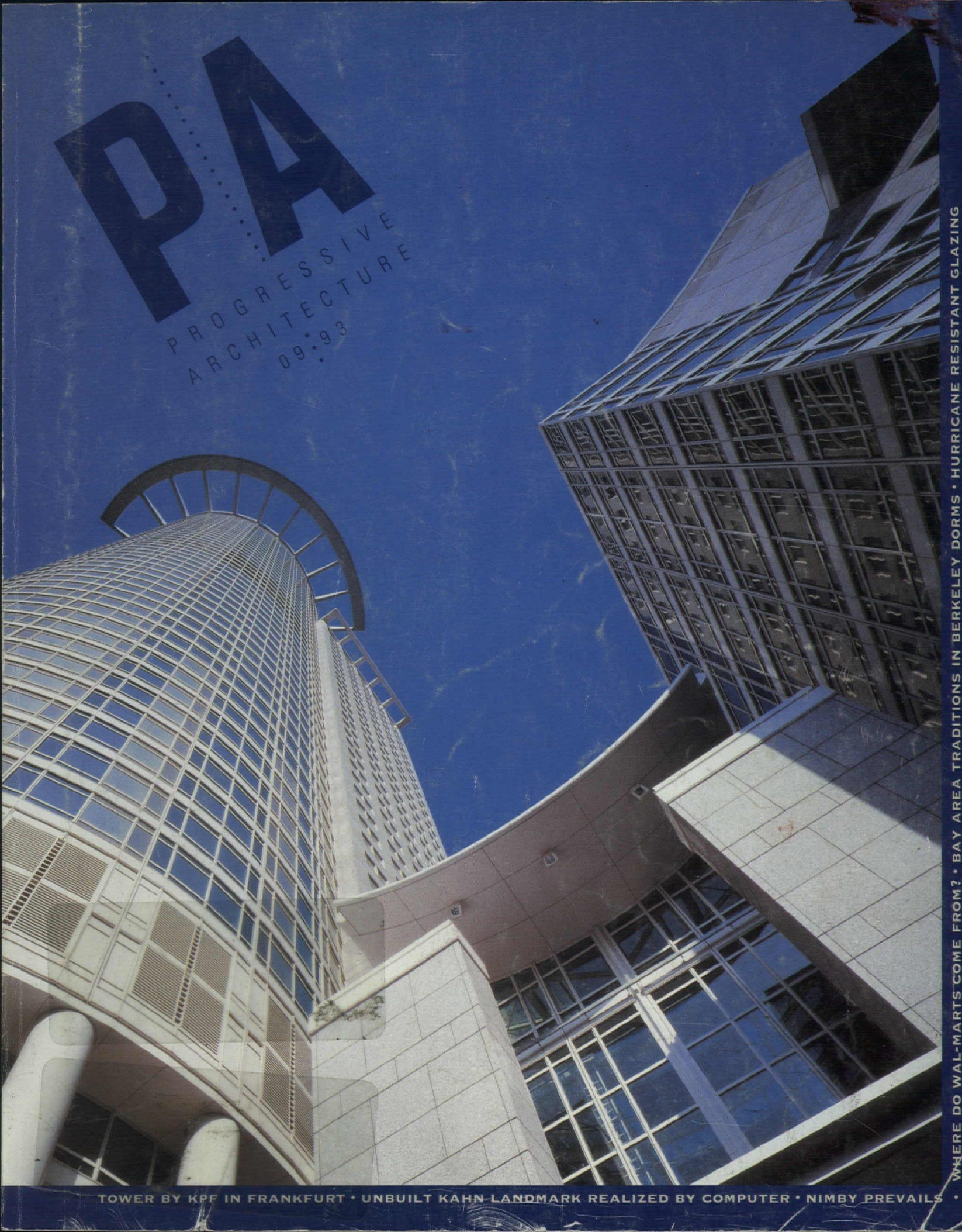
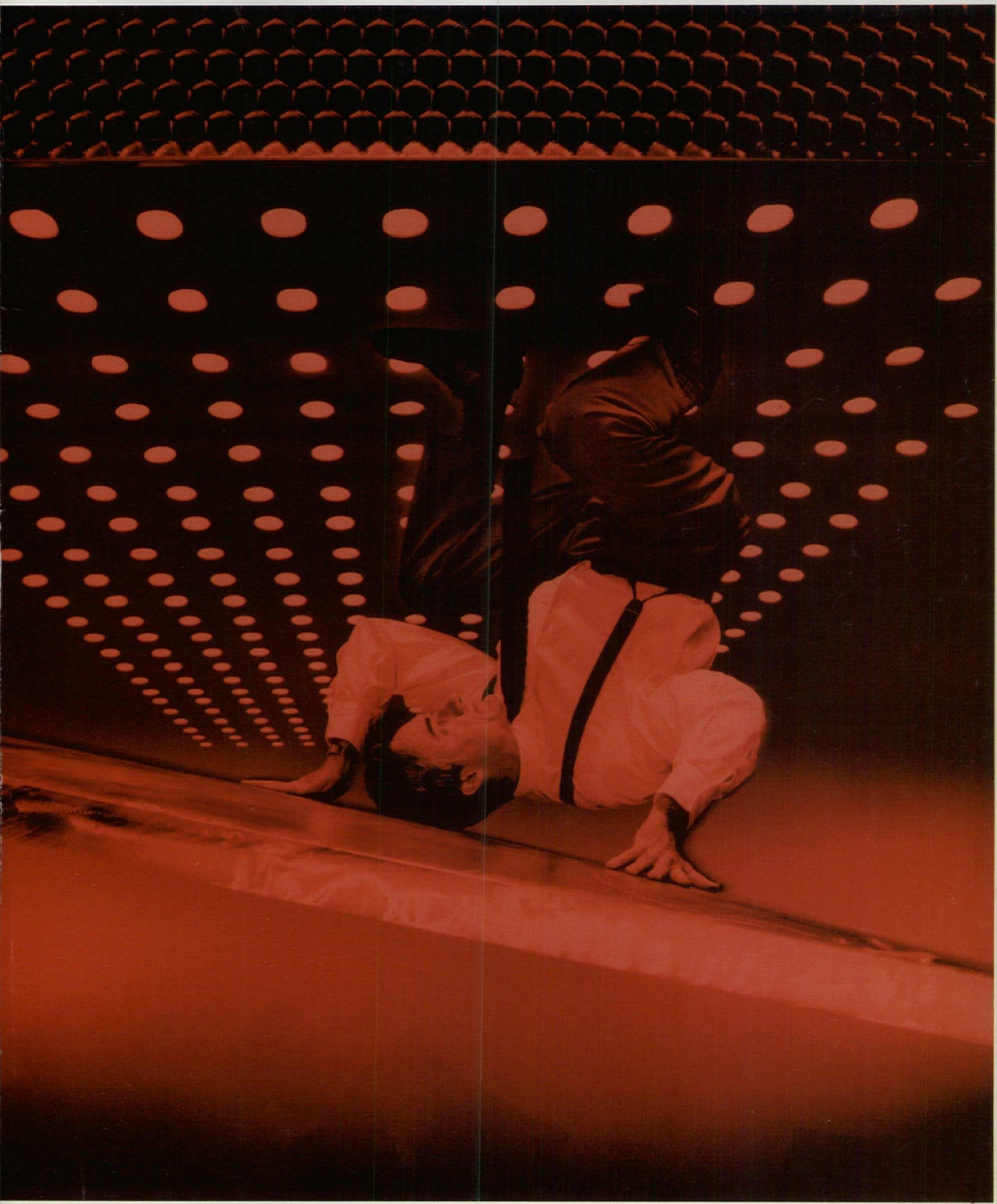

PA
PROGRESSIVE
ARCHITECTURE
09.93
TOWER BY KPF IN FRANKFURT • UNBUILT KAHN LANDMARK REALIZED BY COMPUTER • NIMBY PREVAILS
• WHERE DO WAL-MARTS COME FROM? • BAY AREA TRADITIONS IN BERKELEY DORMS • HURRICANE RESISTANT GLAZING



WALZ ON INDUSTRIAL-STRENGTH DESIGN

"Designers face tremendous pressure in office design, particularly in this increasingly cost-conscious market. Our role is to reinvent the office landscape so it can support a multitude of new tasks and new systems. More than ever, office space needs to be more flexible and responsive, more fluid. At the same time, it needs to champion the business's most important resource, its employees." Kevin Walz. Award-winning designer of office interiors. Specifier of DuPont ANTRON® carpet fiber. ANTRON. There is no equal.

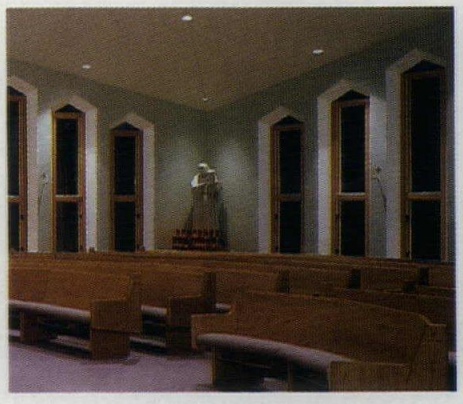
For information on Walz's unique workplace designs and the life-cycle cost advantages of ANTRON nylon, call 1-800-4DuPont.

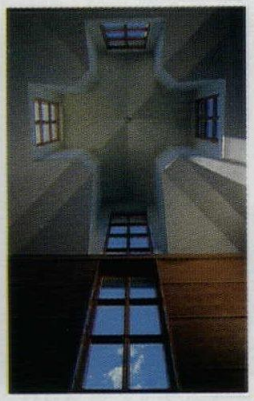
DUPONT
Antron®
Only by DuPont

Circle **No. 319**

AN ENLIGHTENED ARCHITECT CALLS ON ROME AND ANDERSEN TO HELP A CHURCH

As a student in Rome, architect Al Fitzpatrick studied the design of St. Peter's. "Daylight was used as a source of inspiration and tranquility," he said.



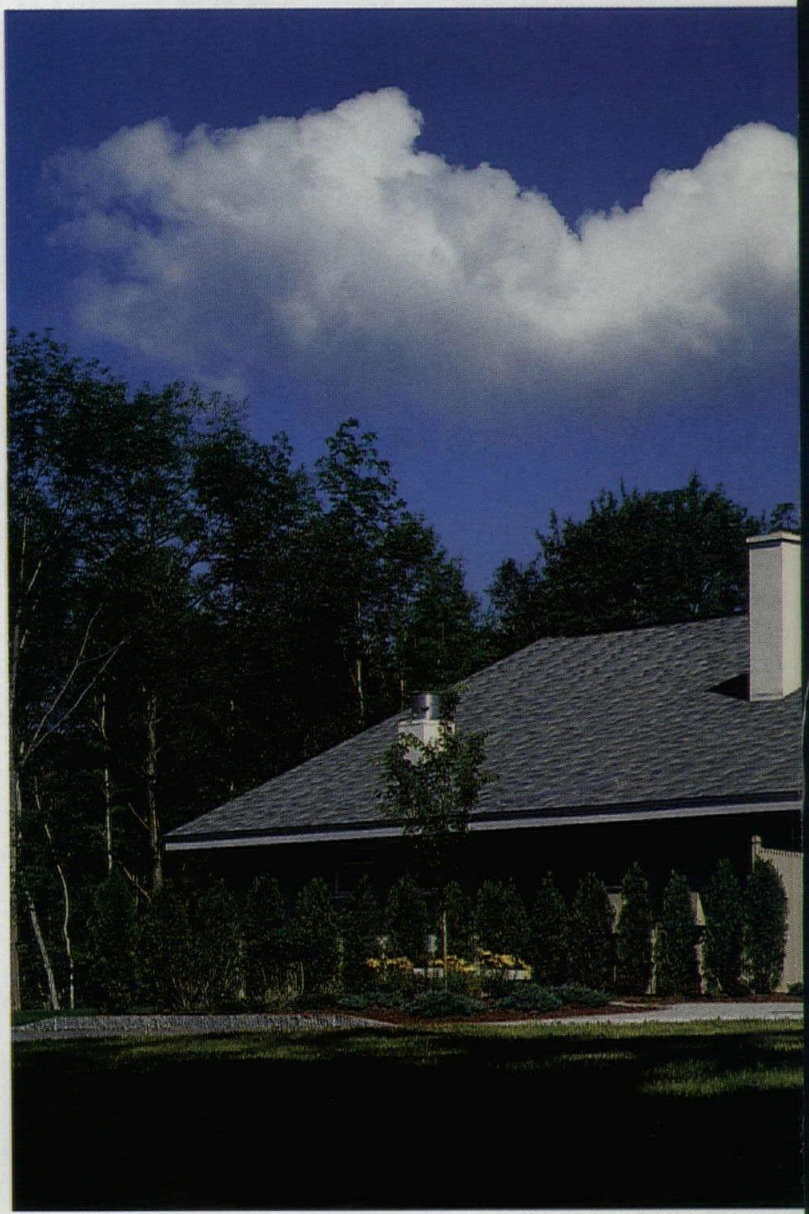


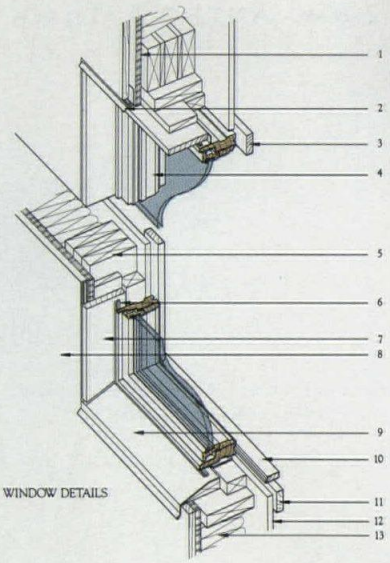
He wanted to bring that same light here to St. Joseph's—create a sanctuary in a hectic world. So he specified Andersen® windows. Said Fitzpatrick: "Andersen enabled us to use many sizes, configurations and special effects."

Special effects, we asked? "In the sanctuary windows we angled the return of the Andersen head, jamb and sill to produce an uplifting yet tranquil effect."

Andersen® window flexibility. It can give both you and your client great peace of mind.

For the name of your Andersen Representative, call 1-800-426-7691. Or write Andersen Commercial Group,℠ Box 12, Bayport, Minnesota 55003.





WINDOW DETAILS

1. 5/8" PLYWOOD SHEATHING
2. METAL HEAD FLASHING WITH DRIP
3. WOOD CASING
4. ANDERSEN® PERMA-SHIELD® CASEMENT WINDOW
5. 2 x 6 WOOD STUDS
6. CONTINUOUS SEALANT WITH BACKER ROD
7. WOOD TRIM
8. VERTICAL WOOD SIDING
9. METAL SILL FLASHING
10. WOOD STOOL
11. WOOD APRON
12. 5/8" GYPSUM BOARD
13. BATT INSULATION

BECOME A SANCTUARY.

ST. JOSEPH'S CHURCH
EPPING, NEW HAMPSHIRE

DESIGN ARCHITECT:
ALBERT M. FITZPATRICK
PROJECT MANAGER:
ROBERT E. LIBBY
HARRIMAN ASSOCIATES
AUBURN,
MAINE

ANDERSEN COMMERCIAL GROUP℠

Circle **No. 330**

A big leap for low-priced laser printers.

Suggested U.S. list price. ©1993 Hewlett-Packard Company PE12358

Your time has come. Now you can make the leap to laser printing for just $849. Introducing the new HP LaserJet 4L printer.

Any way you look at it, the LaserJet 4L goes way beyond the competition. With exceptional print-quality. Outstanding features like 26 scalable typefaces. And a full megabyte of memory, twice as much as most laser printers. In fact, HP's revolutionary Memory Enhancement technology makes our one megabyte perform like two.

Our printer's one-button control panel couldn't be simpler to use. The on-screen software makes it easy to manage many printer functions from your PC. And if you ever need help, HP support is just a phone call away.

The value of the HP LaserJet 4L does not stop with just the price. Our unique Economode feature will save you toner. The new power-saving design saves electricity. Four-page-per-minute speed saves time. And built-in HP reliability saves you trouble down the road.

To see our new printer in action, drop by any authorized HP dealer or look in the *Computers—Dealers* section of your Yellow Pages. It could help your business take off.

If it isn't a LaserJet, it's only a laser printer.

HEWLETT PACKARD

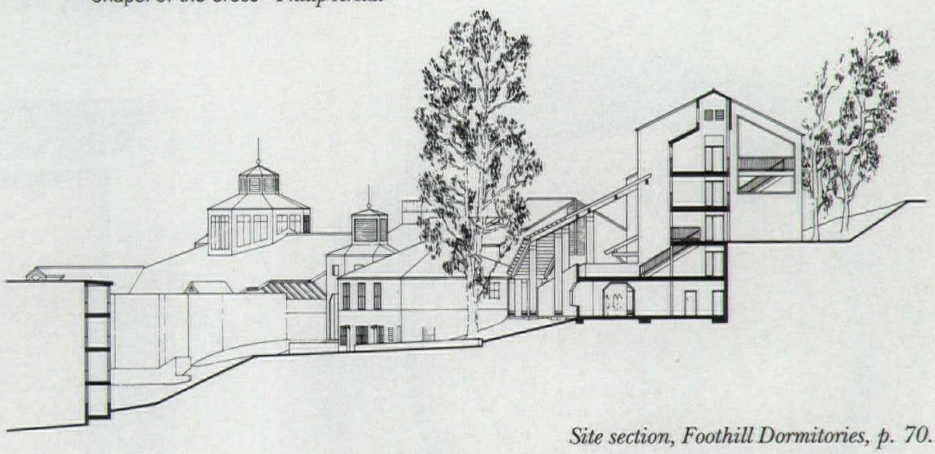
The new HP LaserJet 4L. Just $849.

Cover: *The DG Bank Building, Frankfurt, Germany, by Kohn Pedersen Fox Associates (page 52). Photograph by Flachglas AG. Cover design by Julie Anne Yee.*

Progressive Architecture September 1993

P/A

Editor in charge: John Morris Dixon



Site section, Foothill Dormitories, p. 70.

Departments

This Month In ...

Penton Publishing P/A Progressive Architecture (ISSN 0033-0752) is published monthly, except semimonthly in November, by Reinhold Publishing, A Division of Penton Publishing, 1100 Superior Ave., Cleveland, OH 44114-2543. Philip H. Hubbard, Jr., President; Robert J. Osborn, Vice President. Penton Publishing: Sal F. Marino, Chairman and CEO; Daniel J. Ramella, President and COO; Philip H. Hubbard, Jr., President, Eastern Operations Group. **Executive and Editorial Offices, 600 Summer St., P.O. Box 1361, Stamford, CT 06904. Phone (203) 348-7531. FAX (203) 348-4023.**

Planning A Lab? Tight Deadline?

Push One.

The lab is complex. Your people are busy. The deadline is tight. Time to push the panic button? We don't think so.

You have an experienced rep right at your fingertips. One who can give you computerized specs at a moment's notice. A dealer network to consult with on complex projects. A CAD library of Kewaunee products to assist in planning.

Circle **No. 345** on Reader Service Card

A mobile showroom. And durable furniture packed with the latest innovations in laboratory design.

So why not give us a call. Because when you're pressed for time, it helps to push the right button.

Phone (704) 873-7202

KEWAUNEE®
Scientific Corporation

Labs for Life ™

Editorial | Public Distrust: Plan On It

The NIMBY development-resistance syndrome is part of a larger pattern of distrust that definitely extends to architects and planners.

P/A's experience with an affordable housing development that didn't happen, as recounted by Thomas Fisher in this issue (p. 88), is part of a deepening national mindset. To the acronym NIMBY (Not In My Back Yard), we could add NOTWOT (None Of That With Our Taxes) and NIBYE (Not Impressed By Your Expertise).

As Tom points out, the conservative agenda has elevated the rights of the individual over those of the community, while liberal ideology has backed the rights of special interest groups. Real live citizens may find themselves seesawing between these extremes, depending on the situation, but meanwhile the interests of the public as a whole get short shrift. Every Congressman, legislator, and council member ends up serving a constellation of individuals, corporations, and pressure groups, rather than the interests of the city, state, or nation.

Everyone knows that there is a public good beyond individual and group demands, but nobody is trusted to delineate it. We don't have strong political leaders whipping up support for bold public initiatives – in part because so few of us would buy their message. So we end up with mealy-mouthed leaders, kow-towing to enough special interests to squeak out their election victories. The visions of the planners and the "doers," such as the autocratic Robert Moses or the more community-minded Ed Logue, have long since been discredited.

Then, of course, there is the tax revolt. Politicians have garnered fierce loyalty by telling Americans they are overtaxed, even though our taxes are low by international standards. The fear of "tax-and-spend" at the Federal level led to years of just "spend-and-spend," hence the balooning deficit. Those who would bring the deficit under control have had very limited success advocating "investments" and "sacrifices," while avoiding the terrible T-word.

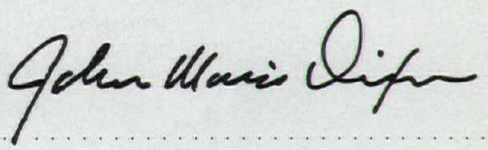
Private efforts at public improvement, whether for profit or not, are also looked upon with great skepticism by the public. They get support from politicians only if they will help in the next election; the politicians are not going to risk political capital by trying to sell a project that has too many vocal opponents.

Of course, the dynamics of this situation have generated a few positive results. For one thing, they have simply stopped a number of dreadful developments – both public and private – from taking place. They have produced new, less destructive strategies of incremental planning, and well considered landmark preservation programs. Among other new instruments developed to fit this public mood is the special assessment district, through which private owners tax themselves for specific purposes; the purposes are often the kinds of maintenance, security, and amenities that the municipal government once provided, but the special district can be far more efficient and responsive in providing these (sad to say) than most local governments.

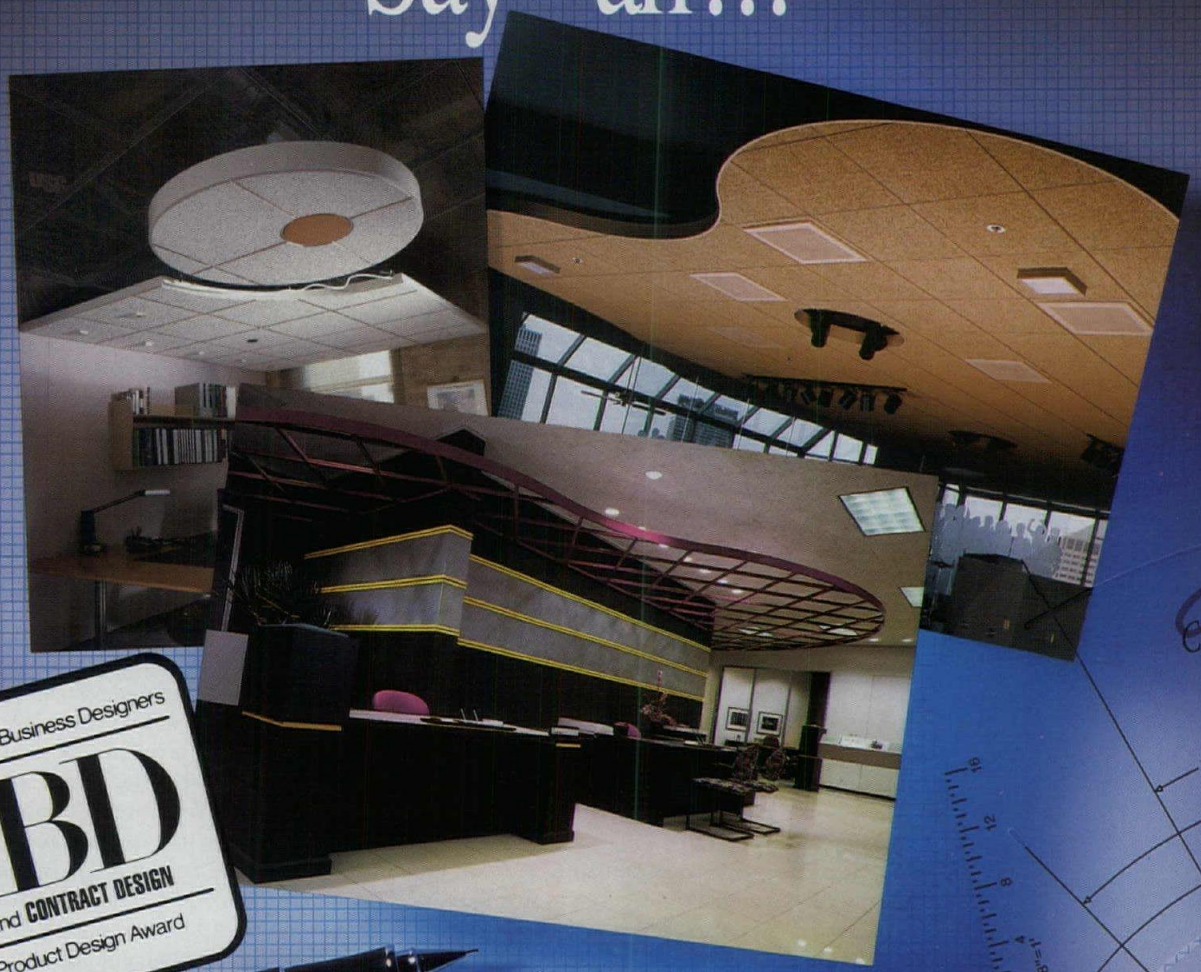
In the years America was becoming the envy of the world – in the 1930s through the 1950s – great public investments had the support of the public. The great hydroelectric dams, the early public housing projects, the parkways and freeways, the amenities of our National Parks, were sources of national and civic pride. At the same time, private interests were developing complexes like Rockefeller Center in New York or Country Club Plaza in Kansas City – not to mention Colonial Williamsburg – to great public approval. All of these projects had opponents, of course, but public distrust mushroomed in the 1960s; the public authorities and their planners had become too autocratic, the dire impact of many highway and housing projects began to be felt, the younger generation would not trust "anyone over 30." (How do those rebels feel now that they are in their mid-40s?)

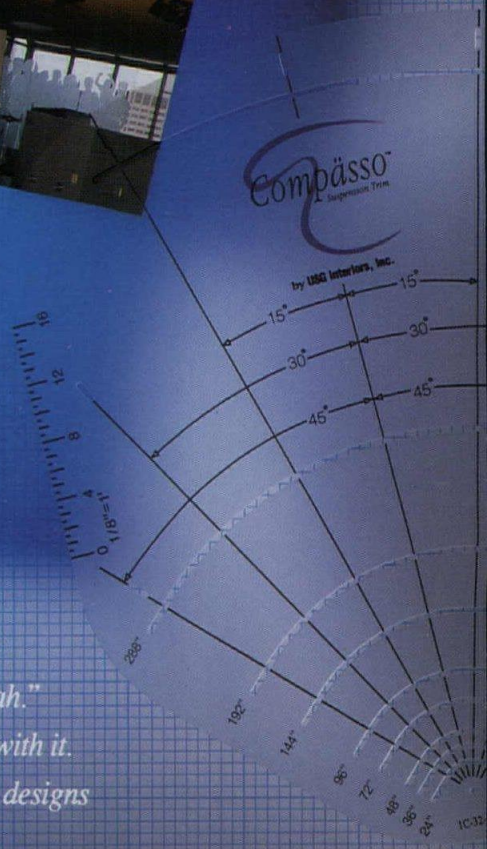
Much of this distrust, which is so much with us today, represents the perceived failings of the experts: the development czars, the housing bureaucracies, the traffic engineers, and, very definitely, the planners and the architects. The overconfidence of those experts was punctured, their dogma was disproved.

But we have on the whole become a nation in which you get more credit for obstructing than for initiating. It is not entirely clear whether the American mood can be changed to support wise public investment and to applaud public-spirited private investment. One thing, however, is certain: as crucial experts in the shaping of physical investments, architects and planners must anticipate public antipathy and understand its roots. Only then can we hope to come up with proposals that may actually generate public enthusiasm.



Say "ah..."





It's called "Compässo,™"
and those two little dots over the "a" mean it's pronounced "ah."
But how you say it isn't nearly as important as what you can do with it.
Because now you can create all the unique and interesting ceiling designs
you always thought you couldn't afford.
Sweeping arcs and curves. Floating islands or peninsulas. Striking sculptural shapes.
And even squares and rectangles take on new drama and interest with the grid at obtuse angles.
If you can imagine it, you can create it – easily and economically – with
standard ceiling grid, tile and Compässo Suspension Trim.
And with the free Compässo Design Kit and Template, it's as simple as it is practical.
Just ask your USG Interiors representative – or call 1-800-950-3859 – for more information.
Try Compässo for yourself.
You'll say, "Ahhhh!"

USG

USG Interiors, Inc.

Circle **No. 329** on Reader Service Card

A Virtual A/E Firm

Your May Editorial, "Virtual Profession," triggers strong memories, important to my work and contributions to the profession. I can also draw an important lesson to pass on to architects at an early stage of their career.

I was most fortunate to meet decades ago the eminent structural engineer Paul Weidlinger and later Mario Salvadori, after he joined the former. Weidlinger was at the time associated with a firm of mechanical and electrical engineers. We developed a close permanent A/E relationship. In the very beginning Weidlinger's staff shared space with the New York office of my firm of Raymond and Rado in the old A/E beehive of 101 Park Avenue.

After a few projects we developed a sort of shorthand communication, mental telepathy, and personal friendship still going to this day. We enjoyed having lunch in the basement restaurant, casually discussing ideas of common interest. As a matter of fact, my award-winning entry in your 1958 annual program was triggered by a remark by Weidlinger.

Reading your editorial made me recall an exchange with the late Gordon Bunshaft at the opening of the Seagram Building. With cocktail in hand, he said: "Rado, where do we go from here? I replied: "The inspiration will come from the future." In two instances, a large stadium and a shell for a restaurant intrigued me and Weidlinger and Salvadori to a point where we developed them fully.

The Atlas Cement Company offered to build huge models if we agreed to their using photos for promotion. The designs were featured prominently in the *Architectural Forum.* It created quite a splash.

I strongly urge architects to form permanent virtual corporations with engineers believing in architecture inspired by advanced engineering. It was essential to my career, reputation, and contribution to the advancement of architecture.

Ladislaw Rado, FAIA
Biscayne Beach, Florida

Riverside South

I thought John Dixon's piece on Riverside South was thorough, fair, and one of the most comprehensive written on this fascinating project.

The objection hinted at in my quote was not to the rebuilding of the elevated highway. Despite initial skepticism, we came to believe that , if the highway were to fall down in the next few years, the loss to the city would be too great in direct costs, deferred repairs to other north/south roads, and the harder to measure impacts of total gridlock on the west side.

What was sad was that, by deferring serious review of the alternative superior inland route they have since adopted, the city fathers lost the opportunity to make modest repairs and instead had to go ahead with a full-blown rebuilding up to today's Federal standards.

Thanks to Senator Moynihan, work has already begun designing the replacement road that will eventually make it possible to tear down this obstructive relic and open up the riverfront to the public.

Kent Barwick, President
The Municipal Art Society of New York

Corrections

Betsy Williams, who was in our Young Architects issue, (July 1993, p. 103), received her M.Arch. degree from Harvard, not from the University of Miami, as we indicated.

The Ben Schroeder Saddle Tree Company, which is owned by Historic Madison Foundation, Incorporated (P/A, July 1993, p. 108) is in Madison, Indiana, not Wisconsin. ■

100% ACRYLIC EIFS

What All The Best-Dressed Buildings Will Be Wearing

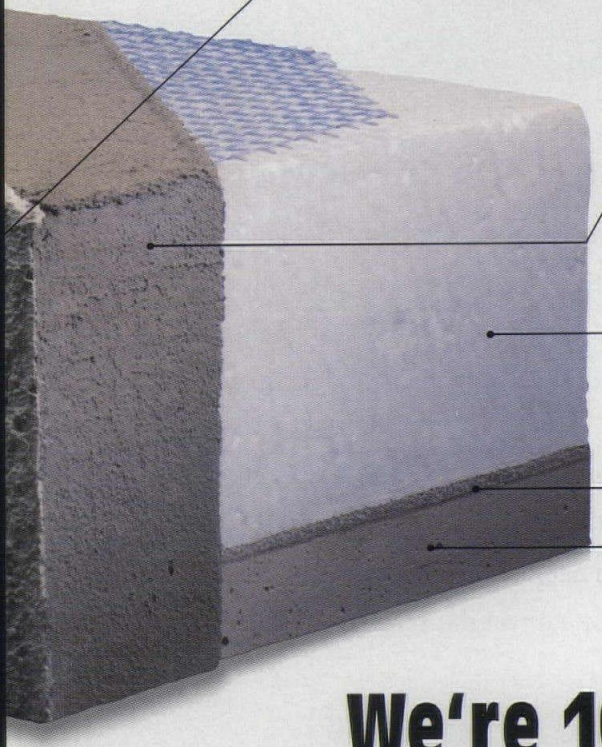
Rohm and Haas 100% Acrylic Polymers Build In Lasting Beauty

The best fashions stand the test of time. And nothing dresses buildings with more enduring beauty than 100% Acrylic EIFS (Exterior Insulation and Finish Systems).

EIFS, when properly formulated with 100% acrylic polymers, provide long-lasting durability. Finish coats resist fading, cracking, and yellowing from UV exposure. Base coats deliver strong protection against impact and water infiltration from wind-driven rain. Plus adhesive layers bond securely to a variety of substrates. So you get 100% Acrylic EIFS that provide durable good looks, season after season.

That's the real beauty of 100% Acrylic EIFS: quality performance that outclasses non-100% Acrylic EIFS. Performance you can specify in an unlimited array of colors, and with greater design versatility than stucco, brick, or precast concrete.

For complete information on 100% acrylic polymers in EIFS, send for our brochure by writing Rohm and Haas Company, Marketing Services Dept., Independence Mall West, Philadelphia, PA 19105. Then dress your buildings in the best fashion with 100% Acrylic EIFS.



Finish Coat—100% acrylic polymers deliver flexibility and colorfastness with unlimited color selection. Assure lasting beauty because the finish resists cracking, fading, and yellowing.

Base Coat—100% acrylic polymers combine excellent water resistance with superior strength and adhesion.

EPS—Expanded polystyrene insulation.

Adhesive—100% acrylic polymers promote superb adhesion to variety of substrates.

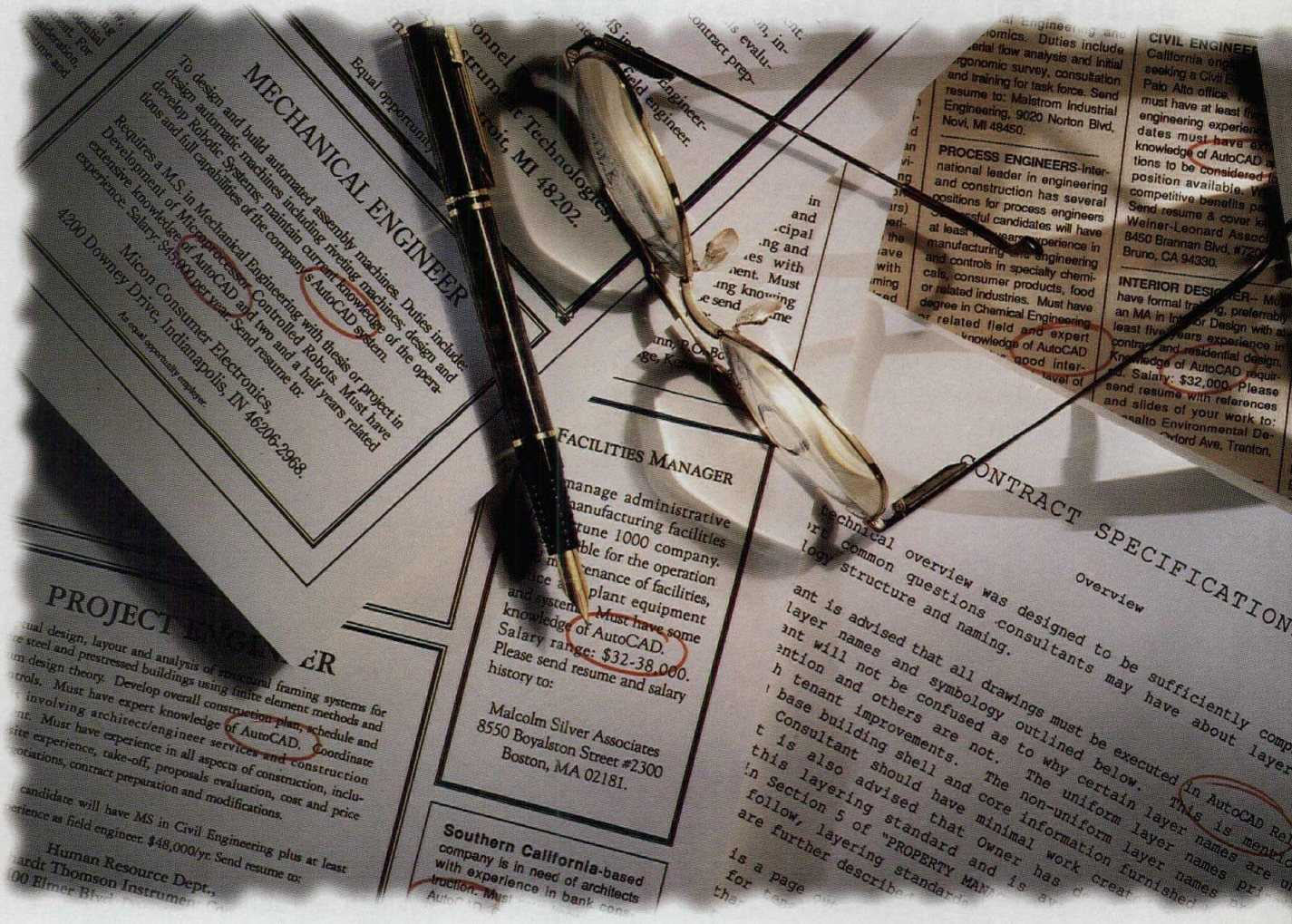
Substrate—Sheathing for new construction... brick, concrete block, precast concrete for retrofit.

We're 100% Into EIFS

ROHM AND HAAS
PHILADELPHIA, PA. 19105

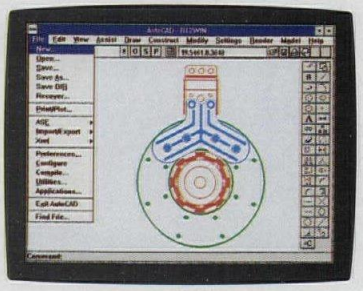
Circle **No. 313** on Reader Service Card

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



Introducing new easy-to-learn AutoCAD® for Windows.

If you're annoyed by all the advantages AutoCAD users have been getting, this is your chance to get even. You can learn AutoCAD software faster than they ever did, thanks to new AutoCAD for Windows.

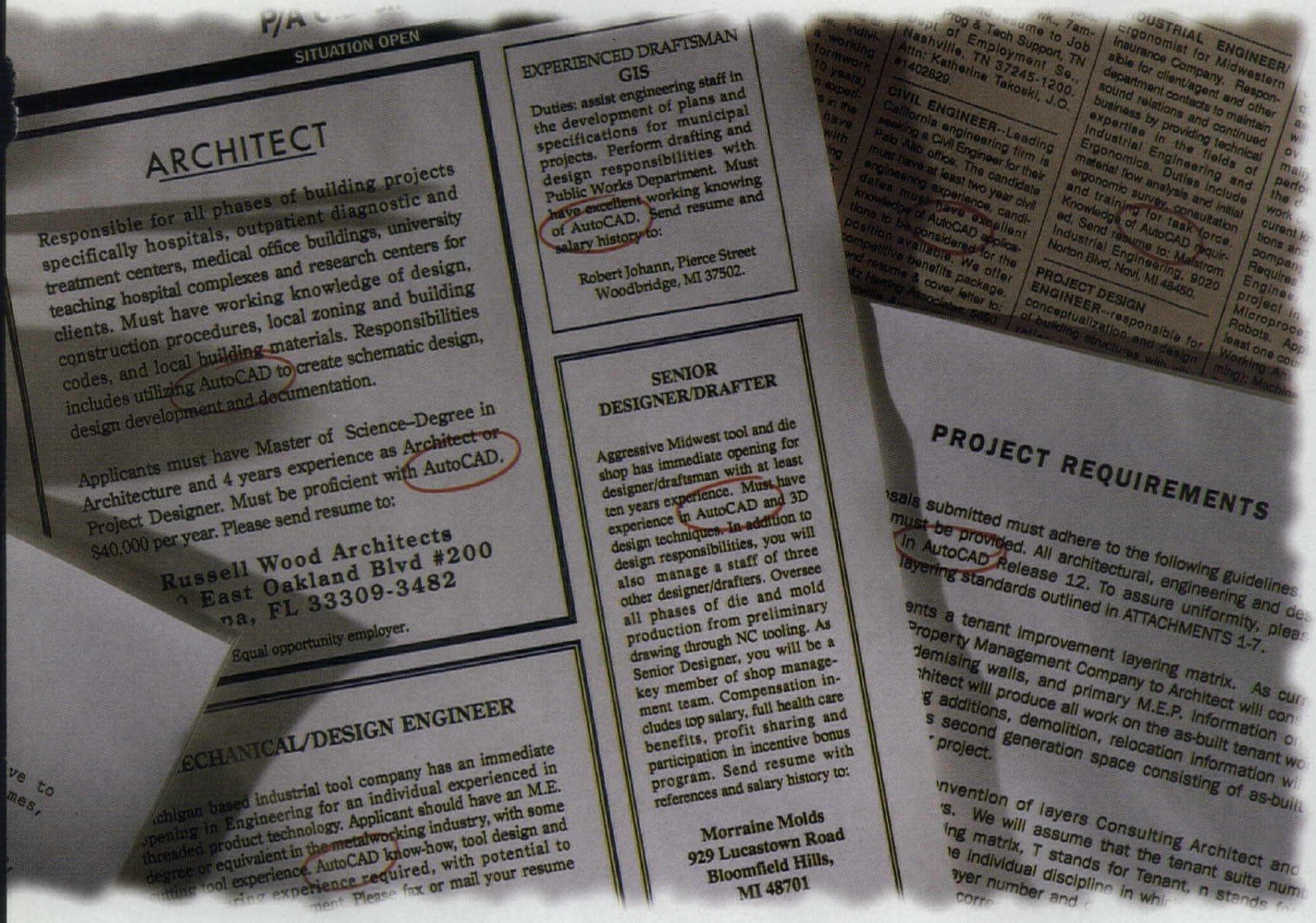


Learning AutoCAD is easier than ever with AutoCAD Release 12 for Windows.

With AutoCAD for Windows you can create your drawings by using simple tools and icons. So you'll quickly regain the productivity and artistry you enjoyed on the drafting board.

The intuitive Windows™ interface eliminates a lot of the repetitive keyboard work that makes computers seem confining. You can work the way that comes most naturally to you. Whenever you need assistance, just push the *Help* button. Exactly the information you need appears on the screen. There's no searching through the manual.

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.

Of course, lurking beneath these friendly features is the full-throttled power of AutoCAD—the world CAD standard. Immediately, all your work will be compatible with more than 700,000 other AutoCAD users.

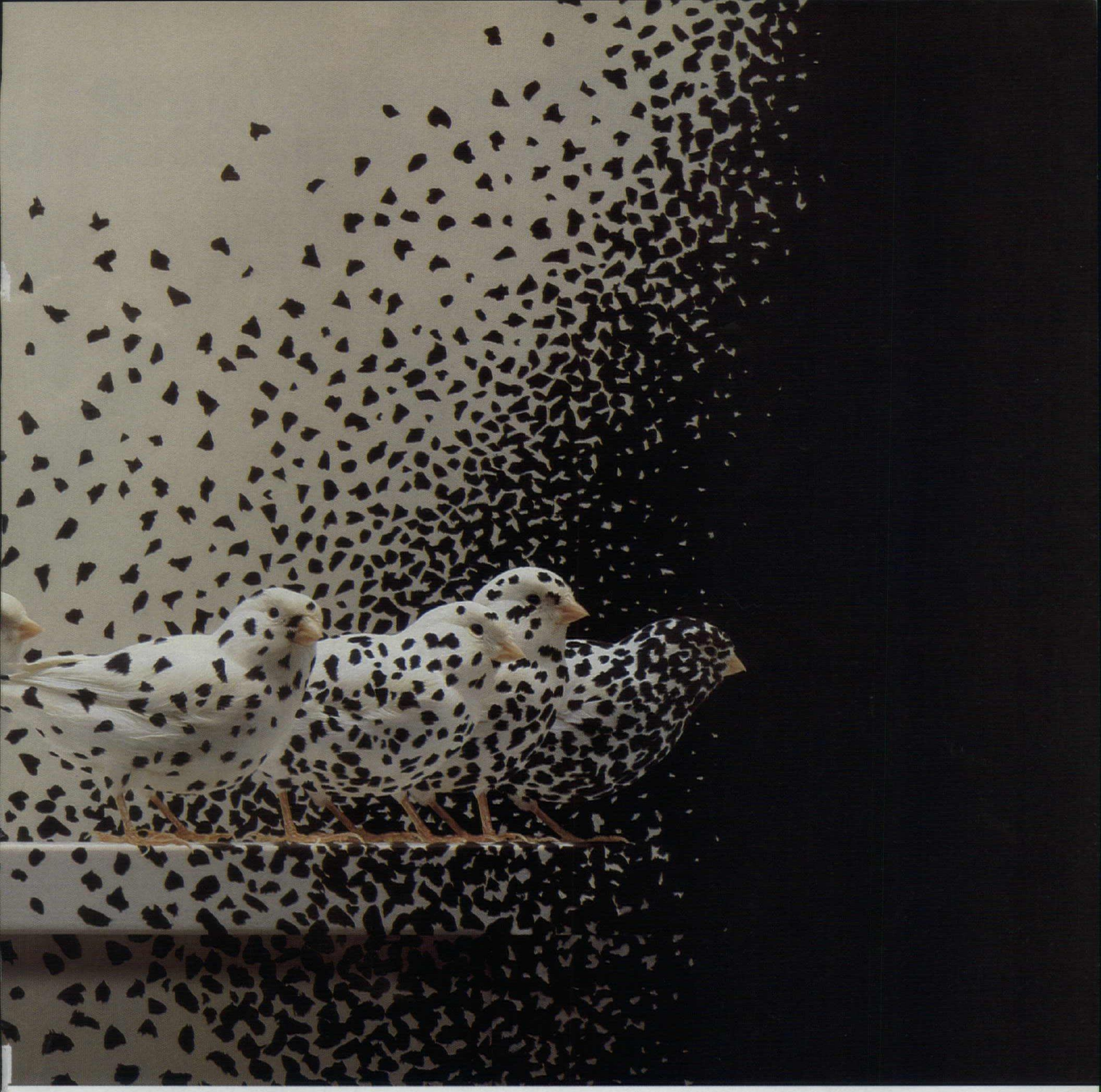
Before long you'll be bringing in those jobs they've been winning all these years. The first step is painless, because our detailed brochure is free. Just call 1-800-964-6432, ext. 642. Outside the U.S. and Canada, fax 415-491-8311.

Autodesk®

Circle **No. 339** on Reader Service Card

SPOT THE DIFFERENCE.

The markings are slightly different, but it's easy to identify the species: Fountainhead by Nevamar® solid surfacing that's beautiful *and* tough. Elegant new Classix may look similar to our popular Matrix pattern, but it features larger particles for a bolder, more textured appearance and greater visual interest. Especially dramatic when used over large areas, Classix is available in a flock of contemporary colors. So take your pick... and spot the subtle difference this unique new solid surfacing pattern can hatch in your designs. For samples and information, call 1-800-638-4380. Nevamar Division, International Paper, 8339 Telegraph Road, Odenton, Maryland 21113-1397.



NEW FOR 1993

Compatible items in Fountainhead, Vitricor® and Nevamar® laminates are all available to simplify your material search.

NEVAMAR®
DECORATIVE SURFACES

INTERNATIONAL PAPER

NEVAMAR DIVISION
8339 TELEGRAPH ROAD
ODENTON MD 21113-1397

Circle **No. 328**

THE FIRST THING WE DID TO HELP REMODEL THIS OLD HUNTING LODGE WAS

This large, beautiful room is the centerpiece of what was once an exclusive hunting lodge. Built in 1930, the property was converted to a single family residence in the early Fifties. But 40 years of paint, plasterboard and paneling had all but hidden its original elegance.

So, when new owners began renovating it in 1991, they asked architect Katherine Cartrett of Mulfinger, Susanka and Mahady to recapture the original rustic charm of the place.

They asked her to use only the finest high performance building products available. Given those terms, it's not surprising that, when the subject of windows and doors came up, the owners asked to talk with Marvin.

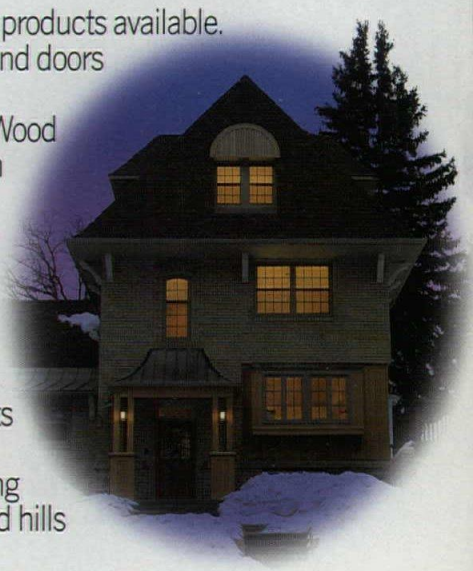
The first step was an on-site meeting. Nick Smaby from Choice Wood Custom Residential Remodelers was there. So were representatives from the Marvin dealer and distributor.

One by one, they inspected every opening in the home. Then the entire group sat down and planned the job out.

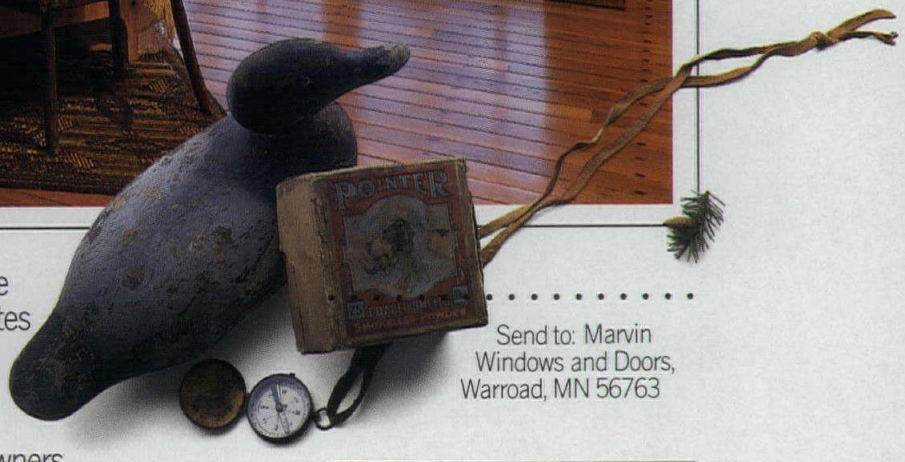
Sizes were discussed. So were shapes, styles, energy efficiency, maintenance and budgets.

By the end of the day, the plan called for a combination of new windows and replacement sash – 46 windows in all. There were eight sets of doors too.

The results of that meeting are pictured above. The Marvin Sliding French Doors add light and open the room to the panorama of woods and hills



START FIRING QUESTIONS.



beyond. And in keeping with the architectural style of the home, each door features custom divided lites and an exterior finish in a color mixed specifically for the project.

Today, this rustic home looks much like the hunting lodge it once was. And if you ask the owners, they'll tell you the key was tracking down the right window and door supplier in the first place.

MAKE US YOUR FIRST CALL, NOT YOUR LAST RESORT.

If you've got a look you're trying to achieve or a problem you just can't solve, call the one company you know will have the right solution. Call Marvin Windows and Doors at **1-800-346-5128** (1-800-263-6161 in Canada). Or mail the coupon for a free catalog featuring the entire line of made-to-order Marvin windows and doors.

Send to: Marvin Windows and Doors, Warroad, MN 56763

Name

Company

Address

City State

Zip ( ) Phone

1509309A

MARVIN

WINDOWS & DOORS MADE TO ORDER.

Circle **No. 320**

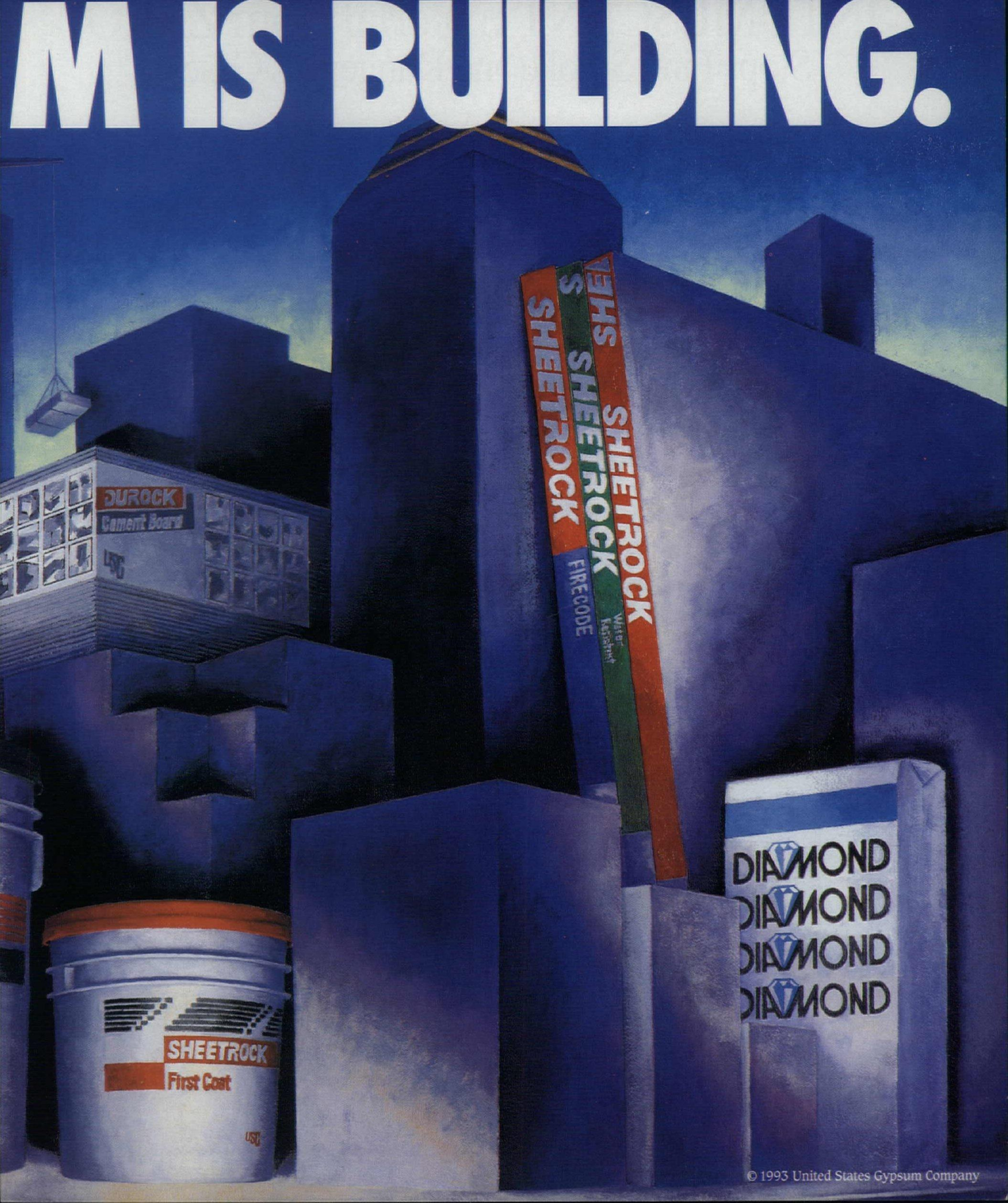
OUR MOMENTU

From new construction to remodeling, the building of America never stops. Neither does the flow of new products and systems from United States Gypsum Company.

It started with SHEETROCK® Brand Gypsum Panels. The original gypsum board that made construction faster, and housing more affordable for millions. It became the standard in the industry by solving a very real need. And that set our standards high for future products like SHEETROCK® All Purpose Joint Compound. USG® Shaft Wall. DUROCK® Cement Board. DIAMOND® Veneer Plaster. SHEETROCK® First Coat. ULTRACODE™ Core Gypsum Panels.

For 90 years now, this spirit of innovation has been the guiding force at United States Gypsum. And it will continue to be so. Because there's always a better way to build.

United States Gypsum Company
Chicago, Illinois


M IS BUILDING.
DUROCK
Cement Board
USG
SHEETROCK
FIRECODE
Water Resistant
SHEETROCK
SHEETROCK
SHEETROCK
DIAMOND
DIAMOND
DIAMOND
DIAMOND
SHEETROCK
First Cost
USG
© 1993 United States Gypsum Company

INTUMESCENT material from ZERO
Stops Fire, Smoke and Dangerous Gases!

FS-3003 "Soft Puff" INTUMESCENT material begins to activate at about 250° F to provide a gradually expanding seal that compartmentalizes a fire and blocks the penetration of smoke and dangerous gases. ZERO can provide INTUMESCENT material as strips in standard and custom sizes, or integrated into various head, jamb, and sill components of our advanced fire-rated, wood or metal door sealing systems.

ZERO can show you unlimited possibilities for sealing doors, windows and void spaces. Call or write for information and samples.

ZERO INTERNATIONAL, INC.
415 Concord Avenue, Bronx, NY 10455-4898
1-800-635-5335
In NYC, call 718-585-3230 FAX 718-292-2243
TELEX 239777 ZERO UR

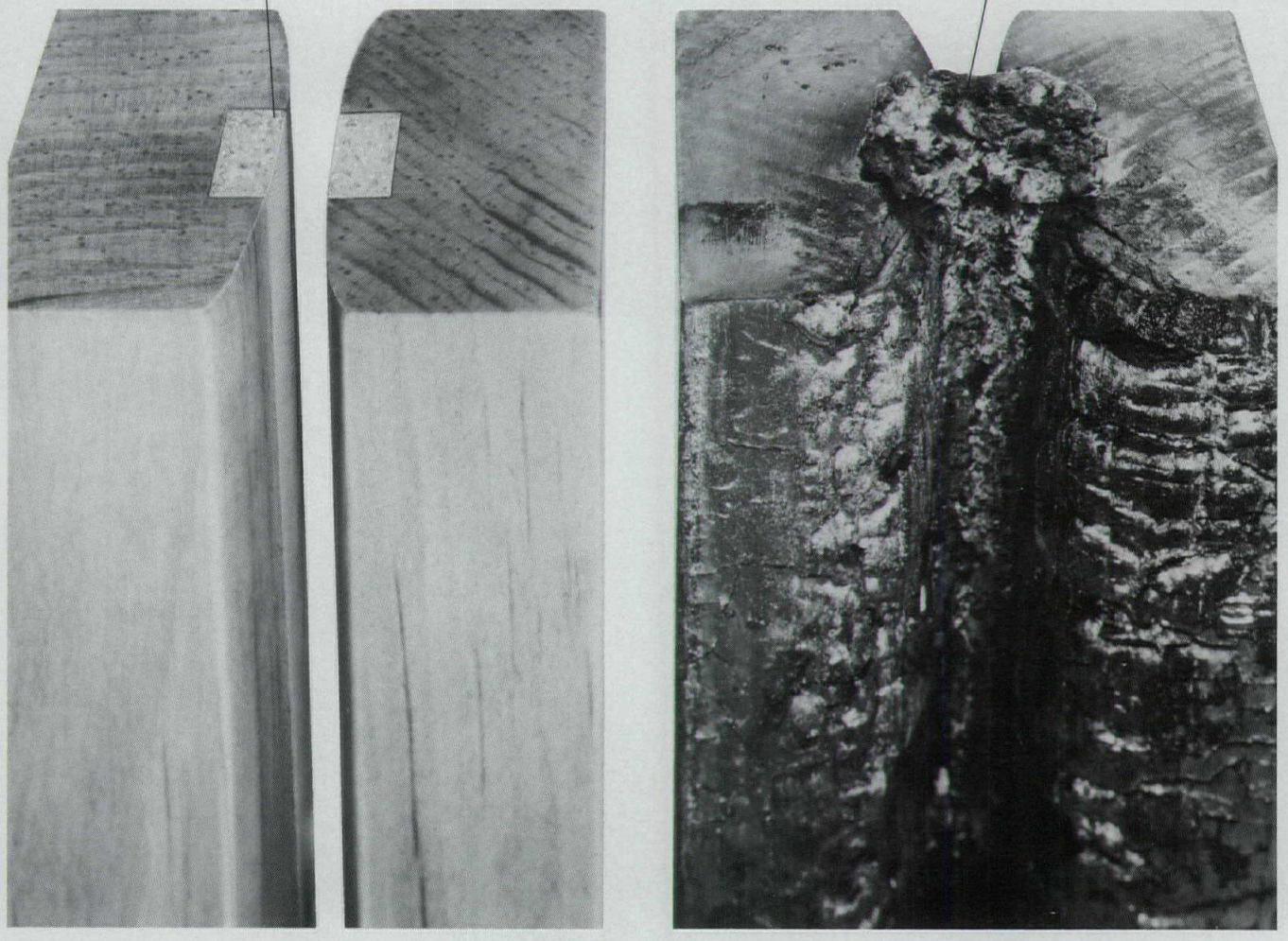
ZERO INTERNATIONAL

WHEN NOTHING ELSE
IS GOOD ENOUGH
FOR LONG ENOUGH

This is
INTUMESCENT
material

Now it's
an INTUMESCENT
fire and smoke seal

In a few moments it becomes
a life saver!

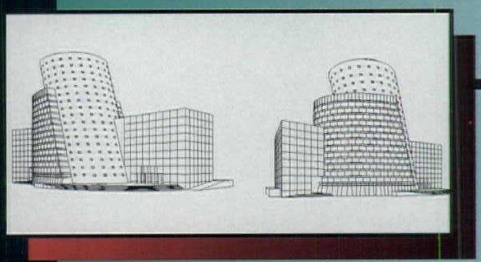


NOW SHIPPING MACINTOSH OR PC VERSION

Architrion release 5.7 gives you more than pretty pictures,

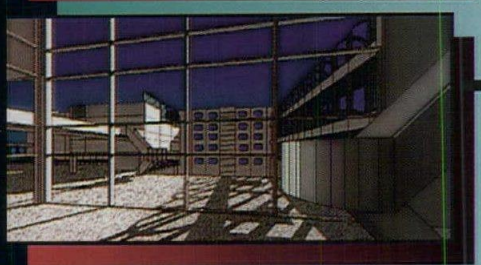
it helps you manage your architectural projects from concept to completion ...

Architrion™ 5.7



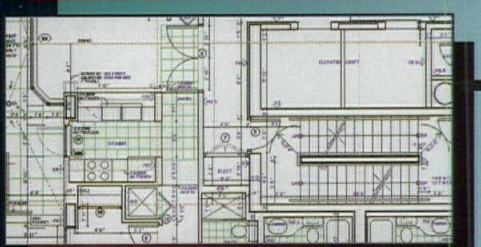
Explore

Step into a whole new dimension of creative capabilities. Get better insight on design options all within an easy to learn environment.



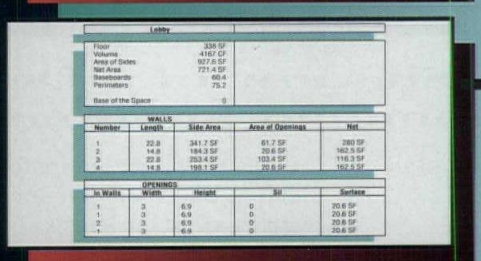
Visualize

From your 3D model, automatically generate views in perspective, axonometry, plan, section and elevation. Also, directly create and replay Quicktime™ movies of your animated 3D models.



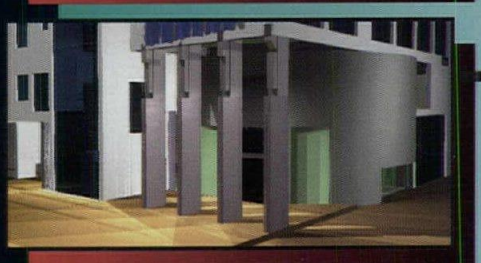
Document

Architrion provides you with all the tools to produce full working drawings. Manage symbol libraries, plot/print drawings and use full file transfer capabilities to industry standard DXF™.



Quantify

The online quantifier enables Architects, designers and building professionnals to calculate precise estimates of quantities and costs.



Communicate

Rendering your 3D models will give you more than pretty pictures. In fact, it gives you a competitive edge when you need to communicate to your client exactly how a project will look in real life!

For a free brochure and video or the nearest authorized BAGH Center call 1-800-561-0522 in the US and Canada or (514) 273-0522 in Latin America

Circle **No. 344** on Reader Service Card

BAGH TECHNOLOGIES

6700 Parc Avenue, suite 250,
Montreal, Québec, Canada H2V 4H9

Beyond the Shadow of a Doubt, Our Most Phenomenal Laminates Ever.

and when the tenor player cuts loose he spins a tale of tears shed and laughter and of the energy and brutality of big city life and somehow his fleeting improvised story contains equally balanced doses of elegance and passion.

that's the essence of jazz.

and the essence of Jazz, our new laminate collection. designed for vertical applications, these twelve new designs range from abstracts to solids to stone-like patterns to woodgrains. they're pearlescent. metallic. with an illusion of dimension. a visual rhythm — the subtle interplay of colors shifting with shadow, light and movement — that definitely strikes a chord.

that's why Jazz laminates are destined to cast a long shadow. like some phenomenal evocative riff issuing from Dexter Gordon's sax, they're impossible to pin down verbally. equally hard to reproduce in print. you simply must experience the real thing.

so if you want to be instrumental in the future of design, you better get hip to Jazz immediately. for more information and rapid Rocket Chip℠ delivery of samples, just get on the horn and call:

1-800-433-3222

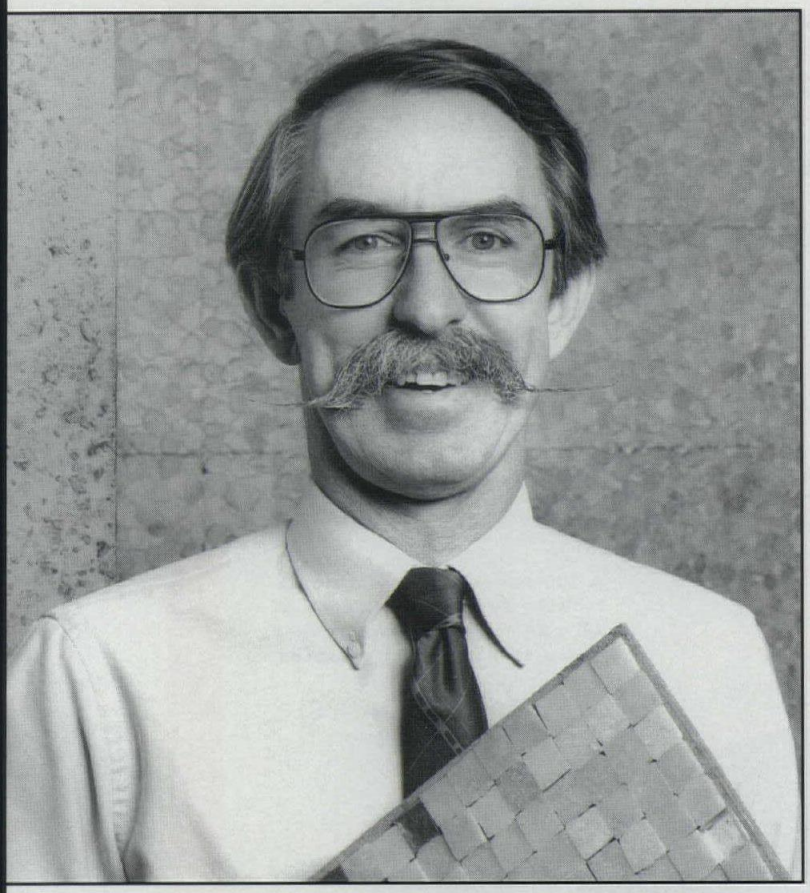
In Texas: 1-800-792-6000

JAZZ MUSIC FOR THE EYES

Visit WILSONART at ASID booth #603 in Orlando, FL

WILSONART®
PEARLESCENT LAMINATES
Bringing new solutions to the surface®

DPIC's taught us a lot about communicating with our clients.



Tom Zartl is principal of Heaton/Zartl & Associates, a 44-year-old architectural firm based in Pasadena, California. He has been president of the Pasadena and Foothill chapter of the AIA and is a director of the California Council of the AIA. We value our relationship with his firm and appreciate his willingness to talk to you about us.

I often give clients DPIC materials to back up a point. It's part of making sure my clients get their questions answered. When we're negotiating a contract, we take the agreement paragraph by paragraph.

One of the paragraphs in almost every Heaton/Zartl contract is a limitation of liability (LOL) clause, limiting the amount of his firm's risk to $50,000 or the fee. DPIC has made information on using LOL available to design professionals for over twenty years.

We attempt to get limitation of liability into every agreement we have. We're very successful. It comes down to economics – we charge more if they don't take LOL, because it's going to cost us more.

Heaton/Zartl & Associates has obtained limitation of liability in 86% of its contracts over the last five years.

The limitation of liability clause is already in our word processor, so it's easy for us to use. The credit money we get back from DPIC is a nice incentive, but we'd limit our liability anyway.

In 1992, Heaton/Zartl received a 25% reduction in its professional liability insurance premium from DPIC because of the architectural firm's use of limitation of liability clauses.

In a small organization, you're more aware of the dollars that are coming in and going out and you're more aware of something like limitation of liability and what it can save.

Like your hide.

■■ **DPIC's Limitation of Liability Credit Program** has returned nearly $37 million to DPIC policyholders in the last five years. Each year, DPIC policyholders can earn up to 25% off their insurance premiums by putting a basic limitation of liability clause in their contracts. More important, they're protecting themselves. For a free package on limitation of liability, call DPIC's Communications Department at (800) 227-4284.

Different by Design™

DPIC COMPANIES

The Professional Liability Specialist of the Orion Capital Companies

Design Professionals Insurance Company
Security Insurance Company of Hartford
The Connecticut Indemnity Company

Rated Excellent by A.M. Best Company

DPIC Companies, Inc.
2959 Monterey-Salinas Highway
Monterey, CA 93940
(800) 227-4284

It's not just money back. It's an incentive to be the best you can be.

Circle **No. 323** on Reader Service Card

Hard worker.
Able to do 19 things at once.
Works well with others.
Requires no feeding.
And comes with its own set of wheels.

How many of your employees can you say that about?

Clean, crisp, wrinkle-free copies up to 36″ x 33′ from a variety of originals.

A 100-sheet cassette automatically feeds cut sheets of 18″ x 24″ to 24″ x 36″, and makes up to 19 continuous copies.

Automatically feeds originals from 11″ x 17″ through 36″ x 33′ for hands-free copying.

Mita has been making copies of blueprints since 1934.

Copies on different media including bond, vellum, polyester film or tracing paper.

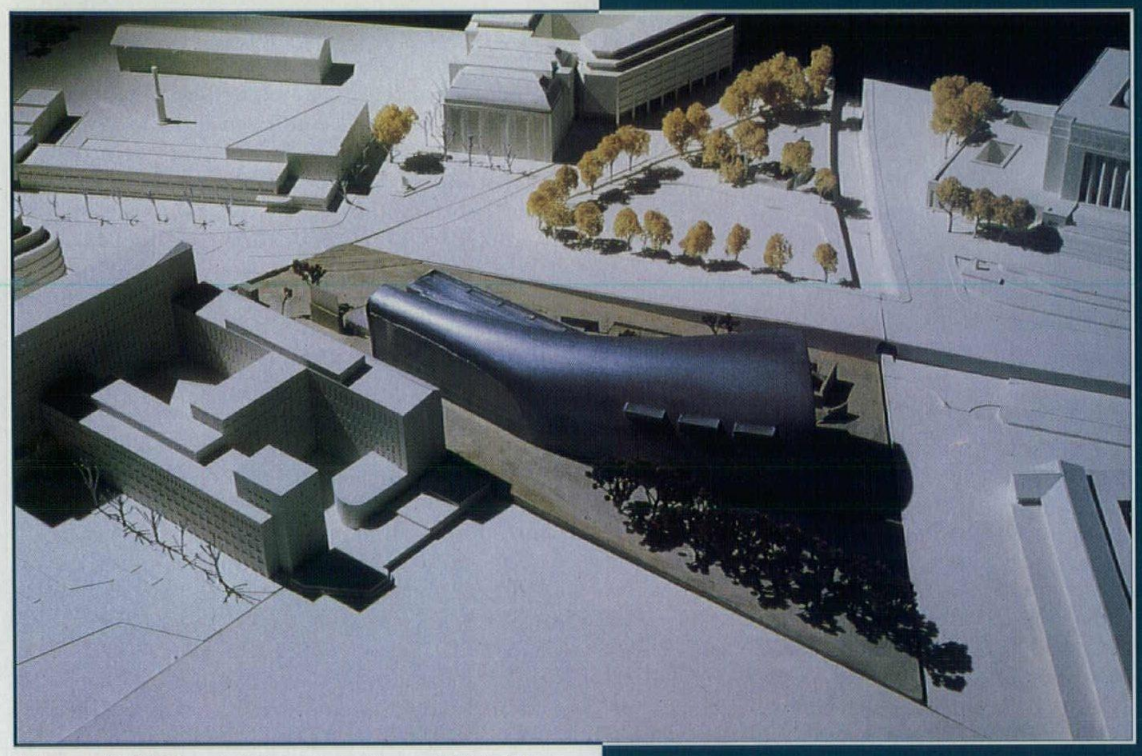
An optional roll unit handles rolls from 17″ to 36″ wide, automatically cuts and feeds sheets from 17″ to 33′, and makes up to 19 continuous copies.

DC-3648 Engineering Copier

mita

[the image specialist]™

To order your free video about the DC-3648 call 1-800-445-7988.



Winning Helsinki competition entry by Steven Holl Architects.

Holl Wins Competition for Finnish Museum

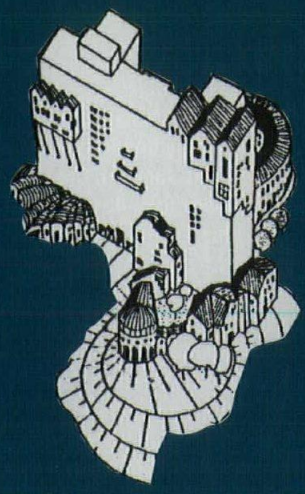
The Finnish Ministry of Education announced on June 18 the results of the design competition for a new Museum of Contemporary Art in Helsinki. Out of 516 entries, the entry of Steven Holl Architect, New York, was awarded first prize. Holl, Alvaro Siza, Kazuo Shinohara, and Coop Himmelblau were invited international participants to the competition, which was otherwise open to Nordic and Baltic architects only.

The unusually high number of entries – 270 from Finnish architects alone – reflected in part the intense interest in the potential of the site and project. The participation indicates as well the precarious state of the Nordic architectural economies; in Finland, for example, there is 50 percent unemployment among architects and the building trades.

The Museum is to be built on a plot in Helsinki's city center, on Mannerheimintie, the city's general boulevard. The site is surrounded by significant buildings, among them Eliel Saarinen's Railway Station and Alvar Aalto's Finlandia Hall. The new building will figure prominently in the central city planning strategy, an effort that has preoccupied Helsinki architects for the better part of a century.

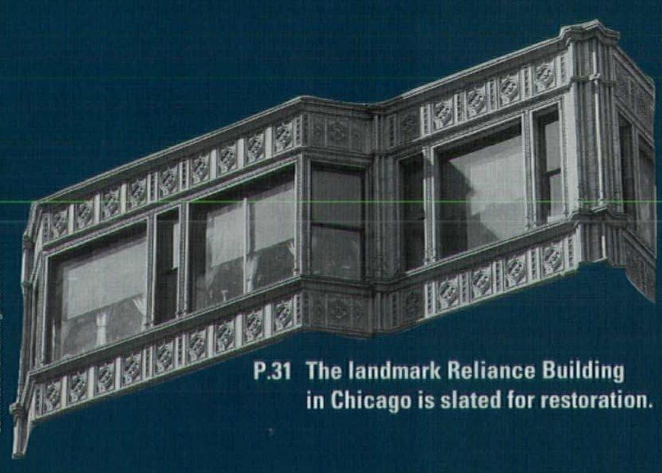
The competition represented not only the desire to address concretely the demands of the site, but also the longstanding ambition to provide a permanent home for the developing national collection of contemporary art. The competition brief encouraged a questioning of prevailing attitudes regarding both urban form and the internal layout of exhibition galleries. Further, the entrants were charged with devising a design of extraordinary originality.

Holl identified a "line of culture" and a "line of nature" running through the site and responded to this dual character with a design the competition



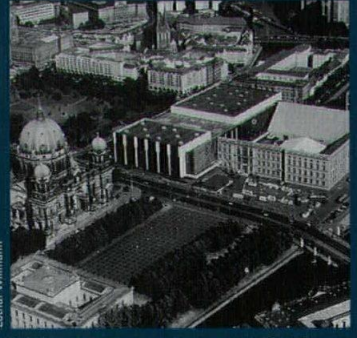
P.32 In Projects, a Chicago Tribune competition for the renewal of Cabrini-Green. (Above, Lucien Kroll's transformation of a highrise.)

9.93 News Report



Commission on Chicago Landmarks

P.31 The landmark Reliance Building in Chicago is slated for restoration.



Lothar Willmann

P.29 A life-size copy of a razed Berlin palace promotes a plan to rebuild it.

P.30 The venerable NCARB design exam gets an overhaul.

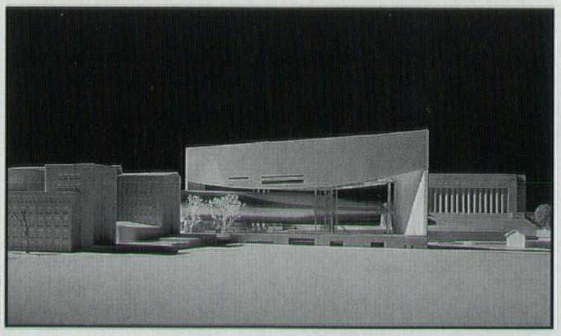
P.29 Philadelphia welcomes a new convention center in Center City.

In response to the catastrophic damage caused by flooding in the Midwest this summer, the AIA, in collaboration with Harper Perkins Architects of Wichita Falls, Texas, has prepared a three-page alert for people returning to flood damaged homes and businesses. For a copy of the alert and other flood recovery information, contact state AIA chapters in Iowa, Missouri, Illinois, and Kansas or Stephen Rentner at national AIA (202) 626-7442.

A new interdisciplinary association of professional model makers from the fields of architecture, product prototyping, special effects, and transportation has been established. The Association of Professional Model Makers' first conference, to be held October 3–5 in Redwood City, California, will address issues of new technologies, working safely with hazardous materials, and training the labor pool of the future. Contact Wendy Sommers, APMM, PO Box 470278, San Francisco, CA 94147-0278 (415) 771-2727 or FAX (415) 921-8081.

There were 180 winning projects in the seven categories of *I.D. Magazine's* 39th Annual Design Review. Best of Category honors in the Environments category were awarded to 25 Brush Place by Jim Jennings Arkhitekture, San Francisco, and the LEF Foundation by Kuth/Ranieri, San Francisco.

The National Trust for Historic Preservation has published its list of America's Eleven Most Endangered Historic Places for 1993 including the (entire) State of Vermont; Downtown New Orleans; the Town of Ste. Genevieve, Missouri; eight historic neighborhoods in Dallas; and South Pasadena and El Sereno, California.



Jussi Tiainen

Kazuo Shinohara's second prize entry.

found "mysteriously sculpturesque" and "sensitively innovative in its articulation of form." The design pairs a curving, streamlined volume of exhibition galleries with a lower, rectilinear volume of administrative offices and public facilities. Entrance is made between the volumes into a high interior hall: the exhibition galleries are reached via a curving series of ramps lining one side of the entrance hall. The gallery volume is structured by curving steel trusses that unite wall and roof; its framework will be covered with a metal skin. Openings have been selectively cut into the silvery volume to introduce natural Nordic light in a variety of ways.

The design of the interiors was praised for its clean lines and distinctive character. Holl's interior renderings indicate a range of natural and artificial lighting conditions, with natural light often entering from slots cut through upper floors or washing down the curved rear wall of the gallery.

The entries of Kazuo Shinohara and Finnish architect Vesa Helminen, a recent graduate of the Tampere architecture school, tied for second prize. Shinohara's entry was composed of basic geometrical forms and praised as a "breathtaking architectural monument." Helminen's entry, a smaller-scaled modulated order of vertical volumes, was cited for its sculptural resonance.

While no third prize was awarded, the jury purchased the entries of Coop Himmelblau and the Finnish-British team of Christopher Bearman, Meri Makipentti, and assistants.

Prospects for the construction of the museum, estimated to cost $35 million, are good. While the jury said the winning design needs scaling down and may need some functional changes, the hope is that Holl's schematic competition design will move towards further development over the next year.

As the museum commission will be the first major building in Finland designed by a foreign architect in many years, the competition results have been subject to passionate scrutiny by Finnish architects and the general public. No doubt, the debate will continue as to the appropriateness of Holl's design. But the competition has succeeded in fomenting debate and in involving Finland more closely in international architectural and cultural discussions.

Peter MacKeith ■

The author is Assistant Professor of Architecture at the University of Virginia and Visiting Lecturer in Architecture at the Helsinki Institute of Technology.

Erickson's Vancouver House On the Block

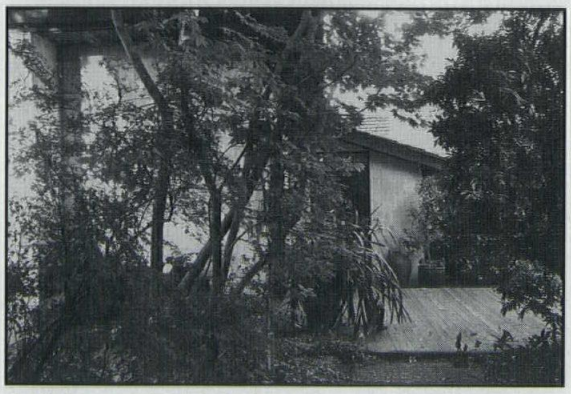
A group led by design professionals has been formed to save Arthur Erickson's 1958 house and garden in Vancouver, threatened with demolition.

The effort began when Elizabeth Watts, a young landscape architect who lives nearby, passed the house and saw that it was being offered for sale by creditors of the financially troubled Erickson. She learned that the most likely potential buyers planned to clear the site for new development, a common occurrence in Vancouver, where land prices are drastically inflated.

Watts and others organized the citizens group to get heritage protection for the house and garden and arrange its purchase for use by the University of British Columbia or another suitable institution. The group proposes that the house be leased to Erickson for life; thereafter, it would be used for educational purposes, perhaps as a residence for visiting scholars, and made accessible to the public. Erickson has indicated his support for the idea.

The house is a converted garage at the rear of a 66 x 122-foot lot, overlooking a naturalistic garden nurtured lovingly by Erickson over the years. "The atmosphere is magical," the citizens group maintains. "Passing through the gate from a Vancouver suburban street, one has the feeling of entering a secluded forest clearing."

Phyllis Lambert, director of the Canadian Centre for Architecture and an adviser to the group, wrote



Arthur Erickson's secluded Vancouver house.

to Vancouver's mayor that the house and garden "deserve the highest respect" as the place where Erickson "experimented with ideas of building and landscape that have been highly influential." Lambert has pledged $100,000 toward the purchase of the house, which could sell for over $600,000.

The preservation effort has received widespread public support, there being great pride in British Columbia in Erickson's international fame. Erickson, meanwhile, has been through bankruptcy and is now doing small projects with a former associate and acting as design consultant to a large Vancouver firm.

The house is heavily mortgaged, but the citizens group has negotiated forestallment of sale or foreclosure for the moment. **Donald Canty** ■

Berlin Considers Rebuilding a Lost Palace

The local Social Democrats are against it. The Green Party is against it. In fact, 58 percent of all Berliners are against it – including 65 percent of those in the East. This is not surprising, considering that a reconstruction of the Prussian Imperial Palace, damaged during the war and demolished in 1951 by East Germans, could cost over a billion dollars.

What is surprising is that the move to rebuild the defunct *Stadtschloss* has come so far. On July 1, a gala featuring the police orchestra and free beer launched a 100-day campaign to convince Berliners that a reconstruction, however costly, is the only fit symbol for the reunited nation. Doing its best for the cause is a life-size *Schloss* copy, painted on canvas on a giant metal frame, albeit rendered in sunny yellow and minus the dome.

A poignant witness to a lost national treasure centuries in the making, the structure cost four million marks (about $2.3 million). It was created by French mural painter Catherine Feff and historian Gerd Peschken, backed with funds raised by Hamburg businessman Wilhelm von Boddien. The facsimile and the historical exhibition it contains have attracted scores of new supporters, despite the immense challenge of reconstruction.

There's more than money at stake, however: sitting on a third of the otherwise empty site is the *Palast der Republik,* the 1970s-vintage former seat of the East German parliament. The vacated building has been stripped of its hammer and sickle and is

Francesca Rogier

Canvas Stadtschloss *façade going up this summer.*

reportedly contaminated with asbestos. Critics questioning the wisdom of the *Schloss* initiative argue that many East Germans view the now politically (and presumably architecturally) incorrect *Palast* as a relatively positive artifact of the Communist regime, and that destroying it creates yet another martyr. Meanwhile, proposals to either replace or add to the *Palast* with new construction are blocked by the commonly held belief that only Neo-Classical monuments can represent national German identity. But soon an open competition for the site will give architects a chance to challenge that belief.

Francesca Rogier ■

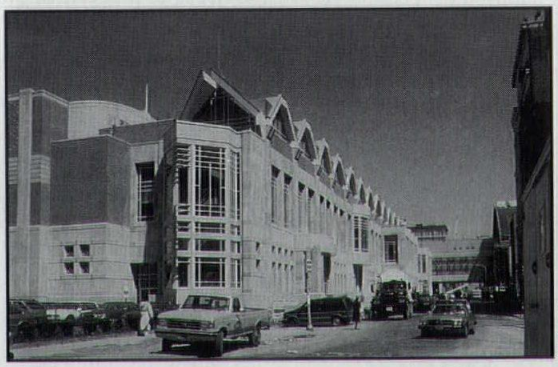
The author is an American architect and doctoral candidate living in Berlin.

High Hopes for New Philadelphia Convention Center

Rarely has a city anticipated a new building the way Philadelphia has awaited the new $522-million Pennsylvania Convention Center. Dedicated in late June at a well-attended civic ceremony presided over by Vice-President Al Gore, the facility is the culmination of a decade-long development process during which the project had to maneuver through a minefield of local politics, budget crises, and urban design debates (P/A, Jan. 1991, p. 28). The stakes were high, for the Center is seen as nothing less than the cornerstone of a plan to revitalize Philadelphia through increased tourism.

Designed by the Atlanta firm of Thompson, Ventulett, Stainback & Associates, with local firms The Vitetta Group, Kelly Maiello, and Livingston/Rosenwinkel, the convention center is located in the heart of Center City. Just two blocks from City Hall and immediately north of the historic Reading Terminal train shed, the pedestrian-friendly Center is within walking distance of most hotels and the Independence Hall historic district.

Tucked tightly onto four square blocks of the traditional Philadelphia street grid, the building is difficult, if not impossible, to view as a whole from the exterior. You glimpse only portions of the structure from most nearby streets; an oversized three-story bridge over Arch Street rudely connects the exhibit hall to the Reading train shed and interrupts any coherent reading of the Center's main, limestone-and-granite-faced Arch Street façade. This



Ken Bryson

Pennsylvania Convention Center, seen from Arch Street.

façade is capped by a series of dormerlike cross gables – in an attempt to reduce the scale of the structure and de-emphasize its horizontality – which have little precedent in Philadelphia architecture.

The other façades take cues from their immediate context, with brick patterns and curved bay windows on the upper stories of the 11th and 13th Street elevations and a functional, stripped-down edge to the rear of the complex on Race Street. The main exhibit hall roof, highly visible from the many tall buildings nearby, is composed of a welcome series of seven vaults that suggestively echo the curve of the terminal shed.

The layered interior of the building is more readily understood as a whole than its exterior. A generous daylighted, three-story pedestrian spine with large windows and skylights runs the length of the

ACSA/Wood Council Competition Winners

Winners have been chosen for the 11th annual ACSA/American Wood Council student design competition. Nearly 1,000 students submitted designs either for an "environmental summer camp and visitor/educational center" or for an "open submissions" category.

Jurors were Steve Badanes of Jersey Devil, Peter Bohlin of Bohlin Cywinski Jackson, Wilkes-Barre, Pennsylvania, and Peter Rose, Montreal. Winners in the "environmental summer camp" category are:

- John Quale, University of Virginia, first prize;
- William Sharples, Columbia, and Jane Sullivan, Boston Architectural Center, second prizes;
- Troy Day, Penn State; Paul Johnson, University of Texas-Arlington; and Samuel Kingore, Woodbury University; honorable mentions.

Winners in the open submissions category are:

- Kevin Bauer, Texas A&M, first prize;
- Diana Boos, Dana Brubaker, Jennifer Carter, Brian Cheng, Andrew Cygan, Stephen Gawronski, Donald Gibson, Manaf Hammami, Jeffrey Leahy, Andy Neilands, Will Stanforth, William Tessler, and Michael Todd, Ohio State, second prize;
- Cori Cassidy and Ellen Haddad, Miami University, third prize;
- Aaron Hoffmans, Kansas State, and Leslie Jordan, Jr., Louisiana Tech, honorable mentions. ■

Obituaries

Lester Collins

Landscape architect Lester Collins, whose work included several nationally prominent sites, died on July 6 after a stroke. Collins, who was 80 years old, studied landscape architecture at Harvard, where he later taught and served as department chair. He was the landscape architect for sculpture gardens at the Hirshhorn Museum and the National Collection of Fine Arts, both in Washington, D.C.

Collins was president of the Innisfree Foundation in Millbrook, New York, and for 33 years the curator of its 200-acre garden. He was a Fellow of the American Society of Landscape Architects.

Thomas F. Galvin

Architect, builder, and developer Thomas F. Galvin died in New York on May 27. According to police reports, Galvin committed suicide. His partner in the real estate development firm Pei/Galvin Holdings, T'ing C. Pei (son of I.M. Pei), suggested that Galvin's suicide may have been motivated by the long real estate slump in New York.

During the building boom of the 1980s, Galvin worked for the developers Olympia & York and Bramalea Inc.; in 1986, he was called in to complete the troubled Jacob Javits Convention Center. Galvin, a Fellow of the AIA, designed several apartment buildings in New York and served as chairman of the city's Board of Standards and Appeals.

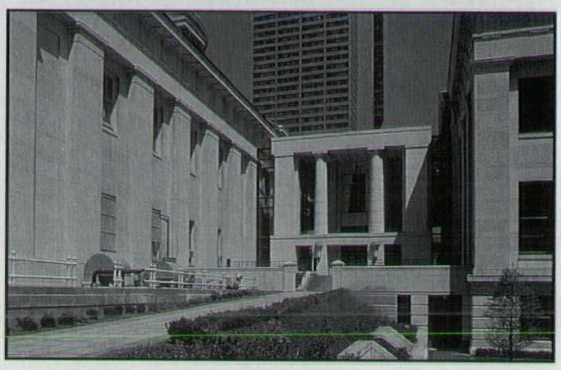
L. Anthony Greenberg

Architect and developer L. Anthony Greenberg of Venice, California, died of cancer on May 11. He was 56. As a partner in the firm Flores, Gelman & Greenberg, he specialized in multifamily residential complexes. The firm pioneered development in Marina del Rey, California, with a series of award-winning condominiums in the late

building along Arch Street and makes a strong visual link to the city. From the spine, users are treated to nearby views of City Hall, the landmark PSFS Building, and the voluptuous curve of the adjacent Reading Terminal shed. The views have to compete, however, with a cluttered ceiling-scape of insistent painted metal frames that deflect attention from the real show outside.

The circulation spine connects the 325,000-square-foot main exhibit hall on the *piano nobile* to entrances and secondary meeting and exhibition space on the third floor. Perpendicular to the spine, the ground floor of the immense structure is bisected by 12th Street, which tunnels through the building, forming a dramatically coffered shallow vault. The space is to be the principal entrance for those arriving at the complex by car or bus.

And Philadelphia officials hope there will be a lot of those arrivals. They project that the facility will attract about 300,000 visitors yearly. If it does its job, the Pennsylvania Convention Center will be the most beautiful building in town. **Donald Prowler** ■



New Connector for Ohio Capitol

After several years of controversy, a new connector now links the Ohio State Capitol with its neighboring Annex. As it approaches completion, worries about the connector appear to have been an overreaction.

The State Capitol is a Greek Revival powerhouse with façades of severe Doric pilasters and columns that stand alert like proud, sober citizens of a young democracy. A recent crop of skyscrapers that has sprung up around the ten-acre Capitol Square in Columbus hasn't diminished the Capitol's austere grandeur in the slightest.

The Capitol's interior, however, is a labyrinthine mess. The building's 53 original rooms have been carved into 317 separate offices, dozens of which fill four light courts that had previously flooded the inside of the building with natural light. The half-dozen leading architects who worked on the building between 1839 and 1861 – including Henry Walter, Martin Thompson, Thomas Cole, Nathan B. Kelly, Isaiah Rogers, and the firm of Town & Davis – wouldn't recognize their creation.

In 1987, the Department of Administrative Services initiated a restoration and renovation of the Capitol complex, which also includes underground parking decks and the 1901 Annex, designed by Samuel Hannaford & Sons. Schooley Caldwell Associates of Columbus won the assignment to lead the $90-million project. The Schooley Caldwell team has completed a third of the work, including a restoration of the Annex, now used as the State Senate offices, and the controversial connector that links the Capitol and the Annex. The two-story connector fills a previously open court between the Annex and the east front of the Capitol. Critics had charged that the connector would obscure one of the Capitol's façades, diminishing its four-square predominance. In 1990, the National Park Service threatened to revoke the building's status as a National Historic Landmark if the connector were built, although so far the agency has taken no action.

In fact, the connector is a demure and subservient addition. Its Doric order harmonizes with that of the Capitol, and its Columbus limestone closely matches that used on the adjacent buildings. The connector provides an all-weather link between Senate offices and the Capitol, as well as an all-purpose room for large public gatherings. Inside the three-building complex, space flows smoothly in a grand procession from the rotunda through the connector to the two-story stair hall of the Annex.

In the next phase of work, Schooley Caldwell proposes to reopen the Capitol's light courts and to reduce the building's 317 rooms to roughly 100. The work completed so far is encouraging. Like a good doctor, Schooley Caldwell has done no harm. The restoration team has also helped ensure the continued vitality of a Capitol complex that will be a real seat of government, not just a historic landmark. **Steven Litt** ■

The author is architecture critic for the Cleveland Plain Dealer.

Photos: Richard K. Loesch, CAM-TECH Photography

Interior (above), and exterior (top left) of Ohio Capitol addition, by Schooley Caldwell.

A Redesign for NCARB Design Exam

The architectural registration exam's 12-hour building design problem will be eliminated next year and replaced with six shorter design problems, according to the National Council of Architectural Registration Boards. The move to change the 12-hour problem, in which registration candidates design and draw a solution to a building program, is an effort to test more comprehensively a candidate's knowledge and skills, says Lloyd James, an examinations research assistant at NCARB. The single design problem, known as Division C of the exam, will be replaced by six "vignette" problems to be completed within 12 continuous hours of testing.

A deficiency with the single design problem, according to James, is that the integration of structure or mechanical systems, for example, might be more challenging for some candidates, depending on the complexity of their individual building solution. Also, noted James, "One mistake might carry through to other parts of the solution, so that it becomes magnified."

The single design problem will be replaced by shorter problems that test a candidate in six areas: block diagram (program understanding and bubble diagrams), schematic design, structural plan, mechanical and electrical plan, building section, and accessibility. Five of the vignettes will be an hour or more in duration, with the sixth problem two or more hours. The six vignettes will be designed to be completed in approximately 10 hours, although the testing period will stay at 12 hours.

The new format will take effect in June 1994. In 1997, this part of the exam, along with others, will be administered by computer. Drawing will be done on a computer screen with a mouse, without keyboard commands. According to James, knowledge of CAD systems will not be required to take the exam, although familiarity with drawing on a screen might help the candidate to master the exam's computer format faster. The exam will also be graded by computer, which will remove the current element of human interpretation of the design solution.

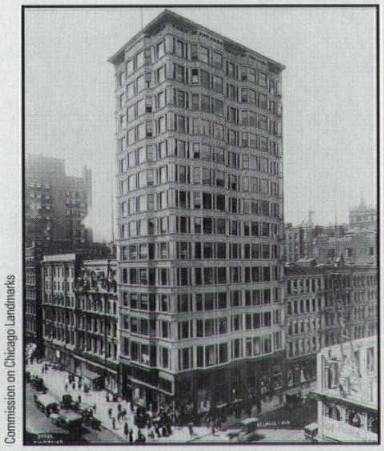
The single design problem, which has been part of the exam for more than 70 years, is legendary for its grueling 12-hour duration, which many candidates regard as a rite of passage into the profession. Will changing it to six shorter problems stunt its mythical proportions? "There's been some discussion of that," observed James, "but the new format will make it more fair for the candidates all the way around." **Michael J. Crosbie** ■

Rookery Team to Restore Reliance Building

From a field of five teams, the Chicago architecture firm McClier, with Baldwin Development, has been selected by the City of Chicago to restore Burnham & Root's 1894 Reliance Building. McClier and Baldwin recently collaborated in restoring another Chicago Burnham & Root building, the Rookery (P/A, Oct. 1992, p. 90), for which they won national and local AIA Honor Awards.

Famous throughout the world for its prescient skeletal expression and extraordinarily open fenestration, the Reliance Building marked an important step forward for the skyscraper. But efforts to restore the building have been frustrated by its small rentable floor plates and by serious physical deterioration – particularly in the terra cotta cladding – both of which make the cost of restoration difficult to recoup with competitive leases.

What's different this time is city intervention. The city will use its powers to wrest the Reliance from neglectful owners and leaseholders. More important, the city has all but promised $5 million to advance the project. The team estimates that the total cost of restoration will be $17 million. A vote approving McClier and Baldwin is expected by the City Council before summer's end. **Cheryl Kent** ■



Commission on Chicago Landmarks

Early photo of Burnham & Root's Reliance Building.

Benedictus Awards to Foster and Student Competitor

The first annual Benedictus Awards for the use of laminated glass in architecture were presented in Chicago during the June joint meeting of the AIA and the UIA. The winning architect is Sir Norman Foster of London, for his passenger terminal at Stansted Airport (P/A, Dec. 1991, p. 54), which applied laminated glazing in its elegant glass walls, skylights, and glazed elevators. The winner of the attendant student design competition – for an addition to the Corcoran Gallery in Washington – was Daichi Amano of Washington State University. Amano received $5,000 out of a total of $14,100 in student prizes.

The jury for the awards included architect James Ingo Freed, James Wines of SITE, and Dr. David Levy, director of the Corcoran Gallery. The number of students entering this competition – 1,200 from 27 countries – was a record number for a student design competition, reported Richard McCommons of the AIA/ACSA Research Council. Cosponsoring the awards program with the Research Council are the UIA and DuPont – producers of Butacite® PVB interlayer for laminated glass. ■

1960s and early 1970s.

His later work included several artists' loft/studio buildings, historic renovations, and the Maple Drive Restaurant (P/A, Sept. 1990, p. 116) in Beverly Hills. His last project was a series of oceanfront townhouses in Santa Monica.

Mary Chapman Hayden

Design manager and researcher Mary Chapman Hayden died of cancer on July 17 in Rocky Hill, Maryland. In 1989, Hayden, with her husband, management consultant Weld Coxe, was designated co-director of a Work Group of the International Union of Architects established to conduct a worldwide study of architectural practice. Together they studied the practice methods of architectural firms in 15 countries. A paper she coauthored with Coxe, "Toward a New Architectural Practice" was published in P/A's Architects and Power series last March (p. 62). Hayden, who was 60, had worked in marketing and management at Short & Ford Architects and at Venturi Scott Brown & Associates.

George S. Lewis

George S. Lewis, former executive director of the New York Chapter of the AIA, died of cancer on June 25 at the age of 77. Lewis, who received his master's degree from the Harvard Graduate School of Design in 1942, led the NYC/AIA to engage actively in civic debate during his 17-year tenure. He had been a member of the City's Landmark Preservation Commission since 1987.

In the 1940s, Lewis worked for Skidmore, Owings & Merrill, for Marcel Breuer, and for the United Nations Planning Office of Harrison & Abramovitz, where he contributed to the design of the Secretariat. He taught at Cooper Union from 1951 to 1955 and at Columbia from 1963 to 1970. ■

Projects

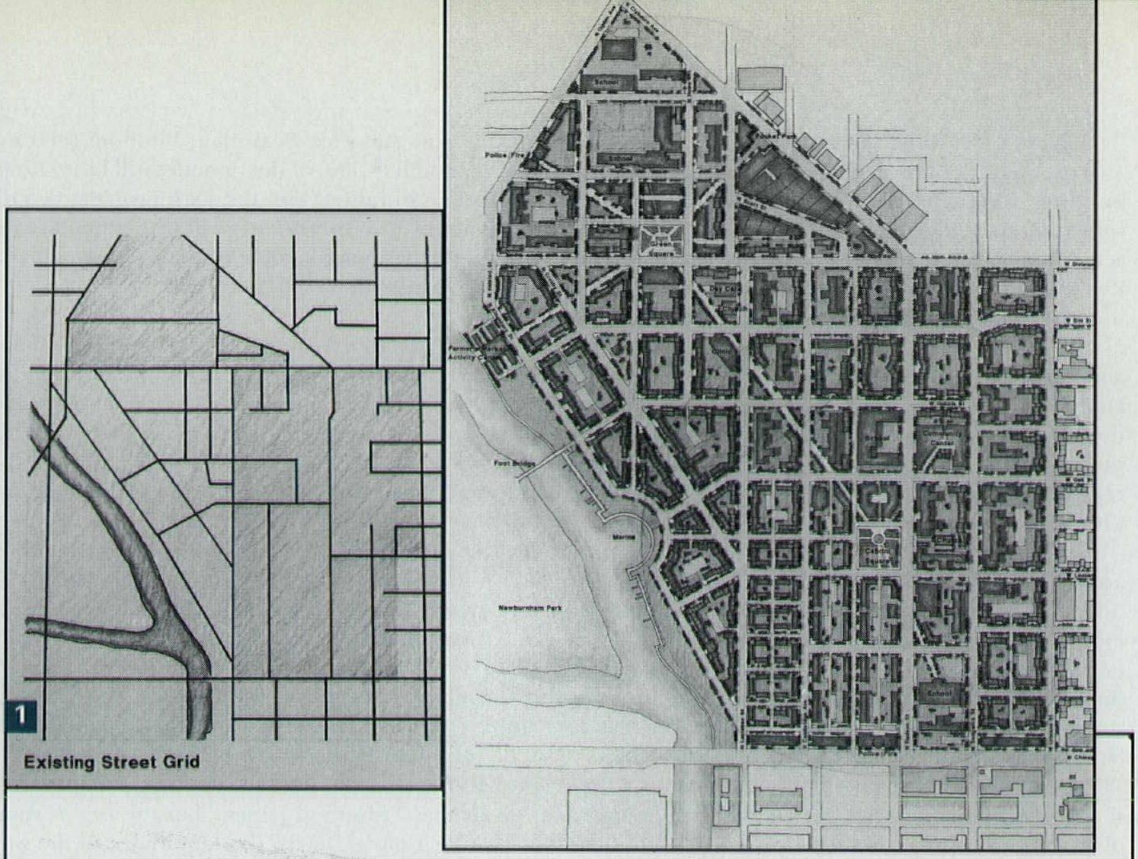
A New *Tribune* Competition

A recent *Chicago Tribune*-sponsored ideas competition for the redesign of Chicago's infamous Cabrini-Green housing projects will not likely rate the space in history books of the 1922 *Tribune* Tower competition. But this contest is as much a barometer of its time as its predecessor: instead of the heady eclecticism of the 1920s, the self-effacing winning schemes exude sobriety and a distrust of grand visions – even of planning itself.

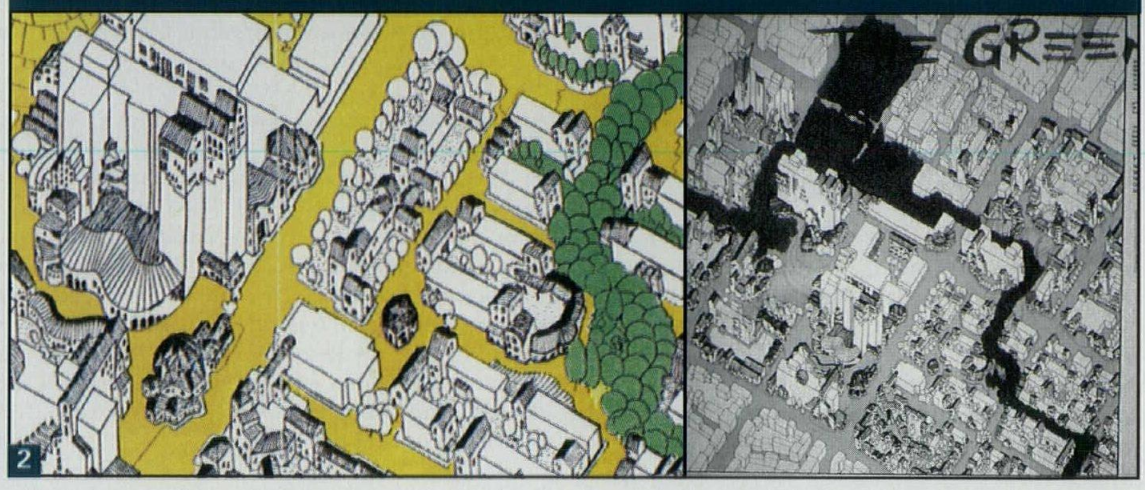
The competition, which offered neither prize money nor commission, was organized by the *Tribune* to provide planners and government officials "a range of creative concepts for low-income housing" and for an upcoming $50-million redevelopment of Cabrini-Green, a 78-building, 71-acre complex housing 7,000 people. A seven-person jury, which included Chicago architects Joseph Gonzales, Christopher Lee, and Cynthia Weese, as well as local housing officials and advocates, chose three prize winners and 27 honorable mentions from among 301 entries.

The first-prize entry (1), by Lawrence Carcoana, Don Faulkner, and Jim Nelson of Fargo, North Dakota, featured a theme common to many entries: the reintegration of Cabrini-Green into the neighborhood by the addition of through streets. The plan retains most of the existing buildings, but sets them in a fabric of low-rise, street-hugging buildings. The plan also establishes a marina on the Chicago River and two town-square-like parks linked by a diagonal boulevard.

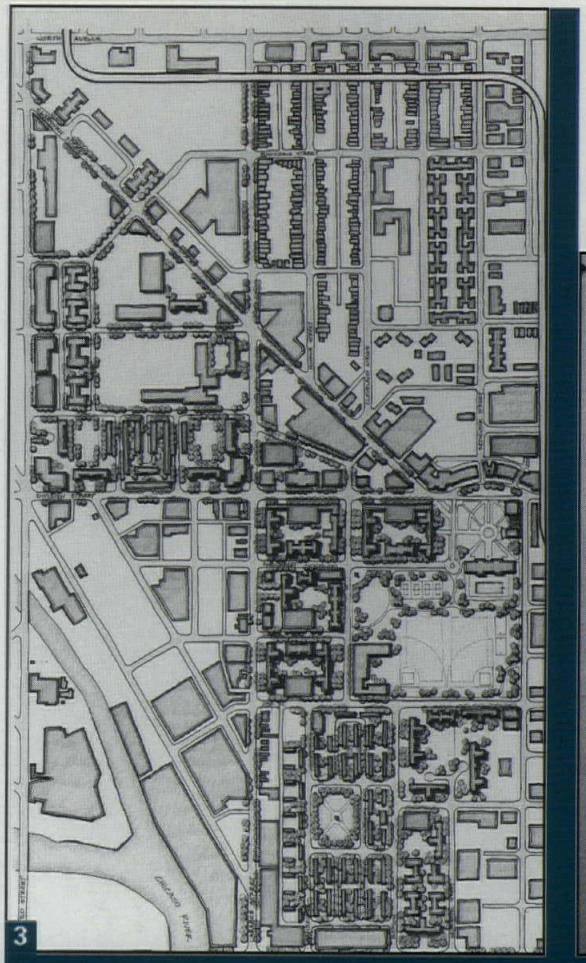
The third-prize winner (3), by the Deerfield, Illinois, firm of O'Donnell, Wicklund, Pigozzi & Peterson, employed a similar, but less formal, strategy, and called for industrial and commercial uses to provide jobs.



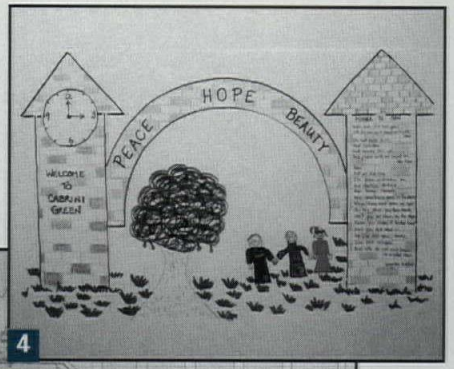
1 Existing Street Grid



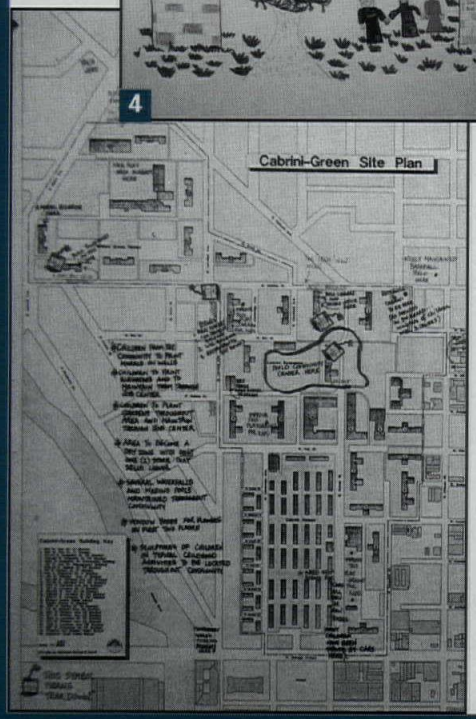
2

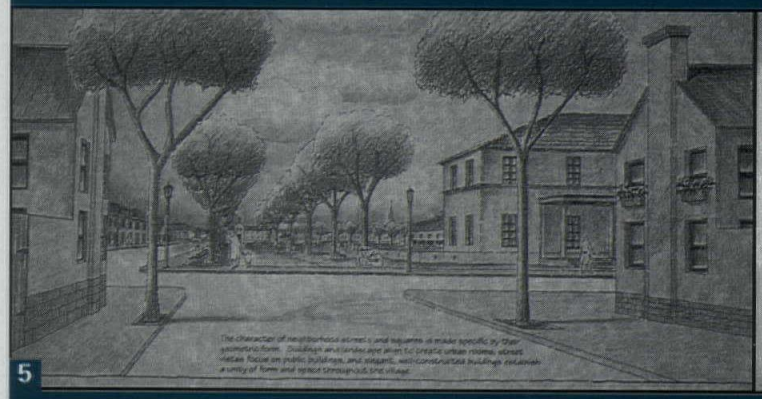


3

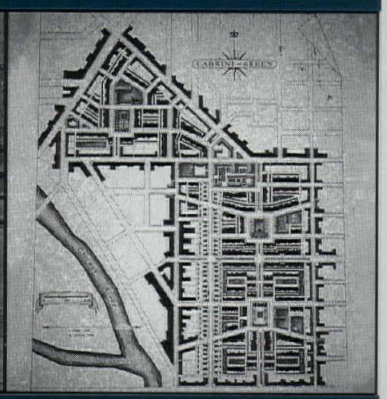


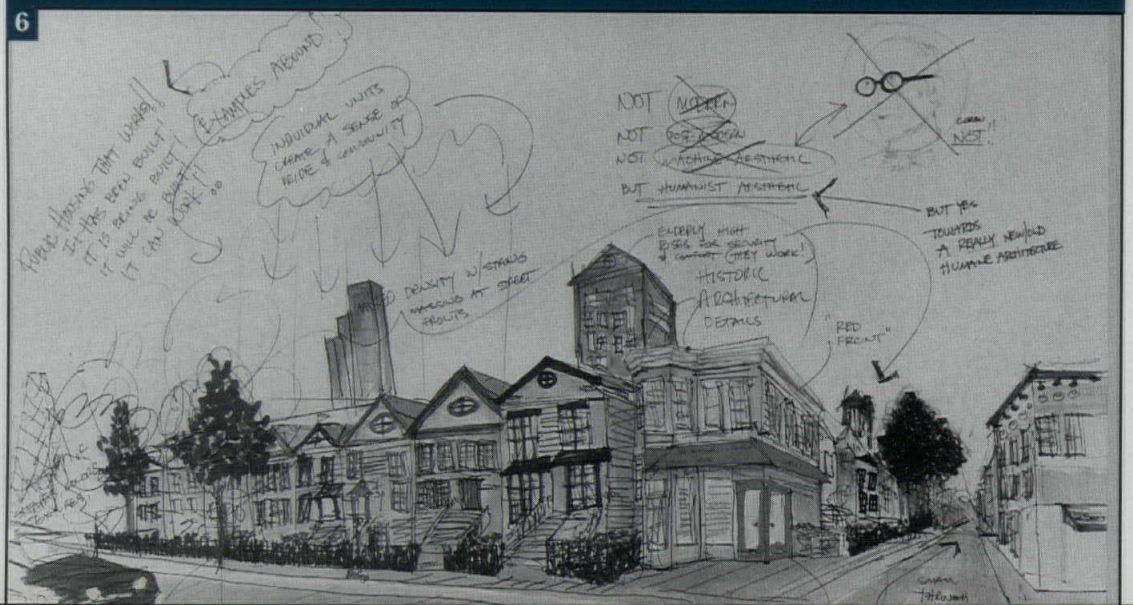
4





5





6

Belgian architect Lucien Kroll, noted for his community-based approach to public housing in Europe, won second prize with a scheme (2) that celebrated the unplanned in a different way. The plan featured a meandering one-mile green belt and suggested the fanciful alteration of the high-rises and street-scapes to evoke the "happily chaotic" nature of medieval villages.

A class project from the University of Kentucky Department of Human Environment took anti-planning rhetoric a step further with an entry (6) that called for replacing the Cabrini-Green buildings with small-scale multifamily houses in the Chicago tradition and allowing the projects' identity – and stigma – to disappear into the fabric of the city. (On their board, a cartoon image of Le Corbusier was crossed out next to the words "Corbu. NOT!")

Not all the commended entries rejected prescriptive physical planning. An honorable-mention scheme (5) by Kristen Damuth, Barry Mahaffey, and Alisa Block Sommer of the University of Miami bore the neo-traditional mark of their advisers, Andres Duany and Elizabeth Plater-Zyberk. The plan included a variety of low-rise housing types within walking distance of neighborhood centers.

But one honorable mention-winning plan served as a reminder that, even with selfless intentions and flexible plans, outside planners can do only so much for places like Cabrini-Green. The entry (4) of Kimberly Davis, 13, and Rachella Thompson, 12, who are residents of Cabrini-Green, proposed small-scale improvements and offered authoritative building-by-building assessments, with sticks of dynamite indicating those that must go. ("A very bad drug building," read one note.) Their entry should remind officials that when redesigning Cabrini-Green – and its kin across America – the people who live there must be at the table.

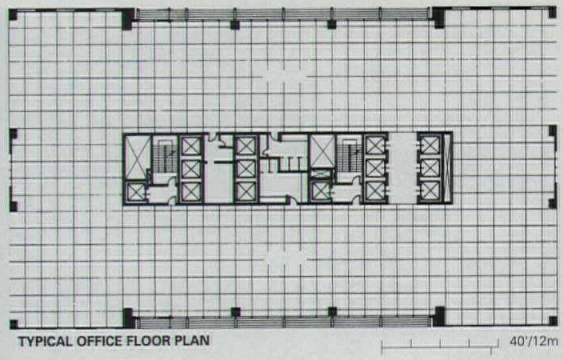
Mark Alden Branch ■

Kim Wins Seoul Tower

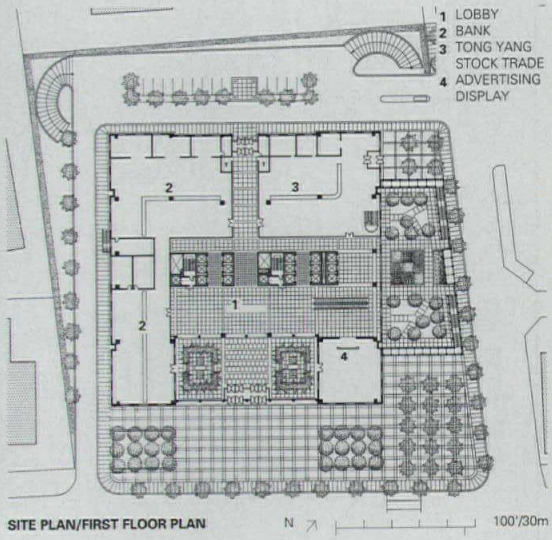
The Hartford, Connecticut, firm of Tai Soo Kim & Partners used this design – strongly reminiscent of their winning (but unbuilt) Hartford City Hall Annex competition entry of 1987 – to win an invited competition for the corporate headquarters of Tong Yang Corporation in Seoul. (Also competing were Perkins & Will, Chicago, and Nikken Sekkei, Tokyo.) The commission is the largest ever for Kim's firm, which has completed several projects in Korea.

The 40-story building, clad to suggest two gray granite towers connected by a wide turquoise glass bay (although the floor plan is essentially one rectangle), will be the tallest building in Seoul's center city and will dominate the view from the Han River. Behind the great arch near the top of the building will be the chairman's suite, boardroom, and ballroom.

MODEL VIEW FROM SOUTHEAST



TYPICAL OFFICE FLOOR PLAN 40'/12m



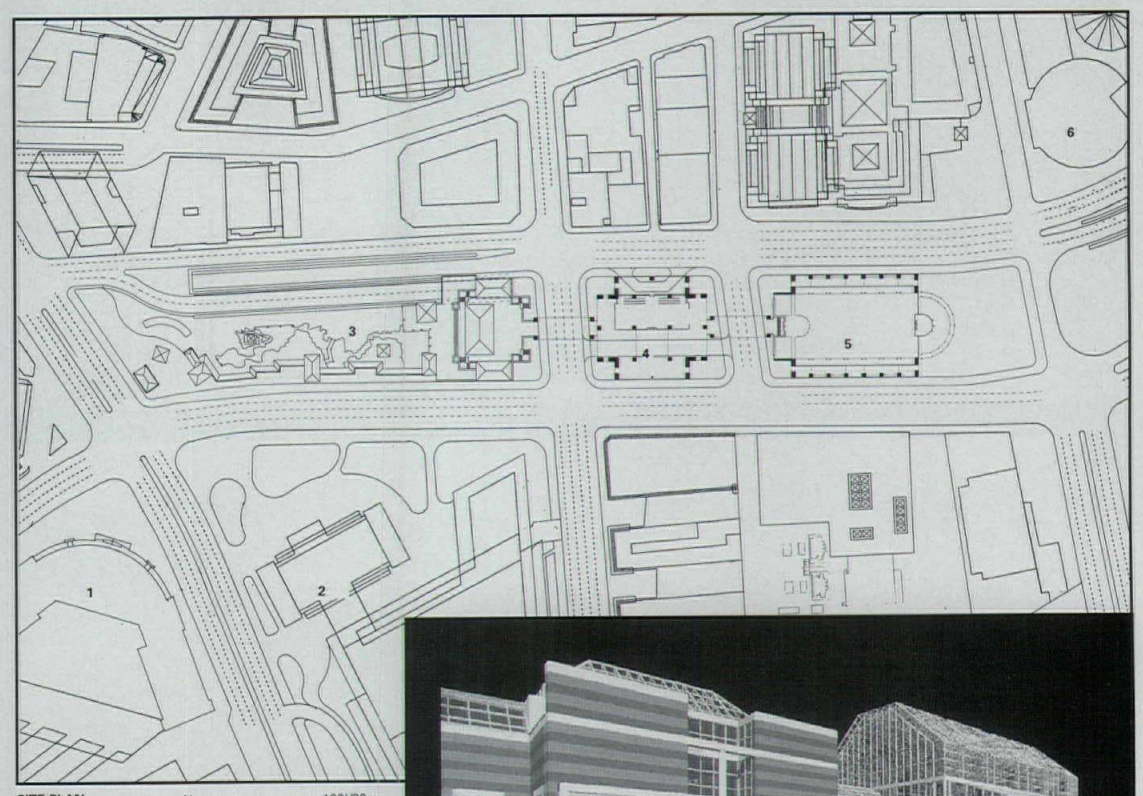
SITE PLAN/FIRST FLOOR PLAN

A Garden Over the Tunnel

Construction of the Massachusetts Botanical Conservatory and Gardens, to be built on reclaimed land atop the Boston Central Artery (P/A, Jan. 1992, p. 85) cannot begin until 1997 or 1998. But the design for the buildings had to be determined early enough to build structural support into the highway tunnel project.

The Conservatory, designed by the Boston firm of Monacelli Associates, spans three blocks in the city's Financial District, with a 60,000-square-foot visitor education center, a 25,000-square-foot glass-enclosed conservatory that will house a tropical rain forest, and an outdoor Chinese Garden designed by landscape architects Morgan Wheelock, Inc. The three components will be linked by pedestrian bridges.

The client for the project is the Massachusetts Horticultural Society. ■



SITE PLAN

1 SOUTH STATION
2 FEDERAL RESERVE BANK
3 CHINESE GARDEN
4 VISITOR/EDUCATION CENTER
5 BOTANICAL CONSERVATORY
6 INTERNATIONAL PLACE

COMPUTER RENDERING

Calendar

Exhibitions

Berlin: The New Capitol
September 15–October 16

New York. "Berlin: Designing a New Capitol for the 21st Century" is a presentation of twelve entries to the Spreebogen International Competition for Urban Ideas (P/A, Apr. 1993, p. 19) submitted by 12 architects from New York. Goethe House.

P/A's New Public Realm
September 15–October 15

Jackson, Mississippi. This traveling exhibition of visionary public works proposals submitted to P/A's ideas competition (P/A, Oct. 1992, p. 73) is supplemented by photos of neglected spaces, substandard housing, and decrepit infrastructure. For gallery location and hours, please contact Kathy Jackson at the AIA/Mississippi Chapter (601) 948-6735.

The Starter House
September 20–October 29

Boston. Architect Donald MacDonald of San Francisco brings his Starter House (P/A, June 1991, p. 97) to Boston for the Affordable Housing Series. MacDonald will give a lecture on September 30 at 7:30 pm. Boston Architectural Center.

Green October
October 7–25

New York. "Green Design and the Sublime," an exhibition of environmentally responsible residential and commercial products presented in vignette settings at the A&D Building, is one of a series of eco-events planned for Green October. The month-long series is sponsored by One Voice, a coalition of New York-based interior design organizations concerned with environmental issues. For more information, contact Eliot Lewin, Howard J. Rubenstein Associates, 1345 Ave. of the Americas, New York, NY 10105 (212) 489-6900.

Competitions

1994 AIA Awards
Dates vary

Washington, D.C. Submission binders for the AIA's Thomas Jefferson Award for Public Architecture must be postmarked by November 1 and by November 8 for the Honorary Fellowships. Nominations to the Architecture Firm Award, the Henry Bacon Medal, and the Institute Honors, must be postmarked by November 19. Contact AIA, 1735 New York Ave., NW, Washington, DC 20006-5292 (202) 626-7300.

Performing Arts Center
Registration deadline
September 20

Baltimore. The University of Maryland at College Park is soliciting letters of interest from U.S. architects for a national competition to design the Maryland Center for the Performing Arts. The $69-million, 283,000-square-foot complex will house facilities for the music, theater, and dance programs, a library, and other performance and rehearsal spaces. Contact William Davis, Maryland Dept. of General Services, 300 W. Preston St., Rm. 403, Baltimore, MD 21201 (401) 225-4296.

Social/Ecological Sustainability
Registration deadline September 24, submission deadlines September 30 (research) and November 5 (design)

Denver. AIA Colorado and the New College of Architecture and Planning of the University of Colorado have announced an open call for research and design "that embrace the concept of sustainability, both ecologically and socially, in architecture." A total of $25,000 will be awarded. Contact AIA Colorado (303) 831-6183 for registration material; send sumissions c/o Platte River Art Services, 1937 Market St., Denver, CO 80202.

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

(continued on page 40)

(continued from page 39)

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.

Photovoltaics
Application deadline October 31, submission deadline November 30

Washington, D.C. Photovoltaics in the Built Environment: An International Architectural Ideas Competition is sponsored by the International Energy Agency and the Netherlands Agency for Energy and the Environment in cooperation with the AIA/ACSA Council on Architectural Research. Categories include large-scale applications, residences, and multistory buildings. Contact AIA/ACSA Council on Architectural Research, 1735 New York Ave. NW, Washington, DC 20006.

What's In a Name?
Entry deadline October 31

Chicago. USG Interiors has announced a contest to name its new X2000 ceiling panel. The winner will receive $25,000. The contest is open to practicing architects and interior designers. Contact USG Interiors (800) 950-3839.

An Affordable, Sustainable, Buildable House
Submission deadline November 9

Richmond, VA. A national, open competition for the design of an environmentally sustainable house for a low-income family has been announced by the Virginia chapter of Architects, Designers, and Planners for Social Responsibility in conjunction with Habitat for Humanity of Greater Richmond. Contact J. David Wilkerson, ADPSR/VA, PO Box 7330, Richmond, VA 23221-7330 (804) 780-0070.

Innovative Housing
Application deadline November 12, submission deadline November 30

Winston-Salem, NC. The City of Winston-Salem, North Carolina, has announced a competition for technically innovative, affordable single-family housing. The winning design(s) will be constructed as part of a lease-purchase demonstration program. Contact City of Winston-Salem, Housing/Neighborhood Development Dept., City Plaza, Ste. 300, 225 W. 5th St., Winston-Salem, NC 27101 (919) 727-8597.

Rome Prize Fellowships
Application deadline November 15

New York. The American Academy in Rome has announced the 1994/1995 Rome Prize fellowship competition. The fellowships are offered in architecture, historic preservation, interior design, landscape architecture, urban planning and design, and other disciplines. Contact Fellowships Coordinator, American Academy in Rome, 667 Fifth Ave., 5th fl., New York, NY 10021 (212) 751-7200.

Veterans Memorial
Submission deadline November 15

San Jose, CA. The San Jose Veterans Memorial Committee, with the cooperation of the City of San Jose, is sponsoring an open, one-stage competition for a memorial. The winner will receive $25,000 and the opportunity to negotiate a contract for implementation. Contact David M. Allen, City of San Jose, Office of Cultural Affairs, 291 S. Market St., San Jose, CA 95113 (408) 277-2789 or FAX (408) 277-3160.

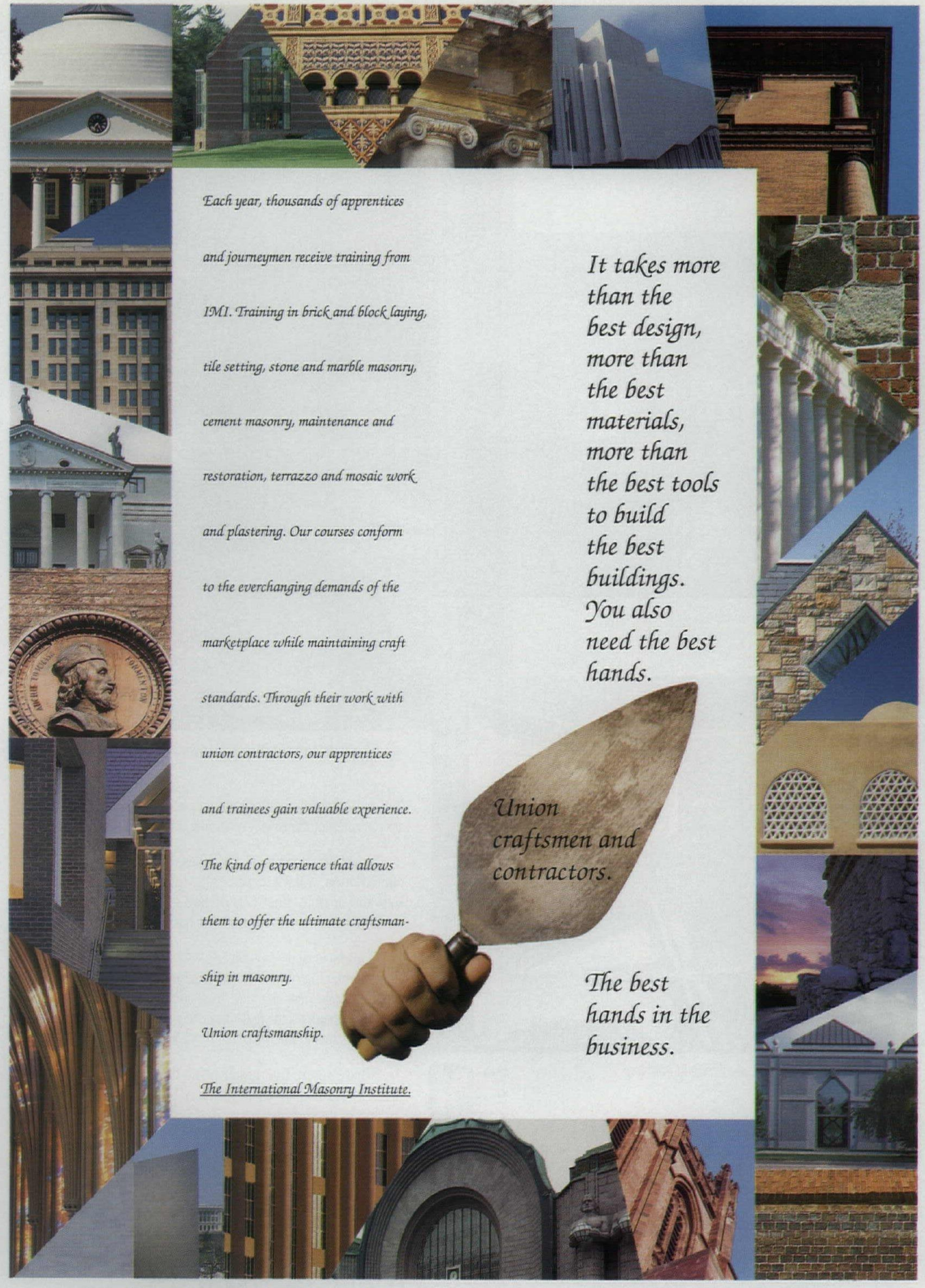
Conferences

Crossing Boundaries
October 14–17

Cincinnati. Crossing Boundaries in Practice, the Fifth International and Interdisciplinary Forum on Built Form & Cultural Research, is being held "to discuss approaches to architecture and the built environment across cultures, disciplines, locations, economic and political systems, and time." Contact Center for the Study of the Practice of Architecture, University of Cincinnati, Cincinnati, OH 45221-0061 (513) 556-3413 or FAX (513) 556-3288.

Virtual Reality
October 18–21

New York. The Virtual Reality Systems and Teleoperation Conference and Exhibition will offer programs and products to an interdisciplinary audience of architects, researchers, developers, doctors, and educators. Stan Goldstein, SIG-Advanced Applications, 1562 First Ave., Ste. 286, New York, NY 10028 (212) 717-1318. ■



Each year, thousands of apprentices and journeymen receive training from IMI. Training in brick and block laying, tile setting, stone and marble masonry, cement masonry, maintenance and restoration, terrazzo and mosaic work and plastering. Our courses conform to the everchanging demands of the marketplace while maintaining craft standards. Through their work with union contractors, our apprentices and trainees gain valuable experience. The kind of experience that allows them to offer the ultimate craftsmanship in masonry.

Union craftsmanship.

The International Masonry Institute.

It takes more than the best design, more than the best materials, more than the best tools to build the best buildings. You also need the best hands.

Union craftsmen and contractors.

The best hands in the business.

IMI is a labor/management trust fund of the International Union of Bricklayers and Allied Craftsmen and the contractors who employ the Union's members in the U.S. and Canada. To learn more, write to us at: 823 15th Street, N.W., Suite 1001, Washington, DC 20005. © 1992, IMI.

FROM BOLD TO BEAUTIFUL

Modeled with AutoCAD • Rendered with ModelView

Modeled with MicroStation • Rendered with ModelView

Modeled with EMS • Rendered with ModelView

MICROSOFT WINDOWS

MODELVIEW

You use CAD every day to design projects. Now you're ready to spice up your presentations with rendering and animation.

ModelView accepts 3D CAD files *directly* from Intergraph's MicroStation, AutoCAD, and EMS, Intergraph's solid modeling software. Or from other CAD packages through DXF. This means no unnecessary translations and no hassles with your CAD model.

Sophisticated raytracing. Visual material editing. Photomontaging. A toolbox for touchup, special effects, and animation. ModelView offers all the features you desire — plus an interactive renderer for real-time review of color, pattern, and texture. All at a very enticing price — $2,500.

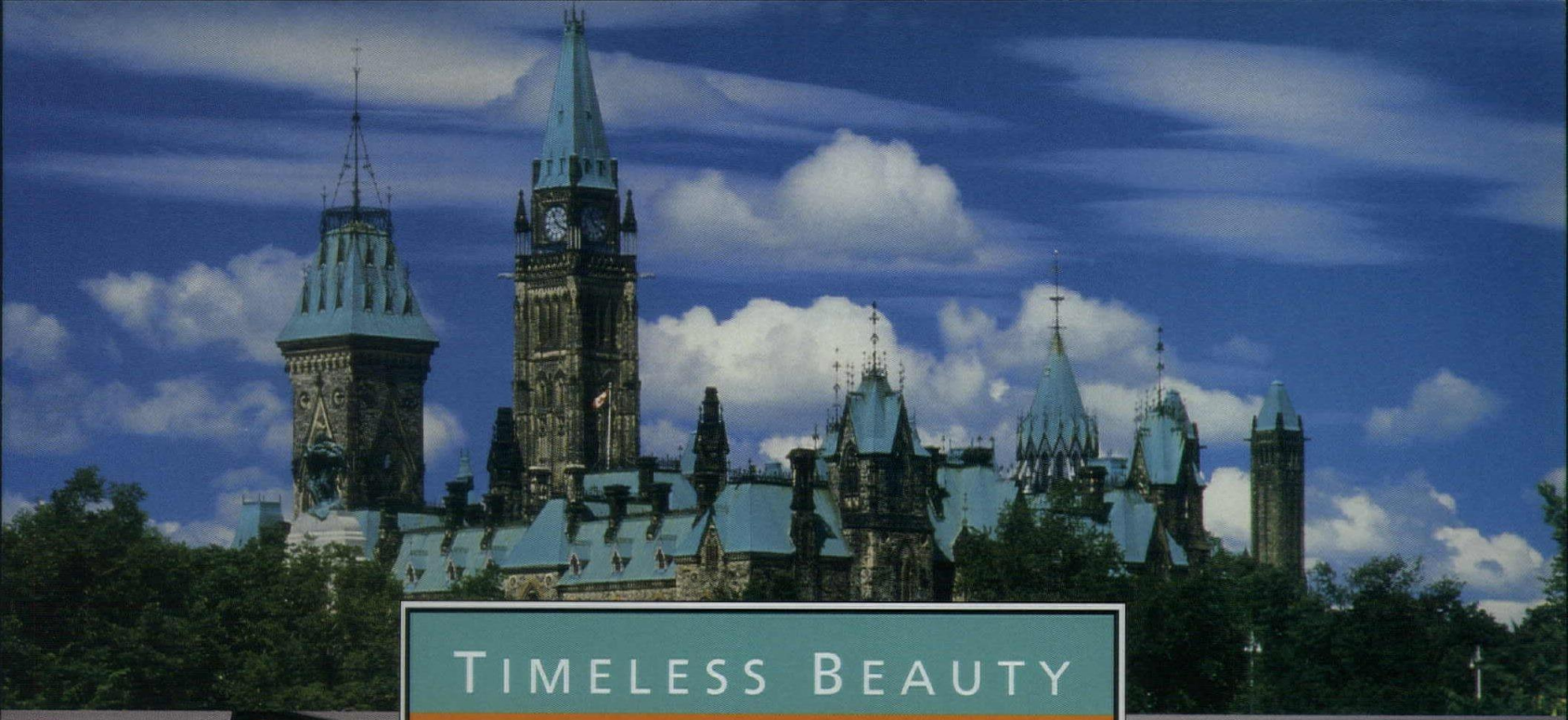
What's more, Intergraph offers the broadest range of CAD applications for Microsoft Windows NT and the best customer support in the industry.

ModelView runs under Microsoft Windows on PCs and under Windows NT on Intergraph's Technical Desktop Series and other Intel-architecture workstations. For more information and a free demo disk, call 800-345-4856.

INTERGRAPH

Solutions for the Technical Desktop

Circle **No. 321** on Reader Service Card



TIMELESS BEAUTY
TIMELY SUPPORT

Get both when you build with architectural copper. Just call 800-CDA-DATA and tap into a complete network of support services — including professional design assistance. • There's also CDA's comprehensive new *Copper in Architecture Handbook*. It features design details and specifications — in hard copy and in AutoCAD® files*— for nearly any application. • A six-part videotape series examines the functions, forms and details of different copper roofing styles. • You also get access to CDA's databases, publications, training programs, materials specialists and local supplier/contractor listings. They're all part of CDA's "Copper in Architecture Program" — providing the assistance needed to put copper's timeless beauty and dependability to work in your next project. *Get all the details today. Call* **800-CDA-DATA** *for a free copy of our brochure,* Copper in Architecture.

COPPER DEVELOPMENT ASSOCIATION INC.

260 Madison Avenue, New York, NY 10016

Circle **No. 312**

AutoCAD is a registered trademark of Autodesk, Inc.
* On 3 1/2" IBM-compatible disks.

WALLCOVERING

GET HOOKED ON THE LOOK THAT WON THE GOLD*

*THE BEST OF NEOCON 1993

When everything else looked like "just vinyl", Vicrtex from Forbo embraced a whole new school of thought in wallcovering and won a 1993 Gold Neocon. If you've been fishing around for innovation and excitement, here's some Vicrtex patterns and textures from Forbo you shouldn't let get away: Taos, a three-color sandstone texture in 35 tones, and a nice new twist on the spatter effect; Raku, a natural look some see as rice paper, others as pottery; Prism, a subtle play on cut gems, it captures and reflects light; Botero a natural fresco texture that evokes the sunwashed patinaed stucco of the Mediterranean. You choose the venue, you choose the pattern and texture. Go for the Gold.

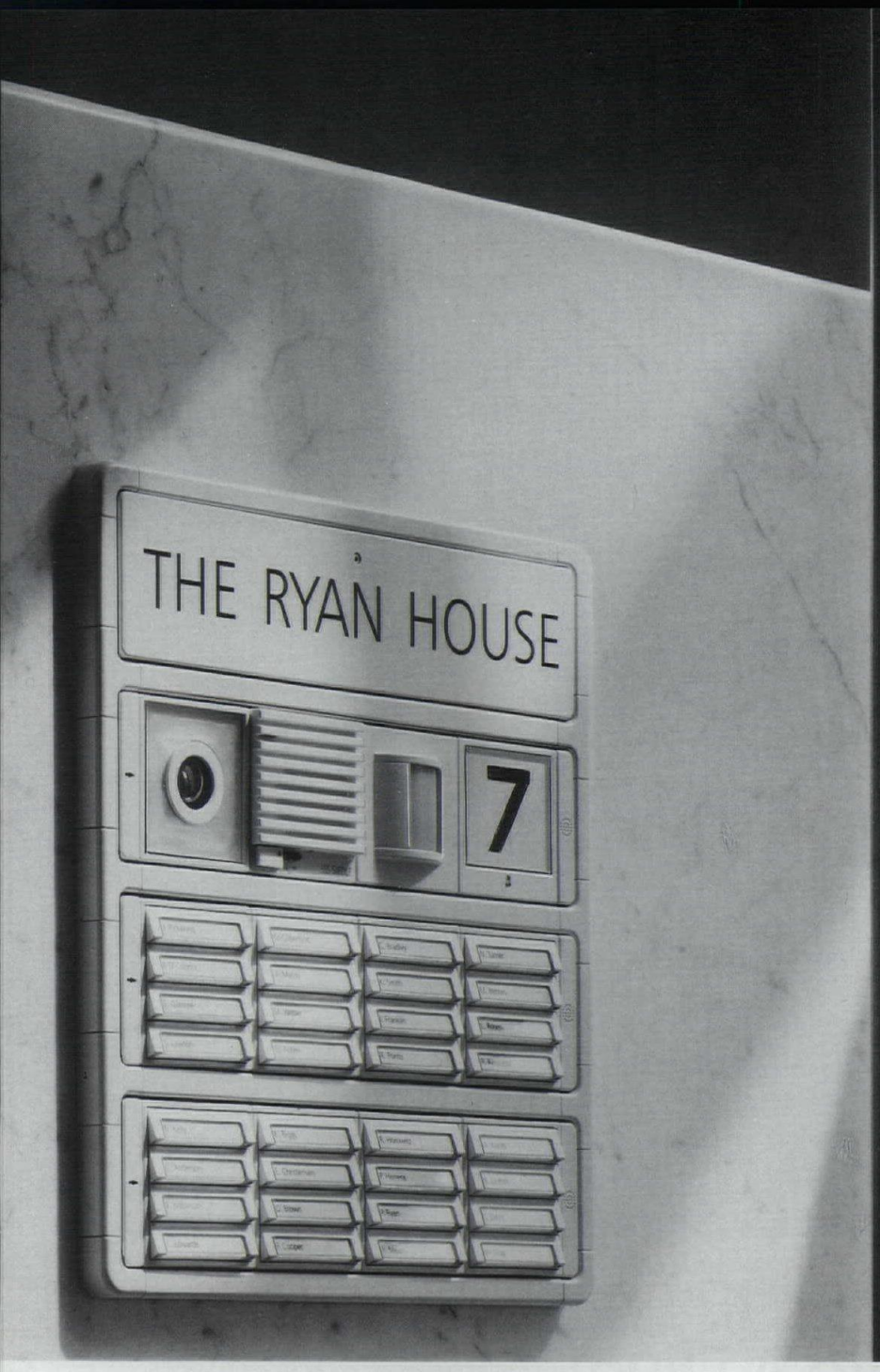
Get hooked on
VICRTEX
WALLCOVERING

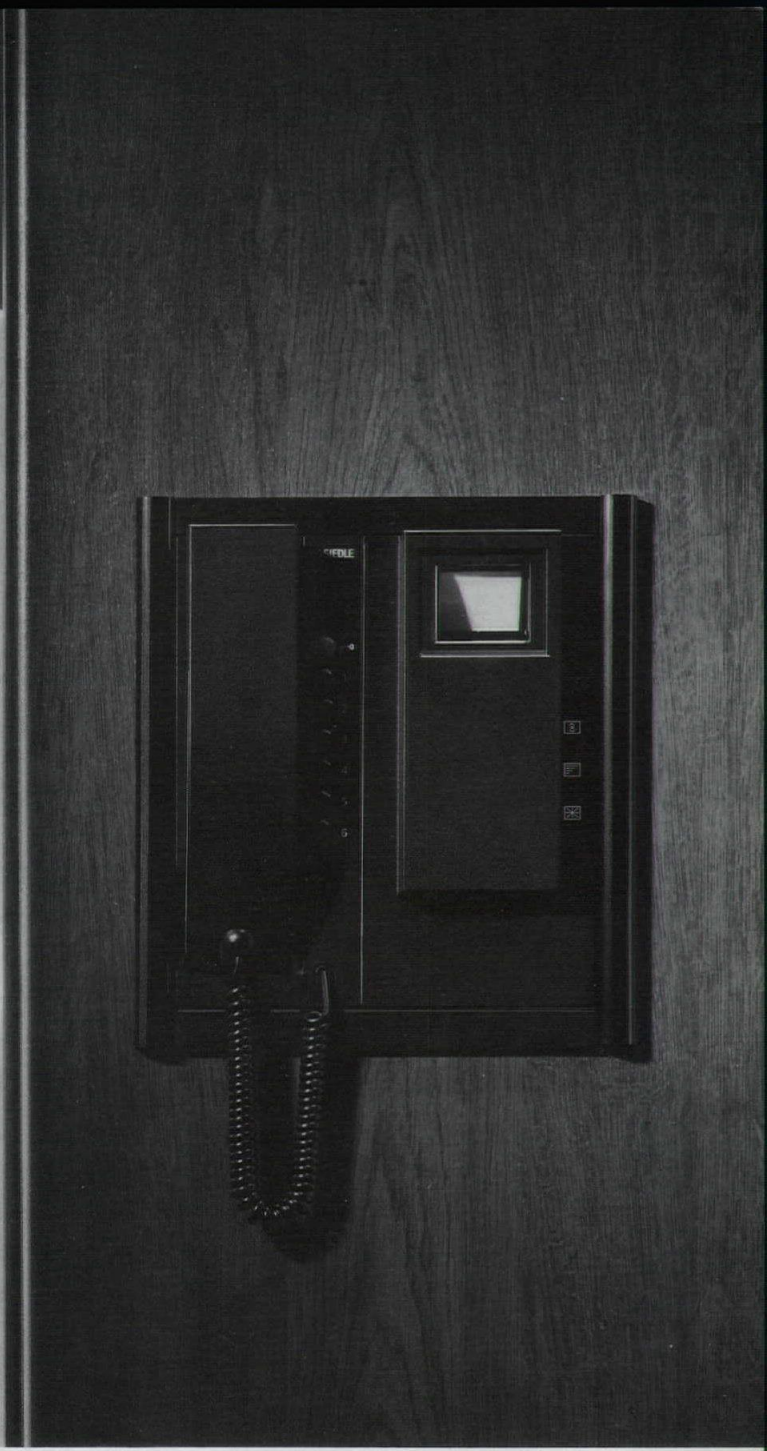
Forbo Industries Incorporated
Hazleton, Pennsylvania

*Cosponsored by Facility Design & Management and International Facility Management Association

FORBO
VICRTEX WALLCOVERINGS
CONTRACT
FORBO FLOOR COVERINGS
SURFACES

Circle **No. 341**





Outdoor - Indoor

Lifestyles differ both privately and professionally. The award winning design of Siedle Communication Systems incorporates unique function modules that offer unlimited function options to meet your clients individual needs.

Outdoor the Vario system can be designed for flush or surface mounting or for integration into a pedestal.
Indoor you have the choice of individual styling including table-top or flush or surface wall mounted.

Siedle modularity provides the flexibility to design communication systems around the individual clients lifestyle and needs.
Styling as desired - functionality as planned.

Coupon

Send to: Siedle Communication Systems of America, Inc, 750 Parkway, Broomall, PA 19008

Please send me further information on Siedle communication systems

PA/9/93

Name _____

_____

Adress _____

_____

Accessible Systems For The Physically Challenged.

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

Intelligent internal communication Systems SSS SIEDLE

The One R-Value That Doesn't Take A Dive.

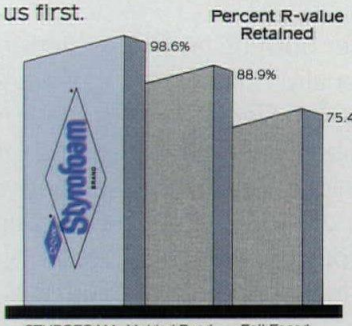
Before you buy cavity wall insulation based on R-value and cost alone, talk to us at Dow.

We'll immerse you in why water resistance is by far the most important factor to consider when selecting cavity wall insulation.

We'll also give you warning that some manufacturers may use 'high R-value' as a decoy to lure you into buying their product. But just ask yourself, what good is high R-value if it doesn't last?

On the other hand, our engineers will gladly show you why STYROFOAM* brand insulation — proven over years on rafts, docks, roofs and roads — is more at home in the wet environment of cavity walls. And that STYROFOAM* is a better buy over the long run because it retains its R-value longer.

We have the solutions to all your insulation problems. In this case, insulation that takes to cavity walls like a duck takes to water. So call us first.



Test Method ASTM C518-91, C177-85
Conducted by ORTECH INTERNATIONAL

For literature on STYROFOAM brand insulation, or to arrange a meeting, call our toll-free line.*

Campaign No 1629
*Trademark of The Dow Chemical Company

Dow* Styrofoam* BRAND

Ozone Depletion Potential Reduced By Over 90%

Call Dow 1·800·441·4369

Circle **No. 342**

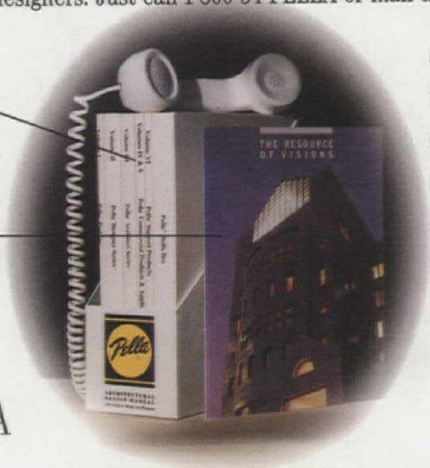
In Canada, call 1-800-447-5678

Call Our 1-800 And Get 5-4-FREE

The five-volume 1993 Pella® Architectural Design Manual and other valuable information is FREE to qualified architects and designers. Just call 1-800-54-PELLA or mail this postage-paid card.

☐ Pella® Architectural Design Manual. *Five volumes of comprehensive reference on the complete line of Pella Windows and Doors.*

☐ Resource of Visions, *describing Pella's unique architectural support capabilities, from design through testing.*



NAME _____

TITLE _____

FIRM _____

ADDRESS _____

CITY _____

STATE _____ ZIP _____

PHONE ( ) _____

102 Main Street, Pella, IA 50219

1-800-54-PELLA

(1-800-547-3552)

CODE: M27713AA

Quality like this only comes from Pella.

Pella® WINDOWS & DOORS

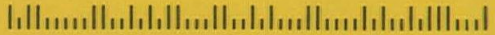
NO POSTAGE
NECESSARY IF
MAILED IN THE
UNITED STATES

BUSINESS REPLY MAIL

FIRST CLASS MAIL PERMIT NO 6 MOLINE IL

POSTAGE WILL BE PAID BY ADDRESSEE

PELLA® INFORMATION CENTER
PO BOX 308
MOLINE IL 61266-9622



P A V E R S

SUMMITVILLE PAVERS:
Specify with confidence. Design with freedom.

Summitville broadens your design freedom with five new choices in impervious glazed porcelain pavers. Pavers with physical properties unequalled on the world tile market.

With water absorption rates of almost 0%. And breaking strengths that double ANSI standards. New Stepping Stones, Marblesque, Summit-Tread, Tactile-Tread and exterior cladding tiles all set new standards for performance.

And a new aesthetic standard as well. Stepping Stones' subtle shadings offer the beauty of natural stone in 8 color ranges.

Marblesque provides a marble-like alternative to the high cost and low durability of polished stone.

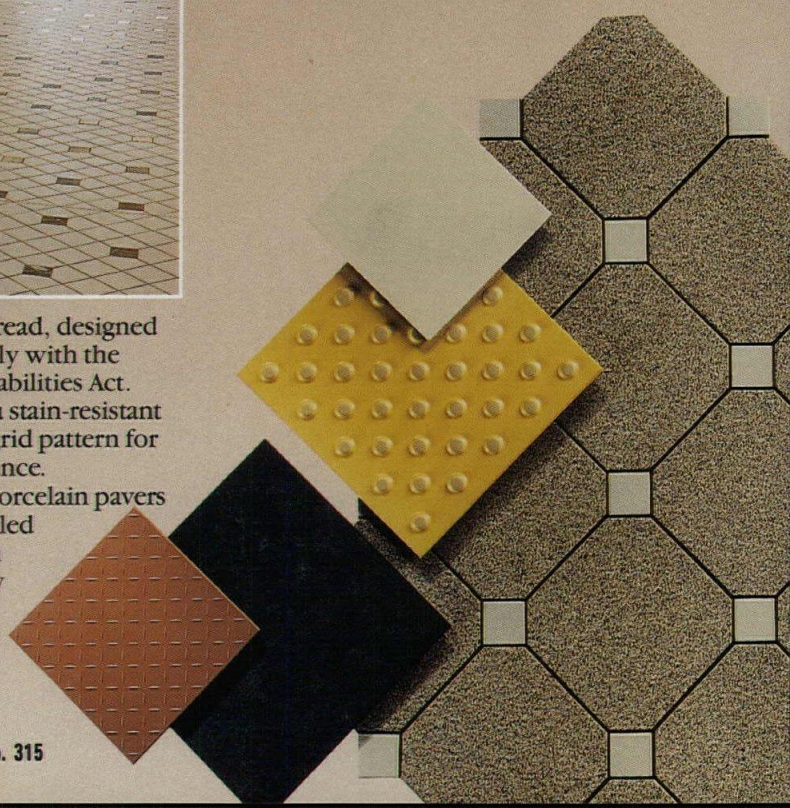
For commercial applications, Summitville keeps your design options open. With Tactile-Tread, designed specifically to comply with the Americans With Disabilities Act. And Summit-Tread, a stain-resistant paver with a raised grid pattern for improved slip resistance.

All Summitville porcelain pavers are made from recycled waste products from the feldspar industry in a new high-tech facility. This tradition of respect for our environment has been a part of Summitville since 1912.

See for yourself how Summitville porcelain pavers can unlock your design freedom. Complete the reader service card to receive full-color product information.

Summitville®

Summitville Tiles, Inc., Summitville, Ohio 43962
FAX 1-216-223-1414



MADE IN USA
MEMBER TILE COUNCIL OF AMERICA INC.

Circle **No. 315**

We can't afford to be wrong. If we make one mistake we might repeat it 250 times."

This definition of quality – efficient delivery of a product with an absence of mistakes – is an important value at BSW, and one that delights their bottom-line-oriented clients. It also earns them the scorn (tinged, perhaps, with envy) of much of the architectural community.

This scorn is often expressed as something like "They're good at what they do, but it simply isn't architecture." Others complain, with some justification, that the highway-strip sameness of Wal-Marts and their kin are destroying the character of American towns. Such criticism does not move Workman: "What you're talking about here is what I believe is a basic barrier to architects. You know why Sam Walton came to us? He said 'I can't get an architect out here who will treat my building like it's important.' So now who's really responsible for how it looks? The owner who wanted to do something better or the architects who had their noses in the air?"


Lavada Nicholls

BSW principals, left to right: Robert P. Sober, Harry P. Lay (a certified public accountant), Robert C. Workman, and David E. Broach.

In defending BSW's social conscience, Workman also cites Wal-Mart's new "Eco-Mart," (P/A, March 1993, p. 23) a prototype store that opened this summer in Lawrence, Kansas, using environmentally conscious materials and systems. The store, which was developed with such green luminaries as William McDonough and Amory Lovins as consultants (and inspired by former Wal-Mart board member Hillary Rodham Clinton), won Wal-Mart a Global Sustainability Award from the United Nations, but the idea of a sustainable Wal-Mart strikes many as an oxymoron, given the land-use and transportation patterns that the retailer promotes. But Workman maintains that the strip is an economic reality: "If architects want to stand off and scream about it, I guess they can. Or they can get involved and try to have an impact on it."

Other architects involved with similar building programs think it's a bad idea for a firm to do all of one company's projects. Michael Rogers, the architectural design supervisor for McDonald's (P/A, July 1993, p. 112), prefers to supply prototype information to a network of architects in different regions, who then customize the design and work with local building officials. In fact, he says, he is trying to expand the circle of architects McDonald's uses. "Nobody can do it like the local people can," he says, adding that issues of local control are always sensitive. "I'm surprised they haven't gotten ripped to shreds." (In fact, Wal-Mart is facing increasing opposition as they try to move into more heavily regulated markets in California and the Northeast.) Rogers maintains that the intangible value of using local architects outweighs the efficiency of centralization.

A Crafty Merger

BSW was born in the waning days of an economic boom in Tulsa, in 1983, when the firms Boyd Broach and Brase Sober Workman merged. The marriage was a strategic one: David Broach had been instrumental in developing pioneering CAD software at Boyd Broach (their system, designed in 1976, was later sold to Bruning and marketed as Bruning CAD), while Brase Sober Workman specialized in multifamily housing. "By joining the two firms, we were able to merge the technology with the design practice that lent itself well to it," explains Broach. The firm worked on speculative office buildings until that

"WE CAN'T AFFORD TO BE WRONG. IF WE MAKE ONE MISTAKE WE MIGHT REPEAT IT 250 TIMES."

market collapsed, and then began to take advantage of the possibilities of CAD by landing clients with ongoing building programs – convenience stores, gas stations, the Mormon church.

But the firm's defining moment came in 1986, when they got a contract to develop a design and production process for 60 Wal-Mart stores. Soon, they had all of Wal-Mart's business, and the firm has been profiting from that company's phenomenal growth ever since. The most recent accounting puts the number of BSW-designed Wal-Marts at over 1,500 (not including the company's Supercenters and Sam's Wholesale Club stores), and the company represents between 60 and 80 percent of BSW's business.

Such dependence on one client is dangerous, suggests Theodore Thomas, president of Arcorp, a St. Louis firm whose clients include K-Mart, a Wal-Mart competitor. "They are in a very precarious position with Wal-Mart. They're not going to be building 300 Wal-Marts a year forever; they're running out of places to put them already."

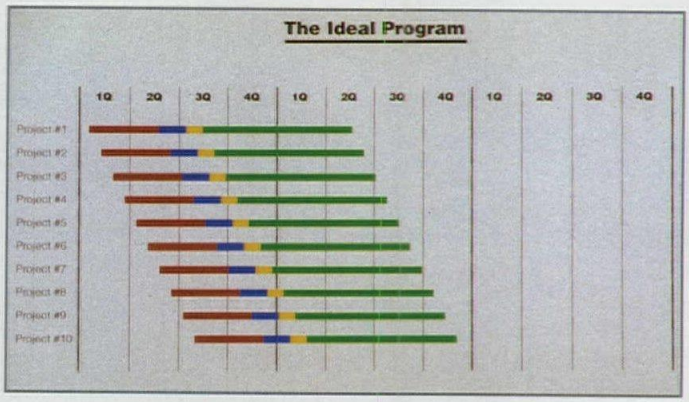
Workman says that both BSW and Wal-Mart prefer the retailer to account for no more than 50 percent of their business: "It's a good thing to say, but it's a very hard thing to do. There aren't many companies like Wal-Mart, that have the volume of work they have. All of our other work is growing like crazy, but it can't keep up with Wal-Mart. Our new business development people have their work cut out for them."

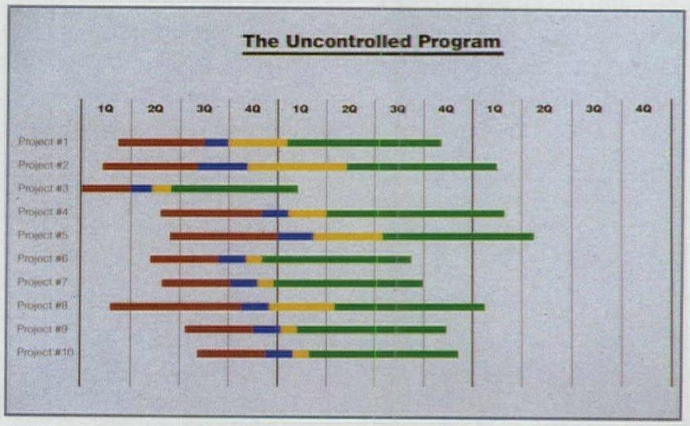
BSW is organized into architectural teams of varying sizes devoted to specific clients. There are currently six teams serving the electronics retailer Circuit City, Marriott's Residence Inns, a McDonald's-owned chain of indoor play facilities called Leaps and Bounds, the Mexican retailer CIFRA, and domestic and international Wal-Marts. General services and business functions for all six teams are provided by common support teams. In the late 1980s, when the firm was still trying to define itself, each team (then called a "studio") was responsible for its own profits, a system that Workman says "gave everybody a fair shot to prove their ideas." But as time went on, it became apparent that people working in start-up ventures made less money, so the profit-sharing plan was instead linked to the performance of the entire company.

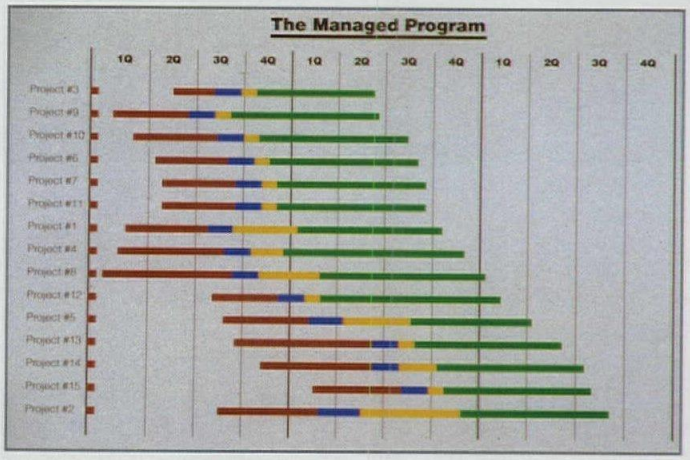
But the organization plan is still important to the firm's operation, as it in effect gives a client company its own "staff" at BSW. Typically, a team will grow in personnel in its early stages, then become smaller as the building program becomes more systematic. People from shrinking teams go on to found new ones.

At the top of the organizational chart are four general principals, three of whom are architects from the original merger: Broach, who is responsible for new business development and international business; Robert P. Sober, who oversees process and business administration; and Workman, who heads up education and training and "continuous improvement." The fourth principal, accountant Harry Lay, looks after strategic finance and planning.

Everyone I spoke to at BSW seemed enthusiastic about the firm. Chris Goble, an architect who came



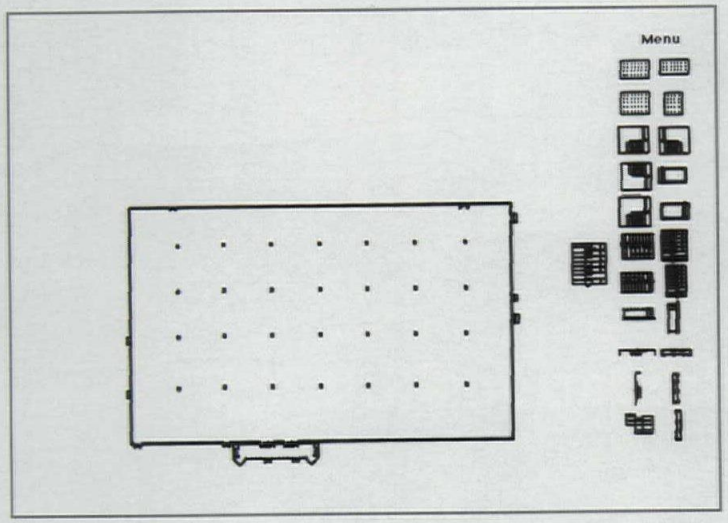


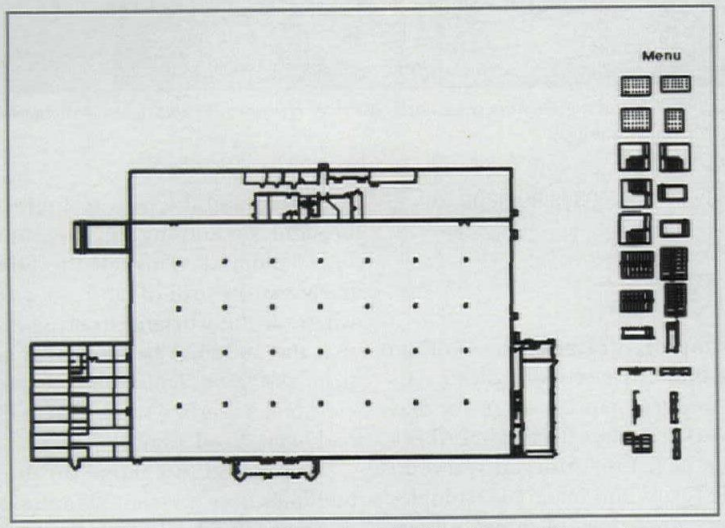


BSW illustrates its approach to ongoing building programs with these three graphs. At the top is an "ideal" program, with real estate activity, design, permit acquisition, and construction for each project occurring on a staggered, predictable schedule. More common, they say, is an "uncontrolled" program (center), with delays and variables throwing schedules off. BSW's "managed" approach, they claim, allows for variables yet still results in a fairly regular completion schedule.

"You know why Sam Walton came to us? He said 'I can't get an architect out here who will treat my building like it's important.'"

to BSW out of college seven years ago, spent five of those years on Wal-Mart (he is now working on the CIFRA prototypes) and says it was "never boring." The repetitive nature of the buildings, he says, "saves you time to work on special conditions and special elevations." But another young Tulsa architect, who was fired from BSW several years ago, says "I didn't feel like any of us there got enough variety of experience. It got old, week in and week out." On the other hand, he adds, "If BSW was not in town, 300 people would be out of work and there would be no AIA chapter."





One form of BSW prototype adds to a basic building box modular components, chosen from a menu to respond to needs of site and market.

Bricks and Mortar as Information

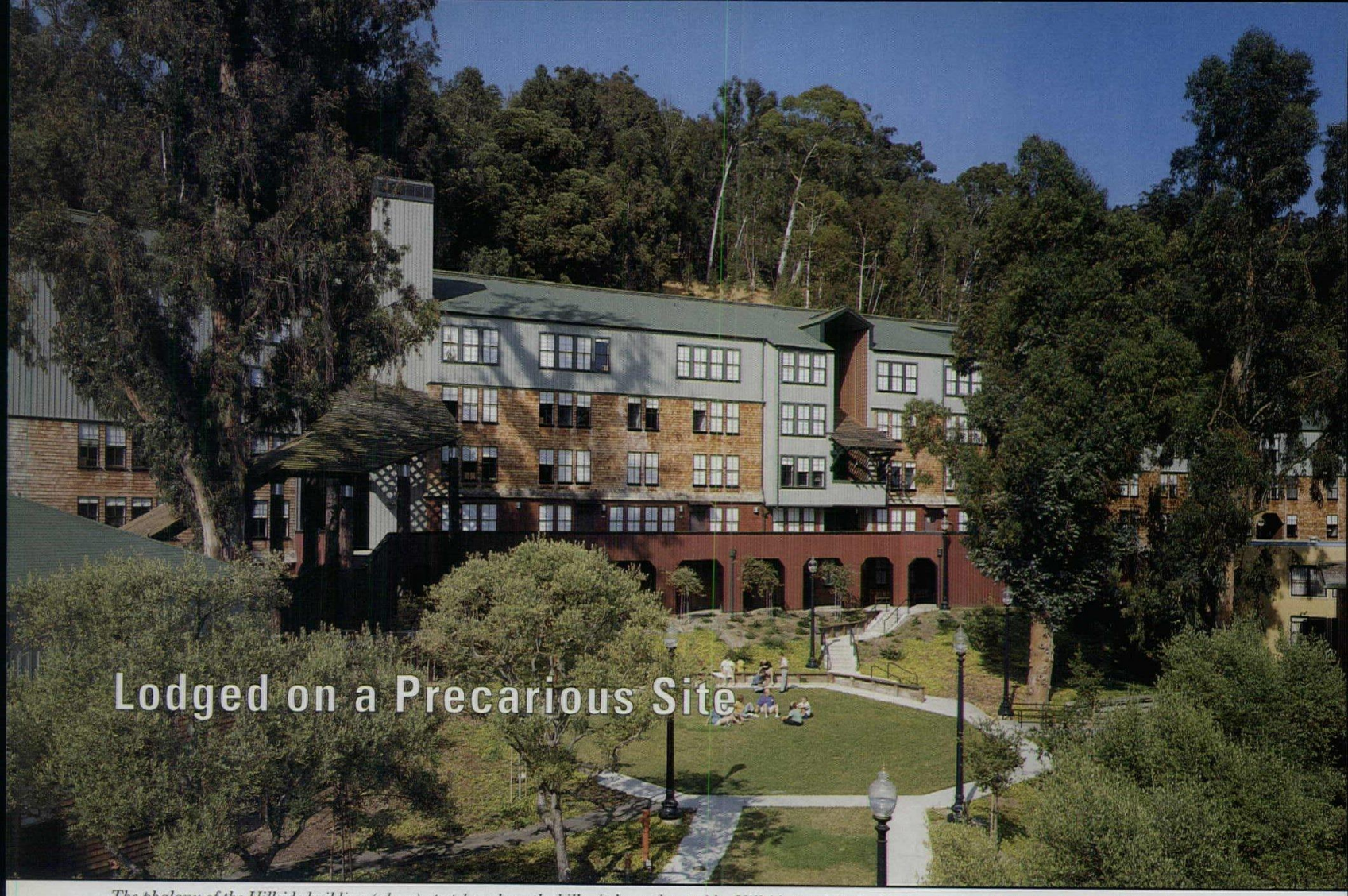
It was explained to me without apparent irony that Robert C. Workman is the "keeper of the vision" at BSW. With the tenacious grin and persuasive manner of a television evangelist, he spoke about the "company" (never the "firm") in language that falls somewhere between salesmanship and spirituality. He dreams of an elaborate education and training program – "a BSW University" – with an internship component comparable to that of doctors. (The firm has 75 interns in the IDP program.) He envisions BSW as a "globally based information management company" with a reach much broader than the practice of architecture as it is traditionally perceived. Among all this heady talk, the subject of bricks and mortar never came up until I observed as much. His reply: "Well, bricks and mortar are just another kind of information."

Already, BSW is testing the waters of expanded services with one of its newest clients, Leaps and Bounds. In addition to architecture and engineering services, BSW will be involved in the real estate end of the project (evaluating sites, arranging for permits, negotiations), in civil coordination, in construction administration, and in management of the building program. Such a plan, says David Broach, is attractive to corporations that are looking to "outsource" activities like real estate development that are not part of their primary business. Broach imagines that "We could handle buildings from beginning to end. We would meet with the client in the beginning, and from that point we'd see them twice: when they come to the city to approve the site, and when they come back to pick up the keys." (As for the "globally based" part, the firm has just opened an office in Mexico City to oversee work in Mexico for Wal-Mart and CIFRA.)

But for all BSW can do, is their success relevant for the rest of the profession? How are they supporting the profession's broader design objectives? In a very small way, BSW and Wal-Mart are beginning to break out of the "cookie-cutter" format; 80 percent of Wal-Marts have special elevations designed for their context.

But could this phenomenal organization and efficiency be applied to truly one-of-a-kind buildings? Therein lies another of Workman's dreams. Much of what BSW has been doing came out of Workman's resolution, early in his career, to "discover what the design process is."

"We've started defining all the processes around the design process," he explains, "the things that other architects aren't giving enough attention to: documentation, construction administration, coordination of the disciplines. And when we get done, the thing left over will be the design process. The journey thus far has been so exciting that we haven't had the need yet to turn our attention to what's left. But it is absolutely our intention to take everything we're doing and apply it to the one-of-a-kind customized project. And when we do, we'll not only deliver a high-quality design project that'll win the aesthetic acclaim of all the architects in the world, but it'll also make good business sense for our clients, come in on budget, and have the finest set of construction documents anyone has ever seen. And everyone attached to that project will win." **Mark Alden Branch** ■



Lodged on a Precarious Site

The phalanx of the Hillside building (above) stretches along the hilly site's northeast side. Hillside (at right in the drawing on the facing page) adjoins the Commons to the left, with the La Loma complex at the top of the drawing.

New student housing on the Berkeley campus pays homage to the Bay Region styles.

The Foothill student housing complex, designed by William Turnbull Associates and overlooking the University of California's Berkeley campus, is the largest and strongest expression of the Bay Region styles to be built in a long time. It employs Bernard Maybeck trellises and colors (a palette of 26 in all), Julia Morgan redwood columns (with the bark left on), simple forms and materials (shingles and board-and-batten), and the small-pane windows of these and less famous architects.

It also represents, as do many of the houses of these Bay Region architects, the ingenious surmounting of very difficult topography. The site, at the upper end of Hearst Avenue, the northern boundary of the campus, was in two parcels. To the north of Hearst was a full city block, except for a corner occupied by a private house. To the south of Hearst was a strip of land ascending the hill and then stretching across the ridge between the campus proper and the Lawrence Berkeley Laboratories farther up.

The first intention was to build the south portion of the complex, called Hillside, up and over the ridge. But somewhat tardy site studies by the university showed that this would put the buildings almost on top of the Hayward earthquake fault. So the siting had to be restudied while design proceeded under a very tight timetable.

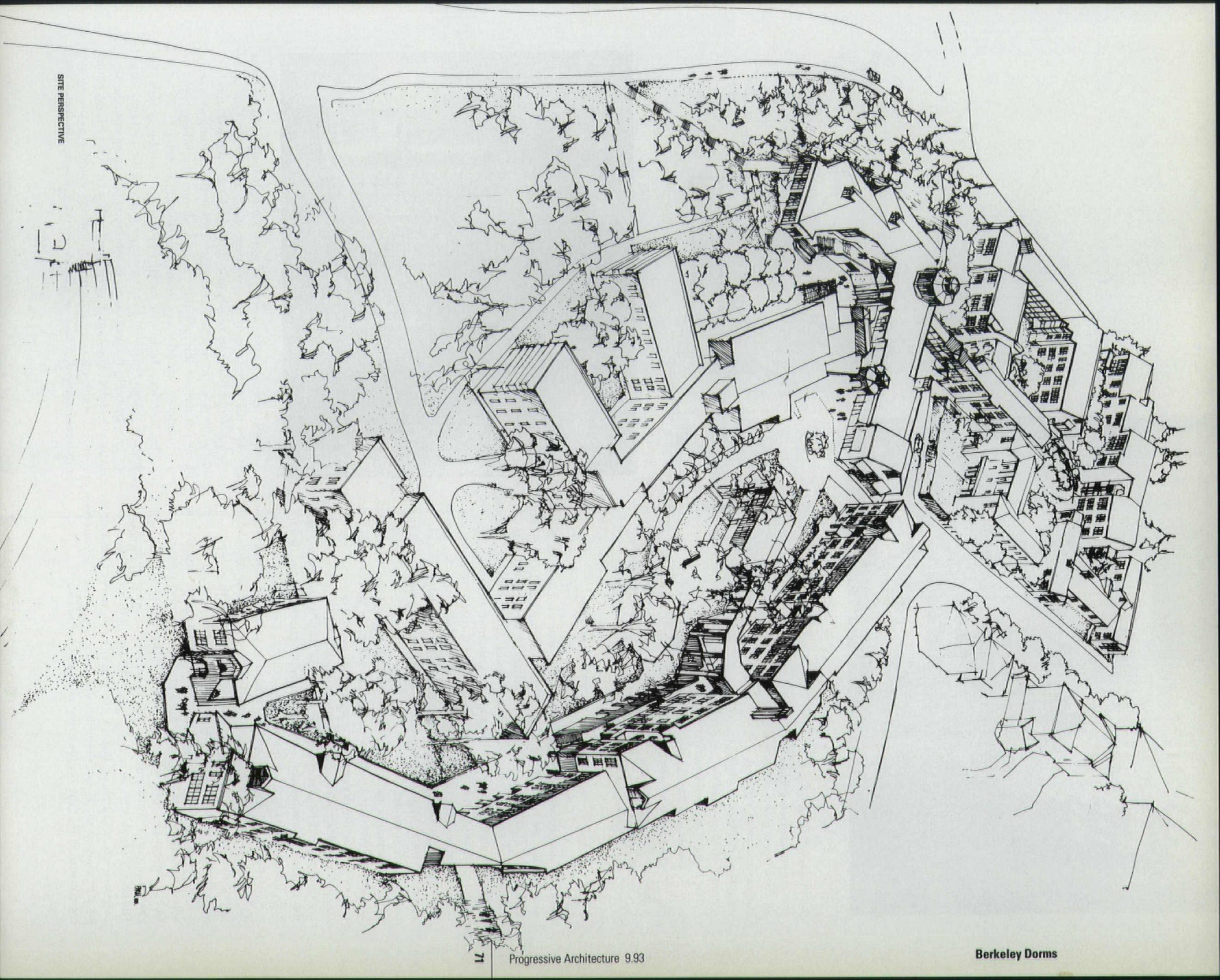
One possibility was to build farther south, but this would have brought the housing too close to the university's Greek Theater, a historic landmark. This left the housing site as a barely adequate, relatively narrow strip of land along the hillside. It became even narrower when, at the working drawing stage, university engineers mandated that the buildings be moved an additional 50 feet down the hill away from the fault. The architects memorialized the event by giving this elevation a scarlike red board-and-batten arc, as if part of the building had been sliced away.

The elevation change on the housing site is up to 70 feet. The buildings here are rooted in the hillside for their first two stories; they sit on modified mat foundations designed to float over potential seismic fissures. Parking for 200 cars, reached by meandering paths, was placed on the uphill side of the fault. The bank behind the buildings was planted with large eucalyptus trees as a "vertical garden."

The dormitories are a commanding presence on the crest of the hill. In addition to expressing their Berkeley heritage the Hillside buildings, housing 400 students, have something of the look of a mountain lodge. Façades are punctuated by gabled stairwells and long sharply projecting balconies at the top floors.

A stringent budget precluded the use of elegant materials. The shingle walls are panelized, the board-and-batten is plywood, and the green ridged roofs that unify the complex are of asphalt shingles. But elegance in materials is not expected of a mountain lodge.

Below the Hillside housing, facing and paralleling the north block across Hearst Avenue, are common facilities including a voluminous



SITE PERSPECTIVE

The Commons (above) as viewed from the southwest side of Hillside is an assemblage of turrets and gables, under some of which are found voluminous dining areas (right). A trellised walkway at Hillside (facing page) sports columns with bark – a nod to a Bay Region style. The site section (right) reveals the dramatic change in elevation across the site from east to west.

SECTION LOOKING NORTH

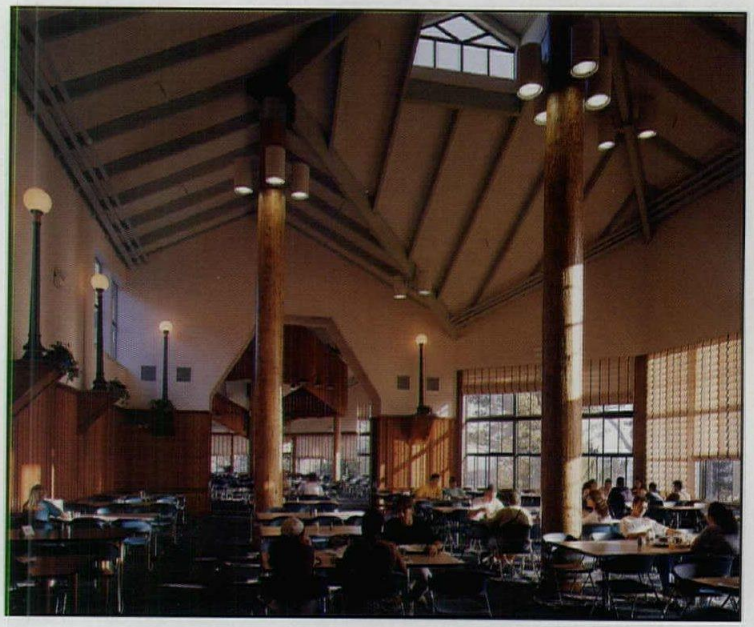
multipurpose room and a dining hall. The latter is positively heroic, with a giant aedicula held on treelike columns, and streetlamps mounted on pedestals around its perimeter. A trellised exterior stairway, flanked by the redwood columns, leads down from the Hillside housing to a recreation building and the Commons beyond.

The Commons has two towers that enliven the view from above and act as landmarks for the complex from below. The smaller is a gazebo-like structure whose only function is decorative. The larger is a soaring rotunda containing the residents' mailboxes, designed as the crossroads of the complex.

The Commons and the Hillside housing wrap around Stern Hall, an earlier dormitory complex designed by William Wurster that is an icon of the Bay Region style. It is as smooth as the Foothill complex is rough-hewn. Foothill steps respectfully back from its older neighbor, creating pleasant open spaces between the two. Where Stern meets the Foothill Commons the conjunction, much studied in the design, is kept from conflict by a terrace serving both and compatible in color.

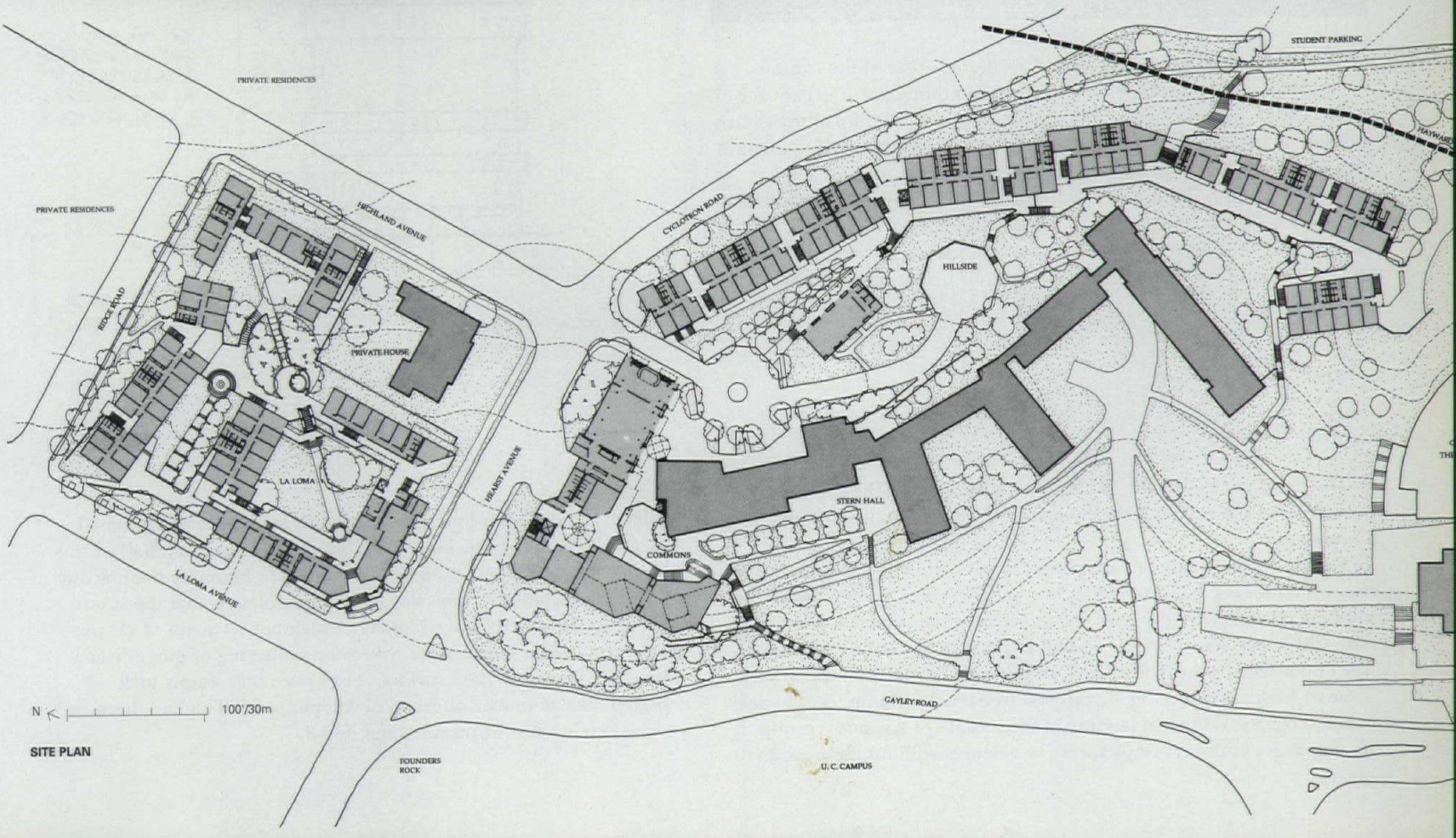
The north block of the Foothill complex, called La Loma, houses 350 students in buildings ringing courtyards set on the diagonal. With minor exceptions, the outside walls of the buildings are shingled and the courtyard walls are board-and-batten. Balconies here are recessed.

Entry to La Loma is at the corner of La Loma and Hearst avenues, where a stairway rises diagonally through the courtyards past stands of trees, some preexisting and some new. It is an inward-turning, urban environment, contrasting with the naturalistic, open character of Hillside. The two sites were to be linked by a pedestrian bridge whose piers are already in place. But the city government, never reluctant to stick a finger in the eye of the university, so far has refused permission for construction of the bridge over the public right-of-way.

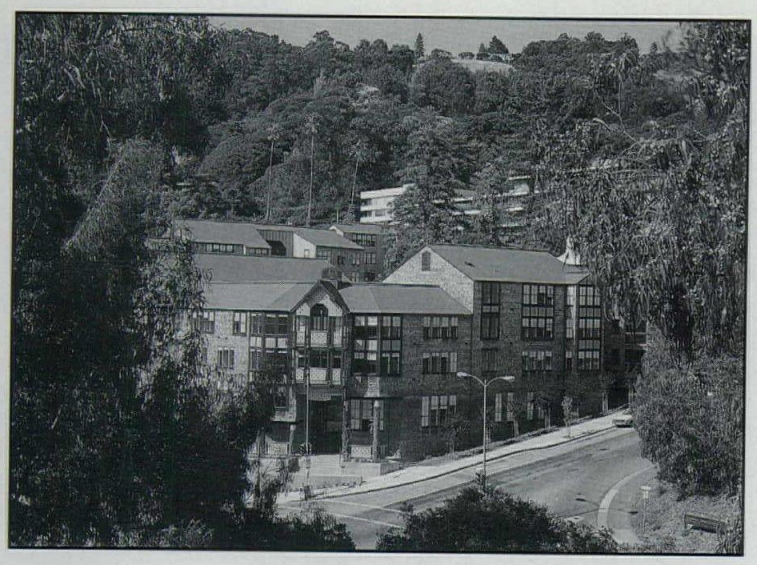


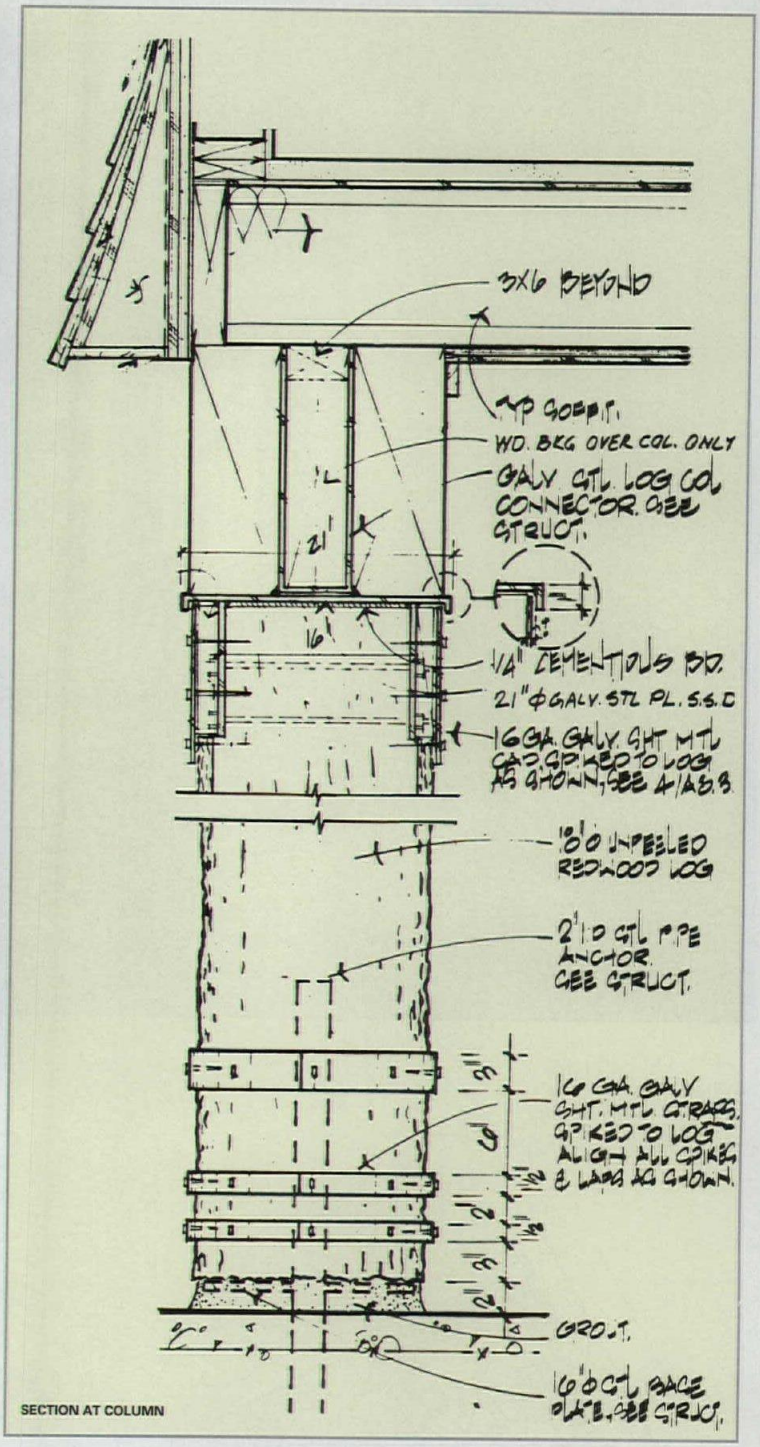
This is unfortunate in several ways. One, it fosters divisiveness between the two parts of the complex and prevents the Commons rotunda from being as much of a crossroads as intended; another, that while pains were taken in design to make the housing as accessible as possible on this site, the complex without the bridge is not in full compliance with the Americans with Disabilities Act.

The absence of the bridge also points up a problem with the almost Tyrolean decoration of the corner entry to the La Loma housing. Left by itself, the ornament is somewhat jarring against the simplicity elsewhere. The bridge, if detailed with a certain whimsy, could provide a soothing complement. The bridge could also be, as the architects intended, a kind of gateway to the Lawrence Berkeley labs


PRIVATE RESIDENCES
PRIVATE RESIDENCES
HIGHLAND AVENUE
ROCK ROAD
PRIVATE HOUSE
LA LOMA
LA LOMA AVENUE
HEARST AVENUE
CYCLOTRON ROAD
STUDENT PARKING
HILLSIDE
STERN HALL
COMMONS
GAYLEY ROAD
FOUNDERS ROCK
U.C. CAMPUS
N
100'/30m

SITE PLAN





SECTION AT COLUMN

up the hill, linking the research and academic areas of the campus.

Student rooms throughout the Foothill complex are organized in suites with common gathering spaces. While all its dormitories are similar in plan and form, they are given individuality by constant changes in color and in patterns of fenestration.

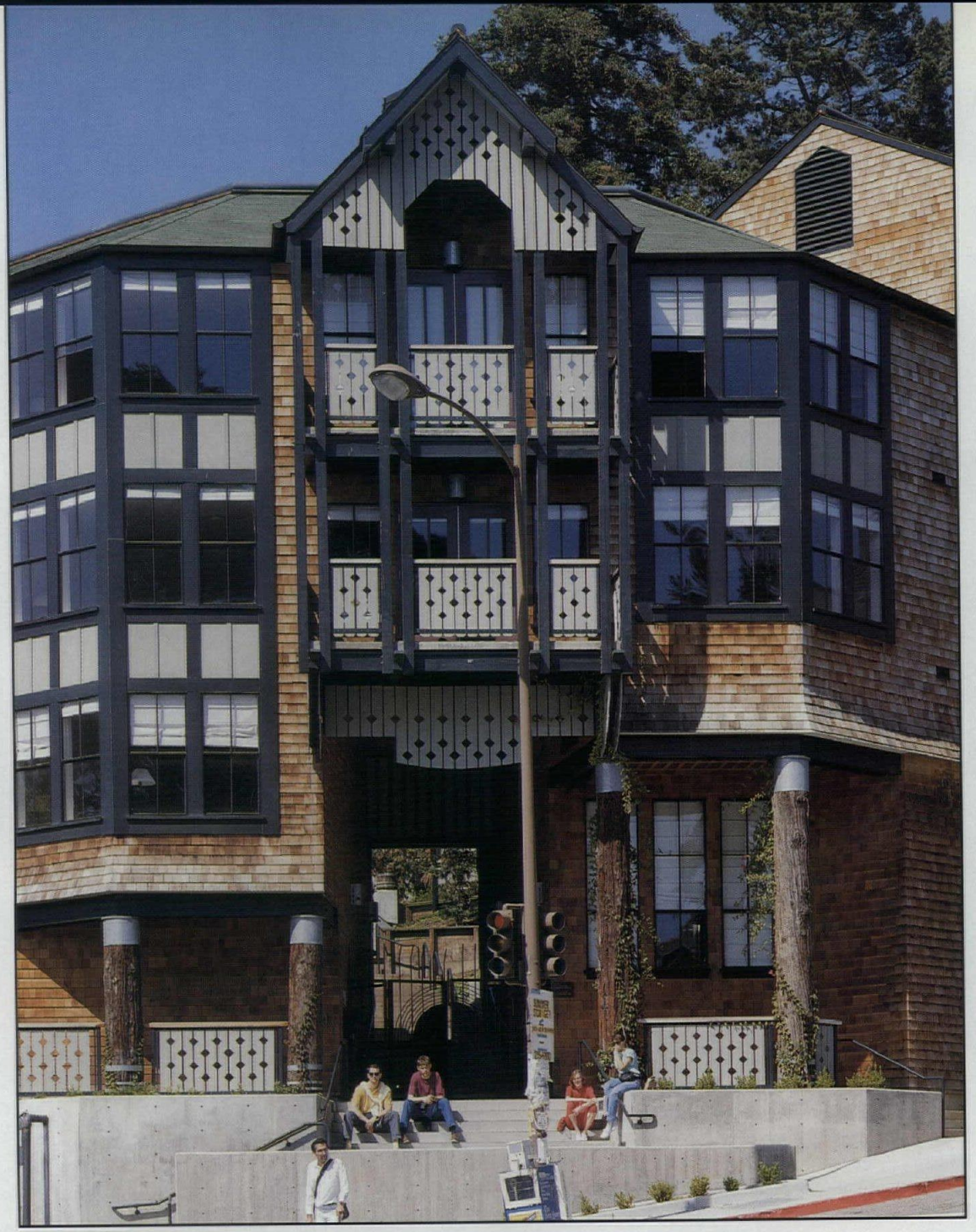
The Foothill buildings are not historicist in emulating any particular previous work. But they build upon the strong regional tradition and sit on the hillside so naturally that they seem to predate some of the earlier Modern buildings on the campus below. **Donald Canty** ■

Other Opinions

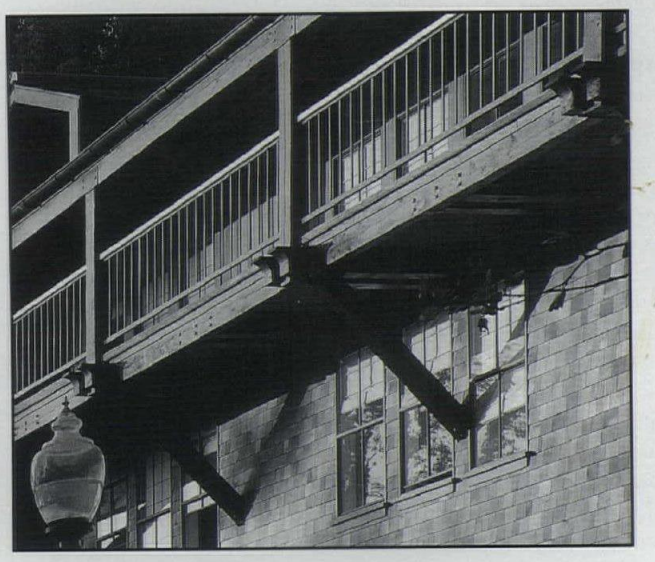
Discussion at P/A of the Foothill complex elicited the following observations from Tom Fisher and from John Dixon, who visited the complex.

Fisher: It is one thing to adapt buildings to the idiosyncracies of a site, which seems well done here, but quite another thing to make the buildings themselves idiosyncratic or picturesque, which is attempted here with much less success. To pull it off, one has to be a bit mad, like Frank Furness or Bruce Goff, or perhaps Bernard Maybeck in some of his work. Here the occasional tree-trunk column, the changes in cladding, the odd strut landing in the middle of a window group (facing page, bottom) are picturesque gestures without the passion to make them work.

Dixon: I think skillful picturesqueness is attainable without madness, and Turnbull has achieved it admirably in the south half of the complex; I rather like the intentional gaffe of blamming the balcony strut into the window group. For me, the problem is that the subtle play between austerity and whim is not maintained north of Hearst Avenue: on the La Loma block, you get a slathering of gingerbread around the entrance, then surfaces elsewhere that simply look deprived, like so much suburban developer stuff. Too bad there isn't a consistent level of inspiration and detail.



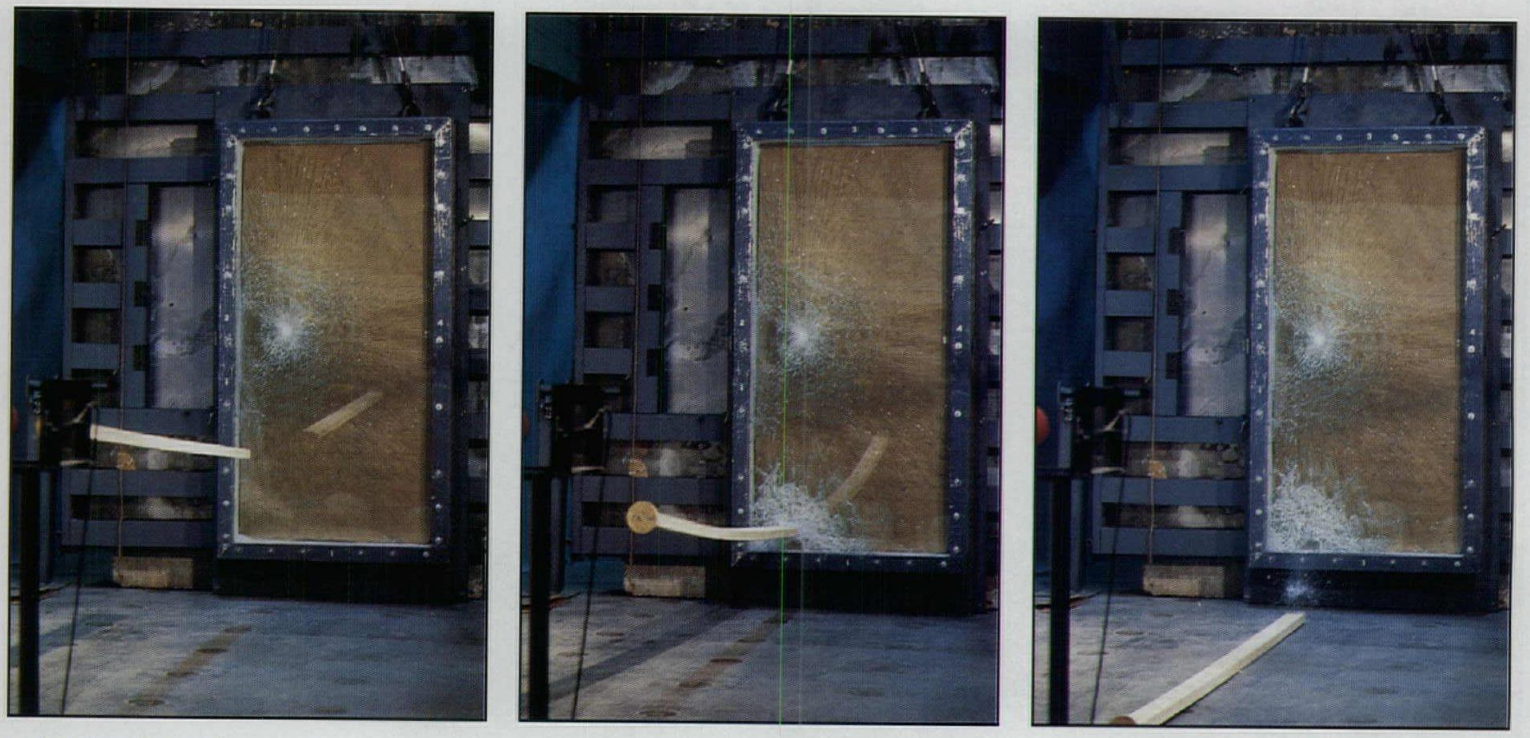
Project: *Foothill Student Housing, University of California, Berkeley.*
Architects: *Design Architects: William Turnbull Associates, San Francisco (William Turnbull, design architect; Christopher Ratcliff, executive architect; Tomas Frank, project architect; Bernardo Urquieta, Marvin Buchanan, design team). Executive Architects: The Ratcliff Architects, Emeryville, California (Larry Biggs, construction manager; Linda Mahle, project manager; Margaret Simon, Alison Strayer, interiors; Jim Goring, Chris Noll, Doug Thornley, job captains; Tom Beil, Tom Blessing, Stephen Holmes, Jon Lebkisher, David Maglaty, Maire O'Neill, Andre Straja, Doug Thompson, project team).*
Site: *residential block and wooded hillside site of 11.5 acres with 70 feet elevation change, overlooking historic campus buildings.*
Program: *Commons building, housing for 750 students, recreation facilities, dining facilities for 1,000, parking for 200 cars.*
Structural system: *mixture of wood frame and steel frame on modified concrete mat foundations.*
Major materials: *panelized cedar shingles, plywood and battens, asphalt shingle roof, anodized aluminum windows, redwood tree columns (see Building Materials, p. 109).*
Mechanical systems: *hydronic heat in suites, forced-air HVAC in Commons; three central gas-fired boiler rooms for both domestic water and heating source.*
Consultants: *Soh & Associates, structural; Gayner Engineers, mechanical and electrical; MPA Design, landscape; Reimer Associates, civil; Wilson Ihrig & Associates, acoustical; Ace Design, signage; Adamson Associates, cost; Rolf Jensen & Associates, codes; McCullough Brown, food service.*
General Contractor: *Lathrop.*
Costs: *$36,408,000; $128 per sq. ft.*
Photos: *Timothy Hursley.*



As it faces the corner of La Loma and Hearst avenues (facing page top, and above) the La Loma complex bursts with colorful ornament. The building's flared shingled skirt hovers above its bark columns (detail, facing page). A diagonal axis through the La Loma complex delivers one to its private corner courtyard (facing page, bottom) at the building's northeast corner. Foothill is not without incongruous details, such as balcony supports butting into windows (left).

Technics | Designing Hurricane-Resistant Glazing

Glazing consultant **Paul E. Beers** reports on new standards for glazing subject to windborne debris. He also discusses their effect on window design.



Laminated glass undergoes large missile impact testing. A 2x4 timber is fired at the test panel at 35 to 55 miles per hour. Panels are also subjected to impacts from ball bearings fired at 88 miles per hour.

Abstract

Glazing in hurricane-prone areas is subjected to both wind and windborne debris, which affect the integrity of the building envelope. Current building codes require glazing to be wind-resistant only. Resistance to windborne debris has never been considered by any of the model building codes, although damage by Hurricane Andrew reveals that windborne debris needs attention. Tests subject glazing to a series of impacts from projectiles to determine its resistance. New codes will require glazing and window design to resist windborne debris.

Hurricane Andrew struck South Florida near the town of Homestead in the early morning hours of August 24, 1992. The damage and destruction to buildings was far more severe than any experienced before in the United States. This resulted in more than $20 billion in losses, with tens of thousands of people left homeless and jobless.

Architects, engineers, consultants, and building officials, representing many different organizations, have investigated the damage inflicted by the hurricane (P/A, June 1993, p. 124). These organizations included the Metro Dade Building Code Evaluation Task Force, the Dade County Grand Jury, the Federal Emergency Management Agency, the Wind Engineering Research Council, the State of Florida Department of Community Affairs, and the Standard Building Code Congress. Virtually every report issued by these organizations identified the loss of windows and doors as a leading cause of damage to buildings. Openings in the building envelope lead to full internal pressurization of the structure, which subjects elements such as walls and windows to forces beyond their design capabilities. Many examples of roof and wall failures during Hurricane Andrew can be traced to the shattering of windows and doors by windborne debris.

Recognizing this failure during Hurricane Andrew, Florida's Dade and Broward counties are in the process of adopting revisions to the South Florida Building Code that will take effect on January 1, 1994. The Standard Building Code, which has jurisdiction throughout most other hurricane-prone regions, has recommended approval of a proposed requirement that glazing be designed and tested to resist impacts from windborne debris. The final vote on such code changes will be next month. All the proposed revisions are similar in requiring

"Building owners are seeking more hurricane-resistant designs, regardless of what future code requirements may be."

Inward Acting Pressures	
P_{max}=maximum *positive* pressure in accordance with SBC 1205	
Range	**Cycles**
$0.0P_{max}$ - $0.3P_{max}$	3740
(-)$0.2P_{max}$ - $0.4P_{max}$	30
$0.2P_{max}$ - $0.5P_{max}$	4500
$0.0P_{max}$ - $0.6P_{max}$	300
$0.5P_{max}$ - $0.8P_{max}$	600
$0.3P_{max}$ - $1.0P_{max}$	100

Outward Acting Pressures	
P_{max}=maximum *negative* pressure in accordance with SBC 1205	
Range	**Cycles**
$0.3P_{max}$ - $1.0P_{max}$	50
$0.5P_{max}$ - $0.8P_{max}$	1050
$0.0P_{max}$ - $0.6P_{max}$	50
$0.2P_{max}$ - $0.5P_{max}$	6850
$0.0P_{max}$ - $0.3P_{max}$	1500

1 CYCLIC WIND PRESSURE LOADING

glazing that can either resist impacts from windborne debris, or be protected with storm shutters that must meet similar performance requirements.

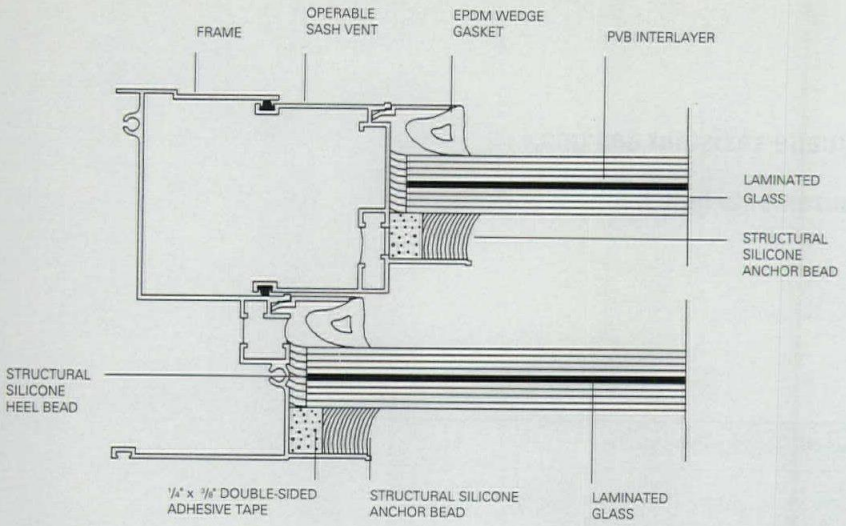
In addition to proposed building code changes, other entities are calling for buildings that are more hurricane resistant. The losses resulting from Hurricane Andrew have caused several insurance companies to go out of business, and most of the large carriers are planning to cancel policies, thus reducing their exposure to future losses in the event of another severe hurricane. The cost and availability of property insurance may soon be governed by the quality of construction. Local and state legislative authorities are also considering actions to strengthen building designs in hurricane-prone areas, and building owners are seeking more hurricane-resistant designs, regardless of what future code requirements may be.

The availability of impact-resistant windows and glass should appeal to architects and the building community. These systems provide passive protection in that they are always in place and do not require any special preparation as a storm approaches. They provide greater design flexibility and fewer installation problems than shutters. The appearance of the building also remains unchanged with impact-resistant windows, while shutters may be considered visually obtrusive.

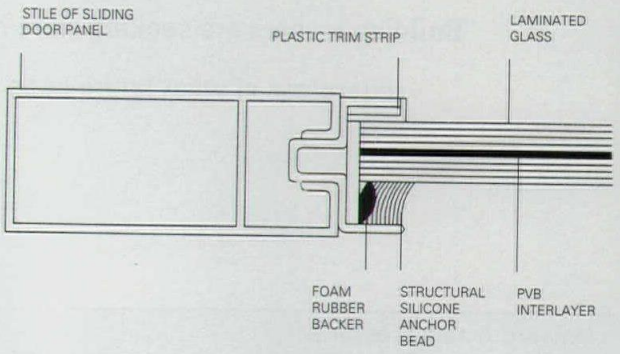
Glazing Testing

Each proposed code revision is grounded in a performance standard and tests, based on the theory that large windborne debris or "missiles" are present at a building's lower elevations and small missiles at higher elevations. Buildings are divided into two zones: the first 30 feet is the large-missile zone, and above 30 feet is the small-missile zone. The large-missile test consists of firing a nine-pound 2x4 timber at the test assembly at speeds between 50 and 80 feet per second (approximately 35 to 55 miles per hour). The test specimen is hit twice, once in the center and once within six inches of a corner. The small-missile test consists of firing steel ball bearings about the size of roof gravel at the assembly at 130 feet per second (approximately 88 miles per hour). The test specimen receives 30 impacts from the small missiles, 10 at the center, 10 within six inches of a corner, and 10 within six inches of an edge. In both tests, after the specimen has been hit it is subjected to a series of pressure

1 *Tables list the range of inward and outward pressure that glass test panels are subjected to. The pressure spectrum is applied to each test specimen beginning with the inward acting pressures followed by the outward acting pressures in the order from the top of each column to the bottom of each column.*



2 WINDOW JAMB



3 SLIDING DOOR STILE

2 *Jamb detail of single-hung window with laminated glass for impact resistance.*
3 *Detail of sliding door stile with laminated glass for impact resistance.*

cycles (1) that have been modeled after actual hurricane wind pressure conditions. The pressure spectrum consists of approximately 18,000 cycles.

Hurricane-Resistant Window Design

Windows can be designed to resist impacts from windborne debris and to maintain the integrity of the building envelope. This requires glazing that will remain intact, even if it is fractured by windborne debris. Laminated glass is one material that meets this criterion; annealed, heat-strengthened, and tempered glass will not.

The glazing must also be anchored to the window frame to avoid fallout during hurricane-force wind loads that will be encountered after the glass cracks. This can be accomplished with a structural silicone anchor bead that, in effect, glues the laminated glass to the frame (2, 3).

Research and development are currently under way by many window and door manufacturers to adopt existing commercially available materials, such as laminated glass, into their framing systems. These designs are being tested in accordance with the proposed code revisions outlined above.

Architects wishing to specify impact-resistant windows and doors should use a performance standard, such as the one proposed to the Standard Building Code, and require the submittal of test results indicating compliance with the specified criteria. By the time this article appears residential products will be available that have been designed and tested for resistance to windborne debris. For commercial projects with custom glazing systems, currently available materials can be used for impact-resistant designs. All custom designs should be tested prior to approval for use on a particular project.

Hurricanes do occur, and windborne debris is present in hurricane-force winds. Architects should take this into account, regardless of building code requirements. The technology and materials for better window and glass designs are currently available and their use will provide safer, more resilient buildings. The new code requirements, along with greater public awareness of how to prepare for a hurricane, will help avoid damage such as that caused by Hurricane Andrew. **Paul E. Beers** ■

The author is President of Glazing Consultants, Inc., in North Palm Beach, Florida, and specializes in glass, windows, sliding glass doors, curtain walls, and water leakage. He has testified before various building code authorities regarding windborne debris in hurricanes. He is a member of ASTM, the American Architectural Manufacturers Association, and serves on the panel of arbitrators for the American Arbitration Association.

Recommended Reading

Beers, P.E., "The Lasting Effects of Hurricane Andrew," *Glass Magazine,* Vol. 43, No. 4, April 1993, pp. 24–31.

Letchford, C.W. and Norville, H.S., "Wind Pressure Loading Cycles for Wall Cladding during Hurricanes," Glass Research and Testing Laboratory, Texas Tech University, 1993.

Minor, J.E., Beason, W.L. and Harris, P.L., "Designing for Windborne Missiles in Urban Areas," *Journal of Structural Design,* ASCE, Vol. 104., No. ST11, November 1978, pp. 1749–1760.

Minor, J.E. and Behr, R.A., "Architectural Glazing Systems in Hurricanes: Performance, Design Criteria and Designs," 7th National Conference on Wind Engineering, University of California, Los Angeles, June 27–30, 1993.

Minor, J.E., "Windstorm Damage," *Glass Digest,* Vol. 71, No. 10, October 15, 1992, pp. 33–34.

Norville, H.S. and Beers, P.E., "Wind Does Not Break Window Glass," P/A, April 1992, pp. 148–152.

Pantelides, C.P., Horst, A.D. and Minor, J.E., "Post-breakage Behavior of Architectural Glazing in Windstorms," *Journal of Wind Engineering and Industrial Aerodynamics,* Vols. 41–44, 1992, pp. 2425–2435.

Pantelides, C.P., Horst, A.D., and Minor, J.E., "Post-breakage Behavior of Heat Strengthened Laminated Glass Under Wind Effects," *Journal of Structural Engineering,* Vol. 119, No. 2, February 1993, pp. 454–467.

Technics Topics | Rating Fenestration for Energy Efficiency

Wood technologist **Ric Markway** discusses the role of the National Fenestration Rating Council.

The grading of windows and doors by the National Fenestration Rating Council (NFRC) opens a new era regarding the energy efficiency of fenestration products. For the first time, architects, designers, and other specifiers will find themselves on a level playing field when it comes to comparing the thermal performance of fenestration products. Although only one state, California, now requires the use of fenestration products that have gone through the NFRC's simulation and testing procedures, five other states will soon be doing so, including Washington, Alaska, Oregon, Idaho, and Wisconsin. Others will follow suit; Florida, Arizona, Texas, Louisiana, New York, Massachusetts, and Colorado have shown interest.

Exactly what does this mean to architects? The NFRC, which was established last year, has developed a procedure to determine accurately the U-value of fenestration products. Under the NFRC program a number of independent simulation and testing laboratories have been approved. These laboratories are charged with the responsibility of determining whether products conform to the U-values represented by the manufacturers.

Rating Procedure

The first step in the process is for the manufacturer to present product information to the computer simulation laboratories. The labs run computer checks, based on glazing options, across the entire line of products to obtain projected U-values for each product in the line. The computer simulation for those products showing the highest and the lowest U-value is then checked in actual physical tests performed by certified testing laboratories. If the tests come within 10 percent of the values established by simulation, the entire product line can be certified. Independent agents, such as the National Wood Window and Door Association and the California Association of Window Manufacturers, evaluate and compare the data from the simulation and testing laboratories and attest to their accuracy.

Once the process has been completed, the manufacturer is authorized to label its entire line. The label (right) affixed to each product identifies that product and shows its U-value. A number of manufacturers have already begun the process of simulating, testing, and certifying their product lines – a procedure that can cost thousands of dollars depending on the number of products.

In addition to evaluating U-value, the NFRC has also established guidelines for measuring solar heat gain. Thus far, southern states have shown considerable interest in the results of this program – more than that evinced for the U-value program. It is only logical that U-values would be of more concern to northern states.

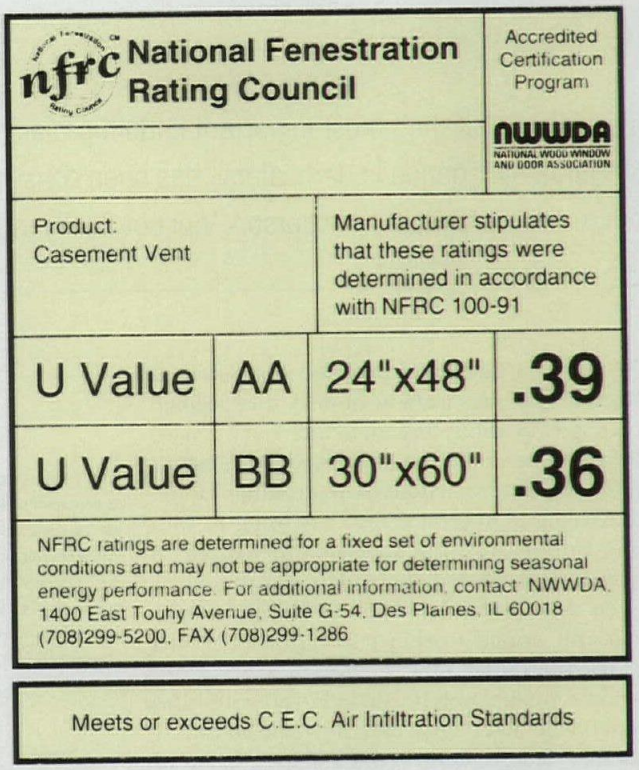
Rating Benefits

The biggest advantage to architects is that for the first time there is a consistent basis on which to evaluate the energy properties of fenestration products. At this point it is not yet clear what U-values individual states will require. But once other states come on board, it is likely to have a domino effect. Eventually, most states will have some energy standards for fenestration products, and thus far the NFRC program appears to be the likely arbiter of those standards.

Even though only a handful of states are now on the bandwagon or about to jump on, several significant advantages might already be used by architects. Several utilities, for example, offer incentive or rebate programs for the use of energy-efficient products. These utilities need a consistent way of measuring energy efficiency and are looking at NFRC's program to provide that yardstick. The labeling will help an architect guide clients in the selection of energy-efficient fenestration so that they can take advantage of such rebate programs. Manufacturers with NFRC-certified products are permitted to display the council's certification seal in their advertising and on their products.

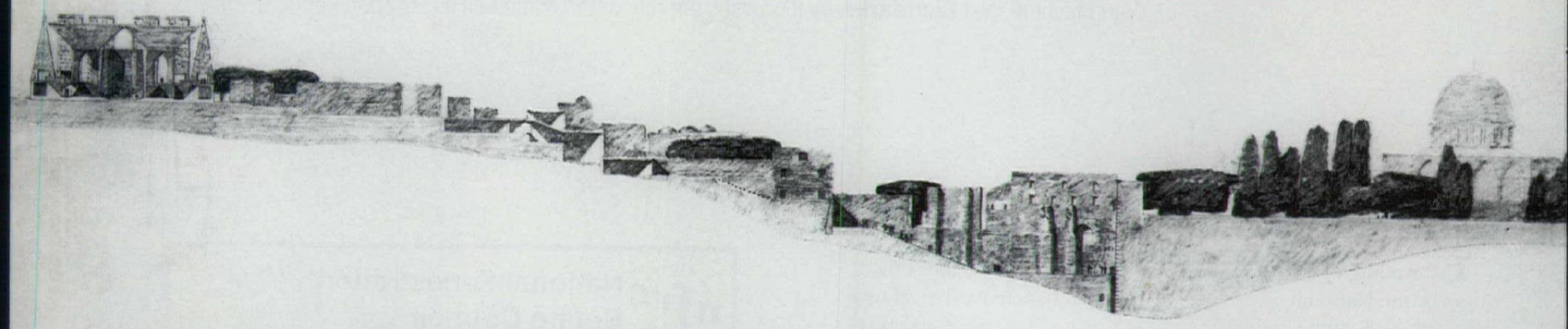
But the biggest advantage will be the establishment of an unbiased system under which all products are measured equally. It will allow architects to choose those fenestration products that best meet their needs, with assurance that these products have been tested against an established set of criteria. **Ric Markway** ■

The author is the manager for technical services at the National Wood Window and Door Association. A version of this article appeared in that association's publication, Window & Door Specifier. *For more information about the NFRC, contact NWWDA at 708-299-5200.*



The NFRC label used on fenestration products will show the product name, the U-value for various sizes, the name and number of the manufacturer, and the independent agent who certified the results of the simulation and testing programs.

A Virtual Landmark



One of Louis I. Kahn's most important unbuilt projects, the Hurva Synagogue in Jerusalem, has been constructed in the computer by architect Kent Larson. Vincent Scully introduces the subject.

It is true that Lou Kahn despised computers, if only because the statistical way of work they seemed to encourage was wholly foreign to him, but it is hard to believe that he would not have loved Mr. Larson's computer graphic projections of his drawings for the Hurva Synagogue in Jerusalem. They bring us with startling fidelity into the space Kahn wanted to make, most of all into its light, and there Kahn might have seen that the kind of light he associated with Jehovah and hoped to shape for Him was really going to be there after all.

From the great pastels he did in Egypt in 1951 it is apparent that it was in Egypt that the shape of divinity first became clear to Kahn. It was a shape created by light – more than that, it *was* light – and, as it evoked the wholeness of Jehovah's being, so was it also silent, engulfing all mortal voices, all natural sounds.

When Kahn came to Gizeh and drew his brooding and resonant studies of the pyramids there he wrote a poem about them, calling them the Sanctuary of Art, of Silence, and of Light. He knew that their gleaming slopes once reflected the sun's rays across the whole Egyptian plain, and even in their denuded state he caused the sun to cast them at times into fierce shadow and blinding light. They were more than Re to him, all light and silence. It seems true, too, that all the remains of ancient Egypt, which Kahn visited while the state of war between Egypt and Israel was in one of its most bitter stages, suggested his Jewishness to him, as if he were there with Moses before the Exodus began. The thick columns standing before the temple walls at Karnak in his pastel became the swelling cylinders of the Mikveh Israel Synagogue project, where light would have been filtered through their hollows to fall in long shafts across the major meeting room within. Two principles that were to become central in Kahn's work were set up there: that of the layering of walls and that of the ruin. The voids in the masonry shell were drawn without glass. Indeed glass, however detailed, would have been out of place in them.

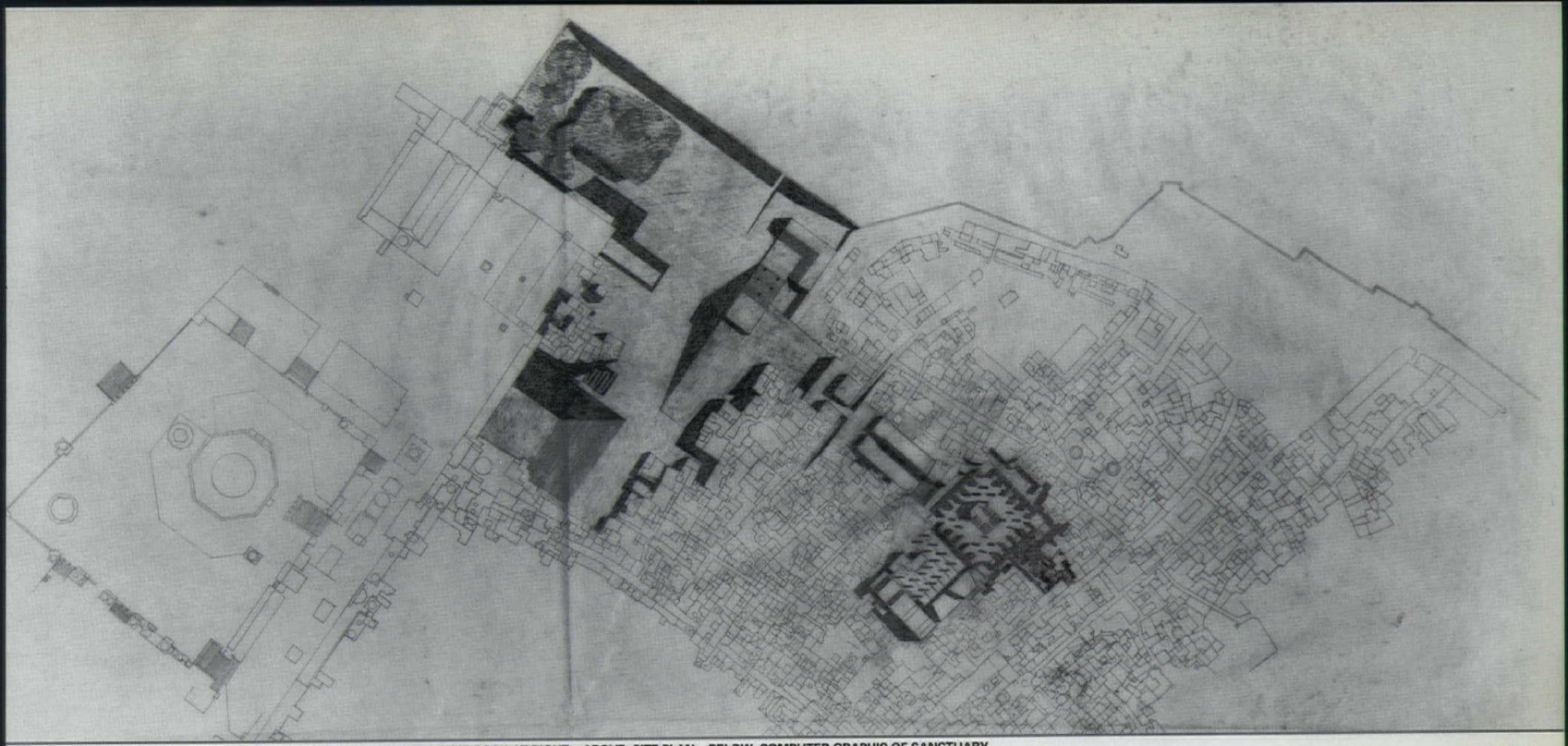
"It is quite clear that your conception of the new Hurva is tremendous...it envisages a spiritual shrine for the whole of Jewry. It is far greater than anything I had in mind." *–Letter, Yaacov Solomon to Kahn, August 25, 1968, (LIK 39)*

"It has been a long time since a single subject such as your plans for the Hurva has aroused as wide a response, and this, of course, not only in Jerusalem but throughout the country. The decision concerning your plans is essentially a political one. Should we in the Jewish quarter have a building of major importance which "competes" with the Mosque and the Holy Sepulchre, and should we in general have any building which would compete in importance with the Western Wall?" *–Letter, Teddy Kollek, Mayor of Jerusalem, to Louis I. Kahn, August 29, 1968, (LIK 39)*

The problem of introducing glass into the voids between the solids in the Hurva project would have been even more severe. The outer wall, if it can be called that, is built of grouped piers, tapered like Egyptian pylons and constructed of the same stone as Jerusalem's sacred wall. How could glass have been fitted between them? The inner shapes, of cast concrete, all jagged and chaotic, would have been even harder to tame with glass, but the roof slabs that grow out of them do not reach the outer piers, so that everything seems intended to stand free of everything else, like ruins of several ages unroofed in the desert. Perhaps the basic problem of enclosure is the major reason that Kahn went on to other studies of the Hurva project in which the central meeting room would have been easier to glaze, if necessary, and some sort of roof stretched out to the piers.

Still, one cannot help feeling that the first scheme was the one that did what he really wanted it to. Its exterior mass, as seen in Kahn's great landscape perspective of it in relation to the skyline of the city as a whole, balances the Dome of the Rock far off with a much more ancient form, out of a millennium long before Christianity and Islam were born. Its monumental outer forms do indeed suggest the pylons of Egyptian temples of Moses's time, like those Kahn so passionately recorded in his pastels. They stand out in space like ruins surrounding ruins. The sun slashes between them to light the broken inner planes in jagged strokes like those Kahn once striped across the columns at Luxor, while the wider intervals between them show the blaze of empty sky where God's larger silence blinds our eyes. **Vincent Scully** ■

The author is Sterling Professor Emeritus of the History of Art at Yale and Distinguished Visiting Professor at the University of Miami.



FACING PAGE: SITE SECTION, SYNAGOGUE AT LEFT, DOME OF THE ROCK AT RIGHT ABOVE: SITE PLAN BELOW: COMPUTER GRAPHIC OF SANCTUARY

Hurva could have been Louis I. Kahn's greatest building. It was to be the foremost religious monument of Judaism, described by Jerusalem's Mayor Teddy Kollek as the "World Synagogue" (LIK 39). It was Kahn's first opportunity to build in the center of the ancient world, whose monumental ruins had captivated him in his youth. It was a chance to work with the intense light of the desert, rendered so powerfully in his travel sketches of Egypt years earlier. Hurva was one of Kahn's few opportunities to give expression to his concept of "assembly" – where people could "transcend individual concerns." Shortly after presenting his first design for Hurva, Kahn wrote, "The idea which motivated the design ... came from inspirations never before felt " (LIK 39).

Most well-known works of unbuilt architecture – Kahn's Mikva Israel Synagogue or Ledoux's House of the Surveyor, for example – have compelling perspective drawings which communicate three-dimensional form and materials. Hurva receives little attention in books and exhibits because no such image exists; it has been understood only two-dimensionally. The complex play of light within powerful spaces must be seen if one is to appreciate Kahn's vision. The images on these pages are an attempt to capture something of the essence of Kahn's Hurva.

We will never know how Hurva would have been completed: details such as railings, floor finishes, and concrete ties were not delineated and had to be extrapolated from contemporary projects. Kahn left only schematic ideas for Hurva, but these are brilliant, clear ideas. There has been a renewed interest in Kahn's work in the last few years, no doubt because it offers a refuge from the rapidly changing fashions of contemporary architecture. In Kahn's best buildings we experience a raw, powerful but perfectly controlled emotion, as with a master musician. Sadly, Kahn died at the height of his career and left much of his best work unbuilt. Hurva was certainly the greatest of the unbuilt.

The old Hurva, destroyed in the war of 1948, was the major synagogue of the old city of Jerusalem. It stood on the hill west of the Dome of the Rock, and was itself built on top of the ruins of a series of previously destroyed synagogues. (Hurva means "ruin" in Hebrew.) Soon after the Jewish Quarter came under Israeli control in 1967, Ram Karmi was approached to build a new Hurva. (See Ram and Ada Karmi's Supreme Court Building, P/A, April 1993.) To his credit, Karmi declined the commission, saying that only Louis I. Kahn should undertake such an important and challenging project. Kahn conceived of the new Hurva as the third great religious monument of Jerusalem, to take its place with the Muslim Dome of the Rock and the Christian Church of the Holy Sepulchre. Kahn was clearly inspired by the location. Sixteen massive pylons of Jerusalem stone enclose the building and recall some ancient monumental ruin. This is his clearest expression of what he called "ruins wrapped around buildings," also seen at the Salk Institute, the Dhaka Capitol, and less literally at the Exeter Library. His beautiful pencil drawing of the site (p. 80) places Hurva confidently on the skyline of Jerusalem, balancing the prominence of the Dome of The Rock.

"I RECEIVED YOUR LETTER WITH JOY TO KNOW THAT I HAVE BEEN HONORED TO EXPRESS THE SPIRIT OF HISTORY AND RELIGION OF JERUSALEM THROUGH MY DESIGN (OF THE HURVA) AND ITS ENVIRONS.... THE IDEA WHICH MOTIVATED THE DESIGN I SUBMITTED FOR YOUR APPROVAL SOME MONTHS AGO CAME FROM INSPIRATIONS NEVER BEFORE FELT. THIS DESIGN CAME SPONTANEOUSLY THOUGH IT TOOK MANY DAYS AND MANY HANDS TO DEVELOP."
–Letter, Louis I. Kahn to Yehuda Tamir, Ministerial Committee for Jerusalem, March 28, 1969, with copies to Teddy Kollek, Yaacov Solomon, and Ram Karmi, (LIK39)

"THE PRIME MINISTER IS QUITE EXCITED BY YOUR PLANS, BUT HE WOULD LIKE TO SEE ITS EXECUTION PUT OFF FOR SEVERAL YEARS.... I DO NOT SHARE THE PRIME MINISTER'S VIEWS. WERE IT NOT FOR OTHER TREMENDOUS WORRIES ... INCLUDING SECURITY MATTERS, HE WOULD HAVE BEEN WHOLEHEARTEDLY WITH US."
–Letter, Yaacov Solomon to Kahn, October 30, 1969, (LIK 39)

"THE OUTSIDE OF THE BUILDING BELONGS TO THE SUN, THE INTERIOR BELONGS TO THE SHADOWS. IT IS A PLACE WHERE PEOPLE LIVE.... I AM USING THE STONE OF THE WESTERN WALL, AND INSIDE IS A CONCRETE STRUCTURE." *–Louis I. Kahn,* What Will Be Has Always Been, *p. 217*

The seemingly simple, perfectly symmetrical plan results in a complex series of multilayered spaces. Inside and detached from the stone pylons is a different world – an inner "silver" sanctuary called the Beis Midrash, or "House of Learning." The space is enclosed by four hollow concrete towers supporting the four sections of a massive concrete ceiling "that unfold like leaves of a tree," an appropriate analogy given Kahn's notion that "learning first began with a man under a tree." In the exact center is the *bima* for the reading of the Torah, surrounded by seating for an intimate daily service of 200. During the larger services, the space between the towers and beyond become a Beis Knesset, or "House of Assembly," where the crowds of the high holy days could gather comfortably. The zone between the stone pylons and the concrete towers is a fascinating space, where the tapering pylons and sloping ceiling planes never quite touch – where the harsh light is filtered, where openings in the concrete provide glimpses into the inner synagogue, and gaps between thc stone pylons allow views out to the old city. The stone pylons have niches on each of two levels – small chapels to receive objects from the great synagogues of the world.

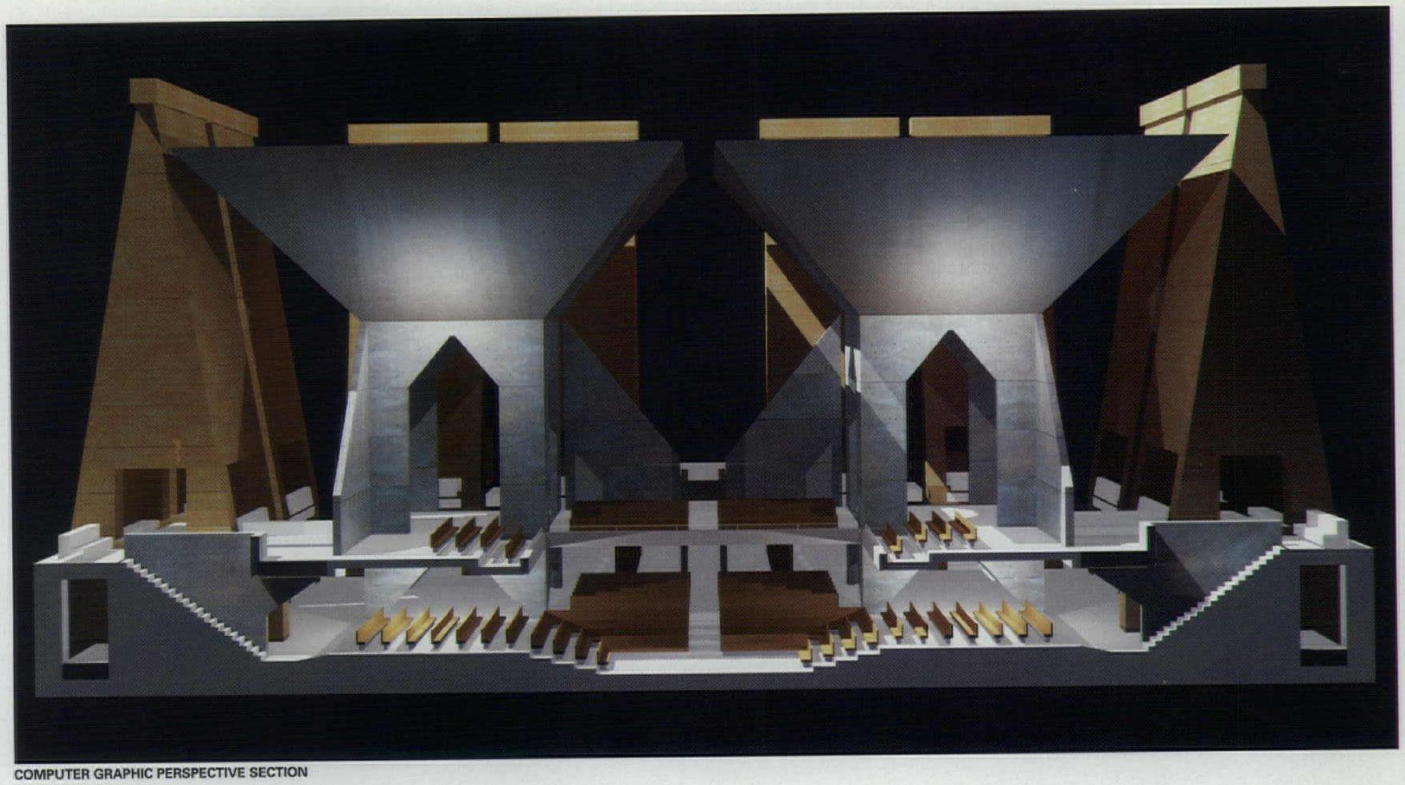
Kahn's initial proposal stimulated much interest and controversy in Israel. It was discussed in the Knesset, displayed at the Israel Museum, and widely covered in the press. The debate focused on whether the old city of Jerusalem (and Hurva in particular) should be reconstructed and preserved as a living museum, or whether new works such as Kahn's should be permitted as symbols of the continuity of Judaism into the future. Ultimately the Prime Minister, while expressing support for the proposal, decided that the project should be placed on hold for several years in light of Israel's many pressing needs.

Between 1969 and 1972, Kahn developed two additional proposals, each with stone pylons similar to the first. The second had a radically different inner sanctuary – massive concrete walls that curved outward at the top; although far easier to glaze, it lacked the dynamic and complex spaces of the first. In his final proposal (p.83), Kahn returned to a variation of the initial design, with smaller concrete towers, better sight lines, and sloping ceiling planes pierced by horizontal cylindrical openings. Those involved in the process, however, primarily recall Kahn's first proposal, shown on these pages. Toward the end, Kahn shifted his efforts to the design of a memorial garden adjacent to the new Hurva and built around thc ruins of the old. It was Teddy Kollek's hope that a successful completion of the garden would permit Hurva to be approved. Kahn died in the midst of this process, with a trip to Jerusalem scheduled for only weeks after his death.

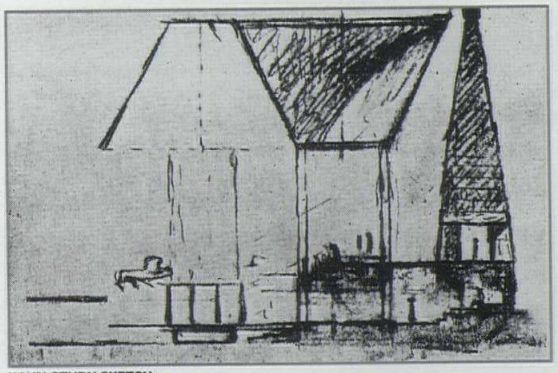
The debate over what to do with the Hurva site has continued during the nearly 20 years since Kahn's death. Hurva remains a ruin to this day.

Kent Larson ■

Note: All quotations indicated by LIK 39 are from the Louis I. Kahn Collection, University of Pennsylvania and Pennsylvania Historical Society and Museum Commission.



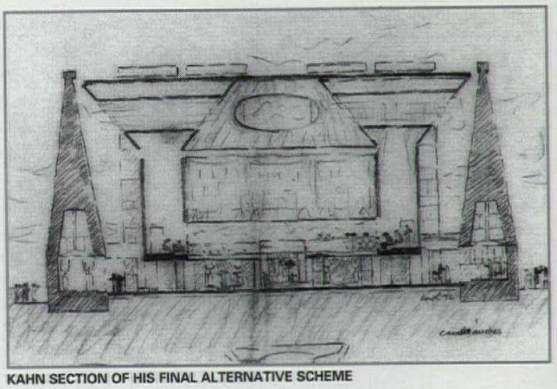
COMPUTER GRAPHIC PERSPECTIVE SECTION



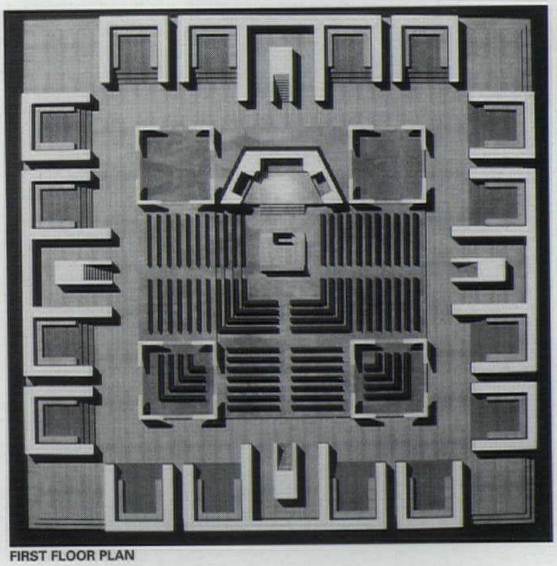
KAHN STUDY SKETCH

"We cannot proceed as yet on the Hurva project .... but we know that one day, if anyone can do it, you will." *–Letter, Teddy Kollek, Mayor of Jerusalem, to Louis I. Kahn, July 9, 1973, (LIK 39)*

"I find that I must visit Jerusalem to spend time on the site of the Hurva, be in your company, and think about the whole thing in the presence of everything around it ....I tried to design the garden. A garden is a very special thing.... Please expect me in Jerusalem within two months or so."*–Letter, Louis I. Kahn to Teddy Kollek, January 7, 1974, (LIK 39)*

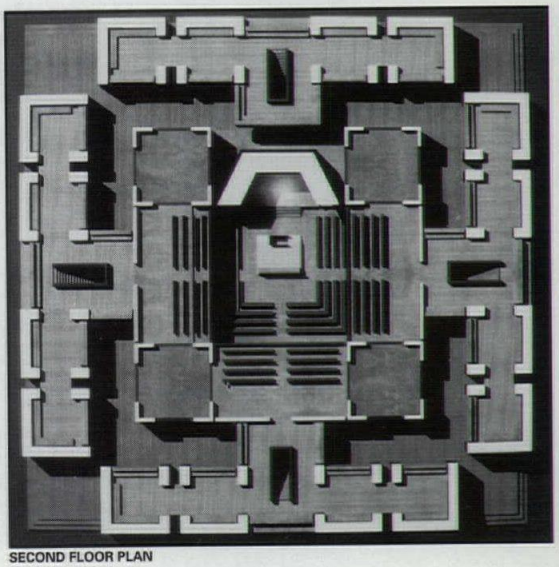


KAHN SECTION OF HIS FINAL ALTERNATIVE SCHEME

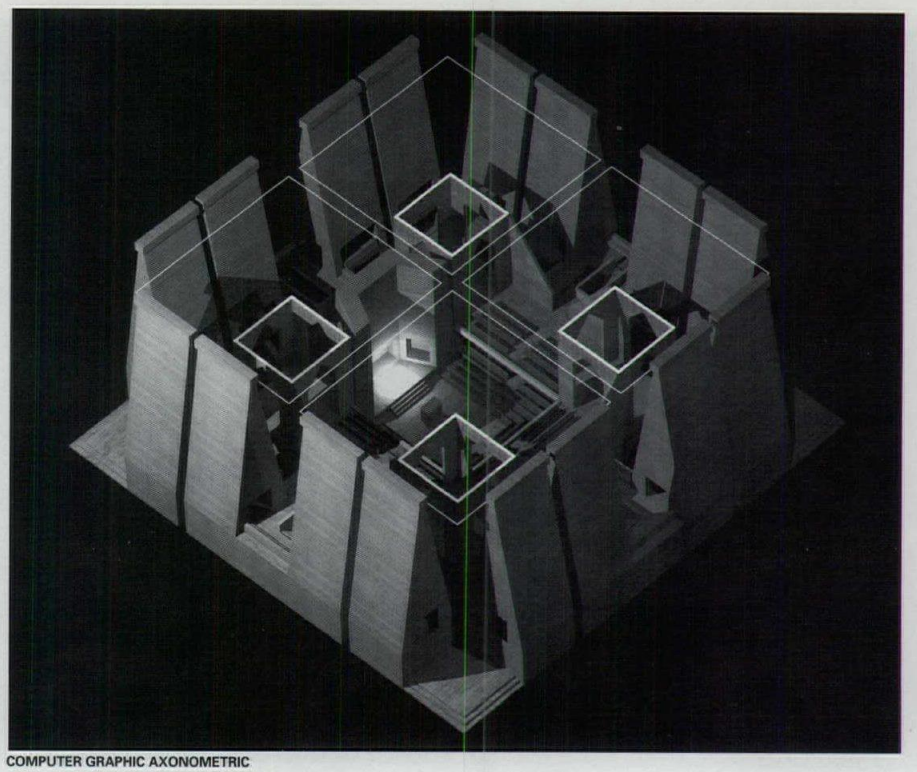


FIRST FLOOR PLAN

"I am eager to start the Hurva during my term of office which will surely be my last. Time is really very pressing and thus I think it is particularly important that we begin the memorial garden now. I warn you that you will be pestered at least once a week on this. I am perfectly convinced that the moment the memorial garden is finished, we can make a decision on Hurva. I hope to see you (next week in New York) and we can discuss all outstanding matters in detail." *–Letter, Teddy Kollek, Mayor of Jerusalem, to Louis I. Kahn, March 1, 1974, (LIK 39)*



SECOND FLOOR PLAN



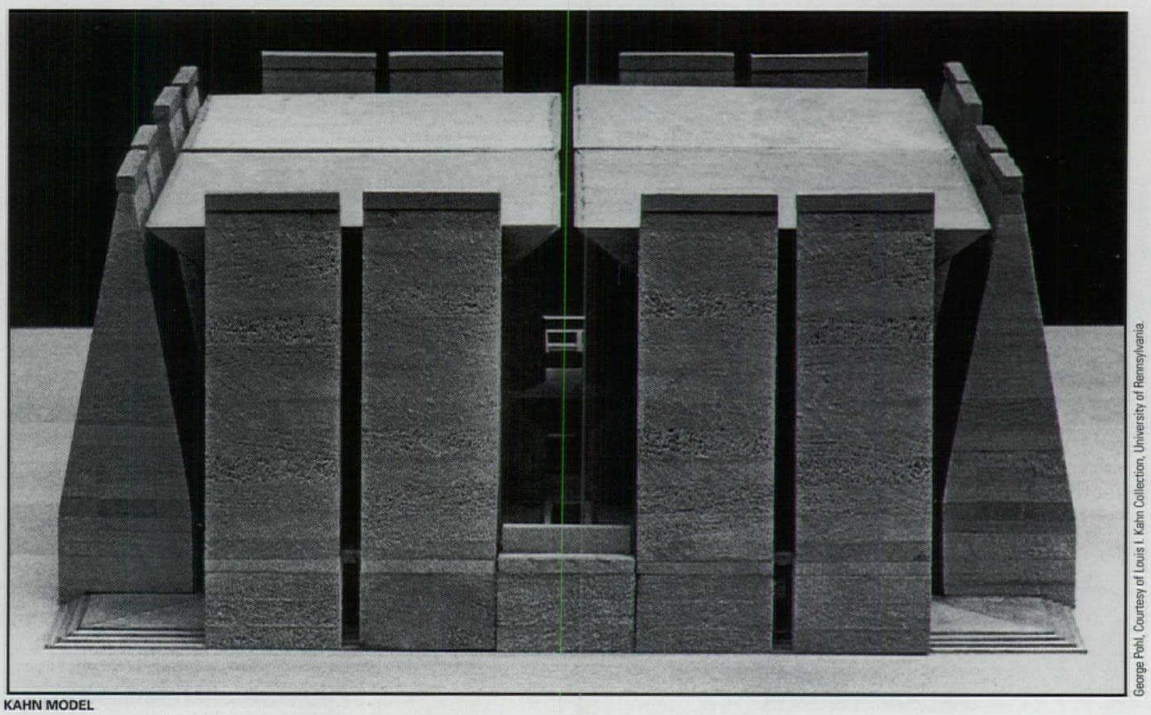
COMPUTER GRAPHIC AXONOMETRIC

"THE SHOCK HAS NOT SUBSIDED. I KNOW HOW DIFFICULT A TIME THIS MUST BE FOR YOU ALL. MY FIRST THOUGHT IS TO ORGANIZE A SMALL EXHIBIT IN JERUSALEM IN LOUIS'S MEMORY." *–Letter, Teddy Kollek, Mayor of Jerusalem, to David Wisdom of Kahn's office, March 26, 1974*

"LOUIS'S WORK IS A MEMORIAL TO A GREAT MAN ... TO OUR DEEP REGRET, THE PLANS HAVE NOT ADVANCED FAR ENOUGH SO THAT WE CAN EXECUTE THEM. A DAY BEFORE LOUIS LEFT FOR PAKISTAN, I DISCUSSED WITH HIM AT LENGTH OVER THE PHONE HIS NEXT VISIT TO JERUSALEM.... A DATE WAS FIXED BUT ALAS, THIS WAS NOT TO BE." *–Letter, Teddy Kollek, Mayor of Jerusalem, to Mrs. Louis Kahn, April 8, 1974*

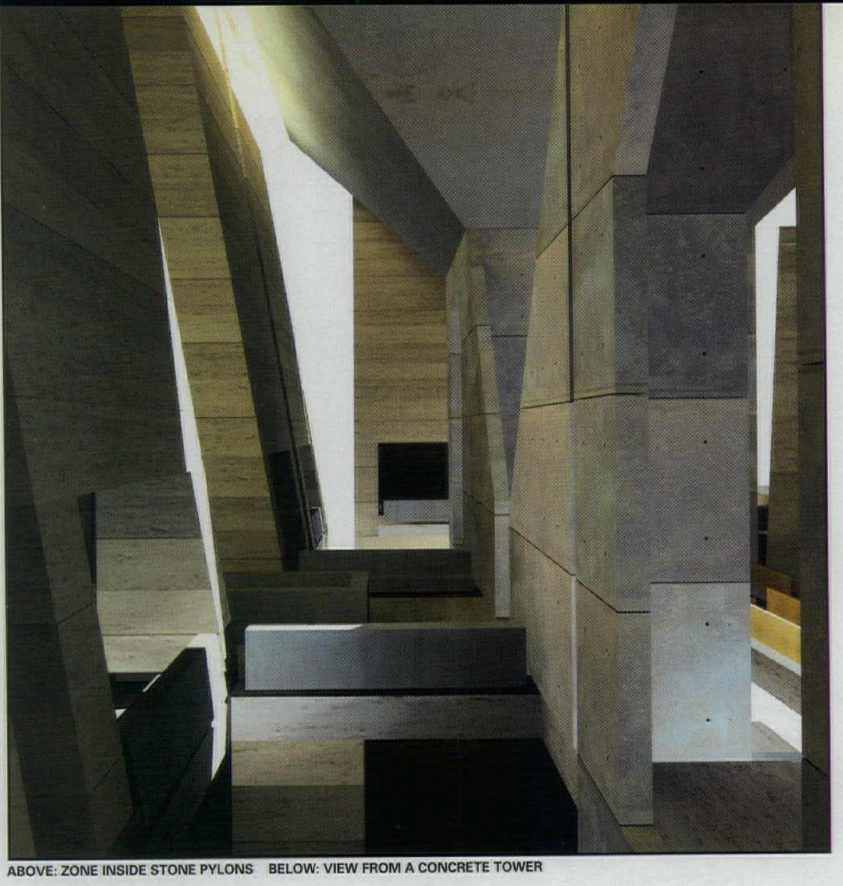
"THIS IS REALLY QUITE WONDERFUL BUT, YOU KNOW, LOU DEFINITELY DID NOT LIKE COMPUTERS." *–Esther Kahn to Kent Larson, July 6, 1993*

"WHO IS TO SAY KAHN WOULD NOT HAVE USED COMPUTERS TODAY? HE WAS FASCINATED BY TECHNOLOGY AND ONCE SAID TO ME THAT MICHELANGELO WOULD HAVE USED THE LIGHTBULB HAD IT BEEN AVAILABLE." *–Marshall Meyers to Kent Larson, August 1, 1993*

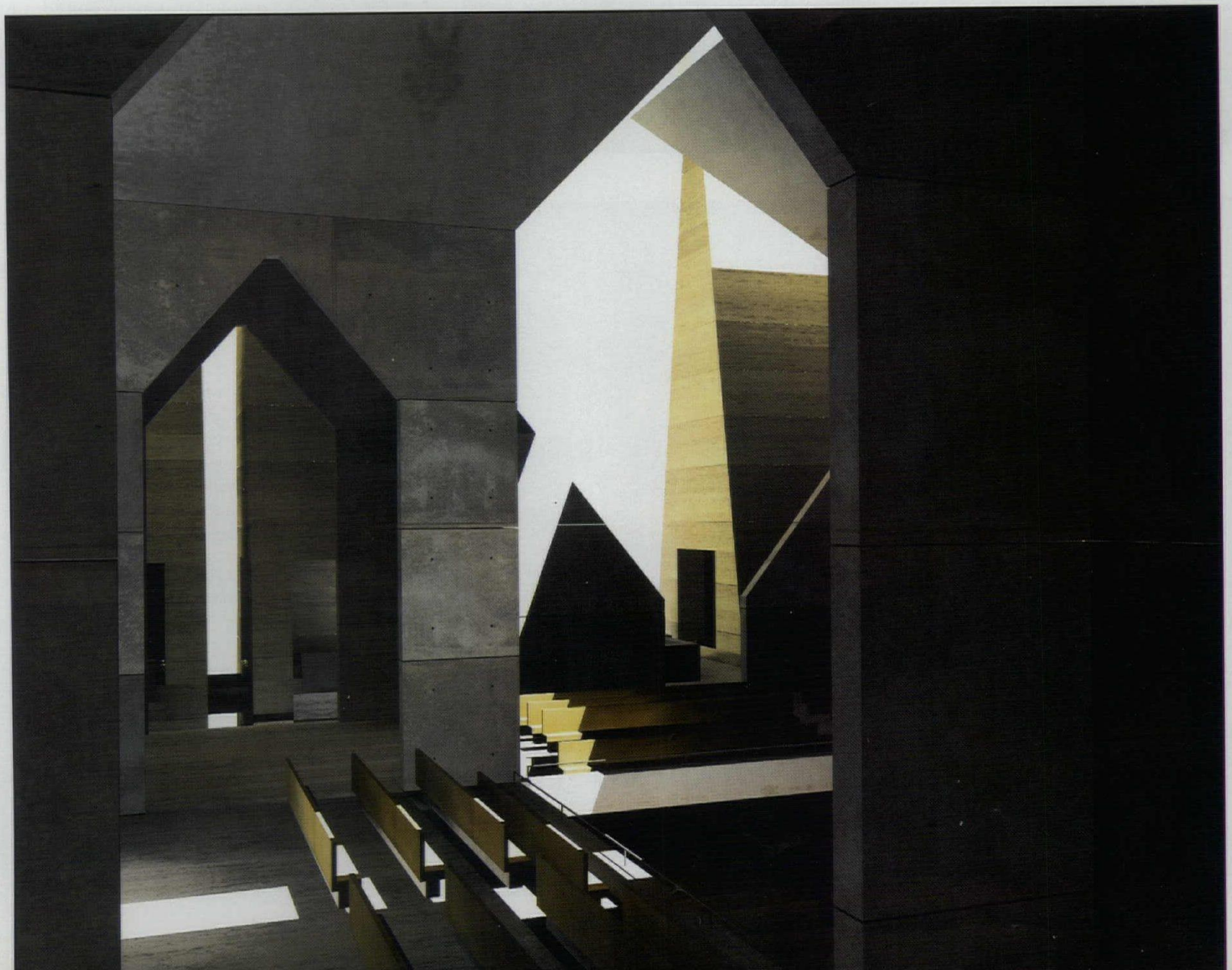


KAHN MODEL

George Pohl, Courtesy of Louis I. Kahn Collection, University of Pennsylvania.



ABOVE: ZONE INSIDE STONE PYLONS BELOW: VIEW FROM A CONCRETE TOWER



TOWER-TO-TOWER VIEW

ABOVE: VIEW INTO SANCTUARY FACING PAGE: VIEW ACROSS SANCTUARY

Generating Light by Computer

Few of us realize how extraordinarily complex the path of light is in a space. Beams of light enter from many places, each continually bouncing off surface after surface until the energy dissipates. With each iteration it picks up some of the color of the surface, and scatters in directions determined by the angle and texture of the material it strikes. Surfaces that receive no direct light are brighter or darker depending on their relationship to those that do. This is the ambient light in a space, which is perceived as constant, regardless of the position of the viewer. For the purposes of rendering, there is a second kind of light: this composed of the specular reflections such as we see in a mirror, which are entirely dependent on the view and change with movement through the space.

A feature of the INTEGRA system used to create these images is its ability to simulate accurately both types of light. Of the systems tested, it is clearly the most capable of rendering architectural space. The process, bidirectional ray tracing, first calculates the complex ambient light beam by beam, iteration after iteration. Then reflections and the textures of materials are incorporated into each view. The user has a very fine degree of control over the accuracy, and therefore over the amount of time required: tiny test renderings can take minutes, a high-resolution image can take a week. Such a tool cannot be approached mechanically – the many parameters affecting the surface properties of materials and the behavior of light sources must be carefully tuned. The user is required to make hundreds of subjective decisions, each producing very subtle effects of color, contrast, texture, and luminance. Using this technology is more analogous to painting in three dimensions than to using a CAD program.

For the modeling and rendering of this project, a workstation by Silicon Graphics, Inc., was used. It is the only practical choice for such intensive graphics and computational demands. SGI makes the equipment used to create the computer animations we see every day – from TV ads to the special effects of *Terminator 2* and *Jurassic Park.*

Photographs of concrete, travertine, and wood were scanned, converted to texture maps, and applied to the polygons of the model. Materials shown here are drawn from photographs of Kahn's Yale Center for British Art and his Exeter Library. **Kent Larson** ■

Kent Larson is a principal of Peter Gluck & Partners, Architects, New York, and president of AR/CS, Architectural/Construction Services.

Credits: *The project was supported by a grant to Kent Larson from the Graham Foundation for Advanced Studies in the Fine Arts. Hardware was providcd by Silicon Graphics, Inc., of Mountain View, California. Software was provided by Sigma Design (ARRIS and INTEGRA) of Burlington, Massachusetts, and Aritek, Inc., (SCULPTOR) of Englewood, Colorado. Kodak 4x5 LVT prints were provided by Image Axis, Inc. of New York. Research assistance was provided by Susan G. Solomon, University of Pennsylvania. Invaluable collaboration in the creation of final images was provided by Koji Tsuchiya of Tokyo, one of the developers of INTEGRA. Historical images courtesy Louis I. Kahn Collection, University of Pennsylvania and Pennsylvania Historical and Museum Commission.*

Perspectives | NIMBY

"Not-in-my-back-yard" has become an all-too-common response to affordable housing, as two recent cases show.

Although statistics are hard to come by, NIMBY – local opposition to projects, especially those that serve poor or minority people – seems to be on the rise. There is, understandably, a fairly widespread sentiment within the architectural community against NIMBY, since architects lose commissions as projects die or go on hold. But it is too easy just to criticize the phenomenon. Far more difficult is taking responsibility for it, part of which lies with this profession, or finding solutions to it, some of which are also within our power.

An example of the complex issues raised by NIMBY was a recent effort in which P/A was involved to build affordable housing in a predominantly African-American neighborhood in Williamsburg, Virginia. The area of about 100 modest single-family houses, called Highland Park, stands on a rise in the land, near the center of Williamsburg but carefully screened from tourists' view. The neighborhood was developed in the 1940s and 1950s by Colonial Williamsburg (CW), in part as a place for people displaced by the Rockefeller-funded restoration of the historic core.

When Highland Park was built, there was no NIMBY – no organized protests by the residents of Williamsburg against what was happening in their own back yards. No doubt, compensating people for their property and letting them build what they wanted on new land – lessons too often forgotten these days – probably helped quell the opposition. Still, for better or worse, people were more accepting 40 or 50 years ago of big projects by local employers – an acquiescence that now seems hard to understand. Even though Rockefeller's sponsorship of CW was a well-kept secret as property was being amassed, it is surprising that there were not more holdouts. Of course, people are not always happy about what they accept. As we discovered in Williamsburg, old wounds between CW and the residents of Highland Park can take a long time to heal.

CW owns a 14-acre piece of land in the northeast corner of that neighborhood, and has been eager to build affordable housing there since the average price for a house in Williamsburg is $160,000, well above what lower-waged employees can afford. Having recently built two houses for its employees for under $70,000, CW saw the Highland Park property as an opportunity to build more. Building more affordable housing was also on P/A's agenda. By mid-1992, the magazine had completed its first affordable housing initiative in Cleveland (August 1992, p. 44), and had begun looking for a second, larger project that might be the basis for a magazine-sponsored competition. A housing specialist, Douglas Horne, got P/A and CW together, and we began to work with CW's Director of Property Resources and Planning, Victoria Gussman, to plan a joint project that would be announced in early 1993.

As the project developed, it became clear that it would have to be bigger than we had first thought. The site could accommodate up to 16 clustered units without a special use permit. However, once a developer was brought in – Elizabeth Byrd of the Hampton Roads Community Development Corporation – and a detailed financial analysis was made, the number of units increased to between 20 and 30. This was arrived at by calculating what we thought was an absolute minimum of site development costs ($275,600), a total unit cost (just over $57,000), a 5 percent contingency, and no soft costs (P/A and CW were planning to pick up most of those). Based on those assumptions, the houses would come in at just over $78,300 if 16 were built, $74,700 if 20 were built. To reach our under-$70,000-per-unit goal, 25 or more houses would have had to be constructed, requiring a special-use permit from the city.

"The architectural and planning professions have, perhaps unwittingly, fed the NIMBY phenomenon."

At first, that didn't seem to be a problem, as the city initially supported the project. But the proposal met with a very different reaction from the moderate-income residents of Highland Park. At a neighborhood meeting held early in 1993, at which P/A and CW laid out our plans for the site, we encountered a great deal of resistance from most residents. Although a few people in the audience spoke about the need for affordable housing, the majority saw only trouble. An apartment complex had been built near the site a few years before and, as one Highland Park resident put it, "the project brought a lot of undesirable elements into the neighborhood." Several people in the audience expected our project to do the same thing, even though the houses would be owned and not rented. Others objected to the density of a cluster development and to the increased traffic. There were also objections to the fact that the new development would have improvements such as curbs and drains that the existing streets did not.

Class Consciousness

NIMBY is commonly thought of as a middle- or upper-class phenomenon, where people with money, power, and time work to keep "undesirable" projects out of their communities, for fear such facilities will lower property values, detract from the community, or (as is often

Houses (above) in the Highland Park neighborhood near the site, which is indicated by a circle on the map at left.

thought but rarely mentioned) bring in the "wrong sort" of people. This response of the Highland Park residents, however, shows how NIMBY cuts across all classes or races. Here was a moderate-income minority population using the same words ("undesirable elements") and expressing the same fears ("it produces clutter and makes the area slummy") that you hear in affluent suburbs.

That said, it is not hard to understand some of the suspicions of the Highland Park residents. Like many minority communities, this one seemed somewhat neglected by local officials; part of our meeting with the neighborhood dwelt on how to get debris removed from the swamp near the neighborhood's main entrance, after repeated but vain efforts to get the city to act. There was also a fatalistic quality to their opposition, as if the memory of the community's displacement 50 years ago was still fresh in some people's minds. As one woman asked, "Will Colonial Williamsburg go ahead and build anyway, no matter what the community says?"

Our answer was no. CW and P/A did not want to stage a competition and build a project against the will of the local community. Also, as the developer pointed out, without the support of the neighborhood, the city would not grant the project a special-use permit, and without that, the numbers no longer worked. The developer met again with the residents, trying to see whether a compromise could be reached. Failing that, we decided in March 1993 not to pursue the project.

There are, however, some lessons to be learned from our failed efforts in Williamsburg. For example, if you had listened carefully to the comments of Highland Park residents, you would have heard not just the catch phrases of NIMBY, but the very words that the design community might use when analyzing a community plan. ("Will a feasibility study be done?" "How many more people can Highland Park absorb?" "Will the new homes have a problem with flooding?" "Will there be another entry to the neighborhood?") Such questions are indicative, I think, of how the architectural and planning professions have, perhaps unwittingly, fed the NIMBY phenomenon.

NIMBY on the Left and Right

Consider the ideas central to NIMBY, such as the empowerment of local communities, the opposition to large-scale development, and the reinforcing of the character of a place. Those concepts emerged in the 1960s and 1970s, when the design community reacted against urban renewal and embraced such things as neighborhood preservation and participatory planning. NIMBY might be seen as a kind of distortion or exaggeration of those ideas. It is not hard to see how opposition to large-scale development can lead to opposition to development of any kind, how incremental planning can be interpreted to mean every neighborhood for itself, and how the preservation of the character of a place has become a code word for keeping outsiders out.

Did the design professions, in attempting to correct one wrong, sow the seeds for another? Did we prepare the ground for NIMBY by giving people the tools to fight unwanted development? Have we now become victims of our previous success? The answer to all three questions is probably yes, although it would certainly be unfair to blame NIMBY on the architectural community. The most reactionary form of NIMBY, in particular, has roots much deeper than anything planted by architects and planners.

NIMBY blossomed in the 1980s during the era of free-market government. Its nourishment, however, has come as much from the political left as from the right. If the right wants to empower the individual, the left wants to empower the group, especially all groups it considers marginalized for one reason or another. The right argues for self-interest, the left for special interests – and both lead to essentially the same place. In Williamsburg, the Highland Park residents were against the project because they saw it would run counter to their self-interest

(maintaining property values, preserving the existing density). At the same time, local officials, while professing to be in favor of the project, placed on it restrictions imposed by various special interests – wetlands requirements for wide setbacks and expensive drainage systems, zoning requirements for wide streets and a lot of off-street parking.

Finding Common Ground

What we have lost sight of, amidst this thicket of specific interests, is the common good. Too few people, least of all the politicians, seem willing to stand up to NIMBY, to argue that everyone is better off if everyone shares equally in making sacrifices. Although an official of the city of Williamsburg did attend one of our meetings with the Highland Park residents, not one political leader showed up to ask that they set aside their self-interest to achieve something the entire community needed.

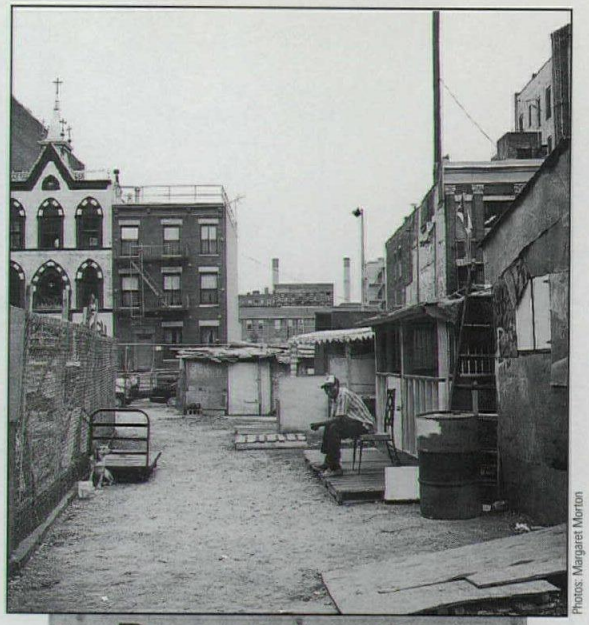
This vacuum of leadership, while frustrating to many people, also creates opportunities for architects and planners. Almost every case of NIMBY, for example, has been preceded by bad planning, with some neighborhoods having been neglected or dumped on too many times and other communities so often exempted from sacrifice they think they are immune. As such, NIMBY offers us a chance to reassert planning as a preventive measure: proper planning now can help eliminate NIMBY in the future. In the case of Highland Park, had its streets been brought up to modern standards and had the existing multifamily housing in the neighborhood been better designed and managed, the objections to further development might not have been so severe.

NIMBY also offers architects a chance to use skills, honed in resolving the conflicts in a client's program, to help conflicting interests within a community find common ground, a plan that everyone can agree to. This means not just designing buildings that fit into the context, but employing the problem-solving methods of design within the political process.

"NIMBY offers us a chance to reassert planning as a preventive measure; proper planning now can help eliminate NIMBY in the future."

This, of course, is easier said than done. In Williamsburg, we were too late to change some of the bad planning of the past, and we did not get far enough into the project to resolve, through design, some of the community's concerns about the future. Still, I think architects and planners have, within their hands, the tools to fight NIMBY. We helped set the stage for it as far back as the 1960s, and we have the means to help undo it, showing communities how to construct a viable common ground that can make people look farther than their own back yards. **Thomas Fisher** ■

P.S. This is not the end of P/A's efforts to sponsor socially responsible competitions. We are currently working on another project that we hope to announce in early 1994.



Photos: Margaret Morton

In another instance of NIMBY, a five-year-old shanty town on Manhattan's Lower East Side faces demolition.

Not on my doorstep. Not in my vacant lot. Not in my precinct. These words form the battle cry of the band-aid war on homelessness in our cities. The imminent demolition of Bushville, a settlement of 15 structures deep in Alphabet City, is a typical – if extreme – example of inner-city NIMBY.

On the request of Margaret Morton, a photographer whose documentation of Bushville appeared in last month's issue (p. 78), I attended an ongoing series of closed-door meetings at the offices of the Good Old Lower East Side (GOLES), a private community organization coordinating efforts to clean up Bushville. Allegations of drug dealing and prostitution on the city-owned lot and the violent crime associated with such activities were cited as the reasons to raze it; the community wants to replace the shanties with an orchard surrounded by a fence. Community gardens are commonly "used as weapons against the homeless," argues landscape architect Diana Balmori (coauthor with Morton of *Transitory Gardens, Uprooted Lives*). The greening of Bushville produces superficial political gains. By removing the site of illegal drug activities, explained a police officer involved in the meetings, you move the problem "out of my precinct."

While GOLES along with the president of the local block association have taken steps to locate established housing, they believe that it is their right to determine the fate of Bushville's eight residents. Curiously, there has been no community board hearing and only minor help from the city's housing agency. Morton has been banished from the meetings because her strong ties to the residents are viewed as a threat to the organizers' lot-clearing agenda.

The city's defeatist policies and the community's inability to look beyond the eyesore of homelessness embody the fallacy of NIMBYism: the failure to confront our most urgent problems – homelessness, drugs, crime – is the failure to recognize that we are all potential residents of Bushville. Bushville's problems are too complex to be resolved with a bulldozer or by simply allowing it to stay. A more coherent public policy might be a start. **Abby Bussel** ■

Technics Q&A

A Forum for Answers to your Technical Questions

Questions on cast-in-place concrete, alternative woods, joints in brick cladding, and more on tile grout discoloration.

Hiroshi Ueda

1 CURVED CAST-IN-PLACE CONCRETE AT ANDO'S LOTUS TEMPLE

Quality Concrete

In an article on Tadao Ando's Lotus Temple (June 1993, page 114), Cheryl Kent mentions "the refined concrete for which this architect is known." How does he achieve it? I caught the part about no cigarette butts in the concrete mix. What else?

Dewey Dearing
Byerly and Dearing, Architects
Colorado Springs, Colorado

Here are some of the important details that we pay close attention to when casting concrete (1) in order to get a high-quality finish. For the concrete, use a stiff mix with a slump under 18 cm (7 inches) and try not to use admixtures such as superplasticizers. Put about three coats of urethane resin on the contact surface of the forms so that they can be removed easily. Fasten the forms as tightly as possible to achieve sharp edges and corners in the finished concrete. Verify with the contractor the pitch of the cone nuts and the studs. When pouring the concrete, use vibrators or bamboo sticks or knock the forms with mallets to distribute the concrete equally, especially where there are many rebars.

Hiromitsu Kuwata of Tadao Ando Architect & Associates
Kita-ku Hsaka, Japan

Alternative Woods

What suggestions do you have for better choices of wood exposed to severe weather, such as siding or decks, than pressure-treated lumber or old-growth redwood and cedar? I know teak and some other tropical woods perform better than weather-resistant domestic woods, but are worse from an ecological standpoint. How about black locust or other appropriate varieties?

G. Mackenzie Gordon, AIA
Gordon & Gordon
Lakeville, Connecticut

Treated wood is widely used for exterior decking because it greatly extends the service life of the wood. Treated wood is rarely used for siding applications since proper construction techniques can greatly minimize, if not eliminate, potential decay and weathering problems. Some domestic softwood species, such as pine and spruce, are suitable for applications exposed to adverse weather conditions and can also satisfy suggested ecological concerns. The use of hardwood species such as black locust, either domestic or foreign, would be less economical and could have a negative effect on the overall environment. Products for siding and decking are not generally available in these species and the grades may not have the strength or visual characteristics required.

Suitable grades of wood commonly used for siding and deck-

Tech Notes

The Masonry Society, the American Concrete Institute, and the Council of Masonry Research have published an 880-page Masonry Designer's Guide, which shows how to apply masonry code provisions to the design of beams, walls, columns, and pilasters. It also covers different kinds of masonry construction based on the structural analysis of three common masonry building types: shopping centers, gymnasiums, and hotels. The guide is available to members of the societies listed above for $60, and to non-members for $90 from ACI, Box 19150, Detroit, MI 48219-0150 Phone: 313-532-2600.

The Universal Design Newsletter contains up-to-date information on universal design, accessibility, and the Americans with Disabilities Act, and is published quarterly. Annual subscriptions are $75. For more information contact: Universal Design Newsletter, 1700 Rockville Pike, Suite 110, Rockville, MD 20852 Fax: 301-770-4338.

A new 36-minute training video, "Uncertainty and Risk: Least-Cost Energy Decisions for Buildings" explains how to evaluate the economics of energy conservation in the long-range operation of buildings. Accompanying the video is a comprehensive treatment of the subject in workbook form. Sponsored by the US Department of Energy and the National Institute of Standards and Technology, the video and workbook are available for $16 from: Video Transfer, 5709-B Arundel Ave., Rockville, MD 20852 Phone: 301-881-0270.

"Clay products are unique in that they expand irreversibly after firing as they absorb atmospheric moisture."

ing can be produced from forests of different ages. For example, 70 percent of the redwood produced today comes from second- or third-generation commercial forests. Construction-heart-grade redwood, typically manufactured from young growth forests, is frequently used for decks, fences, and siding. It does contain knots, and is durable and stable. Siding can also be made from wood fiber, chips, and wafers in the form of hardboard and oriented strandboard.

It is suggested that recommended specification data be obtained from the California Redwood Association, 405 Enfrente Drive, Novato, California, 94949, and the Western Red Cedar Lumber Association, 1200-555 Burrard Street, Vancouver, British Columbia, Canada, V7X 1S7.

Carl E. Darrow of the American Wood Council Washington, D.C.

Brick Cladding Joints

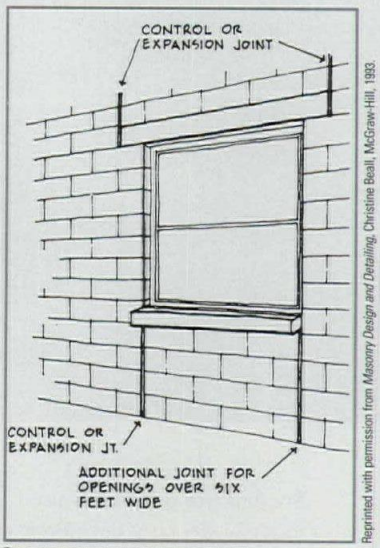
I know that expansion joints are a necessary evil in brick cladding. How can I best plan for where they will occur on the façade so that their visual impact is kept to a minimum?

Larry Quirk, RA
Nutley, New Jersey

Rules of thumb generally dictate that brick masonry expansion joints are required at natural points of weakness in walls, such as at openings (2), offsets, changes in wall height or thickness, and near building corners. Locating expansion joints in brick cladding by rule-of-thumb alone, however, allows little design freedom.

While offsets in a wall are good places to hide expansion joints because of the shadow lines they create, many architects object to the appearance of joints at window and door jambs.

Although each building must be evaluated individually, you can usually achieve greater flexibility in locating and spacing joints if you first calculate the expected movement. Calculating thermal movement in building materials and systems is fairly simple, using standard coefficients of thermal expansion (see P/A, Nov. 1991, p. 121). But concrete, stucco, and masonry are also affected by changes in moisture content. While portland cement-based



Reprinted with permission from *Masonry Design and Detailing*, Christine Beall, McGraw-Hill, 1993.

2 MOVEMENT JOINTS AT OPENINGS

products shrink irreversibly as they lose excess moisture after curing, clay products are unique in that they expand irreversibly after firing as they absorb atmospheric moisture. The expansion stops once the units reach an equilibrium moisture content with their environment. Since time, initial moisture content, and end use all affect net volume change, coefficients of moisture movement are used in calculations to estimate expansion that will take place in the wall. (The Construction Specifications Institute publishes a monograph on joint sealants, which contains a complete set of tables and calculation procedures for masonry as well as other materials.)

Once you have calculated combined thermal and moisture movement and have added a factor of safety for construction tolerances, you can adjust joint size to change spacing, or adjust spacing to change joint size. This will allow you to create a pattern on the wall, much as you do with concrete or stucco control joints. The fewer joints you provide in a building façade, the wider they must be to equal or exceed cumulatively the total calculated movement. The more joints you provide, the narrower they may be – up to a point. Elastomeric sealants require a minimum joint width of ¼ inch to allow proper extension and compression movement. Allowable tolerances in masonry units and joint sizes, however, make thin joints impractical to achieve in the field. A more realistic minimum is ⅜ inch to match the width of the mortar joints. To minimize visual impact, choose a sealant color that matches or is slightly darker than the cured mortar color, and hide large joints next to offsets or projections.

If window openings occur between desired joint locations, consider placing nominal 3- or 4-inch truss-type reinforcement in the brick course immediately above and below the head and sill, respectively. If the joint spacing is wide, reinforce two or more courses above and below the opening. Do not continue the reinforcement across the expansion joints. The reinforcement will help restrain expansion between joints and hold the wall section together so that it essentially "floats" as a unit. Do not use three-wire joint reinforcement to connect to the back-up masonry. Adjustable veneer anchors must allow differential movement between the backing and facing wythe, and anchors should not be placed in the same mortar bed joints as the reinforcement.

It is critical in all brick masonry, regardless of design, that expansion joints be free of mortar droppings or other obstructions that might prevent or inhibit movement.

Christine Beall, RA, CSS, an architect and masonry consultant in Austin, Texas.

Tile Discoloration Update

Congratulations on initiating the Technics Q&A column. Obviously, it can't be the intent of a column addressing technical problems to cover all the possible problems and solutions on a particular subject, such as grout discoloration (see June 1993, p. 37). However, the few causes cited, and the corrections limited to four methods might, in my opinion, create further problems and confusion. The National Tile Contractors Association, on whose Technical Committee I serve, publishes a technical manual covering known problems in ceramic tile and dimensional stone, which are addressed by this consensus committee. The problems of discoloration, their preventions and corrections, are constantly monitored for changes and revision as required, and are presented in a table (facing page). There are at least 20 known causes, at least 15 methods of prevention, and at least 8 corrections. A new problem will be examined shortly: grout staining by organic adhesives.

Gerald Zakim, Gerald Zakim Associates, Wayne, New Jersey, consultants in construction health and safety.

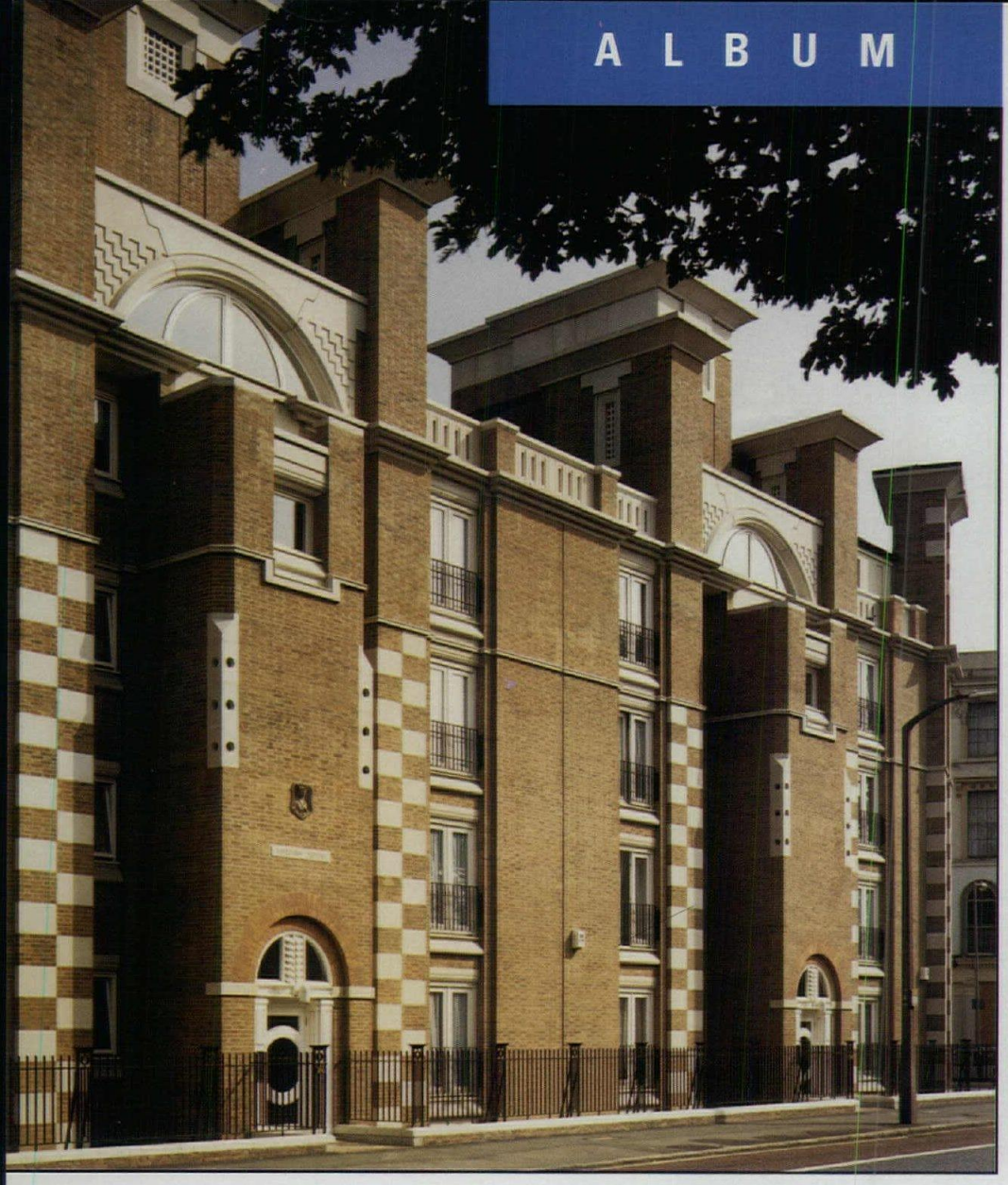
Readers are invited to submit their questions regarding technical issues. You can mail, phone, or fax your questions to the attention of Michael J. Crosbie, Senior Editor, Technics. The answers are presented in good faith, but P/A does not warrant, and assumes no liability for, their accuracy, completeness, or fitness for any particular purpose.

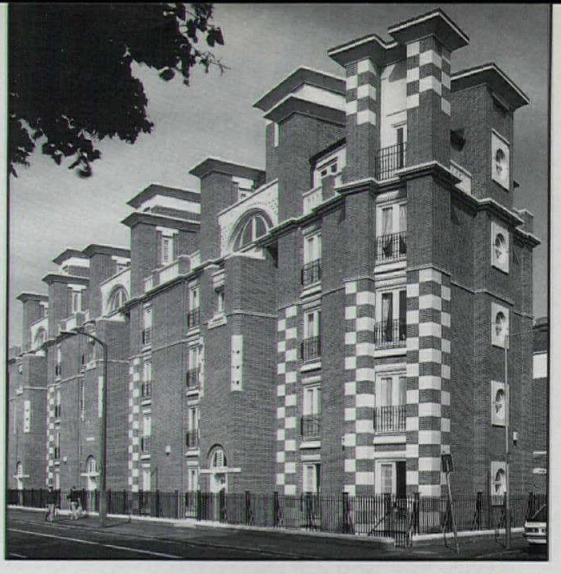
INCONSISTENT GROUT COLOR

LIGHT AND DARK AREAS OF GROUT, MOTTLED, SPOTS, OR STREAKS.

CAUSES	PREVENTION	CORRECTIONS
GROUT MIXED TOO WET.	A STIFF, CONSISTENT WATER RATION GROUT MIX, PROPERLY SLAKED.	NOTE: THESE SUGGESTED CORRECTIONS AND/OR A COMBINATION OF SUGGESTED CORRECTIONS MAY PROVIDE IMPROVED CONDITIONS AND A SERVICEABLE PRODUCT. THERE IS A CORRELATION BETWEEN THE CAUSES AND PREVENTION COLUMNS.
GROUT NOT CURED PROPERLY OR CONSISTENTLY.	DAMP CURE CONSISTENTLY WITH 40-POUND KRAFT PAPER FOR 72 HOURS TO ENSURE SLOW, EVEN CURING.	
INCONSISTENT JOINT SIZES.	MAINTAIN UNIFORM GROUT JOINT DEPTH AND WIDTH.	CONSULT MANUFACTURER PRIOR TO APPLYING ANY CORRECTIVE MATERIAL. MANY TREATMENTS SUGGESTED HEREIN MAY INHIBIT CORRECTION MEASURES THAT MAY BE RECOMMENDED BY THE MANUFACTURER.
CLEANING ACID CONCENTRATION TOO STRONG; USED TOO EARLY; USED ON DRY JOINTS; OR INADEQUATE RINSING AFTER ACID WASH.	DO NOT USE MURIATIC ACID. AVOID CLEANING TOO EARLY WITH ACID TYPE CLEANERS. WET GROUT JOINTS BEFORE CLEANING AND THOROUGHLY RINSE AFTERWARDS.	DAMPEN AND CONTINUE DAMP CURING WITH 40-POUND KRAFT PAPER.
TOO MUCH WATER USED IN GROUT CLEANING PROCEDURE.	REDUCE WATER DURING CLEANUP.	LIGHTLY BRUSH WITH WIRE BRUSH – ON DARK GROUT ONLY.
GROUT NOT SUFFICIENTLY MIXED OR IMPROPERLY MIXED BY HAND WITH TROWEL OR HOE; MIXING TOO FAST WITH HIGH SPEED DRILL; OR MIXING IN DIRTY OR CONTAMINATED CONTAINERS.	DRY BLEND GROUT WHEN UNIFORMITY IS NOT A MANUFACTURER-ASSURED, QUALITY CONTROL FACTOR. DRY BLEND ENTIRE BAG. MACHINE MIX GROUT MATERIALS AT 300 RPM OR LESS.	PRE-WET AND TRY RECLEANING WITH SULFAMIC ACID OR OTHER MANUFACTURED CLEANERS WITH CONTROLLED ACID EFFECT. THOROUGHLY RINSE WITH CLEAN WATER.
INCONSISTENT ABSORPTION OF HIGHLY ABSORBENT TILES. GLAZE ON SOME EDGES OF TILE. SCORED TILE.	USE LATEX ADDITIVE SPECIFICALLY DESIGNED FOR GROUTING. HIGH ABSORPTION TILE SHOULD BE UNIFORMLY WET PRIOR TO GROUTING WITH COMMERCIAL PORTLAND CEMENT GROUT.	PERMANENTLY STAIN GROUT JOINT WITH GROUT SATIN MANUFACTURED FOR THIS PURPOSE.
GROUTING DONE BY DIFFERENT GROUTERS AND UNDER DIFFERENT ENVIRONMENTAL CONDITIONS.	WHEN POSSIBLE, USE SAME CRAFTSPEOPLE THROUGHOUT AN AREA AND MAINTAIN CONSISTENT ENVIRONMENTAL CONDITIONS. AVOID CONCENTRATION OF DIRECT SUNLIGHT, HEAT, OR AIR FLOW SUCH AS SPACE HEATERS, AIR CONDITIONERS OR DRAFT AREAS DURING INSTALLATION AND CURING.	DARKEN GROUT JOINT BY BRUSHING JOINTS WITH MIXTURE OF ONE HALF BOILED LINSEED OIL AND ONE HALF MINERAL SPIRITS.
		RECLEAN WITH NEUTRAL DETERGENT.
		APPLY FLAX-SOAP.
SETTING MATERIAL INCONSISTENT - IN THE UPPER TWO-THIRDS OF GROUT JOINT.	RAKE OUT HIGH RIDGES OF SETTING MATERIAL FROM THE JOINTS PRIOR TO GROUTING, TO INSURE UNIFORM GROUT THICKNESS.	
SPACERS LEFT IN THE JOINTS.	REMOVE SPACERS.	
CLEANING WITH WATER PRIOR TO INITIAL SET OF GROUT.	ALLOW GROUT TO ACQUIRE INITIAL SET BEFORE CLEANING WITH WATER.	
DAMP CURING WITH POLYETHYLENE.	DAMP CURE CONSISTENTLY WITH 40-POUND KRAFT PAPER FOR 72 HOURS TO ENSURE SLOW, EVEN CURING.	
SEALED WITH SEALER NOT SPECIFICALLY MADE FOR THE PURPOSE; OR SEALER APPLIED TOO EARLY.	AFTER DAMP CURING AND PROPER HYDRATION, APPLY SEALERS ACCORDING TO MANUFACTURERS' SPECIFICATIONS.	
GYPSUM DUST FROM DRYWALL OR PLASTER, OR DIRT AND DUST FROM CONSTRUCTION CONDITIONS.	PROTECT THE FINISHED GROUT FROM CONSTRUCTION DEBRIS.	
RESIDUE FROM MATERIALS USED IN INITIAL CLEANING AND MAINTENANCE PROCEDURES.	DURING INITIAL CLEANING, REMOVE THE RESIDUE OF GROUT FROM THE TILE SURFACE, AS WELL AS FROM THE SURFACE OF THE GROUT JOINT. FURNISH MAINTENANCE PERSONNEL WITH PROPER MAINTENANCE INSTRUCTIONS.	
OTHER POSSIBLE CAUSES OF INCONSISTENT GROUT COLOR: • DIFFERENT GROUTING MATERIAL BATCH NUMBERS. • GROUT NOT PROPERLY SLAKED. • USE OF PARTIAL BAGS OF GROUT WHERE INGREDIENTS HAVE SEPARATED. • USE OF CONTAMINATED WATER, OR WATER WITH A HIGH MINERAL OR SALT CONTENT. • VARIATIONS OF RAW MATERIALS SUPPLIED TO THE MANUFACTURER MAY RESULT IN SLIGHTLY INCONSISTENT GROUT COLOR FROM BATCH TO BATCH.		

THIS TABLE COMPILED BY THE NTCA TECHNICAL COMMITTEE. PUBLISHED BY THE NATIONAL TILE CONTRACTORS ASSOCIATION. P.O. BOX 13629, JACKSON, MISSISSIPPI 39236. REPRINTED WITH PERMISSION.





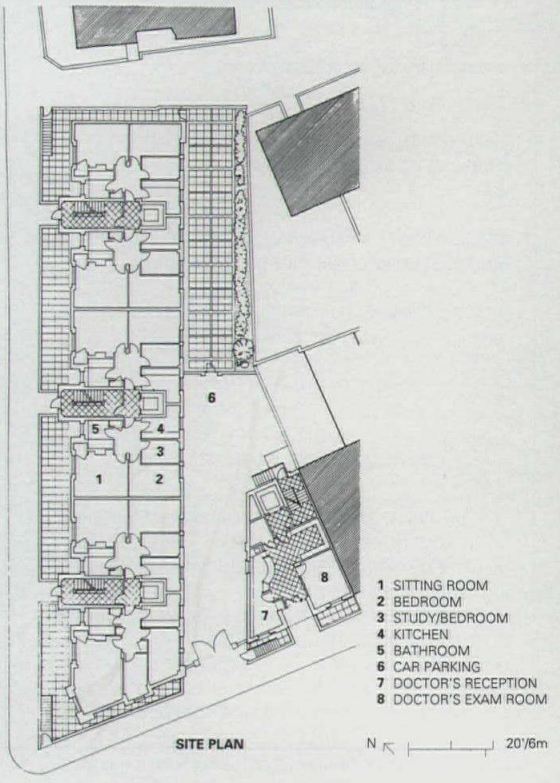
Photos: Martin Charles

MERCERS' COMPANY SENIOR HOUSING

Tthe apartments are entered from three "front doors" (above and upper right; a doctor's office is just around the corner (lower right).

Few urban buildings are more endearing than England's Queen Anne apartment blocks. They are emblems of a national affinity for the eccentric and the traditional – picturesque design adapted to urban housing. John Melvin, a London architect, rendered his Mercers' housing block a latter-day counterpart, urbane and witty.

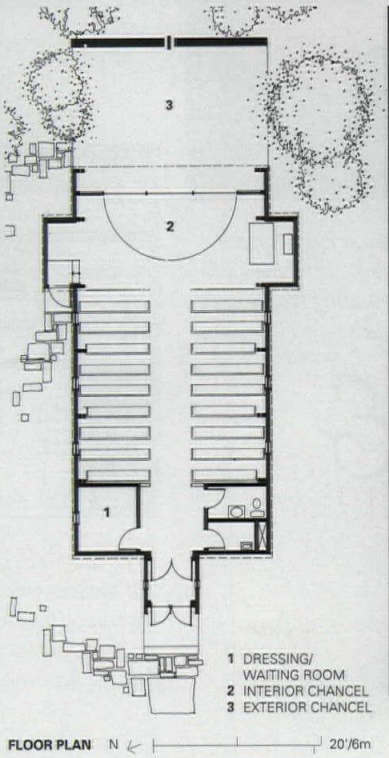
Melvin said that he wanted each of the elderly residents of the apartment building (subsidized by a charitable society) to retain a modicum of the autonomy they would have in a rowhouse. Accordingly, he designed three residential entrances, a floor plan that affords some privacy, and façades that evoke a familiar style. His design is pragmatic, too: the façade's A B B A rhythm aligns with the stairways that provide access (in lieu of corridors) to the apartments. Six chimney stacks flank three taller elevator shafts. Each stack has a checkered shaft of brick and precast concrete, a sharp-edged rendition of a Queen Anne palette. Thus, the chimneys become a giant order of attached columns, substantial, yet machine-made. **Philip Arcidi** ■

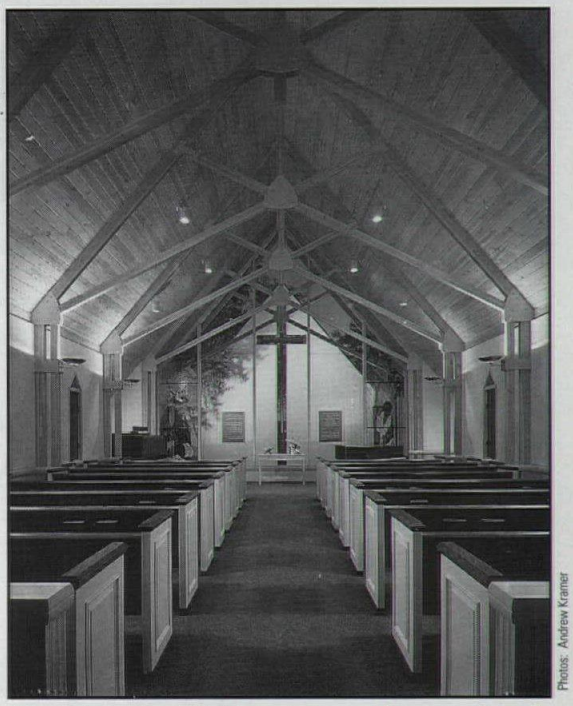


CHAPEL OF THE CROSS

Glass walls, the most obvious way to bring the outdoors inside, aren't often suitable for a church: a vista can be a distraction from the altar. Not in this nondenominational chapel by Midyette/Seieroe Hartronft, an architectural firm in Boulder, Colorado. Here, glazing behind the altar offers a view to an outdoor room: a detached rear wall provides a backdrop for an outdoor meditation space.

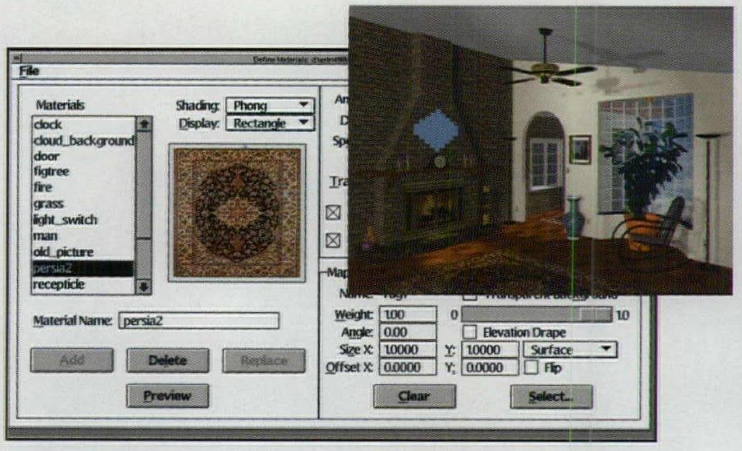
Built on the site of the earliest settlement in Cedaredge, Colorado, the chapel is a gift from Don and Inez Petersen to this small farm town. J. Nold Midyette and J. Erik Hartronft, the architects, thought Carpenter Gothic, a 19th-Century vernacular, would be an appropriately contextual response to the "pioneer town" next door. But when the chapel is seen from the back, its glass wall makes an abrupt contrast to the board-and-batten façades, as if some emboldened Modernist had rehabbed an old church. Seen inside, it is a fitting complement to the four laminated wood trusses that span the nave; like the glass wall, they are modern insertions in a traditional envelope. **Philip Arcidi** ■





Photos: Andrew Kramer

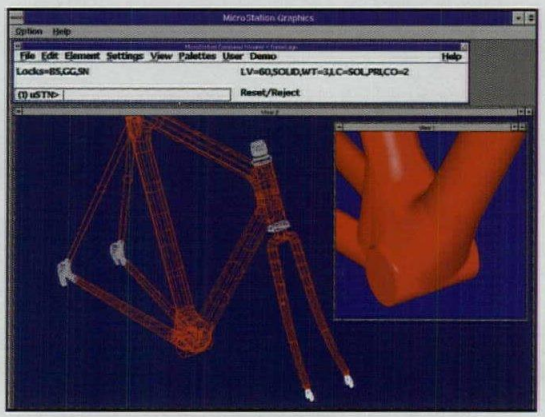
The buttressed wall (top) creates an outdoor room beyond the altar (above).



Rendering. *Visualization and flythroughs – at your fingertips! MicroStation offers photo-realistic rendering to every designer, right in the software. It's easy to make your image reflect your imagination.*

Windows. *It walks and talks Windows. Behind MicroStation lies the user-responsive programming you look for in good Windows software. Version 5 gives you the ultimate in integration of CAD, engineering, and business applications.*

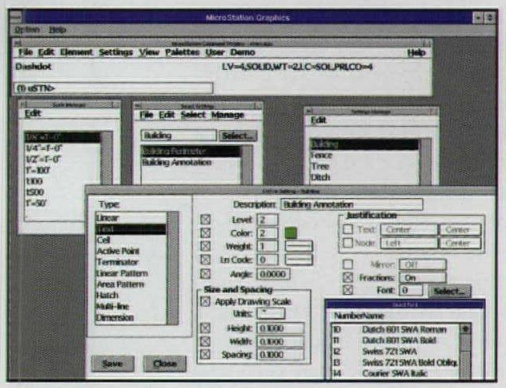
MORE POWER TO YOU.



Modeling. *Model any surface you can imagine in MicroStation. NURBS surface modeling combined with 3D Boolean operations gives you astounding flexibility in creating and modifying freeform models.*

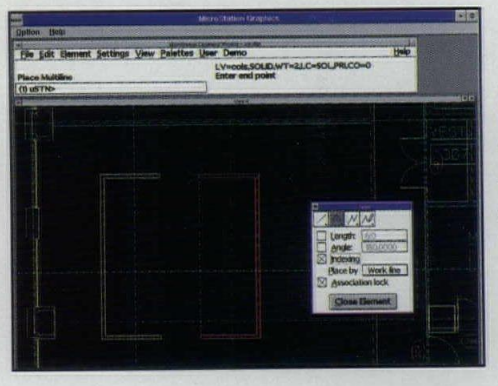
Drafting. *MicroStation gives you first-rate drafting powe – without the limitations of old technology. Enjoy the advantages of contemporary features like ass ciative patterning/hatching, plot preview, standard text editing an fonts, and context-sensitive Hypertext help.*

Read & write AutoCAD .dwg



Workspaces. *Choose the design environment that matches your profession or your CAD expertise – even AutoCAD. Complete with custom interfaces, drafting styles, and design environment management. CAD has never been so streamlined!*

Op
mass
Mod
point.
for futu
parts.



Usability. *What does computer-aided drafting have to do with the way you think? Everything. MicroStation software works for you. It understands the drafting process so well that it infers what you'll do next.*

Power. *Take your pick of popular environments: DOS, Mac, Windows, Windows NT, or UNIX. Have a look at MicroStation on Intergraph's Technical Desktop Series personal workstations.*

Graphical User Interface. MicroStation's easy-to-use interface includes pull-down menus, dialog boxes, tear-off tool palettes, and tool settings window. Choose your interface – Windows or Motif – on any platform. *Transparent Modeless Operation.* The software supports the way you naturally work, maintaining command execution while you fine tune: change element attributes or command parameters, manipulate views, change the dimensioning system, and more. *Powerful View Manipulation.* MicroStation supports up to eight active views that can be moved, sized, and overlapped to fit your design. Zoom and area at any scale. Move around your design fast with built-in dynamic panning. *Workspace Editor.* Tailor pull-down menus, dialog boxes, and tool palettes – even disable commands – with a graphically oriented toolset for customizing your chosen interface. *Text Capabilities.* A convenient text editor lets you easily edit single-line or paragraph text. Choose from TrueType, PostScript, AutoCAD SHX, and MicroStation fonts. ASCII text files can be imported and exported. *Multiple Undo/Redo Commands.* Undo mistakes and perform "what-if" designs in a flash with unlimited undo and redo. *Plotting.* Plot raster and vector information by view or defined areas, at any scale. Visually preview the plot before plotting, saving time and materials. *Online HELP.* MicroStation's HELP remains active, tracking the command you're currently using, so there's no searching through manuals for assistance. *Associative Patterning and Hatching.* Associate patterning with graphics. Change graphics and the patterning updates. Flood-fill hatching/patterning intelligently fills an area, detecting boundaries and holes with a single pick. *Associative Dimensioning.* Dimensions are associated with the geometry, not with a point in space, so that when you change the geometry, the dimensions automatically update. *Custom Line Styles.* Create space-saving custom line styles and place railroad tracks, trees, isobars – anything – just as you would place a line. *Multi-lines.* Define line string elements comprising up to 16 parallel lines of varying symbology and store them in a style library for call. Architects can use multi-lines for fast and easy placement and intersection cleanup of walls and partitions. *2D Boolean tions.* Quickly modify, measure, and hatch multiple 2D shapes with integrated Boolean operations. *Mass Properties.* Calculate area and ties of your model: surface area, volume, mass, centroid, moments and products of inertia, principal moments and directions, and radii of gyration. *rs.* Define relationships among graphic entities with intuitive drawing modes such as tangent, parallel, perpendicular, midpoint, intersection, and end- *ension-driven Symbols.* Based on established relationships, you can assign variables to dimensioned graphics and save the graphics as cells umic placement. Changes in dimensions automatically drive changes to graphics. Dimension-driven design saves valuable time in the design of families of *Symbol Libraries.*

MicroStation Version 5 puts you in charge.

Call 800-345-4856 for a free brochure on MicroStation Version 5 and the name of an Intergraph representative in your area.

MicroStation

INTERGRAPH

Solutions for the Technical Desktop™

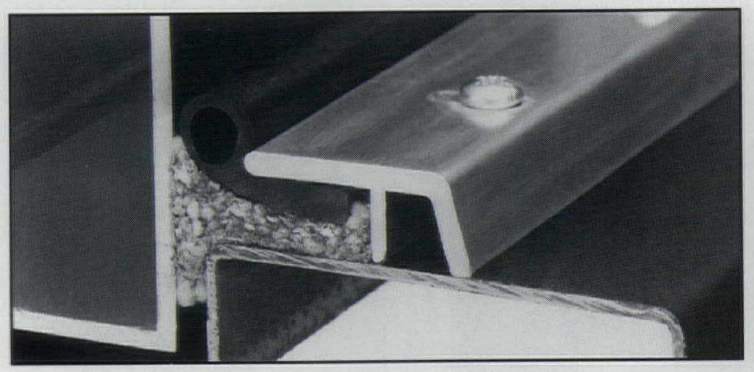
TISCHLER WINDOWS AND DOORS. UNCOMMON. UNCOMPROMISING.

TISCHLER UND SOHN

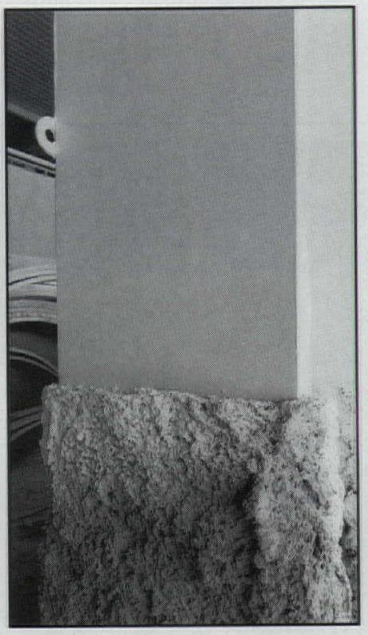
Made in Germany since 1888.

Circle **No. 316** Three Greenwich Office Park 51 Weaver Street Greenwich, CT 06830 USA Telephone 203/622-8486 Telefax 203/622-8558 Toll-free 800/282-9911

New Products and Literature

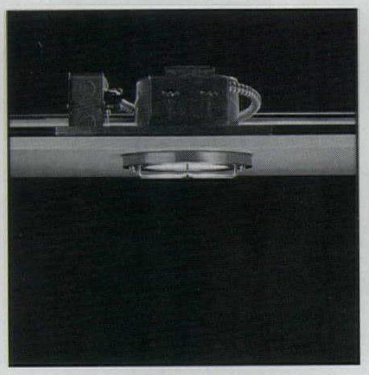


Intumescent Fire, Smoke Door Seal
Nested in door head, jamb, and bottom components and activated by heat or fire, the new FS3003 intumescent fire and smoke seal foams and expands gradually, sealing air spaces between wood or metal doors and frames. Smoke, heat, flames, soot, toxins, and other airborne particles are sealed out for up to three hours. The system meets positive-pressure standards required by international and U.S. agencies. Zero.
Circle 100 on reader service card

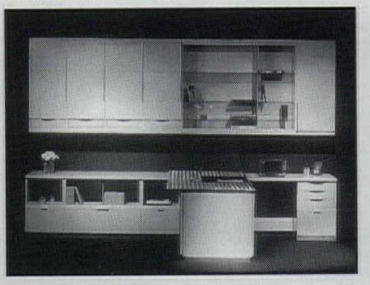


Intumescent Fireproof Coating for Structural Steel
A/D Firefilm® is an intumescent fireproof coating for use on structural steel, eliminating the need to enclose support columns and beams. In a fire, the coating softens and expands to form a meringue-like layer up to four inches thick, insulating the steel from intense heat for up to two hours. "Basically nontoxic [and] water-soluble," the coating can be painted and it meets U.S. building code standards. (The upper portion of the column, left, was treated with A/D Firefilm, the lower portion is covered with a traditional fireproofing material.) Fipro.™
Circle 101 on reader service card

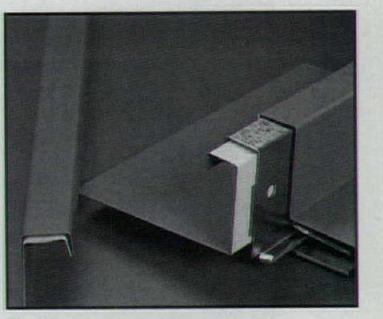
Moderne Design Revived
The Santa Barbara chair and ottoman have been introduced as reproductions of a 1930s design by Kem Weber. The pieces are upholstered with Spinneybeck leather. Design America.
Circle 102 on reader service card



Low Voltage Ceiling Luminaire
A new line of low-voltage recessed ceiling luminaires with high-performance tungsten halogen lamps have stainless steel trim with or without cross guards in 4 ¾-inch and 6 ¾-inch sizes. The new fixtures have a symmetrical optical system for round or oval light distribution. Bega/USA.
Circle 103 on reader service card



New Casegoods Collection
Lauren Rottet and Richard Riveire have designed the Attaché casegoods collection based on a standard 18-inch module. The collection expands on traditional casegood offerings with flat file drawers for large documents, a foot rest (for those who find themselves using the rim of their garbage bin), and other features. Standard wood finishes, Chemcolor finishes, and wood, glass, or anodized aluminum worksurfaces are available. Halcon.
Circle 104 on reader service card



Profile For Low Slope Roofing
The new SPAN-LOK® profile system for low-slope roofing applications is designed to span purlins at five- and six-foot intervals on slopes down to ¼:12. Available in two widths (16 inches wide with a 3-inch vertical leg and 18 inches wide with a 2-inch vertical leg), the profile system meets industry standards for structural loading and air and water infiltration. AEP-SPAN™, A United Dominion Company.
Circle 105 on reader service card
(continued on next page)

New Products and Literature

(continued from previous page)

Barrier-Free Washroom Planning Guide

Produced with the assistance of architect Ronald L. Mace, president of Barrier-Free Environments, this publication includes illustrations and guidelines for designing ADA-compliant public washrooms. Bobrick.

Circle 200 on reader service card

Automated Window Shade System

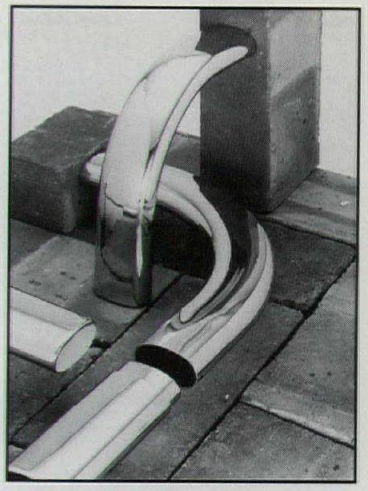
Serena™ is a motorized shade system for windows and walls. It stores up to four different materials (fabrics, sunblocks, and sunscreens are available in a variety of colors and textures) and an open panel. The two-roller system is activated with a wall-mounted control panel; the control panel can be coordinated with lighting controls and interfaced with occupancy and light sensors and time clocks. Lutron.

Circle 106 on reader service card

Protective Coating for Roofs

ROOFGARD™ is a two-component EPDM Liquid Rubber designed to produce a seamless roof coating and waterproofing membrane. It will maintain its integrity in temperatures as low as 60°F and as high as 300°F and can be applied to metal, urethane, and most clean roof coatings. Hudson & Hudson Scientific.

Circle 107 on reader service card



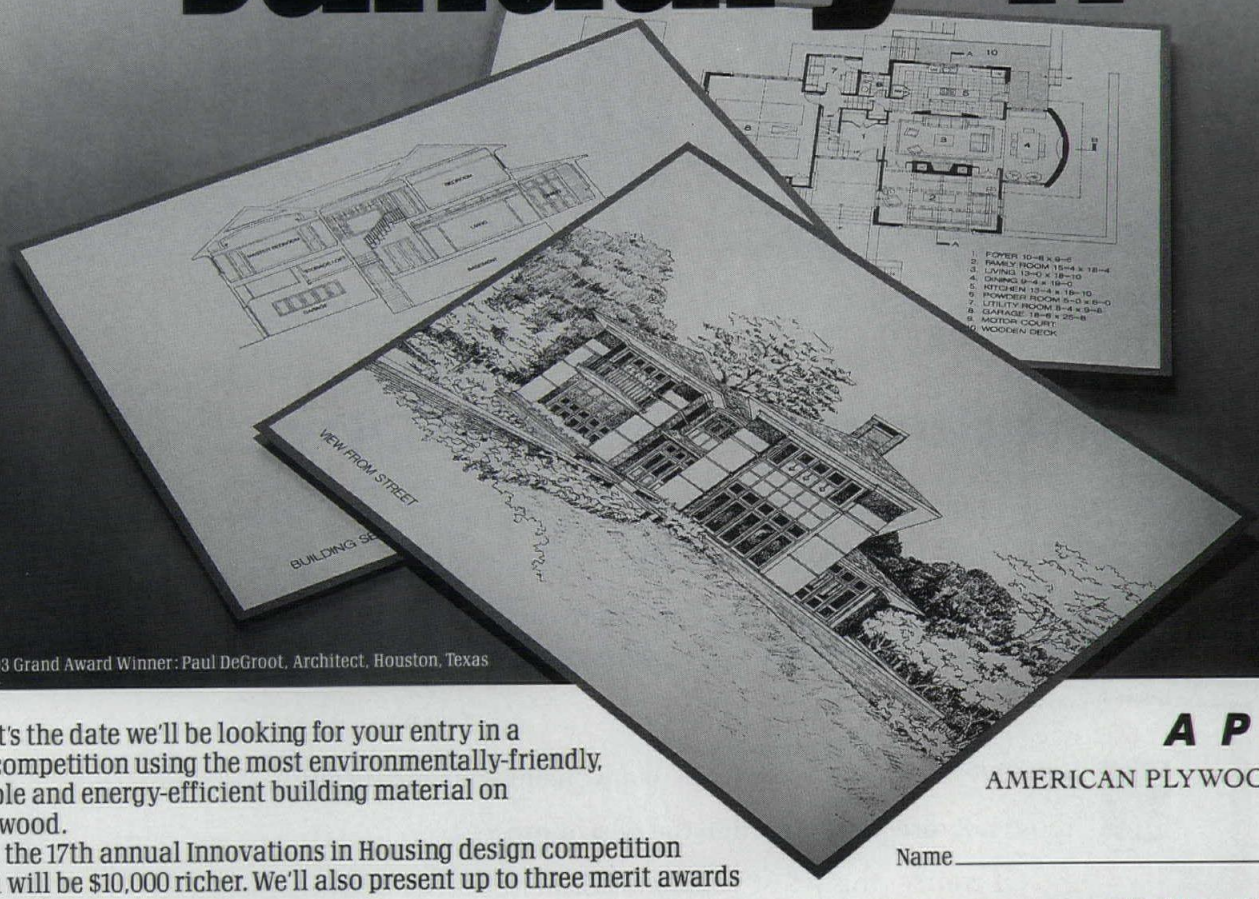
Stainless Steel Handrail

Originally designed for the marine industry, Oval 316 stainless steel tubing is now available for use as handrails, bar and shop fittings, and many other applications. Available in sizes from ¾-inch to 5 inches in diameter, with a satin or polished finish, the tubing can be custom fabricated or assembled as a system on site. It is said to be rust-, corrosion-, and chip-resistant. Malcolm Cole Limited.

Circle 108 on reader service card

(continued on page 103)

Do you have plans for January 4?



1993 Grand Award Winner: Paul DeGroot, Architect, Houston, Texas

That's the date we'll be looking for your entry in a design competition using the most environmentally-friendly, renewable and energy-efficient building material on earth—wood.

Win the 17th annual Innovations in Housing design competition and you will be $10,000 richer. We'll also present up to three merit awards of $500 each.

Your winning design will actually get built—in the Mid-South.

Your winning house will also be featured in Better Homes and Gardens and seen by the magazine's eight million readers.

What we need from you: Your best single-family home design (which has not been built) not to exceed 2,800 square feet.

Do you have plans for January 4, 1994? Send the coupon, call (206) 565-6600, extension 172, or Fax (206) 565-7265 for entry forms right away because that's the deadline for receipt of entries.

Send us a winner by January 4. We'll send you the $10,000 Grand Award.

APA

AMERICAN PLYWOOD ASSOCIATION

Name _____

☐ Architect ☐ Designer ☐ Builder ☐ Engineer ☐ Student

Firm _____

Address _____

City _____

State _____ Zip _____

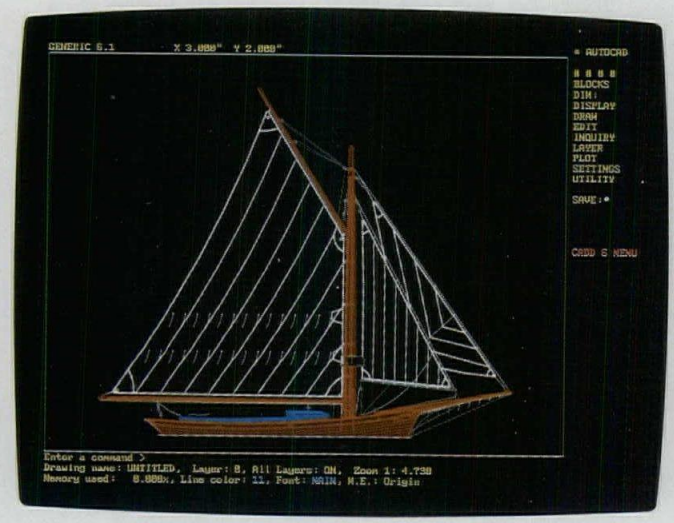
Innovations in Housing, P.O. Box 11700, Tacoma, Washington 98411-0700 PA

Innovations in Housing Call For Entries.

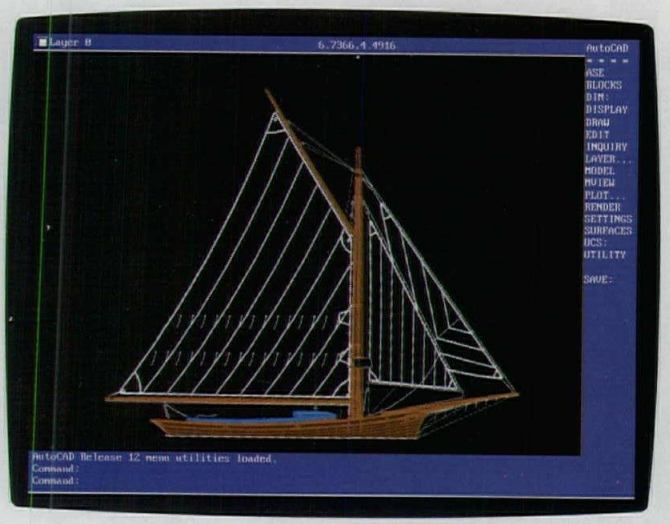
Sponsored by the American Plywood Association, Better Homes & Gardens, Builder and Progressive Architecture and co-sponsored by the American Wood Council.

Circle **No. 311** on Reader Service Card

Why the makers of AutoCAD strongly recommend another brand of software.



New Generic CADD 6.1

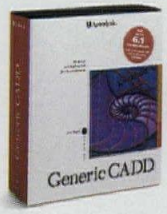


AutoCAD Release 12

Introducing Generic CADD 6.1.

The makers of AutoCAD® software recognize that not everyone needs AutoCAD's full-throttled power. That's why we recommend new Generic CADD® 6.1.

This latest version of Generic CADD software can now write AutoCAD.DWG files—the standard file format throughout the CAD world.



This upward compatibility from Generic CADD to AutoCAD lets you extend the power of CAD to anyone in your organization — even those not directly involved in the design process.

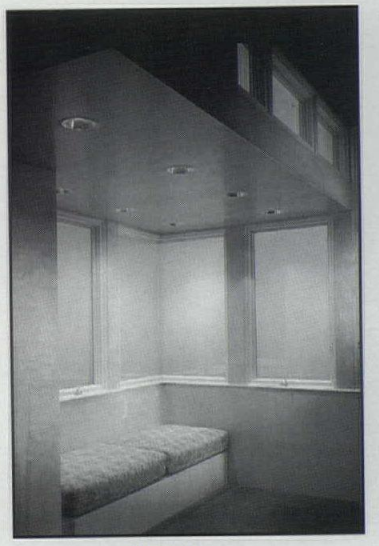
Of course, this latest version of Generic CADD delivers the extraordinary functionality and ease-of-use that have made it a three-time winner of the coveted *PC Magazine* Editors' Choice Award. And it's still only $495.

Generic CADD 6.1 is part of the Autodesk® family of design automation products. You'll find it at leading retail software centers. Or call us at 1-800-228-3601 and request Infopack #A103.

Autodesk.

Technics-Related Products

The products shown here complement this month's Technics article on glazing (p. 76).



New Corner Window

Cornerview™ is a new mitered-corner window with insulating glass. The window is available with custom-colored teal EnduraClad™ exterior aluminum cladding. Pella.

Circle 109 on reader service card

Non-Reflective Flat Glass

Amiran® non-reflective glass is a new weather-resistant, coated flat-glass product for interior and exterior applications. It is said to reduce reflected light to less than 1 percent. The glass is produced by applying a proprietary multi-layered interference system to flat glass in a three-stage process. It is available in sheet sizes up to 10.41' x 6.1' and in thicknesses of 5/32-, 3/16-, 1/4-, 5/16-, and 3/8-inch. Schott.

Circle 110 on reader service card

Insulated Glass Addition

True Divided Lite (TDL) insulated, dual-sealed windows are now available with 7/8-inch wide muntin bars in addition to the existing line of 1 3/8- inch wide bars. Weather Shield.

Circle 111 on reader service card

Condensation-Reduced Glazing

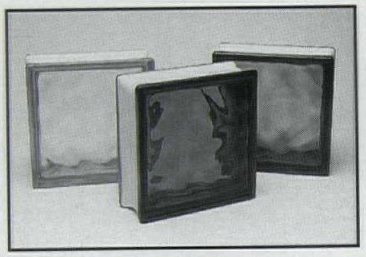
The addition of a new spacer in insulating glass, called Warm-Edge, increases the temperature at the edge of window or door glass, (where temperatures are typically 3 to 12 degrees colder than in its center) reducing the potential for condensation. The U-shaped spacer moves with the glass and frame during normal expansion and contraction. Constructed from tin-plated steel, the spacer holds a black desiccant material. Marvin.

Circle 112 on reader service card

Fire-Rated Glass

FireLite is a wireless, fire-rated ceramic glass. The 3/16-inch thick glass is UL- and Warnock Hersey-listed and carries a fire rating of 45 minutes to three hours, depending on sheet size; sheet sizes up to 36" x 96" are available. Technical Glass Products.

Circle 113 on reader service card



New Glass Block Series

The new Solaris® Glass Block Trimline Series includes four styles of block: Clearview (slightly distorted); Cross-Ribbed; Flemish (moderately distorted view in a "classic" pattern); and Carlotta (a diamond-shaped pattern providing a high degree of privacy). Compatible with the IBP Glass Block Grid System for easy installation, the blocks are 7 3/4 inches square and 3 1/8 inches thick. Acme Brick.

Circle 114 on reader service card

Windows, Doors Brochure

This new 24-page brochure covers the complete line of Ariel windows (featuring wood interiors and factory-finished extruded aluminum exteriors in many different models and styles), insulated entry door systems (prefinished or ready-to-finish fiberglass and ready-to-paint steel), and patio doors. Peachtree.

Circle 201 on reader service card

Heat-Smart Windows

The family of Heat-Smart Windows Systems has been extended to include the Heat-Smart Plus. The new product is designed to reduce solar heat gain with the application of a Low-E coating. Three versions are offered with combinations of double or triple glazing and one or two layers of Low-E coating. Loewen.

Circle 115 on reader service card

Improved Skylight System

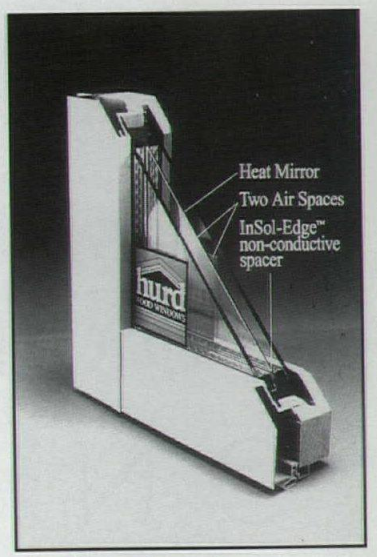
This continuous vault skylight system has been redesigned. Load capabilities, for example, have been "increased from 20 PSF to 30 or 40 PSF, depending on rafter spacing." Single- or double-glazed acrylic in a variety of tints is available. Naturalite/EPI Skylight Systems.

Circle 116 on reader service card

Window Film

Sun-Guard® has announced the introduction of its Safety Film Series, a film designed to give flat glass the properties of safety glass. Applied to a window, the Sun-Guard adhesive system bonds the film to the glass while maintaining optic clarity. The adhesive helps to hold the glass in place, reducing the impact of flying objects propelled by severe weather conditions or vandalism. The film is also said to screen out at least 95 percent of UV rays. Metallized Products.

Circle 117 on reader service card



New Spacer Channel

InSol-Edge is a spacer channel that, depending on the type of glass and window, can increase a window's edge-of-glass temperature by up to 11°F and reduce water condensation. Available with all of the company's Heat Mirror™ products, the spacer also increases a window's overall thermal efficiency. Hurd Millwork.

Circle 118 on reader service card

(continued on page 105)

DOORS THAT HIT YOU ON THE WAY IN

WHEN DESIGNING A BUILDING, YOU HAVE A UNIQUE OPPORTUNITY. AN OPPORTUNITY TO SHARE YOUR VISION WITH EVERY PERSON WHO WALKS THROUGH THE DOOR. THIS OPPORTUNITY KNOCKS LOUDER WHEN THE DOORS YOU CHOOSE ARE FROM WEYERHAEUSER. THE WEYERHAEUSER ARCHITECTURAL DOOR DIVISION PRIDES ITSELF ON MAKING THE FINEST SOLID WOOD DOORS IN THE WORLD. UNRIVALED VENEERS, EXPERTLY MATCHED COLORS AND STAINS, INFINITE SPECIFICATION OPTIONS AND STATE-OF-THE-ART CONSTRUCTION METHODS MAKE WEYERHAEUSER DOORS IDEAL FOR ANY COMMERCIAL, EDUCATIONAL OR HEALTHCARE PROJECT. SO WHENEVER THE JOB CALLS FOR IMMEDIATE IMPACT, CALL WEYERHAEUSER. (800)869-DOOR.

WEYERHAEUSER ARCHITECTURAL DOOR DIVISION SALES CENTER 1401 EAST 4TH ST., MARSHFIELD, WI 54449-7780.

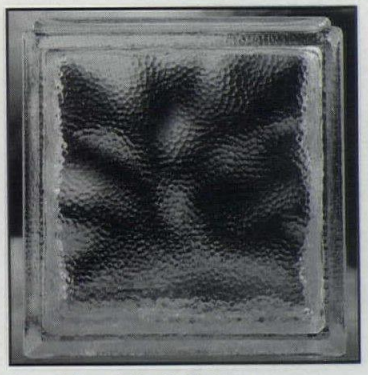
Weyerhaeuser

There Is No Equal.™

Circle **No. 317** on Reader Service Card

New Products and Literature

(continued from page 103)

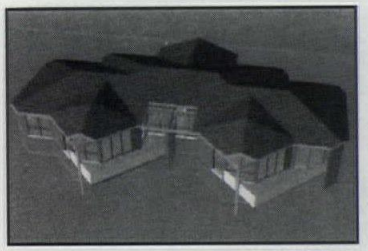


New Glass Block Pattern

The new CIRRUS™ glass block pattern combines the subtle wave pattern of the DECORA® block on the interior face with a stippled exterior texture. Available in 8" x 8" and 6" x 8" sizes, the new block carries a sound transmission class (STC) of 31 and has an impact strength of 40 to 50 pounds per inch. Pittsburgh Corning.

Circle 119 on reader service card

Computer Products



APDesign

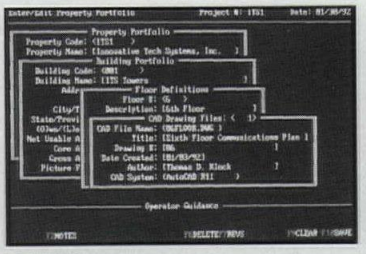
APDesign 7.0, a completely integrated system using AutoCAD Release 12, has modules for design, estimating, framing, rendering, surveying, and digital terrain modeling. Capable of creating a 3D model, APDesign then automates the extraction of such things as elevations, sections, framing plans, perspectives, photorealistic renderings, and site work. Cadsoft.

Circle 120 on reader service card

TERRAMODEL

The latest release of TERRAMODEL, Version 8.10, expands the capabilities of this land-modeling package and includes a rewrite of the HYDRO/PLUS stand-alone package as an integrated module in the system. The new program's commands and enhancements include over 30 Snap options for engineering/ survey design and drafting, and new macro language commands and extensions. Version 8.10 is compatible with previous versions of TERRAMODEL and is binary compatible across supported PC and UNIX workstation environments. Plus III Software.

Circle 121 on reader service card



SPAN™

The SPAN™ series is an integrated facilities management solution for space planning and programming; stacking and blocking; asset, lease, maintenance, and cable management; hazardous materials tracking; and materials handling. The SPAN/CAD Integrator offers a bi-directional, real-time interface between each SPAN database module and AutoCAD. Facilities templates for AutoCAD are compatible with any user-friendly interface on the market. Innovative Tech Systems.

Circle 122 on reader service card

AutoMASTER™ Digitizer Templates

Available for SummaSketch III 12 x 12 and Professional 18 x 12 models, AutoMASTER™ enhanced digitizer templates are compatible with both DOS and Windows™ based versions of AutoCAD Release 12. The templates offer custom dialog windows for managing preference files and an enhanced cursor menu that automates the use of the geometric calculator. Summagraphics.

Circle 123 on reader service card

ASG Core Upgrade

Version 6.0 upgrade for ASG Core, an extensive collection of functions and utilities that makes AutoCAD more productive, has been released. It includes implementation of new AIA layer guidelines, a new graphical user interface called Tableview™, access to ASG-Vertex Electronic CADalogs™, and a cost estimating interface. ASG.

Circle 124 on reader service card

(continued on page 107)

What if they shipped new cars like they ship office furniture?

"Oops. We'll get you the wheels next week," they'd say. Or, "You didn't specify lug nuts." Would you take such excuses from car dealers? Then don't take them from furniture dealers. Find one who features Trendway: great-looking, adaptable office furniture that ships in as little as 3 days. Complete. Including trim, connectors and lug nuts. Call 1-800-968-5344. You'll be rolling real soon.

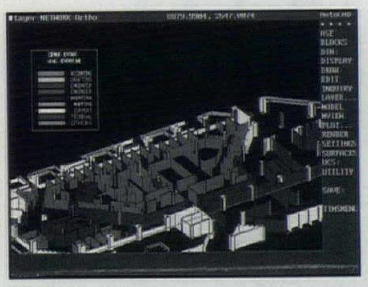
Trendway™

Consider it done.

Circle **No. 331**

New Products and Literature

(continued from page 105)



TIMS Toolkit

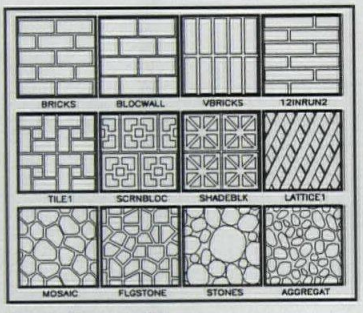
The TIMS Toolkit is a powerful programmer interface to AutoCAD Release 12. It is designed for developers of GIS/FM applications, OEMs, advanced users of TIMS Release 12, and technical departments that support corporate users. TIMS Release 12 uses AutoCAD™ as a graphics engine and provides a wide range of functions including transparent spatial relationships based on an object-oriented technology. The Toolkit also provides access to standard industry databases (Oracle™, dBase™, and Lotus™) and a library of more than 200 routines written in "C" (it can also be accessed from AutoLISP). ObjectGraphics.

Circle 125 on reader service card

Blueprint 4

Blueprint 4, the lastest upgrade to the 2D CAD program, is now available. Some of its new features include tolerancing; on-line prompts; on-screen chamfers and fillets; an enhanced reshape tool; editable line styles; auto-wall tools; a "cut" tool for the insertion of windows and doors; and polylines to combine beziers, lines, and arcs into one closed surface. Blueprint 4 has all the new 2D features and interface enhancements found in the recently released MiniCad+4, the company's 2D/3D CAD program with built-in database/spreadsheet. Graphsoft.

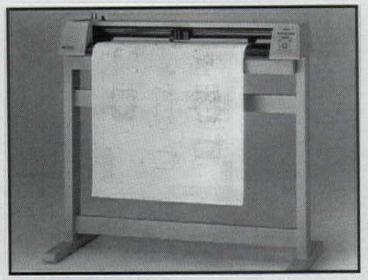
Circle 126 on reader service card



Hatch Pattern Library

The 100 PLUS Hatch Pattern Library Version 3.0 for AutoCAD Release 12 contains 127 hatch patterns appended to the patterns supplied with AutoCAD. It also provides 20 AutoLISP-generated linetypes and utilities that display and launch from a pull-down icon menu. A drawing name, date, and time stamp utility is also included. CompugraphX.

Circle 127 on reader service card



GRX Pen Plotters

The GRX series of eight-pen plotters for wide-format presentation-quality plots has been expanded. The new GRX-350 (D-size) and GRX-450 (E-size) achieve a mechanical resolution of .00006"/step and have a plotting speed of 26 inches per second. They are compatible with HP-GL and HP-GL/2, have auto-protocol function, a mirror function, and a smoothing function that provides highly precise output of arcs and curves. A special area replot function enables the user to review specific sections of a drawing without replotting the entire design. Roland Digital.

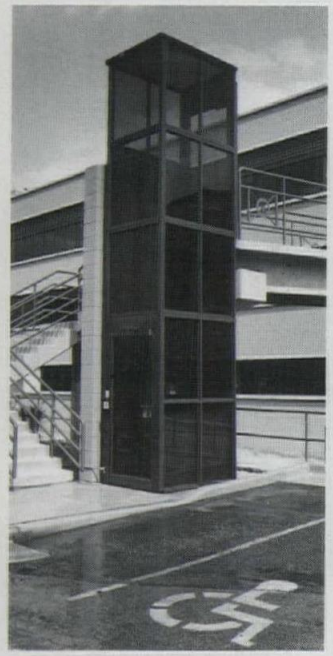
Circle 128 on reader service card

AutoDRAW 8.1

AutoDRAW for AutoCAD is a set of drawing tools that operates in the Windows environment. Custom toolboxes and command buttons can be created with AutoDRAW 8.1. Customized drawing setups can also be achieved. This recently released version has application software packages that include a library of more than 750 architectural drawings and electrical symbols. A.I. Systems.

Circle 129 on reader service card

Our VPL™ Series 2000 Vertical Platform Lifts Provide Access And Freedom To Disabled People.



- Ideal for public building & ADA compliance issues
- Easy to operate
- 750 lb. load capacity
- With options, complies with ANSI A17.1

For more information call Toll-Free
1-800-568-1222
Fax 414-782-7442

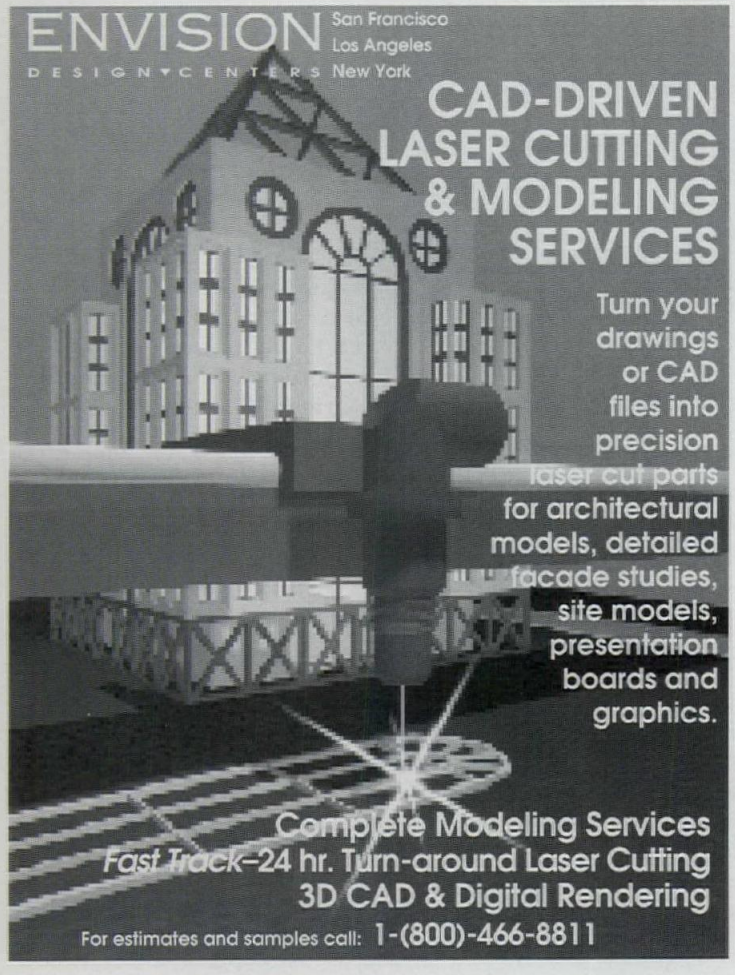
CHENEY
a division of Access Industries, Inc.

P.O. Box 51188, 2445 S. Calhoun Rd., New Berlin, WI 53151 Dept. #PA-0993

Circle **No. 346** on Reader Service Card

ENVISION DESIGN CENTERS San Francisco Los Angeles New York

CAD-DRIVEN LASER CUTTING & MODELING SERVICES



Turn your drawings or CAD files into precision laser cut parts for architectural models, detailed facade studies, site models, presentation boards and graphics.

Complete Modeling Services
Fast Track–24 hr. Turn-around Laser Cutting
3D CAD & Digital Rendering

For estimates and samples call: 1-(800)-466-8811

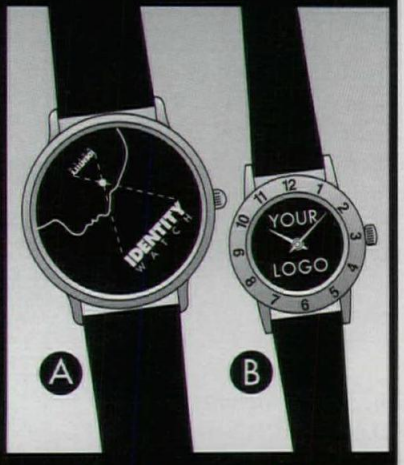
Circle **No. 338** on Reader Service Card

LOGO WATCHES

FACTORY DIRECT TO YOU!

INTRODUCTORY OFFER! JUST $14.50 EA. LIMIT 2

- Precision quartz timepieces
- Top quality color logo reproduction
- Thirty day 100% money back guarantee
- FREE shipping and handling
- Great for businesses, associations, clubs, teams, fraternities, schools, institutions, fundraisers, gifts, sales awards, giveaways...hundreds of other uses.



STYLES A & B AVAILABLE IN MENS AND LADIES SIZES

Just send us two copies of your logo, business card, lettehead or other reproducible art and $14.50 per watch and we will send you a custom made **LOGO WATCH within two weeks of receipt of your order.** (Raised, metallic lettering and photographs not acceptable) MI residents add 4% sales tax. Specify style A or B and mens or ladies. Limit 2 per company.

Mail artwork and check today to:

IDENTITY™ WATCH
20901 East Street, Dept. 2021
Southfield, MI 48034-5934

For free catalog call
800-875-5811 or Fax:
313-353-3533

Circle **No. 001** on Reader Service Card

Major materials suppliers as they were furnished to P/A by the architects for buildings featured this month.

Foothill Student Housing, University of California, Berkeley (p. 70).
Architects: William Turnbull Associates, San Francisco.
Floor joists: TJI. Roof trusses: Latham Timber. Aluminum windows: Bonelli. Interior doors: Cedorco. Overhead doors: Cookson. Carpet: Shaw, Patrick. Tile: Dal Tile, Niro. Vinyl composition tile: Tarkett. Asphalt shingles: Pabco. Waterproofing membrane: W.R. Grace, Paraseal. Batt insulation: Owens Corning. Rigid Insulation: Manville. Paint and stain: Fuller O'Brien. Hinges: Soss. Locksets: Best. Door closers: Rixon. Panic exit: Monarch. Security: Simplex. Lockers: American Locker. Elevators: U.S. Elevator, San Francisco Elevator. Tubs, water closets, and lavatories: American Standard. Flush valves: Powers Process Controls. Toilet stalls: Santana. Water fountains: Haws. Sprinklers: Grinell. Shower doors: Artistic. Furniture: Steelcase, Compendium, DCI. Blinds: Silent Gliss USA. Upholstery: Design Tex. Projection screen: Draper.

P/A Classified

SITUATIONS OPEN

DEAN, COLLEGE OF ARCHITECTURE AND PLANNING
THE UNIVERSITY OF TENNESSEE, KNOXVILLE
ADVERTISEMENT

THE UNIVERSITY: The University of Tennessee, Knoxville, established in 1794, is an 1862 Land Grant Institution with approximately 19,000 undergraduate students and 6,000 graduate students, and more than 1500 faculty. The University confers bachelor's degrees in 150 programs, master's degrees in 95, and doctoral degrees in 52. The University is one of 70 Carnegie I research institutions.

THE COLLEGE: The School of Architecture offers two professional degrees: a five-year undergraduate Bachelor of Architecture and a three-year Master of Architecture for second-degree applicants who do not hold a prior professional degree in architecture. The School of Planning offers a Master of Science in Planning and manages a liberal arts undergraduate inter-disciplinary program in urban studies. The College, as a whole, has approximately forty full-time faculty, six part-time faculty, and 400 students.

THE POSITION: The Dean is the leader and chief administrative officer of the College. The Dean is responsible for academic administration; planning and budgeting; promoting an environment of academic excellence and collegial governance; and developing productive relationships with industry, government, the university and the community.

QUALIFICATIONS:

- A strong academic and/or professional record of achievement, an appropriate terminal degree or the equivalent, and qualifications to merit a senior appointment in the College;
- The ability to build relationships within the College and among the University's other academic programs;
- Communication skills to foster strong relationships with alumni and other professional groups and community organizations;
- Fund-raising ability;
- Intellectual leadership, vision, and a strong commitment to high standards;
- Understanding of administration, budgeting, and program delivery, and
- Understanding of and demonstrated commitment to equal employment opportunity and affirmative action.

The Search Committee will begin reviewing applications on November 1, 1993, but applications will be accepted until position is filled. The desired starting date for the successful candidate will be no later than July 1, 1994.

Nominations and inquiries may be directed to:

Dr. Dwight Teeter
Chairperson, College of Architecture and Planning Dean Search Advisory Committee
The University of Tennessee
302 Communications Building
Knoxville, TN 37996-0332
Telephone: 615/974-3031 FAX: 615/974-3896

The University of Tennessee, Knoxville
is an EEO/AA/Title IX/Section 504/ADA Employer

Drury College

The Hammons School of Architecture is inviting applications for the position of director. This is a tenure track administrative and teaching appointment effective June 1, 1994. Faculty rank and salary are competitive and based on qualifications and experience.

The Hammons School of Architecture is an accredited five-year professional program. Established in 1985, the school of architecture provides a special blend of liberal arts and professional education.

The college seeks applicants who can provide visionary and effective leadership. Applicants should have a liberal arts background and hold a graduate degree in architecture. (Professional registration is desirable.) The successful candidate will be an effective administrator, a successful teacher, and someone with significant professional experience. Candidates should have a commitment to the integration of architecture and the liberal arts and be able to express a clear and coherent philosophy of education consistent with those institutional values.

Candidates are asked to submit: a current curriculum vitae; names, addresses, and phone numbers of at least four academic and professional references; a portfolio with examples of professional and academic work; and, a letter of interest describing their more recent academic and professional accomplishments, experience in leadership positions, and educational philosophy.

Applications and inquiries should be addressed to: Dr. Stephen H. Good, Vice President for Academic Affairs, Drury College, 900 N. Benton Avenue, Springfield, MO 65802. Telephone: (417) 873-7225.

Drury College is an affirmative action/equal opportunity employer. Women and minorities are encouraged to apply.

DIRECTOR,
SCHOOL OF ARCHITECTURE
UNIVERSITY OF ILLINOIS AT CHICAGO

The University of Illinois at Chicago, School of Architecture, is seeking a distinguished architect and architectural educator with strong leadership and administrative skills for the position of Director of the School effective July 1, 1994.

Qualifications: professional degree in architecture, recognized accomplishments in scholarship, practice, and/or research, and professional and civic contributions. The applicant should be able to meet the university criteria for Professor of Architecture with tenure.

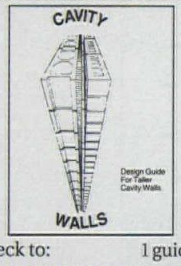
Send application, vitae, a list of five academic and professional references, and a statement on architectural education to:

Chair, Director's Search Committee
Office of the Dean, College of
Architecture, Art, and Urban Planning
303 Jefferson Hall m/c 033
University of Illinois at Chicago
929 West Harrison
Chicago, Illinois 60607-7038

Application deadline: postmark by November 1, 1993.
The University of Illinois is an Affirmative Action-Equal Opportunity Employer. Women and minorities are encouraged to apply.

BUSINESS SERVICES

CAVITY WALLS DESIGN GUIDE



Mail Check to: 1 guide — $10.00

MASONRY ADVISORY COUNCIL
1480 Renaissance Drive
Park Ridge, IL 60068
Telephone: (708) 297-6704

ARCHITECTURAL GLASS

ARCHITECTURAL GLASS
Rice Paper Laminates, Textured Carving, Brushed Acid Etch, Steel Fabrication 22 yrs. exp. MFA U. of PA. See PA 12/91 pgs. 75-78. Degnan/Laurie Inc. 29-14 40th Ave, L.I.C., NY 11101. (718) 937-8510, or studio (401) 423-3992 (Fax 718-361-0651) Extensive Resume

Tri-Lingual Architectural Designer: Formulate interior layout and design concepts for public and private areas of hotel building/renovation design projects. Consult with clients; prepare information regarding proposed space usage and requirements, specifications, materials and cost budgets. Prepare space layouts and integrate architectural elements into unified design scheme under supervision of licensed architect. Work in metric units using work experience in metric units. Short notice travel 30% to job sites in Spanish and French speaking countries. Must have a Bachelor's degree in Architecture and 2 yrs exp in the position or 2 yrs as an Architect. Must have oral and written fluency in the English, Spanish and French languages. $23,500/yr, 40 hrs/wk, 9 - 5:30. Submit resume to: Job Service of Florida, 2660 West Oakland Park Blvd., Fort Lauderdale, FL 33311-1347. Re: Job Order # - FL 0864205.

P/A Classified

MIT: Positions in Design and Computation

MIT's Department of Architecture seeks exceptional candidates for positions on a teaching and research team in computational design theory and computer-aided architectural design. Specializations of particular relevance include geometric modeling and reasoning, building description databases, architectural knowledge representation, shape computation, architectural CAD/CAM and construction robotics, integration of computer technology with studio, and computer-supported professional practice and management. Faculty members are expected to bring computation into strong relationship to architectural and urban theory and design.

Candidates should have a PhD or equivalent in an appropriate research area; professional degree or background in architecture desirable.

One senior, tenured appointment will be made at Associate or Professor level; additional appointment will be made at the rank of Assistant or Associate professor (without tenure), Research Scientist, or Principal Research Scientist, depending upon qualifications and experience.

Candidates should send vita and names of three references to Professor Stanford Anderson, Room 7-303, Department of Architecture, MIT, Cambridge, MA 02139. Review will begin in September, 1993 and continue until the positions are filled.

MIT is an Affirmative Action/Equal Opportunity Employer

Architecture and engineering firm seeks an architectural detailer/designer to: 1) Design and prepare architectural and preliminary civil engineering drawings for commercial and residential buildings using AutoCad R11 & R12 & DataCad programs. Confirm compliance with CABO, ADA, SBC & BOCA building codes. Coordinate and complete working drawings. Prepare material specifications using CSI format. Manage files on LANtastic operation system, OS/2 Ver 2 system, AutoCAD, Intergraph, and data backup using QIC format in Colorade backup system. Manage drawing files and custom make Autolisp program; 2) Prepare residential construction estimates using Excel and Lotus 1-2-3 spreadsheets, and commercial building construction estimates using Estimate Writer program; 3) Prepare and review site maps, topographical profiles, cut and fill volume estimates, and elevation charts to verify contour lines and incorporate relevant data into preparation of construction drawings and preliminary selection of structural system using AutoETABS 2.0 program. Confirm compliance with AISC, ACI Manual, and ASTM specification; 4) Conduct residential and commercial field measurement and inspection for renovation work; 5) Prepare drawings using Ventura and FreeLance graphic and send plot file on Procomm and HaL5 system; and 6) All work performed under supervision of senior registered architect. Experience/Education: Masters degree in architecture. Bachelors degree (or equivalent) in civil engineering. Work Schedule: 40 hours per week/8:00-6:00 (M-Th) / 8:00-12:00 (F) Salary: $23,636 per year Send Resume to: Job Service, P.O. Box 567, Columbia, SC 29201, Attn: Ms. Lisa Hill, Job Order No. 2605928.

ACADEMIC POSITION
DESIGN TECHNOLOGY

The Graduate School of Design at Harvard University is seeking candidates for a senior position in design technology.

The Graduate School of Design has a strong commitment to technology education for students in architecture, as well as in landscape architecture, urban design and planning. Candidates for the open position are expected to have specific expertise in the area of structural analysis and design, with additional capabilities in the area of project planning and delivery. Candidates are also expected to be experienced with computer-aided design and engineering, and with the development, implementation, and management of institutional-level information systems. A broad understanding of technological issues in landscape architecture and urban design and planning would be desirable. Candidates should have an earned doctorate and a strong record of accomplishment in teaching, research, and scholarship.

Applications are invited before 15 November 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: Design Technology Search Committee; FAX (617) 496-5310.** Applicants should not send portfolios or dossiers with their applications. The Graduate School of Design is committed to seeking qualified minority and women candidates, and strongly encourages them to apply. Harvard University is an Equal Opportunity/Affirmative Action employer.

HARVARD UNIVERSITY
Graduate School of Design

P/A ADVERTISERS' INDEX SEPTEMBER 1993

Note: W after numbers denotes material that appears in Regional editions only.

Advertising Sales Offices

Executive Offices
600 Summer Street
P.O. Box 1361
Stamford, Ct 06904
Phone: 203-348-7531
Fax: 203 348 4023
Robert J. Osborn, Vice President and Group Publisher
Gloria S. Adams, Vice President and Associate Publisher

New England:
Phone: (203) 348-7531
Fax: (203) 348-4023
Thomas K. Healy, District Manager

Mid-Atlantic:
Phone: (203) 348-7531
Fax: (203) 348-4023
Thomas K. Healy, District Manager

Southeast:
Phone: (216) 696-7000
Fax: (216) 696-1267
John F. Kelly, Western Sales Manager

Midwest:
Chicago, Phone: (312) 861-0880
Fax: (312) 861-0874
Cleveland, Phone: (216) 696-7000
Fax: (216) 696-1267
Brian Keenan, District Manager, Chicago
John F. Kelly, Western Sales Manager, Cleveland

Mountain:
Phone: (303) 753-1901
Fax: (303) 753-1902
Albert Ross, District Manager

South Central:
Phone: (203) 348-7531
Fax: (203) 348-4023
Gloria S. Adams, Vice President and Associate Publisher

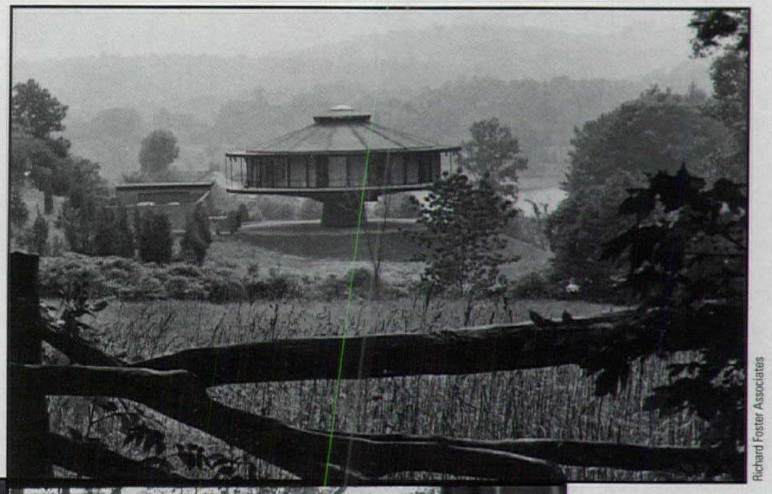
West Coast:
Phone: (415) 692-1381
Fax: (415) 692-7406
Larry Marechal, *District Manager*

Subscription information: Send all subscription orders, payments and changes of address to Penton Publishing, Subscription Lockbox, P.O. Box 96732, Chicago, IL 60693. When filing change of address, give former as well as new address and zip codes, and include recent address label if possible. Allow two months for change. Publisher reserves right to refuse unqualified subscriptions. Professionals include architectural and architectural-engineering firm personnel and architects, designers, drafters employed in allied fields. Subscription rates for U.S. professionals are $48 for 1 year ($65 in Canada, $130 for foreign); $90 for 2 years ($125 in Canada, $255 for foreign); U.S student subscription for 1 year is $48. Single copies are $7.50 in the U.S., $8 in Canada, and $12 for foreign except Information Sources issue and two issues of P/A Plans, $10 in U.S., $12 for Canada, and $20 for foreign Fed ID #36-2875386. GST #R126431964. Permission to photocopy is granted for users registered with the Copyright Clearance Center Inc. (CCC) to photocopy any article, with the exception of those for which separate copyright ownership is indicated on the first page of article, provided that the base fee of $1 per copy of the article plus $0.50 per page is paid directly to CCC, 27 Congress St., Salem, MA 01970. (Code No. 0033-0752/93 $1.00 + .50) Written permission must be obtained for other copying; contact Gerry Katz at P/A, 600 Summer Street, Stamford, Ct. 06904, (203) 348-7531. Indexed in ArchiText Construction Index, Art Index, Architectural Index, Engineering Index. Second class postage paid at Cleveland, Ohio, and additional mailing offices. Editeur Responsable (Belgique), Christian Desmet, Vuurgatstraat 92, 3090 Overijse, Belgique. Volume LXXIV, No. 9. Printed in U.S.A.

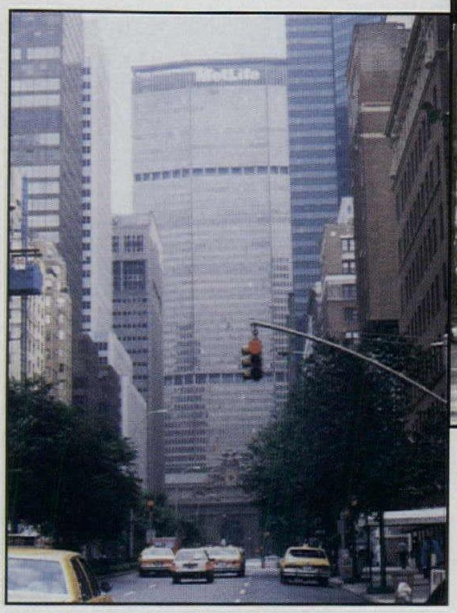
POSTMASTER: Send address changes to PROGRESSIVE ARCHITECTURE, 1100 Superior Avenue, Cleveland OH 44114-2543.

Furthermore . . .

Still Spinning *For 25 years, architect Richard Foster and his family have lived in a house he designed (right), a circle of rooms that revolves ever so slowly above the Connecticut countryside. In honor of this anniversary, a couple of us from P/A spent an evening this summer walking around the house – get it? – and taking in the splendid view. Foster explained that the house (which was widely published when it was built) moves on a ball-bearing assembly akin to a battleship turret, and that the structure is a series of trusses. But you don't see any of these contraptions. They're hidden by cedar shingles – what could be more contextual?*

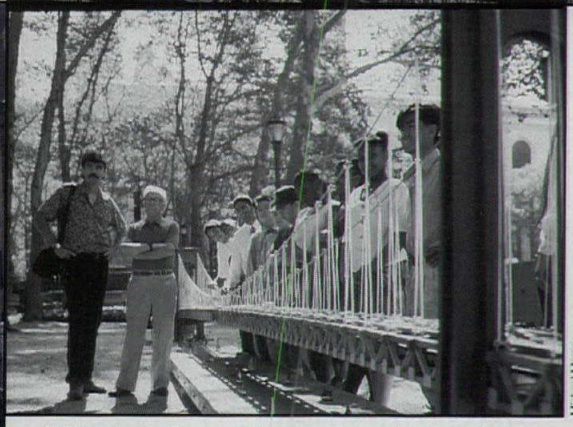


Richard Foster Associates



Abby Bussel

By Any Other Name *The favorite response to our May Question of the Month ("What building would you miss the least if it went away?") should come as no surprise. The Met Life (formerly Pan Am) Building in New York (above) is the anti-Penn Station: New Yorkers rue its presence – and the resulting damage to Park Avenue – as much as they do the absence of Penn Station. (See "What departed building do you miss the most?" in last month's Furthermore.) The building's recent change of name and ownership has not helped much, apparently.*



Michael Moran

A Scholastic Span *This summer, a 40-foot bridge went up in Bryant Park in New York. But the structure (above), a scale model of the Verrazano-Narrows Bridge, isn't for physical crossings; in the words of the project's title, it is a "Bridge to Learning" built by 20 New York junior high school students during the month of July. The Salvadori Educational Center on the Built Environment, founded by noted engineer and author Mario Salvadori, developed the project.*

P/A in October

Louis I. Kahn's Salk Institute (1965) in La Jolla, California, is the latest Modern landmark to be embroiled in controversy over an addition. Next month, we'll revisit the Salk as part of our Landmarks series, considering how the building has fared over the years and how the addition by Anshen + Allen – now under way – will change it. Also in the issue:

- **a Critique of two Paris parks: Bernard Tschumi's P/A-award-winning Parc de la Villette (P/A, Nov. 1989, p. 65) and the more recent Parc André Citroën;**
- **an interiors feature on two record company offices by former P/A Young Architects Bausman & Gill (P/A, July 1990, p. 78);**
- **a Practice Profile of Roberta Washington, a New York architect who has built her practice on the renovation of urban buildings;**
- **a Computer Focus on computer presentation techniques, including multimedia, animation, and rendering.** ■

?

Question of the Month

"What is your favorite example of supergraphics?"

This month, we let the Art Director pick the question. Remember supergraphics, the oversized letters, numbers, and images that characterized early Post-Modern work in the late 1960s? If you have a favorite example of the genre, send a photo of it before November 15 to Furthermore Editor, P/A, 600 Summer Street, Box 1361, Stamford, CT 06904. *We'll publish the most intriguing responses in Furthermore in January.*