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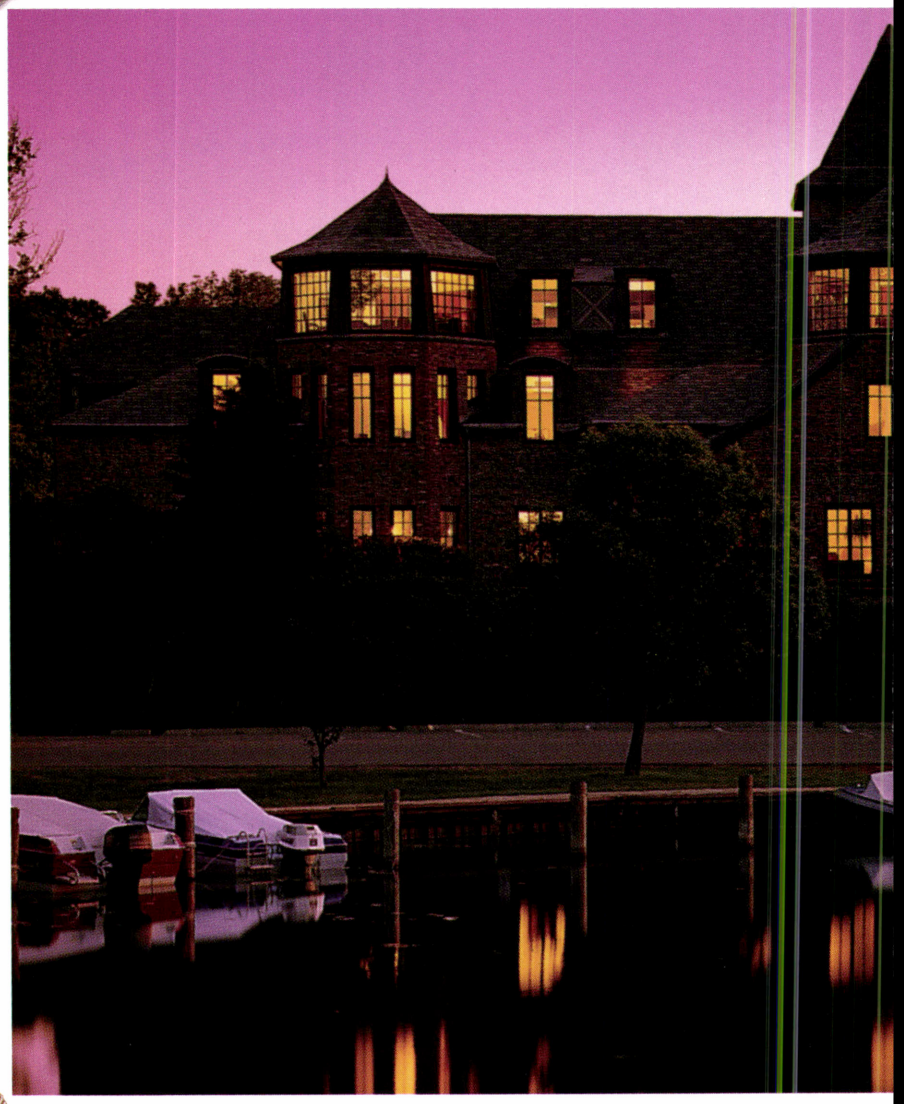

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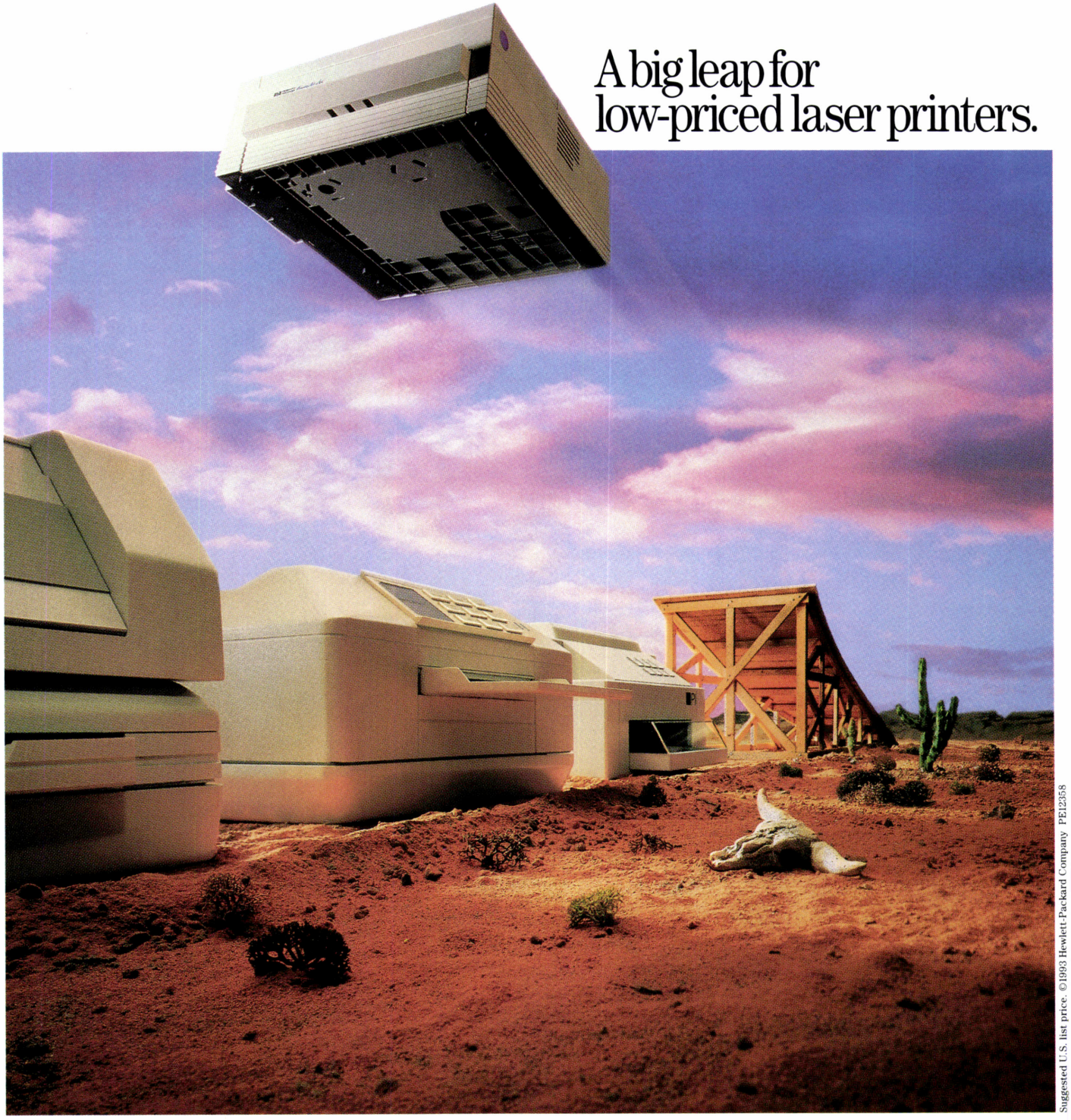

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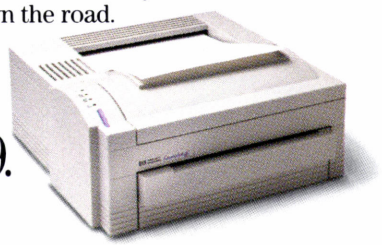

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Young Architects

Editors in charge: Ziva Freiman and Philip Arcidi

73 **Introduction** · *Thomas Fisher*
74 **Employed by Firms**
84 **Self-Employed**
102 **Alternative Careers**
110 **Activism**
122 **Perspectives** Whatever Happened to the Class of 1987? · *Bruce R. Rips*

YOUNG ARCHITECTS

Technics Focus

Energy Efficient Lighting

35 **Energy Resource Centers** · *Harvey Bryan*
39 **Exit Sign Lighting** · *Michael Ouellette*
43 **Occupancy Sensors** · *Dorene Maniccia*

P/A Annual Awards Program

15 **P/A Awards** Call for Submissions

Departments

7 **Editorial** Benchmarks for a Profession in Transition
9 **James A. Murphy** 1938–1993
11 **Views**
21 **News Report**
29 **Calendar**
124 **New Products and Literature**
128 **Computer Products**
130 **P/A Classified**
131 **Advertisers' Index**
132 **Furthermore ...**
133 **Reader Service Card**

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Editorial | Benchmarks for a Profession in Transition

Shifts in values within a severely challenged profession are represented in this Young Architects issue and in the announcement of the next P/A Awards program.

It is always presumptuous to think that what you do will have an impact on history. But certain things we do make us exceptionally conscious of our part in this profession's history. One such action just taken is the choosing of young professionals to be represented in this issue; another is a modification in the structure of the P/A Awards program.

Young Architects Issue

A brief review of P/A's previous Young Architects issues reveals significant changes both in what the profession's youth were doing and how P/A has chosen to interpret it. Our June 1987 Young Architects issue hewed close to the profession's traditional judgment of success by design accomplishment, in one's own name. Most of the pages focused on individuals who were sole practitioners or "name" partners in firms. Some of those, such as Deborah Berke of New York and Carlos Jimenez of Houston, have since gained considerably wider recognition. Even in 1987 we recognized "alternative careers," although giving them much less space per person; these included architecturally trained young people who designed stage sets, ran galleries, worked in community design centers, or consulted on CAD.

In our July 1990 Young Architects issue, we made a point of including at least one professional employed by a firm (designer Mehrdad Yazdani of Ellerbe Becket), which is the typical situation, after all, for fledgling architects. Our alternative careers section that year – again relatively condensed – included such individuals as publisher Kevin Lippert and stadium development executive Janet Marie Smith.

This year, for the first time, we have given equivalent treatment to those who are self-employed, those who work for firms, those who follow alternative careers, and those who – while they may do any of the preceding for a living – are distinguished mainly by their activist or *pro bono* accomplishments. Some in each category get less space in our pages than others, mainly so that we can include 81 different individuals and groups – more than twice the number in either of the earlier Young Architects issues. This equivalent coverage of many possible paths to architectural success – not slighting traditional apprenticeship – acknowledges the exceptional performance required from everyone in this profession if its potential value to society is to be realized.

The 41st P/A Awards Competition

In a similar vein, we feel that it is essential to the profession's future for awards recognition to be based not so much on formal appeal as on a more balanced examination of functional validity, socio-economic contribution, and urban/environmental sensitivity, along with formal qualities. We are delighted when our juries can honor a brilliant small house or a public monument such as the concert hall by Frank Gehry that won in the last P/A Awards competition, but we want to improve the chances for recognition of accomplishments in social housing or health facilities, for instance, or for modest urban design proposals, such as last year's winning Delray Beach, Florida, project. To make this course correction, we have taken a few related steps (see P/A Awards announcement, page 15). We have replaced the three major categories of our previous competitions (architectural design, urban design, and research) – and the three-team jury it entailed – with a single jury that will consider the whole range of architectural and urban design. The jurors invited amply cover both areas.

We are meanwhile requesting entrants to give us specific data on their projects. (Our previous requirement of a "one-page synopsis" was producing too much uninformative rhetoric.) And we are asking for documentation of the design process, rather than just the final product (a request suggested by last year's concert hall entry from the Gehry firm, which succinctly chronicled the design's evolution).

While we have thus eliminated the separate category for architectural research, we will by no means ignore the subject. For one thing, we are encouraging all entrants to include research studies that formed the basis for their designs. We are also planning regular coverage of research efforts throughout the year, and we would welcome a research awards program sponsored by others that could be featured in P/A.

In historical terms, none of the actions enumerated above is likely to constitute, in itself, a watershed. But by recognizing essential shifts in the profession's value system – and by possibly nudging some of them along – we hope to contribute to a more effective, more respected profession, better attuned to its future role in history. ■



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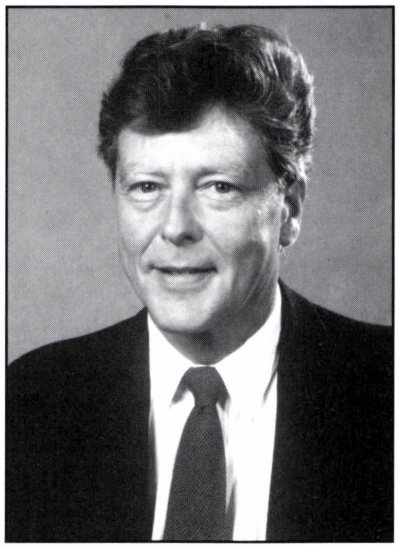
James A. Murphy 1938–1993

It will be hard to accustom ourselves to a P/A without Jim Murphy, who joined this editorial staff in 1970. It will be hard not only for us on the staff of P/A, but for the numerous architects across the nation who became true friends of Jim's over these 22 years. Notes of condolence from many of those who enjoyed Jim's friendship have been reminding us in recent weeks how much his fellow professionals admired this architect turned journalist.

Jim died of a heart attack at his home in Westport, Connecticut, on May 16. While he had long been under treatment for heart problems, death came with no warning, apparently during a nap. He had been working with other editors on this Young Architects issue – taking responsibility for the section on those employed by firms; the architects included on those pages are his selections. He had also been laying the groundwork for the August issue of our P/A Plans supplement, and as usual he had several other projects under way.



Robert Benson

Born in Nebraska, Jim earned a Bachelor of Architecture degree from the University of Nebraska and remained a loyal "Cornhusker," serving for years on the school's Professional Advisory Committee. After a few years working with firms in Lincoln, Jim took a trip East and became attached to the woods and shores of New England. In 1965 he joined Sherwood Mills & Smith, Architects, here in Stamford, Connecticut, and when work was slow there in 1970 Jim visited the P/A offices, a few blocks away, and found his true calling.

Over the following decades, Jim carried several different titles on the P/A masthead: in 1979, he became Executive Editor, and in 1982 he was named Profession and Industry Editor – adding to his journalistic responsibilities his special talent for getting together producers of building components with architectural professionals who could articulate their reactions and needs.

The articles he wrote and edited over these decades were similarly varied, covering a wide range of design, practice, and technical subjects. His analysis of Oscar Newman's "Defensible Space" studies back in October 1972 represented an abiding interest in introducing research findings – often referred to these days as a "knowledge base" – to architectural practice. One of his last articles, the February 1993 cover feature on the the Holocaust Museum in Washington, by architect James Ingo Freed of Pei Cobb Freed & Partners, showed as eloquently as anything he had written over the years how Jim could get inside the minds of architects and convey their creative processes to his fellow professionals.

During his years here at P/A, Jim was a speaker at many architecture schools and AIA Chapters. He was a juror annually in the Innovations in Housing competition and served on the jury for the Steedman Fellowship (Rome Prize). In 1987, he was made a Fellow of the AIA.

A few days after Jim's death, his daughters Diana and Jody organized a memorial service for him at the Unitarian Church in Westport, an architectural landmark by architect Victor Lundy that had won a 1960 P/A Award. It was a building Jim enjoyed showing to visiting family and friends. Under its soaring wood roof, with the intensely green May woods just outside its all-glass walls, the church was a perfect setting for friends to share reminiscences about Jim.

What several of us spoke about that day was Jim's extraordinary good will. His appreciation of some of our profession's finest thinkers was balanced by remarkable tolerance for people who were not so gifted and for architects whose egos demanded special treatment. With other people of comparable good will – those who looked for the best in all their fellow creatures – Jim often formed extraordinary bonds of friendship. He never lost his critical perspective on the work of such people or promoted their accomplishments unduly for publication; he just kept in close touch and savored the experience.

One such person was the late architect Paul Kennon of Houston, who died suddenly of a heart attack three years ago. Writing of one of Paul's last buildings in the December 1992 P/A, Jim revealed his own standards, calling Paul "one of the most upbeat, sincere, and hard-working men in this profession or any other" who nevertheless always had time to visit or drop a note to those he met along the way. In conclusion, Jim wrote: "For all the superlatives he deserves, perhaps the most apt is a simple one, and one that would have pleased him: Paul Kennon was, in all ways, a gentleman."

So, too, was Jim Murphy a gentleman.

John Morris Dixon ■

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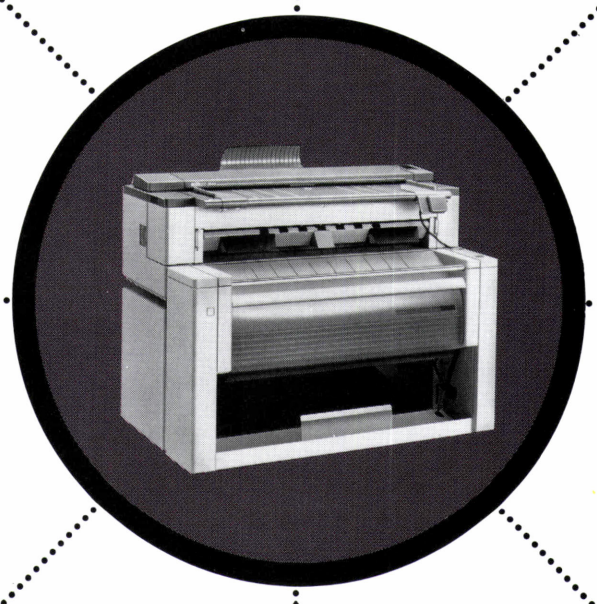

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Views

The Future of Green Architecture

I was disappointed with the editorial in your March issue. I agree that "green" architecture shouldn't be viewed as a sole truth. But I don't believe that this concern of Mr. Fisher's and mine will be given too much consideration by the next decade's developers. And I especially disagree with the supporting arguments of the article.

The very idea that an architectural movement could be "assigned" to a particularly economic system or trend is wrong. And not just because one could immediately think about a number of buildings (including the landmark ones), that don't fit into Thomas Fisher's scheme. Most important, all architectural styles mentioned in the article were spawned by conditions socially and economically quite different from the conditions of the systems which finally adopted these styles. Reasons for such adoption sometimes didn't have anything to do with the type of economy. The centralized economies of the former USSR and of big business in the U.S. have as little in common in their nature and shape as the results they produced. The parallel between them is totally artificial.

Of course economy, together with technology and social conditions, plays a very important role in the shaping of an architectural style. But by the time this style is widely used, the economic structure could be completely different. The style simply becomes a symbol of success, and its attributes are used over and over until they become notorious, and then another style is ready to emerge.

Today, "environmental correctness" becomes increasingly important for the image of a successful business, a public institution, a prestigious house. "Green" architecture, regardless of Mr. Fisher's warning, will repeat the destiny of other architectural movements: there will be a few great works by remarkable architects, it will become a valid asset in both technology and architectural vocabulary, but it will also serve as a tool to hide a lack of creativity and consideration, when used by a mediocrity.

Alexander Ortenberg
Architectural Illustrator
Pacific Grove, California

A Student's Lot

After completing two years of graduate work, I am writing to air one student's views regarding architectural design education.

My architectural design course work has been disillusioning, to say the least. In my experience, many design professors seem to be cast from the same rude and irrational mold. Their egos consume them, and their intolerant vision of what constitutes "good" design typically leads to the verbal abuse and humiliation of well-intentioned and hard-working students trying to conform to unspecified standards. As a consequence, student designs are driven by negative motivation in order to answer the ever-present question: "What will the professor like?"

Freedom of expression and nurtured creativity should motivate a student's design. An atmosphere of constant tension and overbearing authoritarianism cannot foster these important qualities, and instead creates sheep-like students ready to be herded through the next design project.

I hope that not all design professors behave as many did during my course work. I would like to continue my graduate work at another university, but I will not submit to the arrogant attitude of design professors who treat adult students like children. I also hope that all faculty members will note that most graduate students are making huge commitments of time and money to further their education. Their futures as architectural professionals depend on receiving quality education from professors who realize that they are employed for the benefit of these students.

Mary G. Miller
Graduate Student
Richardson, Texas

Righting Wright's Roofs

Re Thomas Fisher's "Seth Peterson Cottage," P/A, April 1993, page 109: Is Thomas Fisher lampooning Frank Lloyd Wright's professional competency or his reader's credibility? For all his obvious glee in this sophomoric romp over a dead man's reputation, the fact remains that Mr. Fisher failed to do his homework. If John Eifler's restoration "revealed tectonic shortcomings," they were not the architect's. One has only to consult Sheet 4, "Sections & Roof Framing (FLlW Fdn. #5821.06)" published in Futagawa and Pfeiffer, *Volume 8: Frank Lloyd Wright: Monograph 1951–1959*) to find the architect's details for the "cricket" at the critical masonry/roof intersection, flashing and roof framing members resting on their supports (not "studs!"). Did even the rudiments of this restoration escape the executive editor? Two decades of neglect and vandalism had more to do with the rebuilding of this roof and the structure of this 880-square-foot cottage.

Does it amuse the editor to believe that, after 65 years of professional practice, Frank Lloyd Wright should have been ignorant of such routine details, or does it amuse him to think that his readers might?

Two months ago Brendan Gill, "best-selling author," reviewed this same restoration for a periodical available at every supermarket; his article was more amusing and, by comparison, much more factual.

Tom Rickard
Tacoma, Washington

Thomas Fisher replies:
Agreed, the correct size of the cottage is 880 square feet, not 800. Regardless of Wright's drawings, it was clear to the restoration architects that no flashing had ever been installed at that point. At least some responsibility for such a failure to follow drawings must rest with the architect. I am personally familiar with two other Wright-designed houses, in Northern Ohio, with poor or absent flashing around the chimney masses. Also, Wright's roof joists at the Peterson Cottage rested on the transom panels, and their spacing was much closer than the window frames below. Wright used this same detail on other houses, including one in Oberlin, Ohio. Wright's daring and sometimes foolhardy handling of such details in some cases is an important part of his record.

Embarcadero Winners Correction

P/A's News Report article on the ideas competition for San Francisco's Embarcadero (May, page 19) misspelled the names of two winners, Mark Topetcher and Evans Heintges Architects. Also, the article incorrectly reported that the five first-prize winners each received $10,000. The competition organizers had planned for three first prizes of that amount, and when the jury chose five, the $30,000 was divided equally among them.

Yacht House Architect

The architect for the Yacht House shown in P/A's Album (May, page 105) is Richard Horden.



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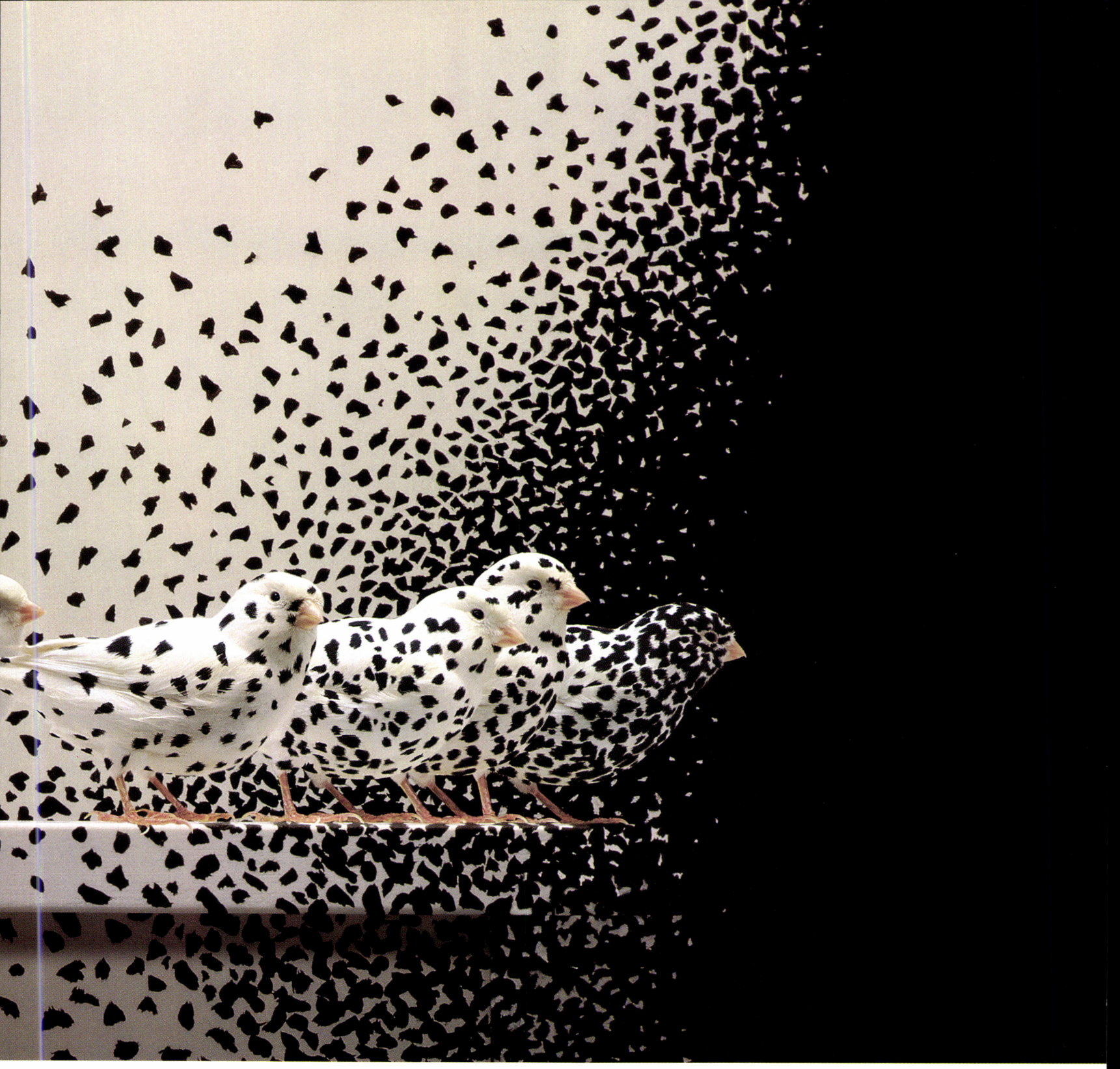



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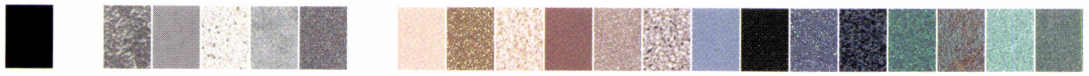

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41st Annual P/A Awards

Progressive Architecture announces its 41st annual P/A Awards program.

The purpose of this awards competition is to encourage outstanding work in architecture and urban design before it is executed.

Awards and citations will be designated by a jury of distinguished, independent professionals, basing their decisions on the overall excellence and innovation.

In an effort to address the broader concerns of the profession, P/A is encouraging the 41st P/A jury to take into account various considerations in addition to qualities of form: response to program and context, management of the design and construction process, technical solutions and details, social and economic contributions. Potential entrants are urged to interpret the call for "outstanding work" as broadly as possible, consistent with the awards program's limitation to specific projects that have been accepted for execution.

The judging will take place in October 1993, and winners will be notified, confidentially, by October 31. Public announcement of the winners will be made in January 1994, and winning entries will be featured in the January issue of P/A. Clients, as well as professionals responsible, will be recognized. P/A will distribute information on winning entries to national, local, and specialized media.

Deadline for Submissions: September 10, 1993

Jury

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Andres Duany & Elizabeth Plater-Zyberk, Architects
Miami, Florida

Christine Killory, RIBA, Assoc. AIA
Principal, Davids Killory,
San Diego, California
Lecturer, School of Architecture,
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M. David Lee, FAIA
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Graduate School of Design

Mary McLeod
Associate Professor of Architecture,
Graduate School of Architecture,
Planning and Preservation,
Columbia University,
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William J. Mitchell, FRAIA
Dean, School of Architecture and Planning, and Professor of Architecture and Media Arts and Sciences,
MIT, Cambridge, Massachusetts

Dr. Sharon E. Sutton, AIA
Associate Professor of Architecture and Regional Planning,
University of Michigan,
Ann Arbor, Michigan

Rafael Viñoly, FAIA
Rafael Viñoly Architects
New York, New York

Eligibility

1 Who Can Enter. Architects and other environmental design professionals practicing in the U.S., Canada, or Mexico may enter one or more submissions. Proposals may be for any location, but work must have been directed and substantially executed in offices in those countries.

2 Real Projects. All entries must have been commissioned, for compensation, by clients with the authority and the intention to carry out the proposal submitted. In the case of design competitions, the proposals eligible are those the client intends to execute.

3 Architectural Design Entries. Entries in Architectural Design may include only works of architecture scheduled to be completed after January 1, 1994. Indicate anticipated completion date on Project Facts page (see item 11, below). Prototypical designs are acceptable, if commissioned by a client.

4 Urban Design Entries. Entries in Urban Design must have been accepted by a client who intends to base actions on them. Implementation plans and anticipated schedule must be explained in entry.

5 Research Behind Projects. While research in architectural and urban design will no longer be judged as a separate category, P/A encourages the submission of research that has been done in support of specific architectural or urban design projects. P/A is making other plans for coverage of generic research studies; see future issues.

6 Verification by Client. The jury's decision to premiate any submission will be contingent on verification by P/A that it meets all eligibility requirements. To that end, P/A will contact the clients of projects the jury selects for recognition. P/A reserves final decision on eligibility and accepts no liability in that regard. Please be certain your entry meets the above rules.

Publication Agreement

7 Providing Graphics. If the submission should win, the entrant agrees to make available further graphic material and information, as needed by P/A.

8 First Publication. P/A is granted the first opportunity among U.S. architecture magazines for feature publication of winning projects upon their completion.

(additional rules and entry form on the following page)

Entry form: 41st P/A Awards Program

Please fill out all parts and submit, intact, with each entry (see paragraph 14 of instructions). Copies of this form may be used.

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I certify that the submitted work was done by the parties credited and meets all Eligibility Requirements (1–6). All parties responsible for the work submitted accept the terms of the Publication Agreement (7–8). I understand that any entry that fails to meet Submission Requirements (9–20) may be disqualified. Signer must be authorized to represent those credited.

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9 Binders. Entries must consist of legibly reproduced graphic material and text adequate to explain it, in English. All entry material must be firmly bound in binders no larger than 17" in either dimension (9" x 12" preferred). Avoid fragile bindings. Supplementary documents such as research reports or urban design appendices may be bound separately to avoid unwieldiness, as part of the same entry. Occasional fold-out pages are permissible, but unbound material in boxes, sleeves, etc., will not be considered.

10 Documenting the Process. It is desirable for entries to document the design process, as well as its result: entrants are encouraged to include copies of preliminary sketches, alternative preliminary schemes, information on context and precedents for the design and excerpts from working drawings.

11 Project Facts Page. To assure clear communication to the jury, the first page in the entry binder must list PROJECT FACTS under the following explicit headings: Location, Site characteristics, Surroundings, Zoning constraints, Type of client, Program, Construction systems, Funding, and Schedule. Give hard data (square-footages, costs, specific materials) where possible. All Project Facts should fit on one page. Paragraphs amplifying this data, covering design philosophy, etc., should be included on subsequent pages.

12 No Original Drawings. Original drawings are not required, and P/A will accept no liability if they are submitted. No models, slides, or videotapes will be viewed by the jury.

13 Anonymity. To maintain anonymity in judging, no names of entrants or collaborating parties may appear on any part of the submission, except on entry forms. Credits may be concealed by tape or any simple means. Do not conceal identity or location of projects.

14 Entry Forms. Each submission must be accompanied by a signed entry form, to be found on this page. Reproductions of the form are acceptable. Fill out the entire form and insert it, intact, into an unsealed envelope attached inside the back cover of the binder.

15 Entry Categories. For purposes of jury procedure only, please identify each entry on its entry form as one of the following: Educational (including any campus buildings), House (single-family), Housing (multifamily), Commercial, Cultural, Governmental, Health-related (including nursing homes), Industrial, Recreational, Religious, Urban design. Mixed facilities should be classified by the largest function. If unable to classify, enter Miscellaneous.

16 Copies of Key Pages. To provide P/A with basic information on your entry, even if it is not premiated by the jury, please include xeroxes of six or more key pages (including Project Facts page), stapled separately and slipped inside the back cover of the binder.

17 Entry Fees. Entry fee must accompany each submission. Fee is $90 for P/A subscribers, $125 for non-subscribers. (Non-subscribers can choose to subscribe at a special rate of $35 per year and pay the $90 entry fee; see entry form.) Make check or money order payable to Progressive Architecture. Canadian or Mexican offices must send drafts in U.S. dollars. Fee must be inserted in unsealed envelope with entry form (see 14, above).

18 Entry Receipts. P/A will send a receipt before October 1, which will indicate an entry number to save for your reference.

19 Return of Entries. P/A intends to return all entries by January 1, by U.S. Mail. P/A assumes no liability for loss or damage.

20 Entry Deadline. Deadline for sending entries is **September 10, 1993**. All entries must show some date marking as evidence of being in carrier's hands by September 10. Address is printed below. Hand-delivered entries must arrive at P/A's offices (address below, 6th floor reception desk) by 5 p.m., September 10. In order to assure arrival in time for the jury, P/A recommends using a carrier that guarantees delivery within a few days.

New Rules This Year:

- **The competition is open to firms in Mexico, as well as the U.S. and Canada (Rule 1).**
- **Entries are limited to the categories of architectural design and urban design (Rules 3, 4).**
- **P/A encourages submission of research reports supporting specific projects and intends to inaugurate a series of features on generic research (Rule 5).**
- **Entrants are urged to include information on the design process (Rule 10).**
- **Entries must include a Project Facts sheet (Rule 11).**
- **Extra copies of at least six entry pages must accompany each entry (Rule 16).**

Address entries to:
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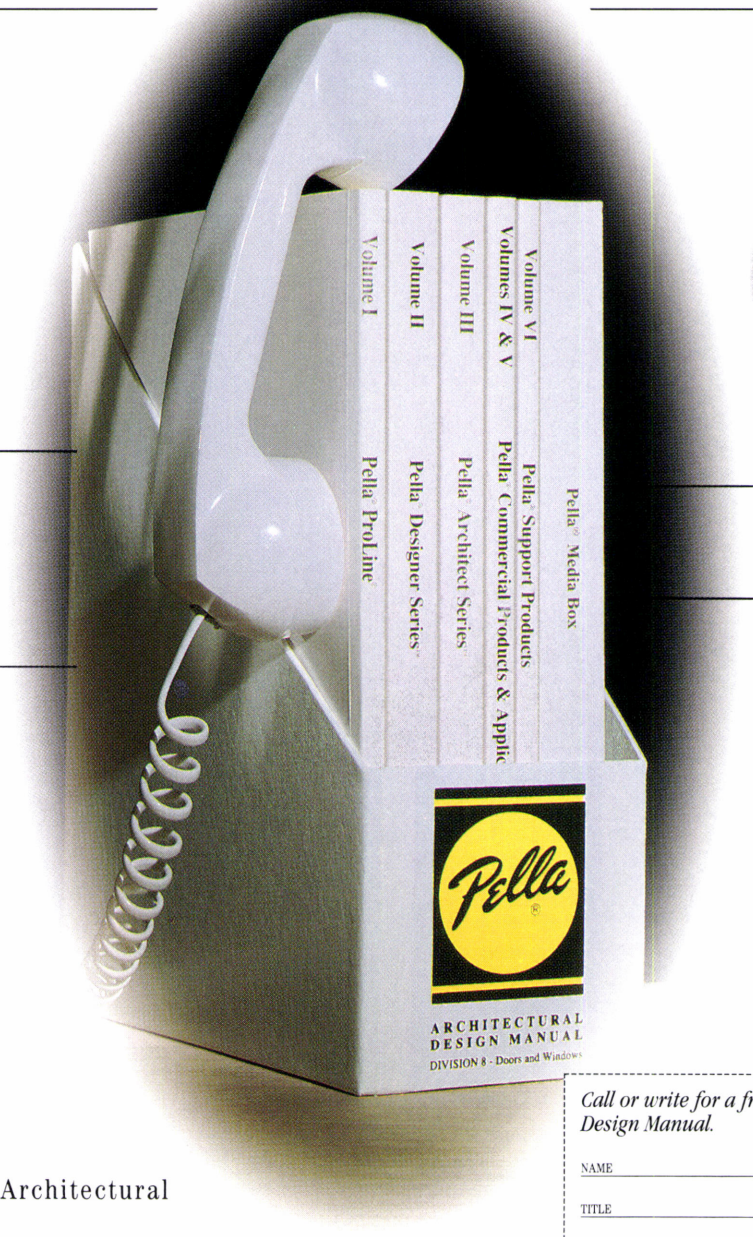

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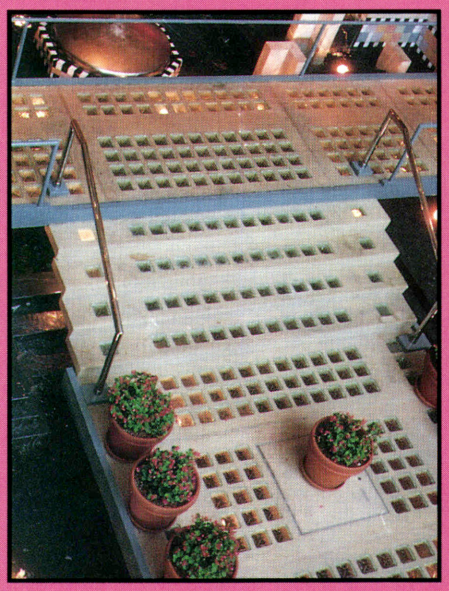

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Robert Ricaulx

Carré d'Art, with Maison Carrée in left foreground.

Norman Invasion: Foster's Carré d'Art in Nîmes

The first-completed work by Sir Norman Foster & Partners in France, the Carré d'Art in Nîmes, opened early this summer. The building combines a new museum of contemporary art with a public library housing both ordinary book-lending functions and the significant Séguier collection of rare books, manuscripts, etchings, and drawings.

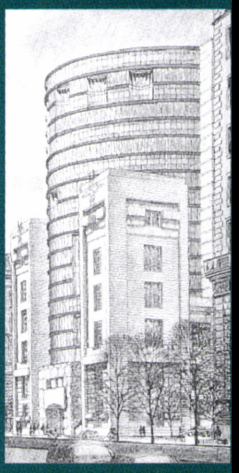
Foster's earliest design sketches viewed the Carré's site as this Franco-Roman city's largest and most important urban space; he noted an "explosion of light from the dark tunnels of tree-lined boulevards" leading to the adjacent Maison Carrée, an intact first-century Roman temple.

The compact new building offers clear but somewhat mechanical responses to the intense sunlight of France's Midi region. The main façade is dominated by a system of vertical blinds, while prominent movable louvers jut horizontally over a main portico. Thin white scrims – giant window shades – are hung behind the exterior glass curtain walls to filter the light. Additional sun-control screens perch atop gallery-space skylights and a large glass-covered central atrium.

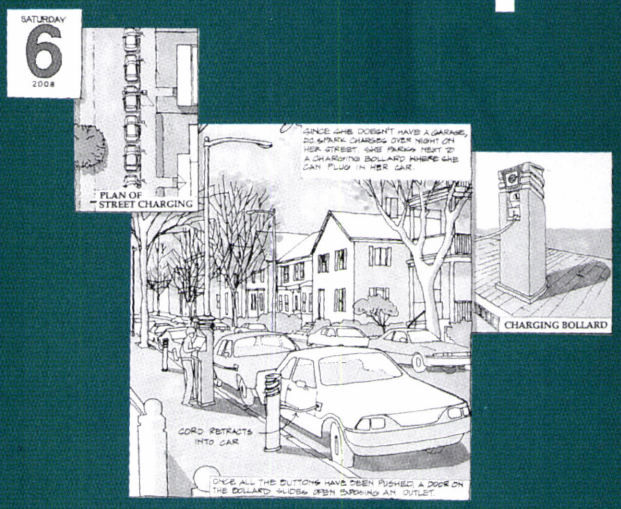
Foster's building echoes the distinctive open end of the Roman Maison Carrée: the ground-level forecourt and an upper-level open terrace are placed under the main portico, which is supported by five thin white columns. But while Classical elements of the nearby Maison Carrée convey a sense of enclosure and heavy solidity, the Carré d'Art is open and airy, a lightweight structure both within and without. Inside, a welcome and surprising luminosity is enhanced by translucent glass-treaded staircases winding up through the central atrium.

The green glass of the stairs is carried through to upper-level floor surfaces and on floors of glass-

7.93 News Report



P.23 Hardy Holzman Pfeiffer Associates' second design for Cleveland's Main Library addition meets with approval.



P.25 A competition challenges designers to explore the impact of electric cars. (Above: detail of winning scheme for Cambridge, Massachusetts.)

P.22 Construction has begun on an addition to the Salk Institute, but critics have not given up.

P.122 Whatever happened to the Class of 1987? In Perspectives, a look at the fortunes of a class o Washington University graduates.

Pencil Points

The 1993 Rudy Bruner Award for Excellence in the Urban Environment, sponsored by the Bruner Foundation of New York, is to be shared by two projects praised as "models of how to transform distressed urban communities." The winners, to share the $50,000 prize, are the resident-led revitalization of the Harbor Point Apartments Community in Boston; and the New Community Corporation, a grass-roots organization in Newark, New Jersey, for improving housing, community services, and employment opportunites in the city's Central Ward.

The AIA has announced the recipients of two of its annual awards for 1993. The Whitney M. Young, Jr., Citation, awarded for significant contributions to society, has been won by David Castro-Blanco, an architect and community activist who is currently president of AIA's New York chapter. The Edward C. Kemper Award, given for significant contributions to the AIA and the architectural profession, has been won by Theodore F. Mariani, an architect, consulting engineer, and planner who has served on public policy committees in the Washington, D.C., area and as president of the Washington/AIA.

***CoHousing* is a national journal that covers development and lifestyle issues as well as current news of cohousing projects in the United States and Canada. It is published three times a year. For subscription information contact The CoHousing Network, 1620 Belvedere Ave., Berkeley, CA 94702. Cost: $20/year.**

The American Academy of Arts and Letters announced the winners of its annual awards in architecture in May. José Rafael Moneo received the Arnold W. Brunner Memorial Prize, awarded to an architect of any nationality who has made "a significant contribution to architure as an art;" and Franklin D. Israel received the Academy Award in Architecture.



Ville de Nîmes

"Surprising luminosity": atrium of the Carré d'Art.

enclosed elevators on two ends of the atrium. The thin skin and glass floors allow sunlight to spill into the library areas, galleries, and administrative offices.

The Carré's galleries must function virtually on an industrial scale to display large art objects and installations – a fact expressed most clearly in a gear-driven crane that rolls on heavy beams above the atrium to hoist artworks in and out, as well as in the use of raised floors throughout. But the fixed, rather small dimensions of the gallery bays and the system of ceiling-mounted light fixtures seem better suited to displaying more conventional wall-mounted artworks.

Although frequently made during opening day in Nîmes, comparisons to the Centre Pompidou by Piano + Rogers, built in Paris nearly a quarter of a century ago, were hardly apt. Foster's building offers little of the flexibility planned for the Centre Pompidou and braves no profound experimentation; the Carré is a fixed, compact, and tidy work, well-suited to its context but unlikely to inspire much comment.

Previously on the Carré's site was a 19th-Century Classical opera house, which burned to the ground in a 1952 arson set by a disgruntled performer. In 1984 the city of Nîmes invited 12 architects to offer design proposals for the site. A second round, pitting schemes by Foster, Jean Nouvel, Cesar Pelli, Arata Isozaki, and Frank Gehry, was decided later that year.

Although enthusiastically welcomed by many residents and by most French critics, the building was not universally acclaimed. One critic called the entrances "barely worthy of a suburban discount outlet" and a writer in the influential national daily, *Le Monde,* summed it up as "*un petit Foster pour une petite ville,*" maligning the design as a hackneyed collection of architectural clichés from the 1970s and 1980s. Be all of that as it may, Nîmes has now added and will long carry a pronounced Anglo-Saxon imprint atop its Roman roots; Foster is also advising the city on major urban design initiatives, including extension of an existing historic axis through a new spine extending to the airport. **Thomas Vonier** ■

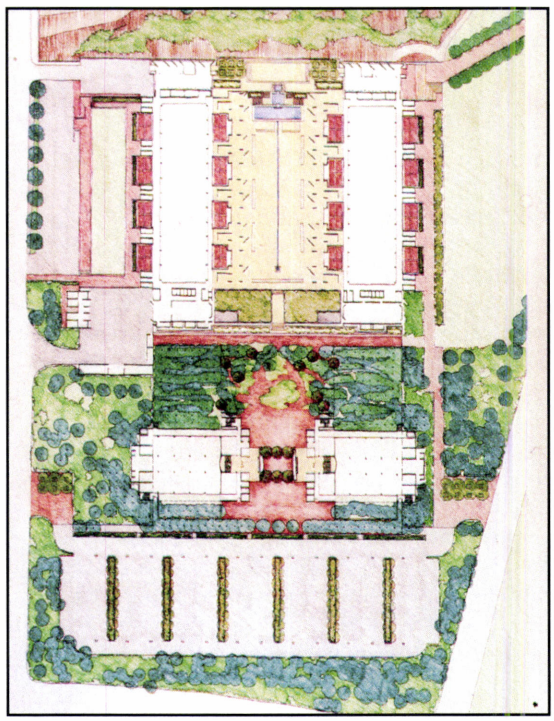
Salk Construction Begins Amid Protests

Construction began in May on the much-criticized addition to the Salk Institute in La Jolla, California, despite a last-minute barrage of protests from architects and historians who sought to discourage Salk officials from altering the 1961 masterwork by Louis Kahn.

As the construction date neared, the furor over the Salk addition verged on confrontation after institute director Brian Henderson refused to meet a contingent of architects seeking to dissuade him from construction.

The two former Kahn associates who designed the addition, David Rinehart and John McAllister of Anshen + Allen, Los Angeles, have drawn fire from numerous critics for locating the new 113,000-square-foot building directly on axis with Salk's famous courtyard, and for what many view as the Kahn-derivative nature of the design. Other critics decry the loss of a eucalyptus grove that many visitors regard as an integral part of the institute entrance.

In a May 10 letter, a group of prominent architects and architectural experts – among them Pritzker Prize winners Robert Venturi, Richard



San Diego Union-Tribune

Salk site plan from November, with new buildings at bottom.

Meier, Frank O. Gehry, and Philip Johnson – requested a meeting with Henderson. While *The New York Times* said that Henderson refused to meet with the architects, a Salk spokeswoman said such reports were "not accurate" and that Henderson was preparing a written statement to each of the architects who signed the letter. (She would not disclose the contents of the statement.)

Anshen + Allen's McAllister characterized the claims of critics as "misstatements of facts," and said he was disappointed that few of those critics had contacted him or examined drawings or models of the project. He disputed the claim that the project, which is located 140 feet east of the original structure, would block views of Kahn's building. He defended the choice of concrete, the same material used by Kahn, as appropriate for an oceanfront site whipped by corrosive salt air. McAllister also disputed the role of the eucalyptus trees, maintaining that a grove of trees was never part of the original design.

McAllister also defended the centralized location of the addition, likely the most controversial part of the design. Although the institute owns considerable surrounding land, the building permit limits construction to the area between the project and the access road. If the current design were to be abandoned in favor of a more remote site, the institute would be obliged to begin an entirely new approval process, which could take years.

Those arguments fail to sway Los Angeles architect Stuart Emmons, who has joined forces with Kahn's son, Nathaniel Kahn, to promote a letter-writing campaign against the addition. "Anything [built] between the parking lot and the Kahn building," said Emmons, "is in the wrong place."

Morris Newman ■



Portland Business Journal

Vincent James

AIA's Young Architects (clockwise from top left): Hooper, Howorth, Soranno, Laurila.

AIA Cites Young Architects in New Program

Four architects have been chosen by an AIA jury as the first recipients of the Institute's Young Architects Citations. The awards honor "exceptional leadership in design, education, and/or service to the profession" by AIA members who have been licensed architects for less than ten years.

Of the four honorees, three were cited for work in the social and professional arenas: Vicki L. Hooper of RSP Architects, Minneapolis, worked on the AIA Minnesota Design Team "to help smaller communities across the state ... plan for future development." Brett Keith Laurila of Venice, California, left his job to work full-time on a *pro bono* project, a shelter for runaway children in Van Nuys, California. Thomas Somerville Howorth (P/A, Aug. 1992, p. 66) of Howorth & Associates, Jackson, Mississippi, was honored for his work in the AIA (he is this year's Mississippi Chapter president) and in the community. Joan M. Soranno, formerly a project designer at James/Snow Architects, Minneapolis, was cited for her design work on such projects as the Minneapolis Children's Museum. ■

Second Time's the Charm for HHPA in Cleveland

From the beginning of his relationship with Cleveland, Malcolm Holzman of Hardy Holzman Pfeiffer Associates (HHPA) has shown an unusual ability to get under the city's skin. Twice in the past four years, Holzman has aroused anger, with proposals for an expansion and renovation of the Cleveland Public Library's downtown complex. The first time, in 1989, library trustees scrapped Holzman's proposal after a public outcry. But this year, Holzman's new and better design garnered enough support to win approval in May from the city's Planning Commission.

Holzman's first plan, chosen by the library board from three invited competition entries (P/A, Sep. 1989, p. 26), would have wrapped the curving glass and masonry arms of a new library annex around the Eastman Reading Garden. The garden is a small, intensely popular city park sandwiched between the 1925 Main Library and its aging and decrepit Business and Science Annex, which Holzman's new annex would have replaced.

The unpopularity of the plan killed any hope of obtaining funding, and library trustees set aside their expansion plans for two years. The second time around, they sought funding before hiring an architect. In November 1991, city voters resoundingly approved a $90-million bond issue; after interviewing several well-known architects, the library again gave HHPA the job.

The new plan, unveiled in January, proposed saving the garden by linking the Main Library to a new East Wing with an underground connection containing an auditorium and service areas. With Robert P. Madison International and URS Consultants of Cleveland, HHPA also proposed a fairly straightforward renovation of the Main Library. It was the East Wing design, however, that polarized

Brick in Architecture Awards

A jury sponsored by the Brick Institute of America and the AIA has selected 11 projects for recognition in the 1993 Brick in Architecture Awards. The awards, which are presented biennially, recognize "outstanding architectural achievement in brick design."

Jurors were architects Larry Ford, Atlanta, chairman; Laurence Booth, Chicago; and Jean Parker, New York. Winners are:

- **800 North Capitol Street, Washington, DC, by Hartman-Cox Architects, Washington;**
- **518 C Street, NE, Washington, DC, by Weinstein Associates Architects, Washington;**



Carol M. Highsmith

Franklin School.

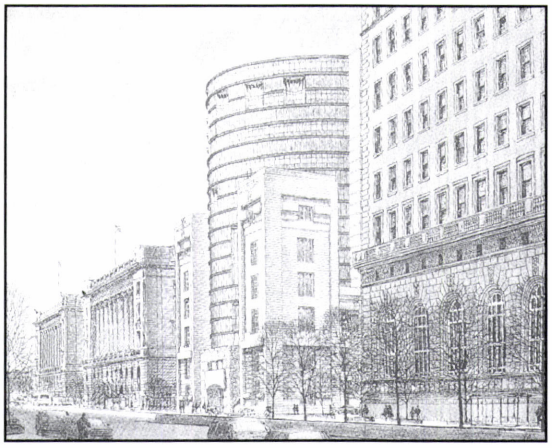
- **Franklin School restoration, Washington, DC, by Oehrlein & Associates, Washington;**
- **Charlestown Navy Yard Row houses, Boston, by William Rawn Associates, Boston;**



Peter Vanderwarker

Old State House.

- **Old State House restoration, Boston, by Goody, Clancy & Associates, Boston;**
- **Capital Cities/ABC, Inc., New York, by Kohn Pedersen Fox Associates, New York;**
- **Allen Addition to Suzzallo Library, University of Washington, Seattle, by Edward Larrabee Barnes/John M.Y. Lee & Partners, New York, and TRA, Seattle;**
- **Woodsworth College, Universi-**



HHPA library addition (center) seen in its Cleveland context.

architectural opinion in Cleveland.

Holzman's East Wing is a light, transparent, ten-story glass oval set on a rectangular footprint, whose four corners are marked by six-story towers. The glass oval would introduce a new, sensuous contemporary form in conservative Cleveland, while the rectilinear towers, with Classically inspired details, would provide a visual connection to the Main Library.

Preservationists claimed that the East Wing was too tall, and that its curvaceous contours and reflective surfaces would clash with the Neo-Classical architecture that predominates in the area, a National Register historic district. But the preservationists underestimate the resilience of Burnham's plan, and the extent to which Holzman's design casts a sympathetic eye on its surroundings. It is far less intrusive and far more original a conception than many of the bland office towers and government buildings inflicted on downtown in the past 25 years.

Still, the anger expressed by Clevelanders was productive. Meetings with the city's Design Review Committee helped Holzman refine the main entrance, the garden, and the principal façades of the East Wing; the design looks promising. The project's success now depends on whether HHPA can follow through with the fine glass and masonry details needed to make the building sing. **Steven Litt** ■

The author is architecture critic for the Cleveland Plain Dealer.

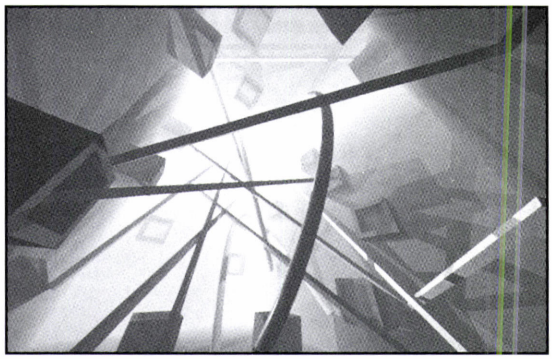
Texas Conference on Cyberspace Implications

William Gibson's novel *Neuromancer* defined "cyberspace" as a "consensual hallucination" shared by a global network of computer users. Cyberconf 3, the third international meeting of those studying the possibilities of this space, took place in Austin, Texas, in May. Sponsored by the University of Texas School of Architecture, the conference was a forum to air the most current thinking on the subject.

While Gibson's use of "consensual" can mean "acting in sympathetic response to voluntary movement," as one would expect in cybernetic technology, it can also mean "existing by mutual consent," assigning a social dimension to the term. The presentations at the conference addressed both the technical and the social aspects of cyberspace.

Several participants stressed the design and technical aspects of creating cyberspace. Jim Leftwich of Orbit Interaction, Palo Alto, California, showed virtual space environments – alternatives to traditional means of interacting with a computer terminal. Marcos Novak of the University of Texas presented beguilingly solipsistic visions of gravity-free architecture. Interactive photographic film maps of Karlsruhe and San Francisco by Michael Naimark showed that cyberspace extends beyond virtual reality (VR).

On the social front, many of the discussions focused on the issue of self and community within cyberspace. The present Internet system, a text-based precursor to cyberspace, is a means for computer operators to communicate through their terminals. Multiuser dungeons (MUDs) have become common locales for like-minded enthusiasts to discuss ideas. While being text-based environments, MUDs often incorporate architectural metaphors to orient users and set the stage for various scenarios. The nature of an interactive space within the MUD, such as an "office," "conference room," or "garden," determines such properties as the number of people who can engage in a discussion and whether the user can overhear private side conversations.



Computer-generated visions by Marcos Novak.

One of the newest MUDs, called the MediaMOO project, was discussed by its creator, Amy Bruckman of the Media Laboratory at MIT. It operates as an electronic meeting place for researchers and enthusiasts of media technology. Since this meeting place is attached to the MIT Media Laboratory, its various spaces have "addresses" on virtual fifth and sixth floors of the I.M. Pei building, which in physical reality has only four floors. This electronic myth gives MediaMOO users a way of locating their experiences in the MUD in relation to information exchange in the real world.

In a similar vein, one could imagine museums and libraries with virtual extensions extrapolated from their physical architecture. This hybrid of real and virtual architecture may prove to be an important by-product of cyberspace. **Peter Anders** ■

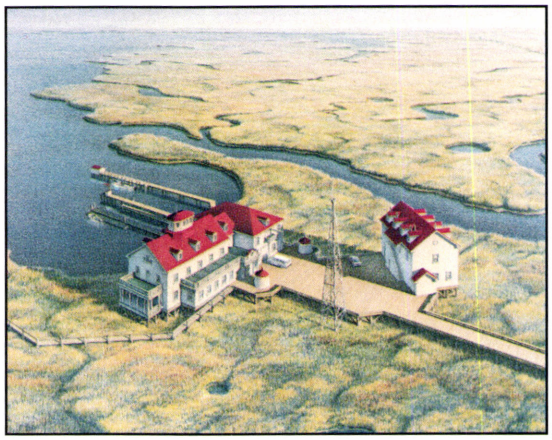
The author, a principal of Kiss Cathcart Anders Architects in New York, teaches design studio and computer technology at New Jersey Institute of Technology.

Eighth Ferriss Prize Winner Chosen

David Sylvester, Trenton, New Jersey, has won the eighth annual Hugh Ferriss Memorial Prize, sponsored by the American Society of Architectural Perspectivists (ASAP). A three-person jury also selected 61 works from nearly 300 entries for inclusion in Architecture in Perspective VIII, the ASAP's annual touring exhibition.

Sylvester was honored for his colored-pencil rendering of the Tuckerton, New Jersey, Marine Research Station, designed by Saphire Associates, Princeton, New Jersey. Also recognized in the competition were Thomas Schaller, New York; Richard Ferrier, Arlington, Texas; Dick Sneary, Kansas City, Missouri; David Bader/Curt Dilger, Washington, Pennsylvania; and Joyce Rosner, Houston.

The three jurors, each from Chicago, were Walter Netsch, former partner of Skidmore, Owings & Merrill; Bonnie Wolf of Miglin-Beitler, Inc.; and photographer Jack O. Hedrich, chairman emeritus of Hedrich-Blessing. ■



Ferriss Prize rendering by David Sylvester.

Competition Explores Impact of Electric Cars

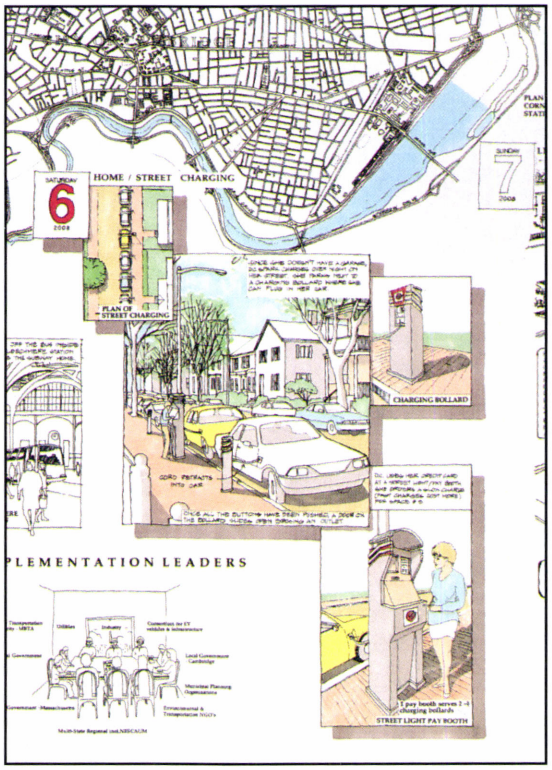
Everyone knows that the use of electric vehicles would quiet the din on our cities' streets, clean the air, and conserve nonrenewable fuels. If that hasn't been reason enough for large-scale conversions to electric vehicle use, the state of California has added another compelling incentive. It takes the form of a regulation, endorsed by many other states, requiring that, by 1998, at least 2 percent of new vehicles sold have zero emissions. The figure jumps to 10 percent in 2003. To meet this challenge, electric cars already exist that can travel at 60 miles per hour and cover 100 miles between charges, as was made plain at a Washington, D.C., exhibition and demonstration in early May.

The same display featured the winners of a national competition that challenged interdisciplinary teams to make planning and design changes to their community's infrastructure aimed at encouraging and supporting the use of electric vehicles. Among the competition's sponsors were General Motors, Hughes Power Control Systems, the Edison Electric Institute, the U.S. Department of Energy, and numerous municipal and regional utility companies.

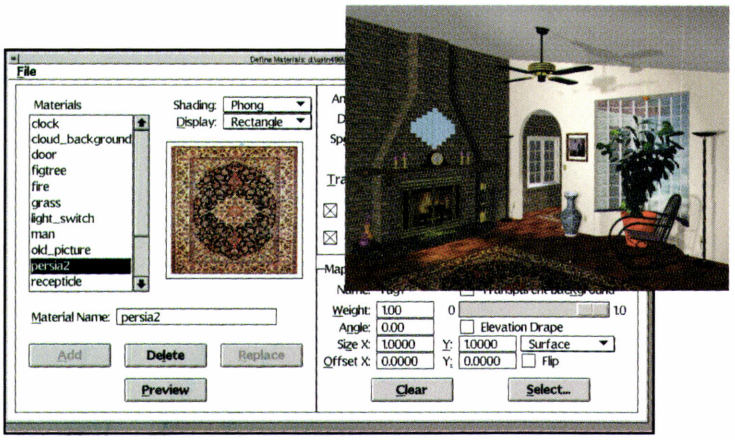
All of the winning schemes were grounded in practicality; none proposed pie-in-the-sky or revolutionary ideas. Some seized the chance to rezone and thereby revitalize their ailing communities. Among the more promising recommendations were that local utility companies own, maintain, and dispose of car batteries and that electrical bollards on residential streets and highway recharging stations, integrated with mass transit, be used to charge batteries. Payment would be by electronic debit card. The winners left unsolved two of the nation's most pressing transportation problems: finding efficient, inexpensive ways of transporting people from inner-city neighborhoods to suburban jobs, and thinning ever heavier suburb-to-suburb rush-hour traffic.

A Cambridge, Massachusetts, team led by designer Lucy Pedler won the grand prize and an honorable mention for logo design. The first award for a large community went to a Denver team led by Paul J. Gulman, an engineer. In a tie for the first award for an intermediate community, one of the winners was a team from El Cajon, California, led by architect and urban designer Jonathan Linton; the other was the Pasadena, California, team of Miralles Associates/CH2M Hill/Pasadena Water and Power Department. A team from Keene, New Hampshire, headed by architect Daniel Scully, won the first award for a small community and a special award for an electric vehicle logo. **Andrea Oppenheimer Dean** ■

The author, a former Executive Editor of Architecture *magazine, is Editor-at-Large of* Historic Preservation.



Detail of winning electric scheme for Cambridge, Massachusetts, by Lucy Pedler and others.



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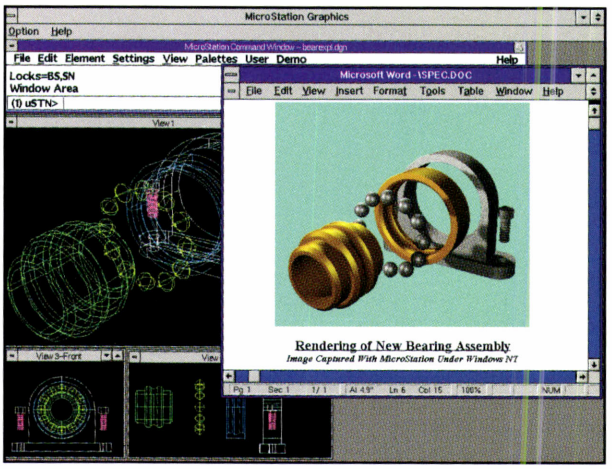

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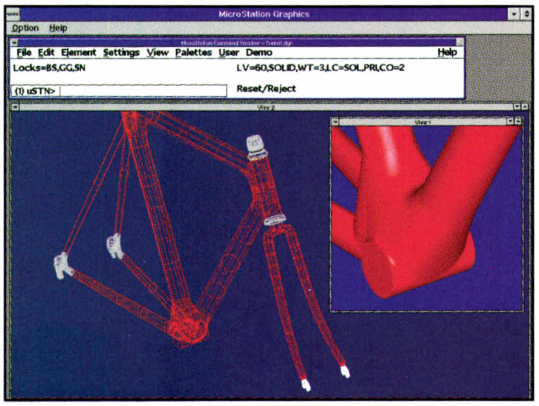

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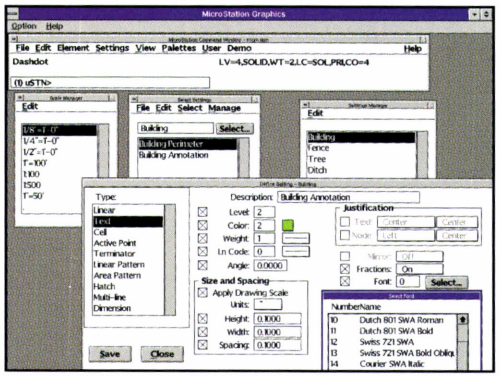

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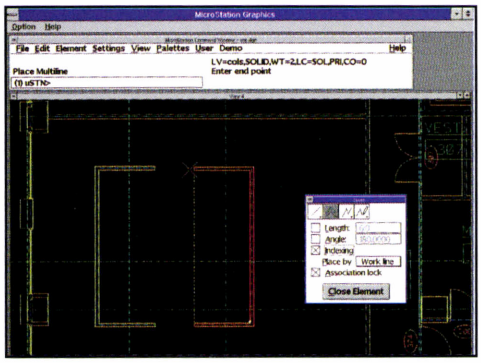

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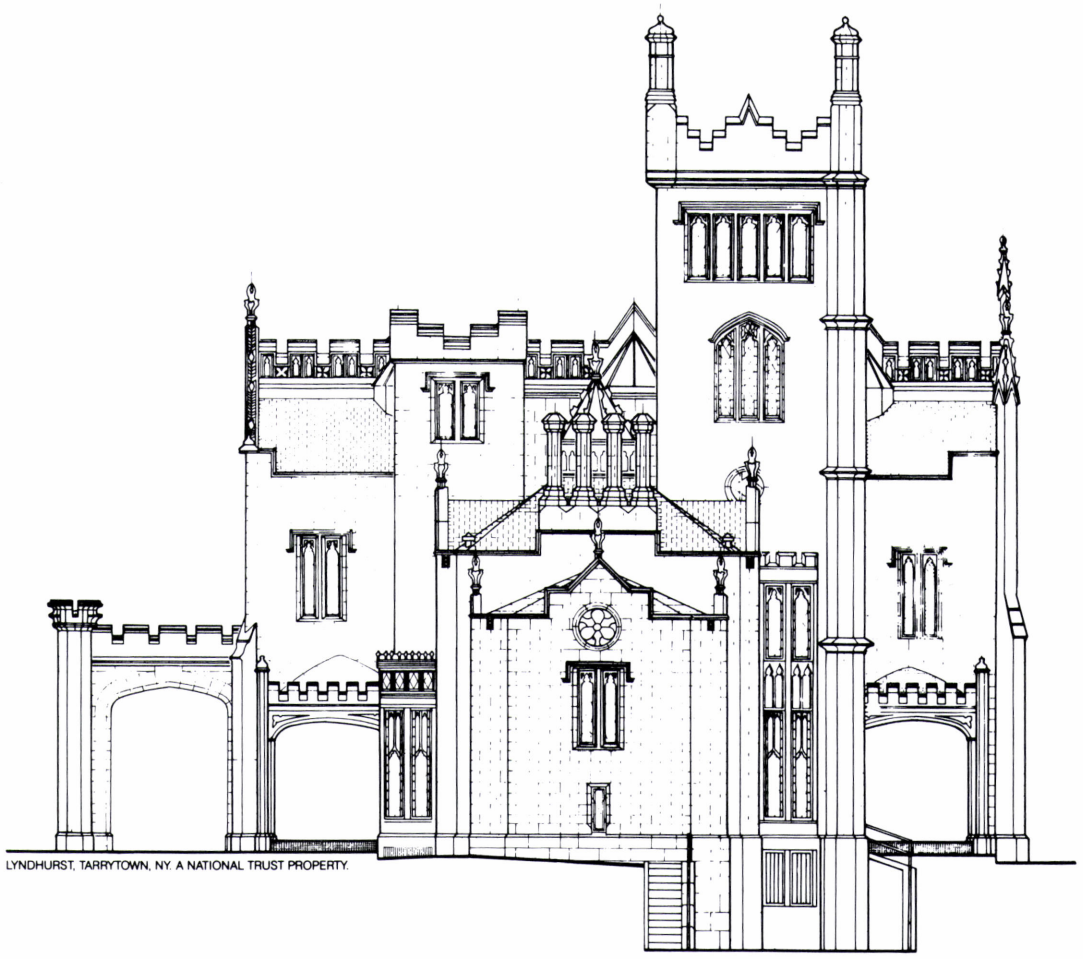

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Calendar

Exhibitions

P/A's New Public Realm
Through July 14

Chicago. This is a traveling exhibition of visionary public works proposals submitted to P/A's ideas competition (P/A, Oct. 1992, p. 73). Chicago Architectural Foundation.

Postwar Moscow
Through August 15

Chicago. "The Moscow Avant-Garde in Architecture: 1955–1991" covers the work of ten architects, including state commissions for civic complexes, schools, offices, and housing. Art Institute.

Work by Black Architects
Through August 20

Chicago. "Design Diaspora: Black Architects and International Architecture 1970–1990" is a juried exhibition designed "to present an international perspective of architecture that examines current design trends and cross-cultural influences within the Black African Diaspora." A four-year tour is planned. Athenaeum.

American Design
Through September 6

Milwaukee. "The Art of Design 2: An Exhibit of American Design" is an all-design show, covering architectural, graphic, product, and industrial designs. Haggerty Museum of Art, Marquette University.

Computer Graphics
July 15–September 8

San Francisco. The San Francisco chapter of the AIA has announced its annual exhibition of computer graphics work. Drawings, renderings, and laser-cut models will be on view. AIA/SF Office.

Competitions

Accessible Housing
Submission deadline July 31 (extended deadline)

Raleigh, North Carolina. The Center for Accessible Housing at North Carolina State University and *Multi-Housing News* invite entries in their annual design awards program, "Best Practices in Accessible Housing." Single and multifamily projects that address the needs of people with disabilities may be entered. Exemplary projects will be featured in a book. Contact Lois Crowe, Center for Accessible Housing, North Carolina State U., Box 8613, Raleigh, NC 27695-8613 (919) 515-3082 or FAX (919) 515-3023.

James Marston Fitch Grants
Application deadline August 1

New York. The James Marston Fitch Charitable Trust, established in 1988, has announced its annual $10,000 research grant (other smaller grants may also be awarded). Applications may be submitted by mid-career professionals working in the fields of historic preservation, architecture, landscape architecture, urban design, environmental planning, architectural history, and decorative arts. Contact Beyer Blinder Belle, 41 E. 11th St., New York, NY 10003 (212) 777-7800 or FAX (212) 753-1284.

AIA Honor, Twenty-Five Year Awards
Dates vary

Washington, DC. Entries to the AIA's 1994 Honor Awards for Architecture program must be registered by August 2 and submissions must be received by August 30. The Twenty-Five Year Award, given to a work of architecture completed 25 to 30 years ago, has a submission deadline of August 30. Contact AIA, 1735 New York Ave., NW, Washington, DC 20006-5292 (202) 626-7300.

Wolverine Exterior Design Contest
Submission deadline August 31

Livonia, Michigan. Wolverine Technologies has announced its 8th annual Finish First Exterior Design Contest. Projects employing the company's Exterior Design System™ may be entered in any of four categories: residential new construction; multifamily new construction; residential remodeling; and light commercial construction. Contact Wolverine Technologies, 17199 Laurel Park Dr. N., Livonia, IL 48152 (800) 521-9020.

(continued on page 30)



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Calendar *(continued from page 29)*

P/A Awards
Entry deadline September 10

Stamford, Connecticut. The 41st annual P/A Awards (see p. 15) recognizes projects scheduled for completion after January 1, 1994. Winning entries will be featured in the January 1994 issue. Contact Awards Editors, 600 Summer St., Box 1361, Stamford, CT 06901 (203) 348-7531 or FAX (203) 348-4023.

Autodesk Competition
Entry deadline September 21

San Francisco. The First Annual Autodesk International Image and Animation Competition invites entries in six categories, architecture and mechanical design and drafting among them. Entries must be created using the company's software or Autodesk Registered Developers™ products. Contact Autodesk (800) 964-6432 (ext. 909) or (415) 491-8311.

Shinkenchiku Residential Design Competition
Submission deadline September 30

Tokyo. Renzo Piano is the judge of the 1993 Shinkenchiku Residential Design Competition. His program theme is "Basic Shelter and Your Local Memory, for Living." Questions will not be answered by the sponsor, but it is suggested that potential entrants request the competition regulations. Contact Entries Committee, Shinkenchiku Residential Design Competition 1993, Shinkenchiku-sha Co., Ltd., 31-2, Yushima 2-chome, Bunkyo-ku, Tokyo 113, Japan.

CRSI Design Awards
Submission deadline October 1

Schaumburg, Illinois. The Concrete Reinforcing Steel Institute has announced its 12th biennial design awards program; it is cosponored by the AIA. Structures completed between January 1, 1991 and October 1, 1993 are eligible. Contact CRSI, 933 N. Plum Grove Rd., Schaumburg, IL 60173-4758 (708) 517-1200 or FAX (708) 517-1206.

Conferences

Baltic Cities Reconsidered
August 16–27

Tallinn and Parnu, Estonia. "The Socialist City in the New Age of Capitalism" is the theme of an international workshop for practitioners, academics, and students called the Baltic Summer School. Organizers hope to "define appropriate city images on the basis of concepts and strategies that embody the aims of the Baltic polis as a social, cultural, and economic entity." Contact Ian MacBurnie, Architectural Association Graduate School, 34-36 Bedford Sq., London WC1B 3ES, England (44) 71-636 0974 or FAX (44) 71-414 0782.

SEGD Conference
August 19–21

Chicago. "What Works?" is the theme of the 13th annual conference of the Society of Environmental Graphic Designers. Participants will discuss the rapidly changing technological, social, and economic forces. Contact Peggy Kelley, SEGD, One Story St., Cambridge, MA 02138 (617) 868-3381 or FAX (617) 868-3591.

Prairie School in Iowa
September 8–12

Mason City, Iowa. "Frank Lloyd Wright and the Prairie School in Iowa" is the theme of the fourth annual conference of the Frank Lloyd Wright Building Conservancy. Fay Jones is among the scheduled speakers. Contact Frank Lloyd Wright Conservancy, PO Box 5466, River Forest, IL 60305 (708) 848-1141 or FAX (708) 386-9069.

Cities for Tomorrow
September 26–October 2

Helsinki, Finland. The International Federation for Housing and Planning (IFHP) has announced the theme of "Cities for Tomorrow" for its 1993 conference. Seminars, case studies, workshops, and study tours are planned. Pekka Korpinen, Fumihiko Maki, and Richard Rogers are among the scheduled keynote speakers. Contact IFHP, Wassenaarsweg 43, 2596 CG The Hague, The Netherlands FAX (31) 71-328 2085. ■

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Engineer	Johnson & Stover
Fixture	Tube-6, pendant-mounted indirect
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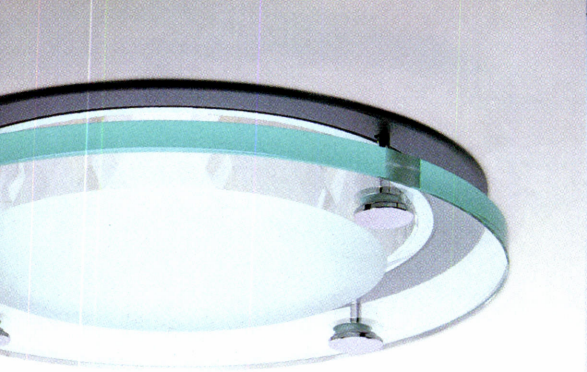



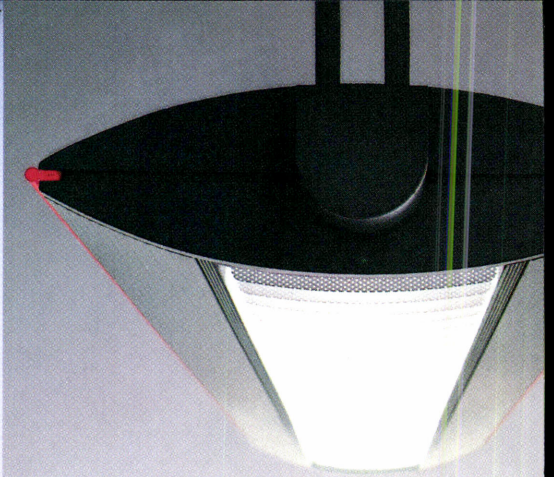

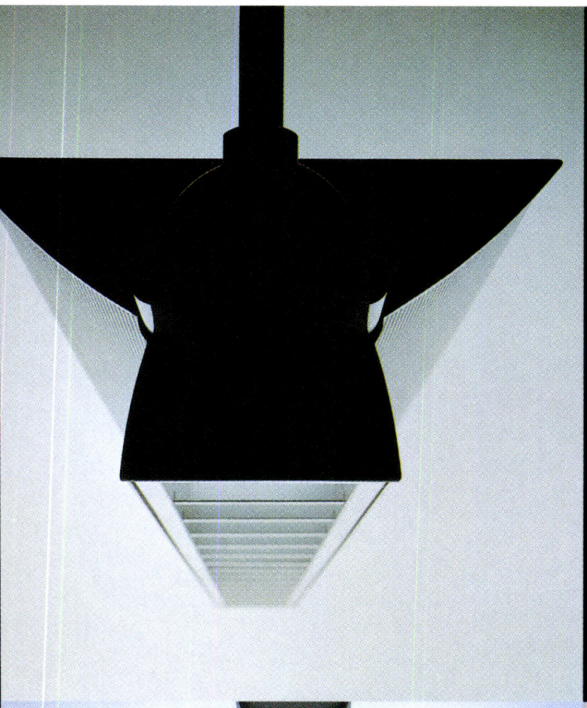

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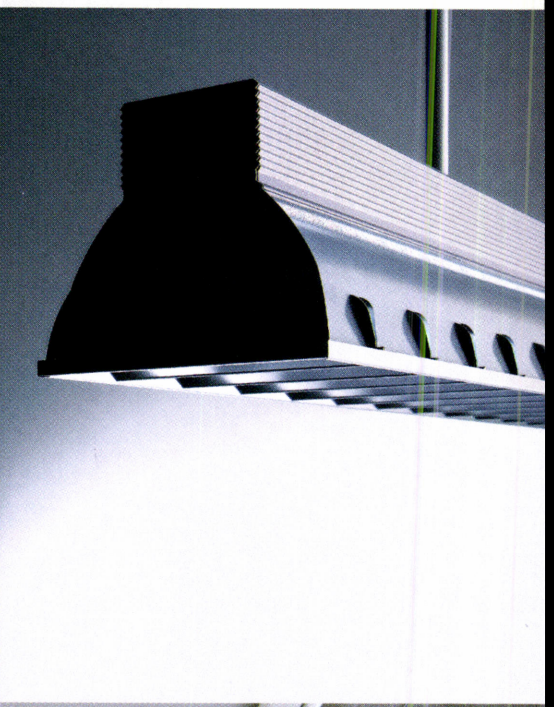



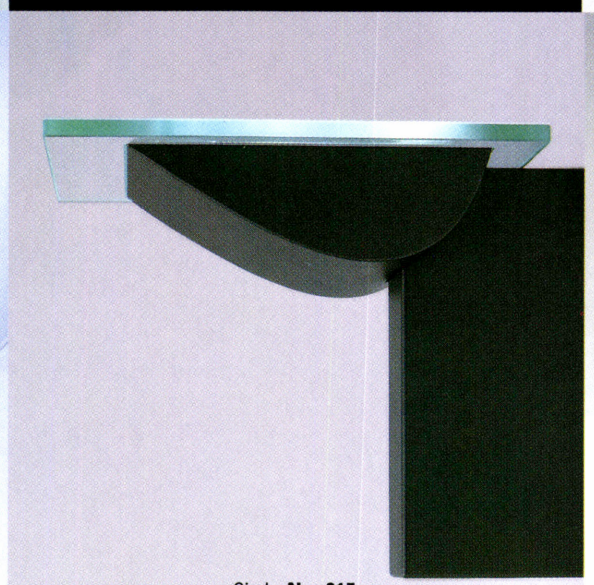



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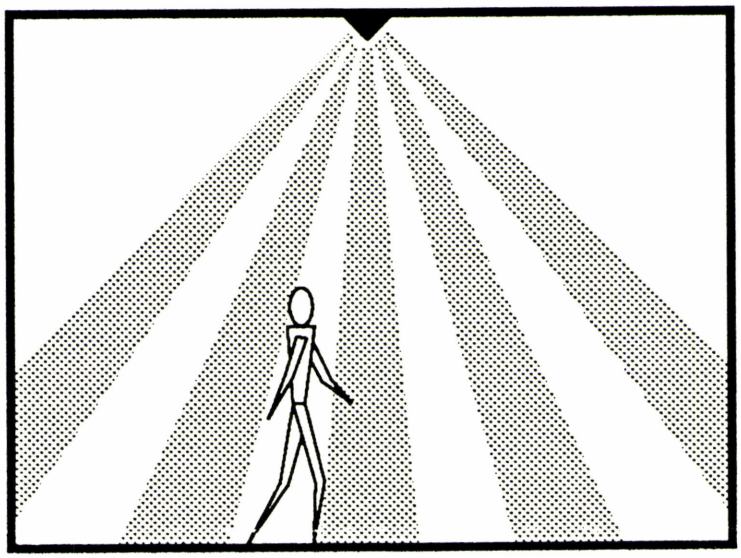
Technics Focus

Energy Resource Centers 35
Exit Sign Lighting 39
Occupancy Sensors 43

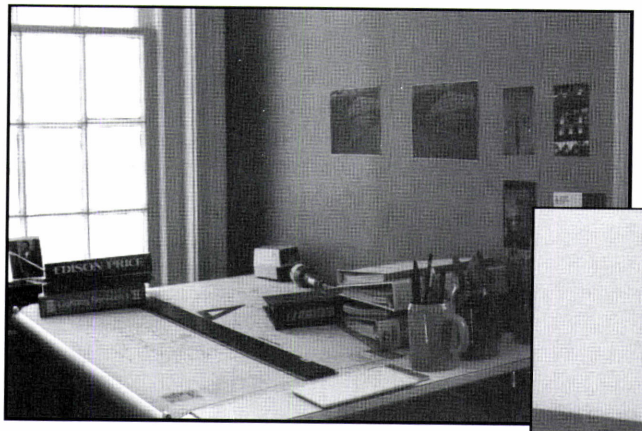
Technics Focus: Lighting



The subject of this focus package is lighting, but the three articles herein consider aspects of illumination that are often not given enough attention. For example, the role of utility companies in promoting the design of energy-efficient lighting is examined in an article on Energy Resource Centers. A report on exit sign lighting and its visibility under smoke conditions challenges current code requirements for such signage. And an article on occupancy sensors provides valuable information for architects in specifying and implementing these energy-saving devices. **Michael J. Crosbie** ■

LIGHTING DESIGN TOOL

Integrate lighting into your design and specification process



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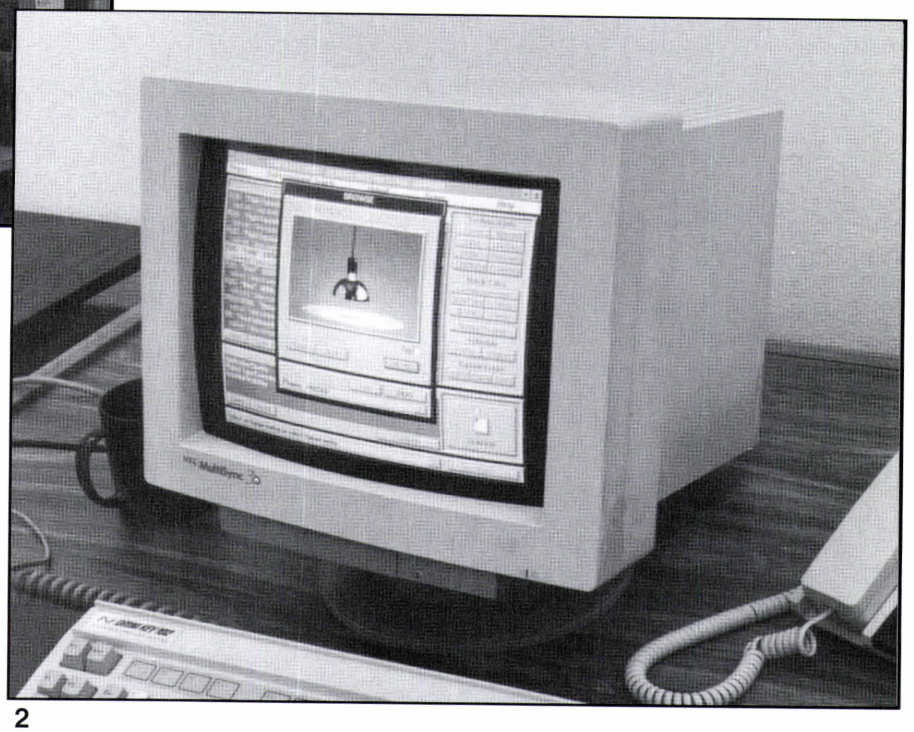

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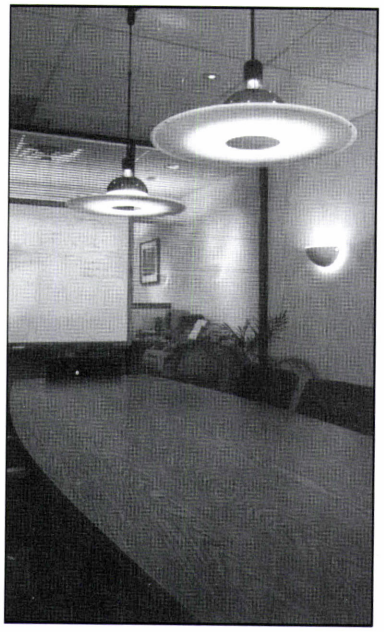

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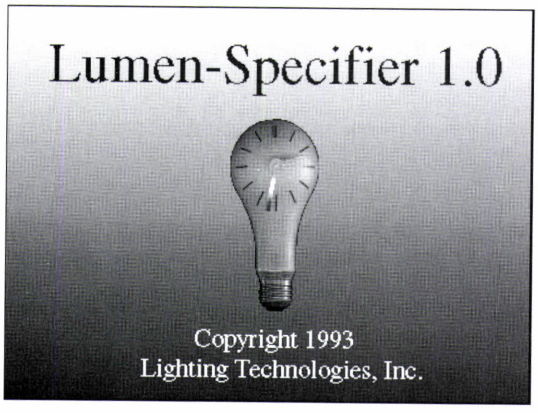

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Architect and researcher **Harvey Bryan** reports on utility-sponsored centers for studying energy-efficient lighting.

Abstract
In an effort not only to encourage energy efficiency but to help architects achieve it in their buildings, several utility companies have sponsored energy resource centers where design professionals can obtain information on energy-efficient design and can model a variety of lighting strategies to study their appearance. Architects can also bring clients to the centers to see lighting alternatives. Four such energy resource centers are profiled.

Utility-sponsored Demand-Side Management (DSM) programs provide customers with direct financial incentives to promote energy efficiency. Their main goal is to reduce or postpone the need for new power plant construction. DSM programs have experienced phenomenal growth in the half-dozen years since their inception. According to a recent study funded by the Electric Power Research Institute, over 90,000 commercial and industrial participants are involved in the DSM programs offered by 75 utilities (including most of the nation's largest).

Inspired by this growth and by the fact that DSM is a practical and inexpensive alternative to the building of new capacity, several utilities are exploring innovative ways to promote their respective programs. Rather than rely solely on financial incentives to stimulate participation, these utilities have established working energy resource centers. This type of center goes beyond the energy centers that many utilities built during the late 1970s and early 1980s, which served to educate and showcase energy efficiency to a general audience. The energy resource center model is designed to allow architects, engineers, designers, contractors, developers, and building owners and managers to learn and to experiment (often by means of full-scale working displays) with state-of-the-art energy-efficient technologies and lighting design techniques.



1 *The Portland Energy Resource Center's fixture, light source, and color demonstration areas.*

Lighting is a Major Focus

Of all the DSM strategies that utilities have been promoting, energy-efficient lighting has proved to be the most cost effective. However, unlike the others, energy-efficient lighting is the most complex to accomplish. Today, for a lighting design to be successful an architect must carefully consider all the traditional design criteria along with the multitude of new energy-efficient lamps, ballasts, fixtures, and control technologies that are constantly coming to market. Thus, for a utility interested in sponsoring a resource center, energy-efficient lighting must have a major presence.

Centers for the demonstration of lighting principles and products are not a new invention; all the major lamp and most large fixture manufacturers have such facilities. GE's Lighting Institute in Cleveland, for example, has been in operation for more than 50 years. However, what distinguishes the resource centers from the company centers is that they can independently demonstrate and compare a full range of lighting products and design techniques. They also provide a convenient and free-of-charge facility to the design professional that is specifically tailored to support (often on a one-on-one basis) the unique nature of contemporary lighting design.

Of the nearly half-dozen utility-sponsored energy resource centers in operation, four are located on the West Coast, where there are forward-looking utilities and state regulatory commissions that allow the cost of such facilities to be placed on the rate base. (A fifth center in Minnesota is not yet ready for operation.) Although these centers differ in response to local needs, they were selected for discussion because they best represent this new genre.

Portland's Energy Resource Center

Opened in late 1986, Portland General Electric's Energy Resource Center (ERC) was the nation's first utility-sponsored center. This 20,000-square-foot facility is located in Tualatin, 12 miles from downtown Portland. The ERC takes a direct approach to technology transfer by providing five areas for the demonstration of energy-efficient commercial kitchen, HVAC, industrial, electrical, and lighting applications. Supporting these areas is an expert technical staff, a library that contains an extensive microfilm collection of over 16,000 manufacturers' catalogs, and a 100-seat auditorium.

The lighting lab houses a continually changing display of about 100 different lighting fixtures, light source demonstrations, color test areas (1), and a mock-up room with a movable ceiling plane that can accept various lighting fixtures. Over its seven years of operation, the lighting lab has evolved from a facility that showcased new energy-efficient lighting products to one that provides an integrated program of technology transfer and assistance. Such a program combines the traditional function of a lab with increased emphasis on the more difficult process of linking energy-efficient lighting to enhanced productivity in the workplace. Finding that good lighting design is critical to such a program, The ERC has responded by forging even stronger links to the design community.

This spring the ERC completed a 1,300-square-foot annex which is adjacent to the new office of the AIA/Portland Chapter. Both organizations cooperated in the planning and design of the annex and will greatly benefit from its use. The downtown annex will complement the Tualatin facility by emphasizing more design-oriented applications and includes a lighting demonstration lab as well as a 30-seat seminar room.

Being the first, ERC has served as a model for the resource centers that followed. It has also shown the ability to develop the services it provides as well as to involve others in its operation. If the utility/design-community cooperation that went into the creation of the downtown annex proves successful, ERC may very well become the model for the next generation of resource centers.

SCE's Customer Technology Application Center (CTAC)

Southern California Edison's facility is located in Irwindale, about 20 miles from downtown Los Angeles and, at 40,000 square feet, is the largest of the resource centers. The CTAC is made up of several information centers (e.g., Industrial, Commercial, Residential) that work in conjunction with a Lighting Design Center and a Learning Center.

Unlike the other resource centers, which focus on the design practitioner, SCE operates the CTAC as an integral part of a strategy to provide innovative services to its customers. To achieve their goal, SCE has designed each of the information centers to function as platforms for both demonstration and testing of new technology. For example, in the Industrial Technology Center several new paint curing, coating, and drying technologies that meet California's tough new emissions regulations are demonstrated in a space that can also compare three different lighting systems (2). This allows an industrial customer to make informed equipment and lighting comparisons simultaneously in a highly realistic setting. The Commercial and Residential Technology Centers operate in a similar manner, whereas the Lighting Design Center is intended to respond to a range of lighting concerns as well as to provide problem-specific support. Like Portland's facility, the Lighting Design Center has a display area designed to demonstrate more than 150 fixture and lamp combinations, light source and color test spaces, and several areas for thematic lighting displays.

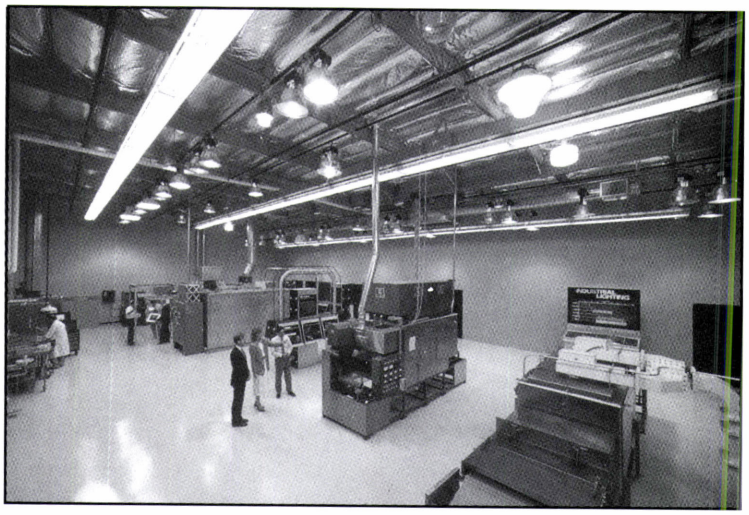
To maximize resources, the CTAC does an admirable job of coordinating activities among its centers. For example, if retail lighting were determined to be an area of customer interest, the Learning Center would work with the CTAC staff to develop the workshop, the Lighting Design Center would create thematic displays for the workshop, and field staff would follow up with a post-workshop visit to every attendee. Such a comprehensive approach provides an excellent example of how a resource center can work within a utility's traditional customer service model.

Seattle's Lighting Design Lab

The Lighting Design Lab is located in downtown Seattle, and as its name suggests, focuses exclusively on lighting. The LDL is an 8,500-square-foot facility that has been in operation nearly four years. Although operated by Seattle City Light, the LDL did not result from the actions of a single utility, but rather from a collaborative process involving several Northwest utilities, universities, and conservation organizations. This group approached the Bonneville Power Administration, the region's Federal power marketing agency, which agreed to provide about 70 percent of funding.

The LDL provides visitors both with the devices that will help them visualize the effects of energy-efficient lighting and with hands-on technical and application support. The lab is composed of a number of well-designed displays, demonstrations, and lighting vignettes that all work to strengthen the link between concept and application. Throughout this process lab staff are available to provide technical assistance. Such assistance is available through the lab's full-time lighting specialist, an extensive reference library, or a computer facility that can graphically simulate almost any lighting environment as well as provide detailed cost and energy analysis. The LDL also has a 1,000-square-foot daylighting simulation facility and a 1,200-square-foot full-scale mock-up space (3). The mock-up facility is one of the largest of its kind. It consists of two 18-foot-by-20-foot movable ceiling planes into which various types of lighting fixtures can be inserted. Movable wall panels are used to define the edges of the space, shutters on a large adjacent window wall can be opened to provide daylight, and with the addition of furniture, carpeting, and other equipment, a designer can accurately simulate almost any proposed lighting design.

Requests from around the country to use the Lighting Design Lab, particularly the mock-up room, are testimony to the uniqueness of this facility (the LDL does allow designers from outside the Pacific Northwest to use their facilities; however they reserve the right to charge for services). In addition, the diversity of the LDL's numerous sponsors and its continuing success in attracting visitors (serving over 16,000 since opening) have allowed this facility to maintain a high level of interest.



2 *SCE's Customer Technology Application Center. The Industrial Technology Center (one of three informational centers) is used to compare energy-efficient equipment with three different lighting systems and 20 different fixture types.*



3 *In the 30-foot-by-40-foot mock-up space at Seattle's Lighting Design Lab, staff work with a customer in evaluating a proposed office lighting design.*



4 *The Lighting Classroom/Demonstration Lab at PG&E's Pacific Design Center includes several interactive demonstrations, lamp and color displays, various types of ceiling-mounted fixtures, and a lighting vignette.*

PG&E's Pacific Energy Center

The Pacific Energy Center is located in downtown San Francisco and is sponsored by Pacific Gas and Electric, the nation's largest utility. The PEC is a 20,000-square-foot facility, housed in a completely renovated 1920s building and has been in operation for a little less than two years. Like the centers in Portland and Southern California, the PEC provides a setting where the latest energy-efficient industrial, commercial, and residential technologies can be displayed and demonstrated. However, the PEC has a particular focus on lighting, HVAC, glazing, and control system technologies.

Being the newest center, the PEC has been able to take the best from its predecessors and goes beyond the other centers in several areas. For example, the PEC's Lighting Classroom/Demonstration Lab incorporates several interactive demonstrations that help visitors to understand conceptually important lighting principles (4). The PEC sponsors an ambitious series of workshops, and the reference center houses a comprehensive collection of literature on building energy and related topics, as well as an impressive array of design tool software. Finally, the PEC has a strong daylighting orientation. Its Daylighting Lab permits qualitative assessment of scale models by mounting them against a window and viewing them from the inside; outdoor testing can also be performed on the center's roof. If more elaborate testing is needed, an arrangement can be made to use the domed artificial sky operated by the Lawrence Berkeley Laboratory (P/A January 1985, p. 160). The PEC's two 40-person classrooms, its 150-person conference facility, and its convenient downtown location are being well utilized for events such as brown-bag lunch discussions, evening lectures, and daylong workshops. However, not all these events are PEC sponsored, nor do they directly promote energy efficiency. By letting architects, designers, and engineers hold meetings at the PEC, many attendees will be intrigued by the facility and will come back for another visit. The PEC staff understands that for the center to become an integral part of the Bay Area's design community, they must provide benefits to the breadth of that community.

Ten Centers To Follow

The success of the energy resource centers has caught the attention of the nation's lawmakers. Congress was so impressed with the resource center concept that it included a major provision in the Energy Policy Act of 1992 to establish such facilities nationwide. The Act, passed and signed into law last October, requires the U.S. Department of Energy (DOE) to establish ten regional energy-efficient lighting and building centers. The DOE has been authorized to make grants either to nonprofit institutions or to consortiums that will establish and operate each regional center. While the appropriation for the Act has not yet been made (it is contingent upon inclusion in and passage of the 1994 budget), Congress did suggest that $10 million per year for each of the next three years should be budgeted for the purpose of getting the ten centers in operation.

For those architects who are located in an area served by one of the resource centers and have not visited a facility, addresses are provided below. For the majority of those who are not served by a resource center but would find one useful, inquiries to your local utility as to why such a facility is not available may be in order. If a satisfactory response is not forthcoming, then do what the Energy Policy Act encourages: work with a professional organization and form a consortium with other interested groups and prepare a proposal to the DOE for one of the ten regional centers.

Harvey Bryan ■

The author is an architect, a researcher, and a frequent contributor to P/A in the area of building technology. He is currently helping to organize a consortium to prepare a proposal to the DOE for a regional energy resource center in New England.

Further Information

Portland General Electric Energy Resource Center, 7895 S.W. Mohawk Street, Tualatin, Oregon, 97062. 503-692-4800.

Downtown Annex, 315 S.W. Fourth Avenue, Portland, Oregon, 97204.

Southern California Edison Customer Technology Application Center, 6090 North Irwindale Avenue, Irwindale, California, 91702. 1-800-336-CTAC.

Lighting Design Lab, 400 East Pine Street, Seattle, Washington, 98122. 1-800-354-3864.

Pacific Gas and Electric Pacific Energy Center, 851 Howard Street, San Francisco, California, 94103. 1-800-468-4743, ext. 951.

Berlin, The Federal Capital of Germany

Announcing the Spreeinsel International Urban Design Competition for Ideas

Sponsors: The Spreeinsel International Urban Design Ideas Competition is jointly sponsored by the Federal Republic of Germany, represented by the Federal Ministry for Regional Planning, Building and Urban Development, Bonn and the Land Berlin, represented by the Senate Administration for Urban Development and Environmental Protection. The Land Berlin has overall control of the project and acts simultaneously on behalf of the Federal Republic of Germany. Authorized agent: Arbeitsgemeinschaft Wettbewerb Spreeinsel, Breite Strasse 1, D - 10178 Berlin - Mitte, tel.: 030/ 2038 - 2006, fax: 030/ 2038 - 2007.

Purpose of the Competition: In compliance with the decision designating Berlin as the capital of the Federal Republic of Germany, a concentration of facilities for the Federal Government and the Land Berlin is to be established in the historic center of the city. Included are the Foreign Office, the Federal Ministry of the Interior, and a conference center, in connection with spaces for high-quality cultural and gastronomical facilities, such as a large library, as well as additional symbolic and urban facilities which are open to the public.

Type of Competition: A limited international urban design competition for ideas, to be preceded by a world-wide open application process with unlimited participation. The entire procedure is anonymous.

Number of Participants: The number of participants in the application process is unlimited. The sponsors will invite about 50 applicants who have been selected by the jury to enter an anonymous competition. The process of selecting and notifying participants is planned for mid-December 1993. The competition materials will be shipped immediately afterward. The participants will be given 12 weeks to prepare drawings.

Selection of Participants: An open, international, qualified procedure of application will be carried out in order to select the participants for the urban design competition. Architects and city planners are sought who possess both experience and ability in dealing with historical building sites and in the execution of building tasks in the range of functions cited here. The selection process will take place based on the submission of conceptual drawings with sketches of urban design ideas, a plan showing programmed uses at 1: 2000 scale, and an isometric drawing, together with a one-sided, single page (DIN a 4 or letter-size) length written description. The selection of participants for the Spreeinsel International Urban Design Competition for Ideas will be made by the jury. By means of a third party, the sponsors will invite those selected by the jury to submit competition entries. The designs submitted for the competition will not be returned.

Deadline for Application: Information for applying to participate in the competition will be sent out starting August 23, 1993. The application materials must be mailed (postmarked) until October 22, 1993 to the authorized agent named above.

Eligibility: All independent architects and city planners around the world who are entitled in their country of origin to carry out the professional tasks described here are encouraged to apply for the participation in this competition. Applicants may be individuals or legal entities (firms) whose business purpose is the provision of planning services, or working partnerships or teams thereof, which correspond to the tasks of the competition. Teams must designate an authorized representative. Firms will be represented by legally authorized individuals.

Expert Judges	Deputy Judges	General Judges	Deputy Judges
- Hanns Adrian Hanover	- Christiane Thalgott Munich	- Rudolf Seiters Federal Minister of the Interior	- Franz Kroppenstedt State Secretary, Min. of the Interior
- Herman Hertzberger Amsterdam, Netherlands	- Karen Van Lengen New York, USA	- Dr. Irmgard Schwaetzer Federal Minister of Regional Planning, Construction, and Urban Development	- Gerhard von Loewenich State Secretary, Ministry of Regional Planning, Construction, and Urban Development
- Josef Paul Kleihues Berlin	- Johanne Nalbach Berlin	- Eberhard Diepgen Governing Mayor of Berlin	- Volker Kähne Head of Berlin Senate Chancellery
- Gerhart Laage Hamburg	- Inge Voigt Frankfurt/Main	- Dr. Volker Hassemer Senator for Urban Development and Environmental Protection	- Wolfgang Branoner State Secretary, Senate Dept. of Urban Development and Environmental Protection
- Gustav Peichl Vienna, Austria	- Dr. Dieter Kienast Zurich, Switzerland	- Ulrich Roloff - Momin Senator for Cultural Activities	- Dr. Winfried Sühlo State Secretary, Senate Administration for Cultural Activities
- Renzo Piano Paris, France	- Franco Stella Vicenza, Italy	- Anton Pfeifer Minister of State at the Federal Chancellery	- Dr. Volker Busse Ministerial Director, Federal Chancellery
- Günter Schäffel Bonn	- Barbara Jakubeit Berlin	- Dr. Dieter Kastrup State Secretary, Foreign Office	- Dr. Claus J. Duisberg Ambassador
- Dr. Hans Stimmann Berlin	- Jürgen Dahlhaus Berlin	- Gerhard Keil Mayor, Borough of Berlin - Mitte	- Dorothee Dubrau City Planner, Borough of Berlin - Mitte
- Angela Wandelt Leipzig	- Michael Bräuer Rostock		

Criteria for Selection: The design solutions for the facilities for the ministries and institutions should be integrated in to the structural pattern of the city. The themes of this international urban design competition for ideas involve the architectural, spatial, and functional integration of required new buildings and the arrangement and design of public spaces, as well as the integration and re-use of existing building fabric. It is expected that designs for buildable projects will be submitted.

Requirement of the Sponsor: The selected projects, together with the recommendations of the jury for the sponsors, will form the basis for the urban planning of the competition site. It is the intention of the authorized sponsor, upon consideration of the recommendations of the jury, to commission one or more prize recipients to the extent that and as soon as actual drawings are developed with respect to entries under consideration, and provided that the winner, in the opinion of the sponsors, is professionally qualified to properly execute the task.

Prizes: The approx. 50 participants will receive a total of DM 550,000.

Cost of Application: The applicants will not be reimbursed for any costs incurred.

Rights of Contract: Participants and winners in the Spreeinsel competition are not automatically entitled to be contracted or invited to any future competitions for construction and execution.

Address for Application and Submission: The competition process will be carried out in agreement with the Union of International Architects (UIA), the Federal Chamber of Architects and the Chamber of Berlin Architects, and according to the guidelines of the European Community on the allocation of contracts for services as well as the principles and guidelines for the execution of competitions (GRW 1977). The official languages of the competition are German and English. The materials for application are information brochures which may be obtained upon written request and payment of a non-refundable fee of DM 50 (Fifty DM, in the form of a check) from the following address:

Arbeitsgemeinschaft Wettbewerb Spreeinsel, Breite Strasse 1, D - 10178 Berlin - Mitte
tel.: 030/ 2038 - 2006 fax : 030/ 2038 - 2007

Competition Deadlines:

Filing date for the Office of Official Publications of the European Community:	June 11, 1993
Mailing of application materials:	beginning August 23, 1993
Submission of application materials: (date of postmark)	October 22, 1993
Selection of participants:	begins December 7, 1993

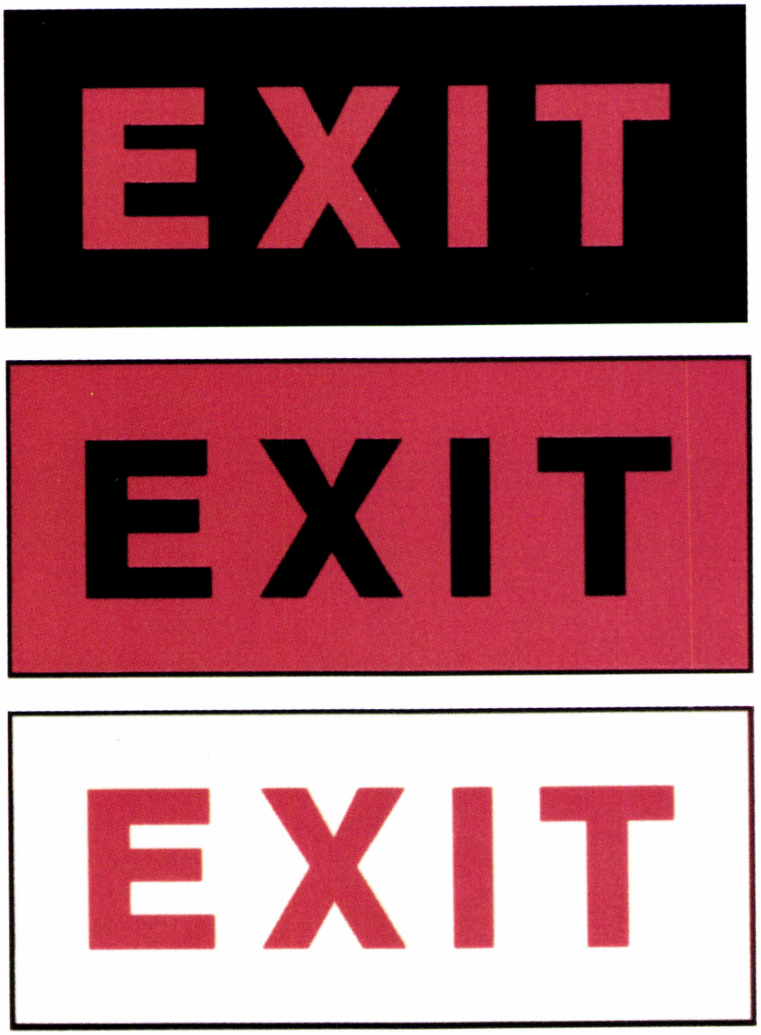
Researcher **Michael Ouellette** presents conclusions from studies on exit sign illumination and visibility.

Abstract

Exit signs are important life-safety components in buildings. New research shows that the minimum illumination requirements specified in the codes do not necessarily ensure that signs will be sufficiently visible or noticeable, especially in smoke when they are most needed. The author discusses the importance of exit sign illumination and visibility, and presents recent findings on how to ensure that signs remain visible. The impact of exit sign illumination, configuration, and placement on architectural design is also discussed.

"There was no information anywhere about anything. It was totally uncoordinated," complained one survivor of the recent World Trade Center bombing in New York. She was but one of the tens of thousands of terrified and disoriented occupants who groped through the smoke and darkness, according to *The New York Times*. Their lives were in danger and they could not find their way out. The evacuation of thousands of people could have been facilitated if only the exit signs had been visible.

The scenario is common. Only 8 percent of the survivors from 400 different fires remembered seeing exit signs during their escapes, according to J.L. Bryan of the University of Maryland. Of course, post-incident studies of this kind are limited by the respondents' recollection skills. Nevertheless, some signs might have been extinguished by power failure, as in the Trade Center disaster. Others might been lighted, but not sufficiently visible. Yet other signs might have been visible but not conspicuous enough to stand out from their backgrounds, especially during the distractions of an emergency.



1 *Three different types of illuminated exit signs. The top one, with its dark opaque background, is slightly more visible in smoke than the other two. The bottom one is the least visible in smoke.*

One might ask, "But if the signs conform with local building and fire codes, then surely they will be sufficiently visible and conspicuous during emergencies, right?" But the codes vary considerably from one jurisdiction to another. For example, in 1978 the British Standards Institution said that exit sign luminance shall be between 2 and 80 candelas per square meter (cd/m^2). On the other hand, the 1991 Life Safety Code of the U.S. National Fire Protection Association (NFPA) indirectly specifies a minimum luminance (roughly 14 cd/m^2) but no maximum luminance. In Canada, the 1990 National Building Code specifies neither minimum nor maximum luminance, but it does say that signs should be illuminated and visible from the exit approach. Inconsistencies among the codes suggest that more needs to be understood about exit sign illumination and visibility, especially in conditions of smoke when they are needed the most.

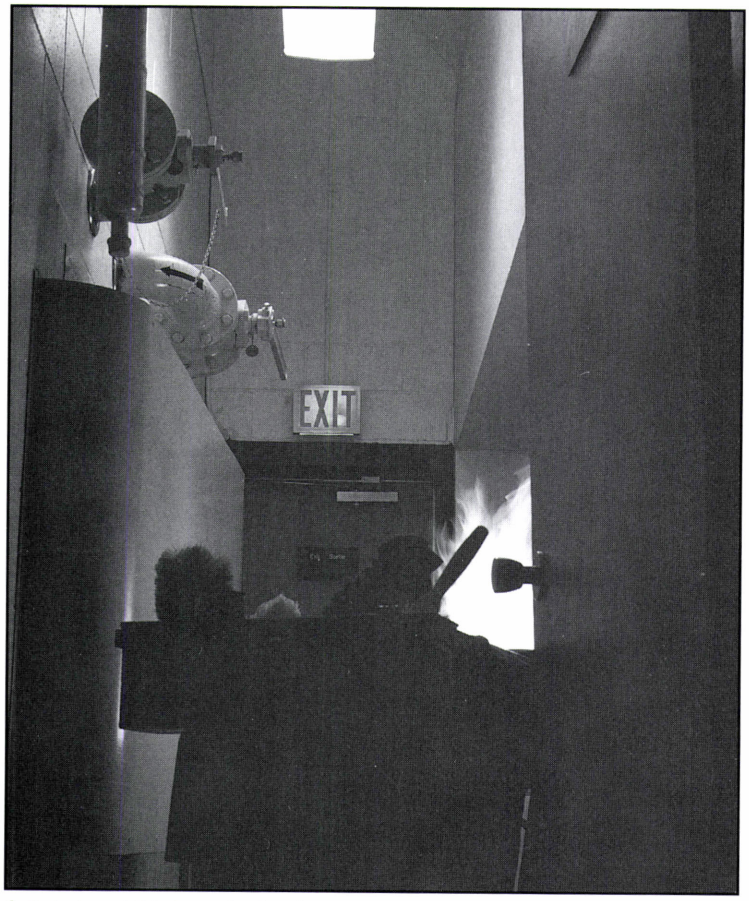
At the suggestion of the Canadian Government's Canadian General Standards Board, our laboratory began a research program into the factors that affect exit sign visibility, to provide recommendations that would help ensure that building occupants need never grope aimlessly when their lives are threatened by fire. Some of the results are summarized below and are discussed in the context of other relevant research in the field.

The Effects of Smoke

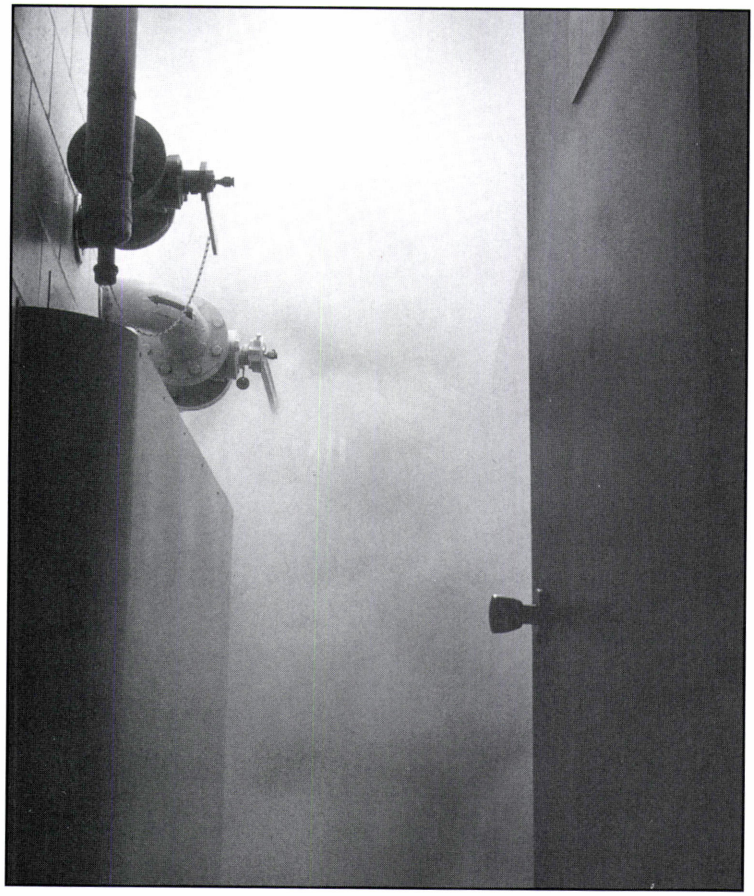
Smoke seriously reduces sign visibility. It reduces brightness, contrast, and clarity or distinctness of individual characters and symbols. Quite often in experiments we've observed that otherwise adequate signs disappear completely in minimal amounts of smoke (2, 3, 4). The signs all conformed to the codes. Should we have been surprised? No.

Codes on exit signs are written for conditions of clear air. They imply that no one will experience smoke if the building conforms to the other requirements in the codes. These might include ventilation requirements and limits on the smoke-generating potential of materials.

Some argue that because smoke builds up so quickly in fires, we can't possibly expect anyone to be alive to read the



2 *Exit sign visible in smoke-free fire.*



3 *Exit sign nearly obscured in smoke. Visibility is greatly reduced by the glare from the overhead luminaire.*

signs just minutes after the fires start. So, they contend, why bother making signs visible in smoke? There is some merit to this reasoning, at least for the rooms where the fire starts. On the other hand, smoke growth in neighboring rooms and exit routes throughout the building may not necessarily be as rapid.

The reality is that people do encounter smoke. Fire fighters and rescuers are obvious examples. They are often unfamiliar with the building and they require as many visual cues as possible for orientation. Some say that an extra few feet of exit sign visibility can sometimes make a large difference for these people – and the people they rescue.

Bryan reports that 53 percent of survivors from fires in institutions admit to traveling through smoke. Similar findings are reported by P.G. Wood in the United Kingdom. Some people went only short distances through the smoke, but many of them advanced farther than they could see.

Knowing that people do navigate through smoke, we have a responsibility to provide evacuation systems that are visible in smoke, wherever feasible. Exit signs are essential components of evacuation systems. Our research identifies simple ways for making exit signs more visible in smoke.

The Effect of Sign Brightness

In smoke, exit signs should be as bright as possible. In our experiments, people performed better with brighter signs. These included signs of 1,300 cd/m^2, which greatly exceeds the maximum suggested by the current standards.

In a follow-up experiment, we measured people's preferences for sign luminance in smoke. In a modest amount of smoke, more than 80 percent of our subjects preferred the highest luminance available (1,200 cd/m^2), regardless of whether the room lights were on, off, or at emergency lighting levels. After viewing the same sign at luminances ranging from 11 to 1,200 cd/m^2, over 73 percent of our subjects reported that there exists no upper optimum level for sign luminance: the brighter the better.

In clear air, the same subjects gave very different results. They appeared to have been bothered by glare from the brightest signs. Over 92 percent of them responded that there was indeed an optimum sign luminance, and that it was somewhere between 70 and 700 cd/m^2. This range challenges the upper limit of the U.K. code, and it exceeds the maximum of the NFPA code.

This presents a problem for the design community. In normal conditions, signs should not be so bright that they cause visual discomfort, nor clash with the architectural design. In smoke, however, they should be as bright as possible to be visible. Bifunctional signs are now available that meet both constraints. They brighten and optionally flash upon a signal from the building's alarm system or from a built-in smoke detector.

The Effect of Ambient Illumination

Wherever possible, emergency luminaires should not be placed along lines of sight to exit signs. We found that ambient illumination greatly reduces sign visibility in smoke. The effect is similar to the scattering of high-beam automobile headlights in fog.

Other light sources near the sign or between the observer and the sign will tend to obscure the sign by scattered light. This includes not only the overhead lighting, but also unit emergency floodlights such as those attached to exit signs themselves. It even includes the light-emitting apertures that are punched into the undersides of some signs in attempts to light the doorways below. All of these sources of illumination can degrade a sign's visibility through smoke.

Glare from competing light sources can also compromise exit sign visibility in smoke-free conditions. This is especially true with sunlight and daylight. It is therefore important that evacuation routes be planned at the early design stages to ensure successful integration with windows, atria, skylights, and luminaires.

Sign Background and Color

Signs with opaque backgrounds are slightly more visible in smoke than signs with transilluminated backgrounds (1). Many different sign configurations are found throughout North America. The stencil-type sign has luminous legends punched out of opaque backgrounds. Others have white or colored transilluminated backgrounds with black, white, or colored legends. Our research shows that stencil signs have a slight advantage in smoke. The large luminous areas of other types of signs tend to obscure their legends in smoke, as does ambient illumination.

According to our research, sign color is not a major factor in visibility. Australia and many European countries adopt green. Other countries accept different colors as long as the color scheme is consistent within a building. Red and green are commonly found in the U.S. In Canada, red is almost universal.

The human eye is most sensitive to the yellow-green region of the spectrum. Therefore it takes less energy to produce green light than it does to produce red light of the same brightness. But this alone does not justify selecting green signs.

What we see depends not only on the spectral efficiency of the eye, but also on the spectral energy of the light source and the spectral properties of all the media between the source and the eye. Incandescent lamps, the most common exit sign illuminants, produce much more red energy than they do green. This tends to compensate for the limitations of the human eye in the red end of the spectrum.

Our lab conducted an experiment in clear air and in several densities of smoke. Twelve normal-visioned subjects observed red and green signs. The signs were exactly the same luminance and were identical except for their colors. We found no significant overall effects of color: seven subjects did slightly better with red signs, while the remaining five showed a marginal advantage with green signs. We conclude that the effect of color on visibility, if any, is much less than that of sign brightness, ambient illumination, or smoke density.

Color might, however, play an important role in helping to ensure that the sign is noticed in the first place. It should contrast in color with the surface it is mounted on. Likewise, the legend should contrast in color and in brightness with its immediate background.

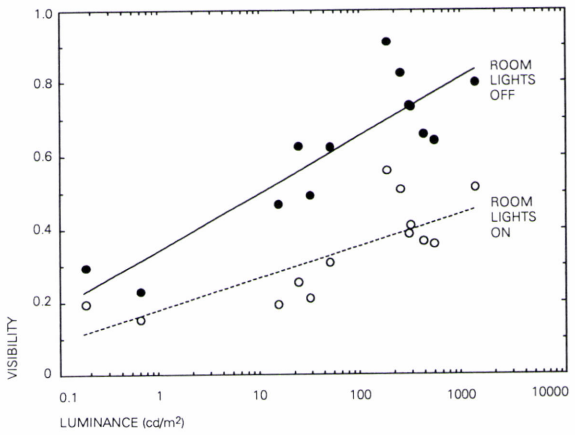
Some believe that North Americans overuse red in signage and that people may dismiss red signs as part of the visual clutter of urban spaces. Others argue that we are especially more likely to notice red exit signs because that's what we're conditioned to. Yet others disagree, saying we may interpret red to mean danger rather than the permission that we usually associate with green. More research is required to settle the debate. Meanwhile, I admit to noticing particularly the wild purple exit signs used throughout one building in Orlando, Florida.

Sign Placement: High vs. Low

Some argue that signs should be placed low on walls because the smoke density is lowest at floor level during the early stages of fire. As a bonus, low signs might be less affected by overhead luminaires which tend to obscure the signs when smoke is present.

However, F.R.S. Clark, who has written on sign visibility, warns that smoke density is not always lowest near the floor. As fire gases cool, smoke sinks and eventually fills the space. He also reports that smoke can be forced evenly through rooms by forced ventilation systems and that it can be pushed downwards by the action of water sprinklers. In these cases, low signs may offer little advantage. In addition, they might suffer from increased risk of wear and tear as well as blockage by people and other movable objects at floor level.

While there is merit to low signs, they are usually recommended as supplements rather than alternatives to conventionally placed overhead ones.



4 *Visibility of 13 different exit signs in smoke, after Rea, Clark and Ouellette. Visibility is expressed as the minimum quantity of smoke needed to obliterate the sign. The figure shows that, in general, brighter signs tend to be more visible than dimmer ones. Variability in the data implies that other factors, such as lettering height, inter-character spacing, contrast, and glare also come into play. Sign visibility is consistently greater in darkness compared with when the room lights are at emergency lighting levels.*

Supplemental low signs are presently required in some jurisdictions, such as California.

Reliability of Exit Signs

Exit signs should be dependable. We are currently analyzing the data from 1,165 questionnaires completed by building owners in a survey initiated by Dave Gilbert of Don Gilbert Industries. Questions included "How often do you perform routine maintenance checks?" and "What is the approximate percentage of signs that need attention as a result of your maintenance checks?"

The results indicate that the more frequent the exit sign maintenance checks, the greater the probability that any given sign will pass the inspection. For example, without a routine inspection program, there is no more than a 45 percent chance that at least 90 percent of the signs will be working properly. However, if inspections are performed at least once a month, the chances increase to 75 percent that at least 90 percent of the signs would pass.

There was also an indication that long-life light sources improve reliability. For example, the probability was less than 62 percent that at least 90 percent of the incandescent exit signs would pass the next maintenance check. With long-life L.E.D. sources, the chances increased to 77 percent. Fluorescent sources fell somewhere in between.

Reliability was lowest (56 percent probability that 90 percent of the signs would pass) when many different types of signs were in use. This highlights the complexities of maintaining incompatible products. Likewise, reliability decreased as the number of signs in the installation increased.

To architects, this means that identical signs should be used throughout the project wherever possible, especially in large installations. This not only simplifies maintenance, but it increases the chances that the signs will operate. As a bonus, it assists occupants by providing continuity throughout their routes.

The research also suggests that architects should encourage their clients to maintain a suitable maintenance schedule for the signs and indeed all key components of the building. The schedule might take the form of an "owner's manual" that outlines the owner's responsibilities in ensuring that the building continues to function as safely, efficiently, and effectively as originally conceived.

Impact on Design

In building design, exit signs are frequently considered after the fact, according to L. Monroe,

who has written on the impact of lighting on building budgets. Inevitably either costs go up or quality goes down.

The solution is to consider exit signage from the very beginning of the project. This helps ensure that sufficient resources remain available for achieving the necessary balance between local code requirements, client needs, and occupant safety. It also helps ensure that the evacuation system integrates effectively with all aspects of the design.

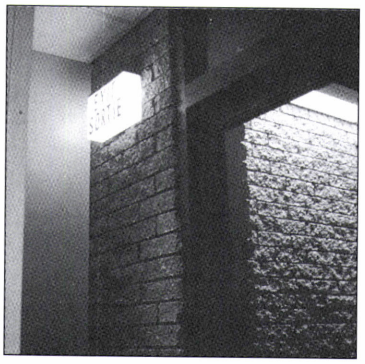
Some may feel that if signs conform to the codes, the architect's responsibilities end there. But the reality is that the codes have not completely caught up with the latest research on emergency egress. Architects should ideally consult this technical information and reach beyond the codes to provide the safest possible building interiors within their means.

After all, what greater professional responsibility does an architect have than to ensure the safety of occupants?

Michael Ouellette ■

The author is a senior technical officer with the National Research Council Institute for Research in Construction in Ottawa, Canada, and carries out research in lighting, visual performance, energy conservation, photometry, and ergonomics. He is active in technical committees of the IES, IEEE, CIE, and the Canadian Standards Association.





5, 6 *An exit sign partially concealed within an alcove formed by a new wall featuring the bulletin board. The photograph was taken in a jurisdiction that permits the placement of signs to the left of doors. The narrow, obstructed, ill-defined exit route is a problem but the high brightness of the sign would boost visibility in smoke. However, light from the fluorescent luminaire directly above the sign would greatly reduce the sign's visibility in smoke. The close-up view of the sign reveals that the lettering height and inter-character spacing were compromised at the expense of visibility, especially when viewed from a distance, viewed by a visually impaired person, or viewed through smoke.*

Legends and Arrows

Text on exit signs should be as large as possible and the spacing between the characters should be reasonably wide. Many codes specify minimum letter height. Few discuss inter-character spacing. Consequently, there exist signs with narrow characters crammed into the smallest space possible.

These signs might suffice for people with visual impairments when viewed from a close distance in conditions of clear air. But knowing that our visual skills decline as we age, we cannot assume that this kind of sign will be equally suitable to older people and to others with visual impairments. Regardless of our visual skills, we can expect these signs to be less visible than well designed ones, especially when viewed from large distances. We can also expect them to disappear sooner in smoke.

Pictograms might offer a more reliable alternative to text, especially to foreign building occupants. B.L. Collins and N.D. Lerner of the U.S. National Institute of Science and Technology studied a wide range of pictograms and observed that none is completely immune to misinterpretation.

The U.S. recently saw considerable interest in determining the optimum configuration for arrows. Collins concludes that the chevron style of arrow is the most visible and that it should be at least 2 1/4 inches high to be visible from 100 feet.

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"The Behaviour of People in Fires," P.G. Wood, *Fire Research Note*, No. 953, Building Research Establishment, Fire Research Station, Borehamwood U.K., November 1972, 113 pp.

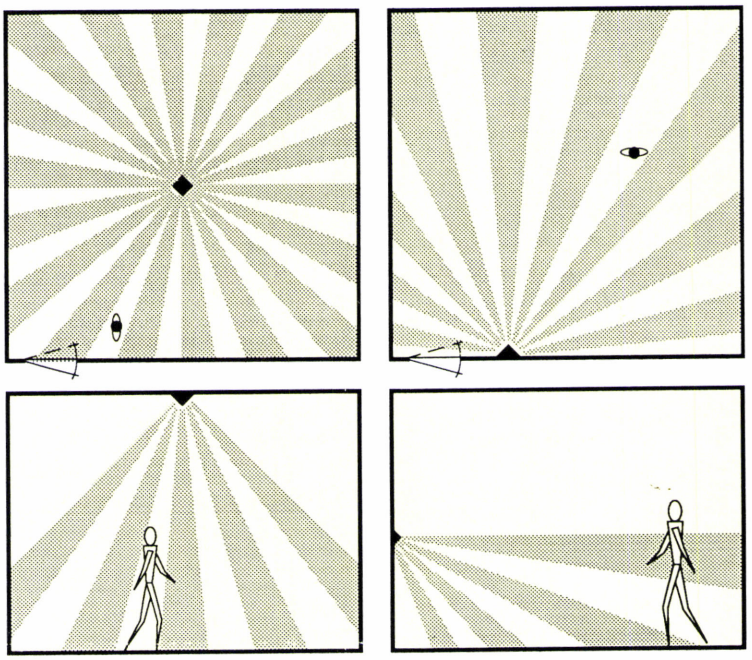
"New Directions for Signage," L. Monroe, *Buildings*, March 1989, pp. 72–74.

Note: Individual copies of papers published by the IES may be obtained from the Illuminating Engineering Society, New York (212) 705-7611. Copies of the U.S. Government papers are available through the U.S. National Technical Information Service, Springfield, Virginia, (703) 487-4660). Copies of all papers are available from the Canadian Institute for Scientific and Technical Information, Ottawa (613) 993-1585.

Lighting specialist **Dorene Maniccia** discusses the technology of occupancy sensors and their proper use.

Abstract

In many buildings, occupancy sensors are used in lieu of manual switches for lighting because they are economical, easy to install, and, if properly specified and applied, energy saving. The most appropriate applications for sensors are in spaces where occupancy patterns are intermittent or unpredictable. Manufacturer-reported case studies for office buildings show savings of 25 to 75 percent and estimate payback periods of one and a half to three years for occupancy sensors. This article discusses the technical characteristics of these products, including occupancy sensor technologies, operational features, placement, types of products available, maintenance, false triggering, and lamp-life issues.



1 *Infrared occupancy sensors contain at least one pyroelectric detector located behind an infrared transmitting lens. The lens is usually vertically segmented and often contains smaller lens etchings within each segment. This lens design results in horizontal and vertical "fan-" shaped detection zones as illustrated in this figure. The sensor responds to motion across these zones, and must detect motion across one or more zones within a specified time period to keep the lights on.*

Technologies

The primary technologies used in occupancy sensors include passive infrared, ultrasonic, and a hybrid that combines passive infrared and ultrasonic technologies. Regardless of the technology used, occupancy sensors are motion sensing devices and they perform three primary functions: they turn the lights on when a room is entered, keep the lights on while the room is occupied, and turn the lights off when the room is unoccupied.

Passive infrared occupancy sensors. These sensors operate by responding to the motion of infrared energy (or heat) in a space (1). They are "line-of-sight" devices that need an unobstructed "view" of a space in order to operate effectively. If an obstruction such as a bookcase, a computer, or a furniture partition blocks the sensor's view of the occupant, the sensor will not be able to detect motion.

Ultrasonic occupancy sensors. These operate by responding to the change in reflected sound waves caused by a moving object in a space. The sensors use transmitter and receiver technology to send and receive high-frequency (ultrasonic) sound waves (2) above the range of normal human hearing (between 25 kHz and 40 kHz).

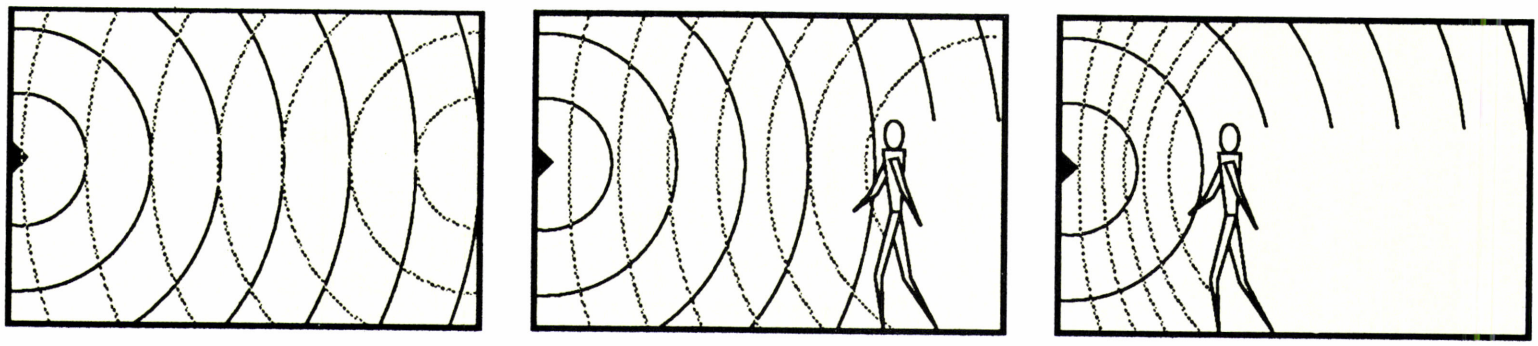
Hybrid occupancy sensors. Such sensors combine passive infrared and ultrasonic technologies in one product. Lights are turned on only when both technologies detect motion, remain on if either technology detects motion, and are turned off only if neither technology detects motion. By requiring both technologies to detect motion before activating the lights, these products may reduce the likelihood that lights turn on when motion or temperature changes are not directly caused by an occupant. And since only one technology is required to detect motion that keeps luminaires on, these products may reduce the likelihood that lights turn off while the space is occupied.

Attributes of Occupancy Sensors

Occupancy sensors have five primary attributes: sensitivity, field of view, coverage area, coverage pattern, and time delay. Some products also have daylight-sensing features. Architects and specifiers need to understand the attributes that characterize the technical performance of the sensor. The installed performance of any occupancy sensor will depend upon its attributes, the room activities, the furniture layout, and the room geometry.

Sensitivity. The responsiveness of the sensor to motion in the space is described as its "sensitivity." Most products have an adjustable sensitivity setting that varies the sensor's response to motion and allows the user to fine-tune the sensor for the activities that occur in the space. The sensitivity adjustment is usually located behind a cover plate to deter tampering with the setting once it's adjusted. Tuning the sensitivity level will affect both the coverage area of the sensor and its responsiveness to motion. Increasing the sensitivity will increase the coverage area, but a very high sensitivity adjustment may result in the sensor's being overly responsive to motion in the space, and the lights may not turn off when the space is unoccupied. Decreasing the sensitivity will decrease the coverage area, but a very low sensitivity adjustment could result in the sensor's being unresponsive to motion, and the lights may not turn on, or may not remain on, while the room is occupied. Thus, the sensor sensitivity should be adjusted for each application.

Field of view. The angle of view of an occupancy sensor is known as its field of view. For wall-mounted sensors the field of view is defined by a horizontal and vertical angle; for ceiling-mounted products, the field of view is defined by a solid angle (3). The field of view determines both the sensor coverage area and the coverage pattern.



2 *A simplified wave pattern in an empty room illustrates the motion detection concepts for ultrasonic sensors. High-frequency sound waves are transmitted from the sensor, reflected from room objects and surfaces, and eventually returned to the receiver located in the sensor. When an occupant enters or moves within the room, the reflected sound wave pattern is altered. The receiver detects the change and turns the lights on. Because ultrasonic sensors transmit energy that essentially fills the volume of the space, they do not require a direct line-of-sight to the occupant.*

Terminology

In the lighting industry, "illuminance" is used to describe the amount of light incident on a surface. According to the Illuminating Engineering Society of North America (IESNA), illuminance is defined as "the density of the luminous flux incident on a surface." (Kaufman, 1984. pp. 1–15). It is expressed in units of footcandles (lumens per square foot), or lux (lumens per square meter).

For some infrared products, the field of view may be adjusted by applying masking materials, such as stickers or special tape, to the sensor. These materials are usually provided by the manufacturer with recommendations for specific uses and applications. Masking the field of view can help ensure that only motion within a certain area is detected.

Coverage area. The physical limits of the sensor's ability to detect motion determine its coverage area. Most occupancy sensor manufacturers publish the coverage areas for the maximum sensitivity setting, although this may not be clearly stated in the product literature. The actual coverage area will depend on the mounting location and the orientation of the sensor in the room, the room geometry, the mounting height, the furniture layout, and the sensor sensitivity setting. Some manufacturers assert that their sensors will maintain detection throughout the published coverage area for certain types of body movements, which are usually discussed in the product specifications and can include small hand motion such as typing, arm motion, and walking. Sometimes more than one occupancy sensor may be required in a space to extend the coverage area, as in the case of a large, open office plan. Manufacturers' recommendations should be followed for these applications.

Coverage pattern. Geometric shapes such as squares, circles, rectangles, or ellipses define the sensor's coverage pattern. These patterns can be vertically or horizontally oriented, depending on the mounting configuration of the sensor. It is important to compare a sensor's coverage pattern with the room's geometry when specifying. A sensor with a long, narrow rectilinear coverage pattern will perform better in a corridor than one with a square pattern. A sensor with a round coverage pattern used in a square room may not cover the corners of the room; a sensor with a square pattern would be more likely to pick up the corners, provided the coverage area and sensitivity setting are adequate.

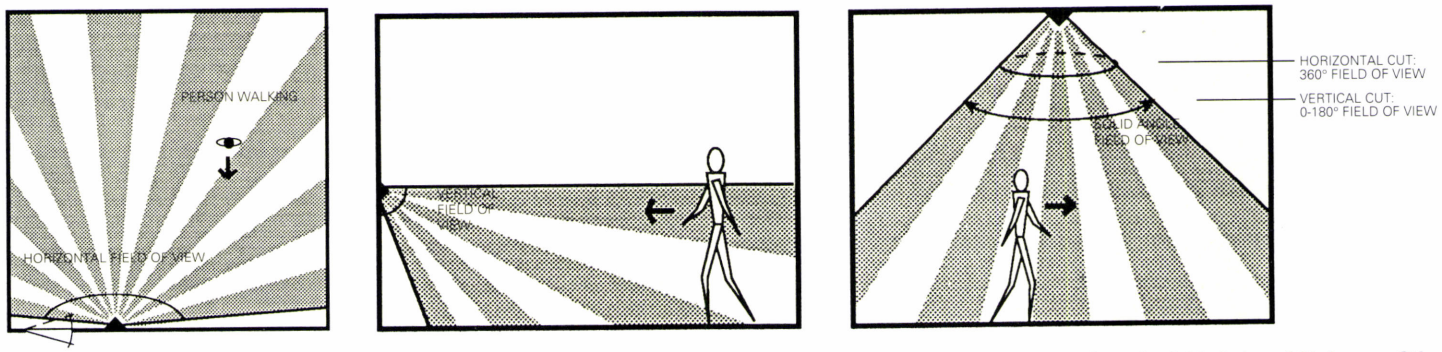
Time delay. This term refers to the amount of time that elapses when no motion is detected before the lights are shut off. An adjustable time delay allows the user to select a time interval when the lights remain on after the space is vacated, although some products have a fixed time delay that cannot be changed. Time delay also prevents the lights from switching off during intervals when people are actually in the room, but move too little or too slowly to be detected by the sensor. If a room is infrequently and only briefly occupied, lighting energy is wasted by setting the time delay for a long period. Conversely, a short time delay may cause frequent switching in a space where people repeatedly enter and exit, such as a copy room, a condition that could drastically reduce lamp life. The time delay setting is usually located adjacent to the sensitivity adjustment.

Daylight sensing. Spaces with abundant daylight do not always require artificial lighting when they are occupied. Therefore, some occupancy sensors include a photocell for monitoring daylight. The photocell monitors the amount of daylight in the space and compares it to a predetermined illuminance. If the daylight exceeds the predetermined illuminance and the room is occupied, the lights are not turned on. The luminaires are turned on only if the daylight is below the predetermined illuminance and the room is occupied.

Mounting Locations

The mounting locations for sensors are at the same height as a typical wall switch, at the center of a ceiling, or in the corner mounted high on the wall or on the ceiling.

Wall-mounted sensors. Standard manual switches or wall dimmers are often replaced with wall-mounted sensors wired directly into the light fixture. Many of these sensors have override capabilities that allow the user to control the lighting manually. Wall-mounted sensors are available with automatic-on/automatic-off, manual-on/automatic-off, two-level-on/automatic-off switching



3 *For wall-mounted sensors, the field of view is defined by a horizontal angle ranging up to 180 degrees and a vertical angle ranging up to 90 degrees. For ceiling-mounted sensors, the field of view is often defined by a solid angle and can be imagined as a cone extending down and outward from the sensor. Manufacturers report field of view for ceiling-mounted sensors in one of two ways. Some cut the cone horizontally and report the resulting circle as the field of view: 360 degrees. Others cut the cone vertically and report the angle at the apex of the resulting triangle as the field of view: 0 to 180 degrees. The latter method gives a more useful description of the field of view, because the first method always results in 360 degrees, regardless of the size of the cone.*

controls, and with manual-on/automatic-off dimmer controls (4, 5).

Automatic-on/automatic-off sensors are the most common type. The unit automatically turns the lights on when motion is detected and off if motion is not detected. These products are appropriate in spaces where total automatic control with no manual override is desired.

Manual-on/automatic-off occupancy sensors, as the name suggests, must be manually operated to turn the lights on. The unit automatically turns off the lights when motion is not detected. These sensors are appropriate in spaces such as perimeter offices where an occupant may choose to leave the lights off when daylight is adequate or when the occupant desires to maintain control of the lighting.

A two-level-on/automatic-off sensor provides control similar to a two-level switching arrangement, which is designed to switch lamps separately within a luminaire to provide multiple lighting levels in a space. The user has the option of selecting manually either a "half-on" or a "full-on" setting on the occupancy sensor. If the "half-on" setting is selected, only half the lamps in each luminaire turn on when motion is detected; if the "full-on" setting is selected, all of the lamps turn on when motion is detected. Alternatively, a two-level occupancy sensor can control different groups of luminaires, again providing multiple lighting levels. In this configuration, "half-on" will turn on half the luminaires and "full-on" will turn on all of the luminaires.

The manual-on/automatic-off dimmer operates in a manner similar to the sensors of the same type, except that it incorporates a dimmer, usually a slide type.

Wall-mounted sensors are easier to install and are less expensive than ceiling-mounted products. For quantities of approximately 100, costs for wall-mounted infrared and ultrasonic sensors range from approximately $40 to $80. But because wall-mounted products are more accessible, they are more susceptible to user tampering than are ceiling-mounted units.

Ceiling-Mounted Sensors

Though ceiling-mounted sensors are available in both surface and recessed mounting options, surface mounting is the most common. The first products introduced were somewhat bulky in size, but newer products are smaller and aesthetically more pleasing (6, 7).

Ceiling sensors are used in areas with coverage area requirements that exceed the capacity of wall-mounted versions, in areas where the connected lighting loads exceed the capacity of wall-mounted versions, or in areas where it is necessary to control multiple lighting circuits. Because access to ceiling-mounted sensors is difficult, such sensors are less susceptible to user overrides and tampering.

Ceiling-mounted sensors are usually wired to a separate control module that is remotely mounted in the ceiling, although for some sensors the control module is integrated with the sensor. When motion is detected, a low-voltage signal is sent by the sensor to the control module, which is wired in series between the lighting load and the sensor. Multiple sensors and lighting circuits can be controlled by one control module (8).

Some ceiling-mounted sensors are designed with one-way, two-way, or three-way detection abilities. These products are usually designed to be mounted in a corner or on the side of a space. One-way sensors are designed to "see" in one direction and are usually mounted near the side wall of a room. Two-way sensors are designed to see in two directions and are usually mounted in the center of a room or a corridor. Three-way sensors are designed to see in three directions and are usually mounted at a corridor intersection. Two- and three-way sensors contain more than one detector to provide multidirectional detection.

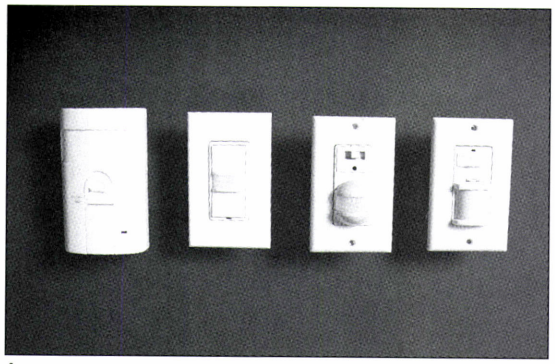
Ceiling-mounted sensors take longer to install and are more expensive than wall-mounted sensors. For quantities of approximately 100, prices for these products, including the control module, range from $90 to $150.

False Triggering

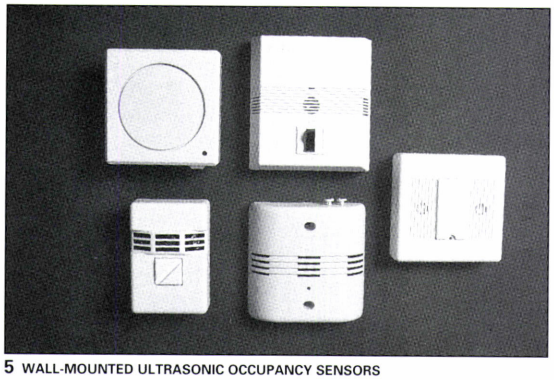
False triggering occurs when the sensor incorrectly turns the lights on or off. This can happen when the sensor is too sensitive to external stimuli, or not sensitive enough to occupancy (see March 1993, p. 84). Lights are inappropriately turned on, for example, if the sensor detects a curtain moved by a breeze or by air circulated by the HVAC system. This is known as a "false positive" event. A "false negative" event occurs when the sensor does not maintain detection in the room, and turns the lights off while the room is occupied. False triggering events can be caused by, but are not limited to, sensitivity to air motion or to vibrations, and insensitivity to minor body motions in a space. False triggering events can be minimized by following the manufacturer's recommendations for locating the sensor, by adjusting sensitivity levels and time delays, and by selecting a product with the appropriate coverage area for the tasks that occur in the space.

Lamp Life and Maintenance

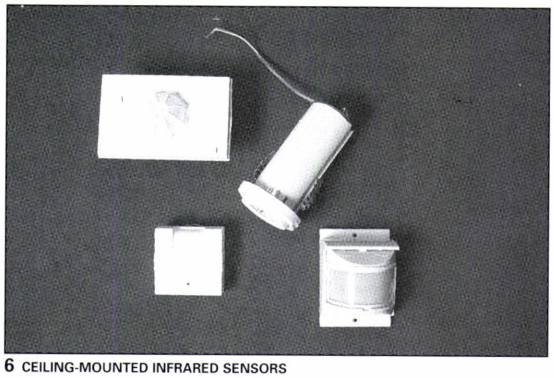
Occupancy sensors are likely to increase the frequency of lamp switching, shortening fluorescent lamp operating life. A typical four-foot-long fluorescent lamp has an average lamp life of 20,000 hours, assuming that the



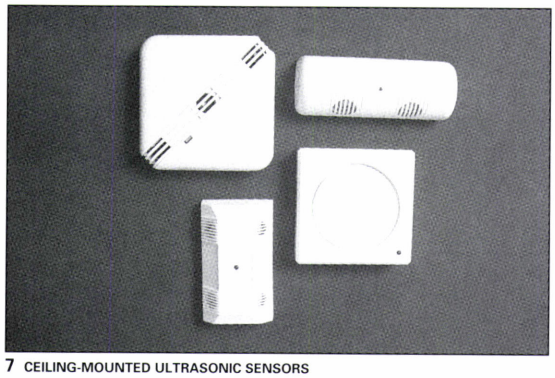
4 WALL-MOUNTED INFRARED OCCUPANCY SENSOR



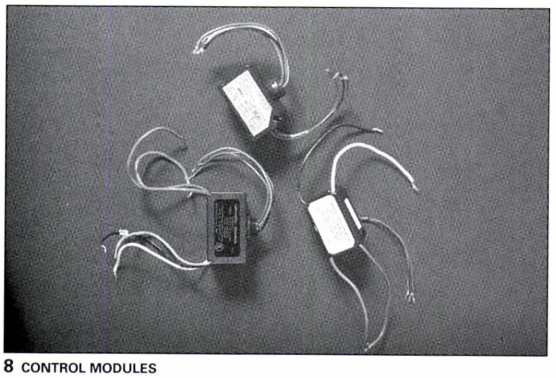
5 WALL-MOUNTED ULTRASONIC OCCUPANCY SENSORS



6 CEILING-MOUNTED INFRARED SENSORS



7 CEILING-MOUNTED ULTRASONIC SENSORS



Photos: Donna Abbott Viahos

8 CONTROL MODULES

lamp will operate for at least three hours each time it is started. If lamps operate less than three hours per start, the operating life will be shortened owing to frequent lamp switching. However, using occupancy sensors should reduce the total lamp operating hours and increase the time between relamping; thus, lamps should not have to be replaced as frequently.

In general, occupancy sensors require little maintenance, although for products where sensitivity and time delay are adjustable, follow-up periodic tuning may be required. Some manufacturers recommend that occupants not adjust the sensitivity and time-delay features. Some sensors, therefore, are designed so that these adjustments are not easily accessible to the occupant.

Dorene Maniccia ■

The author is a lighting specialist at the Lighting Research Center at Rensselaer Polytechnic Institute in Troy, New York, and has written extensively on lighting issues.

Recommended Reading

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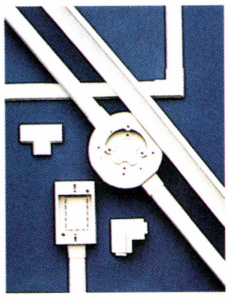
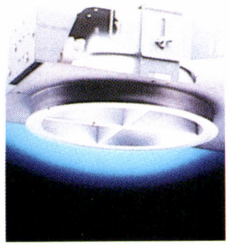
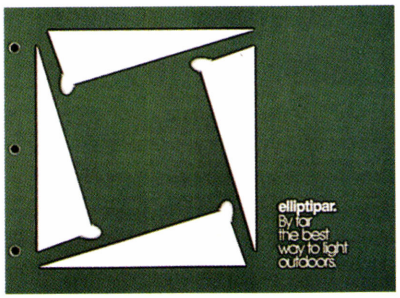
Lighting and Related Products Literature Digest



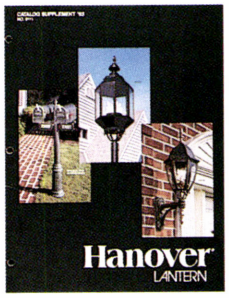
Carlon Electrical Products' new nonmetallic line of Egaline Surface Raceway Systems are designed to accommodate the rapid spread of business automation equipment and the demand for more power, data, and communication wire management. A range of single-channel styles include standard, tapered, self-adhesive, and cornice.
Carlon. Circle No. 351



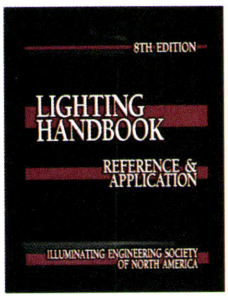
Edison Price Lighting's Duplex®-DM and Super Baflux®-DM, the first dimmable compact fluorescent fixtures, save energy even when they are not dimmed. Both use a solid state electronic ballast that is 25 percent more efficient than a conventional magnetic ballast. Both fixtures can be dimmed down to the five percent level and are appropriate for commercial & residential spaces.
Edison Price Lighting. Circle No. 352



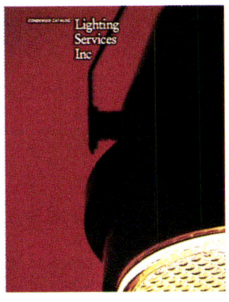
elliptipar® luminaires incorporate compact, high-efficiency asymmetric reflectors to achieve uniform illumination without hot spots, scallops, or striations, and with fewer fixtures. By combining the many styles of luminaires with tungsten, H.I.D., or fluorescent lamps, there's a choice for providing more efficient beam utilization, control, and memorable outdoor lighting designs.
elliptipar. Circle No. 353



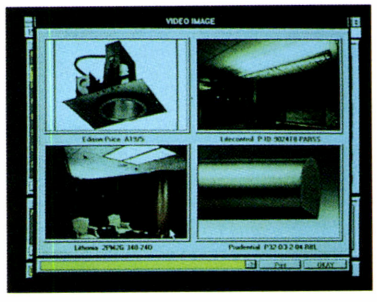
Hanover Lantern's 1993 catalog supplement contains a selection of newly designed cast titanium/aluminum lighting fixtures that feature clear bent beveled glass, solid brass finials, spindles, and candle clusters. A selection of decorative single and multi-mailbox holders, post, and decorative cast titanium/aluminum post base covers are also included.
Hanover Lantern. Circle No. 354



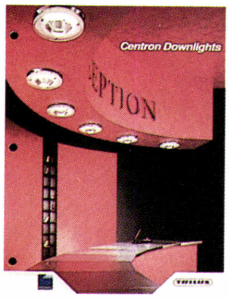
The long awaited new eighth edition of the *Lighting Handbook* includes the 1993 electric codes and regulations; elements of design and the design process; illuminance selection procedures; software for lighting calculations; and a discussion about circadian rhythms, seasonal affective disorders (SAD), jet lag, and retinopathy of prematurity.
Illuminating Engineering Society of North America. Circle No. 364.



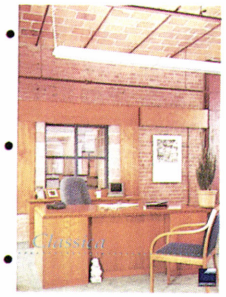
Lighting Services Inc., introduces a new 16-page, four-color condensed catalog summarizing the full line of products. Lighting Services Inc., the world's leading manufacturer of track, acccent, and display lighting systems, is celebrating its 35th anniversary of Commitment to Excellence.
Lighting Services Inc. Circle No. 355



Lumen-Specifier is a Microsoft® Windows™-based lighting design and specification tool. This time-saving program allows the user to search a broad equipment database, evaluate video images, line drawings, and complete specifications, perform photometric and economic calculations, and generate architectural renderings, schedules, and cut-sheets.
Lighting Technologies, Inc. Circle No. 356



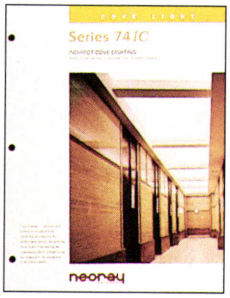
The specular hexagonal faceted reflector in the Trilux-Downlights provide for precise photometric performance. These downlights utilize either one or two 13- or 18-watt compact fluorescent quad lamps and provide excellent light output for a variety of uses. Two lamp positions are available to achieve exactly the photometric distribution required.
Litecontrol. Circle No. 357



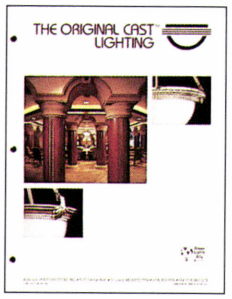
Classica, by Litecontrol blends design & technology. The 13″ × 3½″ fixture, packing two, three, or four T8 lamps or two or four 40 or 50-watt compact fluorescent lamps, is perceptually diminished in size by its lighted perforated sides. For areas requiring low brightness ceilings with VDTs, the advanced reflector system produces high-efficiency lighting and a wide indirect distribution.
Litecontrol. Circle No. 358



Lutron Electronics has published two new brochures that provide information on the operation and applications of its broadened line of Hi-lume® electronic fluorescent dimming ballasts. Hi-lume ballasts feature true, architectural-grade dimming from 100 to 1 percent light (5 percent for T-5 lamps), with silent, flicker-free operation at any level.
Lutron Electronics Co., Inc. Circle No. 366



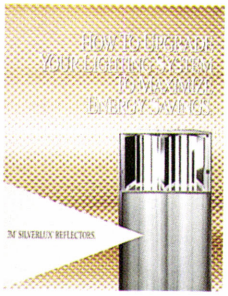
Neo-Ray Series 74IC shadow-free indirect cove lighting. Achieved by computer aided optical reflector design, this family includes luminaires for T12, T8, and Biax lamps. A three-part optical system provides optimized light distribution with peak candela values between 125 and 135 degrees above nadir for maximum throw. The design eliminates socket shadows.
Neo-Ray. Circle No. 359



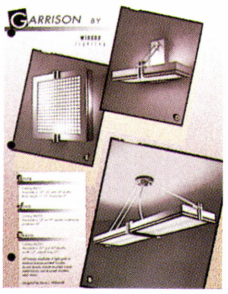
When you need something different, or special in classical or semi-classical lighting fixtures, The Original Cast Lighting company has become *the* choice. Our 'classic technology' assures you excellence in design, craftsmanship, quality, material selections, and energy conservation. Function and design are blended together for perfect appearance and performance.
The Original Cast Lighting. Circle No. 349



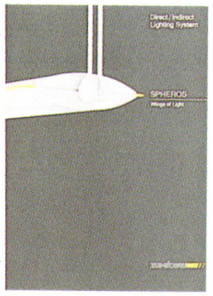
Sterner Lighting Systems, Inc., showcases a broad selection of quality lighting systems. This brochure features Sterner's Roadway/Area lines Softform®, elements®, and Classics, Infranor® Precision Floodlighting, Custom Lighting, Controls, and the Northern Light Division. Sterner manufactures high performance lighting and control products in Winsted, MN.
Sterner Lighting Systems, Inc. Circle No. 360.



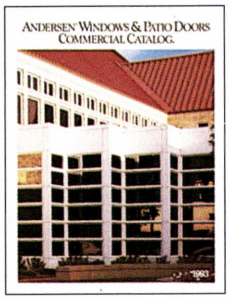
Silverlux reflectors can make lighting systems highly efficient and energy saving. As many as one-half of a facility's fluorescent lamps can be removed while maintaining optimum lighting levels and a fully lamped look. One-half the lamps mean one-half the energy costs, reduced heat build-up, and lower operating costs.
3M Construction Markets. Circle No. 361



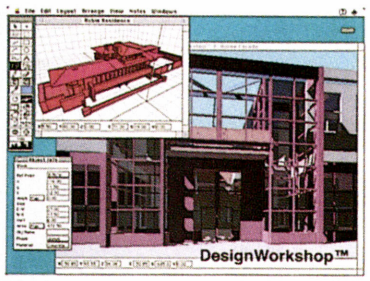
The Garrison series from Winona Lighting includes one pendant and two wall bracket styles. Common design elements include an extruded aluminum fixture body, perforated metal, and machined muntz block detail. Garrison comes in light gold and medium bronze painted finishes. The standard light source is Sylvania Octron lamps. Custom lengths and finishes are available.
Winona Lighting. Circle No. 362



The SPHEROS family is an exciting range of individual luminaires and linear lighting systems for surface mounting or ceiling suspension. SPHEROS is a direct/indirect lighting sytem that was designed for architects and designers concerned with aesthetics. SPHEROS, with its wide range of accessories, demonstrates outstanding optics for high photometric performance.
Zumtobel Lighting, Inc. Circle No. 363.



Detail drawings, color photographs, specifications, size tables, technical data, and descriptions of all Andersen windows and patio doors for nonresidential applications are included in this 92-page catalog. To create large Andersen Feature Windows for nonresidential applications, information on Andersen Reinforced Joining Material is also included in the catalog.
Andersen Corp. Circle No. 365



DesignWorkshop™ is an intuitive 3D modeler for architects. Sketch in live 3D perspective, developing your design seamlessly from massing to spatial and detailed models. Graphically create, move, and reshape objects. Quickly produce plan, elevation, pochéd section, and perspective drawings; shaded and shadow-cast renderings. Animate walkthroughs, sun studies.
Artifice, Inc. Circle No. 367.

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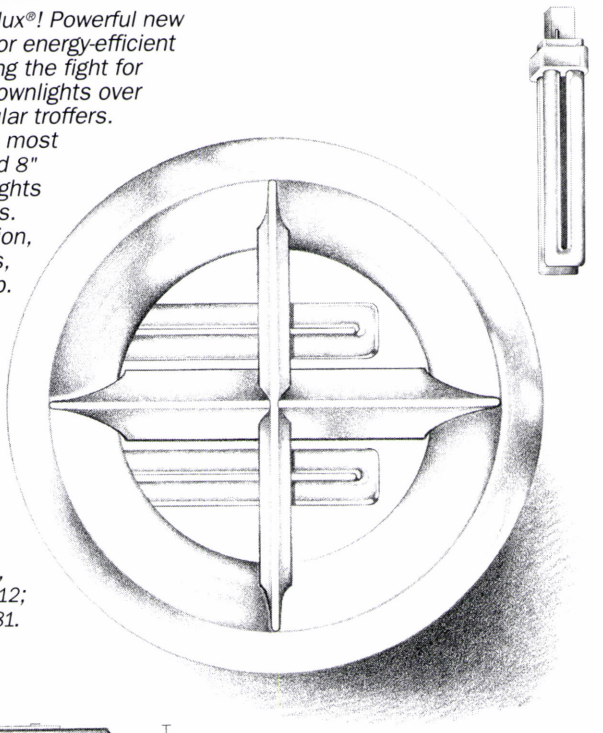
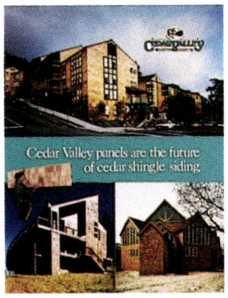
It's Super Baflux®! Powerful new fluorescents for energy-efficient offices. Leading the fight for small round downlights over large rectangular troffers. The industry's most efficient 7" and 8" baffled downlights for quad lamps. Even distribution, low brightness, only 4¾" deep. Dimming and emergency options. Super Baflux: superheroes among our ***Standards****. For more information and the name of your local representative, call 212-838-5212; fax 212-888-7981.*

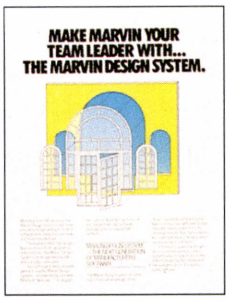


EDISON PRICE LIGHTING
ARCHITECTURAL LIGHTING AT ITS BEST

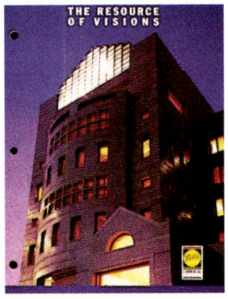
Circle **No. 328** on Reader Service Card



The future of cedar shingle siding is the theme of Cedar Valley's new brochure detailing the panelized exterior siding system. Included are specifications, product descriptions and illustrations, finishing and application information, and nearly four pages of color photos of significant projects by leading architects using conventional and Decorator shingle panels.
Cedar Valley Shingle Systems. Circle No. 368



New from Marvin Windows & Doors, the Marvin Design System is the most complete design and specification software available from a window and door manufacturer. To meet the needs of the entire design team, the system can be operated by both CAD- and non-CAD users. The program runs with Microsoft Windows, AutoCAD, and DXF systems.
Marvin Windows & Doors. Circle No. 370

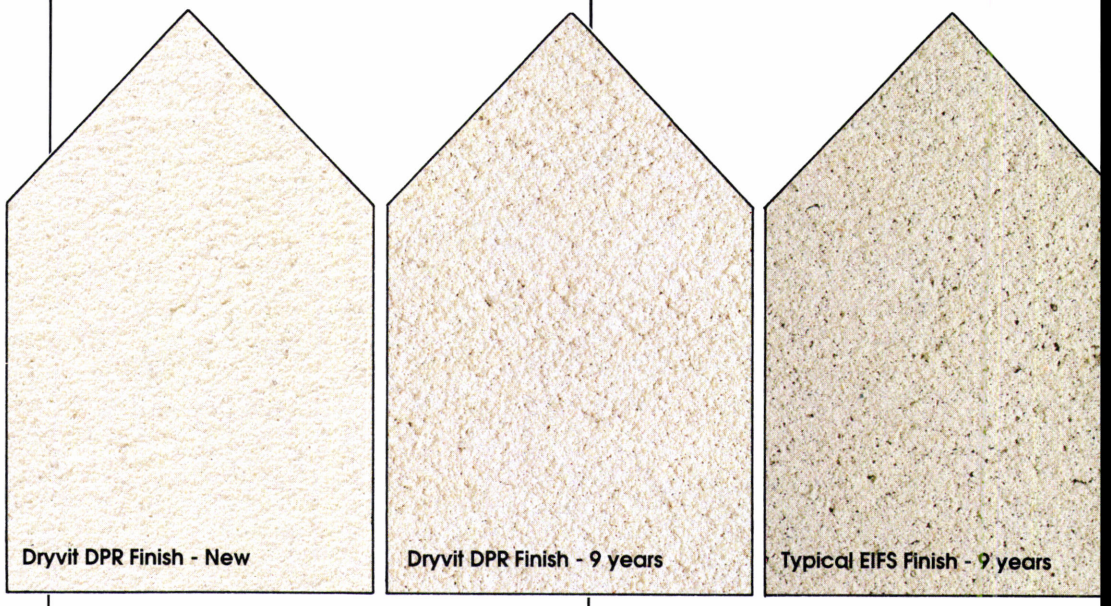


The Pella® *Resource of Visions* brochure is designed to highlight Pella windows, doors, and other products offered for commercial applications as well as the various services available to support these products.
Pella Windows & Doors. Circle No. 371

GIVE AIRBORNE DIRT THE

Dryvit Outsulation with Dirt Pickup Resistant chemistry — even after years of exposure, it's the system proven to keep its new look longer.

Twenty-three years ago, Dryvit introduced the first exterior insulation and finish system in the United States to meet the stringent demands of architects, builders and owner/developers. Today, the innovation in Dryvit Outsulation® continues with the development of Dryvit DPR finishes (**D**irt **P**ickup **R**esistant), a proven finish formulation which actually resists the pickup of dirt and other airborne pollutants.

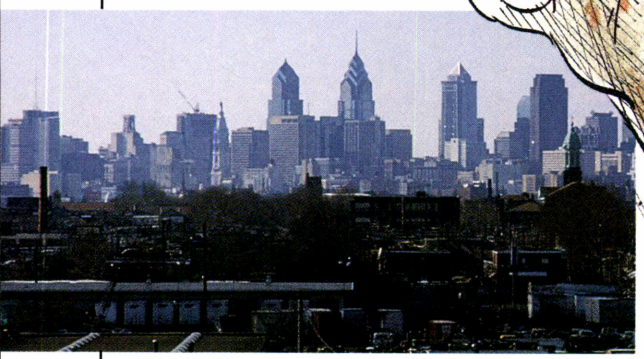


Unretouched photography illustrates the effectiveness of Dryvit DPR finish — even after 9 years of harsh exposure to the elements.

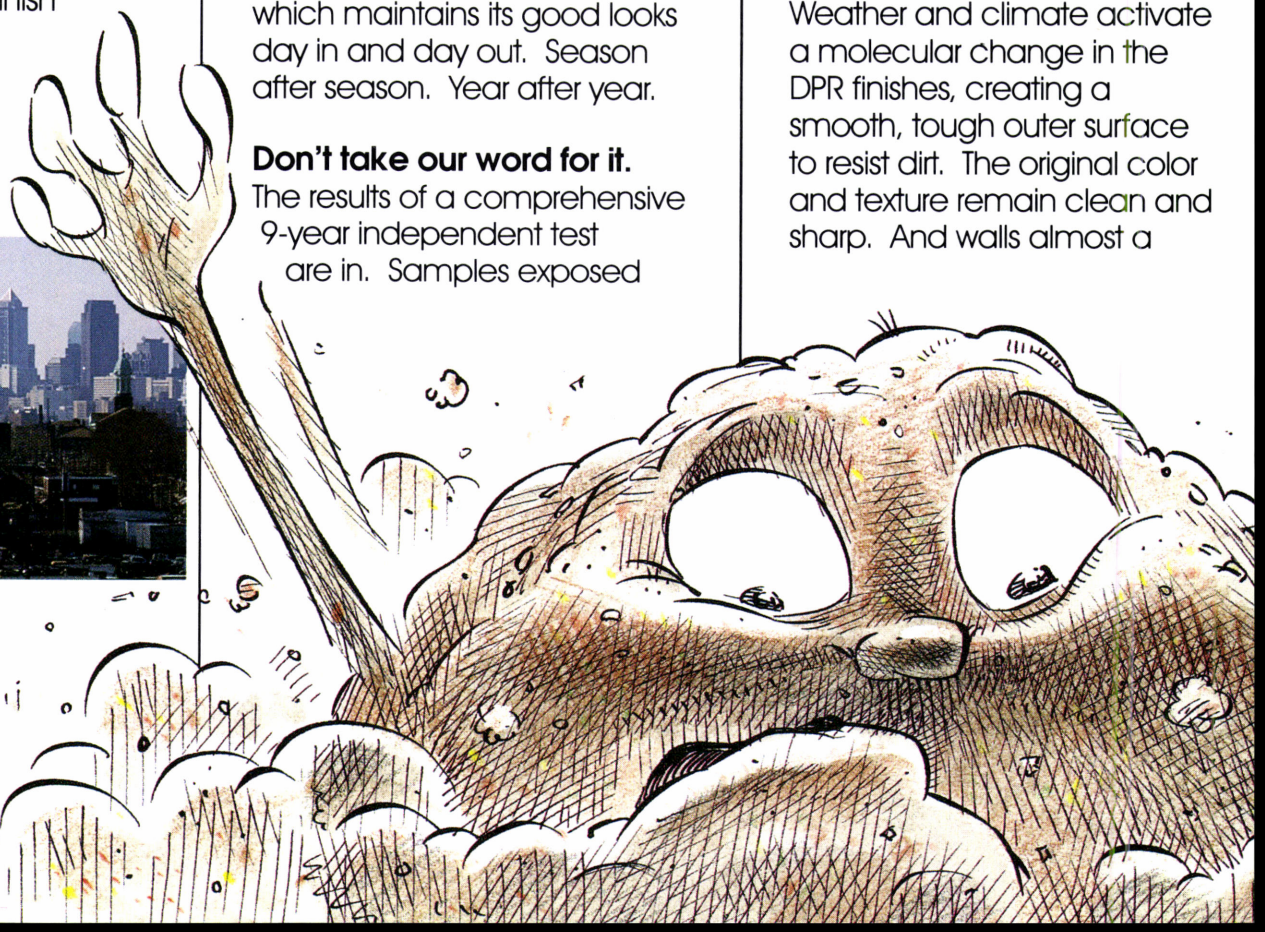
And a cleaner finish will be less prone to the growth of mildew, which thrives on dirt. The result is a durable textured finish which maintains its good looks day in and day out. Season after season. Year after year.

Don't take our word for it.
The results of a comprehensive 9-year independent test are in. Samples exposed to a typical high pollution environment around a large urban area dramatically illustrate how well Dryvit DPR chemistry works.

Weather and climate activate a molecular change in the DPR finishes, creating a smooth, tough outer surface to resist dirt. The original color and texture remain clean and sharp. And walls almost a



Test location: A major U.S. industrial area.



100% ACRYLIC POLYMER

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FINISH IT DESERVES.

decade old practically look like they were applied yesterday. The proof is in the pictures.

And if mildew is a significant problem. . .
If you live on the water's edge or in a mildew-prone environment, Dryvit invites you to consider the new Dryvit Medallion Series of finishes that includes state-of-the-art mildew resistant technology, as well as DPR technology, developed to meet these conditions.

If you think you know everything about Dryvit performance, you haven't even touched the surface.
Architecturally-inspiring, energy-saving, cost-effective Dryvit Outsulation has long been the exterior insulation and finish system of choice. In fact, Dryvit's 100% acrylic polymer resin has proven itself in over 150,000 installations since 1969. Dryvit's worldwide reputation for quality and technical innovation is further enhanced with DPR finishes that resist dirt and mildew.



Available in a selection of 4 textures (shown clockwise from top left): Quarzputz®, Sandblast®, Freestyle® and Sandpebble®

Call 1-800-4-DRYVIT for an even closer look today.
Given all the proven advantages of Dryvit Outsulation, it only makes sense that you demand the best. Specify Dryvit's DPR finishes and keep your buildings cleaner longer.

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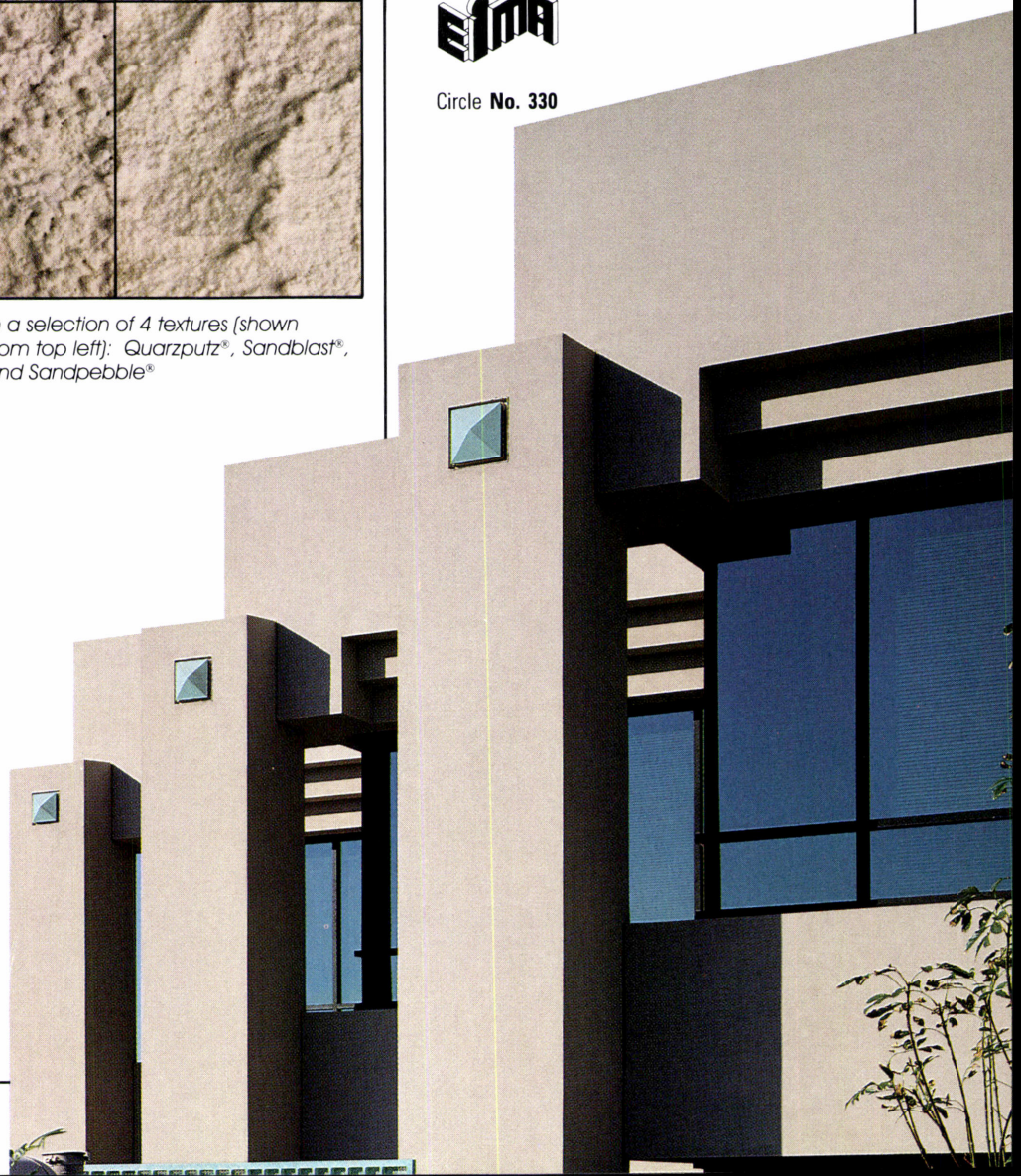
The Difference You Can See.

EIMA

Circle **No. 330**





It's no illusion AutoCAD use
But don't get



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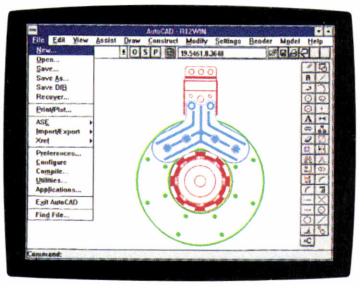

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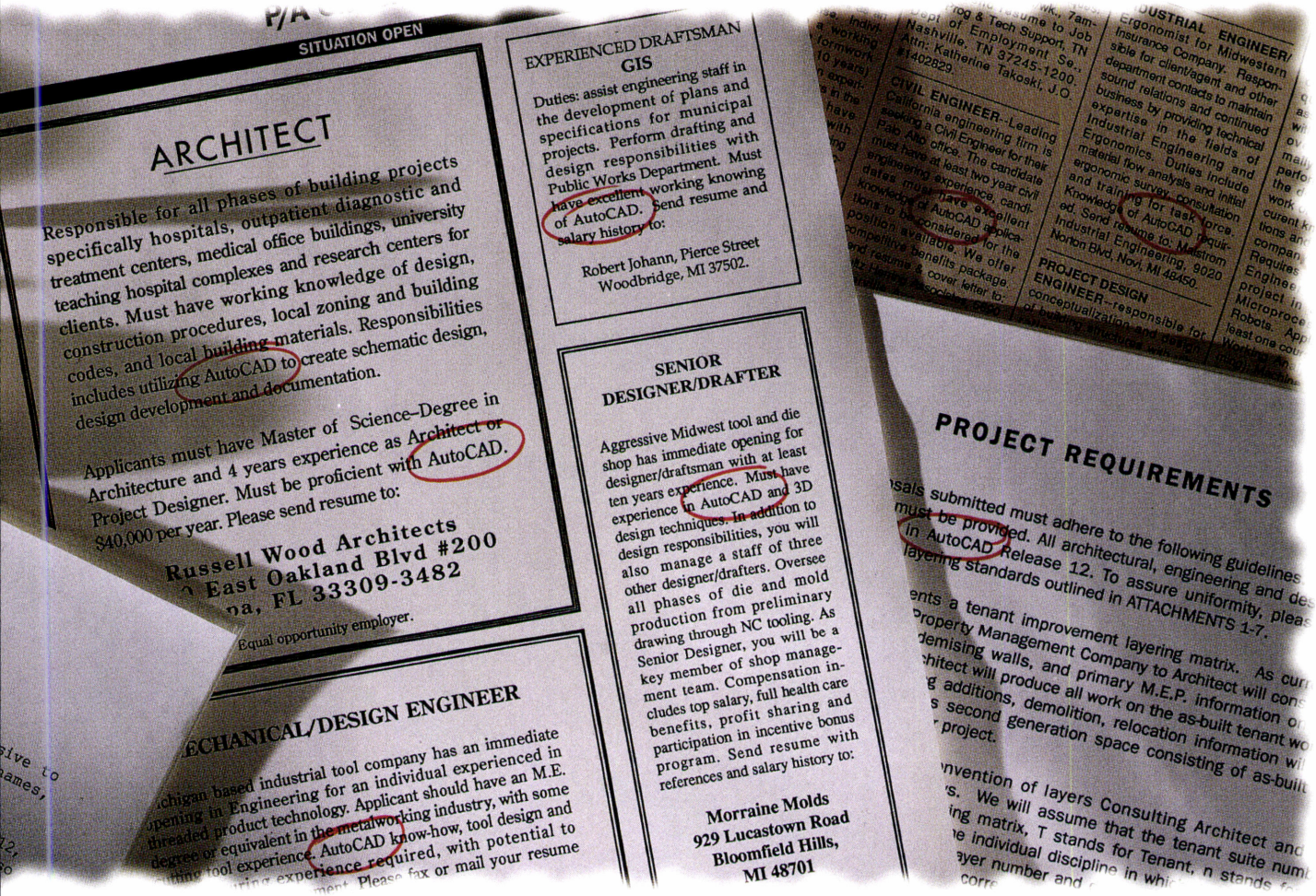
rs have an unfair advantage. mad, get even.



But that's just scratching the surface. The more you use new AutoCAD for Windows software, the more powerful it becomes. *Gradually, you'll find yourself producing two, three, four times as much work as you do now.* And producing it faster.

That's because AutoCAD for Windows automates the tasks that take up most of your day. For instance, you can link AutoCAD drawings directly to your proposals. As you revise the original drawings, revisions are automatically made in the proposal. All in a fraction of the time it would take you to do it by hand.

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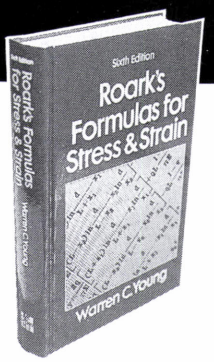


Since 1938 Roark's *Formulas for Stress & Strain* has maintained its position as one of the most widely used engineering reference works in the world. Now 37 tables, over 1400 cases and more than 5000 formulas from the new 6th Edition of this book are combined for the first time with the power of TK Solver software

The program covers the entire 6th Edition of the book • Provides stress and strain solutions for beams, plates, columns, and pressure vessels • Handles superposition of loads • A set of unit conversions and an expandable materials library are included • Program menuing system helps you select the particular chapter, table and case from the book • Results include plots of cross-section (to scale) bending moment, shear, stress, slope and deflection • Outputs to screen, printer or plotter.

Most importantly — you can solve problems forward or backward. For example: if the calculated deflection of a plate is too great, specify the maximum deflection you can tolerate. Then let the dimension of plate thickness become the unknown, and solve again. This backsolving feature is a designer's dream.

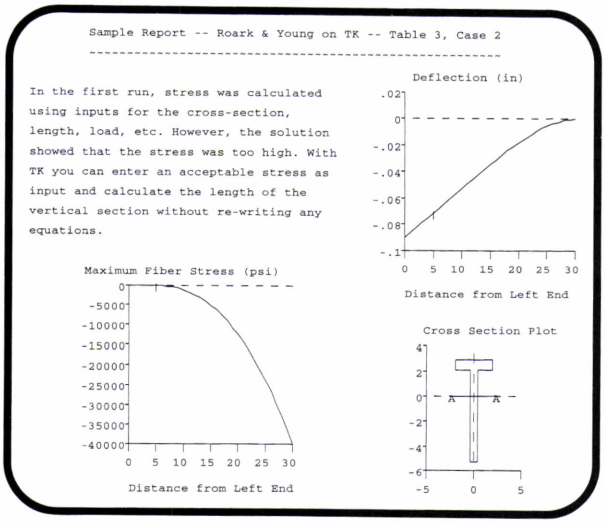
ROARK & YOUNG ON TK $1190

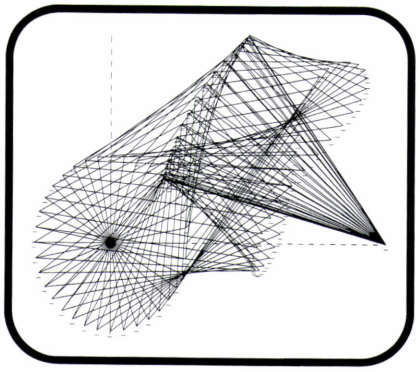
(For the IBM PC family or compatibles, 286 PC/MS Dos 3.2 or greater, 1 meg RAM)

(NOTE! The $1190 price includes TK Solver software (below) and a copy of the new 6th Edition.)

TK Solver 2.0 software . . . $595

Solve dozens of linear, non-linear or differential equations simultaneously • backsolving lets you do "What-if" analysis • iterative solving • list solving • automatic plotting • automatic unit conversion • differentiation and integration • over 100 built-in functions and library routines • math co-processor support • presentation view lets you generate WYSIWYG reports • MathLook feature displays equations in near mathematical notation • keystroke macros with samples • link to many symbolic math packages.





Complete computerized TK Solver 2.0 application modules are available for these useful handbooks:

Blevin's *Formulas for Natural Frequency and Mode Shape,*

Incropera & De Witt's *Fundamentals of Heat and Mass Transfer,*

Tyler Hicks' *Standard Handbook of Engineering Calculations.*

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1992

Wood Design Award Program



Merit Award

Project:
Solar-Heated Earth House
Architect:
Alfredo De Vido, FAIA
New York, New York
Owner:
Richard & Noriko Moore
Structural Engineer:
Paul Gossen
General Contractor:
Richard Moore





Jury:
"This earth house design does not disturb the treed site. It cools efficiently in summer, heats in winter, and remains light and airy. This is an example of honest use of materials."

Oak trees carefully cleared at the hillside site provided the wood for this 2,200-square foot Connecticut berm house. The structure, which faces south, utilizes an overhang above a wall of windows to eliminate summer sun but admit warm low winter rays. A thermal mass stores heat in winter. Skylights in the middle of the roof admit daylight to the portion of the house extending into the hill.

The frame is post and beam construction. Exposed beams at the floor and roofs are covered with wood decking. Interior wood beams and decking are also exposed. The floor plan consists of an entry, master bedroom, guest suite, living room, kitchen, dining room, studio, and porch.



Photographs: Norman McGrath

Special Advert

American Wood Council

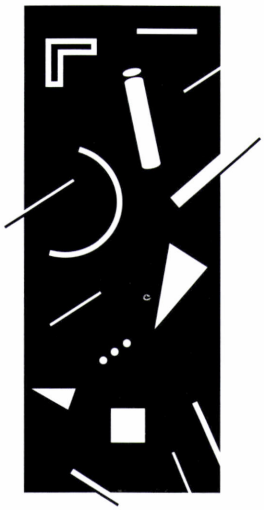
1992

Wood Design Award Program



Eight outstanding building projects were honored in the American Wood Council's 1992 Wood Design Award Program. The winners, several with challenging site constraints, demonstrated both economy of scale and imaginative uses of wood.

Seven residential projects and one church were chosen for awards from among 193 entries. Three projects received Honor Awards, three received Merit Awards, and two projects received Citations.



The winning designs range in architectural style from "medieval modern" through the roaring twenties to contemporary nature-hugging structures.

"These selections represent an eclectic collection very symbolic of 1990's resource awareness," the jury noted.

The seven winning residential projects consist of a solar-heated earth house in New England, an addition to a 1919 Sears kit-built house in the nation's capital, a northwest forest-island retreat, a portable shelter for the homeless, a colorful midwestern writer's studio, an arboretum-sited contemporary house, and a whimsical Ozark forest clubhouse. The barn-like design of the church, located in rural Sonoma County, was praised by the jury for transforming ordinary wood and light into a moving spiritual experience.

The American Wood Council congratulates the winners, whose exceptional buildings are illustrated on the following pages. We wish to thank the jurors for their reasoned, thoughtful review of the entries and the participants who took the time to enter the twelfth annual Wood Design Award Program.

The Wood Design Award Program, conducted annually, is sponsored by the American Wood Council. To celebrate the program's twelfth year, we are proud to present the award-winners in this special section of Progressive Architecture.

A program description, guidelines, and entry information for the 1993 program are included on the business reply card which follows this section.



"Wood is a warm, sensual material, a primary architectural element which defines the character of the project, as shown by these submissions."

Andrea Oppenheimer Dean
Architectural Critic and Journalist
Washington, D.C.

"Most of the submissions as well as the winning projects demonstrate that the excesses of the 1980's, with their waste and over-emphasis of materials, are rapidly diminishing."

Susan Maxman FAIA
Susan Maxman Architects
Philadelphia, Pennsylvania

"We need to appreciate and control vital resources such as wood. Many of the solutions this year represented a less than judicious use of this valuable resource. But those that were chosen for commendation exhibited a superb respect for, and understanding of, the qualities of wood and its flexible ability to serve the most lofty and humble needs—from the spiritual to the most basic survival necessities."

Michael Pyatok AIA
Pyatok Associates
Oakland, California

"Fortunately, since we are all concerned environmentally about wood and the limits of resources, there is a perceptive and growing decline in the extravagances of the 1980's. We must appreciate and use wood very carefully because this material tells you more than plaster or gyp board, which makes it a very valuable building component."

George Homsey FAIA
Esherick Homsey Dodge and Davis
San Francisco, California

Honor Award

Project:

Arboretum-Sited Contemporary Northwest Island House

Architect:

James Cutler Architects

Bainbridge Island, Washington

Developer:

The Arbor Fund

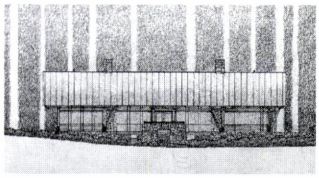
Structural Engineer:

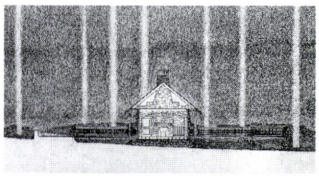
KPFF Consulting Engineers

General Contractor:

Charter Construction, Inc.







Jury:

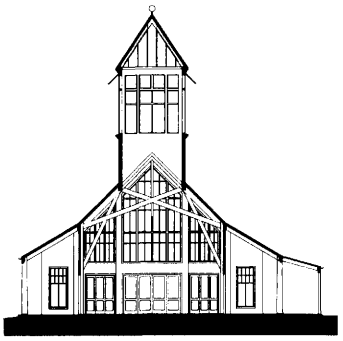
"All of the elements, including the furniture, have been carefully thought out for this unique site plan. We would not change anything in this incredibly rich, yet simple and calm atmosphere."

Photographs: Art Grice

A grove of Douglas fir in a semi-public arboretum is the site of this 1,400-square foot heavy timber contemporary island house. The building provides a view of a reflecting pool and grave site beyond an adjacent green meadow. An entry walk on axis with the grave site extends through the entire house to a viewing deck overlooking the meadow and pool.

In the future, the building will be converted into a small education and visitor center. Therefore, interior space is divided into a flexible central living/dining/kitchen area which will become a lecture room, and two bedroom suites which will be visitor's quarters.



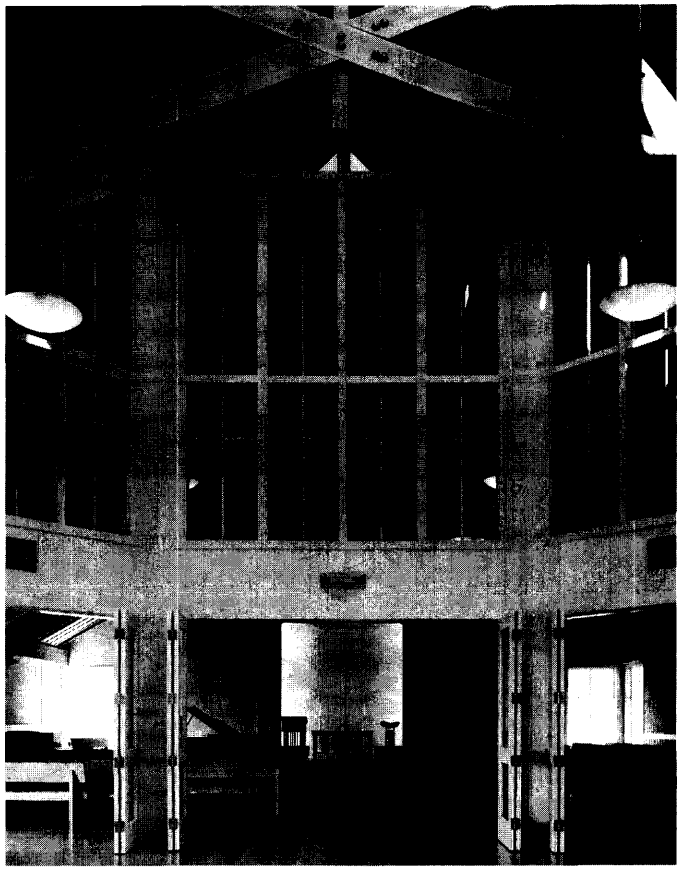


Honor Award

Project:
Barn-Like Church
in Rural Sonoma County
Architect:
William Turnbull Associates
San Francisco, California
Owner:
St. Andrew Presbyterian Church
Structural Engineer:
MKM Associates
General Contractor:
Nonella Construction

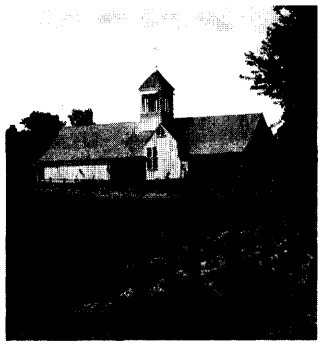
Traditional wood buildings found throughout agricultural Sonoma County determined the barn-like design of this church. The 12,000-square foot structure, sited on a gently sloping six acre parcel, features a generous sanctuary, narthex, and fellowship hall. A high cupola delivers natural light to the octagonal narthex. The sanctuary features lightly stained wood trusses, rafters, and decking.

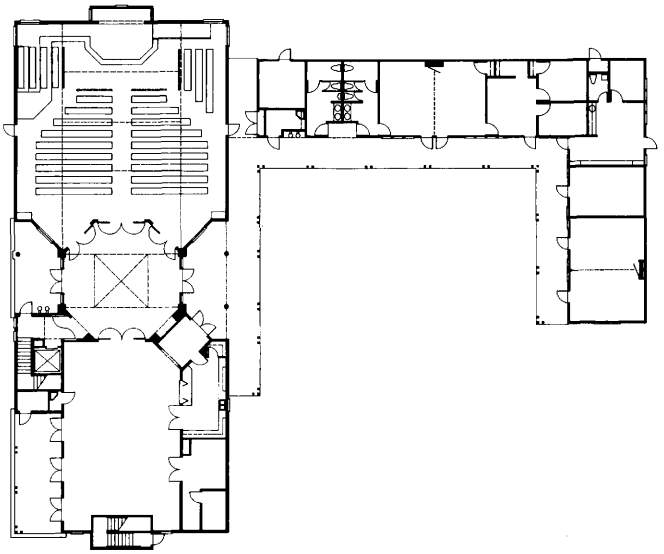
Porches overhang classrooms and offices, which extend along a one story wing enclosing the entry courtyard. The white exterior is covered with painted plywood and battens.

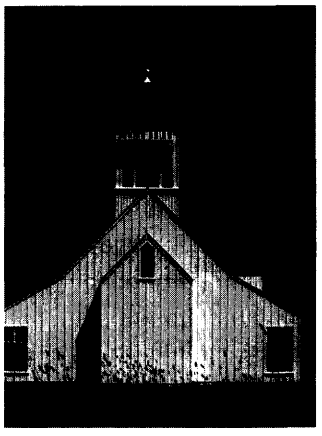


Photographs: Mark Darley/Esto

Jury:
"This is a mature piece of work. All details work together to create a serene quality which continues from outside to the interior. The design, combined with an ordinary material, produces a highly spiritual atmosphere."







Honor Award

Project:

Low Budget Portable

Homeless Shelter

Architect:

Students, School of Architecture,

University of Miami

Coral Gables, Florida

Structural Engineer:

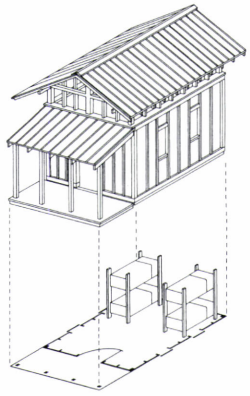
Juan A. Fernandez-Barquin, P. E.

General Contractor:

WAAS Philips Construction

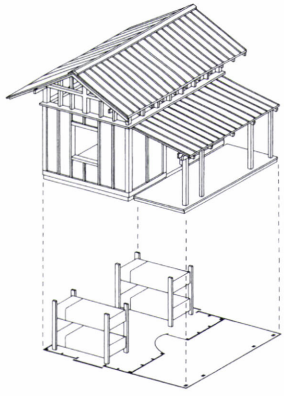


Photograph: Jen Cohen



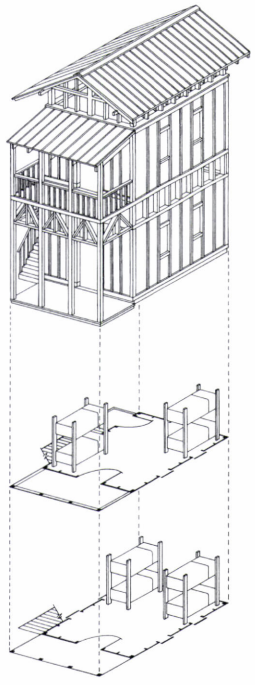
This $2,000 prototype of a 160-square foot portable housing unit is designed for easy assembly with pressure treated wood panels secured by bolts. The exterior consists of plywood with applied battens.

Stained lumber interior walls rest on wood flooring, capped by a sectional roof. Four bunk beds at the rear allow forward living space which can be enlarged with a porch addition. Swing-out screened windows coupled with clerestory and gabled openings along the pitched ceiling deliver natural ventilation.

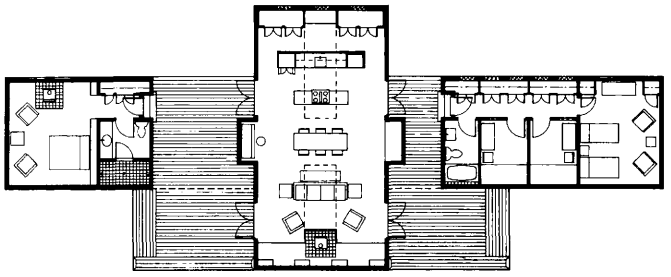


Jury:

"This project is an excellent lesson in sensible planning that delivers dignity in a very modest shelter through architectural design. The unit expresses both the social and professional concerns of these students as exhibited by their firm grasp of sound proportions."



Merit Award







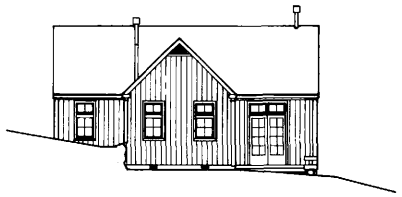
Photographs: Dominigue Vorillon

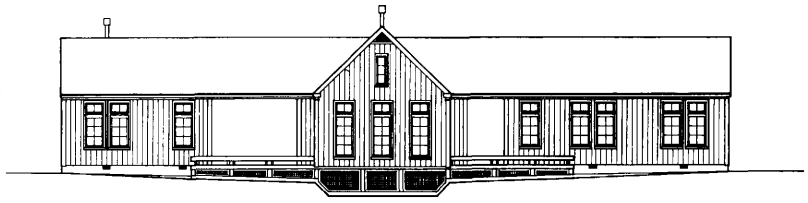
Project:
Scandinavian-Style Waterfront Retreat
Architect:
Thomas L. Bosworth, FAIA
Seattle, Washington
Owner:
David & Virginia Broudy
Structural Engineer:
Ed Lebert
General Contractor:
Constructive Energy

A densely wooded, high-banked site provides seclusion for this 1,750-square foot Scandinavian-inspired waterfront retreat. The cedar-clad structure accommodates a greatroom, a master suite, and a children's bunkhouse set parallel to the topography. Each unit is connected by a porch to retain the view of neighboring islands and provide maximum natural light.

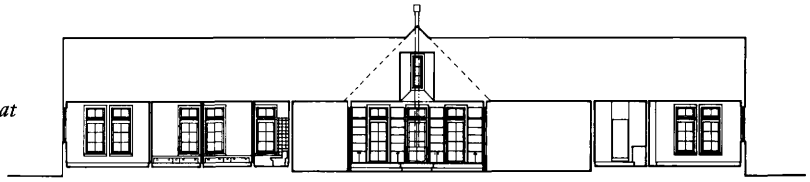
The interior walls are covered with white painted tongue and groove hemlock which highlights warm oak floors and Douglas fir custom doors and windows.

Jury:
"The inside of this house combines a nice mix of painted and non-painted wood, creating a wonderful light quality. Wood adds elegance and simplicity to the structure, and the open design emphasizes daylight, a very important element in a region that experiences many cloudy days."









Merit Award

Project:
Solar-Heated Earth House
Architect:
Alfredo De Vido, FAIA
New York, New York
Owner:
Richard & Noriko Moore
Structural Engineer:
Paul Gossen
General Contractor:
Richard Moore





Jury:
"This earth house design does not disturb the treed site. It cools efficiently in summer, heats in winter, and remains light and airy. This is an example of honest use of materials."

Oak trees carefully cleared at the hillside site provided the wood for this 2,200-square foot Connecticut berm house. The structure, which faces south, utilizes an overhang above a wall of windows to eliminate summer sun but admit warm low winter rays. A thermal mass stores heat in winter. Skylights in the middle of the roof admit daylight to the portion of the house extending into the hill.

The frame is post and beam construction. Exposed beams at the floor and roofs are covered with wood decking. Interior wood beams and decking are also exposed. The floor plan consists of an entry, master bedroom, guest suite, living room, kitchen, dining room, studio, and porch.



Photographs: Norman McGrath

Merit Award

Project:

Addition to 1919 Sears

Kit-Built House

Architect:

McInturff Architects

Bethesda, Maryland

Owners:

Peter & Shaune Miller

General Contractor:

Shorieh Talaat Design Associates



Photographs: Julia Heine

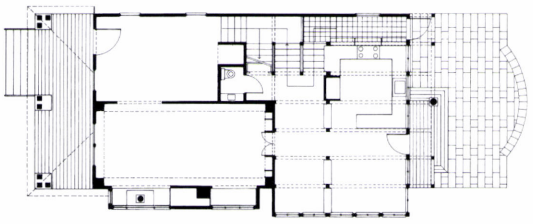


A two-level rear addition enhances the space, detail, and light in this Sears catalog house without sacrificing the simplicity, original order, and unique American character of the structure.

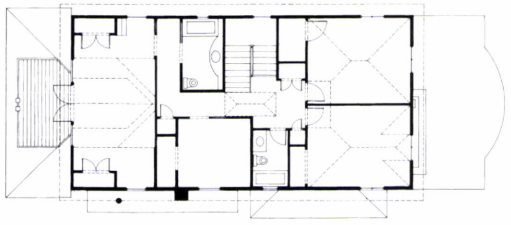
The back of the house was extended at both levels to accommodate a new family-oriented kitchen and two bedrooms above.

Post and beam construction combined with all-around windows in the kitchen area recreate the informality of early twentieth century summer houses. The kitchen ceiling is painted porch beadboard. All new flooring is vertical grain pine. Walls, posts, and beams on both levels are painted soft shades of beige and white.

An expansive arch, columns, and generous window frames painted white provide dramatic detail at the rear of the pale yellow clapboard covered exterior.



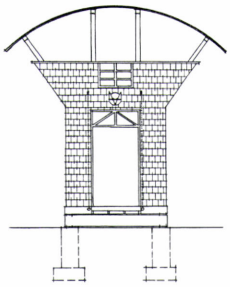
First Floor

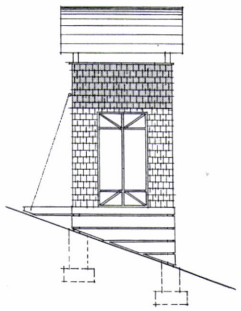


Second Floor

Jury:

"This renovation was planned with great sensitivity. The architect knows the design of the original house and how to use it to build upon. He has taken an ordinary house and made it special."





Citation

Project:

Forest Clubhouse

Architect:

Mackey Mitchell Associates

St. Louis, Missouri

Owner:

John C. Guenther, AIA

Structural Engineer:

Marc Alper

General Contractor:

Guenther family



Photograph: John C. Guenther

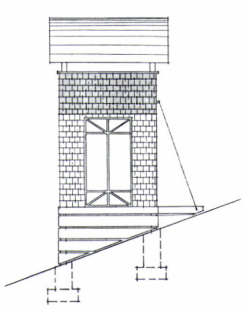
This two-story fort-like clubhouse for kids, whose "security" features include a lookout tower and drawbridge, consists of a cedar shingled shaft and open splayed top set on a base of "copper" green stained skirt boards spaced for ventilation.

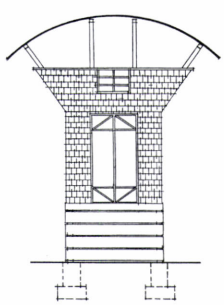
Green-stained plywood sheathing and wood decking were used in the eight-by-eight foot ground level interior, which contains corner seats, large screened openings, and a ladder to the open deck above.

Clear plastic covers a barrel-vault roof for overhead protection on the second floor, which expands to eight-by-fourteen square feet to accommodate two outward projecting reclining seat backs.

Jury:

"This forest clubhouse is a whimsical treatment of the medieval fort. In historical context, the project is similar to the ancient temples, forts, and castles reproduced in 18th century formal French, Italian, and English gardens."







Photograph: Shim Koyama



Photograph: Christian Korab

Jury:

"This design uses color with great skill. The aniline colors blend with the natural colors of the blue lake water, green trees, and bright spring and summer flowers."

Citation

Project:

Colorful Writer's Studio

Architect:

The Stageberg Partners

Minneapolis, Minnesota

Owner:

Susan Toth

General Contractor:

Larry Smith

Bright colors serve to emphasize the design elements of this compact, light-filled studio located on a densely wooded lakeside hill near the main house.

Both the exterior walls of the bluff side and roof of the wood frame are covered with weathered cedar shingles. The rear wall shingles, however, are stained bright blue-green. A purple, red, and gray wood bridge leads to a red door in this wall.

The same dramatic color theme extends throughout the interior, including a blue vaulted ceiling, red window mullions, and purple beams. A natural cedar stairway from the bridge level leads down to the white oak floor interior, where a blue desk surface and windows follow the contours of the exterior curved front of the studio.

For further information about this year's award winners or specific wood applications, contact the American Wood Council or the appropriate affiliated member association:

American Wood Council/
American Forest & Paper Association
1250 Connecticut Avenue, N.W.
Washington, D.C. 20036

American Plywood Association
P. O. Box 11700
Tacoma, WA 98411

Canadian Wood Council
1730 St. Laurent Boulevard
Suite 350
Ottawa, Ontario K1G 5L1
Canada

Cedar Shake & Shingle Bureau
515 116th Avenue, N.E.,
Suite 275
Bellevue, WA 98004

Southern Forest Products Association
P. O. Box 641700
Kenner, LA 70064-1700

Western Red Cedar Lumber Association
1200-555 Burrard Street
Vancouver, B.C., Canada V7X 1S7

Western Wood Products Association
Yeon Building
522 S. W. 5th Avenue
Portland, OR 97204-2122

A 24-page catalog featuring the 1992 award-winners is available on request. To order, please call 202-463-2760 or write the American Wood Council.

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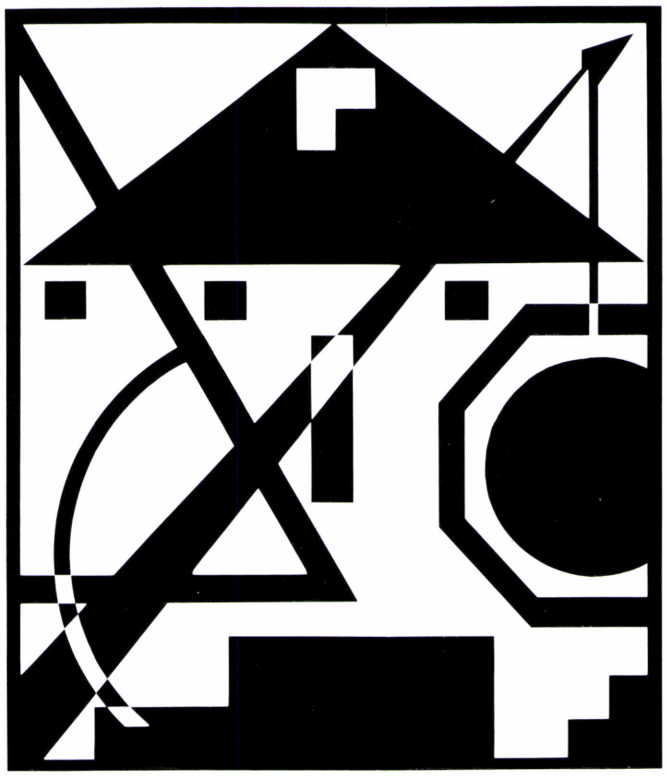

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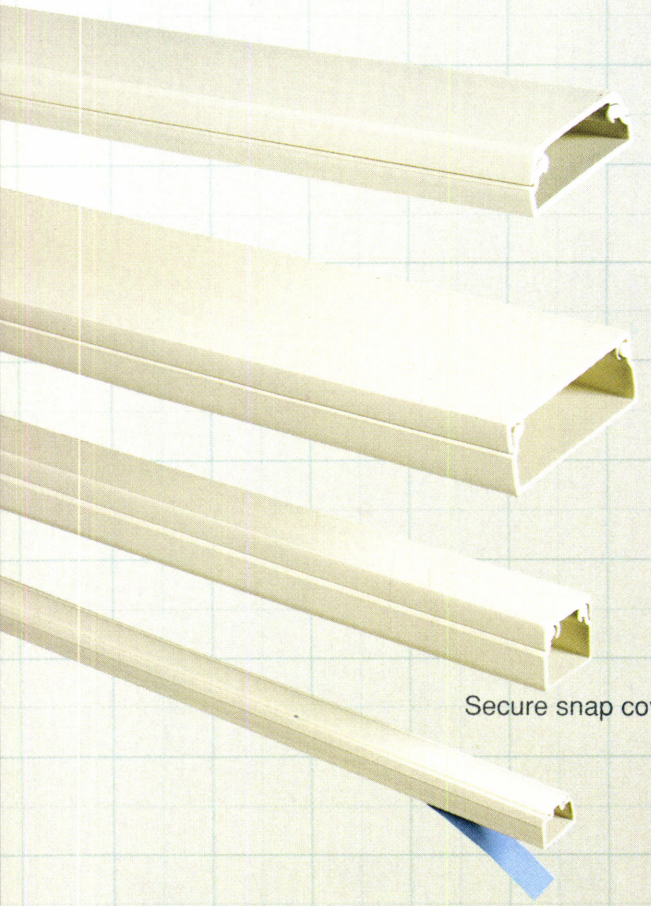

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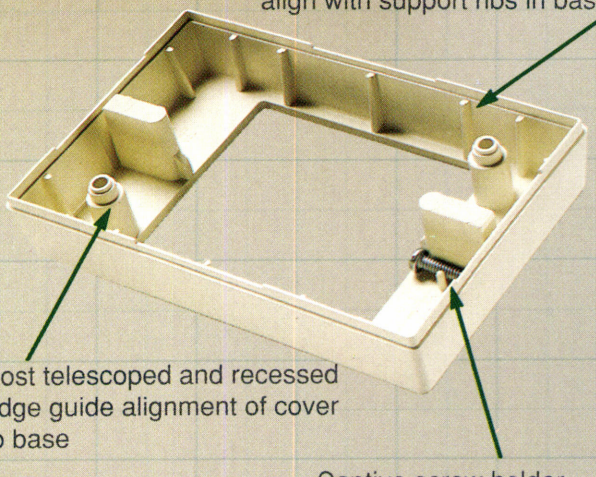

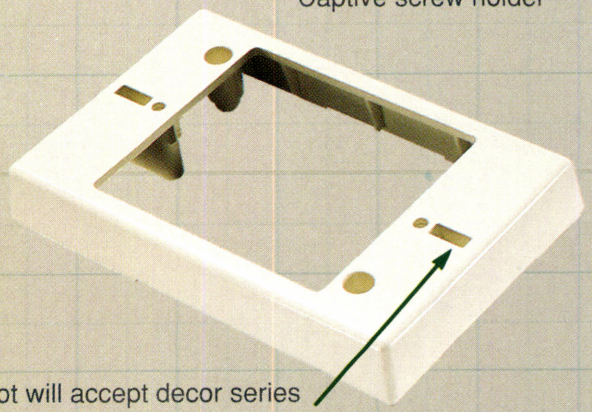

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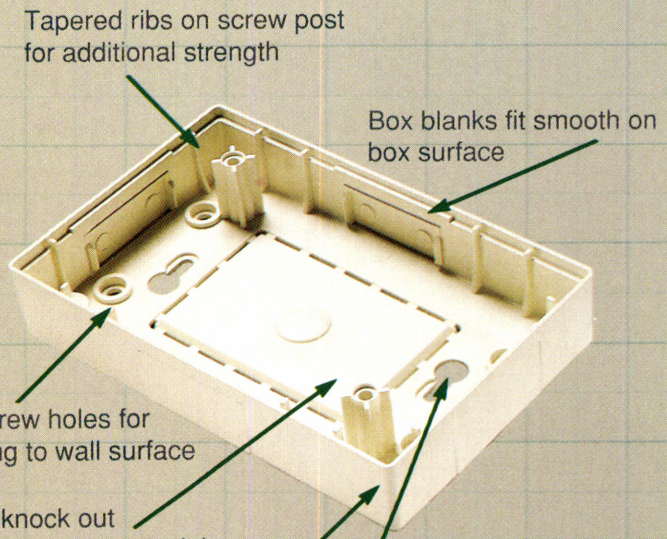

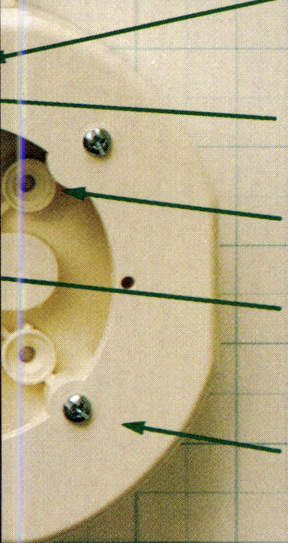

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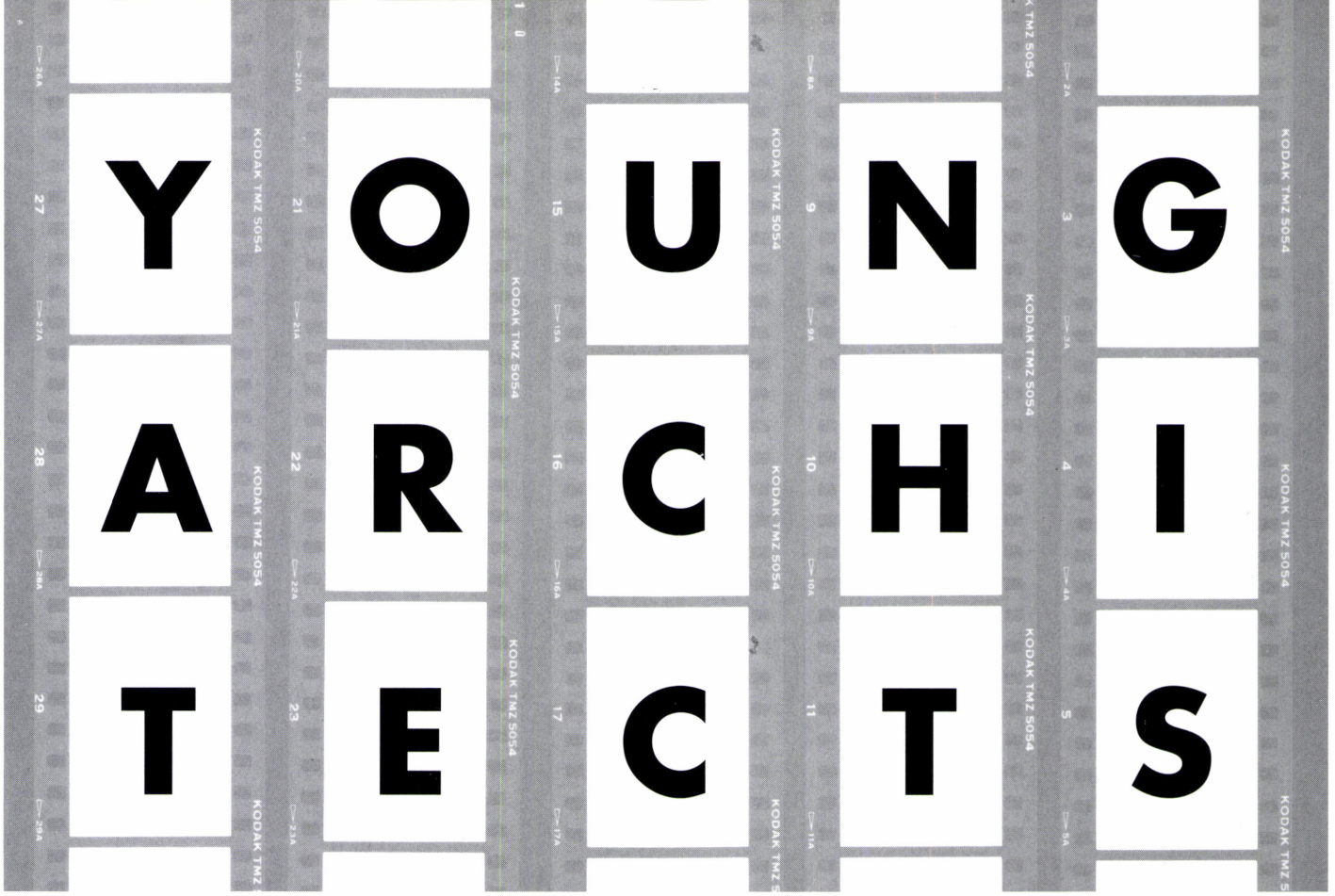


IN ITS THIRD YOUNG ARCHITECTS ISSUE, P/A DISCUSSES THE CAREER OBSTACLES AND THE INVENTIVE WAYS AROUND THEM FOUND BY ARCHITECTURE SCHOOL GRADUATES OF THE LAST TEN YEARS.

Young architecturally trained people, like canaries in a mineshaft, are vulnerable to the changing economic climate and are the first to fall when things turn bad. Indeed, almost every person who submitted work for this issue had been laid off and/or unemployed at some time in the past ten years. The architectural profession, in recent years, has paid relatively little attention to the plight of its youngest members. But it does so at its own peril: the difficulty young architects are having in finding work and in making a decent living signals larger problems faced by us all.

Young architects, however, are more than just a portent of trouble. They have also been a major source of new ideas and, recently, an impetus for changing the way in which architects work.

We have attempted to chart some of these changes on the following pages. Unlike our past issues on young architects, this one focuses on what people are doing as much as on what they are producing. What it reveals is a profession becoming much more diverse, not only in the gender and the ethnic background of its members, but also in the kinds of services architects offer, in ways of organizing a practice, and in the type of work we call architecture.

We received 485 submissions in response to our call for entries for this issue, an amazing number of portfolios, most of which were of a remarkably high quality. We are grateful to all who took the time to enter and who gave us the opportunity to see their work.

We divided the entries evenly among the nine P/A editors, who read them all and selected the most outstanding to present to the rest of the staff. From those presentations, we developed thematic categories, divided the remaining entries accordingly, and assigned editors to reread and write about each selected submission. Because of space limitations, we were forced to narrow the number down to 81, a group that we think fairly represents the whole.

The thematic categories are: people who are self-employed, those who are employed by firms, people who have pursued various alternative careers, and those who have taken a socially active stance. We have also included a report, based on a survey by one recent graduate, on what his architecture class is now doing.

But such categories and surveys, in the end, cannot capture the range and expansiveness of young architects' work right now. They are dismantling the old barriers between disciplines, crossing the boundaries between professions, and generally transforming the practice of architecture before our very eyes. And we should look and listen, because we are all down the same mineshaft, breathing the same air. **Thomas Fisher** ■

Young Architects

Employees of Firms	**74**
Self-Employed	**84**
Alternative Careers	**102**
Activism	**110**
Perspectives	**122**

EMPLOYED BY FIRMS

Employees in firms have had a rough time of it in recent years. Numbers from the Bureau of Labor Statistics indicate that employees, on average, are not changing jobs often, are working longer hours, and have had pay increases that are barely keeping up with inflation.

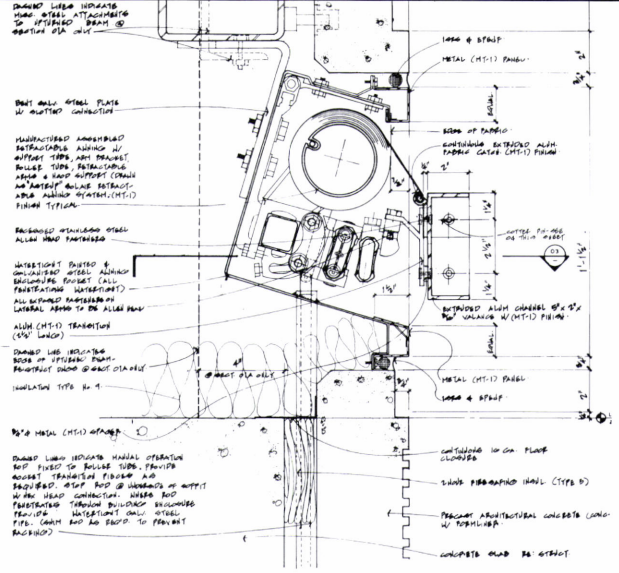
Despite these difficulties, there is something quite positive going on right now among many of the young employees in firms – something amply illustrated in the work submitted for this issue and by the people and projects featured in this section. Here is a group of employees obviously proud of what they do, and evidently concerned about its quality, be it a well-designed detail, a well-managed project, a well-drawn sheet of working drawings, or a well-coordinated team effort. And for some of these people, that pride extends beyond working hours to their volunteer efforts.

This concern with quality may stem partly from all the attention currently being paid to "total quality management" in the business world and the construction industry. But it has deeper and more long-lasting roots as well. People ten or fewer years out of school face lifelong competition with the baby-boom generation just ahead of them, a generation that may preempt most of the top positions in established firms in the years ahead.

Among other things, this may force us all to reevaluate our ideas about work and our notions about success. As it becomes harder to move up in the ranks of firms, we may finally begin to attach greater status to doing a good job regardless of what it is. We may come to see success in terms of the quality of our skills and the level of our craftsmanship rather than in the height of our position or even the amount of our salary.

The architectural media, so long obsessed with the singular efforts of individual stars, have a responsibility here in helping shift the focus of attention. It is time to emphasize that architecture is always a team effort and that people in all phases of the process have vital roles to play. This section on the employees in firms is a step in that direction.

Thomas Fisher ■



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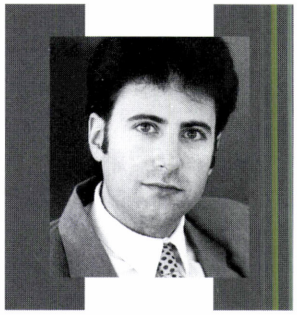


DAVID L. SWARTZ
SKIDMORE, OWINGS & MERRILL
LOS ANGELES

Education: *B. Arch., Syracuse, 1983; M. Arch., U. of Southern California, 1988.*
Experience: *Graduate Professional Scholarship; Graduate Teaching Assistantship.*

As a technical coordinator for SOM, David Swartz is responsible for the quality and completeness of construction documents. The drawings represented here are for the Grand Avenue Plaza Hotel in Los Angeles. Swartz submitted these drawings for our consideration because they represent, he says, "what a lot of architects do as part of their job, and are an important aspect of architecture that merits recognition." In his practice experience, Swartz notes, "Neither designer nor technical architect is free to develop 'theoretical' architecture. Architecture is a team approach and any one individual can be the 'key'."



INEDA P. ADESANYA
ALAMEDA COUNTY PLANNING DEPARTMENT
HAYWARD, CALIFORNIA

Education: *A.B. (Architecture), U. of California, Berkeley, 1988.*
Experience: *Taylor and Company, Contractors; City of Redwood City, California; San Mateo County, California; City and County of San Francisco; Ade Design Associates.*

While an architecture student, Ineda Adesanya worked as a draftsperson for a local contractor and became interested in the Uniform Building Code and other regulations. School also sparked an interest in planning; a number of positions in various local government planning offices in Northern California followed graduation. Right now Adesanya is writing the first Development Standards/Design Guidelines for Alameda County, allowing her to combine her design and planning knowledge. It is anticipated that the County Board of Supervisors will adopt the standards and guidelines this summer.



KELLEY NEEDHAM
WOLFF/LANG/CHRISTOPHER ARCHITECTS
RANCHO CUCAMONGA, CALIFORNIA

Education: *B. Arch., California State Polytechnic U., Pomona, 1985.*
Experience: *Various California firms while an architecture student.*

After several years with various small firms doing modest residential projects, Kelley Needham found a firm that would allow him to take the design lead on large-scale commissions. The Upland Police Facility (above) was his first large project, and was featured in the March 1993 issue of P/A Plans. He is currently working on a 65,000-seat amphitheater and a high school. Needham says that his greatest satisfaction as an architect comes from "helping nonarchitects understand what architecture can do for them." He has also volunteered his time to build homes for poor families in Mexico.



JOANNE BAUER **BILL LATOZA**
BAUER LATOZA STUDIO
CHICAGO

Education: *B.A., Goddard College, 1973; B. Arch., City College of New York, 1984.*
Experience: *Urbahn & Associates; Swanke Hayden Connell; Perkins & Will.*

Education: *B. Arch., City College of New York, 1984.*
Experience: *Urbahn & Associates; National Park Service; Neil Berzak, Architect; Edward Shiffer, Architect; Swann & Weiskopf; Chicago Park District.*



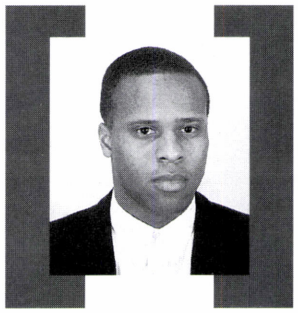
Prior to opening their own firm in 1990, Joanne Bauer and Bill Latoza (who met in architecture school) worked in various offices around the country. They made the conscious decision that while one worked in the private sector, the other would gain valuable experience in the public sector, working as an architect in public agencies. The Burnham Park Harbor Master's Building (above) was designed by Latoza when he worked for the Chicago Parks District. That experience now informs their current work for the parks district, on the Morton Arboretum in Lisle, Illinois, and on Historic American Buildings Survey drawings for the Jens Jensen Studio.



CLIFFORD L. CHANG
JORDAN WOODMAN DOBSON
OAKLAND, CALIFORNIA

Education: *B. Arch., Cornell, 1986.*
Experience: *Earl R. Flansburgh & Associates; William Downing Associates; ELS Architects; Skidmore, Owings & Merrill; Jordan Woodman Dobson.*

Like many young architects, Clifford Chang has worked for relatively short stints in a number of large, established firms. Chang says that these firms prepared him for his current work as a senior designer/architect. One of his largest projects now under construction is the Berth 30 Terminal (above) on a 34-acre site at the Port of Oakland. The $70-million terminal, which will serve as a staging area for importing and exporting overseas goods, incorporates as part of its architectural imagery the large-scale machinery used to move cargo.



ELLIOTT LE ROI BARNES
ECART SA
PARIS

Education: *B. Arch., Cornell, 1983; M. Arch., Cornell, 1985.*
Experience: *Eschweiler Prize in Design; Edwin Siepp Memorial Prize in Design; Arthur Erickson Architects; teaching at Cornell, Arizona State, U. of Virginia.*



After his architectural education Elliott Barnes gained professional experience and also taught at various schools. For the past six years he has practiced with Andrée Putman's firm Ecart, and has helped design and complete a number of projects with her. Among them is a restaurant (above), which featured a number of custom-designed screens, in the French pavilion at last year's world exposition in Seville. The restaurant combined natural light and faux shadows to give the underground space the feeling that light was coming from several sources.



Dan Cornish

Terry Wilkinson

(FROM LEFT TO RIGHT)

EDUARDO CALMA
ELLERBE BECKET, NEW NORK
Education: *B.Arch., Pratt, 1986.*

TIMOTHY JOHNSON
ELLERBE BECKET, NEW YORK
Education: *B.Arch., U. of Minnesota, 1990; M.Arch., Columbia, 1992.*

JEFFREY WALDEN
ELLERBE BECKET, MINNEAPOLIS
Education: *B.Arch., U. of Minnesota, 1991.*

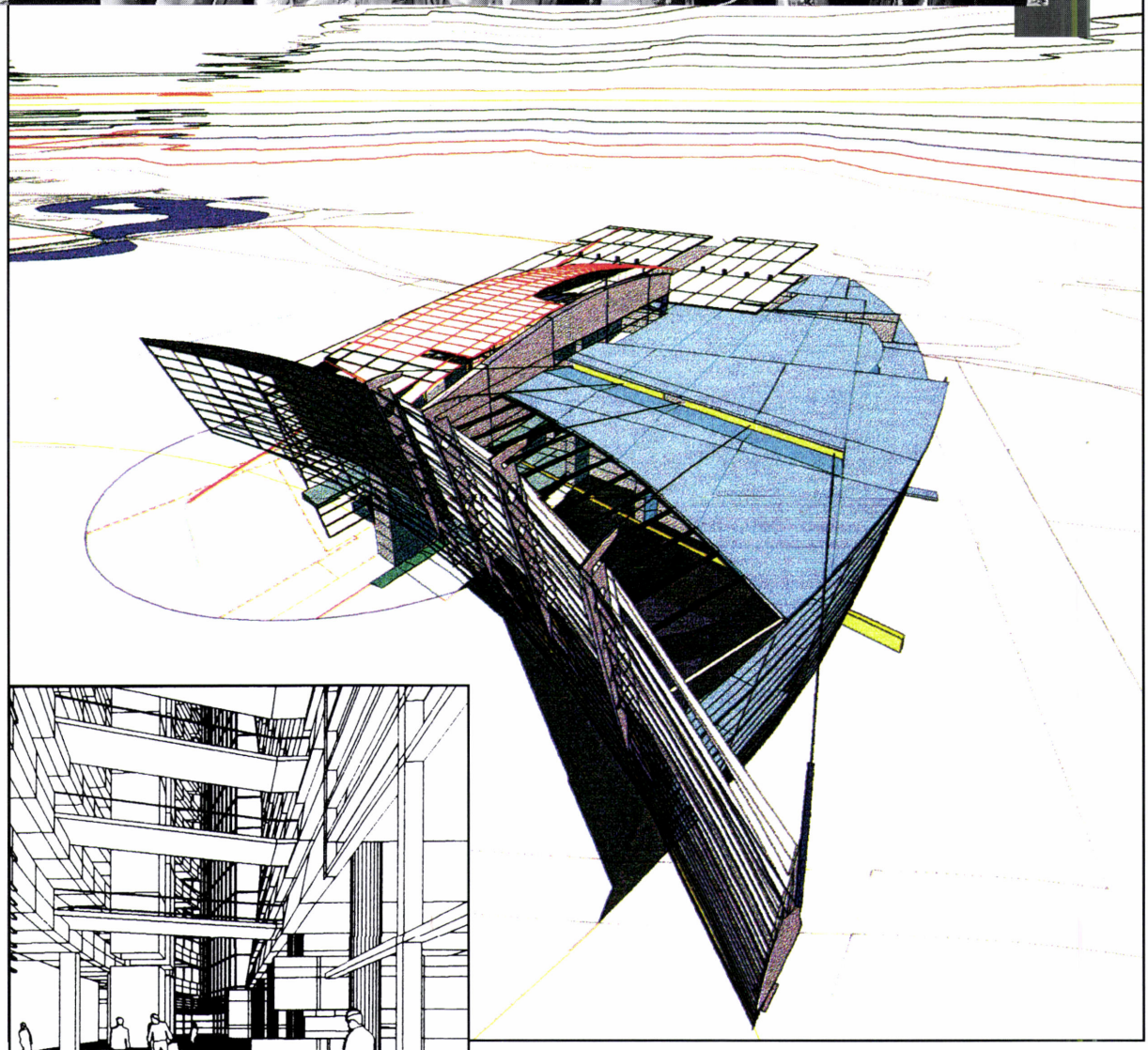
DAVID KOENEN
ELLERBE BECKET, MINNEAPOLIS
Education: *B.A., M.Arch., U. of Minnesota, 1991.*

E. TIM CARL
ELLERBE BECKET, MINNEAPOLIS
Education: *B.Arch., Notre Dame, 1986.*

DERRICK McCALLUM
ELLERBE BECKET, MINNEAPOLIS
Education: *B.Arch., U. of Minnesota, 1991.*

MICHAEL KENNEDY
ELLERBE BECKET, MINNEAPOLIS
Education: *B.Arch., U. of Minnesota, 1990.*

PAUL DAVIS
ELLERBE BECKET, MINNEAPOLIS
Education: *B.Arch., U. of Minnesota, 1990.*



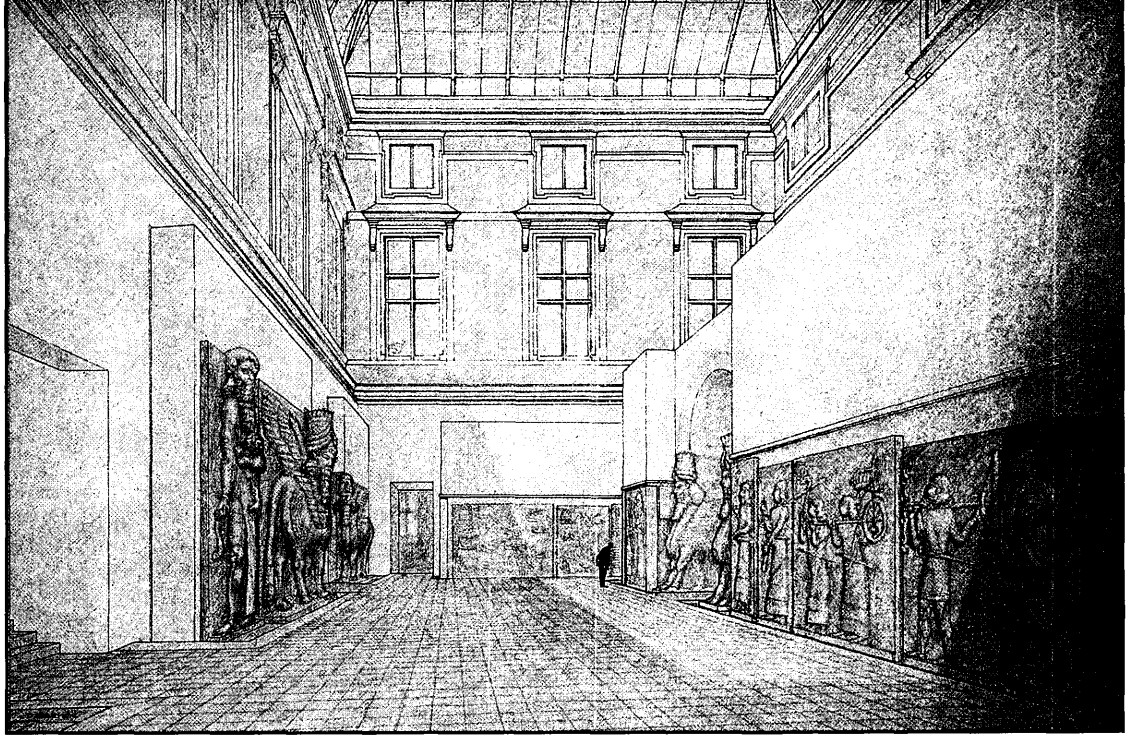
KIA MOTORS AUTOMOBILE PAVILION, 1991

SATO KOGYO HEADQUARTERS, TELEPORT CITY, 1990,

In 1988, Ellerbe Becket became a test site for a new 3-D modeling software package from IBM. This group of people, many of whom were then students, began to explore the software's potential as a design tool, especially in creating the dynamic architectural forms for which Ellerbe Becket has become noted.

The team worked together from 1988 to 1991 and had a certain freedom within the larger firm, typically arriving late, after their classes were over, and often working well into the night. Says Mic Johnson, the design principal who worked with the group, **"WE WERE COMMITTED TO EQUALITY AND TEAMWORK."** Brainstorming sessions and charrettes became common. "We discussed spiritual matters, environmental issues, and historical, cultural, and political influences, among other things," continues Johnson. "We created and lived a vision of how an office could work in which each person felt empowered to test the edges of his personal experience. **I AM CONVINCED THAT WE ARE BETTER ARCHITECTS BECAUSE OF THIS PROCESS."**

The results of the team's work bear that out. The complexity and dynamism of the structures designed with the software indicate not only the power of the computer system, but the energy of the people who worked on it. Members of this team who continue to work with principal Peter Pran in two of Ellerbe Becket's offices, also demonstrate how a large firm can encourage creativity and new ideas by breaking down the scale and loosening the requirements of its corporate culture.



PERSPECTIVE VIEW OF THE COUR KHORSABAD IN THE LOUVRE

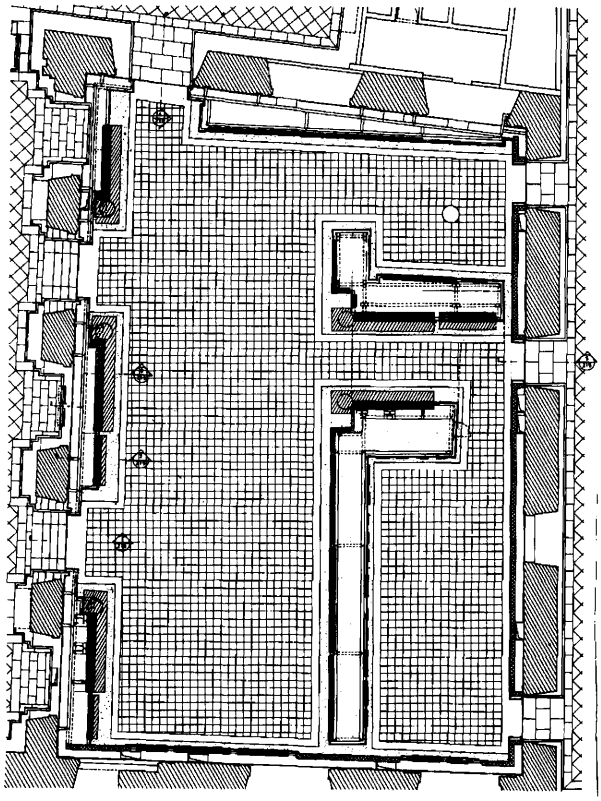


Thibault Montamatti

DAVID M. HARMON

PEI COBB FREED & PARTNERS
PARIS

Education: *B.A., U. of North Carolina, 1982; M.Arch., Harvard, 1988.*
Experience: *Stull & Lee; Bruner/Cott & Associates; BSC Group; Oliver Cope, Architect.*
Project: *The Louvre Museum, Richelieu Wing, Paris.*
Architects: *Pei Cobb Freed & Partners.*
Client: *The Louvre Museum.*

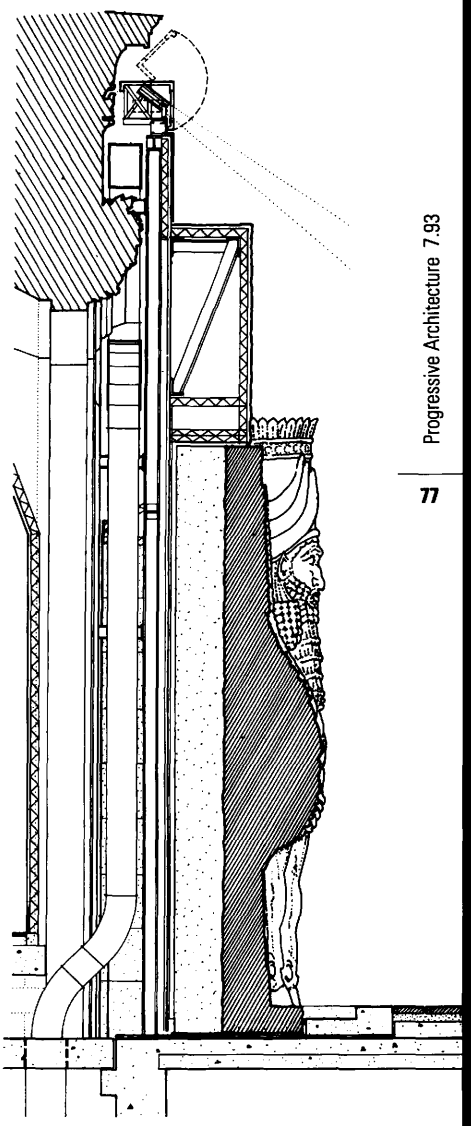


PLAN OF THE GALLERY SHOWING THE PLACEMENT OF RELIEF PANELS

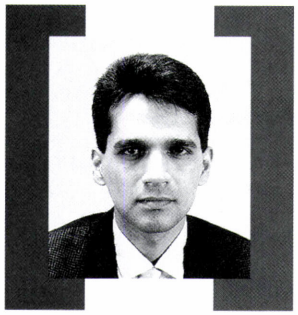
A year after joining Pei Cobb Freed & Partners in New York in 1990, David M. Harmon was sent to Paris by the firm to work on their ongoing Louvre project (P/A, May 1989, p. 37). Harmon was made project manager for the Middle Eastern Antiquities and Islamic Art collections in the Museum's Richelieu wing. It was a felicitous assignment for Harmon, who studied cultural anthropology as an undergraduate.

The work shown here is the Cour Khorsabad, a gallery in an existing Louvre court that will house sculpture and relief panels from the 2,600-year-old palace of Sargon II, in present-day Iran. Harmon worked with conservators and Assyrian experts to recreate as much of the setting as possible within the courtyard. "The opportunity to put these pieces in sequence and in the sunlight was too good to pass up," says Harmon.

The combination of a big firm and a seven-person foreign office appeals to Harmon: **"BEING HERE IS IDEAL IN A SENSE. I HAVE MORE RESPONSIBILITY THAN I WOULD HAVE IN A LARGER OFFICE."** Further, he says, "As an African-American architect who traveled and lived abroad as a child, I feel particularly awake to the breadth and inevitability of cultural variation."



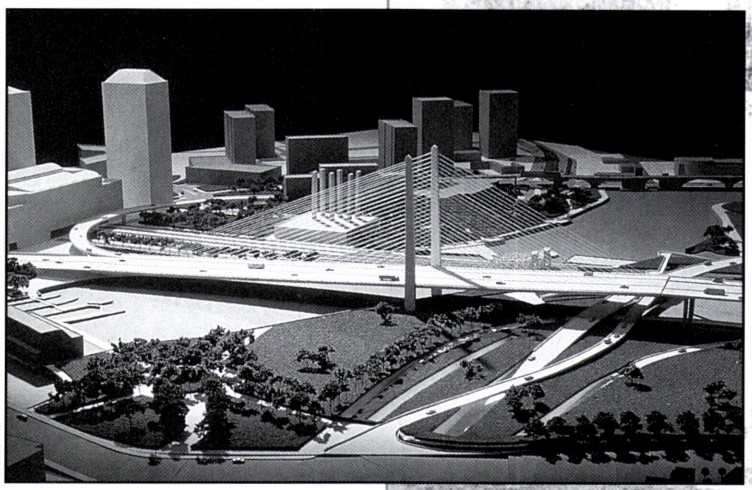
SECTION THROUGH WALL AND PANEL



MIGUEL ROSALES
WALLACE FLOYD ASSOCIATES, INC.
BOSTON

Education: *Dipl. Arch., Universidad Francisco Marroquin, Guatemala, 1985; S.M.Arch.S., MIT, 1987.*
Experience: *Beacon Management Corporation; Stull & Lee.*
Project: *Charles River Bridge/Interchange, Central Artery/Tunnel Project, Boston.*
Project management: *Bechtel/Parsons Brinckerhoff.*
Archtecture and urban design: *Wallace Floyd Associates (Miguel Rosales, Leon Drachman, Robert Enlow, David Burson, Manuel Sanchez, Peter Brigham); Stull & Lee (Toby Reed, Shraddha Sejpal); Carol Johnson & Associates (Bill Taylor).*
Engineering: *Dr. Christian Menn.*
Client: *Executive Office of Transportation and Construction (Stanley Durlacher, Assistant Secretary of Transportation).*

While many young architects in offices start out working on a relatively small scale, designing and detailing parts of buildings, Miguel Rosales has had the opposite experience. Since 1989, he has worked as an architectural/urban designer on Boston's Central Artery/Tunnel Project, the largest highway project currently under way in the U.S. **"ALTHOUGH I WORK IN THE ARCHITECTURE GROUP," SAYS ROSALES, "MY WORK RELATES MORE TO URBAN DESIGN THAN TO ARCHITECTURE BECAUSE OF THE SCALE OF THE PROJECT."**

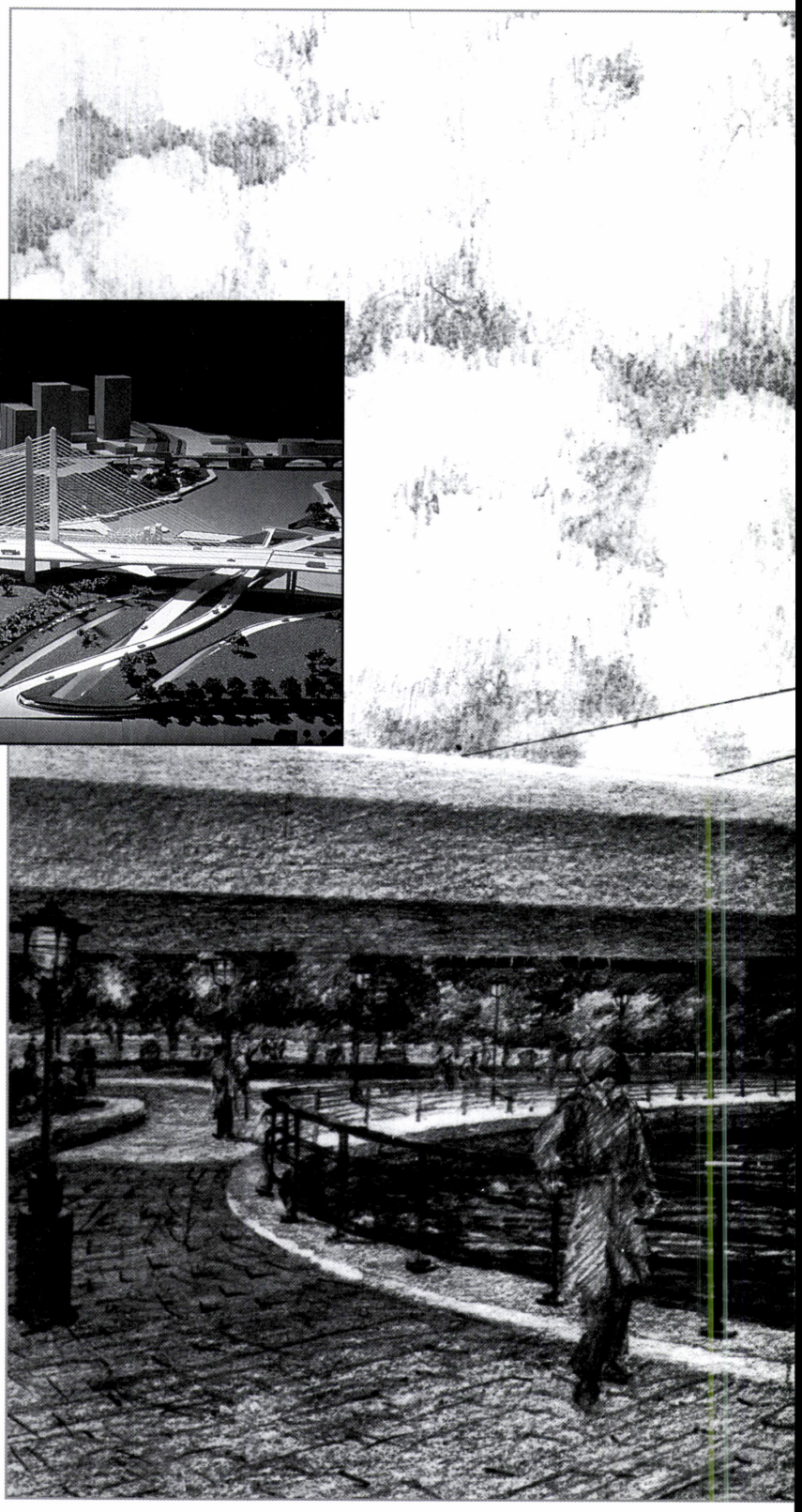


Peter Lewitt

Tackling architectural problems at the largest scale was a conscious direction for Rosales. "After obtaining my Master's degree," he says, "I went to work in urban design with the intention of finding architectural resolutions to city-wide urban design problems at a conceptual level." On the Central Artery he has concentrated on three areas: urban design and highways, bridge architecture, and highway architecture. "All of these areas," he observes, "are non-traditional in the fields of architecture and urban design since engineers have the primary design and construction responsibility for highways." And one of his goals, he adds, "has been to attempt the elimination of visual impacts caused by the highway – not an easy task since traditionally large urban highways in the U.S. have been great engineering achievements and at the same time major environmental and aesthetic disasters."

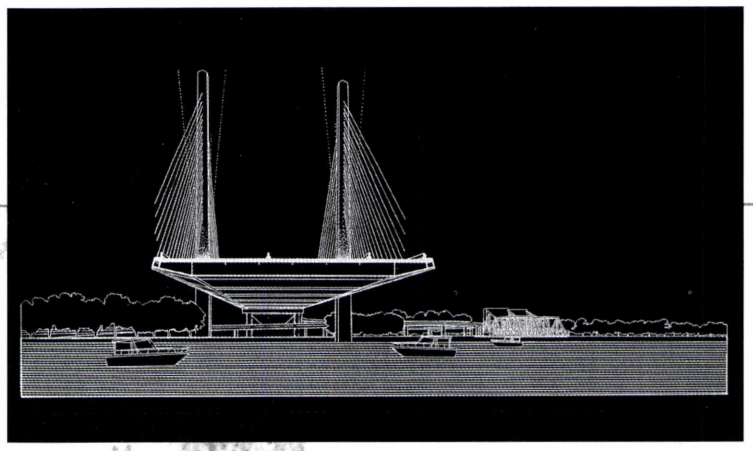
Shown here is the proposed cable-stayed Charles River Bridge that Rosales has worked on with the Swiss engineer, Dr. Christian Menn. Awarded a 1993 Urban Design Award from the AIA, the Wallace Floyd plan, said the jury, illustrates "the integration of architecture and urban design."

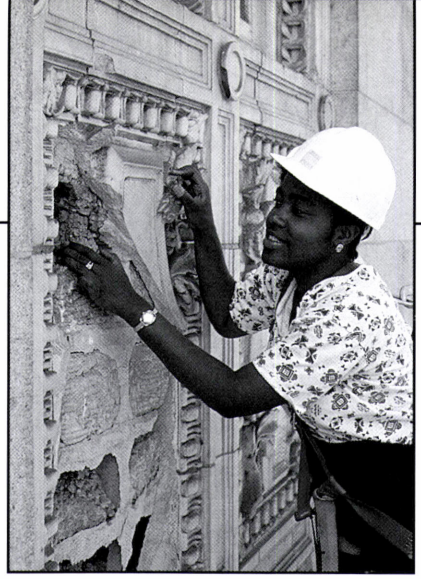
BELOW LEFT: MODEL VIEW. RIGHT: PLAN OF INTERCHANGE. FAR RIGHT: SECTION.



RENDERING, CHARLES RIVER BRIDGE

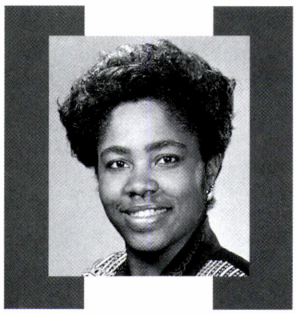






SYLVIA ROSE AUGUSTUS AT THE JOB SITE

SHEET FROM THE CONTRACT DOCUMENTS DETAILING THE EXISTING CONDITIONS OF THE EARTHQUAKE-DAMAGED OAKLAND CITY HALL



SYLVIA ROSE AUGUSTUS
CAREY & CO. ARCHITECTURE
SAN FRANCISCO

Education: *B.A., Washington U., 1987; M.A., Cornell, 1990; M.Arch., Berkeley, 1991.*
Experience: *Kohn Pedersen Fox Associates; New York Department of City Planning; San Francisco Department of Planning; Environmental Science Associates; Carey & Co.; National Park Service.*
Project: *City Hall, Oakland, California (earthquake damage repairs and seismic strengthening).*
Architects: *VBN Architects, Oakland. Associate architects: Michael Willis Associates, San Francisco.*
Preservation Architects: *Carey & Co. Architecture.*
Client: *City of Oakland.*

Growing up in the Bronx, Sylvia Augustus watched as "the magnificent buildings stayed but most of the population left." Her career path in architecture, which has included a master's degree in preservation planning and preservation work in both public and private concerns, has centered around **HER LONG-TERM GOAL: "TO HELP REBUILD THE BRONX."**

Augustus is now working in a non-traditional role, coordinating a National Park Service program that trains people in conservation skills. The work she submitted for this issue, however, was done while she worked for Carey & Co. Architecture, a 12-person San Francisco firm specializing in preservation. There, Augustus helped assess the condition of the earthquake-damaged Oakland City Hall and prepared drawings that described that condition; the nature of the work demanded that she scale scaffolding as high as 325 feet.

Augustus says she has enjoyed working in firms, "especially when there's a lot of communication. To be able to see what other people are doing is great." She hopes to return to the Bronx and have her own firm specializing in the reuse of buildings as affordable housing.



PART OF A COMPETITION DRAWING FOR THE PARK WASHINGTON HOTEL IN HIROSHIMA

Every employee brings to a job not only a specific set of skills, but a wider experience or body of knowledge about the world. And the best people in an office are often those who learn how to infuse their work, whatever it may be, with their own experiences. An example of this is Jeffrey Logan (son of Donn Logan of ELS), who works as a project designer at Kaplan McLaughlin Diaz (KMD) in San Francisco.

While still in architecture school, Logan spent the summer of 1986 working with Fumihiko Maki, living with a Japanese family who, says Logan, "taught me about Japanese lifestyle and revealed to me the customs and richness of their culture." This experience served him well when, after graduation, he went to work for KMD, who were beginning to work in Japan. Logan has since worked as a designer in several of the firm's Japanese projects, which has allowed him to "add some insight to KMD's efforts" there.

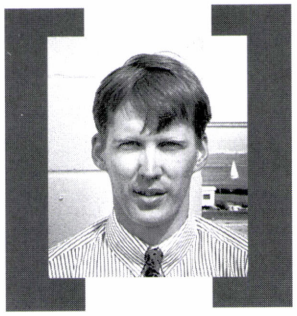
His knowledge about the culture has served him well not only in helping design Japanese projects, but it "helps inform our problem-solving capabilities," says Logan. **"SEEING AND STUDYING FIRSTHAND THE WAY PEOPLE SOLVE PROBLEMS AROUND THE WORLD ALLOWS US TO LOOK THROUGH NEW LENSES TO EXPLORE DESIGN SOLUTIONS."**

In KMD's design for the Tokyo headquarters of the K.K. Nakazato company, which is Logan's first major built work, rectilinear and radial structural grids are expressed on the exterior with a gridded core wrapped with saillike curtain walls gesturing to the adjacent waterfront. As such, the building seems to express the relationship of American and Japanese cultures – two different systems that embrace each other with respect and yet with a certain tension.



Koshi Miwa

VIEW OF THE K.K. NAKAZATO HEADQUARTERS FROM THE WATER



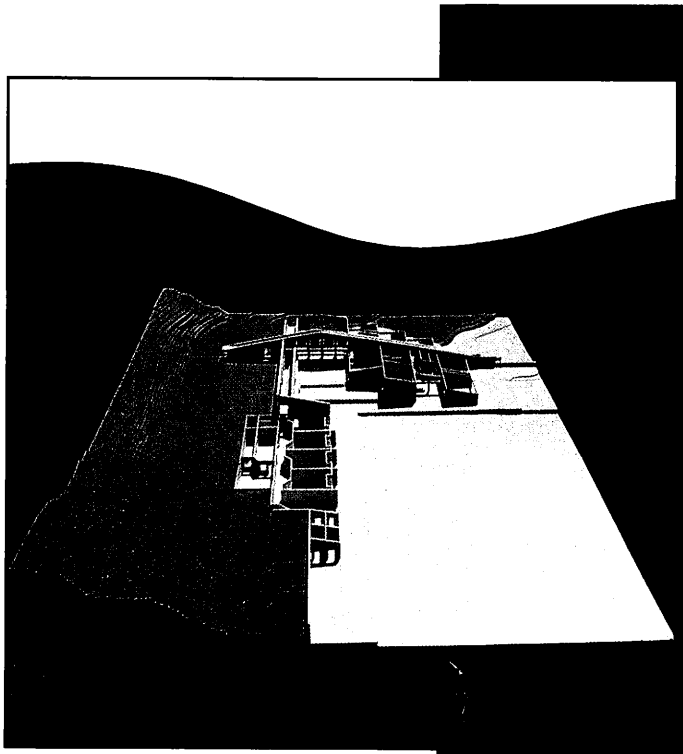
JEFFREY LOGAN
KAPLAN McLAUGHLIN DIAZ
SAN FRANCISCO

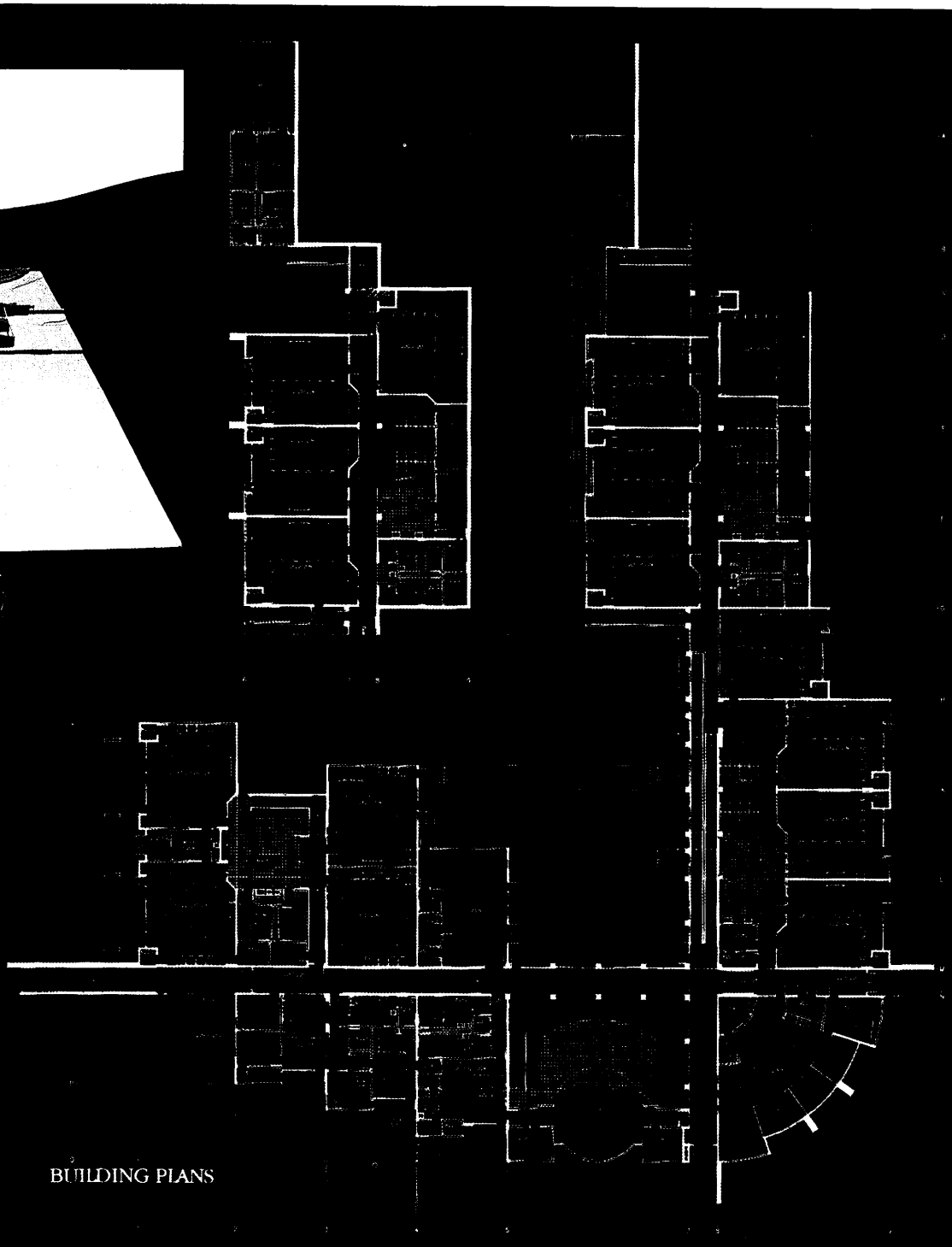
Education: *A.B. Architecture, Berkeley, 1983; M.Arch., Harvard, 1988.*
Experience: *Maki & Associates; Holt Hinshaw Pfau Jones Architecture; Kaplan McLaughlin Diaz.*
Project: *K.K. Nakazato Headquarters, Tokyo.*
Design architects: *Kaplan McLaughlin Diaz (Herbert McLaughlin, principal-in-charge; Mitch Green, project director; Jeffrey Logan, project designer; Richard Lee, Sammy D'Amico, Mark Petkovich, Mika Yamamoto, project team; Tom Beggs, landscape design).*
Architect of record: *TODA Corporation, Tokyo (Masahiko Ogasawara, chief architect).*
Client: *Nakazato Company, Ltd.*

James Kisel is one of three architects who specialize in schools in the design department of the Blurock Partnership, a 60-person firm. Kisel says that as educational philosophy shifts to emphasize individual learning styles, **SCHOOLS "MUST BE FLEXIBLE, WITH MULTIPLE TEACHING ENVIRONMENTS AVAILABLE TO EACH STUDENT."**

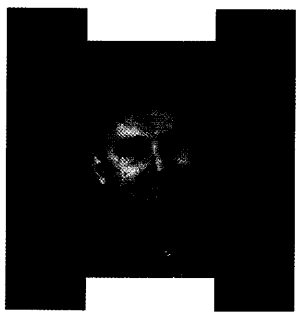
To arrive at a program, and, ultimately, a design, the firm uses a charrette process involving a committee of users – administrators, teachers, maintenance people. Kisel says he enjoys working on schools because their needs are more particular than those of commercial clients.

Representative of his approach is the Wood Ranch Elementary School in Simi Valley, California, a project awaiting funding by a developer. Nestled into the edge of an open valley, the school is organized along two intersecting circulation spines. Off these spines are three classroom clusters, each built around a common area for art, science, and computer activities. In addition, each classroom has a "Smart Wall," with a projection television monitor, "whiteboards," and a teacher's work station with a computer terminal and a video camera.





MODEL AND PLAN OF THE WOOD RANCH ELEMENTARY SCHOOL IN SIMI VALLEY, CALIFORNIA



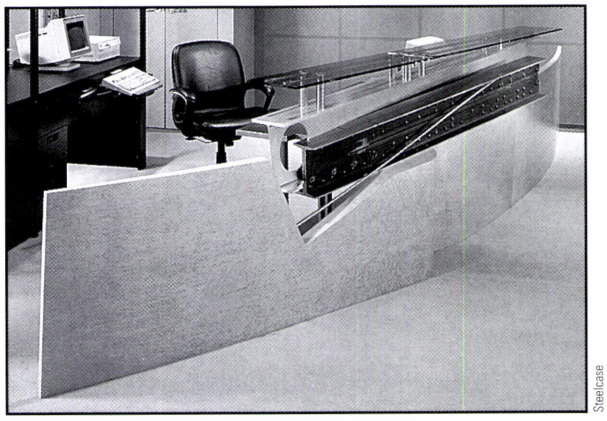
JAMES R. KISEL
THE BLUROCK PARTNERSHIP
NEWPORT BEACH, CALIFORNIA

Education: *B.Arch., Carnegie Mellon, 1984.*
Experience: *Bushey Associates; Chapman Taylor Partners.*
Project: *Wood Ranch Elementary School, Simi Valley, California.*
Architects: *The Blurock Partnership.*
Client: *Simi Valley Unified School District.*



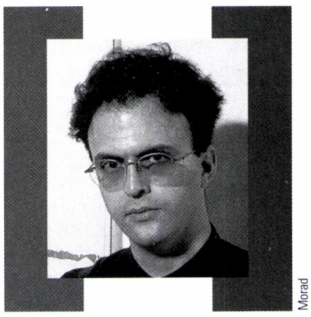
David Patterson

INTERIOR OF NASA AUDITORIUM



Steelcase

RECEPTION DESK AT STEELCASE SHOWROOM



Morad

MANSOUR MABOUDIAN
GREENWELL GOETZ ARCHITECTS
WASHINGTON, DC

Education: *B.S., 1982, M.Arch., 1984, Catholic U.*
Experience: *Barianos Historic Restorations, Inc.; Thomas Manion Architects.*
Project: *NASA Auditorium, Washington, DC.*
Architects: *Greenwell Goetz Architects.*
Client: *NASA.*
Project: *Reception desk, Steelcase showroom, Washington, DC.*
Architects: *Greenwell Goetz Architects.*
Client: *Steelcase.*



David Patterson

CIRCULATION SPACE ADJACENT TO NASA AUDITORIUM.

When Mansour Maboudian arrived at Greenwell Goetz Architects, a Washington, D.C., firm specializing in interiors, he brought a more architectonic approach to interiors with him. Maboudian, a native of Iran, used some sculpture and furniture he had made to demonstrate his design skills to the partners.

An opportunity to put those skills to work came when the 26-person firm was hired to produce interior design contract documents for the NASA headquarters in Washington, D.C. Maboudian convinced the client to adopt his high-tech design for the auditorium, which is used for press conferences, lectures, and presentations.

Another design, the reception desk for the Steelcase furniture showroom in Washington, came as the result of an invited competition. Maboudian's idea was to make the desk look like a "collision of materials." In this and the NASA project, where he established a system of conflicting grids, **MABOUDIAN SAYS HE IS EXPLORING "THE SCIENCE OF CHAOS, AND HOW YOU CAN GET APPARENT CHAOS AS THE RESULT OF AN ORDERED PROCESS."**

SELF-EMPLOYED

Architecture is not a field that overexposes its young talent. Ours is an old man's (and maybe someday an old woman's) profession; few architects find their stride until they reach middle age. For most, the first ten years out of school – which brackets the work shown here – is a time to learn how to build well. The scope of work is too broad, the details too intricate, and the liability risks too steep to assume expertise within a couple of years. Winning the confidence of clients can be just as challenging; few would commit a real estate proposal (the biggest investment most ever make) to a neophyte. The more secure the investment, the better; innovation is hazardous. Conservatism dominates the architectural marketplace, no matter how progressive the patron's politics or household may be.

Few of us dwelt on these job conditions during our student years. We enrolled to learn the cult of design and made a vocation centered on the rites of yellow trace and chipboard. Most of us pledged to graduate, join a small firm, and execute our own designs before long. Eventually, most architects approximate this goal: 86 per cent of the AIA's members work in offices with fewer than ten employees. In small offices, the psychological if not the fiscal returns seem richer than in a firm of architects by the dozen.

But practices like this are exceptional among young architects these days. Simply to find clients who would commission the work illustrated on the following 17 pages is a windfall. Our sputtering economy seems programmed to keep graduates out of work, their aptitudes untapped. There's less built work to publish these days. Accordingly, this section of P/A, the mainstay of previous Young Architects issues, is now on a par with three complementary sections. It's clear that fewer young practitioners can rely on conventional commissions to bring their talent to the fore.

Should P/A have gone farther? Do the times mandate more space to speculative work that won't be built? Modernism, for example, emerged in the United States during the Great Depression. Design ideas often lose their clarity when transferred from drafting table to construction site. But architecture's essence lies in its built form. To paraphrase one of my art history professors, architecture's strength is its impurity – the problems of construction lend a richness that no other art form can match. Exemplary buildings may be hard to find, but we can't be sure of what we're doing without them.

Is it presumptuous to discuss design in this straitened economy? No. But it's no longer the fetish that the marketplace once made it. Most of the architects we interviewed spoke little about design *per se*, yet their work proves that it has not been eclipsed. (Good design has never been easy to put into words, after all.) If anything, it's even more valuable these days: for architects, an affirmation of their mission; for clients, a prudent investment in a buyer's market. **Philip Arcidi** ■

The following section was written with Abby Bussel and David Gruber.

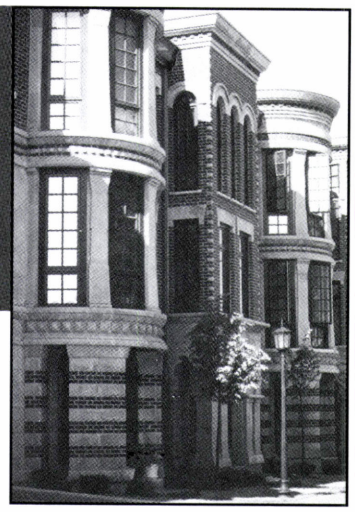


LEE PHILLIPS-DIAMOND **JOHN D. DIAMOND**

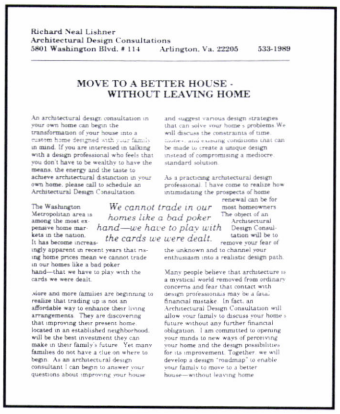
DIAMOND LUTHER PHILLIPS
SALT LAKE CITY

Education: *B.S. (Interior Design), U. of Kansas, 1983.*
Experience: *Corporate Interiors, Inc.; Gerald Jones Co.; private practice.*

Education: *B.S. (Environmental Design), U. of Kansas, 1982; B.S. (Architecture), U. of Kansas, 1983.*
Experience: *Shaughnessy Fickel & Scott Architects; Anderson Mason Dale Architects; Pappageorge Haymes, Ltd., Architects.*



While most neo-traditional neighborhood design is based on vernacular American precedents, Diamond Luther Phillips's Embassy Club development in Chicago's north side (above) calls to mind such formal European icons as the Place des Vosges and John Nash's Royal Mile. The 32 townhouses are grouped in axially symmetrical rows, some with center arches leading to rear parking. The firm worked closely with developer/builder MCL Development on crafting the solid brick and hand-cut limestone exteriors, enabling them to forgo the typically cheap façades employed in speculative rowhousing.



Richard Neal Lishner
Architectural Design Consultations
5801 Washington Blvd. # 114 Arlington, Va. 22205 533-1989

MOVE TO A BETTER HOUSE -
WITHOUT LEAVING HOME

An architectural design consultation in your own home can begin the transformation of your house into a custom home designed with your family in mind. If you are interested in talking with a design professional who feels that you don't have to be wealthy to have the means, the energy and the taste to achieve architectural distinction in your own home, please call to schedule an Architectural Design Consultation.

The Washington Metropolitan area is among the most expensive home markets in the nation. It has become increasingly apparent in recent years that rising home prices mean we cannot trade in our homes like a bad poker hand—that we have to play with the cards we were dealt.

We cannot trade in our homes like a bad poker hand—we have to play with the cards we were dealt.

More and more families are beginning to realize that trading up is not an affordable way to enhance their living arrangements. They are discovering that improving their present home located in an established neighborhood will be the best investment they can make in their family's future. Yet many families do not have a clue on where to begin. As an architectural design consultant I can begin to answer your questions about improving your house and suggest various design strategies that can solve your home's problems. We will discuss the constraints of time, budget, and existing conditions that can be made to create a unique design instead of compromising a mediocre standard solution.

As a practicing architectural design professional, I have come to realize how intimidating the prospects of home renewal can be for most homeowners. The object of an Architectural Design Consultation will be to remove your fear of the unknown and to channel your enthusiasm into a realistic design path.

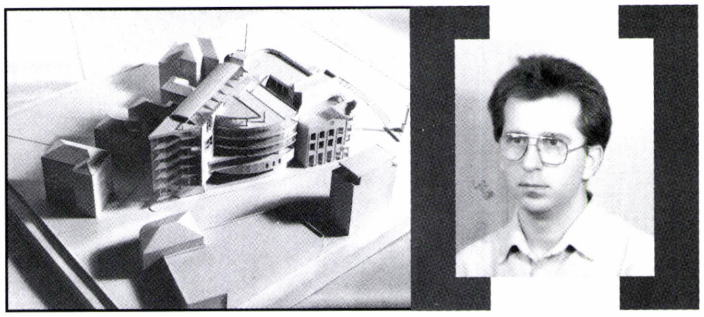
Many people believe that architecture is a mystical world removed from ordinary concerns and fear that contact with design professionals may be a fatal financial mistake. In fact, an Architectural Design Consultation will allow your family to discuss your home's future without any further financial obligation. I am committed to opening your minds to new ways of perceiving your home and the design possibilities for its improvement. Together we will develop a design "roadmap" to enable your family to move to a better house—without leaving home.

Richard Neal Lishner considers himself to be "an architectural refugee," having been laid off three times in as many years. Lishner did not, however, give up on his chosen profession: he decided to hit the streets of his middle-class neighborhood, distributing flyers (above) offering residential design services (initial consultation fee: $100). Despite some difficulties (as an unregistered designer, Lishner was not able to use the word "architecture" in any form) he delivered more than 8,000 flyers in two years and received six commissions for remodel/addition projects.



RICHARD NEAL LISHNER
PORTLAND, OREGON

Education: *B.A., State University of New York; M.Arch., U. of Maryland.*
Experience: *Susan Woodward Notkins & Associates; Rounds Van Duzer Associates; Greenwald Cassell Associates; Residential Design Services; Argo/Architect.*



Pavel Getov has resided in the U.S. since 1991, but still maintains an active practice in his native Bulgaria. This project was the winning scheme in a two stage national competition to renovate and expand the existing City Hall in Sevlievo (right third of model). The scheme envisions inserting a quarter-circle council chamber into the triangular site, with an atrium between the new and existing structures. The project is on hold, while Getov completes a new comprehensive school for the city.

PAVEL PANAYOTOV GETOV
ANTARES
SOFIA, BULGARIA

Education: *M.S.Arch., HIACE (Sofia), 1988; M.Arch., SCI-Arc, 1993.*
Experience: *Bulgarian Institute for Research, Technology, and Design of Health Buildings; UNESCO Science Survey Corps; Richard Meier & Partners/Los Angeles, DMJM.*



According to Rogers and Marvel, "we find our best work is often generated by the many constraints that accompany young firms' commissions." For Visiting Neighbors, a nonprofit organization that cares for 1,500 homebound elderly in Lower Manhattan and Queens, the duo was engaged pro bono to design a presentable space at a total cost of $6,000. Their provocative solution partitions the space with muslin curtains hung from suspended conduit. The lighting and the conference table were made from materials found near the site.

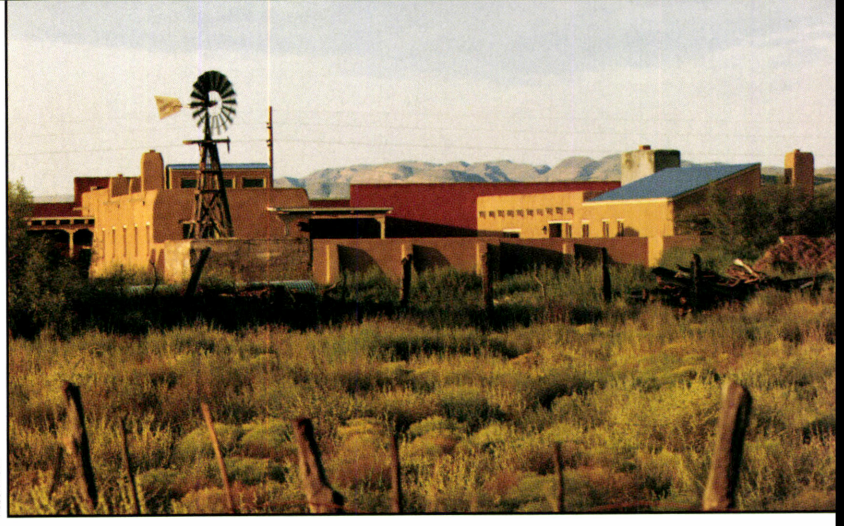


Pablo Delano

ROBERT M. ROGERS
JONATHAN JOVA MARVEL
ROGERS MARVEL ARCHITECTS
NEW YORK

Education: *B.A., Rice, 1981; B.Arch., Rice, 1983; M.Design Studies & Theory, Harvard, 1989.*
Experience: *I.M. Pei & Partners; private practice; Visiting Assistant Professor at Pratt Institute; Lecturer at Columbia and SCI-Arc.*

Education: *B.A., Dartmouth, 1982; M.Arch., Harvard, 1986.*
Experience: *Richard Meier & Partners; Emilio Ambasz; private practice; Adjunct Assistant Professor at Columbia.*



Robert Reck

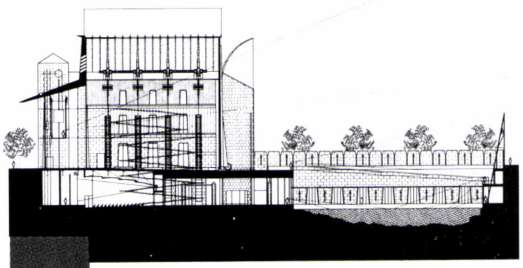


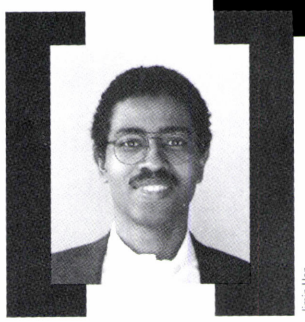
Tom Hoos

A. ANTHONY ANELLA
POBLANO DESIGN
SANTA MONICA, CALIFORNIA

Education: *B.A., Dartmouth, 1979; M.Arch., U. of Colorado, 1986.*
Experience: *Antoine Predock, Architect; Morphosis; Hoover Berg Desmond; Barton Phelps & Associates; Moore Ruble Yudell.*

"Architecture that is about architecture bores me," says A. Anthony Anella, an architect who has chosen to focus his attention on the relationship between the built and the natural landscapes of the American West through design, research, and writings. Load-bearing adobe walls, mud plaster interiors, and wood beams make Anella's Plank House, a vacation house in the Rio Grande Valley of southern New Mexico, an eloquent synthesis of landscape and indigenous architectural tradition. The architect, who cites Vincent Scully and J.B. Jackson among his influences, views architecture as a part of "the larger cultural continuum."



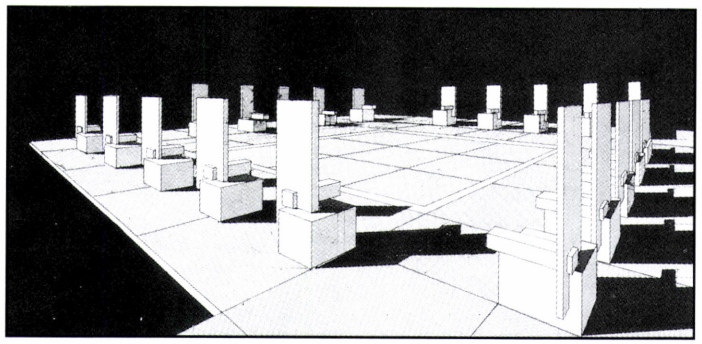


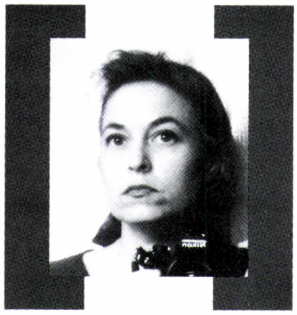
Jimin Han

FRANK DENNER
FRANK DENNER ARCHITECT
NEW YORK

Education: *B.Arch., Cornell, 1987.*
Experience: *Pei Cobb Freed & Partners; private practice.*

In 1992, excavations for a new Federal office building in lower Manhattan revealed the city's lost 18th-Century Negro Burial Ground. Frank Denner became an architectural consultant for efforts to find an appropriate commemoration. As a result of this campaign, the site has been accorded Federal landmark status and the office building will be built on only a portion of the site. In anticipation of a Landmarks Preservation Commission competition for a memorial on the remainder of the burial ground, Denner's latest scheme centers around a "main place" with wood and steel columns acting as counterweights for a roof that opens up to the heavens.



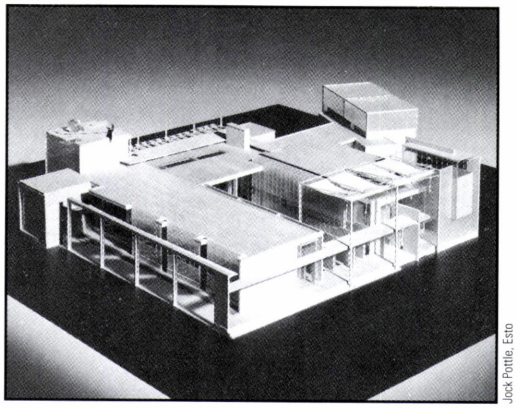


MARTI COWAN

NEW YORK

Education: *B.S. (Architecture), California Polytechnic State University, San Luis Obispo, 1978; M.Arch., Yale, 1984.*
Experience: *Stone Marraccini & Patterson Architects; Tanner & Vandine Architects; Archeological Excavation of St. Pierre-l'Estrier, Autun, France; Margaret Helfand Architects.*

Marti Cowan's work is characterized by formal geometries and an understanding of the visual and tactile qualities of materials. Her entry in the Memorial to the Salem Witch Trials competition (above), designed in collaboration with David Kesler, demonstrates Cowan's sensibility. The proposal, says the architect, is based on the idea of "absence" and how to form a meditative "location" for the twenty colonists executed for alleged acts of witchcraft: twenty black granite chairs are set on a gridded square; biographies are inscribed on the backrests and dates of execution on the armrests. Although the entry was not premiated, it offers a powerful reminder of the consequences of intolerance of social difference.



Jock Pottle, Esto

KEVIN KENNON PETER MOORE

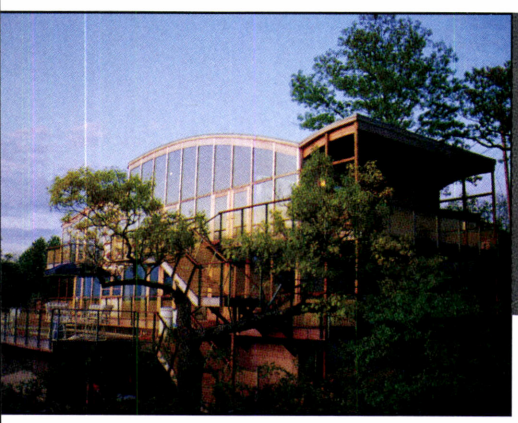
KEVIN KENNON PETER MOORE ARCHITECTS
NEW YORK

Education: *B.A., Amherst, 1980; M.Arch., Princeton, 1984.*
Experience: *Kohn Pedersen Fox Associates; Agrest & Gandelsonas.*

Education: *B.A., M.Arch., Columbia, 1981, 1984.*
Experience: *Peter Moore Associates*

Kennon and Moore see this house (above) for a pro basketball player as an inheritance from two other architects: the one who established the house's basic plan, and Giuseppe Terragni, the Italian Rationalist. Kennon and Moore found his 1932 project for an Italian kindergarten a counterpart to the house, in plan, if not program.

The similarities were liberating: they emended the house with Terragni's plan as their guide. Kennon and Moore worked without any pretense of originality. They position themselves as Zelig architects: the authorship and program of any structure is interchangeable; good ideas are made to be recycled.



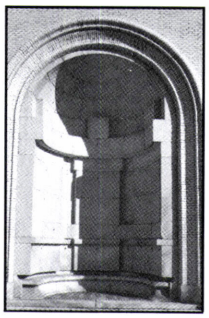


JOSEPH LAMBKE

THE THOUGHT GARAGE
CHICAGO

Education: *B.Arch., Illinois Institute of Technology, 1986.*
Experience: *SOM/Chicago; Holabird & Root; Doblin Group; instructor, Illinois Institute of Technology.*

Believing that architecture should not be broken into specialties, Joseph Lambke conducts a practice that ranges from the design of furniture to the design of cities. He has self-published a treatise on sustainable planning advocating "agricultural cities" – groupings of well-defined towns connected by an efficient transportation system, and separated by land used for agriculture. He is also a firm believer in adaptable system-ized housing, as exemplified by the private residence shown above. Here, a cedar frame contains glass and concrete fiberboard panels, with an interior free of bearing walls.



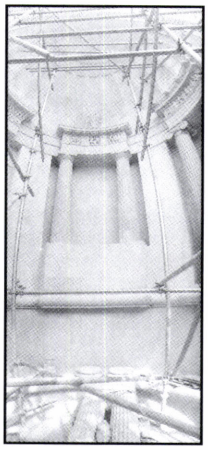


BRUCE LINDSEY PAUL ROSENBLATT

BRUCE LINDSEY PAUL ROSENBLATT ASSOCIATES
PITTSBURGH/NEW YORK

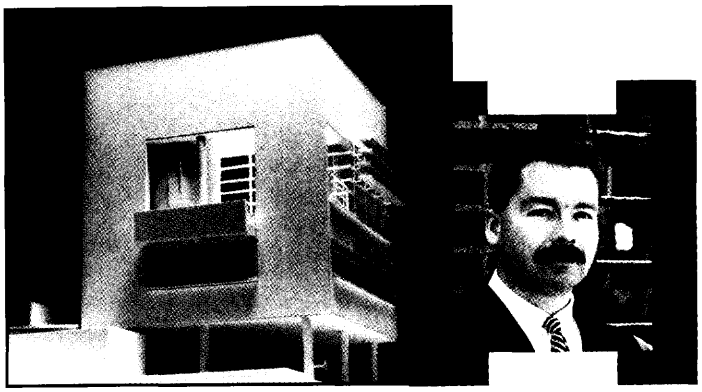
Education: *B.F.A., U. of Utah, 1976; M.F.A., U. of Utah, 1979; M.Arch., Yale, 1986.*
Experience: *Felix Drury Architects; Associate Professor at Carnegie Mellon; private practice.*

Education: *B.A., Yale, 1981; M.Arch., Yale, 1984.*
Experience: *Margaret Helfand Architects; SOM/New York; Director of Architectural Design Practice Center at Carnegie Mellon.*



Greek niche before (top) and under construction.

Henry Hornbostel never completed designs for the five monumental limestone niches on the main façade of his Carnegie Mellon College of Fine Arts building. In 1990 Lindsey and Rosenblatt were commissioned to resume the work. It was an unusual project for the duo, whose other design work contains no direct historicism, but they believe strongly in reuniting craft and architecture. For this project, computer modeling was used in conjunction with experienced carvers to achieve the intended result.

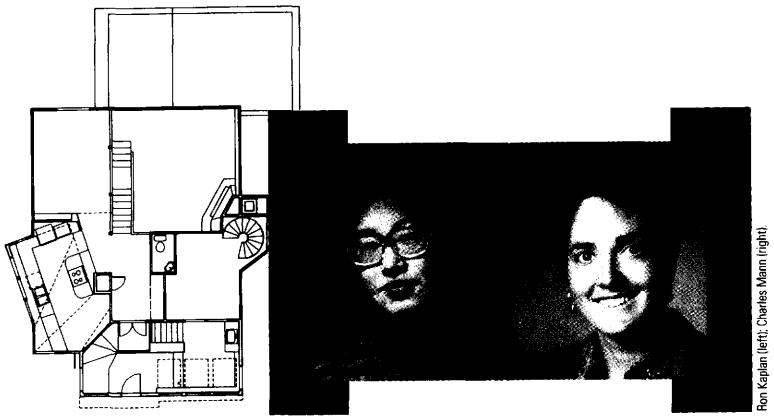


This weekend house, a 26-foot-square cube, brings to the Pacific coast the spirit of two Paris buildings: Adolf Loos's Tzara house and Le Corbusier's Villa Stein. When Gilbert Rampy visited the houses, he was impressed by their deeply layered, yet flat façades – a strategy well-suited to his client's cramped corner lot in Manhattan Beach, California. Rampy's balcony, a paraphrase of Le Corbusier, holds a cylindrical volume – an open-air study whose shutter lifts for ocean views.

GILBERT NOLAN RAMPY

NEW YORK

Education: *B.S., Georgia Tech, 1983; Ecole des Beaux-Arts, 1984; Fellow, American Academy at Fontainebleau, 1984; M.Arch., Princeton, 1989.*
Experience: *Scogin, Elam & Bray; Anthony Ames; Richard Meier & Partners.*



Ron Kaplan (left); Charles Mann (right)

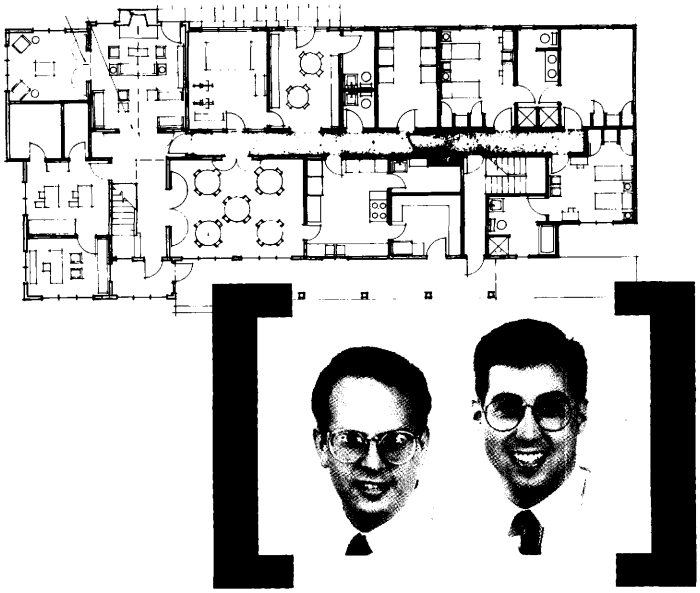
RAY KINOSHITA MARCIA HART

RK STUDIO AND M. HART ASSOCIATES/ARCHITECTS AMHERST, MASSACHUSETTS, AND EXETER, NEW HAMPSHIRE

Education: *B.A., M.Arch., 1983, 1988, Harvard.*
Experience: *Women's Rights National Historical Park competition, first prize in collaboration with Ann Wills Marshall; offices of Jeremiah Eck, Rafael Moneo.*

Education: *B.A., Princeton, 1981; M.Arch., Harvard, 1987.*
Experience: *various firms in New England and Alaska; design studio instructor, Phillips Exeter.*

The partnership of Ray Kinoshita and Marcia Hart is a sometime thing – intentionally so. Their common ground is modems, faxes, and computer discs – media for sharing expertise on joint ventures like the house rehab shown in plan, above. Computer technology hasn't radicalized their design; it is simply a tool to span the 120 miles between their offices. Keeping overhead costs kept to a minimum, Kinoshita and Hart recruit clients bypassed by more established practitioners; They show that good architecture needn't be expensive.



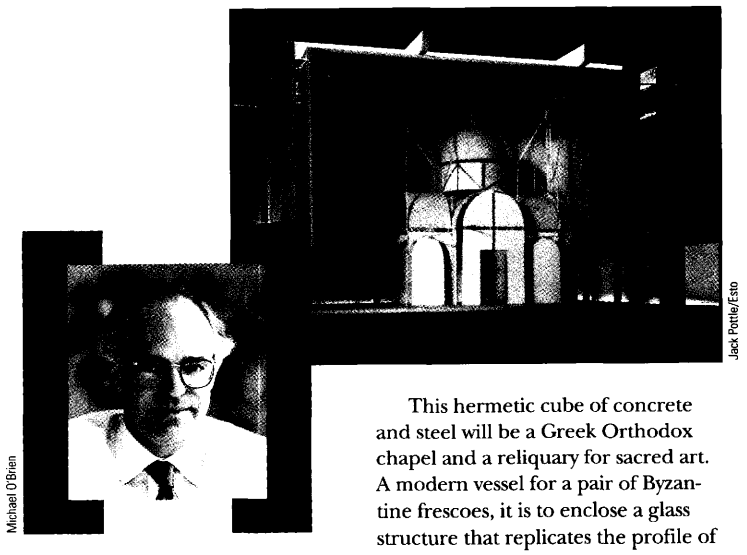
LAURENCE A. FRANK BRIAN T. McCARTHY

BENNETT FRANK McCARTHY ARCHITECTS, INC. SILVER SPRING, MARYLAND

Education: *B.Arch., U. of Maryland, 1984.*
Experience: *Ralph Bennett Architect; Muse & Giammatteo Architects.*

Education: *B.S. in Architecture, U. of Maryland, 1984.*
Experience: *Ralph Bennett Architect; Gilbert & Foster, Architectural Consulting and Design.*

Two young University of Maryland graduates have joined with an older architect, Ralph Bennett, who was their studio critic, then an employer. Their practice is focused on housing for the elderly, the poor, the terminally ill, and others with special environmental needs. The Raphael House, a 30-unit home for the elderly in Rockville, Maryland, received a gold medal in 1992 from the NAHB National Council on Seniors Housing. Illustrated here is the plan for a 20-bed halfway house for recovering alcoholic women and their children, now being completed in Montgomery County, Maryland.



Michael O'Brien

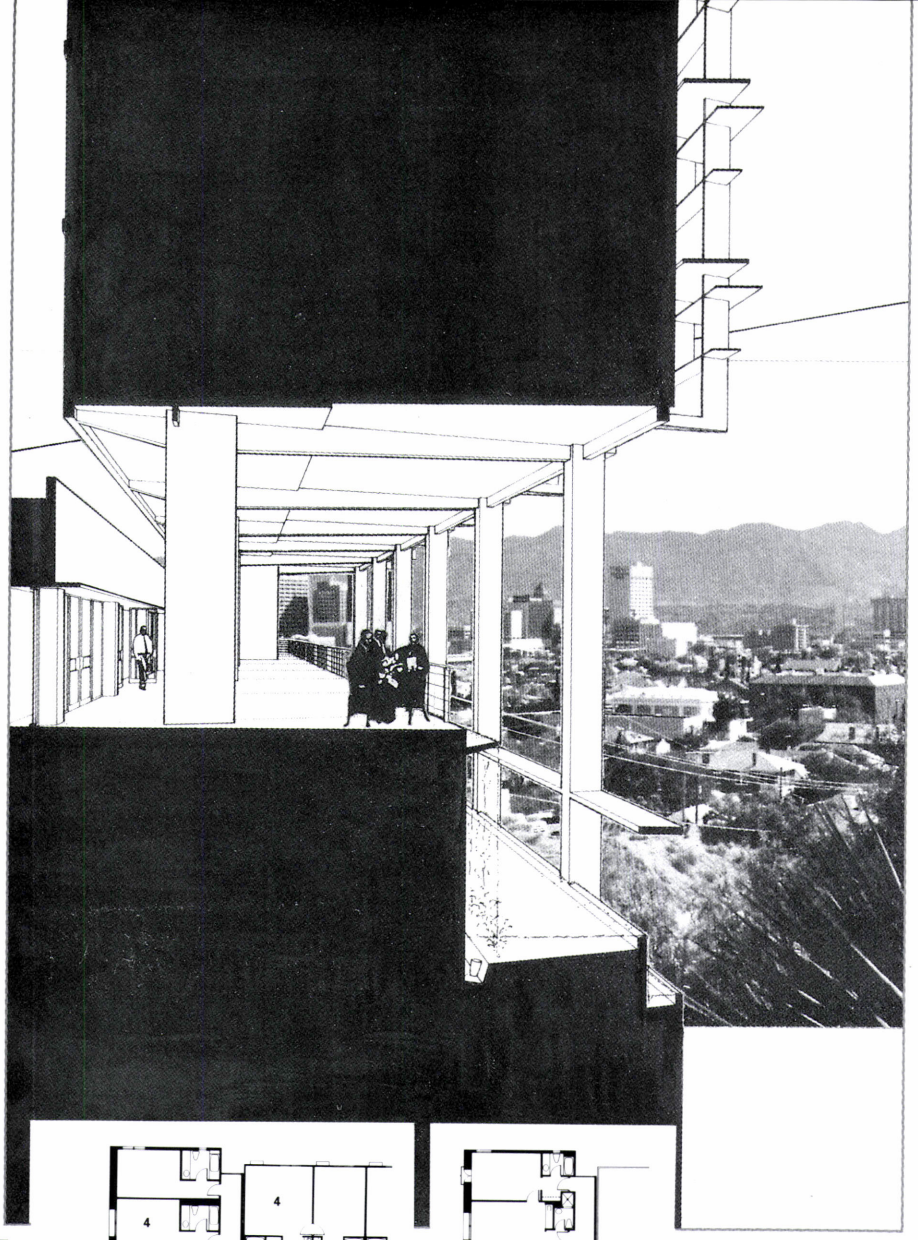
Jack Pottle/Esto

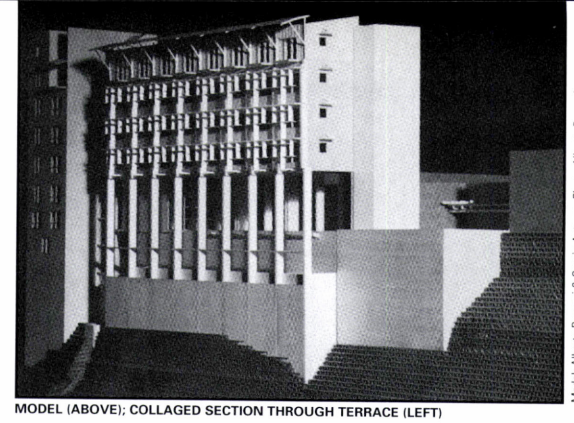
FRANÇOIS deMENIL

FRANÇOIS deMENIL, ARCHITECT NEW YORK, NEW YORK

Education: *B.Arch., Cooper Union, 1987.*
Experience: *Nagel and Lesser, Kohn Pedersen Fox Associates, Richard Meier & Partners.*

This hermetic cube of concrete and steel will be a Greek Orthodox chapel and a reliquary for sacred art. A modern vessel for a pair of Byzantine frescoes, it is to enclose a glass structure that replicates the profile of the frescoes' home – a chapel in Cyprus. Restored by the Menil Foundation for the Archbishop of Cyprus, the frescoes will be on loan in Houston for 20 years and then reinstalled on their original site. To be an architect charged with the display of art brings François deMenil full circle; he comes from a family of art patrons. Menil himself was a patron of architecture before getting his B.Arch.: his house on Long Island by Gwathmey Siegel Associates was a subject of a P/A cover article in December 1983.





Model: Alberto Bonomi & Sergio Astorga. Photo: Alberto Bonomi

MODEL (ABOVE); COLLAGED SECTION THROUGH TERRACE (LEFT)



Bev Blackwood

PATRICK PETERS

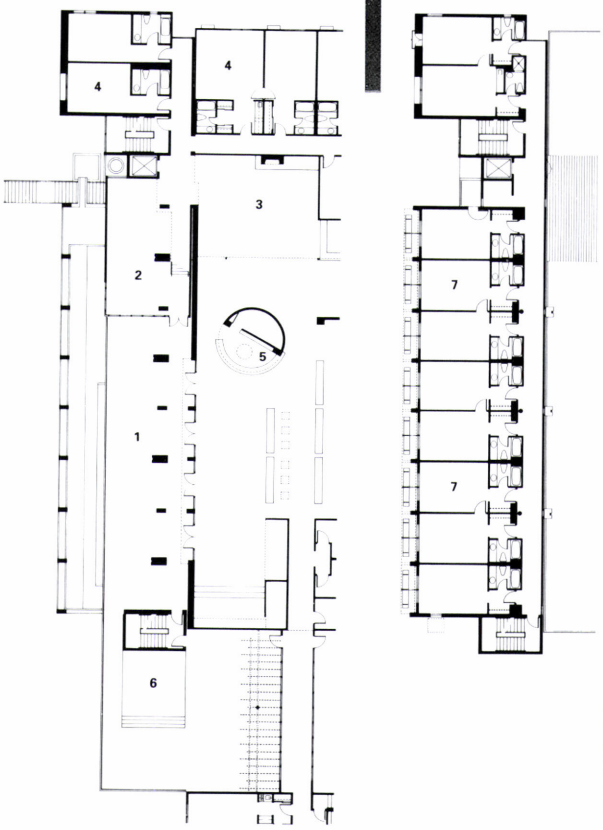
RAFAEL LONGORIA

LONGORIA/PETERS
HOUSTON

Education: *B.Arch., U. of Cincinnati, 1984; M.Arch., Rice, 1989.*
Experience: *Assistant Professor of Architecture, U. of Houston; Skidmore, Owings & Merrill; Assistant Professor of Architecture, Institut Teknologi MARA, Shah Alam, Malaysia*

Education: *B.A., 1982, B.Arch., 1984, Rice; M.B.A., U. of Texas, Austin, 1988.*
Experience: *Assistant Professor of Architecture, U. of Houston; Chelsea Architects; Ford, Powell & Carson.*

Project: *Cliff Inn Tower.*
Client: *Cliff Inn Hotel.*

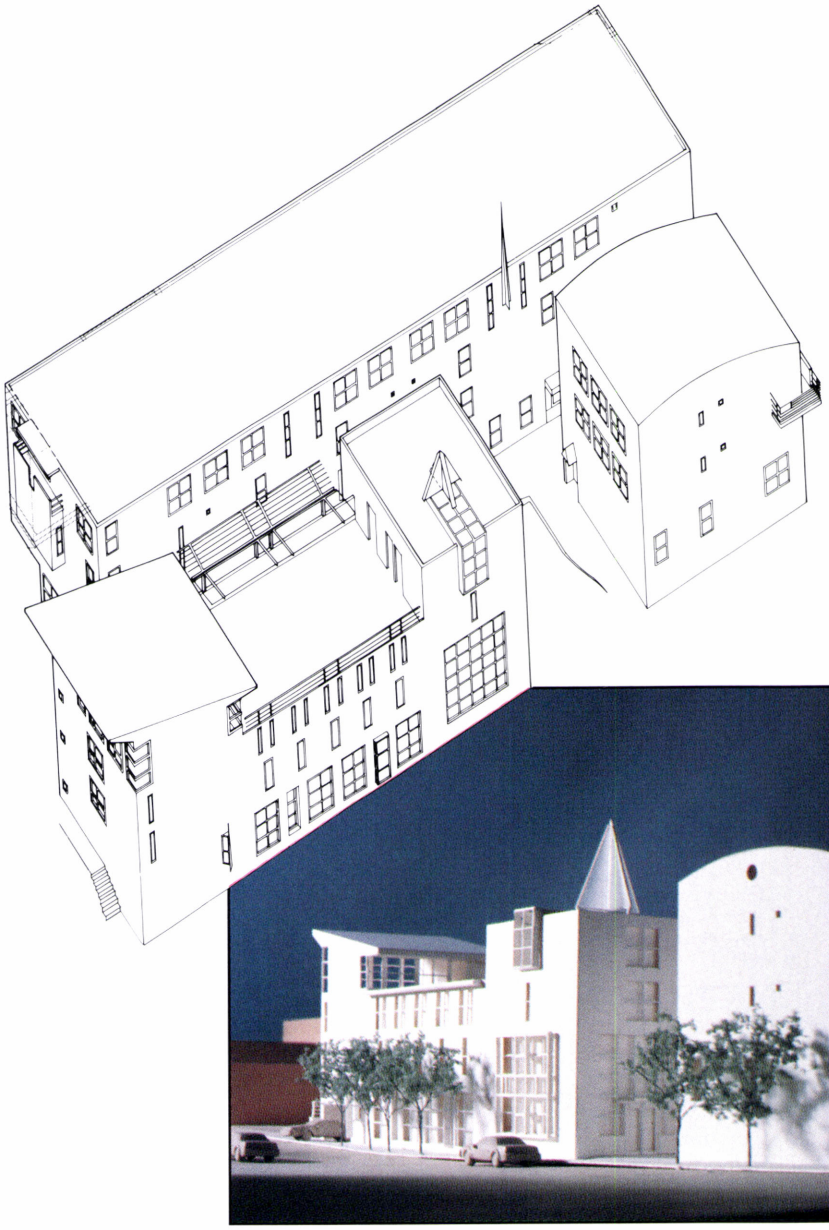


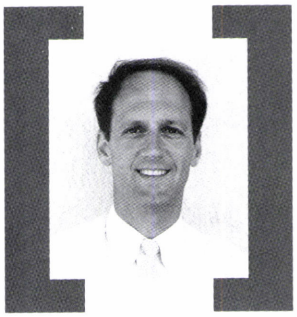
FIRST FLOOR PLAN N 20'/6m **THIRD FLOOR PLAN**

1 TERRACE
2 NEW LOBBY
3 EXISTING LOBBY
4 GUEST ROOM
5 EXISTING BAR
6 SWIMMING POOL
7 TYPICAL NEW GUEST ROOM (SUNSCREEN ON WEST SIDE)

When Rafael Longoria and Patrick Peters talk about the Cliff Inn Tower, a four-floor addition to a medical center hotel, they focus on its urban context and on the inspiration they find in Alvar Aalto, Le Corbusier, and Colin Rowe. Like other architects in Texas, Longoria and Peters are prospectors for the urbanity hidden in the state's sprawling cities. The region's economic slump could aid their cause: concerned about their cities' future, Texans are sponsoring urban design studies (if not urban planning commissions) for teacher/practitioners like Longoria and Peters. To them, **MODERNISM IS THE MOST APPROPRIATE MODE FOR BUILDING IN THESE ADOLESCENT CITIES.**

But Longoria and Peters say little about the Cliff Inn Tower's strongest point: it seems Modern and vernacular at once. While it is an object building – a frontispiece for the El Paso Medical Center – it looks like a structure in harmony with the hillside, not a building deposited at random. The limestone-clad corner will complement a façade of aluminum sunscreens, and the restaurant will open to a terrace behind a giant colonnade, a frame for views of the city below.





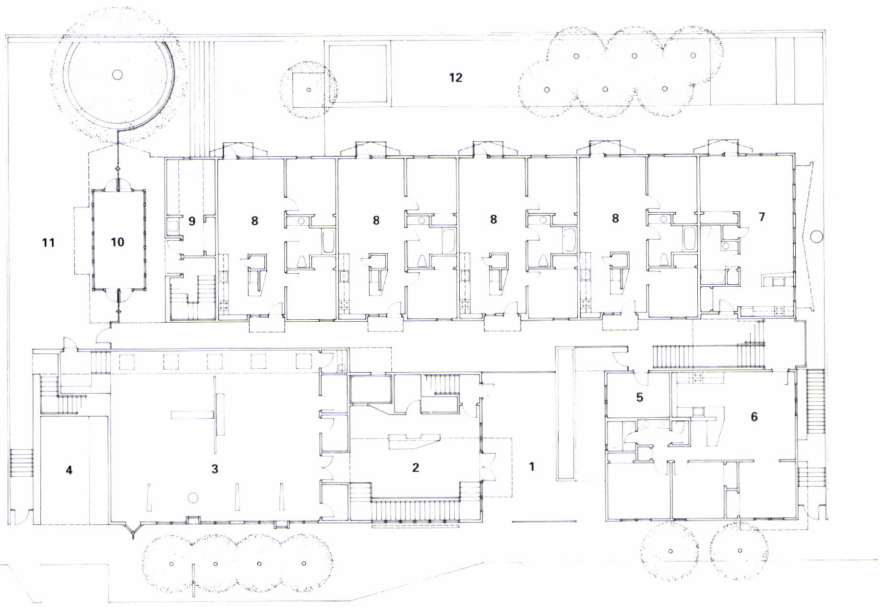
MARK HORTON

MARK HORTON ARCHITECTURE
SAN FRANCISCO

Education: *A.B., Dartmouth, 1979; M.Arch., Harvard, 1983.*
Experience: *Backen Arrigoni & Ross, Architects; Skidmore, Owings & Merrill. Co-founder, CfCA/2AES. Lecturer, U. of California at Berkeley and California College of Arts & Crafts.*

Project: *Good Samaritan Family Resource Center and Housing, San Francisco.*
Architects: *Mark Horton Architecture and Simon Martin-Vegue Winkelstein Moris, Architects-in-Association.*
Client: *Good Samaritan Foundation and Mission Housing Development Corporation.*

GOOD SAMARITAN FAMILY RESOURCE CENTER AND HOUSING, AXONOMETRIC AND MODEL



1 ENTRY COURT
2 FAMILY RESOURCE ENTRY HALL
3 CHILD CARE
4 CAR RAMP TO UNDERGROUND PARKING
5 HOUSING OFFICE
6 THREE BEDROOM UNIT
7 HANDICAP STUDIO
8 HANDICAP ADAPTABLE TWO BEDROOM UNIT
9 LAUNDRY
10 CHILDREN'S READING ROOM
11 DAY CARE OPEN SPACE
12 HOUSING OPEN SPACE

GROUND FLOOR PLAN

Mark Horton made the decision to open his own firm on the morning of his 30th birthday; he was on a European architectural tour and woke up that day thinking about what Le Corbusier and the other masters were doing at age 30. He returned home to San Francisco and quit his job at SOM. **HE LIKENS THE DIFFERENCE BETWEEN BEING SELF-EMPLOYED AND WORKING FOR A LARGE FIRM TO "DRIVING THROUGH THE ALPS AS OPPOSED TO ACROSS NEBRASKA; THE HIGHS ARE HIGHER AND THE LOWS ARE LOWER."**

Horton wants to design medium-scale, program-oriented institutional projects, buildings that really effect positive change in people's lives. The office towers he worked on at SOM affected the skyline, but little else. While he is frustrated by the profession's failure to fulfill its fundamental role as problem-solver and place-maker, he believes that such responsibilities can be resumed through the lessons of history.

Projects such as the Good Samaritan Family Resource Center and Housing in San Francisco's Mission district offer Horton the kind of challenge he most desires. It is an opportunity to work with enlightened clients who believe that everyone is entitled to good architecture; with Good Samaritan he can affect people from ground zero. The project, to be completed in 1995, will include 20 units of housing for low-income families and a resource center where day-care, family-planning services, employment counseling, and English language classes (the area is populated by immigrants from Central America) are available to both Good Samaritan and neighborhood residents.



JOSEPH DECREDICO

Education: *B.A. (Architecture), U.C. Berkeley, 1985.*
Experience: *MACK Architects; Holly Hulbrud, Design; Charles Jennings, Architect; Andrew Batey, Architecture; Adjunct Professor, California College of Arts and Crafts.*

DANIELLE SERGENT

Education: *B.A. (Architecture), U.C. Berkeley, 1985.*
Experience: *Bull Volkmann & Stockwell; Esherick, Homsey, Dodge & Davis; Ripley Associates; William Turnbull & Associates; Lecturer, California College of Arts and Crafts.*

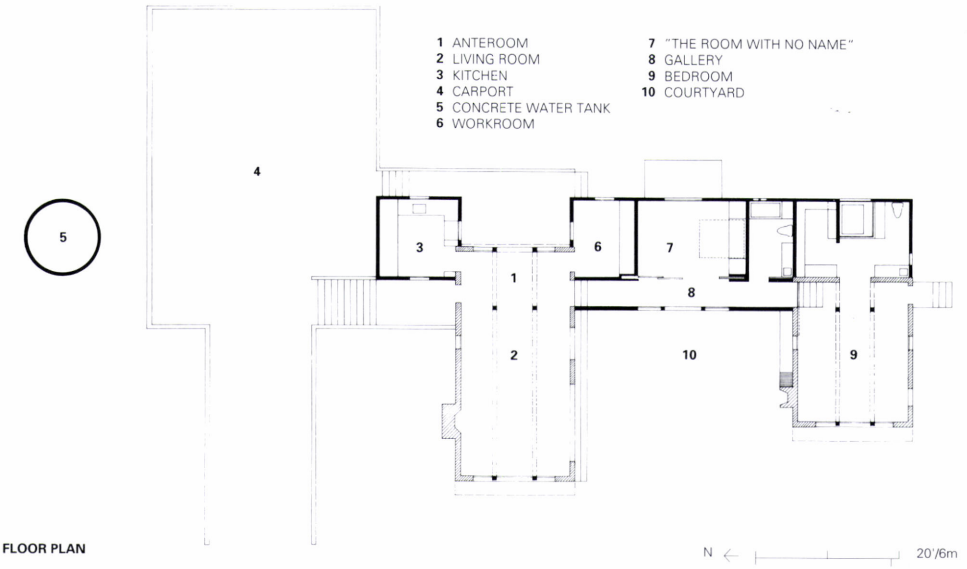
DECREDICO/SERGENT
SAN FRANCISCO

Project:
Harrison Residence, Nicasio, California.
Designers:
DeCredico/Sergent (Joseph DeCredico, Danielle Sergent, Lisa Hill, Jacqueline Lange, Mari Minamide, Chris Roberts, design team).
Client:
William Harrison
Consultants:
John Yadegar & Associates, structural engineers; Floyd Construction (Mark Casertelli, Jim Burnett), contractor; Patrick Fitzgerald, steel fabricator.

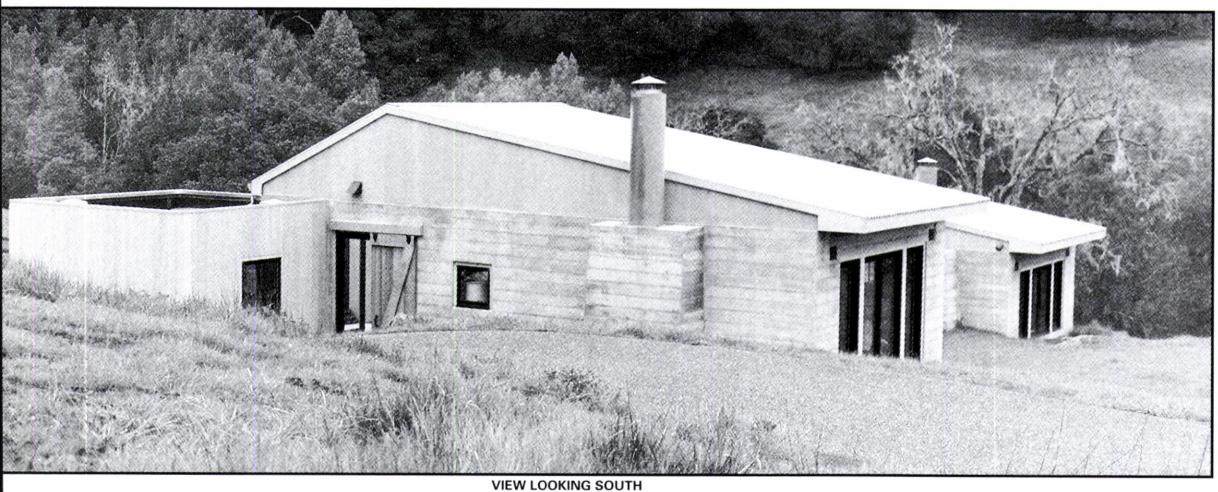


Photos: Joseph DeCredico

HARRISON RESIDENCE, CONSTRUCTION PHOTO SHOWING FORM WORK



FLOOR PLAN



VIEW LOOKING SOUTH

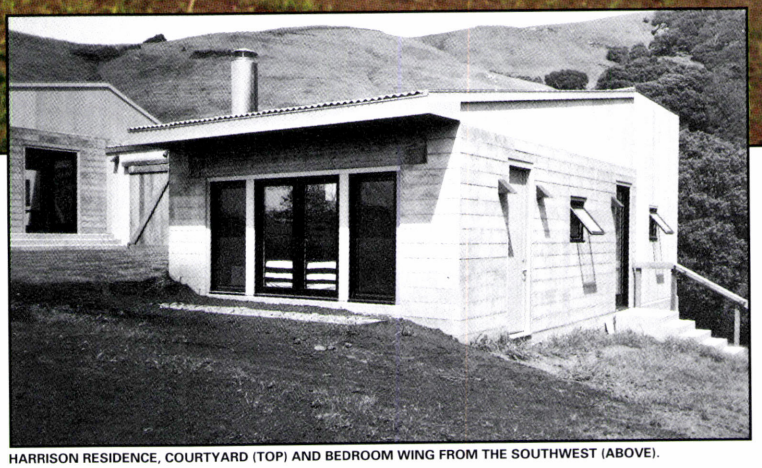
With more than a dozen projects on the boards and under construction, Joseph DeCredico and Danielle Sergent are in the rare position of being deluged with work. Long hours and modest financial gain are viewed by the partners as a trade-off: Having their own firm and being responsible to a client are just a bit more appealing than being responsible to a deadline at someone else's firm.

The partners are fascinated by the "sensuality of materials." The raw intensity of the ten-inch-thick, ten-





GALLERY



HARRISON RESIDENCE, COURTYARD (TOP) AND BEDROOM WING FROM THE SOUTHWEST (ABOVE).

foot-high walls of the Harrison Residence in Northern California bespeaks their desire to use a material in its most potent form.

They cite Alberto Perez-Gomez's "The Unconscious Act of Making" and poet Octavio Paz's "Between What I See and What I Say" as works that have informed their own sensibility towards materiality and composition. **THERE ARE TWO SIMULTANEOUS ACTS OF ARCHITECTURE" SAYS DECREDICO, "ONE THAT WE ARE CONTROLLING AND ONE THAT IS UNSEEN.** The latter only reveals itself as you work through the project. It is that aspect that's hidden in between that we are always searching for," says DeCredico.

The Harrison Residence, inspired by the client's descriptions of his travels to villages in the Central Asian Himalayas, where buildings seem to be absorbed into the landscape, clearly embodies the designers' philosophy. The house is a series of "four living terraces carved into the hillside," where "the living spaces unfold, unencumbered by the artificial distinctions which create inside/outside, formal/informal, public/private."



Photos Rick Stafford

(FROM LEFT TO RIGHT)

AN ARCH
MINNEAPOLIS, MINNESOTA

BRYAN CARPENTER
Education:
attended U. of Minnesota, 1982-1987.

SUSANNE CARPENTER
Education:
attended U. of Minnesota, 1982-1986.

GEOFFREY WARNER
Education:
B. Arch., U. of Minnesota, 1988.

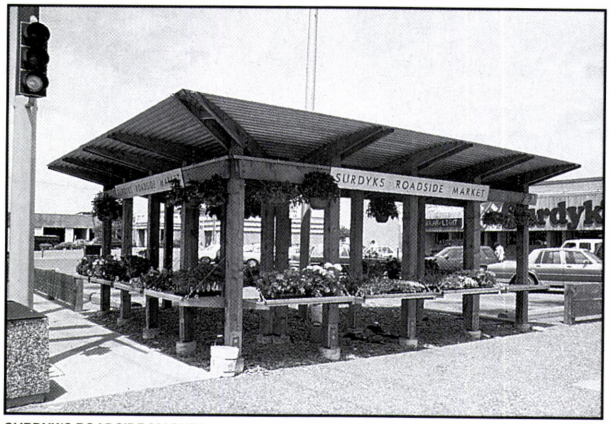
MARC ASMUS
Education:
B. Arch, U. of Minnesota, 1987.

HELENA ESPINOSA
Education:
B. Arch., U. of Minnesota, 1988;
M. Arch. candidate, Princeton.

REHN HASSELL
Education:
B. Arch., U. of Minnesota, 1986.

DAVID MALCOLM SCOTT
Education:
B. Arch., U. of Minnesota, 1987.

Project:
An Arch Studio, Minneapolis.
Architects, Designers, and Builders:
An Arch (Marc Asmus, Bryan Carpenter, Susanne Carpenter, Helena Espinosa, Rehn Hassell, David Malcolm Scott, Geoffrey Warner)
Project:
Surdyks Roadside Market, Minneapolis
Architects and Designers:
An Arch
(Helena Espinosa, Rehn Hassell, Geoffrey Warner, David Malcolm Scott, Marc Asmus)



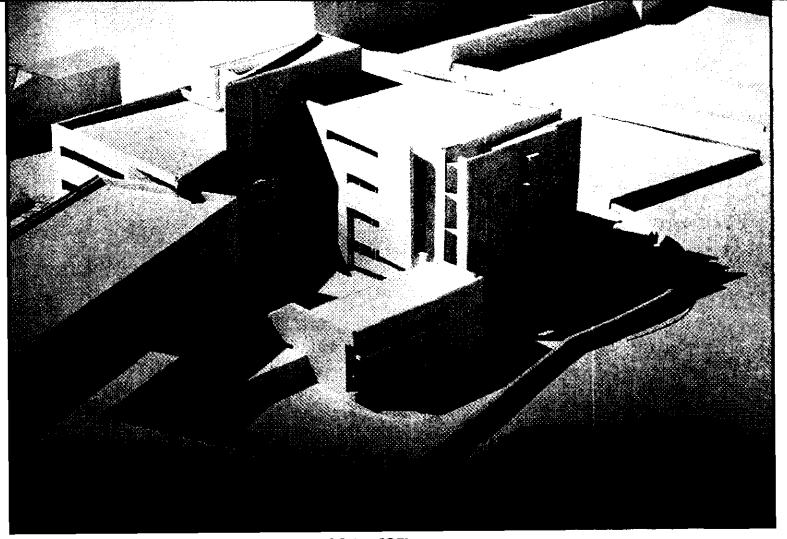
David Malcolm Scott

SURDYK'S ROADSIDE MARKET

ISOMETRIC, AN ARCH STUDIO

"STUFF WE DID WHEN WE DID WHAT WE WANTED TO DO!" says the Pop Art cartoon figure that introduces An Arch's portfolio. Take away the sarcasm, and you have the gist of this after-hours office. It's a collaborative of seven classmates from the University of Minnesota, a practice where the daily wage and the boss jobs). Their sense of humor belies their resolve. Having won a grant from Forecast, a Minnesota arts organization, An Arch rehabbed an empty storefront into a studio-cum-design forum. It became a place for the city's architects and artists to meet, with lecture series and open-ended discussion groups – the milieu An Arch's members took for granted at school, but found almost nonexistent in the professional sphere.

Above all, the studio is a workplace: since 1988, An Arch has tions, a farmer's market, and a house-within-a-power station; a landscape project and commercial interior are underway. They're offered many more commissions than they undertake. Priority goes to non-profits and clients who don't mind An Arch's slow pace: business hours are nights and weekends, and the office's egalitarian structure means that consensus is far from instantaneous. An Arch's members know that their synergy is exceptional. Will it lead to a standard partnership? No one is sure; none consider it inevitable. But An Arch's value doesn't depend on its future state; they've already formed an exem-



INSTITUTE OF MOLECULAR AND CELLULAR BIOLOGY, MODEL



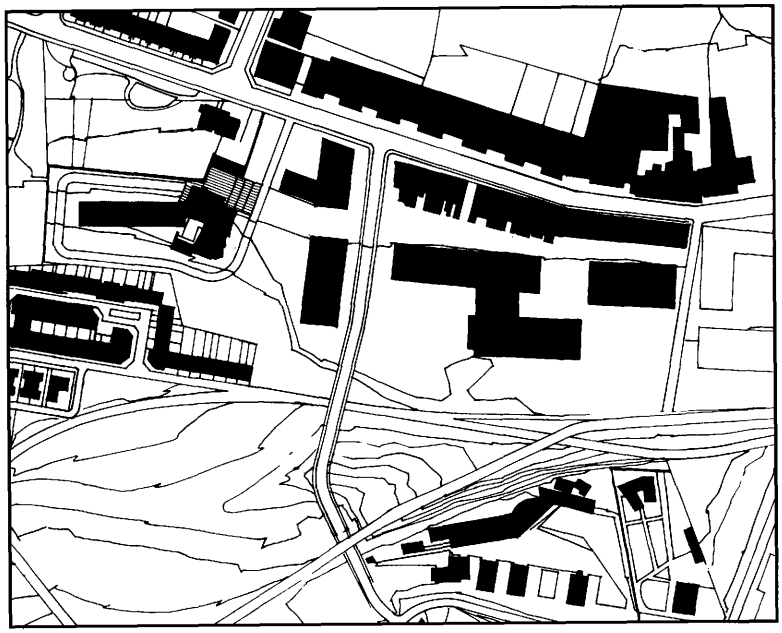
Ingrid Breyer

ANNE PERL DE PAL

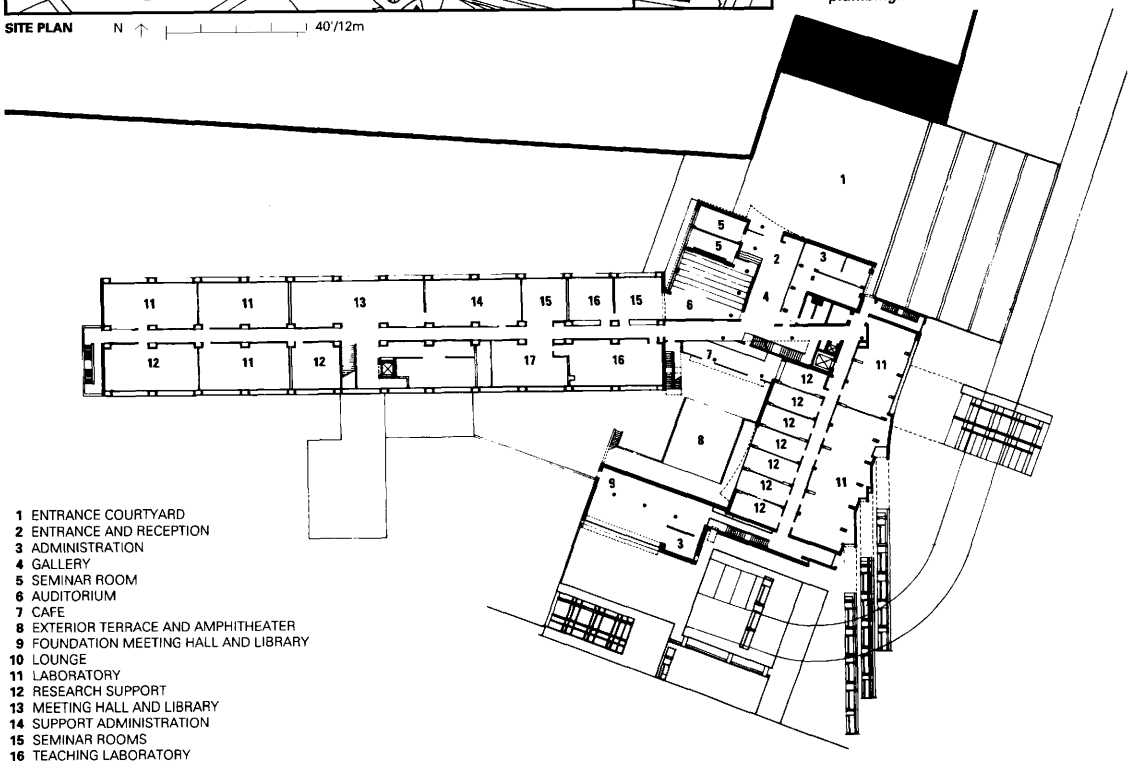
ANNE PERL DE PAL ARCHITECT
NEW YORK
CHAPEL HILL, NORTH CAROLINA
PORTO, PORTUGAL

Education: *B.E.D.A., N. Carolina State U., 1980; M.Arch., Columbia, 1986.*
Experience: *Cogswell/Hausler Associates, Architects; Payette Associates, Architects; Voorsanger & Mills Associates, Architects; Anne Perl de Pal Architect; Adjunct Assistant Professor of Architecture, Columbia;* Alvaro Siza Guide Book, *Princeton Architectural Press (work-in-progress).*

Project: *Institute of Molecular and Cellular Biology, University of Porto, Porto, Portugal.*
Architects: *Anne Perl de Pal and Maria Fernanda Machado Seixas with Eduardo Gomes, Joaquin Dominguez, Tara Rochkind, Donald Bauman, Leonor Seixas.*
Client: *University of Porto.*
Consultants: *Rui Manuel Santos de Oliveira, structural; Protermia, mechanical; Humberto Morais Lima, electrical; Candido Augusto Guerra, plumbing.*



SITE PLAN N ↑ 40'/12m



1 ENTRANCE COURTYARD
2 ENTRANCE AND RECEPTION
3 ADMINISTRATION
4 GALLERY
5 SEMINAR ROOM
6 AUDITORIUM
7 CAFE
8 EXTERIOR TERRACE AND AMPHITHEATER
9 FOUNDATION MEETING HALL AND LIBRARY
10 LOUNGE
11 LABORATORY
12 RESEARCH SUPPORT
13 MEETING HALL AND LIBRARY
14 SUPPORT ADMINISTRATION
15 SEMINAR ROOMS
16 TEACHING LABORATORY
17 RESTAURANT

FIRST FLOOR PLAN N ↑ 20'/6m

Architect Anne Perl de Pal, with Portuguese associate Fernanda Maria Machado Seixas, won the commission for the Institute of Molecular and Cellular Biology in an international competition organized by the Portuguese government and sponsored by the European Community in 1990. The program called for social, teaching, research and support facilities configured in a complex that would redefine the way lab buildings are traditionally planned

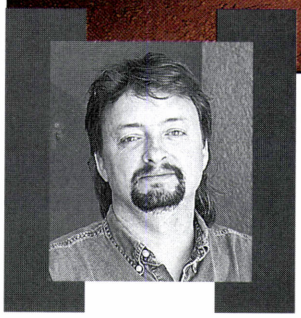
Sited on the campus of the University of Porto, within walking distance of Alvaro Siza's school of architecture, the 100,000-square-foot Institute breaks down the traditional boundaries separating areas of scientific research. It is composed of four structures that "literally overlap one another," making physical and perceptual links among the activities of the Institute's 140 scientists, between the structure and the land.

With offices in New York, Chapel Hill, North Carolina, and now in Porto, Perl de Pal is in constant motion; one recent episode required an emergency trip from New York to Porto to shore up finances after a government devaluation of Portuguese currency. The global economy allows her to operate a one-woman international practice and to question the traditional boundaries that separate societies and individuals with commissions such as the research institute in Porto.



William Lesch

VIEW OF LIVING ROOM FROM COURTYARD

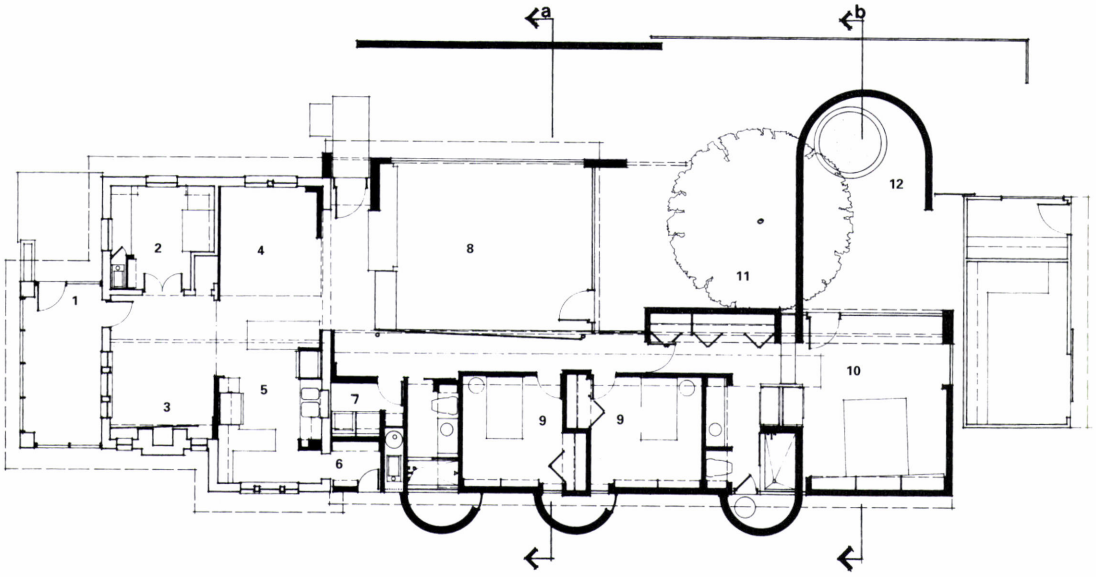


RICK JOY

RICK JOY, DESIGN BUILD
TUCSON, ARIZONA

Education: *B.Arch., U. of Arizona, Tucson, 1990.*
Experience: *William P. Bruder Architect; private practice.*

Project: *Joy house addition.*
Designer: *Rick Joy, Design Build*
Client: *Mr. & Mrs. Rick Joy.*



PLAN

1 PORCH
2 STUDY
3 DEN
4 DINING
5 KITCHEN
6 MUDROOM
7 LAUNDRY
8 LIVING ROOM
9 BEDROOM
10 MASTER BEDROOM
11 COURTYARD
12 PATIO/JACUZZI

N 10'/3m



HALLWAY SHOWING FLOATING VENTILATION CONDUIT



CLERESTORY

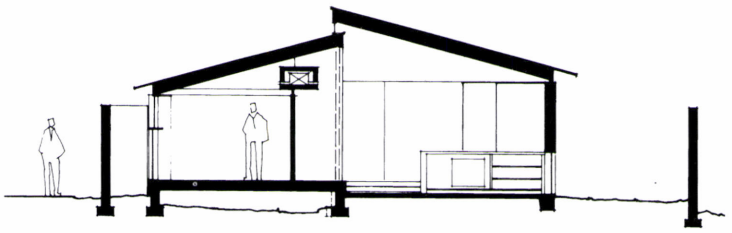


LIVING ROOM

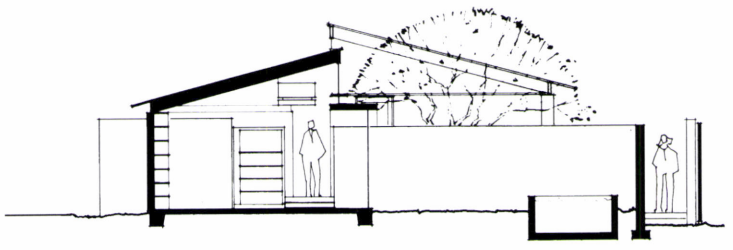
Photos: William Lesch

Rick Joy studied music, sculpture, photography, and graphics prior to studying architecture; and learned carpentry as a means of supporting a career as a professional drummer. His work is guided by intuitive artistic impulse, inspired by his mentor, William Bruder. In his words, **"IF A BUILDING IS FUNCTIONALLY AND SENSUALLY RESPONSIVE TO THE HUMAN CONDITIONS AND DESIRES OF ITS OCCUPANTS, AND TO THE SENSIBILITIES OF THE PLACE IN WHICH IT IS BUILT, IT CAN TRULY BE ENJOYED IN AND OF ITSELF, WITH NO NEED FOR ELABORATE INTELLECTUAL JUSTIFICATIONS."**

He built this addition to his own house by himself (with the exception of concrete, rough plumbing, rough electrical, plaster, and glass). The design was based on the need to admit light from the south while maintaining privacy from the service alley. Curving plastered landscape walls provide privacy and capture sunlight for bedrooms and bathrooms, and a six-inch clerestory slot serves the living room. While the material palette is varied, the elements are brought together with highly crafted and often surprising joints.



SECTION A-A

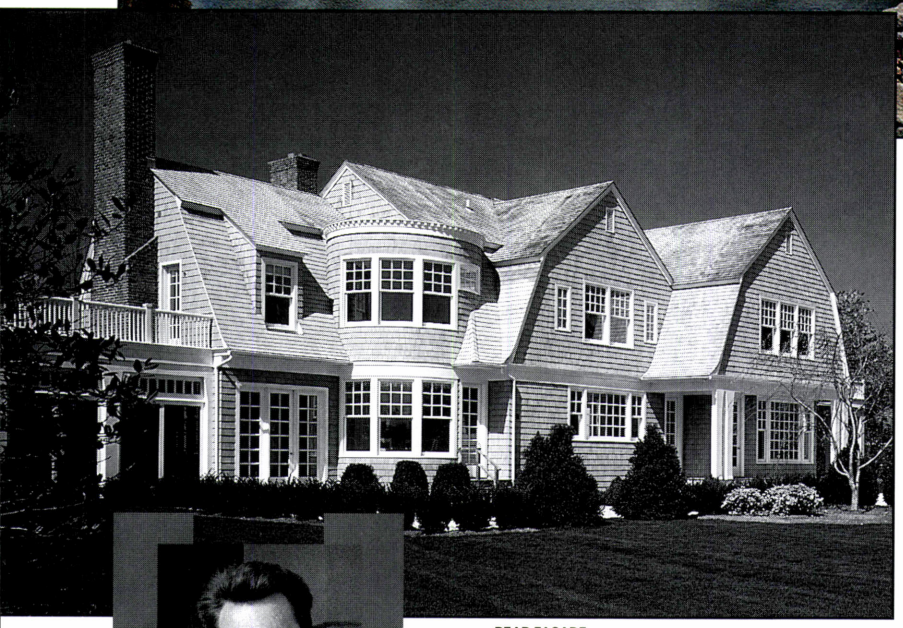


SECTION B-B

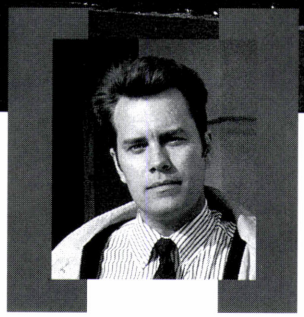
10'/3m

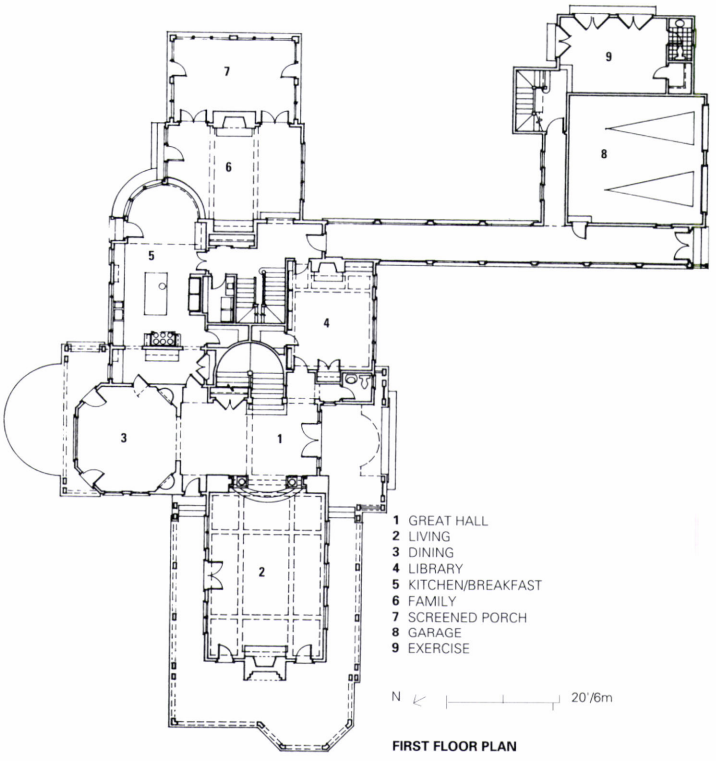


FRONT FAÇADE



REAR FAÇADE





FIRST FLOOR PLAN

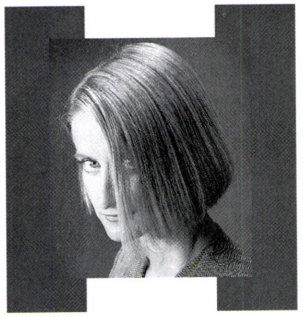
PETER COOK

PETER COOK, ARCHITECT
BRIDGEHAMPTON, NEW YORK

Education: *B.S., Rensselaer Polytechnic, 1985.*
Experience: *E.L. Futterman, Architect.*
Project: *Summer house, South Shore Long Island.*

"DESIGNING TRADITIONAL BUILDINGS TEACHES YOU HOW TO WORK CREATIVELY." Peter Cook describes the Shingle Style houses he designed in the Hamptons as case studies for learning how to build well. Detailing is a case in point; over the past five years, he has learned the power of subtlety: a line of shadow, for instance, can provide a stronger highlight than filigree. Cook's matter-of-fact approach seems molded by his curriculum and his work experience: he describes Rensselaer as a tech-heavy learning environment, where studios focused on design as a problem-solving method. Having worked as a carpenter for four summers, Cook has a healthy respect for the tradespeople he depends on. Anyone planning to design small structures would benefit from time spent in the building trades, he says. "You need to know how to translate your vision into built form."

Where does innovation fit in? For Cook, creative license is earned once you're qualified to carry out your ideas. A few years ago, his clients were reluctant to give him free rein with their house. But once he had built enough houses for them to inspect, their trust advanced in tandem with his creative convictions.

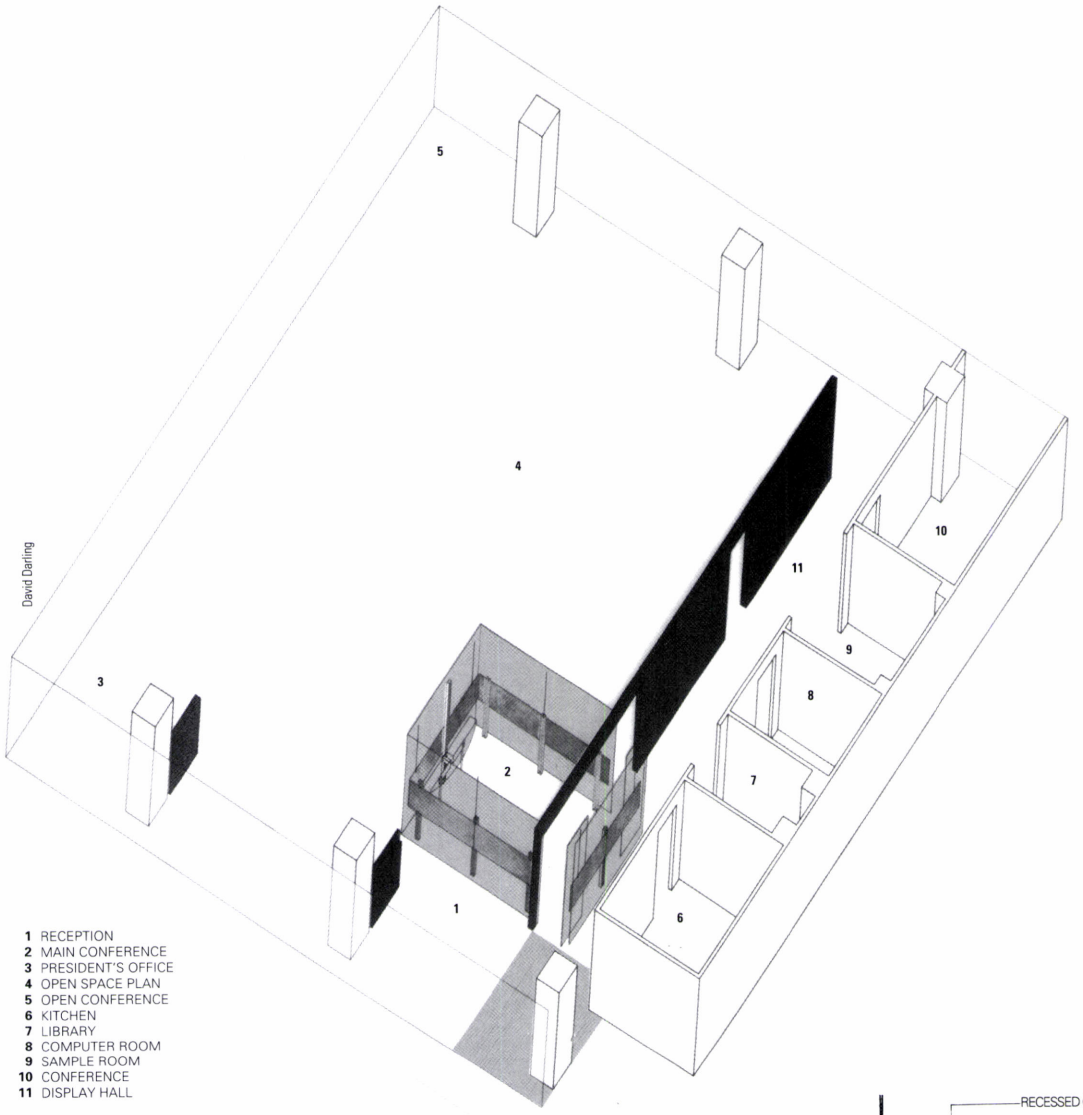


SUZANNE GREISCHEL

SUZANNE GREISCHEL
ARCHITECTURE INTERIORS
SAN FRANCISCO

Education: *A.B.(Architecture), U.C.Berkeley, 1979; M.Arch., U.C.Berkeley, 1983.*
Experience: *SOM/San Francisco; Jennings Stout Architects; Lecturer at U.C. Berkeley and U.C. San Francisco.*

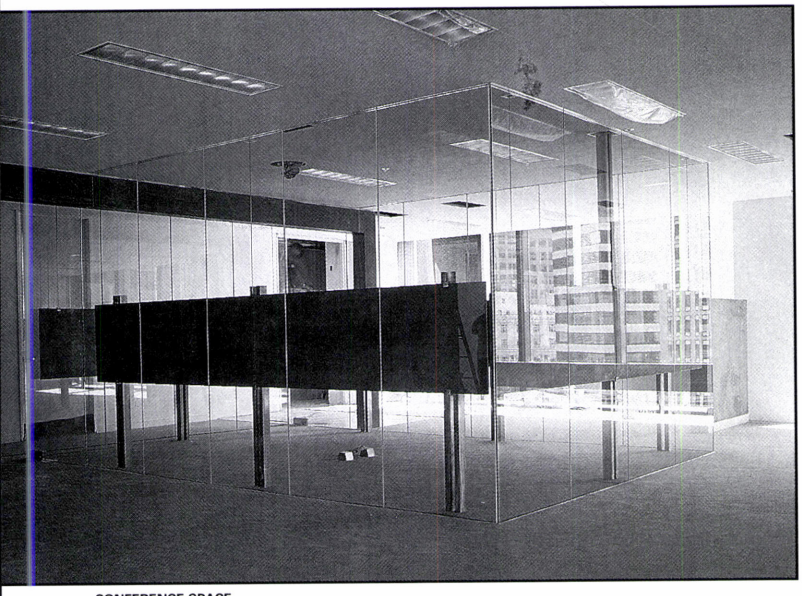
Project: *C.R.I. office space*
Designer: *Suzanne Greischel*
Client: *Coordinated Resources, Inc.*
Consultants: *Robinson Mills & Williams, project management; C.W. Ironworks, steel fabrication.*



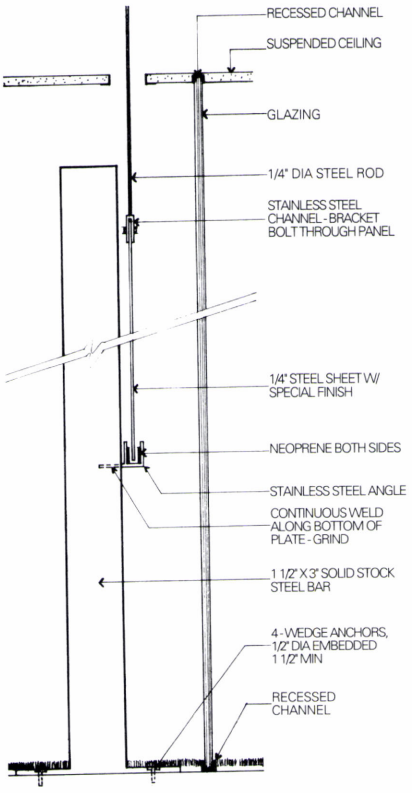
AXONOMETRIC

Like many young designers in urban areas, Suzanne Greischel's practice consists mainly of remodeling and additions. She has taken the position that since such work implies ongoing change from an original state, remodeling must be open to the possibility of constant change. **"BY DESIGNING SMALL SEGMENTS OF THE SPACE WITH AN 'OBJECT' IN MIND," SHE SAYS, "MY APPROACH CAN ACCOMMODATE THE CONSTANTLY CHANGING PROGRAM."** She does this by lavishing special attention on the detailing of those objects that can be changed while maintaining flexibility.

In this design for a furniture dealership in San Francisco's Crown-Zellerbach building, the glass-enclosed conference room becomes the focal point in a mostly open-plan office. The conference room itself was designed as a microcosm of the building. Inside the floor-to-ceiling glass, a screen of plate steel is suspended on columns and suspension rods – independent of the curtain-wall envelope.



CONFERENCE SPACE



DETAIL – CONFERENCE SPACE WALL



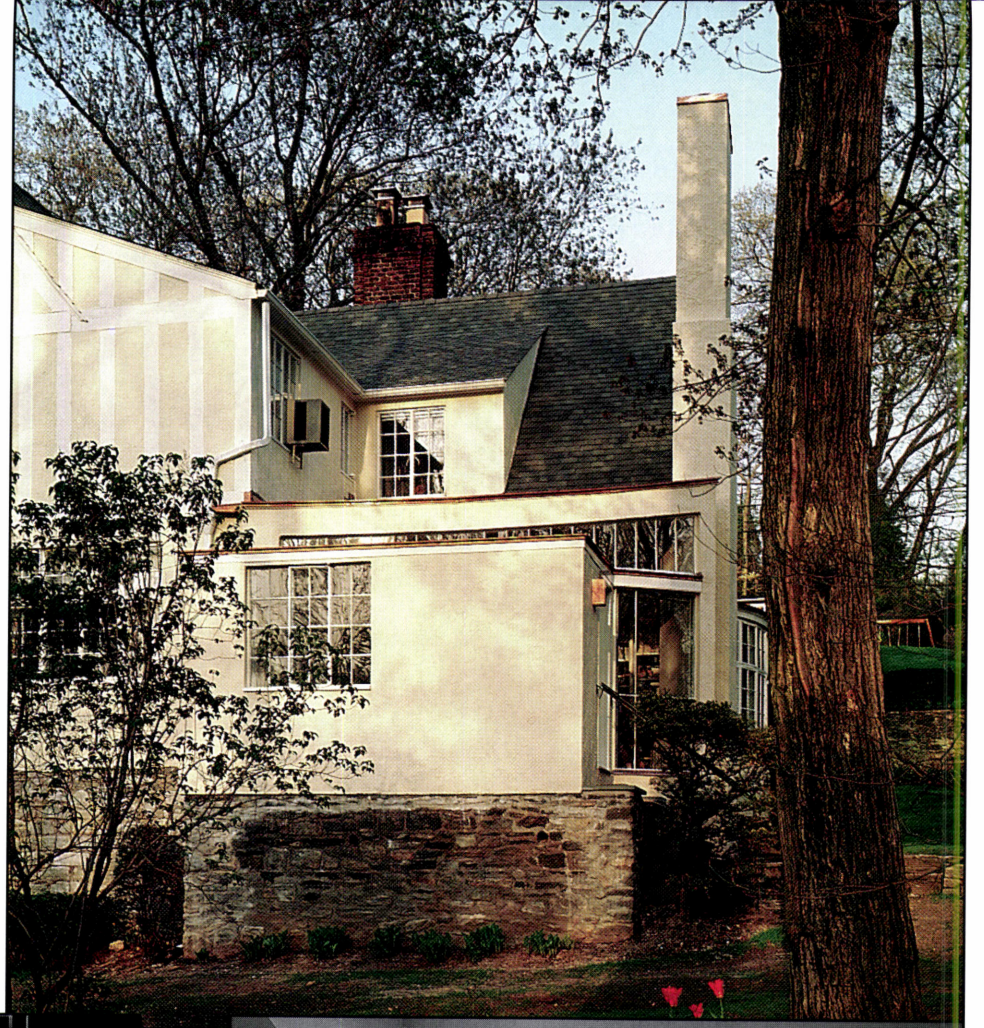
KATHRYN DEAN AND CHARLES WOLF

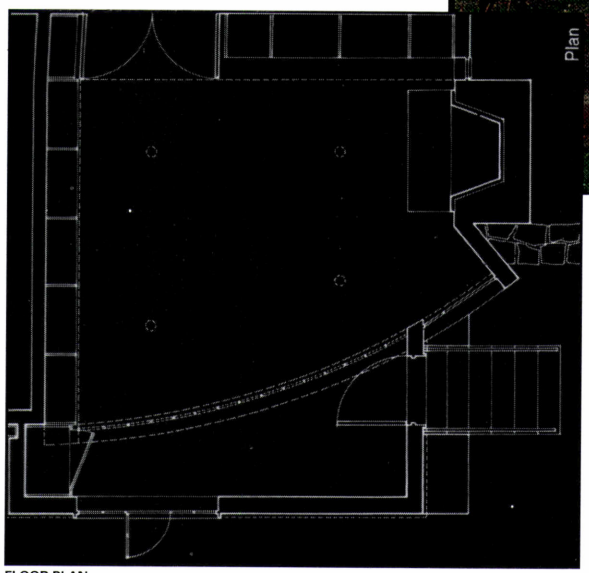
DEAN/WOLF ARCHITECTS
NEW YORK

KATHRYN DEAN
Education: *B.A., North Dakota State U., 1981; M.Arch., U. of Oregon, 1983.*
Experience: *Kohn Pedersen Fox Associates; Adjunct Assistant Professor of Architecture, Columbia.*

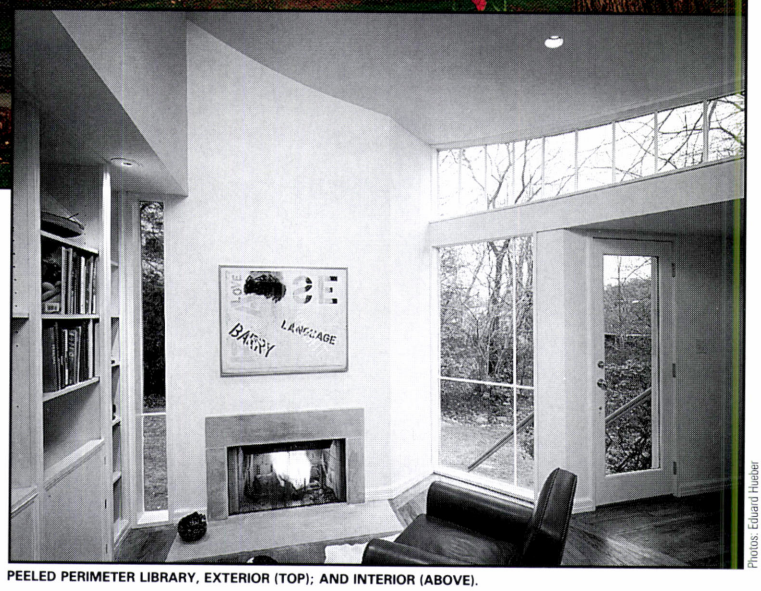
CHARLES WOLF
Education: *B.A., Washington U., 1979; M.Arch., U. of Oregon, 1983.*
Experience: *James Stewart Polshek & Partners; Adjunct Assistant Professor of Architecture, Columbia.*

Project: *Peeled Perimeter Library, Bronxville, New York.*
Architects: *Dean/Wolf Architects (Kathryn Dean, Charles Wolf, principals; Elizabeth Whittaker, project assistant).*





FLOOR PLAN



PEELED PERIMETER LIBRARY, EXTERIOR (TOP); AND INTERIOR (ABOVE).

Photos: Eduard Hueber

Charles Wolf and Kathryn Dean established their own office in 1991 to "have more control" over their work and to "address client needs head-on." Both partners had previously worked at large firms, where they felt "excluded from the process" of making architecture. Freed from the restraints of working in the context of another firm's design sensibility, Dean and Wolf are able to infuse projects with their own brand of architecture.

The partners find inspiration in the time they spend at contemporary art galleries. They cite the work of Bruce Nauman, Martin Puryear, and Susan Rothberg among their influences. Sometimes they look to a sculpture for its tectonic qualities or its subject matter, but mostly, they are interested in "emotional content." It is the sculptor's "ability to evoke or stir some kind of an emotional reaction" that they would like to emulate in their own work.

The Peeled Perimeter Library, a 220-square-foot addition to an existing Tudor-style house in Bronxville, New York, is just such a sculptural composition. The upward sweep of the library roof and the "seamless" way the addition is grafted onto the existing structure are clues to this sculptural exploration. The program called for an addition that would be both a family room and a private study for the owner.

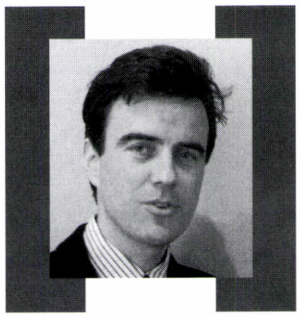
While the room is basically an open space, the irregularity of its wall planes articulates the function of the small space. The architects point to the "slice of light" cutting through the south-facing window as an "implied border" between the public and private areas.



Paul Laliberté



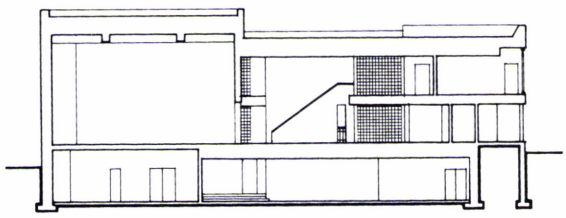
ENTRY HALL (TOP)
ENTRANCE(ABOVE)
MAIN FAÇADE (LEFT)



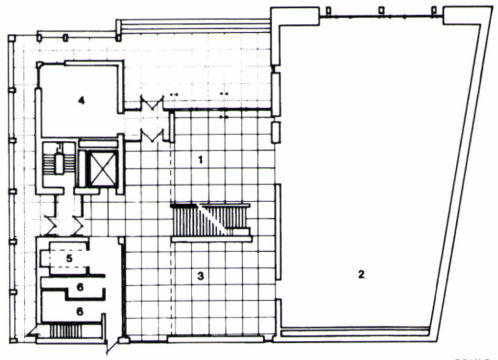
PIERRE THIBAULT
PIERRE THIBAULT ARCHITECTE
QUEBEC CITY

Education: *B.Arch., Laval University, 1984.*
Experience: *Private practice.*

Project: *Centre d'Exposition, Baie-St.-Paul, Quebec, Canada.*
Architect: *Pierre Thibault Architecte, Quebec City (Pierre Thibault, Principal; André Limoges, Lucie Beaumont, project team).*
Client: *Corporation du Centre d'Art de Baie-St.-Paul.*
Consultants: *Piette Audy, Bertrand, Lemieux et Associées (structural); Groupe-conseil Roche (mechanical/electrical).*



SECTION THROUGH HALL

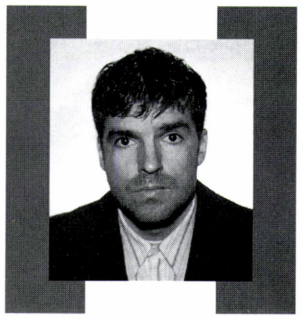


1 HALL
2 MAIN GALLERY FOYER
3 LIBRARY
4 CLOAKROOM
5 RESTROOM

GROUND LEVEL PLAN

PIERRE THIBAULT BELIEVES THAT YOUNG ARCHITECTS INEVITABLY GET TYPECAST BY THE KIND OF WORK THEY DO. He has managed to make this situation work to his advantage, by cultivating Quebec cultural institutions as his clients. His office has already worked on several museums and a biomedical research center.

The design for this exposition hall in the Quebec village of Baie-St.-Paul is based on dividing the volume into three parts by programmatic function. A large exhibition gallery and service functions are grouped on opposite sides of a glazed hall. The façade treatment of exposed steel with brick and glass infill was derived by abstracting the appearance of a cinema that once stood on the site of the main gallery space. The result has something of a Miesian quality without being overly formal.



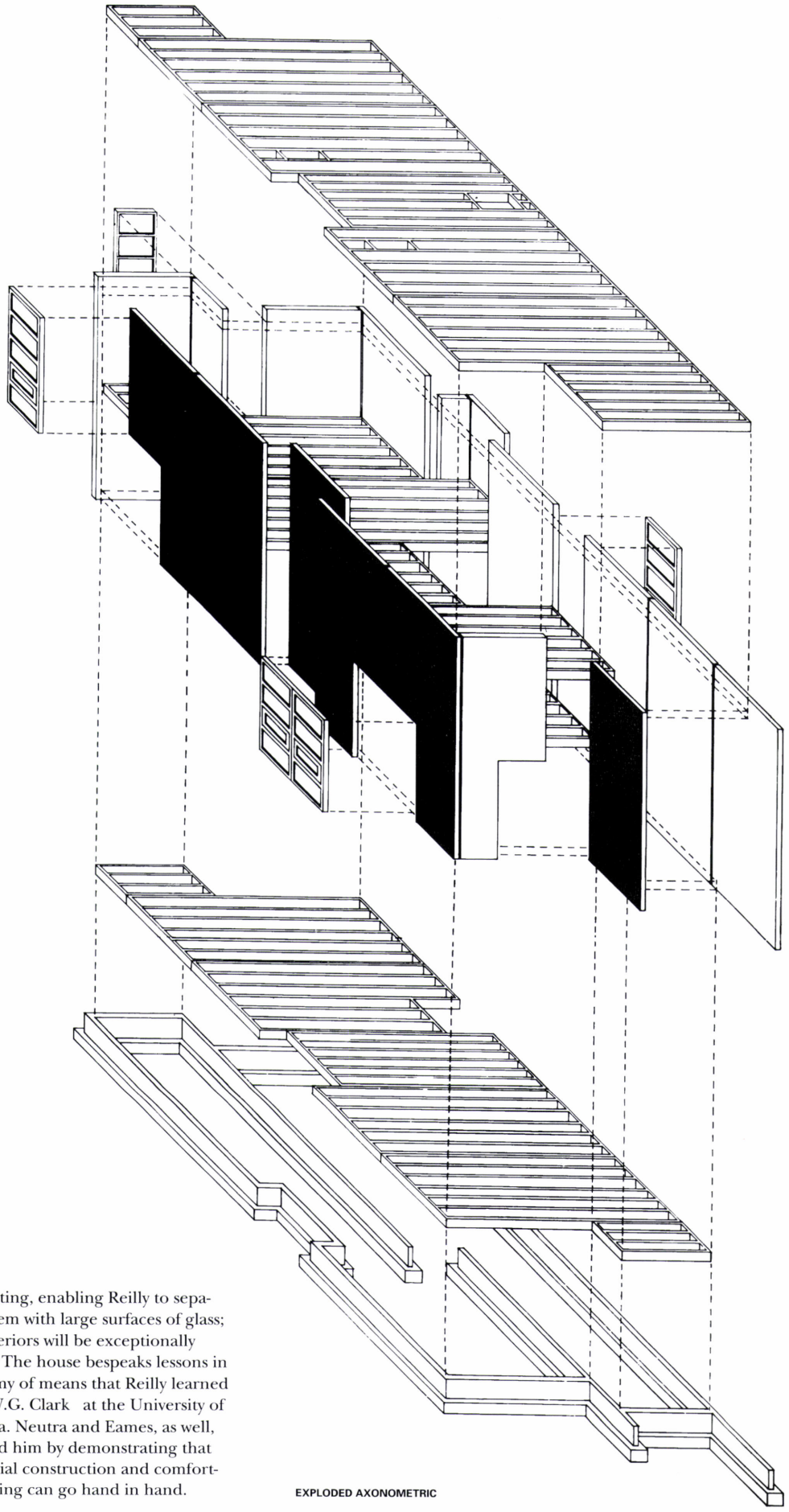
ALISTAIR REILLY
WASHINGTON, D.C.

Education: *B.A., Syracuse, 1987; M.Arch., U. of Virginia, 1988.*
Experience: *Robertson & McNulty; Kolatan & MacDonald; Koetter & Kim; Voorsanger & Mills; D. Compe, Inc. (prefabricated panel contractor).*

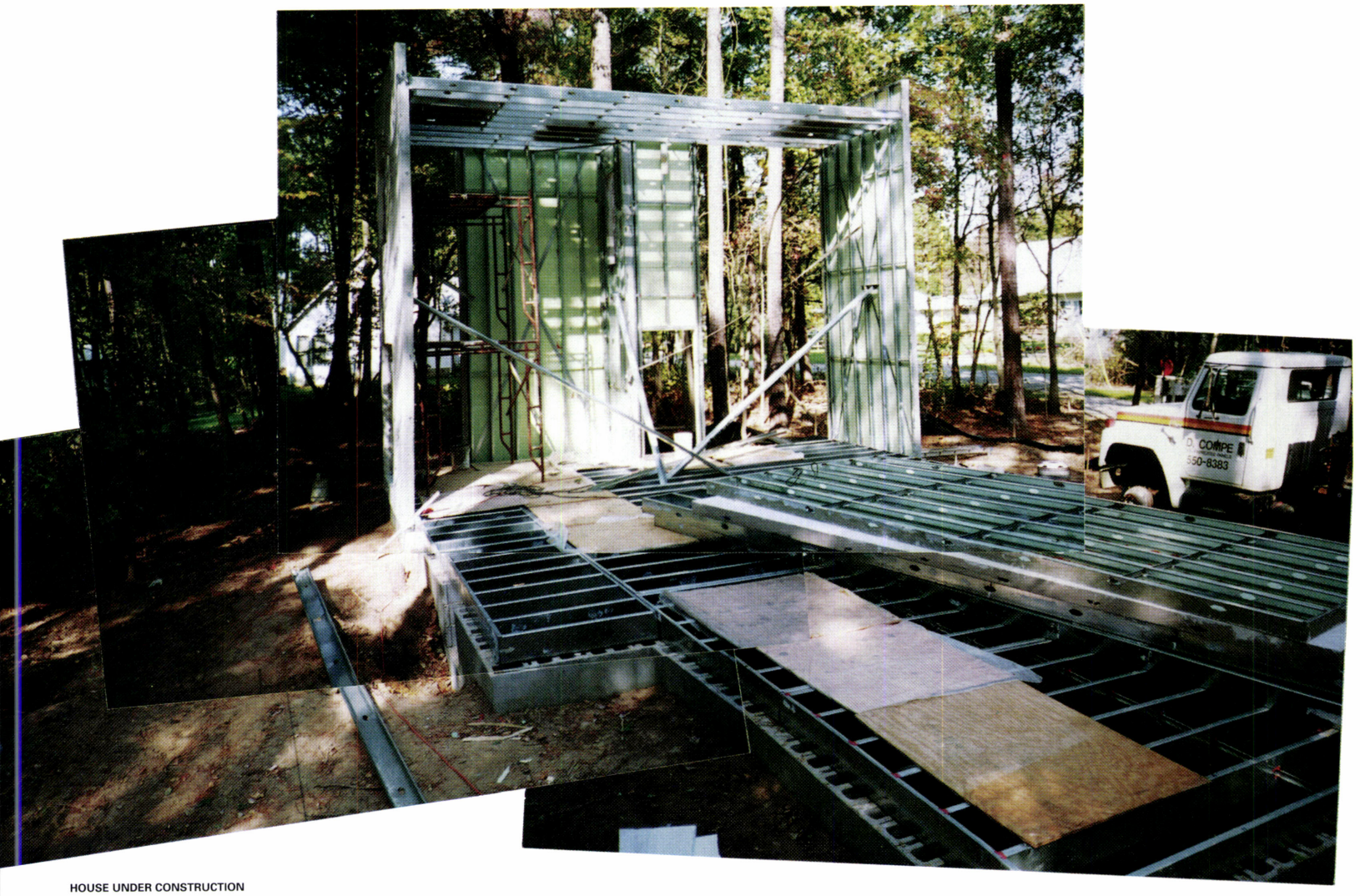
Project: *Drumpoint Experimental House, Calvert County, Maryland.*
Architect: *Alistair Reilly, designer and builder.*
Client: *D. Compe Inc.*
Consultants: *Atlantic Framing Design (Brian A. Mucha), engineering.*

Every architect is familiar with balloon-frame construction, but few use it. Virtually every stick-built structure is platform-framed – that is, a stack of one-floor structures – without the double-height studs required for balloon framing. But if this prototype house by Alistair Reilly proves successful, balloon framing may reappear, built with steel studs, celotex board, and an EIFS (synthetic stucco) veneer. The house is a creative response to problems in two markets. The nation's inflated real estate prices troubled Reilly's father, who remembers that General Motors and Sears once sold economical factory-built houses as desirable as custom-built ones. Perhaps a house of prefabricated walls, clad in EIFS, would be more affordable. It might also lift his EIFS contracting firm out of a business slump.

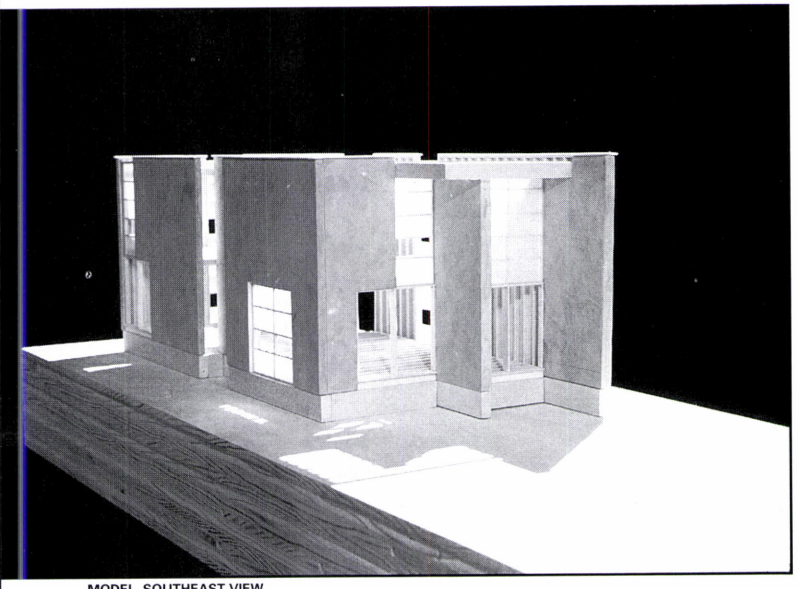
The senior Reilly asked Alistair to design a three-bedroom model for about $50 per square foot. His prototype is being built near Chesapeake Bay, a Modern counterpoint to the traditional homes that prevail in the area. Reilly's rigorous design makes a virtue of standardization: prefabricated steel-stud panels are the module for every surface, from the joists over the CMU foundation to the enclosing walls and the roof. Each panel is self-supporting, enabling Reilly to separate them with large surfaces of glass; the interiors will be exceptionally bright. The house bespeaks lessons in economy of means that Reilly learned from W.G. Clark at the University of Virginia. Neutra and Eames, as well, inspired him by demonstrating that industrial construction and comfortable living can go hand in hand.



EXPLODED AXONOMETRIC

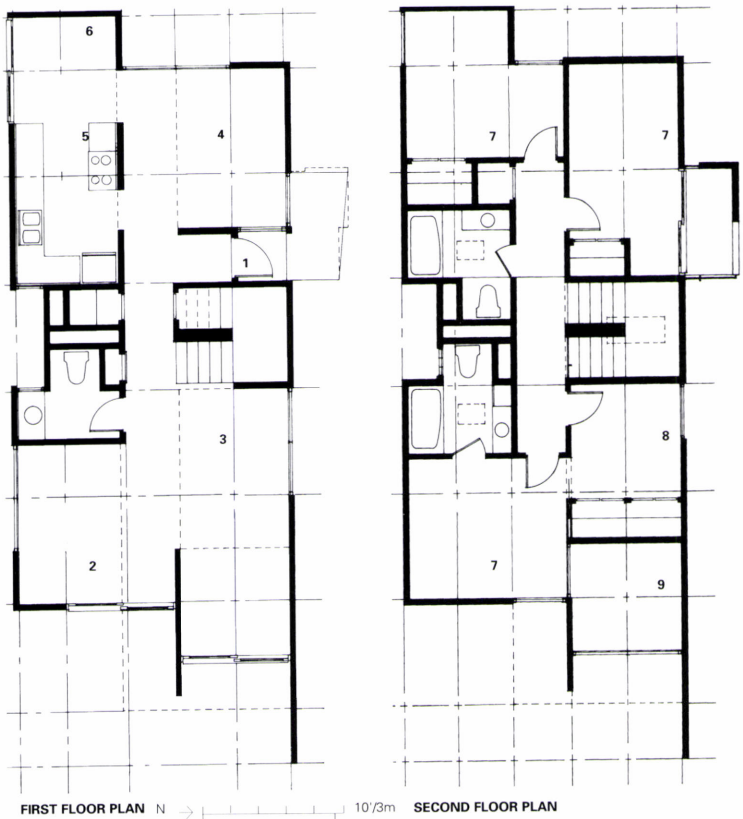


HOUSE UNDER CONSTRUCTION



MODEL, SOUTHEAST VIEW

Photos: Michael Lomont



1 ENTRY
2 LIVING
3 STUDY
4 DINING
5 KITCHEN
6 BREAKFAST
7 BEDROOM
8 EXERCISE/NURSERY
9 OPEN TO BELOW

FIRST FLOOR PLAN N → 10'/3m SECOND FLOOR PLAN

ALTERNATIVE CAREERS

Once treated as a novelty, the phenomenon of architects working in alternative careers has taken on new importance in a time when there are many more architecture school graduates than traditional practice can absorb. Even among AIA members, alternative careers have risen slightly in the last five years. According to a newly released AIA salary report on alternative careers, 18 percent of AIA members – up from 16 percent in 1988 – are "working in settings other than private practice," most commonly in corporate architecture or facilities-management departments, in education, and in government. The figure for all architecture graduates, while not available, would presumably be much higher, since those pursuing different careers are less likely to become registered (or if registered, to join AIA).

The AIA survey found also that 64 percent of the alternatively employed would not now take a job in private practice for the same pay and benefits. Our Alternative Careers submissions roughly echo those numbers: a majority feel that, however accidentally, they have found their calling. So it is interesting to note that many of our respondents would not even have considered other career options had it not been for disastrous job prospects. Christine Malecki, a recent Carnegie Mellon graduate and student director of the American Institute of Architecture Students (AIAS), feels that schools should encourage students to explore options. "People need to be educated with an openness to other careers," says Malecki. "The attitude in schools is that if you don't work in a firm, you're nothing." To combat this attitude, Malecki produced an AIAS booklet for students on nontraditional careers, including art and design, writing, and "entrepreneurship."

Among the portfolios we received were a substantial number devoted to alternative careers. Some came from people who tried something new out of desperation; others have simply followed pursuits that had long interested them. Some have made a full-time career of their "alternative"; others pursue theirs during off-hours for little or no pay. Most are involved in closely allied design disciplines, but some have moved far afield. Some of the alternative careerists noted were sculptors, painters, furniture and exhibition designers, graphic designers, a sand sculptor, a reserve police officer, and a plumber's assistant.

Most entrants, regardless of the extent to which they have strayed from conventional practice, feel that architectural education is an advantage in their field. Many cited the training in problem solving as having the widest application, though learning presentation skills and surviving the initiation rite of design juries were also considered valuable. Many complained, though, that their education had placed too much emphasis on solitary design skills – a refrain often heard even from those in traditional practice.

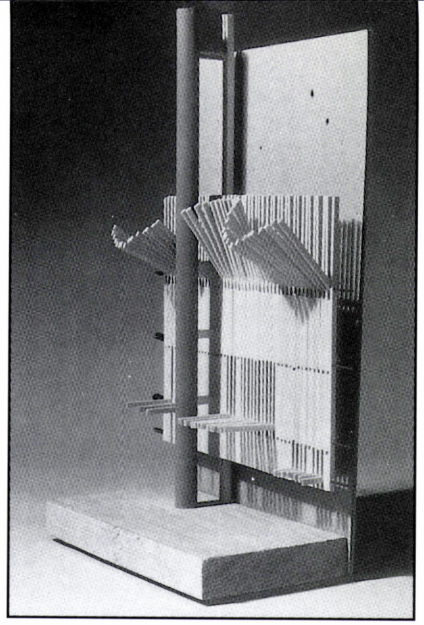
Mark Alden Branch ■



Grant Taylor

CRAIG KONYK
DESIGN
NEW YORK

Education: *B.S., Catholic U., 1981; M.Arch., U. of Virginia, 1983.*
Experience: *Skidmore, Owings & Merrill; Smith-Miller + Hawkinson.*



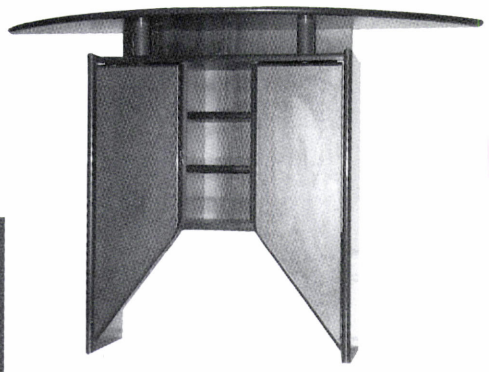
While Craig Konyk's practice is not exclusively "alternative," his list of projects includes more exhibitions, competition entries, and furniture-like pieces than buildings or interiors. Konyk, who teaches at New Jersey Institute of Technology and at Parsons School of Design, has built his career on the fringes of traditional practice, winning recognition through design and awards competitions. One recent work, commissioned by Parsons, is a display system of plywood slats that fold down to create horizontal surfaces (above). He practices on his own, but shares studio space with other young architects.



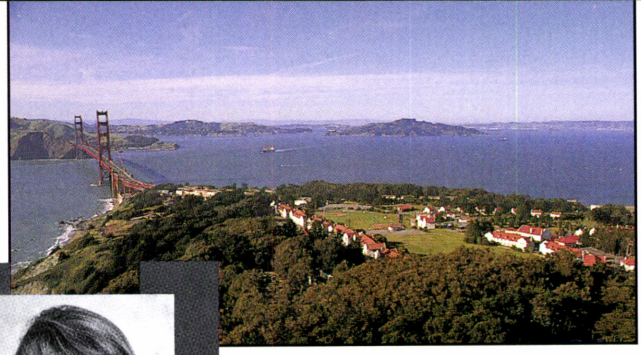
Photos: Louis Jolicoeur

CÉLINE MARCOTTE
LAMINATE DESIGN
UNIBOARD, INC.
SAINTE-FOY, QUEBEC

Education: *B.Arch., Laval University, 1990.*
Experience: *Régis Côté et Associés.*



When the economy went sour, Céline Marcotte answered an ad for a color consultant at Uniboard, a manufacturer of low-pressure laminate board. "I developed the job and made it more than it was," she says. As coordinator of design and marketing, she develops new colors and finishes, organizes trade show exhibits, and designs furniture to promote the product. The piece above, developed for a company that makes PVC pipe, was designed to display both products.



National Park Service



Ally Ma

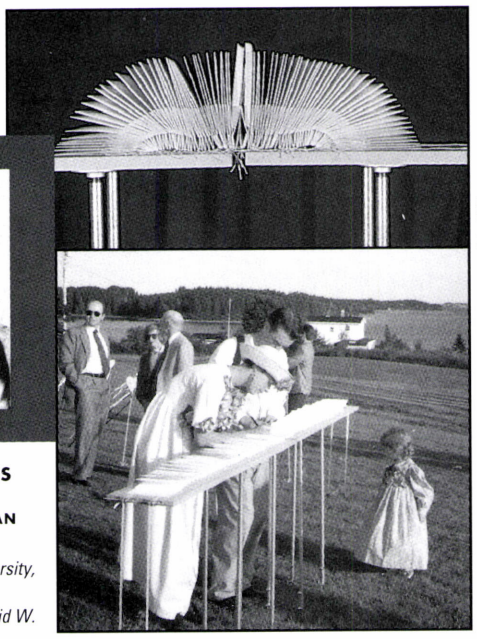
CAREY FEIERABEND
PLANNING
NATIONAL PARK SERVICE
SAN FRANCISCO

Education: *B.S., U. of Virginia, 1982; M.Arch., Yale, 1986.*

Since 1990, National Park Service employee Carey Feierabend has been the lead historical architect on the team that is helping to determine what will be done with the Presidio (above), the 1,400-acre, 865-building military base near the heart of San Francisco that is being closed by the Army. "I've crossed into planning and working with multidisciplinary teams," she says. Her responsibilities include program development, working with the public to gather and present ideas, and contracting out building assessments and historic studies. Her team's draft management plan for the site comes out this month.



Bob Moustakas



Betsy Williams

Bev Carter

BETSY WILLIAMS
BOOK MAKING
ANN ARBOR, MICHIGAN

Education: *B.E.D., Miami University, 1983; M.Arch., 1986.*
Experience: *various firms; David W. Osler Associates.*

In addition to her architectural work, registered architect Betsy Williams makes books that "enhance the rituals of an event" or "record a place and time." Among her projects are a box containing 100 years of birthday cards (a gift for a newborn baby); an exhibition catalog that visitors assembled themselves using pages gathered throughout the exhibition; and a ten-foot-long, pleated wedding guest book (above). Williams hopes for "a more complete synthesis" of her book and architecture work in the future. One upcoming project is a series of books on "the space-time relationship of festivals" that she encountered on a European study grant.



Samuel J. Armijos



Biggs Photography

SAMUEL J. ARMIJOS
FABRIC STRUCTURES
NEWARK, NEW JERSEY

Education: *B.Arch., New Jersey Institute of Technology, 1985; M.Arch., Rensselaer Polytechnic Institute, 1987.*
Experience: *FTL Associates.*

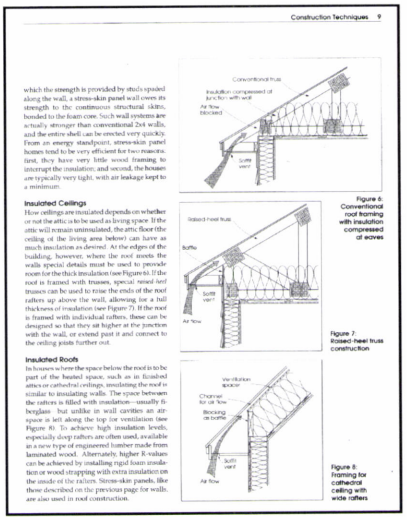
"Seven years of architecture school and now you're building tents!" Such was the reaction of friends when Samuel J. Armijos finished school and went to work for FTL Associates, a firm that specializes in tensile structure design. Armijos's interest in the subject had begun with his master's thesis; at FTL, he got a chance to design bandshells, interior tented ceilings, and music pavilions. In 1991, he founded Nomadic Structures, which specializes in the research, design, and manufacture of fabric structures. His first product, introduced last year, was a portable beach cabana. Other projects include a temporary "ceiling" attached to a trellis for a wedding reception (above).



Justin Kimball

DUNCAN PRAHL
ENERGY CONSERVATION
WESTERN MASSACHUSETTS
ELECTRIC COMPANY
SPRINGFIELD, MASSACHUSETTS

Education: *B.Arch., Rhode Island School of Design, 1986.*
Experience: *Garofalo & Associates; GSGSB Architects.*



Construction Techniques 9

which the strength is provided by studs spaced along the wall, a stress-skin panel wall owes its strength to the continuous structural skins, bonded to the foam core. Such wall systems are actually stronger than conventional 2x4 walls, and the entire shell can be erected very quickly. From an energy standpoint, stress-skin panel homes tend to be very efficient for two reasons. first, they have very little wood framing to interrupt the insulation; and second, the houses are typically very tight, with air leakage kept to a minimum.

Insulated Ceilings

How ceilings are insulated depends on whether or not the attic is to be used as living space. If the attic will remain uninsulated, the attic floor (the ceiling of the living area below) can have as much insulation as desired. At the edges of the building, however, where the roof meets the walls special details must be used to provide room for the thick insulation (see Figure 6). If the roof is framed with trusses, special raised-heel trusses can be used to raise the ends of the roof rafters up above the wall, allowing for a full thickness of insulation (see Figure 7). If the roof is framed with individual rafters, these can be designed so that they sit higher at the junction with the wall, or extend past it and connect to the ceiling joists further out.

Insulated Roofs

In houses where the space below the roof is to be part of the heated space, such as in finished attics or cathedral ceilings, insulating the roof is similar to insulating walls. The space between the rafters is filled with insulation—usually fiberglass—but unlike in wall cavities an air space is left along the top for ventilation (see Figure 8). To achieve high insulation levels, especially deep rafters are often used, available in a new type of engineered lumber made from laminated wood. Alternately, higher R-values can be achieved by installing rigid foam insulation or wood strapping with extra insulation on the inside of the rafters. Stress-skin panels, like those described on the previous page for walls, are also used in roof construction.

Conventional truss

Insulation compressed at junction with wall

Air flow blocked

Soffit vent

Figure 6: Conventional roof framing with insulation compressed at eaves

Raised-heel truss

Baffle

Soffit vent

Air flow

Figure 7: Raised-heel truss construction

Ventilation spacer

Channel for air flow

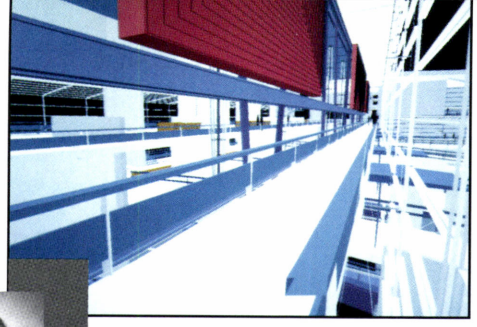
Blocking or baffle

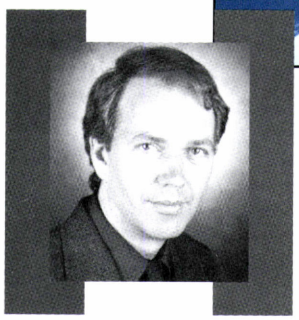
Soffit vent

Air flow

Figure 8: Framing for cathedral ceiling with wide rafters

After designing a solar house as a high school project, Duncan Prahl says his interest in energy efficiency was "waylaid" by a formalist education. But after a long stretch without work, Prahl joined Western Massachusetts Electric as coordinator of the utility's Energy Crafted Home program. Prahl consults with builders, homeowners, and architects, recommending construction details (above) and techniques for greater energy efficiency. "I do everything from program management to crawling around attics," he says.





EDEN GREIG MUIR
CAD CONSULTANT/TEACHER
ARCHITRONIX
NEW YORK

Education: *B.S., City College of New York, 1983; M.Arch., Columbia, 1986.*
Experience: *GIST, Inc.; assistant professor, Columbia.*

Back in 1984, while a student at Columbia, Eden Muir faced "tremendous resistance to the idea of using computers in design." By 1988, however, he was teaching there, developing a CAD curriculum emphasizing design through "parametric modeling." At the same time, he went to work for GIST, Inc., a software development firm, where he worked on 3-D modeling projects, including the Nara Convention Center competition entry of Scott Marble and Karen Fairbanks (above; see P/A, Feb. 1993, p. 22). "This was a promising use of CAD," he says, "not as an after-the-fact renderer, but as a working tool." He recently founded his own CAD firm, ARCHITRONIX.



Ronald Brisebois

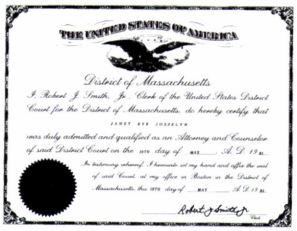


Joevon-Mauro

DONALD M. RATTNER
EDUCATOR
NEW YORK

Education: *B.A., Columbia, 1979; M.Arch., Princeton, 1985.*
Experience: *Allan Greenberg, Architect; Ferguson, Murray & Shamamian.*

Two years ago, Donald Rattner established the Institute for the Study of Classical Architecture, under the aegis of the New York Academy of Art, to "stem the erosion of cultural memory" by providing training in Classical architecture and building methods. The Institute offers a summer program for architecture students and professionals, an annual journal, *Acroterion*, scheduled to debut this December, exhibitions, and continuing education classes.


THE UNITED STATES OF AMERICA

District of Massachusetts

I, Robert J. Smith, Jr., Clerk of the United States District Court for the District of Massachusetts, do hereby certify that

JANET EVE JOSSELYN

was duly admitted and qualified as an Attorney and Counsellor of said District Court on the ... day of ... A.D. 19..

In testimony whereof, I hereunto set my hand and affix the seal of said Court, at my office in Boston in the District of Massachusetts, this ... day of ... A.D. 19..

Robert J. Smith, Jr.
Clerk

JANET EVE JOSSELYN
CONSTRUCTION ATTORNEY
BOSTON

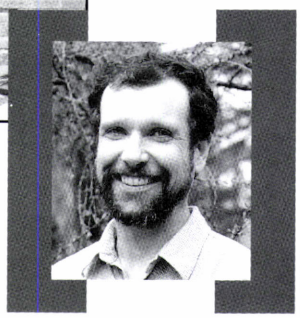
Education: *B.A., Colby, 1977; M.Arch., Harvard, 1984; J.D., Boston College, 1990.*
Experience: *Skidmore, Owings & Merrill; Shepley Bulfinch Richardson & Abbott; Gadsby & Hannah Attorneys at Law.*



Janet Eve Josselyn, a registered architect who has worked for the past three years as an attorney specializing in construction litigation, stresses that she has not "left" architecture. "This is just one element of the process of architecture," she says. Most often, she has handled contractor-client disputes involving heavy construction. (She can't recall a case involving an architect.) When work slowed down at her firm recently, she took a few months off to write a novel, not yet published, about insurance fraud in construction. But she stresses with lawyerly caution that "it is entirely a work of fiction."



Claire Stevenson



Dorn Kerkhof

JOHN W. THOMPSON
MASONRY CONTRACTOR
MADISON, WISCONSIN

Education: *B.A, U. of Wisconsin, 1971; M.Arch., U. of Wisconsin-Milwaukee, 1983.*

When John Thompson graduated from college, he decided to be a bricklayer, "as a way of escaping institutional tyranny." Several years later, Thompson, by then specializing in masonry restoration, went to architecture school. But after graduate school and conventional employment, he says, "I discovered I really love bricklaying." He now tries to do masonry work in the summer and his own design projects in the winter. Among his masonry restoration jobs have been two Frank Lloyd Wright houses, including the Bogk House in Milwaukee (above).

DEBORAH DESILETS
CLOTHING DESIGN
MIAMI

Education: *B.S., 1982, B.Arch., 1987, Florida A&M.*
Experience: *Arquitectonica, Spillis Candela & Partners.*

Deborah Desilets has run her own architectural computer graphics firm, teaches CAD at a Miami high school, and designs clothing. Her clothing designs (right), based on the idea that geometric folds "similar to origami" are superior to traditional seam construction, have appeared in *Threads* magazine. "Both buildings and clothes are exterior skins that must respond to movement without putting too much stress on the materials," she says.



Glenn Johnson/ *Threads*



Sal Salerno



Karen O'Connor

MOLLIE O'CONNOR
FESTIVAL ARCHITECTURE
MINNEAPOLIS

Education: *B.Arch., U. of Minnesota, 1989.*
Experience: *assistant to artist Siah Armajani; Archistudio; Young & Associates.*

ABOVE AND BELOW: "SKY SPIRAL",UPTOWN ARTS FAIR, 1992



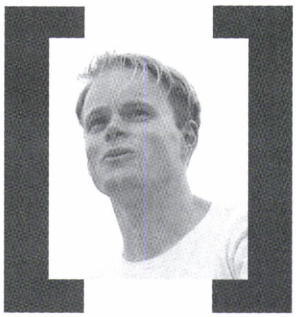
Mollie O'Connor

Streets closed to cars for festivals have great potential for creating "temporary urbanism," says Mollie O'Connor. "They can create gathering places where none existed before, making an ordinary place extraordinary." O'Connor has been exploiting such possibilities for the past five years, designing parade floats, tempera street paintings, and other constructions for Minneapolis community groups. Such efforts are in addition to her day job with a Minneapolis firm doing government housing rehabilitation, work that she says "isn't particularly satisfying artistically."

Her most elaborate work to date is "Sky Spiral," a ribbon of fabric hung over an intersection for three days at last year's Uptown Arts Fair, casting shadows on another spiral painted on the street. O'Connor says the piece was "very difficult" to build, and that she would try a tensile structure with concentric circles if she had it to do again.

"I'd love to make this a business if I could, although the volunteer aspect is really important to me," O'Connor explains. She is customarily given a budget for a project; for "Sky Spiral," she was paid $6,000, most of which went into the product. "I did buy myself a new pair of glasses," she admits.

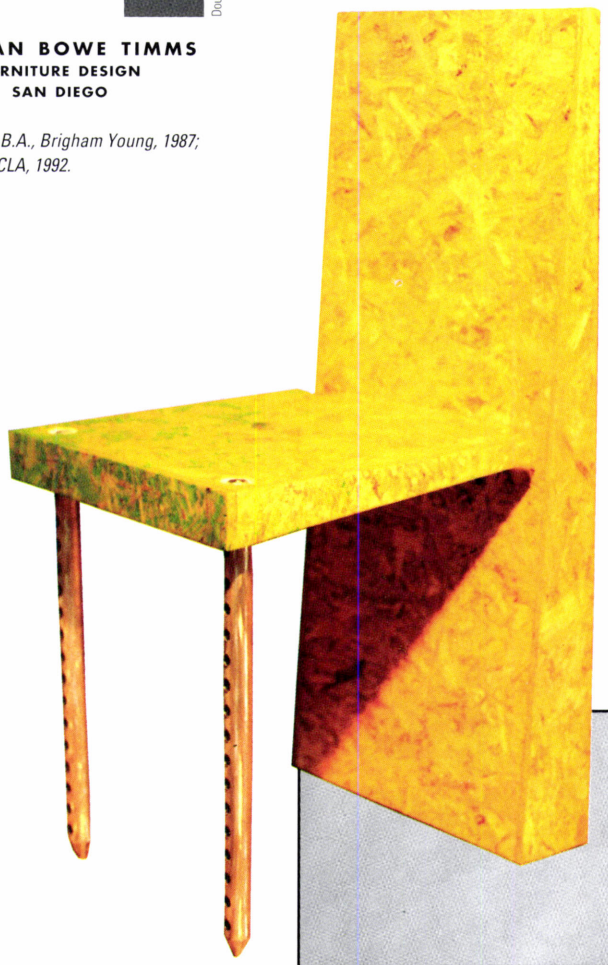
But festival work has had its advantages in the office, too. **"I'M MUCH MORE SURE ABOUT MYSELF IN DESIGN DECISIONS, AND I'M CONSULTED ON THEM MORE OFTEN; I'VE GAINED A LOT OF RESPECT."**

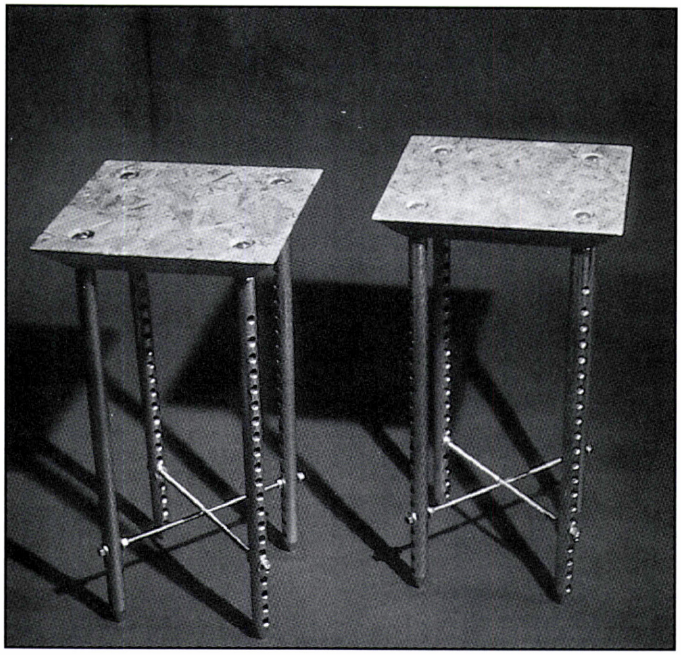


Doug Geisey

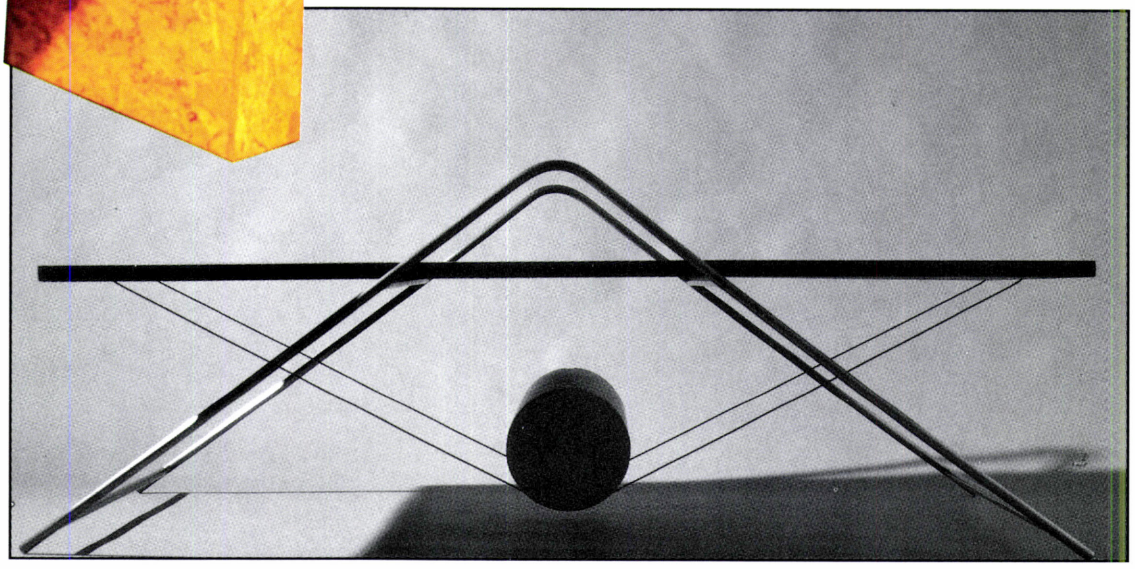
NATHAN BOWE TIMMS
FURNITURE DESIGN
SAN DIEGO

Education: *B.A., Brigham Young, 1987; M.Arch., UCLA, 1992.*





CHAIR (LEFT) AND TABLES (ABOVE) MADE OF STRAND BOARD AND WEIGHT MACHINE PINS



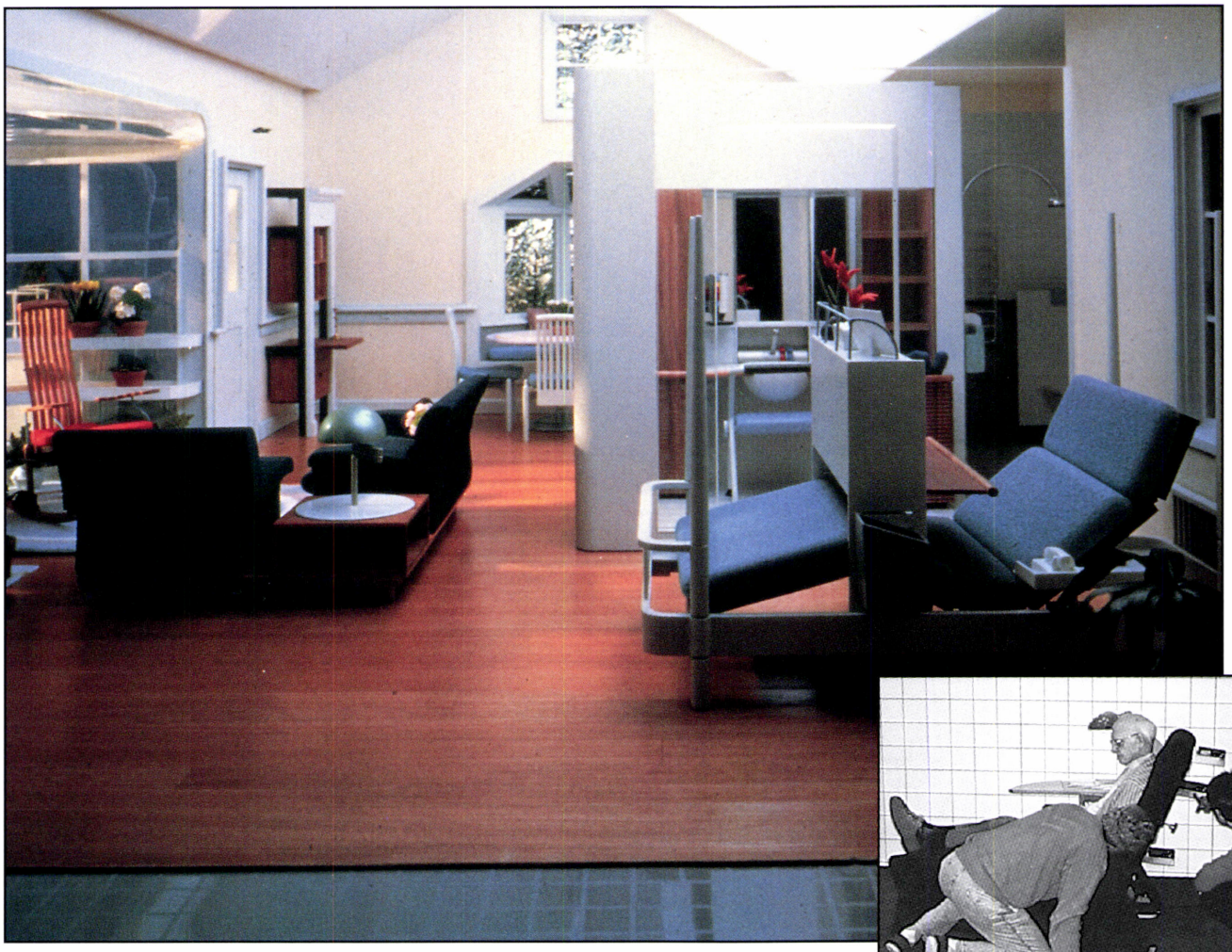
Photos: N. Bowe-Timms

COFFEE TABLE WITH CONCRETE CORE SAMPLE AS COUNTERWEIGHT

For his master's thesis, Nathan Timms offered a recycling project of sorts: a house remodeling that reused and reconfigured existing parts. The project, along with his "unemployment and desire for hands-on design experience" led him to his current pursuit, building furniture with leftover and unconventional materials, some scavenged from alleys and junkyards. There are some noble ideas behind Timms's furniture: his goal is to make each piece with 50 percent post-consumer waste, addressing environmental concerns and helping to keep down the cost to consumers.

His palette of materials includes old office doors, perforated center pins from weight-lifting machines (he found a motherlode of these), concrete core samples, end cuts of wood beams, and sometimes entire pieces of furniture that he reconfigures.

He has sold a few pieces, mainly to "friends and old roommates," but has not had luck in galleries where his work has been shown. (Gallery mark-ups don't help, he suggests.) Lately, his thinking has moved toward ideas of mass-production with cheap materials like oriented strand board, which shows up in some recent tables. **"I WANT THE STRENGTH OF MY DESIGNS TO NOT BE SPECIFIC TO ANY PRECIOUS MATERIAL."**



Photos: Herman Miller, Inc.

MODEL BY WILLIAM STUMPF OF POTENTIAL PRODUCTS FOR OLDER PEOPLE



ERGONOMIC ANALYSIS

While a student at the University of Michigan, Gary Waymire became interested in the design process "as much as or even more than the solution itself." Influenced by a professor who had worked for CRSS, he worked on several architectural programming projects in school. This interest has led to a career dedicated to the predesign process; most of Waymire's work consists of research done with potential users, a group he defines as "anyone who might come into contact with the product."

In his first job, at Herman Miller Research Corporation, Waymire worked on a team that investigated environmental needs related to aging, in order to develop products that would serve an older population. In addition to extensive empirical research, his team set up a "living arts studio" – a kind of ongoing focus group – with older people in Ann Arbor. The project led to prototype products, by well-known designers, in seating, kitchen equipment, and bathroom products. The project remains on hold at Herman Miller.

His current employer, GVO, Inc., does product research predominantly for the computer industry.

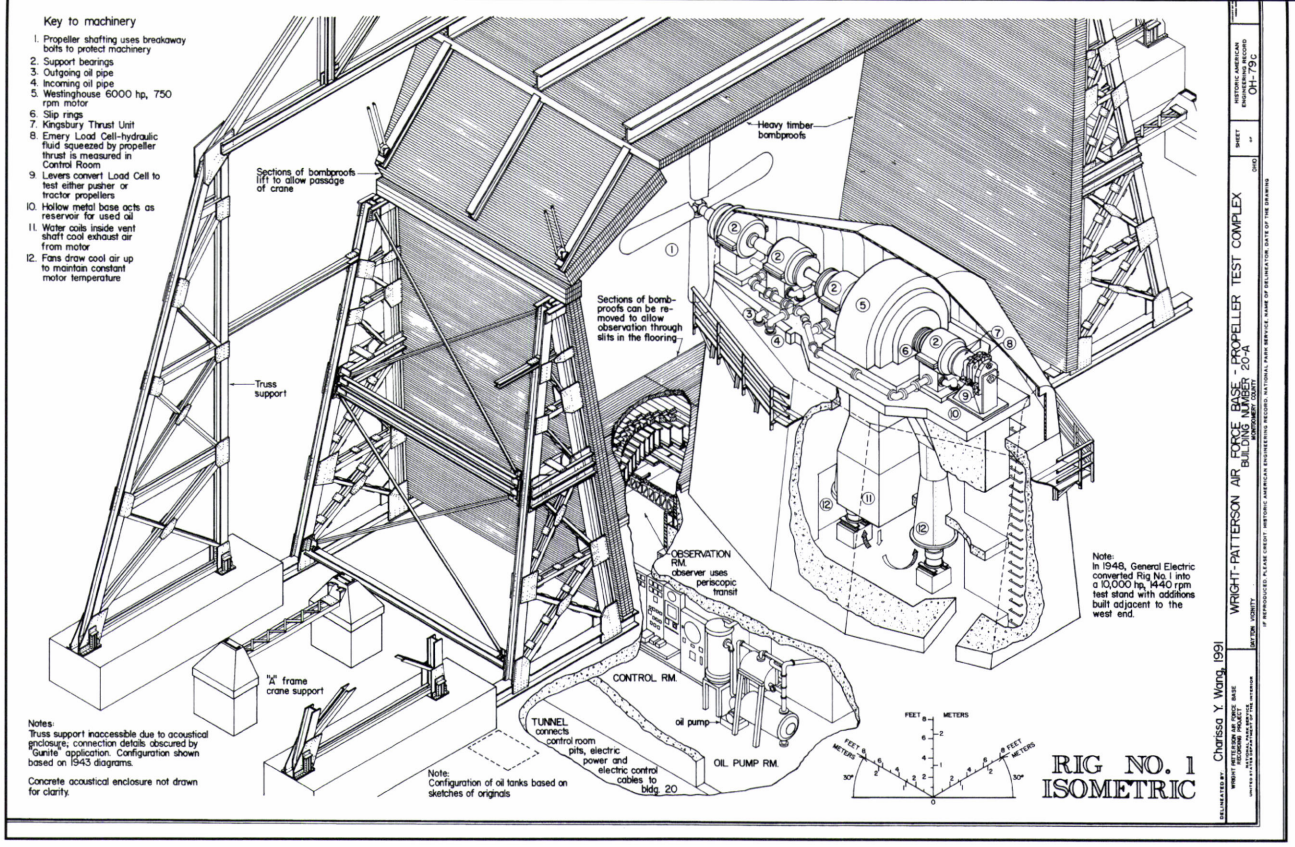
Waymire says he is not bothered by turning projects over to someone else to design. "I WORK VERY CLOSELY WITH A LOT OF DESIGNERS, BUT I DON'T CONSIDER MYSELF A DESIGNER," he says, adding that he tries not to interfere with "the intuitive aesthetic decisions of designers."



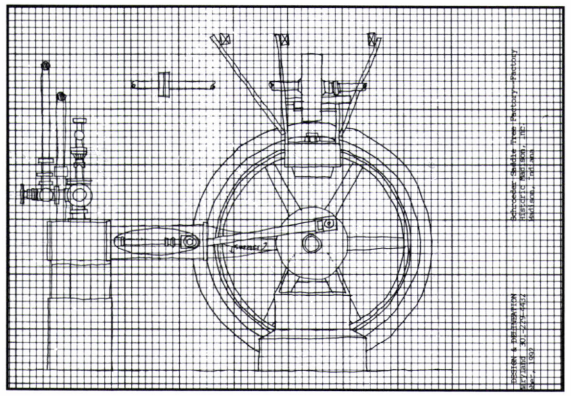
Emma Hooker

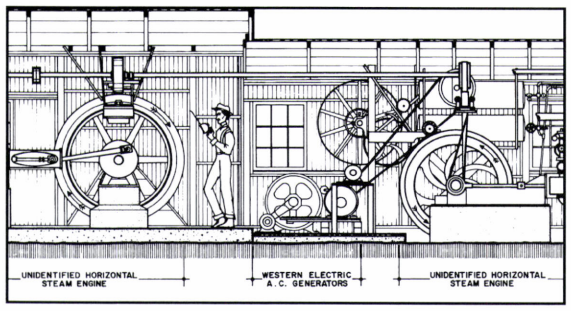
GARY L. WAYMIRE
PRODUCT ANALYSIS
GVO, INC.
PALO ALTO, CALIFORNIA

Education: *B.S., 1985, M.Arch., 1987, U. of Michigan.*
Experience: *Herman Miller; IBACoS.*

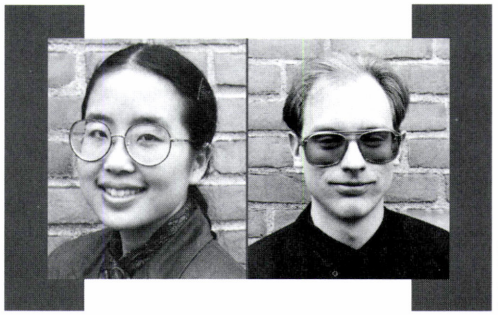


PROPELLER TESTING MACHINERY, WRIGHT-PATTERSON AIR FORCE BASE





FIELD DRAWING (CENTER) AND REDRAWN ELEVATION (ABOVE), SCHROEDER FACTORY



Donald M. Durst

Charissa Y. Wang

CHARISSA Y. WANG DONALD M. DURST

HARDLINES: DESIGN & DELINEATION
COLUMBUS, OHIO

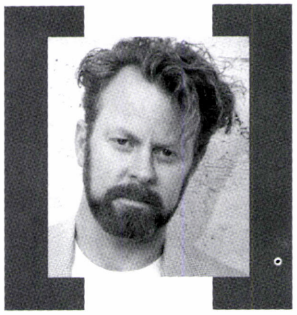
Education: *B.S., U. of Maryland, 1988; M.Arch., Ohio State, 1990.*
Experience: *Stoiber & Associates.*

Education: *B.S., U. of Maryland, 1987; M.Arch., Ohio State, 1990.*

"We never thought of ourselves as alternative," protests Donald Durst. And indeed, Hardlines, the firm he founded upon graduation with schoolmate Charissa Wang, did almost all conventional design work for its first two years. But last year, most of the firm's work was in the area of measuring, researching, and documenting historic buildings. Their business is fueled by Federal rules requiring such work before undertaking federally funded projects that might result in damage to historic properties. Wang and Durst provide clients with a thick "anthology" that includes field photographs, notes, drawings, and historic documents.

Such work is commonly performed by summer employees of the Historic American Buildings Survey (HABS) or the Historic American Engineering Record (HAER); in fact, both Wang and Durst spent summers working for HAER. In 1991, they were commissioned by HAER to do work at Ohio's Wright-Patterson Air Force Base that could not wait until summer; they have since done several jobs for both public and private clients, the latter including the Schroeder Saddle Tree Company in Wisconsin, which wanted its historic factory buildings documented.

"I THINK WHAT WE'RE DOING NOW IS A GOOD EXERCISE OF ALL THE THINGS WE LEARNED IN SCHOOL: DESIGN, HISTORY, PRESENTATION, RESEARCH," says Wang. The pair hopes to have a full-service architectural firm; both partners were to take their registration exams last month.



Alan Kong Au

PERRY ANDELIN BLAKE
SET DESIGN
BLAKE + AU ASSOCIATES
VENICE, CALIFORNIA

Education: *B.A., Utah State, 1982; M.Arch., Harvard, 1985.*
Experience: *Frank O. Gehry & Associates.*

SCENE FROM THE FILM "BIRCH STREET GYM"

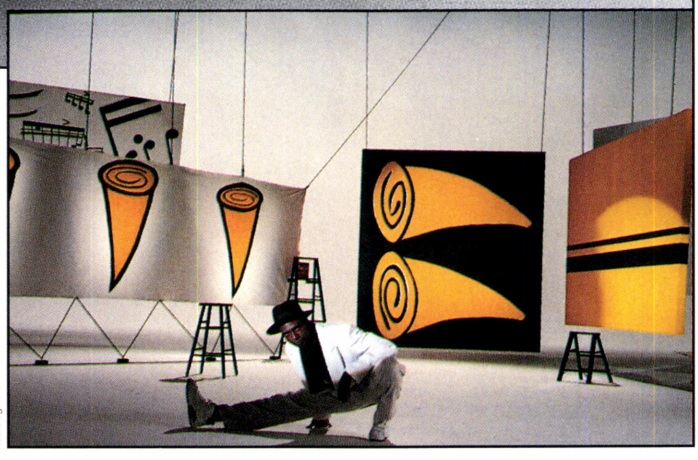


Mambo Films



Rhythm & Hues

COMMERCIAL FOR MITSUBISHI GALANT



Red Dog Film

COMMERCIAL FOR "BUGLES"

Perry Blake feels that there is "no better background for designing sets than designing buildings." His young firm's success in design for commercials, music videos, and short films supports his point. After four years at Frank O. Gehry & Associates, Blake and fellow Gehry employee Alan Kong Au struck out on their own and found themselves doing as much set design as architecture. "Just being in Los Angeles meant half the people we did architectural work for were in the film industry," says Blake; he estimates that 90 percent of the firm's work today is set design, and their goal is to move into feature films. He cites several advantages of the temporal world of film over architecture: **"WE DO THE DESIGNS SOMETIMES IN DAYS, AND THEY'RE BUILT IN A WEEK; WITH A CAMERA, I CAN DETERMINE THE WAY MY WORK WILL BE SEEN; AND NO ONE CALLS ME IN THE MIDDLE OF THE NIGHT TO SAY IT'S LEAKING."**

But Blake feels that his and Au's architectural training and experience are an important part of their success. Film clients have been impressed by the architectural work – office interiors, houses – that they include in their portfolio.

A commercial for the snack food, "Bugles," featured a dancer moving around an abstract set with cartoon-like, two-dimensional graphics. Some of the firm's more literally architectural work includes the sets for a short film nominated for an Academy Award, *Birch Street Gym*, and a series of commercials for the Mitsubishi Galant that debuts this month.

If the body of work submitted to P/A for inclusion in this issue reflects the sensibilities of an up-and-coming generation, then the portfolios represented in this section presage significant changes in the very culture of the profession.

"Activism," as we broadly defined it, is characterized by its social dimension. The "reenvisioning" of a social program for architecture is evinced by these young architects' engagement with their communities, as well as by work that grapples with burning issues such as affordable housing and our crumbling public domain. *Pro bono* work, diverse educational initiatives, and paid services for nonprofit organizations are amply represented here, complemented by small projects in the charitable sphere of shelters and halfway houses.

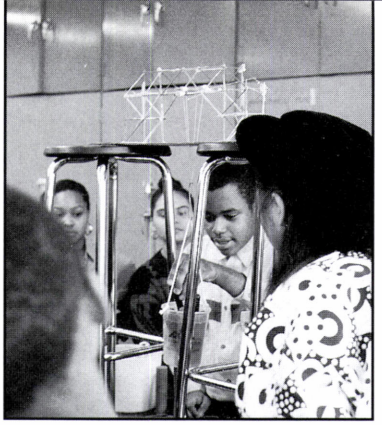
"The architecture I practice today is less about distinct buildings or single ideas, but more about a social whole. This is probably a better expression of my pre-Harvard hopes than anything I learned as a student there," says Elizabeth Debs of her undertakings with community organizations in Delray Beach, Florida. "Maybe the recession that shaped my career changed my direction, or maybe my 1960s childhood has greater control over me than any outside influences."

Architects' affiliations with new or established organizations, also featured in this section, reflect "activism" in the collegial realm; and though still relatively rare, the "proactive" or self-initiated projects included here signal efforts to redefine the practice (and thus the role and scope) of architecture.

To be sure, this new sensibility was forged in part by economic crisis: a case of necessity being the mother of reinvention. Yet this generation of architects is responding not only to the feelings of marginality and impotence admitted in many parts of the profession, but also to the power politics being pointlessly played out in others.

The incremental nature of many of the projects and strategies represented on the following pages heralds one of the more consequential shifts in attitude: having discarded the heroic stance of Modern architecture, with its ideals of solitary creation and universal compliance, these young architects think globally, but act locally. What's more, their energies extend beyond the boundaries of conventional practice to embrace modest, yet pressing tasks in the community.

Ziva Freiman ■





BEN POSEL
SATULAH GROUP
NEW YORK

Education: *B.A., Oberlin, 1981; M.Arch., Columbia, 1989.*
Experience: *Jules Fisher Associates; High School of Art & Design, New York; Saint Ann's School, Brooklyn.*

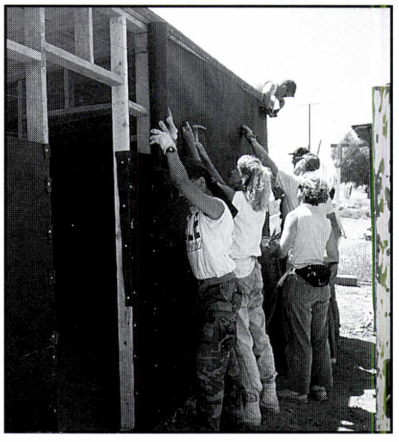
Ben Posel taught three classes on architecture in the 1991–1992 academic year at New York's magnet High School of Art & Design. "I was shocked at times by the lack of academic preparation," he says, "but I was also impressed by the efforts the students made when held to high standards and expectations." The highlight of the course was a model bridge building competition, where one of the toothpick-and Elmer's-glue models withstood a 21-pound load.

ACTIVISM

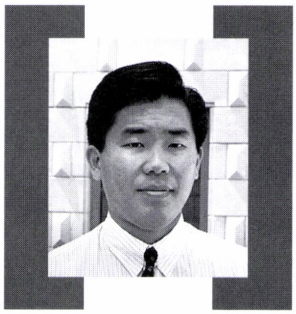


MICHAEL WATKINS
ANDRES DUANY & ELIZABETH PLATER-ZYBERK, ARCHITECTS
GAITHERSBURG, MARYLAND

Education: *B.Arch., U. of Cincinnati, 1985.*
Experience: *Cho, Wilks & Benn.*

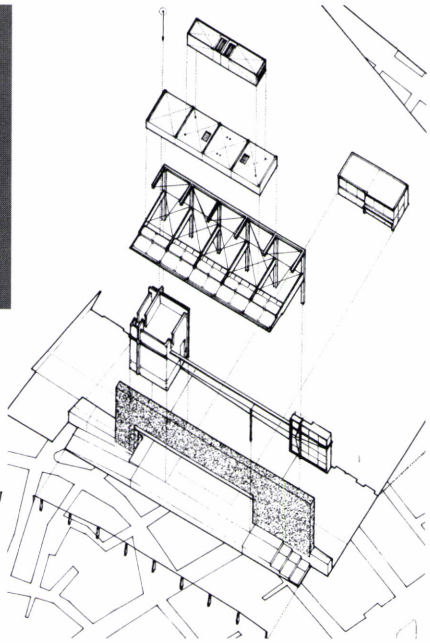


While serving as Project Manager and Town Architect at D/P-Z's Kentlands development and at their proposed Haymount project, Michael Watkins has led the Junior High Youth Group at the church he attends. The highlight of each year's program is a mission trip where a group of 20 to 30 students spend a week doing construction and/or restoration work for people in need. A recent trip to Mexico involved the construction of shelters.



KAZ BABA
LOS ANGELES

Education: *B.S.Arch., Arizona State, 1985.*
Experience: *Moule & Polyzoides; Koetter Kim & Associates; Ellenzweig Associates.*



Interested in the formal properties of the wall plane, Kaz Baba has explored it through a number of projects and competitions. One proactive project was his proposal for a ticketing pavilion in Boston's theater district, complete with its own "proscenium," "stage," and "marquee." A group of people in Boston are interested in building a pavilion on this site, based on his effort.





MONIQUE MOORE
VITRUVIUS PROGRAM
LOS ANGELES

Education: *B.Arch., SCI-Arc, 1991.*

Working in SCI-Arc's Vitruvius program, Monique Moore teaches furniture design to preschool and elementary school children, and conducts teacher training workshops in design education. She has also organized a group of children to make furniture out of discarded materials for sale as part of a post-riot fundraiser for inner-city youth scholarships to SCI-Arc's summer architecture program.



Photo above: Eduard Hueber

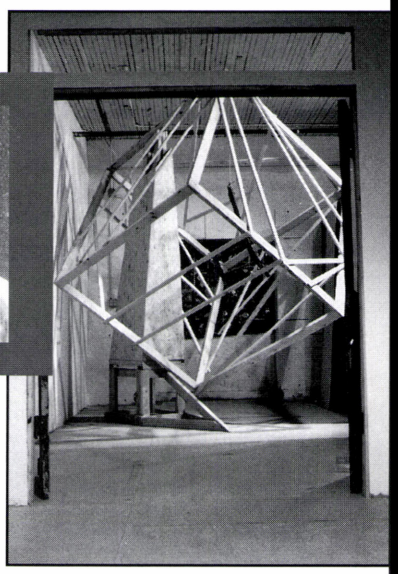


JEFFREY MURPHY
JEFFREY MURPHY ARCHITECT
NEW YORK

Education: *B.S., U. of Virginia, 1982; M.Arch., Harvard, 1986.*
Experience: *Pei Cobb Freed & Partners; Gwathmey Siegel & Associates; Kaplan McLaughlin Diaz Architects/Planners, Adjunct Professor at City College of New York.*

Since opening his own practice in 1991, Jeffrey Murphy has cultivated an array of nonprofit clients, sometimes developing projects in response to their perceived needs. In his opinion, the low fees earned by such work are balanced by the significant level of responsibility and control accorded the designer. This playground for the Casa Rita Transitional Women's Shelter provides a "family room" where women, children, and visiting family members can interact.





MONTE D. ANTRIM

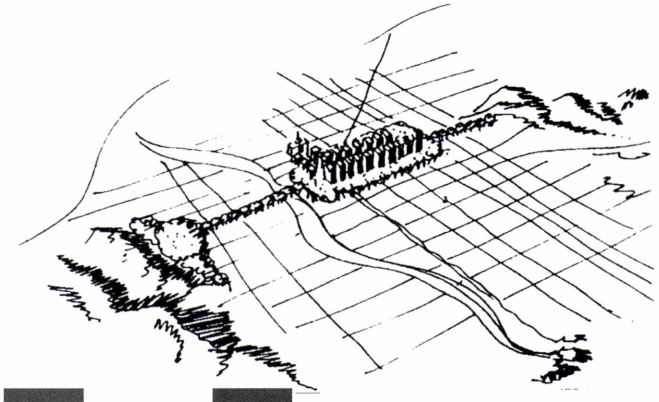
Education: *B.Arch. and B.S. Environmental Design, Ball State, 1989.*
Experience: *Hedley Greentree Partnership (England); Prentiss Associates; Tom Livengood Design.*

CHRISTOPHER RAYMAN

Education: *B.Arch. and B.S. Environmental Design, Ball State, 1990.*
Experience: *RTKL Associates; Curtis Beattie & Associates; Edelstein Associates (advertising); Mesher Shing & Associates.*

BOX
SEATTLE

While employed at architecture firms in Seattle, the partners of Box undertake independent projects in an effort "to show the value and possibility of an expressive architecture." Box grew out of a cooperative for architecture, a larger group formed in 1990, when the Box partners were commissioned to design and build the Penny University cafe, completed in 1992. They remain members of the cooperative, whose number varies from 4 to 12. "Cube," the construction illustrated here, was executed by Christopher Rayman with Jerry Garcia, originally a third partner in Box; it was installed in a 1991 art show in a vacant warehouse space where the cooperative has staged a series of exhibitions.





MARLENE S. IMIRZIAN
SMITH, HINCHMAN & GRYLLS
PHOENIX, ARIZONA

Education: *B.S. Arch., U. of Michigan, 1980; M. Arch., U. of Michigan, 1983.*

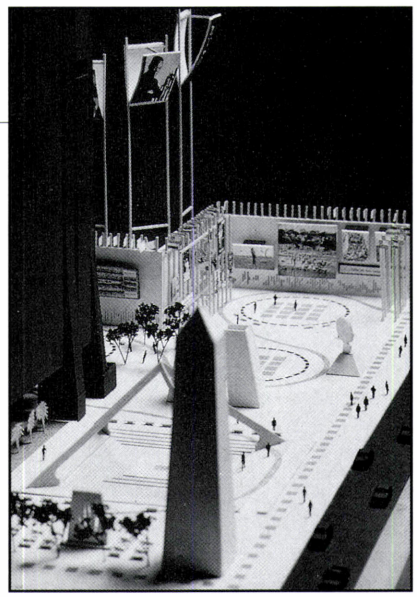
Prior to entering architecture school, Marlene Imirzian worked for Gunnar Birkerts in Birmingham, Michigan, an experience she regards as pivotal in her decision to become an architect. In her current position as an associate and design manager she has worked on a range of large-scale projects. The work represented here, however, was conducted as a volunteer, working with other Phoenix design professionals. They developed the Downtown Phoenix Specific Plan "to provide a well-articulated vision of what the formal order of Phoenix ought to be." In recognition for her work, Imirzian was appointed by the mayor to assist in the development of the city's first architectural design guidelines.

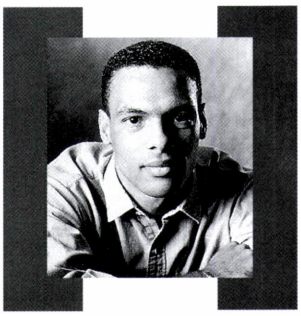


MICHAEL A. ROGERS
AIA, NOMA
BELLWOOD, ILLINOIS

Education: *B.Arch., U. of Illinois, Chicago, 1983.*
Experience: *McDonald's Corp.*

Michael Rogers's enthusiastic involvement in the National Organization of Minority Architects has led to his election as first vice-president/president elect; in 1994, he is slated to become the youngest president in the 24-year history of the association. His activity in the Illinois Chapter of NOMA, of which he was president in 1990, helped make it an example to other chapters nationwide. Having grown up in Chicago's notorious Robert Taylor Homes, Rogers sees his volunteer NOMA work as contributing to "the education and mentoring of youths aspiring to become architects or to enter any other productive occupation they desire." In his daily work as architectural design supervisor at McDonald's in Oak Brook, Illinois, Rogers has overseen the design of more than 1,000 restaurants for the national chain, which he considers "an American institution" that would not thrive if its buildings were not "responsive to the people and communities they serve."

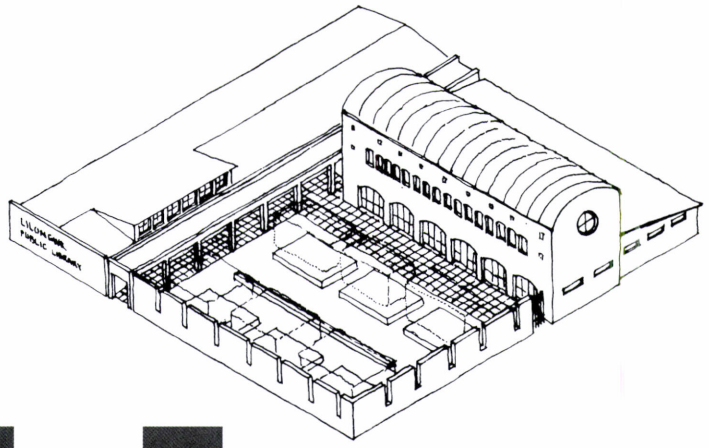


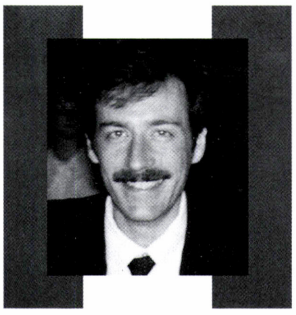


ERIC K. DANIELS
JACK TRAVIS ARCHITECT
NEW YORK

Education: *B.Arch., Pratt Institute, 1985.*
Experience: *Benjamin Thompson Associates; Harris Spata Architects; Butler Rogers Baskett.*

Eric Daniels's proposal for rehabilitating the windswept plaza at the Adam Clayton Powell, Jr., State Office Building in Harlem would turn the space into a clean, well-lighted, secure area for family gatherings, entertainment, and enlightenment, specifically geared to the needs of the local community. The plan includes educational/historical displays on African-American and Harlem culture, murals and sculpture by local artists, an outdoor stage, and a games area.





DANIEL K. GAROFALO
PEACE CORPS VOLUNTEER
ARCHITECT
MALAWI, AFRICA

Education: *B.S., U. of Virginia, 1983; M.Arch, U. of Pennsylvania, 1987.*
Experience: *Bartley Bronstein Long Mirenda.*

Daniel Garofalo was active in various community services such as Habitat for Humanity and the Community Design Collaborative while working in Philadelphia. He has since become one of only two architects now working in the Peace Corps. In Malawi, with a staff of four, he reviews building applications and designs and manages construction projects. A recent project in the city of Lilongwe is this new public library, which he designed and for which he is helping raise money.





THE YOUNG ARCHITECTS TASK FORCE

EL PASO, TEXAS

STEVE A. FRANCO
Education: *attended U. of Texas, El Paso.*

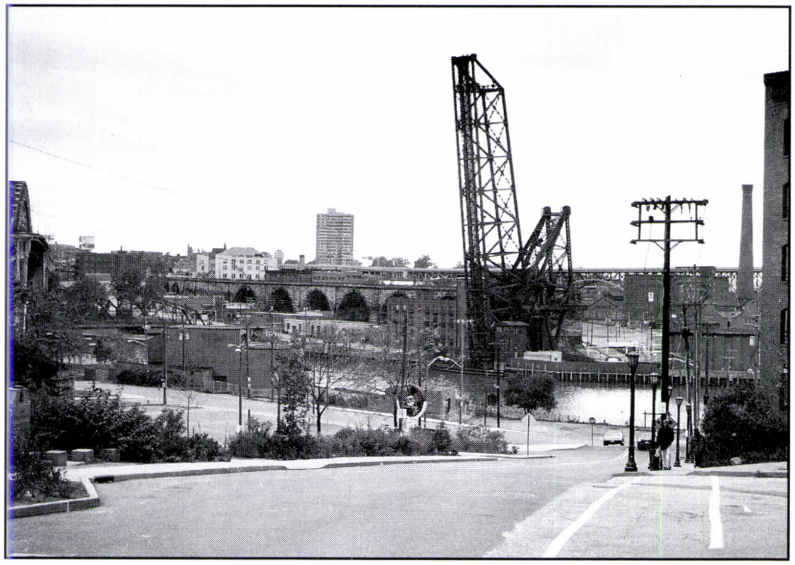
ROBERT C. FILARSKI
Education: *B.Arch., Texas Tech, 1987.*

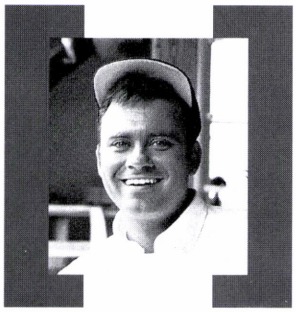
ED SOLTERO
Education: *B.Arch., U. of Houston, 1985.*

MICHAEL WALKER
Education: *B. of Environmental Design, Texas A&M, 1984.*

MARTIN NEEDLE
Education: *B.Arch., Texas Tech, 1987.*

El Paso's Young Architects Task Force was organized in 1988 by interns and associates in local firms who were concerned by their lack of participation in AIA activities. The group started study groups and a resource library for the A.R.E. exams, sponsored a lecture series that brings internationally recognized speakers to El Paso, organized an architecture month known as "Archtober," and provided *pro bono* services for social service facilities. The members listed above (three of whom are now AIA members, the others associate members) are those principally involved in the architectural installation illustrated here, constructed to mark "Archtober." Stud walls, standard windows, and paint were used to generate architectural elements that change appearance with sun angles and point of view, providing both a gateway and a counterpoint to the local museum.



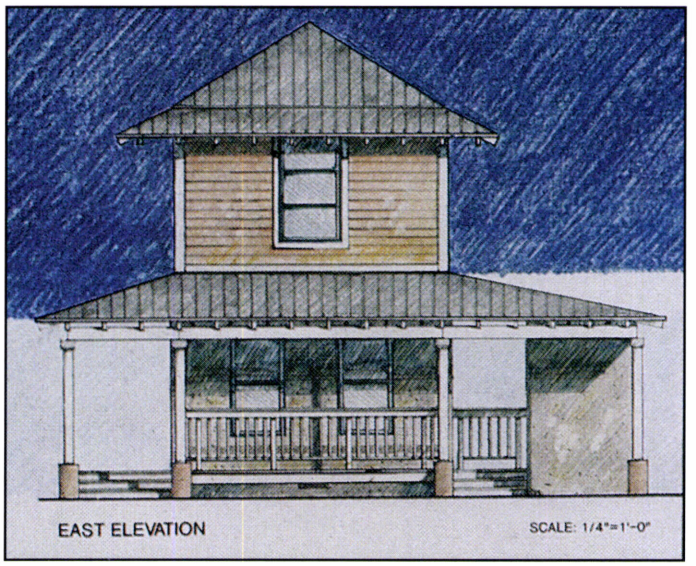


JOSEPH K. BARDEN JR.

HILTSCHER SHAPIRO ASSOCIATES, LIMITED
CHICAGO

Education: *B.Arch., S.U.N.Y. Buffalo, 1986; M.Arch., Arizona State, 1988.*
Experience: *Green & Associates; SOM/Chicago; Antoine Predock, Architect.*

Joseph Barden received a Burnham Prize in 1992–1993 to document the qualities characteristic of Great Lakes cities as they are becoming "ex-cities" of abandoned buildings and vacant lots. His work includes an exhibition at this summer's AIA/UIA Convention, a book, and a planned television special for PBS. He hopes to establish a regional institute of urbanism to help governments develop adaptive solutions to abandoned landmarks, historic districts, and crumbling neighborhoods.





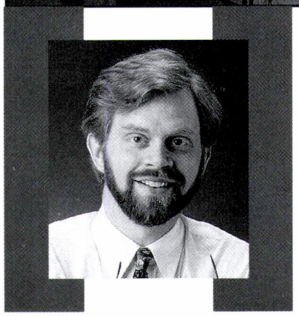
MARILYS R. NEPOMECHIE

MARILYS R. NEPOMECHIE ARCHITECT
COCONUT GROVE, FLORIDA

Education: *M.Arch., MIT, 1983.*
Experience: *Office of Urban Architecture; Sasaki Associates; Kenneth Folgers, Architects.*

Attachment to a region can take many forms. For Marilys Nepomechie of Florida, that regional sensibility is evident in her design work, such as this $32-per-square-foot, 1,250-square-foot house that won the Delray Affordable Infill Housing competition. It also extends to *pro bono* community efforts, such as her work as part of a master planning team to develop a post-hurricane design for the Cutler Ridge Town Center and its live/work neighborhood.

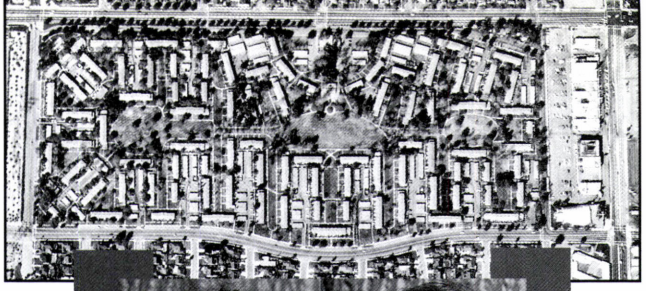




ERIC EMMETT DAVIS
CHICAGO PARK DISTRICT
CHICAGO

Education: *B.S. Arch., U. of Virginia, 1983; M.Arch., U. of Illinois, Chicago, 1986.*
Experience: *James, Morris & Kutyla; Kober-Belluschi Associates; McGuire & Shook.*

While working for the Chicago Park District, Eric Davis has been involved in a number of public service efforts, including service on a housing advisory task force in his ward and the vice presidency of the WEST Homeless Shelter, where he chaired the building and fundraising committees. From 1988 to 1990, he offered *pro bono* services in the design of a 40-bed overnight homeless shelter, shown above.





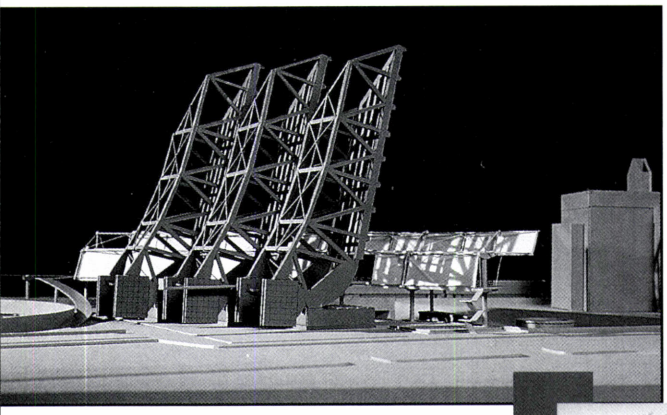
JANE HARDING HOUSDEN
THE END

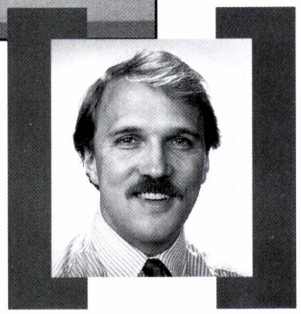
Education: *B.Design (Arch.), U. of Regina, 1980; M.Arch., U. of Texas/ Arlington, 1986.*
Experience: *The Housden Barnard Company; WZMH; Saskatchewan Housing Corporation.*

WESLEY VAN KIRK ROBBINS
THE END

Education: *B.S., M.I.T., 1980; M.Arch., U.of Texas/Arlington, 1986.*
Experience: *The Housden Barnard Company, Space Design International.*

The End is a business dedicated to advancing architectural arts and sciences through competions, exhibitions, and publications. Robbins and Housden are planning a journal that they hope to publish by the end of this year. Their most recent project is running a design competition for a fence for Baldwin Hills Village, a large residential development in central Los Angeles built in the late 1930s and early 1940s. Although it was intended as solely an ideas competition, "The Fence" competition has been criticized for its questionable approach to dealing with security in this riot-torn area.

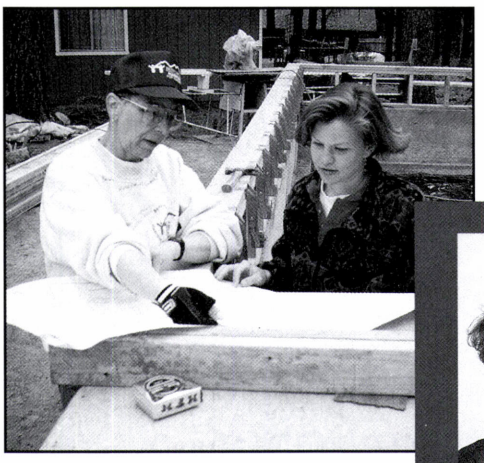




PAUL LUKEZ
PAUL LUKEZ ARCHITECTURE & DESIGN
BOSTON

Education: *B.A. Environmental Design, Miami University, 1981; M.Arch., MIT, 1985.*
Experience: *Arrowstreet, Inc.; William Rawn Associates.*

Paul Lukez believes that "architects can act as catalysts in the decision-making matrix shaping our environment, as architectural entrepreneurs of sorts." While running a traditional office, he has also engaged in a number of proactive research projects on such things as collaborative communities and Boston's Central Artery project. One such effort has been his involvement in the Rolling Bridge Initiative, a nonprofit group's attempt to save and reuse a rolling bridge in Boston as a kind of time piece and industrial-era landmark.





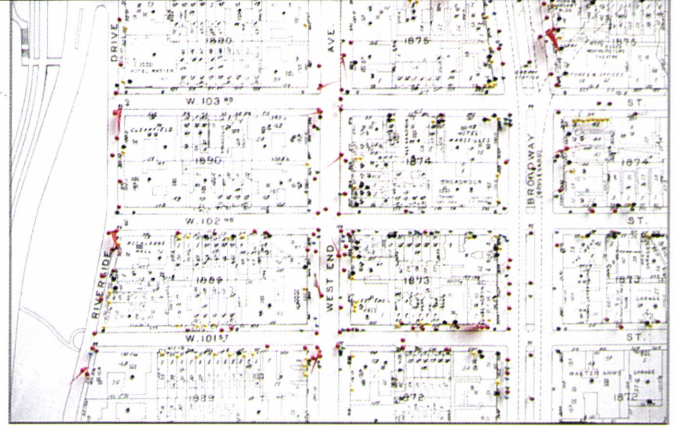
CHERYL HEINRICHS
BEND AREA HABITAT FOR HUMANITY
BEND, OREGON

Education: *B.Arch., U. of Kansas, 1989.*
Experience: *Drummey Rosane Anderson Inc.; Cole & Goyette Architects & Planners.*

Cheryl Heinrichs works as a construction coordinator for Habitat for Humanity, planning construction, setting schedules, hiring subcontractors, acquiring materials, instructing volunteers, and working with the families providing sweat equity. She is currently coordinating one of the first Habitat houses to be built completely by women. The Bend Area Habitat has so far placed 11 families in affordable housing.



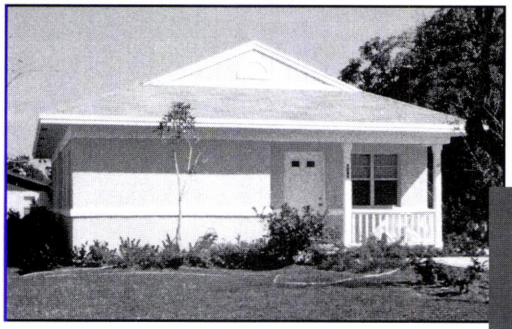
From left to right: Francoise Bollack, Margot Jacqz, Denise Hall, Ines Elskop.



PROJECT PUNCHLIST
NEW YORK

DENISE A. HALL
Education: *B.Arch., City College of New York, 1985.*
Experience: *Neil Berzak, Architects.*

While working as principal of D.A. Hall Architects, specializing in art galleries and restaurants, Denise Hall has also been a founder and the chairman of Project Punchlist. This program, launched in 1991 by a group of women members of the New York Chapter, AIA, involves block-by-block assessments of New York neighborhoods, identifying physical deficiencies and helping community groups to get them corrected. Areas of about five city blocks are being surveyed, noting such problems as broken sidewalks, missing street trees, and graffiti (map, above). Community Boards, acting on Project Punchlist documentation, have begun to get action on such items as curb cuts and street lighting repair.



Photos: Cortesy EDRC



ELIZABETH ANDERSON DEBS
EDRC ARCHITECTS INC.
DELRAY BEACH, FLORIDA

Education: *B.A., Vassar, 1981; M.Arch., Harvard, 1986.*
Experience: *Kohn Pedersen Fox Associates; Springland Associates (residential developer).*

During the depths of the recession, Elizabeth Debs set up shop in Delray Beach with fellow Harvard graduate Ralph Cantin. Their small-town practice is a far cry from the luxury second-home real estate development where she gained the bulk of her experience. Debs and Cantin helped establish the Boca Delray Affiliate of Habitat for Humanity, and their *pro bono* prototype design, above, is now being implemented for the third time. Debs, who won a commendation in P/A's affordable house initiative (June 1991, p. 85) administered the Delray Beach Affordable Housing Competition.

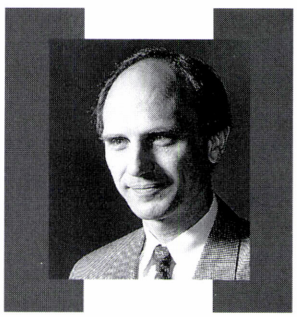
ASSOCIATION FOR WOMEN IN ARCHITECTURE
SEATTLE



Founded in 1987, Seattle's AWA is a nonprofit group working "to highlight the power of collaboration" through such as activities as "Expanding Your Horizons" programs for high school girls, lectures, a bimonthly newsletter, professional workshops on subjects such as sustainable architecture and liability, and mock design exams. Activities such as a Lego competition have been used to raise money for battered women's shelters and other causes.

A mentoring program has been established to support women students at the University of Washington. Members who collaborated on the submission for this issue include Nora Jaso, Barbara Ruys (M.Arch., Harvard, 1986), Jeanne Rynne (B.A. in Architecture, Oberlin, 1987), Veronica S. Smith (B.Arch., U. of Arizona, 1991), Lisa K. Trujillo (B.Arch. U. of Oregon, 1990), Son Bao Vuong (M.Arch., U. of Washington, 1990), and Laurie A. Wilson (B.Arch., Cornell, 1985).





SARTO STEPHEN SCHICKEL
SCHICKEL DESIGN GROUP
PHILADELPHIA

Education: *B.S., Cornell, 1976; M.Arch., U. of Pennsylvania, 1987.*
Experience: *Teaching assistant, U. of Pennsylvania.*

When the City of Philadelphia made public plans for a giant convention center, Sarto Schickel saw an opportunity for a new public square to be built on land designated for an accompanying hotel and parking garage. He took his proposal, for moving the parking underground and creating a formal entrance pavilion for the convention center, to community meetings, board rooms, club luncheons, and officials' offices, receiving a Graham Foundation grant to pursue the project. Although he was stonewalled by the developers, the hotel has been redesigned to provide an outdoor space about one-third the area of Schickel's plan.

After graduation, the wife-and-husband team of Elizabeth Reader and Charles Swartz returned to Swartz's home town, some 70 miles west of Washington, D.C. As interns in a local firm, they worked primarily on homes for "wealthy clients with generous budgets." While the projects were gratifying in their own way, the architects explain, **"WE WANTED MORE DIVERSE PROJECTS AND A CHANCE TO MAKE A DIFFERENCE IN OUR COMMUNITY."**

Since opening their own practice in 1990, the partners have provided both paid and *pro bono* professional services to two nonprofit organizations: City Light, a community-based development corporation for affordable housing, and another organization that assists disabled adults to achieve independence.

Last spring, construction was completed on North Kent Court, a development of nine single-family, low-cost houses designed by Reader & Swartz for City Light. Built for approximately $40 per square foot on parcels of land laboriously assembled on a vacant block in the middle of town, the houses all have the same massing and square footprint, 24 feet on a side; each is different in plan and elevation, and in four of the homes the ground floor is accessible to the disabled.

Beyond its community-service value, the architects find that practicing in a small town (pop. 22,000) has the distinct advantage of variety: the office's main line of residential renovations and additions is supplemented with adaptive use, industrial, educational, religious, and recreational projects.



James Swartz

READER & SWARTZ ARCHITECTS
WINCHESTER, VA.

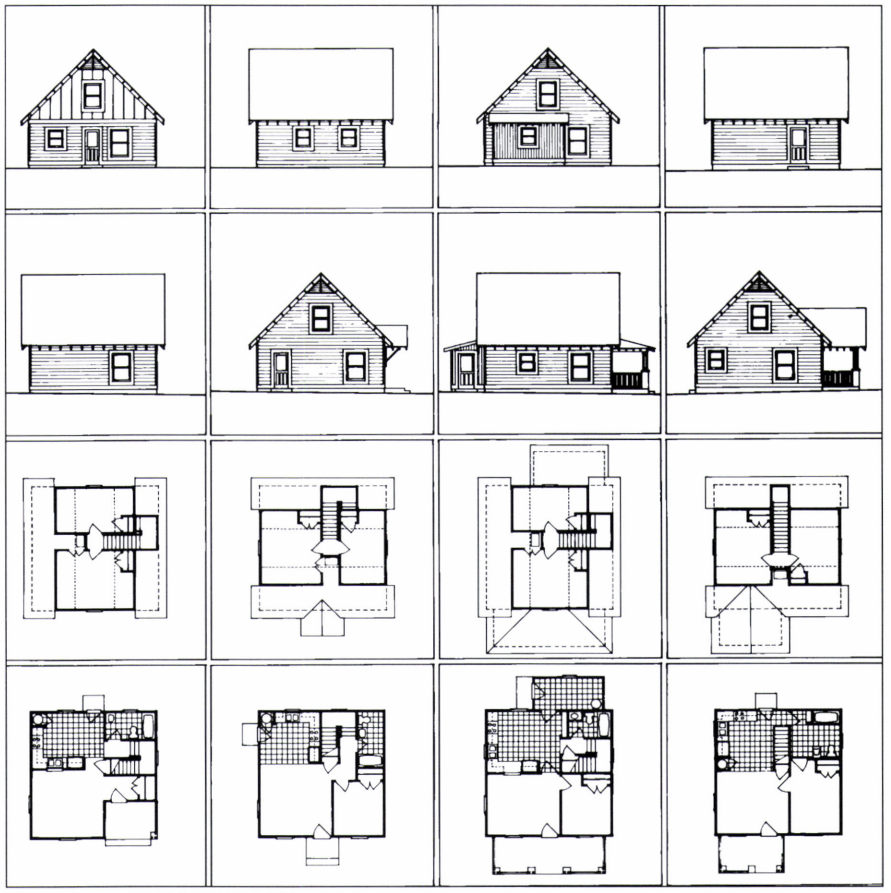
ELIZABETH READER

Education: *B.Arch., Virginia Polytechnic Institute, 1986.*
Experience: *Stuart & Tumure Architects; Peter Lueders Architect.*

CHARLES SWARTZ

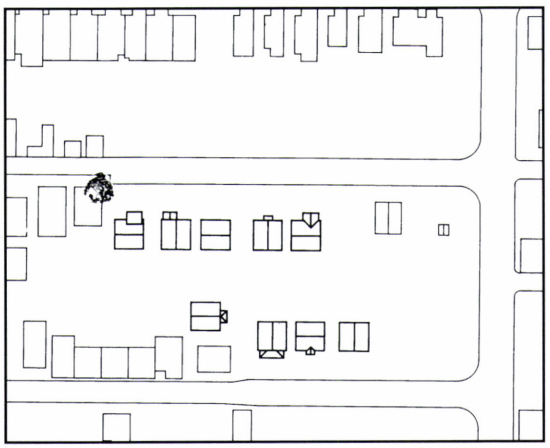
Education: *B.Arch., Virginia Polytechnic Institute, 1986.*
Experience: *Stuart & Tumure Architects; Donald Singer.*

Project: *North Kent Court, Winchester, Virginia.*
Owner and General Contractor: *City Light Development Corporation.*



PLANS AND ELEVATIONS OF FOUR HOUSES

20'/6m



SITE PLAN, NORTH KENT COURT

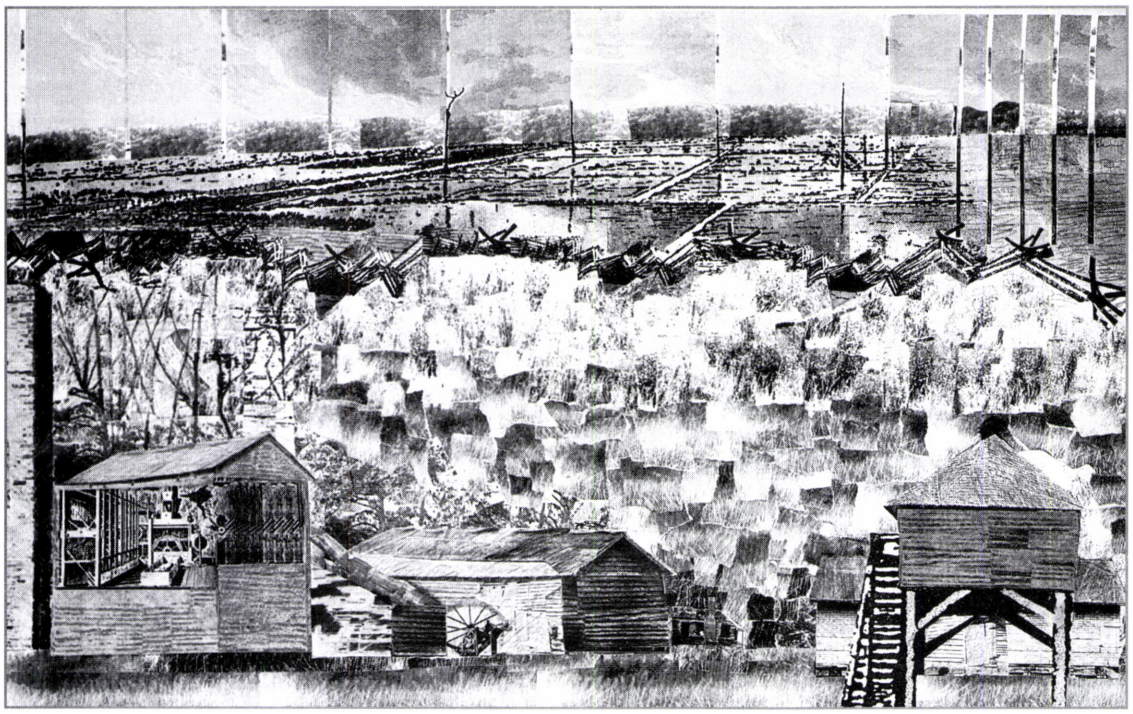
N

100'/30m

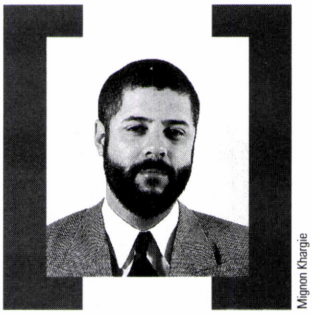


Charles Swartz

NORTH KENT COURT HOUSES



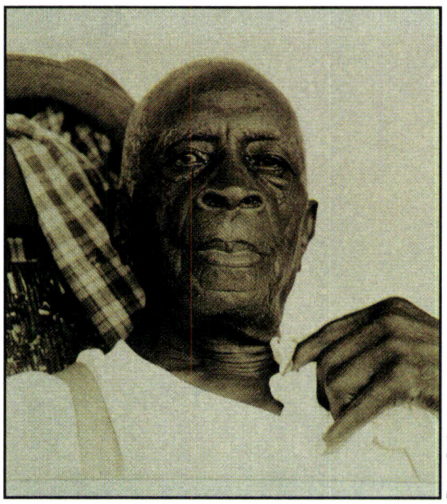
COLLAGE OF A RICE FIELD LANDSCAPE



Mignon Khargie

THOMAS FOWLER IV
SAN FRANCISCO

Education: *B.Arch., New York Institute of Technology, 1984; M.Arch., Cornell, 1989.*
Experience: *UC Berkeley Planning, Design and Construction department; Hartman Cox Architects; Garrison McNeil Architects and Planners; National President/Chief Executive Officer, AIAS; Director of Minority Educational Affairs, Cornell.*



Thomas Fowler

BUBBA HENRY, A SOURCE OF ORAL HISTORY



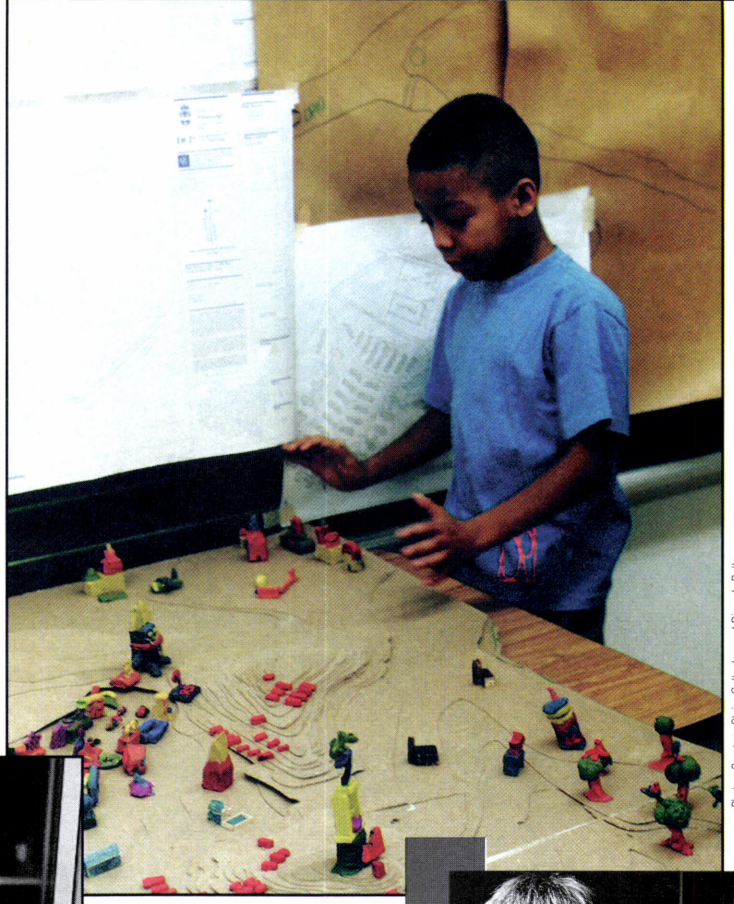
SHADOW DRAWING OF 1780 MAP OF SOUTH CAROLINA FARMING COMMUNITY

Since the beginning of 1991, Thomas Fowler has been project manager for the development and construction of major campus buildings of the University of California at Berkeley. But the work highlighted in this section has to do with *pro bono* research Fowler has conducted since 1987 for the Freewoods Foundation in South Carolina.

The foundation enlisted the architect's help to develop an architectural concept for a cultural museum and working farm that will depict the peak of African-American farming in South Carolina during the 19th Century. In the course of "thousands of hours" of work, Fowler has drawn on and interpreted a vast array of research materials, ranging from historical maps, documentation of surviving structures, landscape photography, and oral history of what was once a thriving rice- and tobacco-growing community. His research has tapped the memory of figures such as Bubba Henry, one of the last remaining active farmers in the area. The young architect's drawings, prints, collages, and relief models of the South Carolina site findings have been the subject of several one-man shows.

"OUR GENERATION OF ARCHITECTS NEEDS TO EXPLORE WAYS OF INCORPORATING CULTURAL, HISTORICAL ISSUES INTO AN ARCHITECTURAL VOCABULARY, GETTING AWAY FROM TRENDS FOR TRENDS' SAKE," says Fowler. "This process involving the conveyance of cultural richness to the built artifact will be the challenge for my future."





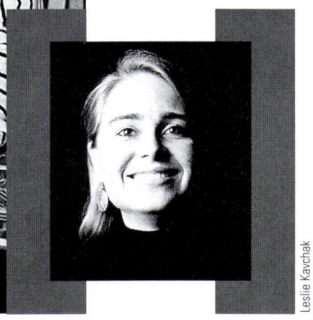
"OUR TOWN" PROGRAM STUDENT WITH MODEL OF NEIGHBORHOOD

Photos: Courtesy Claire Gallagher and Diane LaBelle



Photos: Courtesy Linda Gates

MODELMAKING ACTIVITIES , TOP AND ABOVE, IN THE "ARCHITECTURE FOR CHILDREN" PROGRAM



Leslie Kavchak

LINDA PARKER GATES

PILOT INSTRUCTOR
ARCHITECTURE FOR CHILDREN
PROGRAM AT CARNEGIE MELLON

Education: *B.A. Computer Science, Denison, 1986; M.Arch., Carnegie Mellon, 1991.*



Leslie Kavchak

CLAIRE BURKE GALLAGHER

DIRECTOR
PITTSBURGH OPEN DOORS
PITTSBURGH

Education: *B.S. Marine Biology, U. of Tampa, 1976; M.A. Secondary Science Education, Monmouth College, 1982; M.Arch., Carnegie Mellon, 1991; doctoral candidate in Architecture Education, U. of Pittsburgh.*

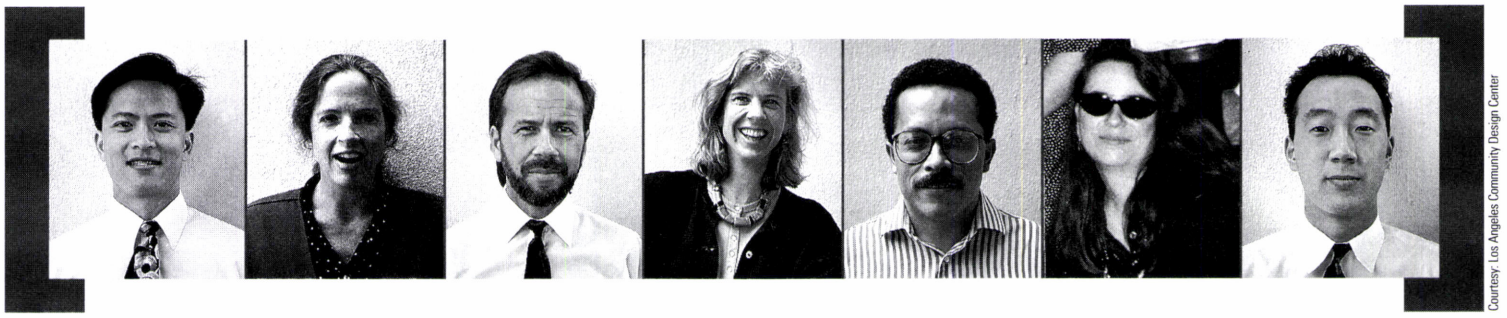
DIANE LAURA LaBELLE

DIRECTOR
"OUR TOWN,"
AN ARCHITECTURE PROGRAM
FOR PUBLIC SCHOOLS
PITTSBURGH

Education: *B.S. Nursing, St. Louis University, 1975; M.Arch., Carnegie Mellon, 1990.*

The related educational programs highlighted here originated in 1992, when Claire Gallagher conceived the Architecture for Children Program at Carnegie Mellon University, and set it in motion with the help of pilot instructors Linda Gates, Louisa Grauel, and Helen Mabry. The ten-week, Saturday-morning program is offered for $130 to students in grades three to eight. According to its authors, the program was motivated by concern over the lack of spatial literacy that hampers informed public participation in the evolution of our towns and neighborhoods. **"TO MAKE EFFECTIVE CIVIC DECISIONS AS ADULTS, ELEMENTARY SCHOOL CHILDREN NEED TO BEGIN TO UNDERSTAND THE CONCEPTS THAT INFLUENCE THE BUILT ENVIRONMENT,"** asserts Gates.

The tuition-based program is effective in addressing children from middle-income families; to reach the inner city, Gallagher, with the assistance of Diane LaBelle, launched "Our Town," a three-phase program devised to introduce the concepts of design and architecture and an understanding of the processes that shape their own neighborhoods, to children deemed "at risk." Lisa Schroeder contributed to developing the curriculum for the third phase. "Our Town" is underwritten by the local AIA chapter, Architrave, the American Architectural Foundation, and Open Doors, a neighborhood-based organization. Funds from the James Marston Fitch Charitable Trust, local public schools, and Carnegie Mellon will be used to expand the program to additional sites in Pittsburgh. The program's chief goal, say LaBelle and Gallagher, is "to promote a sense of community pride and history," which ultimately leads to a sense of empowerment and self-esteem.



Courtesy: Los Angeles Community Design Center

LOS ANGELES COMMUNITY DESIGN CENTER
(FROM LEFT TO RIGHT)

WILLIAM HUANG
ARCHITECTURAL DIRECTOR
Education: *B.Arch., SCI-Arc, 1984; M.Arch., Harvard, 1988.*

SUSAN EMMONS
PROJECT ARCHITECT
Education: *B.A., U. of Vermont, 1976; M.Arch., Harvard, 1984.*

CARLOS OVALLE
PROJECT MANAGER
Education: *B.Arch., SCI-Arc, 1986.*

LAUREN MacCOLL
PROJECT MANAGER
Education: *B.S., Brown, 1983; M.Arch., SCI-Arc, 1990.*

JOSEPH SANTIESTEBAN
PROJECT MANAGER
Education: *B.S. (Architecture), U. of Florida, 1976.*

EVA REYNOLDS
PROJECT MANAGER
Education: *B.A., UCLA, 1986; M.Arch., SCI-Arc, 1990.*

BOBBY CHA
INTERN
Education: *B.Arch., USC, 1993.*

Project: *Las Americas Hotel*
Owner: *Skid Row Housing Trust.*

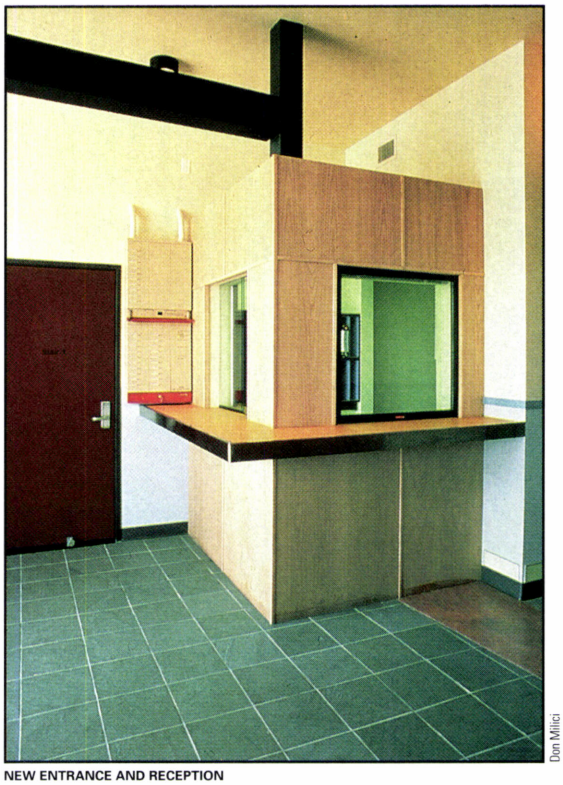


Don Milici

LAS AMERICAS HOTEL BEFORE REHABILITATION

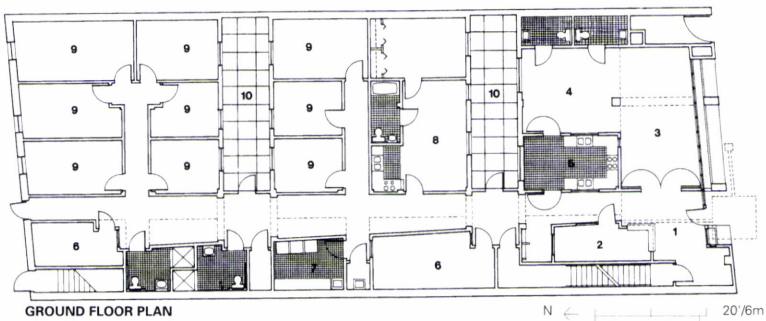


ENTRANCE ELEVATION OF REFURBISHED SRO HOTEL 10'/3m



Don Milici

NEW ENTRANCE AND RECEPTION



GROUND FLOOR PLAN N 20'/6m

1 LOBBY
2 OFFICE
3 LOUNGE
4 DINING
5 KITCHEN
6 MEETING ROOM
7 LAUNDRY
8 MANAGER'S UNIT
9 GUEST ROOM
10 LIGHT COURT

The young designers of the Los Angeles Community Design Center comprise the architectural staff of a nonprofit architecture, planning, and low-income housing development organization. Since its founding in 1968, the Design Center has worked with over 400 community groups to build childcare centers, health clinics, senior service centers, shelters for the homeless, and permanent low-income housing. In addition, it conducts feasibility studies, investigates financial packaging, and provides workshops on commercial revitalization and community design.

The possibility of working on socially beneficial projects was the main attraction for the current members of the architecture staff, explains director William Huang. **"WE ASKED OURSELVES WHO IS BENEFITING FROM OUR LABOR, AND DOES GOOD DESIGN HAVE TO BE A LUXURY OR CAN IT BE ACCESSIBLE TO THE LOW-INCOME COMMUNITY."**

Among the recently completed projects is the Las Americas Hotel, a rehabilitated 58-unit SRO just east of Skid Row. At a construction cost of under $2 million, the low-income hotel boasts livable units (rented at $240 per month), benign common areas, and a dignified street presence, in addition to its bolstered structure and updated building systems. The young architects value the opportunities afforded by their organization's structure and the scope of its services. "We're able to initiate projects," says Huang. "And we have input early on in the development process, allowing our architectural contribution to be more meaningful and informed."



SIGNS ON THE ARCHITECTS' STREETFRONT OFFICE CHANGE WEEKLY





Robin Cottle

MARMOL RADZINER & WELSH ARCHITECTURE
LOS ANGELES

LEONARDO E. MARMOL

Education: *B.Arch., Cal Poly, San Luis Obispo, 1987.*

RONALD M. RADZINER

Education: *M.Arch., University of Colorado, 1986; B.S., Cal Poly, San Luis Obispo, 1984.*

JOHN A. WELSH

Education: *B.Arch., Cal Poly, San Luis Obispo, 1986.*



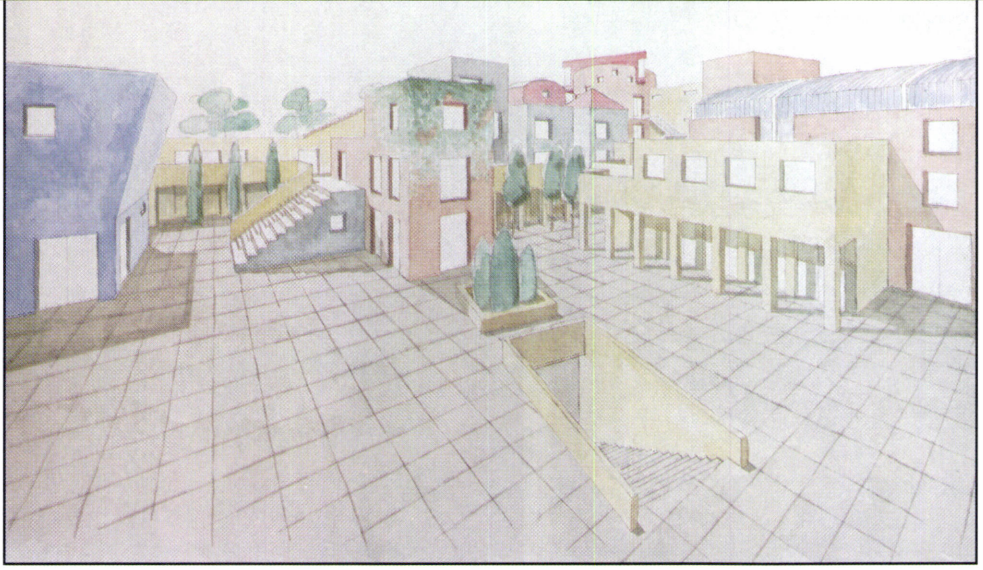


Chris Shanley

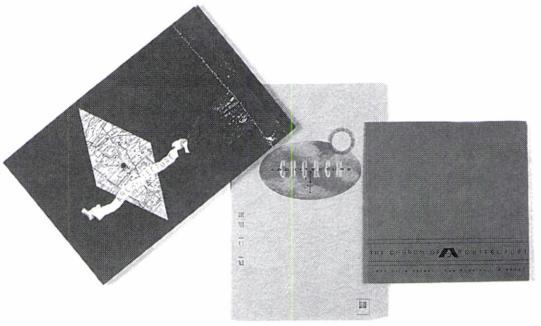
"WE STRONGLY BELIEVE THAT THE ARCHITECT HAS A VITAL ROLE IN THE BUILDING AND REBUILDING OF OUR COMMUNITIES," wrote the young partners of Marmol Radziner & Welsh in the portfolio submitted to P/A. This conviction underlies the firm's activism on many fronts, beginning with the location of the office: to establish a presence on the street, the architects moved from an "isolated art fort" in Venice to a storefront in Los Angeles, and installed a signboard on which the messages change weekly.

The three are among the founders of the "Church of Architecture," a small publication started by a group of Cal Poly graduates as a means to stay in touch and develop ideas that originated at school. The sporadic (four issues to date) alternative "forum" for young designers has grown to a press run of approximately 2,000; costs are covered through fundraising parties.

The architects' involvement with diverse nonprofit organizations began with MRW's effort to organize volunteers to repaint the Sheenway School

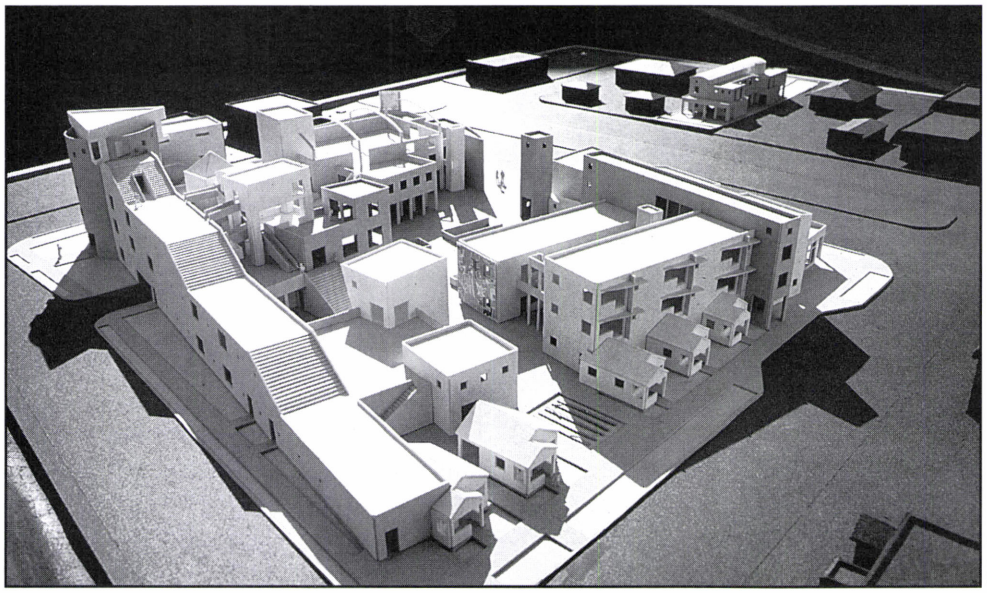


RENDERING OF PROPOSAL FOR NEW SHEENWAY SCHOOL



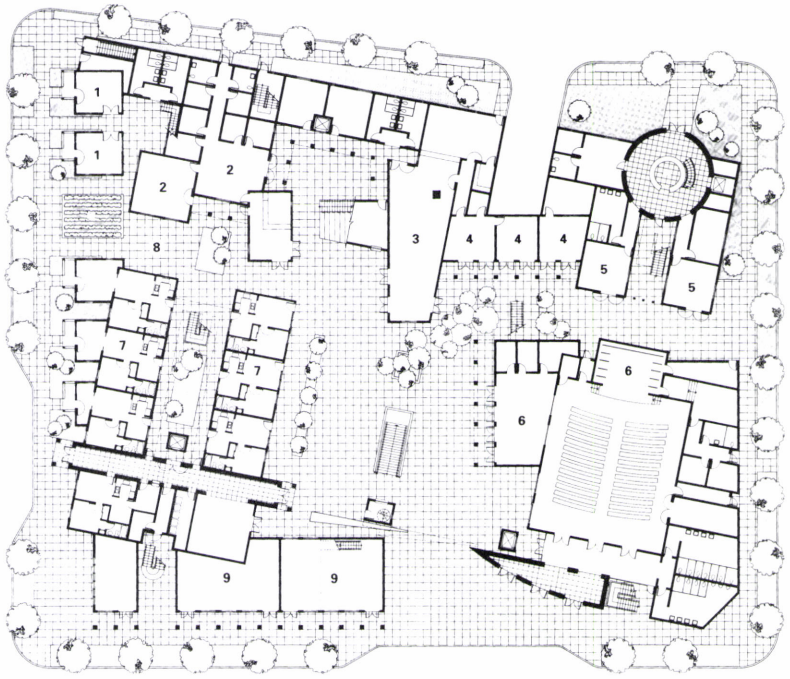
COVERS OF "CHURCH OF ARCHITECTURE" PUBLICATION

Courtesy: Marmol Radziner & Welsh



Weldon Breuster

MODEL



1 SHEENWAY PRESCHOOL
2 ADMINISTRATION
3 DINING/STUDENT LOUNGE
4 SCIENCE CENTER
5 INFANT DEVELOPMENT CENTER
6 COMMUNITY CENTER/AUDITORIUM
7 HOUSING FOR ELDERLY
8 GARDEN
9 FOOD CO-OP/ COMMERCIAL

GROUND FLOOR PLAN

N → 40'/12m

in Watts. Subsequently, they recall, "we also found ourselves cooking breakfast for the children on a weekly basis, and teaching a number of classes on drawing, painting, and design."

Since then, MRW has completed the schematic design for the new Sheenway School, which was conceived by cofounder Dolores Sheen as a kind of "core community," commingling on one block a school, a preschool, and infant care, with a cultural center, a medical clinic, 23 units of housing for elderly, and commercial space including a food cooperative. The phased project will eventually replace the existing Sheenway School on site.

Limited budgets for the first houses, renovations, and interiors projects, combined with a strong desire to eke out of the construction as much quality as possible, led the partners to undertake the general contracting themselves and recast MRW as a design/build firm – a move that not only enabled them to "ride out" tough times," the architects attest, but which also underwrites their *pro bono* work.

Perspectives | Whatever Happened to the Class of '87?

Bruce P. Rips, an architecture graduate of Washington University, asks his former classmates what they're up to.

On an autumn afternoon in 1986, a Washington University architecture student perished in a skydiving accident. Only years later would the memory of the student's death represent anything like a parable to his former classmates. Entering a vibrant job market the following spring, few graduates imagined the steep descent that would soon take place in the architectural profession. The personal and professional turmoil created by layoffs shook the terra firma of middle-class expectations. The short history of the Washington University Class of 1987 attests, however, to the resiliency and sense of survival awakened in individuals during an economic crisis.

Washington University's architecture school, located in St. Louis, attracts students and disperses graduates across the country. Its alumni closely mirror the gender and racial composition of the nation's young architects. I had heard a number of war stories from former classmates about the elusive architectural job market and decided to poll my class on its career experiences. I sent 81 questionnaires out, 47 to former undergraduates and 34 to former graduate students, and received 24 back from each group – a response rate of nearly 60 percent. The survey focused on three broad areas: employment trends, job satisfaction, and future expectations.



"Moducrate Tower" by Alice Van Meter Wolfe of Design Ideas, Springfield, Illinois.

The poll reveals the economic and social dynamics working within the architecture profession and provides a statistical backdrop to the widespread anecdotes of job market turmoil. The attitudes elicited from classmates paint a picture of what it has been like to begin a career during one of the worst recessions ever for architects.

The results appear to confirm the difficulties architects are having in finding long-term, stable employment. My former classmates on average changed jobs every 20 months and held 3.5 full-time or part-time jobs during the six years they have been in the workforce. These figures might have been higher had not a substantial share of the former undergraduates temporarily taken themselves out of the job market by pursuing graduate degrees.

The survey revealed that high levels of job satisfaction are closely correlated with those who have achieved the most independence and job responsibility. Classmates, for example, who have their own business, teach, or involve themselves in community activities expressed the most job enthusiasm and career optimism. Passing the architectural registration examination and long-term employment are also indicators of job satisfaction.

A substantial percentage of the young architects surveyed remain committed to the practice of architecture or related fields in spite of fluidity in the job market, low pay, and poor benefits. The nature of this commitment is diverse. Some have pursued a range of architecturally related projects, particularly during periods of unemployment.

Just over half of the class has been unemployed at some point since 1987; nearly all of them had been laid off. Changing jobs early in an architecture career is not unusual, and close to half of those currently employed were seeking a new position. In economically good times, the rate of job changes may also be frequent, but interviews with classmates reveal that changes have been horizontal moves as much as vertical ones.

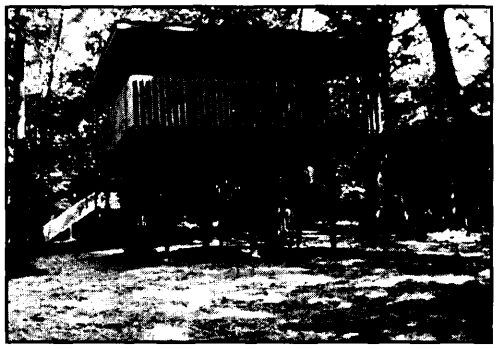
One interviewee, who wished to remain anonymous, described what it was like to have five jobs in seven years. "I was always the new guy in the firm and I was usually the first to get laid off. Whether I had more responsibility at the next firm I worked for varied; it was a function of either having more experience or not having much competition. At one firm, everyone worked in teams, but then so many people were laid off that I was responsible for whole projects."

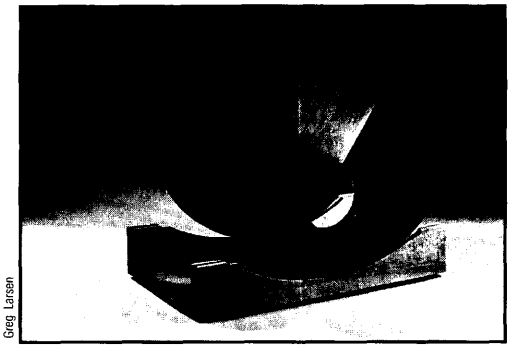
Current job status looks more encouraging. Nearly all the respondents have some form of current employment, more than two-thirds in full-time positions. A third were "consulting" or "freelancing," and several of them were looking for permanent employment as they were nurturing a nascent practice.

What would it have taken for a young architect to remain fully employed since graduation? William Schallenberg, Director of Corporate Research and Planning for the AIA, states that, according to institute surveys, the best opportunity for steady employment was to become an expert in institutional facilities (healthcare, education, or justice) and live in a second-tier city in the Midwest, the region of the country least affected by the recession. Cities like Des Moines, Omaha, and Cincinnati experienced real market demand rather than demand driven by the tax code and real estate speculation.

The AIA's best of all possible scenarios closely resembles that of David Leighly. After receiving his M.Arch. from Washington University he moved to Rochester, Minnesota, where he has worked for one firm, TSP Architects and Engineers, whose clients include the prestigious Mayo Clinic. Although the firm has had several waves of layoffs, Leighly is among a core of key employees.

Just six others from the class have worked as long for one employer. In two cases, the individuals were self-employed. Four of the six





Greg Larsen

Far left, Girl Scout "Tree House" by Martin Salino-Hugg of Burlington, Iowa; left, "Rolling Rocker" by David P. Leighly of Rochester, Minnesota; below, vacation house by David Pill of Pill • Maharam Architects, Brookline, Massachusetts.



positions were with architecture firms.

Job satisfaction often reflects the level of independence and responsibility an individual possesses. Sixty-seven percent of the respondents expressed satisfaction with their current employment. Not surprisingly, respondents who had longer tenure at a firm carried more responsibility. In addition, two classmates who teach at the university level and three who started their own businesses have more personal control over their careers. Alice Van Meter Wolfe's company, begun during her first year of architecture school, develops product ideas and markets them to retailers as diverse as New York's Museum of Modern Art gift shop and the retailing giant Wal-Mart. Design Ideas has grown by 50 percent each year and now has a total of 30 employees.

Another indicator of job satisfaction is community involvement. Returning to his hometown of Burlington, Iowa (population 27,200), Martin Salino-Hugg assumed responsibilities often asked of professionals in a small city. Salino-Hugg serves on several boards, including the city's Historic Preservation Commission. He has also volunteered his architectural skills to various community projects including the design of a Troop House for the local Girl Scouts.

Attitudes about current salary and benefits did not match job satisfaction levels. Half of the respondents were satisfied with their salaries, and a slightly smaller percentage expressed the same satisfaction with benefits. A total of 13 percent did not receive benefits.

Dissatisfaction has led several architects to begin achieving the independence not found while employed. Entrepreneur Charles Pick was so frustrated by the way architecture firms marketed themselves that he began his own company specializing in real estate consulting and acquisitions. AQA, based in San Francisco, opened its doors just as the recession hit California. The company offers architecture services but attracts clients through real estate expertise. Other graduates, such as Boston architect David Pill, have found in the completion of freelance projects a renewal of self-confidence that was badly shaken by office turmoil.

Interestingly, levels of optimism for the future were less than those for job satisfaction. Just under 50 percent replied that their expectation for their future in architecture was either excellent or good; however, three-quarters indicated that they were not considering a new career. Those considering alternative careers were for the most part those with undergraduate degrees who had not completed further architectural training. Career options ranged from architecturally related businesses (graphic design, architectural sales) to furthering their education with a graduate degree in business.

If most of the respondents are committed to architecture or to closely allied professions, what is the nature of this commitment? In other words, why do these young architects continue to pursue the profession when salary and benefits are so disappointing? The answers, of course, vary. For some there is an understanding that the years of being an intern architect would be long and sometimes unrewarding. As Michael Wolfson, a Boston designer, states, "At 18, just starting college, I knew architecture wasn't an easy profession. There would be feast and famine. I was just very surprised at the depth of the problems."

Others have personal and financial obligations to family that take precedence over job satisfaction or that make retraining difficult. Community involvement allows individuals to pursue architecturally related interests. Former classmate Amy Munsat volunteers at the Women's Institute on Housing and Economic Development in Boston. Participating in design competitions, writing books, and teaching part-time all have been significant activities. Andy Kulterman wrote a book on the architecture of the Balkans before he found his first teaching position at Illinois Central College in Peoria.

And then there is the thrill of making a difference. As St. Louis architect Erik Kocher notes: "I have now had a number of projects come to fruition everywhere from Decorah, Iowa, to Lake Tahoe, Nevada, to Kansas City, Missouri, and I now know why people become architects: to walk through your own design and appreciate its impact on the people who use it is exhilarating."

Young architects over the years have adapted to career roadblocks. In this recession, however, job certainties and control over one's career have greatly diminished. For many it is difficult to believe that stable, long-term employment will ever become a reality. Newspapers are full of articles describing the structural changes occurring in the service economy, namely the loss of permanent jobs and the increase in temporary employment.

My survey, although limited in sample size, addresses the plight of young architects neglected by previous surveys. Expanded research efforts should follow. More important, institutions such as the AIA and architecture schools need to create effective programs or networks that support intern architects. Survey respondents, in fact, expressed considerable dissatisfaction with existing assistance efforts.

Listing her accomplishments since graduation, Hunter Crabtree concluded with "learned to do headstands." It's an apt metaphor. My former classmates have seen the profession from a new perspective that requires the risk taking and flexibility of a gymnast. **Bruce P. Rips** ■

The author, a member of Washington University's Class of 1987, is a writer and urban planner in Seattle.

New Products and Literature
New Products and Literature 124
Technics-Related Products 126
Computer Products 128

New Products and Literature



1

1 Sculptured Brick

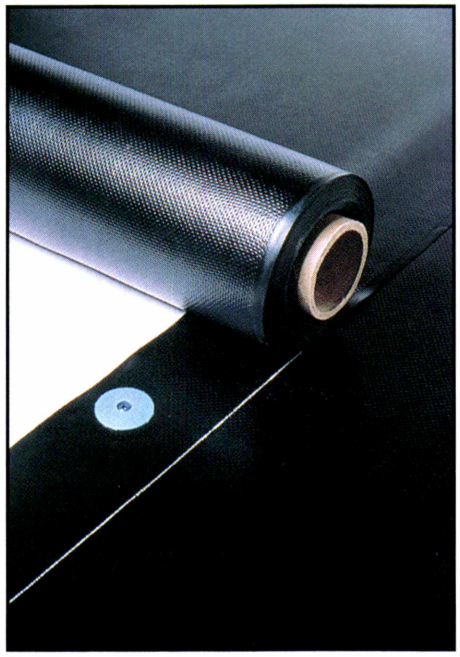
Custom-produced sculptured brick installations can be produced in glazed or monochromatic brick in Intaglio or Bas Relief for commercial, educational, institutional, and religious buildings. Designs are outlined and carved into "stiff-mud" brick, fired, and brought to the site. The project shown here is "Charles Page and His City" by Paula Collins for the Sand Springs Home in Oklahoma. Acme Brick.

Circle 100 on reader service card

2 Single-Ply Roofing Membrane

"Hi-Tuff/EP"™ is a black, heat-weldable, scrim-reinforced single-ply roofing membrane. The membrane, based on an ethylene propylene polymer from Himont, has a UL Class A System designation for external fire resistance on low-slope roofs. Available in 76½-inch-wide rolls, the system is compatible with common commercial roof substrates and can be used as a mechanically attached, fully ballasted, or vented roofing system. Stevens.

Circle 101 on reader service card



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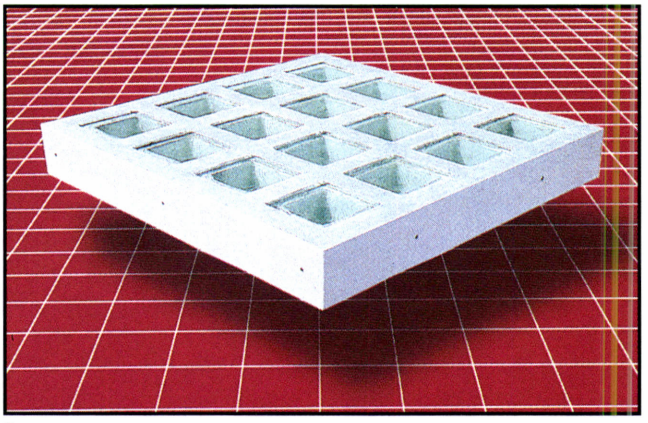


3

3 Concrete/Glass Block System

"CastGlass"™ is a new precast concrete grid system for glass block inserts. It is suitable for walkways, stair treads and landings, floor panels, skylights, and skybridges. The panels support a minimum load of 100 pounds per square foot on a six-foot clear span. Standard panel size is a 6-inch-thick, 3'-7" square. The VISTABRIK® glass blocks from Pittsburgh Corning are 1½-inch-thick, 7¾-inch-square pattern-free paver units. Dura Art Stone.

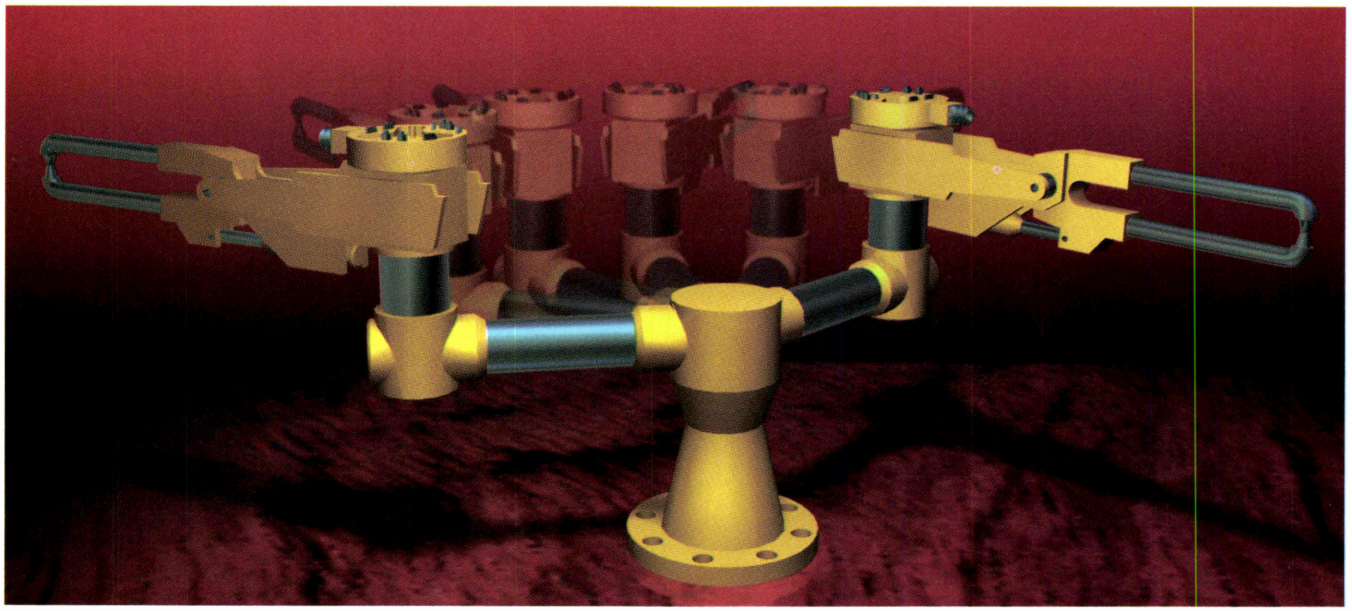
Circle 102 on reader service card

(continued on page 127)

These are typical AutoCAD drawings.







(In 3D Studio.)

3D Studio® Release 2 transforms your AutoCAD® drawings into captivating presentations. You can add photorealistic textures, reflections, light and shadows. Or add motion for product demonstrations and architectural walk-throughs. Now, for a limited time, your purchase of 3D Studio includes free Visual Link™ software, an AutoCAD extension that lets you easily combine the precision of AutoCAD with the modeling and animation tools of 3D Studio. Curious? Call 1-800-879-4233, ext. 245 and we'll send you more information. Outside the U.S. and Canada, fax 415-491-8311.

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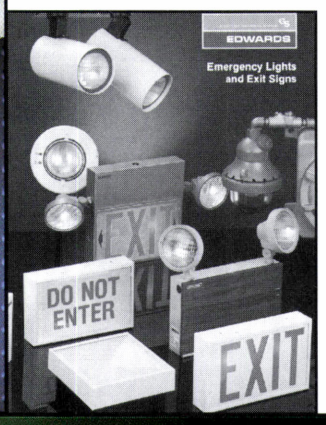
Circle **No. 323**

Technics-Related Products

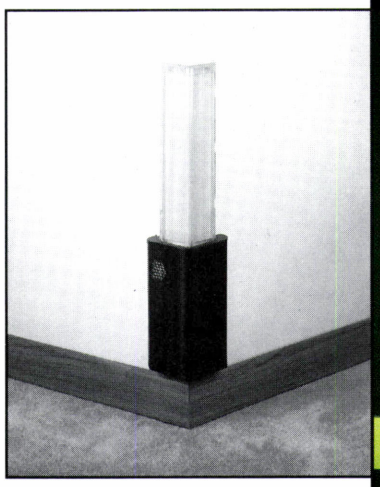
The exit signage products shown here complement the Technics Focus article on systems of egress.



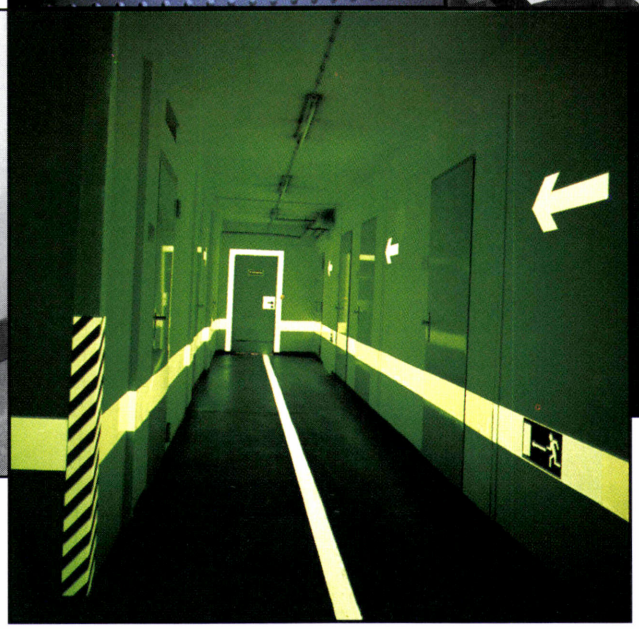
Energy-Efficient Exit Sign
Sure-Lite's "Egresser" energy-efficient, UL-listed exit sign (right) is said to consume an average of $3.50 worth of electricity annually; its subminiature lamps have a projected life-span of more than 70,000 hours or eight years. The sign is 5/8-inch deep and is available in a black or white housing with red or green lettering and single- or double-faced configurations. Cooper Lighting.
Circle 103 on reader service card



Emergency Lighting, Exit Signs Catalog
This seven-page catalog (left) includes specifications for a full line of emergency lighting products and exit signage. All products have automatic solid-state switching, a solid-state line-latched low-voltage disconnect circuit, and a brownout circuit to monitor AC line voltage. Edwards.
Circle 200 on reader service card



Smoke-Activated Emergency Egress System
The "Lite-A-Way" strobotronic emergency corner guard system (above) is designed to lead occupants of institutional and commercial buildings along paths of egress during a fire. The wall-mounted units, activated by built-in smoke detectors, flash on and off every three seconds and can be viewed from a few hundred feet with 50 percent smoke coverage. Powered by five AA batteries, the units meet ASTM standard D-1929 and are UL-approved. A patent is pending. Tri-Guards.
Circle 104 on reader service card



Photoluminescent Signage
This extensive line of "Jalite" self-adhesive photoluminescent fire exit signage and marker tapes (above) can be used on a variety of wall and door surfaces in commercial and institutional buildings. The products are available with exit lettering or symbols. Warning, danger, and hazard signage may also be ordered. Multiguard.
Circle 105 on reader service card



Fluorescent Emergency Fixture
"Practica Bella Exit"® fixtures (above), in emergency or standard energy-saving models, have a vandal-resistant polycarbonate housing and a patented plug-in connection system. The UL-listed fixtures are available with light gray, burgundy, or black housing and a green or red exit sign. They are equipped with an electronic ballast and they accommodate a 22-watt fluorescent lamp. Beghelli.
Circle 106 on reader service card

(continued from page 124)

Fire-Resistant Roof Decking

"FlameBreak"® is a UL-classified, fire-resistant panel suitable for new and replacement roof decking. Its imbedded-glass mat faces and silicone-treated core are designed to yield low flame spread. The panels are constructed of a layer of APA-performance-rated sheathing bonded to 1/4-inch-thick Dens-Glass® proprietary gypsum panels. Georgia Pacific.

Circle 107 on reader service card

Cement and Concrete Catalog

The Portland Cement Association has released its 1993 catalog. It includes more than 400 technical, educational, and promotional publications, videos, software programs, and slide sets on product and technical information and construction applications. Portland Cement Association.

Circle 201 on reader service card

Loose-Fill Insulation Brochure

This new four-page brochure includes thermal data for 6-,8-, 10-, and 12-inch masonry units, a specifications guide, and a thermal-resistance values table for veneer and cavity wall calculations for loose-fill insulation. The insulation is nontoxic, noncombustible, and inorganic. Perlite Institute.

Circle 202 on reader service card

Insulating Drainage Panels

"Styrofoam™ Thermadry™ Brand Insulating Drainage Panels" combine drainage, insulation, and protection in a single board. The panels were recently approved for plaza deck construction. Concrete can be poured directly onto the panels and can still be drained at the concrete/foam interface. The panel's exterior surface has a matrix of horizontal and vertical channels covered with a spun-bonded filtration fabric to drain ground water away from below-grade walls. Dow Chemical.

Circle 108 on reader service card



Circle **No. 333** on Reader Service Card



Membrane Structures Brochure

This line of tensioned membrane structures is constructed of "Sheerfill® Architectural Membrane," a woven electrical-grade Fiberglas® substrate with a Teflon PTFE coating. The material is lightweight and translucent and can meet fire code requirements for many kinds of construction. The membrane product can be used for skylights, roofs, freestanding structures, and other types of enclosures. The Cynthia Woods Mitchell Center for the Performing Arts is shown above. Birdair.

Circle 203 on reader service card

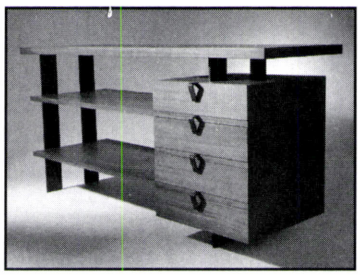
Energy-Efficient Lighting Guide

The National Lighting Bureau has published a new 50-page guide, the *NLB Guide to Energy Efficient Lighting Systems*. The extensively illustrated publication focuses on retrofit lighting systems rather than on single-component retrofits. The guide also includes systems analysis and maintenance, planning information, and sources of assistance. Contact NLB, 2101 L St., NW, Washington, DC 20037 (202) 457-8437. Cost: $10.

ADA-Compliant Access Systems

All of the "Magic-Door"® products described in this brochure, *The Automatic Way to Say Welcome,* include a variety of safety features, including microwave and infrared sensors, automatic reversal, and fail-safe systems. The brochure provides information on "Dura-Glide™ Sliding Doors," swinging doors, special systems, and door controls. Stanley.

Circle 109 on reader service card



New Side Table

The "ST-12" side table is part of a collection of sixteen pieces of Arts-and-Crafts-inspired furniture designed by Marc Desplaines. The side table is shown here in Sapelli wood with blued steel supports and handles. It is 66 inches wide, 20 inches deep, and 32 inches high. Antoine Proulx.

Circle 110 on reader service card

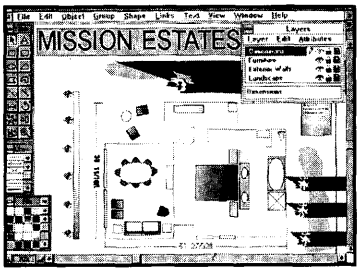
Bathroom Faucet

The "Traditional"™ collection of faucets features all-brass construction and a washerless cartridge. Model #5904/14708 has a two-lever-handle arc spout with a chrome finish and white handles. Moen.

Circle 111 on reader service card

(continued on page 129)

Computer Products



IntelliDraw

Aldus is billing this product as the first of a new generation of "smart" drawing programs for Macintosh and Windows – offering CAD features with the simplicity of use of illustration programs. The program features auto-alignment guides and commands to draw symmetric shapes and define parametric connected shapes. Also included is a sizable clip-art symbol library. Aldus.

Circle 112 on reader service card

ARCHT

An AutoCAD architectural application, ARCHT speeds both 2-D and 3-D drawing with design tools and predrawn blocks. Over 2,000 architectural blocks are included in the library, with the ability to add user-defined blocks of frequently drawn routines. Wall, door, window, and stair creation is automated with a graphical interface. The vendor claims its use of Autodesk's ADS programming tools gives its package a significant speed advantage over older AutoCAD architectural applications. KETIV Technologies.

Circle 113 on reader service card

TEACHING ASSISTANT

This interactive tutorial program for learning AutoCAD has been released in a Windows version. TEACHING ASSISTANT runs inside the AutoCAD environment with a series of lessons and practice sessions.
Electronic Courseware Systems.

Circle 114 on reader service card

AutoCAD Spelling Checker

SPELLCHECK is an AutoCAD application which can check either all or user-selected text, dimension text, attributes, and attribute definitions within AutoCAD files. Both Windows and DOS versions have been updated with the release of version 2.0 for AutoCAD Release 12. The new version features an improved graphical user interface, and a greater speed of operation. Haestad Methods.

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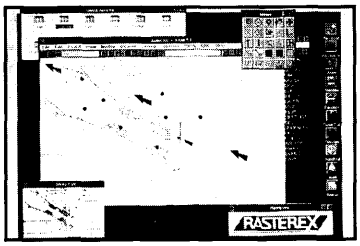


RxAutoIcon

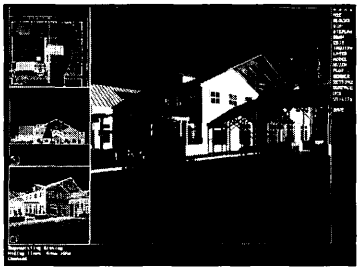
This AutoCAD Release 12 for Windows add-on is designed to accelerate any standard display device by bypassing the Windows Graphics Device Interface, avoiding graphics bottlenecks. The program can be configured to take optimum advantage of advanced graphics boards.
Expert Graphics.

Circle 116 on reader service card

DGNLink

DGNLink allows AutoCAD Release 12 users to import MicroStation files and merge them into current drawing files. Release 2.0 has added the ability to process MicroStation reference files to AutoCAD XREFS and the ability to personalize colors, fonts, layers, line styles, and element imports.
Decision Graphics.

Circle 117 on reader service card



AccuRender

An AutoCAD rendering application, AccuRender calculates shadows, reflection, transparency, refraction, and diffusion of 3-D images for "photo-realistic" rendering. A materials library is included, as well as a fractal technique for drawing vegetation that keeps file size small with a varied appearance. Special effects like fog and haze are built into the program, which can calculate sun shadows from the latitude of the site, the date, and the time of day. Robert McNeel & Associates.

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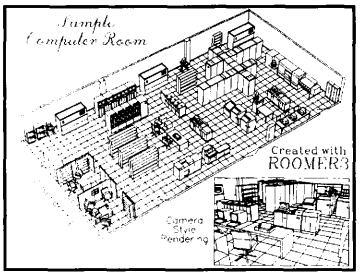


ROOMER3

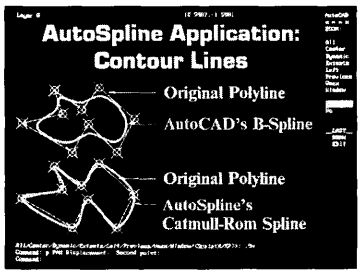
A versatile 3-D space planning software, ROOMER3 has been revised with the release of version 2. The new version handles four times more data and produces 3-D renderings four times as quickly. Also available are furniture libraries for interior design, computer rooms, and party design. Hufnagel Software.

Circle 119 on reader service card

PC-SOLAR

This passive solar design tool for PCs shows shading on 3-D wireframe models for day, time, and location (by ZIP code). The program offers a variety of ways to view the shading profiles, including animated sequences that show the shadows moving across the structure from sunrise to sunset for three different days simultaneously. 3-D Software

Circle 120 on reader service card



AutoSpline

Those who design curved lines around known data points may want to consider this AutoCAD utility which allows users to spline points with adjustable tensions, designing a curve that fits exact points in defined space. Recent enhancements include full dialog box support under the Windows environment.
M.Slinn Engineering.

Circle 121 on reader service card

Healthcare Design

Healthcare casework manufacturer, Midmark, is offering Visions 3-D Design, a CAD system made for layout of medical office facilities, hospitals, and clinics. The software contains a complete catalog of Midmark products, and a 3-D room layout module with options based on medical specialty.
Midmark.

Circle 122 on reader service card

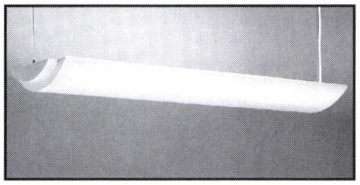
New Products and Literature

(continued from page 127)

Recycled Plastic Products Guide

The American Plastics Council has published a new guide to products made with recycled plastic called the *Recycled Plastic Product Source Book and Database.* It includes more than 450 building products.
American Plastics Council.

Circle 204 on reader service card



Indirect Lighting

The "Classica" reflector is an energy-efficient fixture suitable for commercial spaces requiring wide and indirect light distribution. The fixture houses two, three, or four T8 or four 40-watt compact fluorescent lamps. It is 13 inches wide and 3½ inches high. Litecontrol.

Circle 123 on reader service card

Drywall Furring Brochure

The 16-page Drywall Furring Systems brochure provides brief descriptions and installation guidelines for three drywall furring systems. The systems include the fire-rated "630 System," the "640 Series," and the "Fire Front 650," the "first fire-rated drywall system to allow penetrations for lights and air supply." Chicago Metallic.

Circle 205 on reader service card

Engineered Lumber Brochure

The *Total Support* brochure describes a family of commercial engineered lumber structural building products; it also includes information on specifying software and structural and environmental benefits.
Trus Joist MacMillan.

Circle 206 on reader service card

Stainless Steel Toilet Partitions

"Solid Core Heavy Duty Stainless Steel" toilet partition units have a seven-ply exterior grade plywood core and a satin finish. They are designed to withstand heavy traffic and rough treatment. Metpar.

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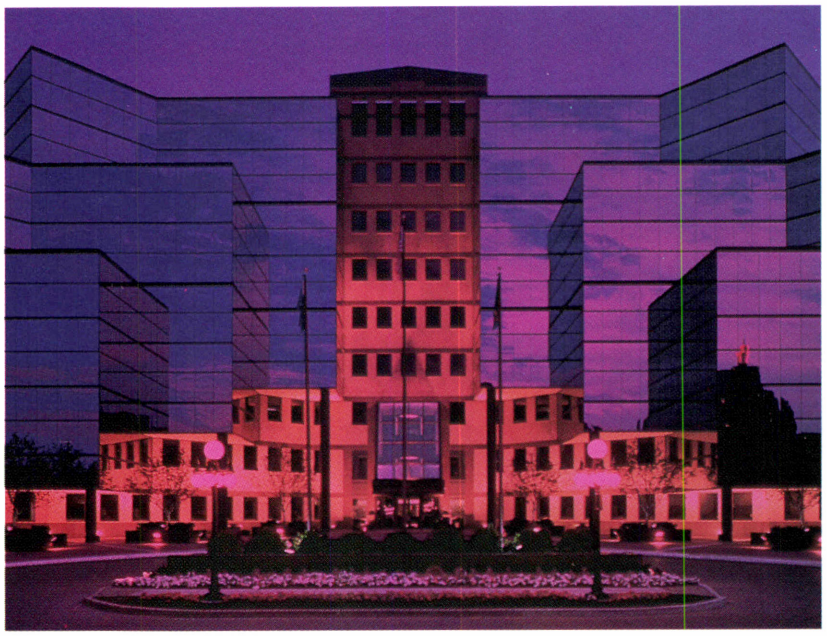
STERNER
The Total Performer.



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Applications are invited before 1 December 1993 on forms available from: **Harvard University Graduate School of Design, Office of Faculty Planning and Human Resources, 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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GRADUATE DESIGN DIPLOMA

The Architectural Association School of Architecture invites applications for the eighteen-month Graduate Design programme. The course objective is to produce, defend and disseminate substantive contributions to the catalogue of available architectural, urban and post-urban design strategies. Through studios, courses and seminars, students will become familiar with the intellectual issues and instrumental techniques which support this goal. Students applying for the programme should have graduated from a recognised course in architecture and/or urban design.

The programme is scheduled to include: Jeffrey Kipnis, Bahram Shirdel, Mark Cousins, Alan Balfour, Peter Eisenman, Rem Koolhaas, Daniel Libeskind.

For further details and application forms please contact Jacqueline Readwin, Assistant Registrar, at the address above.

Project Designer/Architect to direct projects from sketch through construction drawings and specifications; investigate problems, analyze alternatives and recommends design proposals for review for clients in a variety of media; such as water color renderings and pen and ink; design interiors, coordinate materials and finishes; prepare budgets and schedules on specific projects; coordinate work activities with two or more drafting technicians; perform zoning and code reviews, monitor project and production costs through various stages of design; perform construction administration on some projects. REQUIREMENTS: Bachelor of Architecture degree. Plus two years of experience in Architecture. OTHER REQUIREMENTS: Academic course work must focus on urban design. Academic transcripts required as evidence of same. Applicant must submit evidence of one design assignment and one water color rendering. SALARY: $32,000 per year/40 hour work week; 8:00 a.m. to 5:00 p.m. The job order number for this opportunity is KS 5300254. Please apply at Lawrence Department of Human Resource Office, 833 Ohio, Lawrence, KS 66044, Telephone number (913) 843-0531, or refer to job order number when submitting a resume to the above referenced office. Do not submit resumes to Alien Certification Officer. Must have proof of legal authority to work in the United States.

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Candidates should hold graduate degrees in architecture, urban design or landscape architecture, with good analytical and graphic skills. Good command of CAD is preferred. Senior positions require 3-5 years office experience and ability to work independently. Fluency in Mandarin preferable but not required. Send resume detailing experience, salary history and expected position to: Dr. Chin Pai, Cosmos Inc., 310 Chung Hsiao East Road, Section 4, 9th Floor, Taipei, Taiwan. Telephone: 8862-741-0172; Fax: 8862-741-5259.

University of Michigan

The College of Architecture and Urban Planning invites applications for the position of Chair of the Architecture Program. The College offers undergraduate and graduate programs in architecture as well as graduate programs in urban and regional planning. The Architecture Program has 47 faculty, 350 students, and awards B.S. and M.Arch. Degrees. The Chair is responsible for providing leadership; coordinating instruction, teaching courses in architecture; recruiting faculty and students; defining new program initiatives in consultation with faculty; managing the program budget; and representing the school to the profession and the public.

Interested persons are invited to submit a letter of application, curriculum vita, and list of at least three references with addresses and phone numbers to Dr. Sharon E. Sutton, Chair; Architecture Program Chair Search Committee; College of Architecture and Urban Planning; The University of Michigan, 2000 Bonisteel Blvd.; Ann Arbor, MI 48109-2069; (313) 936-0221.

Materials will be received until October 1, 1993; the position is available July1, 1994. Applicants must qualify for tenure in the College. References will not be contacted until the final stage of the selection process.

The University of Michigan is a nondiscriminating affirmative action employer. All underrepresented groups, including African Americans, Hispanics, Asians, Native Americans, and women are encouraged to apply.

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P/A ADVERTISERS' INDEX
JULY 1993

Alliance America 6
American Wood Council 55–68
Andersen Corp. 49
Artifice, Inc 49
Autodesk, Inc. 52, 53
Autodesk 3D Studio 124a–b, 125

Carlon, A Lamson & Sessions Co. 47, 70, 71
Cedar Valley Shingle Systems 49
Circle Redmont, Inc. 20

Design Competition: P/A Design Awards 15, 16
Design Competition: Spreeinsel International Urban Design Competition 38
Dryvit Systems, Inc. 50, 51
DuPont Co.—Antron C2, 1

Edison Price Lighting, Inc. 47, 49
elliptipar, Inc 47

Hanover Lantern 47
Hewlett-Packard Co. 4

Illuminating Engineering Society of North America 47
Intergraph Corp. 26, 27, C3

Kewaunee Scientific Corp. 29

Lighting Services, Inc. 47
Lighting Technologies, Inc. 34, 47
Litecontrol Corp. 31, 48
Lonseal, Inc. 30
Lutron Electronics Co., Inc. . . . 48, C4

Marvin Windows & Doors, Inc. 2, 3, 49
Mita Copystar America, Inc. 10

Neoray Lighting 48
Nevamar Corp. 12, 13

Original Cast Lighting, Inc. 48

PPG Industries, Inc. 8
Pella Corp. 17, 18, 19, 49

Southern California Gas Co. 28W
Sterner Lighting Systems, Inc. 48, 127, 129, 131

3-M Construction Markets 48

Weyerhaeuser Architectural Doors, Inc. 14
Ralph Wilson Plastics, Inc. 72
Winona Lighting 30, 48

Zumtobel Lighting, Inc. 32, 48

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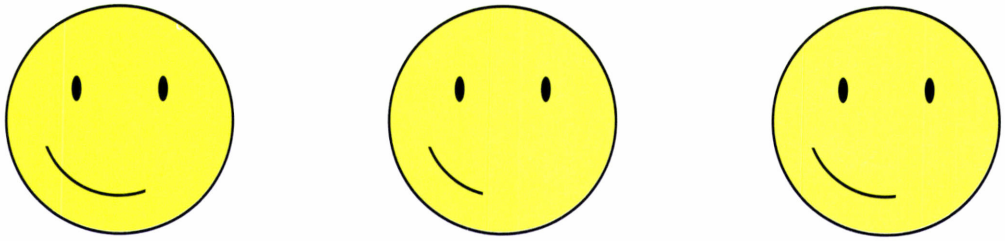


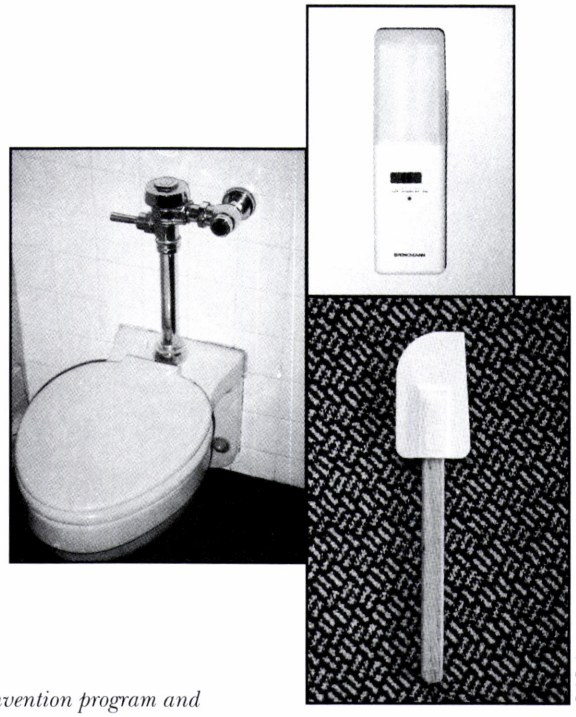
1987 1990 1993

The P/A YAFE Index

After three Young Architects issues, we think we may have developed a new economic indicator for architects: we call it the P/A Young Architects Facial Expression Index. In the first issue, in June 1987, 68 percent of the subjects were smiling in the photos they supplied to us. But in July 1990, only 37 percent could muster a grin – a clear sign of hard times on the horizon. This year, the happy faces come to 57 percent, which suggests to us that prosperity is just around the corner.

Household Words

The most interesting things about the responses to our March question – "What household object do you most admire for its design?" – were the accompanying statements. Andrew C. Wehrli of Naperville, Illinois, wrote a well-reasoned defense of his choice (right), arguing for its looks, function, and dependability. James A. Mayer of Fargo, North Dakota, was moved to verse: "Oh what a delight to say what I like/About the Brinkman emergency light (top right)." We'll spare you the remaining couplets. But Kuth Ranieri Architects of San Francisco clearly thought their choice (far right) spoke for itself. The photo was accompanied merely by a transmittal that said "spatula."



Ruth Ranier

Environmental Precedent

Did you AIA members wonder why this year's voluminous convention program and registration forms were unusually late? According to two informed sources at AIA, the first batch of 100,000 forms was printed on newsprint, in keeping with the convention's environmental theme. But when the newsprint caused the yellow ink on the cover to bleed, AIA leadership got rid of the entire press run and started over.

Question of the Month

"What is your favorite piece of civil engineering?"

Do you have a favorite bridge, dam, highway interchange, or other work of civil engineering? Before September 15, send your nomination (a photo would be a plus) to Furthermore *Editor, P/A, 600 Summer Street, P.O. Box 1361, Stamford, CT 06904. We'll publish the most intriguing responses in November.*

P/A in August

The architect Zaha Hadid has become famous on the strength of her drawings. Next month, we will report on her first completed building, a fire station on the manufacturing campus of the German furniture manufacturer Vitra in Germany. We'll also take a look at other Vitra commissions on the site, by such architects as Frank Gehry, Tadao Ando, and Alvaro Siza. Also in the issue:

- **a feature on a remarkable set of government-sponsored day-care centers in Frankfurt, accompanied by a look at American daycare facilities;**
- **a case study on architect Carl Stein's use of photogrammetry in the documentation and restoration of Shepard Hall at the City University of New York;**
- **a critique of the restored Union Station in Washington, D.C.**
- **a photo essay on the self-built shelters of New York's homeless.**

The Technics section will include an article on rain screens and the debut of a new recurring feature that will highlight some of the most interesting and current architectural research. ■