

Also in this issue

- Work in Two Worlds  
by Tai Soo Kim
- Profile: Michael Pyatok
- Critique: L.A. Library
- Technics: Computers

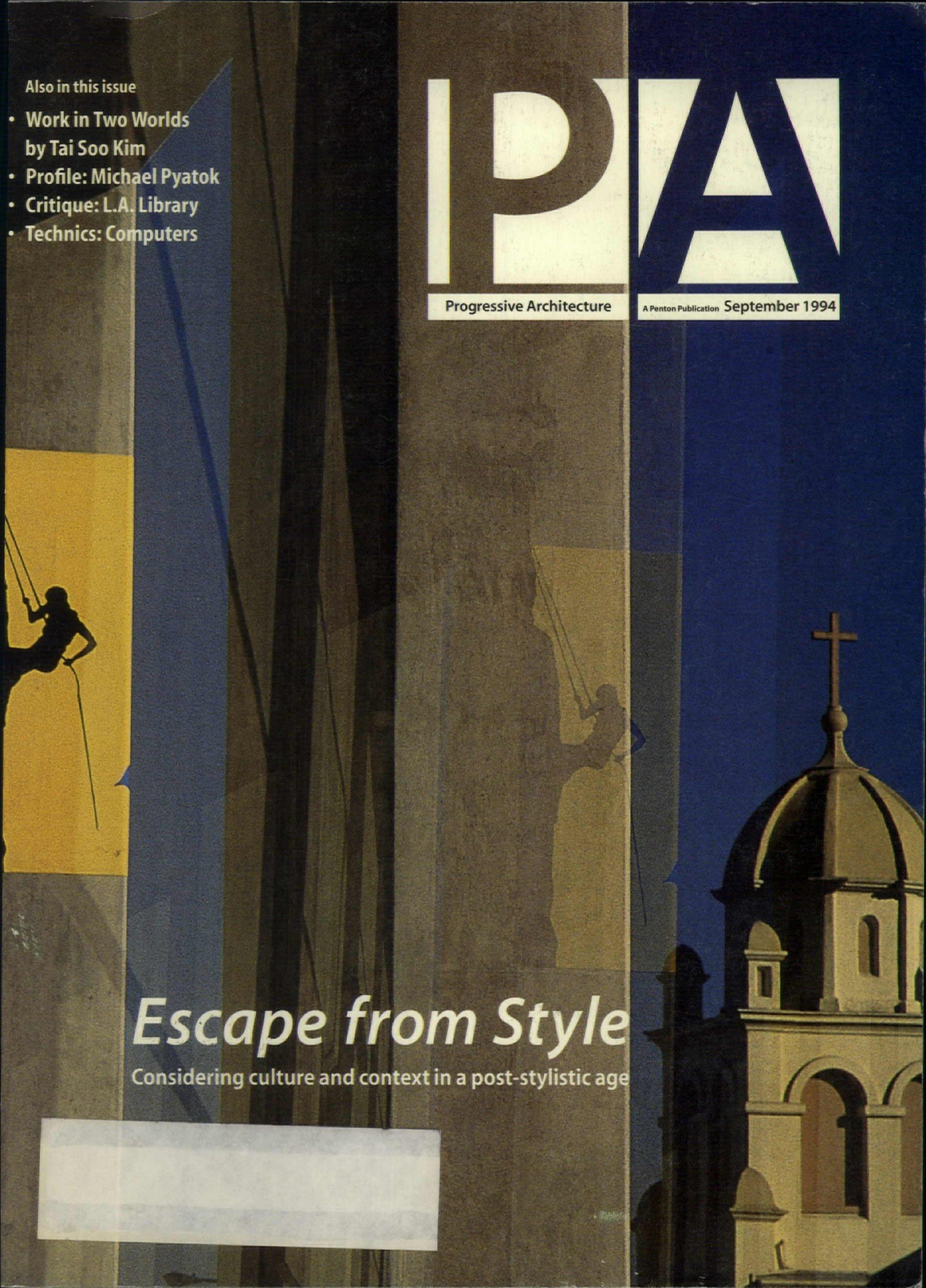
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Progressive Architecture

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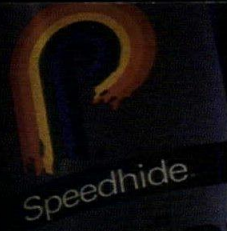
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
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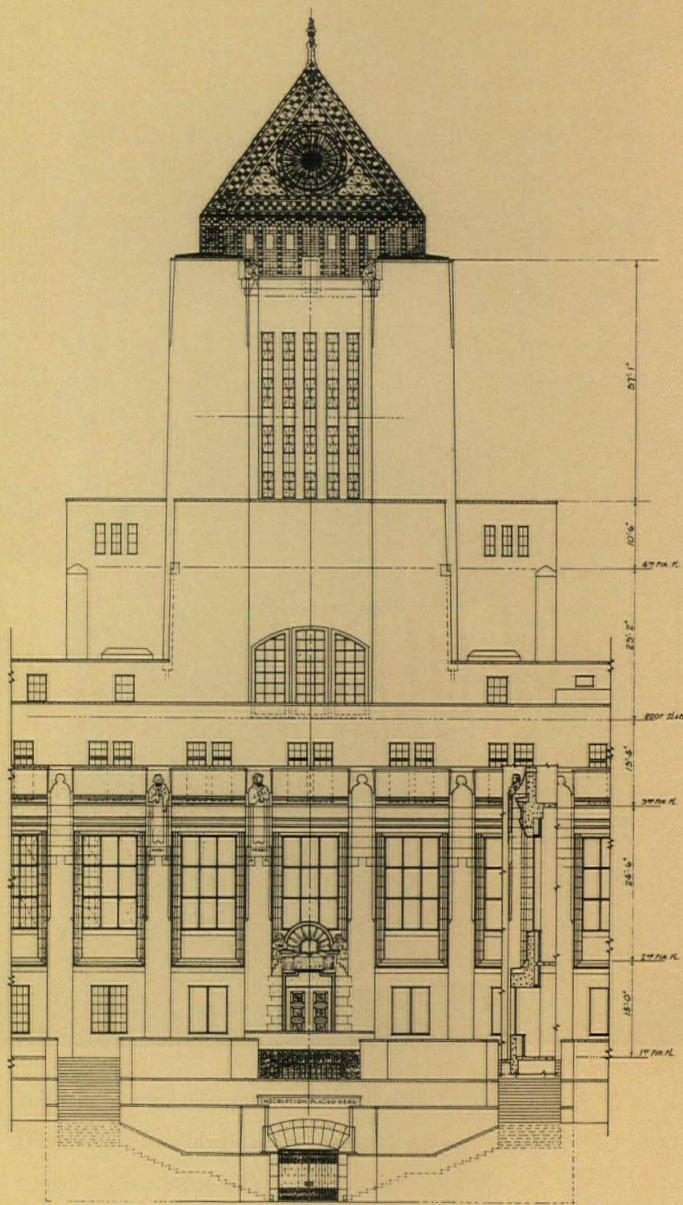
*Detail, St. Mark's & Climber,*  
*photo by Takane Eshima (p. 59).*  
*Cover design by Julie Anne Yee.*

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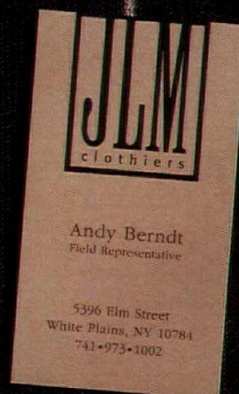
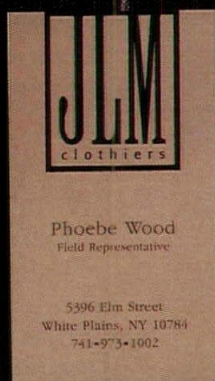
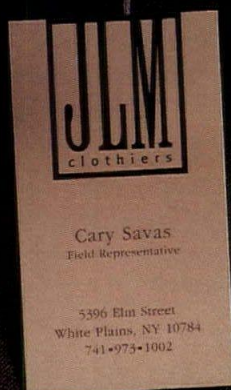
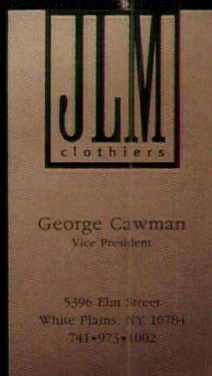
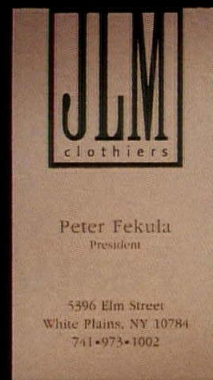
### 120 Selected Detail

Hollow core concrete plank.

## Coming Next Month The Politics of the Big Prizes

Profile: Hillier Group • Architecture in Cyberspace

Critique: Prudential Center • Technics: Cladding



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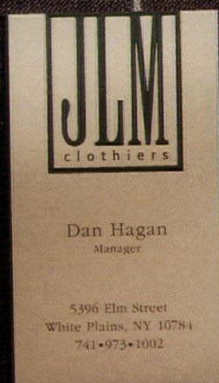
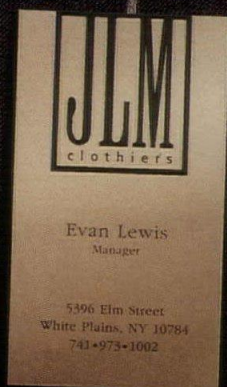
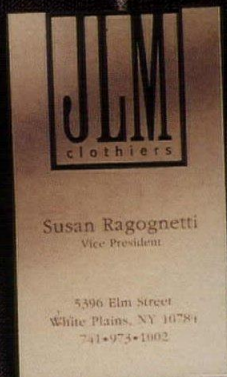
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# Why Smother Prosperity?

For the architecture profession, this recession has been the longest, harshest downturn since the 1930s. Now we have begun hearing word from all over the country that the flow of commissions is increasing – at least a little. Firms that have survived can now be cautiously optimistic: for the the smaller, leaner profession emerging from this recession there may soon be enough work to go around.

And then again, there may not.

The Federal Reserve Board seems convinced that our major economic problem is not a limping economy, but inflation. On August 16, the Fed raised its short-term interest rates a larger-than-expected one-half percentage point, marking the fifth time so far this year it has imposed interest hikes in order to *cool* the economy.

Never mind that most of us have encountered little evidence of inflation; consumer price increases so far this year have been well below the widely accepted 3 percent annual rate. The Fed sees signs of impending inflation in such indicators as the “low” unemployment rate of 6.1 percent, an increase in factory overtime, and a 4.7 percent increase in housing starts from June to July.

How do we explain this restraint of economic growth to the estimated 8 million Americans who are out of work or the 4.4 million who have been able to get only part-time work? (These are July Bureau of Labor Statistics figures.) The architectural profession accounts for a generous share of these unemployed and underemployed people, and large numbers of architects are self-employed in FAX-and-letterhead firms that produce at best subsistence revenues.

It is important to keep in mind that the Fed’s raising of short-term rates does not necessarily increase the longer-term rates that so crucially affect loan-financed or bond-financed construction. In fact, short-term hikes, by reassuring the financial markets that the economy isn’t overstimulated, can actually lower long-term rates – but that definitely hasn’t occurred this summer.

Of course the experts at the Fed understand all this better than most of us ever could, and no doubt their power over interest rates has tended to stabilize our economy over the several decades of its existence. But in the last analysis its members’ paramount concern seems to the welfare of the banks

and the investors in financial markets, the holders and lenders of money who have the most to lose through inflation. Why else would they risk an economic setback to fight the mere threat of inflation?

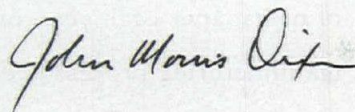
For the great majority of us who make our living producing goods or services – you, me, the local beautician, the president and stockholders of GM – prosperity is the overriding goal, and a modest amount of inflation is a tolerable price to pay for it; our revenues are generally going to catch up with inflation, if only after some delay. And if we hold mortgages or business loans, the inflation that hurts the bank benefits us by reducing the dollar value of our debt.

Could the Federal Reserve’s latest attack on inflation reverse our fragile economic recovery? Fed Chairman Alan Greenspan admitted as much on July 20, telling the worried Senate Banking Committee that if this latest rate hike – which he was then contemplating – were to sharply slow down the economy, the central bank could easily lower rates again. And, in his view, the economy would quickly bounce back. From his ultra-secure, inside-the-Beltway position, it’s almost like twiddling the dials on the stereo.

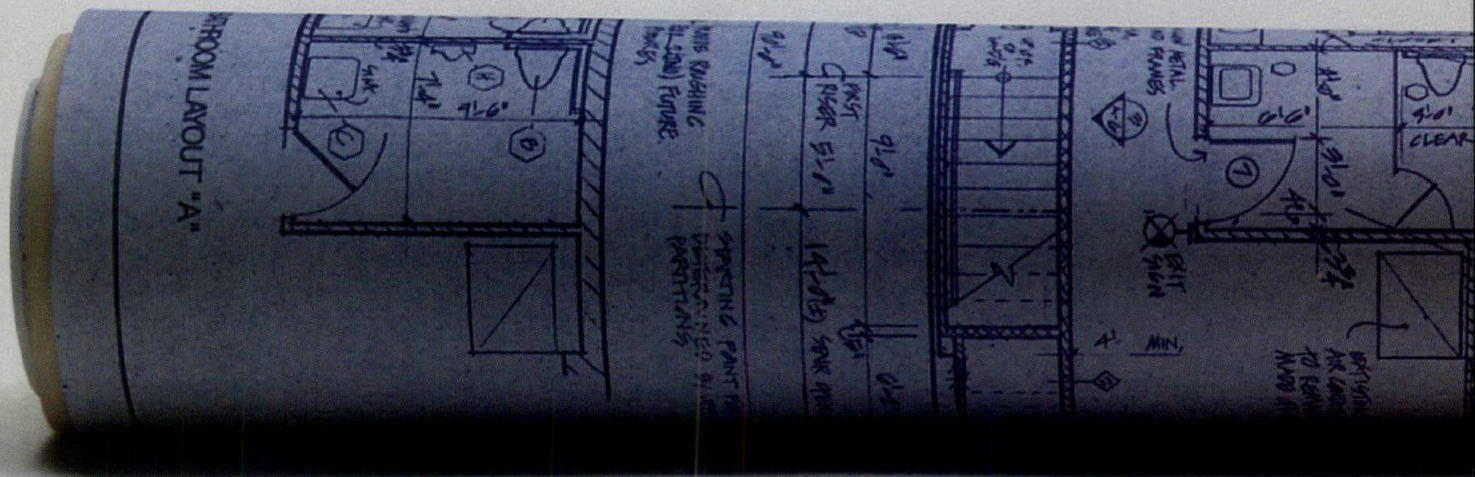
Economic pundits don’t expect the Fed to take another swing at potential inflation until after the November elections. Any economic dip set off by the Fed rate increases could hurt incumbent Congressmen at the polls, so it is widely thought the board will lie low until then. But there are no guarantees. The institutional independence of the Federal Reserve Board can make it virtually impervious to public opinion. The Clinton Administration, like the preceding one, seems to have been too intimidated by the board’s power to oppose its tactics openly. About the only device for bringing public opinion to bear on the Fed is the Congressional committee, where Chairman Greenspan must often answer publicly for the board’s actions.

Since architects have everything to gain from a more active economy – and little reason to fear the mere specter of inflation – the AIA and its building industry allies should be pressing the cause of prosperity on Capitol Hill. The Fed doesn’t have to obey Congress, but it does have to listen. □

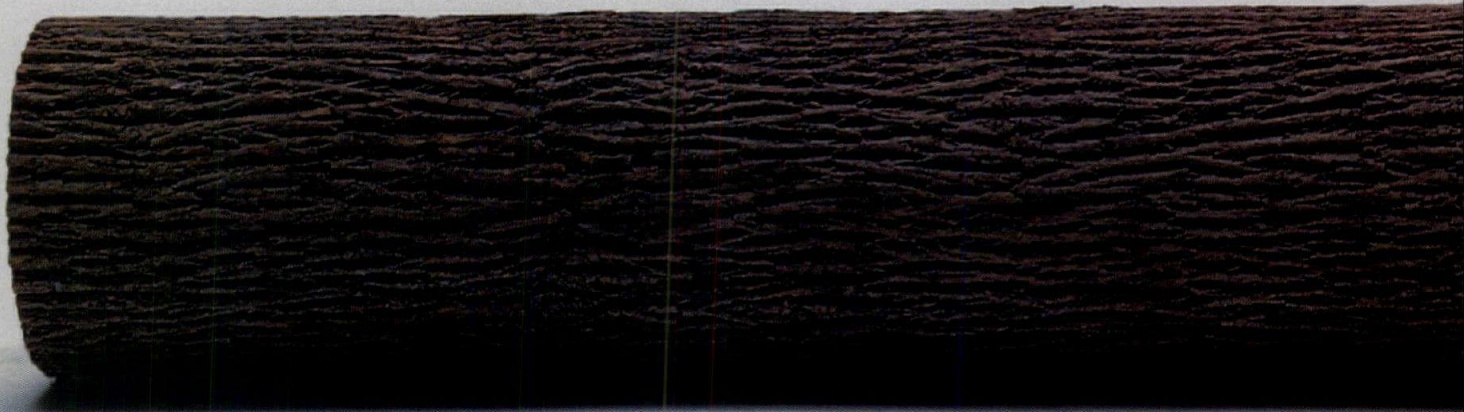
**The Federal Reserve Board’s attack on possible future inflation threatens the fragile economic recovery on which so many architects are pinning their hopes.**



John Morris Dixon



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## The Intern Trap I

Thomas Fisher's article, "The Intern Trap; How The Profession Exploits its Young," published in the July 1994 issue, was an outstanding article that brought attention to an issue that has been too long ignored by our profession and our profession's media. As Michigan's IDP State Coordinator, I regularly hear of the exploitation of interns including: noncompliance with federal wage laws concerning overtime pay, low hourly wages, employers refusing to give interns the required training experience for their IDP requirements, and employers instructing those in-

terns to falsify their IDP records. Publication of informative articles such as Mr. Fisher's will hopefully have an impact on those firms who continue to run their practices this way.

I would also like to encourage you to feature firms that do run their practices in a lawful and ethical manner, and who have found that a profit can still be made while treating employees fairly and complying with all labor department regulations. My own firm, Albert Kahn Associates, Inc., in Detroit, is just such a firm; approaching its 100th anniversary year, it has a current staff of 265 people.

Employees who do not receive appropriate overtime compensation are mainly stockholders in the company and number approximately 52 people. Interns are treated with respect and are considered valuable employees. The firm has a well-established method of ensuring that those interns who are aggressively pursuing licensure receive the appropriate training in all of the 16 IDP training categories. Albert Kahn Associates, Inc., winner of the AIA's 1994 IDP Outstanding Firm Award, is proof that survival does not necessitate exploitation.

*Cynthia Enzer-Radecki, AIA  
Michigan IDP State Coordinator  
Detroit*

## The Intern Trap II

I just finished reading "The Intern Trap: How the Profession Exploits its Young" in your July 1994 issue and had to write immediately to thank you for the new direction your magazine has taken since its format and content change in February. I must admit that when the change came in your magazine I was rather skeptical - not of the new focus of your magazine, for I think that the profession has long been in need of a

**"The architectural industry's continued practice of undervaluing its interns only adds to the stereotype that architects are bad business people, a stereotype which I think is all too appropriate."**

*Peter G. Wong*

self-critical forum, but rather I was skeptical of the sincerity of your efforts. In other words, I wasn't sure if it was just a marketing ploy to address a new niche in the market or whether your goals were somewhat more altruistic. But the content and focus of your magazine these past few months have persuaded me that P/A is no longer just another architectural picture magazine but one that is trying to activate the profession to take a look at itself and its culture.

In this light, "The Intern Trap" is an especially compelling article, for I am one of those many recent graduates who are next to useless in the office (to paraphrase the noted architect on page 72). But unlike many of the graduates coming out of the architecture schools today, I am not willing to espouse this antiquated line of thinking which so pervades the profession. I think a large part of it has to do with the fact (*continued on page 14*)



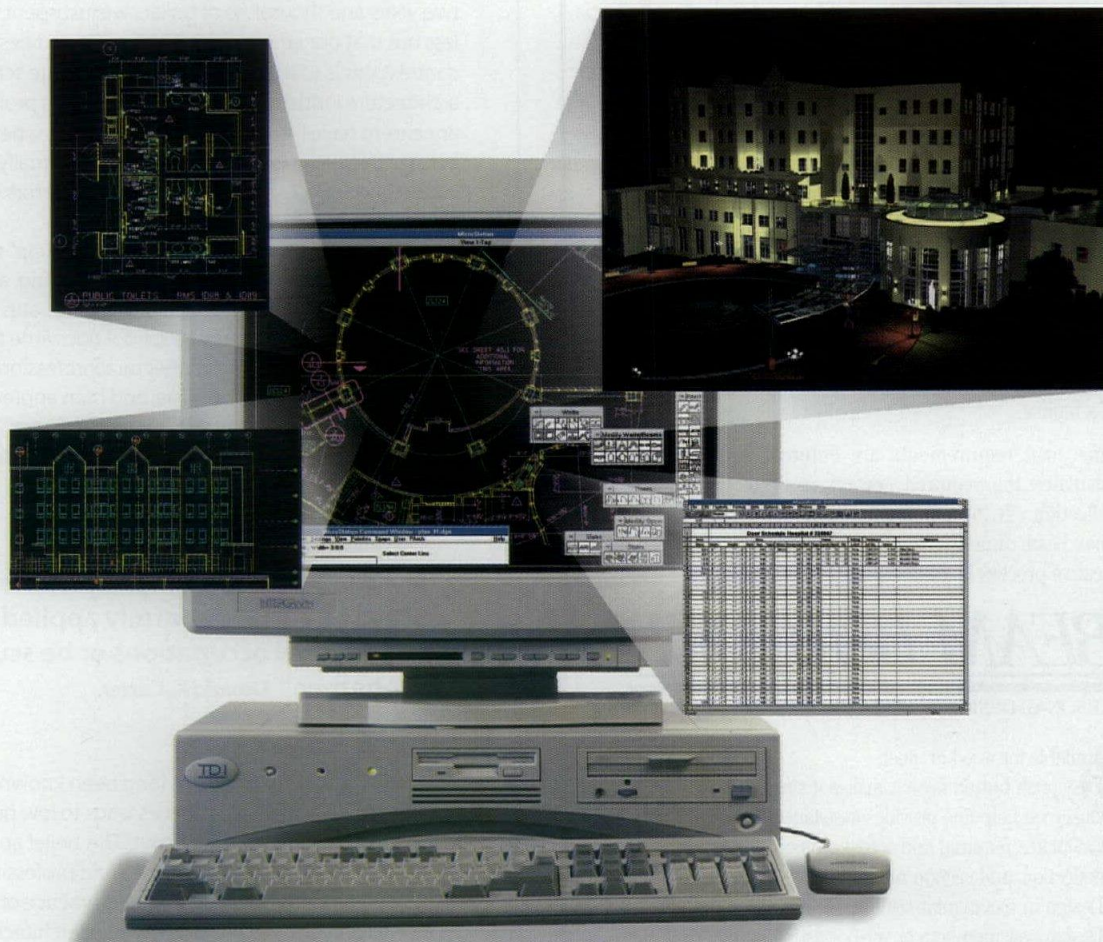
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## Views

### The Intern Trap (continued from page 12)

that in addition to my M.Arch. I also received my M.B.A.

You see, in business school they actually have the gall to try to instill a sense of self-worth in students. Our professors, our career counselors, and our working graduates all tell us that we have something to offer when we graduate. They tell us that the two years and thousands of dollars we just spent were not useless but that our efforts were worthwhile and desired. What a contrast this is to the mentality of architecture school and the architecture industry (can it really be called a profession when it appears to have little if any moral standard?) where students are constantly beaten down in reviews, have virtually no career counseling services, and only hear of the horrors of low-paying, exploitative jobs from recent graduates.

For me, the primary issue in "The Intern Trap" is not of labor and wage practices but more of the underlying, and accepted, mentality of the industry, which is that graduates learn nothing in school and that architecture school does little to add value to a person's worth in the architectural profession. The article touches only briefly on this issue, and I can appreciate why – the issue of educational reform in the training of architects needs to be seriously addressed and is probably a topic in itself for a future issue of your publication.

**"The exempt/nonexempt overtime pay issue should be uniformly applied to all professional occupations or be scuttled altogether." Donald K. Carter**

In the business world, it has long been known that the continuous exploitation of employees leads to low productivity and poor quality in a company's output. This belief applies not only to manufacturing but also to service and professional industries. The architectural industry's continued practice of undervaluing its interns only adds to the stereotype of architects being bad business people, a stereotype which I think is all too appropriate.

It is my belief that the treatment of interns is symptomatic of two fundamental issues within the industry – educational reform and business acumen. If graduates are viewed as useless then what is the point of going to school? Instead of seeing this as an excuse to underpay and underappreciate interns, why aren't the professionals, our supposed "mentors," trying to improve the current educational system? Perhaps it is because they are devoting most of their time to trying to gain recognition, satisfy their egos, or simply to survive in an industry that has been badly battered during the past few years. But to continue the bad practice of exploitation is not going to help their profit margins or the profession. At best, it results only in short-term gain at the expense of the long-term survival of the industry.

Peter G. Wong

St. Louis

### The Intern Trap III

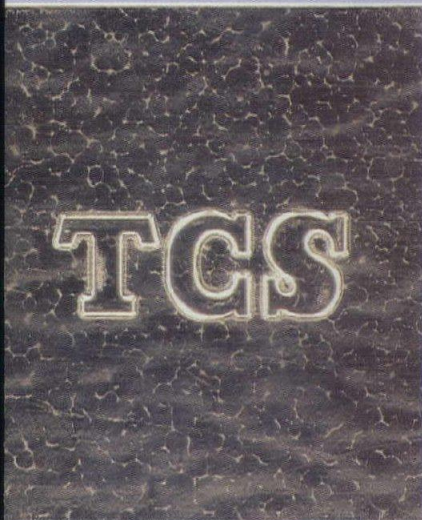
I wish to respond to your "Intern Trap" article in the July 1994 P/A. This is indeed a sticky issue. It has always angered me that some prominent architects have not paid interns at all or at slave wages. I know of one young graduate (continued on page 98)



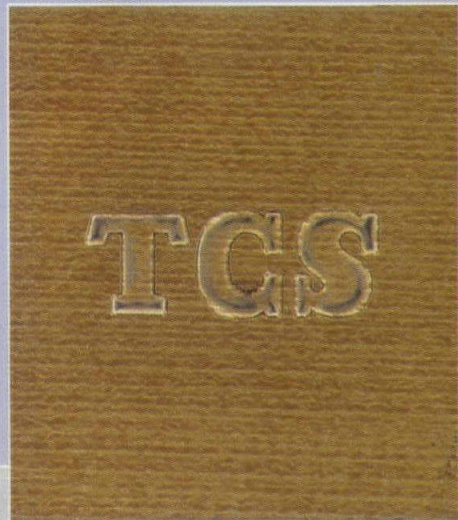
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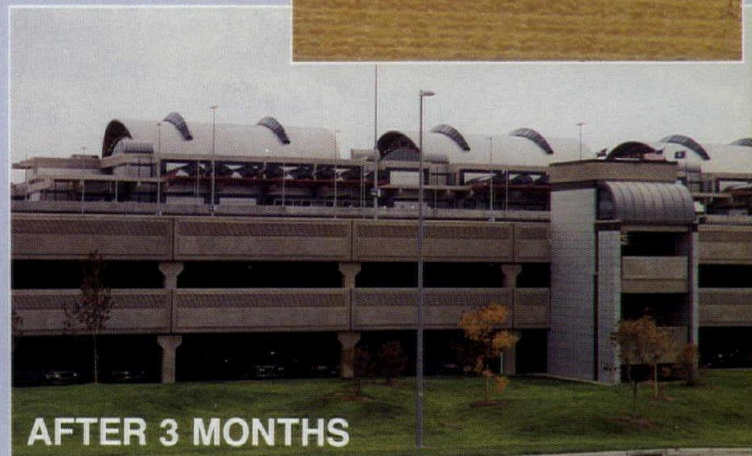


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Architect: Tasso Katselas

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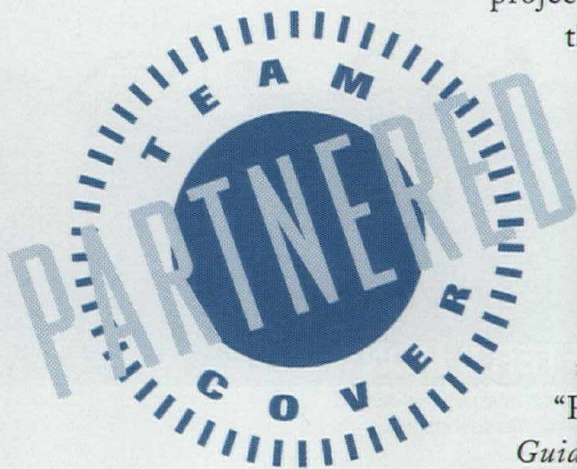
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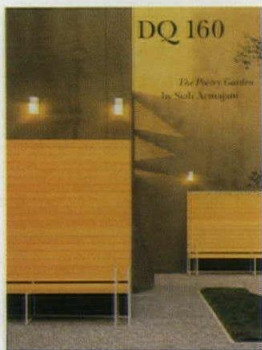
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## TWA Terminal Gains Landmark Status

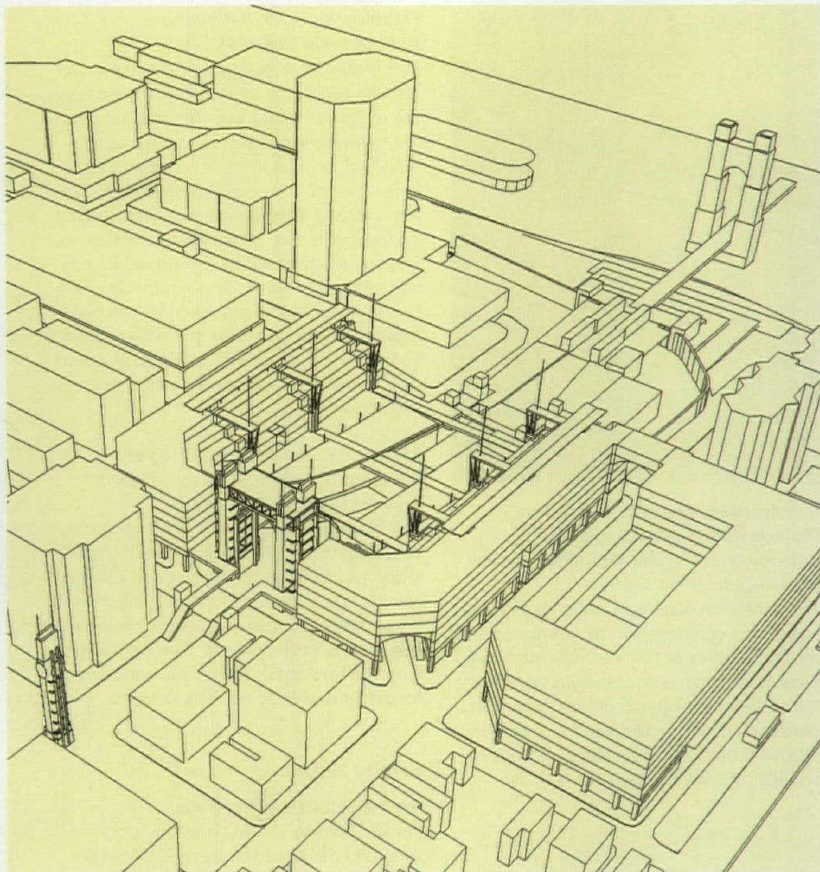
Over the objections of Trans World Airlines, the New York City Landmarks Preservation Commission conferred landmark designation July 19 on the exterior and much of the interior of Eero Saarinen & Associates' TWA Terminal at John F. Kennedy Airport. The airline objected especially to making the interior a landmark, and yet, given the company's insensitive alterations of the lobby and ticketing areas (see P/A, May 1992, pp. 96-109), the interior seems the most in need of protection. The Port Authority, landlord of the 32-year-old building, is not bound by the city's landmark designation, so the slow desecration of one of the greatest terminals ever built may grind on. However, designation should at least give the owners pause and let them know that the architectural community is watching. □

## A Strategic Reversal

"A lot of people think *Design Quarterly* doesn't exist anymore," says Robert A. Jensen in Minneapolis. But the 48-year-old journal founded by the Walker Art Center has sprung back to life. In July, with Jensen



as its new editor, *DQ* published issue number 160, using the format that its previous editor, Martin Filler, had discarded. Before the Walker closed the quarterly a year ago, Jensen noted, "Filler tried to cover four or five topics per issue on various design disciplines." MIT Press has since acquired the periodical, and this July it reappeared, looking much like the *DQ* of pre-Filler days, the entire issue addressed to one heavily illustrated topic. The summer number focuses on the Poetry Garden, a permanent environmental work designed for the Lannan Foundation in Los Angeles by artist Siah Armajani. Subscriptions (\$30 per year for individuals) are available from MIT Press Journals, 55 Hayward Street, Cambridge, MA 02142. □



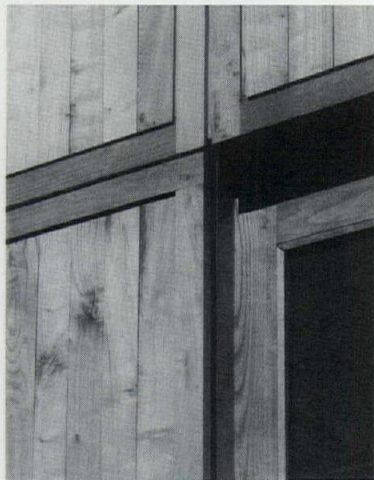
## A Better Entrance to Kentucky

Cincinnati architect James Y. Cheng of KZF, Inc., has won an international competition to design a dramatic gateway for Covington, Kentucky – Cincinnati's somewhat scruffy neighbor across the Ohio River. Cheng's plan, chosen from 104 entries, calls for constructing a 50-by-100-yard landscaped plaza one floor above grade at the Covington end of the famous Roebling Suspension Bridge. Traffic entering or leaving the bridge would travel underneath the plaza and also pass through a nine-story masonry and steel arch that will mark the south end of the project. The new arch, designed to echo but not copy the landmark bridge, would have at its top an observation platform where people could enjoy panoramic views of the river and the two cities. These and other ideas, such as arranging new four-story buildings to form a U-shaped opening toward the bridge, are intended to create "a co-

herent public realm" in place of the current mixture of leftover spaces, parking lots, and awkward development sites. Concourses paralleling the roadway would step down to the river, enabling pedestrians to reach the Ohio without encountering vehicular traffic.

Construction of the winning design must receive approval from local agencies concerned with such matters as fitting the new buildings, parking, and access into long-range development plans for Covington's riverfront, which has undergone about \$200 million of development in the past 10 years. Cheng expects that he and KZF would execute any public portions of the project that go forward. Louisville writer and editor Grady Clay chaired the jury, which included Ralph Johnson, Michael J. Pittas, Vernon Rader, and George Jaeger. The competition was sponsored by the Roebling Gateway Park Corp. and the City of Covington. □

## Books



**Construction, Intention, Detail: Five Projects from Five Swiss Architects** edited by Kevin Alter and Mark Gilbert, *Artemis, London/Zurich, 1994, \$14.95.* This exhibition catalog includes three essays about the construction-driven ideas and methodologies of five very talented Swiss firms. Each firm has an individual vocabulary, but all seek architectural content through materials and detailing. The results are exquisite. (Above: Detail from School for Wood Technology, Biel, by Meili & Peter.)



**Bunker Archeology** by Paul Virilio, *Princeton Architectural Press, New York, 1994, \$34.95.* This first English language edition of Virilio's book gives us a personal perspective on the architecture of war. An urban philosopher and cultural theorist, Virilio positions the "Atlantic Wall" (1,500 bunkers built along the French coast by the occupying Germans during World War II) within the political and social context of the war and he contemplates its meaning in the Post-War era. His own photographs of the bunkers – massive, zoomorphic concrete casements – underscore the lasting physical and psychological impact of the ruins. (Above: observation post.)

**Façadism** by Jonathan Richards, *Routledge, New York, 1994, \$75.* In this new book author and urban planner Jonathan Richards considers many sides of the ongoing debate over the meaning and the merit of "façadism" in individual structures and, on a larger scale, in urban centers. In the case of a London redevelopment project involving listed buildings, a debate raged for years over two proposals: one by James Stirling, which would have required demolition of listed buildings, and another by Terry Farrell, which would have inserted new buildings behind the façades of the old structures. Though much of Richards's analysis is focused on England the relevance of his exploration is widespread.

**Passive and Low Energy Cooling of Buildings** by Baruch Givoni, *Van Nostrand Reinhold, New York, 1994, \$49.95.* This book presents research and applications of cooling techniques, such as building orientation and layout, window size and shading, exterior color, and use of landscaping. A variety of passive cooling strategies is presented, including a "shower tower" evaporative system. The hard data, calculations, and analysis for different climates are most welcome.

### Briefly Noted

**Art & Architecture Thesaurus, Second Edition**, *Oxford University Press, New York, 1994, \$375, five-volume set, \$195, single-user electronic edition.* A reference standard, with 48,000 new terms, now available on disk.

**The Design Encyclopedia** by Mel Bars, *Wiley, New York, 1994, \$60.* Decorative and applied arts reference book covering the last 100 years.

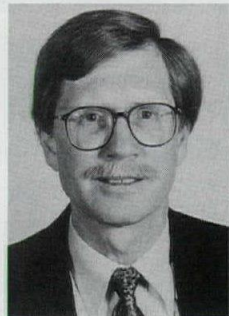
**Environmental and Architectural Acoustics** by Z. Maekawa and P. Lord, *Chapman & Hall, New York, 1994, \$135.50.* A comprehensive guide to acoustical design, outdoors and indoors, packed with tables, diagrams, and formulae.

**The Making of Beaubourg** by Nathan Silver, *MIT Press, Cambridge, Massachusetts, 1994, \$24.95.* Spirited account of the Pompidou's creation, from conception through completion.

**Museum Builders** edited by James Steele, *Academy Group, New York, 1994, \$69.* An international collection of high-profile museums by high-profile architects, such as Gehry, Meier, and Moneo.

**Crystal Palace** by John McKean, *Phaidon, London, 1994, \$29.99.* Original Drawings, renderings, and archival photos of this seminal structure by John Paxton and Charles Fox.

## Philip Langdon Joins P/A



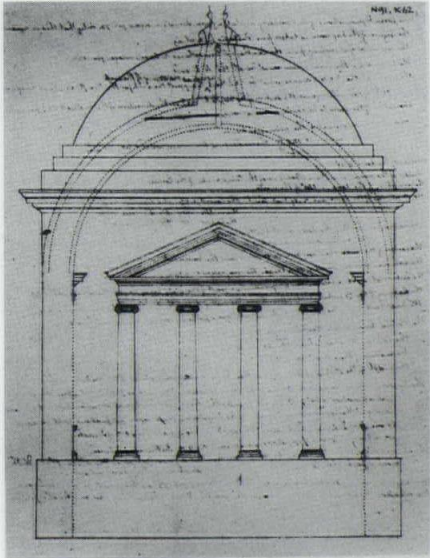
Philip Langdon, author of *American Houses*, *Urban Excellence*, and other books on design subjects, has joined P/A as a senior editor. Langdon has been a frequent contributor to *The Atlantic Monthly*, *Landscape Architecture*, and *Planning* magazines for the past 10 years. In June the University of Massachusetts Press published his sixth book, *A Better Place to Live: Reshaping the American Suburb*. A resident of New Haven, Langdon earlier was a reporter and architecture critic for *The Buffalo* (N.Y.) *News*. He succeeds Mark Alden Branch, who has moved to McKinney, Texas. Branch will continue to contribute to P/A as a correspondent. □

## Two Big Firms Merge

Hellmuth, Obata & Kassabaum of St. Louis and CRSS Architects of Houston now are a single firm, using the HOK name, as a result of a merger that took effect July 21. HOK, founded in 1955, entered the merger with a staff of 1,000 known recently for its design of sports facilities. CRSS Architects, or CRS, as it's more generally known, was founded in 1946 as Caudill Rowlett Scott and recently employed about 250 people. The combined firm, which has 12 offices in the United States and five overseas, says it will keep the entire staff from both HOK and CRS. Executives said the merger will "enhance the national and worldwide reach and range of design, planning, and consulting services" each has previously offered. □

## A Seattle Museum Reopens

The Seattle Art Museum's original home, a marvelous 1933 Art Moderne building on Capitol Hill, reopened in August as the Seattle Asian Art Museum after a \$1.5-million renovation by Olson Sundberg Architects. One of the highlights of the extensively refurbished museum is a garden court where the architects created earthquake-resistant niches for the display of heavy stone sculptures. The 16,000 square feet of galleries operate as a subsidiary of the Seattle Art Museum, which since 1991 has had its main quarters in a five-story downtown building designed by Venturi Scott Brown & Associates. The two-story Art Moderne building sits in Olmsted designed Volunteer Park. □

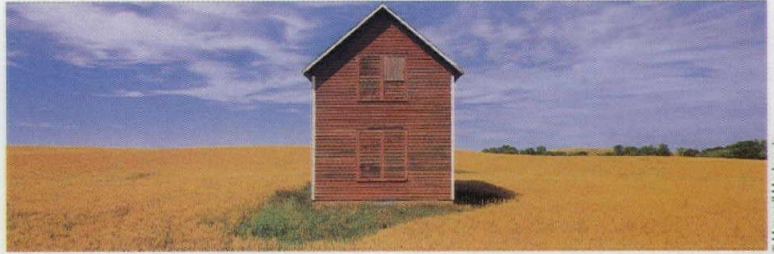


## Mr. Jefferson Goes to Washington

"It's a place you would rather look at now & then than live at," Anna Thornton wrote in 1802 after spending five days visiting Monticello, where she was disturbed by the incomplete state resulting from Thomas Jefferson's continual renovations. But our most architectural of Presidents triumphs yet again over the naysayers in an exhibition titled "Thomas Jefferson and the Design of Monticello," on view in Washington, D.C., at The Octagon, a building designed by none other than Dr. William Thornton, Anna's amateur-architect husband. The show, which runs through October 2, breaks new ground by tracing the evolution of Monticello through its many alterations and additions. Scores of archival drawings and manuscripts document the changing appearance of the house, including the original east façade, a Palladian-inspired design that was virtually demolished for the version that stands today. The highlight of the exhibit is a 3/8" : 1" scale model of Monticello's domed roof and oculus. □

## Preparing for Quakes

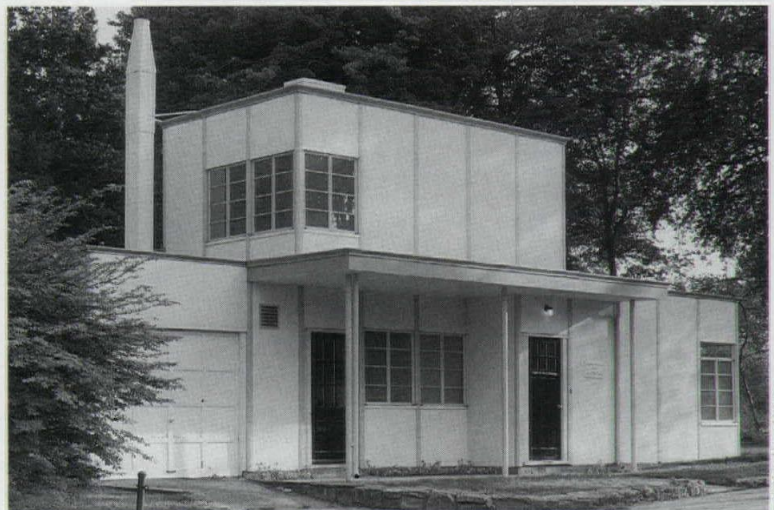
Los Angeles City Hall, designed in the mid-1920s and known worldwide, thanks to *Dragnet*, should manage to survive the earthquakes that make Southern California's future so worrisome. The City Council recently agreed to spend \$153 million on 38 months of seismic strengthening and other improvements, beginning in early 1995. Albert C. Martin & Associates has prepared what is being billed as "the largest base isolation project in the world." □



## Architecture, Lonely and Spare

When Maxwell MacKenzie returned to the western Minnesota farm country where he was born, he found approximately a third of its old buildings deserted. Moved by their melancholy beauty, MacKenzie began photographing the sagging barns, empty houses, and expansive stretches of prairie that once were home to thousands of set-

tlers from Sweden and Norway. The result, "Abandonings: Photographs of Otter Tail County, Minnesota," is on view from September 10 through October 8 at the Julie Saul Gallery, 560 Broadway in New York. The crisp color prints offer a poignant reminder that architecture sometimes becomes most evocative when it slips toward ruin. □



## Bauhaus on a Budget

Its Depression-era architect, Robert W. McLaughlin, called it the "Motohome" – an experiment in economical Bauhaus-inspired mass house production at a time when the cost of a conventional new house far exceeded most Americans' budgets. In 1933 Winslow Ames had a Motohome erected in New London, Connecticut. Now, after four years of effort, the rectilinear little dwelling has been restored on the campus of Connecticut College, where it will be used by the Center for Arts and Technology.

McLaughlin's firm, American Houses Inc., won 20 U.S. patents for the Motohome, which featured a then-revolutionary concrete slab foundation, flat

roofs "you can use," and exterior walls of thin asbestos cement panels. Wall segments were shipped from a factory and attached to a steel frame constructed on site. If the homeowner's needs later changed, the house could easily be expanded or moved; such, at least, was the claim. The New London specimen was restored with the help of the college, volunteers, preservation organizations, and two local architects who donated their services, Russell Sergeant and the late Michael J. Pray. To get a free cardboard model kit of the Motohome, write to the college's Center for Arts and Technology, Campus Box 5365, 270 Mohegan Ave., New London, CT 06320-4196. □

# Calendar

## COMPETITIONS

### Urban Dwelling

Deadline, entry: October 17  
Urban dwelling is the theme of the 1994 Shinkenchi Residential Competition, written and juried by Fumihiko Maki. Contact Entries Committee, Shinkenchi Residential Competition 1994, Shinkenchi-sha, 31-2 Yushima 2-chome, Bunkyo-ku, Tokyo 113, Japan.

### Presidential Design Awards

Deadline, submission: October 31  
Work that has been sponsored, authorized, commissioned, produced, or supported by the U.S. government may be entered in the fourth Presidential Design Awards. Contact Thomas Grooms (202) 682-5437.

### Theater Design Awards

Deadline, submission: November 7  
The United States Institute for Theater Technology has announced its Annual Architectural Awards Program. Contact Tim Hartung (212) 807-7171, FAX (212) 807-5917.

### Unbuilt Architecture

Deadline, submission: November 8  
Unbuilt designs, real or theoretical, may be entered in this annual program. Contact Unbuilt Architecture Awards, Boston Society of Architects, 52 Broad St., Boston, MA 02109-4301 (617) 951-1433 ext. 232.

### Rome Prize

Deadline, application: November 15  
The American Academy in Rome has announced the 1995/1996 Rome Prize fellowships. Architecture, urban design and planning, and historic preservation are among the eligible disciplines. Contact Fellowships Coordinator, American Academy in Rome, 7 E. 60th St., New York, NY 10022-1001 (212) 751-7200.

### Where City Meets Country

Deadline, registration: November 15; submission: January 6, 1995  
A transitional area between urban and agricultural zones in the southwest section of The Netherlands is the subject of an international ideas competition. Contact Eo Wijers Foundation, c/o NIROV, Mauritskade 21, 2514 HD The Hague, The Netherlands.

## EXHIBITIONS



### House Rules

September 10 – December 11  
Wexner Center, Columbus, Ohio.  
Ten teams of architects and social theorists explore "the impact of race, class, gender, ethnicity, and identity on architectural theory and the pro-

duction of domestic spaces" in House Rules; bell hooks/Koning Eizenberg Architecture (model, below left) and Mike Davis/ADOBELA are among the participants.

### Japanese Design

September 25 – November 20  
Museum of Art, Philadelphia.  
An installation designed by architect Kisho Kurokawa will house more than 250 objects – furniture, housewares, electronics, posters – in this blockbuster show.

## CONFERENCES

### Green Design New York

September 28 – October 23  
New York.  
This is a series of shows, panel discussions, and meetings (see "Sustainable Materials and Technologies, below) on environmental issues sponsored by IBD/NY, ADPSR/NY, and AIA National Committee on the Environment. Contact Green Design New York (212) 843-6689.

### A/E/C SYSTEMS Fall

October 10 – 12  
Chicago.  
This is the fall version of the computer design show. Contact Sharon Price, A/E/C SYSTEMS Fall, PO Box 310318, Newington, CT 06131-0318 (800) 451-1196.

### SARA Convention

October 19 – 23  
Ft. Lauderdale, Florida.  
"New Boundaries in Architectural Practice" is the theme of the 1994 national convention of the Society of American Registered Architects. Contact SARA, 1245 S. Highland Ave., Lombard, IL 60148 (708) 932-4622.

### Sustainable Materials and Technologies

October 22 – 23  
New York.  
This conference/product show will cover sustainable building materials and technologies. Contact AIA/Committee on the Environment, PO Box 80361, Baltimore, MD 21280-0360 (202) 626-7482, FAX (202) 626-7518.

### Historic Preservation

October 26 – 30  
Boston.  
"Preservation, Economics, and Community Rebirth" is the theme of the 48th National Historic Preservation Conference. Contact Kristin Vandevort, National Trust for Historic Preservation (202) 673-4092.

### International Architecture Seminar

November 7–10  
Jerusalem, Israel  
A Seminar on "Architecture, History, and Memory" will be organized around case studies presented by James Freed, Antoine Predock, Arata Isozaki, Vittorio Gregotti, Alvaro Siza, Balkrishna Doshi, and others. Contact Arthur Spector, 16 Ibn Gvirol St., Jerusalem, Israel (972) 2 665 107, FAX (972) 2 610028.

# Practice Notes

## Profits Rise Moderately

The median operating profits of design firms surveyed by the *Professional Services Management Journal* have risen 8.3 percent from 1993's level, while the median backlog of work has increased 5.6 percent and median net revenue per direct labor hour has risen 3.4 percent. However, median staff size has stagnated and overhead rates have increased to a median of 153.2 percent. The 235-page *Financial Statistics Survey* is available for \$239 plus \$4 shipping from PSMJ, (617) 965-0055.

## Construction Costs Grow More Slowly

Building costs increased more slowly in the second quarter of 1994 than in the first, according to E.H. Boeckh, cost consultants. The rate of increase dropped from .6 percent to .5 percent for commercial construction, from .7 percent to .5 percent for residential building, and from 1.2 percent to .4 percent for industrial facilities. For more information, call Janet Olson at E.H. Boeckh, (800) 809-0016, ext. 2808.

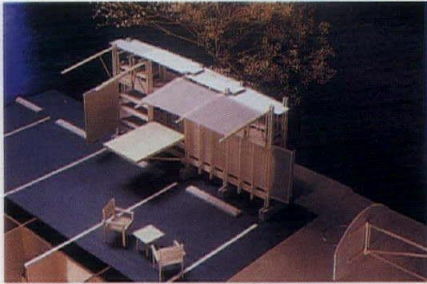
# Technics Notes

## Jailhouse Compendium

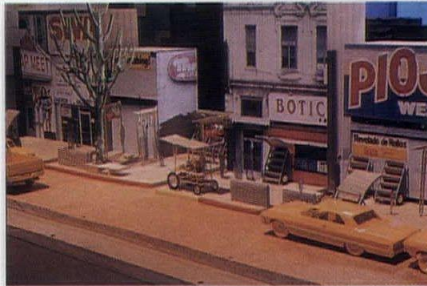
The American Institute of Architects is offering Justice Facilities Review, 1994–1995, a 125-page book of 46 correctional, court, adult detention, law enforcement, and juvenile detention projects. Each is briefly described and illustrated with photographs, elevations, sections, and plans. Basic data and credits are included, along with comments from the jury that selected the projects. For prices and ordering information, call AIA at 800-365-2724.

## Four-Alarm Research

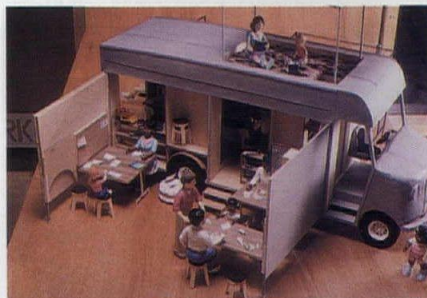
The National Institute of Building Sciences has identified four areas it considers to be the "highest priority research needs," as defined by its subcommittees. The four are indoor air quality; validation of full-scale burn data of fire models developed by the National Institute of Standards and Technology; structures resistant to extreme winds; and the long-term effects of additives on the durability of concrete. These research priorities and others receiving high, medium, and low priority are described in detail in a recently published 106-page report offered by NIBS. Contact: NIBS Publication Department, 202-289-7800.



1 Vending, waiting, looking station.



2 Training, borrowing, repair station.



3 After-school station.

## Improving Los Angeles Neighborhoods

Eleven teams of students at the University of Southern California School of Architecture recently displayed their ideas for meeting the social service needs of inner-city neighborhoods in relatively inexpensive, modest-scale ways. Among their concepts developed under faculty members Christopher Jarrett and Norman Millar and exhibited at the Municipal Art Gallery are a "vending, waiting, looking station" (1); a "training, borrowing, repair station" (2); and an "after-school station" (3). They were designed for areas such as Watts, East Los Angeles, and Koreatown with the intention of showing how small projects, created in collaboration with civic agencies and community groups, could meet neighborhood needs that are sometimes inadequately addressed by large urban master plans. □



## Wright Restoration in Buffalo

The long-awaited restoration of Buffalo's Darwin D. Martin house, one of Frank Lloyd Wright's finest Prairie-style residences, will begin before year's end. First priority is to repair and retille the roof, says Robert Kresse, president of the nonprofit Martin House Restoration Corp., which so far has collected \$1.2 million in an international fund-raising drive. To do a full restoration of the grounds and the house, built from 1904 to 1906, another \$5 to \$6 million must be brought in.

Recently The Buffalo News, M&T Bank, and Rich Products Corp. donated \$350,000 which enabled the restoration group to buy the adjacent house

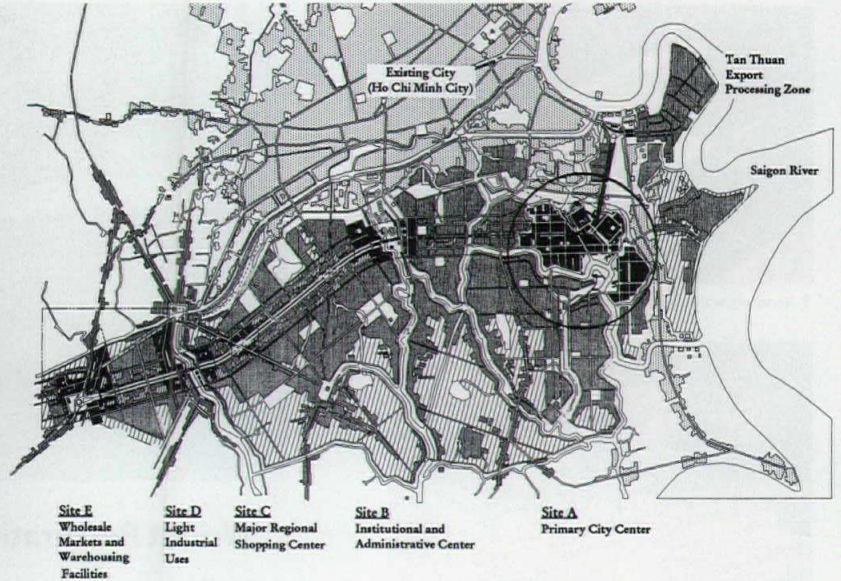
(above) that Wright designed at Martin's behest for the Buffalo businessman's sister, Delta, and her husband, George Barton. "We hope to hire an executive director within 30 days and offer that person the opportunity to live in the Barton house," said Kresse. Eventually Kresse's group would like to restore the entire two-acre complex, which would mean razing three small 1950s apartment buildings and rebuilding a conservatory, a pergola, and stables designed by Wright to complement the Martin house. A neighboring two-story gardener's cottage was recently restored by a private owner. □

## Repairing Rudolph's Architecture Building

The sound of breaking glass reverberated through part of New Haven in June as workers removed almost every window from the Yale Art and Architecture Building and began a renovation that's expected to proceed over three consecutive summers. The heroic urban sculpture by Paul Rudolph, built in 1963, has been a grim concrete labyrinth for years, so the \$11 million exterior and interior renovation, planned by Beyer Blinder Belle Architects of New York, is long overdue. The first summer's work concentrated on replacing leaking old single glazing with new double-pane low-e windows, repairing damaged concrete spandrel beams — the original reinforcing steel had begun to rust through — and improving the ventilation. □



Michael Mansford, Yale University, Office of Public Affairs



## Americans in Vietnam

Skidmore, Owings & Merrill, San Francisco, and Koetter, Kim & Associates of Boston have won an international invited competition to design a new city center that will eventually house more than two million people adja-

cent to Ho Chi Minh City (Saigon), Vietnam. SOM will handle overall coordination and Koetter, Kim will prepare the urban design plan of the central business district, within which Kenzo Tange Associates of Tokyo will design several buildings. The 6,425-acre new center continues the grid of the adja-

cent urban fabric, with the densest development occurring in a square that is skewed off the grid, in the same orientation as that of the nearby historic city center. Boulevards and canals will run through the area, recalling the French urban tradition still evident in the old city.



## Kansai Airport's Artificial Landscape

The Kansai Airport (*P/A*, Mar. 1992, p. 105) occupies an artificial island off the coast of Osaka, Japan. And the terminal itself, designed by Renzo Piano Building Workshop Japan, creates its own artificial landscape, including a four-story "canyon" and a series of interior terraces that step down toward the tarmac under a huge, undulating roof. The terminal—like a small city, with its own interior train system, commercial sector, and office park—is an impressive achievement, bound to take its place among the world's major terminals. However, its size, (1.7 kilometers long) and complexity (four floors of passenger services) may leave travelers, let us say, disoriented.







Voitto Niemela

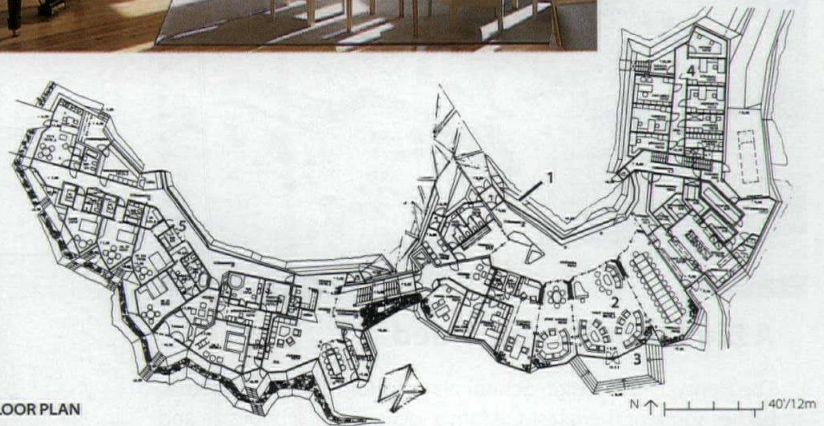
## Finland's New Presidential Residence

Reima and Raili Pietilä's competition-winning design for the official residence of the Finnish President (P/A, Sep. 1992, p. 112), completed last October, occupies a wooded peninsula northwest of downtown Helsinki. In keeping with the architects' longstanding credo regarding the essential affinity between architecture and "local nature," the structure responds to its site with massing evocative of craggy rock formations. Its double-glazed windows, their emphatic verticals rising to the roofline establish rhythms compatible with the surrounding trees.

With a gross area of 4,210 sq m (roughly 450,000 sq ft), the sprawling building comprises three distinct sections: the President's residence (including private quarters, public reception rooms, an office wing, and staff facilities); a gatehouse; and a housekeeping building with accommodations for two staff families. The various components are differentiated by level, volume, and orientation. For instance, the generously proportioned principal salons are raised and clustered around a sizable "sea" terrace; on a lower level, the intimately scaled private rooms, each with its own small terrace overlooking



- 1 ENTRANCE
- 2 PRINCIPAL RECEPTION ROOMS, SALONS
- 3 SEA TERRACE
- 4 OFFICE WING
- 5 PRIVATE WING

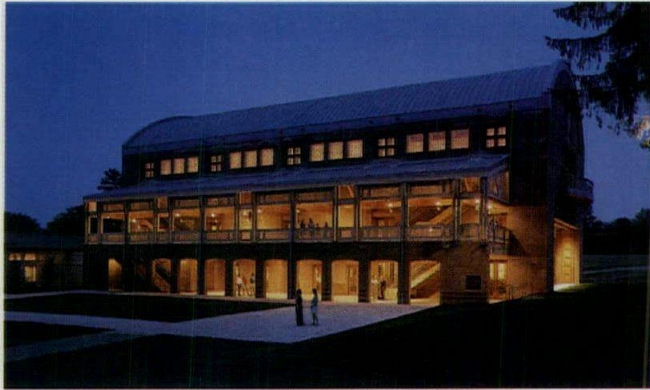


FIRST FLOOR PLAN

the water extend like an armature along the peninsula. Favoring traditional construction methods and domestic materials, the façades are built of Viitasaari red granite, the steel-framed windows covered with edged copper sheets. The interiors employ various stones and woods, but are generally white, with ceiling and wall planes that are folded and faceted to maximize the penetration of Finland's shallow white sunlight.

Judging the building from photographs

alone, there is a disappointing disparity between the promise of the organic, "wild" plan and model, and the ultimately tame built reality: the exteriors evince an institutional uniformity; likewise the interiors appear to err on the side of slickness, effected by cool geometric abstraction, overpolished textures, and a too-bland color palette. The result seems curiously devoid of the "emotion" that the late Reima Pietilä believed should be conveyed by architectural form.



© Steve Rosenthal

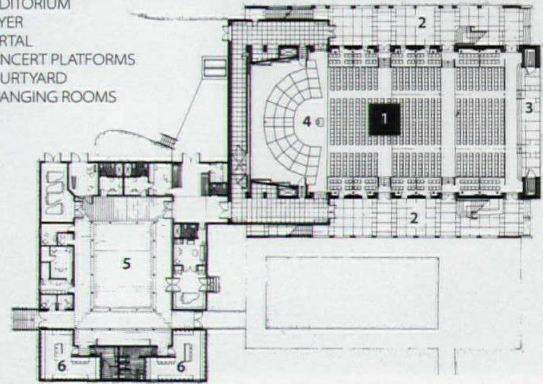
## For Symphonies Indoors and Out

Upon July's opening of the Seiji Ozawa Hall at Tanglewood in the Berkshire Hills of Massachusetts, music critic Edward Rothstein wrote in *The New York Times* that the \$9.7-million building "is precisely what a concert hall should be: a resonant, warm space that comes to life with sound." Designed by William Rawn Associates of Boston, the vaulted hall has an exterior faced in red brick. Its arcades employ Alaskan yellow cedar, which turns gray, and Douglas fir. Five-inch-thick acoustically insulated doors slide open on the back of the 1,180-seat hall to let another 2,000 people on a gently sloping lawn see and hear the performances, aided by a sophisticated outdoor sound system. The building, which Rawn likens to a Shaker meeting house in its "elegant frugality," will double as a recording studio.



Steve Rosenthal

- 1 AUDITORIUM
- 2 FOYER
- 3 PORTAL
- 4 CONCERT PLATFORMS
- 5 COURTYARD
- 6 CHANGING ROOMS



ORCHESTRA FLOOR PLAN

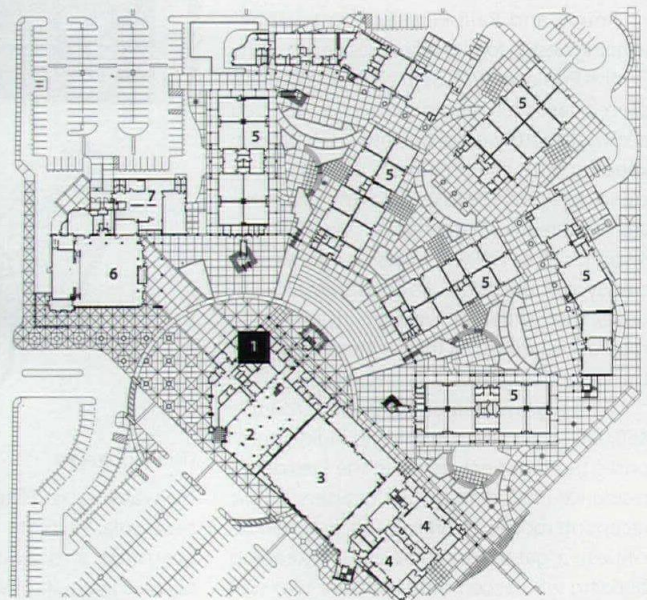
N 40'/12m



Jerry Laursen

## A Big School, Subdivided

The Henry J. Kaiser High School planned for Fontana, California, embodies some of the latest California ideas about school size and design. The architect, HMC Group of Ontario, California, has organized most of the classrooms into semi-autonomous clusters where students will spend much of their time in a presumably cohesive small-school environment, even though the complex as a whole will contain a student body of 2,000. The clusters will radiate from a courtyard and central facilities containing a gymnasium, a library, and administration. Specialized "career academies" placed at the perimeter will shelter outdoor gathering areas from the fierce Santa Ana winds. By separating the classrooms from facilities that are open to the public, the design will help shield most of the campus from after-hours trespassers.



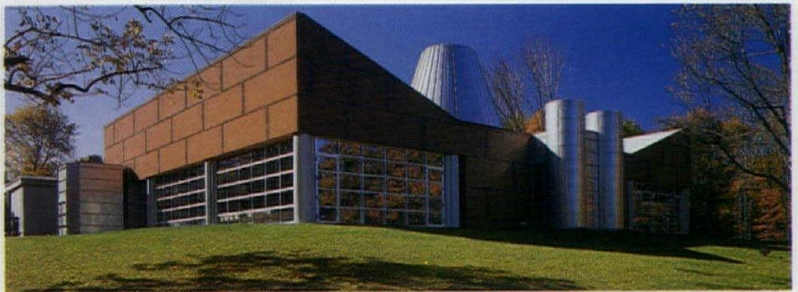
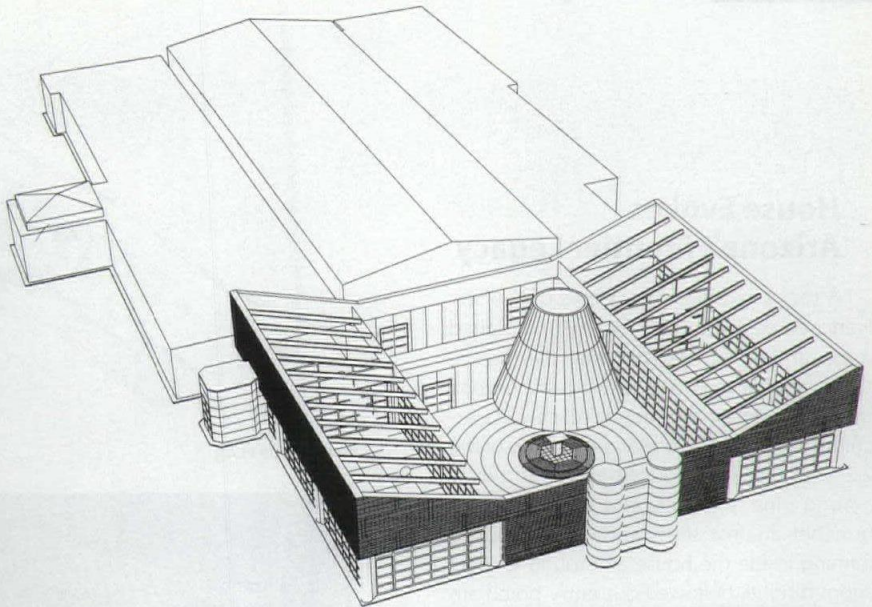
GROUND FLOOR PLAN

N 100'/30m

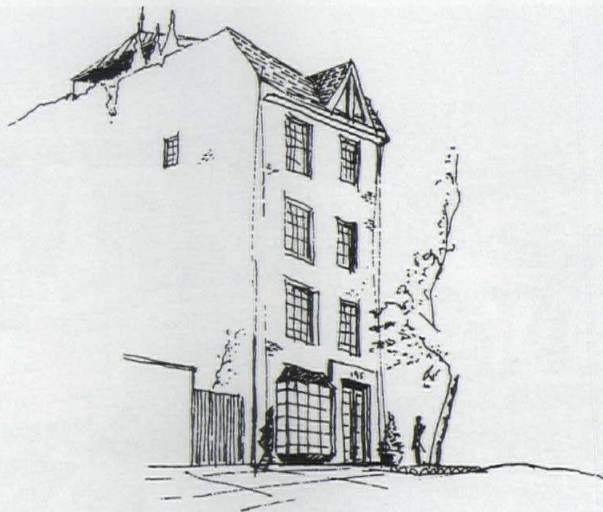
- 1 ADMINISTRATION
- 2 LIBRARY
- 3 GYMNASIUM
- 4 LOCKER ROOM
- 5 CLASSROOMS/LABS
- 6 MULTIPURPOSE ROOM
- 7 KITCHEN

## Synagogue Spaces Expand with Dignity

The perennial functional problem of the modern American synagogue has been how to expand the worship space for the High Holidays and other events that multiply attendance. For Congregation Sons of Israel in suburban Briarcliff Manor, New York, Conklin Rossant Architects have developed a coherent set of volumes to house various numbers. A sanctuary laid out in the round seats 250 for weekly services; motorized overhead doors with translucent glazing add two flanking porches for a total of 500 seats; sliding walls defining the lobby open to increase capacity in stages to 2,000, when the existing social hall is included. Clear-glazed overhead doors enclosing the porches can also be opened to surrounding lawns. To the building's simple forms and materials they have added bold, minimal symbols: a tentlike conical skylight over the central Bema and stainless steel cylinders recalling the form of the Torah scrolls outside the Ark where they are kept.



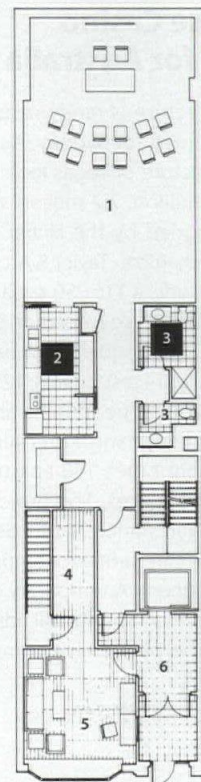
Eduard Hueber



## Easing the Pain of Cancer Patients

Swanke Hayden Connell Architects of New York is donating its services to convert a former furniture store in New York's West Village into a place where cancer patients and their families can obtain support and counseling. The facility, known as Gilda's Club, in memory of comedienne Gilda Radner, who died of ovarian cancer, will have counseling rooms,

offices, and meeting spaces on four floors at 195 West Houston Street, plus a children's play area in the basement. The 25'x100' building will also contain a center for training the staffs of Gilda's Clubs across the country. Construction is expected to be finished by year's end. Richard S. Hayden is the principal in charge and Joseph Pirrotta is project manager.



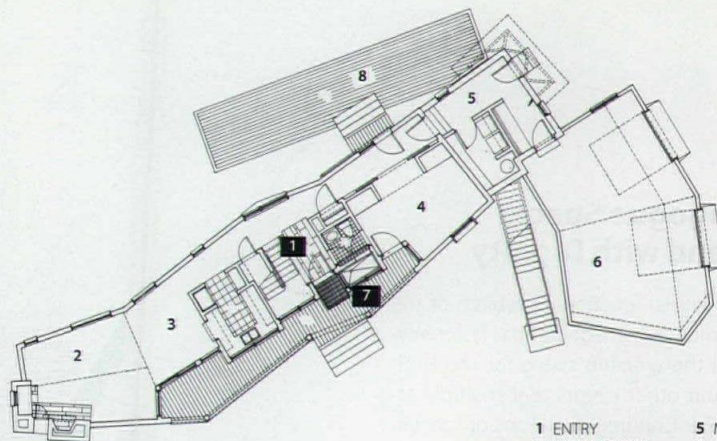
- 1 CONFERENCE ROOM
- 2 PANTRY
- 3 TOILET
- 4 RECEPTION
- 5 WAITING AREA
- 6 LOBBY

FLOOR PLAN

N ↓ 10'/3m

## House Evokes Arizona's Frontier Legacy

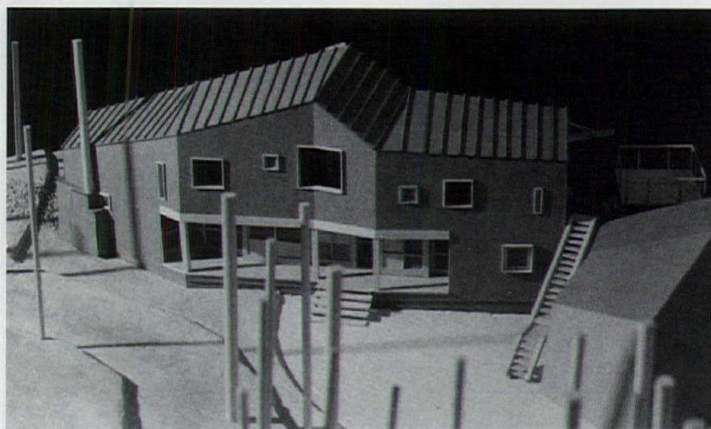
A rocky, wooded site, views of the San Francisco peaks, and the lore of abandoned mines and ghost towns provide the inspiration for a projected house in Flagstaff, Arizona by Ross Anderson of Anderson/Schwartz Architects, New York. The elongated body of the 2,240-square foot house bends and twists among pine and rock, and the metal roof hunches against snow and wind. Exposed framing inside the house and rough timbers supporting its hollowed-out entry porch are reminiscent of old mine shorings. The materials palette is similarly evocative: lapped exterior cedar siding of irregular widths, concrete block fireplaces, a "boulderlike" garage clad in reddish asphalt shingle, a standing seam roof, and wood windows and doors.



FIRST FLOOR PLAN

10/3m

- |               |            |
|---------------|------------|
| 1 ENTRY       | 5 MUD ROOM |
| 2 LIVING ROOM | 6 GARAGE   |
| 3 DINING ROOM | 7 PORCH    |
| 4 FAMILY ROOM | 8 DECK     |

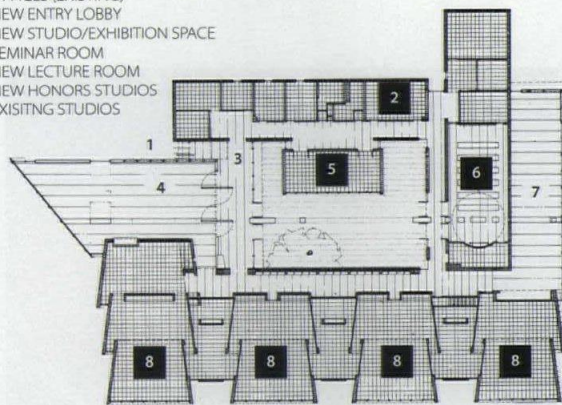


## Grandiose Casino Planned for Australia

Casino architecture is rarely restrained, but a casino planned for Sydney, Australia, makes the architecture of Vegas look almost tame. The \$400-million, 2.2-million-square-foot casino, designed by the Hillier Group with Philip Cox Richardson Taylor & Architects of Sydney, will include: a 116,250-square-foot main casino; a 19,000-square-foot private gaming room; a 30,000-square-foot banquet and meeting facility; 14 restaurants; 12 beverage outlets; a 2,000-seat performing arts theater; a 750-seat dinner and entertainment theater; a 350-room hotel; 140 apartments; and 2,500 parking spaces. The project will also have a light rail station, a bus depot, a health club, a child care center for employees, and a retail component. A temporary casino, scheduled to open next spring, will tide gamblers over until the permanent complex is completed in 1997.



- 1 NEW ENTRANCE
- 2 OFFICES (EXISTING)
- 3 NEW ENTRY LOBBY
- 4 NEW STUDIO/EXHIBITION SPACE
- 5 SEMINAR ROOM
- 6 NEW LECTURE ROOM
- 7 NEW HONORS STUDIOS
- 8 EXISTING STUDIOS

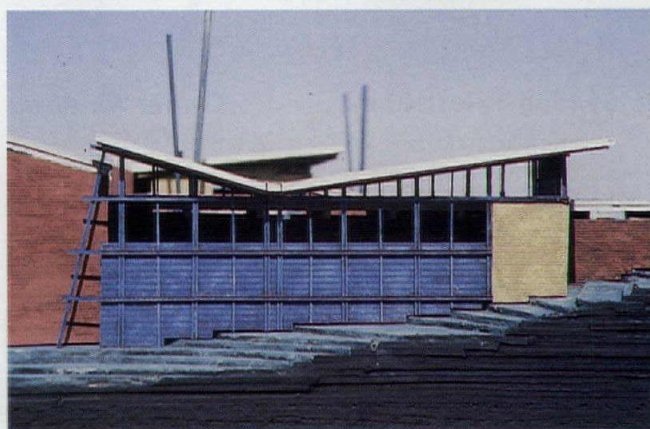
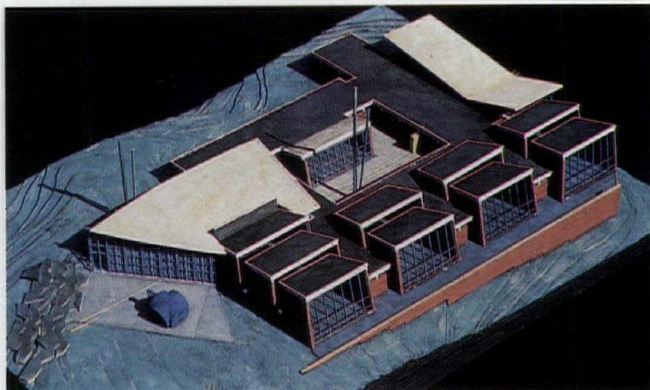


FIRST FLOOR PLAN

N ↓ 40/12m

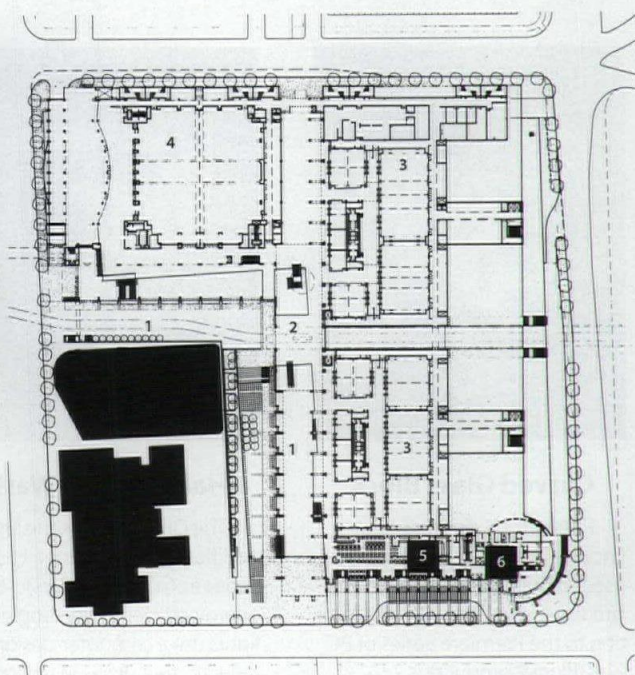
## A Modern but Lighter Addition

Brian Healy of Cambridge, Massachusetts, describes his proposed additions to Brandeis University's Fine Arts Building as "less rigid, more lighthearted" than the repetitive abstract forms Harrison & Abramovitz designed for the building in Waltham, Massachusetts, in 1962. New studio and exhibition space would be in an angular addition with a blue metal screen on its eastern end. New honors studios would be topped by a butterfly roof with continuous clerestory windows. A courtyard that was poorly integrated into the original building would become a focal point of the renovated and enlarged interiors. Healy says his \$2-million addition and renovation proposal, now under consideration by the university, has raised the university's opinion of the original building, which "they weren't really appreciating."



## A Railway Runs Through It

The Charlotte Convention Center, scheduled for completion next year, will occupy a four-block site at the southern edge of the North Carolina city's heart. Designed in a joint venture by The FWA Group, Charlotte, and Thompson, Ventulett Stainback & Associates, Atlanta, the \$90-million center will preserve a railroad right-of-way that runs through the middle of the site. A vaulted spine will allow the rail line to pass through the 850,000-square-foot building. Below-grade exhibition halls will continue beneath the tracks; ballrooms and meeting rooms on the floor above will be slightly above street level. To raise the convention-goer's awareness of Charlotte, the building's 746-foot-long concourse on the top level is a glass-enclosed corridor offering sweeping views of the city and access to outdoor gardens.



BALLROOM LEVEL

- 1 CONCOURSE
- 2 GRAND HALL
- 3 MEETING ROOM
- 4 BALLROOM
- 5 RESTAURANT
- 6 ADMINISTRATION

N ↙ 100/30m

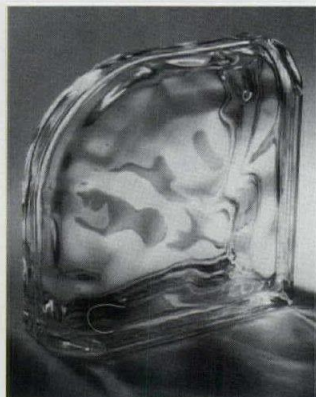


### Seating by Iosa Ghini

Italian architect and designer Massimo Iosa Ghini has produced the Leggero seating series for Cassina. Leggero's exposed bent steel tubing is finished with baked enamel in gray, yellow, or green; stainless steel turnbuckles hold the fabric cushion support in tension. It is available as an armchair, a standard and an oversized two-seat sofa, and a three-seat sofa. Circle 100 on reader service card

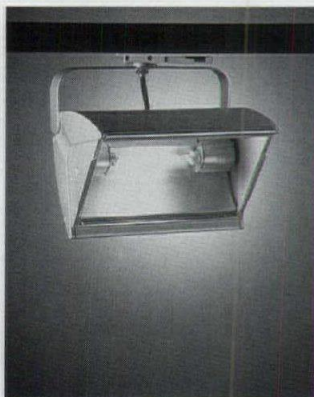
### Corner Window à la Wright

Designed by architect Stuart Cohen in collaboration with an in-house engineering team, Pella's CornerView Window, (right) constructed of mitered, 5/8-inch-thick clear insulating glass, is available in three standard sizes. Primed-wood or aluminum-clad exterior finishes and wood interior finishes are offered in standard and custom colors. Circle 101 on reader service card



### Curved Glass Block

Pittsburgh Corning's new Encurve™ finishing unit can be used to build curves, waves, and circular shapes. This newest addition to the Premiere Series of PC GlassBlock® products is 7 3/4" x 7 3/4" x 3 7/8" and is available in the Decora® pattern. Circle 102 on reader service card



### Halogen Wall Washers

The QM200/500 is the latest addition to the Tungsten Halogen Series from Lighting Services. The energy-efficient, wide-angle flood lights use a computer-designed reflector that works in unison with a 100-, 200-, 300-, 350-, 400-, or 500-watt tungsten halogen lamp. An integral UV filter/safety shield makes the fixtures suitable for museum and gallery applications. Circle 103 on reader service card



### Glulam Guide

American Wood Systems has updated its *Product and Application Guide - Glulams*, Form EWS Q455A. The 24-page brochure includes recommended specifications, and information on fire resistance and moisture effects. Circle 200 on reader service card



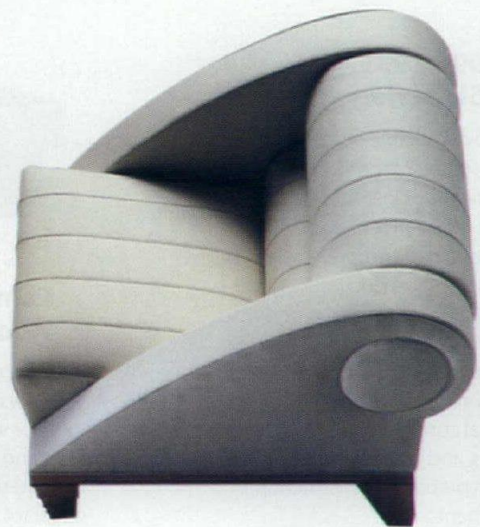
### Insulation for 2 x 4 Walls

Owens-Corning has expanded its line of polyethylene-wrapped insulation products for attics and crawlspaces to include PINKPLUS® R-13 Fiberglas Insulation for 2 x 4 walls. Specifically designed for exterior wall installation, the new encased insulation has a kraft-paper-faced vapor barrier with a stapling flange for easy installation. Circle 104 on reader service card



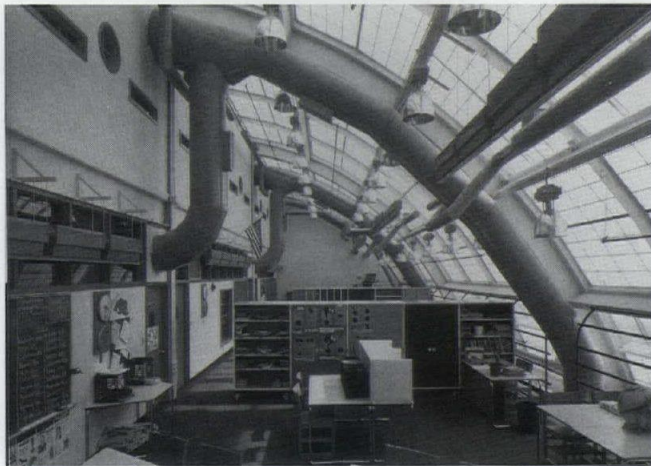
### Handcrafted Wool Rugs

San Francisco designer Vicki Simon's Ingredients collection of 100-percent wool rugs, handcrafted in the U.S., includes five basic designs (each in three sizes): Circle in a Square; Square in a Rectangle; Square in a Circle; Half and Half; and Spiral (shown above). Mustard, Celery, Blueberry, and Tea Leaf colorways with a variety of trim options are available. Circle 105 on reader service card



### Furniture by Leon Krier

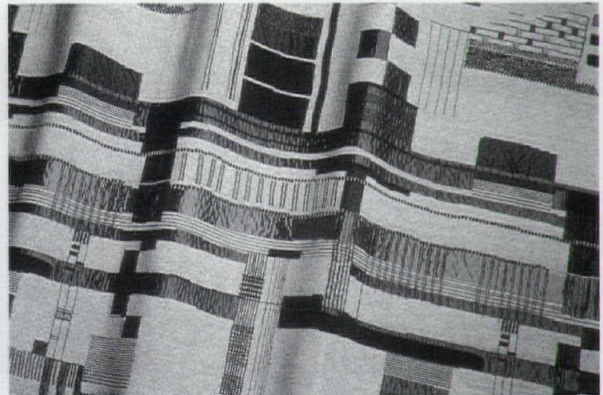
Architect Leon Krier has designed a small collection of furniture for Giorgetti® over the past few years. Among the tables, chairs, sofas, and cabinets in the collection is the Aries series of sofas and armchairs; fabric or fiber-quilted leather upholstery covers a solid beech wood and plywood frame; the base and feet are made of solid cherry wood. The Aries armchair (shown above) is 32 1/8 inches wide and 39 3/8 inches deep. Circle 106 on reader service card



### Exposed Duct Systems Brochure

United McGill's complete line of ducts and fittings is designed specifically for exposed duct system applications in painted galvanized steel, stainless steel, and aluminum. Custom-fabricated components are also

available, including ribbed duct, standing seam elbows, duct manifolds, and special connectors. A new brochure includes product descriptions and installation photos. Circle 201 on reader service card



### Bauhaus-Inspired Textile

Produced as part of Knoll Textiles' celebration of the 75th anniversary of the Bauhaus, Legacy textile has a large-scale, geometrical pattern based on a design by Gunta Stolz. The chenille and viscose fabric is available in four colorways and has a wide repeat, suitable for sofas, club chairs, etc. Circle 107 on reader service card

### 1994/1995 CSI Catalog

Now available is the 1994/1995 edition of the Construction Specifications Institute's *Services and Publications Catalog*. The catalog contains a comprehensive listing of technical documents, educational materials, and programs developed by CSI. One of the technical publications featured is the *Manual of Practice*, a reference manual containing theories, techniques, and formats to aid specifiers in preparing construction documents.

Circle 202 on reader service card

### Tile Product Catalog

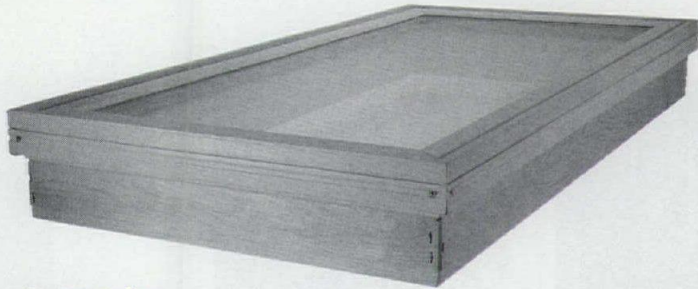
Dal-Tile's 1994 product catalog provides descriptions, application recommendations, sizes, and trim options for its full line of glazed wall tiles, ceramic mosaics, glazed floor tile, unglazed floor tile, Stone Classics, and European Classics. Installation products are described and specifications listed.

Circle 203 on reader service card

### Building Products on CD-ROM

The United States Gypsum Company is now offering building product and construction system data and specification information on CD-ROM. The USG ACTION software program, originally on 13 floppy disks, enables architects and specifiers to electronically transfer product specifications, descriptive copy, code and performance test results, schematics, illustrations, and CADD drawings directly into architectural plans and specification sheets. The program includes fire-rated and sound-rated wall, ceiling, and floor assemblies, and abstracts from model code reports.

Circle 204 on reader service card



### Composite Wood Windows

Integrity is a new line of wood windows from Marvin with an exterior shield of Ultrex™, a glass fiber and polyester resin composite material. The Ultrex shield does not chip, crack, bend, or warp. The windows hold 3/4-inch-thick insulating glass with Low-E

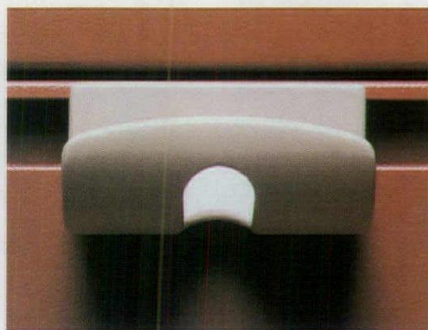
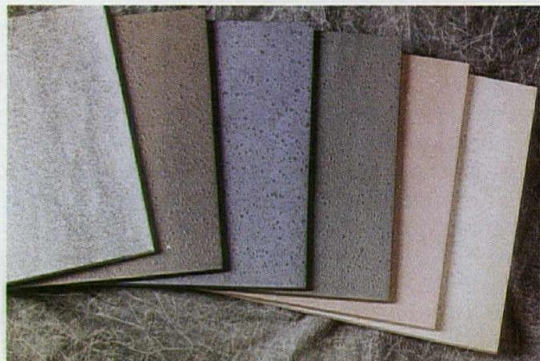
II, a coating that incorporates multiple layers of energy reflecting materials. Integrity meets and exceeds the National Wood Window and Door Association Grade 40 for air and water infiltration and structural requirements.

Circle 109 on reader service card

### 12 x 12 Porcelain Pavers

American Olean has announced the availability of 12" x 12" Quartz Crystal and Crystal Flame (right) porcelain pavers. Available with polished, honed polished, and unpolished pebbled surfaces, the pavers have the appearance of granite. Four-inch-wide borders and corner pieces are also available.

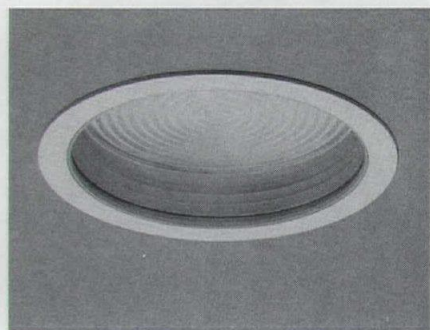
Circle 110 on reader service card



### ADA Compliant Drawer Pulls Brochure

Meridian has published an 8-page, full-color brochure on its new line of ADA-compliant drawer pulls designed by Tom Edwards. The pulls, named Enhanced Access™, were designed to ease the use of file and storage cabinet drawers.

Circle 205 on reader service card

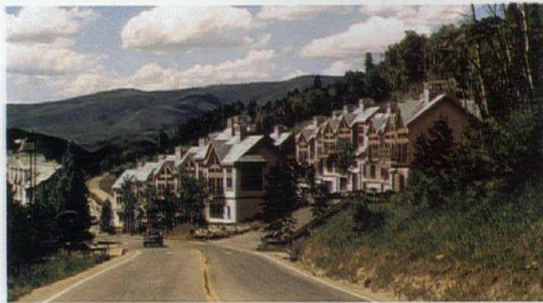
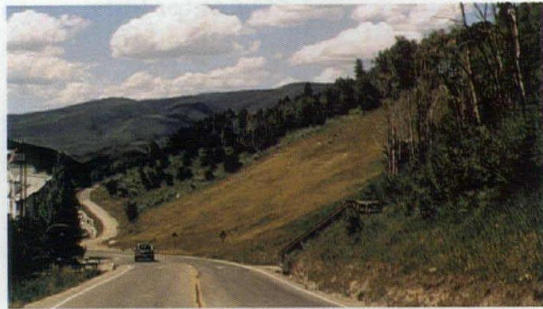


### Compact Fluorescent Downlight Additions

STAFF Lighting has added 45 decorative downlight treatments to its line of compact fluorescent fixtures, including new reflector finishes (PolyQuad Matte), smaller aperture sizes (4" and 5" aperture downlights), and decorative lamp shieldings (interchangeable rings, discs, cylinders, and cones). The Fresnel Lens (shown above) is among the new Shallow Plenum Downlights (SPDs) in the collection.

Circle 111 on reader service card





## 3D Studio® Upgrade

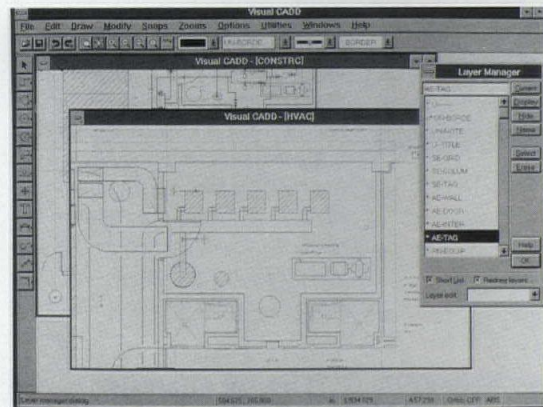
The Multimedia Division of Autodesk has announced a major upgrade of its 3D modeling, rendering, and animation software for 386/486/Pentium®-based PCs. 3D Studio Release 4 has several production-level features accessed through a series of plug-ins. Focusing primarily on character animation, free-form organic modeling, and data-driven motion, Release 4 includes new modules for true 3D inverse kinematics, spline-based modeling, fast preview rendering, and a key-frame scripting language. Of particular interest to architects and designers is the Perspective Match plug-in, which makes it easy to render a 3D model into a photograph by matching the perspective of the original photograph.

Circle 112 on reader service card

## 2D Design and Drafting

Numenta has introduced Visual CADD Windows-based 2D design and drafting software. Designed by several of the original developers of Generic CADD®, Visual CADD delivers many of Generic's features to Windows, including the two-letter command set for quick, intuitive use. It loads and saves all Generic CADD file and AutoCAD® DWG/ DXF file formats.

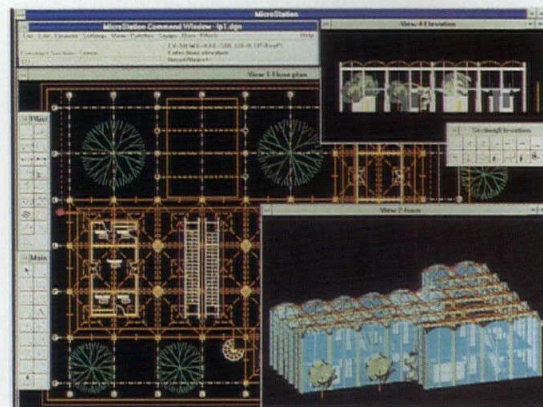
Circle 113 on reader service card



## Intergraph Applications for Windows NT

Intergraph has shipped its building design applications (Project Architect, Project Layout, Project Engineer HVAC, and Project Engineer Electrical) for Microsoft Windows NT; the applications continue to be available for Intergraph workstations as well. Project Architect (shown left) is a full-function software package that supports and automates the entire architectural process – from schematic design to construction documentation. It also generates 3D models for use with MicroStation and ModelView to create high-quality images and animations.

Circle 114 on reader service card



## MacDraft Upgrade

IDD has shipped version 4.0 of its MacDraft drawing and drafting software for Apple® Macintosh® computers. MacDraft's new integrated database features allow the user to assign information to objects, to perform Find/ Replace operations, and to create custom reports that are updated as changes are made to a drawing. In addition, a cloning feature can automatically replicate a report as a Microsoft® Excel® worksheet.

Circle 115 on reader service card

## Third-Party Applications for AutoCAD LT

Kadet LT from Expert Graphics is a complete LT-based application that adds tools and features to the AutoCAD LT environment. It is designed around a complex-object hierarchical model that improves layer management and control. Any predetermined entity or set of entities can be copied or moved as a single block from one floor of a layout to another by using a single command.

Circle 116 on reader service card

## Time-Tracking Software

TimeTrax, a graphical-based software product developed by Timberline, allows architectural and engineering firms to track their time. TimeTrax automates the collection of time information and its subsequent transfer to project control, to forecasting and scheduling applications, and to accounting software; daily, weekly, biweekly, and semimonthly cycles are available. An electronic stopwatch measures and automatically posts time spent on each project to the computerized time-entry screen. Security options restrict timesheet access, ensuring confidentiality and data integrity. The software runs on Microsoft Windows and on IBM OS/2 operating systems.

Circle 117 on reader service card

## CAD Drafting Package

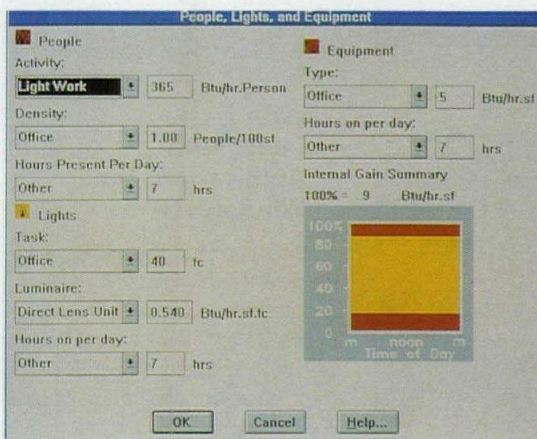
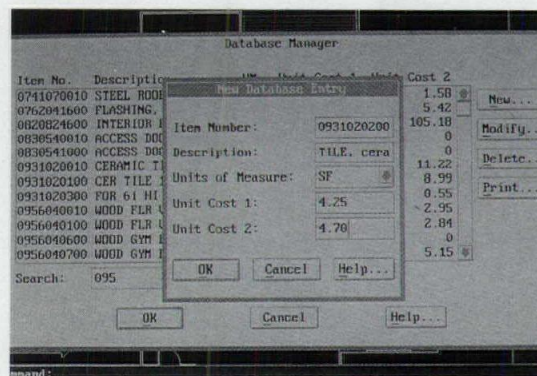
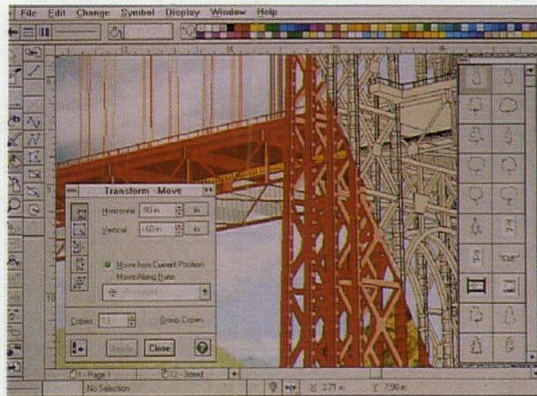
TommySoftware™ has introduced CAD/DRAW 2.0 for Windows, a CAD shareware package. It combines 2D drawing functions with a fast redraw speed, pop-up menus, support for 256 drawing layers, and the ability to import or export graphic data. New features of this version include: additional commands for constructing lines, tangents, and circles, and for dividing and copying objects; the ability to directly edit a selected object and scale, to rotate or distort it. Version 2.0 complies with the guidelines of the Association of Shareware Professionals and is available from major bulletin boards and on-line services. Circle 118 on reader service card

## 2D/3D CAD Package

XCAD for Windows and Windows NT from Xitron provides a comprehensive range of drawing facilities to create and modify simple and complex drawings. A major feature is its ability to draw free-form surfaces using advanced NURBS (Non-Uniform Rational B-Spline) surface tools, such as close/open mesh, linear sweep, and rotational sweep. It can be used to draw surfaces of any shape, while providing drafting functions for the production of dimensioned drawings of objects. The DXF file format provides users with a bridge between XCAD and other CAD software, including AutoCAD. Circle 119 on reader service card

## Raster CAD for Windows

GTXRaster CAD Series for Windows, new from GTX, is billed as the first program of its kind to combine automatic raster-to-vector conversion and hybrid editing with full compatibility with AutoCAD for Windows. The new program features dialog boxes, pop-up menus, pull-down menus, and a floating tool box icon palette. Circle 120 on reader service card



## CAD-Compatible Illustration Tool

Micrografx Designer™ Technical Edition is designed to bridge the gap between CAD and other computer equipment and software. Its translation filters allow the user to accurately transfer "front-end" sketches to CAD for detailed rendering. Designer™ can also import and enhance CAD files and images, and integrate them into presentations or documents. Circle 121 on reader service card

## Cost Estimating Module

Eagle Point has announced the release of the Quantity Takeoff/Cost Estimating module for its Advanced Architecture program. The architectural utility offers several features, such as R.S. Means Cost Data, a database manager, material assignment, take-off extents, back-up utility, detailed results table, and a print manager. It is an optional module that is fully integrated with the Advanced Architecture module to provide, say the producers, a fast and easy method of calculating quantities and preparing estimates. Circle 122 on reader service card

## Energy Analysis Software

Softdesk's new energy analysis software, developed with the U.S. Department of Energy, is said to be the first software package to capture the geometric information needed for energy analysis directly from a CAD system. Called Softdesk Energy, it integrates a heating and cooling loads capability (based on ASHRAE's Simplified Energy Analysis Method) with AutoCAD drafting tools and Softdesk's building design software. Climates for geographic areas can be reviewed by picking a city or zone on a graphic map with the mouse. It generates charts of heating and cooling loads throughout the year based on the average temperature and humidity for a typical day in each month. Circle 123 on reader service card

# 817 hits. No errors.

*The 817 Pella® Architect Series™ windows in the renovated B&O Warehouse at Camden Yards combine historical authenticity, energy efficiency and low maintenance.*



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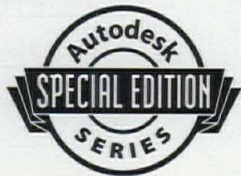
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# SIGGRAPH 94: The Digital Era Dawns

Architects will wake up to find they've missed a revolution.

by Kent Larson

SIGGRAPH 94, the twenty-first International Conference on Computer Graphics and Interactive Techniques, attracted 26,000 people to Orlando in late July – among them, image-makers for Hollywood and Madison Avenue, developers of ways to visualize complex datasets in science, medicine, mathematics, and warfare, and creators of most of the architectural imagery the public sees. Together this strikingly disparate group is defining the three-dimensional grammar that may soon be the world's primary means of communication.

SIGGRAPH is a showplace for powerful new three-dimensional tools that lend themselves to being demonstrated through architecture. There were architectural images at every turn in Orlando's cavernous exhibition hall. But the images generally fell into one of two narrow categories: gritty future visions of the Blade Runner/Neuromancer variety and painstakingly rendered simulations of historical spaces. Exhibit monitors displayed a basilica, two cathedrals, the Alhambra, an Italian hill town, a Mayan temple, a Shinto shrine, and countless anonymous spaces.

Little of the architectural imagery was created by architects, and nowhere in the hall were buildings of the present – or even of the 20th Century. Also absent was work that architects would find conceptually interesting. Clearly, the concerns and aesthetics of architects today are irrelevant to these image-makers and their vast audience.

Several months ago *ANY: Architecture New York* devoted an entire issue to what the magazine called "Electrotecture." *ANY* avoided defining the term, but suggested that it broadly described the architecture of the electronic age. It was taken for granted that

*Kent Larson is a principal with Peter Gluck & Partners in New York. His article on Louis I. Kahn's unbuilt Hurva Synagogue, with his computer images, appeared in the September 1993 P/A.*



Walt Disney Corporation Virtual Reality Magic Carpet ride (animated interactive characters from *Aladdin*).

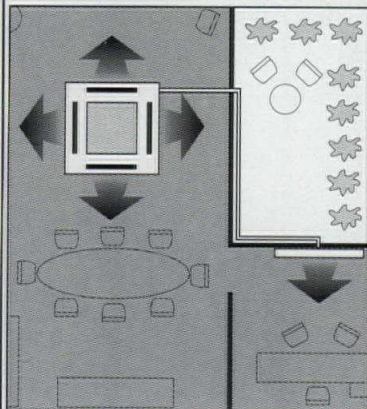
architects would be front and center in this significant development. *ANY's* writers overlooked the fact that creative nonarchitects have been working vigorously for years to develop an architecture of the digital age. The fruits of that effort are to be found in the abstract geometry of super-computed models of chaotic systems, the full-screen worlds of industrial light and magic, the battlefields of the video arcade, and the new three-dimensional communities of the net. Architects, by and large, have shown little interest in this movement. And they weren't invited anyway.

Hardly noticed among dozens of SIGGRAPH courses, panel discussions, and demonstrations such as "Spacetime Splashes: Catching the Wave of Einstein's Equations" was a token, poorly attended session called "Computer Graphics for Architecture and Design – Cur-

rent Work Outside the U.S." The discussion was dull, the audience bored, and the work shown tended to be staid and corporate (with the notable exception of several Japanese projects). Most of what was presented in that architectural session paled in comparison to the controversial, groundbreaking, if uneven, work by artists, scientists, and the entertainment industry. The participants addressed none of the fascinating fundamental questions about the relationship of architecture to digital technologies: Will the design of virtual systems used for designing space fundamentally influence the kind of space created? Will children reared in virtual (Nintendo) environments relate to space differently? Will the availability of this new technology simply lead clients to demand one more service from architects – which the (continued on next page)

**SIGGRAPH 94** (continued from previous page)

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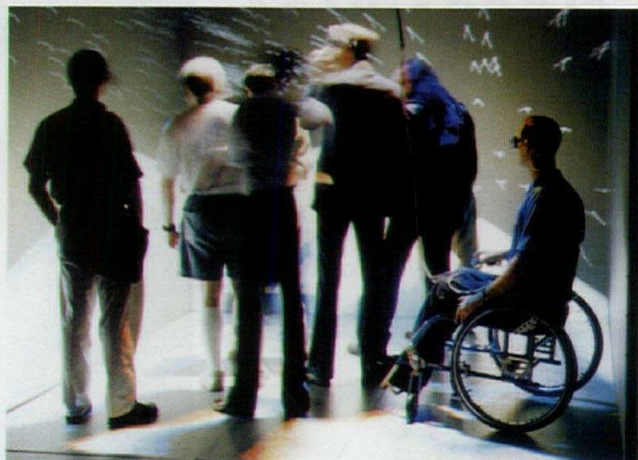
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**VROOM, A Walk Through Chesapeake Bay**, by Eileen E. Hoffman, enables viewers to experience the interaction of complex oceanic systems.

clients will refuse to pay for? The questions could go on and on.

As for the conference as a whole, the star of the show was RealityEngine2, Silicon Graphics' device for rendering more than one million textured polygons per second. Such graphics power allows a user to move smoothly around a textured, complex model in real time, with little of the hesitation that destroys the illusion of being immersed in space. Expectations are that performance will improve tenfold in the next two years, opening fantastic opportunities for the visualization and manipulation of space.

Perhaps the ultimate use of this computing power was in the three VROOMs set up by the Electronic Visualization Laboratory of the University of Illinois at Chicago. A VROOM is a 10-foot x 10-foot x 9-foot cube with three of its faces receiving projected images of a single model, each face driven by a separate RealityEngine2. People enter a VROOM wearing special goggles that reveal the stereoscopic projected images, while manipulating views, parameters, equations, time, or anything else the programmer allows. The illusion of physically being inside a virtual space is wonderfully disorienting. The hardware for a VROOM can be set up for about \$1 million.

As a three-dimensional space for visualizing three-dimensional digital space, a VROOM would seem perfect for architectural exploration. In spite of this, only two of the 44 projects shown involved buildings, and neither was a study of architecture. Participants from academia were quick to express their view that architecture schools are at best uninterested in exploring the possibilities of this technology, and remain isolated in the technological dark ages.

It is too easy to say that the architectural profession's inadequate fees bar any meaningful participation in the digital revolution. Much of the best work at SIGGRAPH was either developed in academia, where computer technology is widely available, or created by artists outside the entertainment industry, despite their limited resources.

Architecture schools should be leading the exploration of meaningful ways to use these tools to create architecture. Most, however, have not measured up to the task. Just as the architectural profession has ceded control of much of the building process to other disciplines, architects now are in the position of seeing other fields amass superior expertise in three-dimensional visualization technologies. Architects find themselves possessing little influence over the increasingly sophisticated architectural images that SIGGRAPH participants present to the public. In the end, the exhibition in Orlando drives home a disturbing thought: the digital revolution is passing architects by. □

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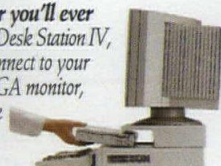


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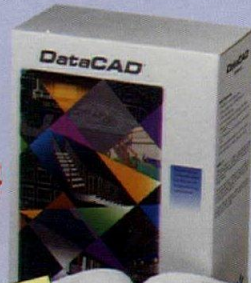
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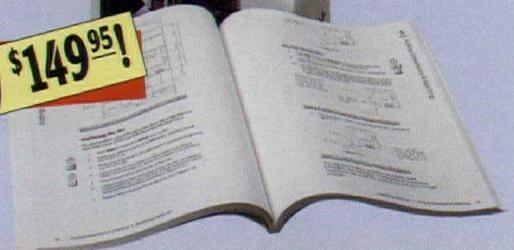
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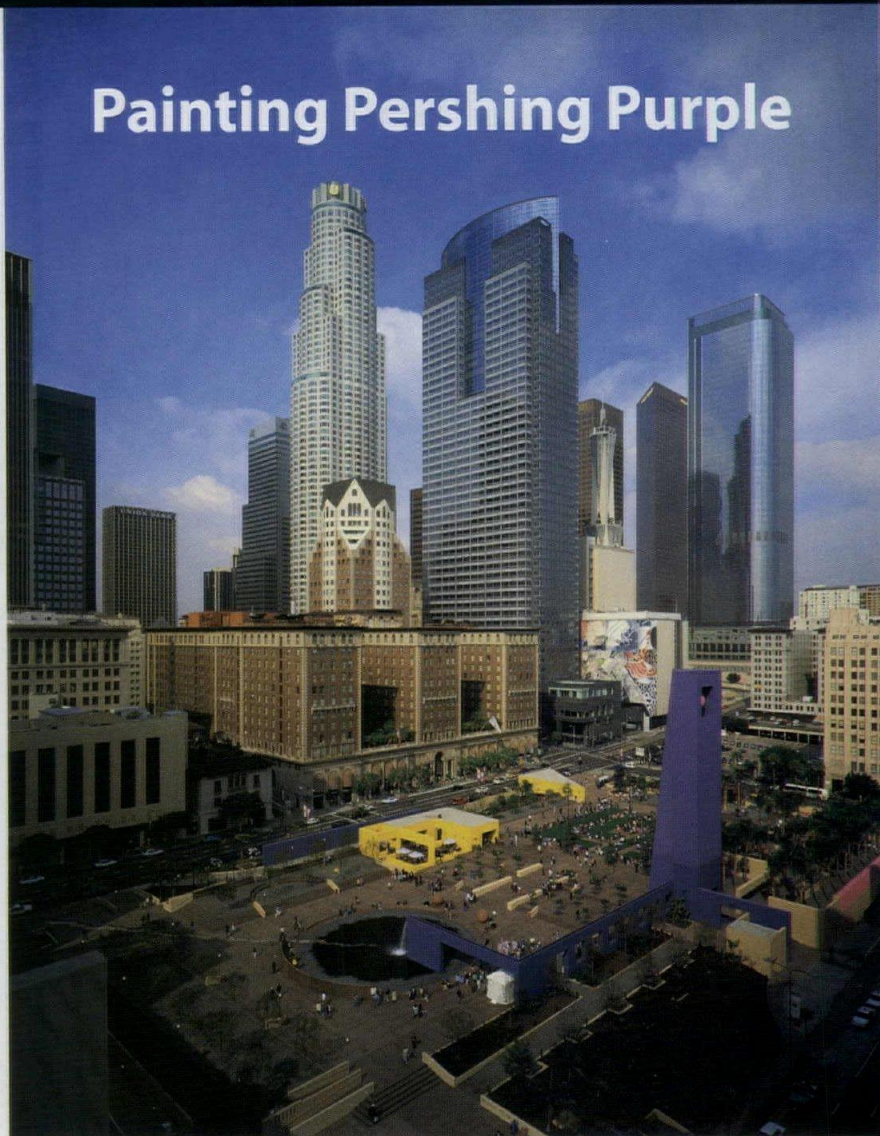
**Legorreta injects a striking Mexican influence into L.A.'s downtown park.** by *Morris Newman*

The completion of the 5.5-acre Pershing Square this past spring culminated a ten-year effort to make over the oldest and most troublesome park in Downtown Los Angeles. A collaboration between Ricardo Legorreta of Mexico City and the landscape firm Hanna Olin of Philadelphia, the new park is a sophisticated attempt to bridge social and geographic divisions in what had been an inhospitable part of the city.

Like Los Angeles itself, Pershing Square has been the subject of many makeovers. Earlier in the century, it went through incarnations as, variously, a formal Anglo-American garden, an Olmsted-like park with dense planting and winding paths, and, most recently, as a sterile slab of cracked concrete. Since the 1950s, when Downtown L.A.'s only park was transformed into the lid of a underground parking structure, few visitors other than drug dealers spent time in Pershing Square, a no man's land dividing the pin-striped financial district from the Latino Downtown.

In the mid-1980s, the city decided to re-make Pershing Square. The Los Angeles Community Redevelopment Agency joined forces with a group of local businesses and developers to sponsor a design competition in 1986, with the \$14-million cost of the project to be split evenly between public and private sectors. But downtown interests hated the winning entry by SITE Architects, which proposed a rolling "landscape" made of a twisted steel grid and glass panels, and featured such trademark SITE items as buried automobiles. Calling the scheme unbuildable, they shelved the SITE proposal, and developer Robert Maguire II assembled a new coalition of property owners behind the Legorreta/Hanna Olin scheme.

In a self-conscious foray into multiculturalism, Legorreta and Hanna Olin conceived the park as a combination of Latino and Anglo-American parks. The Latino elements are a hardscaped "zocalo" or plaza, punctuated by a ten-story purple "campanile" and a circular fountain paved with river stones, which are continuous in plane with the concrete pavement. The Anglo-American area centers on an open-air amphitheater on the



The redesigned Pershing Square has little to do with the traditionally restrained colors of Downtown L.A.

north, surrounded by formal walks and planting. Walkways throughout the park are surfaced in decomposed granite, a soft, porous material that evokes the gravel walkways of 19th-Century promenade parks.

Angelenos seem divided in their opinions of Legorreta's audacious color scheme, which includes a matte purple for the tower, pinkish concrete for the pavement, and a cool yellow for a café and a police substation. It's hard to tell whether Legorreta misunderstood the steely, hazy quality of Downtown light in choosing these dense, chalky hues, which would be better keyed to the brilliance of Mexican sunlight, or whether they are a calculated assault on Downtown's prim white-and-gray color scheme.

While the plan of Pershing Square is diagrammatically simple, in experience the park is very complex, largely because of a multitude of level changes orchestrated through ramps, terraces, and steps. These level changes break the park into many outdoor

"rooms," each of which the designers hope will be appropriated by different ethnic or social groups for their own semiprivate gatherings. Legorreta has pointed out that in Mexico picnickers often set up string barriers to mark off their own "private" spaces; here, level changes attempt a similar division of outdoor spaces.

The level changes also help hide Pershing Square's "fatal flaw": the ramps of the underground parking garage. Originally, the park had ramps on all four sides. The designers removed the ramps from the east and south and shortened the driveways of the remaining ramps. To tie the park into Downtown's walkways, the designers have provided a sidewalk around the entire park, while providing built-in seating for people waiting for buses.

The old statues that had places of honor in the former Pershing Square, including a scowling Beethoven with an unbuttoned waistcoat and a *(continued on next page)*

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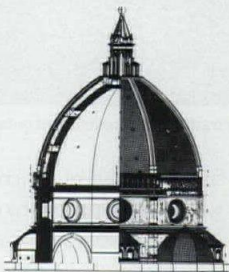


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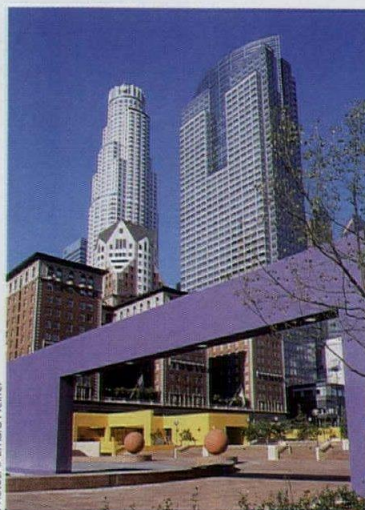
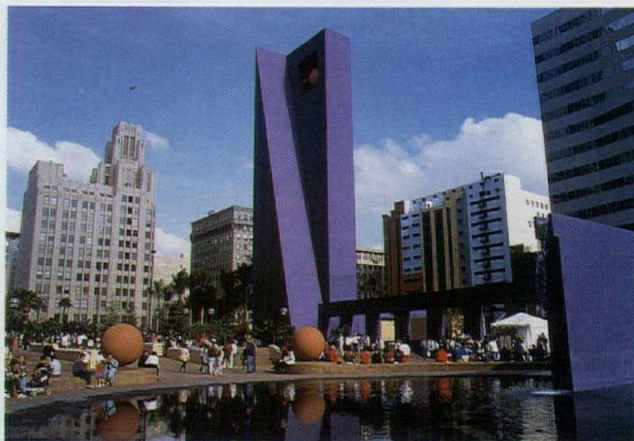
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## Reports

### Pershing Square (continued from previous page)



The campanile (above) towers over a fountain whose water level rises and falls every 30 minutes. The view through the purple aqueduct (left) looks toward a bright yellow café, a second bright yellow structure containing a bus stop and park office, and Bunker Hill in the distance.

Photos: © Erhard Pfeiffer

World War I doughboy with his ready bayonet, are grouped together like mothballed objects in a museum warehouse. Although the old objects look sad and marginalized in this setting, the park would be poorer without these hoary objects, which form part of the city's collective memory of the pre-Legorreta park.

The new Pershing Square has not been uniformly well received. Many people find the plaza too hard, too arid, too lacking in greenery. That impression is not helped by the lack of mature trees, which could have offered shade and refuge from the California heat. None of those objections is insignificant for a rare bit of open space in a highrise district that until recently was notable for both lack of charm and unfriendliness to public life.

Judging from the constant flow of people through the park, however, Pershing Square is a social success. Fortunately, Downtown L.A.'s newest park has become integrated into a lively pedestrian network of new or revived institutions, including the newly renovated Los Angeles Central Library by Hardy Holzman Pfeiffer, the Bunker Hill steps by landscape architect Lawrence Halprin, the Maguire Gardens fronting the library, also by Halprin, and the Museum of Contemporary Art by Arata Isozaki. Supported by these new public buildings and spaces, Pershing Square has become an active element in the reclamation of Downtown Los Angeles as a place for pedestrians and, remarkably in this often unsocial city, as a place of civic feeling. □


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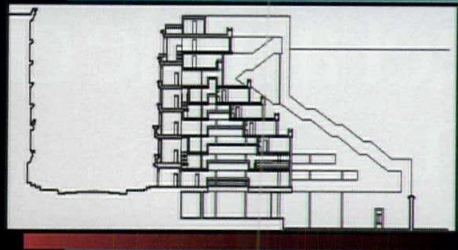
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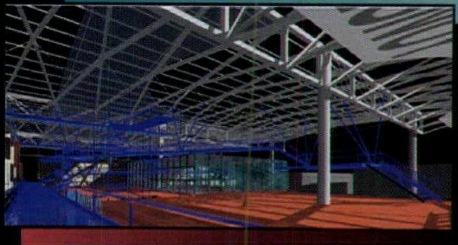
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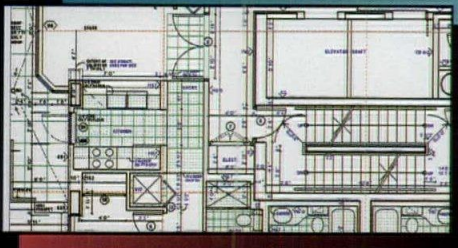
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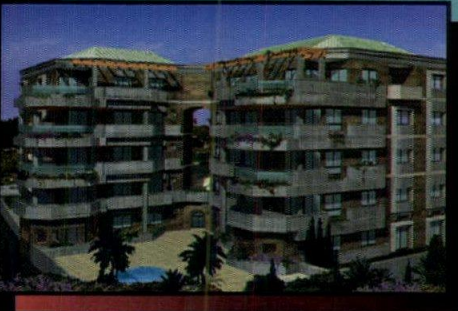
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# Chinese Boom Town

**The most ambitious of China's Special Economic Zones, the burgeoning city of Shenzhen is generating opportunities for some American firms.**

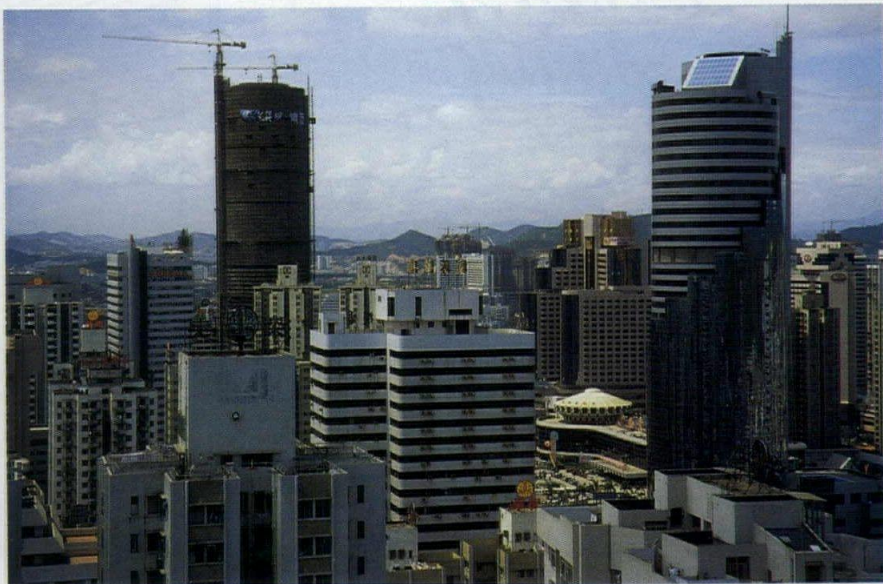
by John Morris Dixon

The words Special Economic Zone don't even hint at the actuality: Shenzhen is an all new city of 3 million on a site that was rice fields in 1980. China's experimentation with market economy is apparent in its established cities, but here the new economic policy is solely responsible for a whole metropolis, complete with skyscrapers, freeways, and theme parks. The lobbies of Shenzhen's luxury hotels bustle with capitalists from outside the People's Republic; most come from Hong Kong and Taiwan, but American architects are definitely among them.

From the revolving restaurant atop Shenzhen's Shangri-la Hotel, the city's towers and slabs (top right) look as if they might have sprouted almost anywhere in the world. But the number of cranes on the skyline tells you this is not America, and the bamboo scaffolding that encases the buildings under construction says it's East Asia. A few blocks to one side of the hotel, the dense urban fabric ends abruptly at the barbed-wire fence marking the well-guarded border between China and the New Territories of Hong Kong. Just beyond the fence is a swath of unlikely greenery that the Hong Kong government keeps undeveloped to foil illegal border-crossers; isolated in it is a station on a railroad that will take you to the heart of Hong Kong in about an hour.

Developed as a showcase of enterprise, Shenzhen has spawned a number of private architectural firms to help deal with its amazing building boom. But one dominant firm is nonetheless the state-linked Shenzhen University Institute of Architectural Design (SUIAD), made up of the new university's faculty members and headed by its dean of architecture, Xu Anzhi. Like virtually all the adults in Shenzhen, Xu is from elsewhere, in his case Beijing; he has traveled the world and taught in Montreal. And like many other Shenzhen citizens, he does not even understand the local Cantonese dialect, managing quite well with Mandarin and English.

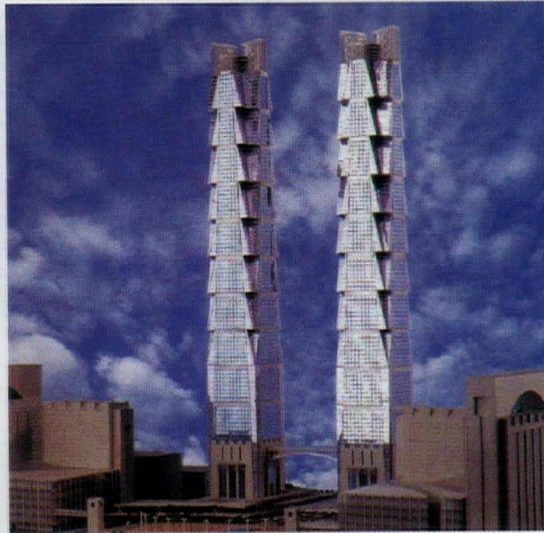
SUIAD is carrying out residential and institutional commissions, most of them in



John Morris Dixon



The skyline of the 14-year-old city (top), seen from one of its rooftop restaurants, continues to be reshaped by new towers. Now under construction is the 2.37-million-square-foot AVIC Plaza complex (above left) by the Shenzhen University Institute of Architectural



Design with Loeb Schlossman Hackl of Chicago. SUIAD is conducting an in-house competition (above right) for the 17-million-square-foot China Plaza; the scheme shown, one of four, plays on the forms of pagodas.

Shenzhen. For some larger commissions that call for international standards of detail and mechanical systems, the institute has collaborated with American firms. Right now, SUIAD is working on two Shenzhen projects with S.O.M., San Francisco, and on four others (three in Shenzhen, one in the far north of China) with Loeb Schlossman Hackl of Chicago.

### Drawing on International Resources

Money for most of Shenzhen's building projects comes from Hong Kong and Taiwan. Since developers pay dearly to lease state-owned land for finite periods of years, there is

great pressure to complete revenue-generating structures quickly. After a long and often exasperating period of building program approval and lease negotiation, developers want their buildings to go up overnight. They are usually more than happy to wrap their hard-won square footages in the kind of envelopes they are familiar with. There is little time for design exploration.

For high-profile buildings that Americans are likely to work on, developers are willing to pay fees in the area of 4 percent, versus only 2 percent or less for run-of-the-mill Chinese commis- (continued on next page)



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**Reports**

**Chinese Boom Town** *(continued from previous page)*



One of the city's vast apartment complexes (top) includes moderate-scaled facades to make its lower floor more congenial. A meticulously maintained luxury-row-house community (below) looks as if it might be in Orange County, California.



Photos: John Morris Dixon

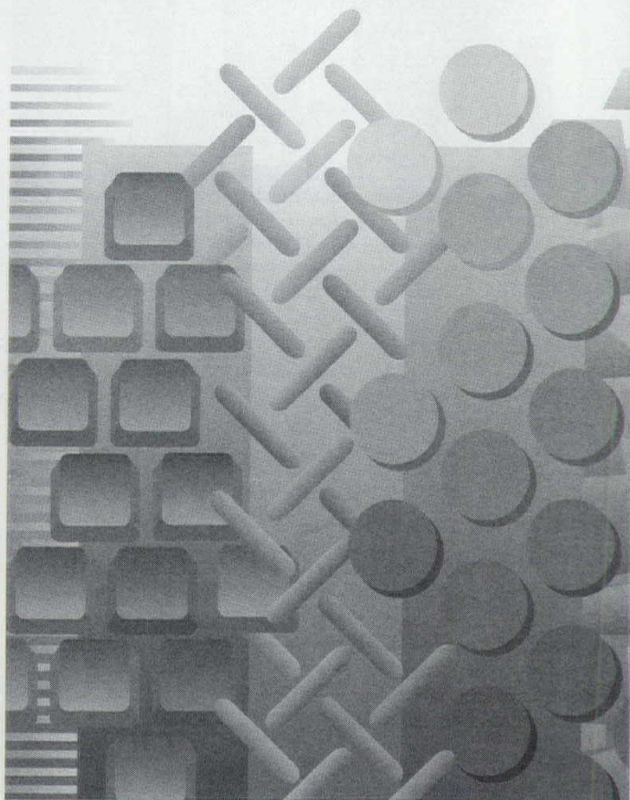
sions with simple mechanical systems and builder-determined details. An American firm collaborating on a large project, sharing fees with local firms whose costs are low, can make a reasonable profit.

Don Hackl of Loeb Schlossman Hackl observes that the highrise buildings we associate strongly with North America are actually quite appropriate to dense Asian cities. In fact, the major Chinese cities today are comparable in some key ways to the American cities that spawned the skyscraper: they are highly centralized, rely strongly on public transportation, and want to proclaim their commercial eminence to the world.

**Twin-towered Behemoth**

The plum skyscraper commission in Shenzhen promises to be a 17-million-square-foot mixed-use complex called for in the city's master plan. Including an international trade center, as well as offices, a hotel, and a Chinese hall of fame, it would be a key element in a planned urban center about 7 kilometers west of the present one, at a proposed highway and transit crossroads. The SUIAD architects, working so far without foreign collaborators, have been generating design proposals for this vast complex, with twin 128-story towers, as envisioned in the city's master plan. An internal mini-competition has been organized, with four teams working on alternative design schemes – two of them treating the towers strictly as abstract forms, two of them drawing on more obviously Chinese imagery. Their client, a local developer backed by Taiwanese investors, is optimistic that officials will accept his proposal. Deng Xiaoping himself, credited with the concept of Shenzhen, is said to be eager for this new city core to proceed.

Hackl, who is to be a juror for the twin towers mini-competition, wonders whether there is any appropriate way to acknowledge cultural distinctions in skyscrapers. Is it better, as some attempts at a Chinese look suggest, just to stick with international banalities? A harborside tower in Shenzhen, designed by Hackl's firm with SUIAD, will respond to its context with enormous sail shapes worked into its curved curtain walls. Whatever an architect's attitude toward formal traditions, almost all designs must pass review by *feng shui* experts, who determine how the design will *(continued on page 52)*



# METROPOLIS

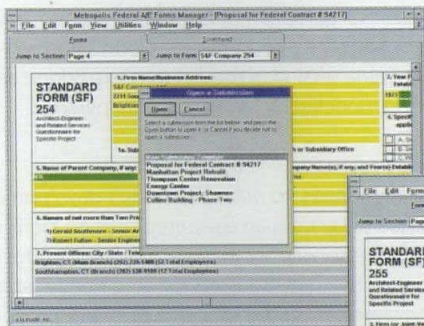
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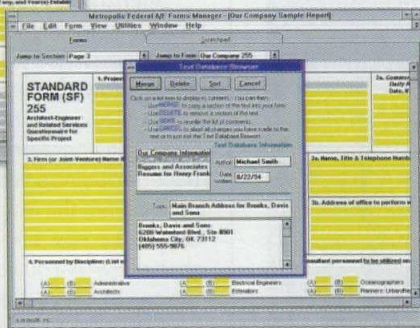
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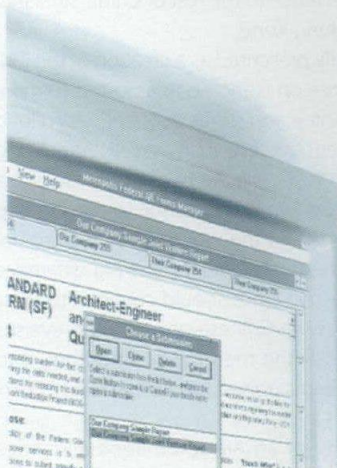
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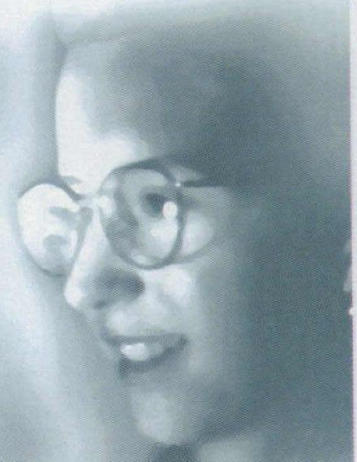


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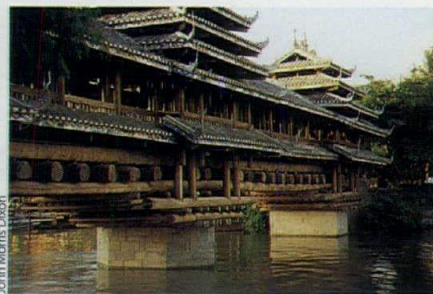
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research 

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## Reports

### Chinese Boom Town *(continued from page 50)*



*The Wind and Rain Bridge is one of over 50 regional structures carefully replicated in Shenzhen's Chinese Cultural Village.*

affect good and evil spirits; despite decades of official bans on such "superstition," few Chinese dare proceed without this okay. As plans are made for a new city center, housing developments advancing up the surrounding hills range from relatively no-frills apartment blocks to opulent rowhouses of Mediterranean vernacular or Corbusian white cube derivation, set amid instant tropical landscaping. (Attracted by relatively reasonable housing prices, many Hong Kong citizens are now actually living in Shenzhen.) Resort hotels along the shore or in the hills may induce traveling businessmen to bring their families.

Another tourist inducement, new to China, is the theme park. Shenzhen has just completed three of these, no less, all in a row along the Pearl River estuary. These three diverse attractions include: Splendid China, which offers dozens of the nation's sights, such as the Forbidden City and the Suzhou gardens, in miniature; the Chinese Cultural Village, where houses and other structures from China's far-flung regions have been authentically replicated; and World Window, where a rough simulation of the Eiffel Tower jostles with a Central European castle and the Capitol at Brasilia. As the highway in from the airport passes World Window, visitors go under an identifiable version of the Golden Gate Bridge and whiz by an entry pavilion modeled on I.M. Pei's Louvre pyramid.

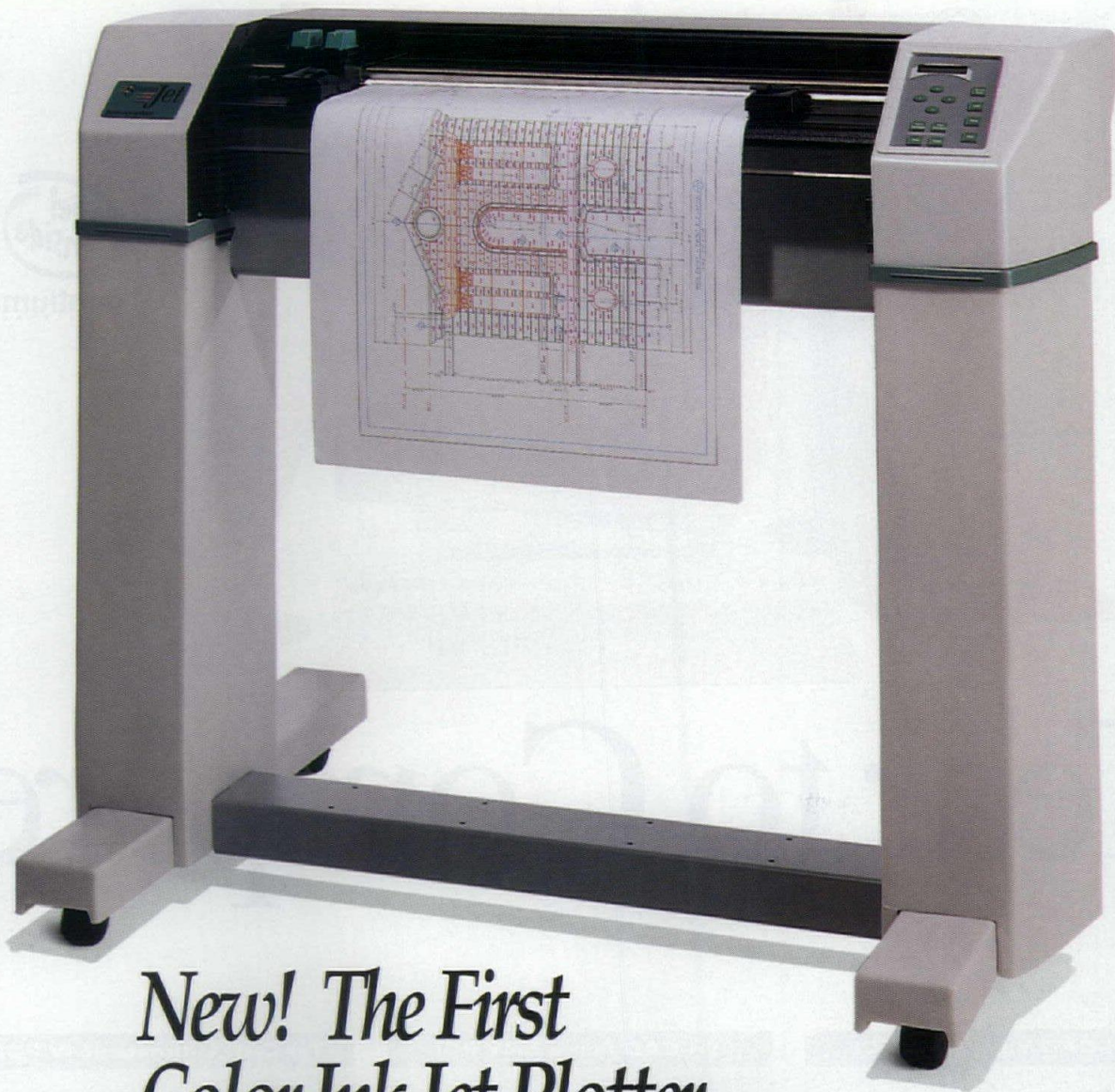
#### Shenzhen's Prospects

During its brief history to date, Shenzhen's development objectives have shifted away from an early emphasis on factories almost entirely toward the service sector. The growing production of its companies is now being outsourced to more needy regions, while Shenzhen concentrates on the offices that direct production and trade (including a fledgling stock market). While immigrants used to pour in from the rest of China, only people with more select qualifications are now allowed to move there. It's significant that Shenzhen presents a guarded border fence to the rest of China, similar to the one that separates it from Hong Kong.

Although Shenzhen is proudly presented as a creation of the Chinese government, its dependence on Hong Kong amounts to more than just proximity. (Shenzhen hotels and stores quote prices in Hong Kong dollars, although they accept Chinese yuan as well.) After Hong Kong's assimilation into China in 1997, will the two cities meld into a single metropolis? More likely, the two will continue to present two zones of interface between China and the world, with different degrees of personal freedom and general affluence. The big difference in real estate costs between the two cities should continue to favor construction in Shenzhen. Unless the Chinese government reverses its current economic policies – or the merger of Hong Kong into China goes badly – Shenzhen seems poised for a continuing boom.

**Note:** Shenzhen will be the site of an AIA International Practice conference to be held Nov. 6 – 11. For information, contact, Russell V. Keune at AIA in Washington. FAX (202) 626-7421. □





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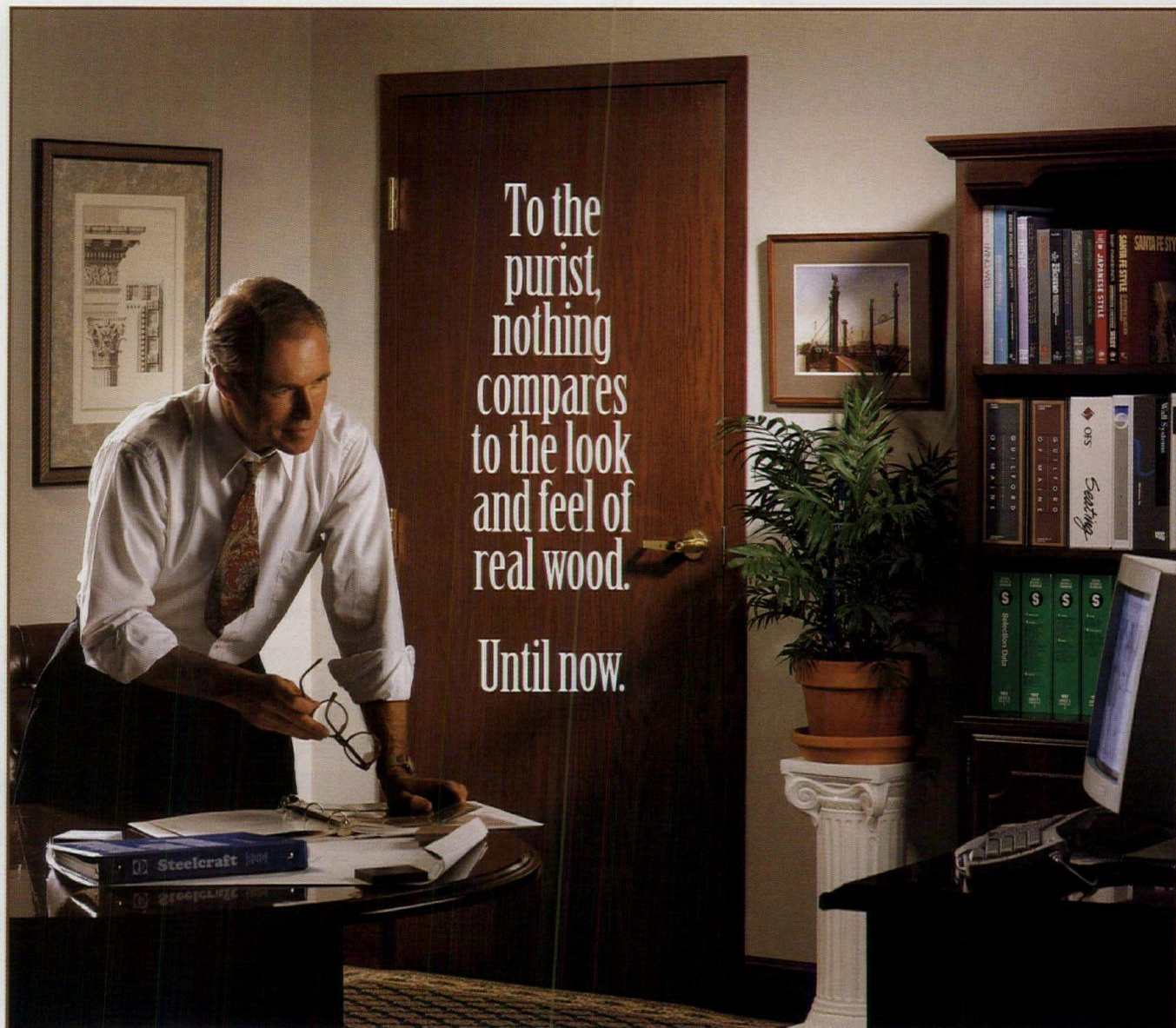
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St. Mark's & Cimber, photo by Takane Eshima, AIA

# *Escape from Style*

We seem to be entering a post-stylistic age, where architecture is having to respond to the context and culture of a place, and where architects are having to work increasingly within local vernaculars. *by Thomas Fisher*

I hear many architects these days talking about the confused state of architectural design, which seems to have no clear direction. The idea of a universal or international style has lost credibility. And recent efforts at establishing new styles – Neo-Modernism, Deconstructivism – have all failed to attract more than momentary attention and marginal support among designers. So we are left with no dominant style and no sense of where such a style might even come from. But this condition is healthy, I think, because the very idea of style has tended to crowd out other values which, after being suppressed for almost 200 years, are once again being prized.

Style, of course, means many things, and so requires some definition. As a reflection of one's personality, style will always be with us; every architect, by virtue of being human



1 Placa 1988, photo by Joanna G. Strauss, AIA.

has his or her own style of doing things. But style in architecture has two other connotations: the idea of a signature style, where certain forms are associated with a particular architect, and the idea of historical styles, where certain forms are linked to a particular time period. The latter two notions of style, while seemingly quite different, began to merge in the 1970s and 1980s, as designers developed their signature styles based upon historical styles.

That merger, however, reflected certain assumptions that seem increasingly questionable. The idea of architects applying their signature styles in many different contexts, for many different functions, around the world assumes that

form has the same meaning everywhere. While that may appear to be true in the “global village” of the media, in fact, the world seems to be getting more “tribal,” to use another Marshall McLuhan phrase. What do the standard historical styles mean in a multicultural world, where one group’s tradition is another’s repression? And what do signature styles mean in a world where people are seeking solidarity with their community, ethnic group, or clan?

The profession’s emphasis on personal and historical styles, in other words, seems increasingly out of step with what more and more people expect and need from us. And so we must begin to think about what architecture might be like

after style, a task made easier, I think, by understanding what architecture was before style.

Let me first say something about the photographs used to illustrate this essay. Drawn from the St. Louis Chapter’s National AIA Photography Competition, these images, all taken by architects, help tell the tale of style’s rise and fall, and they suggest that we have been in search of an architecture without style for some time now, at least through the lenses of our cameras.

### The Old Way of Designing

Consider Joanna G. Strauss’s photo, entitled *Placa 1988* (1). This view of historic Dubrovnik, in the former Yugoslavia, provides a compelling image of architecture before style. Although the old city has characteristic materials and shapes – stone walls, tile roofs, three- and four-story buildings – the architecture does not constitute a style so much as a vernacular. Its form, in other words, is inseparable from its content: its construction methods and materials, its social function and meaning, and its environmental response and fit. As Alberti once described this integrated way of making form: “Beauty is a concordance and mutual attunement of parts.” Everything from the form of cities and buildings to the form of governments and communities was seen as compositionally related. The same ordering principles – balance, moderation, rhythm, hierarchy, and so on – applied to all.

Some architects have built theories around that old, integrated way of form-making. Jonathan Hale calls it “the old way of seeing,” an idea that he explores in a recent book by the same name. “The designers of the past succeeded easily,” he says on the opening page, “where most today fail, because they saw something different when they looked at a building. They saw a pattern in light and shade. When they let pattern guide them, they opened their ability to make forms of rich complexity.” Hale is right, I think, in claiming that architects, especially those working in local vernaculars, looked at buildings in ways different from our own. But he makes the mistake of interpreting form in strictly visual terms, as “pattern in light and shade,” when what was powerful about



the old way of designing was that the form of buildings was of a piece with the form of society and the form best suited to the climate. It was a conceptual way of making form, not just a visual one.

The Pattern Language of Christopher Alexander and his Center for Environmental Structure avoids Hale's formalism, recognizing that architecture before style was inseparable from its function. However, Alexander and his colleagues argue that such patterns are timeless and universal, mistakenly separating vernacular architecture from the cultures and climates that give form its meaning.

### How the Book Killed the Building

A common assumption in our field is that architecture has always been thought of in terms of style. But its stylistic interpretation is, in truth, relatively recent. One of the first books to talk about architecture in this way was a volume by architect Johann Bernard Fischer von Erlach entitled *Outline of Historical Architecture*, published in 1721. In it, he shows architectural examples from various parts of the world and presents them as styles from which architects are free to choose. "Artists will here see," he wrote, "that nations dissent no less in their taste for architecture, than in food and raiment, and, by comparing one with the other they themselves make a judicious choice."

To see what grew from the seeds he sowed, look at Jan Pittman's photograph (2), taken in Seville, Spain and entitled *Plaza España 2*. The architecture, here, has taken on a narrative function, communicating or symbolizing content that has little to do with the building itself. The parapet urn recalls the Moorish influence in Seville, the elaborate scupper echoes the gargoyles of the city's Medieval architecture, the brick moldings and panels tell a story of how buildings used to be constructed. Perhaps most revealing is that this building is actually beginning to look like a book: the ornamental tilework looks like decorative flypaper and the bust, like a dedicatory engraving on a title page.

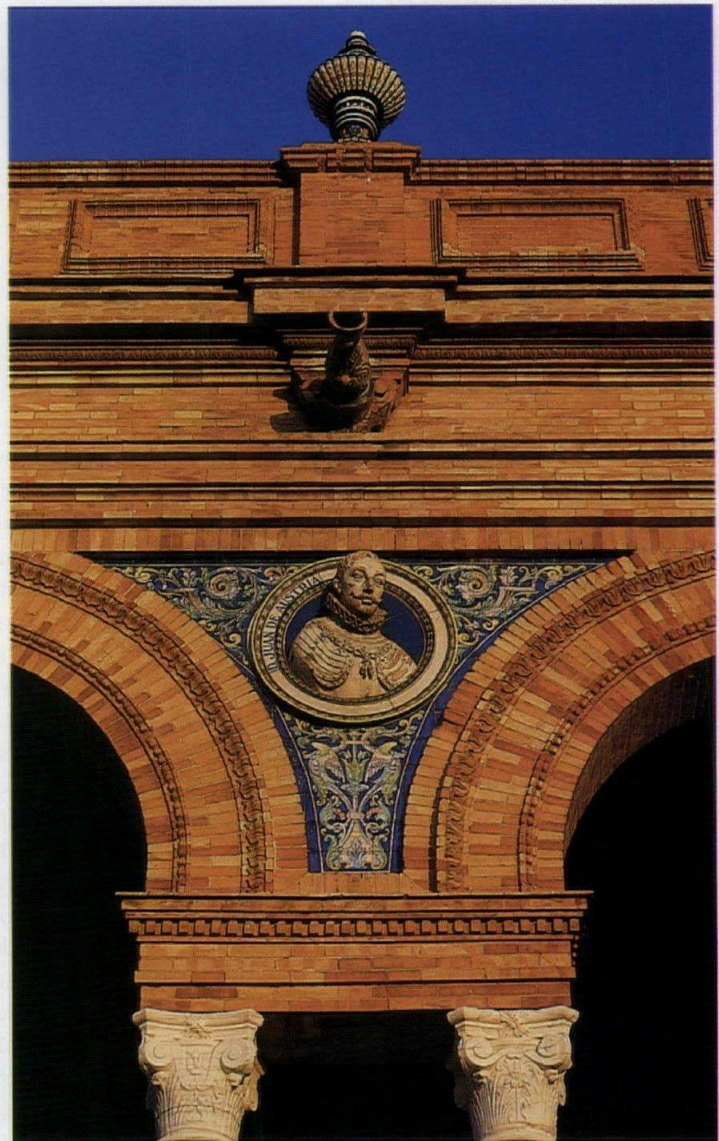
Victor Hugo, in his 1831 novel, *Notre Dame de Paris*, said that "the book would kill the building." And so it was in his own time, as architecture was becoming increasingly literary in nature.

As far back as the Sophists in Ancient Greece, the form of literature (syntax, semantics) was seen as distinct from and of higher value than its content (a book's subject matter). With the rise of Romanticism in the late 18th Century, however, that literary tradition of splitting form from its content swept through Western culture. By the 19th Century, it had heavily influenced architectural thought.

Architects began to see the world, not as an integrated whole, but in oppositional terms: our authentic individualism against a conformist culture, the purity of our art against a philistine public. We also began to see architectural history, not as a continuum, but as a set of

discrete periods, each characterized by its own style. And we began to see ourselves, not as participants in a building tradition, but as autonomous form-givers, divorced from – indeed inhibited by and critical of – tradition.

Such thinking became institutionalized in the then new profession. The architect-as-individualist was embedded in the studio system of the schools, where priority was placed on individual effort, on formal manipulation, and in our century, on originality. This Romantic view of the architect also pervaded the then nascent architectural media, which, by the early 20th Century, were already focusing on the aesthetic expression of a very few architects, thus con-



2 Plaza España 2, photo by Jan Pittman.

flating journalism with public relations.

Architectural theory was heavily influenced by this literary Romanticism as well. It was no coincidence that writers such as Goethe and Ruskin made substantial contributions to architectural theory in the late 18th and 19th Centuries. For them, architecture was a powerful means of communication, and architectural style a way of achieving a social unity that both felt had existed in the Middle Ages and was being lost. "There is a chance for us," wrote Ruskin, "... of obtaining the consent, both of architects and the public, to choose a style, and to use it universally."

What Goethe and Ruskin did was to romanticize a vernacular architecture that was essentially anti-romantic. In co-opting the opposition, they made it difficult for us even to think about vernacular architecture in anything other than Romantic terms, as styles created by individuals. But if we are ever to understand architecture before style or see what it might be after style, we must escape this Romantic trap.

### Resisting Romanticism

The greatest resistance to Romanticism has always come from architectural practitioners who must respond to the concerns of particular groups in particular places. Look at Jeffrey Allen Wierenga's photograph, entitled *Frank's Fish Net*, showing the Edgemar Development by Frank O. Gehry Associates in Santa Monica, California (3). The image, taken through a scrim of chain link, shows several stuccoed forms, culminating in two steel-framed boxes, one glazed, the other open.

Gehry is interesting because his architecture is both a signature style and a vernacular tied to a particular place and culture – Southern California. This building, for example, uses local materials, such as stucco, glass, and chain-link fencing, and reflects the local vernacular of simple, casually arranged structures. The forms also make some connection with the building's content: the boxlike frames on the roof, for example, recall the steel-framed structure on which they sit, they serve as towers announcing the building's plaza, and they even offer a kind of spoof of the boxes that can be found in the building's shops.

But this vernacular-oriented architecture has ended up being romanticized. Chain link fencing and skewed forms – generic elements if there ever were any – have been identified with Gehry's personal style. And he has been praised in the media, not for contributing to and pushing the boundaries of a local vernacular, but for doing just the opposite: making a local vernacular his own.

This resistance and eventual succumbing to Romanticism has, indeed, haunted Modern architecture for some time. Le Corbusier, for example, took an anti-Romantic stance when he spoke of creating a vernacular for our time, one that would evolve out of modern technology and the needs of modern society and that would have the same compositional and proportional rules apply to all. Walter Gropius sought similar goals in attempting to structure architectural education and his own firm along more cooperative, multidisciplinary lines.

*The real challenge for architecture today*

*is to find ways to respect local concerns and*

*respond to the local environment, without*

*giving in to them uncritically. Historically,*

*every vernacular that was vital and meaningful*

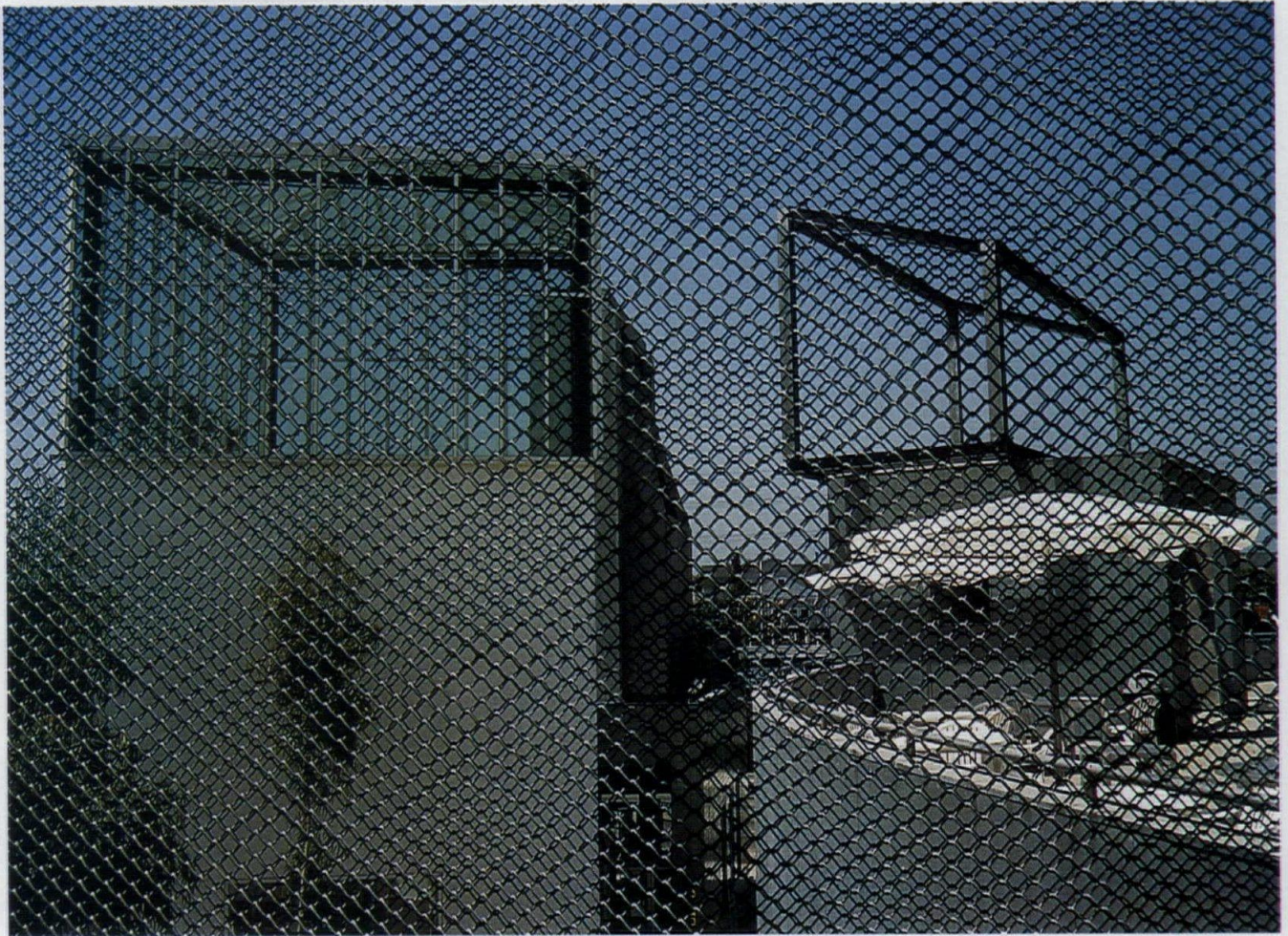
*was also constantly changing, pushing the*

*limits of what people knew and expected.*

Unfortunately, the early Modernists got caught up in the romanticized image of themselves in the media. And some of them, such as Mies, ended up just perpetuating the form/content split of Romanticism, seemingly unperturbed that a bank in Toronto and a museum in Berlin would occupy essentially the same glass box.

### The End of Romanticism

If the Romantic tradition is so ingrained in our profession, how can it be overcome? You could argue that, if anything, we have entered a period of super-Romanticism, a highly individualistic era in which form, completely divorced from content, has become nothing but a means of personal expression. I think there is no denying that some of this is going on, promoted largely by the institutions most rooted in Romanticism: the schools, magazines, and museums. But I think this individualism rep-



3 Frank's Fish Net, photo by Jeffrey Allen Wierenga.

resents a last gasp of a worn-out idea, rather than something that can carry us into the future.

I say that for several of reasons. First, the economic base for Romanticism has collapsed. Personal expression and idiosyncratic form-making have tended to thrive in relatively stable societies, as was the case in England in the 19th Century and in the United States in the late 19th and 20th Centuries, when Romanticism flourished. But the global economy is anything but stable and secure, and it demands of us, as designers, a level of performance that can be achieved only through cooperation among disciplines and communication across cultures. The partnering going on between architects and contractors, the fast-tracking that has almost become the norm for projects, the risk architects are having to take on just to get a job: this not a climate hospitable to Romantic posturing.

Second, the social and political context in which Romanticism thrived has changed drastically. A focus on stylistic or formal issues in architecture suggests that matters of content – social, political, technical, moral issues – have either taken care of themselves or are being ably handled by others. That was obviously not the case, however, in the 1980s, when the profession seemed obsessed with historical and signature styles. Our cities were decaying, our affordable housing disappearing, and our streets growing unsafe. To continue such a focus on style, without attending to what is happening outside our doors, makes us seem irresponsible – or worse, irrelevant.

Third, the literary and intellectual world, the very source of Romanticism, has left it behind. Deconstruction in literature and philosophy, for example, challenges such cherished Romantic ideas as a dichotomized view of art and society and the assumed autonomy of

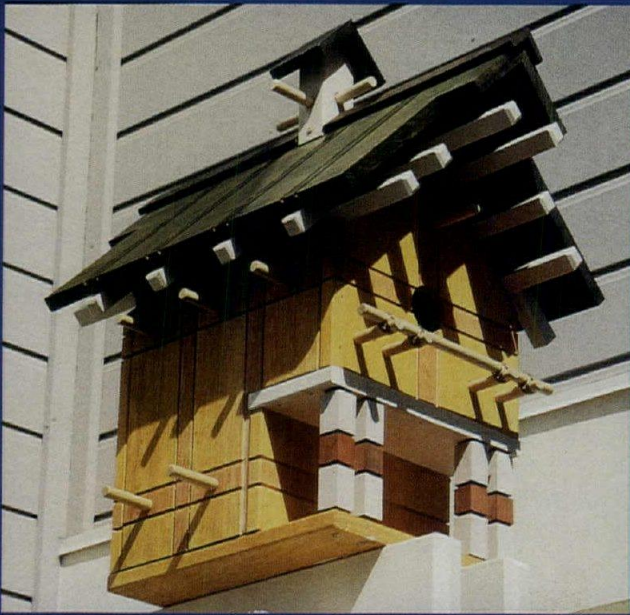
form and authorship. But even here, we have a hard time letting go of old habits. When Deconstruction was embraced by some in our field, it was immediately romanticized – turned into a style that was associated with a few individuals.

#### Architecture After Style

But what, you might ask, will architecture look like after style? The answer, I think, is that it will look like many things, depending upon the content, context, climate, and culture of a place. It may, in other words, be like architecture before style: myriad local and constantly evolving vernaculars. That does not mean that buildings will necessarily look folksy; indeed the association of vernacular architecture with a certain look is itself a product of our turning everything into a style. As Corb and Gropius understood, vernaculars are always of their time, responding to current technology and current needs. (*continued on page 100*)

# MICHAEL PYATOK

## Dedicated to Nonprofits



For residents of Willow Court (right) Pyatok and his staff designed, built, and donated birdhouses for every front porch.



**Pyatok and his Bay Area firm combine true concern with street-smart expertise to further the cause of nonprofit, low-income housing.** *by Sally Woodbridge*

Since 1985 Michael Pyatok has been building a practice on designing housing for those least able to afford it. This has been an uphill course, since the Federal government had by then all but stopped funding new housing for the poor. Yet Pyatok says that his experience has deepened his conviction that housing for low-income households can be rewarding for architects.

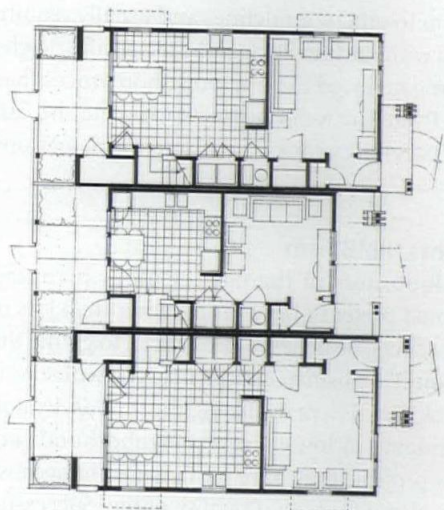
When asked to name some of the rewards of what many architects view as a frustrating and unremunerative practice, Pyatok is quick to agree that making money is not one of them. In fact, he has consistently taught half-time to balance his income. Although his firm has prospered he continues to use part of his income to pay his staff for the extra hours required to design housing for limited budgets. There is also the reward of "beating the odds" stacked against designing and building not-for-profit housing that offers visual appeal and user satisfaction.

Since the mid-1980s part of the void left by the lapse of Federal housing programs has gradually been filled by nonprofit

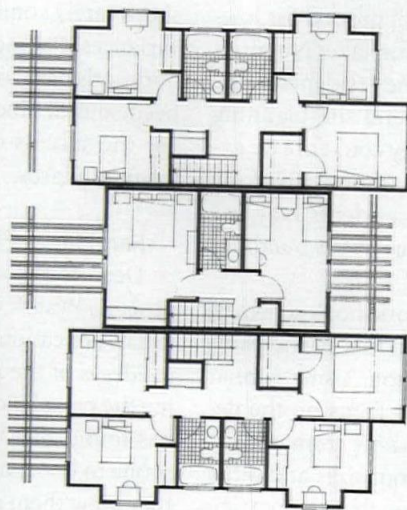
organizations. The NPs have been honing their skills in fundraising and management so that, particularly in the last ten years, they have been creating opportunities for architects to design low-income housing of noteworthy design. Yet in his frequent speaking engagements around the country, Pyatok has discovered that many major cities have virtually no nonprofit sector to cope with inadequate housing for the poor.

The San Francisco Bay area, the location of most of Pyatok's projects, has been fertile ground for the development of a strong nonprofit community for several reasons. Foremost among them is the area's compact geography. Interested professionals and residents of the contiguous cities around the bay have not found it so difficult to build coalitions here as it is, say, in Southern California, where cities sprawl across great distances. Another factor Pyatok credits for the strength of the nonprofit sector is the existence of the UC Berkeley city and regional planning department, which has trained planners who have either joined community development agencies or have served as consultants or staff to nonprofits. *(continued on next page)*

*The author, is P/A's Bay Area correspondent. Her most recent book is Bernard Maybeck: Bay Area Romantic, Abbeville Press, 1992.*



TYPICAL FIRST FLOOR PLAN 10'/3m



TYPICAL SECOND FLOOR PLAN

### Willow Court, Menlo Park, California

The four projects presented here were built in the past two years in relatively stable areas with populations who had to be convinced that the projects would not bring a decline in property values and quality of life. The oldest, Willow Court, completed in the spring of 1992, is Pyatok's second project for the Mid-Peninsula Coalition for Housing, a 24-year-old nonprofit organization. The six four-bedroom units, designed for large, very low-income families, were grouped to give the appearance of two large houses.

Pyatok has found that increasing the scale of buildings gives them more dignity, particularly in old neighborhoods that often have large homes. Although the detailing of the Willow Court buildings is simple, it expresses a kinship with the Craftsman bungalows typical of the region. The simplified stylistic features – wooden trellises to dress up entrances, shaped brackets, barge boards, and picket fences, evoke a general idea of home without aping any one style.



Over the nine years of his practice Pyatok has developed strategies to ease the often arduous approval process for low-income projects. The first step his design team takes is a series of neighborhood workshops that expose the residents to the design process. Participants are given several site-planning kits, with parking – a difficult challenge they could not be expected to solve – already in place. Since the location of parking indicates ways of relating the buildings, residents may use these indications to develop their own ideas about buildings and open spaces.

A second workshop presents the first workshop's schemes, drawn up and analyzed by the architects so that participants may make decisions about the final solution. Using similar modeling methods, succeeding workshops focus on the design of the units. Because the architects know from experience the costs typically associated with room sizes and other dimensions, they are given in sample plans that the participants use in developing their schemes. Following a review of the plans drawn up and analyzed for the follow-up workshop, firm decisions are made. The results of the workshops are consolidated for presentation to city planning departments.

Pyatok has found that the schemes developed in the workshops rarely conform to official guidelines and usually require variances. Planners without knowledge of the specific neighborhoods have to be convinced that the workshop process has been sound. Since Pyatok is well known in Oakland, he can use the success of previous projects to argue for deviations from standards.

#### **Familiarity Fights NIMBYism**

Despite the arduousness of the participatory planning process, Pyatok would prefer to have more rather than less of it. The educational effects, he believes, are crucial to giving the residents of the project a positive experience. Notwithstanding the prevalence of NIMBYism in all neighborhoods, Pyatok has found that residents in low-income neighborhoods are prone to boost new projects they have participated in because they view them as raising their own quality of life. Successful projects often produce a wave of owner improvements in other neighborhood buildings.

Another strategy that Pyatok believes is helpful in combating NIMBYism is the use of conservative imagery in designing

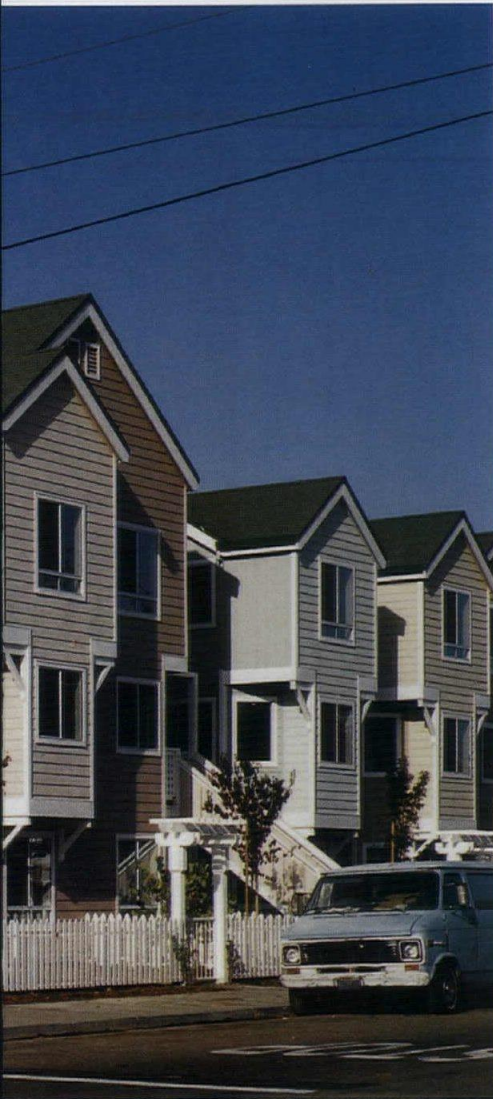
## Marcus Garvey Commons Oakland, California

Marcus Garvey Commons, completed in fall 1992, was sponsored by the East Bay Asian Local Development Corporation, which serves primarily Asians in Oakland's Chinatown, and Jubilee West, which serves the African-American community in West Oakland. The project is six blocks from the site where the Cypress freeway collapsed in the 1989 earthquake; it is visible from the elevated BART tracks carrying passengers across the bay. Two- and three-story townhouses contain the 18 family units; disabled residents are housed in four single units on grade.

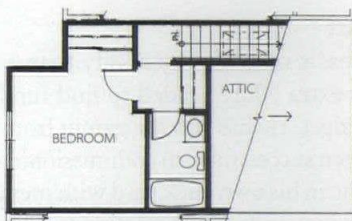
A community center that faces the cross street at one end of the property serves the surrounding neighborhood;

behind it are commons and a play area used by the residents. As at Willow Court, each unit has a garden area by the front door that opens into a living room. The large kitchen with eating space faces a rear patio, that is convenient to the parking area.

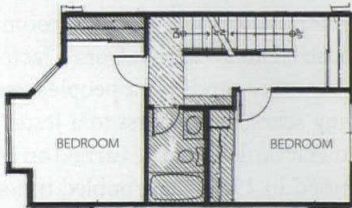
The grouping of the units here creates the effect of rowhouses to strengthen the block front, once a row of 19th-Century cottages that had gradually vanished because of fires and neglect. Projecting bays and alternating warm and cool pastel colors break up the building mass. Stairs to upper units, a common feature of 19th-Century houses in the neighborhood, also enliven the street frontage.



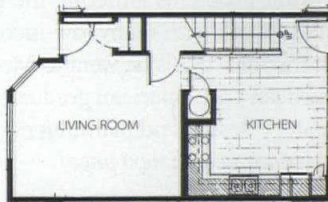
Janet Delaney



THIRD FLOOR PLAN

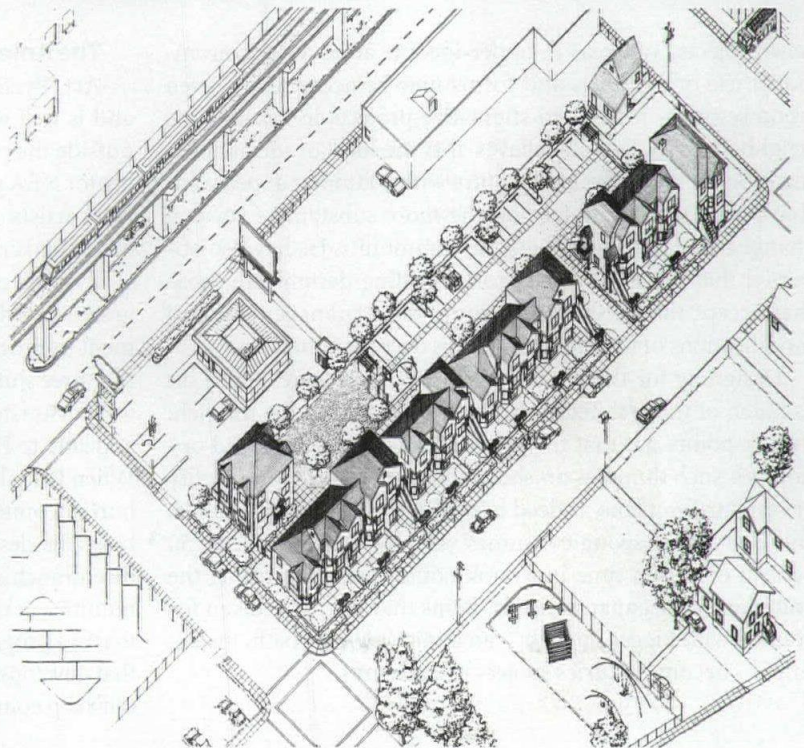


SECOND FLOOR PLAN



TYPICAL FIRST FLOOR PLAN

10/3m



AXONOMETRIC, EIGHT-UNIT DEVELOPMENT



new projects. Whereas in upper-income areas an unconventional use of materials and forms may be acceptable – even trend setting – it tends to stigmatize projects in low-income neighborhoods. Pyatok believes that the ideal of social housing is better served by architecture with a familiar appearance that puts a reassuring face on the more substantive societal change being introduced into the community. He has also observed that the most satisfactory building designs are those that accept the necessity for continuous management and modifications of the initial buildings over their lifetime.

Designing for the lifestyles of the poor requires every bit as much of the architect's attention as designing for the rich. Pyatok points out that the small room sizes and limited options for such things as finishes and fixtures need not simplify or standardize plans. Indeed every linear foot of wall counts, and every door swing consumes valuable space. At least 50 percent of design time in Pyatok's office goes into fitting the unit plans to occupants' needs. Items that might be taken for granted with bigger budgets – an additional half-bath, for example – become luxuries subject to trade-offs.

### The Amenity of Art

Art, Pyatok believes, is more of a necessity than a luxury and is well worth the extra effort needed to find funds for it outside the project budget. He has run the gamut from applying for NEA grants, often successfully, to commissioning works from artists, to working in his own back yard with members of his staff to craft birdhouses and wood sculptures.

Pyatok's commitment was, in a way, born into him. Having grown up with his mother and brother in a one-room apartment in Brooklyn's industrial area – across from a factory that ran three shifts a day – he understands poor people's needs. He was fortunate in winning scholarships, first to a Jesuit school and later to Pratt and to Harvard, where he earned an M.Arch. When his education ended in 1967, the troubled times made him uncomfortable with the mainstream practice of architecture. His desire to confront problems afflicting the poor and disenfranchised led him to work with many low-income communities in the U. S. In the mid-1970s he went to Mexico City to run a program for Mexican and American graduate students that developed participatory design and planning methods for self-help communities. *(continued on next page)*





Douglas Kahn

## Tower Apartments Rohnert Park, California

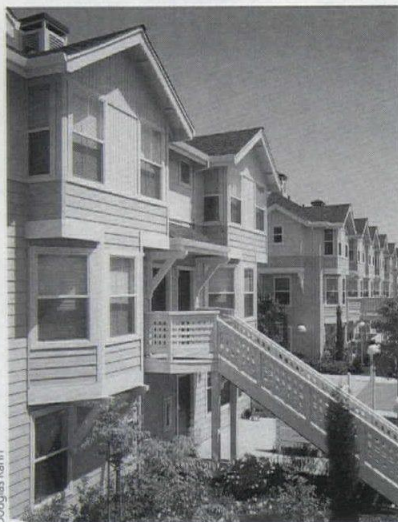
Organizations that build rental housing for low-income people in California face both high land costs and a need for low unit costs to qualify for Federal and state financial assistance. In projects such as Tower Apartments, the resulting high densities usually set off neighborhood opposition, and architects must devise strategies to mitigate the effects of these densities. Various approaches to this challenge include grouping units, as discussed above, and creating a village image, which often appeals both to residents and to neighbors.

For these apartments, completed in 1993 in a city north of San Francisco, Pyatok arranged the 50 family units

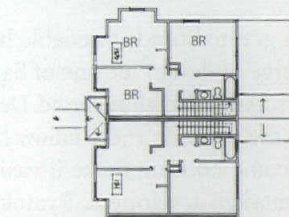
around two courtyards to reduce the apparent scale. Along the main street in front of the property, three- and four-bedroom townhouses are two stories high to conform better to the density of the surrounding community. The buildings around the courtyards are three levels high, with the two-story units located above two-bedroom flats and parking. Each dwelling has its own front and back patio or porch.

The community center, laundry, office, and mail room are located in one central building convenient to both courtyards. Although at 25 dwelling units per acre the project's density is twice that of its surroundings, the intimate character of the courtyards dispels the impression that people have been crowded together against their will. At the dedication, a county supervisor confirmed the design's success by stating that the project had converted him from opposing high-density housing to advocating it.

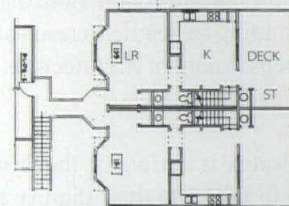
The search for ways to add visual interest to low-budget buildings has led Pyatok to create a vocabulary of elements - bracketed bays, trellises, and stairways to upper levels - that are easily integrated with projects of varying sizes. Contrasting colors and surface materials also contribute to an impression of quality. Rarely an issue in for-profit housing, these aspects of design loom large in the budgets of the firm's projects. For example, Pyatok often has to argue long and hard for using board siding that has a shadow line.



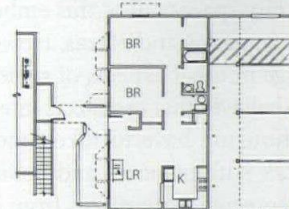
Douglas Kahn



THIRD FLOOR, DUPLEX UNIT

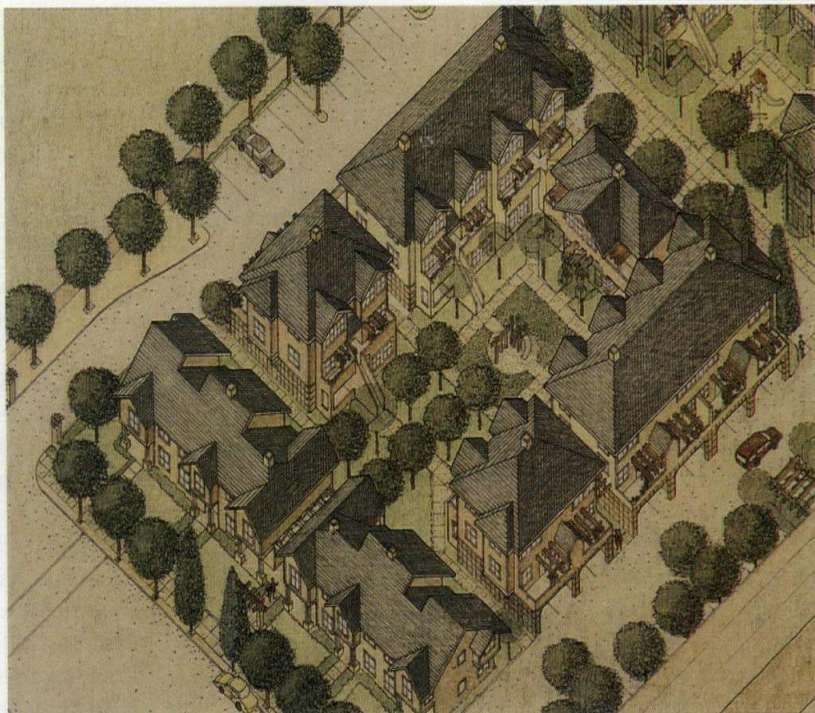


SECOND FLOOR, DUPLEX UNIT



FIRST FLOOR FLAT  
PLAN, HALF OF  
6-UNIT BUILDING

20'/6m



AXONOMETRIC OF 50-UNIT DEVELOPMENT



In 1977 Pyatok moved to California, settling in Oakland. He spent the next seven years working for other architects; as a housing activist he helped to found a nonprofit, Oakland Community Housing, Inc. In 1983 he applied for and won a Loeb Fellowship, which took him to Harvard to attend the Kennedy School of Public Policy and the Business School. There he deepened his theoretical knowledge of the housing field and returned to Oakland to establish his own office. Since then he has completed over 50 projects and has 11 more in design and construction phases.

Nonprofit organizations have been his valued clients, both because their goals are to create housing as a long-term investment and because they have come to recognize that good design is an important means of winning acceptance for their projects. Indeed Pyatok has found that because his clients need exemplary projects to promote their next ventures, they are likely to exceed design guidelines in order to build something the neighborhood will be proud of. Since an average of 600 applications are received for every 30 units he builds, the selected residents are generally model tenants.

In his zeal to advance the cause of affordable housing, Pyatok has mounted a virtual crusade to reach beyond the nonprofit world to that of for-profit developers and their in-

vestors. The NEA has granted funds to enable him and Tom Jones, architect in charge of design for one of San Francisco's most active nonprofits, Asian Neighborhood Design, to tour U.S. cities and spread the word. In these fallow times Federal tax credits for low-income housing make it easier to get the attention of private-market developers. Pyatok, Jones, and former Pyatok employee Willie Pettus are also collaborating on a book of case studies of affordable housing. Since 1990 Pyatok has been commuting to Seattle to teach at the University of Washington's Department of Architecture.

#### **A Civic Vision**

As for the future, Pyatok is optimistic that housing for the poor can be designed to promote their dignity and comfort; that high-density housing can be interwoven with both restful and active community spaces, all of this embedded in the public domain of streets, parks, and plazas. However, this future depends on change in other aspects of society. As a seasoned activist, Pyatok believes that architects interested in the future of affordable housing have to take time from their drawing boards to work with planners and policy makers to change the laws that segregate work places from housing and to create the jobs that bring social stability. □

## YWCA Family Village Redmond, Washington

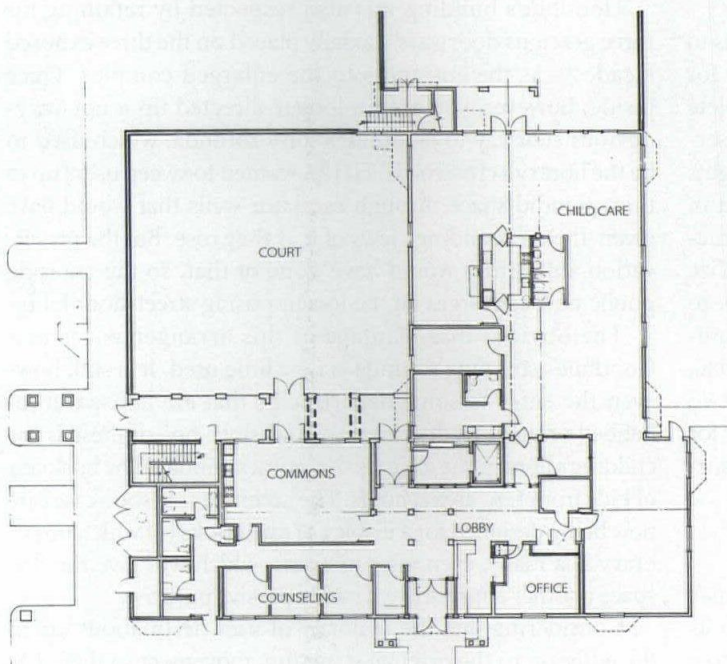
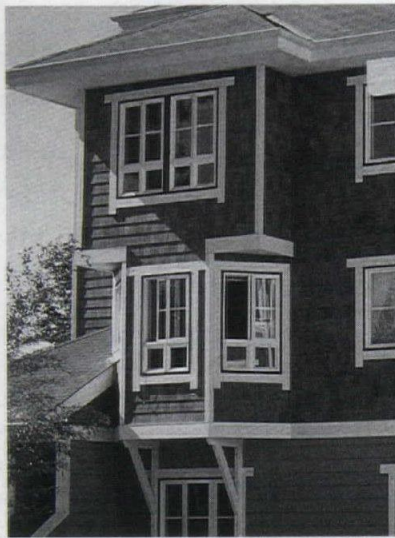
Another project completed in 1993, the YWCA Family Village was designed in association with Stickney Murphy architects of Seattle. Although the location in this booming area known as Seattle's Eastside is not one that suggests a population in need, the area is experiencing increasing homelessness and lacks affordable housing. After surveying the needs of the greater Seattle area, the Y's board determined that this site at an intersection, with a school and a church occupying two other corners, would give high visibility to a model project. Since the 20 apartments, which house mostly women and their children, are in one building, the term "village" is a misnomer. But it does suggest

the kind of interdependency the facility supports.

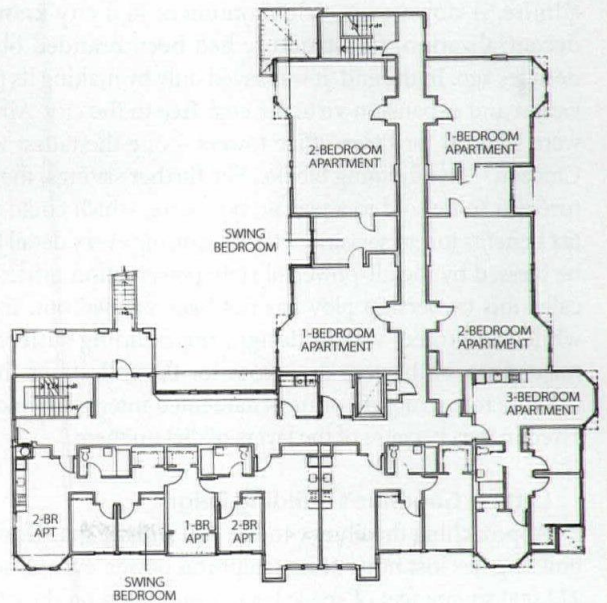
This is transitional housing for people who, for various reasons, find themselves temporarily homeless. Each apartment is occupied for from three to twelve months while the heads of the households look for new employment and more permanent housing. The building has a child-care program for up to 60 children and a variety of counseling services for the parents.

Although the structure has the familiar look of the country inns and lodges found in the Northwest region, its street elevations hold the corner site and confirm the town's grid pattern. The variation of materials to create a base and an attic story breaks down the building's scale.

The ground floor plan, with its reception desk and conference room, echoes the homyness of the lodge and was designed to alleviate the stressful effects of the crises facing these families. Because children are such a presence in the building, their needs were addressed in such features as 10-foot-wide corridors for indoor play, with large windows facing south. These corridors open to back porches from which stairs lead down to the play yard. Adjacent apartments have "swing rooms" between them that permit the conversion of two apartments with two bedrooms each into a three-bedroom and a one-bedroom unit. One large room per unit for living, dining, and cooking reflects the way the families live, facilitates handicapped access, and provides a more efficient overall space plan.



FIRST FLOOR PLAN



UPPER FLOOR PLAN



Foad Ferafi

## Critique

# With All Due Respect

Hardy Holzman Pfeiffer's rehabilitation of the L.A. Public Library reveals the splendor of Goodhue's building, which their own respectful additions can't match. *by John Morris Dixon*

The partners of Hardy Holzman Pfeiffer Associates think Bertrand Goodhue's design genius is still not adequately appreciated, and after visiting his L.A. Public Library I'm inclined to agree. Emerging from a decade-long process of restoration and expansion under HHPA's direction, this 1926 landmark reveals its original architect's extraordinary conviction and inventiveness. At the same time, HHPA's additions expose some of today's difficulties in even trying to attain Goodhue's level of quality, with the best of intentions and \$214 million to spend.

The real wonder is that this landmark is here at all for us to admire. A downtown civic monument in a city known for decentralization, the structure had been branded obsolete decades ago. In the end, it was saved only by making its preservation and expansion virtually cost-free to the city. Air rights were sold off for three office towers – one the tallest west of Chicago – on adjoining blocks. For further savings, the structure was to be sold to a private syndicate, which could realize tax benefits for preservation, thus requiring every detail here to be blessed by the all-powerful state preservation office; ironically, this ownership ploy has not been carried out. In 1986, while the project was in design, the building suffered two major fires, both more disastrous for the collections than for the concrete structure or its ornamented interiors, which survived in part because of the layers of dirt on them.

### Letting Goodhue's Building Reign

Approaching the library today, you will see that Goodhue's building has lost none of its sculptural power, even though its 212,000 square feet of space have been joined on the east to a 328,000-square-foot extension, which defers to the original

block by burrowing four stories into the ground. The still substantial above-ground volume has been minimized visually by its division into cubic forms clad alternately in stucco and dark green terra cotta. On the library's opposite flank, the old West Lawn has been reclaimed from years of parking lot misuse in the form of a superb public parklet, the Robert F. Maguire III garden. Though coordinated with the library effort, this garden was actually a private undertaking, atop a garage that serves both the library staff and neighboring office towers.

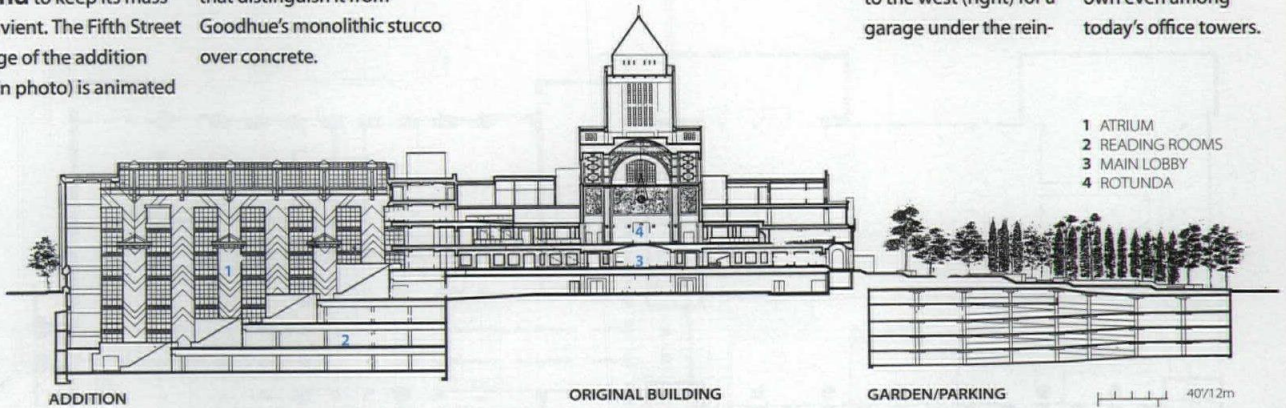
Goodhue's building was also respected by retaining his three gracious doorways – axially placed on the three exposed façades – as the entrances to the enlarged complex. Once inside, however, you are no longer directed up a not-very-obvious stairway to Goodhue's lofty rotunda, which used to be the library's crossroads. HHPA wanted to sweep users up to this splendid space through escalator wells that would have given them expanding views of it as they rose. But the preservation authorities would have none of that, so the entering public now converges on the less imposing street-floor lobby.

The obvious disadvantage of this arrangement is that Goodhue's stunning rotunda is now little used. It is still, however, the entry to some departments that are housed in rehabbed original reading rooms. And since one of these is the children's library, the space is sometimes animated by busloads of kids from L.A. area schools. The architects say showcases are now being designed for a display of rare books (of which this library has many, even after its fires), which will give the fine space another appropriate if rather passive purpose.

Considering that the majority of user destinations are in the addition to the original structure, movement to them has been made fairly straightforward. A broad, easily identified

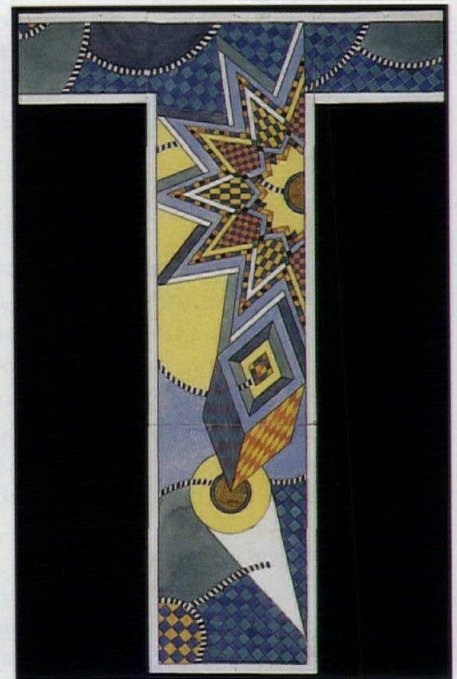
The architects have shown their respect for Goodhue's sculptural landmark by **putting much of the 328,000-square-foot expansion below ground** to keep its mass subservient. The Fifth Street frontage of the addition (right in photo) is animated

by gardens and smaller scale volumes, while the Grand Avenue flank (left in photo) is forbidding. Stucco on the steel-framed addition is gridded with relieving joints that distinguish it from Goodhue's monolithic stucco over concrete.



The **preciousness of the library's site** is indicated by the burrowing that went on to the east (left) for four underground floors and to the west (right) for a garage under the rein-

stated west garden. Goodhue's aptly conceived crowning pyramid (placed unapologetically atop his interior dome) holds its own even among today's office towers.



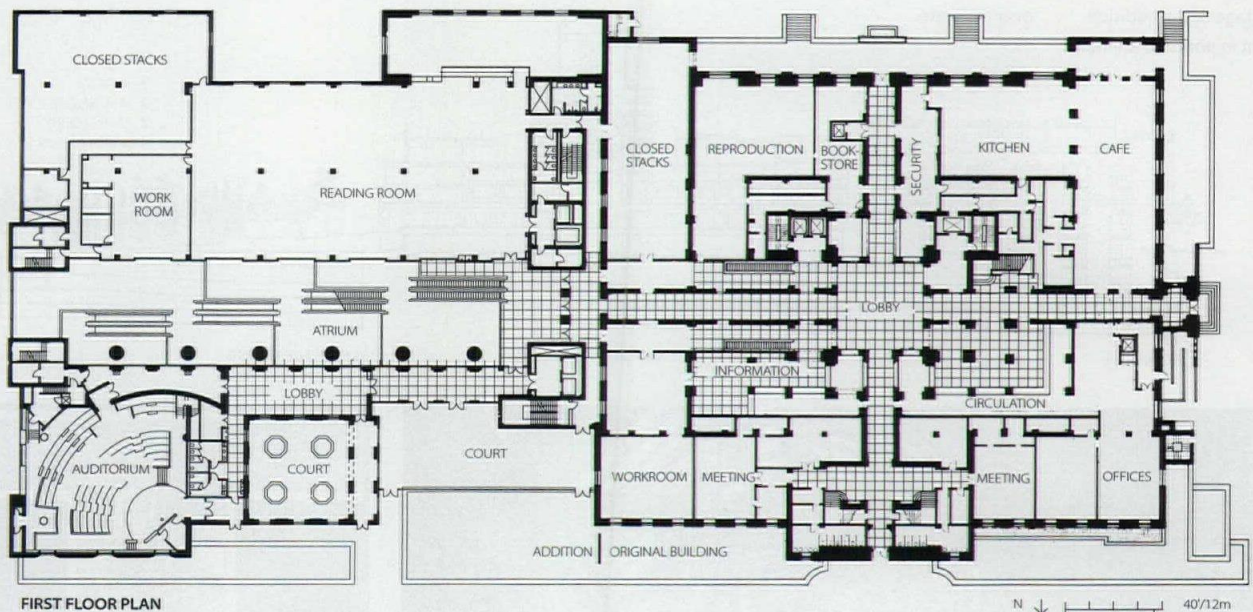
**An atrium supplies daylight** to the new wing's below-grade rooms. Vacant-looking escalator landings lead to reading rooms on four levels. **Still to be installed are murals** extending across the long south wall (one bay module above) and the lower part of the end wall, relieving its anticlimactic

blankness. Roof trusses are painted blue on one side, coral red on the other, as if to make light of structure; exaggerated terra-cotta-clad columns support them on one side only. The very prominent chandeliers, entrusted to a committee-chosen artist, draw on literary symbols but look like seasonal mall decorations.

Tom Bonner

The addition has been integrated with the cross-axis plan of Goodhue's building by extending a broad passage from the lower lobby, now main

lobby, into the new atrium, where escalators lead down to below-grade levels. Other escalators parallel to the linking passage lead up to upper-floor departments in both old and new portions.



passage leading out of the ground-floor lobby takes you to a landing overlooking the new atrium, from which banks of escalators can be seen descending four stories. For the few departments flanking the atrium above the ground floor, there are easily spotted banks of escalators running parallel to the broad passage. The one sticky problem for users is finding the right floor, since they are counted both ways from the first; you meet people on the 4th Floor looking for the Lower 4th.

### Under the Big Skylight

The atrium effectively takes the curse off below-ground spaces by providing daylight to their inward-facing window walls and by making the route to them clear and spacious. But the atrium also tests HHPA's ability to create a grand interior to rival Goodhue's rotunda – with an even larger volume. While deference to the original building limited their design choices on the exterior, nothing comparable cramped their style here. (Granted, they had to truncate the stronger triangular peak they proposed for this space, because that was deemed too assertive on the outside.)

The tall, linear space they have given us is navelike, but it lacks a proper terminus. Symmetry has been consciously denied not only by offsetting the escalator banks – which would have caused vertigo if straight – but by putting columns along one side of the space, holding up trusses whose other supports are hidden. Elements bounding this space form quirky collages typical of this firm's work: exaggerated and ornamented elements played off against blandly functionalist ones, symmetry against asymmetry. Still missing are murals that will enliven the long wall facing the columns and the subgrade portion of the end wall. These will counter some of the present

blandness, but how will they coexist with the obtrusive artist-designed chandeliers already here?

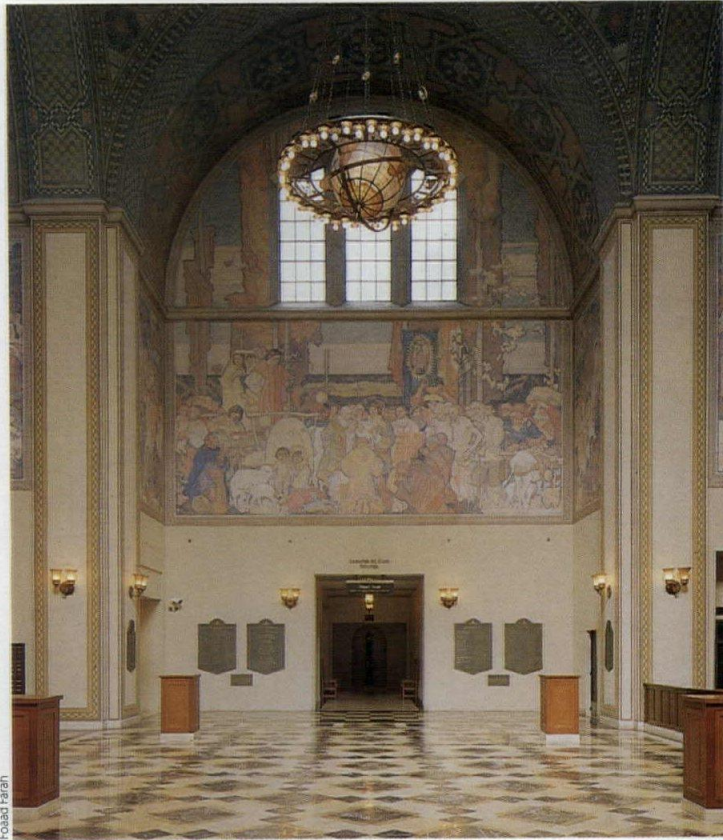
### To Curl Up with a Book

Visitors descending into this atrium are meant to peel off at each level into departmental reading rooms. Here they find spaces that are the antithesis of Goodhue's palazzo-style reading rooms. The spaces for different departments are identically detailed, with squares of stacks and squares of seating spreading out like Valley suburbs around central information desks. The way the stacks define spaces for tables, easy chairs, or carrels is quite effective, and most of these architect-designed furnishings are very good.

The notably weak elements in these reading rooms are the central information desks. Their bland forms are not given more presence by pseudo-tacky veneer patterns, and they are dimly lighted compared with the spaces around them. Library staff complain about the lighting and other problems with the desks, blaming the administration's belief that operations here would be totally electronic, while in fact there is much paper and small print to deal with.

Where the architects have refitted old Goodhue reading rooms they have had greater success. Most of their furnishings look fine in these elegantly proportioned rooms; their figured carpets may cause a bit of visual overload in the presence of Goodhue's splendid painted concrete ceilings, which only gained charm from long-term neglect and recent fires.

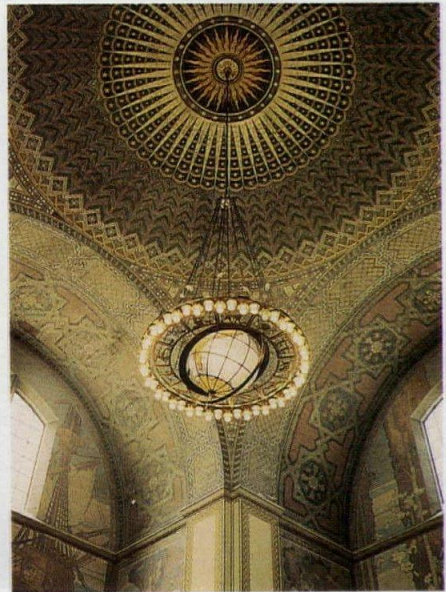
One high-point among the new additions is the 235-seat auditorium located at the northeast corner of the site (foreground, p. 72). It takes the form of stucco-walled, tall-windowed block that might have been a Goodhue outbuilding.



Foad Farah

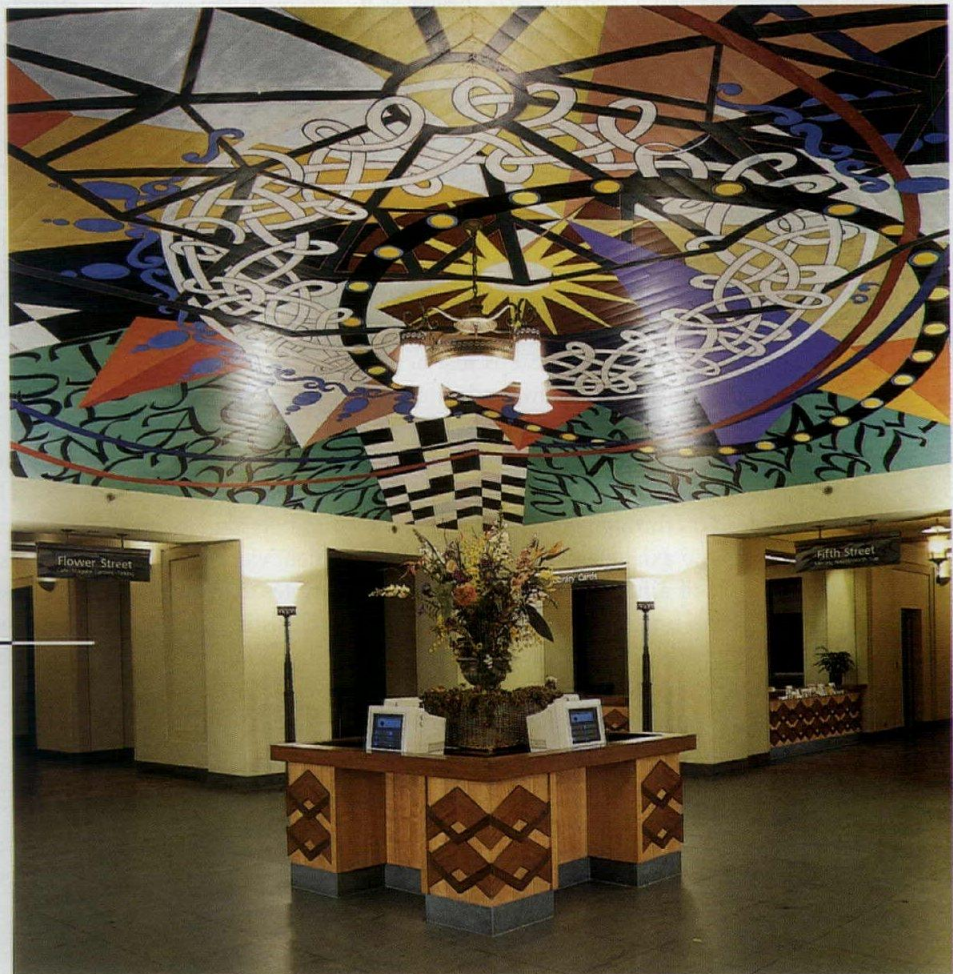
Originally the library's center and catalogue location, **Goodhue's rotunda has become an elegant relic,** an entry to only a few key departments. It's some consolation that the fine

marble floor can now be enjoyed. Goodhue's ornament combines geometrical abstraction with various traditions; his **chandelier represents the Earth in abstract.**



Foad Farah

**The street-floor lobby,** a minor space in Goodhue's scheme but now the main crossroads, has been made to look more expansive, as well as more important, by a geometric painting on its low vault by Renee Petropoulos. A view into this appealing space only slightly improves the low, drab check-out area that adjoins it.



Tom Bonner

The adaptation of original reading rooms to new uses is well demonstrated in the **Children's Library, originally the History Library.** With custom furniture like that of other departments, but scaled down, the room is awesome in a way that seems to please visiting kids. **History-themed murals** from the 1920s are taken less earnestly in the 1990s, when they seem to have just the right mythical qualities for children. Where Goodhue had cork floors, HHPA has put carpet they designed with motifs from Goodhue's ornament.



Foad Parsh

Into it the architects have inserted a quarter-circle theater as if juxtaposing new to old. The result is a room of interesting, if not shocking, character that looks as if it should serve well for concerts and other library programs. Leading to the theater are a court and lobby that appear to be devised for the kind of galas that cultural institutions now rely on to meet their budgets.

### A Patch of Arcadia

Perhaps the greatest contribution here, to library users and to all Downtown L.A., is the reestablishment of a garden to the west of the library. The firm of landscape architect Lawrence Halprin, which had made the Bunker Hill Steps just across the street look like B-movie scenery, somehow made the right design moves here. Within less than two acres they have encompassed the best qualities of 19th-Century urban parks: terraces, pools, and rows of cypresses extend the building's axis, and winding walks lead off through groves of greenery to either side. While it recalls the axial elements of the original garden here, its dense mix of allusions to various garden traditions is strictly of our own time. The integration of artists (Jud Fine, Laddie John Dill, and Mineo Mizuno) into the design of pool, fountain, and even stairs has been remarkably successful. The integration of inscriptions into several of the art works revives a hallmark of Goodhue's work – a tradition clearly suited to a library. All of this obviously appeals to the public, which puts this downtown oasis to good use.

The success of the garden's art program contrasts with the widely varied results of the ambitious art program inside the building. The difference may be attributed in part to the selection process for the building: after art sites were selected, artists submitted proposals to a selection committee on which the ar-

chitects had one vote; once chosen, the artists were not obligated to coordinate with the architects except for the basic mechanics. Hence some of them fail to complement the building.

### Good Intentions Mean a Lot

Overall, the L.A. Library project is one of the most laudable reclamations of a civic monument in many years. For one thing, downtown L.A. desperately needs such a structure and its function if it is to be more than a mere cluster of office buildings. And Goodhue's work here is revealed as one of America's very best public buildings, a provocative example of the promising evolution of the Beaux-Arts tradition that was killed off by doctrinaire Modernism.

The architects selected were not aiming to do a star turn, but genuinely respected Goodhue's work. His complex and occasionally witty designs have a kinship with Post-Modernism, and Hardy Holzman Pfeiffer saw this as a chance to complement work by one of their idols. The outcome clearly demonstrates their respect, but their own design moves seem uncharacteristically cautious. Seeing what HHPA has saved here, we can breathe easy, but nothing they have added is going to take our breath away. □

**Project** Los Angeles Public Library, Central Library, Los Angeles.

**Architects** Hardy Holzman Pfeiffer Associates, New York and Los Angeles (Norman Pfeiffer, partner in charge).

**Associate Architect** Kennard Design Group

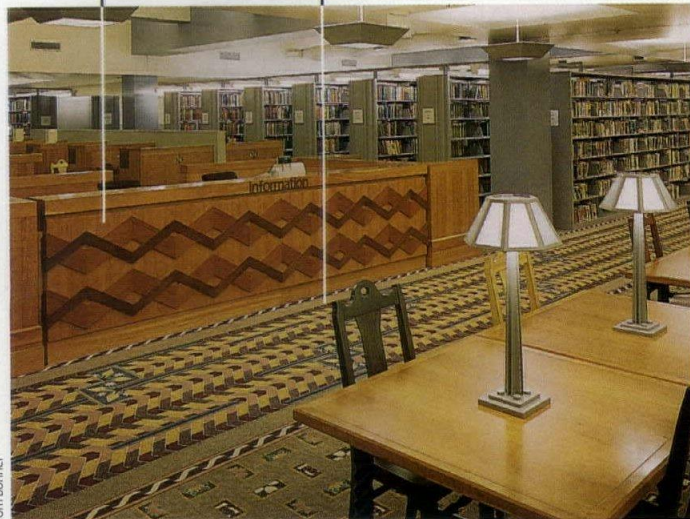
**Original Architects** Bertram Grosvenor Goodhue; Carleton Winslow, Associate Architect.

**Consultants** Brandow & Johnson Associates, structural; Fisher Marantz Renfro Stone, lighting; Lawrence Halprin, Befe Morris Scardina, Campbell & Campbell, landscape.



**In the new reading rooms**, the Classical containment of the old building is replaced by a kind of controlled sprawl. A checkerboard array of stacks and pleasantly reminiscent furnishings surrounds a main desk that is too

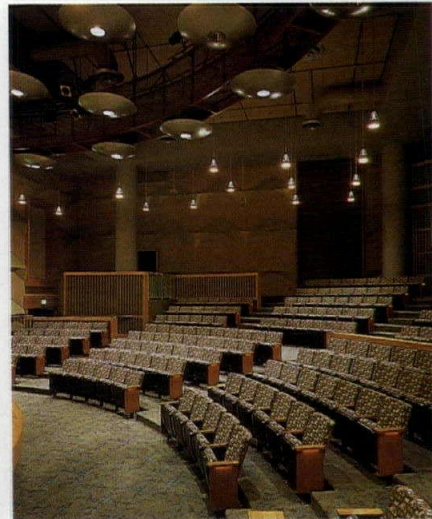
blandly functional-looking for its key role and too dimly lit by indirect fixtures above it for the needs of staff. Characteristically **playful HHPA carpets** define areas and paths.



Tom Borner

The curves of the 235-seat auditorium are effectively juxtaposed to their cubic room, **a newly built volume reminiscent of the old building.** The figures of custom upholstery jar against those of cus-

tom carpet, and both with the starkness of catwalks; the plywood relief sound diffusers on the back walls, suggesting understated 1920s chic, are among the building's best new ornament.



Foad Fereh

**The Maguire Garden west of the library brings back greenery**

that was banished in the 1960s for a parking lot – an event that spurred the library preservation movement. While returning to an axial sequence of pools and terraces, the garden design – by Lawrence Halprin with nicely integrated work by three artists – embodies today's complexity and allusion. The still vacant Egyptoid dining pavilion, designed by others to suit an intended restaurant tenant, is mercifully screened by the some of the fine newly planted trees.



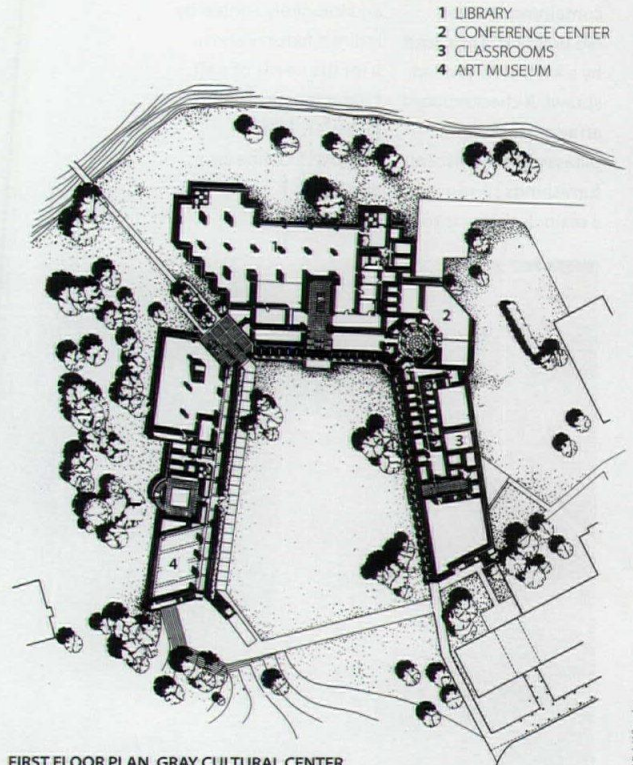
Jay Venezia

Dealing with cultural differences is no longer limited to architects working abroad. Divergent values and expectations within the general public – and the demand that those differences be respected – are encountered more and more in local communities. Which raises questions that every architect must confront. How can architecture acknowledge special interest groups without losing sight of people's commonalities? How can design retain an underlying order while responding to the peculiarities of a place? How can designers address the values of others without losing touch with their own?

The work of Tai Soo Kim Partners offers some insight into those questions. The firm straddles two cultures, with offices in Hartford, Connecticut, and Seoul, Korea. And its work straddles two design traditions, which enables it to respond to widely varied situations without simply imposing a predetermined set of forms or a signature style. The first part of this article looks at the firm's work; the second part looks at how the firm operates.

### The Two Worlds of Modernism

Modern architecture itself straddles two intellectual traditions. At one extreme it embodies a rationalist urge for order, logic, and certainty, associated in architecture with gridded space, systematic form, and structural clarity. At the other ex-



FIRST FLOOR PLAN, GRAY CULTURAL CENTER

Nick Wheeler

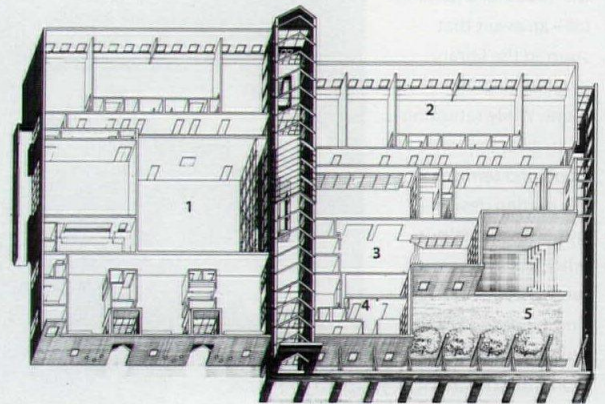
## WORKING IN TWO WORLDS

treme, it reveals an empiricist fascination with the particulars of a place, the operations of society, and the needs of people. This, in turn, leads to an architecture that responds to functional requirements, as well as to local context and culture.

Most architects have staked out their place along the continuum between rationalism and empiricism, and tend not to move much from that initial position. But more and more architects seem willing to embrace both rationalism and empiricism simultaneously, initiating a kind of dialogue in their work between these two poles of Modernism. In the case of Tai Soo Kim Partners, this has led to a design process that begins with a clear, rational form, which is then inflected, in an empirical manner, by local conditions and constraints.

### Peeling Away the Box

The firm's 1981 Middlebury Elementary School, in Middlebury, Connecticut (2), has a simple, rectangular form bisected by a gable-roofed interior street. That form has then been modified to accommodate particular functions or to make symbolic gestures. Part of the rectangle, for example, has been removed to create a common outdoor space adjoining the library, and two sides of the white, concrete-block-clad building have been wrapped by a red-brick screen wall along which outdoor circulation occurs. Kim and his partners have also inserted into the building elements associated



AXONOMETRIC, MIDDLEBURY ELEMENTARY SCHOOL

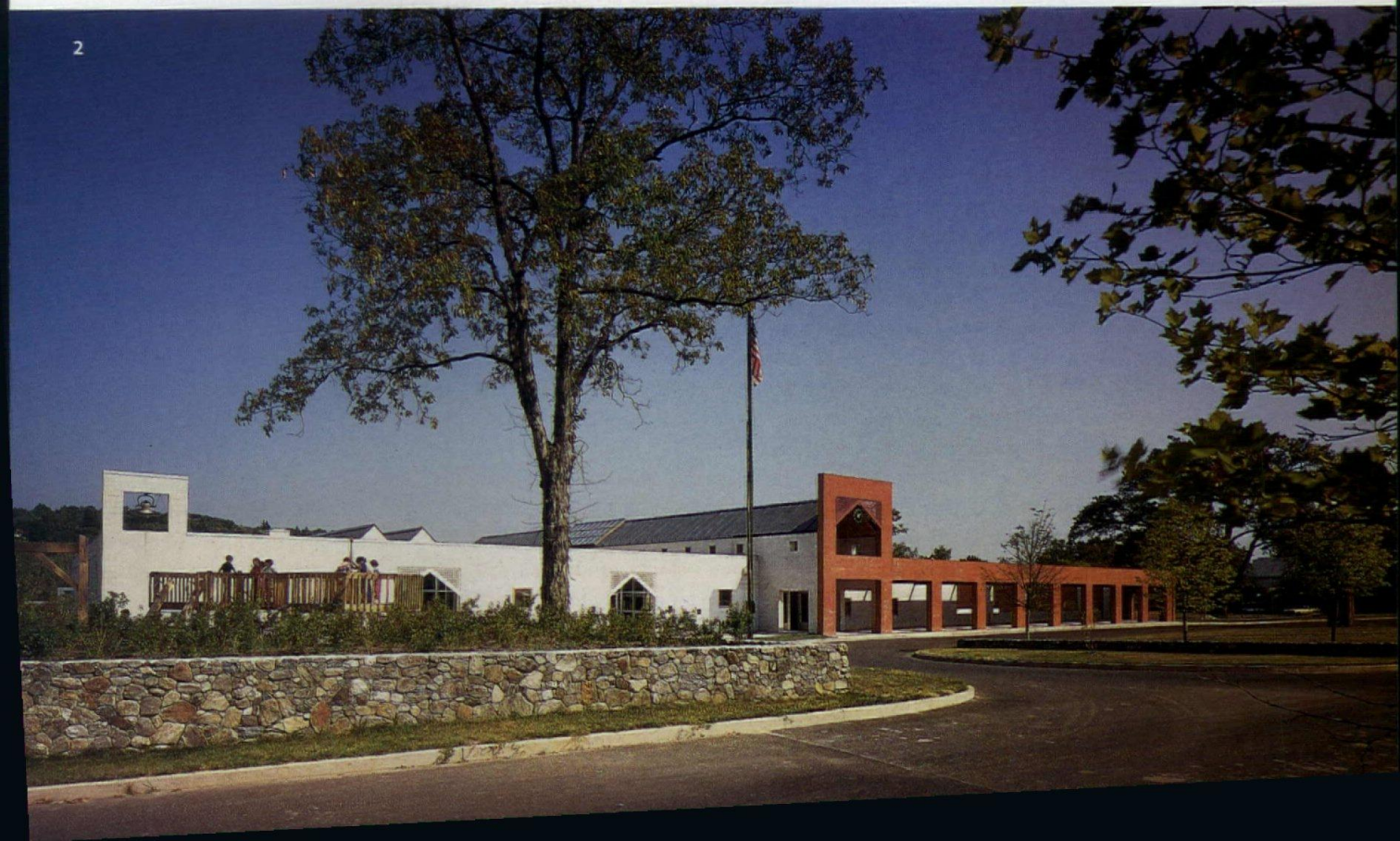
- 1 GYMNASIUM
- 2 CLASSROOMS
- 3 LIBRARY
- 4 ADMINISTRATION
- 5 COURTYARD

Steve Rosenbhal

These two projects are formally the inverse of each other. The Gray Cultural Center (1) has a defined central space and an outer edge that responds to particular programmatic requirements. The Middlebury Elementary School (2), in contrast, has a defined perimeter, within which spaces are carved to accommodate various outdoor functions.



**Tai Soo Kim Partners show how a medium-sized firm operates in two different countries and accommodates to two different cultures without losing its identity.** *by Thomas Fisher and Michael J. Crosbie*



with the schoolhouse – a bell tower, a clock tower, individual entrances to classrooms. The result is a structure that is at once legible as a New England school and logical as an overall composition.

The firm pursued a variation of this strategy in the 1989 Gray Cultural Center at the University of Hartford in Connecticut (1). Like the Middlebury school, the Gray Cultural Center uses brick screen walls to tie together various functions – a library, an art museum, a conference center, a bookstore, and classrooms. And several of these functions have their own interior spaces – a two-story, Kahn-like entry to the library, for example, and a two-story rotunda in the conference center. Formally, however, this project inverts the relationships of the Middlebury project. Here, the building's outdoor quadrangle and screen wall provide the rational order, allowing the diverse functions around the perimeter to take whatever form they require.

### Rationality in Historic Contexts

The flexibility of this design process becomes even more apparent in historic settings. The 1991 Student Recreation Center at Miss Porter's School in Farmington, Connecticut, (3) stands on a campus of older, mostly residentially scaled buildings. The facility, which houses a gymnasium and an in-

door track along with a variety of support spaces, had to be voluminous, without overwhelming the adjacent structures. Kim created a simple boxlike form, which he embedded into the hillside to reduce its apparent bulk and capped with a large hipped roof. A continuous clerestory and a series of curved steel brackets connected to white steel columns separate the roof from the box below. The form is thus rational in its expression of structure and empirical in its adjustment to the character of other campus buildings.

A somewhat different response to a historic context occurs in the firm's design for the Capitol Place office building in Hartford, Connecticut, (4) completed in 1991. This building responds to its context not through its form so much as through its façade. The building stands near the Connecticut State Capitol and the State Library, both monumental limestone-clad structures. This building needed to provide a suitable backdrop for those landmark structures, while remaining compatible with them in scale and material. Again, Kim presents us with a simple, boxlike form, in this instance bisected by an entrance bay and gridded with a regular rhythm of rectangular windows. To modulate the rational grid, however, he inserts moldings at the lintels and sills of the upper windows, a projecting cornice at the coping, and slight rustications in the precast concrete cladding. These elements all abstract the Classical detail – the moldings, cornices, and rustications – of the nearby buildings and so tie the structure, visually, to its surroundings.

### Logic and Nature

A dialogue between rationality and empiricism exists also in the firm's integration of buildings in their landscape. This strategy is most apparent in two projects in Seoul: the 1986 National Museum of Contemporary Art (5) and the 1987 Corporate Training Facility for the Daehan Kyoyuk Life Insurance Company (6). In both projects, mountainous landscapes dwarf these large buildings, demanding that the structures hold their own visually in their rugged settings and yet adapt physically to the irregular contours of their sites.

At the museum, Kim uses an axial arrangement of forms as the rational ordering device. The entrance axis, for example, lies perpendicular to the main axis of the museum, with a drum-shaped circulation space at the crossing of the two. Strong geometric forms – circles, semicircles, squares – also give the museum a clear logic and an identity in the landscape. But, for all its formal order, the museum still responds to its wild surroundings. The building recalls the form of ancient Korean fortresses, with walls that step up the mountain slope and with an approach that takes visitors across a moat and through layers of rusticated stone walls. Yet the museum never becomes picturesque: the fortress walls and the forms they enclose, for example, never stray from the underlying grid.

At the training facility, the firm accommodates nature in a

## Letting opposing values coexist, without either elevating one over the other or dissolving one into the

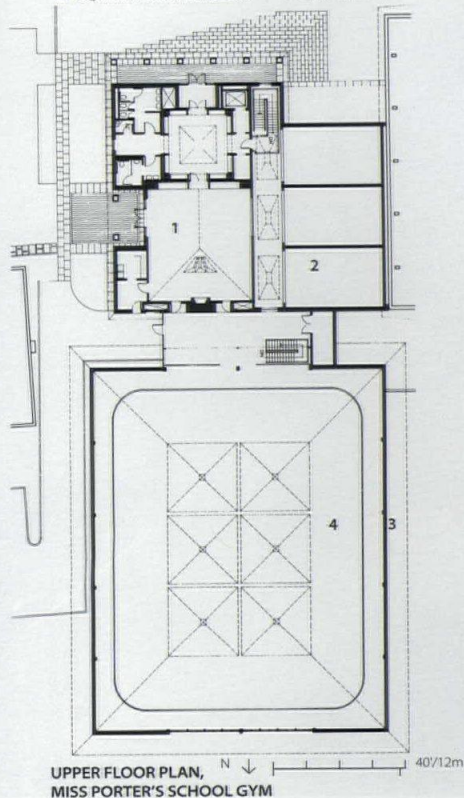
somewhat different way. As in the museum, this building contains an axial entrance perpendicular to the main mass of the building. Likewise, part of the building is terraced down the slope. The rational order of the building itself, however, is not achieved through axially aligned spaces, but through the treatment of the building as a kind of great wall, gridded with the regular rhythm of narrow windows and the uniform bands of floors expressed on the façades. This rational wall, however, has been carefully adjusted to the land. Most apparent is its undulation, which relieves the potential monotony of such a long building and which accommodates the curving contour of the site. The top of the building also steps up toward the center and then back down, expressing the rise and fall of the slope, and the center of the building has a large portal, marking the building entry and creating a monumental opening that reads from afar.

### Design as a Dialectic

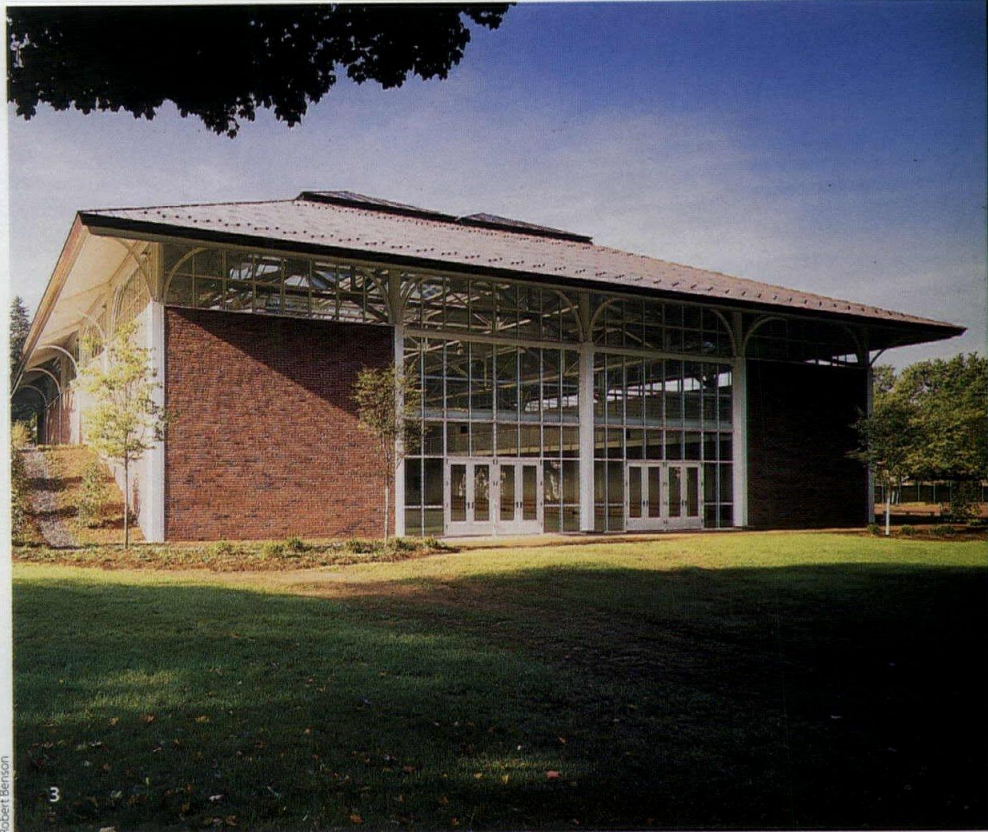
In all of these projects, the dialogue between rationalism and empiricism has enabled Tai Soo Kim Partners to adjust to local conditions without losing the clarity or the underlying order of the work. That dialectical process, however, yields benefits that extend beyond design; it also provides a way of dealing with cultural differences. Letting opposing values coexist, without either elevating one over the other or dissolving one into the other, is a useful tactic when confronted by people with divergent interests, expectations, and demands. It is a process well suited to working in a complex world.

Thomas Fisher

- 1 LOUNGE
- 2 SQUASH COURTS BELOW
- 3 RUNNING TRACK
- 4 GYM BELOW

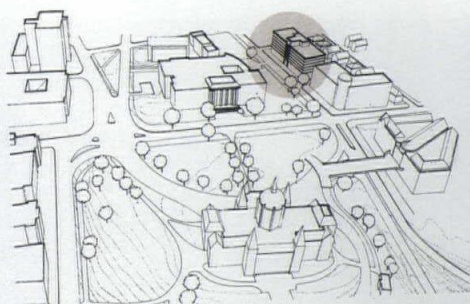


UPPER FLOOR PLAN, MISS PORTER'S SCHOOL GYM



Robert Beirson

other, is a useful tactic when confronted by people with divergent interests, expectations, and demands.

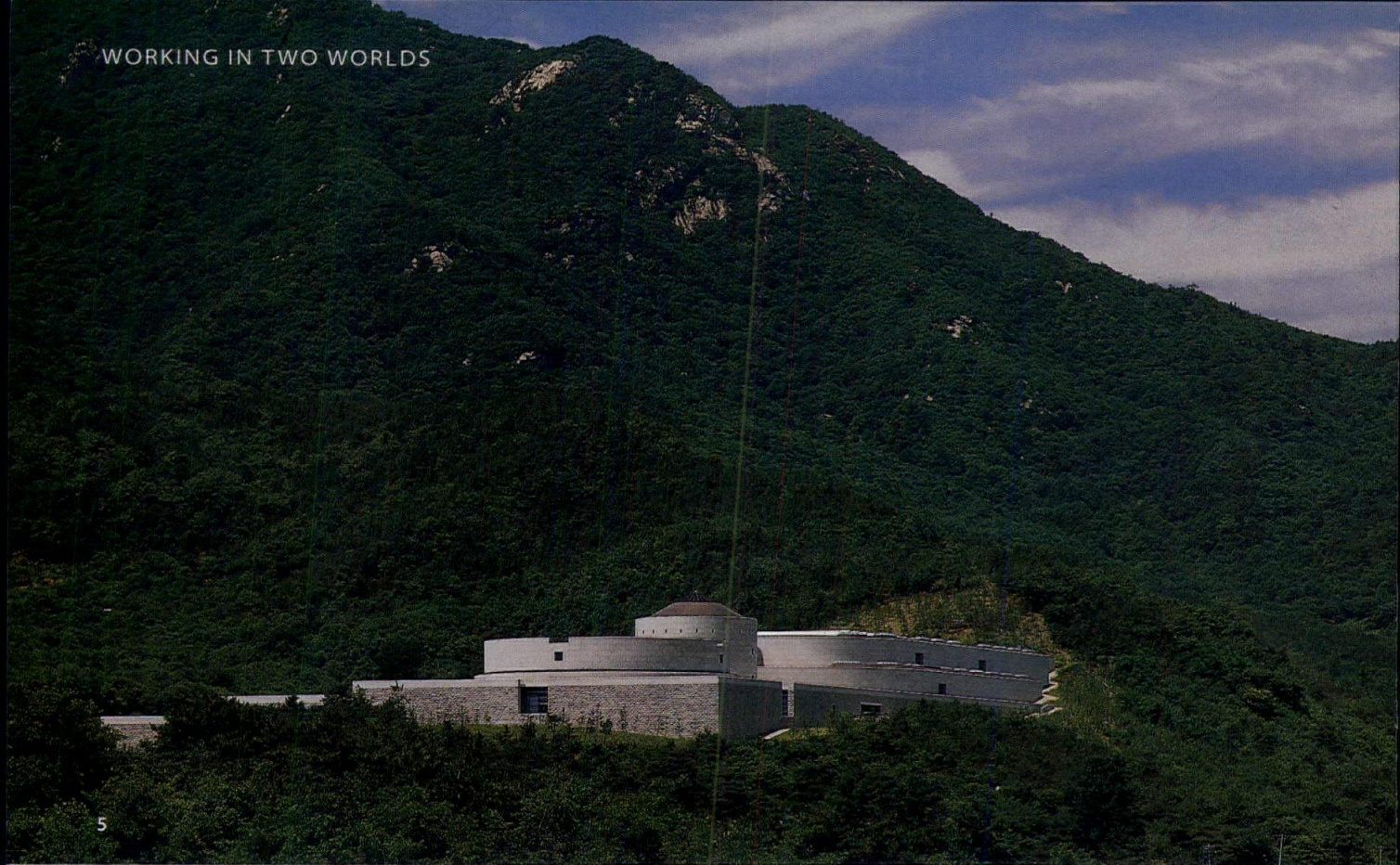


SITE SKETCH, CAPITOL PLACE

Tai Soo Kim, FAIA



In responding to their historic contexts, these buildings, too, take very different, although related tactics. The Miss Porter's School Gym (3) reflects the surrounding residentially scaled buildings in its form, with its hipped roof and bracketed eaves. The Capitol Place office building (4) refers to the adjacent Classical buildings through its façade details and material.



5

**Details and memos on Korean projects are faxed to the Seoul office from Hartford at 5:00 in the evening, and by**

6



## A 24-HOUR PRACTICE

Tai Soo Kim has inhabited two worlds of architecture since his days as a student at Yale's architecture school, where he studied after graduating from Seoul National University in 1960. Today half of his 20-person office in Hartford is occupied with U.S. work, and half with projects in Korea, such as the Lucky Hi-Tech Research Park in Deaduk (7, 8, 9), and the Tong Yang Group Headquarters in Seoul. "The world is small, and getting smaller," reflects Kim, who shuttles to Korea for two weeks every two months.

But one could argue that such an international practice makes the world larger. Having completed a number of nationally prominent buildings in Korea, such as the National Museum of Contemporary Art (5) and the Corporate Training Facility for the Daehan Kyoyuk Life Insurance Company (6), Kim has become something of a celebrity in his native land. He recently received from the Korean Broadcast System the prestigious Korean Overseas Compatriots Prize, which made him recognizable on the streets of Seoul. "You're the architect," said a woman, a total stranger, from whom Kim was arranging to rent space for a new Seoul-based office.

### Korea's Context of Practice

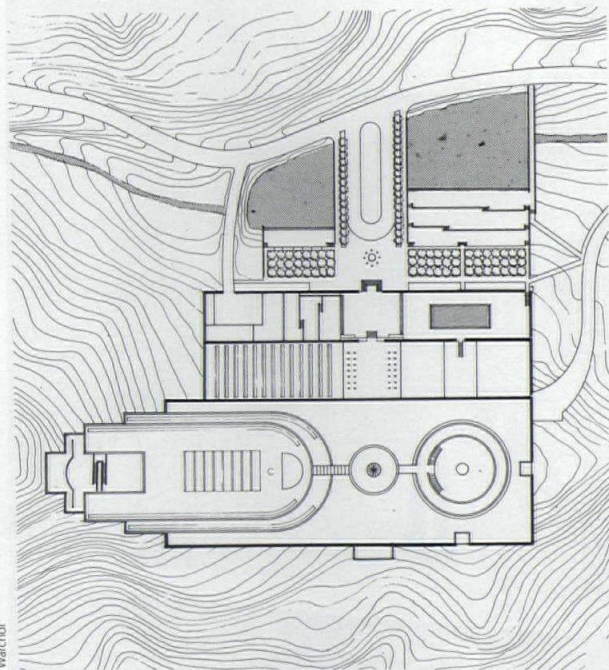
The structure of architectural practice in Korea creates a demand among certain clients for buildings designed to Western standards. The majority of Korean architects practice in large design/build conglomerates, which get most of the government construction jobs and are responsible for about 70 percent of the work in the country. There are about ten firms ranging in size from 50 to 80 people, and a plethora of one- and two-person firms that do small projects.

Korea's building boom over the past two decades has been fueled by large, multinational corporations, which have the capital to build and compete for business on a world scale. Architecture is one of the ways they compete. Kim observes that corporate heads are cognizant of Western standards of design and import it for their own buildings in Korea. Kim competes with large American architecture firms and Japanese architects for work in his homeland. He has the advantage of being a native son and the architect of one of the country's major cultural institutions.

The logistics of practicing half a world away are eased with the use of computers and electronic communications. Kim's office usually designs the project through schematics and design development, and then hands the construction document phase over to a joint-venture firm in Korea. However, for public spaces such as lobbies and portions of buildings with high visibility, the Hartford office also does working drawings. The associated firm takes care of approvals and permits.

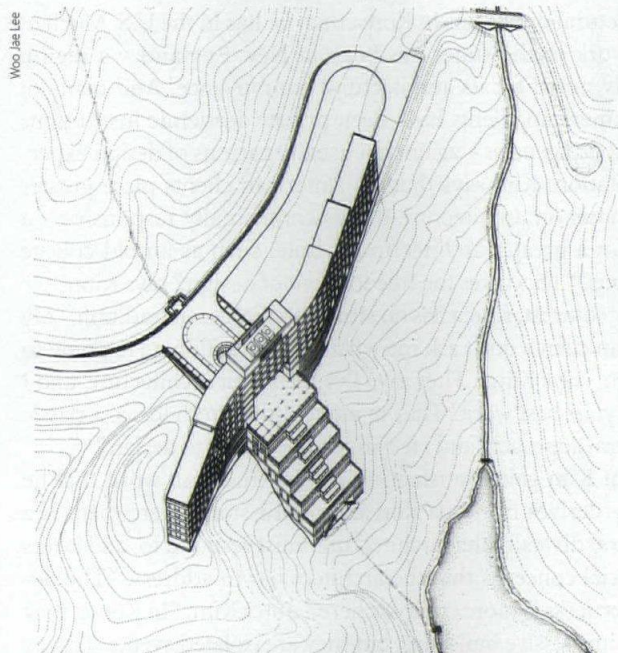
### An Emphasis on Quality

Kim has opened an office in Seoul with six employees to exert greater control over the construction phase. "For projects in the U.S. we do 100 percent of the work," says Kim, so the quality of the end product is better than that of his Korean



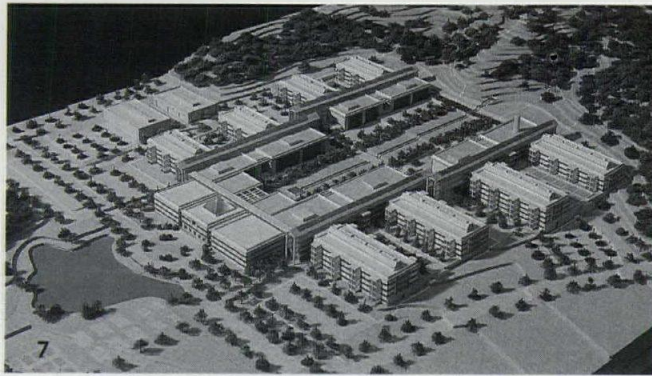
SITE PLAN, NATIONAL MUSEUM OF CONTEMPORARY ART

8:00 the next morning responses are faxed back.



AXONOMETRIC, DAEHAN KYOYUK CORPORATE TRAINING FACILITY

The two largest buildings the firm has done in Korea also show different ways of responding to a site. The National Museum of Contemporary Art (5) is a rectilinear, fortress-like building whose stepped massing recalls that of the surrounding hillsides. In contrast, it is through its curvilinear form that the Daehan Kyoyuk corporate training facility (6) adapts to its heavily contoured site.



Photos this page: Tai Soo Kim, FAIA

work. "By the time I see it in the field, it's too late to tear it apart and do it over," Kim notes, so his new Korean office will concentrate on project administration. "Now our practice operates 24 hours a day," says Kim. Details and memos on Korean projects are faxed to the Seoul office from Hartford at 5:00 in the evening, and by 8:00 the next morning responses are faxed back. "Sometimes I get calls at home at 3:00 in the morning," says Kim, for answers to questions that can't wait. Drawings are shuttled back and forth on disk, but Kim anticipates that soon modems will be used to send drawings over the phone lines.

The fee structure is set by the Korean Ministry of Construction, which dictates guidelines on what architects should be paid. There is not a large spread between fees for small and large projects in Korea as there is in the U.S.; perhaps only a 2-to-3-percent difference. This makes large commissions especially lucrative, and Kim does not work on modest projects.

The high cost of land in Korea also contributes to a greater concern for quality materials on the client's part. On a \$500-million project, land costs may account for more than half that amount, so clients want buildings built well and made of durable materials. Kim notes that there is little cost-cutting on material quality. "I get spoiled working there," he says. "When I tell clients that certain materials will cost more, they don't even blink. These buildings represent the company on the world stage, and they want high quality." There is also less chauvinism in material choice than there was a decade ago, when local materials were emphasized. "With the growth of world trade, we can use materials from anywhere," explains Kim.

### Freedom to Design

Kim finds that he has greater freedom to explore new architectural directions in Korea than he has in the U.S. Much of his work in the states has been in New England – a region hardly noted for its architectural flamboyance. And many of his American clients have been private academic institutions or public agencies – again, not usually patrons of design experimentation. Kim says that his American clients place greater emphasis on architecture that is contextually responsive – a part of a greater architectural whole, such as an old college campus. "This takes the freedom out of design," says Kim.

By contrast, Korea has no strong architectural tradition. "My Korean clients don't ask me what kind of building I'm going to design," says Kim. "They say, 'I've seen your architecture, and I want your best work.' They're interested in fresh ideas, a classic modern approach, and I feel much freer there to design."

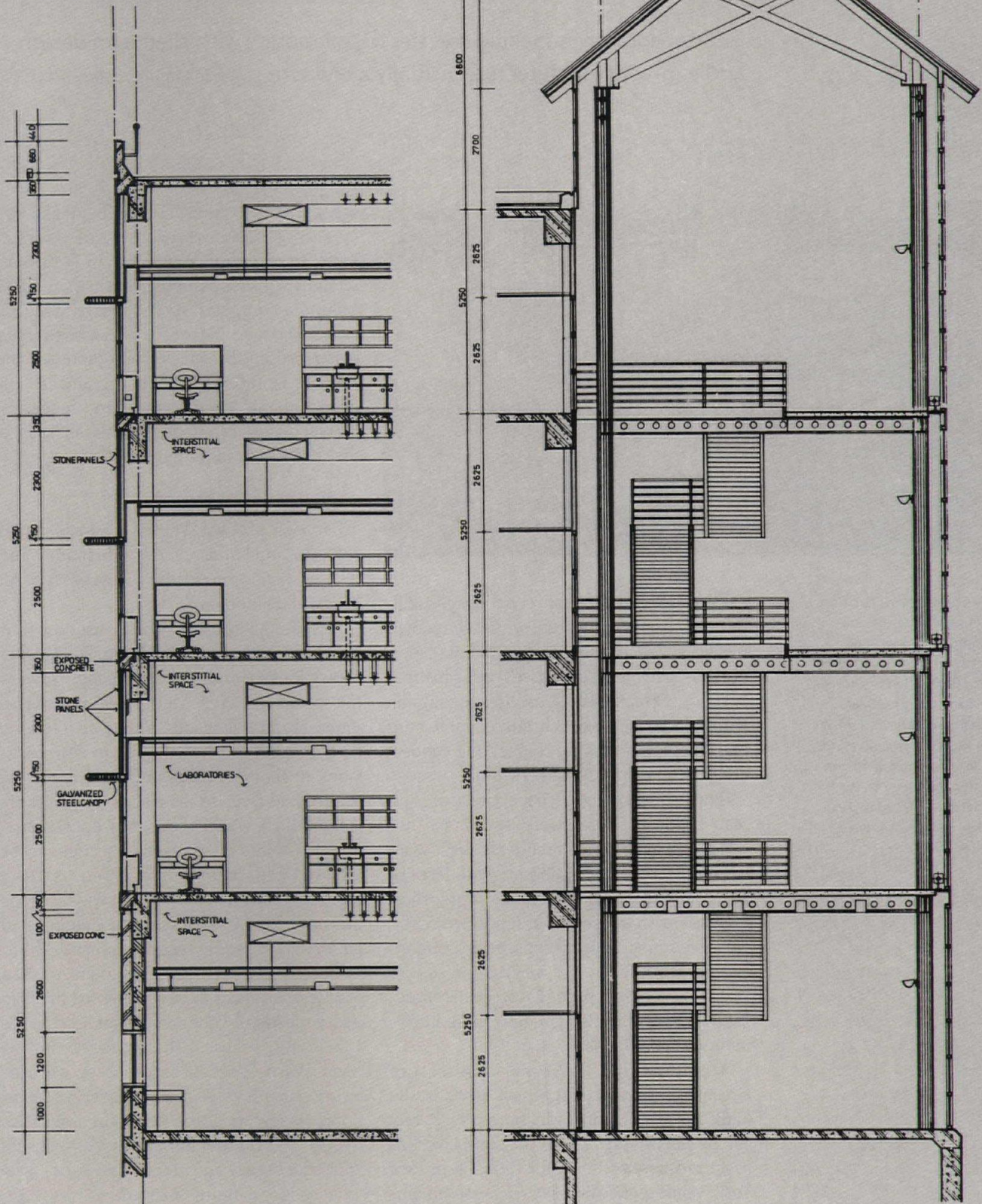
But Kim gains satisfaction in his American work that he rarely derives from his Korean commissions. Here there is a cultural diversity that architecture must respond to, and layers of social concerns that the architect has to address. "The design process is more complex here," notes Kim. "In Korea, they want impressive buildings, but they are isolated events. There's much less concern with urban issues and with maintaining some continuity with the culture. Here there's attention to the building's role in the neighborhood, how it can serve a depressed community, how architecture can serve society. Ultimately, that's more satisfying to me."

Perhaps Tai Soo Kim has found the best of practice in both worlds.

Michael J. Crosbie



The master plan for the Lucky Hi-Tech Research Park (7) in Daeduk, Korea, calls for 2.5 million square feet of research and development laboratories, in addition to administration space. The first phase, now completed, encompasses 600,000 square feet and includes two of the eight lab wings and corresponding product development areas. Sections from the design development drawings through a spine and the exterior wall of a lab wing (10) show how the lab spaces are served by deep interstitial spaces, and the spine's steel structure.

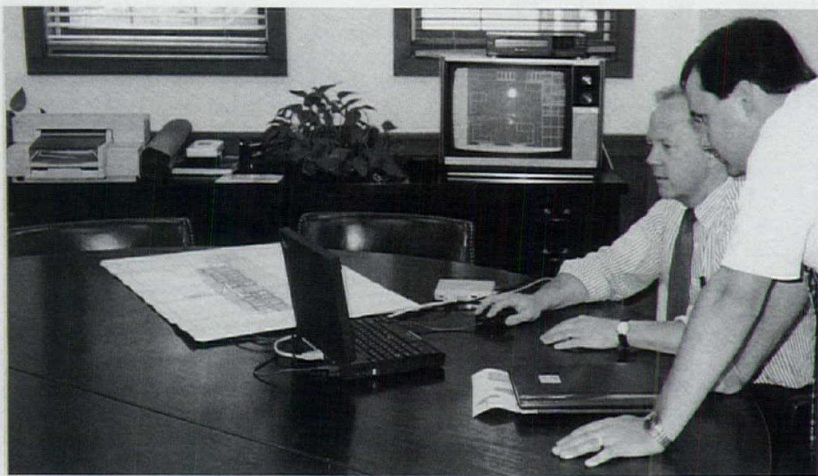


10 SECTIONS THROUGH LAB AND SPINE

10/3m

# The Virtual Practice

CAD technology is making it easier to collaborate with clients on design, and to practice architecture virtually anywhere. *by Michael J. Crosbie*



Michael J. Crosbie

In the boardroom (1), before meeting with the Bridgehampton National Bank board of directors, architect Curtis Wayne (left in photo) and bank vice president Chris Becker review schematic design. During the meeting, studies were projected on the remote screen on the credenza, and hard copies of new design ideas were printed out.

As computers permeate every area of architecture – from design and construction documents to project administration and site supervision – can “virtual practice” be far behind? Forms of virtual practice are already common within large firms, which link computers in branch offices across the country and conduct design in an electronic netherworld.

But the next step in virtual practice is already upon the profession. By “virtual” we mean a firm in which architects don’t work within the same physical space, with face-to-face communication, but on their own, wherever they wish, communicating electronically. Now even small firms, using lap-top computers, modems, faxes, and service bureaus (or “CAD Centers,” see page 92) can be decentralized, and can offer clients a more intimate role in the design process.

One such firm is Wayne Architects of Greenwich, Connecticut, which specializes in bank design. The firm was started two years ago by Curtis Wayne, who previously worked as an in-house architect for Citibank in New York. While there, Wayne developed a streamlined method of designing on the computer. “We would have meetings with branch man-

agers,” recalls Wayne, “and it would take forever to get design revisions made to drawings.” In response, Wayne began “squatter” sessions with his in-house “clients,” huddled around a computer. As the design was discussed and questions arose, alternatives could be studied on the screen. “It compressed the amount of time for schematic and design development,” says Wayne, “and made the branch managers and other bank officials feel they had a stake in the outcome.”

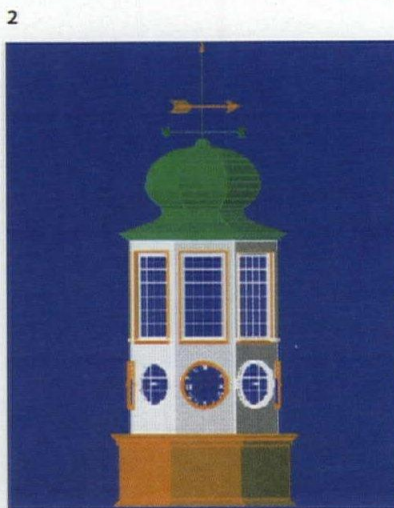
## Design on the Fly

Now on his own, Wayne conducts design consultations and reviews schematics and design development drawings with bank clients in their offices.

For design sessions Wayne uses an IBM ThinkPad 750C, a portable lap-top that makes it easy for him and two other people to view the screen. For larger audiences, an external video monitor is used. Wayne also takes a desktop color printer with him to design sessions so that drawings and studies can be printed and given to the clients. The software is DataCad 5, which allows easy drawing manipulation and spatial walk-throughs to be achieved on the lap-top. “There’s no need for a digitizer board,” according to Wayne. “The drawings can be generated and manipulated with a mouse and keyboard commands.”

Beverly Wayne, his spouse and formerly a bank employee, does marketing for the firm and occasionally attends design sessions as a facilitator between the architect and the client. Wayne can take his clients on bank interior walk-throughs, study exterior elevations, review furniture selection and office layouts, and do preliminary cost estimating. Walls can be moved, windows added or subtracted, floor patterns changed.

During a design session I sat in on for a bank in Bridgehampton, New York, Wayne



reviewed schematic designs with the bank's board of directors, using a combination of printed drawings and on-screen renderings. At one point the board objected to the size of the new building's cupola. Wayne quickly reduced its size by a quarter, and then rendered a view of the building from the highway, as a bank customer would see it. The board was happy with the adjustment. The onion-shaped cupola top also drew fire from a board member. Wayne changed it to a more traditional bell shape the board approved.

Wayne admits that this method of design is not suited to every architect. "You have to be comfortable designing in front of people," he says, "what I call design on the fly." The ease with which designs can be manipulated and changed might also lead some clients to think that they can do it themselves with the right computer and software. Wayne says he often generates complex drawings and perspective views just to keep the process mysterious and a bit intimidating to clients, not unlike the facile hand-sketch that architects have relied on for centuries.

There is also the danger of generating quick solutions to design problems that might require more study, and having the client latch onto the quick solutions. "We make it clear that, just as clients have a right to change their minds during design, the architects have the same right," says Wayne. "A solution generated during a client session might not work out as well as we originally thought. But this process makes it easier to make big changes, because the clients have been brought along in the process and are informed about what the design issues are."

### Virtual Practice

Wayne's method of working with clients makes for an easy transition into the realm of virtual practice. The firm is comprised of approximately eight people, or "associates" as Wayne describes them, half of whom work part-time. All work at home on either their own computer equipment or leased equipment, and they bill Wayne as independent contractors on an hourly basis.

After design sessions, Wayne relays drawings and other information to his associates, who further develop the project. The information is transported electronically by modem from Wayne's computer to an associate's equipment at home. After development the design data can be modemed to a service bureau, where it is printed as hard copy.

The staff meets at Wayne's Greenwich office

approximately once every ten days to compare notes on how the projects are developing, review product selection and samples, verify drawings standards, solve problems that have cropped up, and coordinate work for the next week or so. The office has a full-time project manager who reviews drawings and administers construction. Projects that require a lot of design supervision on Wayne's part are sometimes done with CAD in the office.

According to Wayne, having such a virtual practice is more profitable because of savings on overhead and a more efficient use of time in making revisions with clients, but the office phone bill is higher than in a conventional practice of a similar size.

Wayne admits that, under these virtual conditions, it is sometimes hard to maintain the kind of team spirit often found in a conventional practice. As computer technology develops further, and techniques such as video-conferencing become more sophisticated and commonplace, the *esprit de corps* of a virtual firm may be nurtured electronically. But virtual practice is here to stay, and the close collaborative process computers now offer will no doubt soon become expected by clients. □

The bank's board of directors viewed the onion-domed cupola (3) from a parking lot perspective (2) and came to the conclusion that the cupola was too large. During the meeting, Wayne reduced the cupola's size by 25 percent (4) and changed the cupola top to a more traditional bell shape the board approved. These drawings were printed out during the meeting.

# CAD Law

What you need to know to limit your exposure for electronically transmitted design data. *by Steven G.M. Stein and Jeffery H. Winick*

## Abstract

New business risks and legal liabilities have arisen with the use of computers in architecture. This article explores the risk management tools available. In particular, the article focuses on contract language that anticipates problems with computer use and on office procedures to manage these risks.

The architectural profession has adopted, with growing enthusiasm, the use of computers in generating, revising, plotting, and transmitting its work. As with all new technologies, however, the use of computers in architectural practice raises previously unrecognized risks and liabilities. Risk management issues are often identified only after a firm encounters its first meaningful monetary loss or significant claim.

The electronic transfer of design data creates five main concerns: errors arising from information transmitted to the architect; errors introduced during transmission or during use by the client; defining deliverables and protecting compensation; control of ownership and limits on reuse; and risk shifting.

## Errors in Transmitting Information to the Architect

In most respects, liability risks arising from information transmitted to the design professional are not at all dissimilar from those pre-existing before the advent of CAD. Whether generated in print or electronically, information provided to the design professional by others may lead to a defective design product for two reasons: the information obtained from the owner, the owner's consultants, or the owner's contractor was insufficient or incorrect; and the information obtained from product vendors or the design professional's own consultants was insufficient or incorrect. These risks have not changed. However, with computers architects must now ask if the information provided to them electronically is identical to that which the other party intended to transmit.

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*The authors are attorneys with Stein, Ray & Conway of Chicago, and specialize in legal counsel to architects and engineers.*

New liability exposures arise first and foremost from the inability of conventional file management techniques to document the transfer of this information. Although standard operating procedures prior to computers may have required the maintenance of a correspondence log or the retention of transmittal sheets, the electronic transfer of data, particularly by way of modem or network, is likely not to be documented through these procedures. Moreover, information transferred through computer can easily lose its label (if on a disk), or source identification (if electronically transferred). Even more serious, the information can be deleted from the recipient's files so that data as well as any record of their receipt may be lost. In addition, unlike written copies that clearly reflect changes, computer data can be modified and bear no evidence of the modification.

When liability issues arise, one must trace the source of the design data used. If architects are unable to prove they relied on particular information provided by others, the architects will bear the loss. Therefore, procedures to document the receipt of information electronically, as well as a means of retaining a copy of the information "as transmitted," are critical.

## Errors in Transmission to or Use by the Client

In the transmission of electronic documents to the client, a host of possible errors can occur. First and most obvious, the transmission of the data is fraught with potential problems. This is true whether the transfer is by disk or over a wire. For example, in order for the transfer of disk-stored material to proceed without error, all of the following must occur: the computer from which the material is downloaded, in particular the disk drive, must be fully operational and defect free; the

disk onto which the material is copied must be defect free; the disk must not be subject to any physical or magnetic forces during transit that would alter the information on it; the information on the disk must be compatible with the recipient's computer software and hardware; and the recipient's computer, in particular the disk drive, must be fully operational and defect free. At any of these stages, critical errors that are difficult to detect can be included in the data. In addition to all of the above concerns, electronic transfer of data via modem can encounter problems with phone lines.

Once the information is utilized by the recipient, there is a more likely possibility of error. The electronically transferred design data can be altered and damaged by the recipient's software or, more commonly, during the mere examination of the material. Exacerbating each of these risks is the possibility that the recipient is using the software improperly.

To reduce these problems the architect and the client or consultant should institute procedures that address the various risks involved. Because the sharing of information occurs in the early phases of their relationship, this can be easily accomplished. In addition, the architect should take steps to ensure that the electronic equipment is fully operational and error free and that those individuals manipulating the data are well trained.

The design professional must also be concerned with further transmission of the material from the client to others. For example, the client may transmit the design data to other offices, contractors, and consultants. The risks entailed in the transfer of this data through computer-related means are the same as those discussed above; however, the architect has no control over the medium or the method of transmission.

As with input errors, identification of the source of information and changes becomes increasingly important as the network of individuals sharing the design data widens. The very speed with which ideas can be graphically transmitted introduces the possibility that the author or the source of a subsequent design decision will become confused or entirely lost. For this reason, the architect must keep track of all material that has been transmitted and must maintain a copy of exactly what was transmitted.

### Defining "Deliverables" and Protecting Compensation

In medieval England, the transfer of land required the meeting, in person, of seller and purchaser with the transmission of title

through the hand delivery of earth and twigs from the property conveyed. Thus, the land was transferred in both the legal and the physical sense. Architects also define discrete moments when information is transferred, and a right to payment is established, such as delivery of schematic drawings, design development drawings, and working drawings. Approval sets the parameters for the distinction between "basic" and "additional" services. Post approval changes entitle the design professional to increased compensation.

Now, with computers, it's possible for clients to be "on-line" throughout the design process and to have available to them all interim design data. Thus, delivery of the design product is made on a continuous basis. The clear lines between "schematic," "design development," and "working" drawings are easily muddled, especially when clients are technically competent and desire to work along with the architect. With the rhythm of approval and payment disrupted, and with control over design products lost, the architect's risk of nonpayment increases.

It is therefore imperative that these issues be specifically addressed in the contract. In particular, the contract must incorporate language both defining "deliverables" and tying payment to the "deliverables."

And what of the use of in-process design data? Assuming the client is willing to pay for the work performed to date, is the client entitled to make use of less-than-final design data in order to speed up a project without agreeing to relieve the architect from liability for errors and omissions existing in the not-yet-finalized documents? This is an issue that needs to be addressed in the contract.

### Ownership and Reuse

In the architectural and engineering communities, as in other walks of life, it is often said that "imitation is the highest form of flattery." However, when the imitation affects one's ability to market and profit from one's work, the feelings of flattery evaporate quickly.

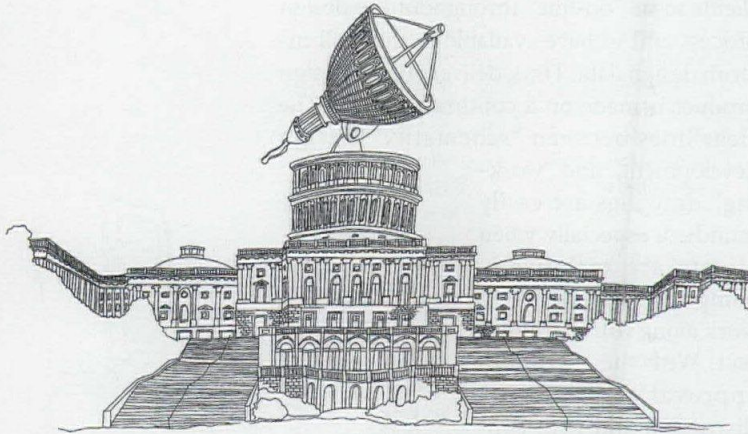
In the U.S., design professionals are protected. The creators of "original work of authorship" such as engineering plans or a building design as embodied in a completed structure, are entitled to statutory protection against unlawful copying of their work. When



Forrest Wilson/ZONK

the design product is created, modified, or transmitted with the use of computerized processes, additional issues relating to copyright protection must be addressed.

The Federal copyright laws provide protection to design professionals for their ownership rights in their design materials. As a matter of good practice and to ensure copyright protection, architects routinely place a copyright symbol on their plans or drawings. This leads to the obvious question of how to copyright electronically stored data or design information.



Forrest Wilson/ZONK

The Copyright Office in Washington has issued regulations concerning the position and method of affixing a copyright notice for different categories of protected work. For works reproduced in "machine readable copies," the design professional can provide notice of copyright in the following ways: "With or near the title or at the end of the work, on visually perceptible printouts; at the user's terminal at sign on; on continuous display at the terminal; or reproduced durably on a gummed or other label securely affixed to the copies or to a container used as a permanent receptacle for the discs." As good practice and as a means of providing additional protection to design products, one of these alternatives should be used for electronically stored materials.

In general, under the Copyright Act, the architect's ownership right of copyrighted work in an electronic database is treated no differently than a set of plans produced on paper. In both cases, regardless of whether or not the design professional has provided the owner with a set of the plans or drawings for use on the project, the architect retains ownership rights unless otherwise agreed in writing. Therefore, the owner infringes on the design professional's copyright if the work product is used other than in connection with the project that is the subject of the agreement between the architect and the client.

Nevertheless, it may be wise for architects to consider, before entering into a contract with an owner, whether they intend to provide the owner with the computer-generated design documents and if so, to provide protection for ownership rights of the materials in the contract. Although the treatment of these materials will not differ from the treatment of a hard copy, the opportunity for the owner to alter, adapt, or transfer the materials may be significantly greater. Thus, the need to establish the respective rights and obligations of the architect and the client is enhanced. These concerns are often addressed by contract provisions that disallow the owner's reuse of the materials for any purpose, and a provision by which the owner agrees to indemnify the architect for any losses or claims associated with the unauthorized reuse of the design materials.

### Risk Shifting

Some errors or omissions inherent in a design process and in an electronic transfer of design data cannot be completely avoided. The issue becomes who bears such risks. Appropriately, the architect bears the risks of internal operations – employees' errors in conceptualization, documentation, and transmission. But risks in the electronic transfer of information should be borne by others.

Clients should bear all risks associated with their provision of information, modification of design data, reuse, reformatting, retransmission, and premature use of information. In addition, clients should also take responsibility for those they employ – consultants and its contractors – to the extent that the information they provide is defective or erroneous, whether in original conception, creation, formatting, or transmission.

However, even the clients' acceptance of their fair share of responsibility leaves fuzzy areas. For instance, the incompatibility of software or hardware that results in failed transmission between the client and the architect is a shared responsibility unless risk of such incompatibility is clearly accepted by one of the parties.

A contract can appropriately allocate the risks of the electronic creation and transmission of design data. In addition, the client can contractually waive certain claims based on the scope of the architect's services and the client's requirements and inputs.

The client's consultants and contractors, too, can be bound through the client's contract. Although the architect has no way of directly negotiating appropriate risk-sharing with the client's independent contractors,

clients can agree to require their contractors to share risks appropriately through indemnity provisions, waivers, and fair descriptions of scope of services.

But other third parties are not bound by the client's agreement, although the scope of services will be helpful in defining the architect's duties to the public. Indemnities are the usual tool for shifting liability of third party claims. Accordingly, the architect should request and obtain from the client an indemnity appropriate to the circumstances. In a world of equal bargaining power, it would be simple to define the scope of that indemnity. Logically, the party most in a position to control a loss and to minimize its impact should bear the responsibility for both parties if it fails to do so. Whether the party is appropriately compensated for the potential risk is an equal consideration. Unfortunately, equal bargaining power rarely, if ever, exists, and indemnities are usually written and made part of a contract in much the same fashion as a powder charge is introduced to a muzzle-loaded cannon.

Contracts with consultants are as important as the design professionals' contracts with clients. Risks should be shifted to the party best able to control them in light of compensation arrangements. In addition, the scope and service definitions should be carefully tailored to match the needs of the architect from the technical standpoint and the requirements that the design professional must meet under contract with the client.

Insurance has its place in risk shifting as well. The extent to which professional liability policies apply to erroneously created and transmitted design data, however, is unclear. On the one hand, it is self-evident that the failure of the architect properly to perform design services is covered. On the other hand, if the design services are appropriately performed, but only the transmission of data is flawed due to equipment failure, it is much less clear how the professional liability policy would apply. An endorsement (a specific policy modification) of the professional policy may be in order, although the cost of such an endorsement requires underwriting experience which may not yet exist.

Valuable-papers insurance too must be reviewed. Not only is the definition of the "papers" that are subject to the insurance important, the limits of liability should be reviewed in light of the tremendous amount of information stored on disk and of the fact that some of the information may be retrievable from others after transmission. □

## Procedures Checklist

One means of determining whether procedures are in place to address the issues discussed in this article is to compare internal practices with the following checklist. While the list is neither exhaustive nor specifically tailored to the particular needs of any architect, it does provide a good starting point from which to work.

### Administrative Procedures

- Establish procedures for hardware/software purchasing.
- Institute security procedures that restrict to the necessary individuals access to the system.
- Review professional liability insurance policy to determine scope of coverage and confirm presence or absence of "computer liability" exclusions.
- Prepare and distribute a training and procedures manual that clearly states accepted procedures regarding computerized design data.
- Require incorporation of source identification (including author and date) into electronically transmitted design data.

### Contract Negotiation Architect/Client Contracts

- Negotiate clear definition of "deliverables" that makes provision for electronically generated design data.
- Tie compensation to the "deliverables" as defined in the contract.
- Include a technical specifications agreement.
- Negotiate scope-of-services provisions and waivers that contemplate the use of computerized and electronically generated design data.
- Negotiate indemnification provisions that allocate responsibility for errors and omissions arising from the use of computerized and electronically generated design data.

### Execute Technical Specifications Agreements with:

- Consultants
- Vendors
- Contractors

### Consultant's

#### Contract Review

- Coordinate definition of deliverables and compensation with the Architect/Client contract.
- Negotiate scope of services provisions and waivers that contemplate the use of computerized and electronically generated design data.

#### Data, Information, and Document Source Identification

- Maintain a log of the dates of transmission and the receipt of all electronically generated design data.
- Maintain an archive of all transmitted data, information, and documents.
- Maintain an archive of all received data, information, and documents.
- Institute procedures for the creation, modification, and use of copies of design data.
- Maintain copies electronically and in hard copy of changes made to drawings and specifications, including changes made by the design professional and by others.

#### Design Product

#### Identification/Transmittal

- Institute procedures for identification of generations and revisions of drawings and specifications.
- Create transmittal memoranda for all transfers of design data, whether electronic or by disk, and include design document identification numbers.
- Retain hard copies of all transmittal memoranda.

# Emerging CAD Centers

Rather than investing in expensive equipment and training, architects can call on "CAD Centers." by *Teresa P. Davidson*

## Abstract

Clients are demanding more computer sophistication on the part of architects. "CAD Centers," which offer a range of computer visualization and rendering services, along with CAD management and advice, can provide architects with access to the latest in technology without a hefty investment in hardware, software, and staff training. The article discusses pros and cons of CAD Centers and how architects can best use their services.

Through the downturn of the economy, the market for architectural services has changed drastically, becoming more and more competitive. Day in and day out, architects face a constant struggle to increase productivity and efficiency. As clients become more sophisticated, they expect more for their money. To maintain a leading-edge advantage, the architect must not only be knowledgeable about design issues, building systems, and materials, but must, in addition, use computers more efficiently and effectively.

To the architect's benefit, computer consultants have emerged and are expanding the range of services they provide. Today, service bureaus have evolved to include more than just printing and/or plotting services; these specialized firms are coming into the market as skilled entrepreneurs. Likewise, many consultants have architectural or engineering backgrounds and are forging connections between the design profession and the multitude of available computer technologies.

Among the most valuable and least understood resources for architects are "CAD Centers," which are still emerging and are involved in all phases of design and construction.

## CAD Centers Defined

CAD Centers range from one-person offices providing drafting services to sophisticated team-oriented businesses offering consultation, highly advanced computer graphics, training, technical support, supplies, turn-key computer systems, and presentation-quality output products. Their primary pur-

pose is to provide computer support for their clients, though they also serve as dealers for computer companies and occasionally as software developers. CAD consultants must not only have a good network of sources, but they must also have a "vision" of which products will be promising to learn, and worth investment of their time and money.

When choosing a CAD Center, architects should choose consultants who have a good understanding of the architectural market, its current trends, and the needs of the architect's client. A CAD Center should also exhibit the desire and initiative to generate creative solutions and design alternatives. Consultants must be extremely knowledgeable and trained to provide input on systems designed to fit the architectural firm's style, and to provide the expected results.

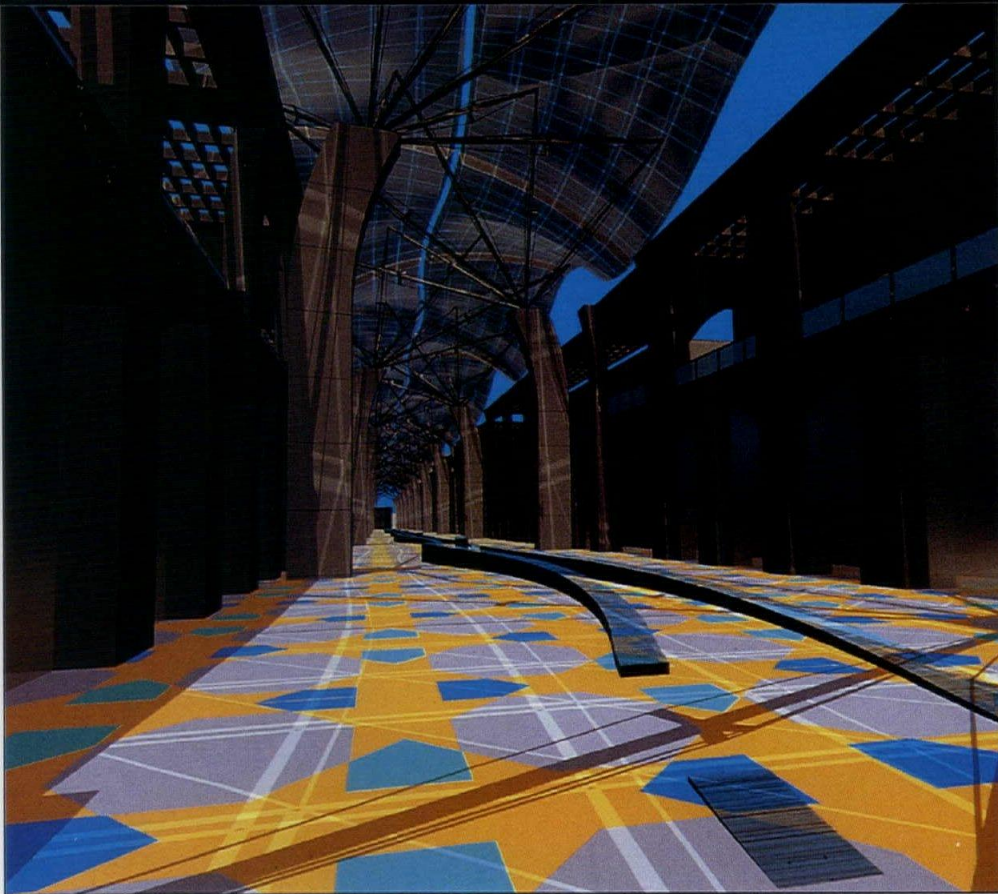
The most important element in dealing with a CAD Center is the establishment of a trusting relationship with consultants. They should be willing to direct the architect so that the design professional's computer resources are utilized efficiently before the billing clock starts ticking. A good relationship will also require loyalty on the architect's part. Trustworthy consultants are eager to invest free time with architects who are not just "brain-picking" or shopping for the lowest quote.

It is possible that an architecture firm will be supported by several computer consultants and/or visualization experts, depending on a project's requirements. The market for CAD consultants is so wide and varied that it demands specialized expertise. Priorities in selecting a consultant should include expertise and the level of support offered.

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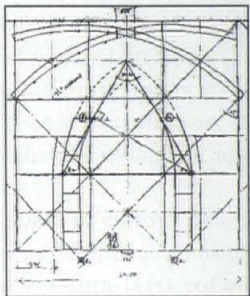
*The author is an associate with Group 70 International, an architecture firm in Honolulu.*



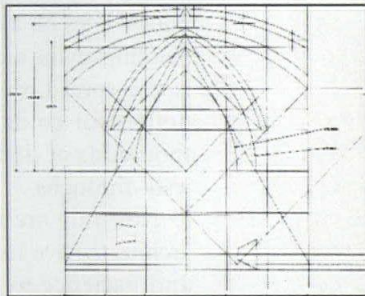


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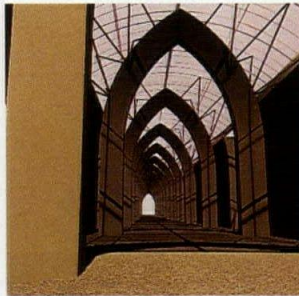
A finished rendering (1) of a design by Fredenburgh Architects, New York, as developed by Edge Media, New York, is the result of a series of drawings that start as sketches (2) then move to hard-line drawings (3). The scheme for a glass-covered walkway was studied with arches meeting at the ceiling (4) and penetrating the glass enclosure (5).



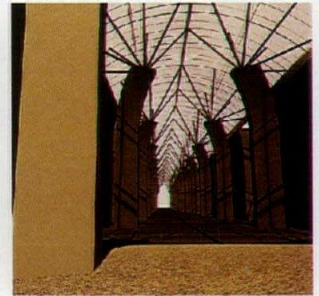
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3



4



5

### What a CAD Center Can Provide the Architect

Most CAD Centers have a range of capabilities with a diversity of hardware and software. A typical service involves a 3D model created in AutoCAD that is rendered, animated, and then output to videotape or Photo-CD. The 3D model has to be layered according to the materials to be used. Colors and textures, which have been created or scanned, are then applied to each layer of the AutoCAD drawing file using Autodesk's 3D Studio or Autovision software. Using animation software, viewpoints are selected as "keyframes," and the presentation frames are rendered to videotape.

If a traditional look is desired, artistic filters may be added with image-processing software, and samples provided for client

approval. Services such as these are available at \$65 an hour (Honolulu rate); hard-copy photo-quality prints up to 34 inches by 47 inches can be generated for \$300.

### Pros and Cons

One of the most significant advantages of using a CAD Center is that design firms do not have to invest time or money on advanced equipment or training, or hire specialized personnel. Architects gain exposure and access to a variety of specialized hardware and software that provide color, speed, and realistic images. Design firms also gain the capability and the opportunity to experiment, using all these systems to determine which will best suit their style and needs before purchasing them. Owner-Architect agreements usually include the billing and reimbursement



6 CAD Center rendering of a living room, developed by HONCAD of Honolulu.

### CAD Center Services

- Training and consultation
- Systems maintenance and repair
- File translations, especially those which require macros to prepare files prior to translation. Because colors, linetypes, blocks, and layers can display inconsistencies during the process, trial-and-error sessions are often necessary to accomplish a clean translation.
- Drawing, scanning, and digitizing, especially large-format
- Plotting: pen, pencil, color, electrostatic, direct-image thermal
- Presentation graphics, including:
  - High resolution slides*
  - Transparencies*
  - Video production*
  - Video image capture*, where a photo is superimposed onto a file; for example, where a proposed building design is placed, in context, on the project's site.
  - Photo-CD*, a relatively inexpensive alternative to video image-capture, which will eventually replace slides due to its photographic quality, ability to play on any standard television, and the eventual capability to add a music/sound track.
  - Image-processing* where "filters" of traditional techniques (watercolors, oils, charcoals, etc.) can be used to render a 3D model, and then print out on various formats and media (slides, transparencies, photo-quality prints, etc.). Other image-processing techniques include anti-aliasing (making edges disappear), color balancing, and digital compositing.
- Architectural visualization: (in ascending order of complexity)
  - Photo-compositing* is a procedure where photos are combined to add background or foreground in context to visualize the impact of design.
  - Conversion* of 2D plans and elevations to 3D models.
  - Rendered 3D models*, where the models become photo-realistic by applying scanned textures to surfaces.
  - Animated "fly-bys,"* where the viewer is flying around the model. Lights are used to cast shadows and to simulate day or night "flights."
  - Animated "walk-throughs,"* where the viewer travels into, through, and around the model. Materials, lights, and detailed interiors are required.

of consultants' charges. This is a viable benefit as it is hard for firms to justify billing for in-house CAD time and output. Finally, architects do not have to dedicate so much time to training and keeping up with the overwhelming advances and changes in the CAD, multimedia, and related markets; they have more time to focus on design.

Nonetheless, architects have to be knowledgeable enough to know how to manage and budget the consultant's time and fees efficiently. Turn-around time will affect scheduled deadlines. If an architect uses services in production, for example, a reasonable amount of time has to be scheduled for quality control and document checking; if one uses plotting services, time must be allocated for script routines, file transfers, collation, and binding. Be sure to ask the CAD Center for the expected turn-around time for these various services.

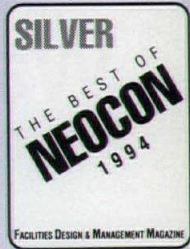
These services can be costly. Consultants' rates vary depending on the level of complexity and sophistication of the desired project. In Honolulu, hourly rates vary from \$50 to \$150 per hour; in New York and California, hourly rates on average are \$100 to \$150, depending on the scope. The cost of deliverables is also spread over a wide range, from a few dollars for color plots or slides, to tens of thousands of dollars for animated, detailed walk-throughs.

Not only are time and money at issue; architects have to exercise open-mindedness and patience to allow for trial-and-error sessions. We need to remember that we are pioneers in a sea of technology. In addition, CAD-proficient architects on staff who can lead and make decisions throughout the process are an advantage. They don't need to be expert users; their value depends on their imagination, creativity, and ability to lead the consultant to deliver the expected high-quality, cost-effective product.

### Conclusion

During rough economic periods, it's easy for an architect to assume that CAD consultants offer only superfluous, extravagant services. On the contrary, the positive, value-added services they can provide to the profession outweigh the drawbacks. Architects can share in the learning and enthusiasm of the computer industry and can prepare for a new phase of professional development. Shouldn't we incorporate CAD Centers more in the process of architectural design, and embrace this technological revolution? □

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# Watch Your Code Consultants

New York lawyer *Norman Coplan* recounts a case in which code consultants were not held personally liable for their own negligence.

Design professionals often rely upon the advice of building code consultants or expeditors. But, the limits of function and the extent of liability to which a code consultant is subject have not, in general, been clearly defined legally. And that can spell trouble for architects.

Some code consulting firms, for example, claim to have an expertise that may appear to the public to be professional; a few may even cross the line into

**Apparently, only a licensed professional is subject to personal liability for negligence, even if such a limitation may not serve the public interest.**

the unlawful practice of architecture. One of the issues that remains unclear, however, is whether the principals of a code consultant firm are subject to personal liability for negligence in performing their duties.

## How Trouble Arises

In a recent New York case, an architect, commissioned to prepare plans for a house remodeling, sued the officers of a code consulting firm for damages arising from their alleged negligent performance. The architect had asked the code firm to examine a set of preliminary drawings to determine whether the design complied with set-back requirements, in particular, a requirement for a rear yard on the property.

According to the code, an architect who wants a preliminary interpretation of a zoning regulation prior to preparing a full set of plans, can obtain it with a "zoning and egress application." But the plaintiff claimed in the suit that the officers of the code consulting firm sought an oral opinion from someone in the Building Department as to whether the plans were in compliance with the regulations, instead of submitting a zoning and egress application. The architect also alleged that, while the drawings were eventually taken to the acting chief engineer of the Building Department, the code consultant's conversation with the engineer was primarily on zoning issues unrelated to the rear yard question. And it appears that the engineer had a two-minute conversation with the Borough Superintendent, who saw the plans and made no objection.

The code consulting firm advised the architect in writing that the Borough Superintendent had been consulted and that the Building Department's interpretation of the rear yard requirement was that he was to establish a 30' x 30' yard on which nothing could be built. After receiving this memorandum, the architect spent several months drawing a detailed set of plans with a 30' x 30' rear yard. He filed the plans with the Building Department, which objected on the ground that the zoning regulation required two 30' x 30' rear yards, not one.

## Legal Action

The owners of the property, who had paid the architect over \$140,000, discontinued the project and threatened legal action. In settlement of that claim the architect paid the owner \$55,000. The basis of the architect's claim of negli-

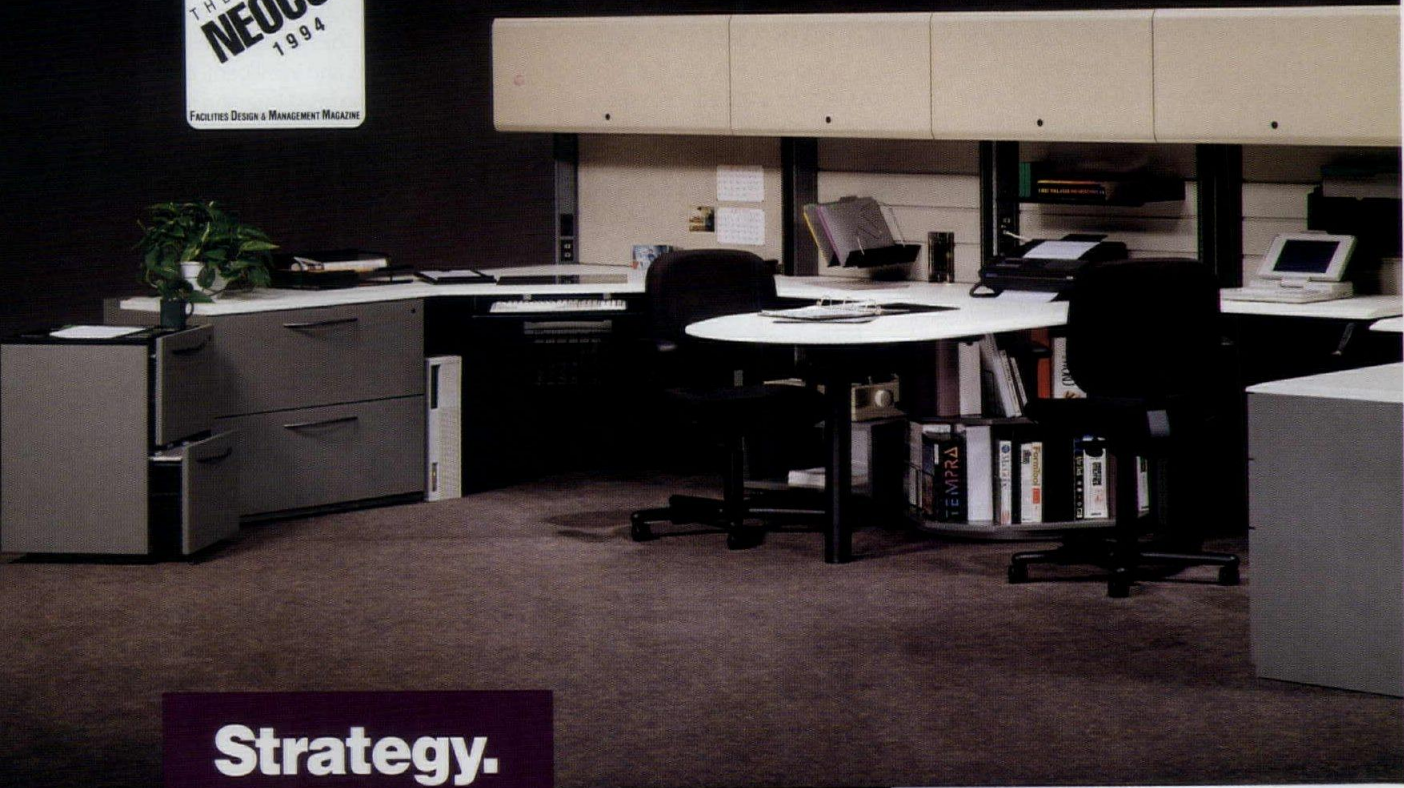
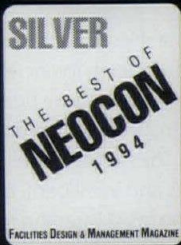
gence against the code consultants was that they knew that interpretations given orally by plan examiners are not binding, that the regulation was subject to interpretation, that the unused zoning and egress application procedure was available, that the Borough Superintendent had not been spoken to personally, and that the regulations concerning the rear yard requirement had not been studied prior to the initial meeting with the Building Department.

The defendants argued that, even if the code consulting firm breached its contract with the architect, the individual employees of that firm were not personally liable for negligence. The plaintiff's position was that zoning consultants and expeditors who shuffle projects through the Building Department have a relationship with their clients that imposes a legal duty independent of contractual obligations.

The Court, however, granted the defendant's motion for summary judgment, ruling that no tort was committed. The Court said that "no special duty, outside the contract, existed which required the defendants to perform in a certain way regarding the rear yard requirements. No showing has been made that the individual defendants had some specialized training or skill or were otherwise in a relationship with the plaintiff that would impose a duty of care independent of the contract."

Since persons acting as code consultants or expeditors generally hold themselves up as having specialized skill, or training or experience, it would appear that the Court's conclusion is subject to question. Under the Court's decision, apparently, only a licensed professional is subject to personal liability for negligence, even if such a limitation may not serve the public interest. □

*The author is a partner in the New York law firm of Bernstein, Weiss, Coplan, Weinstein & Lake.*



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Circle No. 324

**The Intern Trap** (continued from page 14) who even paid "tuition" to work in a famous architect's office. I believe intern architects should be paid a fair salary, but I am concerned that the exempt/nonexempt issue is being forced on the architecture/engineering professions, while law firms, accounting firms, planning and urban design firms, advertising firms, film companies, hospitals, universities, research institutions, radio/television stations, social service agencies, manufacturing corporations, stock brokers, federal/state/local governments (especially staffs of elected officials), and yes, even magazine publishers routinely and seemingly without guilt or penalty ask their recent college graduate "interns" to work long hours without overtime compensation.

Since my children are currently of intern age, I have firsthand knowledge about conditions in other professions from them, their cousins, and their friends. This is not a plea or an excuse for exploitation of our talented youth, but a suggestion that the hypocrisy and discrimination by the regulators should be addressed.

The exempt/nonexempt overtime pay issue should be uniformly applied to all professional occupations or be scuttled altogether. Year-end performance bonuses based on productivity and effort may actually be a better way than overtime pay to reward and compensate interns. To me this issue is just one more indicator of the ap-

**"So don't tell me the AIA doesn't provide any benefits. I know better." Gloria Wise**

alling weakness of our profession in lobbying effectively in Washington on one hand and in deriving fair compensation for our services on the other hand.

You have spoken and written on both the lobbying and financial failures of the profession and, in particular, on the relentless downward squeeze on professional fees, even at the superstar firms. This squeeze, combined with an ever-increasing annual crop of eager and talented architecture graduates, creates a climate ripe for exploitation.

Your article raises a well-intentioned alarm for the profession, but please also acknowledge that architects have been unfairly singled out in the legislative and regulatory processes.

Donald K. Carter, FAIA, AICP  
UDA Architects  
Pittsburgh

## No Regrets

I read the last P/A cover-to-cover, the first time I've done that with an architectural magazine in many years. So, naturally, I applaud the changes P/A has made.

Having said this, I've been following P/A's letters to the editor in the last couple of issues and have come to realize, once again, that for everything gained there is something lost – in this case, the avant-garde P/A, the one I liked so much when I was younger but care little about now. I hope most of your subscribers, and many potential new subscribers, feel as I do.

Bill Brenner  
National Institute of Building Sciences  
Washington, D.C.

## An AIA Chapter Speaks Up

In your July issue, Richard DeMunbrun (formerly AIA, as he signs his letter) says he cannot name a handful of benefits of membership in the AIA and states the AIA was no help in our economic downturn. Mr. DeMunbrun doesn't know what the AIA is doing now.

Our chapter paid for a psychiatrist to come in and hold group therapy sessions or laid-off architects and their families. We had a series of meetings for those temporarily out-of-work architects featuring people who could help, such as credit counselors, instructors in how to start a home-based business, how to market yourself, how to do small projects successfully, and others. We typed their résumés, we faxed them all over the country, and we mailed over 100 résumés for one architect alone. We offered the service to over 500 people over a two- to three-year period and never once asked "Are you an AIA member?" We are here for all architects, including one who said he was embarrassed to come through our door, we had done so much for him already.

So don't tell me the AIA doesn't provide any benefits. I know better.

Gloria Wise, Executive Director  
Dallas Chapter, AIA

## P/A and the Profession

The new P/A is splendid. I particularly like the way you have taken on important questions about the profession's conduct of its internal affairs. These problems of practice are a sign of why architects have so much difficulty operating in the current environment, and they also exacerbate the problems.

The question, for me, continues to be how much improvement it is reasonable to expect. The profession's traditions make it very difficult for most practitioners to think

in terms of the accountability standards that clients are looking for increasingly.

This summer, I have been working with several small firms to help them "grow" their practice. The partners in all of them are good architects and intelligent. But it is amazing how some resist listening to their clients, or if they do "listen", how hard it is for these architects to credit the client's design ideas. They often exhibit an arrogance which is offensive to all but their fellow architects. In some areas, they obviously do have a genuine and unique expertise, but it covers many fewer aspects of the building and the building process than they seem to realize.

**"The profession's traditions make it very difficult for most practitioners to think in terms of the accountability standards that clients are looking for increasingly."**

Robert Gutman

As I say, I believe the difficulty with many of these practitioners is the tradition in which they operate: their persistent focus on what they regard as the standards set by the star designers and the design awards committees. Unfortunately, as we know, the profession continues to give design awards with little attention to the technical and other features of buildings.

In order to be really effective in your new campaign, I believe that P/A has to grapple with this tradition. It is not enough to make awards for research, which are presented with little connection to specific buildings, or to sponsor affordable housing schemes. The annual awards program, I would suggest, must put much more emphasis on the technical, social, and economic side of building. This takes more time and work and will cost Penton extra bucks, but without a thorough consideration of the schemes, I can't see how you will be able to extend the critique represented by the recent issues of P/A into the realm that ultimately counts: design, the art of architecture. Unless you do, the present bifurcated condition between theory and practice, design and building, education and practice, will continue to persist, and probably get worse. The next cycle of opinion will reverse things again, and your program will be regarded as just another phase in the continuing battle between architecture and building. My clients and the profession will again have been cheated, (continued on page 100)

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## Escape from Style

(continued from page 63) (What they didn't always understand is that vernaculars are also local and contextual, not international or universal.)

But, you might ask again, how can vernaculars exist in a world where the content of buildings is constantly changing, local cultures have all but disappeared, and the context of one place looks so much like everywhere else? There are a couple of answers. As Kenneth Frampton has argued, there must be a critical component to vernaculars today. "The fundamental strategy of Critical Regionalism," he writes, "is to mediate the impact of universal civilization with elements derived *indirectly* from the peculiarities of a particular place.... It may find its governing inspiration," he adds, "in such things as the range and quality of the local light, or in a *tectonic* derived from a peculiar structural mode, or in the topography of a given site." What it *won't* do is "revive the hypothetical forms of a lost vernacular." It must be, at once, of its time and critical of its time.

But I would add that our media-driven universal culture is, itself, on the wane. Politically, there are many signs of that: opposition in the Islamic countries to American consumer culture or the fragmentation of nation-states like the former USSR and Yugoslavia into rival ethnic groups. But even economically, there is mounting evidence that universal culture is having to respond to local needs, to become more vernacular. "The more universal we become," writes business analyst John Naisbitt, "the more tribal we act.... As companies become more global," he goes on to say, "convincing socially conscious customers that they are not exploiting the disadvantaged, disturbing the environment, or destroying a country's cultural heritage will become critical to the success of their product."

The same onus is on the architectural community. The fact that most buildings have to go through an increasingly tough gauntlet of local zoning boards, design review committees, and the like shows the rise of local identity and power. To resist or despise those local interests, striking the romantic pose of the pure artist misunderstood by a philistine population, is too easy and ultimately self-defeating. The real challenge for architecture today is to find ways to respect local concerns and respond to the local environment, without giving in to them uncritically. Historically, every vernacular that was vital and meaningful was also constantly changing, pushing the limits of what people knew and expected.

The other big challenge the profession faces is to convince clients that we ourselves are changing. The longest lasting legacy of Romanticism, unfortunately, may be the public perception that design for us is simply a formal or stylistic activity. As a layperson told me with a straight face, after she had viewed P/A's traveling New Public Realm exhibition, "I didn't know architects were interested in such things." Comments like that show that we have a lot to learn and a lot of educating to do. □

### P/A and the Profession (continued from page 98)

and most practices will continue in the same sorry state they are in now.

As I say, I applaud your efforts to address the divisions in the profession, but I have my doubts about their effectiveness unless you grapple with the concept of design itself. So far, it seems to me, you have been circling around the subject. The real test is what happens in your P/A Awards jury, and what is premiated in January 1995. Am I being unreasonable in asking for such a result? I don't think I am.

One reason I continue to teach housing is that it is one of the few fields of architecture in which the idea of accountability has a solid base, but this is also a reason why architects have

**"I applaud your efforts to address the divisions in the profession, but I have my doubts about their effectiveness unless you grapple with the concept of design itself." Robert Gutman**

not made a significant contribution in this realm for a long time. Incidentally, I am requiring all my students to read your recent article on low-income housing, which is a terrific statement of the issues.

Robert Gutman, Professor  
Princeton University

### AIA Board: How Big Is Too Big?

With reference to P/A's April feature, "The AIA: Worth the Price of Admission?" Justin Henshell, AIA, of Henshell & Buccellato, Red Bank, New Jersey, has sent P/A a copy of a page from the June 1960 *AIA Journal*. The page records the caustic comments of the political scientist C. Northcote Parkinson, famed for his insights into organizational failings.

In his preamble to a talk before the AIA on "the political and economic horizons which confront the architect of today," Parkinson observed that "the officers of your Institute have since regretted their action in inviting me here .... For they had hardly shown me a diagram of their organization before I began to criticise its unwieldy structure. Do you mean to tell me, I asked, that you have a Board of Directors with *eighteen* members? Don't you realise, I said, that the Coefficient of Inefficiency lies just beyond a membership of nineteen – so you are on the brink of disaster?"

As noted in our April article, the AIA's Board now numbers 49. Thank you, Justin Henshell, for this historical insight. – Editor

### CORRECTIONS

#### The Americans Is Coming?

Readers have pointed out that the Russian version of the phrase "The Americans Are Coming," which appeared on our August cover and in the headline of our lead article, should have read АМЕРИКАНЦЫ ИДУТ. Our mistaken translation of the final word turned the phrase into the equivalent of "The Americans Is Coming." – Editor

#### Baltimore Design Credits

The New Plan for Baltimore's Inner Harbor is by Design Collective, Inc. (not Design Collaborative, Inc., as we erroneously stated in P/A, July 1994).





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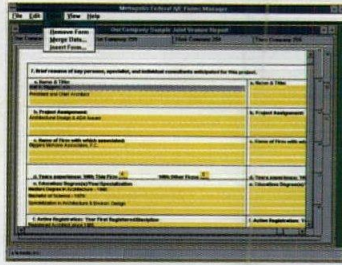
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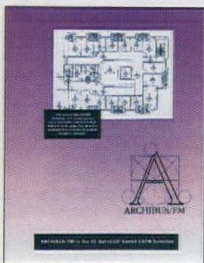
# Computers and Related Products Literature Digest



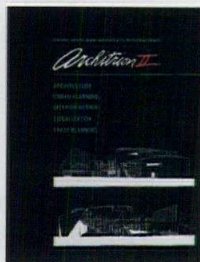
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Andersen Windows, Inc., offers Andersen CADD-I for AutoCAD. The software creates 3D symbols, 2D elevations, and details and schedules for all Andersen products. The DXF symbol library provides 2D plans and elevation symbols in addition to a product specification disk in CSI format. **Andersen Windows, Inc. Circle No. 361**



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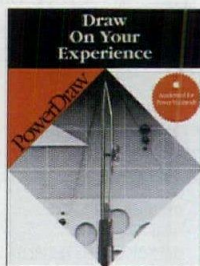
Archtirion II is an integrated architectural CADD software for architects, interior designers, urban planners, and builders. Architriion provides an advanced, true-3D modeling and design environment, a complete set of architectural drafting tools, an on-line quantifier, and a photorealistic rendering module. Architriion lets you explore, visualize, and document designs simply and efficiently. **BAGH Technologies. Circle No. 363**



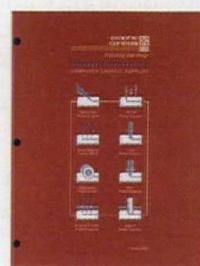
This brochure describes the features of DataCAD software and its ease of use for CAD applications, such as architectural design, floor plans, home building, facilities layout, remodeling, photorealistic rendering, and more. The brochure also includes a features analysis chart comparing AutoCAD and DataCAD 5 software. DataCAD comes with a 45-day money-back guarantee. **CADKey. Circle No. 364**



Virtual Animator is a 3D animation solution from Eagle Point and CadZooks that runs inside AutoCAD in real time. It allows you to step from your AutoCAD model into your rendered design and to walk down halls, open doors, and arrange furniture using your mouse. It takes seconds and does not lock you into a predetermined path – see what you want to see when you want to see it. **Eagle Point. Circle No. 365**



PowerDraw™, part of the PowerCADD™ Series, is an intelligent CAD program, combining powerful architectural drafting functions and External plug-ins with an intuitive Macintosh interface. Benefits include: "self-healing" Door/Window Insertion tools; an intelligent Wall Trim Tool for cleaning up intersections; and the ability to associate dimensions, parametric symbols, and more. **Engineered Software, Inc. Circle No. 366**

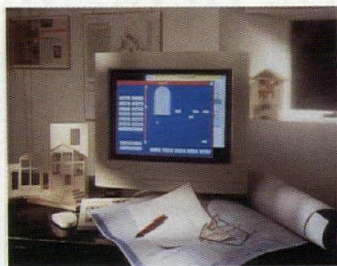


Graphic Controls has produced an updated version of its *Computer Graphics Supplies* catalog. The catalog includes the widest range of supplies and media for electrostatic, ink jet, direct imaging, laser plotter, pen plotter, thermal transfer, and impact plotter technologies. Also included is a convenient cross reference for manufacturers and performance criteria. **Graphic Controls. Circle No. 367**



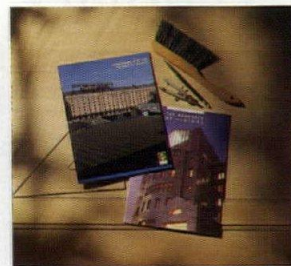
Intergraph's Project Architect is software for intuitive architectural design and construction documentation, automatically generating schedules, reports, and quantity takeoff, and sections, elevations, and models from intelligent floor plans.

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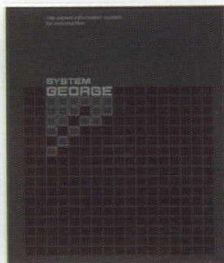
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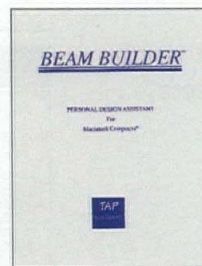
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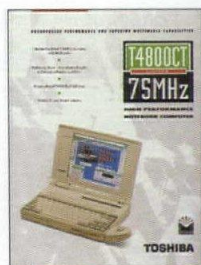
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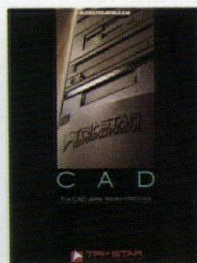
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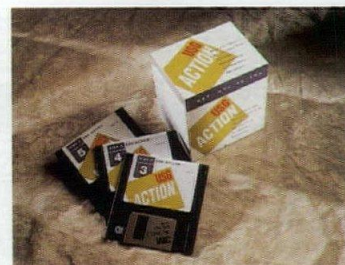
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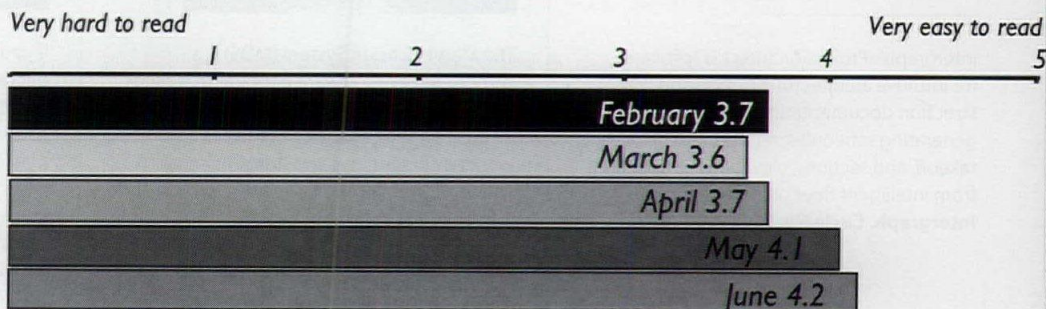
# In The February, March, April, May and June Issues...

In order to receive reader feedback, P/A included a Fax-back questionnaire, plus mailed surveys to 1500 subscribers and non-subscribers asking for their opinions about editorial changes made.

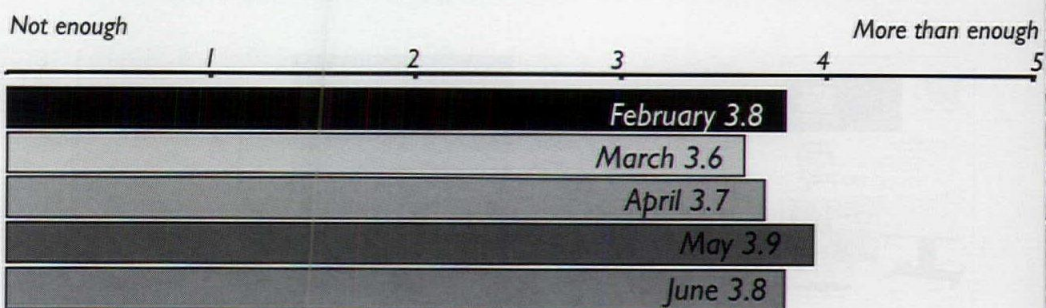
Here are the results:

Degree of preference indicated on a 1-5 scale

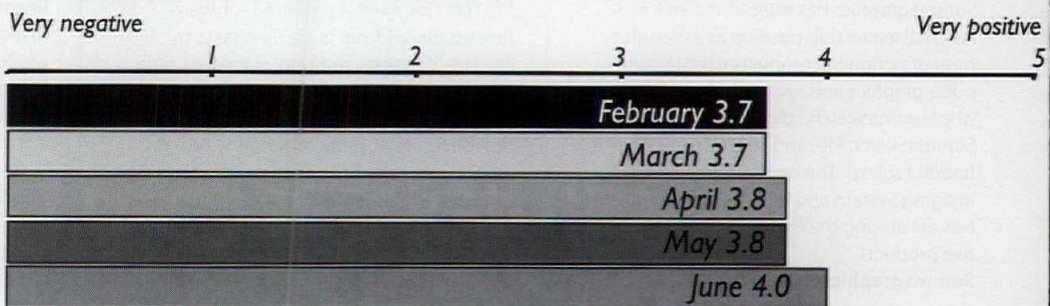
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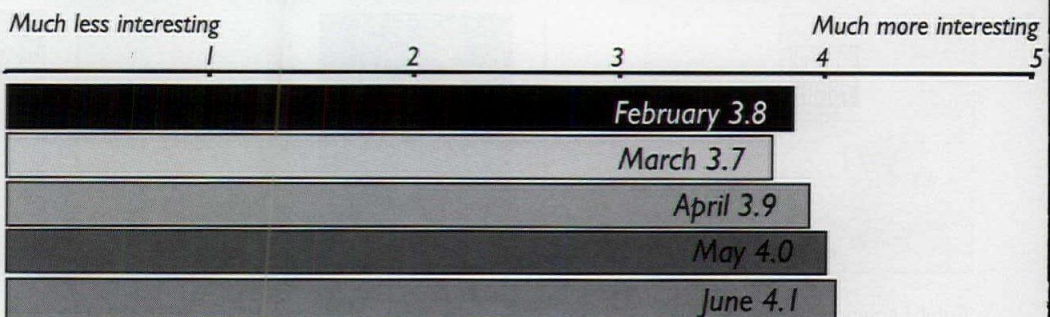
Was enough information presented on subjects covered?



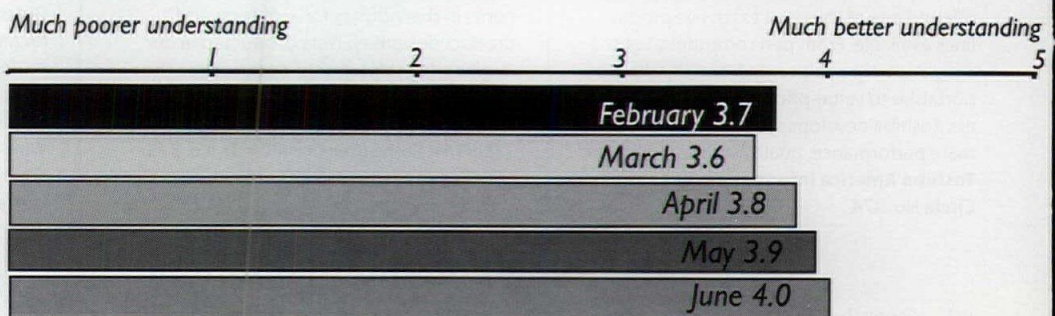
What is your opinion of the changes represented compared with last year's P/A?



How would you rate P/A's interest to you personally?



To what extent does P/A give you a better understanding of the profession's chief concerns?



# These nine uncommonly talented designers now have something in common.

## Muriel R. Cooper

The late Muriel Cooper cofounded MIT's Visible Language Workshop. She and her students developed dynamic three-dimensional visual modes to present complex data within the two dimensions of the computer screen.

## Zuzana Licko and Rudy VanderLans

Zuzana Licko and Rudy VanderLans' work has had a crucial impact on digital typography. Their new concepts in graphic design have, through work in their seminal magazine *Emigré*, had a dramatic influence on our visual environment.

## Katherine and Michael McCoy

During the 1980s, the McCoy's, co-chairs of the Design Department of the Cranbrook Academy of Art, joined the ranks of the nation's most influential designers through their work on symbolism and semantics of design.

## Achva Stein

Landscape architect Achva Stein sees her field as paramount to the very future of the planet whether it be the possibilities for urban agriculture, community gardens, the reclamation of ravaged landscapes or national parks development.

## John and Nancy Jack Todd

A biologist and writer respectively, John and Nancy Jack Todd and their company, Ocean Arks Intl., have built a series of Living Machines, household- and community-scale sewage treatment and wastewater purification systems in several North American locales.

## Lebbeus Woods

Lebbeus Woods is an architectural visionary who, through a stream of books and exhibitions, has delineated a series of compelling images of the future of architecture and urbanism. Woods is tenacious in his insistence that architecture aspire to poetry, to science, to philosophy.

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The Department of Architecture in the College of Architecture, Art, and Planning at Cornell University is seeking candidates for the following tenure track positions:

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Candidates must have a post professional degree and be qualified to teach architectural design as well as courses in another area of the curriculum, such as building technology, architectural theory, professional practice, visual studies. Appointment criteria will include previous teaching experience. Scholarly work, teaching, and administration are obligations of this position.

Send letter of application and curriculum vitae to: Prof. Werner Goehner, Design Search Chair, Department of Architecture, 143 East Sibley Hall, Cornell University, Ithaca, NY 14853-6701

#### Assistant or Associate Professor of Architectural Technology

The candidate should have the ability to contribute to the undergraduate and graduate programs in architecture and be qualified to teach in at least two of the following areas: building, environmental and energy systems, energy analysis, thermal design, lighting, acoustics, indoor air quality. The position requires collaboration with design faculty in studio instruction. Appointment criteria will include previous teaching experience, professional degrees at the graduate level, experience in theoretical and applied computer methods, including computer graphics and professional experience and research in architecture. Academic scholarship and teaching are obligations of this position. Send letter of application and curriculum vitae to: Architectural Technology Search Committee Chair, Department of Architecture, 143 East Sibley Hall, Cornell University, Ithaca, NY 14853-6701

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Candidate should have a Ph.D. with a research specialization in computer graphics. Responsibilities include research, supervision of graduate students (Ph.D and M.S.), and undergraduate teaching in computer aided design. Since this tenure track appointment is in the Department of Architecture, a background in architecture with an ability to contribute to the undergraduate and graduate professional programs in architecture is necessary. The position requires collaboration with design faculty in studio instruction. Teaching responsibilities will include course offerings in computer graphics for architecture majors as well as core courses in architectural technology, lighting, computer aided design, structures, environmental control systems. Rank will be commensurate with experience.

Most of the graduate research occurs in the Program of Computer Graphics, an interdisciplinary graphics center dedicated to development of interactive graphics techniques and the uses of these techniques in a variety of applications. Current projects involve the simulation of three-dimensional, time dependent phenomena, and include the fields of architecture, structural engineering, medicine, and stage/lighting design. The Program of Computer Graphics is part of a newly established National Science and Technology Center for Computer Graphics and Scientific Visualization. Curriculum Vitae and supporting materials should be submitted to: Technology Search Committee Chair, Department of Architecture, 143 East Sibley Hall, Cornell University, Ithaca, N.Y. 14853-6701.

For all positions, rank and salary will be commensurate with experience. Applications will be accepted beginning October 1 until the position is filled. The appointment is expected to begin Fall 1995.

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### UNIVERSITY OF CALIFORNIA, LOS ANGELES

Department of Architecture and Urban Design invites applications for the following faculty positions, beginning academic year 95-96.

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**Computing.** The Department seeks applicants with strong qualifications to make fundamental contributions in **Computing** as it applies to architecture. The application areas include but are not limited to: visualization, urban design, construction technology, computer-aided design, design automation, design theory, knowledge-bases, user interfaces.

The Department of Architecture and Urban Design at UCLA offers four degrees at the graduate level: M.Arch.I, M.Arch.II, M.A. and Ph.D. in Architecture. Associated with the Department is a new Center for Design and Computation, which supports collaborative research in this area.

The successful candidates will be responsible for teaching fundamentals to professionals and advanced courses to research degree students, including the Ph.D. degree, and will also be responsible for expanding research in their area. It is expected that these tenure track appointments will be made at the assistant professor level; however, depending on exceptional qualifications, appointment at a higher rank may be considered.

Candidates are asked to submit an application which includes a curriculum vitae, the names and addresses of at least three referees, and non-returnable samples of work to Jurg Lang, Chair, Department of Architecture and Urban Design, School of the Arts and Architecture, UCLA, Los Angeles, CA 90024-1467. UCLA is an Equal Opportunity/Affirmative Action employer. The Department of Architecture and Urban Design seeks diversity and encourages women and members of minority groups to apply.

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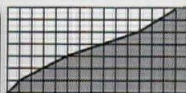
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Applicants should submit a curriculum vitae along with three letters of recommendation to the Appointments Committee, School of Architecture, University of Maryland, College Park, MD 20742-1411. The review of applicants will begin on October 15, 1994.

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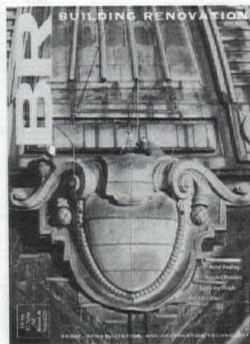
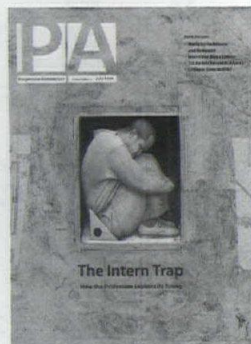
The Department of Architecture in the College of Environmental Design, University of California at Berkeley, invites applications for two positions at the assistant, associate, or full professor level beginning in the 1995-96 academic year. The appointees will be expected to teach architectural design studios at the undergraduate and graduate levels and to conduct lecture courses in one or more of the major areas of the curriculum. Other duties will include student academic advising, service on department and university committees, and participation in the academic life of the college. The Department would consider an appointment at a fractional percentage from 50-100% with the appointee's other time devoted to his or her professional work. Candidates interested in a fractional percentage must therefore be engaged in professional practice as an architect. Salary and rank will be commensurate with qualifications and experience.

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Application forms for this position are available from the Search Committee Chair, Department of Architecture, University of California at Berkeley, 232 Wurster Hall, Berkeley, CA 94720. Fax your request for an application to (510) 643-5607. Completed applications must be postmarked no later than November 1, 1994.

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Applications are invited before **15 November 1994** on the application forms available from: **Harvard University Graduate School of Design, Office of Faculty Planning, 48 Quincy Street, S203, Cambridge, MA 02138, Attn: Search Committee; FAX: (617) 496-5310.** Applicants should not send portfolios or dossiers with their applications. Harvard University is an Equal Opportunity/Affirmative Action Employer.



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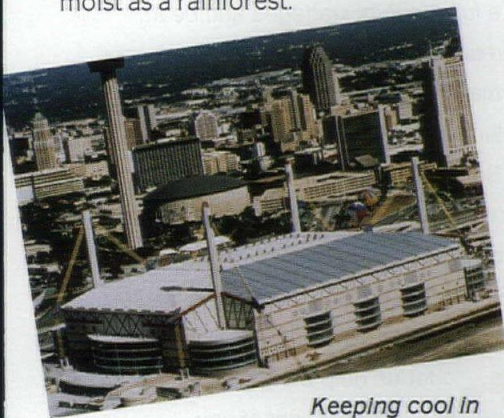
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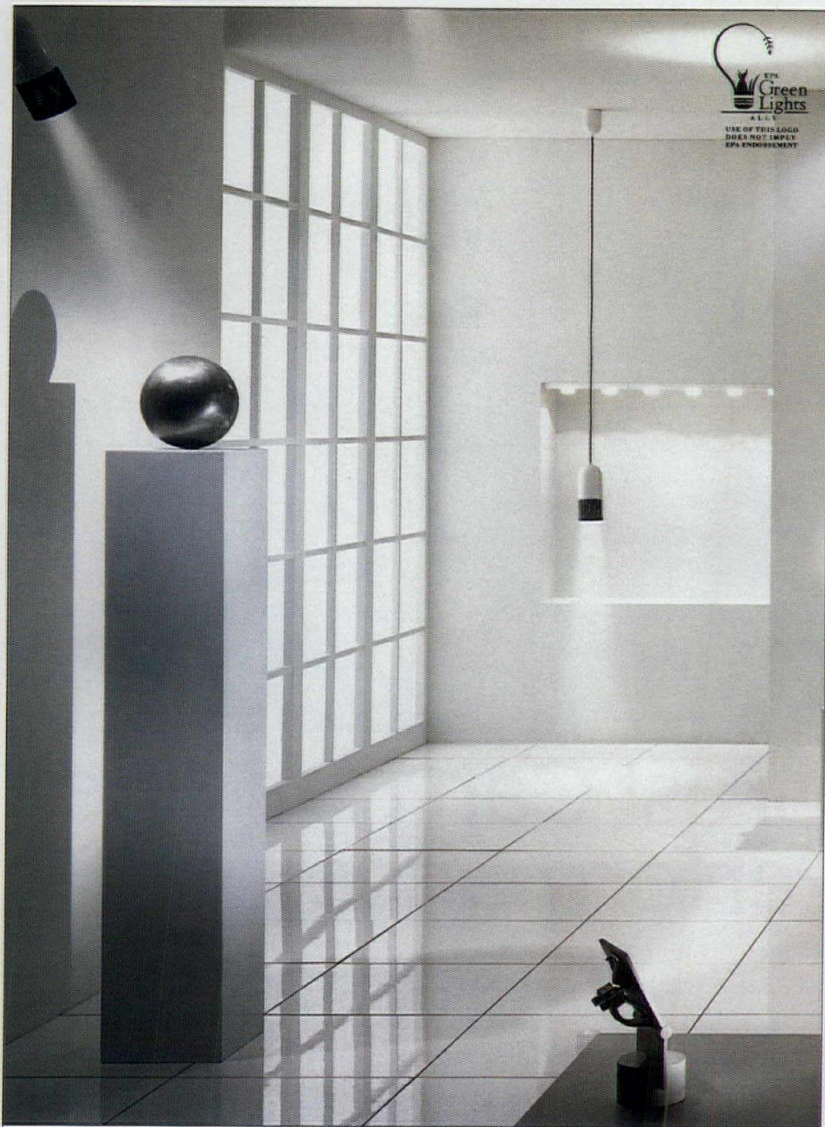
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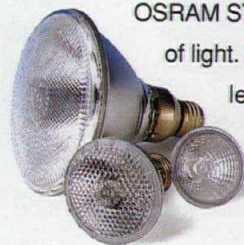
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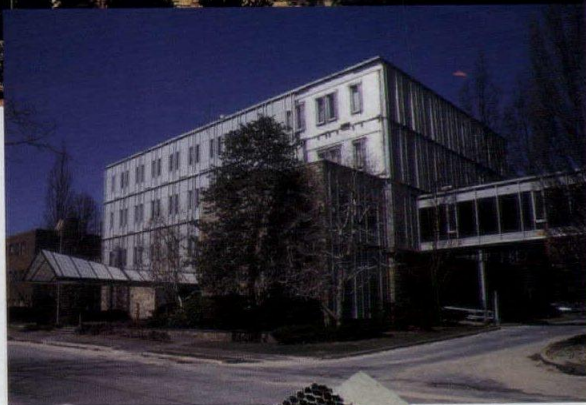


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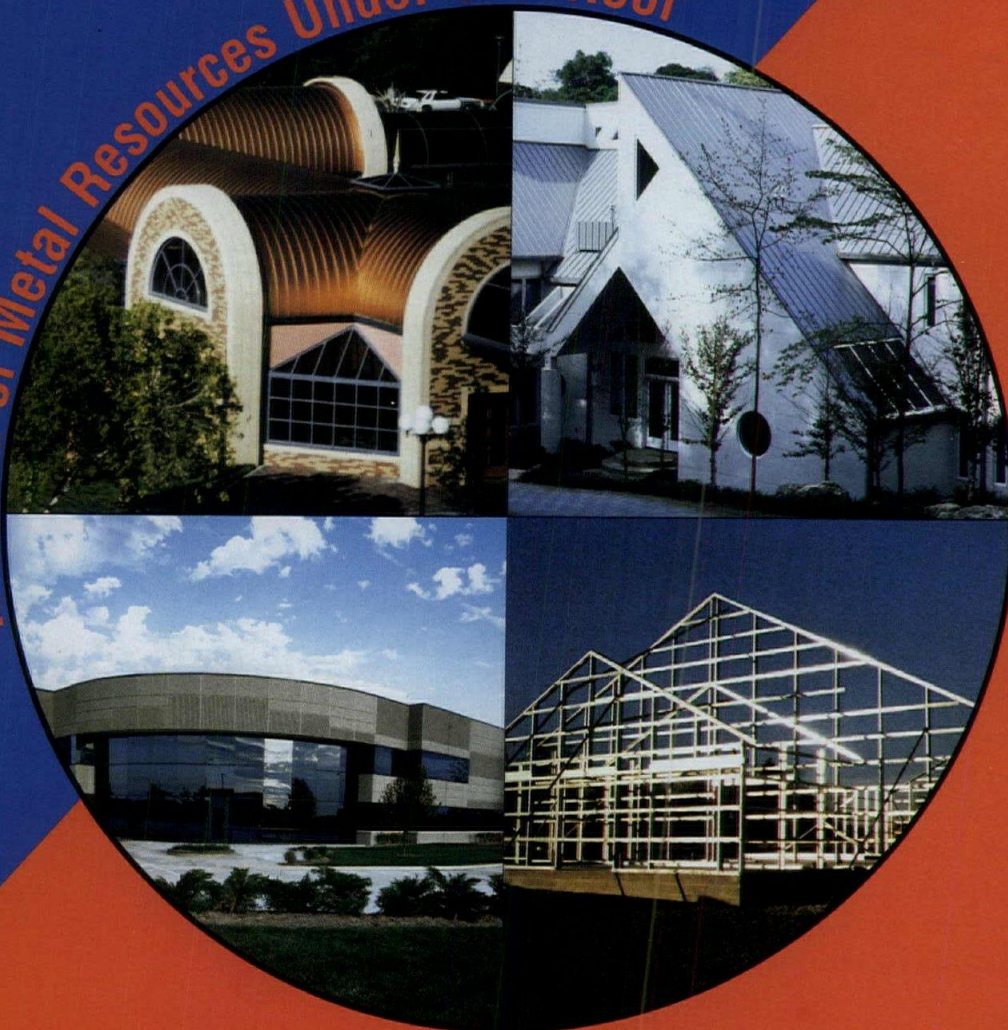
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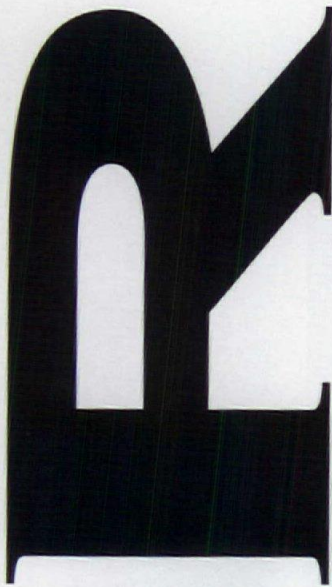
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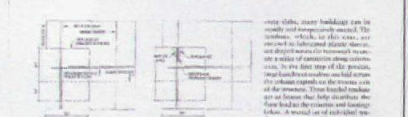
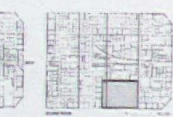
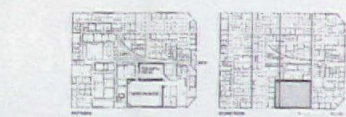
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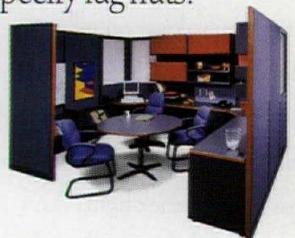
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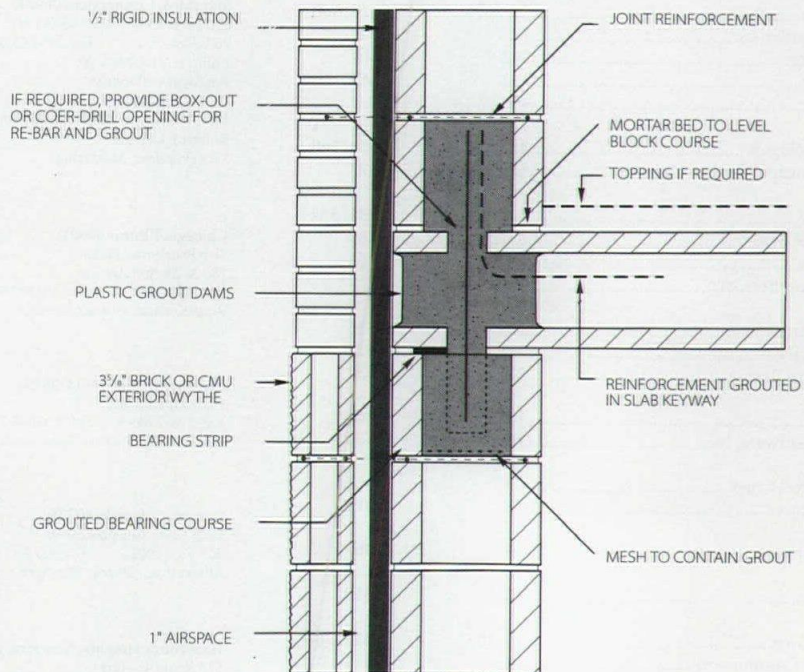
**H**ollow core concrete plank systems are not new technology, but a new guide on designing with them (which includes these details) is now available. The technology offers advantages in ease of construction (because of prefabrication) and fire resistance. Hollow core concrete planks, most efficient for low-rise buildings (especially housing), have a two-hour fire rating. The Masonry Advisory Council, a proponent of hollow core concrete plank construction, points out that 61 percent of all property losses and 80 percent of all deaths by fire are in residential construction.

The logic of concrete plank construction is similar to wood platform framing, as exhibited in the exterior wall detail (1). Key elements in the detail include L-shaped reinforcing rods grouted solidly into the slab extending into the CMU wall, and vertical reinforcing through the plank into CMU just above and below the slab.

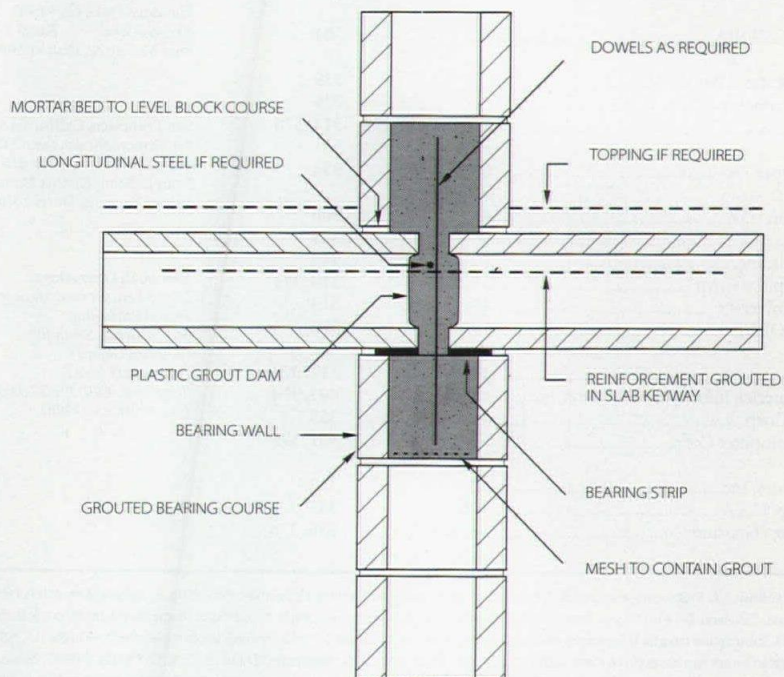
The planks are made in a nominal thickness of eight inches so that they will work with masonry coursing. Eight-inch slabs can span up to 28 feet, while ten-inch-thick slabs can span up to 33 feet. The thicker slabs, however, require that two inches be shaved off the height of the first course of CMU on top of the plank, to maintain consistent masonry coursing.

For load-bearing interior walls (2) the planks are grouted into the CMU with vertical and horizontal reinforcing. As indicated in both details it is critical to place plastic grout dams in the ends of the hollow-core planks and to include a thick mesh at the bottom of the CMU just beneath the slab to contain the grout. Pipes and electrical conduits can be routed through the cores and emerge through drilled openings in the plank.

The new design guide is available from the Multifamily Construction Advisory Committee of Illinois, 708-297-6704. **Michael J. Crosbie**



1 CAVITY WALL AND PLANK DETAIL



2 DOUBLE LOADED WALL AND PLANK DETAIL