degradable liquid that removes biological deposits from hard environmental surfaces. A contact time of only two minutes, followed by manual scrubbing, will loosen and remove most biological growth, which contributes significantly to the degradation of stone and masonry. 800/684-0901. Cathedral Stone Products Inc., Hanover, Md. **CIRCLE 224**



224

Block drainage system

Mortar Net Block's efficient management of moisture migration helps prevent efflorescence on interior and exterior concrete masonry. The product is made of 100 percent recycled polyester. 800/664-6638. Mortar Net USA, Ltd., Gary, Ind. **CIRCLE 225**



225

Precast modular system

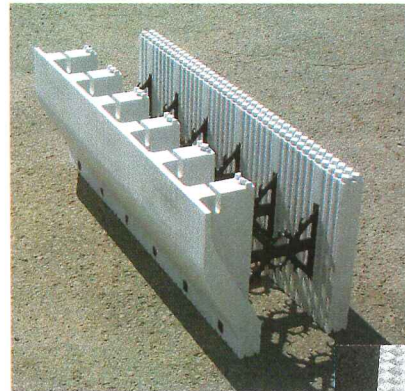
Oldcastle precast concrete modules can be used to quickly create classrooms, correction facilities, pump stations, toll booths, or other facilities. 215/257-8081. Oldcastle Precast Modular Group, Telford, Pa. **CIRCLE 226**



226

Not just for sidewalks anymore

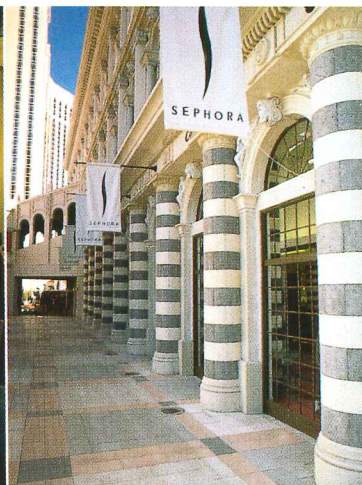
Buddy Rhodes Studio creates precast concrete for floors, walls, bar tops, counters, benches, sinks, tubs, showers, and columns. As in the Italian terrazzo tradition, the surface is ground with water to expose the natural aggregate. The three surface finishes are veined, steel trowel, and terrazzo. 877/706-5303. Buddy Rhodes Studio, San Francisco. **CIRCLE 227**



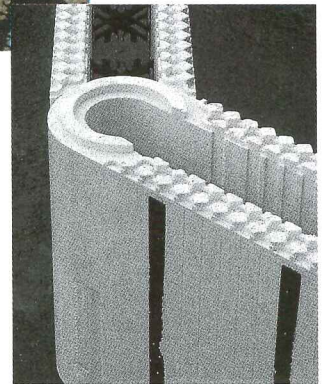
228

Adjustable corner form unit

The Arxx four-inch adjustable corner form unit (top) will eliminate the need to miter-cut non-90-degree corners on four-inch Arxx Wallsystems. The eight-inch extended brick ledge form unit (bottom) makes it easier for Arxx Wallsystems to be used in applications requiring a brick or stone veneer on an eight-inch structural concrete wall. 800/293-3210. Arxx Building Products, Cobourg, Ontario. **CIRCLE 228**



227



**OUR CERTIFICATION EXAM CAN MAKE EIGHT WEEKS
OF BOOT CAMP SEEM LIKE A SUMMER VACATION.**



Each year, every Metal Building Manufacturers Association (MBMA) member must pass a thorough engineering and manufacturing audit that combines a written submission and on-site inspections by an independent consulting engineer.

Here's the drill. AISC auditors annually scrutinize order entry, purchasing, fabrication, and design and detail documents randomly selected from a list of 200 projects over the past six months.

In addition, they give the white glove treatment to our manufacturers' inner workings, from receiving to welding quality to shipping.

MBMA members also invest millions of dollars in research to advance the performance of metal buildings in extreme conditions.

No other industry group matches our members' dedication to bringing architects quality, flexible and dependable metal building and roofing systems.

To find out more about specifying metal buildings systems or our CEU programs, call or visit our web site today.

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ABET LAMINATI CONTINUES TO DELIGHT ME WITH ITS INNOVATIVE DESIGNS. —*Katherine Sutton*

Wherefore art thou Romeo?

The Balcon-ease is a pre-engineered modular balcony system. Features include a variety of rail styles, sizes, and a sure-grip checker plate deck. Bolted connections eliminate field welding. 303/296-6070. The Urban Habitat, Denver. **CIRCLE 229**

Gray-colored copper

FreedomGray, the tin/zinc alloy-coated copper from Revere, offers the advantages of copper in an earth-tone gray color. It is lead-free, environmentally friendly, and designed to withstand years of corrosive weathering. 800/950-1776. Revere Copper Products, Rome, N.Y. **CIRCLE 230**

Stainless-steel railing

Guardrails and handrails in the inox pre-engineered railing system feature brushed-finish, high-quality steel for interior and exterior applications. 877/HEWI-INC. Hewi, Inc., Lancaster, Pa. **CIRCLE 231**

Thicker MDF panel

Made from 100 percent Southern pine fiber, two-inch Premier Plus MDF has the same characteristics as Willamette's thinner Premier Plus MDF. The smoother, more machinable board is available in four- and five-foot widths, and in lengths up to 18 feet. 803/802-8055. Willamette Industries Inc., Fort Mill, S.C. **CIRCLE 232**

Greater choice in joists

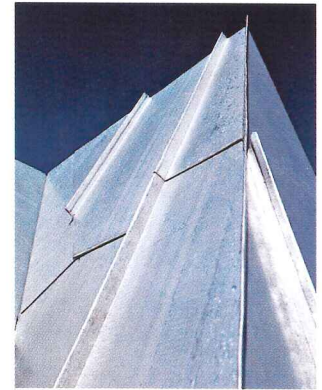
The new version of the TJI joist features flanges made from TimberStrand Laminated strand lumber. 800/338-0515. Trus Joist, A Weyerhaeuser Business, Boise, Idaho. **CIRCLE 233**

Glam laminates

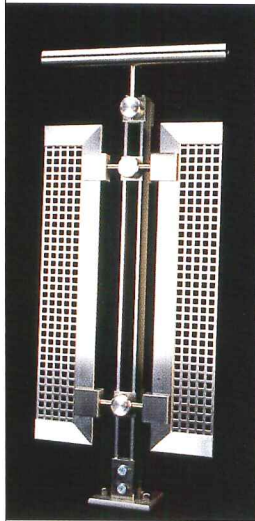
Iridescenti, Serigrafia 2000, and Cresp are three new laminates from Abet Laminati. Iridescenti laminates shimmer in 21 colors and two finishes (soft and bumpy); Serigrafia 2000's bright colors are made possible by special silk-screening techniques; and Cresp has a crinkled texture with a highlighted raised effect. 800/228-2238. Abet Laminati, Englewood, NJ. **CIRCLE 234**



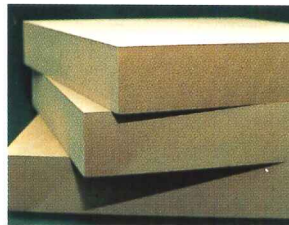
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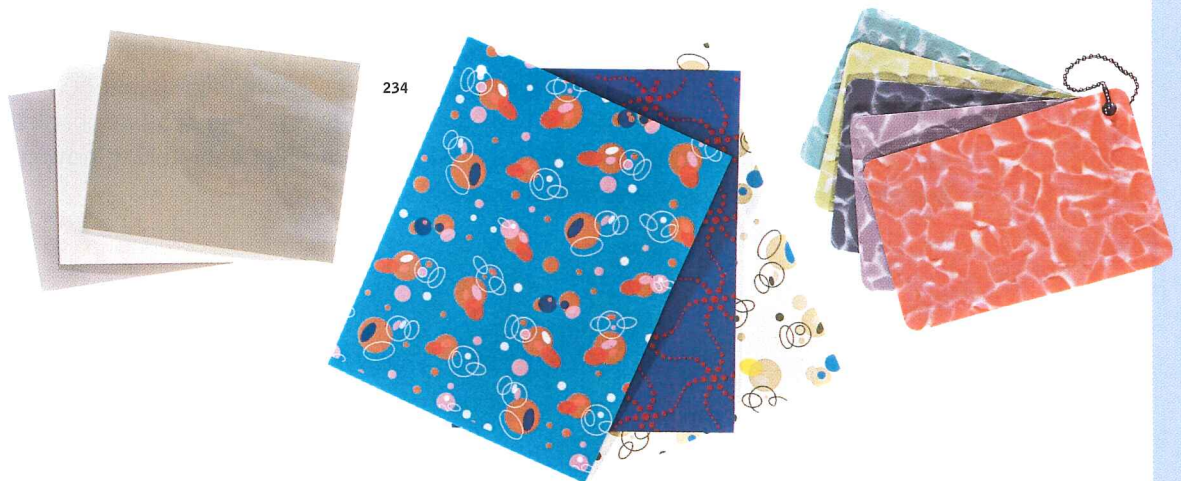
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232



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234

Pinehurst Resort & Country Club
Centennial Course No. 8
Owner: Club Corporation of America
Architect: James R. McVicker Jr. AIA

Roofing Contractor: McRae Roofing Inc
Color: Hemlock Green
Profile: Snap-Clad.



WELL-MANICURED GREENS*

* Not to mention the blues, reds and 30 other standard colors on steel. (18 on aluminum)

SNAP-CLAD™ Metal Roofing Panels

Pinehurst Resort & Country Club recently completed its new clubhouse for its Centennial Course No. 8. The clubhouse, designed by architect James R. McVicker, evokes the rich tradition of Pinehurst and its position at the top of a hill makes it visible from all corners of the course. The project features over 9,000 sq. ft. of Snap-Clad panels with a Hemlock Green PAC-CLAD finish. McRae Roofing Company of Asheboro, North Carolina installed the panels.

Petersen Snap-Clad Panels are corrective leveled as they are roll-formed, allowing us to provide panels of unmatched flatness. PAC-CLAD is a full Kynar 500® finish covered by a non-prorated 20 year warranty. For complete information, please call us at **1-800-PAC-CLAD** or visit our redesigned web site featuring new on line ordering @ <http://www.pac-clad.com>.



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THE GROOVED, DIAMOND-PATTERN SURFACE [OF PARKLEX 1000] IMPLIES THAT THE PANELS COULD BE USED AS INDUSTRIAL FLOORING, WHICH INTERESTS ME. —Craig Konyk, AIA

Zinc cladding

Rheinzink's modular zinc wall panels utilize an advanced dry-seal, pressure-equalized, rainscreen technology.

604/291-8171. Rheinzink Canada Ltd., Burnaby, British Columbia. **CIRCLE 235**

Diamond-patterned wood

Parklex 1000 exterior-grade wood-composite panels are now available with a grooved, diamond-pattern surface.

310/396-9991. Finland Color Plywood Corporation, Venice, Calif. **CIRCLE 236**

Fire-resistant membrane

UltraGard SRT 45 Fire Resistant (FR) and SRT 60 FR are heat-weldable, single-ply membrane products that are

mechanically attached or fully adhered. 800/654-3103. Johns Manville Roofing Systems Group, Denver. **CIRCLE 237**

HCFC-free polyiso

ACFoam is a line of environmentally friendly HCFC-free polyiso insulation products that retain high R-values and provide improved facer adhesion. 770/933-4479. Atlas Roofing Corp., Atlanta.

CIRCLE 238

Ridge venting

The V-600 line features a radiused peak that keeps the ridge well defined and prevents shingle cracking during cold-weather installations. 800/837-8368.

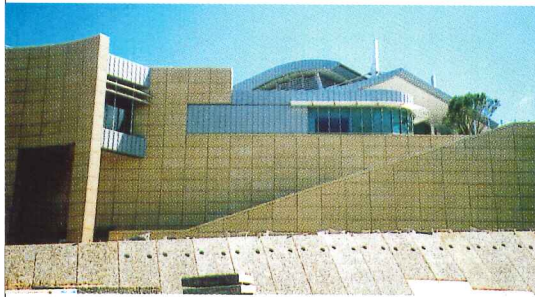
Cor-A-Vent Inc., Mishawaka, Ind. **CIRCLE 239**

Keep drier with fleece

Stevens EP Fleece membranes are available in black, white, and gray and come in both 80- and 95-mm thicknesses. The membrane combines a Stevens EP TPO membrane with a nonwoven polyester fleece. 800/621-ROOF. Stevens Roofing Systems, Holyoke, Mass. **CIRCLE 240**

Exterior trim

The TEC manufacturing process produces a wood-composite trim of uniform density that is easy to handle, cut, machine, and nail. 800/255-0785. Masonite Corporation, Chicago. **CIRCLE 241**



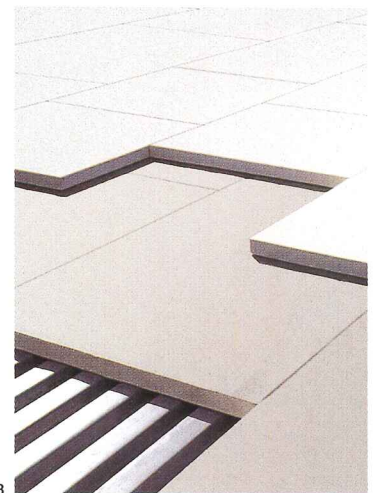
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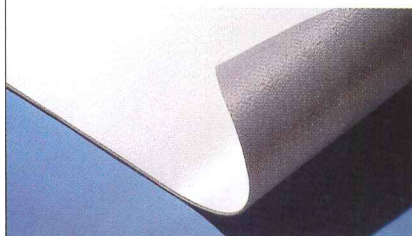
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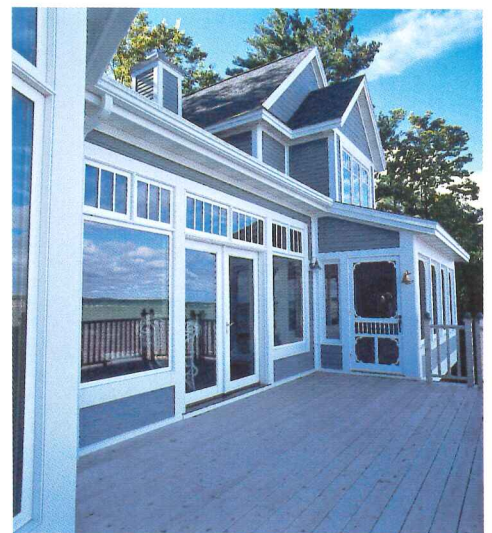
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CIRCLE 56 ON INQUIRY CARD

DOORS & WINDOWS



Metal, wood & plastic doors & frames • Corrosion-resistant doors • Metal, wood & vinyl windows • Door hardware • Exit devices • Glass • Glazing film

MOST INTERESTING WAS THE SUBMISSION OF FIBERGLASS WINDOWS—POTENTIALLY MORE DURABLE AND ENERGY-EFFICIENT THAN ALUMINUM AND VINYL. —*John Amatruda*

Contemporary lock device

The Inpact 94/9575 Mortise Lock Device is a single-door solution with the same backset, finishes, trim, and mechanical performance of the concealed rod Inpact exit device. 502/261-1176. Von Duprin, Indianapolis. **CIRCLE 242**



242

New contoured glass medium

Breez is a open-stock product line of compound, curved, laminated safety glass panels that are joined in a line, in circles, or along any curved path. 714/431-1190. CTEK, Santa Ana, Calif.

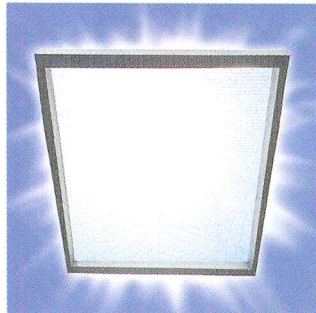
CIRCLE 243



243

High-performance glazing unit

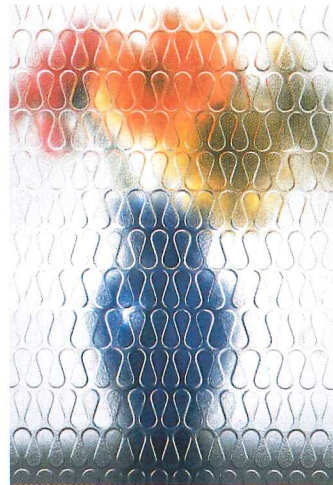
Solera introduces an insulated, translucent glazing unit that eliminates moisture build-up and condensation. 902/794-2899. Advanced Glazings Ltd., North Sydney, Nova Scotia. **CIRCLE 244**



244

Architect-designed glass

Designed by Arquitectonica's Laurinda Spear, FAIA, these stock glass patterns accommodate a wide range of design applications in textured, clear, and etched finishes. 773/278-4660. Skyline Design, Chicago. **CIRCLE 245**



245

Sleek European frames

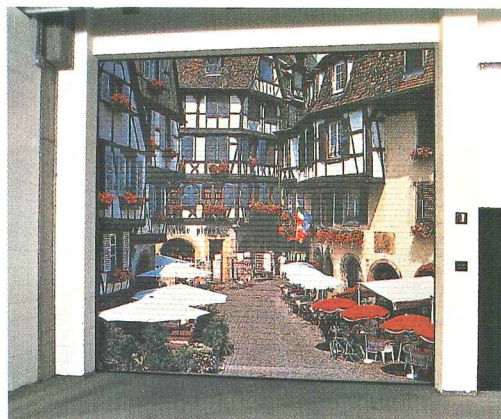
Popular in Europe for years, this fire-rated product recently passed testing for U.S. production. Allowing for extremely large expanses of glass, the doors and frames are well suited to commercial applications. 800/426-0279. Technical Glass Products, Kirkland, Wash. **CIRCLE 246**



246

Rolling doors with a view

The Graphics Door creates a new set of options for rolling doors and rolling-counter door curtains and hoods. 800/233-8366. Cornell Iron Works, Mountaintop, Pa. **CIRCLE 247**

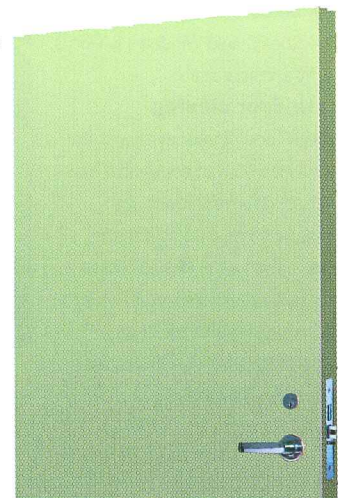


247

Door defeats corrosion

KhemPro's fiberglass-reinforced polymer doors and frames provide cost-effective protection against moisture penetration. 888/CECO-DOOR. Ceko Door Products, Brentwood, Tenn. **CIRCLE 248**

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DOORS & WINDOWS

Metal, wood & plastic doors & frames • Metal, wood & vinyl windows • Door hardware • Exit devices • Glass • Glazing film

Wood or metal, stile and rail

The Wood Stile and Rail Door and the Metal Stile and Rail Door collections offer an extensive palette of design elements, including stiles and rails, insets, and finishes. Inset materials can be used for walls, elevator entrances, interiors, columns, and other features. 877/626-7788. Surfaces+, Carpinteria, Calif.

CIRCLE 249

Old-fashioned pulley system

The new Weight and Pulley Double-Hung windows feature a brass pulley system complete with brass chains and alloyed weights. 800/477-8656. Kolbe & Kolbe Millwork Co., Wausau, Wis.

CIRCLE 250

Sliding security

The TopLock security lock can be used with any sliding glass door having a glass thickness of $\frac{3}{16}$, $\frac{1}{4}$, or $\frac{1}{2}$ inch. 800/423-3531. Hafele America, Archdale, N.C.

CIRCLE 251

Clear protection

Vista UVShield is an invisible residential window film that helps prevent sun glare, unbalanced heating, wasted energy, and dangerous UV rays. This dual reflective film offers high solar rejection yet provides visibility from inside to out at all times. The film is designed to provide high exterior and low interior reflectivity. 800/345-6088. CPFilms Inc., Martinsville, Va. CIRCLE 252

Welcome to the family

American Fir rounds out a family of softwood used in the Custom Wood Interiors Collection, which includes knotty pine and traditional pine. American Fir is ideal for classic and country settings, kitchens, and family areas of the home. 800/477-6808. Weather Shield Windows & Doors, Medford, Wis. CIRCLE 253

Accurate door closing

The new GSR coordinator system from Dorma provides correct sequential closing of pairs of doors equipped with overlapping astragals, panic devices, flush bolts, a cylindrical lock, or other door hardware assemblies that require one door to close before another. 800/523-8483. DORMA Architectural Hardware, Reamstown, Pa.

CIRCLE 254



249



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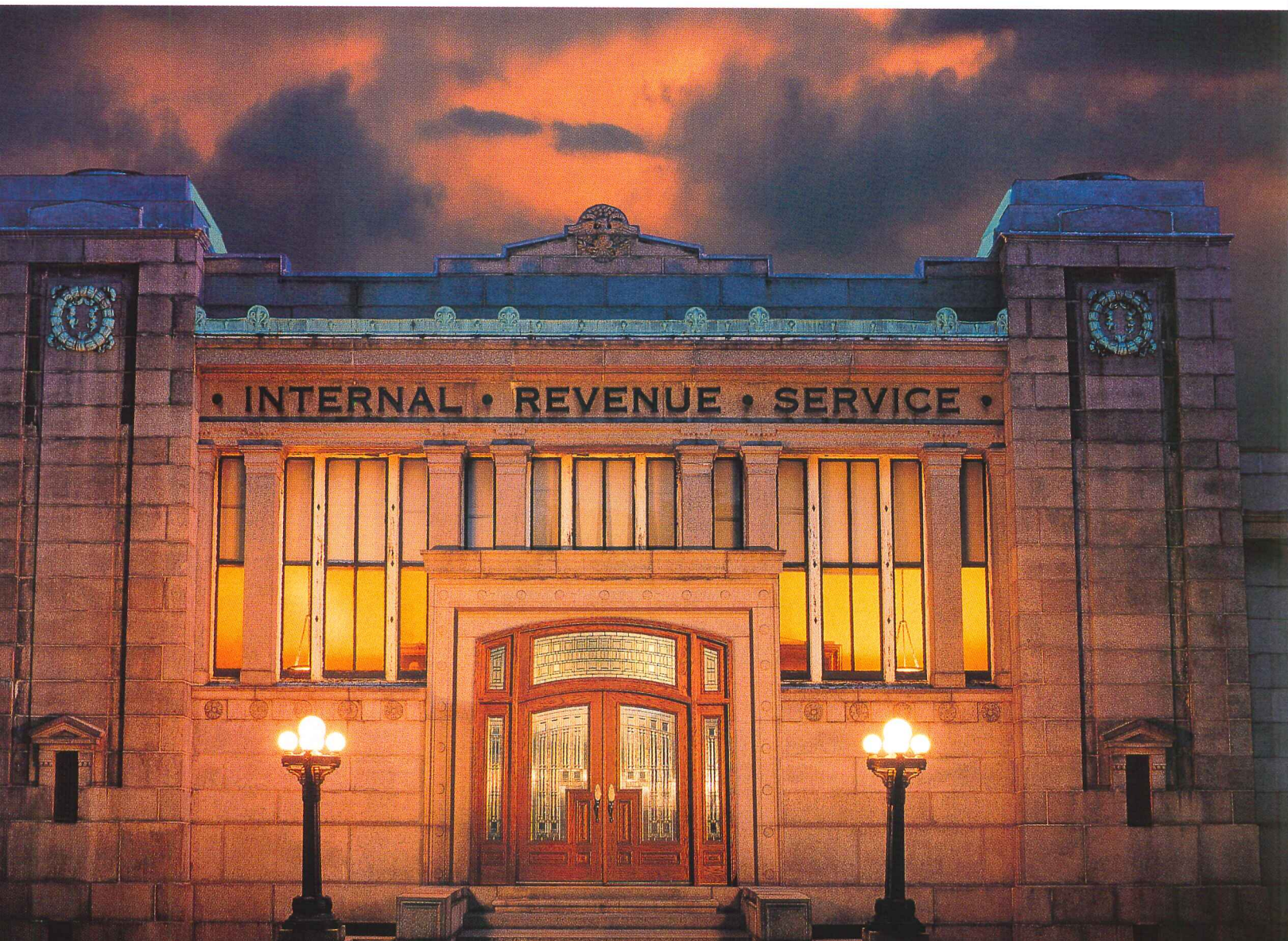
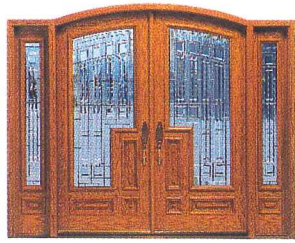


253



254

The right door can make any place more inviting.



Now, think what our custom doors could do for your home. A door with no boundaries, save those of your imagination. A door handcrafted in the Old World style from the most beautiful hard woods available: Genuine Mahogany, Cherry, Maple, Walnut and Northern Red Oak. International Wood Products can deliver this door. All the way from your mind straight to your dream home. 1-800-877-9482 ext. IWP2 www.iwpdoor.com



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CIRCLE 57 ON INQUIRY CARD

DOORS & WINDOWS

Metal, wood & plastic doors & frames • Metal, wood & vinyl windows • Door hardware • Exit devices • Glass • Glazing film

High-tech garage door opener

The DoorMaster garage door opener is sensitive to obstacles in its path, without the use of photoelectric sensors.

800/827-3667. Wayne-Dalton, Mt. Hope, Ohio. **CIRCLE 255**

Latest solar tempered glass

Sun-Guard Silver offers the performance and color uniformity characteristics of a sputter-coated glass product. It can be tempered, bent, or heat-strengthened after the coating has been applied.

248/340-2105. Guardian Industries, Auburn Hills, Mich.

CIRCLE 256

Fiberglass passes the test

Arcon introduces a series of fiberglass window and door products. Arcon's laboratory testing program helps ensure that all products meet or surpass strict Canadian and American industry standards. 514/645-4444. Arcon Canada, Montreal. **CIRCLE 257**

New casement window style

A new casement window from Pella has a low-profile integrated crank hardware featuring a foldaway handle. 888/847-3552. Pella Corporation, Pella, Iowa.

CIRCLE 258

Custom glass art products

Windows, doors, side lights, dividers, partitions, and screens are produced by firing leaded mouth-blown stained and painted glass in a hot kiln. 718/361-8154. Ellen Mandelbaum Glass Art, Long Island City, N.Y. **CIRCLE 259**

Vinyl window system

A complete line of durable vinyl acoustical windows, with STC ratings from 40 to 44, is now offered. 800/755-6274.

Graham Architectural Products, York, Pa.

CIRCLE 260

Panels with nature's designs

Richly embossed, custom-designed glass privacy walls suggest elements of earth, wind, and water, reflecting an eco-friendly sentiment. 800/777-2332. UltraGlas, Inc., Chatsworth, Calif. **CIRCLE 261**

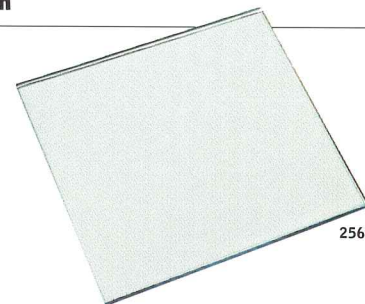
Integrated door system

The Rite Door system includes the door and frame, an integral exit device, hinges, a variety of door finishes, trim, and electrification options. 800/872-3267. Adams Rite Manufacturing, Pomona, Calif.

CIRCLE 262



255



256



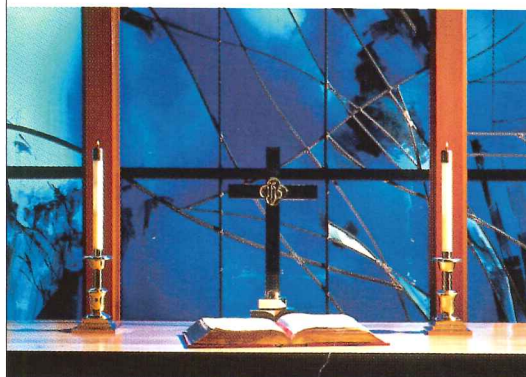
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 Clayton Avenue School
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 Bearsch, Compeau,
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be adjusted to the requirements of most projects. OKALUX® Light Diffusing and Insulating Glass panels have withstood the test of time and have been used in applications world-

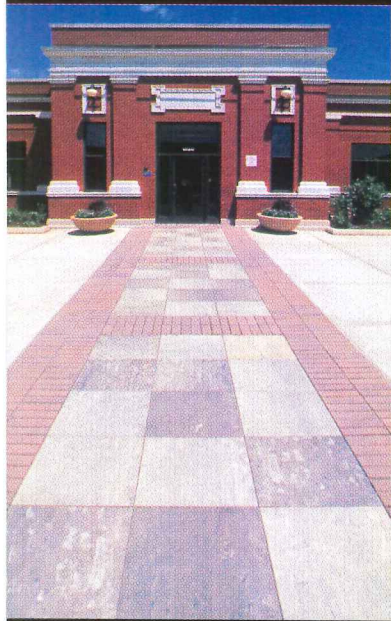
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CIRCLE 58 ON INQUIRY CARD



Architect: DeStefano+Partners, Chicago



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CIRCLE 59 ON INQUIRY CARD

FINISHES

Acoustical ceilings • Carpet • Ceiling suspension • Gypsum fabrications • Paint • Tile • Wall coverings • Wood & resilient flooring



IT'S GREAT TO SEE THAT IN ADDITION TO THE NEW PRODUCTS ON THE MARKET, PRODUCTS WE ALREADY USE ARE BEING REFINED TO BE MORE ENVIRONMENTALLY FRIENDLY. —Terese Wilson

Vinyl flooring for hipsters

Armstrong introduces a line of resilient vinyl floors in bright, vintage patterns. The four designs come in 14 colors, complete with a CleanSweep wearlayer for easy cleaning. 800/233-3823.

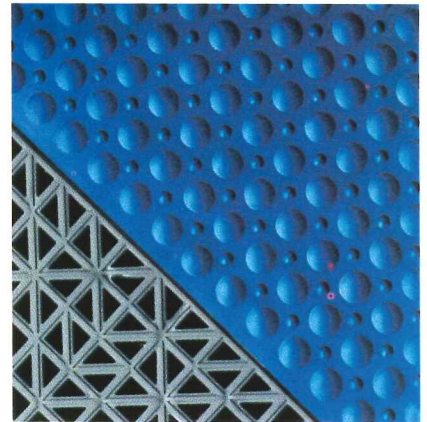
Armstrong World Industries, Lancaster, Pa. **CIRCLE 263**

Clean and green

CrocoTile, DuPont's newest flooring system, is made from 100 percent recycled carpet material. Ideal for athletic facilities, anti-fatigue areas, bar and kitchen floors, ramps, and drainage areas, CrocoTile is adhesive-free and durable. 888/4-DUPONT. DuPont, Kennesaw, Ga. **CIRCLE 264**



263



264

Pop the cork

Utilizing a renewable natural resource, Innovations has created an earth-friendly wallcovering with cork as its base. The 36-inch-wide product is washable and holds a Class A flame rating. 800/227-8053. Innovations in Wallcoverings, New York City. **CIRCLE 265**



265



266

Elemental tile

Earth, Fire, Water, and Wind, the basic components in the glass-making process, also serve as the inspiration for a new collection from Bisazza. Combinations of the tiles in random ratios of colors and styles are premixed, in stock, and ready for installation. 305/597-4099. Bisazza, Miami, Fla. **CIRCLE 266**

Three underfoot

Streatley Road sheet carpet by Bentley is a 36-ounce, 3/8-gauge, large-scale linear pattern in cut pile. Prince Street's Modern Office pattern has a complex finish combining varying sizes of loops with a subtle shearing. Interface debuted Great Plains as the first commercially viable carpet tile product manufactured from PLA, a natural resource derived from corn. 800/336-0225. Interface Americas Inc., Atlanta. **CIRCLE 267**



267



FINISHES

Acoustical ceilings • Carpet • Ceiling suspension • Gypsum fabrications • Paint • Tile • Wall coverings • Wood & resilient flooring

Pseudo granite surfacing

With its mineral surface and dimensionality, Basalto looks like flamed granite. Porcelain-bodied, this flooring by Daltile is appropriate for exterior applications. 800/933-8453. Daltile, Dallas.

CIRCLE 268

Bring the stars down to earth

Oonars, by Silver Creek, is a celestial display of pattern on a solid pile-cut field in three colorways with a coordinating nine-inch band border. 212/688-7447. Silver Creek/Bloomsburg Carpet, New York City.

CIRCLE 269

Party all night long

Designed for use under all laminate and floating wood floors, QuietGuard is an acoustical underlayment offering sound reduction for commercial and residential applications. 972/506-0480. Bruce Laminate Floors, Addison, Texas.

CIRCLE 270

The writing isn't on the walls

In the sandblasted or unpolished version, Sine Tempore porcelain stoneware is completely resistant to spray paint. 212/980-1500. Italian Trade Commission, New York City. CIRCLE 271

Counting sheet

Avalon's Chancery line, part of the Wools of New Zealand brand, offers a palette of 10 earthen colors on a striped-loop field. 800/627-6068. Avalon, Calhoun, Ga.

CIRCLE 272

Suspended ceiling

Armstrong's Optima Vector, a suspended acoustical ceiling with virtually no visible grid, helps transform open-plan areas into more effective upscale spaces. 888/234-5464. Armstrong World Industries, Lancaster, Pa. CIRCLE 273

Rethinking concrete

Patene Arctectura transforms existing concrete surfaces into customized spaces through coloring, patterning, texturing, and finishing methods. 559/673-2411. Bomanite, Madera, Calif. CIRCLE 274

Hardwood from Hoboken

Eight species of Brazilian hardwood floors are available in the Indusparquet collection. All prefinished floors are kiln-dried and precision-milled, and timber is harvested only from managed forests. 800/222-1068. Hoboken Floors, Waynem, N.J. CIRCLE 275



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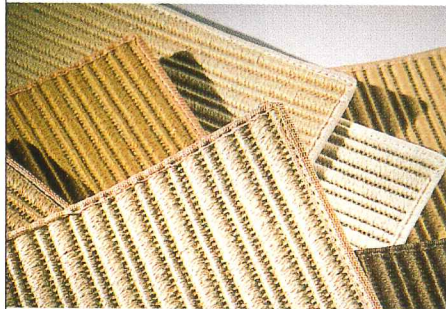
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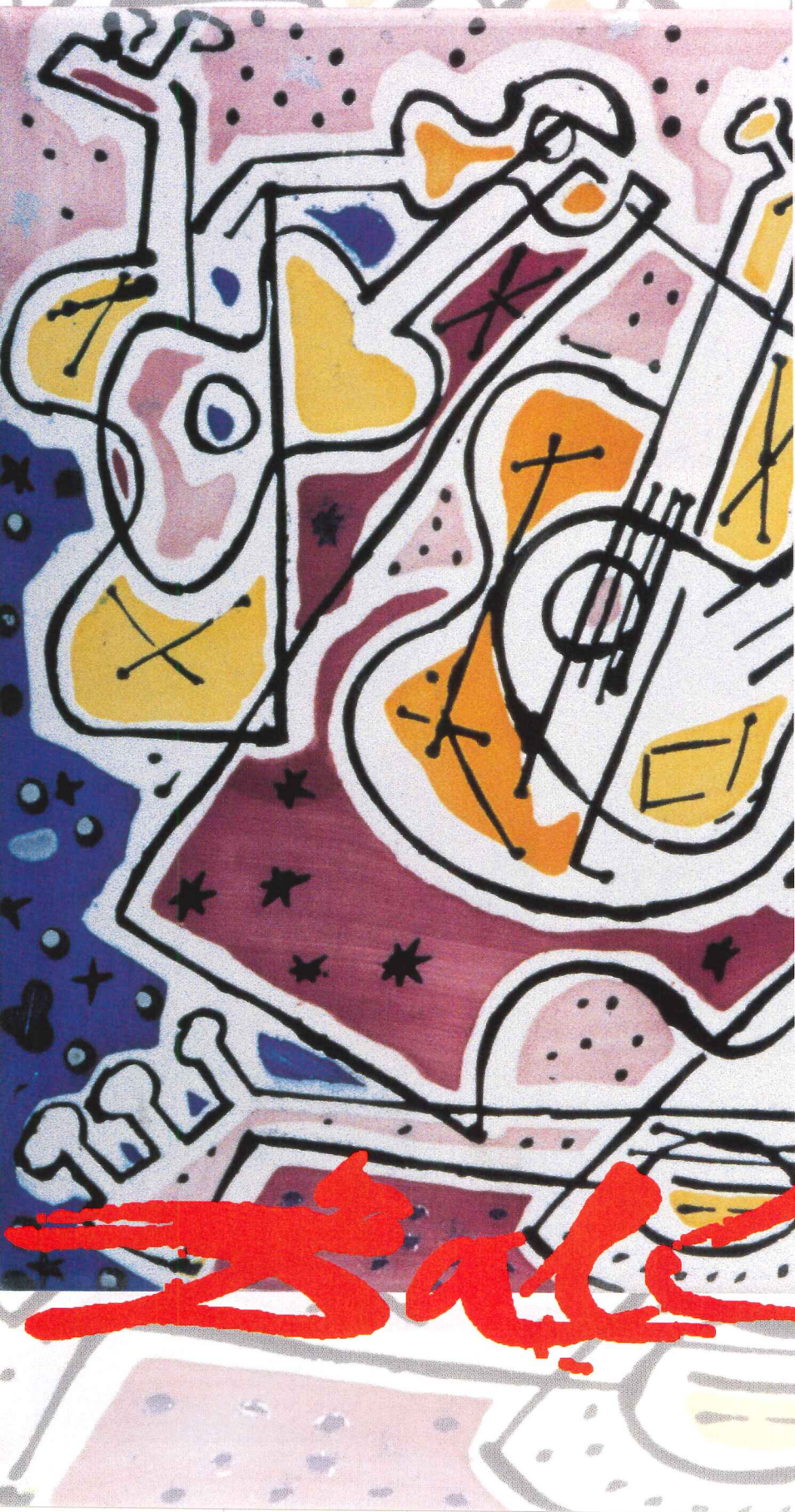
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Tile of Spain

Autographed With Excellence



Throughout history, artists like Spain's Salvador Dalí have added new dimensions to their unique interpretations with the creative use of ceramic tile. Like Dalí, the tile manufacturers of Spain are regarded as masters of their craft.

For centuries, they have combined a history of craftsmanship and quality with forward-thinking technologies. Today, they continue to set industry standards and develop the techniques and products of the future, from handmade to high-tech.

No other ceramic tile offers the prestige of the finest European products at such attractive price points. Tile from Spain delivers quality, service, and a stylish array of elegant designs and rich textures, priced to enhance profitability.

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Web Site: www.tilespain.com

Image of ceramic tile by Salvador Dalí courtesy of
The Salvador Dalí Museum, St. Petersburg, Florida.



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FINISHES

Acoustical ceilings • Carpet • Ceiling suspension • Gypsum fabrications •
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Keeping clean

WonderGliss, a new ceramic surface from Duravit, deprives dirt of the ability to cling to bathroom fixtures. Hygienic and labor-reducing, WonderGliss eliminates the need for heavy and caustic cleaning agents. 888/387-2848. Duravit, Duluth, Ga. **CIRCLE 276**

Northern natives

FineWood, PermaGrain's new line of pre-finished flooring, features seven natural North American hardwood species in traditional and contemporary hues. 610/353-8801. PermaGrain, Newtown Square, Pa. **CIRCLE 277**

Take it easy

ComforTech Anthem's cushioned inner layer provides all-season thermal protection in a noise-reducing flooring. Slip resistance helps minimize foot and leg fatigue. 800/899-8916. Johnsonite, Chagrin Falls, Ohio. **CIRCLE 278**

Group effort

In collaboration with a team of designers from around the world, Milliken developed the Image Series as a collection of customer-influenced designs. 706/880-3327. Milliken Carpet, LaGrange, Ga. **CIRCLE 279**

Outdoor effects

Round and oblong colored porcelain pebbles are mesh-mounted to coordinate with the rustic field tiles in the Del Conca Antica Asolo series. 212/980-1500. Italian Trade Commission, New York City. **CIRCLE 280**

Underlay alternative

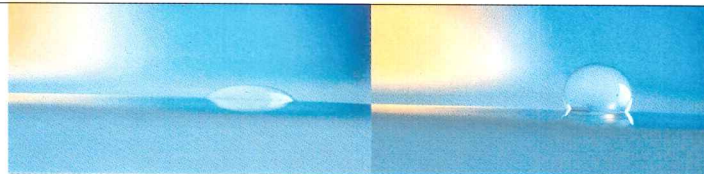
Isobord has introduced a new underlayment product made from strawboard and non-formaldehyde resins in place of lauan plywood. 503/242-7345. Isobord Enterprises, Portland, Ore. **CIRCLE 281**

No-hassle aluminum ceiling

Sonata from Armstrong offers the detailing and look of an extruded aluminum ceiling suspension system without the labor-intensive installation process. 888/234-5464. Armstrong World Industries, Lancaster, Pa. **CIRCLE 282**

Essence of Spain

The textures and colors of the cut and loop España Collection capture the essence of Spain in intricate detailing, height, and texture. 800/523-5647. Lees, Greensboro, N.C. **CIRCLE 283**



276



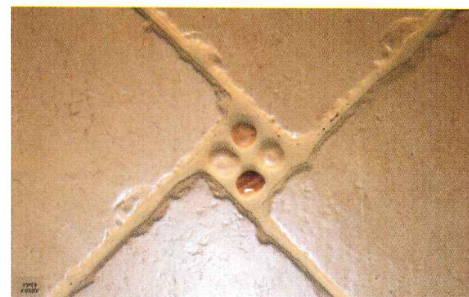
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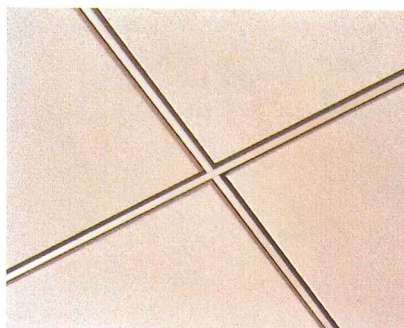
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283

Once there was a beautiful painting. And everyone loved it.

The artist was asked to sell it often and for large amounts of money.

It was so coveted, in fact, that people began to copy it. Soon everyone could have the painting if they wanted it. The funny thing was, though, no one wanted it anymore.

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The secret's in the yarn

An ultrafine, round, monofilament yarn gives Xorel Three an industrial, sleek, metallic look. 800/727-6770. Carnegie Fabrics, Rockville Centre, N.Y. **CIRCLE 284**

Thick color carpets

Textura's thick, looped texture, crafted by Woolshire from heathered yarns and solid-color accents, creates a display in 10 colorways. 800/799-6657. Woolshire Carpet Mills, Calhoun, Ga. **CIRCLE 285**

Shine on

Gilded and antiqued, the It's Old, It's Gold embossed surface works as a luminous covering for walls and ceilings. 201/217-2267. Willem Van Es Design Studio Ltd., New York City. **CIRCLE 286**

Work that floor

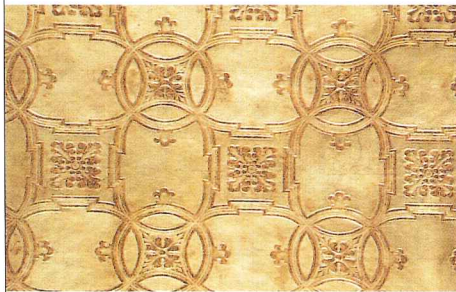
Mannington Commercial's GLS Series is a heavy-duty, high-performance, homogeneous sheet flooring available in six-foot widths. Four unique patterns enhance commercial and institutional settings. 800/241-2262. Mannington Commercial, Salem, N.J. **CIRCLE 287**



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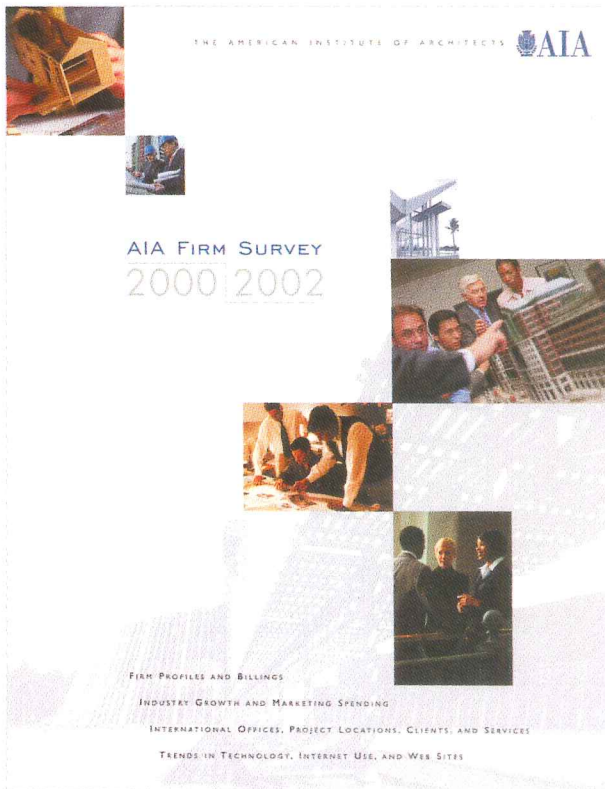
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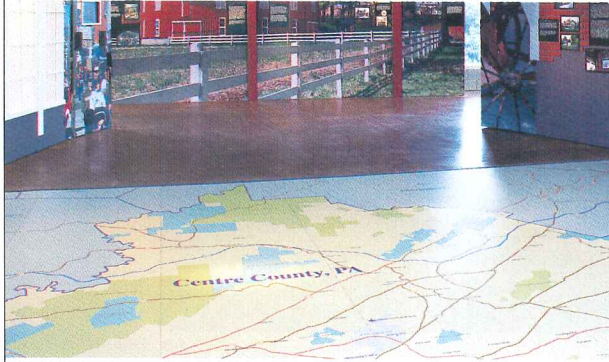
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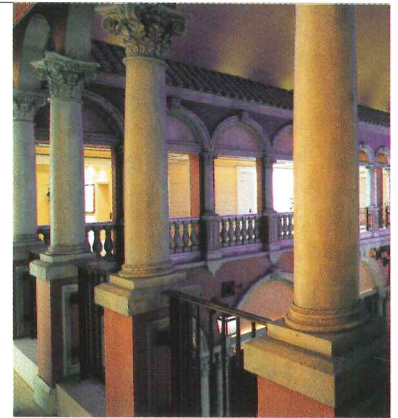
Folia Permanent Graphic Flooring's high-pressure, wear-resistant laminate tiles are designed for floating installations. 888/264-6122. Folia Industries, Huntingdon, Quebec. **CIRCLE 288**



288

Holding up the roof

GRG (Glass Reinforced Gypsum) Classic columns and cornices provide professional durability, economy, and design in architectural ornamentation. 800/963-3060. Melton Classics, Lawrenceville, Ga. **CIRCLE 289**



289

High-tech porcelain

Blue Stone high-tech porcelains come in three finishes and a range of modular formats. All are frost-, chemical-, and stain-resistant. 212/980-1500. Italian Trade Commission, New York City. **CIRCLE 290**



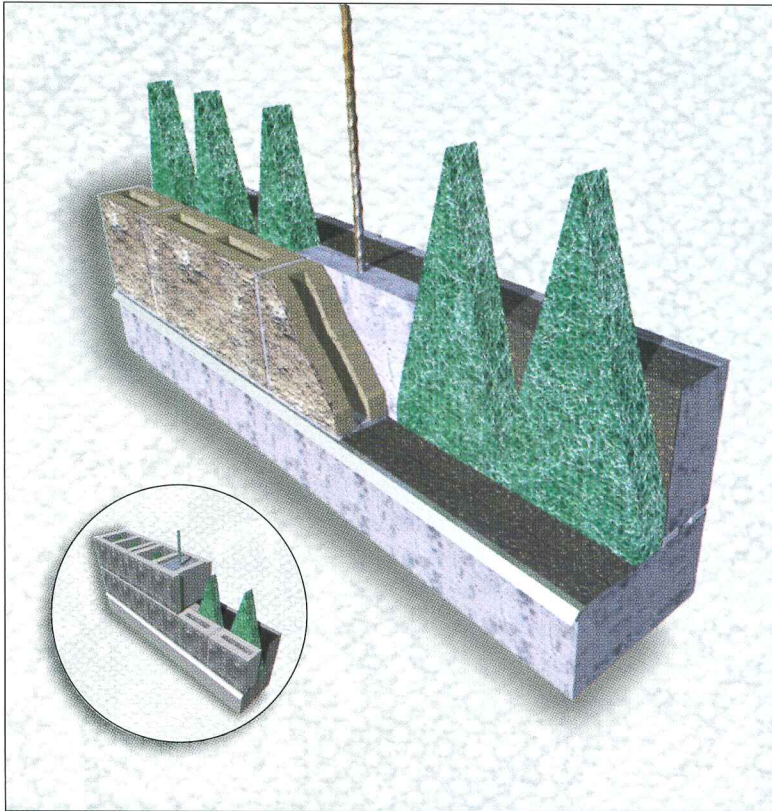
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Carpet grids

Bellbridge has looped three colors of wool yarns into a grid pattern to create its Evora line, recommended for heavy commercial use. 800/227-3408. Bellbridge Carpet, Benicia, Calif. **CIRCLE 291**



291



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Mortar Net™ Block's **patented** shaped mortar dropping collection device prevents water damage in single wythe concrete masonry unit (CMU) walls by breaking up mortar, thereby allowing proper drainage to the weep holes. To ensure optimum performance of concrete masonry walls, specify Mortar Net™ Block.

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Color palette

The Azrock Linosom linoleum line from Domco gives designers a natural, eco-friendly product in 19 colors and 40 shades. 800/921-1717. Domco, Florence, Ala. **CIRCLE 292**

Acoustical ceilings

Laminated ceiling panels feature a smooth, monolithic appearance in Celotex's new acoustical product, Serene m. 800/CELOTEX. BPB Celotex, Tampa. **CIRCLE 293**

Scale variation

One pattern is offered in small, medium, and large scales to create a unique visual in the new Urbana line from Invision. 800/859-9558. Invision Carpet Systems, Dalton, Ga. **CIRCLE 294**

Safety floors

Versa Floor offers antislip and fatigue-relieving properties to improve safety and productivity. The floor system provides a high level of thermal and acoustic insulation. 800/533-4267. Innovative Flooring, Chatsworth, Ga. **CIRCLE 295**



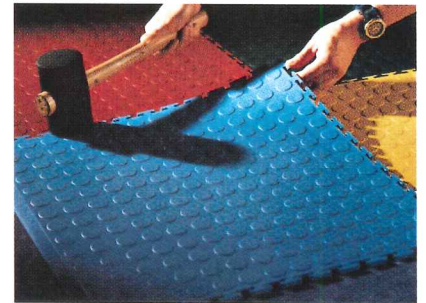
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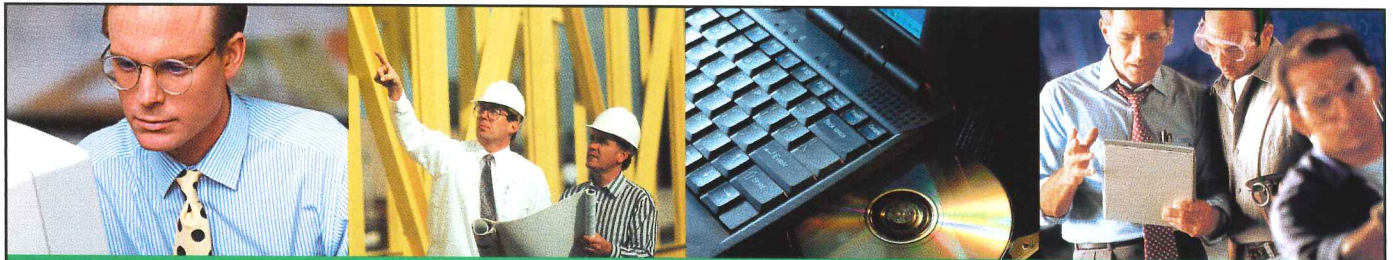
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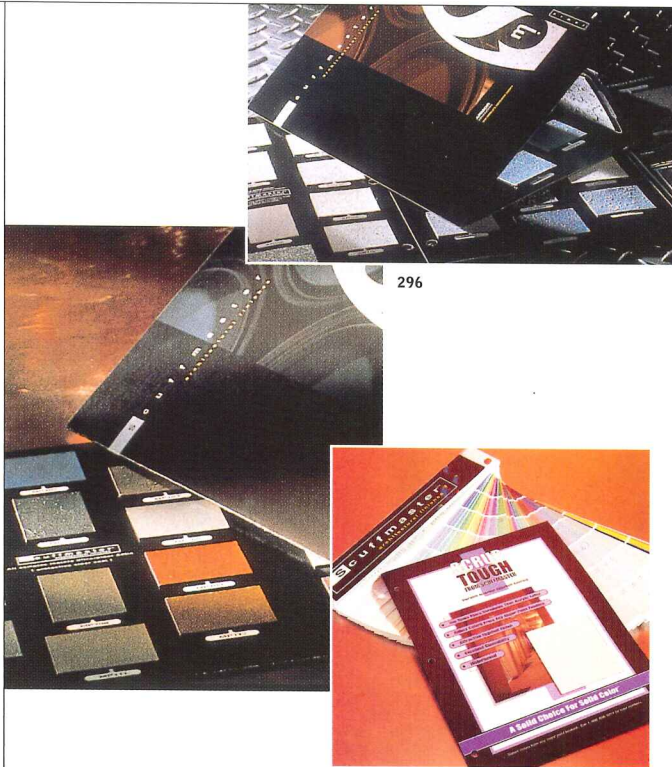
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Celtic trilogy

Three patterned carpets of Kerry, Kinsale, and Wexford form the new Celtic Collection, recently refined with modified colorways and reduced face weight to enhance performance. 800/523-5647. Lees, Greensboro, N.C. **CIRCLE 297**



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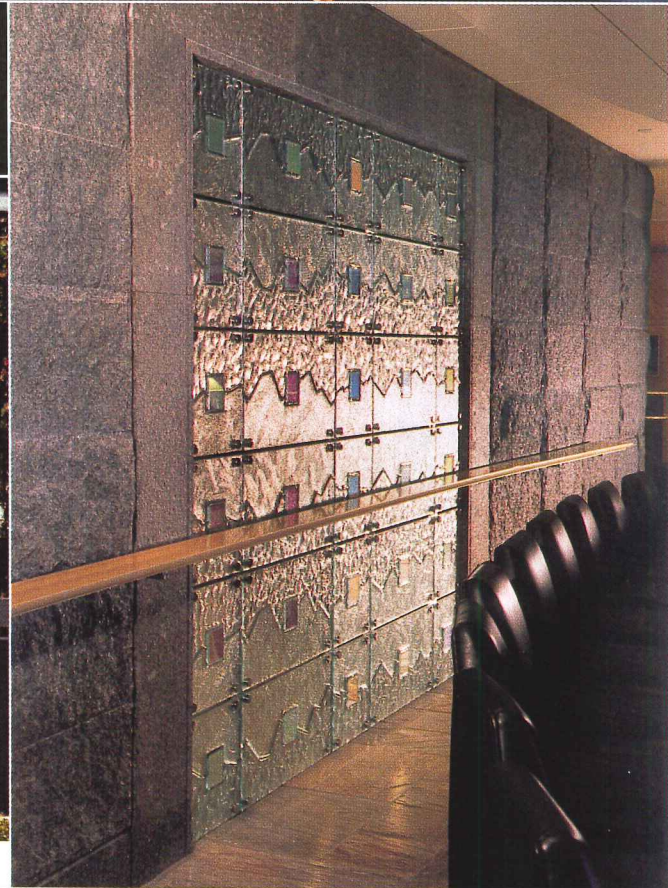
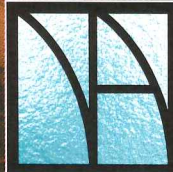
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THE STRAWBOARD PRODUCT IS CLEARLY MAKING STRIDES TO BE ACCEPTED AS A LOW-COST ALTERNATIVE TO PARTICLE BOARD. —John Amatruda

Bathroom unity

The Valli l'arredobagno hardware and accessory collection is available in several coordinating finishes. 877/326-2565.

Gruppo Valli & Valli, New York City. **CIRCLE 298**

Access flooring

The C-Tec Series raised flooring system uses panels of composite steel and concrete to create a solid platform with space for cabling and air distribution. 312/822-9640. Interface Architectural Resources, Grand Rapids, Mich. **CIRCLE 299**

Digital note taker

The Hawkeye whiteboard capture system combines digital cameras and an internal processor to record meetings passively. 888/42-SMART. SMART Technologies, Alberta, Canada. **CIRCLE 300**

Technology platform

The Building Technology Platform integrates cabling, access flooring, and air systems into one package. 410/799-4774. Tate Access Floors, Jessup, Md. **CIRCLE 301**

Not just blowing hot air

Made from drawn steel, the Eclipse automatic hand dryer is available in either polished chrome or white enamel. 800/553-1600. Bobrick Washroom Equipment, North Hollywood, Calif. **CIRCLE 302**

Shades of shades

Intended for exterior or interior use, PhiferScreen 530 is a versatile fabric sun-control alternative available in a variety of colors. 800/633-5955. Phifer Wire Products Inc., Tuscaloosa, Ala. **CIRCLE 303**

A place for the ornaments

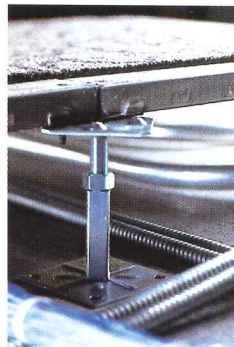
StorageBord premium engineered strawboard tongue-and-groove panels help increase attic storage space. 503/242-7345. Isobord Enterprises Inc., Portland, Ore. **CIRCLE 304**

Go ahead and get lost

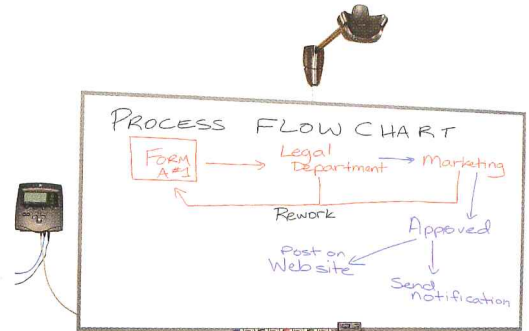
The Arcus Information System features curved contours and is based upon a series of aluminum extrusions in various configurations and sizes. 800/553-7722. Cornelius+, Carpinteria, Calif. **CIRCLE 305**



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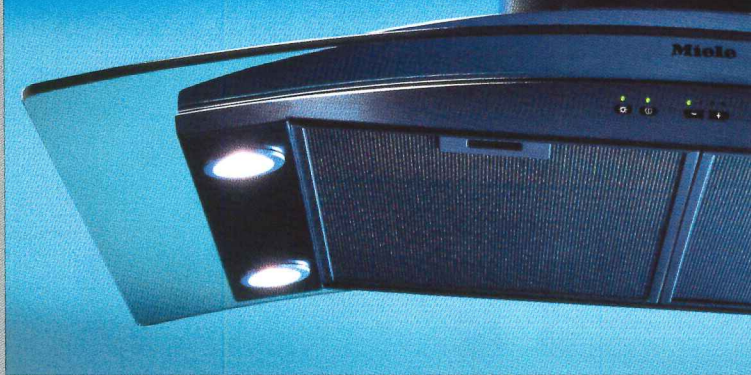


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EQUIPMENT

Kitchen & bath cabinets • Kitchen hoods & ventilation • Residential appliances



MIELE INCORPORATES THE LATEST COOKING TECHNOLOGY WITH THE CLEANEST DESIGN. —Katherine Sutton

Stainless-steel space

Monogram's stainless-steel island hood provides an alternative to downdraft ventilation. Using Speedcook technology, the built-in Advantium oven can cook traditional oven dishes in an average of one-quarter of the time of a conventional oven. Seventy-two inches of door surface on the built-in Advantium refrigerator/freezer allow for custom-panel installation. 800/626-2000. General Electric, Louisville. **CIRCLE 306**

Material matrix

Bulthaup's new material scheme within the System 24 kitchen cabinetry includes environmentally friendly linoleum made from natural raw materials, stable aluminum edges, and stainless-steel cutting surfaces for easy-to-clean durability and chemical resistance. 310/288-3875. Bulthaup USA, Los Angeles. **CIRCLE 307**

Make it fresh

Miele's built-in coffee system will froth or steam milk with a steam wand, distribute hot water through a separate spout, and allow for grind preference and temperature control. The convection steam oven can cook most foods in under 20 minutes, retaining vitamins and minerals that are otherwise lost. 800/843-7231. Miele, Princeton, N.J. **CIRCLE 308**

Cabinet lines

The lines of Giorno's low, mirror, and tall cabinets contrast with material combinations of glass, aluminum, alder, and wenge wood. The straight lines of the cabinets alternate with playful details, such as the leaf-shaped aluminum door handles. 888/DURAVIT. Hoesch/Duravit, Duluth, Ga. **CIRCLE 309**

Home on the range

The Designer Series by Viking Range includes a variety of distinctive commercial-type products for the home, including cooktops, ventilation systems, and refrigerators. 888/VIKING1. Viking Range, Greenwood, Miss. **CIRCLE 310**



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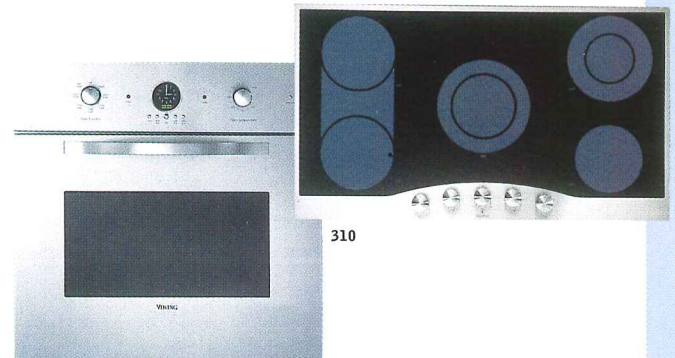
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FURNISHINGS

Fabric treatments • Manufactured casework • Multiple-use fixed seating • Healthcare/school/library/hotel furniture • Systems furniture



I THINK THE USE OF MORE COLORFUL AND LUMINOUS MATERIALS AND FINISHES GREATLY ADDS TO THE PRODUCTS' AESTHETICS. —*Katherine Sutton*

Cast-aluminum options

Mark Kapka developed Jet, a modular system of elements that center around a cast-aluminum framework. Designed by Andrew Jones, Gym is a stacking chair of translucent plastic on a tubular steel frame available in a variety of colors and finishes. Brandon, by EOOS, is a collection of lounge seating options and tables with a characteristic elliptical steel leg. 800/724-5665. Keilhauer, Scarborough, Ontario. **CIRCLE 311**

Wired tables

Designed by Mark Müller, the Vox furniture collection expands to include Vox Training Tables, which integrate furniture and technology through built-in wiring. The tables are available in a variety of shapes and sizes. 800/668-9318. Nienkämper, Scarborough, Ontario. **CIRCLE 312**

Stain-resistant coating

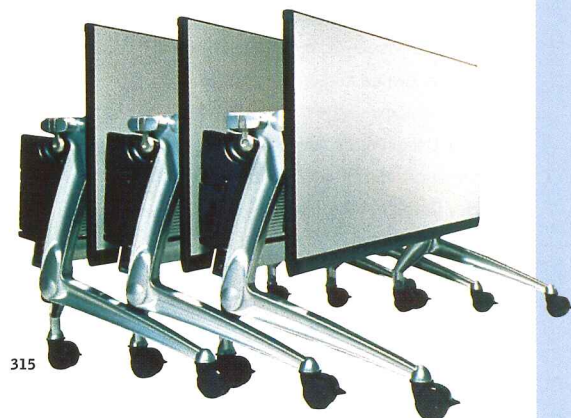
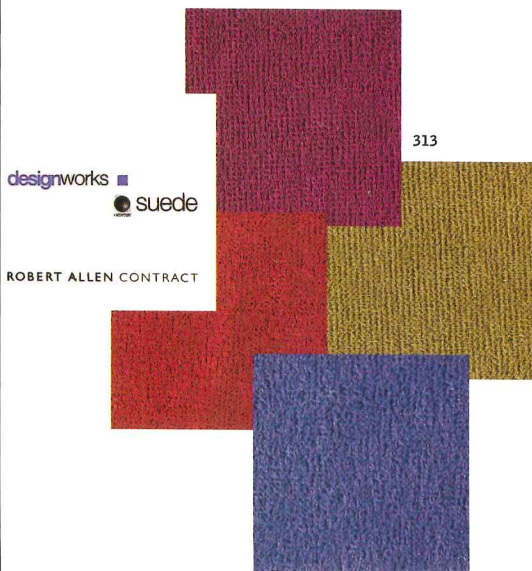
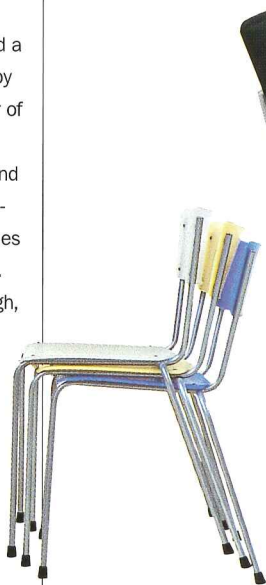
Intended for high-traffic areas where stains are a problem, Designworks-Crypton is a high-technology fabric system that uses a patented process to encase fabric in a flexible and breathable coating that is stain- and water-resistant. 800/333-3777. Robert Allen Contract, Mansfield, Mass. **CIRCLE 313**

Talk to each other

Sidewalk is a complete seating environment that creates a relaxed, comfortable ambience and promotes group interaction through soft, upholstered seating and an open arrangement. 800/627-6770. Brayton International, High Point, N.C. **CIRCLE 314**

Pack it up

Available in a variety of sizes and surface treatments, Train is a versatile series of computer training tables. In addition to managing computer wiring and cables, the tables flip, nest, and roll for easy storage and mobility. 972/641-2860. Vecta, Grand Prairie, Tex. **CIRCLE 315**



FURNISHINGS

Fabric treatments • Manufactured casework • Multiple-use fixed seating • Systems furniture

Patterns on the rise

Pallas designer Lori Weitzner used puckers and raised and lowered effects to achieve the contemporary three-dimensional designs in the new Ascension collection. 800/4-PALLAS. Pallas Textiles, Green Bay, Wis. **CIRCLE 316**

Work in bed

Cassina's Sleepy Working Bed marries work and sleep in a single unit. A functional bed complete with headboard, night tables, and bedside task lighting, this piece also sports an attachable shelf and lamp to transform it into a workspace. 800/770-3568. Cassina USA, Huntington Station, N.Y. **CIRCLE 317**

Conference room on the go

Huddleboard's Mobile Easel stores 10 marker boards, providing over 187 square feet of space. Huddleboard marker boards weigh less than five pounds, can be used in horizontal or vertical positions, and are available in two sizes. 800/333-9939. Steelcase, Grand Rapids, Mich. **CIRCLE 318**

Sit down and stay down

The ergonomic design of Medallion stadium seating by the Hussey Seating Company helps increase blood flow and back support for improved sitting comfort. 207/676-0234. Hussey Seating, North Berwick, Maine. **CIRCLE 319**

Do it your way

Switch by SMED is a high-performance workspace with flexibility that allows a user to change the angle of the branch wall, pull out a whiteboard for privacy, or put storage, walls, or work surfaces anywhere along the main wall. 800/661-9163. SMED International, Calgary. **CIRCLE 320**

Past made present

Colorful creations from Alexander Giroud, world-renowned mid-century textile designer, inspired the three woven fabrics of Unika Vaev's new collection, Cosmopolitan. 800/237-1625. ICF Group, Valley Cottage, N.Y. **CIRCLE 321**

Line them up

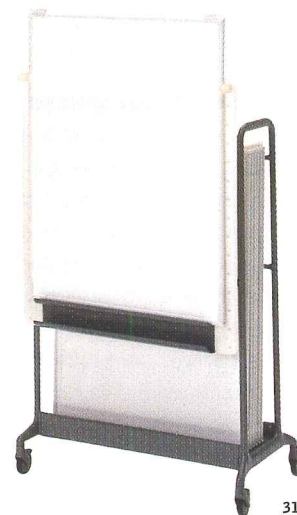
Functional and modular, the Marengo tables by Zero form an endless string of configurations to create conference and reception tables. 401/724-4470. Zero, Lincoln, R.I. **CIRCLE 322**



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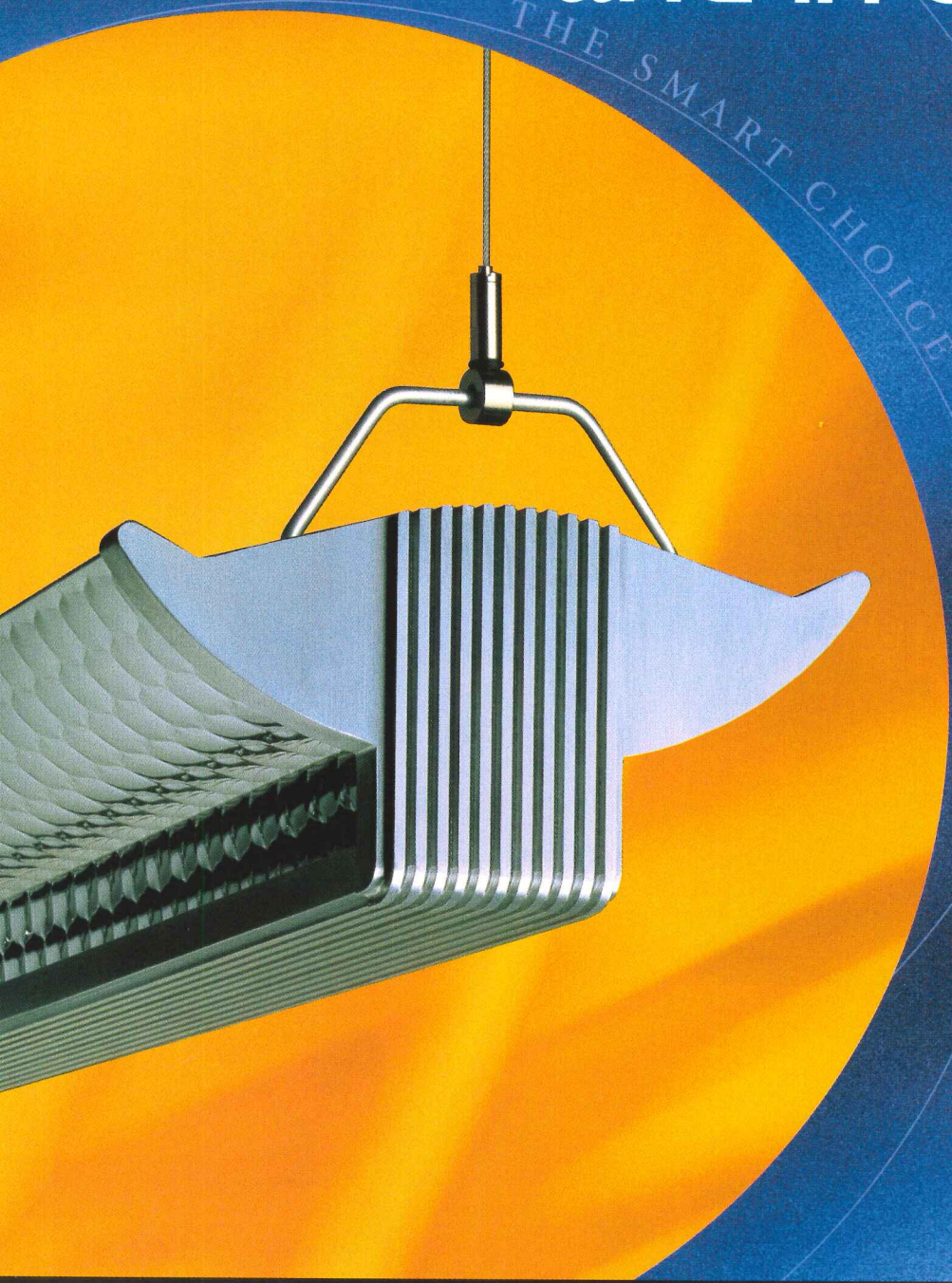
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LIGHTING

FURNISHINGS

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Stacking chairs

The Eddy stacking chair is now available in four new translucent colors. Made of polypropylene plastic, the chair has optional clip-on upholstered seat and back pads, armrests, row and seat numbering, and writing tablets.

800/995-6500. Dauphin of North America, Boonton, N.J. **CIRCLE 323**

Put them together

Inspired by the simplicity of early-20th-century Modernism, designers at Datesweiser created xo, a modular kit of parts combining aluminum with traditional materials such as granite, glass, maple, and mahogany.

800/466-7037. Datesweiser, Buffalo. **CIRCLE 324**

Polyurethane piece

Blob, a new angle- and-line-free chair from Nienkämper designer Karim Rashid, curves organically to accommodate the contours of the body.

800/668-9318. ICF Group, Valley Cottage, N.Y. **CIRCLE 325**

Make the most of the floor plan

Composed of easily movable, pull-out shelving units, QuickSpace by Spacesaver more than doubles the storage capacity of existing space by eliminating aisles, while still providing quick access to materials.

800/492-3434. Spacesaver Corp., Fort Atkinson, Wis. **CIRCLE 326**

Out of the rain

RealFurniture.com, an online furniture retailer offering Modernist classics to design-savvy consumers, launched its first collection of decorative accessories with a sleek umbrella stand.

800/257-7764. RealFurniture.com, New York City. **CIRCLE 327**

Moving in place

The dominant ergonomic characteristic of Lucy, the new Doug Ball chair by Vecta, is a translucent pellathane back that moves with the user during activity.

972/641-2860. Vecta, Grand Prairie, Tex. **CIRCLE 328**

It takes two

The self-supporting TableBed from Inova makes double use of limited space, sliding out into a bed at night and folding up during the day to reveal a table for five.

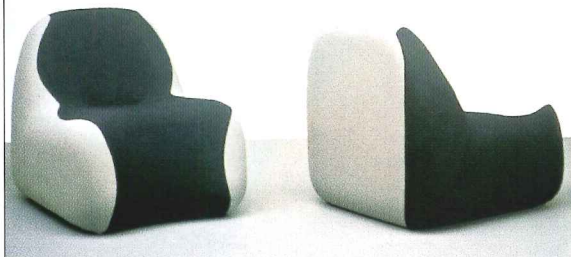
212/932-1446. Inova, New York City. **CIRCLE 329**



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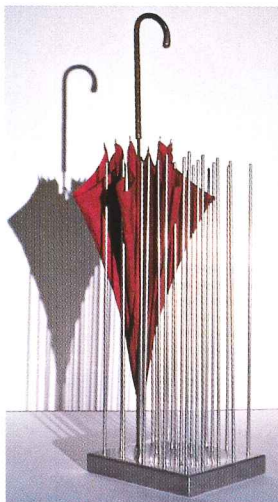
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Waiting around

The Palette Lounge Series, designed by Wolfgang C.R. Mezger for Davis Furniture, offers a plethora of solutions for the waiting/working environment, with rotating tables and generous seating. 336/889-2009. Davis Furniture, High Point, N.C.

CIRCLE 330

Change it up

Haworth introduces if, a furniture system for office spaces. In freestanding environments, a utility chain integrates power and allows for floor-plan adjustments without disrupting power flow. Jump Stuff II work tools offer active storage and organization. 800/344-2600. Haworth, Holland, Mich. CIRCLE 331

High-tech origami

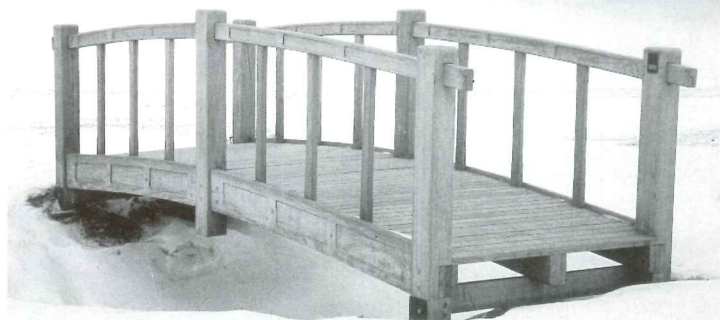
Designed to look as if it were folded from a single sheet of metal, Fabiaan Van Severen's Rincon table is executed in stainless steel with the option of custom-designed etchings for tabletops. 877/525-5566. DesignForm+, Carpinteria, Calif. CIRCLE 332



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In the shade

Birdair Lite's new line of preassembled, freestanding shade structures can be linked for continuous weather protection and either permanently fixed or mounted for removal and storage. 800/622-2246. Birdair, Amherst, N.Y. **CIRCLE 333**

Built-in baths

Available in both corner and off-wall models, Giorno Built-In Whirlpool baths are made by Hoesch from high-quality sanitary acrylic; they offer four whirl systems. 888/DURAVIT. Hoesch/Duravit, Duluth, Ga. **CIRCLE 334**

Stadium seating

MAXAM creates flexible gymnasium seating for multiuse facilities. These structures can accommodate five different row-spacing options, removable safety rails, and transverse decking for a stiff walking surface. 207/676-2271. Hussey Seating, North Berwick, Maine. **CIRCLE 335**

Moving up

The CabForm Series 2000 system features unique stile, rail, and inset designs for pre-engineered elevator interiors. 877/626-7788. Forms+Surfaces, Carpinteria, Calif. **CIRCLE 336**

Noise down, quiet up

Scamp Sound Masking System's acoustical treatments increase speech privacy and reduce noise distractions to improve acoustic comfort. 905/844-2622. K. R. Moeller, Oakville, Ontario. **CIRCLE 337**

Don't walk

Schindler introduced its 9500 moving-walk series to eliminate long walks from heavy traffic patterns, indoors and outdoors. 973/397-6500. Schindler Elevator, Morristown, N.J. **CIRCLE 338**

Bottoms up

Diamond Spas constructed this stainless-steel whirlpool bath with a contoured bottom, visible weld seams, and a hand-buffed finish. 800/951-7727. Diamond Spas, Broomfield, Colo. **CIRCLE 339**

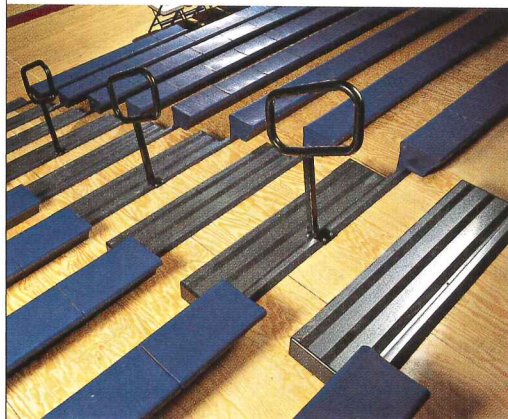
I JUST LOVE THE IDEA OF A HOT TUB MADE OUT OF STAINLESS STEEL. IT IS PART UTILITARIAN, PART SCULPTURE. —Craig Konyk, AIA



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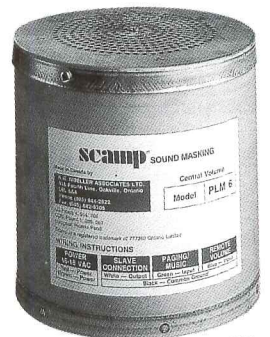
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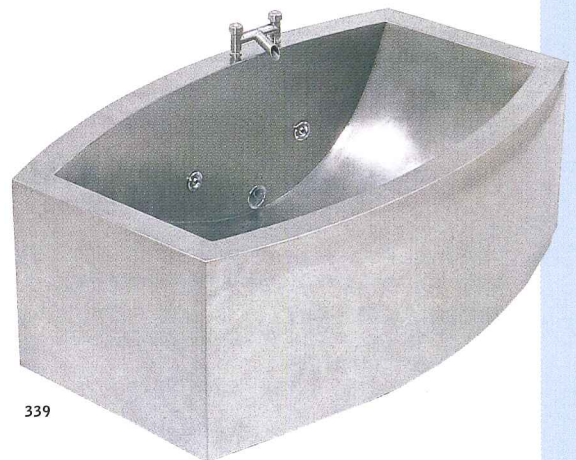
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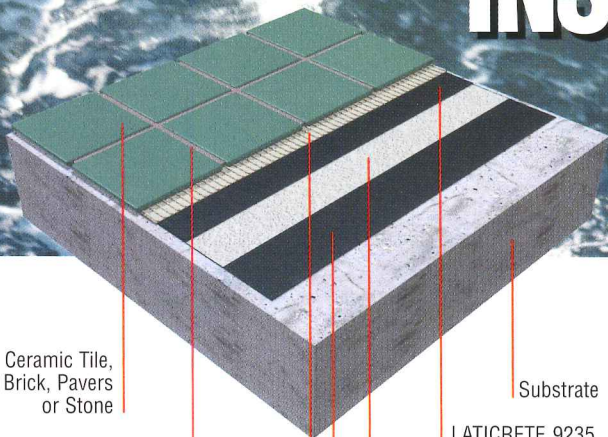


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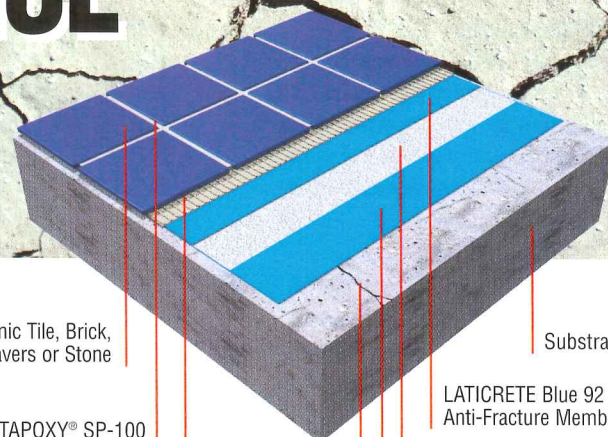
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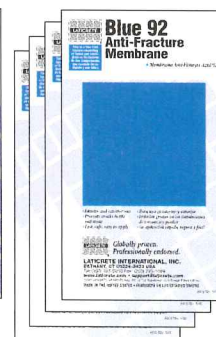
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THE FANS FROM MODERN FAN ADD MUCH-NEEDED STYLISTIC CHOICES TO AN ITEM THAT IS OFTEN TOO FUNCTIONAL OR TOO TRADITIONAL-LOOKING. —John Amatruda

Water and leaf

Archetypal forms such as the water droplet and the leaf inspired Massimo Losa Ghini in his designs for Giorno, as shown in the flowing fittings of the bathroom series. 800/774-1181. Dornbracht, Duluth, Ga. 888/DURAVIT. Hoesch/Duravit, Duluth, Ga. **CIRCLE 340**

Industrial fan

The Industry Fan's unornamented forms evoke the industrial age. Its raw finishes are designed to blend in with exposed ceilings. The fan functions as an environmentally sensitive choice for comfort control—at full speed it uses less than one amp of power. 888/588-3267. The Modern Fan Co., Ashland, Ore. **CIRCLE 341**

Clean breathing

The Hunter HEPatech 250 with high-performance ionizer can remove particles as small as .1 micron and is CADR rated to clean an 18-by-20-foot room. 800/4-HUNTER. Hunter Fan, Memphis. **CIRCLE 342**

Even flow

The Axor Terrano single-lever lavatory faucet's ceramic mixing cartridge offers quiet operation, while Hansgrohe's integrated aerator aerates the water stream without use of a mesh screen. 800/719-1000. Hansgrohe, Alpharetta, Ga. **CIRCLE 343**

Someone's in the kitchen

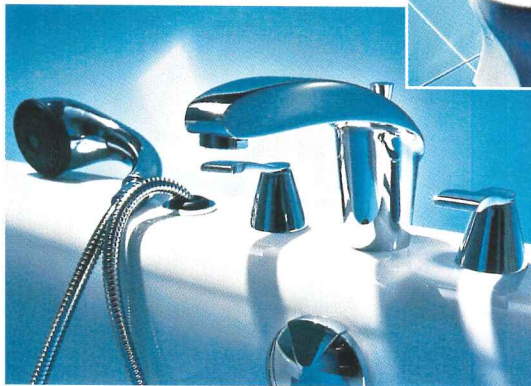
Durable stainless steel teams up with a fully accessorized Platinum Series sink, seamless counter, and wraparound raised edge to create an integrated preparation and clean-up system. 800/451-5782. Blanco, Cinnaminson, N.J. **CIRCLE 344**

A sink that resonates

The Infinite Fitting Basin, originally designed by Bruce Tomb in 1984 as a sculptural piece, comes in sand-cast white bronze, silicon bronze, brass, or aluminum. 415/970-9210. Infinite Fitting, San Francisco. **CIRCLE 345**



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Brilliant basins

Watercolors basins turn superannealed glass into brilliantly colored, durable, usable sinks. 310/815-4785. Colorwash, Los Angeles. **CIRCLE 346**

Don't call it a comeback

Kallista plumbing design introduces the Michael S. Smith Collection of vintage and classically inspired bathroom fixtures. 888/4-KALLISTA. Kallista, Kohler, Wis. **CIRCLE 347**

The least favorite chore

TOTO's SanaGloss protective glaze seals ceramics with an ionized barrier that prevents particle adherence. 800/350-8686. TOTO, Morrow, Ga. **CIRCLE 348**

Clean filters

E-Series RIAG-FLO/PH peripheral header air filters offer rigid filtration in an environmentally friendly design. The filter's nonmetallic components allow it to operate in humid conditions without rusting, corroding, or degrading. 800/333-7320. Camfil Farr, Los Angeles. **CIRCLE 349**

Cast-iron sinks

Dolce Vita cast-iron above-counter lavatories can be installed self-rimming or wall-mounted using Kohler's wrought-iron bracket, thus providing an array of design options. 800/4-KOHLER. Kohler, Kohler, Wis. **CIRCLE 350**

Don't worry, spec Happy

Designed by Sieger Design, the Happy D pedestal basin/console from Duravit features generous proportions and a broad deck. The lavatories are available in a 29½-inch or 25½-inch size, both with a full pedestal or siphon cover. 888/DURAVIT. Hoesch/Duravit, Duluth, Ga. **CIRCLE 351**

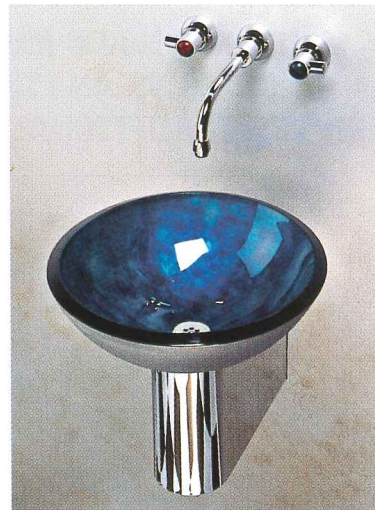
888/DURAVIT. Hoesch/Duravit, Duluth, Ga. **CIRCLE 351**

Shower power

New Generation Aktiva A8 handshowers boast streamlined showerhead and handshower designs, various advanced spray modes, and built-in cleaning functions. 800/719-1000. Hansgrohe, Alpharetta, Ga. **CIRCLE 352**

Below decks

The stainless-steel Grand Triple and Combination Max undermount sinks are unconventionally located below the counter for a European look. 705/526-5427. Kindred Industries, Midland, Ont. **CIRCLE 353**



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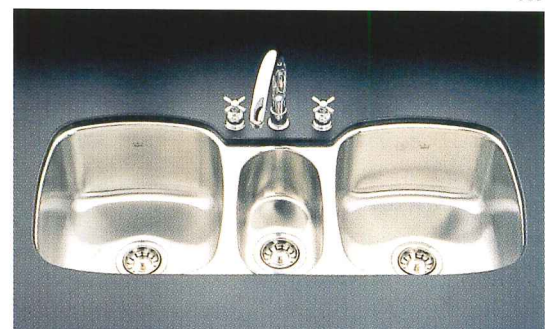
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The recently opened entertainment center chose Sloan Optima Plus Flushometers to integrate time-tested hydromechanics and modern electronics. Sloan's Perfect Sense® EL-1500 Optima sensor utilizes advanced

electronics that adjust automatically to surroundings and changing conditions. Sloan's Optima Plus Flushometers have their own LED diagnostics. The Optima's Sentinel® system is electronically programmed to automatically flush after 24 hours of non-use, ensuring fresher restrooms and reducing corrosive buildup.

Sloan blends state-of-the-art electronics, timeless craftsmanship and styling in Hilton's ultra-modern restroom to orchestrate both form and function.

For example, Sloan's Optima ETF-80 hygienic and automatic faucets use infrared technology to sense a user's hands and automatically adjust to changing environments. Plus, the new sleek, sophisticated design and contemporary styling elevates the standard for elegance.

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THE NEW TECHNOLOGIES IN LIGHTING ARE RESULTING IN FIXTURES THAT ARE SMALLER AND MORE STREAMLINED. —Terese Wilson

Technologically advanced

Zumtobel Staff introduces Orea, Spheros 75, and Miros (shown clockwise from top left). Orea directs light with its waveguide lens housed in a floating design. Spheros 75 encloses a maximum output T5 lamp in a slim profile casing. Miros is a projector-mirror lighting system designed to flood a room with light, without revealing its source. 800/932-0633. Zumtobel Staff Lighting, Highland, N.Y. **CIRCLE 354**

Contemporary craft

The Birds combine modern, functional design with old-world craftsmanship, as each unit is handblown using the centuries-old *incalmo* process. 206/363-9323. Resolute, Seattle. **CIRCLE 355**

Live long and prosper

Combining white light, a 100,000-hour life, and a high lumen package, the 165-watt QL Induction Lighting System provides a viable option for industrial, commercial, and outdoor environments. 800/555-0050. Philips Lighting Company, Somerset, N.J. **CIRCLE 356**

Lighting span

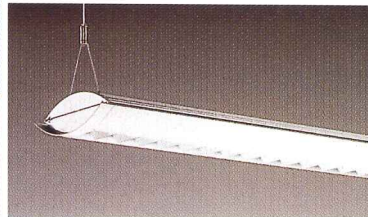
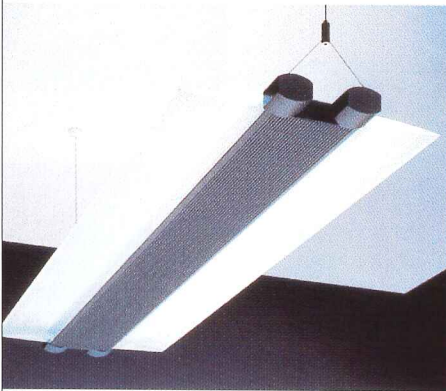
The Bridge Cable System is a line voltage system that can connect to ceilings or walls. It incorporates a variety of halo and spot-light options. 203/407-8000. Nemo Italianaluce, Hamden, Conn. **CIRCLE 357**

Flexible street lamps

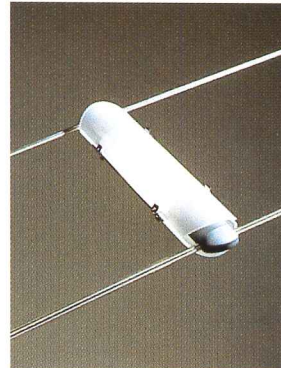
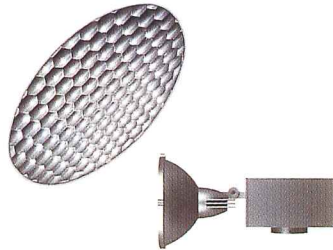
Using a system of field-interchangeable segmented reflectors, the Boulevard Series provides a flexible system for lighting roadways and parking lots. 770/922-9000. Lithonia Lighting, Conyers, Ga. **CIRCLE 358**

Hit the right note

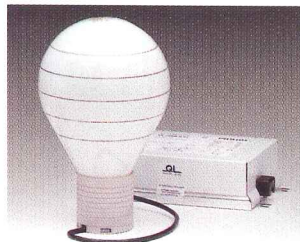
A combination of line and low-voltage units, the Light Notes Series incorporates lamp intensities ranging from 20-watt MR16 to 250-watt PAR38. The series is available in a variety of finishes. 800/999-9574. Lighting Services Inc., Stony Point, N.Y. **CIRCLE 359**



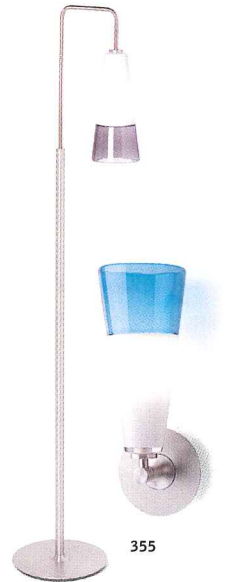
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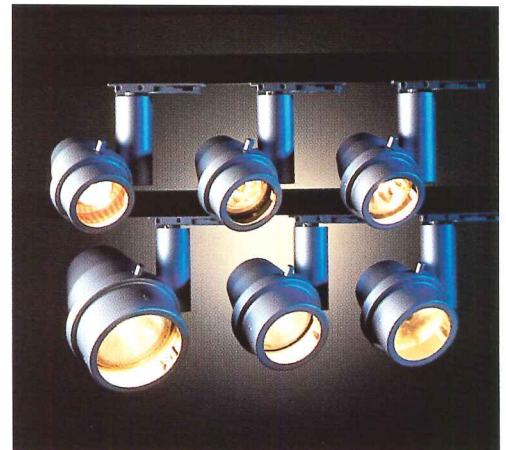
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Modular fixtures

The Megan and the Eos systems use T5 lamp technology housed in perforated steel and extruded aluminum, respectively, both coated with a polyester powder finish. A variety of connectors and sizes complete these modular systems. 631/694-9292. Artemide Inc., Farmingdale, N.Y. **CIRCLE 360**

Color wand

Suited for indoor or outdoor applications, the LED-based Color Change Luminaire, housed in the TIR Light Pole, can exhibit an unlimited mix of colors and color sequences, governed by a standard DMX control board. 800/663-2036. TIR Systems Ltd., Vancouver. **CIRCLE 361**

Woven fiber optics

Allsteel integrates AMP Netconnect fiber-optic cabling into its furniture panel systems to create a flexible and economic solution to cabling infrastructure for work environments. 319/262-4800. Allsteel Inc., Muscatine, Iowa. **CIRCLE 362**

Lighting design software

ColorPlay is a lighting-design software package that provides a user-friendly graphic interface for creating lighting shows with Color Kinetics digital color-changing lights. 888/FULL RGB. Color Kinetics Inc., Boston. **CIRCLE 363**

Smart color

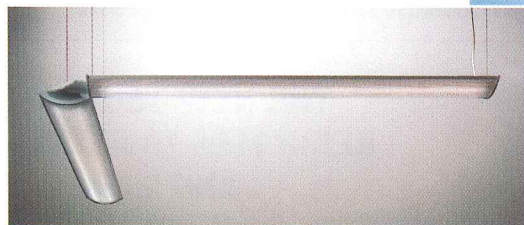
The Colorblast digital lighting fixture uses Chromacore technology to wash interior and exterior walls with changing color, all controlled by microprocessor-equipped LEDs. 888/FULL RGB. Color Kinetics Inc., Boston. **CIRCLE 364**

Custom outdoor lighting

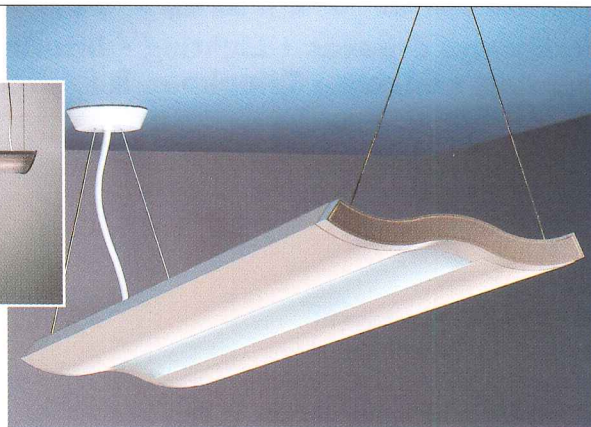
Designed by Perry Romano, the Design PDM Paradigm is an outdoor and roadway lighting fixture in aluminum with a polyester powdercoat finish. The fixture incorporates Optical Edgeglow windows that can be customized with color effects. 847/451-0040. Quality Lighting, Franklin Park, Ill. **CIRCLE 365**

Rotating bollard

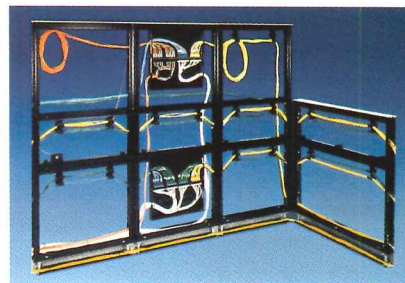
Designed by Karsten Winkels, Ponte is a landscape lighting bollard that rotates a full 360 degrees and accepts a 35-watt PAR30 or a 24-watt HO/T5 lamp for uplighting or pathway lighting. 704/471-2211. Hessamerica, Shelby, N.C. **CIRCLE 366**



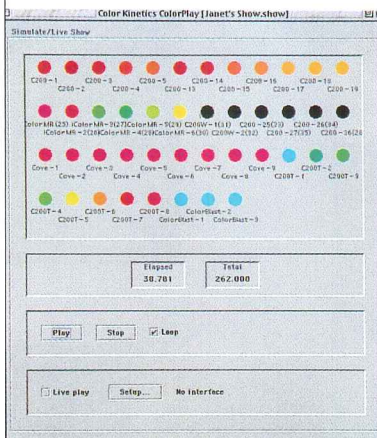
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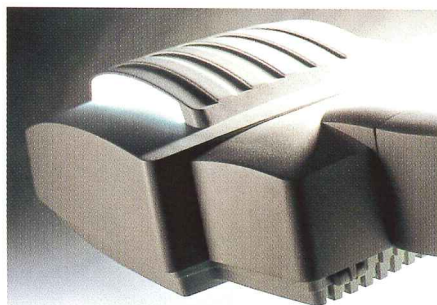
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Theme and variation

In conjunction with Louis Poulsen Lighting in 1927, Danish designer Poul Henningsen created the PH 3/2 glass pendant, made of handblown glass shades and detailed chrome fittings. The PH 3/2 Academy chandelier is a variation on this Henningsen original. 954/349-2525. Louis Poulsen Lighting, Ft. Lauderdale, Fla. **CIRCLE 367**

Hub for the home

Resi-Link Home Structured Wiring System is an adjustable and expandable modular solution to centralized wiring distributions in residential applications, including telephone, CATV, video, and Internet wiring. 901/252-5000. Thomas & Betts Corporation, Memphis. **CIRCLE 368**

No strings attached

Intended for commercial applications, RadioTouch offers wireless remote control of a room's multizone lighting system, including audiovisual equipment and motorized window shades. 800/523-9466. Lutron Electronics Co. Inc., Coopersburg, Pa.

CIRCLE 369

Durable reflector

Prescolite introduces the American Matte Reflector, a low-maintenance reflector that offers a uniform brightness in a durable surface finish that maintains a consistent appearance. 510/562-3500. Prescolite, San Leandro, Calif.

CIRCLE 370

Weatherproof luminaires

Fully enclosed under tempered glass, the recessed stainless-steel luminaires from BEGA/US are intended for wet locations. The luminaires use either Ceramic Metal Halide or Tungsten Halogen PAR20, 30, and 38 lamps wrapped in a perforated stainless-steel internal baffle. 805/684-0533. BEGA/US, Carpinteria, Calif.

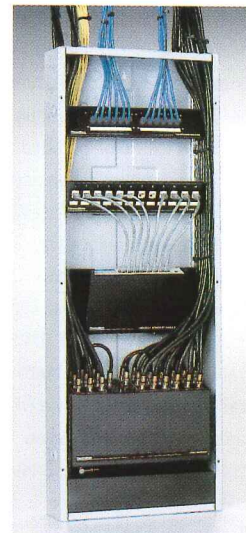
CIRCLE 371

Outdoor delight

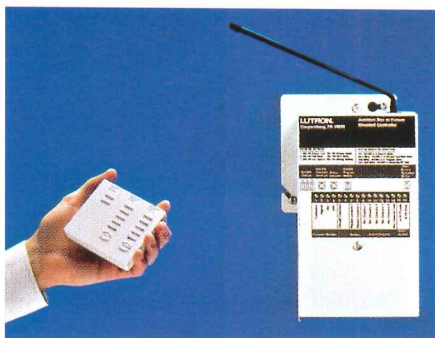
Louis Poulsen Lighting enlisted the Danish designer Alfred Homann to create a series of simple and functional exterior luminaires, including the Kipp wall and Kipp bollard, both available in a variety of finishes and lamp options. 954/349-2525. Louis Poulsen Lighting, Ft. Lauderdale, Fla. **CIRCLE 372**



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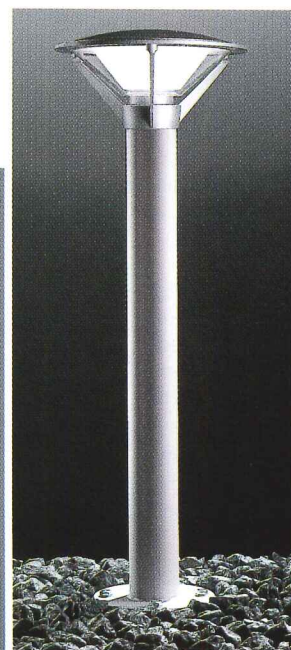
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Raceways & boxes • Lighting • Interior & exterior luminaires • Emergency lighting • Lamps

Inventive assemblage

Claimed to be the first symmetric recessed indirect fixture, the Sky luminaire features four fluorescent lamps embedded in a contoured reflector design. The Verve is a cantilevered, wall-mounted fixture of extruded aluminum; it distributes light using an asymmetric optical assemblage. 773/247-9494. Focal Point, Chicago. **CIRCLE 373**

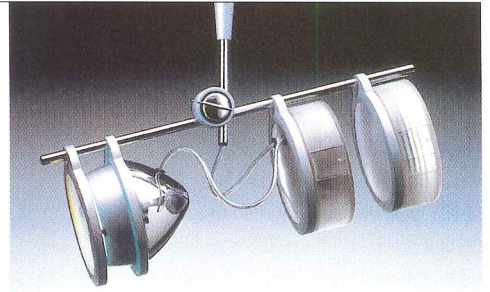
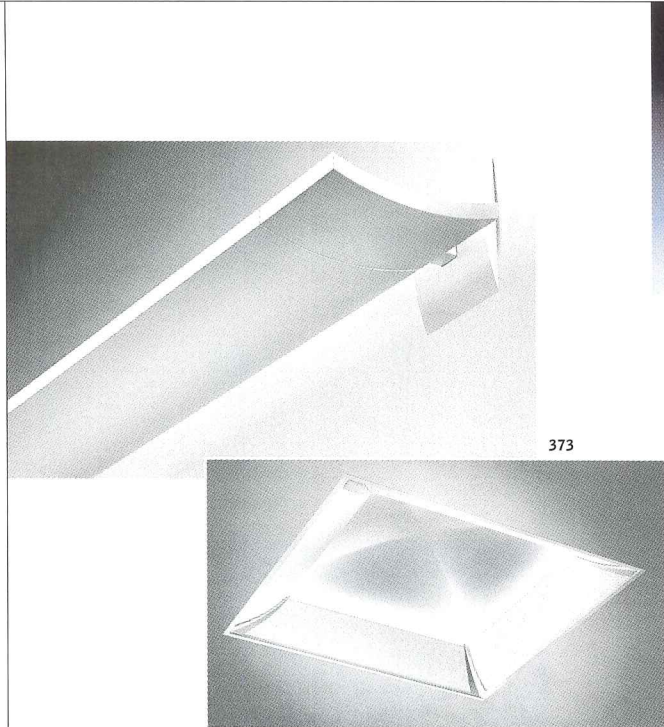
Integrated system

Designed by professional lighting designer Ron Harwood, the Smarthead track-lighting system combines projectors and spotlights with a wide range of lamping options and optical accessories. 714/957-6101. Targetti, Santa Ana, Calif.

CIRCLE 374

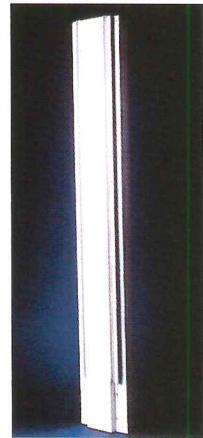
Surface element

The SLP4 recessed wall luminaire fits flush with interior walls and provides a vertical element of light using a single MR16 lamp or high-output LED color-changing light source. 800/663-2036. TIR Systems Ltd., Vancouver. **CIRCLE 375**



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Bending geometries

Named for the bendable nature of its track, Flex 12 is a low-voltage track-lighting system that offers a variety of geometric fixtures. 847/827-9880. Juno Lighting Inc., Des Plaines, Ill. **CIRCLE 376**

Emergency reliability

Suitable for indoors or outdoors, the Weathergard 626 emergency lighting is a low-profile fixture that includes a halogen spot in a durable polycarbonate shell. 203/575-2044. High-Lites Inc.,

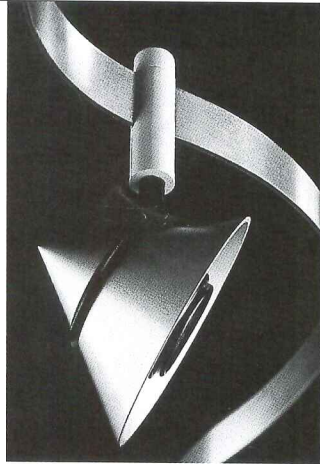
Waterbury, Conn. **CIRCLE 377**

Options expanded

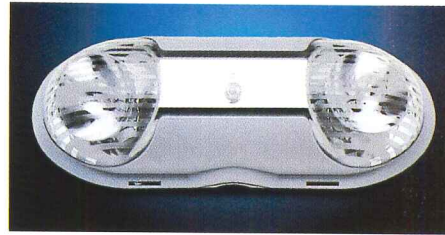
The newly expanded series of HID Multi-5 ballasts now includes metal-halide and high-pressure sodium designs in a range of wattage. 800/BALLAST. MagnaTek Lighting Products, Nashville. **CIRCLE 378**

Compact color

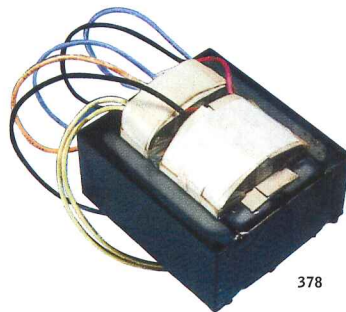
The EC2 is a compact and economical exterior wash luminaire with color mixing, programmable effects, and remote operation. 512/836-2242. Lightwave Research, Austin, Tex. **CIRCLE 379**



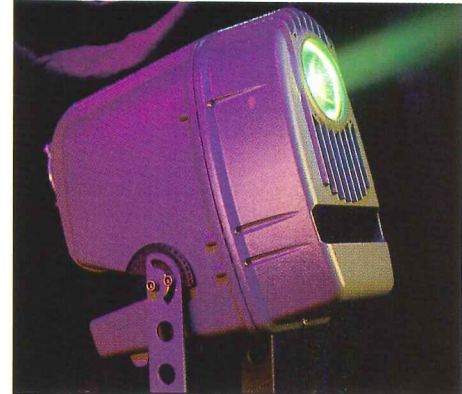
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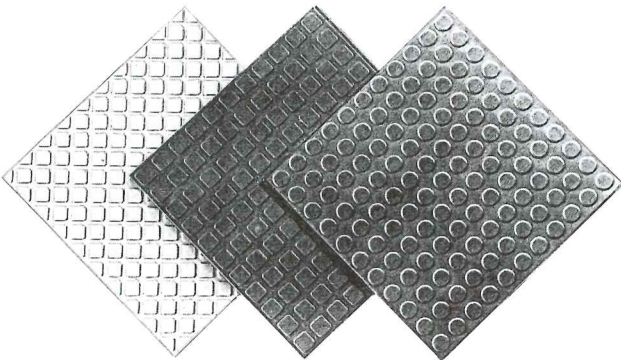
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DESIGN COMPETITION

UNITED STATES MARINE CORPS HERITAGE CENTER

The United States Marine Corps announces a juried Design Competition to select a team that will plan the museum component to the U. S. Marine Corps Heritage Center in Quantico, Virginia. The design team must have the vision and the commitment to make this an architecturally distinctive structure, the first phase of a planned campus of facilities.

The innovative, signature museum will herald the history of the United States through the eyes of Marines. A one hundred and thirty five acre parcel of land has been selected as the site. Located adjacent to Interstate 95, the United States Marine Corps Heritage Center is foreseen as a significant visitor's destination.

For competition information, log on to: usmcheritagecenter.efaches.navfac.navy.mil

CIRCLE 80 ON INQUIRY CARD



Dates & Events

Calendar

Skyscrapers: The New Millennium Chicago, Ill.

August 19–January 15, 2001
Sponsored by the Art Institute of Chicago, this exhibit examines more than 70 high-rises either recently completed or in construction. The exhibit includes the Jin Mao Building by SOM, the Sony Center by Helmut Jahn, and some of the latest green skyscrapers by Sir Norman Foster, Ken Yeang, and others. See www.artic.edu.

Wood: An American Tradition Washington, D.C.

September 9–April 22, 2001
The National Building Museum is hosting an exhibition exploring the important and varied role of wood in American architecture. For information call 202/272-2448 or see www.nbm.org.

Architect of Form and Spirit: Eric Mendelsohn in Saint Louis

September 17–March 10, 2001
A major exhibit highlighting the life and work of German architect Eric Mendelsohn, designer of COCA's current home, where the exhibit will be. Call 314/725-6555; or get more information on the Web at www.cocastl.org.

Edoardo Gellner and Carlo Scarpa: The Church of Core de Cadore Venice

October 5–December 22
This exhibition explores the history and relevance of the church and the village where it is located. Call 041/710025-2571012, write archiviogetti@iuav.it, or see <http://oberon.iuav.it>.

How Architecture of the '70s Shapes Buildings of Today Harvard and Cornell Universities

October 17–April 24, 2001
This lecture series includes Rem Koolhaas, Rafael Moneo, Jorge Silvetti, Sara Whiting, Alan Colquhoun, and Felicity Scott. Free of charge. Call 617/495-2337 or see www.gsd.harvard.edu/events.

Light, Life, Libeskind: A Look at the New Jewish Museum San Francisco

October 26–January 28, 2001
The Jewish Museum of San Francisco is presenting an exhibition of Libeskind's drawings, computer renderings, and models of its new facility. For information call 415/591-8800; or write info@jmsf.org.

Monuments, Mills and Missile Sites Washington, D.C.

October 26–April 29, 2001
This exhibit explores 30 years of the Historical American Engineering Record (HAER), which documents historically significant engineering and industrial works throughout the United States. At the National Building Museum, call 202/272-2448 or go to www.nbm.org

Art Is Work: A Milton Glaser Retrospective New York City

November 2–December 8
The largest retrospective ever held in New York on the work of this well-known American graphic designer. AIGA's Fifth Avenue gallery. 212/807-1990, www.aiga.org.

Jewels in the Crown: The Architecture of the Savannah Plan

Washington, D.C.
November 10–January 5, 2001
Savannah, Ga., is acclaimed as one of America's most vibrant small

cities. This exhibit illustrates the architectural and cultural approach taken in creating this successful urban experience. At the Octagon, call 202/626-7387.

Architectural Competitions in America

New York City

November 10–January 6, 2001
This traveling exhibition at two New York galleries reviews the legacy and utility of competitions as important historical phenomena resulting in some of the most significant built works. For information contact Jessica Lavin, 718/636-3517; jlavin@kmmwarch.com.

Architectural Competitions in America

Pratt Institute, Brooklyn

November 11–January 6, 2001
An analysis of the role of competitions in the evolution of American architecture, researched and curated by Tobias Guggenheimer, former professor in the School of Architecture. Contact 718/636-3517.

Flight Patterns

Los Angeles

November 12–February 11, 2001
This exhibit explores the landscape, urbanism, and relationship of cities to land in geographic areas of the Pacific Rim. At the Geffen Contemporary at MOCA. Contact 213/626-6222 or go to moca.org.

Downsview Park Design Competition Exhibit/Critique New York City

November 13–December 21
On display are models and drawings by finalists of this 320-acre park in Toronto; a forum of leading critics and commentators rounds out the program. The exhibit is at the Van Alen Institute. Contact 212/924-7000; www.vanalen.org.

Moguls and Monuments

November 14–May 15, 2001
The Municipal Art Society of New York presents this illustrated lecture series on how the superrich built four of New York City's great buildings. Lectures include the Guggenheim Museum (Nov. 14), the Woolworth Building (Jan. 23, 2001), the Chrysler Building (March 13, 2001), and Rockefeller Center (May 15, 2001). For information call 212/840-1840.

Dreams and Disillusion: Karel Teige and the Czech Avant-Garde

Miami Beach, Fla.

November 15–April 1, 2001
The Wolfsonian-Florida International University presents the first U.S. exhibition on Karel Teige, the graphic designer, architectural theorist, and important proponent of the European avant-garde. For information call 305/531-1001.

Cities in Motion Montreal

November 15–April 1, 2001
Three exhibitions united around the theme of cities illustrate how modern transportation systems have changed the fabric and scale of cities over the past century. At the Canadian Centre for Architecture, 514/939-7000; icloutier@cca.qc.ca.

AIA Students' Forum 2000 Conference Los Angeles

December 27–January 2, 2001
The AIA's annual conference provides students with the opportunity to learn about issues concerning architectural education and the profession. The conference includes speakers, lectures, tours, and seminars. For information, visit www.aiaforum2000.com or contact Ann Marie Teheny at amtaheny@aol.com.

Dates & Events

On the Job: Design and the American Office

Washington, D.C.

November 18–June 24, 2001

This major exhibition documents the American office as an architectural and social space, a dynamic environment whose significance extends beyond physical boundaries. National Building Museum. Call 202/272-2448 or see www.nbm.org.

The Future of Design

Toronto

January 18–21, 2001

A conference of design insight, provocative exhibitions, far-out features, and product launches by 300 stellar designers, manufacturers, and retailers. For more information, 416/599-8885 or see interiordesignshow.com.

How to Maximize Resources and Efficiency Through Internet Applications **Scottsdale, Arizona**

January 30–February 1, 2001

Hear the best practice studies on implementing

e-business initiatives from some of the leading construction, hardware, software, design, and supply firms. To view agenda or register online see www.iqpc.com/INHP-TT/construction, call Christiaan Hanson at 312/980-3410, or email christiaan.hanson@iqpc.com.

Cities in the Third Millennium **Melbourne, Australia**

February 26–March 2, 2001

The Sixth World Congress of the Council on Tall Buildings and Urban Habitat will feature more than 80 local and international speakers and a large exhibit. Call 613/9682 0244; or see www.icms.com.au/tbuh.

The Architecture of R.M. Schindler **MOCA at California Plaza, Los Angeles**

February 25–June 3, 2001

First major survey of this century's most innovative Vienna-born Modernist. For information call 213/626-6222 or see www.MOCA-LA.org

National Trust Study Tours

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Led by esteemed study leaders, local guides, and guest lecturers, this series of 85 tours under the auspices of the National Trust provides something for everyone. To receive a free copy of the 68-page guide, contact 800/944-6847 or tours@nthp.org.

Competitions

Competition for Community Centers of the Future

Deadline: December 13

The Danish Foundation for Culture and Sports Facilities invites entries for the design of community centers. The winner will be awarded a cash prize and the design of three community centers in Denmark. For information call +45-32-83-69-01, write konkurrencer@dal-aa.dk, or download information from the Web at www.dal-aa.dk.

Business Week/Arch Record Awards

Call for Entry: January 1, 2001

Look for the insert in RECORD'S January issue announcing this award for public and private projects completed anywhere since January 1, 1998. Visit www.aia.org; or www.archrecord.com or call toll free 888/242-4240; in the U.S. 202/626-7463.

The Rotch Traveling Scholarship

Application due: January 1, 2001

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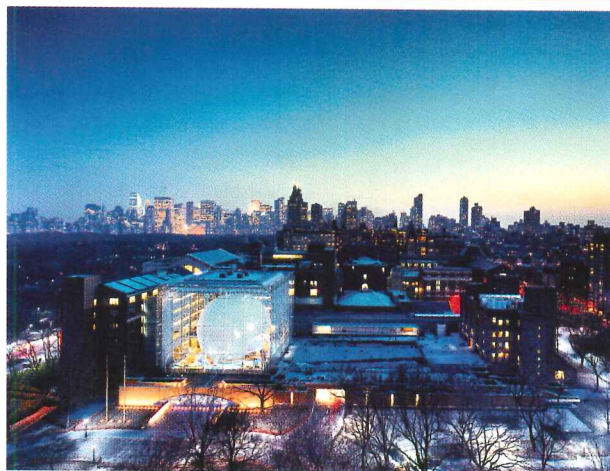
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The Rose Center for Earth and Space

Reading our coverage of the Rose Center is better than visiting the building itself: early design sketches, archival precedents, technological details, notes on the terrace, and an exclusive interview with architect James Stewart Polshek and his partners.

<http://www.architecturalrecord.com/PROJECTS/AUG00/ROSE/ROSE1.ASP>



Georges Restaurant

The simplicity of Georges, the new restaurant on top of Paris' Centre Pompidou, belies the computer process that created it. See a computer animation of the process that rendered these strange forms, photos of their construction, and meet one of the designers.

<http://www.architecturalrecord.com/PROJECTS/SEPT00/PEOPLE/GEORGES.ASP>



The New 42nd Street Studios

The Times Square area is defined by light and movement, and we inaugurate our new lighting section with a building that captures both light and movement. See two streaming videos of the changing theatrical lights on the façade of this rehearsal studio.

<http://www.architecturalrecord.com/LIGHTING/NOV00/PEOPLE/MILITELLO.ASP>



The South Carolina Aquarium

Architecturalrecord.com sets a new standard for showing a building project online with our innovative interactive floor plan. Click on arrows scattered on the plan, and see a photo of the view from that spot.

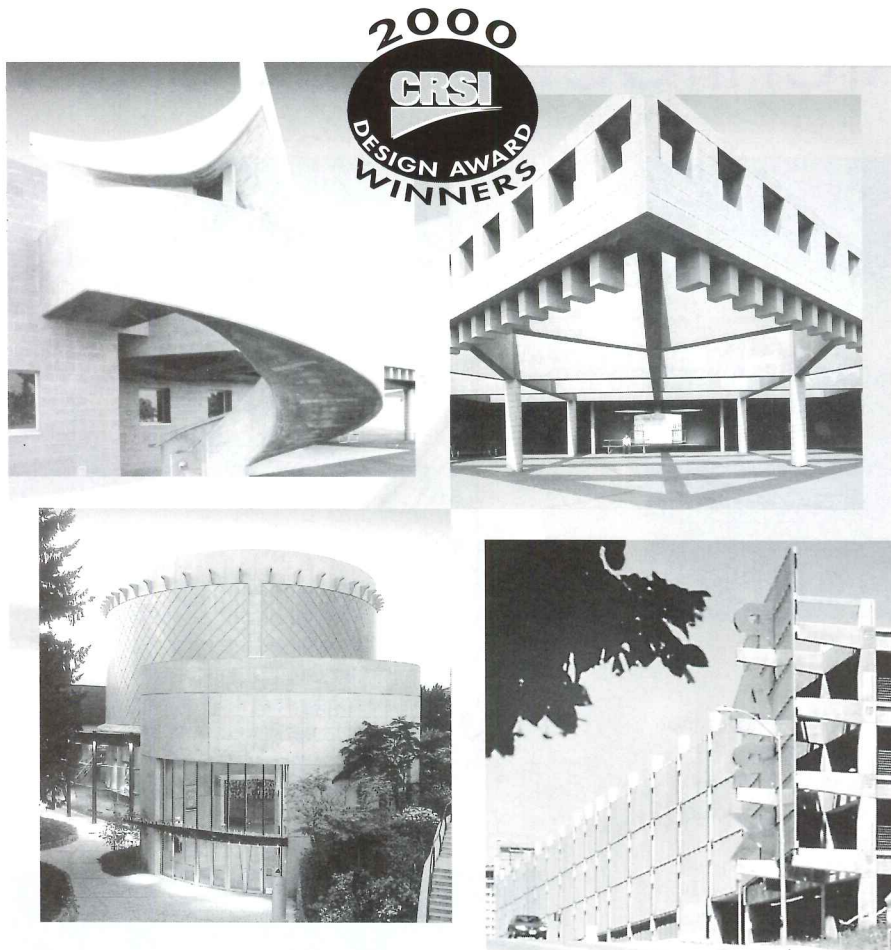
<http://www.architecturalrecord.com/PROJECTS/OCT00/AQUARIUM/AQUARIUM1.ASP>



The Business Week/ Architectural Record Awards

Each year, *Architectural Record*, *Business Week* and the American Institute of Architects present awards for business design. On Architecturalrecord.com, you will find not only information about and pictures of the ten winners, but also of 11 other finalists.

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Dates & Events

writing to: Rotch Travelling Scholarship, 52 Broad Street, Boston, Mass. 02109.

NEA's Grants for New Public Works

Deadline for letters of interest: January 11, 2001

As part of an effort to invest in projects that promote livable communities, the NEA will fund a limited number of design competitions to stimulate excellence in design in the public realm. Though NEA is especially interested in landscape design, competitions include architecture, planning, graphics, and industrial design. Call 202/682-5452 or go to www.arts.gov.

Competition for Seaside Landmark

Deadline for entries: January 23, 2001

The Town of Seaside and the Seaside Institute are sponsoring a competition to design a landmark to greet visitors and commemorate the 20th anniversary of the community's founding. This idea-based competition is open to architects who have designed buildings at Seaside in the past, talented young architects, students of architecture, and even homeowners and children. For entry forms call 850/231-2226, or see www.seasidefl.com.

The 11th Annual James Beard Foundation Awards

Deadline for restaurant and graphic design entries: January 31, 2001

The award honors culinary-related talent, including restaurant designers of projects in the United States and Canada. Entry forms and rules can be obtained by faxing or E-mailing requests to 212/627-1064/jbfmoller@pipeline.com or 212/645-3654/dpadmore@myoungcom.com. Forms can be downloaded from jamesbeard.org.

Dupont Benedictus and ACSA Student Design Competition

Deadline for registration: February 1, 2001

Deadline for receipt of entries: March 8, 2001

This year, DuPont and the Association of Collegiate Schools of Architecture (ACSA) present the challenge of designing a multipurpose entertainment retail facility, while exploring the uses of laminated glass. For further information see www.acsa-arch.org, call 202/785-2324 or E-mail hbatliboi@acsa-arch.org.

E-mail calendar events and competitions to ingrid_whitehead@mcgraw-hill.com at least two months ahead of event date.



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AIA/ARCHITECTURAL RECORD CONTINUING EDUCATION

ANSWERS

Questions appear on page 157. To receive CES credits, fill in the education reporting form below or on our Web site (www.architecturalrecord.com).

1. The conclusions were threefold: First, there is a security threat in both public and private sectors, although the threat is more defined in government facilities. Second, no building is truly secure because as security technology advances, so does terrorist technology. Third, it is best to use the security tools available because a more secure building is less likely to be targeted for terrorism.
2. The premise that the physical environment can be altered to reduce the incidence of crime is based on four elements: territoriality, natural surveillance, activity support, and access control. These designs create distance between buildings and streets, enhance lighting, and control the access of people into the buildings. Environmental design measures are usually effective only when the threat of massive destruction and loss of life is not present.
3. Personnel access can be controlled electronically by requiring a personal identification number, credentials such as an access card, or

biometrics to identify the individual requesting access.

4. The lobby is the focal point for access to a building. The number of security/reception desks must be kept to a minimum in order to maintain effective control and allow a natural flow of personnel. The security/reception desk should be equipped for a wide range of tasks, from providing visitor information to monitoring cameras and communication devices. For access security, the lobby must be the convergence point that all stairwells empty into, ensuring that no one can gain access to the facility without passing through the screening point.
5. Schools need to provide for security while maintaining an open and nurturing environment. To achieve these often contradictory goals, many schools are installing CCTV systems to record activities in key locations. Another important strategy is minimizing the number of entrances to the facility, making it easier to monitor incoming and outgoing traffic without forcing students to walk long distances to their classrooms. The most contentious issue in schools is keeping weapons out. Metal detectors are used in many schools, and this requires design to support the technology.



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"Maintaining Security in an Insecure World" [page 153]

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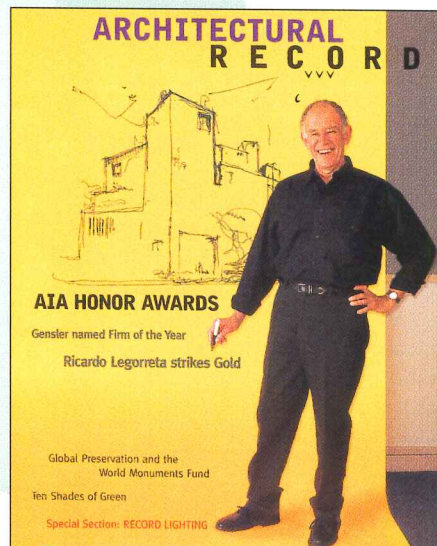
Send completed form to University of Oklahoma, Continuing Education, AIA/CES, Room B-4, 1700 Asp Avenue, Norman, OK 73072-6400; fax 405/325-6965. To respond by E-mail, visit www.architecturalrecord.com and click on Continuing Education. For more information, call 800/605-8229.

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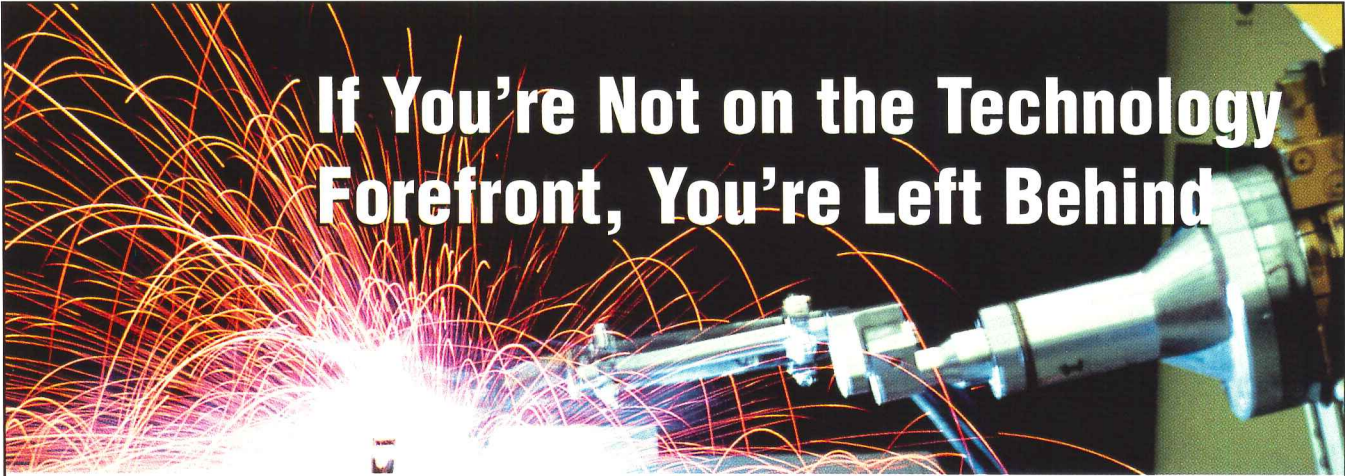
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- Elliott Masie, president, Masie Center—The Technology & Learning Think Tank, Saratoga Springs, NY

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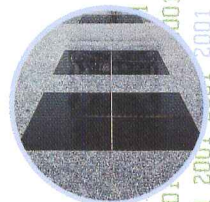


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ON THE FOLLOWING PAGES, ARCHITECTURAL
PRODUCT AND MATERIAL MANUFACTURERS
CELEBRATE AND SHARE THEIR PRODUCTS,
PLANS AND VISIONS FOR 2001 WITH
ARCHITECTURAL RECORD READERS.



JELD-WEN, inc.**IWP® AURORA™ AND ESTATE DOORS*****IWP Makes Another Grand Entrance***

Introducing Aurora™ doors from IWP® – beauty that is specifically engineered to withstand the harshest of elements. Wooden doors that have continual exposure to sun, rain, coastal salt spray, or extreme temperatures may require frequent maintenance. Although the look of wood is often preferred, these types of exposures to weather often make other materials a better choice for entryways. IWP created Aurora doors as a solid alternative for use in these harsh environments. Not only are these composite doors an excellent value, they are designed to reflect all the beauty, texture and weight of a premium hardwood door. Even better, they are virtually maintenance-free.

To create a realistic appearance of wood, Aurora doors begin with molds cast from IWP's finest hardwood doors. IWP then integrates their patented Strata™ Technology, a process in which multiple layers of resin, tints, base colors and reinforcing materials are permanently bonded to give the door the natural coloration of wood and an illusion of depth. Aurora doors are offered in three woodgrain textures: oak, mahogany and paint surface. Finished Aurora doors have the same silky feel – and the same weight – as wood, with a variety of sizes, styles and glass options to choose from.

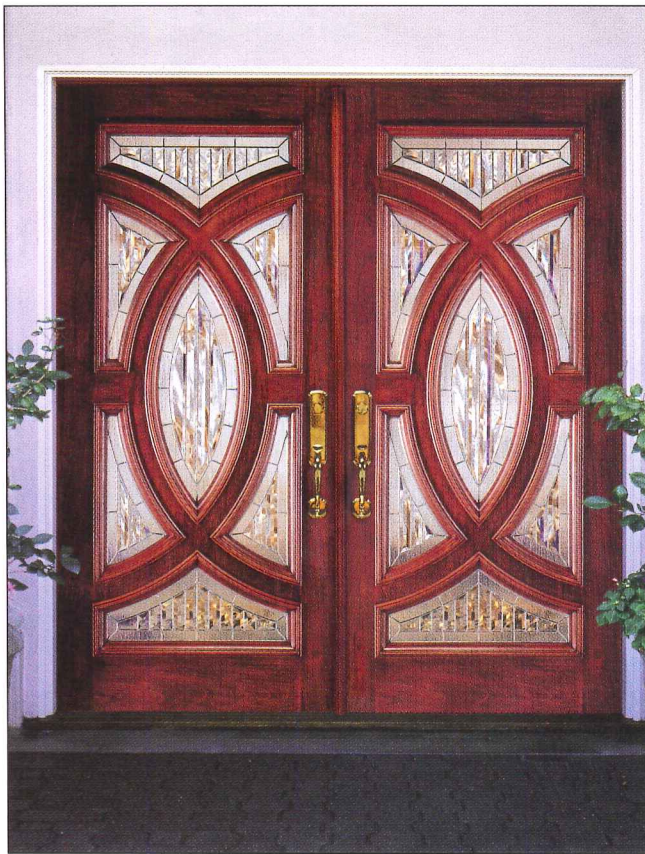
Aurora doors can be installed in virtually any location because their installation is made easy – Aurora doors come pre-hung and prefinished.

Handcrafted Passages of Time and Tradition

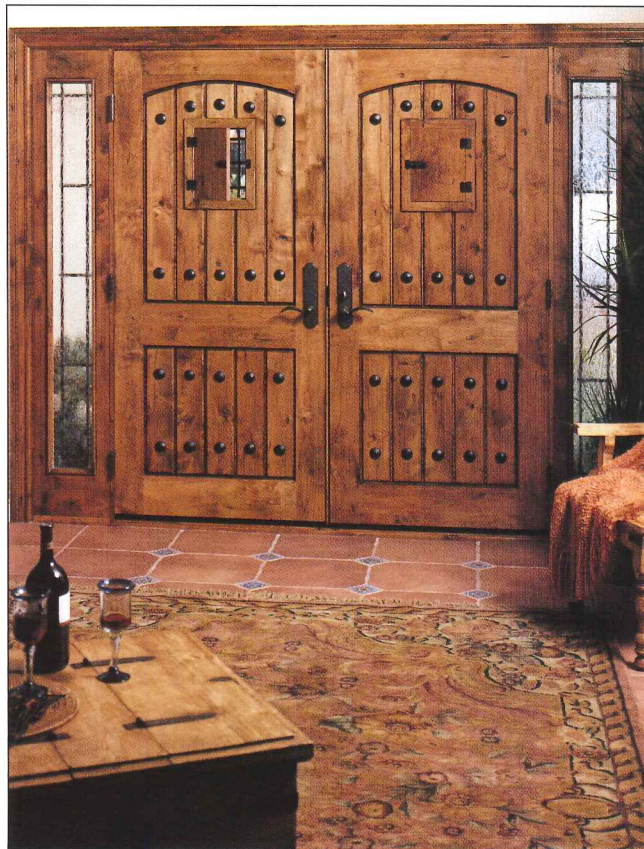
The esteemed IWP® Estate Door Collection™ provides homeowners with custom hardwood entry doors in various “old world” styles. This IWP collection provides homeowners with a wide array of custom entry doors, designed to complement a variety of home architectural styles ranging from Craftsmen and Tudor to Southwestern and Mediterranean.

This door line was designed with multiple options for mixing and matching – to complement all architectural designs. Each Estate door presents the customer with tremendous options: door shapes including flat, Gothic, segmented and radius tops are available. Customers can also choose a custom finish and one of twenty-three color options. Finish options include: smooth, heavy-textured wire brush, hand-hewn or a distressed finish, and each allows for maximum personalization of every custom door.

Every Estate door is hand-built from solid wood in either clear or knotty alder, and many styles are available with a choice of decorative door accents. Perfect complements to the handcrafted simplicity of each door, accent options include wrought iron door and sidelight grilles, speakeasy doors and oversized, decorative nails called clavos. These metal options are available in dark or rust patina and provide design-enhancing details that have been specially selected for the Estate Collection.



IWP Aurora Doors with Strata™ Technology.



IWP Estate Doors with old-world authenticity.



INTERNATIONAL
WOOD PRODUCTS®
Part of the JELD-WEN family

IWP

San Diego, California

Telephone: (800) 463-3667

www.iwpdoor.com

ARCHITECTURAL AREA LIGHTING

Architectural Area Lighting (AAL), a leading manufacturer of specification grade outdoor lighting for over 30 years, designs lighting products to complement the interior, exterior and landscape design of the site. AAL offers a series of solutions to fit any design specification. AAL products are noted for their strength, high quality and energy efficiency.

AAL's extensive line ranges from wall sconces to traditional fixtures and poles. AAL's contemporary line consists of the **Spectra**, **Universe Collection** and **Mitre**. The **Spectra** (shown on the right) offers the freedom to specify size, finish and optics to complement the design scheme. The **Spectra** is available as a pole or wall mount with a matching bollard to complete the line. The **Universe Collection** is a complete family of decorative, yet functional luminaires that transcend architectural styles past and present. Available in three sizes for pole or wall mount, the **Universe Collection** allows you to mix + match luminous elements, hood shapes and optical systems. The **Mitre's** classic geometric lines complement any architectural expressions of precision, structure and line. The **Mitre** is available for wall or pole mount with a matching bollard.

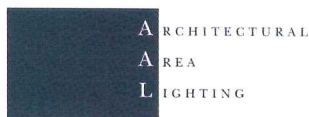
AAL's traditional fixtures enhance the attractiveness of streets, plazas, parks and pedestrian walking areas. The family of traditional fixtures include the **Promenade**, **Town Commons** and **Traditional Concrete Bollard**. These decorative fixtures have state of the art optical systems for unmatched lighting performance.

AAL's newly released fixtures include the **eSconce**, **Oculus** and **Steplights**. The **eSconce**, an exterior wall sconce, can transform an unwelcome but necessary object on the building's surface into an integral design element. Available as an up, down or up + down design, the eSconce offers multiple fascia panels and colored gels to accent the interior or exterior of the building. The **Oculus** precision floodlighting offers multiple beam patterns in one fixture. The **Oculus** fixture has a variety of options and mounting configurations. The **Steplights** are available with an array of fascia designs in aluminum or brass to accent your low-level environment. A composite back box insures longevity in poured concrete installations.

MOLDCAST, a subsidiary of Architectural Area Lighting, has manufactured high quality building mounted luminaires, bollards, historic and classic lighting fixtures for over 40 years. For 2000, MOLDCAST recently released a re-introduction of the MOLDCAST brand along with new products to the industry. The newly launch catalog is filled with nine product brochures and a CD ROM for quick and easy access to product brochures, specification sheets and installation instructions in PDF format.

New products for MOLDCAST include the redesign lens of the **MDL** (Multi-Distribution Luminaire), the Historic **Charleston ContraCline** and the Historic **Chesapeake Pericline**. The **MDL** new lens (shown on the right) is now high temperature acrylic instead of polycarbonate, which means the lens will not turn yellow from UV exposure to metal halide lamps or the sun. The new lens also has improved photometry performance with less surface brightness, which will decrease discomfort glare. The **Charleston ContraCline** combines the better of two worlds-rugged construction & cutting-edge, performing optics. The **Charleston ContraCline** includes three reflector light distribution types and is easy to service. The **Chesapeake Pericline** is reminiscent of the old 19th century English gas lanterns. The **Chesapeake's** dual reflector optical system has four types of light distributions for precise illumination.

In addition to the new binder and new product designs, MOLDCAST web site is now live! This web site includes new product updates, upcoming events, brochure downloads, sales locator and more!

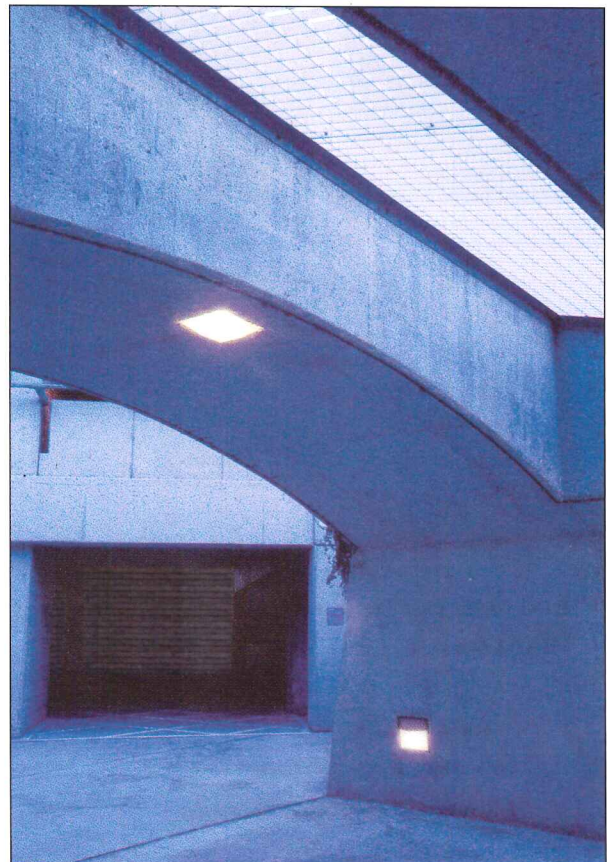


For more information, contact:

Architectural Area Lighting (AAL)
1429 Artesia Blvd. / P.O. Box 1869
La Mirada, CA 90638-1869
Telephone: (714) 994-2700
Fax: (714) 994-0522
www.aal.net / www.moldcast.com



Spectra Series



MDL (Multi-Distribution Luminaire) Series

BPB Celotex

FOR WALLS. FOR CEILINGS. FOR ANSWERS.

Functionality and flexibility are just two of BPB Celotex' strong points in supplying design professionals with distinctive acoustical ceiling and wall solutions for interior and exterior applications.

FOR WALLS

For decades, BPB Celotex has been delivering high-quality gypsum boards that stand uniformly flat with no shadows. The uniform high-edge hardness assures that boards arrive and remain square with no wavy edges, warps, bows or deformities in shipping or installation. Uniform edge tapers are consistently calipered to form perfect joints. Uniform high-strength cores eliminate any crumbling or wide-area cracking.

BPB Celotex produces board for a wide variety of applications:

- **Fi-Rok® Gypsum Board** – Interior gypsum board that has a specially formulated core for use in fire-resistance rated designs.
- **Regular Bath Backer Resistive Wallboard** – Water resistive gypsum board used behind tiles in wet areas such as bathrooms, laundry and utility rooms, and kitchens.
- **Regular Gypsum Sheathing** – A water-resistant gypsum sheathing for application to the outside of building framing members. Serves as the base for exterior walls.
- **Exterior Gypsum Soffit Board** – For exterior soffits and carport ceilings that are completely protected from contact with water.
- **Interior Ceiling Gypsum Board** – For use on interior ceilings where framing is spaced up to 24".

FOR CEILINGS

The BPB Celotex Series of premium high-performance acoustical ceilings and interior products includes mineral ceilings, gypsum ceilings, fiberglass ceilings, composite ceiling panels and high-performance wall panels. Whether your design requirements are aesthetic beauty, acoustical performance, durability... BPB Celotex can deliver a wide variety of solutions. Featured here are three of our most popular ceiling products:

Cashmere® Acoustical Ceilings: The Cashmere acoustical ceiling is a classical system featuring reliability and style. It features lightly-textured fine-fabric appearance and factory-applied vinyl latex paint and many are offered with a 10-year limited warranty against visible sag in conditions up to 104°F and 90% relative humidity. Cashmere ceilings are available in a full selection of sizes, colors and edge details. Cashmere ceilings also include exceptional sound absorption, Protectone® products for UL fire resistance time-rated assemblies, light reflectance values of .80 and greater and are warranted against visible sag.

Additionally, the Invisigrille™ Integrated Speaker Panels system is an attractive option for the Cashmere acoustical ceiling. An industry innovation, Invisigrille ends obstructive metal and plastic grills, comes with factory-painted fabric to conceal speaker openings and is available with comparable Cashmere ceiling textures.

School Board™ Acoustical Ceiling Panels: School Board™ acoustical ceiling panels will significantly reduce maintenance and replacement costs. This ceiling has all the exceptional qualities of a traditional BPB Celotex acoustical ceiling, including excellent sag resistance, light reflectance, acoustical properties and highly decorative designs. Furthermore, the School Board ceiling incorporates a new impact-resistant coating making it one of the toughest ceiling boards in the industry today.

The School Board acoustical ceiling also offers design flexibility and resistance to high temperatures and humidity. It boasts up to a 25 percent increase in durability (as per ASTM C367 impact test) making it the intelligent choice for school building retrofits and new constructions. The School Board product is treated with a revolutionary acrylic polymer sprayed-on coating providing more durability while making it more impact-resistant.

School Board comes with a ten-year 104/90 limited warranty against visible sag. Withstanding combined effects of temperatures to 104°F (40°C) and relative humidity up to 90 percent, the School Board maintains its aesthetic and decorative design.

Ultra 90+® Acoustical Ceilings: The Ultra 90+ acoustical ceiling combines all of BPB Celotex' best features into one reliable product. Ultra 90+ features the UltraGuard™ scratch-resistant finish, ultra-high light reflectance and is available in a wide variety of edge details and colors as well as in specific UL-Classified time-rated assemblies.

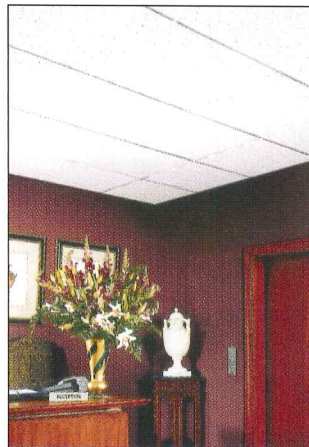
The Ultra 90+ acoustical ceiling comes with a 10-year limited warranty that protects against nicks and scratches, chipping and flaking, and punctures and indentations. Additionally, this product also carries a 10-year limited warranty against visible sag up to 104°F (40°C) and relative humidity up to 90 percent. Ultra 90+ ceiling panels cut and trim like a dream and have foil-backing as a standard feature.



School Board™ acoustical ceiling panels will significantly reduce maintenance and replacement costs.



Cashmere® acoustical ceilings are a classical system featuring reliability and style.



The Ultra 90+ acoustical ceiling combines all of the best features into one reliable product.



For more information, contact:

BPB Celotex / Corporate Headquarters

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Tampa, FL 33607-1766

Telephone: (800) CELOTEX

Toll-free Fax: (866) 427-0287

www.bpb-celotex.com

ANCOR

Ancor Granite Tile offers a complete variety of modular granite products for interior and exterior use including floor and wall tile, flamed pavers, and exterior panels for cladding.

...Granite... classic elegance that endures for function, ease of maintenance and prestige no other material comes close... from the specialists at ANCOR... expertise that means quality and consistency in product and service. In every way, the most desirable of materials, and the ultimate choice of more and more architects, specifiers and owners who seek true long term value whether the application be residential, commercial or institutional. As well, this is flooring that stands up to the heavy traffic of shopping malls, airports and other commercial facilities.

AFFORDABLE BEAUTY

You no longer have to compromise the scope and beauty of your floor plans when you select ANCOR Granite Tile. Our specialization is the key to your success; our volume production creates efficiencies which translate into cost savings for you. We produce in North America, close to our sources of material and near you. All part of why our prices are so attractive.

VERSATILITY

ANCOR has the versatility and range to allow you the design freedom you seek. We have the colours, sizes and finishes to match your imagination and application: choose from over seventy North American and imported granites, in standard 12" x 12" x 3/8" tile, up to 18" x 18" x 1/2", and sizes in between. In accordance with your requirements, subject to certain minimums and production efficiencies, special custom order sizes can be produced as needed.

We have a finish for every environment: polished for walls, bases and accents, honed for commercial, high traffic applications, sandblasted or flamed for increased slip resistance on inclines and entrance ways or for exterior applications.

RELIABLE QUALITY

You can rest assured when you buy from the specialists at ANCOR.

Our innovative dual production line system keeps our high volume output going which translates to less down-time, reliable deliveries that are on time, and fast, flexible responses to your special requirements. It is just one way we work smarter to maintain consistent quality and prompt, responsive client service.

Standard sizes and finishes are nearly always in stock, ready to for delivery.

EASY CARE, NATURALLY

Unlike the host of flooring products on the market that attempt to imitate the look of natural stone, none can match the prestige and low-maintenance durability of ANCOR Granite Tile. Our tile is solid granite, not a cement or resin agglomerate, glazed tile, or soft stone that may chip, spall, fade or alter with time and the elements.

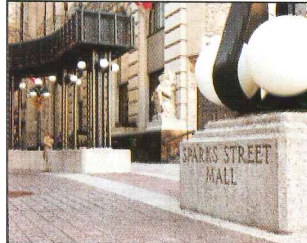
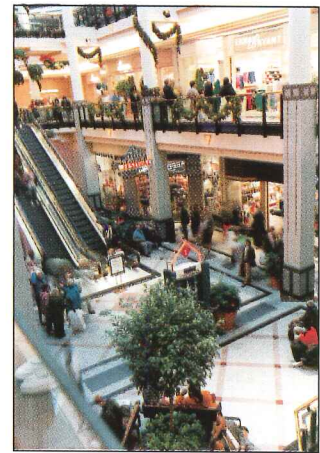
Under normal conditions, water rinsing or cleaning with mild soap and rinsing is all the care that is required. There is no need for the never ending cycle of sealing, waxing and stripping.

ANCOR Granite Tile Inc. is ISO 9002 certified and is a member of the Marble Institute of America, the Canadian Stone Association, and the Terrazzo Tile and Marble Association of Canada.

All Ancor granites exceed minimum requirements as set forth by the American Society for Testing and Materials (ASTM) under designation C615-85.

We would be pleased to direct you to one of our local distributors or provide you samples and brochures as appropriate; please do not hesitate to inquire.

Our samplebook contains small samples of thirty-two of our more popular materials. Individual samples of specific materials in the various finishes are normally supplied in a 4" x 6" (13 x 19cm) format, although full size samples are available as appropriate.



ANCOR
GRANITE TILE • TUILE DE GRANITE

For more information, contact:

Ancor Granite Tile, Inc.

435 de Port Royal West

Montreal, Quebec, Canada H3L 2C3

Telephone: (514) 385-9366

Fax: (514) 382-3533

Email: webmaster@ancor.ca

www.ancor.ca

Claude Paquette

Sales Manager

LIGHTING CORPORATION OF AMERICA

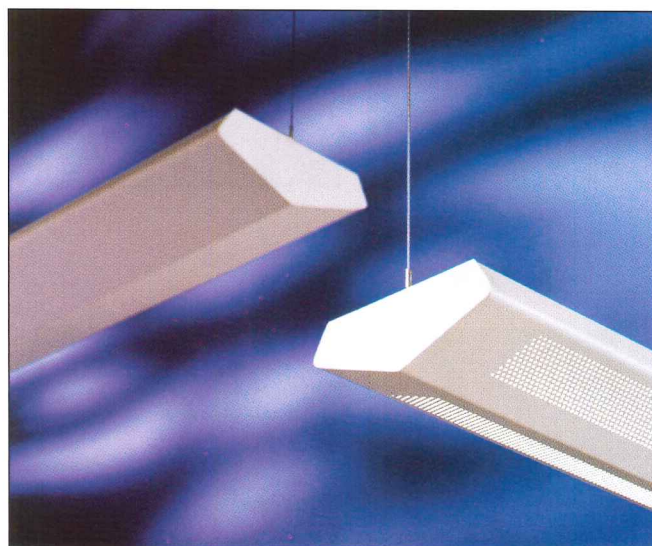
Lighting Corporation of America (LCA) proudly announced the formation of an exciting new company this year. Alera Lighting, which was formed around the core of Columbia Lighting's architectural lighting line, has a 20-year history of supplying unique direct, indirect, and direct/indirect linear lighting systems. Designed for office, education, and institutional environments, these quality lighting systems continually deliver the latest technology in glare-free, comfortable lighting.

As part of a renewed focus on the rapidly growing linear fluorescent market, Alera Lighting introduced several innovative new products in the year 2000. Lexim and Maxim brought T5 HO technology to Alera's indirect and direct/indirect product lines. Alera recently took high-tech lighting in a new direction with Quest and IndiQuest, contemporary and sophisticated luminaires for high-end applications.

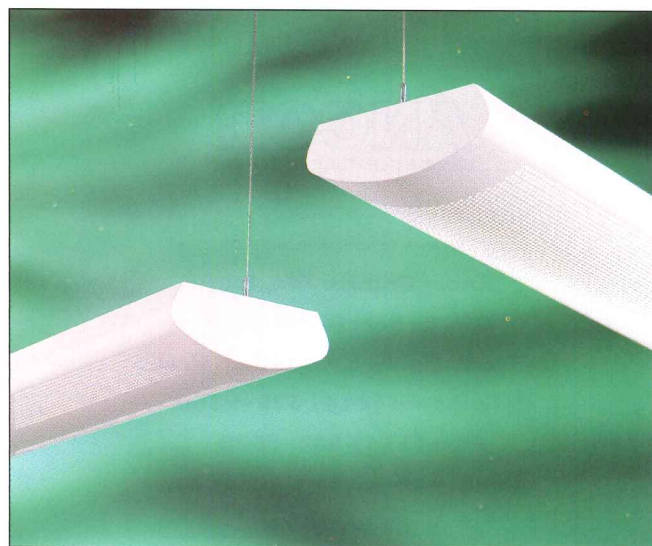
Alera Lighting maintains its manufacturing and administrative functions in Spokane, Washington. Alera products are represented throughout the U.S. and Canada by a network of independent sales representatives.



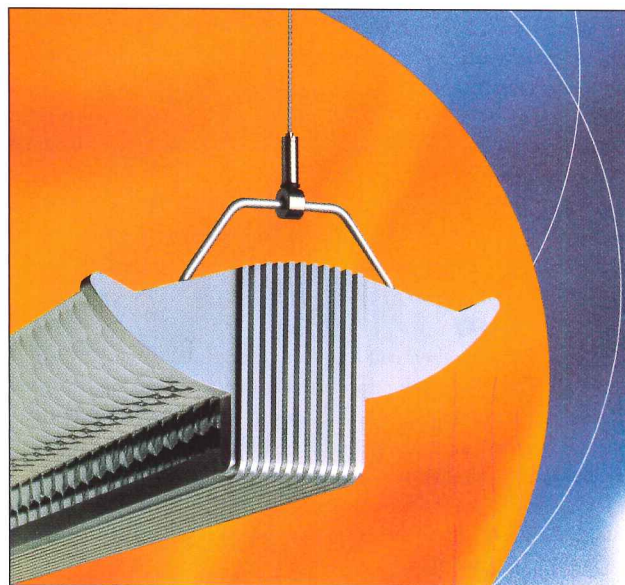
Quest



Maxim



Lexim



IndiQuest



For more information, contact:

Alera Lighting
3808 N. Sullivan Road
Bldg. 29
Spokane, WA 99216
Telephone: (509) 921-8300
Fax: (509) 921-8360
www.aleralighting.com

A/D FIRE PROTECTION SYSTEMS

Passive Fire Protection Specialists

A/D Fire Protection Systems is a privately owned company headquartered in Toronto, Ontario. A/D specializes in developing and manufacturing passive fire protection products for the construction industry. Those products include firestopping materials and sprayed fire resistive materials (fireproofing) for structural steel and concrete. The company's Quality Management Statement was registered in accordance with ISO 9001 in November 1998. An achievement they are proud of considering the company's Mission statement reads "our goal is to cost effectively manufacture passive fire protection materials that meet or exceed regulatory requirements and the expectations of our customers." The company is committed to a very active research and development program. This commitment has led to the development of innovative products and has enabled A/D to develop unique expertise related to firestopping products and fire protection for structural steel. A/D has technical sales offices across Canada and the USA.

Fireproofing products protect the structural elements of buildings from fire and delay the occurrence of critical temperature where the load carrying capacity of the structure would be comprised. A/D manufactures conventional sprayed fibre and cementitious fire resistive materials as well as thin-film intumescent coatings. A/D's sprayed fire resistive materials are:

- A/D FIREFILM®II • A/D TYPE 5 • A/D 1XR
- A/D TYPE FP • A/D TYPE 7

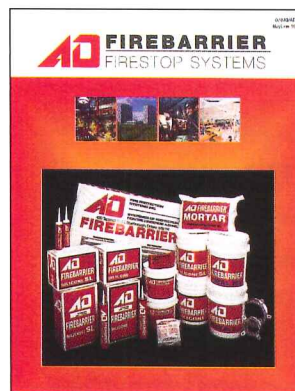
A/D FIREFILM®II is the industry's leader when it comes to decorative, thin film intumescent fire resistive coatings. It is an aesthetic fire resistive coating for structural steel that provides fire resistance ratings up to 3 hours. It allows the designer to express the structure as an art form at interior locations in buildings where fire resistance ratings are required. In a fire, it softens and expands to form a meringue-like layer up to 4in. (100mm) thick which insulates the structural steel from fire. The second component of the system, the decorative topcoat, A/D COLORCOAT®, acts as a protective layer and serves as the attractive colorful finish.

Firestopping is required by building codes to seal openings for building services when they penetrate fire rated walls and floors. Firestopping also aids in preventing the transmission of toxic fumes and gases from one compartment to another. A/D manufactures a complete system of firestopping materials all listed by ULC, ULI, WHI and/or FM. The A/D FIREBARRIER line of firestopping products consists of:

- A/D FIREBARRIER Mineral Wool
- A/D FIREBARRIER Silicone and Silicone SL
- A/D FIREBARRIER Seal and Seal NS
- A/D FIREBARRIER Mortar

New products include:

- A/D FIREBARRIER Pillows
- A/D FIREBARRIER Collars
- A/D FIREBARRIER Intumescent Caulk



AD FIRE PROTECTION SYSTEMS

For more information about any of our products, call toll-free or visit our web site:

A/D FIRE PROTECTION SYSTEMS

420 Tapscott Road, Unit 5

Scarborough, Ontario M1B 1Y4

Telephone: (800) 263-4087

Fax: (416) 298-5887

Email: mail@adfire.com

www.adfire.com



The David Geffen Foundation Building
Beverly Hills, California / Architects: Gwathmey Sigel & Associate Architects

Photo: Tom Bonner



Bright Side Residence
Vancouver, British Columbia / Architect: Bill Pechet

RHEINZINK

RHEINZINK has been in business for more than thirty years with the worlds largest zinc mill producing and distributing its products worldwide. A bright rolled finish and a "preweathered" quality as well as a complete roof drainage system are available in both finishes.

RHEINZINK's alloy contains small amounts of copper and titanium. Developed for the special requirements of today's construction sector, the material has been used and approved on numerous projects. Durability, longevity, low maintenance and an elegant, aesthetically pleasing appearance are qualities that make RHEINZINK® an ideal building product.

An extraordinary commitment to quality is the basis for international acknowledgements of RHEINZINK's roof, façade and drainage systems.

The QUALITY ZINC symbol (Test No. 424-030012) awarded by TÜV Rheinland (Association of Technical Inspectors) as well as certification as per EN ISO 9001 reiterates RHEINZINK's commitment to quality and reinforces an international reputation for quality. Furthermore the material is certified as environmentally proofed building product (No. of certificate Z.RHE199).

With RHEINZINK façade systems, visions become reality. Whether for office buildings, the commercial and industrial sectors, or refurbishment projects, RHEINZINK has the right system for virtually any application. RHEINZINK façade systems not only offer maximum flexibility in styling and architectural design but feature excellent working properties and the latest state of the art in façade engineering. RHEINZINK turns your façades into a business card for architecture.

For perfect realization of extraordinary construction plans, we have our consulting service of RHEINZINK. Worldwide more than 50 engineers support the architects' and craftsmen's work. We supply literature with details and specifications for virtually every application. Our recommendations are also available in hard copy and in AutoCAD® files.



RHEINZINK

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Fax: (604) 291-1343

Email: rheinzink@rheinzink.ca

www.rheinzink.com

TECTUM

TECTUM Performance Products

For more than five decades, the commercial and institutional design and construction industry has depended on the unique acoustical panels made by Tectum Inc. whenever the need arose for acoustical wall and ceiling treatment that would also stand abuse, is easy to work and install, provides an attractive finish when left natural or painted, and is very cost effective in any interior and many exterior applications. These Tectum performance products have stood the test of time.

Today, in keeping with current design trends, sophisticated acoustical needs and insulation requirements, Tectum Inc. has developed new products using the standard Tectum panel in conjunction with other materials to provide a different look and/or enhanced characteristics.

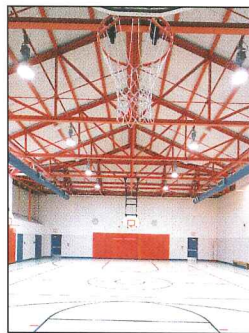
Along with recent uses of standard Tectum acoustical panels, some of these enhanced products are pictured here, showing the practical and imaginative ways architects, designers, contractors and building owners are specifying their usage in today's public, private and educational construction.

With products such as fabric wrapped wall panel systems and decor panels, several types of composite roof deck systems and the abuse resistant Acoustical-Tough™ lifetime warranted ceiling panel system, Tectum Inc. offers a broad line of specialty acoustical building products to meet almost any commercial or institutional need.

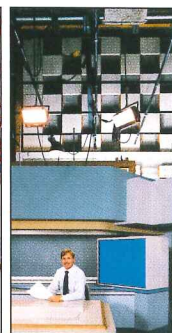
We offer our experience, along with this full line of proven performance products, to help you satisfy your design requirements in a timely and economical manner.

Environmental Statement / Green Architecture

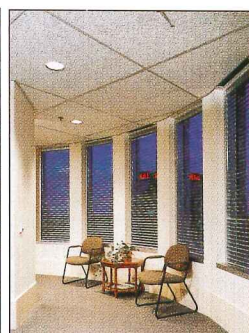
Tectum panels are made from sustainable raw materials. The wood excelsior is from new growth that reaches maturity in 25-30 years. The primary source of magnesium oxide used in the binder is sea water. The silicate used in the secondary binder is made from sand. Tectum Inc. recovers waste magnesium and recycles water during the manufacturing process. The recovered magnesium waste is used in the manufacturing of magnesium sulfate, a primary ingredient in the binder. These recent programs have been successful in reducing the water consumed and reducing the magnesium requirement for the manufacture of magnesium sulfate. Tectum products continue to meet the need of owners, architects and engineers who require green building products.



Tectum Roof Deck



Tectum Sound Blocks



Tectum Ceiling Panels



For more information, contact:

TECTUM, Inc.
P.O. Box 3002
Newark, Ohio 43058-3002
Telephone: (888) 977-9691
Fax: (800) 832-8869
Email: aird@tectum.com
www.tectum.com

MAXXON

Acousti-Mat® II The Ultimate Sound Deadening, UL Listed System

Maxxon is the pioneer and leader in the underlayments industry, with over 2 billion square feet of underlayments installed in apartments, commercial buildings and homes worldwide. From the original Gyp-Crete, Floor Underlayment, the Maxxon line has expanded to include:

- **Five high-strength floor underlayments**, designed for everything from capping large commercial projects to delivering the heat in radiant floor heating systems Gyp-Crete, Gyp-Crete 2000, Therma-Floor, Dura-Cap, and Commercial Topping.
- **Rapid Floor Systems Underlayments.**
- **The Level-Right, family of cementitious, self-leveling underlayments, and**
- **Acousti-Mat II, a high-performance sound control system for wood-frame and concrete construction applications.**

Maxxon stresses quality in all its products and services. With a program that attracts only the most qualified applicators, quality is continually monitored through audits, product sampling and compressive-strength testing.

New Acousti-Mat® II, The Superior Sound Control System

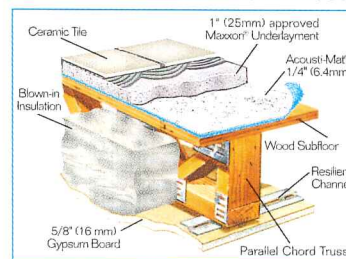
A breakthrough in sound control technology, Acousti-Mat II is the cost-effective solution to "noise" complaints, even with ceramic and wood floors. Its core of fused entangle filaments, attached to a non-woven fabric, creates a void area between the subfloor and a high-strength Maxxon underlayment. The Acousti-Mat II® system isolates sound waves, reducing transmission of impact and airborne sound up to 75 percent. It also provides enhanced fire control, as proven in over 50 UL Fire Rated Designs. And it's backed with sound tests by ICBO- and NVLAP-accredited laboratories.

For a solution to those "noise" complaints, specify Acousti-Mat II:

- **Increases IIC up to 20 rating points over concrete, 10 rating points over wood frame**
- **Low profile system**
- **Economical**
- **Documented sound tests**
- **Over 50 UL Fire Rated Designs**
- **Engineered by Enka**
- **From Maxxon Corporation, the floor specialists.**

To add the superior sound control of Acousti-Mat II to your next project, contact us today. We'll provide specifications, technical data, and sound test reports. Order on-line at www.maxxon.com/am2/ or call (800) 356-7887.

ACOUSTI-MAT II OVER PARALLEL CHORD TRUSS

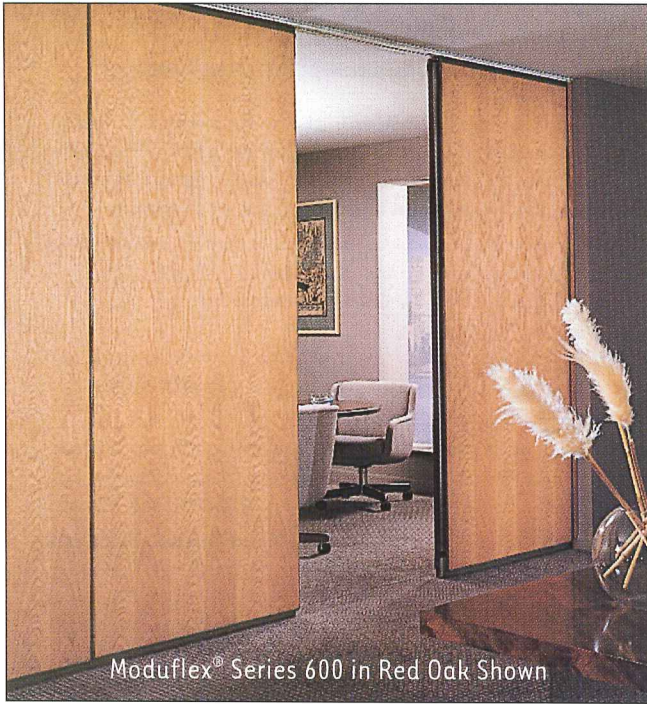


For more information, contact:

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Hamel, MN 55340
Telephone: (763) 478-9600
(800) 356-7887
Fax: (763) 478-2431
Email: info@maxxon.com
www.maxxon.com



READER SERVICE NUMBER 109



Moduflex® Series 600 in Red Oak Shown

Panelfold®

FOLDING DOORS • ACOUSTICAL FOLDING PARTITIONS • ACOUSTICAL PANELS
OPERABLE WALLS • RELOCATABLE WALLS

Headquarters and Factory

10700 N.W. 36th Ave.

Miami, FL 33167-9907

Phone: (305) 688-3501

www.panelfold.com



Fax: (305) 688-0185

Email: sales@panelfold.com

THE HISTORY OF PANELFOLD

Now in its fifth decade, Panelfold has long been recognized as the innovative leader in the folding door, acoustical accordion folding partition and the operable and relocatable wall industry. Established in 1953, the company has progressed from its first small factory to a 140,000 square foot modern facility in suburban Miami, Florida, U.S.A. and has been a major employer in Miami's multi-cultural community.

Guy E. Dixon, the company's founder, applied for the first patent on a wood folding door, and is generally recognized as its inventor. That original wood folding door was the prototype for Panelfold's extensive line of folding partitions including the popular Scale/4®, Scale/6®, Scale/8®, and Scale/12®, models and the Sonicwal® acoustically rated partitions. Criterion®, the multi-use PVC door, was introduced in 1972 and, in 1987, with the addition of Fabricwal®, Panelfold entered the traditional fabric folding door market.

Moduflex® operable walls and PrimeSpacer® relocatable walls were first introduced to the Panelfold line in 1972. The development of the Moduflex® line with both steel constructed and general purpose panels, available for many widths, heights and configurations, enabled Panelfold to complete its capability of providing the total spectrum of space-dividing products for the ever expanding needs of the residential and commercial construction and remodeling industries.

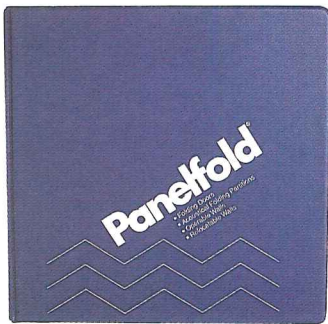
Panelfold products are available in a variety of colors, textures, wood veneers, decorative laminates and work surfaces, meeting the highest criteria of design specifications.

Panelfold products are distributed nationally by installing contract companies and residential distributors in every major market area.

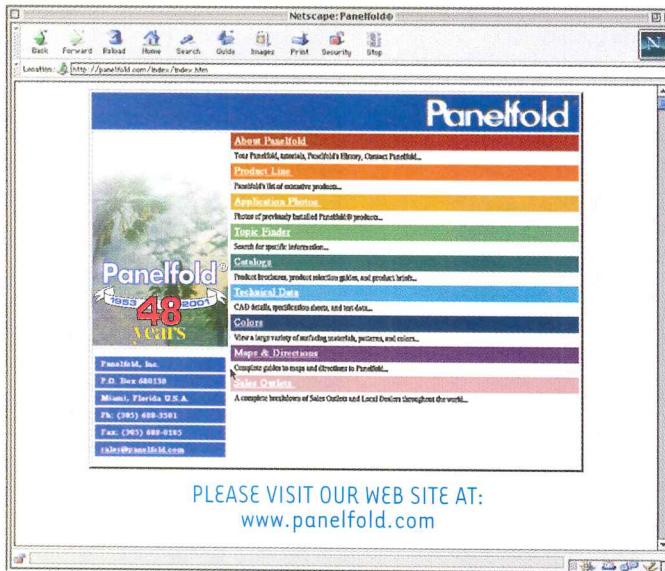
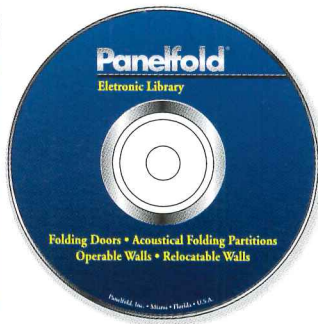
With a growing network of licensed manufacturers and distributors in over 54 countries, Panelfold is now represented globally and has major installations on every continent. Panelfold has been awarded the "E Star" Award by the U.S. Department of Commerce for excellence in exports.

Still owned and managed by the Dixon family, Panelfold remains committed to excellence in the design and production of folding doors and partitions and operable and relocatable walls into the twenty-first century.

Architectural Products Manual



Panelfold Electronic Library Version 3.1 on CD-ROM



ARCHITECTURAL RECORD CALL FOR ENTRIES

Record Interiors 2001

The editors of ARCHITECTURAL RECORD announce the annual RECORD INTERIORS awards program. This program is open to any registered architect; work previously published in other U.S. national design magazines is disqualified. Of particular interest are projects that incorporate innovations in program, building technology, and use of materials. The entry fee is \$50 per submission; please make checks payable to ARCHITECTURAL RECORD. Entries must also include plan(s), photographs (transparencies, slides, or prints), this entry form, and a brief project description, all firmly bound in an 8 1/2-by-11-inch folder—postmarked no later than April 29, 2001. Anonymity is not required. Winning entries will be featured in the 2001 RECORD INTERIORS. Other submissions will be returned or scheduled for a future issue. Please include a self-addressed envelope with the appropriate postage, and allow 10 weeks for return.

Name of firm: _____

Address: _____

Phone: _____

Fax: _____

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Contact person: _____

Name of project: _____

Location of project: _____

Type of project (i.e. residential, restaurant, retail, etc.): _____

Agreement: We will not offer this project for consideration by another national design magazine during the 10-week review period at ARCHITECTURAL RECORD.

Signature: _____ **Date:** _____

Print name: _____

Please mail submissions to:
Sarah Amelar • RECORD INTERIORS • ARCHITECTURAL RECORD
Two Penn Plaza • Ninth Floor • New York, NY 10121

This form must be included with your entry. If you have any questions, please
E-mail Sarah Amelar at sarah_amelar@mcgraw-hill.com

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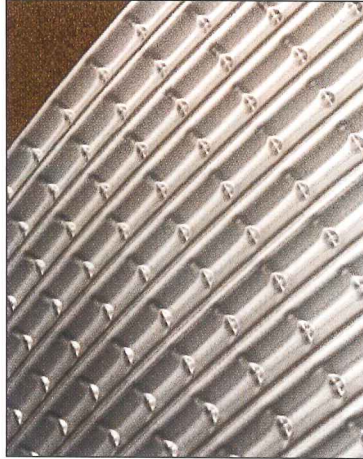
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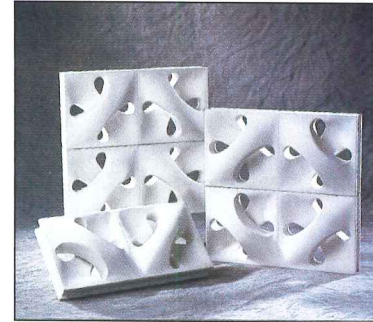


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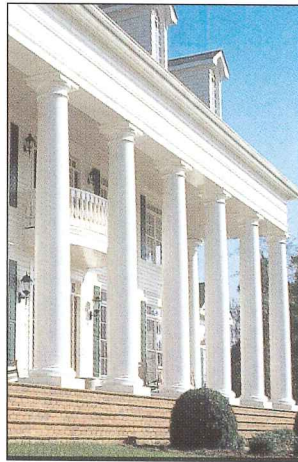


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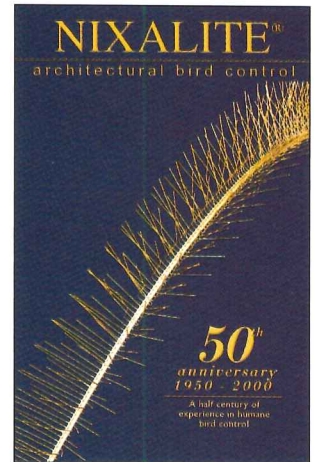


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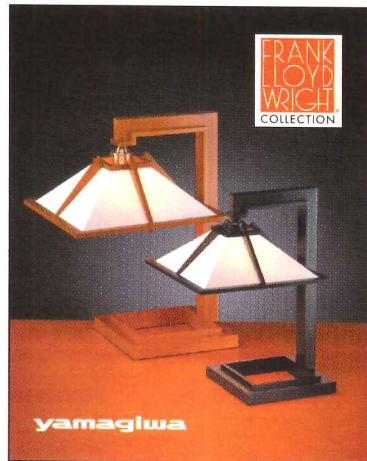


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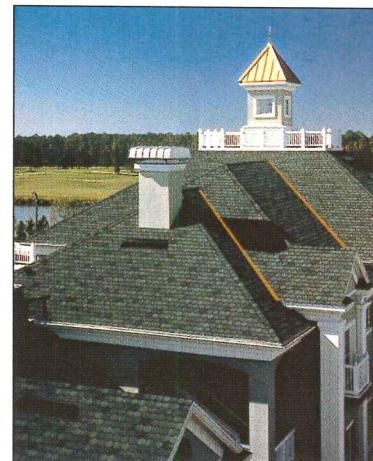


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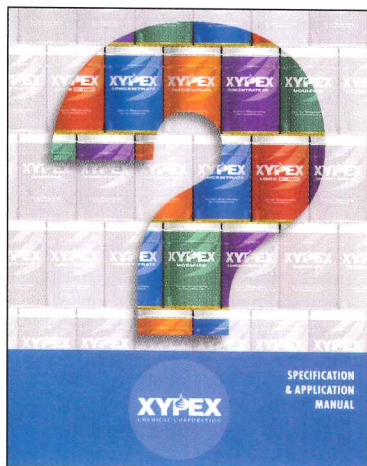


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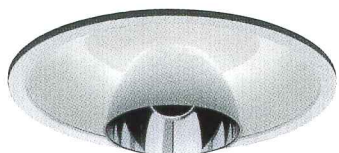


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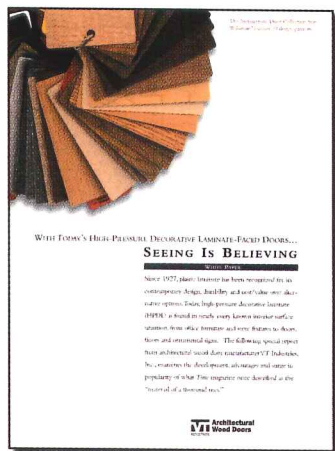


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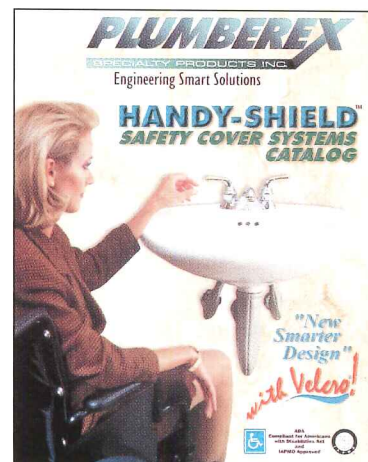


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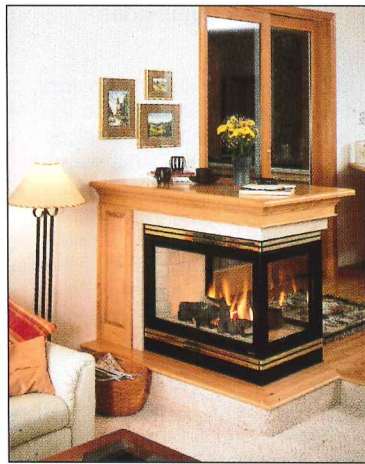


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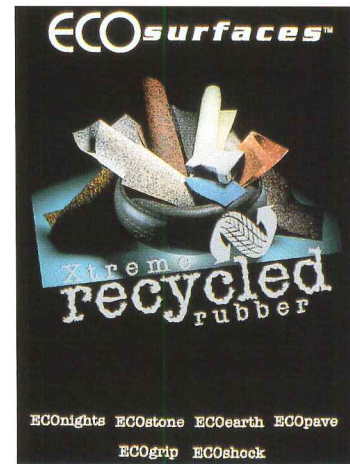


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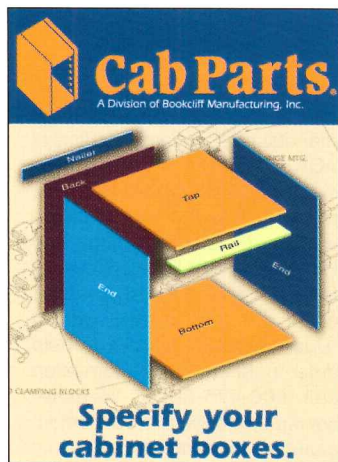


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Bruck Lighting Systems

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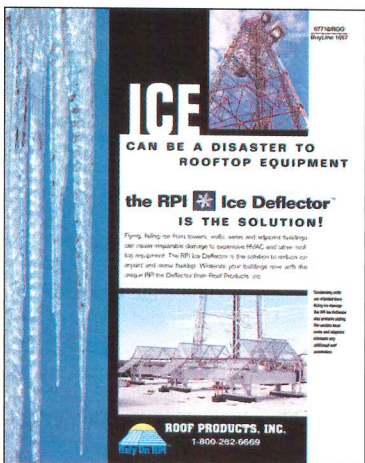


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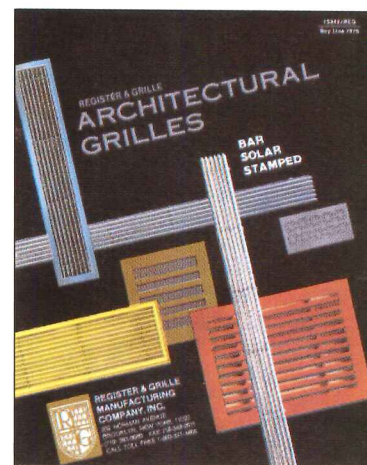


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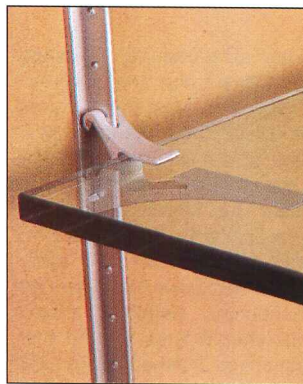


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CIRCLE 141 ON INQUIRY CARD

Parallel Design Partnership, Limited

"ellen's brackets," an anodized-aluminum shelving system designed by M Ali Tayar, provides an elegant alternative to existing bracket-and-track systems. Cantilevered brackets come in two sizes, for shelves 3/4" or 3/8" thick and 10" deep. Wall-mounted tracks permit 1 1/2" adjustment of wood, glass or plexiglass shelves. For more info phone Parallel Design Tel: 212-989-4959 Fax: 212-989-4977.



Parallel Design

CIRCLE 142 ON INQUIRY CARD

Unique Early Childhood Furniture

GRESSCO, Ltd introduces HABA® a new line of children's modular Loft furniture, shelving, platforms and room partitions in addition to our existing array of Kinder-System™ reading furniture. Now you can create a truly unique children's area in your hospital waiting room, daycare center, church or library. Call GRESSCO today for a FREE catalog at 800-345-3480, www.gresscoltd.com



GRESSCO Ltd.

CIRCLE 143 ON INQUIRY CARD

Illuminated Directory

APCO's award winning Visulite® directory is the finest in illuminated directories. Text and graphics appear to suspend in the background through the use of tinted solar glass and negative graphics that are evenly illuminated by fluorescent light. Changeable graphics are housed in cartridges designed to prevent light leaks. Visulite® is offered in a variety of finishes with eight attractive door shapes. APCO Graphics, Inc., (404) 688-9000, E-mail: sales@apcosigns.com, Web: www.apcosigns.com

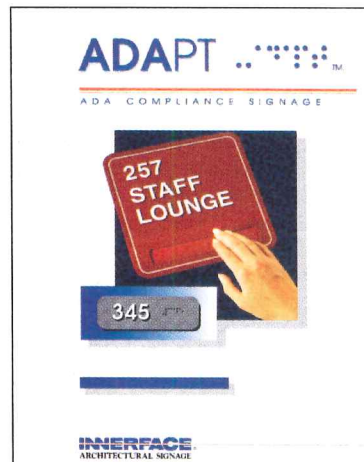


APCO Graphics, Inc.

CIRCLE 144 ON INQUIRY CARD

ADA Compliance Signage

Innerface makes it easier for you to meet the Americans With Disabilities Act (ADA) signage standards. Innerface offers (1) A variety of compliance signage, (2) National distribution (3) Solid 27 year history and (4) Economical, attractive, and highly functional interior and exterior signage. Innerface also offers signage planning and wayfinding services. For free literature, please call 800-445-4796.

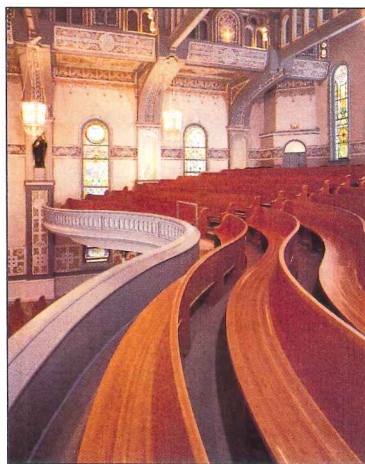


Innerface

CIRCLE 145 ON INQUIRY CARD

The Radius Curved Church Pew

Since 1919, New Holland Church Furniture has supplied churches nationwide with both custom & standard church furniture. Today, New Holland is the only manufacturer of "Radius Curved Pews" in the USA. As a certified member of the Architectural Woodwork Institute (AWI), you can be assured of our consistent high quality. New Holland has just developed all new product catalogs for our Pews and Solid Wood Chairs. New Holland Church Furniture, 313 Prospect St, New Holland, PA 800-220-1465



New Holland

CIRCLE 146 ON INQUIRY CARD

The Opening Glass Wall

A full line of aluminum and wood framed systems that make large exterior openings possible. Expand space with indoor/outdoor areas. Increase business with large, inviting entrances. Ideal for residential and commercial applications. An aesthetic, engineered solution offering weather tightness, security, and ease of operation can be provided for almost any conceivable application. Available are folding, paired and individual panel systems. Call 800-873-5673 or fax 415-383-0312. nanawallsystems.com



Nana Wall Systems, Inc.

CIRCLE 147 ON INQUIRY CARD

Decorative Posts & Poles

More than 30 years of experience comes together in each Hapco aluminum pole design. The Abingdon, Va., based company is an engineering leader with in-house design analysis and testing facilities. Hapco specializes in conventional and decorative lamp posts and architectural street light poles. Mounting heights range from eight to 45 feet.

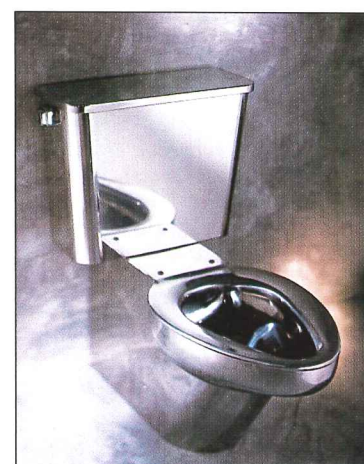


Hapco

CIRCLE 148 ON INQUIRY CARD

Neo-Metro™ Collection

Acorn Engineering Company introduces a new line of designer, stainless steel bath fixtures. The Metro-Urban Toilet (here in "Mira" finish) is fabricated entirely out of heavy gauge stainless steel. The Metro-Urban Toilet uses only 1.6 gpf. Acorn's Neo-Metro™ Collection also manufactures exclusive stainless steel washbasins, bathtubs, urinals and other fixtures for the residential and commercial bath. For more information: 800-591-9050 email: info@neometro.com www.neometro.com

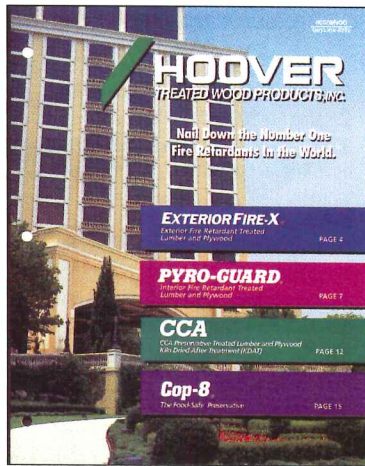


Neo-Metro™ Collection

CIRCLE 149 ON INQUIRY CARD

New Fire Retardant Treated Wood Catalog

Order the latest treated wood catalog from Hoover Treated Wood Products, Inc. PYROGUARD® and EXTERIOR FIRE-X® are the featured products. CCA KDAT and COP8® preservative treatments along with PLYWALL Sound Barrier System are included. Visit Hoover's web site at www.frtw.com. For a free catalog call 800-TEC-WOOD (832-9663) or e-mail hoover@frtw.com.

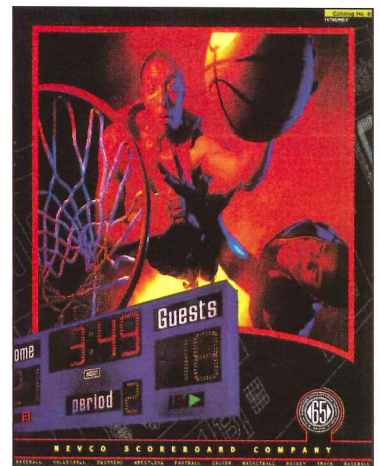


Hoover Treated Wood

CIRCLE 150 ON INQUIRY CARD

Scoreboards for Sports NEVCO Scoreboard Company

NEVCO Scoreboard Company manufactures scoreboards for the following sports: basketball, baseball, football, soccer, wrestling, volleyball, swimming, track, hockey and in-line hockey. Our indoor scoreboards are available in incandescent and LED (light emitting diodes). Nevco scoreboards carry a 5 year guarantee and are UL Listed/ CSA Certified. Call 800-851-4040 for information and a free color catalog. We have been manufacturing scoreboards for over 65 years. www.nevcoscoreboards.com Email: nevco@nevcoscoreboards.com

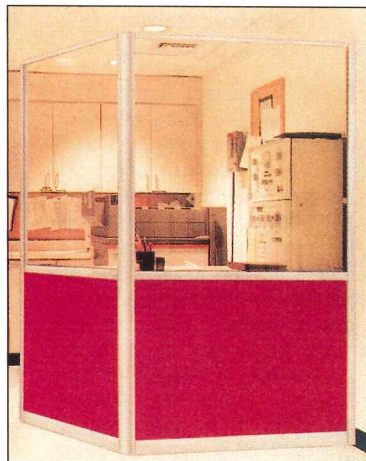


NEVCO Scoreboard Company

CIRCLE 151 ON INQUIRY CARD

CLEAR-Pb® Lead-Plastic Radiation Shield

Discover the advantage of incorporating Nuclear Associates CLEAR-Pb® Lead-Plastic Radiation shielding into your next project! Lead-impregnated plastic won't shatter; space saving; cost-effective; more versatile than old-fashioned lead-glass; quick, hassle-free installation; ideal for medical and non-medical facilities; available in more than 100 standard sizes, seven lead equivalencies and kits. For further information, call 888-466-8257, Web: www.nucl.com



Nuclear Associates

CIRCLE 152 ON INQUIRY CARD

Mini-JOMY® Pole Ladder

A scaled down version of the JOMY® Safety Ladder, specially designed for residential and light commercial applications. The Mini-JOMY® looks like a drain-pipe but folds out to a 17" wide ladder with slip resistant rungs constructed of extruded anodized aluminum and stainless steel. The Mini-JOMY® is maintenance free and will last the lifetime of any building. Can be locked at ground level for access applications. Call 800-255-2591 for additional information. Or find us at www.jomy.com



JOMY® Safety Products

CIRCLE 153 ON INQUIRY CARD

Vertical Platform Lifts

The National Wheel-O-Vator Co., Inc. designs the Vertical Platform Lift with Quality, dependability, Customization and service in mind. We are committed to manufacturing the best vertical platform lift in the business. When your number one need is accessibility for a new home, pre-existing home or commercial application, call national wheel-o-vator at design line 800-968-5438. email: wgreaives@wheelovator.com web site: www.wheelovator.com



National Wheel-O-Vator

CIRCLE 154 ON INQUIRY CARD

Building Home Remodeling

Waupaca Elevator has the answer to your Up/Down needs. In business for almost 50 years we have perfected the comfort, convenience, mobility, and safety necessary for the modern home elevator. Look to the 21st Century in home design by installing a Waupaca Elevator in your home today. For further information contact: 1050 So. Grider St., Appleton, WI 54914. Tel: 800-238-8739.

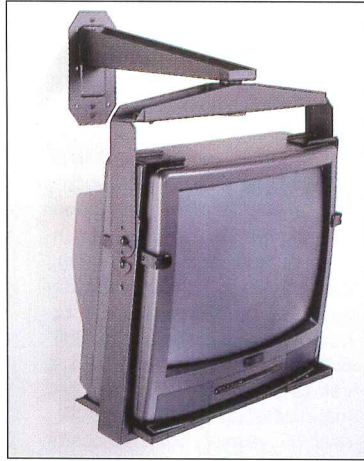


Waupaca Elevator

CIRCLE 155 ON INQUIRY CARD

TV Mounts and A/V Mounting Accessories

Peerless industries manufactures mounts and mounting accessories for electronics including televisions and monitors, plasma screens, LCD projectors, speakers, security cameras, and computer monitors. Peerless mounts are appropriate from boardrooms to stadiums. All are designed for strength and durability, aesthetics, and for ease of assembly and installation. Made in the U.S.A by Peerless Industries, Inc., 1980 Hawthorne Avenue, Melrose Park, IL 60160, 708-865-8870 or 800-865-2112. www.peerlessindustries.com

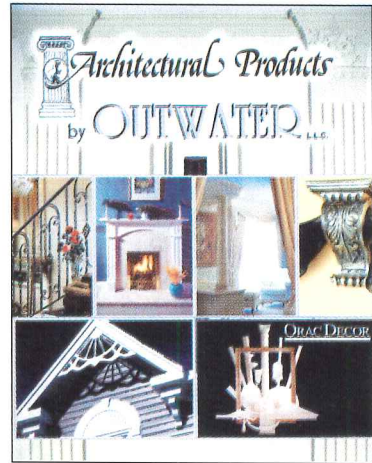


Peerless

CIRCLE 156 ON INQUIRY CARD

Architectural Products by Outwater

Outwater's Free 950+ Page Master Catalog for 2001 is the most important building & renovating tool you will ever have in your possession! Referred to by industry professionals as "the definitive must have reference source," each of the newly introduced & regularly stocked products featured in the catalog furnishes end users & specifiers with complete schematics, information, pricing & photos or drawings to aid in application & purchasing decisions. Some of the featured products include Interior/Exterior Millwork, Columns, Brass Hardware, Wrought Iron Components, Lighting, Furniture & Cabinet Components, Knobs & Pulls & more. Call 800-835-4400; Web site: www.outwater.com

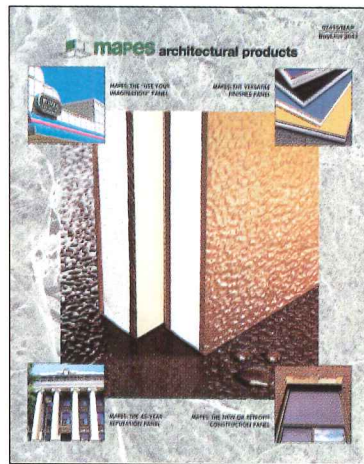


Architectural Products by Outwater

CIRCLE 157 ON INQUIRY CARD

Graffiti Resistant Panels For Infill Applications

Mapes Industries offers a complete line of graffiti resistant panels with a genuine porcelain enamel on aluminum surface. In-house color matching capabilities combined with various component options provide the designer with unlimited design solutions. Kynar, anodized and baked enamel finishes are also available. For more information, contact the factory at www.mapeind.com

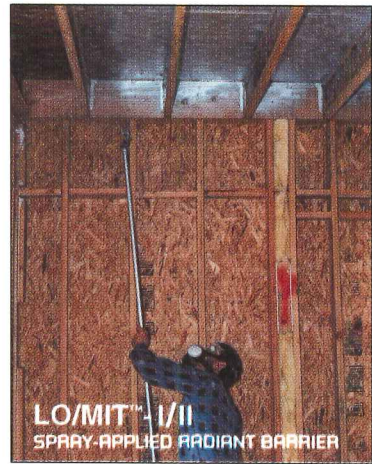


Mapes Industries, Inc.

CIRCLE 158 ON INQUIRY CARD

Radiant Barrier Low E Coating

LO/MIT-I Radiant Barrier Coating is a silver colored, non-thickness dependent, low cost spray applied replacement for foil type barriers. It conforms to ASTM C 1321-98 specification for "Interior Radiation Control Coatings", and is an EPA Energy Star Ally product. Shipped premixed, it is easily applied with standard spray equipment. Solar Energy Corporation, 129 Walters Ave., Ewing, NJ 08638-1829. Ph: 609-883-7700, Fax: 609-497-0182, Web Site: www.solec.org, Email: 71263.413@compuserve.com

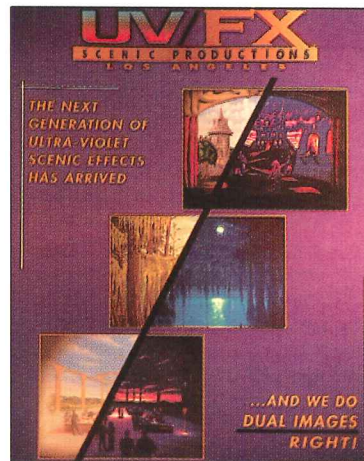


Solar Energy Corporation

CIRCLE 159 ON INQUIRY CARD

UV/FX Scenic Productions

UV/FX wrote the book on Ultra-Violet Visual Effects which are designed, art directed and painted (and now even printed). UV/FX specialize in Dual Images, Complete Invisible treatments, Day to Night Effects, 3-D scenery and more for changing themed walls, backdrops and ceilings. www.uvfx.com, Tel./Fax 310-392-6817.

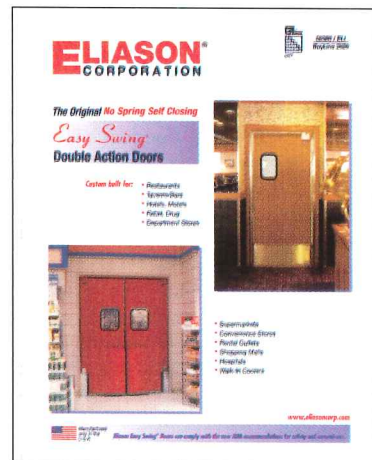


UV/FX

CIRCLE 160 ON INQUIRY CARD

Eliason Easy Swing® Double Action Doors

Eliason, the original & only manufacturer of Easy Swing® Doors, has announced the availability of their new 2001 Price Spec catalog. Doors are color illustrated with complete specifications and prices. Available in a variety of sizes, styles and decor options. Doors are sold direct and the price catalog is sent no charge. Eliason Corporation, P.O. Box 2128, Kalamazoo, MI 49003. Tel: 800-828-3655 Fax: 800-828-3577 Email: doors@eliason-corp.com Web site: www.eliasoncorp.com

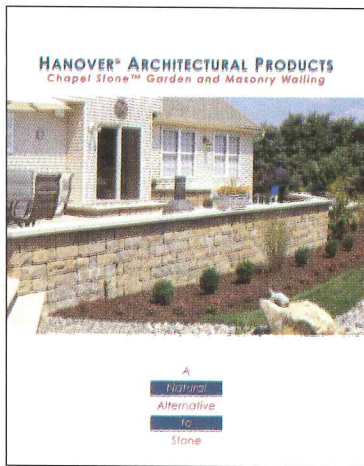


Eliason Corporation

CIRCLE 161 ON INQUIRY CARD

Chapel Stone™

Hanover® Architectural Products introduces Chapel Stone™ Garden and Masonry Walling – Nothing quite adds charm to a home or building like stone. Hanover's Chapel Stone™ Garden and Masonry Walling make this beautiful characteristic affordable and available. Manufactured from the highest quality concrete with over a million pounds of pressure, the product has the same density and high compressive strength of natural stone. For more information please call us at 800-426-4242.



Hanover Architectural Products

CIRCLE 162 ON INQUIRY CARD

Custom Noise Absorption Products

Essi Acoustical Products Company's Silentspace Wall Panel's, Ceiling Panels, baffles & Banners solve acoustics while providing the aesthetics you require. Products are ideal for board rooms, offices, schools, gymnasiums, arenas, theaters, libraries or any space where there is unwanted noise. For fifteen years Essi has been providing products to meet demanding specs. Custom made for your specific project. Choose the thickness, shape, edge detail, tackable, & attachment method, finished with standard textiles or to coordinate with your custom textiles. A complete binder which contains tech. data, fabric selections & acoustical data is available. 800-886-6678, Fax 216-251-9933, www.essiacoustical.com

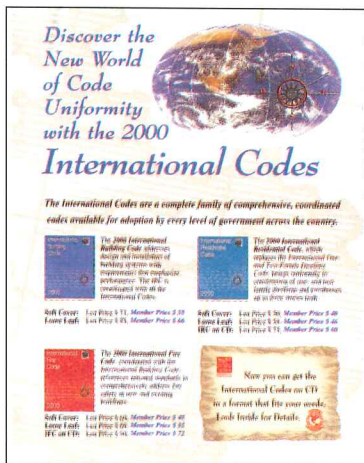


Essi Acoustical Products Co.

CIRCLE 163 ON INQUIRY CARD

BOCA Provides Architects with International Code Solutions

BOCA offers Architects technical support services, including code interpretations, plan review, seminars and certification, along with International Code books and time-saving International Codes on CD. You can also earn AIA CLUs by taking courses from BOCA campus on-line. For a FREE International Code catalog or to place an order, call BOCA toll-free at 800-214-4321, ext. 715. BOCA is the Architect's Choice for Code Solutions.

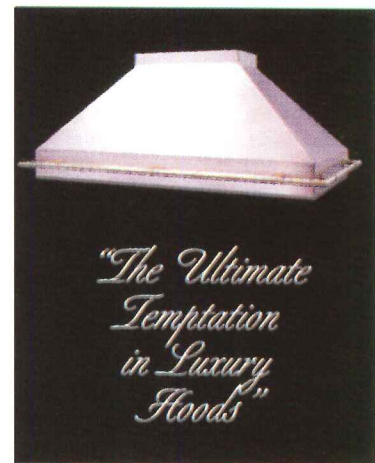


BOCA International

CIRCLE 164 ON INQUIRY CARD

Elegant Custom Hoods

The beauty of an Independent Hood is breathtaking! A close inspection reveals an exquisite under-hood design that incorporates an easy-to-clean surface with brilliant and ambient halogen lighting. The warmth of copper, the brilliance of brass, and the strength of stainless are the powerful raw materials that capture your attention...our attention is to detail. We ultimately create a hood for the connoisseur. Contact us at 1-800-7-NEVADA or www.independent@kitchenhood.com

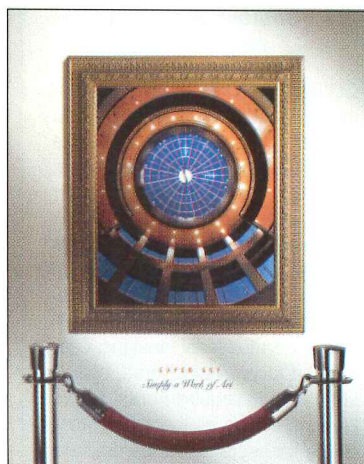


Independent Inc.

CIRCLE 165 ON INQUIRY CARD

Innovative Glass and Polycarbonate Skylights

Like classic works of fine art, Super Sky creates innovative skylighting systems that add timeless beauty and natural light to buildings worldwide. With nearly 75 years of experience, Super Sky continues to set skylight industry's standard for quality products. Discover Super Sky's time-tested glass, and revolutionary Polycarbonate EDGE® Translucent systems.

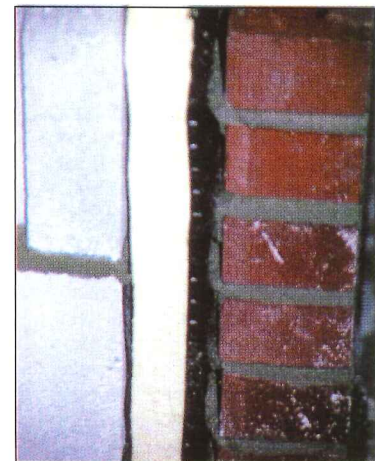


Super Sky Products, Inc.

CIRCLE 166 ON INQUIRY CARD

The Insulated Drainage Board

ThermaDrain® eliminates the need for a clean airspace. Currently, a 2" airspace is the primary means of providing sufficient drainage for cavity walls. However, poor workmanship, mortar blockages and mortar bridging can and does occur in airspaces 2" or greater. This allows water to bridge the cavity before it ever reaches the flashing and weepholes. ThermaDrain® eliminates workmanship problems and provides a continuous drainage path to the required flashing. Call us for a data sheet and a free sample.(800-837-4065) *Patent Pending



ThermaDrain®

CIRCLE 167 ON INQUIRY CARD

Duraflake MR® Particleboard

Architects specify Duraflake MR® moisture-resistant particleboard for cabinets and counters where humidity and intermittent water contact is common. Duraflake MR is stronger, absorbs less moisture, and exhibits minimal thickness swell compared to standard particle-board. Third-party manufacturers offer a wide variety of laminated surfaces. Call and we'll send you a FREE Duraflake Specifications Binder. 800-887-0748, Ext. 310



Willamette Industries, Inc.

CIRCLE 168 ON INQUIRY CARD

Concord Horizon: The Commercial Accessibility Solution

The Horizon is one of Concord's fully enclosed elevators. Its innovative cable hydraulic drive system delivers reliable, quiet & smooth operation while serving two to six stops. The Horizon is the ideal commercial accessibility solution for the physically disabled. Standard features include emergency battery powered door operation & lowering, a slack cable safety device, & emergency cab lighting. For information, please call 800-661-5112 or visit us at www.concordelevator.com



Concord Elevator Inc.

CIRCLE 169 ON INQUIRY CARD

Chadsworth's 1.800.Columns®
www.columns.com

Columns, pillars, pilasters and posts available in wood, Poly-Stone™ and fiberglass. Interior, exterior. Variety of sizes and styles. Competitive prices. Job-site delivery. Worldwide shipping. Our award-winning Idea Book features an exciting collection of column projects. Includes Columns Product portfolio, \$20 soft cover, \$30 hard cover. Columns Product Portfolio \$5 (credited to first order). Free flier. 800.486.2118 • Fax 910.763.3191

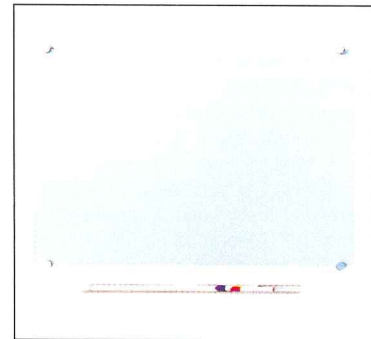


Chadsworth's 1.800.Columns®

CIRCLE 170 INQUIRY CARD

Innovative Glass Marker Boards

Peter Pepper Products offers innovative glass marker boards available in 1/4" clear tempered safety glass, with low iron content, crystal clear in appearance with a flat polished, beveled edge. The backing material is a white frit ceramic coating, screen applied and fused with the back of the glass. The glass marker board is mounted with 1" dia. aluminum standoffs. Peter Pepper Products, Inc. ph: 310.639.0390 fx: 310.639.6013 www.peterpepper.com

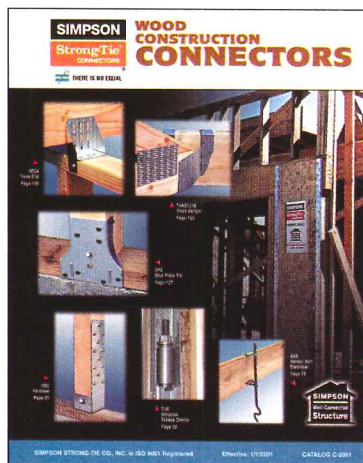


Peter Pepper Products, Inc.

CIRCLE 171 ON INQUIRY CARD

Connector Catalog Expanded

Wood Construction Connectors-2001, incorporates Simpson's entire connector line, including composite wood and plated truss applications. An unequalled connector reference for architects, structural engineers and building officials, the catalog includes specifications, load charts, application drawings, and building code acceptance. Nineteen new products are introduced, including the multistory Anchor Tiedown System. For a copy of the 2001 catalog (C-01), write Simpson Strong-Tie Company, 4120 Dublin Blvd., Dublin, CA 94568



Simpson Strong-Tie

CIRCLE 172 ON INQUIRY CARD

Custom Designed Mezzanines

Cubic Mezzanines add a second or third level inside your facility & help you turn unused cube into useable space. Create new production, office, storage or assembly space, locker rooms, parts departments, distribution centers & more. Cubic Mezzanines are custom designed with CAD technology, PE stamped & backed by a lifetime structural warranty. Choose from single or multi-level designs customized to your exact area, height, color & load requirements. Cubic Designs covers all the details from onsite measurements to complete mezzanine design & installation. www.cubicdesigns.com 800-826-7061

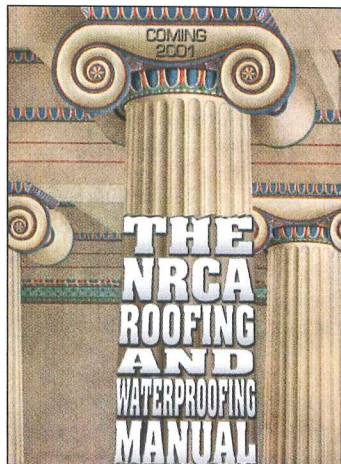


Cubic Designs, Inc.

CIRCLE 173 ON INQUIRY CARD

Stability, Strength, Support

Comprehensive roofing information at your fingertips. The NRCA Roofing and Waterproofing Manual, fifth edition, provides 2,000+ pages of low-slope and steep-slope information on roof system design and installation. Developed by the National Roofing Contractors Association, the Manual includes specification plates, 300+ details in both isometric and section views and a reroofing section. Call 800-323-9545. Visit www.nrca.net.

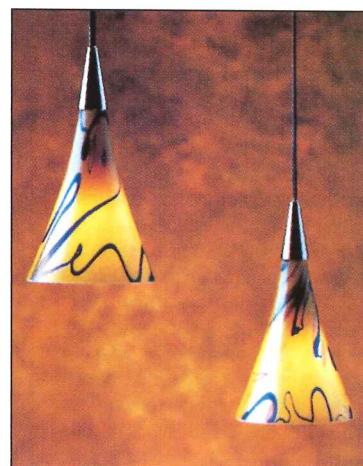


NRCA

CIRCLE 174 ON INQUIRY CARD

**Art – Aesthetics – Lighting
BELL Pendant**

Orbit North America Ltd. features a collection of individually hand-blown truly artistic glass series for pendant monopoint, cable system or mono rail mountings. All glass pieces are available in several unique finishes, shapes and size. A white interior coating ensures even light distribution throughout the glass, minimizing hot spots. Suitable for project applications within the residential, commercial and hospitality industry. www.orbitlight.com



Orbit North America, Ltd.

CIRCLE 175 ON INQUIRY CARD

www.panelfold.com
Email: sales@panelfold.com

Now in its fifth decade, Panelfold has long been recognized as the leader in the folding door, acoustical accordion folding partition, & the operable & relocatable partitions industry. FIRECOUSTIC®: New for 2001 is an updated U.L.® 1 Hour Special Purpose Fire Door Assembly Classification of Moduflex® Series 800-Firecoustic® steel panel models after testing for fire resistance per UL 10B. Listing for these models now includes full-thickness, acoustical single as well as double pass doors, all of the manufacturer's standard surfacing materials, & Moduflex Firecoustic operable partitions that intersect with one another.

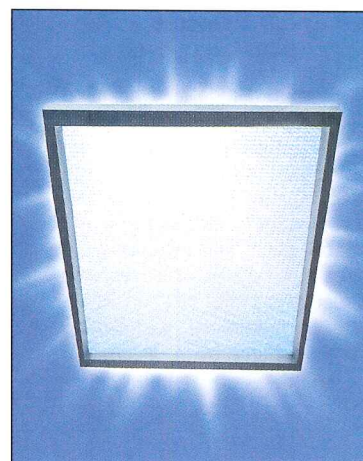


Panelfold, Inc.

CIRCLE 176 ON INQUIRY CARD

**Insulated Translucence
in Glass**

Quality buildings can now have all the benefits of insulated translucent glazing PLUS the timeless beauty & durability that comes only from glass. Unlike plastic solutions, SOLERA® insulated translucent glazing units deliver over 70% light transmittance plus U values of .25 to .14. Curtain wall, sloped, skylights....glass to architectural spec. Call 902-794-2899 or visit www.advancedglazings.com

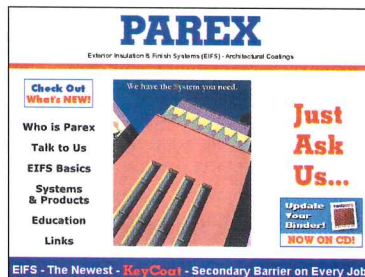


Advanced Glazings, Ltd.

CIRCLE 177 ON INQUIRY CARD

**Exterior Insulation and
Finish Systems**

WWW.PAREX.COM presents extensive information on Exterior Insulation and Finish Systems (EIFS), including the newest component of EIFS - KEYCOAT – the process of applying an EPS direct-to-the-wall adhesive and liquid membrane secondary weather barrier together in one step. Among the site features are specifications, CAD drawings, and AIA CEU seminars.

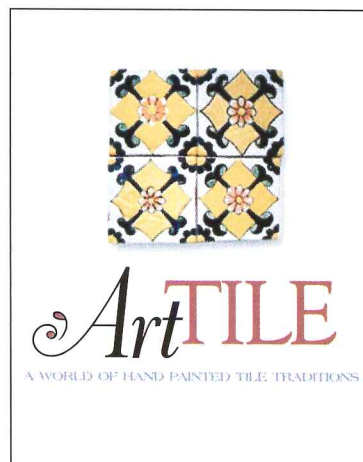


Parex

CIRCLE 178 ON INQUIRY CARD

**Hand Painted
Tile Traditions**

An online store featuring hard-to-find, hand painted, handcrafted tile from around the world. Our tile producers are selected for their artistry & adherence to hand painted craftsmanship that represents particular, well known cultural styles. In addition to outstanding design, ArtTILE is made with high quality glazes, pigments, & durable ceramic, suitable for interior, exterior, home & commercial use. Visit us on the web at arttile.com or call Toll Free: 888-735-8453, 233 W. Rosewood San Antonio, TX 78212 Ph: 210-734-8453 Fax: 210-733-6673 Email: arttile@arttile.com

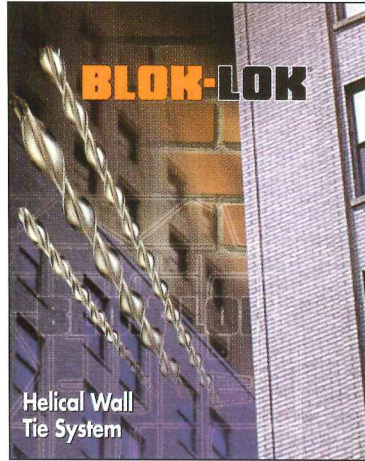


ArtTILE

CIRCLE 179 ON INQUIRY CARD

**Stainless Steel Helical
 Wall Tie System**

Blok-Lok, with over 35 years experience in the design and manufacture of masonry reinforcing and tie systems, provides innovative solutions for the repair and stabilization of defective walls. Blok-Lok offers an economical stainless steel helical wall tie that is driven into position through a properly sized pilot hole, providing a positive connection between wythes, while allowing for differential movement. Call 800-561-3026 or visit our website at www.blok-lok.com



Blok-Lok, Ltd.

CIRCLE 180 ON INQUIRY CARD

**PORCH-LIFT®
 Vertical Platforms**

PORCH-LIFT® Vertical Platform Lifts from Access Industries are designed to raise and lower a wheelchair user from one level to another indoors and outdoors for public buildings of all kinds. Easy to install and operate, the lifts require little to no site modification to install next to stairs or a landing. Standard models can be installed in a custom hoistway (shown above) to blend with any building design or accessibility plan.

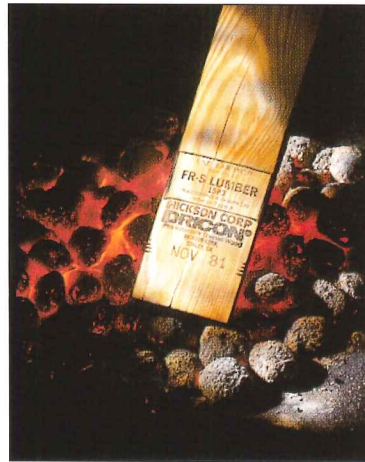


Access Industries

CIRCLE 181 ON INQUIRY CARD

**FRT Wood &
 Building Codes**

"Reference Guide for Designing with Fire Retardant Treated Wood" outlines code-compliant applications for FRT wood. Guide also covers design properties, test standards, identification, and specification, and describes the Dricon® brand which has been used effectively since 1981 in multi-family, commercial, and institutional structures. (www.dricon.com)

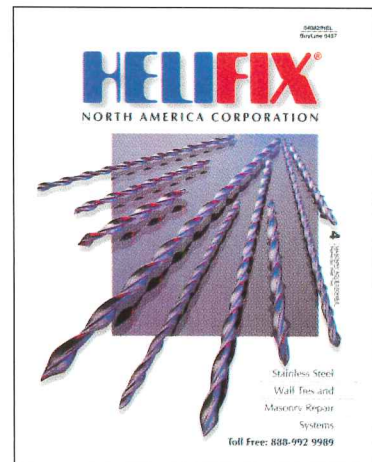


Hickson Corporation

CIRCLE 182 ON INQUIRY CARD

**Stainless Steel Retrofit
 Wall Tie System**

The unique Helifix 'DryFix' stainless steel remedial wall tie system is used to stabilize and strengthen masonry walls in both high rise and domestic buildings. The 'DryFix' system involves no toxic chemicals or complex expander devices while providing a fast, cost effective, stress free result in most common building materials. Helifix ties may also be used in new construction and masonry refacing. Call 888-992-9989 for further information.

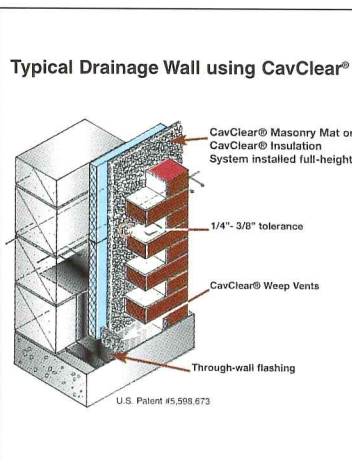


Helifix

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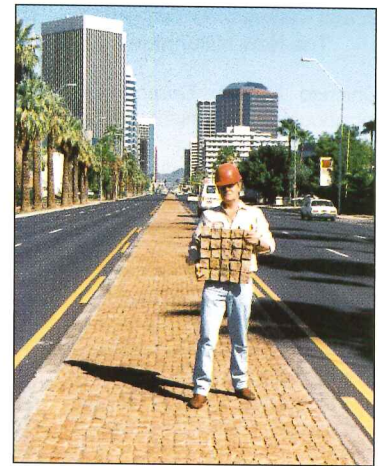


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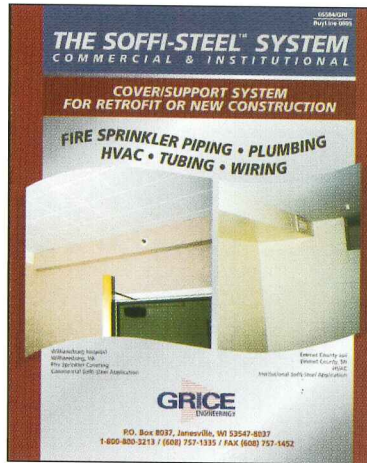


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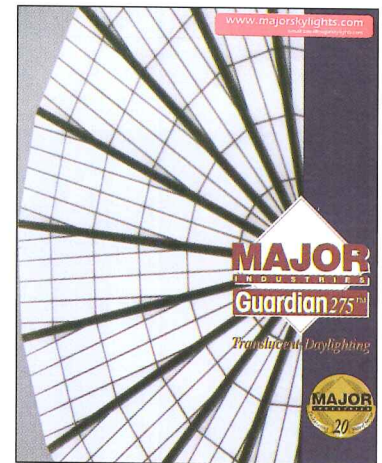


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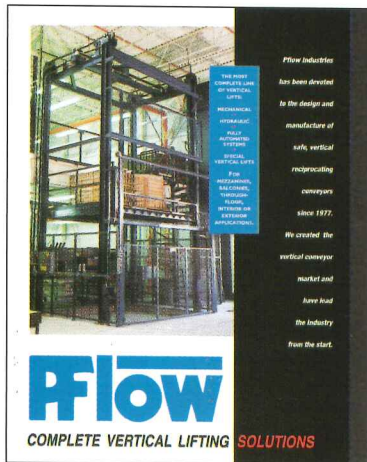


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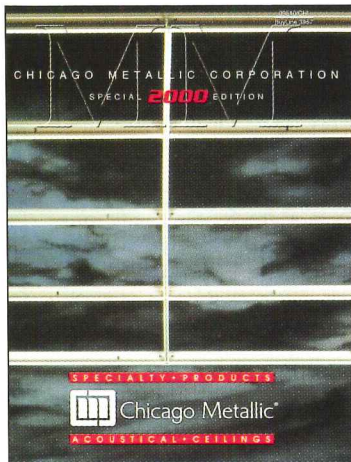
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2001 CATALOG PREVIEW

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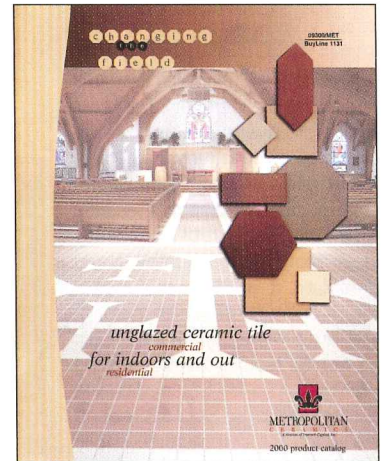


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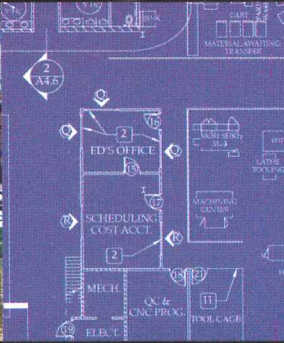


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