

# Marching On

With this issue RECORD embarks on a new phase in its long history. Faced, due to mechanical requirements, with a magazine one inch shorter (as you see), we resolved to turn necessity into a virtue and seized this opportunity to bring you a magazine that contains sweeping changes in editorial approach and presents them to you in a brilliant design by Massimo Vignelli (shown here at work, right, with editor Kliment).

Thus, to reinforce RECORD as the companion of the active architect, we are adding depth to breadth in our coverage of buildings and of such regular departments as practice and technology. Chiefly, you will see more pages devoted to individual buildings: there will be more drawings, larger photographs, more critiques. These building "portfolios" will alternate monthly with RECORD's traditional Building Types Studies, whose projects will likewise be shown in greater depth, complemented by short takes.

Meanwhile, all the design news and other time-related matter, which until now was split up between the front and the back of the magazine, is now concentrated up front, in a single brand-new section we're calling Yellow Pages. There you'll find in one convenient place current news on design, practice, technology, and important new products, as well as book reviews, profiles, and observations.

The idea is not for you to think of RECORD as a mere collection of separate monthly issues, but as a year-long "book" published in monthly installments, with each important topic given the space it needs. What's more, we have built flexibility into the plan, so if a major publishing opportunity comes along after our editorial calendar for the year is set, we can accommodate it.

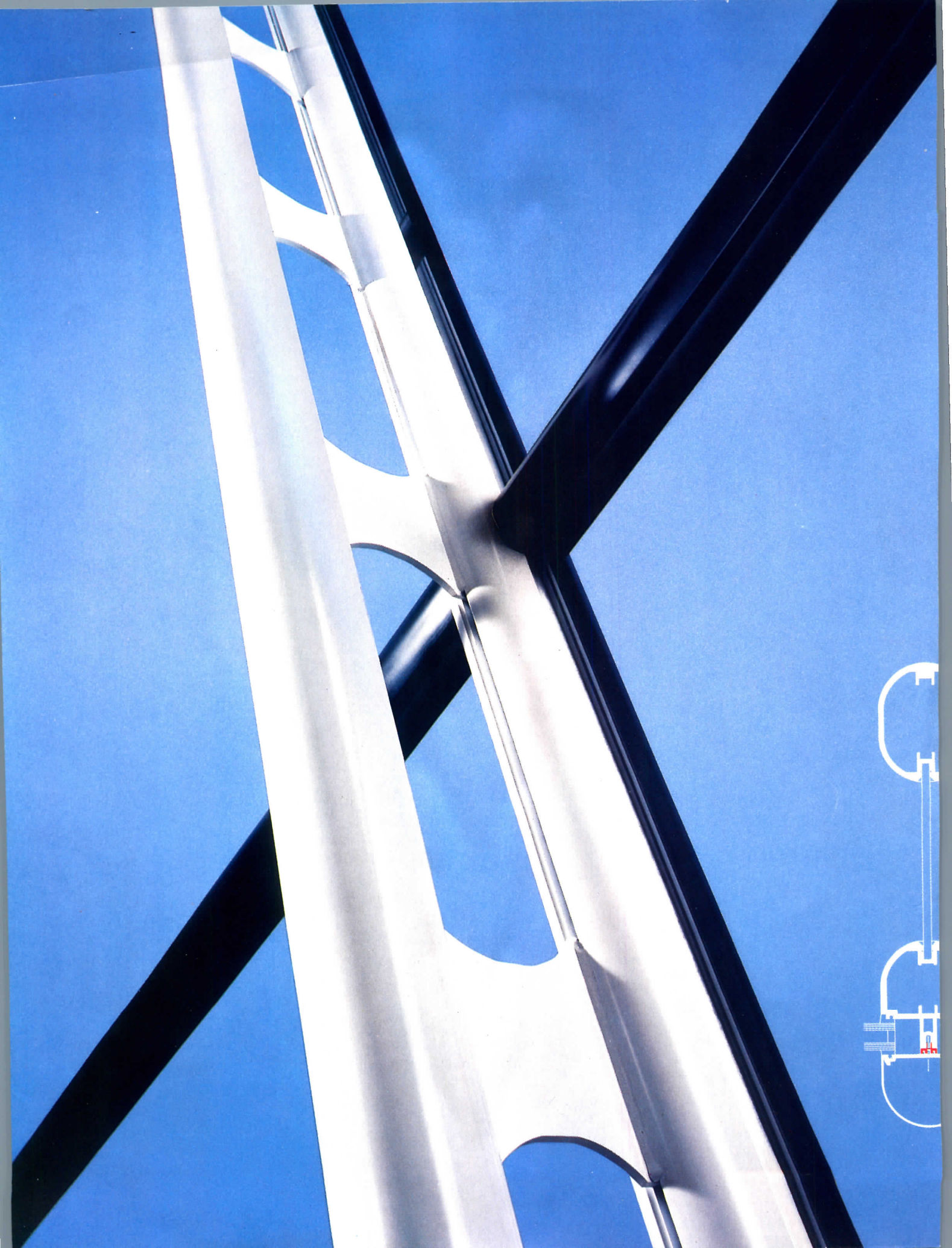
It all means an elegant, richer, more cohesive, more professional magazine. It brings you information in the depth you need. It gears RECORD to help you tackle the turbulent 1990s with realism and confidence. The issues are many—building up the architect's professional skills; meeting the needs of the user whose needs are not being met by current systems; educating the architect; meeting the need for a coherent set of design values; and showing sympathy for the environment.

We launch the recast RECORD with this double issue devoted to preservation. The field celebrates its 25th anniversary as a deliberate activity, and is now a part of every architect's language.

You pay a premium for RECORD. Our job is to justify your investment in us. I hope you'll like what you see. *Stephen A. Kliment*









**Austria**

**Museum in the Mountain**

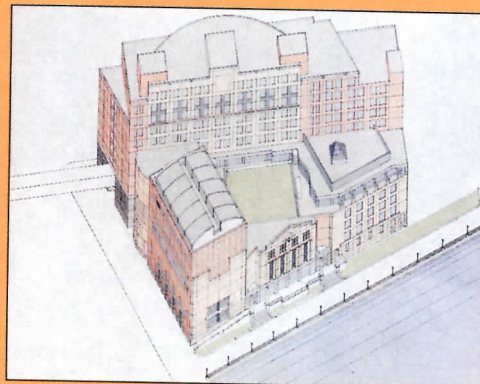


ns Hollein's Guggenheim Museum Salzburg is being hollowed out of Mönchsberg mountain, which thrusts upward from the historic old quarter of the Austrian city. Guggenheim officials expect the new building, which won't be finished until Salzburg's

Expo year of 1995, to offer exhibits on a par with those at its sister institutions in New York and Venice. But the real show is clearly the museum itself, Hollein's forward-looking, late-century reply to Frank Lloyd Wright's Manhattan monument. ■

**New York**

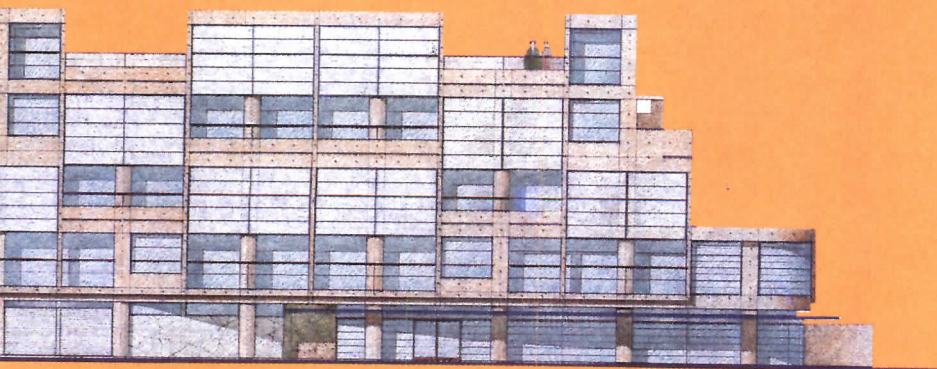
**Schools:  
City Public . . .**



The new Stuyvesant High School, in New York's Battery Park City, is a joint design of Cooper, Robertson & Partners and Gruzen Samton Steinglass. The 400,000-sq-ft, computer-networked complex on 1.5 acres will serve 3,000 of the city's best students. ■

**Japan**

**Staggered Condos for Kamakura**



restrictive building codes and allowable height requirements, along with stringent solar exposure and seismic considerations, set the design direction for this 14-unit, 21,500-sq-ft luxury condominium scheme in the port city of Kamakura. Adele Naudé San-

tos designed the apartments on an 18-sq-ft grid, knitting them in staggered layers to maximize wall and window space. The poured-in-place concrete exterior, surrounding a courtyard and circulation spine, is sheathed in a steel-and-glass curtain wall. ■

**Massachusetts**

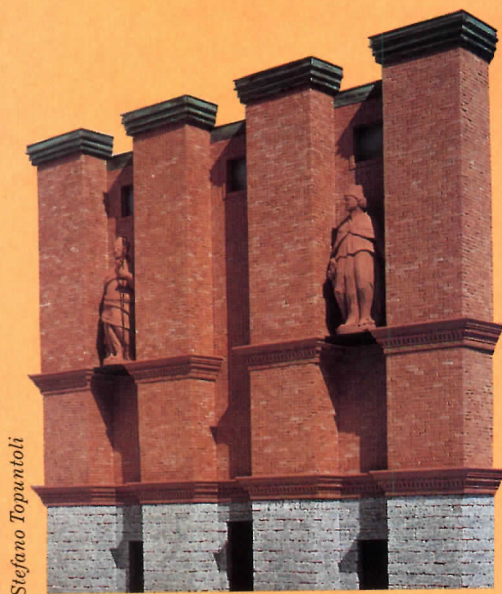
**. . . Country Private**



This \$2.5-million, 21,000-sq-ft middle school and arts center for Noble & Greenough in Dedham, Massachusetts, designed by Symmes Maini & McKee Associates, pitches a wood-truss roof on a steel-frame building that will serve some 220 students. ■



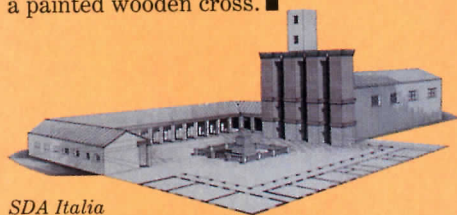
## Rossi Church to Guard Milan Suburb



Stefano Topantoli

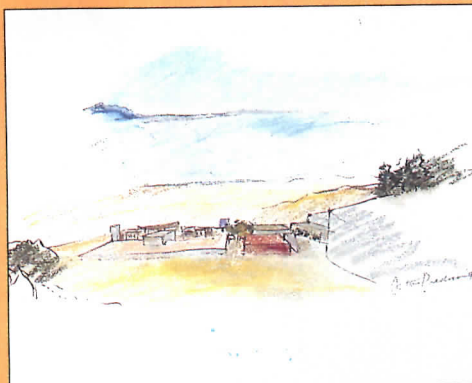
A cloister, church, and bell tower compose the compound of San Carlo alla Barona, designed by Aldo Rossi for a Milan suburb. Rossi found inspiration in a favorite Lombard church, and worked with two young Italian architects in an approach to ecclesiastic design that extends beyond purely architectural concerns. "The ancients had a more natural rapport with the church" than do the moderns, says Rossi, and so they let the order of each church establish its architecture. "As a result," he adds, "all of the churches were beautiful."

For San Carlo, Rossi let the industrial order of the day guide his design. Four massive, engaged columns rise from a stone base and flank huge statues of the patron saints of Milan, forming a bold facade that anchors the church as the city spreads out around it. An exposed steel structure and humble materials such as sheet-metal cladding animate the spare interior of the nave. This simplicity is carried through to the traditional bell tower and cloister, both faced in plaster and related in scale to the church. On the consecrated ground in the cloister's center stands a painted wooden cross. ■

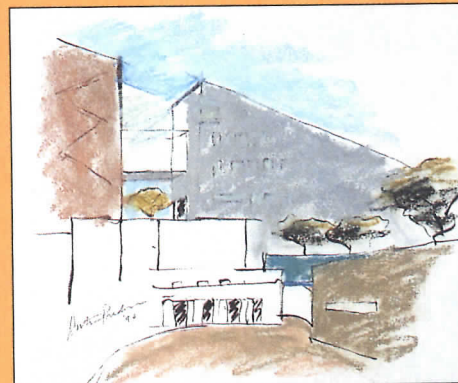


SDA Italia

## Predock Projects for UC Campuses

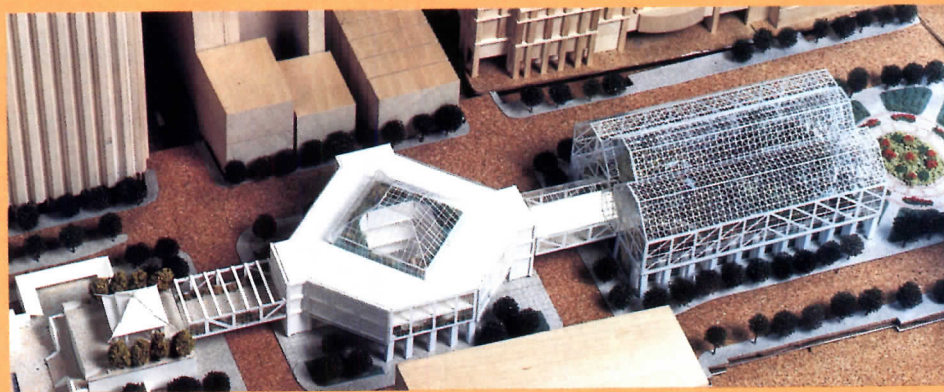


Antoine Predock has been awarded design commissions at two University of California campuses. In both schemes, landscape and view play a key role. At UC/Santa Cruz (left), Predock designed a music facility perched above Monterey Bay, with a concert



courtyard extending from a wooden veranda. At UC/Davis, facing distant mountains, a social sciences and humanities center that provides a campus focal point emerges from the ground in a slope that both admits and guards against the intense sunlight. ■

## Conservatory and Gardens in Boston's Future



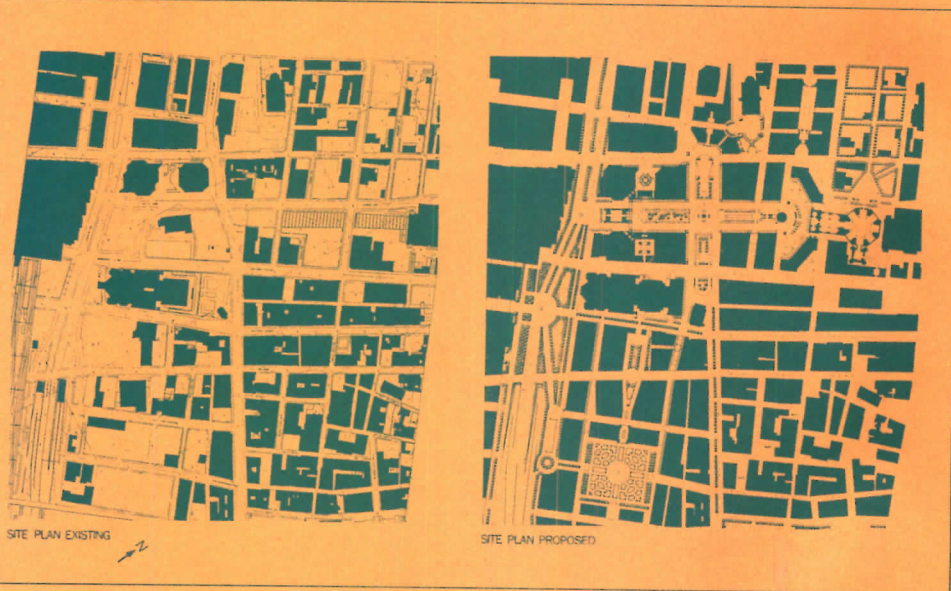
Even if downtown Boston's projected 10-year, \$5-billion Central Artery Project, now under federal environmental review after receiving state approval, goes full steam ahead, construction won't begin on the proposed Botanical Conservatory and Gardens until 1999. Because the conservatory, designed by Lawrence Bluestone of Monacelli Associates for the Massachusetts Horticultural Society, will eventually be built atop the CAP's underground expressway, tunnel engineers needed to determine its weight in order to file plans for the roadway. Thus, a

conservatory design was required nearly years ahead of schedule. The complex, which has the blessing of Boston's city planners, will use air rights along the tunnel's newly created 27 acres of land, all slated for public use.

The complex spans three full blocks adjacent to and paralleling the downtown waterfront. A glass-enclosed, 25,000-sq-ft botanical conservatory and an outdoor walled Chinese garden at opposite ends of the site are linked by pedestrian bridges. A four-story, 40,000-sq-ft visitor's pavilion.



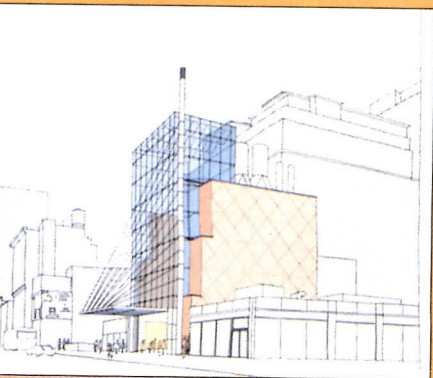
## Montreal CBD Design Has Fighting Chance



Attempts to implement new, large-scale urban design often slide into open warfare among competing interests. But the winning plan in the recent international competition to redesign 100 acres of Montreal's central business district, by Steven K. Peterson of New York's Peterson Littenberg Architects, has a fighting chance. Because the competition was sponsored by a private/public consortium including 20 real-estate firms and the city government, typical hurdles are already down. Cost and financing for the plan—dubbed “La Cité Internationale de

Montréal”—have not been announced, although the provincial and national governments will be underwriting the planned public spaces. Michael Kirkland, a developer and chairman of the competition jury, claims that building the proposed conference center and adjacent Place Montréal, in the plan's northeast quadrant, would “prime the development pump” to sustain interest in the scheme and spur private developers to move ahead. Too-slow movement, says Kirkland, risks breaking up the plan's underlying unity. ■

## Pavilion Marks New Entry to Penn Station



A long-proposed entrance pavilion and cooling tower has been approved for the Long Island Rail Road at New York's Pennsylvania Station. Designed by R. M. Kliment & Frances Halsband, the glass and steel tower rises above a supporting brick outer shell that forms a party wall at the site limits. Daylight streams through the tower to the lobby floor and to escalators descending to the marble and granite concourse. Radiating light beacons in the tower and a marquee suspended from steel cables announce the entrance. ■

## Briefs

### Awards

The 1990 Douglas Haskell Award for Student Journalism, sponsored by the New York Foundation for Architecture, went to Roann Barris of the University of Illinois, for her article, “Peter Eisenman and the Erosion of Truth.” The jury, which was chaired by RECORD senior editor Charles K. Hoyt, included Stanley Abercrombie, Harold Fredenburg, and David Morton.

### Delayed mail

The U. S. Postal Service's \$95-million, 870,000-sq-ft General Mail Facility, designed by Rose, Beaton + Rose for Westchester County, New York, and scheduled for completion in 1993, has hit its own sorting snag. The building site is on a watershed that drains into a New York City reservoir, and runoff could also affect Westchester water supplies. Local town governments, environmental groups, and New York City have filed a class-action suit in federal court, charging that the P. O.'s own seven-volume environmental assessment is insufficient and that a full environmental-impact statement is required. “We're optimistic,” says Bill Rose, a partner at the firm, claiming that “rare and unique” drainage measures have been taken to guard against watershed damage. A ruling is expected in late winter.

### People

Dean Johnson, a former SOM partner who worked at the Chicago, Houston, and Washington offices, has returned to Houston, rejoining Louis Skidmore Jr. at Ziegler Cooper, where Skidmore has been for two years. Johnson becomes Ziegler principal in charge of large-scale corporate projects.

### Media alert

Is HOK advertising? You might think so, if you heard the February spots naming it as a sponsor of National Public Radio news. Turns out the airtime was in exchange for design work on NPR's New York offices.

### Competitions

The Precast/Prestressed Concrete Institute has issued a call for entries to architects, designers, and engineers in its 1991 Design Awards and Industry Advancement competitions. Categories include general structures and bridges built in the U. S. or Canada. Deadline for submissions is July 31. Contact the Precast/Prestressed Concrete Institute at 175 W. Jackson Blvd., Chicago 60605; 312/786-0300. ■



## Cambodia

# WMF Sets Sights on Angkor



Jean-Dominique Leroux

The World Monuments Fund is taking on the big one: Angkor, the ancient Cambodian city of temples that has survived a millennium of decay and, more recently, modern warfare. Conservation architect and Asia specialist John Sanday is directing the fund's long-term restoration effort, the first stage of which is to develop a master plan. Sanday, preparing for an Angkor visit this summer, spoke to RECORD about the task ahead: "A draft master plan exists that was developed after the first mission. We've decided to amplify upon it considerably with in-

formation that others working in the field can contribute, to actually go through the exercise of doing a detailed assessment of one site—what its condition is and how to approach conservation problems before even calling it a master plan. The idea of this period of involvement is to train people out there, and then eventually step away and let the country look after things. In the Cambodian government, most of the bright people have other things on their minds, and they see us as the only organization that can do this coordinating at this stage." P. D. S.

## Ohio

# Railroad Art Deco in Cincinnati



Cincinnati's Art Deco Union Terminal has reopened its 106-foot-high rotunda and main concourse, renovated by Glaser Associates. Historical Society and Natural History museums share space in this first phase of an ongoing restoration effort. ■

## Pennsylvania

# Widener Building De-Modernized



The three-story-high arcade running the width of the Widener Building in Philadelphia is being uncovered and restored as part of a \$15-million renovation by Francis Cauffman Foley Hoffmann Architects. The project, to be completed this summer, includes a re-creation of the Chestnut Street facade, much of which was destroyed during a modernization wrought on the 1914 Horace Trumbauer building over a quarter-century ago. That's also when the arcade was hidden behind a drop ceiling, in an attempt to increase commercial space. ■

## Italy

# Stairway to Heaven

"The favorite house of architects" is how one survey described the Casa Malaparte, an inhabitable staircase scaling a cliff on the Italian island of Capri. Built in the late 1930s, the villa was attributed to architect Aldaberto Libera until recently, when new evidence proved that the design was the collaboration of owner Curzio Malaparte and local mason Adolfo Amitrano. Current proprietor Niccolo Rositani, a Malaparte descendant, is restoring Casa Malaparte and is making the building available to select groups for design-related events. K. D. S.

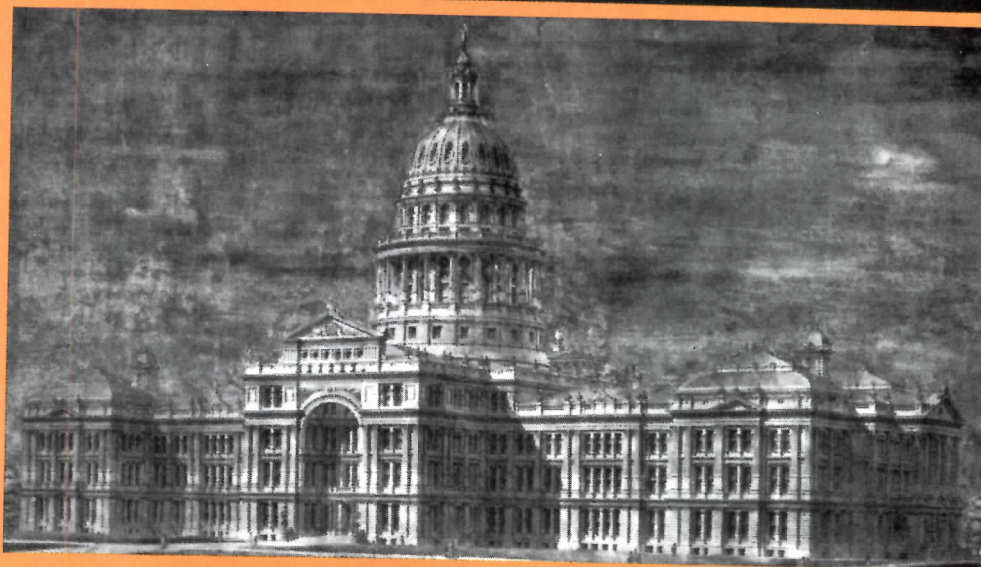
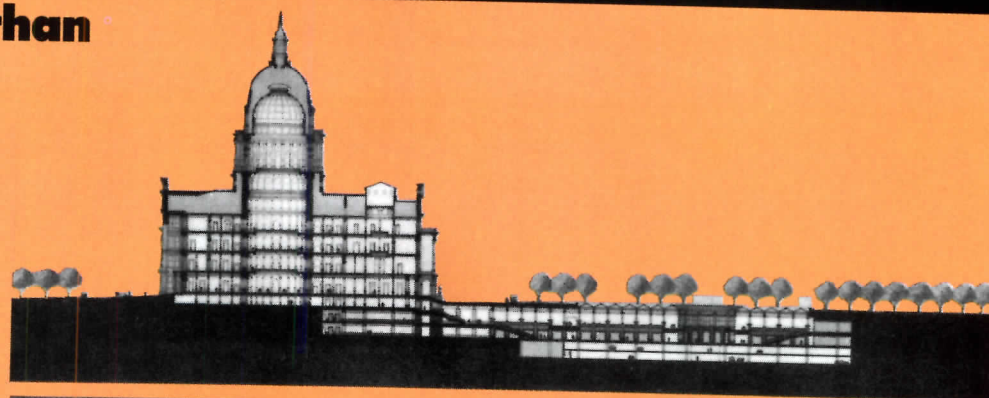


Michael McDonough



## State Capitol: More than a Facelift

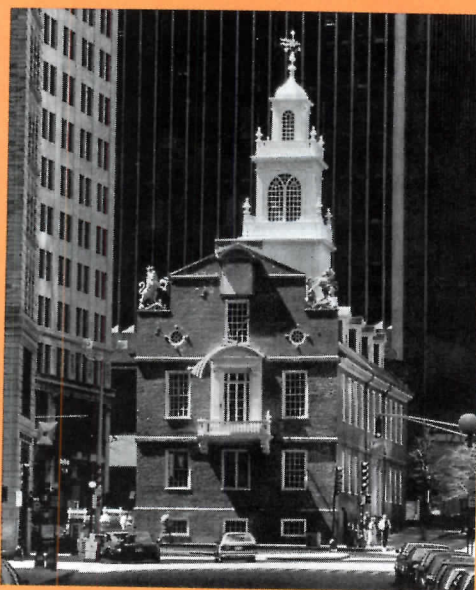
Texas, never shy about its heritage, is moving ahead with a no-holds-barred restoration of its state capitol. The three-year, \$149-million program also calls for a four-story, 600,000-sq-ft extension, all built below grade. Architects for the project are 3D/International on the extension, and Ford, Powell, and Carson on the restoration, under Kirby Keahey of 3D/I. The restoration of the capitol, completed in 1888 from a design by Elijah E. Myers (watercolor right), won't begin until enough of the extension is completed to permit state legislators to move in. The below-grade extension will preserve the capitol's regal hilltop setting, and will be organized around a 40-foot-deep, open-air courtyard that in detailing and materials closely matches the rotunda's interior. Naturally lit offices extend from both sides of the courtyard, above a parking garage. Restoration will focus on the capitol as it was before 1915, preserving historically important areas such as the rotunda and legislative chambers. Other major preservation goals include halting structural deterioration and installing safety equipment, including a sprinkler system. ■



## Restoring Colonial Landmarks in Boston



Photos by Lucy Chen



A more modest approach to preservation was undertaken last November in Boston, where Goody, Clancy & Associates began work on two of the city's 18th-century landmarks, Faneuil Hall (far left), built in 1742, and the Old State House, built in 1713. Along with cleaning and restoring exterior and interior surfaces and repairing structural damage, the program goals for both buildings include increasing handicapped accessibility, improving ventilation and other mechanical services, and installing fire-suppression systems. In addition, some historic artifacts will be restored, such as an 1831 Simon Willard clock that will be returned from storage to the east facade of the Old State House. Both buildings are owned by the City of Boston and have been in continuous use; the restoration work is expected to be completed in March 1992. *P. D. S.*



## Preservation

### Preservation Legislation Hits New Phase



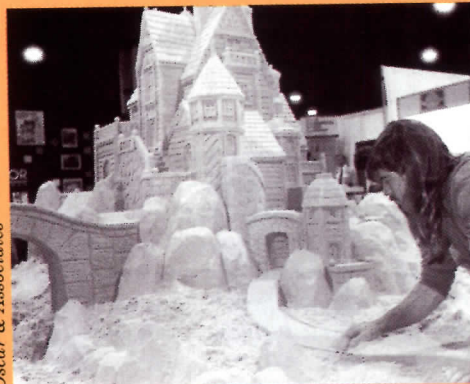
Two significant historic-preservation bills, introduced in Congress late last year, are due to be reintroduced again this spring. One, the National Heritage Conservation Act, which calls for a "national strategy for protecting natural and historic places," may have the best prospects, in part because its author, Senator Dale Bumpers, is chairman of a Senate subcommittee on public lands, national parks, and forests. The bill has the backing of the 13-member National Heritage Coalition, a group organized by the National Trust, the National Parks and Conservation Association, and the Wilderness Society. In 1989, Bumpers and the coalition were the main players in Congressional efforts to save much of the Manassas Battlefield from being bulldozed for development. Key provisions include creation of a new list of endangered national and historic land-

marks; mandating the National Park Service to negotiate heritage-protection strategies with local governments and private owners; creation of a new standard limiting federal actions that could harm significant resources; and strengthening of the National Historic Preservation Act to create dispute mediation between federal agencies and the Advisory Council on Historic Preservation. To move the bill ahead, the initially proposed creation of a trust fund for financing preservation projects has been dropped. The second bill, the National Historic Amendment Act introduced by Senator Wyche Fowler (photo) aims to strengthen preservation-education programs in both appreciation and restoration techniques and to create a National Center for Preservation Technology as part of the Department of the Interior. The bill also is intended to reassert federal leadership in historic preservation; strengthen federal protection for historic properties; build up the federal archaeology program; and further define the role of the states in national preservation. Fowler describes this as "the first comprehensive update and fine-tuning of the National Historic Preservation Act since 1980." Among the fine-tunings: State historic preservation officers could consult directly with federal agencies and assist with rehabilitation projects that may qualify for federal help.

*Peter Hoffmann, Washington, D. C.*

## Housing

### Builders Struggle



Oscar & Associates

"Next to war, the credit crunch is the biggest topic this year," stated David Seiders, chief economist of the National Association of Home Builders at its annual convention in January. Last year, he had predicted that builders would adjust to the savings-and-loan crisis in 1990 and find alternative sources of financing. He now predicts starts will bottom out in the first half of 1991 and then climb to 1.4 million in 1993. David Stockman, former director of the Office of Management and Budget said the current recession will be "long and shallow." Not all regions have been hard-hit, said John Tuccillo of the National Association of Realtors. Some, such as the Pacific Northwest, have remained active. And not all builders have resorted to sand castles as in one exhibit (photo). Bainbridge Inc., a small Colorado builder, has cut back on land inventory, but is taking options on it instead. The Green Co. in the hard-hit Northeast has stayed busy working for banks on failed projects, turning them around. Inco Homes in California is building affordable housing to weather the storm. "We're working for cash-flow," explained president Ira Norris, "not for profit." Considering the downturn and that this was the third straight show in Atlanta, it was no surprise that attendance was down—to about 55,000 from last year's 66,000. The convention travels to Las Vegas for three years starting in 1992. *C. A. P.*

## Publications

### New Work Out of Old Failures

"If you want to do work for the Resolution Trust Corporation, you'll have to know its regulations," says Rachel Levitt of the Urban Land Institute. The RTC will soon hold the world's largest real-estate portfolio, much of it unfinished or in need of renova-

tion. To help architects know the regulations and whom to approach for work, the institute has put out *Real Estate and the RTC*, \$42 for nonmembers from the institute at 625 Indiana Ave., N. W., Washington, D. C. 20004-2930 (800/321-5011). ■



## Long Way to Go

More than a third of architectural, engineering, and environmental-services firms are flunking human-resources management," says design-profession consultant Mark Zweig. This he learned from a national survey of firms with a median of 90 employees. While larger firms tended to do best, some small firms outdid them. For criteria used and survey results, see box, right. Some results were surprises. The firms with owners and managers also had more employee-related law suits and a higher turnover rate. Explains Zweig, those firms

with a plan and a manager tended to be large and have more exposure, and may have put in their programs as a reaction to having a more than usual share of problems. On the brighter side, many respondents said problems with getting and keeping staff were limiting their firms' growth—meaning, says Zweig, that the job market in the current soft economy may not be as unhealthy as thought. And because so few offices have human-resources programs, those that establish one can gain a big competitive edge. *C. K. H.*

ALL FIRMS	%YES	Median Size
HR management action plan	45%	165
HR manager	45%	246
Manual updated	75%	105
Affirmative action plan	58%	90
Employment-related lawsuit	22%	248
Recruitment/retention problems	35%	100
Turnover above industry average	11%	400

## Risk Assignment Is Key to Contracts



Can architects escape paying for contractor's errors?" asked lawyer Steven Stein of Greenburger, Krauss, and Jacobs during the Construction Litigation Superconference in San Francisco (December 6-7, 1990). The session was called "How to Sue and Defend the Architect, Engineer, and Construction Manager," and Stein's answer was that design professionals could help their cause by modifying standard owner-architect agreements to define requirements for construction observation. Legal cases are contradictory, he said, about whether standard documents,

such as AIA B141, shield architects against liability.

His recommendations on how to modify standard agreements?

1. State the number of site visits required.
2. Limit the parts of the contractor's work to be reviewed.
3. Exclude work which cannot be observed, i.e., work when the architect is not there.
4. Limit the duty to observe repetitive work, i.e., work which occurs when the architect may or may not be there.

During another session, "What to Change in Those New-Fangled AIA Forms," the lawyers suggested how to modify existing contract forms to best protect both parties. Attorney B.C. Hart of Hart, Bruner & O'Brien declared: "What we have is an 80-year-old form with 14 revisions that must be repeatedly spruced up to simultaneously serve every particular group of owners, contractors, engineers—no easy task if the expectation is to avoid litigation altogether." Said panelist Steven Comer (photo) of Allen, Snyder & Comer, each of the following risks of liability requires modifications to AIA Document B141 to protect architects:

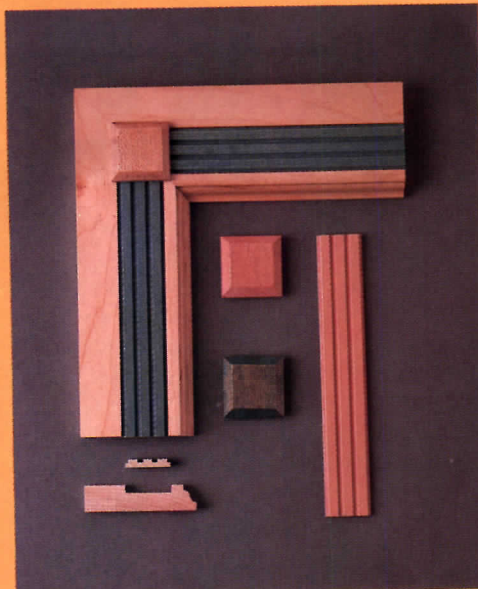
- *Asbestos and other hazardous materials.* His suggestion: Have owners engage separate consultants themselves.
- *Shop drawings.* Limit responsibility to what your fees warrant.
- *Suspensions or delays.* Make sure you will be compensated for these.
- *Payments.* Make sure these are timely by exacting legal fees for collections, interest on late payments, etc.
- *Mediation.* "This contract provision indicates from the start that all parties really want the contract to work." This was supported by E. Mabry Rogers of Bradley, Arant, Rose and White: "Mediation has restored civility to the civil process." Moderator Justin Sweet summed up: "When making modifications, make sure the whole contract works together. There's a definite flaw in putting too heavy a risk on the other party. Put risk where there is ability to control harm and where there is ability to bear risk. Look at the contract as a tool to make the process manageable and workable." *Louis Marines, former executive director of the AIA and now head of the A & E Management Academy in San Francisco.*



# Preservation Ornament



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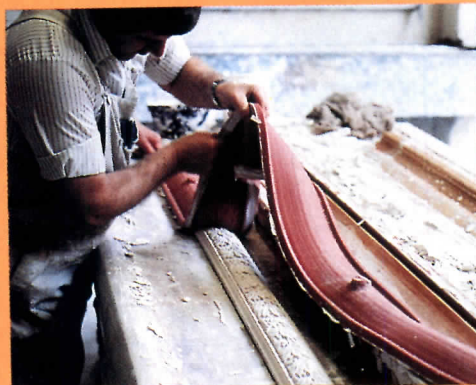
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303



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304

Architectural details with traditional decorative motifs formerly done in hand-cast plaster, carved wood, and stone may be specified in lighter-weight, less costly, and easier-to-install materials. Authentically detailed moldings, cornices, pediments, and other classical elements that duplicate those found in historic landmark properties are offered from stock, and custom capabilities permit the replication of in situ elements down to the last curlicue. *J. F. B.*

### 300. Masonry replication

The entire portico of Bellefontaine, a palatial 1899 mansion in Lenox, Massachusetts, designed by Carrère and Hastings, was reconstructed in fiberglass-reinforced polyester (FRP) to match the marble original, destroyed in a fire. Using old photographs and elevation drawings pub-

lished in contemporary journals, Boston architects Jung/Brannen reconstructed the portico based on the structure shown top, left. But the marble of the building's surviving balustrades, window surrounds, and other trim, quarried in nearby Lee, had weathered poorly, with most veining indistinguishable and the surface eroded. Project architect Paul Francisco selected replacement elements of FRP, integrally colored and textured after molding to resemble the now limestone-like shading and surface of the surviving marble. Every component of the portico formerly made of stone—columns, balustrades, window surrounds, cornice, and architrave—was custom molded, using remnants as models where possible, and duplicating the original marble profiles and detailing (bottom). Fibertech Corp., Pendleton, S. C.

### 301. Custom-design moldings

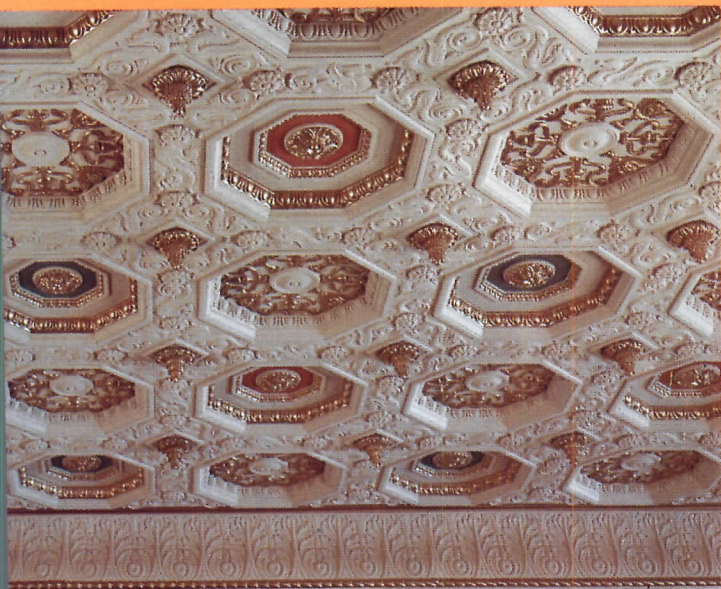
The SelecTrim system provides a modular context for cost-effective custom-molding profiles. The primary elements, made of poplar or other hardwood, have 1 1/4- or 1/2-in.-wide grooves that accommodate decorative inserts and accents. These can be made of prefinished wood, metal, laminate and solid-surface materials. The inserts conceal the wall-attachment holes in the base. James Wood Co., Williamsport, Pa.

### 302. Line-for-line

An easy-to-use mold-making compound, Moldform T is said to offer excellent surface definition of details for replication in gypsum materials. It is especially suited to restoration work, where in situ ornamentation must be duplicated. Stag Sealants and Polymers, Inc., Doraville, Ga.



For more information, circle item numbers on Reader Service Cards



5



### 303. Authentic details

Focal Point supplies decorative elements in a variety of materials for indoor and outdoor use, including both standard and fire-rated polyurethane, glass-fiber-reinforced gypsum, and a composite marble.

EciCast, a new line of moldings made of class A-rated polymer for commercial interiors, comes in both simple and detailed patterns, three of which were combined to create the ornate cornice pictured. The firm specializes in licensed reproduction of de-

tails from National Trust, Colonial Williamsburg, and other landmark properties, as well as custom castings for historic renovations. Focal Point, Atlanta.

### 304. Fireplace surrounds

A variety of sculptural effects is offered by a line of British-made reinforced-plaster ornament and moldings. Pictured is the Virginia mantel and surround, a new design that fits the larger dimensions of American fireplaces. Aristocast Originals, Inc., Smyrna, Ga.

### 305. Coffers and cornices

The highly ornate ceiling shown above, left, a version of the Venezia system customized for the Shattuck Cinema in Berkeley by architect William Simpson, is made of non-combustible fiberglass-reinforced gypsum.



305

Individual 30- by 30-in. sections are supported in a snap-together suspension grid. The installation can meet seismic-code requirements. Decorative inserts like the rosettes can be replaced by sprinkler heads, lights, etc., and provide access to plenum space without dismantling the ceiling. Designer Lynn Wilson used FRG moldings and cornice for the restoration of the Biltmore Hotel in Coral Gables, Florida (above, right). Entol Industries, Inc., Miami.

### 306. European flair

Orac Decor are cornice and panel moldings, ceiling medallions, pilasters, corbels, niches, and lighting sconces, in French, Italian, and English patterns. Complementary polystyrene moldings come prefinished in faux marble and metallic shades. Outwater Plastic/Industries, Inc., Wood-Ridge, N. J. ■



# WestWeek '91: Product Preview



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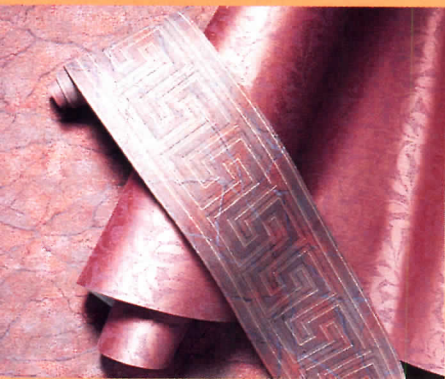
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For more information, circle item number on Reader Service Cards



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**307. Sparkle plenty**

Designed by Minneapolis architect Michael DiBlasi, the Larry lamp comes as a pendant (pictured) and as a sconce. It's a metal cylinder divided into perforated and solid segments by a colored ring. George Kovacs.

**308. Judicial**

Terrence Hunt has designed a simple, classic, solid yet light chair; at the Rodenbeck showroom. Who can say why he calls it The Truffle? Cabot Wrenn.

**309. Occasional**

Flared of arm and tapered of leg, upholstered seating in William Schacht's Dendhur Group looks Egyptian, Russian, and Neoclassical at the same time. Mueller, A Haworth Company.

**310. Braced**

Set on a steeplelike criss-cross base, Ward Bennett's Tri-X table comes with tops of etched glass, granite, and steel. Geiger.

**311. Shimmer**

Celestial, a reversible silk satin, is part of an opulent new fabric line. Jack Lenor Larsen.

**312. Flex**

Charles Perry designed an elegantly simple seat suspension for his new stacking chair that lets the user twitch comfortably. Polypropylene seats and backs come in 17 colors, or may be upholstered. Krueger.

**313. Curvaceous**

A new worktop option for the System 2Plus line, Silhouette flows from station to station. The tops feature a comfortable, rounded edge treatment. Panel Concepts.

**314. Hush**

New wallcoverings, companion fabrics, and borders from Gramercy include Bergamo, a warp-lay, three-dimensional paper-backed textile that can help dampen noise in an office environment. Schumacher.

**315. Hang-ups**

Pamela Weir-Quiton says that her Man-Icons are evocative of the stretched figures of Navajo sand paintings. They also function as sculpture, clothing valet, or stand-in dinner guest. Jazz Furniture.

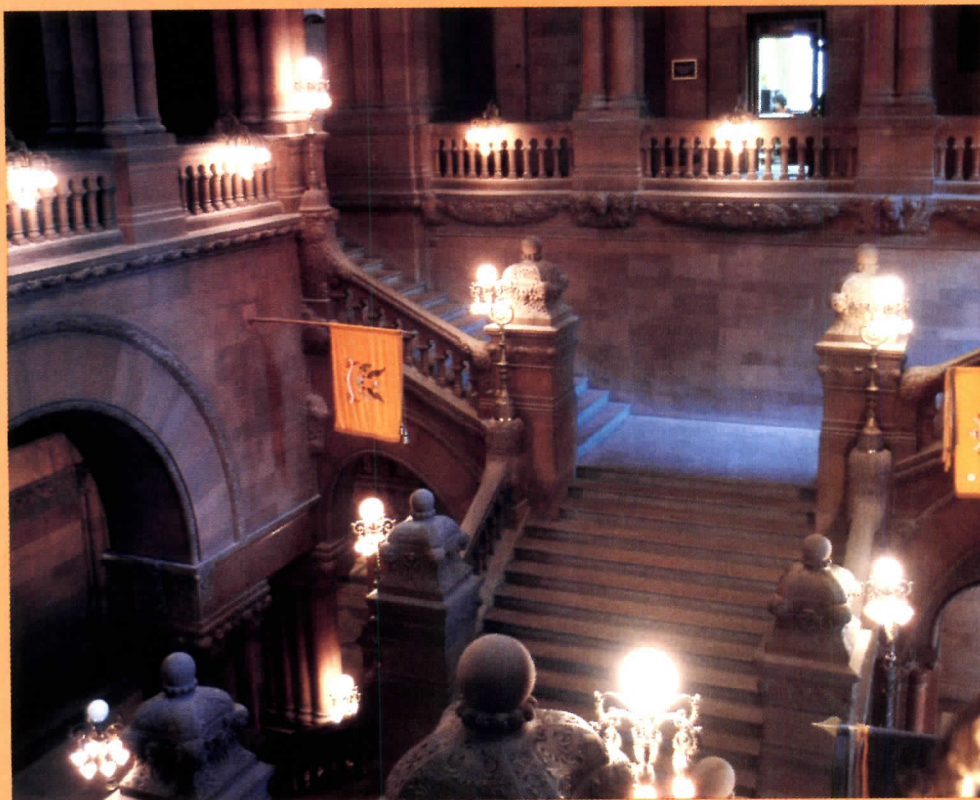
**316. Spotlight**

This Charles Eames Chaise is to be the focus of Vitra's retrospective Pacific Design Center exhibit. A never-before-produced entry in MOMA's 1948 low-cost-furniture contest, the molded-plastic piece can seat one or two people. Vitra.



# Preservation vs. Codes

By Theodore Prudon



The trouble with extending the cultural and economic life of buildings on the one hand and meeting constant changes in building codes and regulations on the other is that ever more buildings do not comply with the most current and applicable building codes—which are, in most cases, designed for new construction. This means that architects will have to work even harder to provide safe and healthy conditions in accordance with the *intent* of current codes, if not the *letter*. A particular issue is converting architecturally or historically significant buildings to other purposes without major intervention.

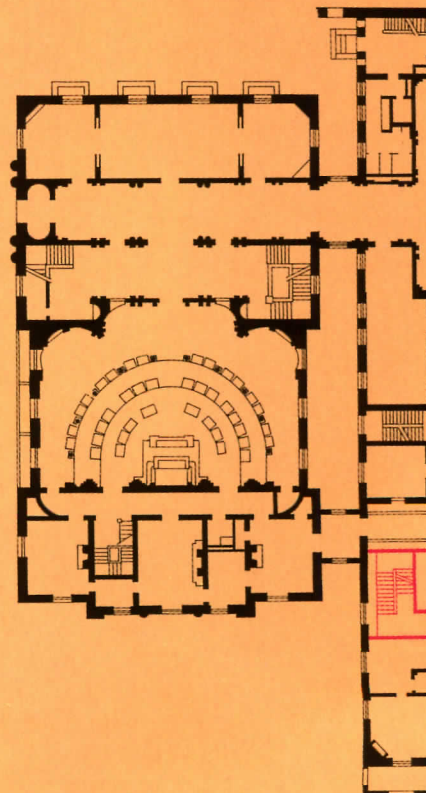
Early in the evolution of building regulations, their purpose became to provide three minimal guarantees: structural safety, protection against fire, and minimal sanitary standards. In most instances, the language was very prescriptive. Codes gave very spe-

*Mr. Prudon is a principal and preservation design director of Swanke Hayden Connell Architects and holds a doctorate in preservation and conservation.*

cific instructions on how buildings were to be built. By the middle of the 19th century, the major concern became the so-called fire-proof building. This meant creating noncombustible construction assemblies. Emergence of the high rise at the end of the 19th century brought the focus not only on the issue of egress, but also on fire suppression in the form of standpipe systems and early sprinkler systems. As is so often the case, most improvements were directly driven by disasters: the Chicago fire of 1871, the Triangle Shirtwaist Factory fire of 1911, the Baltimore fire of 1904, or the San Francisco earthquake and consequent fires of 1906.

The principles underlying the early codes are largely operational today, but they have been expanded to include, e.g., such requirements as handicapped accessibility and sanitary-, mechanical-, and electrical-code provisions. Other more recent issues have included seismically upgrading existing structures or assuring safe conditions by regular inspections. These are a few examples of how life-safety-related legislation

Left: The monumental-stair problem as shown in the New York State Capitol before remodeling by The Ehrenkrantz Group. Right, top: The open fire-stair problem in The Bowery Savings Bank,





... York City, before remodeling by  
... anke Hayden Connell Architects.  
... ow: The seismic problem at the  
... y and County Building in Salt Lake  
... y being solved by Ehrenkrantz.

Bottom: The new-stair problem solved  
in the New Jersey State House remodeled  
by joint-venture partners Short and  
Ford, Johnson Jones.

... continues to evolve, driven by experience,  
... nging technology, and improving  
... ndards.

### Administrative process

... eral different codes may cover rehabili-  
... on. Codes in most large urban areas do,  
... some extent, address this. In other juris-  
... ctions where state codes or one of the  
... del codes may have been adopted, specific  
... visions address restoration and rehabili-  
... tion. While no national rehabilitation code  
... sts, recent publications by HUD and the  
... tional Fire Protection Association (e.g.,  
... *Protection of Historic Structures and*  
... *es*, NFPA 913) provide recommendations  
... l guidance. Existing or earlier building  
... les, hazard-abatement codes, building-  
... ntenance codes, and retroactive  
... gulations may apply.

... e language of the code may be either pre-  
... scriptive or performance oriented. Most  
... temporary codes continue to be prescrip-  
... e. Performance codes leave much  
... cretionary decision-making power with  
... le officials for which they often are not  
... ined or prepared and expose jurisdictions  
... liability—often resulting in stricter and  
... rrower interpretations. However, some  
... gnition of performance standards exists  
... most codes by accepting the concept of  
... ternate materials and methods.”

... ildings existing today were built accord-  
... y to codes prevailing at the time of  
... nstruction. If no substantial changes were  
... de subsequently or are intended today  
... d no change in the type of occupancy is  
... mtemplated, it is not likely that a major  
... npliance issue will arise. However, retro-  
... sive regulations may apply to specific  
... ects such as repair work (i.e., maintain-  
... a safe condition) or upgrading of  
... rticular systems. Amendments to codes in  
... w York, San Francisco, Los Angeles, and  
... icago require existing buildings to comply  
... h new elevator, fire-detection, or safety  
... gulations.

... e need to bring an existing or historic  
... lding in compliance with the governing  
... es will arise in cases of substantial re-  
... ilitation and/or a proposed change in  
... upancy. The degree to which full compli-

... ance is required or whether noncompliance  
... can be mitigated in other ways remains a  
... subject of interpretation. Traditionally most  
... codes used the 25/50-percent rule. Where  
... the rehabilitation costs exceeded 50 percent  
... of the market value of the property, full  
... compliance would be sought. Between 25 to  
... 50 percent, a varying degree of compliance  
... would be required. This system is gradually  
... being replaced with different evaluation  
... methods to arrive at a more objective rating.  
... Where there is a change in occupancy, the  
... degree of hazard becomes an important  
... consideration.

... The problems in the rehabilitation of an ex-  
... isting building are more pronounced in the  
... rehabilitation or restoration of a recognized  
... historic building for which one must not only  
... arrive at a safe solution, but also avoid dis-  
... rupting the original historic fabric. The  
... administrative review and approval process  
... for a recognized historic building may in-  
... volve a local historic-buildings agency or the  
... National Park Service for buildings on the  
... National Register of Historic Places.

... Where the type of occupancy is changed, the  
... option may be to limit occupancy rather  
... than to substantially alter. For instance,  
... in an historic residence turned house mu-  
... seum, an additional egress stair may be  
... avoided by limiting second-floor use, elimi-  
... nating any presence of an open flame, or by  
... installing a discrete fire-detection or sup-  
... pression system.

... Enforcement of codes is usually triggered  
... when a building permit is to be obtained.  
... However, rather than submitting a fully  
... completed set of documents it is almost  
... always advisable to consult with the local  
... regulatory bodies prior to finalizing the  
... drawings. The participation of the code offi-  
... cial in the review and decision making will  
... make it easier to explore issues related to  
... “alternate materials and methods” or, if the  
... decision is outside his jurisdiction, to win his  
... support in an appeals process. Where the lo-  
... cal code does not address the issue under  
... consideration specifically, it may be useful  
... to look to codes in other jurisdictions or  
... recognized organizations for guidance in  
... presenting a proposed alternative to an  
... appeals board.

### Typical problems

... In significant buildings, typical problems fall  
... into three categories: structural (including  
... seismic safety), fire and life safety, and ac-  
... cessibility. Requirements on mechanical,  
... electrical, or other systems are more easily  
... met because, in a major project, they are  
... usually replaced. Aside from physical-condi-  
... tion problems, structural ones come from  
... code limitations to or changes of allowable-  
... load requirements. In evaluating an existing  
... structure, load issues must be considered be-  
... fore any major action because structural  
... changes are very disruptive.

• *Seismically upgrading* an existing build-  
... ing may present a more complex structural  
... problem. A large part of our early building  
... stock is unreinforced masonry construction  
... with limited resistance to lateral forces.  
... While no reliance has been placed on exist-  
... ing buildings’ seismic resistance (even  
... though they had survived many years) there  
... are now more respectful approaches. Re-  
... inforcement (generally concrete and/or steel  
... frames) and, for instance, foundation isola-  
... tion from ground motion have been used.  
... Reinforcement requires substantial changes  
... in the building. Finishes and interior fea-  
... tures may have to be removed and  
... reinstalled if they are to be saved.

• *Foundation isolation* for an important  
... historic building may be more desirable, al-  
... though code acceptance of such technolo-  
... gies for historic buildings is just beginning  
... (photo, lower right). While codes require  
... minimal standards, additional measures may  
... reduce property damage, particularly where  
... the historic fabric or the content of the build-  
... ing are valuable.

• *Fire and safety issues* most frequently  
... confronted are egress and fire separation.  
... The number, type, and size of exits, stairs,  
... connecting corridors and their enclosures  
... are important. Even 19th century “fire-  
... proof” construction is not sufficiently fire  
... resistant to qualify for rated enclosures to-  
... day. The problems are usually twofold, first  
... the type of construction is no longer recog-  
... nized and second, openings have glass doors  
... and transoms, and wood frames. A recent  
... HUD publication, *The Guideline on Fire*  
... *Ratings of Archaic Materials and Assem-*



## Preservation Contracts Are Different

By Charles Heuer

**Codes...** *Continued from page 53*  
*blies*, helps architects and code officials interpret existing construction. Enclosures may be the biggest problem when a change in occupancy is proposed. Then, some significant change in architecture and historic character may be required. Adding fire-detection and suppression systems, automatic door closers, and eliminating glass panels are only a few of the options for discussion with code officials.

- *Existing stairs* are a common problem in restoration projects. Many large historic buildings have grand staircases that are open to all floors (left photo, previous page). Enclosing the large open and monumental stairs to prevent the rise of smoke and hot gasses may pose a considerable design challenge if the original architecture is to be respected. Supplemental measures such as a smoke exhaust system may help. Hand and guard rails, while often an integral part of the decorative scheme, do not usually meet present code requirements and may require new secondary rails. By the end of the 19th century metal emergency stairs with marble treads were a common feature. Such stairs need to have a rated enclosure, but can be used as-is if they are not winding stairs.

- *Additional stairs* may have to be built where exit capacity is too low. Placing them in e.g., existing air shafts or light wells can minimize disruption (plan). If fire-safety problems cannot be mitigated without drastic architectural changes, trade-offs are frequently found by installing fire-suppression systems.

- *Handicapped access* demands a great deal of architectural ingenuity. A porticoed entrance may be an important architectural feature, but present an accessibility nightmare. Access can usually be accomplished without too much disruption by means of other entries and existing elevators.

Such solutions require creativity by architects *and* code officials. Full compliance will, in most instances, not be possible. However, understanding the intent of code requirements helps find acceptable alternatives. In that process, early participation by the code official is critical. ■

Contracts between architects and owners for renovation, adaptation, or preservation of an existing building have much in common with contracts for new-building design. But there are inherent differences in the nature of the projects and the scope of necessary or desirable services. This article discusses some of the differences and suggests means and methods of dealing with them in contracts.

### Knowing what you are dealing with

For new buildings, architects need to know the site boundaries, topography, and results of subsurface testing. In work on existing buildings, someone has to accumulate and/or make available data describing the size, nature, and condition of the existing structure and facilities. If the owner is to provide such information, the architect may insist on the right to rely on its accuracy and completeness. (See possibly appropriate contract language in the first sample paragraph in the box, far right.) Conversely, the architect may be asked to verify the information provided by the owner and make recommendations for obtaining additional information through destructive or non-destructive testing, or both.

Existing structures are full of concealed conditions and other surprises. Sooner or later, they will reveal themselves, and the owner-architect agreement should address the timing of such revelations and allocation of responsibility for their financial implications to both parties. For example, the more money that the owner is willing to spend on preliminary testing and investigation, the earlier the concealed conditions will be revealed and the less it will cost (in time and money) to deal with them. But no preliminary testing program (whether designed and administered by the owner or the architect) can uncover all concealed conditions. Thus, the owner-architect agreement should

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allocate responsibility for costs and disruptions when unforeseen hidden conditions are discovered. If the owner is to plan and administer the preliminary investigation, the contract language in the second sample paragraph in the box, far right, may be appropriate.

The existing-conditions phase is not limited to simply measuring, making notes on materials, and drafting the results. Someone, preferably the architect, must evaluate them—deciding what can be saved, what must go, and how planning can produce a cohesive building. Frequently, the architect is also required to take an active role in coordinating and/or directing the work of the contractor(s) who will perform the testing and documentation tasks. If the architect is to perform such evaluation and coordination services, that should be clearly stated in the scope of the owner-architect agreement. The agreement should also be clear that the contractor(s) are working for the owner, and the architect is merely administering their contracts as an agent of the owner—not as the responsible principal. (See third sample paragraph.)

The more the owner and architect know about the quality and condition of the existing building before design work begins, the more likely they can tailor a contractual scope of services that anticipates and provides for the services that will actually be needed. Besides coordination services, other extra predesign services might include pho



Errico Studio



*owner-architect agreements for preservation and renovation projects could hold added surprises to those hidden behind crumbling walls. Know what you are getting into.*

ography and measured drawings of existing conditions, and the review and analysis of the structural, mechanical, electrical, and other capabilities of the existing building.

#### **Defining basic and extra services**

AIA Document B162, Scope of Designated Services (for use with AIA Document B161, Standard Form of Agreement Between Owner and Architect for Designated Services), lists predesign and other services that may be required during the course of the project's development. It may be valuable for the owner and architect to review this document together to assess which services seem likely to be required. One helpful feature of the document is that it allows for affirmatively stating which services are *not* to be provided by the architect and, thus, for resolving subsequent disagreements over whether or not one service was implicitly required by the need for another.

Experience has shown that renovation, adaptation, and preservation projects often require increased effort by architects on specifications, development and testing of models and mock-ups, administration of competitive bidding, negotiations with contractors, and construction-phase administration. For example, bidding documents might be required for alternate divisions of the work. Construction administration might entail supplemental construction documents in response to newly discovered existing conditions. Additionally, special construction documents must usually be even more comprehensive than those for new construction to permit intelligent and reliable bidding by the interested contractors.

Because of the nature of renovation, adaptation, and preservation, there may be a greater-than-usual number of codes and regulations applicable. And such codes and regulations are subject to interpretation by appropriate governmental officials. [See *Preservation vs. Codes*, pages 52-53.] Accordingly, the owner and architect should expect increased effort in research and coming up with codes, as well as some false design starts or unfavorable interpretations that take time and money to correct.

Finally, the architect will normally have greater interaction with the contractors during construction than is typical for new buildings. Most architects are sensitive to the risks of exposure to potential liability in this phase. Hence, the distinction between "observation" and "inspection" is well known to them, if not to owners and the public in general. There is no inherent need, however, for architects to shy away from a high level of involvement with contractors that renovation, adaptation, and preservation projects may need. Even so, prudent architects will not assume responsibility for the outcome of events beyond their power to control—including the contractor's means, methods, techniques, sequences, procedures, and results. Conversely, there is generally nothing wrong with architects' accepting responsibility for what they can control. This requires a careful review of the scope of their services during construction.

#### **Providing for contract change**

Because of the uncertainty about what may emerge during construction, the owner-architect agreement must permit and provide for adjustments in the scope of services and the associated compensation for the architect. The better basic services have been defined in the initial agreement, the easier it will be to distinguish them from additional services. How are such extra services priced?

To be equitable, the method must be clear, easy to administer, and established in the initial contract. Certainly, a provision that additional services will be paid for on a time-and-materials basis is easy to understand and fairly easy to administer. Hourly rates are inserted into the agreement and the expenses that are to be reimbursed are defined. The architect can be confident that this will recover his costs and some profit, although the client may argue that it can produce inequitably high fees.

The issues discussed here are common ones, although each situation is different. ■

*This article is intended as a discussion of legal principles and possibilities and should not substitute for legal advice in specific contract situations.*

## **Possible Contract Clauses**

### **1. If the owner will provide existing-condition data:**

"The owner shall furnish documentation and information about the existing facility and the architect shall be entitled to rely upon the accuracy and completeness of such documentation and information. If the documentation or information furnished by the owner is inaccurate or incomplete, the owner hereby agrees to bear all costs, losses, and expenses, including the cost of the architect's additional services, made necessary thereby."

### **2. If the owner controls preliminary investigation:**

"The architect shall not be required to perform or have others perform destructive testing nor shall the architect be required to investigate concealed or unknown conditions at the project. Accordingly, the owner hereby agrees to bear all costs, losses and expenses, including the cost of the architect's additional services, made necessary by the discovery of such concealed or unknown conditions."

### **3. If the architect coordinates investigations and testing by contractors:**

"The owner shall furnish all services of contractors for investigating and testing the existing facilities. The owner hereby agrees to include in each of its contracts with such contractors provisions that (1) expressly state that the provisions are for the architect's benefit, (2) provide that the contractor acknowledges the architect's role as coordinator of the investigation and testing services, and (3) obligate the contractor to cooperate with the architect in the architect's performance of the role of coordinating the investigation and testing services furnished by the owner, the architect shall be deemed to be an agent of the owner and not an independent contractor."



## CAD Meets the Beaux Arts: Renaissance of Grand Central Station

*CAD models (below) allowed the architect and clients to see the before (left) and after effects of placing speakers inside original bronze light fixtures in the waiting room.*



*By John Hughes*

When Grand Central Terminal opened on February 2, 1913, it was renowned as one of America's most brilliant architectural and engineering works. And during its 78 uninterrupted years as a cornerstone of New York's mass transit system, the Beaux Arts landmark has served as a remarkably efficient train station, through which more than half a million people circulate every day. Yet time has taken a marked toll of the historic terminal. Despite a cleanup for its 75th anniversary, ancient pipes continued to pop, patched roofs to leak, and the elegant marble to crack. It became clear that major changes were needed to maintain Grand Central's status as a premier New York gateway.

Now there is hope. Initiated by Peter Stangl, the president of Metro-North Commuter Railroad, which operates the terminal under the umbrella of the Metropolitan Transportation Authority, work has begun on a 10-year upgrading of unprecedented pro-

*Mr. Hughes is a free-lance writer in Fort Collins, Colorado.*

portions. The effort is being led by architects Beyer Blinder Belle, in association with Harry Weese & Associates of Chicago, the New York engineering firm Seelye Stevenson Value & Knecht, and many consultants. Working with Metro-North, the firms have developed a master plan for Grand Central's future. Just as progressive is the team's ambitious use of current CAD technology from schematic design through construction documents, dramatically reshaping the approach to the project.

### Restoration scope

Budgeted at \$400 million in 1989, the project will include much restoration—in part because the New York City Landmarks Preservation Commission declared Grand Central a landmark in 1967 and that status was upheld and confirmed in a much publicized test case by the U. S. Supreme Court in 1978. Due to the project's size and complexity, the master plan has been divided into 32 interconnected packages, some of which are phased more closely to others for logistical and/or engineering reasons. During its development, the team researched Grand

Central's history through original documentation. Researchers also investigated how and why the building was adapted over the years to meet such changes as the increase in long-distance rail travel during the 1920 '30s and '40s, and the shift to a commuter entele in later decades. The results were then translated to CAD, with one master drawing file containing all of the terminal's changes throughout time.

The design team conducted a very detailed existing-conditions survey. Equipped with both original and computer-generated drawings, it effectively compared existing elements to initial configurations. (Many of the automated drawings had been generated by utilities engineers Carlson & Sweatt as part of Metro-North's ongoing maintenance of the station.) The designers probed the steel framework to test for possible water damage, measured every nook and cranny, analyzed layers of paint to determine original colors, and photographed pedestrian patterns and rush-hour bottlenecks. Data from the existing-conditions survey were incorporated into the archival CAD drawing



they decided against it. Work on the main waiting room of the terminal (below) included removal of a gigantic backlit sign that had dominated the space for decades. The

architects propose to replace it with stairs planned by original architects Warren and Wetmore, similar to those on the opposite wall (far right).



Producing a comprehensive, accurate set of master drawings from which the master plan was developed. Field teams established a system to rate the architectural quality of terminal spaces, as well as the efficiency of present usage. This system was used to determine the level of preservation or intervention needed, ranging from complete restoration of materials and design to removal of elements deemed incompatible with the building's original architectural integrity. Preservation concerns have been separated into three major categories: structural and mechanical integrity, general preservation, and art conservation (e.g., cleaning statuary and murals).

#### CAD convenience

The bulk of Beyer Blinder Belle's work is being done on 386/33 PC clones with 4MB of RAM, 110MB hard disks, and Control Systems' graphics controllers that support monitors with resolutions from 1,024 x 768 to 1,280 x 1,024. Input is performed with UlComp 23120 digitizers and the majority of the firm's output is produced on a Versatec 36 electrostatic plotter. The firm's CAD

software of choice is AutoCAD Release 9, which is basically a 2-D package. However, the firm occasionally uses Release 10 for 3-D analyses. "Release 9 allows us faster zooms and pans than the Release 10 version," says Beyer Blinder Belle CAD manager Michael Gilroy, "and since most of our work is done in 2-D anyway, we've stayed with it."

So far, the only instance in which 3-D has been used during this restoration project was an analysis of the historic chandeliers hanging from the ceilings of the terminal's waiting room, the first space to be addressed in the project. The analysis was to determine whether adding speakers to the center of the fixtures would harm their appearance. (See comparative models, opposite page top.) Result: the speakers were placed elsewhere. "The study of the lighting fixtures is a graphic example of how CAD has been used in the project," says Gilroy. "The technology has been so integrated into our work that we are continually finding new ways to use it." CAD's ability to copy bits of master drawings and manipulate scale, orientation, and line weights, and to quickly and accu-

rately create enlarged plans and details has been invaluable.

And, according to Gilroy, CAD has become even more valuable as the project has progressed. Now that construction is underway or construction documents are being developed for all 32 planning and construction packages, CAD coordination among consultants has become an important priority for standardizing graphic elements as well as base drawings. Because all of the design-team members agreed to use the same software system, translation difficulties have been minimal.

Files are passed either by modem or on floppy disks to subcontractors. Information in the master-drawing file is categorized into overlays used for the appropriate trades. Design-team members can mask every layer except the one containing details pertinent to their work and make templates for their own detailed drawings without being slowed by extraneous details. While drawings then originate from a common file, *Continued on page 197*



# Specification Series: Preserving Masonry

By Frances Gale

Masonry preservation requires a very careful, detailed approach beyond that for new work. Stabilizing and protecting masonry materials are project goals. The scope of the work may include cleaning, repointing, crack repair, consolidation, and water-repellent treatment, replacement, and any other procedures required to re-establish integrity.

## Preliminary work

A first step is identifying conditions. Inspection reports required of the contractor should note existing conditions—including locations of erosion, spalling, other deterioration, open joints and cracks, general soiling, staining, and any paints, coatings, or graffiti. This is often best done on inspection drawings from the architect. Dangerous conditions should be immediately pointed out. Only after a thorough survey can the scope of work be determined.

Sources of deterioration, including contaminants, should be identified *before* any work commences. Water-repellent treatment, for example, should never be used to arrest water-related deterioration unless the causes are repaired. Contaminants might include high chloride levels from deicing salts that deteriorate masonry *and* interfere with consolidation treatments and water repellents. Historic structures require a survey of deteriorated mortar joints; 100-percent repointing is never recommended. The degree of masonry deterioration determines whether to repair or replace.

Identifying the type of masonry helps determine appropriate products for cleaning and repair. Petrographic examination of natural stone and concrete is important in some instances, especially if deterioration is so advanced as to require chemical consolidation. Laboratory tests to determine chemical and physical properties of masonry materials are essential for repair and replacement so that new materials are chemically and physically compatible with the substrate.

- *Analysis of original* mortar should determine the ratio of binder to aggregate, the

*Ms. Gale is director of technical services for ProSoCo, Inc. and was formerly with the National Park Service.*

type binder (eg., lime, natural cement), and the color, sizing, and origin of the sand so that a repointing mix will match the original in color, texture, strength, and hardness.

## Quality assurance

Because preservation is specialized, it is important that all contractors hired have at least five-years experience and a list of recently completed projects to check. Manufacturers should have proven experience in formulation, manufacture, and distribution of their products and should be willing to provide on-site guidance during preliminary testing and final use.

- *Test areas* for cleaning, consolidation, and water-repellent application, typical of general existing conditions, should be selected by the architect. Adjacent materials should be tested for possible chemical reaction and environmental conditions during tests recorded (e.g., air and surface temperatures, relative humidity, wind, and sun exposure).

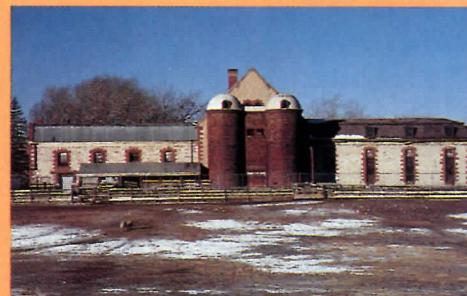
- *Field samples* are important in establishing standards for such work as repointing, patching, reattachment of fragments, crack repair, and replacement. Completed tests should be evaluated for color, texture, finish, and installation workmanship.

- *Site conditions.* If chemicals are used for masonry cleaning, this should not be done when wind could cause them to drift to adjacent surfaces. Cleaning, repointing, and most repair work require water and must not be done when there is danger of freezing. If chemical consolidants and water repellents contain volatile organic solvents, specify an upper temperature limit as well. Before they have cured, many such treatments are detrimentally affected by moisture; work should not be done when it might rain within 24 hours. Use manufacturer recommendations.

## Products

- *Commercial products.* Contractors should submit for approval manufacturers' product data and Material Safety Data Sheets. When acceptable products are identified by name in the specification, list manufacturers. Include physical compliances such as specific gravity and pH. Percent solids and flash

*Below: before and after conditions of the Wyoming Territorial Penitentiary in Laramie. Opposite page: a check list of items to consider in writing specifications*



point are important for chemical consolidants, water repellents, and some adhesives. Require laboratory testing for performance of products proposed for substitutions.

- *Repointing mortar.* Specify the lime, sand, pigments, other components and *mix*. Mix is critical for matching the color, texture, strength, and hardness of the original. Components of composite patching materials, generally similar to repointing mortar, vary in mix. Specify the composition of slurry, scratch, and finish coats unless a commercial product is used. Suitable materials for repairing cracks vary, depending on the length, width, and depth. For small, shallow cracks, cementitious grouts are often used. For larger ones, epoxy grouts.

## Execution

- *Examination.* Prior to beginning work, the contractor should verify site conditions—especially if time has elapsed since inspection and testing.

- *Preparation.* Prior to cleaning, applying chemical treatments, or repair, all loose surface materials and delaminated stone must be removed. All surrounding nonmasonry surfaces should be protected.

- *Installation.* For repointing, the original joint profile should be replicated. In patch-



the slurry, scratch, and finish coats are generally 3/8 to 3/4 inches thick and should be mixed at the jobsite. (Some commercial products eliminate preliminary coats.) Surface roughening and staggered rows of holes drilled at varying angles are both used for mechanical keys.

Every masonry-preservation project presents a different set of challenges. Specifications that accurately describe the particular procedures and products required for each one ensure success.

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## Masonry Preservation Guide Specification

### PART 1 GENERAL

#### A. Summary—Section includes:

Cleaning  
Repointing  
Composite patching  
Crack repair  
Reattachment  
Consolidation treatment  
Water repellent

2. Inspection report including:  
Existing conditions  
Sources of deterioration  
Location of areas for sample extraction  
Size of cracks and results of monitoring to determine activity  
Molds of intact ornamental and carved surfaces

3. Mortar analysis  
4. Petrographic examination  
5. Laboratory test data

#### C. Quality assurance:

1. Field samples and test areas

2. Manufacturers qualifications  
3. Contractor qualifications

#### D. Environmental conditions

#### B. Submittals:

1. Product data and Material Safety Data Sheets  
2. Procedures used in preparing field samples and test areas.

### PART 2 PRODUCTS

#### A. Manufacturers

3. Consolidation treatment  
4. Water repellent

#### B. Materials:

1. Cleaning products  
2. Adhesives for reattachment, replacement, crack repair

5. Mixes  
6. Repointing mortar  
7. Composite patching coats

### PART 3 EXECUTION

#### A. Examination

3. Water Repellent  
Apply wet-on-wet

#### B. Preparation:

1. Protect surrounding non-masonry surfaces  
2. Remove loose surface debris, delaminating masonry

D. Installation  
1. Repointing  
Remove deteriorated mortar

Pack joints, strike when thumbprint hard  
Match original joint profile  
2. Composite Patching  
Drill holes for mechanical key  
Brush apply slurry coat  
Trowel on 3/8 to 3/4-inch layer of scratch coat  
Apply finish coat

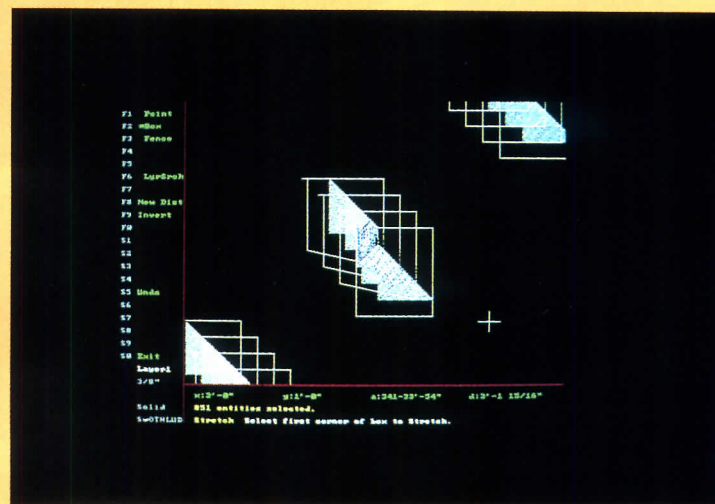
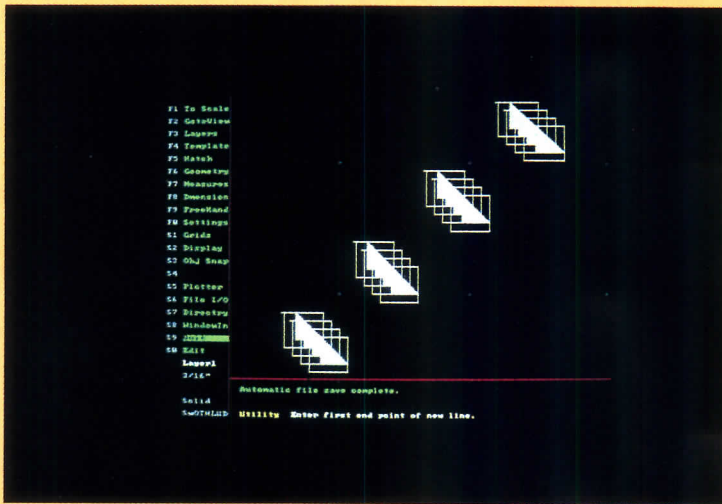
#### 3. Crack repair

Grout crack  
Temporarily seal surface of crack leaving injection ports  
Inject adhesive or cementitious grout  
Remove temporary seal  
4. Reattachment/replacement  
Drill holes for reinforcing rods  
Fill holes and coat surfaces with adhesive  
Set piece in place  
Remove excess adhesive



## Fine-Tuning DataCAD 4.0

An object can be copied in three dimensions at once—to a rectangular or circular array. In this case (1), a hollow square with triangular hatched area was copied to produce an array of 16 in two dimensions, at an angle, in one command sequence. A third dimension could have been added. The



DataCAD is a full-featured drafting and modeling package with good database capabilities. Version 4.0 comes with a display list processor for faster redraws. The 3-D modeling program, once an extra-cost add-on, is now standard. It is particularly easy to edit 3-D drawings in DataCAD, and to visualize where you are inside them.

This is the first full update of DataCAD since the original developer, Microtecture, was taken over by Cadkey in mid-1989. It includes more than 60 changes. Most of the changes are small—they fall into the “fine-tuning” category. Taken together, however, they make an already smooth-running program even easier to use. That plays to DataCAD’s strengths. In many offices, it is used at the very inception of projects, for modeling and massing studies. Files are then fleshed out on DataCAD into production drawings. Not many full-featured CAD packages are easy enough to use that way. Version 3.6 was reviewed in RECORD January 1989, pages 125-127.

### Not easy on the old AT’s

DataCAD is not an easy program to use with a network on older AT-type computers, because it takes up most of the normal DOS 640 Kilobyte memory area. In fact, it might be wise (as the manual suggests) to use DataCAD with PC or MS DOS 3.3 instead of DOS 4.01 even if you do not network; the last-named takes up more memory. Another approach is to use DR DOS 5.0, the MS DOS clone from Digital Research.

If you are planning to network, use a computer with 80386, 80386SX, or 80486 microprocessor. This will allow you to use an inexpensive third-party program such as QEMM from Quarterdeck or 386max from Qualitas to load most of DataCAD into “extended” memory above the normal 640K. Once all is set up, DataCAD can use a network to store and retrieve files with reasonable ease.

DataCAD will work with many graphics accelerator boards, but thanks to its compact file structure and built-in display list processor software, an accelerator card is often not necessary. Consider one, though, if your drawings use lots of hatched (shaded) areas, and your drawing technique results in many screen redraws.

The display list, as is typical of such software, uses expanded, not extended memory. Whether or not you are using a third-party memory manager, you use DataCAD’s configuration program to reserve expanded memory for the display list. If the display list requires more memory than you have, the excess will spill over onto the fixed disk. But that takes time, defeating the whole purpose of having a display list anyway. (For a discussion of how display lists work, see RECORD, September 1990 pages 187-190.)

Only one view is available on-screen at a time, but views can be changed quickly. The configuration program, by the way, is menu-

driven and easier to use than previous versions. With it, you can be up and running DataCAD in an hour or less.

### Among the other changes:

- Screen pan, scroll, scale, and refresh can be controlled from the text-entry menu, making it easier to place text properly. Text can also be scaled either in the drawing’s absolute coordinates or relative to the current plotting scale. Text settings (font, size, and so forth) can be viewed at once. Many new fonts, including hand-lettering, have been added.
- Hatch patterns can be drawn to fill only part of a surface; the boundary can be defined from within the Hatch menu. Many hatch patterns come with the program; you can develop others yourself.
- It is easier to copy an array of objects at an angle to the original and to fence objects for copying, and to undo erasures.
- Many new macros are included. One of them allows near-automatic creation of 3-D windows and doors in a wide variety of styles. Individual components can be specified on a bill of materials, and the 3-D objects can be rendered with the optional Velocity program. These are added to macros for stairs, spiral staircases, concrete beams, and so forth.
- Another macro allows fly-throughs with or without hidden-line removal. The fly-through may be saved as slide images for faster viewing later.
- Tolerances can be added to individual dimensions. Dimensioning has been improved generally, with easier changes for



etch facility in DataCAD is particularly powerful (2). In this example, we've stretched the bottoms of the boxes at the computer screen.

files, colors and so forth. Maximum drawing-file size was increased to 16 MB from 4 MB.

The change that many users have been waiting for—the ability to send output to a printer instead of a plotter—is not yet ready. But it is promised for this year. In the meantime, you can “plot” a drawing to a file using HPGL (The Hewlett-Packard Graphics Language), then print on a laser or dot-matrix printer that can read HPGL files. Walls are limited to two sides—no multiple parallel lines unless you replicate them, or write a macro to do the job. But the sides can be hedges or other custom line types.

A more or less unlimited number of symbols may be invoked and brought into a drawing. Symbols are not dimensionless; that is, if you want two file cabinets, you must create two symbols, rather than using a universal symbol that you stretch or rescale. Symbols can be rotated or mirrored, however. And, once a symbol is brought into a drawing, it can be exploded and modified, then saved as a new symbol. You can add as much information as you want about each symbol—price, source, size, name, and so forth. The default is six fields of data, with 80 characters maximum per field. But you may specify more fields if you want.

Redefined reports include ones for costs, quantities, and so forth. Reports are standard ASCII files that can be added to a drawing, sent to a printer, or saved as a text file. The text file, in turn, can be split into data, a form that can be processed by spreadsheet programs such as Excel and Lotus 1-2-3, or by database programs such as dBase IV.

In short, DataCAD deserves a look, especially for small and medium-size self-contained architectural or multidisciplinary offices. If you expect to exchange files back and forth with outside designers (for hvac or structural work, for example), modifying designs as you go, you may run into trouble—unless all the outsiders use DataCAD, or unless you set up rigid rules for drawing formats, to assure that translations via DXF will work. *Steven S. Ross*

## DataCAD 4.0

**Equipment required:** IBM AT, PS/2 or compatible (that is, any computer with an 80286 or newer microprocessor), 640K of random-access memory (2 MB or more recommended), math coprocessor (80287, 80387 or compatible), mouse or digitizing tablet. Oddly enough, DataCAD cannot be configured for the PS/2 mouse using the PS/2 mouse port. All of the program files take up close to 7 MB on your fixed disk.

**Vendor:** Cadkey, 440 Oakland St., Manchester, CT 06040. 203-647-0220. The base price is \$2,995 for new users. Upgrades from Version 3.6 are \$995. Velocity, the rendering program, is \$495. The base price does not include support; that's \$695 extra for a one-year maintenance package (including quarterly upgrades) if bought within 30 days, \$995 later. The fee for each extra user within a company is \$995, plus \$155 extra for annual maintenance.

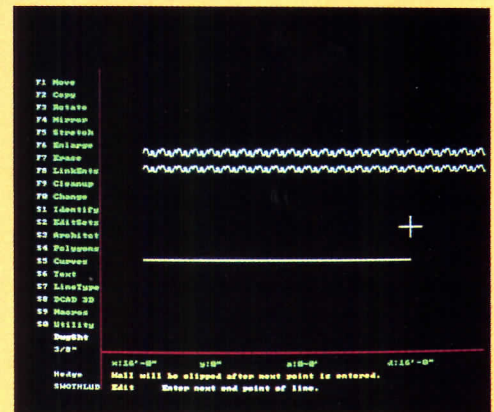
**Manuals:** An improvement from earlier versions—which were already pretty good. There are three volumes—a design and drafting guide, one for modeling and viewing, and one covering DataCAD AEC, the integrated program that customizes DataCAD for architects and others who deal with designing buildings rather than industrial parts. A fourth, empty, binder is supplied for add-on programs such as Velocity (for rendering). Tutorials are long-winded (this is a full-featured package, remember, with lots to learn), but first-rate.

**Ease-of-use:** Aside from some idiosyncratic menu trees (you have to load a default drawing, for instance, before going to the menu that allows you to read in a DXF file, and you do not exit the system from the root menu), DataCAD is a model of good software design. In other words, you can use it efficiently with little training. As you progress, you learn new tricks as you need them. The macro language is straightforward and feature-packed.

**Error-trapping:** DataCAD does its best to keep you out of trouble. Out of the box, for instance, it automatically saves work as you edit it, into a file with an .ASV extension.

And it always leaves a backup copy of your last editing session. It will not load a DXF file if it senses an error (usually some entity that it cannot handle) during the translation. That can be a bother, because you are barred from using the file at all. But it does keep corrupted files out of the system. We were unable to load large files written with the AutoCAD 11 DXF-out command.

DataCAD can keep track of 1,000 drawing layers; other common CAD software can track as few as 32. So be careful if you expect to do back-and-forth transfers. Be careful when clicking on numeric values. A quick double-click on a value inserts a double value. That is, click on “4” twice, and you enter “8” on the command line.



Want a “wall” of hedge? Specify “hedge” as linetype, and draw the “wall.” The line below will be turned into a hedge as soon as its second endpoint is specified.

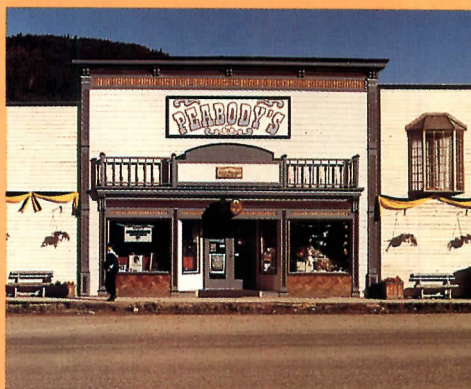
For more information, circle item numbers on Reader Service Cards. **317**



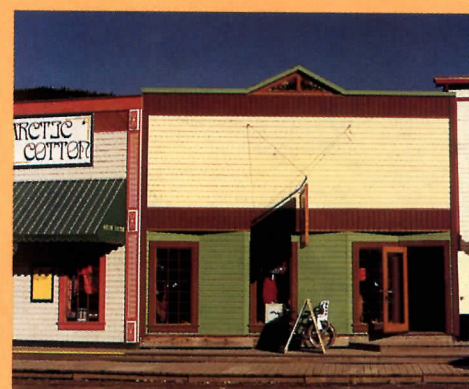
# Call of the Wild



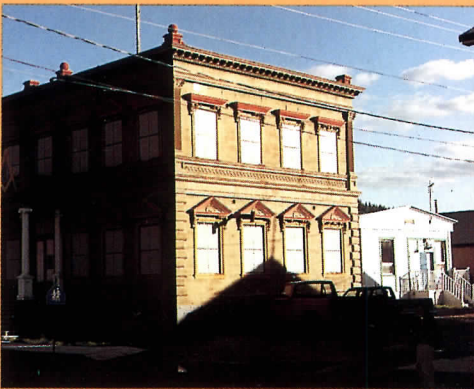
1



2



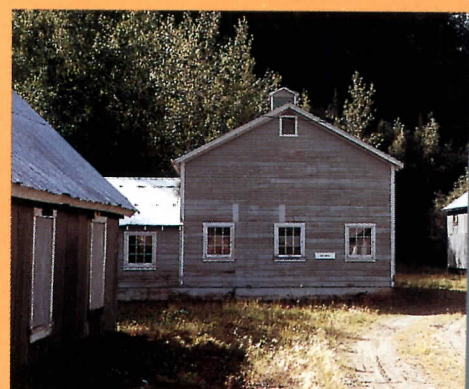
3



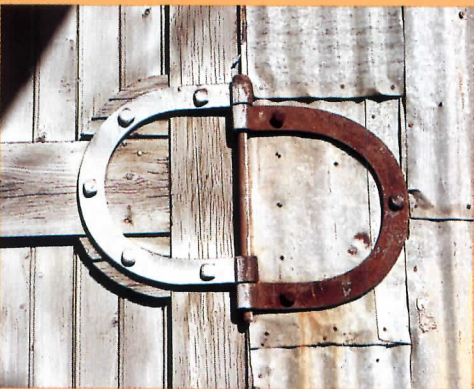
7



8



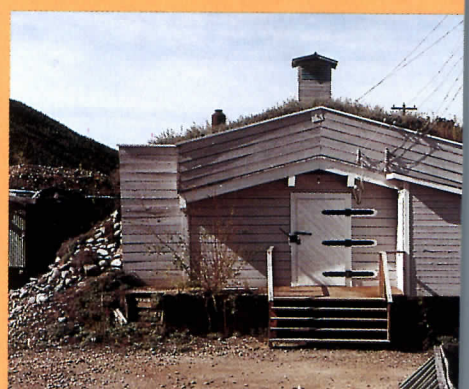
9



13



14



15

Photos by author, except 16 and 17 courtesy of Dawson City Museum and Historical Society

Dawson City, Yukon Territory. A highlight of last summer's season was the World Gold Panning Championship, where amateurs and pros from more than 20 nations competed to see who could pan the most gold out of a given amount secreted in a pile of wet dirt.

The contest is a sign of vigorous life in this town born in the great gold rush of 1898, swollen to 20,000 inhabitants in its heyday but now subsisting at a strength of 750 souls on modest residual gold excavation and tourism.

At its height, the town boasted work by Canada's top architects, such as the Commissioner's Residence (1901) by Thomas Fuller (1). Front Street stores, which face the Yukon River along a stretch where the miners landed and where supplies were unloaded and gold shipped out to the world, have been renovated with liberal use of color (2, 3).

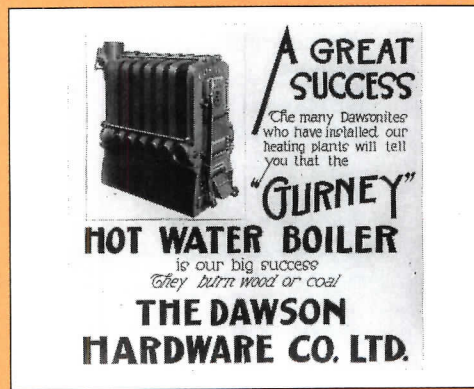
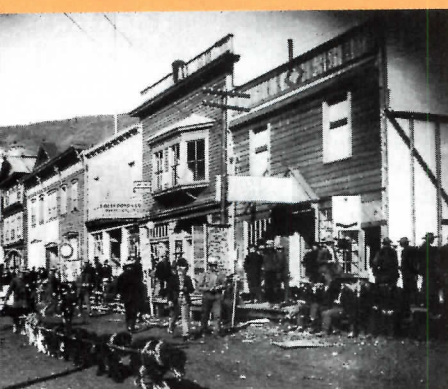
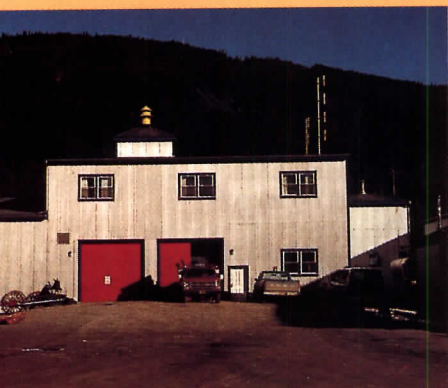
The best Modern building is the fire station (Akio Saito, architect, 1988—4, 5), which also doubles as the municipal council chamber

and offices. Faced with an industrial variant of the traditional pressed metal, and using primary colors to great effect, this building has a high-tech yet simple quality in tune with the town's tiny population and harsh climate. A south-of-the-border fast-food paler reaches for identity with its "98" logo (

An ancestor of the fire house is this c. 1904 "monumental" building by Robert Monierieff (7). Now a Masonic Temple, it is faced with pressed-tin "curtain" wall, quoins, and cornice designed to look like



RECORD's editor reports on the architecture  
of the 1898 Yukon Gold Rush.



me. Heating was hot air by wood furnace. Other buildings haven't fared so well (8).

control its looks, Dawson City has issued a design guideline, which concedes that the town was never any particular style, but which does list acceptable materials. By and large, if the architect can prove a detail or configuration with contemporary photographs taken in Dawson City's early days, the design should pass muster.

curious bit of nostalgia is the campus of

the largest of the old gold-mining companies, the Yukon Consolidated Gold Corporation. It is a deceptively simple arrangement of 81 modest buildings (9, 10, 11) that in fact creates a subtle series of small and large spaces, including a ceremonial parade ground. Buildings were post and beam with corrugated walls and roofs or wood siding, with wood window and door trim (12), and sometimes elaborate hardware (13). They housed offices, repair shops, sleeping quarters, and the gold casting room. Some buildings are unique by any standard, such

as the lumber shed (14) and the cold storage building, which is covered with sod and cooled by pipes sunk to permafrost (15). Old slides survive of the lives and times of the old sourdoughs (16). Here too is an ad for a popular brand of boiler from around 1900 (17). This model burns wood or coal.

Picturesque buildings survive in other parts of the 1898 trail, such as this 1899 Arctic Brotherhood meeting hall in Skagway, Alaska, a seaport and entry point for the miners of '98 (18). *Stephen A. Kliment*



# Preservation: Annotated Bibliography

By H. Ward Jandl

Growing interest in revitalizing older and historic buildings has produced over the last two decades a specialized body of literature that includes information on how these buildings were constructed, data on current materials and products, and research on methods for preserving historic resources. With over a half million properties listed in the National Register of Historic Places, the need for reliable, current information is greater than ever. The following annotated bibliography provides an introduction to the literature of rehabilitation and adaptive use; it is not by any means comprehensive.

## Periodicals

**Bulletin** of the Association for Preservation Technology. Published quarterly, this periodical provides a wealth of technical information on the latest preservation and rehabilitation techniques. (Address: APT, P.O. Box 8178, Fredericksburg, Va. 22404).

**CRM Bulletin.** Published by the National Park Service, this bimonthly journal contains a broad range of articles on cultural resource management and is aimed at preservation professionals working in the public sector. (Address: P.O. Box 37127, Washington, D. C. 37127-7127).

**Historic Preservation Magazine.** This bimonthly magazine, published by the National Trust for Historic Preservation, focuses on such topics as heritage tourism, adaptive use, preservation planning, and landscape and architectural history. (Address: 1785 Massachusetts Ave., NW, Washington, D. C. 20036).

**Old-House Journal.** This bimonthly periodical offers practical information to homeowners planning restoration and rehabilitation projects. (Address: OHJ, 435 Ninth Street, Brooklyn, N. Y. 11215).

**Traditional Building.** This bimonthly newspaper specializes in "historical products for today's professional." (Address: Traditional Building, 69A Seventh Avenue, Brooklyn, N. Y. 11217).

*H. Ward Jandl is an architectural historian and preservationist who works for the National Park Service.*

## Books and Leaflets

### *Principles and Practices*

**All About Old Buildings: The Whole Preservation Catalog,** Diane Maddex, editor. Washington, D. C.: The Preservation Press, 1985.

Part bibliography, part listing of resources, an indispensable reference tool for preservationists.

**The American Mosaic: Preserving a Nation's Heritage,** Robert E. Stipe and Antoinette J. Lee, editors. Washington, D. C.: U. S. International Council on Monuments and Sites, 1987.

Provocative essays on preservation in the U. S., including an analysis of the strengths and weaknesses of the present system.

**Keeping Time: The History and Theory of Preservation in America,** by William J. Murtagh. Pittstown, N. J.: The Main Street Press, 1988.

An overview of the preservation movement in the U. S., from its roots with the Mt. Vernon Ladies' Association through the 1980s.

**Landmark Yellow Pages: Where to Find All the Names, Addresses, Facts and Figures You Need.** Washington, D. C.: The Preservation Press, 1990.

Directory of historic preservation organizations, and information on specific programs.

**Presence of the Past,** by Charles B. Hosmer, Jr. New York: G. P. Putnam, 1965.

A detailed history of the preservation movement in the United States prior to 1926.

**Preservation and Conservation: Principles and Practices.** Washington, D. C.: The Preservation Press, 1976.

Proceedings of an international conference held in 1972, with chapters on wood, masonry, metals, paints and varnishes, maintenance, standards, and education.

**Preservation Comes of Age,** 2 volumes. Charlottesville, Va.: University Press of Virginia, 1981.

A comprehensive review of preservation activity in the United States from 1926 through 1949.

**Recording Historic Structures,** John A. Burns, editor. Washington, D. C.: The American Institute of Architects Press, 1989.

A guide to documenting cultural resources, from initial survey through research and the preparation of drawings and photographs.

**Rehabilitation Guidelines 1986,** Volumes 1-11. Washington, D. C.: National Institute of Building Technology, Inc., 1986. Guidelines developed for HUD for use with existing codes by building officials, designers, inspectors, and builders.

**The Restoration Manual,** by Orin M. Bullcock, Jr. Norwalk, Ct.: Silvermine Publishers, 1966. Reprint: New York: Van Nostrand Reinhold, 1983.

Field-tested methods for restoring buildings, including procedures for historical, architectural, and archaeological research.

**The Secretary of the Interior's Standards for Rehabilitation with Guidelines for Rehabilitating Historic Buildings.** Revised 1990. Washington, D. C.: Government Printing Office, 1990.

Ten standards to guide rehabilitation work, along with a detailed list of recommended and not recommended work treatments.

**Well Preserved: The Ontario Heritage Foundation's Manual of Principles and Practices for Architectural Conservation,** by Mark Fram. Erin, Ontario: Boston Mills Press, 1988.

Comprehensive look at preservation principles and practices, with chapters on conservation standards, archaeology, project management, structural systems, energy conservation, and new construction

### *Legal and Legislative*

**Federal Historic Preservation Laws,** Sarah K. Blumenthal, compiler. Washington, D. C.: Department of the Interior, 1989.

Compilation of major federal laws that have shaped historic preservation in the U. S.

**Handbook on Preservation Law,** Christopher Duerkson, editor. Washington, D. C.: Conservation Foundation, 1983.

Overview of preservation law, aimed at attorneys, developers, and architects.

**The Historic Preservation Yearbook,** Russell V. Keune, editor. Bethesda, Md.: Aler & Adler, 1984.

Compendium of laws, regulations, programs, and groups affecting preservation.

**Reusing Old Buildings: Preservation Law and the Development Process,** Conservation Foundation, Washington, D. C.: National Trust for Historic Preservation, 1984. Articles and essays on legal and financial aspects of adaptive use.



## Technology

**Building Early America**, Charles Peterson, editor. Radnor, Pa.: Chilton Book Co., 1976. Papers from symposium on building technology, covering glazing, development of central heating, and 19th-century lighting.

**The Care of Old Buildings Today: A Practical Guide**, by Donald W. Insall. London: The Architectural Press, 1972.

Detailed maintenance and preservation techniques, covering roofs, timber construction, metal work, glass, and even church bells.

**Conservation of Historic Buildings**, by Bernard M. Feilden. London: Butterworth & Co., Ltd., 1982.

Comprehensive resource for maintaining historic buildings. Chapters on structural elements, temperature control, building interventions, new systems, and materials.

**Emergency Repairs for Historic Buildings**, by Elenor Michell. London: English Heritage, 1988.

Descriptions of temporary repairs that can be made easily and inexpensively until permanent repairs can be made.

**The Old-House Journal Compendium**, Lem Labine and Caroline Flaherty, editors. Woodstock, N. Y.: The Overlook Press, 1980. Collection of articles from the first 8 years of *The Old-House Journal*, providing useful "how-to" information to do-it-yourselfers.

**Practical Building Conservation, English Heritage Conservation Handbook**, 4 volumes, by John Ashurst and Nicola Ashurst. New York: Halsted Press, 1988.

Detailed volumes on stone, brick, terra cotta, mortars and plasters, and metals.

**Conservation Briefs** series, 23 available to date. Washington, D. C.: Government Printing Office, 1975-1990.

Ongoing series of technical leaflets from the National Park Service. Topics include: cleaning masonry buildings, repointing, energy conservation, storefronts, and additions.

**The Sixth Old House Catalog**, Lawrence Dow, compiler. New York: Sterling Publishing Co., 1990.

Sourcebook for restoring, decorating, and finishing historic houses, listing rehabilitation products, services, and suppliers.

**The Technology of Historic American Buildings**, H. Ward Jandl, editor. Washington, D. C.: Foundation for Preservation Technology, 1983.

Essays on the history of construction technology, including such topics as hand-forged iron hardware, the evolution of the balloon frame, painting techniques, and metal roofs.

## Adaptive Use/Rehabilitation

**New Construction for Older Buildings: A Design Sourcebook for Architects and Preservationists**, by Peter H. Smeallie and Peter H. Smith. New York: John Wiley & Sons, 1990.

A collection of projects involving new insertions and additions; some lack sensitivity to the buildings to which they are appended.

**New Life for Old Houses**, by George Stephen. Reprint of 1972 edition. Washington, D. C.: The Preservation Press, 1989.

One of the best primers of its type, covering preservation techniques, financing, contractor selection, and energy conservation.

**Rehab Right**, by Helaine S. Kaplan and Blair Prentice. Berkeley, Ca.: Ten Speed Press, 1986.

"How-to" manual for homeowners providing basic information on repair, rehabilitation, and restoration techniques.

**Renovation: A Complete Guide**, Second Edition, by Michael W. Litchfield. Englewood Cliffs, N. J.: Prentice Hall, 1991.

Guidance on renovating older, not necessarily historic, buildings.

**Respectful Rehabilitation: Answers to Your Questions About Old Buildings**, National Park Service. Washington, D. C.: The Preservation Press, 1982.

Technical guidance for owners of historic houses, covering a wide range of specific preservation and maintenance problems.

**Restoring Old Buildings for Contemporary Uses: An American Sourcebook for Architects and Preservationists**, by William C. Shopsin. New York: Whitney Library of Design, 1989.

Handbook focusing on design issues, preservation strategies, and rehabilitation techniques.

## Building Types

**Movie Palaces: Renaissance and Reuse**, by Joseph M. Valerio and Daniel Friedman. New York: Educational Facilities Laboratories, 1982.

A look at movie theaters that have been re-

vitalized as cultural centers.

**Recycling Historic Railroad Stations: A Citizens Manual**, U. S. Department of Transportation. Washington, D. C.: Government Printing Office, 1978.

A handbook with rehabilitation guidance for old train stations, with 8 case studies.

**Saving Large Estates: Conservation, Historic Preservation, and Adaptive Reuse**, by William C. Shopsin and Grania Bolton Marcus. Setauket, N. Y.: Society for the Preserving of Long Island Antiquities, 1977.

Preservation strategies for protecting and preserving country houses and "cottages."

**Surplus Schools: Adaptive Reuse**, Paul Abramson, editor. New York: Educational Facilities Laboratories, 1985.

A report examining alternative uses for redundant school buildings.

**Working Places: The Adaptive Use of Industrial Buildings**, by Walter Kidney. Pittsburgh: Ober Park Associates, 1976.

A pioneering study of America's industrial heritage, examining options for reuse.

## Economic and Financial

**Adaptive Use: Development Economics, Process, and Profiles**. Washington, D. C.: Urban Land Institute, 1978.

A guide to adaptive use, focusing on economics and process, project feasibility, planning, financing, and implementation. Includes 15 case studies of successful projects.

**New Profits from Old Buildings: Private Enterprise Approaches to Making Preservation Pay**, by Raynor M. Warner, Sibyl M. Groff, and Ranne P. Warner. New York: McGraw-Hill, 1979.

Business-minded guide to adaptive use, with over 70 case studies of successful projects.

**Preserving America's Heritage: The Rehabilitation Investment Tax Credit**, Touche Ross & Co. Cleveland: Touche Ross & Co., 1987.

A booklet with case studies outlining the basic tax and historic certification rules following the Tax Reform Act of 1986.

**Rehabilitating Older and Historic Buildings**, by Stephen L. Kass, Judith M. LaBelle, and David A. Hansell. New York: John Wiley & Sons, 1985.

A book that explains the rehabilitation process and sets forth the benefits and potential pitfalls of preservation. ■



# Rethinking Boston

By Nancy Levinson

Stephen Coyle looks out the window of his corner office on the top floor of Boston City Hall, surveying a scene that encompasses the famous harbor and Long Wharf, the tower of the Custom House, Faneuil Hall, and Quincy Market. Speaking rapidly and with animation, he sketches a history of the waterfront, and describes how a new building by Graham Gund relates to Alexander Parris's 19th-century warehouses. If Coyle's tone is curatorial, that is understandable. As director of the Boston Redevelopment Authority, the 300-person agency that controls the city's planning and development, Coyle has contributed considerably to shaping the cityscape.

## Boston's building boom

Coyle arrived at the BRA in 1984, and his tenure thus far has coincided with the most spectacular building boom in Boston's history. By most accounts the 45-year-old director and his staff have done an excellent job of managing what might, under less skillful leadership, have become a frenzy of insensitive development. This fact is especially impressive, given that the BRA's \$20-million budget comes chiefly from leasing land to developers.

"Sympathetic to preservation" is how Susan Park, president of the Boston Preservation Alliance, describes Coyle. "He has made an incredible mark on the city," she adds, "by controlling development and by changing the ground rules by which projects get built." Coyle's BRA is widely credited with opening up a design-review process that had become aloof under previous directors. "Before Coyle, downtown development had been the province of a privileged few," explains Alex Krieger, director of urban design at Harvard. "Today a broad stratum of society has a stake in the process."

"I consider myself a 'convener,'" says Coyle. "What we have tried to do is to set up a process that involves all the various people who care about the city. I don't for one second believe that the city government alone—or the architect or developer or community—possesses the wisdom about what's best for the city. It's the dialog among us all, a dialog that takes place in the context of a community setting standards

and defining its values, that produces a vision for the city."

The BRA has just completed an ambitious district-by-district rezoning of the entire city—the first such effort in two decades—and in most areas has imposed strict limits on height, bulk, density, and use. The agency has established rigorous design guidelines for each district, stipulating, for instance, contextual materials and detailing, ground-floor retail in office towers, conformity to existing cornice lines, and generous setbacks. More often than not, developers have emerged from BRA review sessions with projects that have shrunk in size, but become more elaborate in profile, more complex in program. "Everyone who's tried to build here recently has been cut down to size," says John B. Hynes III of Lincoln Property Company. The agency's influence on some of Boston's major new buildings—Rowes Wharf, 75 State Street, 125 Summer Street—was significant, and Coyle is clear on the value of agency mandates. "I think the architecture has responded to the rules, and we've gotten some very interesting buildings. I don't like to speak ill of other cities, but it is the uninhibited, rule-free cities that tend to produce the commonest-looking buildings."

Coyle shares the prevailing Bostonian view that very tall buildings fit uneasily into the city's medieval downtown plan, with its narrow, winding streets. (The city has recently re-established building height limits, which had been abolished in 1964 in favor of FARs. The height limit in the central business district is now 155 feet; in special development zones, 435 feet.) "The skyscraper is the problem child of modern planning," says Coyle. "Clearly it has wreaked havoc on the microclimates of cities and on the pedestrian's experience of the city, and yet there are enormous economic pressures to build them." At the least, he believes, tall buildings ought to relate to a particular place. "A developer's first preference is almost always for some variation of the International Style. But when you're building a rectangle,

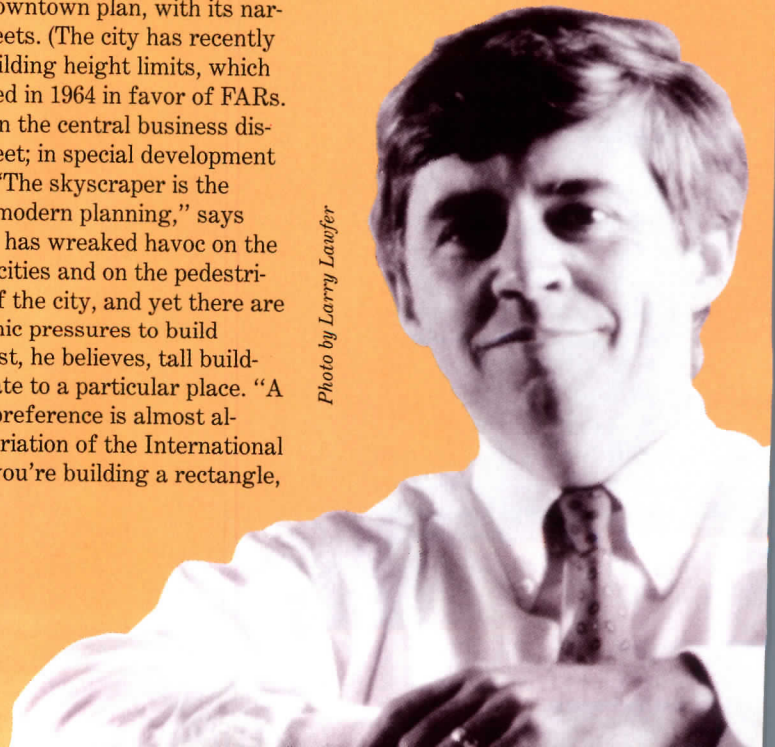
what are you going to get? A very big building that's very efficient for the developer with the cheapest possible materials once the steel is up, a building that's the same whether it's in Boston or Houston or Seattle, and a kind of architecture that does not seem to me to belong to a culture. I think it's called the International Style because no one wants to claim it."

"What we've tried to do is to make the vertical building respond to the scale and character and history and existing architecture of Boston. We don't have a template for a Boston style. But they are the result of a synthesis of, on the one hand, the market pressure to build tall buildings, and, on the other, of our attempt to encourage architecture that is specific to Boston. And yes, the process is time-consuming, it is expensive, and it can frustrate the development team—but you've got to show patience for a building that's going to last for a couple of hundred years. In this business, the only mistakes you make are the ones you build."

## How to prevent overbuilding

To avoid further development in the overbuilt business and financial districts, the BRA has tried, with reasonable success, to spur interest in other parts of the city. The combined renovation and restoration of the 200-year-old Charlestown Navy Yard, in the

Photo by Larry Lauffer





*s director of the Boston Redevelopment Authority, Stephen Coyle is helping to reshape the city's skyline and streetfronts.*

works for 15 years, has been reinvigorated with new institutional and residential development. (The largest single preservation project in the country, it involves transforming the nation's oldest naval yard, closed since 1974, into a campus of institutions, offices, and housing.) Two years ago the BRA published the Midtown District Cultural Plan, an ambitious proposal to transform what is known as the Combat Zone, Boston's honky-tonk strip, into a mixed-use district comprising theaters, housing, and office towers.

Coyle and the BRA have harnessed the building spree in yet another way. Boston's well-known linkage laws require developers of downtown real estate to contribute money for affordable housing and job development. (The rule specifies \$6 for every square foot over 100,000). To Coyle, whose parents were displaced from their South Boston home by a housing project, linkage is such much-needed compensation for the trauma of urban renewal and a municipal response to the dearth of federal money for social programs.

While it has not dramatically transformed the city's ghettos, the policy has in fact produced over 3,000 units of housing and stimulated commercial activity in many of Boston's neighborhoods. "It never ceases to amaze me how many people do the public business with so little understanding . . . of how necessary it is to change the rate of capital formation for people of color, to help build stronger communities through private ownership," explains Coyle. "Now *there's* a guiding principle that has to be put on the table along with design and engineering, especially if you're serious about a profession. I prefer to call city *building*, as opposed to city *planning*. If you look at how urban economic policies have developed in countries such as Japan, Germany, or Great Britain, you discover that people there accept the need to maintain strong urban centers. But as you look at cities across America today, the question is, do we have a true understanding of the role of cities in the national economy, and, more to the

point, do we have an economic development program to allow cities to build up their economies?"

#### **Reinvigorating the BRA**

Long-time observers of the Boston design scene credit Coyle with re-energizing a tired agency. Established in 1957, the BRA came into its own in the '60s under the leadership of Edward J. Logue, the distinguished planner whose best-known legacy is Government Center. In the '70s, however, the agency's power and prestige waned. Kevin White, Boston's mayor from 1967 to 1983, tended to manage development himself and to dominate the five BRA directors who served his administration.

Coyle is not without his critics. One of Boston's most powerful men, he is also one of its most controversial. When members of the design community—colleagues, architects, preservationists, developers—talk about Coyle, the portrait that emerges is kaleidoscopic, and often contradictory. He is praised as compassionate and thoughtful, criticized as brash and unfocused. To some, Coyle is a champion of the underclass and a dynamic leader impatient with technocracy; to others, an inefficient manager loath to delegate authority, a mix of Machiavelli and Robert Moses. Everyone agrees that he is extraordinarily intelligent, and most people who meet him are dazzled by his erudition. With Coyle, meetings and interviews tend to turn into highly detailed lectures—he is reputed to have a photographic memory—and his conversation ranges over a variety of subjects, from city planning in ancient Thebes to the flaws of the 1986 tax code.

#### **Coyle's appointment**

Coyle was appointed to the BRA by Mayor Raymond Flynn. For Flynn, elected in 1983 on a populist platform, Coyle was an ideal choice, a native son with impressive academic and professional credentials. The 10th of 14 children of Irish-Catholic parents, Coyle was raised in Waltham, just outside Boston. He attended Brandeis University on a scholarship—"It was a real reversal," he has said, "to be in a cultural minority"—and after graduation ran, unsuccessfully, for the State Senate on a platform of tax reform, affordable housing, voting rights for 18-year

olds, and withdrawal from Vietnam. Public-sector work occupied him for much of the 1970s, first in Boston, where he headed two suburban housing authorities while serving as a Waltham city councilman, then in Washington, where he worked as executive assistant to Housing and Urban Development Secretary Patricia Harris and then as deputy undersecretary of Health and Human Services. (Along the way he earned a master's degree in public administration at Harvard.) His HUD years were eventful. "Pat Harris would put me on a plane and send me to deal with problems all over the country, from the Mississippi Delta to the south side of Chicago. So one week I'd be supervising the demolition of a housing project that had become a scene of crime, the next I'd be on a reservation, trying to help Indian tribes build housing."

By 1980, however, Coyle found himself questioning the social programs of the '60s and '70s and needing to refocus his career. He earned a law degree at Stanford, then worked as vice president for finance at architect John Carl Warnecke's office in San Francisco. Although Coyle loved California, Flynn's offer provided not only the chance to return to Boston (Coyle and his wife, a former Miss Massachusetts, have three children), but also the challenge of a job that would draw on all his training and previous experience.

Coyle's background has served him well. He is considered a forceful, sometimes intimidating, negotiator, in large measure because he has a superior grasp of the complexities of development. He knows more about finance and tax and real-estate law than most architects, and more about city planning and architecture than most developers. Never formally trained as a planner, he has read widely in urban-design history and theory, and speaks as knowledgeably about Boston's 18th- and 19th-century buildings as about contemporary projects.

The legacy of the great planners of the late 19th century—people such as Daniel Burnham and, especially, Frederick Law Olmsted—has impressed him deeply. To Coyle, who has studied Olmsted's work and

*Continued on page 183*



## Ban the Boom?

By David Masello

To a visitor, the connection between John Julius, Lord Norwich's decades-long passion for the architecture, art, and history of Venice and the north London neighborhood in which he lives is uncanny. He is quick, however, to discount any link. "Little Venice is what the taxi drivers and guide books call this area, but I have trouble thinking of it as that," says Norwich.

The author of numerous history and architecture volumes, producer of documentaries for the BBC, and member of the House of Lords, Norwich (pronounced to rhyme with porridge) is a popular figure in Britain, often seen with the likes of Prince Charles. Indeed, at the 25th-anniversary gala of the World Monuments Fund last November, Norwich introduced the program at which Prince Charles was honored for his work in architectural preservation. At the evening's conclusion, he and HRH left together immersed in conversation like old friends.

From the expansive drawing room of his Georgian-style house (circa 1840), which is filled with domestic accouterments that bespeak a life of wide-ranging travel and professional endeavors, one overlooks the picturesque Regent Canal. The narrow canal has helped earn this area of Camden Town the name Little Venice. While diminutive footbridges and moored flat-bottom boats recall the Italian port city, bankside pubs, rows of Georgian townhouses, and the absence of sight-hungry tourist hordes say, emphatically, this is London. For Norwich, the latter detail is the most telling of all.

### The tourist threat

As a cofounder of the London-based Venice in Peril Fund and as the newly named honorary chairman of the World Monuments Fund, Norwich has been actively involved in

*David Masello is Special Projects Editor at Avenue magazine.*

the restoration of significant Venetian landmarks, which have been damaged by everything from floods and acid rain to simple neglect. Furthermore, he has long recognized what he considers an even more insidious threat facing Venice and other great cities: tourism pollution. Battling this phenomenon has become Norwich's own special cause.

At last November's European Monuments Forum hosted by the World Monuments Fund, Norwich cited harrowing numbers about tourism and its damaging effects on buildings and cities. In particular, he described one day in the life of Venice in 1987 when some 66,000 tourists descended on the city. So overwhelmed was the Venice infrastructure that local authorities finally had to close the causeway linking the city to the mainland. "In July 1989, the present foreign minister of Italy, Signor de Michelis, whose one passion in life is rock music—his only book to date is a guide to the best discos of Europe—invited the group Pink Floyd [to perform in St. Mark's Square], who in turn brought 200,000 fans—not one of whom had a hotel room or loo in Venice," Norwich recalls with incredulity. "They camped out for 48 hours on the piazza. It took the army four days to clean it up." The following year, Signor di Michelis proposed an international exhibition, Expo 2000, boasting that it would attract 30 million people over a period of four months, or as Norwich calculates, 250,000 people a day (50,000 more than the Pink Floyd concert), every day for four months. Fortunately, the plan was scratched.

Norwich, however, is most troubled by daily tourists to Venice, those visitors who arrive by bus early in the morning and leave by dusk. A survey conducted by the University of Venice found that two-thirds of these tourists don't even care to go into St. Mark's Cathedral once they arrive at the piazza. "The large majority sit, rather disconsolate,

rather bored, rather unhappy, spending money only on bird seed to feed the already overfed pigeons, eating packed lunches they brought with them, and depositing the packages all over the piazza, which is already disfigured by 200 litter bins." Norwich sees an underlying irony to the fact that many tourists don't even care to be there.

According to Norwich, large numbers of tourists literally erode monuments. Over the years, millions of hands caressing the little statues along the basin in Venice have smoothed them to the point where certain features are virtually unrecognizable. In the Vatican, so many visitors pack the Sistine Chapel that during the course of the day the temperature rises by 41 degrees. The hot, damp air rises to the ceiling where it produces fungus. The painted caves at Lascaux, France, were closed to the public for similar reasons. The south aisle of Canterbury Cathedral is now 1 1/2 inches lower than it was 20 years ago as a result of the heels pounding on it daily.

"Tourism pollution is not only the destruction of monuments, but also the destruction of the atmosphere that those monuments are meant to engender," Norwich emphasizes. "If you go to Westminster Abbey at this very moment, it's like [a department store] three days before Christmas. The whole atmosphere of solemnity is gone." Norwich refers to a proposal to build a massive tourist extension to Haworth parsonage, the small house of the Brontë sisters, as "tourist pollution gone mad."

In terms of numbers of tourists, Norwich is convinced that what we are experiencing now is a "tip of the iceberg." From the Far East alone, Norwich estimates that within the decade 10 times as many tourists as we see now will be traveling abroad. Vast numbers of Eastern Europeans, newly enfranchised and eager to see the world, will join increasing numbers of South and North

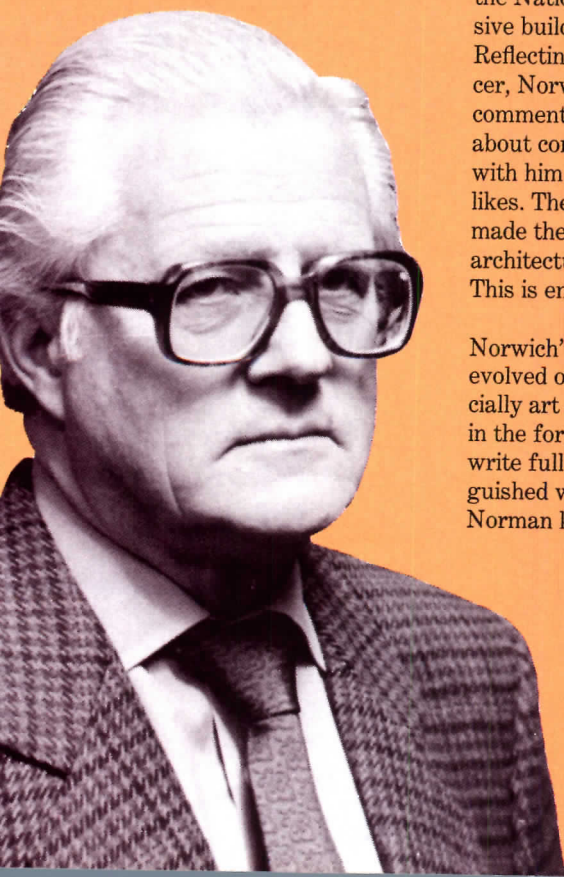


For John Julius Norwich, honorary chairman of the World Monuments Fund, the only way to preserve certain monuments is to restrict access to them. Does "tourism pollution" pose a serious threat?

Americans, adding to the plethora of tourists.

#### Crowd control

Norwich admits that he has "no magic cure." But through his work with the Venice Peril and World Monument funds, he has made it a near mission to document the scope of the tourist flood and the urgency of protecting the globe's architectural and horticultural heritage. At minimum, Norwich wants to create a situation whereby those visiting the great tourist spots, be it the Louvre, a scenic English village, or the Parthenon, are those who really want to see and experience them. "I would say, for instance, those going to Venice, 'You're all welcome, all we ask is that you make your own way. Don't just get on a tourist bus. Come on your own, buy your own ticket, take a train, a bus, or drive, or hitchhike, or bicycle, but at least show that you're prepared to take a little bit of trouble to come here.' That would limit the present number to about 70 percent of what it is now. Then I would say, 'You must have a hotel reservation for at least one night to show that you have a certain commitment to the place.'"



As is, Norwich sees only the tourist-bus companies as profiting from the endless visitor migration.

In what might be a precedent-setting development, the French government has reopened the caves at Lascaux but by advance appointment only. While Norwich realizes the anti-democratic implications of such a plan, he does admit that such a move might be appropriate for, say, the Louvre or the Taj Mahal, the Prado or the Parthenon. "I think we must get used to the idea of having to make appointments. Numbers must be limited."

#### Architecture present and past

Even though Norwich spends considerable time helping secure funds for the restoration of Renaissance churches, Palladian villas, and Rococo salons, he is keenly aware of current architecture. "After having had the misfortune to live through 30 years of what I find the dreariest, most boring, soulless architecture we've ever seen in the history of mankind, suddenly it seems to be getting much better again. Postmodernism is fascinating." Surprisingly, Norwich cites a late Modernist building—I. M. Pei's East Wing of the National Gallery—as "the most impressive building built in the last 20 years." Reflecting his years as a foreign-service officer, Norwich is diplomatic about his comments on Prince Charles's strong views about contemporary architecture. "I agree with him more on his dislikes than on his likes. The important thing is that he has made the people of this country conscious of architecture in a way they were not before. This is enormously important."

Norwich's involvement in architecture evolved out of his writing on history, especially art history. After serving a dozen years in the foreign service, Norwich resigned to write full time. To date, his many distinguished works include two books on the Norman kingdom in Sicily, an exhaustive

two-volume work on the history of the Venetian republic, assorted travel books, and editorship of *The World Atlas of Architecture*. He is currently writing volume two of a three-volume series on the Byzantine empire. He has also produced some 20 documentaries for British television.

In fact, it was for a BBC television series entitled *Spirit of the Age*, done in the early 1970s, that Norwich began to distinguish himself as an architectural historian. The series comprised eight films that recounted the evolution of English architecture through the ages. Of the eight chosen to do the individual films, Norwich was asked to make the one on Palladianism. Following the great success of that series, Norwich was asked to be general editor of the book, *Great Architecture of the World*, now translated into 16 languages.

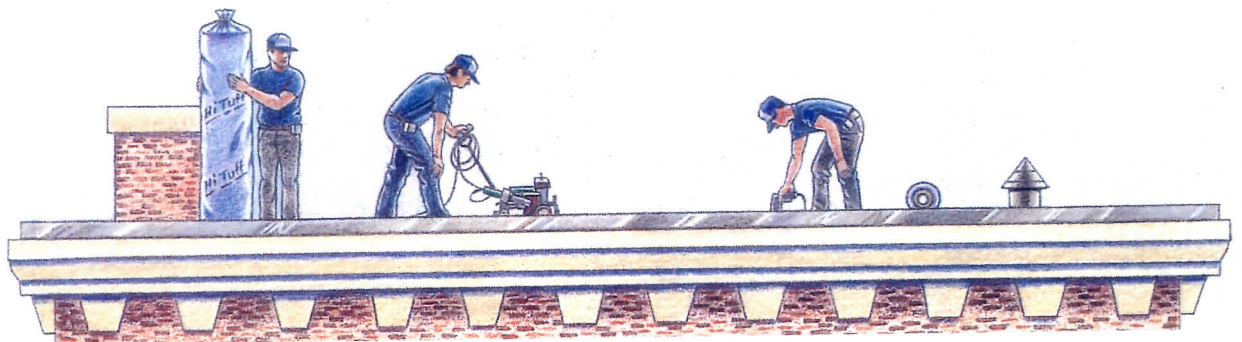
Norwich toiled for eight years on *Britain's Heritage*, a historical guide book of sorts that recounts the best examples of English architecture. While the book was intended to cover the entire island, Norwich realized after years on the project that "I used a net with rather too small a mesh. I hadn't finished the south of England let alone the north. After all, this country is so grotesquely rich in architecture—there are 12,000 medieval parish churches alone!" While another author handled the north, Norwich's volume is perhaps the definitive guide to the architecture of the southern part of England.

Despite the thoroughness that characterizes that volume and indeed all of his work, Norwich insists that "I have never unearthed a new fact in any sphere or in any book I've done. I am quite good at reading boring books and regurgitating them into something I hope is a little more interesting and amusing. What I like doing is trying to enthruse other people with my own enthusiasm for something. I don't necessarily want to stretch the borders of knowledge." ■





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*Building Types Study 689/Preservation*

When Congress passed the National Historic Preservation Act 25 years ago, it gave an important seal of approval to a movement which, writes Nora Richter Greer on the following pages, “would gain a foothold in the American consciousness and greatly influence future development in our cities.” As Greer points out, preservation over the past quarter century has become a diverse and specialized movement. Everything from the growth management of cities to the conservation of farms and scenic byways is today within the preservationist’s purview.

The buildings featured in this issue, RECORD’s first major investigation of the field in eight years, show just how far we’ve come since the days when preservation was the exclusive domain of local historical societies. Although research-driven projects such as the restoration of the Purcell-Cutts House in Minneapolis and the reconstruction of St. Andrew’s Episcopal Church near Boston are preservation in the old sense, other featured projects—a former hospital turned low-cost housing in San Francisco, the renovated Berkeley Building in Boston, and two townhouses converted to academic use in New York City—take a less archeological tack, combining careful exterior restoration with virtually all-new interiors. A third group of adaptive-use projects—Harborside in New Jersey, the interim USAir terminal at Washington National Airport, and the Gary Group office complex near Los Angeles—reveals a sharp new appreciation for a once-neglected building type, the country’s great inventory of early- and mid-20th-century industrial architecture. *P. M. S.*



# Preserving Preservation

By Nora Richter Greer

**F**or preservationists, 1991 is a banner year—a time to celebrate victories and to reflect on future challenges. Twenty-five years ago this October, Congress passed the National Historic Preservation Act. Soon after, the National Register of Historic Places was established, as were the Secretary of the Interior's Standards for Rehabilitation and the SHPOs (state historic preservation officers). Thereafter, preservation would gain a foothold in the American consciousness and greatly influence future development in our cities. Today the preservation movement has a more diversified agenda; opportunities for architects to participate abound. In addition to the three Rs—restoration, renovation, and re-use—it now also encompasses growth management, rural preservation, scenic byways, cultural diversity, and even tourism.

Prior to Congressional approval of the 1966 Preservation Act, the U. S. Conference of Mayors clearly articulated what would become the course for preservation. "If the movement is to be successful," that organization mandated, "it must go beyond saving bricks and mortar. It must attempt to give a sense of orientation to our society, using structures and objects of the past to establish values of time and place." The mayors offered three necessary changes: the recognition of "the importance of architecture, design, and esthetics as well as historic and cultural values"; the need "to look beyond individual buildings and landmarks to historic and architecturally valued districts"; and the development of "tax policies that can stimulate preservation efforts."

One wonders what our cities might be today without this broadened understanding of preservation. Take historic districts, for example. Would Georgetown, Beacon Hill, or Miami Beach exist without the zoning and esthetic safeguards allotted to a historic district? Even with the safeguards, a district's survival can be constantly tested. Nowhere is that clearer than in Miami Beach, where the modest-scaled hotels and residences of the Art Deco District are eyed for the economic potential a high-rise condominium could bring.

As the U. S. Conference of Mayors advocated, some national economic incentives were crucial to the blossoming of the preservation movement. And, indeed, the Tax Reform Act of 1976 suddenly made historic preservation and adaptive use as economically feasible as new construction. Tax incentives spurred the re-use of historical buildings, often breathing new life into decaying neighborhoods. Such activity peaked in 1985 when 3,117 historic rehabilitation projects generated some \$24 billion in private investment. In cities

*Nora Richter Greer is a free-lance writer in Washington, D. C. She was the editor of the National Trust for Historic Preservation's Forum and is a former editor of Architecture magazine.*

across the country new life flourished in classical shells—Boston's Faneuil Hall, St. Louis's Union Station, and Chicago's Navy Pier, for instance. Small-town main streets were polished and rejuvenated.

The rehab boom, however, strained federal coffers, and the Tax Reform Act of 1986 diluted the tax credits. The imposition of passive-loss restrictions strangled the market. By 1989 only 994 projects sought tax credits, representing \$925 million of private investment.

## **A silver lining in recession's cloud**

Now the recession and banking and real-estate blues have already slowed preservation activity. Ironically, in the long run this hiatus may prove favorable for preservation. Nellie Longworth, executive director of Preservation Action, a lobbying group in Washington, D. C., sees the economic turndown as a way of "buying time"—getting protective ordinances in place while demolition pressures are lessened. She points to the establishment of the Lower Downtown Historic District in Denver in the late 1970s when the city was experiencing the lagging economy of the oil bust. At the same time, it forces preservationists to consider other avenues of finance: private market syndication, a tool used in the early tax-credit boom, is again considered feasible, and the transfer of development rights continues to grow. Many owners are now thinking renovation, figuring they can get good, usable space for a lot less than by going to new construction. F. W. Dodge confirms this by estimating that the ratio of alteration work to total construction for nonresidential and multifamily residential construction, already up to 17.9 percent in 1990 from 16.4 percent in 1989, will rise some more in 1991, to 19 percent.

In the 1970s the ascendancy of Postmodernism, although considered by pure preservationists as shallow and oversimplified, was generally applauded as having produced, in the words of George Notter, leader in preservation architecture, "a new emphasis on the context of cities and a respect for older architecture." Notter adds: "This will continue to grow in the U. S., as it has in other countries and cultures, because it contributes to the comfort people feel with an earlier age, as they are drawn back into previously abandoned parts of cities that now surge with renewed life." Notter goes a step further: "Those who believe that preservation and adaptive use are waning are wrong," he says. "The once arrogant disregard for context on our city streets is no longer acceptable." He looks to the master plans of San Francisco, Philadelphia, Boston, and New York—which "recognize people's need and affection for pedestrian access and comfort, view corridors, light and shade"—as holding clues to the future.

As preservation activity has increased, so has litigation. The most volatile subject is takings, which centers on the right of a public or



## *Economic recession emerges as a spur to the preservation movement, now in its 25th year.*

ity to limit the developmental potential of private property. In the early 1970s, Penn Central's plan to build a 55-story tower above Grand Central Terminal in New York City was deemed inappropriate by the New York City Landmarks Commission. In 1978, the U. S. Supreme Court upheld the basic constitutionality of the city's landmark law. The Court ruled, "There is no formula for what constitutes a taking within the meaning of the just compensation clause [of the Constitution's Fifth Amendment]," reports Jerold S. Kayden, attorney and Constitutional scholar. "The Court's decision meant that no property owner is entitled to the highest and best use of his or her property. The just compensation clause only guarantees the opportunity to have an economically viable use."

In the lower courts, landmark ordinances are continually challenged. Perhaps the most celebrated recent decision involves St. Bartholomew's Church in New York City. Designed by Bertram Goodhue, the church opened in 1919 and a community house, designed by Goodhue's successor firm, opened in 1928. In 1983, St. Bart's requested the New York City Landmarks Commission's approval to demolish the community house on the grounds of financial hardship, and replace it with a 59-story office building. The request was denied by federal district court last year.

Across the country, historic churches in urban areas are reported to be extremely vulnerable to demolition, as economic conditions and demographic changes cause parishes to merge and properties to be sold. In fact, so widespread is the problem that a new national organization, Partners for Sacred Places, was founded in 1990 to advance the stewardship and preservation of religious properties.

### **movement toward diversity**

Partners for Sacred Places represents the recent trend in preservation advocacy—that of diversity and specialization. Some find this pluralism unsettling and potentially damaging. Other advocates seize the opportunity to promote preservation goals and objectives wherever they may exist. Among the activities are:

**Growth management.** From Florida to Massachusetts to Oregon, cities and states are guiding growth to preserve certain environmental and urban amenities. Florida's population, for example, is expected to increase at an even more furious rate in the 1990s than during the past decade. In a state where planning has been almost a taboo, all cities and counties must now develop comprehensive growth plans. On Massachusetts' Nantucket Island the city created a land-bank program to purchase rapidly disappearing open space. In addition to its value in protecting sensitive natural resources, public and private land-saving action can protect the integrity of individual historic sites and districts," maintains William R. Klein,

director of the Nantucket Planning and Economic Development Commission. San Francisco's city plan, adopted in 1985, has "shifted the burden of proof from preservation advocates, who in the past have had to conclusively document that historic buildings are worthy of protection instead of new development, to developers of new buildings, who now need to show that their projects will fit into the context of historical structures and will contribute to the beauty of the city as a whole," says H. Grant Dehart, an architect involved in the development of the city's downtown plan.

- **Rural preservation.** "It is often the setting that makes a historic building special, and the setting may be vast in rural areas," suggests Samuel N. Stokes, a consultant specializing in land conservation and historic preservation. "The biggest challenge is to offer significantly more protection to those historic, natural, and agricultural settings through statewide planning and regulations." Currently, the National Trust for Historic Preservation and the U. S. Department of Agriculture are examining if and how public policies work against historic preservation in rural areas. Meanwhile, the preservation of covered bridges and historic barns has brought pride back to rural communities.

- **Civil War sites.** On the East Coast Civil War enthusiasts battle to keep private developers off historic lands.

- **Maritime.** Activities to save historic ships have broadened to include historic seaports.

- **Scenic roads.** Groups such as Scenic Byways, Preservation Action, and others advocate Congressional approval of a new federal highway trust fund and a reauthorization of the Federal Highway Commission with more funding for preserving scenic byways.

- **Education.** Not only have advanced-degree programs for preservationists flourished, but elementary and secondary schools have embraced heritage-education programs.

- **Tourism.** Supporting tourism in the name of historic preservation is a two-edged sword. A growing interest in "heritage tourism" has led to the preservation of important landmarks and communities. The earliest, and perhaps still most significant, development is Colonial Williamsburg in Virginia. The celebration next year of Christopher Columbus's landing in America will likely "solidify the relationship between the tourism industry and the preservation community," in the words of Cheryl Hargrove, director of the National Trust for Historic Preservation's tourism initiative. On the other hand, "Many in historic towns worry that preservation is becoming the lackey of tourism," argues Everett Ellin, chairman of the Historic Design Review Board in Santa Fe. He maintains that the "tangible evidence of our past is in jeopardy when overused." The danger, Ellin says, is the creation of "a tinselly preserved environment dictated by nostalgia."

- **Cultural diversity.** In the past, historic preservation has often been

*Continued on page 179*



# Back in Business





*An aging Boston dowager  
reclaims center stage through a  
thoughtful combination of  
restoration and redesign.*

*The Berkeley Building  
Boston, Massachusetts  
Notter Finegold + Alexander,  
Restoration Architect*





**W**hen the Berkeley Building opened in Boston in 1905, it caused a sensation. Designed by MIT professor and transplanted Parisian C. D. Despradelle, the Beaux Arts structure seemed an altogether un-Bostonian concoction—an overexuberant Gallic departure from the city's traditional brick, granite, and sandstone. Despradelle, whose initials stood for Constant Desire, had incorporated daringly large panes of glass into the six-story steel-framed office building, and set them within a frothy terra-cotta framework encrusted with cornucopia, sea creatures, and the heads of goddesses. Over the years the building became a local favorite, serving since the 1940s as headquarters for the city's wholesale interior-furnishings trade. It enjoys local and national landmark status. And recently this lively building has been carefully restored and renovated by the Boston-based firm Notter Finegold + Alexander.

Impetus for the \$11-million project came in the mid-1980s, when the building's tenants left en masse for newer quarters. Selected by owner A. W. Perry for their expertise in adaptive use, NF+A found the Berkeley sound, but shabby. Although carefully maintained, the terra cotta was dingy with decades of soot and bore the scars of careless repairs. (Off-white tiles had been patched, for instance, with brown mastic.) Inside, 40 years of decorators' showrooms had left the building literally layered with recent design history. Thus the project split into two major components: the restoration of the building's exterior and an interpretive redesign of its interior.

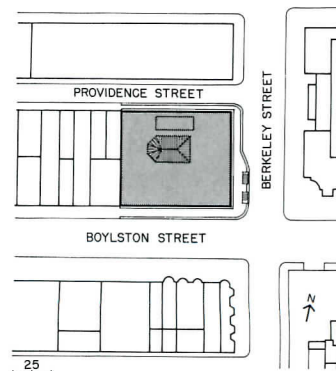
Under the supervision of Preservation Technology Associates, the building's terra cotta was cleaned and repaired as gently as possible. Tiles were scrubbed with acid-based detergent—no high-pressure steam was used—and cracks were repaired with stone-patching mortar. Deteriorated or missing terra cotta was replaced—at the upper floors with cast fiberglass and at the first two levels with the real thing. The architects' philosophy throughout was to favor the imperfect old over the spic-and-span new. "Wherever we could, we left the existing in place, even if it was blemished," says partner-in-charge James Alexander. "It's part of the age and story of the building, and our intent was not to make it look brand-new."

What *is* brand-new, and spectacularly so, is the eight-foot-high balustrade that crowns the building. Constructed of cast fiberglass reinforced with steel, it is a near-exact copy of the terra-cotta original, which had been deemed unstable and removed in the late 1930s. "The building looked as if it had been given a bad haircut," says Alexander. The restoration here was complicated by the lack of documentation, as a search for original construction drawings had been fruitless. Fortunately, while the Berkeley's building manager was clearing out the basement, he discovered Despradelle's 1906 rendering of the central bay—a fine, delicately colored ink-and-wash drawing, about five feet tall and two feet wide, executed on linen. Along with full-size enlargements of old photographs, it proved invaluable in the design of the new balustrade.

Despradelle's drawing also inspired the re-creation of the Berkeley's big, 8.5-foot-tall entrance doors, with their swirls of polished bronze over glass. Of the 11 original storefronts, whose graceful detailing hints at Art Nouveau, only two survived. The rest, which had succumbed to various banal remodelings, have been skillfully rebuilt. Even the sitework, usually determined by the city, has been made consistent in spirit and palette with the refurbished building. The architects convinced the Boston Redevelopment Authority to forego its standard Boylston Street sidewalk—red brick with bands of concrete—in favor of concrete edged with gray granite. And around the



*With its large expanses of glass set into thin bands of off-white terra cotta, the Berkeley created quite a stir when it opened in 1905 (top photo shows a 1908 postcard view). During the 1930s the structure's terra-cotta roof balustrade was removed, and following World War II most of its wood storefronts altered (above). Using old photographs and a 1906 watercolor by architect C. D. Despradelle, Notter Finegold + Alexander reproduced the 8-foot-high (12-foot-high above the entrance) balustrade in steel-reinforced cast fiberglass and restored 9 of 11 original storefronts (opposite).*



© Steve Rosenthal photos





THE BERKELEY

#narragansett

The Boston

FLORENCE







THE B

FLORSHEIM

SALE  
49.95 79.95  
NEW ARRIVALS





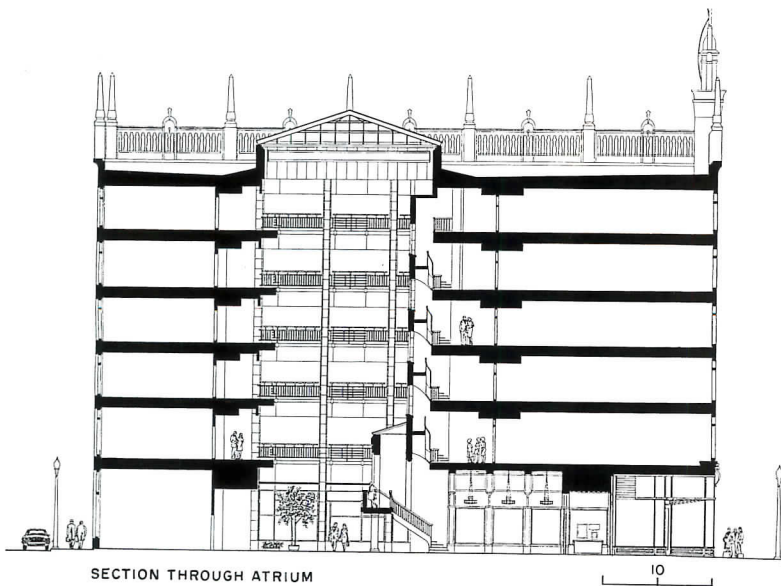
EY

King's  
JEWELER  
JEWELER





*The architects resolved the Berkeley's inefficient U-shaped plan by walling in a light well to create a six-story atrium, 40- by 50-feet in plan, around which all circulation is organized (top right). The original Carrara marble staircase, with its painted steel balusters and Honduran mahogany hand-rail, is the one preserved interior element (top left and opposite). Art Nouveau-influenced storefronts inspired the new lobby (bottom photo left), which functions as a transition between the building's historic facade and its new atrium. The lobby's mahogany trim and decorative brackets and a frieze of William Morris wallpaper are new, while two of the three bronze-and-glass pendant lamps were salvaged from the original lobby.*









building double Washington lampposts are painted not standard municipal black, but sea-green to match the wood shopfronts.

The ebullience of the facade never extended to the interior, conceived from the start as speculative commercial space. For that reason, and because little of the interior detail remained, the architects have worked with relative freedom within.

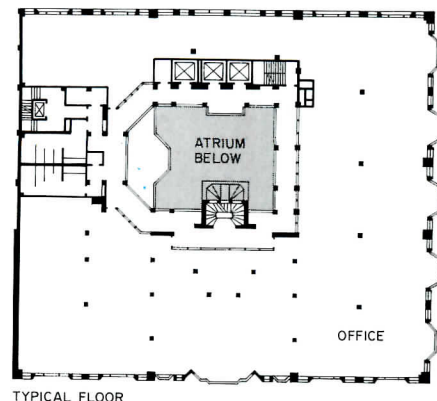
Judged by today's standards, the Berkeley was awkward and inefficient. The 109,000-square-foot building was originally U-shaped in plan, with a dreary glazed-brick light well opening onto Providence Street. On office floors a double-loaded corridor devoured valuable space, as did three elevator shafts located just to the north of the original stairwell. NF+A has neatly solved these problems by introducing a major new space. The light well has been walled-in to create an 80-foot-high skylit atrium, around which the building's interiors are organized. The results are streamlined circulation, new code-complying firestairs, more rentable space, and a pleasant view for inside offices. Offices have been left as uncluttered as up-to-date building systems allow. (The use of heat pumps, for instance, minimized ductwork and allowed for greater ceiling heights.)

The atrium has been designed and detailed as a contemporary space, with finishes that complement their historical surroundings. Columns are sheathed in two-foot-square Italian tile, selected for its affinity with terra-cotta. New elevator cabs have been given a touch of old-fangled elegance: on the rear wall of each is a bronze tablet with an etching of Despradelle's drawing. The architects designed oversized sconces using products from historical lighting catalogs. Balustrades ringing the atrium are made of the same materials—painted steel for the balusters, Honduran mahogany for the hand-rail—used in the original stairwell.

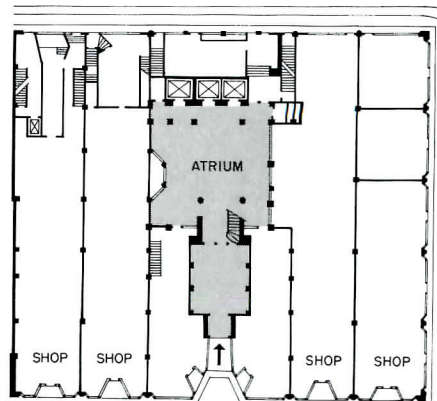
The one interior element that was preserved is an elegant Carrara marble stairwell, which needed little work beyond rebuilding a piece of marble wainscoting. A solid marble niche at the first landing has been replaced with a theatrical little balcony, which serves as a visual connection between old and new. The stair tower's stepped openings (part of the light well's original exterior fenestration) serve, Alexander says, "to give relief and focus to the atrium."

The architects have treated the lobby as an extension of the exterior, and a transition between historical skin and new core. Here the atmosphere is turn-of-the-century. Successful period-inspired details include decorative mahogany brackets, a frieze of William Morris wallpaper, and restored bronze-and-glass pendant lamps.

The Berkeley Building's restoration underscores the progress the preservation movement has made in Boston in two decades. In 1970 Notter Finegold Associates worked on the renovation of Boston's Old City Hall, the first adaptive use of a municipal building in the United States. In that project, economics predominated over history: to claim as much marketable space as possible, the building's historic interior was gutted. The Berkeley saw a thoroughly different mentality. The very existence of the nonutilitarian, \$250,000 balustrade is a case in point. Although the project received a preservation tax credit, the owners were not required to replace what was missing. That they chose to do so is due in part to the influence of the architects and various reviewing agencies, including the Boston Redevelopment Authority and the Boston Landmarks Commission. But it is also explained by the widespread acceptance of the idea that a building's value is enhanced by its history. *Nancy Levinson*



TYPICAL FLOOR



FIRST FLOOR

10

*CAD-generated shop drawings were used to re-create bronze-and-glass main entrance doors (opposite), which were fabricated in Japan.*

**Credits**

*The Berkeley Building  
Boston, Massachusetts*

**Owner:** *A. W. Perry, Inc.*

**Architect:** *Notter Finegold + Alexander, Inc.—James Alexander, principal-in-charge; James Monteverde, project manager; Peter Bullis, administrator; Roxanne Horvath, Silvia Acosta, Peter Patsouris, Scott Payette, project team*

**Engineers:** *Boston Building Consultants (structural); Environmental Design Engineers (mechanical); Allen Demurjian Major & Nitsch (civil); Goodall Shapiro Associates (electrical)*

**Consultants:** *Preservation Technology Associates (materials)—Dr. Judith Selwyn; Kimberly Shilland (research); JGL Interiors (interior design)*

**General Contractor:** *George B. H. Macomber Company*





420

THE  
ROUSSEAU  
SHOE



# Town and Gown

© Norman McGrath



*Casa Italiana Zerilli-Marimò  
New York University  
New York City  
Helpern Architects*



*Two projects for New York University by Helpern Architects turn 19th-century townhouses into homes for academic departments.*

© Paul Warchol



*Onassis Center  
for Hellenic Studies  
New York University  
New York City  
Helpern Architects*



Like the two cultures to which they are dedicated, the Onassis Center for Hellenic Studies and the Casa Italiana Zerilli-Marimò at New York University share a common heritage that at varying times seems either distant or immediate. Both projects are 19th-century town houses converted into study centers for university departments. Both conversions were designed by Helpern Architects and sit just two blocks from each other in Greenwich Village. But the design strategies used at each building differ greatly, one emphasizing restoration and the other sympathetic adaptation.

Because the building housing the Onassis Center had changed little since the late 19th century, the architects decided to minimize intrusions and focus on preserving period details such as stained-glass windows, plaster ornament, and wood molding. The building acquired with funds from the Baroness Mariuccia Zerilli-Marimò for the Casa Italiana, however, had been essentially gutted in 1979 by a private developer bent on converting it to condominiums. In terms of interiors, there was little to restore by the time NYU entered the picture. "The Onassis Center involved lots of small gestures," explains David Helpern, "while the Casa demanded a few grand ones."

Although a fire during restoration destroyed much of the Onassis Center's upper two floors, the architects were able to return the building to a semblance of its original state, thanks in part to the extensive photographic record and full set of measured drawings Helpern Architects had established at the start of the job. Most important, they maintained the residential quality of the building, while adapting it to an entirely new purpose. At the Casa Italiana, a new two-story atrium and a raised backyard terrace create an updated identity for the building without severing its ties to the past.

Certain preservation issues were addressed on both projects: expanding and adapting old buildings for new uses, making facilities accessible to the handicapped, restoring (and sometimes re-creating) architectural detailing, and shaping new personalities for buildings without offending the architectural sensibilities of the past. Inserting modern mechanical systems into historic fabrics also provided quite a challenge, forcing the architects to snake conduits inside old walls and ingeniously thread air conditioning and heating ducts between joists and 4-inch wall studs. Once that task was accomplished, the architects hid modern air compressors discreetly out of sight. "It's a matter of understanding your buildings," says Helpern.

Finally, both projects involved dual clients. For the Hellenic Studies Center, Helpern was hired by the Alexander S. Onassis Foundation "with the university looking over our shoulder," while for the Casa Italiana, the architects were hired by the university "with the Baroness looking over our shoulder." *Clifford A. Pearson*

*An Anglo-Italianate brownstone built in 1851, the building now housing the Casa Italiana offered Helpern Architects a clean slate in terms of interiors, thanks to a gut renovation by a private developer in 1979. As a result, the architects' preservation efforts focused on the front facade (page 100), where they restored segmental arched windows and the building's idiosyncratic eyebrow cornices. Helpern also re-created (in molded fiberglass) the heavy roof cornice, using old photographs and the existing lower cornices as models. To tie the building to its two-bay sister structure next door, the architects extended a wrought-iron balcony across the Casa's facade. Making the building accessible to the handicapped required several insertions: a rail lift on the front facade, an interior elevator, and ramps bridging partial floor-level changes inherited from the 1979 remodeling. Inside the building Helpern carved out a two-story atrium (top opposite) that serves as the main orienting space. Four new columns work with two original structural ones and new Tuscan-inspired capitals to give the lobby a Mediterranean character. To create space for a 100-seat auditorium (bottom opposite), the architect raised the level of the rear garden and tucked the new facility underneath. A new terrace sits above the auditorium. C. A. P.*

#### **Credits**

*Casa Italiana Zerilli-Marimò  
New York City*

**Owner:** *New York University*

**Architect:** *Helpern Architects—David Paul Helpern, principal-in-charge; Gregg DeAngelis, project architect; Peter Wasem, Ruey-Bin Shyu, Raymond Cook, project team*

**Engineers:** *Robert Rosenwasser (structural); Cosentini Associates (mechanical/electrical)*

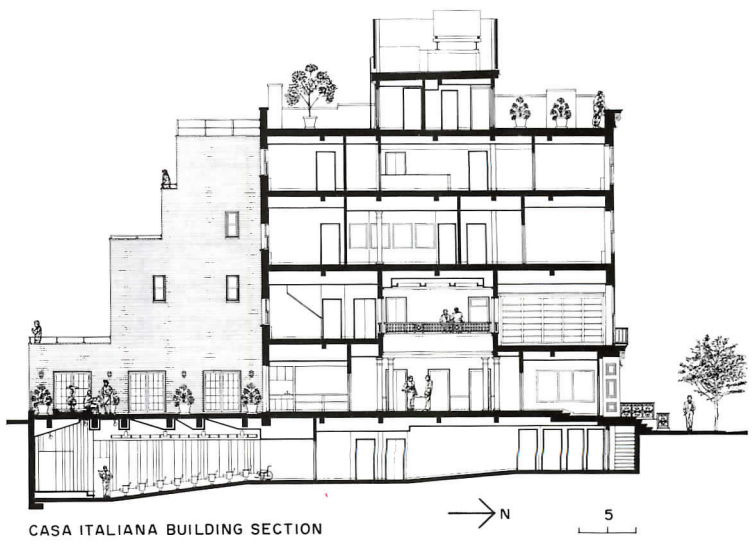
**Consultants:** *Klepper Marsha King (acoustics)*

**General Contractor:** *The Steg Group*





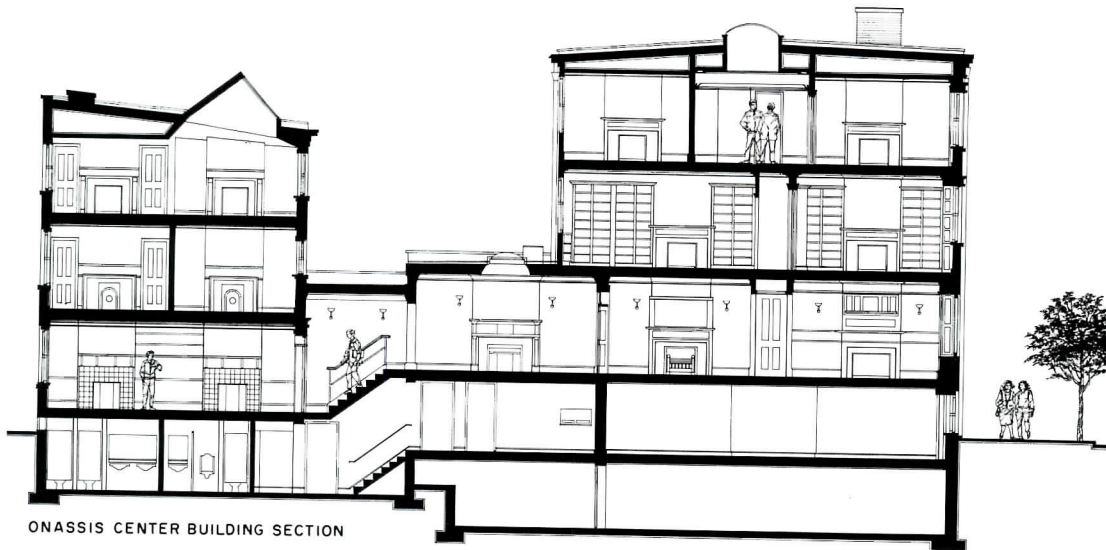
Norman McGrath, photos this page



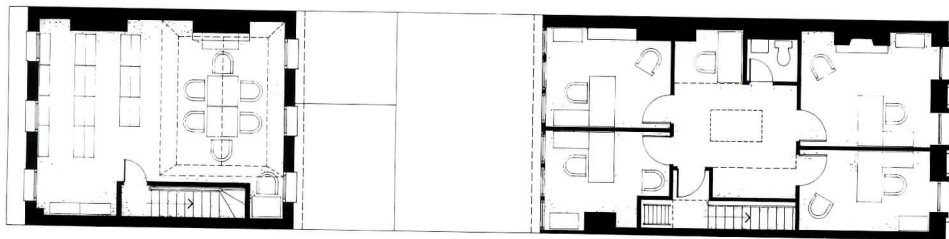
CASA ITALIANA BUILDING SECTION



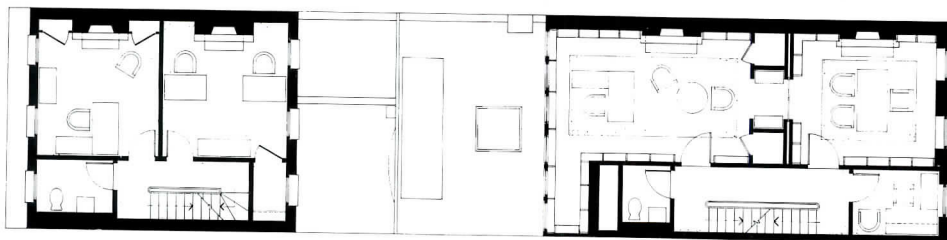




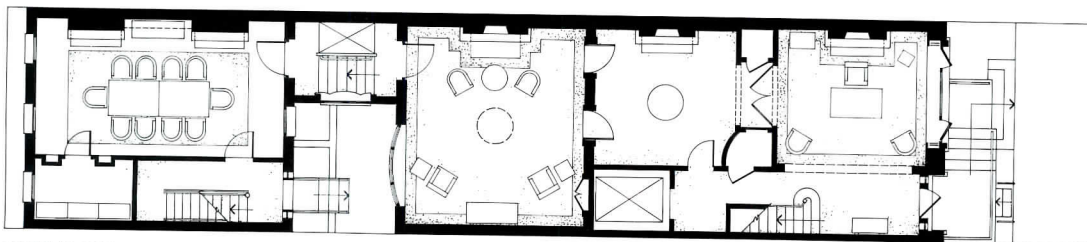
ONASSIS CENTER BUILDING SECTION



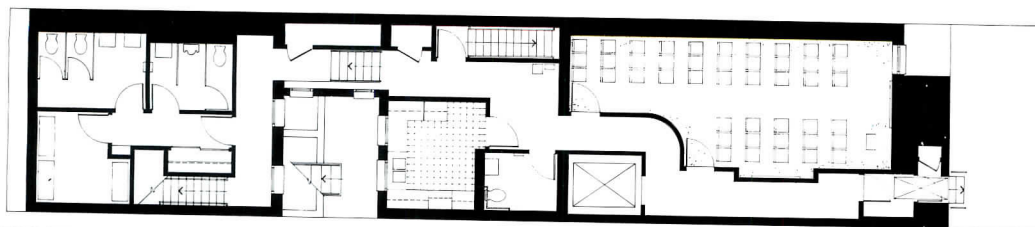
THIRD FLOOR



SECOND FLOOR



FIRST FLOOR



BASEMENT FLOOR

Once the home of artist Maitland Armstrong, the Onassis Center is actually a pair of structures on one narrow lot: an 1830s Greek Revival townhouse and an 1850s house in the rear. When Armstrong bought the property in 1880, he had his friend Stanford White tie the two buildings together. A first-floor parlor then became home to the Tile Club, a group of artists in Armstrong's circle. The first task in turning the property into the Onassis Center was restoring the street facade (page 101); this job involved repairing the dentiled roof cornice, the wrought-iron railing, and the leaded-glass window designed by Armstrong himself. For handicapped access, Helpern installed a wheelchair lift under the front stoop and a rail lift inside the house. Throughout the job, the architects focused on preservation rather than adaptation. For example, the layout of the first floor was retained (photo 1 and 3 opposite), while details such as plaster molding, cornices, and stained glass were repaired. A fire during renovation destroyed much of the two upper floors of the main house but gave the architects a freer hand in designing offices. The best spaces here are the director's suite, where Helpern designed new book cases (photo 4), and the study area (photo 4). A 50-seat lecture room was added to the basement. C. A. J.

#### Credits

The Onassis Center for Hellenic Studies  
New York City

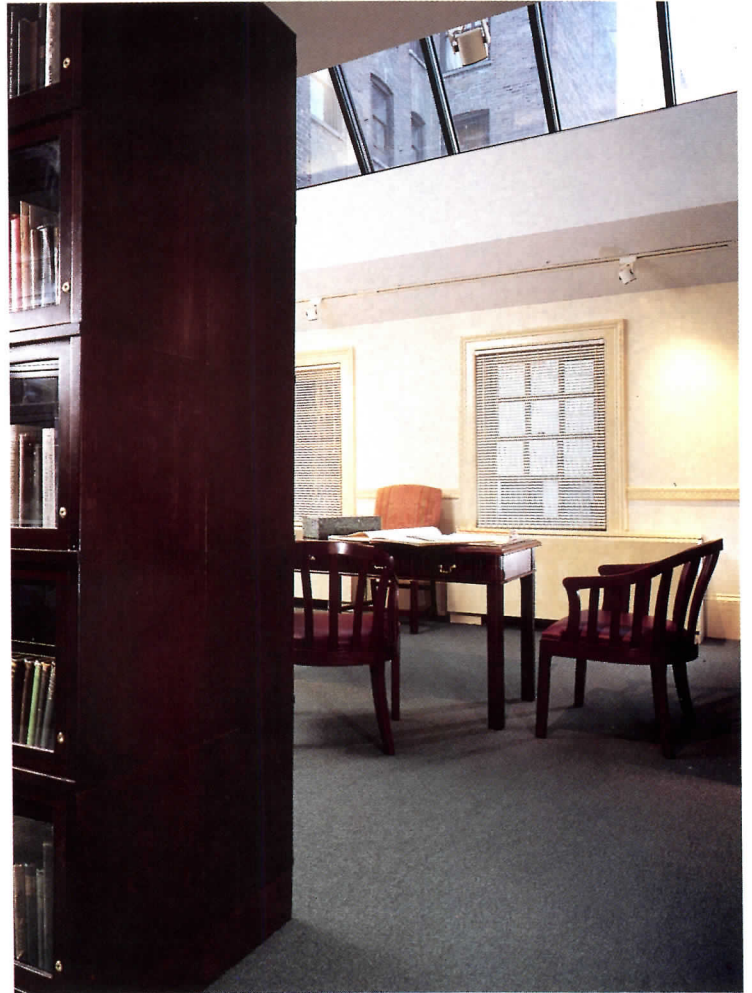
**Owner:** Alexander Onassis Public Benefit Foundation

**Architect:** Helpern Architects—David Paul Helpern, principal-in-charge, George Ververis, Ira Mitchneck, project architects

**Engineers:** Cosentini Associates (mechanical/electrical); Paul P. Valerio Associates (structural)

**General Contractor:** Herbert Construction





© Paul Warchol, photos this page

2



4



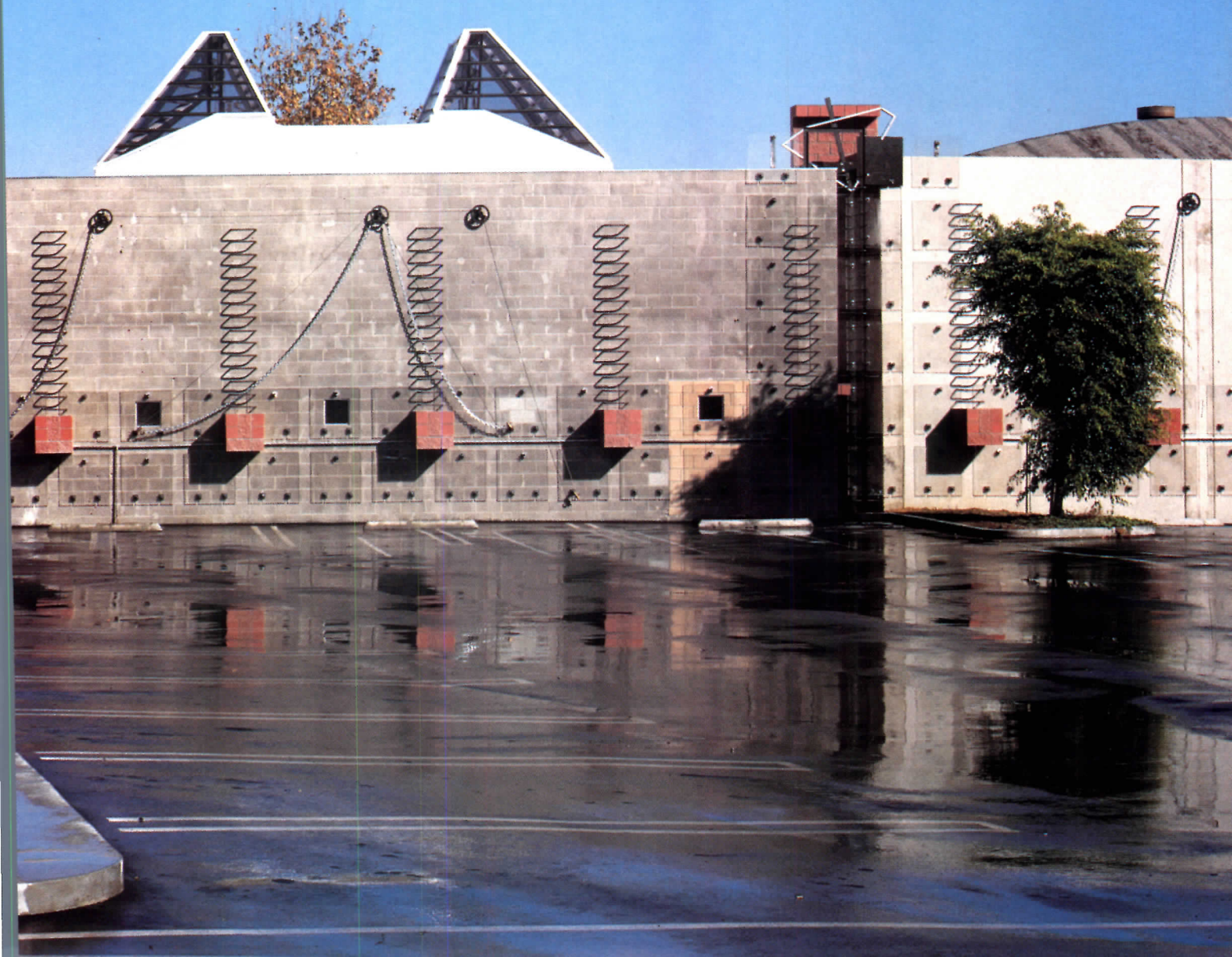
# Up Against the Wall



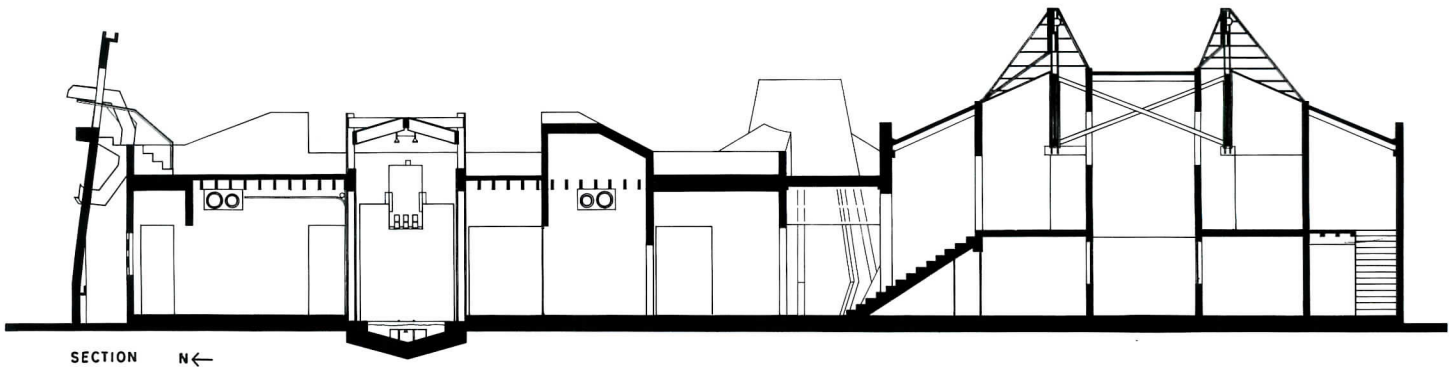


*Renovation of this Culver City  
warehouse into offices for a public  
relations firm is adaptive use,  
Eric Owen Moss style.*

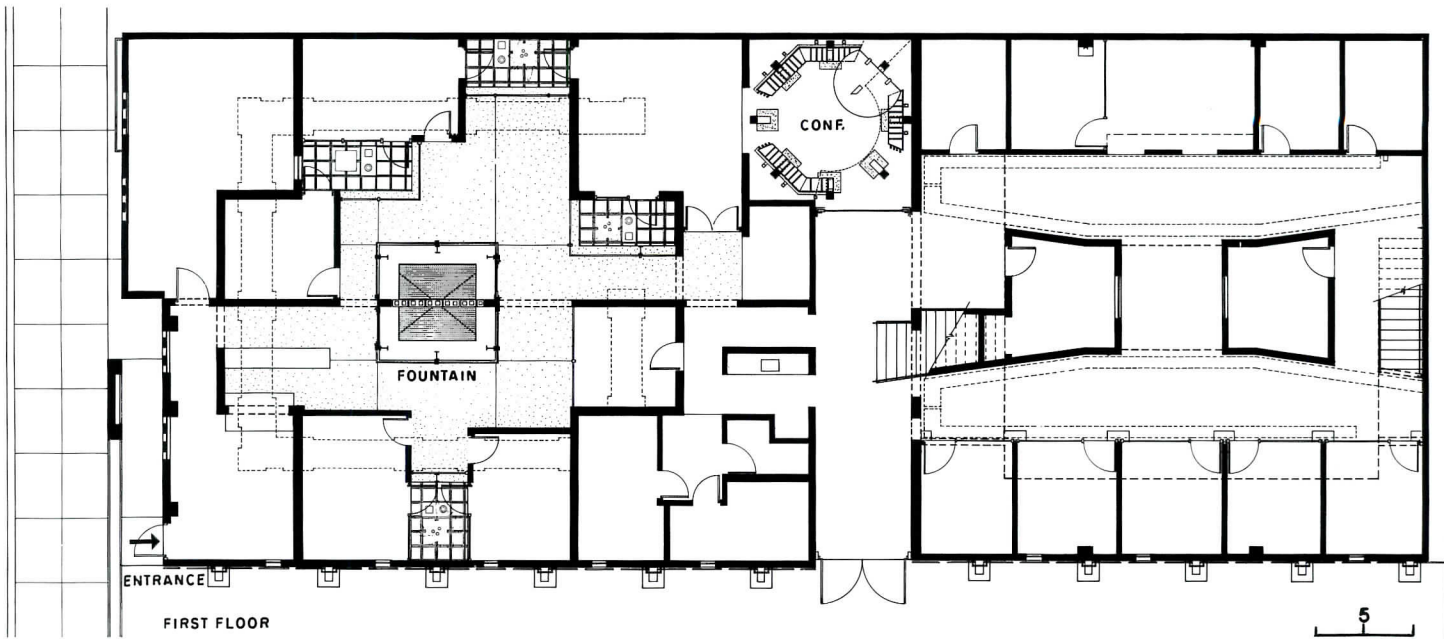
*Gary Group  
Culver City, California  
Eric Owen Moss, Architect*



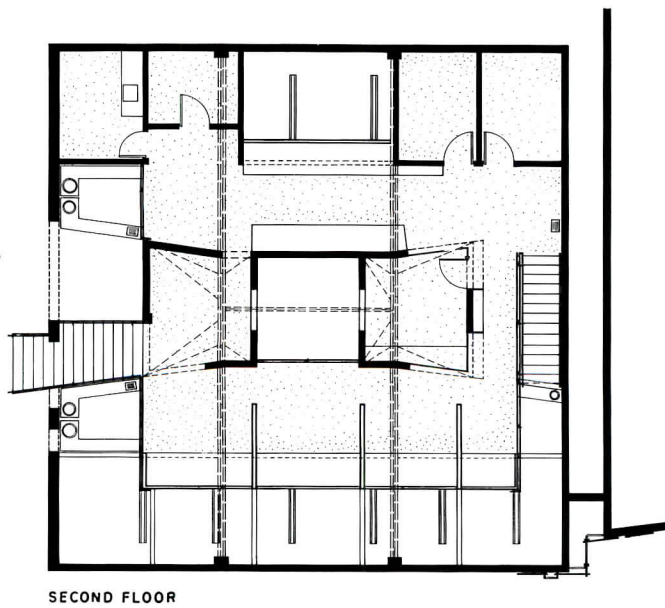
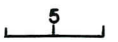




SECTION N ←



FIRST FLOOR



SECOND FLOOR



ratuitous is what some might call the heavy metal paraphernalia that make the wall of a Culver City office building look like a giant computer chip—an ironic billboard of 20th-century technology. But the chains draped among concrete block protrusions (actually planters), rebar ladders (eventually trellises), and acrylic panels with assorted metal fasteners (in some cases, windows) aren't merely the artistic self-indulgences of Eric Owen Moss. To be sure, Moss arranged them with an eye toward the artful rather than the outwardly practical—"Just because this stuff isn't operational and doesn't make the wall go up and down, doesn't mean it's without erogenous appeal," he says. But this collage of modified catalog parts is rooted in function, economics, and construction techniques, all those supposedly mundane matters that a reputed architectural rebel like Moss is not expected to address.

In fact, Moss's adaptive-use renovation of a 1940s steel foundry into offices for the Gary Group, a public-relations firm, is made up of prosaic materials; it's the overall effect that's unusual. Frederick Norton Smith, owner of the building and two neighboring structures (including Moss's own studio in Lindblade Tower) that make up a motley complex grouped around a communal parking lot (site plan page 110), was asked by city officials to pretty up the derelict masonry wall running parallel to Ince Boulevard, a local thoroughfare. By the time Smith was ready to begin construction on the project, he had secured Dick Gary as a tenant, and his architect, Moss, had received the commission for Gary's interior.

Although the building's prominence along Ince had spurred initial interest in the project, its front is actually along an alley perpendicular to the boulevard, a mixed signal Moss incorporated into his design. By recessing the main entrance behind a new leaning front facade of rust-colored block, the architect set up a strong contrast between a nearly flat false-front and his heavily encrusted west facade (page 110). "The building is seen more in profile than straight on," he explains. As if to bind the two sides together, a white steel grid straddles the corner and becomes a clock facing the parking lot.

The front wall is a structural tour de force that flaunts its own construction. Vertical soldier-course block layered on stacked bond block is punctuated by concrete infill where the C-shaped steel ribs that support the entire structure poke through the facade. The adjacent low-slung bunker has conference-room windows that are boarded up to control light and privacy. The wood bars, like those Moss designed for Lindblade Tower some years ago, are now unnecessary safety precautions in a gentrified neighborhood.

Inside, offices are clustered around a communal wading pool that forms beneath a marble fountain (page 113). Small interior bamboo gardens are calming antidotes to Moss's more assertive meeting room—a fusion of geometric shapes rendered in steel, aluminum, and wood (page 112). Additional offices line the back of the building, and open studios are on the second floor beneath the vaulted roof of two existing bowstring trusses, now topped by skylights.

Even though all that remains of the original structure is the long wall (updated with gray block patches and light-brown block infill over the employee entrance) and the two trusses, Moss considers the existing shell essential to his design. "You never see the original building on its own. You always see it amended or altered," says Moss of the final result. "That doesn't mean the original building is useless. If it hadn't been there, the project never would have turned out like this." *Karen D. Stein*

#### **Viewpoint: By Aaron Betsky.**

*The architecture of The Gary Group building is too much. It is surplus construction, a whole cartload of decoration. Unlike the frivolous paste-on pastiches of Postmodernism, however, this is decoration that has embedded itself in the structure, function, and experience of the building to such a degree that it can no longer be separated out. The fanciful additions to the parking-lot wall, the baroque conference room baldachino, and the array of black-bamboo-filled courtyards in themselves form a clear parti, allow light to enter into this deep industrial space and, most of all, create a sort of three-dimensional treasure map for an amorphous cityscape of warehouses.*

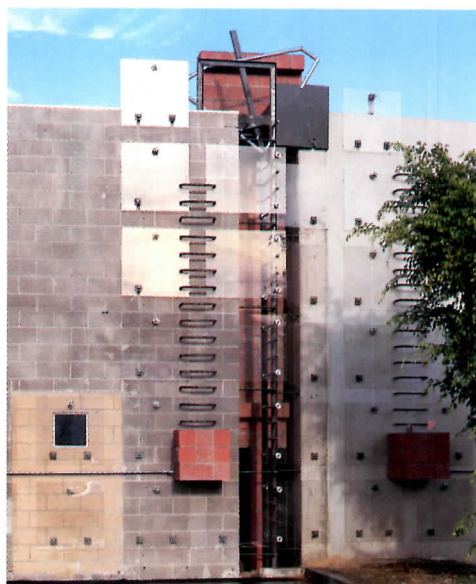
*Eric Moss describes his architecture as a series of stories and episodes. While he compares his work to that of James Joyce or Cervantes, calling it "picaresque" and "a modern version of the age-old Ulysses saga," what sets this apart from the current confusion of literature with architecture is that all the "stories" here are told through the stones of buildings. Meaning is not tacked on as a single grand facade for some theoretician to discover. Rather, there are the "stories" of daily use shown physically through over-articulated details and exaggerated scale and light.*

*These stories merge into several narratives. First is the narrative of how buildings are put together: the obsessive revelation of joints and the glorification of the most humble supporting members. Next is the narrative of how this particular building was made: concrete masonry units which form the fabric of the facade, and reinforcement of the original structural grid with new, slightly skewed members. The third shows in the ability of architecture to insert into these layers of masonry construction the clean, highly-machined Modernist technology of glass and steel. Architecture here has re-expressed and rebuilt an otherwise conventional building. Finally, a surrealist catalog drawn from current technology permeates this design, from the use of standardized plumbing hardware and rebars for ornamental but functional details such as handrails, to the loop of the air-handling equipment that ties all these components together.*

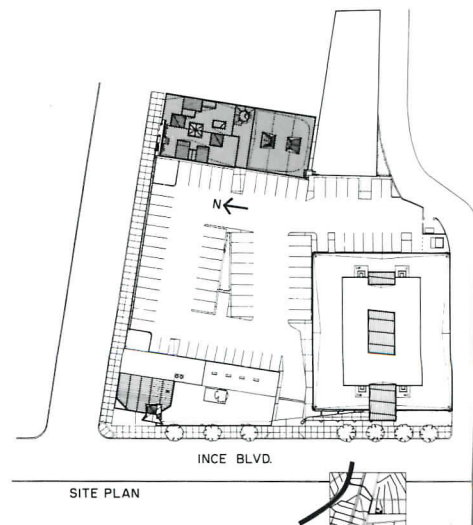
*The parking-lot wall becomes the key to the story, a collection of items of dead tech, i.e., industrial leftovers stripped of function, that have become embedded in the wall, while the grid of windows and planters adds rhythm, and the tops of the skylights create a skyline. Moss admits that this wall is covered with elements that have no need to be there—except that the city insisted that "something be done" with this forlorn wall. What he has done is to make something of the site's materials and textures. Those skylights allow the interior to be effectively used; the walls respond to the concerns of the city. Even the fanciful entry tower serves as a much-needed sign in this horizontal landscape.*

*In The Gary Group building, architecture is no longer used purely to solve function, or to preserve an urban fabric, but rather to reinterpret the existing conditions of construction. This frees Moss to engage in some far-fetched hypotheses and experimental essays, such as superimposing the octagon, circle, square and other geometries (to say nothing of materials) that explode out from the bare walls of the conference room, or the combination of showerheads and marble to make a ceremonial fountain at the heart of this miniaturized courtyard complex. Those elements are a bit much, but at least they rediscover the industrial vernacular of the area and reveal how a building comes together.*



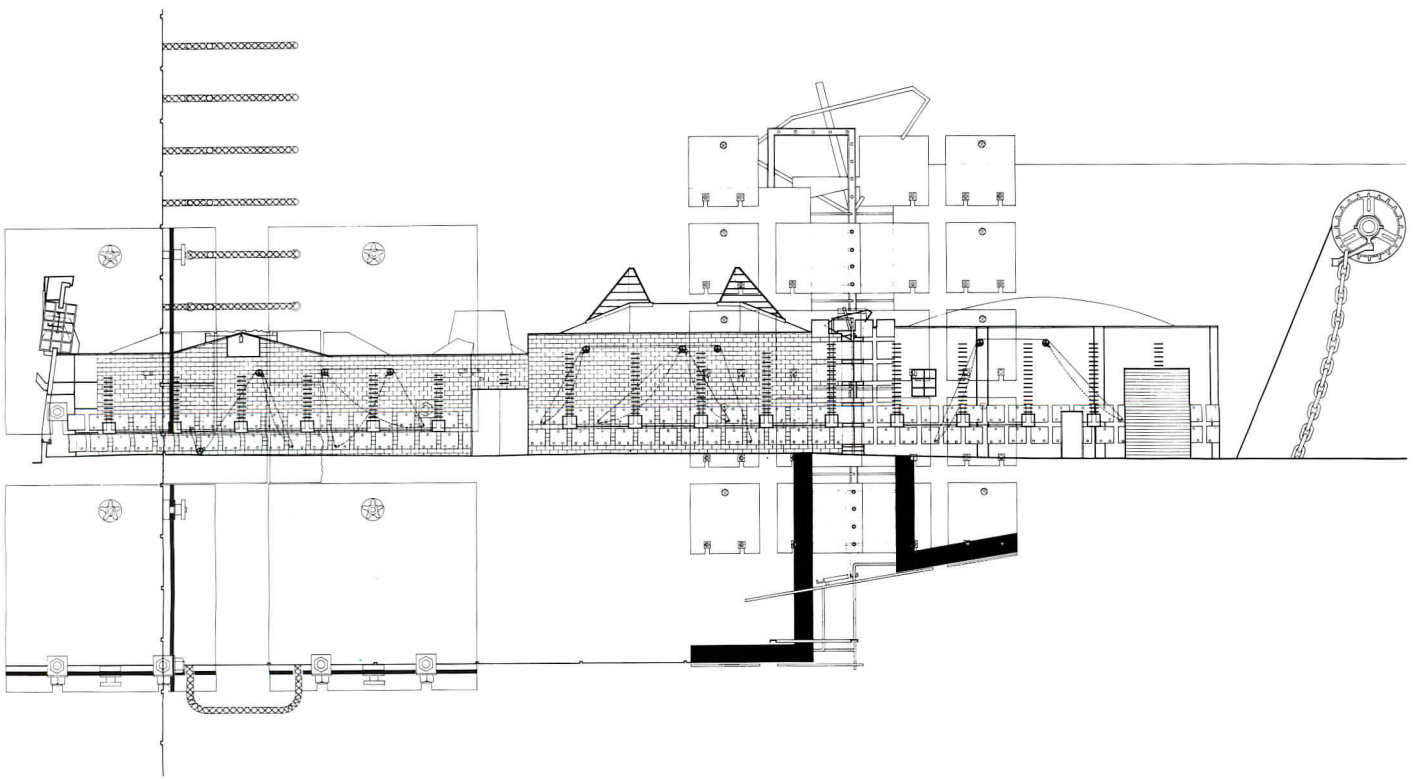
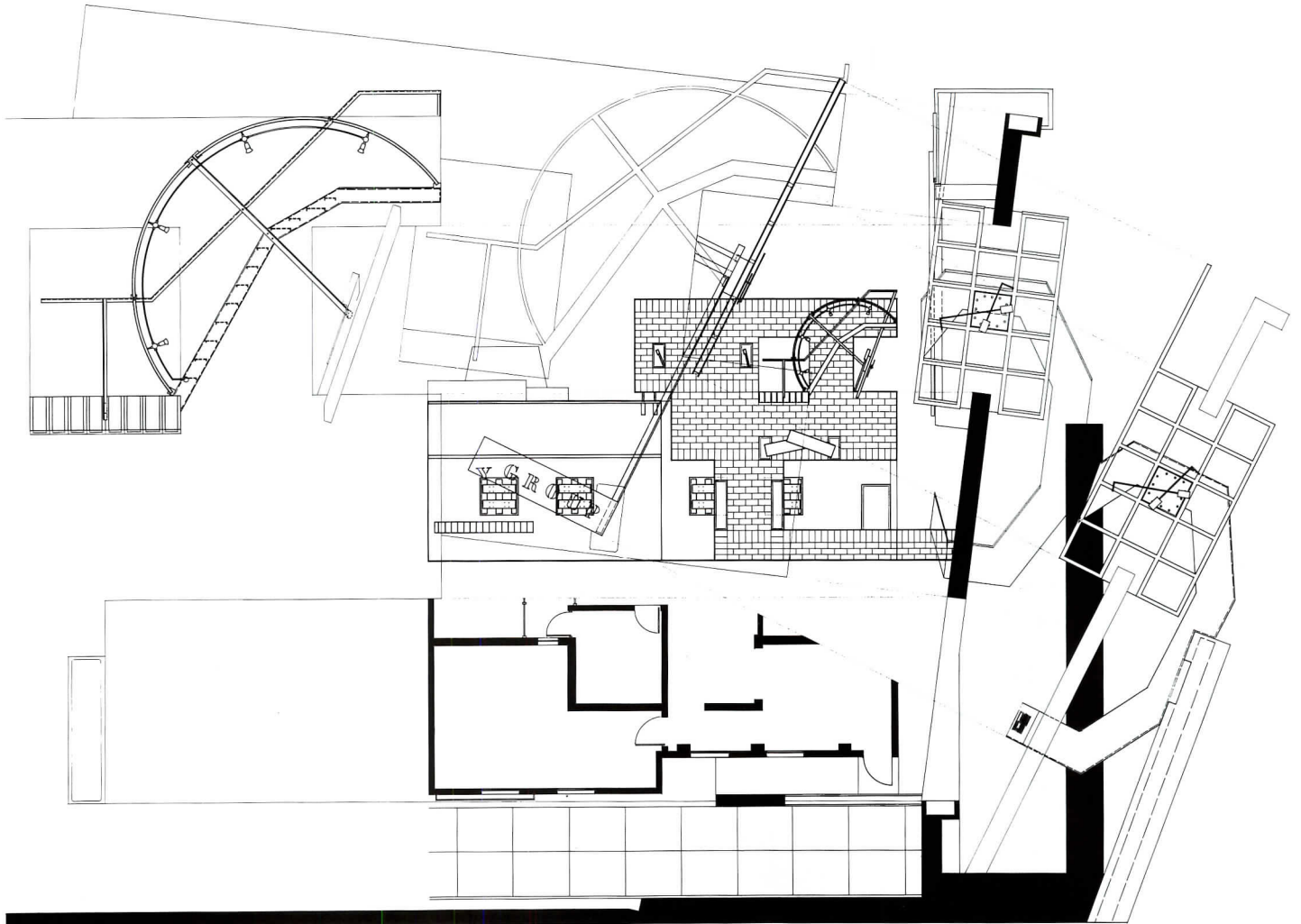


The leaning front wall of the Gary Group is built of rust-colored concrete block supported by three C-shaped steel ribs fastened to three steel columns buried within a setback light-brown masonry wall (photos left). The top edges of all three steel ribs poke through the facade, while what appears to be leftover steel at the bottom of two of the ribs is folded to form the Gary Group marquee (middle). A balcony looks out to the Pacific Ocean. A curved rebar handrail and concentric piece of electrical conduit dotted with light fixtures frame a metal stair. The stair hangs from a white grid, which is both a clock face and structural support of the parapet (bottom left). Boarded-up windows are Moss's way of controlling light and privacy. His drawings show the front (opposite top) and side (opposite bottom) elevations at different scales simultaneously. In what can best be described as composites of technical and conceptual ideas—here the clock and acrylic panels—from different vantage points (plan, section, elevation) in an attempt to represent “a psychological reality not necessarily intelligible in a physical way.”



© Tom Bonner photos

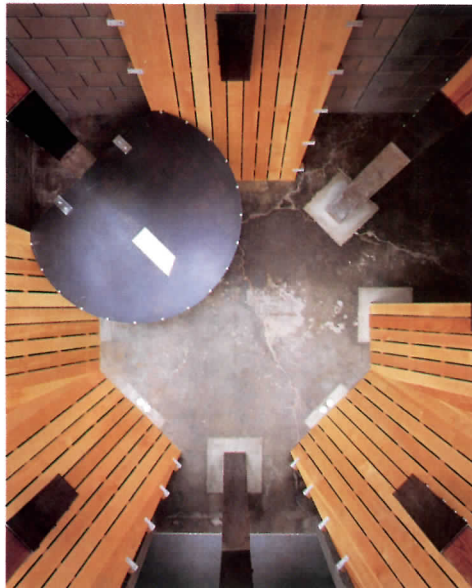
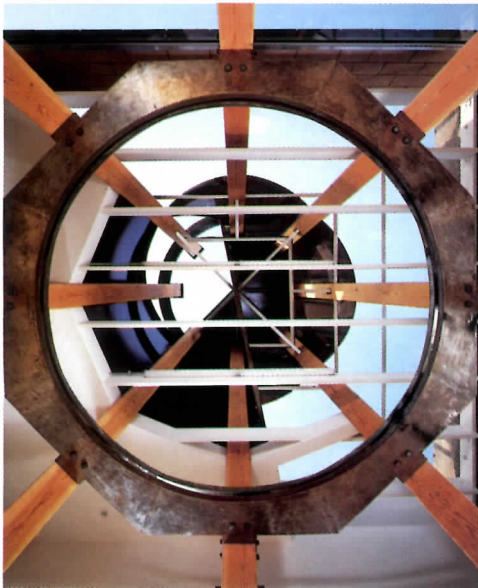








The small conference room is composed of overlapping geometric shapes. Within the square room, glue-laminated beams set into metal casings define an octagon-shaped meeting area (middle right and bottom). Braced by a round steel collar, the tilting beams rise some 25 feet through a glass and aluminum pyramid (middle left), where they are topped by a conical steel cap. An opening in the cone (top) admits light directly over a steel conference table. Located at the gabled cross axis of the private office wing (plans page 108) is a recirculating fountain, which has residential shower heads pouring water down a marble chute (opposite).



**Credits**

Gary Group  
Culver City, California

**Owner:**

Frederick Norton Smith

**Architect:** Eric Owen Moss

Architect—Eric Owen Moss,

principal-in-charge; Jay

Vanos, project architect; Todd

Conversano, Scott Nakao,

Loren Beswick, Sumathi

Ponnambalam, Evelyn Tickle,

Lawrence O'Toole, and Mathia

Johannsen, team

**Engineers:** Davis/Fejes Design

(structural); AEC Systems—

Greg Tchamitchian

(mechanical); California

Associated Power—Mike

Cullen (electrical)

**Consultants:** Saul Goldin

(lighting); MB&A—Mel Bilow

(plumbing); Tom Farrage

(steel furniture)

**Construction Management:**

A. J. Construction

**General Contractor:** Jamik, In









# Second Coming

*Nearly destroyed by fire four years ago, a rebuilt Episcopal church near Boston is once again the center of its congregation's spiritual life.*





*Reconstruction of St. Andrew's  
Episcopal Church  
Hanover, Massachusetts  
Ann Beha Associates, Architect*











*The day after an electrical fire set it ablaze, St. Andrew's Church lay in near-ruins (above), its timber-framed roof, south wall, and steeple collapsed into the sanctuary. Ann Beha Associates used the building's remains as the basis for a \$1.68-million reconstruction that restored the exterior and sanctuary of the 1810 church to their pre-fire appearance while upgrading mechanical systems and adding a usable undercroft. The rebuilt church (opposite and pages 114-115) was completed just over two years ago.*

**T**he reconstruction of St. Andrew's Episcopal Church following a disastrous fire on Christmas Day, 1986, raises a philosophical dilemma that vexes even architects strongly committed to preserving significant historic structures. The debate pits those who advocate the exact replication of past forms whenever possible versus those favoring sensitive new design that respects history without slavishly mimicking a bygone period.

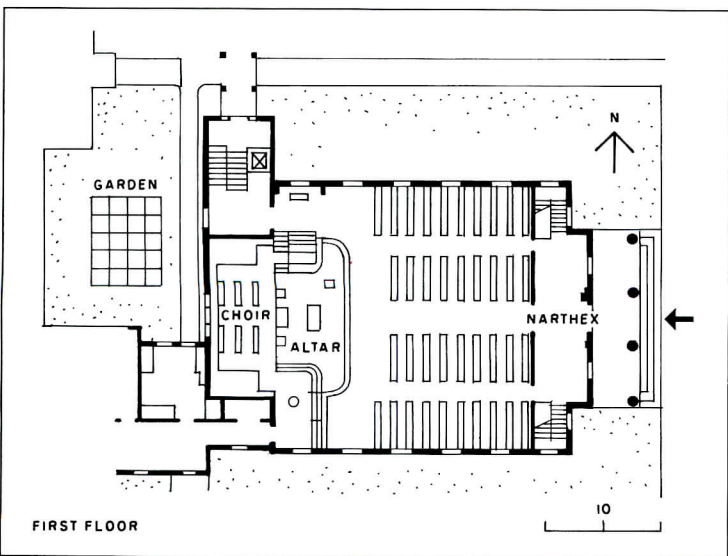
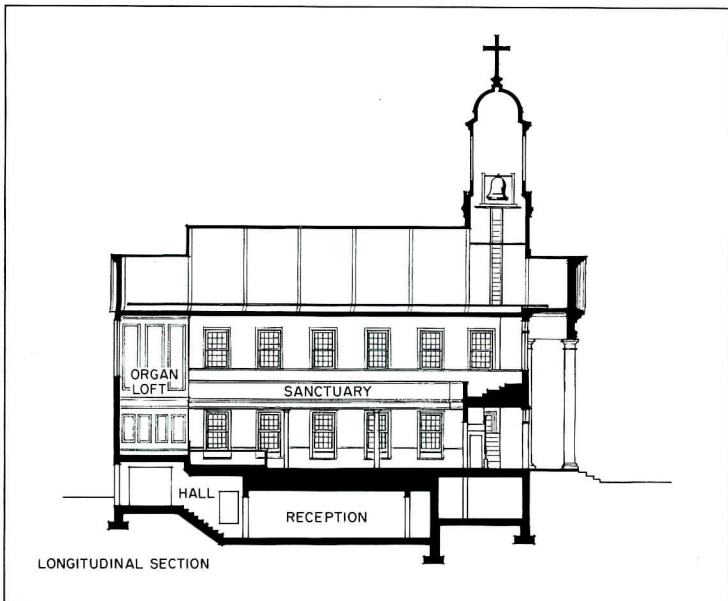
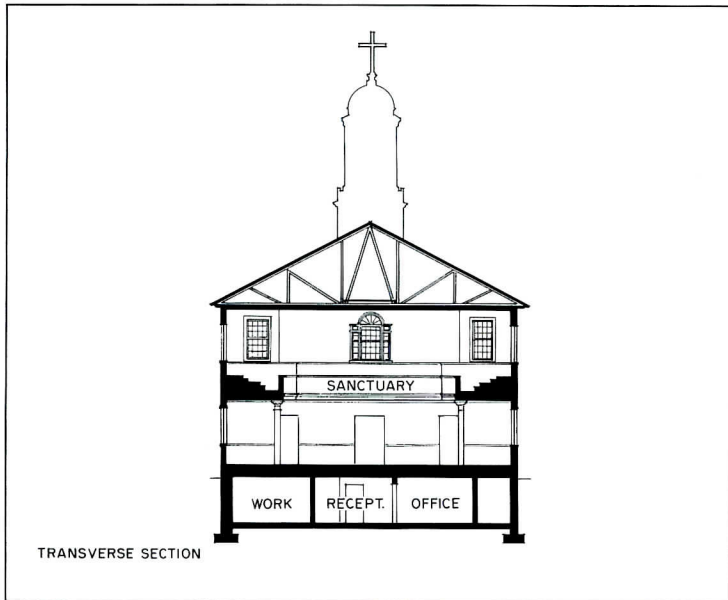
In the case of St. Andrew's, the fourth oldest Episcopal parish in Massachusetts, the matter was settled by the congregation. Project architect Marilyn Brockman, principal at Ann Beha Associates, recalls that the parishioners "had an unusually strong commitment to the history of their church," which was built in 1810 as a Federal-style meeting hall and altered early in this century with the addition of a steeple and portico. But even though their \$1.68-million reconstruction program clearly meant to focus on restoration rather than redesign—at least on the exterior—parish members also recognized that the old church didn't always function very well, and they viewed the rebuilding as an opportunity to make a few changes.

Chief among these interior improvements was an expanded chancel, including a repositioned altar set closer to the congregation, with a new choir loft and organ as backdrop. The new altar is constructed in part from charred timber beams salvaged from the fire. In order to accommodate larger church ceremonies, the architects designed movable pews in the front of the 180-seat sanctuary, and they reorganized the undercroft to provide two offices, a conference room, and a 12-seat chapel. In the sanctuary, new recessed ceiling fixtures unobtrusively supplement illumination from a restored brass chandelier and wall sconces, while unsightly metal radiators are now encased in white-painted shiplap boards lined with metal-faced plywood. Full insulation, exterior aluminum storm windows on 12-over-12 wood sash, and a zoned hot-water heating system help mitigate the effects of the region's harsh winters.

To develop accurate designs and dimensions, the architects utilized historic photographs—including parish members' wedding pictures—along with written histories and on-site measurements taken from elements of the original structure. The restored church, gleaming white in its classic New England setting, is a deft blending of old and new: the relatively undamaged north wall, for example, is virtually indistinguishable from the completely reconstructed south wall, which was leveled by the fire. Because enough of the original church remained standing to allow the local inspector to waive the requirement for steel framing, the new building is framed in two-by-tens and is sheathed in four-inch white-cedar clapboards, which replace vinyl siding misguidedly installed during the 1970s. The church now rests on a poured-concrete foundation clad in a veneer of granite panels that harmonize with the surviving pieces of the building's original rubblestone and granite-block base. A new steeple, fabricated on the ground before being hoisted into place, is capped with a copper cupola and cross; its three clock faces are black cast fiberglass, embellished with gold-leaf numbers.

In the end, Brockman credits much of the project's success to the late Wallace Gruenberg, who headed the church's building committee. "Wally was a strong advocate for close communication between the owner, architect, and contractor, and he insisted that the church spend its money on materials and design that would establish continuity with the congregation's history." She adds: "I have worked on many churches, some larger and more architecturally impressive, but St. Andrew's is my favorite." *Paul M. Sachner*





*Raised poplar paneling reproduced from the blackened remains of the 1810 church forms a case for the parish's new organ console (opposite), which is situated at the altar's northern end. The enclosure's gently bowed form echoes exactly the curve of a stair on the altar's southern flank (plan bottom left). The architects replicated original wood elements throughout the sanctuary (pages 114-115), creating new casings, window sash and shutters, pews, shiplap wainscoting, brackets, and Tuscan columns in white-painted poplar, with contrasting dark-stained mahogany trim. Three stained-glass windows that somehow survived the fire have been restored and returned to their original positions. The largest, a Tiffany-designed triptych over the altar, now boasts a painted frame comprising shields of the Episcopal Church and St. Andrew, the dove of peace, and the wheat and grapes of Communion.*

**Credits**

*Reconstruction of St. Andrew's Episcopal Church  
Hanover, Massachusetts*

**Owner:** *St. Andrew's Episcopal Church—Walter Gruenberg, building committee chairman*

**Architect:** *Ann Beha Associates—Marilyn Brockman, project architect; Susan Hillberg, project associate*

**Engineer:** *LeMessurier Consultants (structural, mechanical, electrical)*

**Consultant:** *D. Schweppe Lighting Design (lighting)*

**General Contractor:** *R & M Contracting Co.*







# Postindustrial Revolution





*A "rail-to-keel" warehouse complex once brought freight and shipping to the Hudson River waterfront. Now it brings businesses and people.*

*Harborside Financial Center  
Jersey City, New Jersey  
Beyer Blinder Belle, Architect*





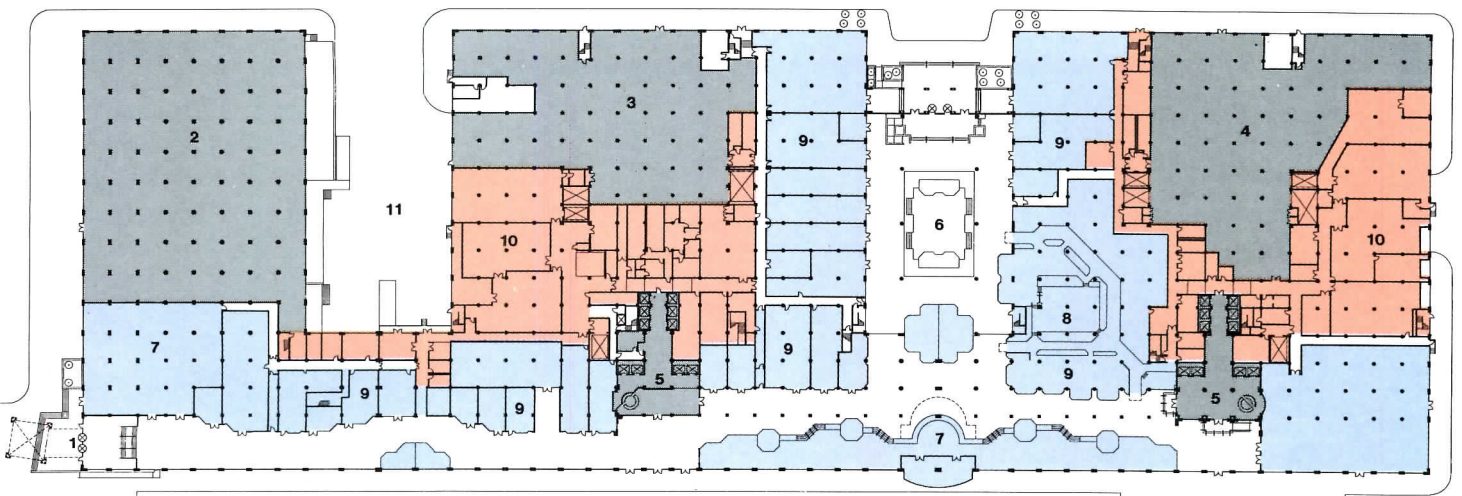
In its 1930s heyday, when Jersey City was a thriving port within New York's upper harbor, the Pennsylvania Railroad built on the city's Hudson River waterfront a mammoth (1.9 million square feet) freight-handling center boasting "rail-to-keel" delivery via railroad cars that ran through the warehouse onto piers where goods were transferred to ships. Because of the staggering traffic volume and a working population that reached 3,600, Harborside Terminal became a city in itself, with its own fire and police departments, hospital, and powerhouse. On its second level lay "Pennsylvania Avenue," a 1,000-foot-long street lined with bars, restaurants, and shops. Sixty years later, the port is gone but the terminal is again a focal point on the New Jersey shore, the first stage of a proposed financial center (master plan opposite) that when fully developed will rival Rockefeller Center in size. Offices replace warehousing; a once-barricaded riverfront has been given back to the community; and Pennsylvania Avenue has reappeared in the guise of a retail promenade.

The matchless waterfront site, poised among newly renaissance commercial and residential areas one train stop from Manhattan, would be incentive enough for the center's development. But the size and interior flexibility of the former terminal added impetus for casting it as both a harbinger of the larger complex and an immediate repository for much of the project's total public space. Helping to breach the visual barrier between city and river, service courts split the eight-story concrete structure into three distinct but connected elements: a former refrigerated warehouse of 400,000 square feet and two 750,000-square-foot blocks whose scale is further broken down by upper-level light courts. When Beyer Blinder Belle took over the conversion, a previous owner had already reclad the smaller unit in aluminum and glass stripes, and had begun to resurface the rest of the terminal. The firm subsequently adopted for the long east facade facing the city the sleek skin designed by James Stewart Polshek & Partners, with its zigurat motif rising to rooftop towers. But on the inland faces (pages 124-125) the tough egg-grate concrete frame remains as a reminder of the high-tech center's industrial roots—albeit refined and re-proportioned with bays of gray-brown stucco spandrel panels and white-framed metal windows set between contrasting beige-brick-clad columns whose upward thrust is halted by a sturdy cornice. At the light courts "receding" infill walls of navy-blue aluminum add definition, while the base of red-brick columns with precast details also serves the two-story waterfront arcade with its creamy stucco facing and punched windows.

In the private realm of the office tenants the building and its mechanical systems were completely updated, including new entrances from the future boulevard (now a parking lot) as well as new elevator cores carved out of the existing floors. But it is the public realm—consuming 137,000 square feet of ground-floor space and reaching out to claim the river's edge—that best characterizes the emerging center. A formal approach takes the visitor through the one-time service court between the two larger buildings, now reclaimed as a bamboo-filled winter garden (pages 126-127) on an axis leading to an open café overlooking the water. More often, workers and visitors will enter by way of the broad pedestrian artery that travels the center's full four-block length. Countering its daunting size, the street draws vitality and human scale from a lining of glass framed in sea-green metal: lively storefronts on one side and on the other an arcade open to the changing light and airy expanse of the riverfront (soon to be brought even closer by an outdoor esplanade and walkways along the piers) and to the Manhattan skyline beyond. Open too is the promise of the larger complex and the far-reaching development effort it will join. *Margaret Gaskie*

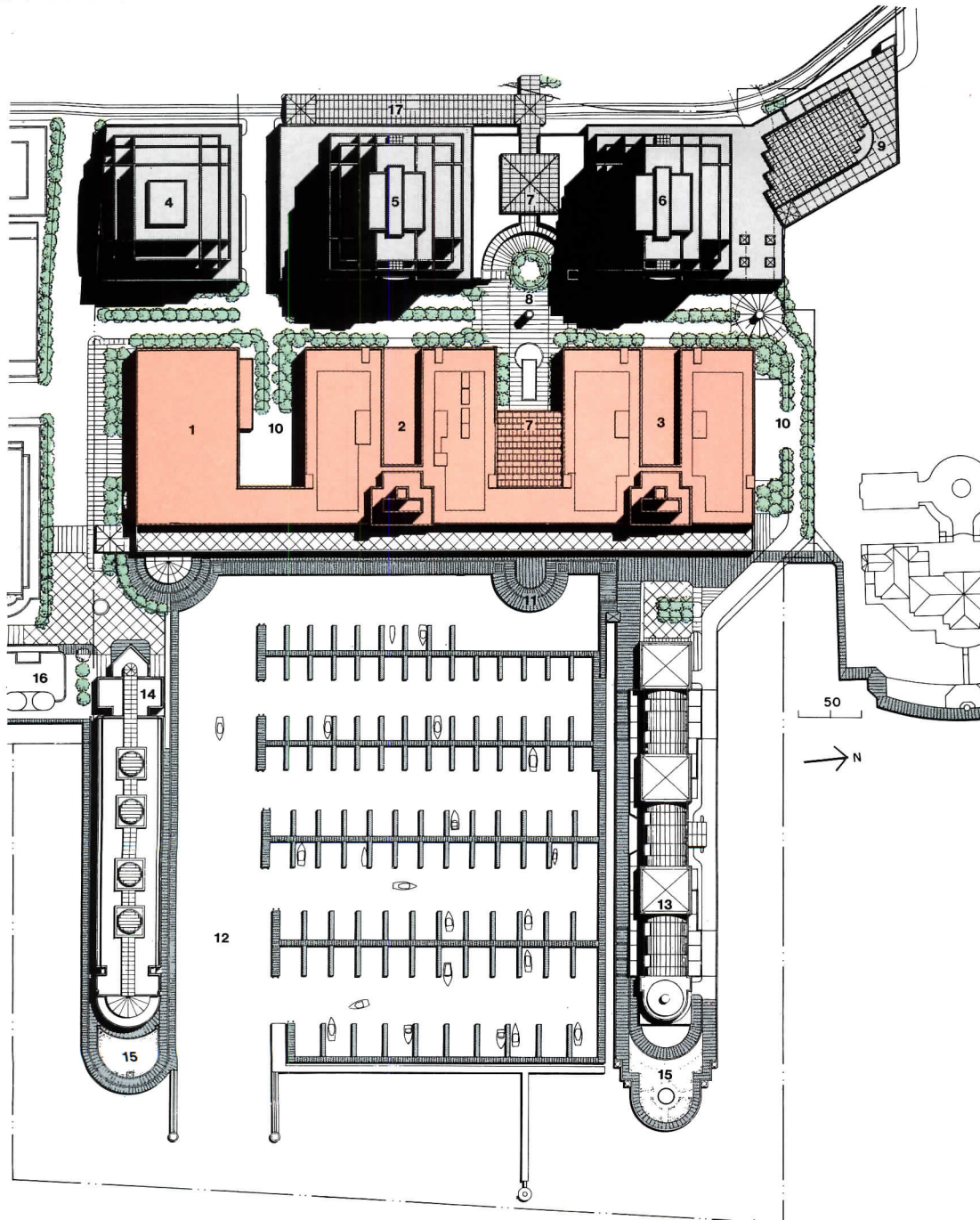
*When completed the new Harborside Financial Center will be a major link in a chain of new development stretching along the New Jersey shore opposite New York City. Its master plan anticipates that position at the same time it takes advantage of—and adds to—the existing urban fabric. Apart from the terminal building (Plazas 1, 2, and 3), the center will comprise an additional 6 million square feet of mixed-use space—a 28-story office tower on the south (Plaza 4) and two 50-story towers (Plazas 5 and 6) each topped by 11 apartment floors. All three will contain retail components and parking, supplemented by two garages. Their siting conforms to the local street grid, plus a new boulevard between the towers and the lower building, and includes a station for a future north/south transit system. A plaza linking the project's two atriums continues through the present building to the waterfront, where housing and a hotel built on the two original piers will embrace a marina. The piers will also include public walkways culminating in parks. The retail promenade that opens the terminal building to the Hudson already serves as a public thoroughfare extending north from the PATH train station. It will be paralleled along the water by an outdoor esplanade bracketed by half-acre plazas at each end.*





OFFICE
  RETAIL
  SERVICE/MECH.

1. Entry
2. Plaza One
3. Plaza Two
4. Plaza Three
5. Elevator lobby
6. Atrium
7. Restaurant
8. Future food court
9. Retail shops/ services
10. Building services
11. Service court



1. Plaza One
2. Plaza Two
3. Plaza Three
4. Plaza Four
5. Plaza Five
6. Plaza Six
7. Atrium
8. Central plaza
9. Garage
10. Service court
11. Waterfront promenade
12. Marina
13. North pier—residential
14. South pier—hotel
15. Park
16. PATH station
17. Light-rail station





















1



4



2



5



3



6

© Peter Aaron/ESTO Photographi



Except for the steel-and-glass curtain wall facing Manhattan, the time-worn concrete exterior of the Harborside warehouse was reportioned and refurbished with materials that underscore its present use for high-tech back offices but recall its industrial origins: a base of red brick, precast concrete trim, and granite watercourse (4), with lighter brick column covers and precast tucco spandrels above. The masonry framing of the base continues to the interior shopping street (1, 2) where it is elaborated by shallow arches and more insistent precast concrete trim (5, 7). Despite its forbidding 1,000-foot length, the retail promenade is a lively and welcoming space visually hortened by the strong horizontals of overhead arches and beams, an interrupted paving pattern, and the projecting awnings and signs of the storefronts. At the atrium and the two office elevator lobbies the passage also breaks vertically, rising to open mezzanines. The storefronts with their steel-framed glass facades add an illusion of openness that is confirmed on the water side where operable glass doors provide light and views—and in summer, access to the outdoor deck. Office elevator lobbies (3) look out on but are secured from the retail arcade and differentiated from it by a shift to somewhat more highly finished materials—e.g., granite instead of brick. Throughout, new additions are constructed of meticulously detailed bolted and articulated steel in telling contrast to the heavy masonry and concrete of the existing structure. The most striking intervention is the atrium, a delicate fabrication of exposed steel, clear glass, and translucent panels gently inserted into the former service yard between the larger office units (6, 8, 9).

The grand formal entrance, enhanced with shops and rich in paintings, it is also the principal gateway to the riverfront.

#### Credits

*Harborside Financial Center  
Jersey City, New Jersey*

**Owner:** US WEST Inc.

*Pension Fund*

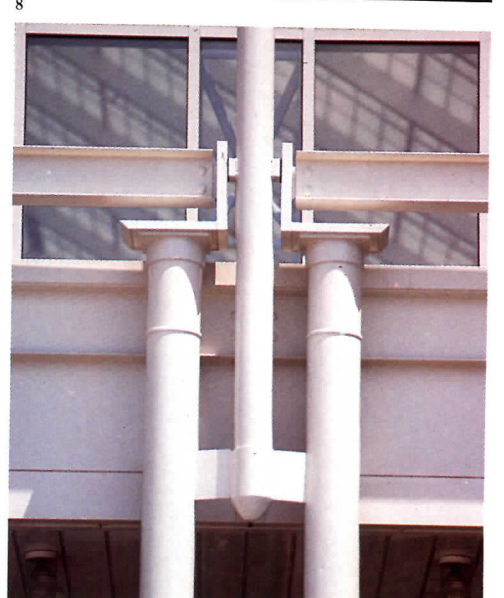
**Developer:** Jones Lang  
*Wootton USA*

**Architect and Planner:** *Beyer  
Blinder Belle—John H. Beyer,  
partner-in-charge; Richard  
Visconti, partner/chief  
architect; Christopher  
Barriscale, project designer;  
Timothy Allanbrook, project  
manager/master plan;  
Cameron Rashti, project  
manager/terminal; Mark  
Pavliv, project administrator;  
Robert McMillan, project  
architect; Ilan Tavor, project  
architect/construction  
administration; Carmine  
Cappadona, Lucie Curtiss,  
Mary Davis, Heather Faulding,  
Charles Finnegan, Donald  
Flagg, Bill Gibbons, Scott Isley,  
Basil Jarrett, Peter Kelaher,  
Charles Kramer, James  
McChesney, John Nastasi,  
Mark Nusbaum, Richard Rose,  
John Rountree, Ray Searby,  
Gerard Spano, Jack Superson,  
Mariko Takahashi, Carl  
Wienbroer*

**Engineers:** *Cosentini  
Associates (mechanical); URS  
Consultants Inc. (structural);  
Mueser Rutledge Consulting  
Engineers (geotechnical);  
Vollmer Associates (traffic and  
civil); Sidney M. Johnson &  
Associates (marina)*

**Consultants:** *James R.  
Gainfort (exterior cladding);  
Rolf Jensen Associates (life  
safety); Zion & Breen  
Associates (landscape); Fisher/  
Marantz (lighting); D. I. Design  
& Development Consultants  
Ltd. (retail/graphics); John A.  
Van Deusen & Associates  
(elevator); Paulus Sokolowski  
& Sartor (environmental);  
AMIS, Inc. (cost estimating);  
deHarak & Poulin (exterior  
graphics); Square Industries  
(parking)*

**Construction Manager:** *Turner  
Construction Co.*





# In Flight





*Rising above the constraints of  
time, budget, and preservation  
guidelines, an aging aircraft  
hangar becomes an uplifting  
waystation for air travelers.*

*USAir Interim Terminal  
Washington National Airport  
Arlington, Virginia  
Giuliani Associates, Architect*





Given a scant year to convert a sow's-ear maintenance hangar to a silk-purse passenger terminal, architect Joseph Giuliani could take wry satisfaction in having framed the problem himself. Giuliani Associates' initial assignment for USAir, which had recently merged with Piedmont Airlines, was to locate enough ground and air space at Washington's busy National Airport to consolidate the two operations. Heading the list of needed support facilities was a temporary terminal capable of handling eight aircraft and associated passenger traffic during construction of a planned new terminal. A thick stack of feasibility studies later, the firm's proposal for a master plan based on resuscitating a circa-1940s maintenance hangar at the north end of the airport was approved, and the clock immediately started ticking off the tight timetable for designing and building the interim terminal, along with accompanying aircraft parking aprons, taxiways, taxi lanes, bus roadways, and utility connections.

The location was chosen for its comparative closeness to other passenger operations as well as for the grand—though rough—readymade space contained in the great 180- by 300-foot hangar. But its handy location also brought it within the designated historic fabric of the main terminal at Washington National, so the shift to public occupancy had to be made without changing the character of the original building. Of particular concern to the preservation agency was the hangar's two-story frontispiece, a workaday concrete structure relieved by the merest hint of Moderne streamlining in a curved aluminum entry canopy supported by a modest pylon. Accordingly, all existing openings were preserved, although the deteriorating industrial-type steel windows were replaced with sleek thermal glazing and the entry was enlarged to meet fire egress requirements as well as to present a friendlier approach. Even the most evident change, a canvas canopy cantilevered from the existing concrete roof structure to provide curbside shelter, leaves the facade essentially intact.

The hangar itself was also transformed with changes largely limited to upgrading fenestration. On the west a clerestory was reglazed with reflective glass; on the east, where a sloping skylight no longer met codes under the new occupancy, an insulated replacement system was installed on the original structural supports. To emphasize the heroic scale of the enclosure, its simple concrete shell and steel-framed roof were painted out with white. The key to preserving the integrity of the space, however, was the addition of a two-level pre-engineered building along the hangar's eastern facade. At ground level the new structure houses, in addition to incoming baggage facilities, operations offices, and flight control, a miniature depot for buses that transport short-haul passengers to and from remotely parked commuter planes. The level above, connected to the lower terminal by four escalators, houses a single large departure area with major concessions ranged along the hangar wall—a convenience for passengers that also further reduced the functions to be accommodated in the main hangar space.

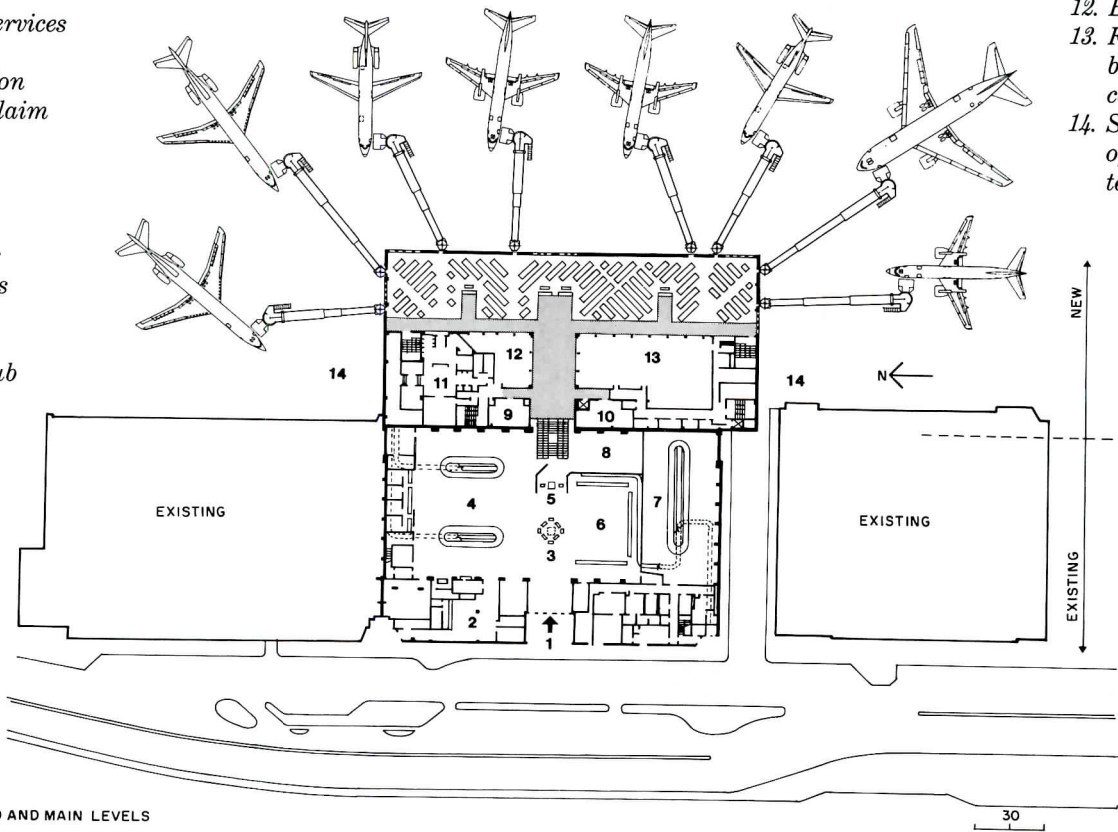
There, baggage make-up occupies a closed-off area at one end of the terminal, and ticketing and ground-transport services hug the periphery of the space, leaving only the two baggage-claim carousels, an information kiosk, and security clearance on the open floor. Illuminated signs highlighting directions and destinations frame the space, as do immense air-handling ducts that skirt the walls. But the essential character of the space is more tellingly defined by the airborne elements afloat within it: suspended clusters of white vinyl banners that conceal integrated accent lighting, lend the terminal focus and scale—and lift the spirit. *Margaret Gaskie*

*USAir's temporary terminal builds on an existing 180- by 300-foot maintenance hangar and an attached two-story concrete office/administration building. Though unprepossessing, the structures were protected as part of the fabric of the airport's main terminal, limiting exterior changes to reglazing openings with more thermally efficient materials and stretching a canopy across the face of the building and the twin hangar next door (see elevations opposite). The existing structure houses ticketing, baggage claim and make-up, security, ground-transport services, and supporting offices. Other functions are contained in an adjoining, somewhat larger, pre-engineered building. Because even the hangar's apron was to be preserved, the new structure was built on columns and footings set on the apron's existing 12-inch-thick concrete slab. Although it also provides incoming baggage and other support facilities, the ground floor is largely given over to a commuter mini-terminal from which buses run to and from aircraft parked in remote areas. Reinforcing the integration of groundside and airside functions, the upper level is one large departure-control area served by all concessions except a gift shop and small "sidewalk" café in the hangar space.*

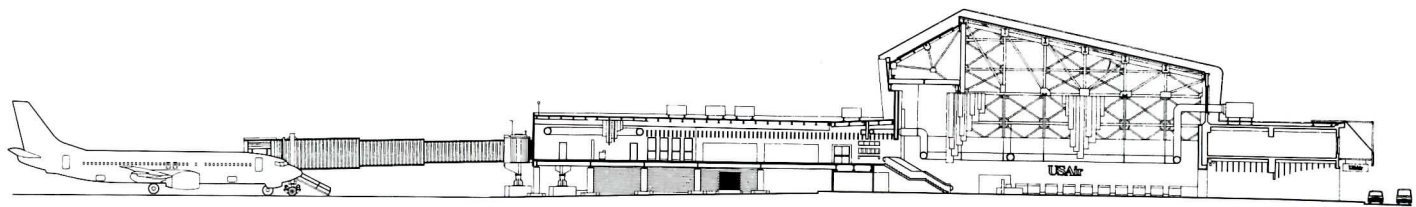


1. Entry
2. Ground services
3. Flight information
4. Baggage claim
5. Security
6. Ticketing
7. Baggage make-up
8. Computer departures
9. Men
10. Women
11. USAir Club

12. Bar
13. Food and beverage concessions
14. Shuttle bus operation under terminal



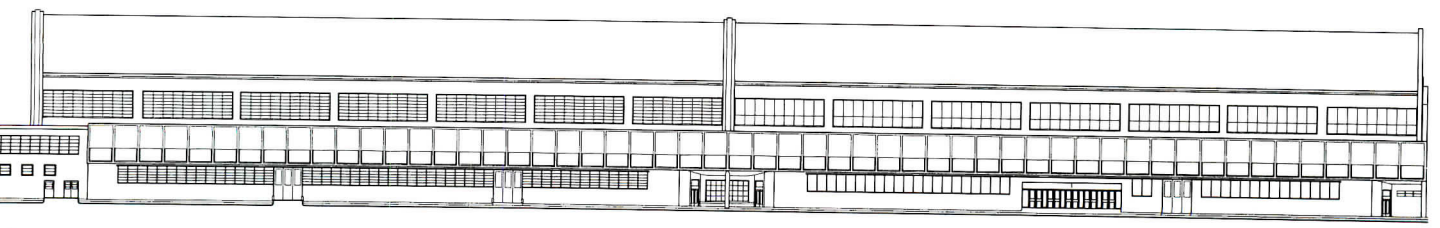
COMBINED GROUND AND MAIN LEVELS



NO. II BUILDING SECTION



ELEVATION - BEFORE



ELEVATION - AFTER





© Robert C. Lautman photos



*Apart from upgraded fenestration, changes in the hangar interior were minimal—an overall coat of white paint, “pilasters” concealing mechanical chases and drains, and firewalls enclosing the hangar doors, which if removed would have had to be preserved and stored. Placing air-conditioning units on adjoining rooftops and suspending ductwork around the edge of the space allowed mechanical systems to be introduced without breaching the structure. Similarly, acoustic baffles hang largely unseen within the web of steel framing overhead. Even the most striking additions to the space—hanging clouds of white nylon fabric—serve a practical purpose. Accent lighting concealed within each cloud highlights the main functional elements within the space: ticketing, escalators, information, and incoming baggage receipt.*

**Credits**

*USAir Interim Passenger Terminal  
Washington National Airport  
Arlington, Virginia*

**Owner:** *USAir, Inc.—Kenneth A. Wiseman, director of facilities; Metropolitan Washington Airports Authority*

**Architect:** *Giuliani Associates Architects—Joseph C. Giuliani partner-in-charge; Kenneth Brown, architect-in-charge; Gustavo Perez-Jaime, graphics; Joseph Marino, field representative*

**Engineers:** *Burns & McDonnell (civil/structural/mechanical/electrical)*

**Consultants:** *Coffeen, Fricke & Associates, Inc. (acoustical/audio); Anson Design Associates (lighting); Hygienetics, Inc. (environmental)*

**Construction Manager:** *Parsons Management Consultants*

**General Contractor:** *Tiber Construction Co. (phase 1); Whiting-Turner Contracting Co. (phase 2)*





Car Rentals

USAP Baggage Service

Potomac

VIS National

DOLLAR

USA

Fresh Cookies & Pies

Fresh Cookies & Pies



# Mission of Mercy





*A Catholic order in San Francisco  
spearheaded the conversion of a  
former hospital's outbuildings  
into affordable housing.*

*Mercy Family Plaza  
San Francisco, California  
Sandy & Babcock, Architect*





**B**etween 1907 and 1930 the Southern Pacific Railroad built and periodically added to a Neoclassical hospital complex that at one time was San Francisco's largest medical center. The hospital, located near Golden Gate Park, ceased operations in 1973 and stood vacant for several years, protected by national and local landmark designation. In 1983 the Sisters of Mercy renovated the main hospital building into Mercy Terrace, a housing complex for the elderly. More recently, the Catholic order converted four hospital annex buildings into 33,000 square feet of affordable housing for families, couples, and singles, called Mercy Family Plaza.

The principal challenge facing architects Sandy & Babcock was to create quality housing under a stringent \$3.9-million budget *and* adhere to federal and local guidelines for renovating historic buildings. The end result serves the causes of preservation and affordable housing equally well.

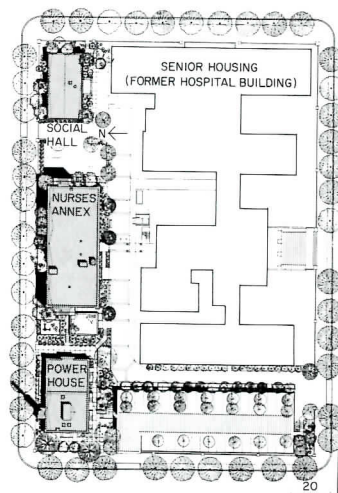
Mercy Family Plaza comprises 36 studio, one-, two-, and three-bedroom units. All but 10 of the units are in the nurses' annex, which was the easiest building to convert since its previous use had been residential. The most difficult building to re-use was the former powerhouse, which accommodates Mercy Family Plaza's eight largest units. The powerhouse presented two major challenges. The first was bringing in sufficient natural light. Although the building had 12-foot-high double-hung windows, there were not many of them. The architects' solution: a generous use of roof skylights. An even greater challenge was presented by a boiler pit that had to be dug to a depth of 15 feet below the original floor level, with additional fuel storage another 10 feet down. The architects built a new floor system over the pit, which became a maintenance area containing the main switchboards and power systems and a shop. Access is through a tunnel from a new parking structure on the southwest portion of the site.

Some of the units in the powerhouse have two-story spaces with lofts. The architects were prohibited from taking the lofts all the way to exterior walls, however, because they would have visually marred the building's round-arched windows. They came up with an ingenious system of metal grates that function like drawbridges. When down they provide emergency exits from loft to operable windows; when up they serve as railings over the void.

While most adaptable in plan, the nurse's annex presented a vexing structural problem of its own. The four-story building had a concrete frame and brick exterior walls separated from the frame by a three-inch gap. Sandy & Babcock cut away the floors and built new structural walls to full height at the corners. The walls consist of a reinforcing-steel frame covered with gunite, secured to the brick walls by 2,500 epoxy dowels. The new system was 90 percent complete at the time of the 1989 earthquake and held strong.

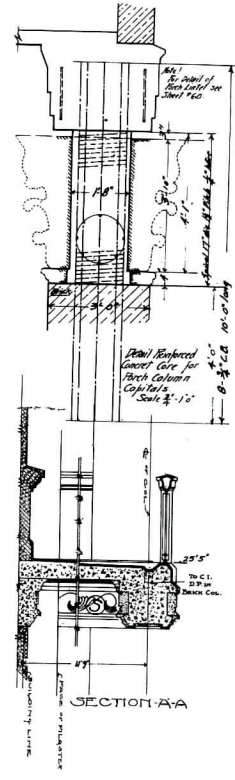
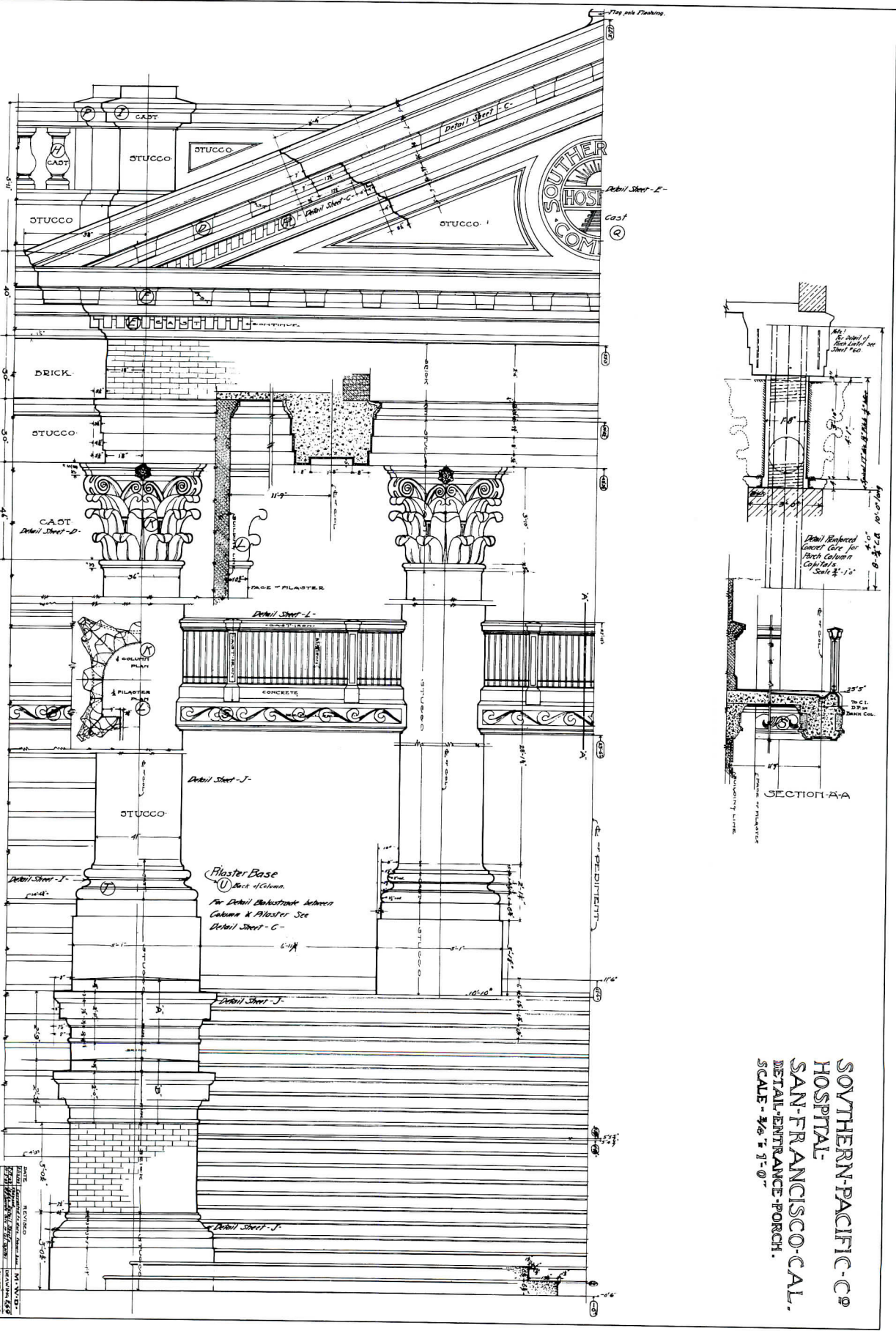
In the past decade the Sisters of Mercy have become increasingly active in the development of affordable housing. For Mercy Family Plaza they formed a partnership with the IbeX Group and put together a complicated financing package with the John Stewart Company, which also manages the complex. Throughout the project, moreover, the sisters were sensitive to the difficulties of putting dwellings for the elderly and families with children on the same site. Before construction they instituted a program under which residents of the seniors' housing were trained in child care at a nearby nursery school. Seniors now work with children on the site, sharing generous open spaces at the center of the complex. *Donald J. Canty*

Sandy & Babcock



*The former powerhouse, social hall, and nurses' residence that make up Mercy Family Plaza are lined up along the northern edge of the hospital complex (photo and site plan above). Before restoration (top) the powerhouse was intact, but derelict. Sandy & Babcock use early 20th-century drawings (opposite) as a guide in their restoration of the complex's Neoclassical ornament.*





SOUTHERN-PACIFIC-CO  
 HOSPITAL  
 SAN-FRANCISCO-CAL.  
 DETAIL-ENTRANCE-PORCH.  
 SCALE - 3/8" = 1'-0"

DATE: \_\_\_\_\_  
 DRAWN BY: \_\_\_\_\_  
 CHECKED BY: \_\_\_\_\_  
 APPROVED BY: \_\_\_\_\_  
 TITLE: \_\_\_\_\_

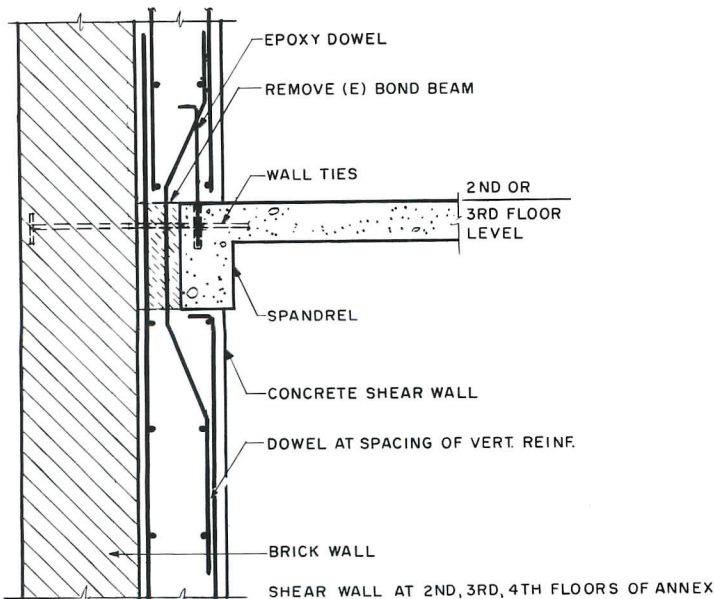




© Jay Graham photos except as noted



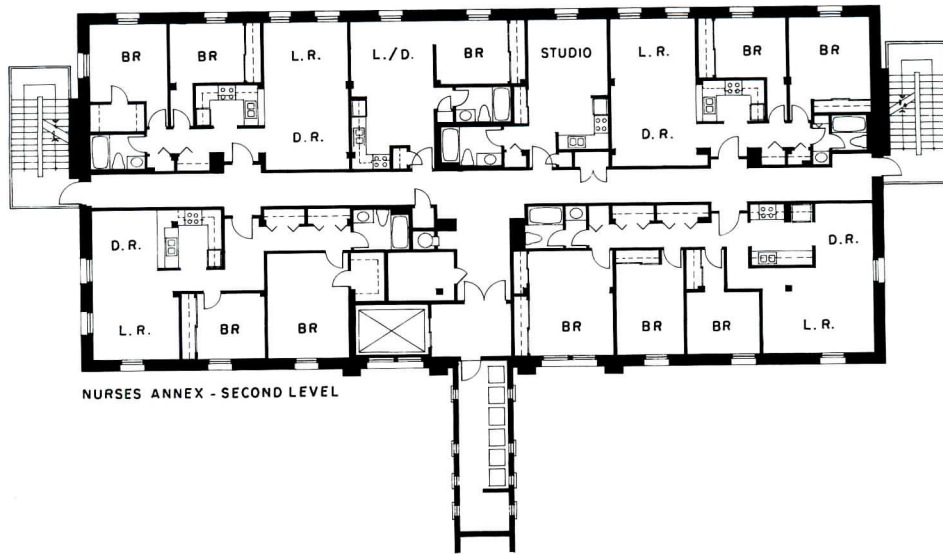
Although originally scheduled for demolition, the powerhouse chimney (top left) was ultimately retained and restored as a gesture to the building's past use and as a visual focus for the complex. The small one-story structure adjacent to the powerhouse (center in top left photo) is used for social gatherings and as a nursery school. Parents and children of Mercy Family Plaza share open-space privileges with the elderly residents of adjoining Mercy Terrace. Site lighting, benches, and other landscape elements, including a new steel fence, were designed to complement the Neoclassical buildings (bottom left photo). Inside the western entrance to the powerhouse (opposite), a new wall divides the foyer and allows direct entry into two dwelling units. In adapting the powerhouse interior for residential use, the architects reinforced the unstable connection between the building's concrete frame and brick exterior walls (section left).





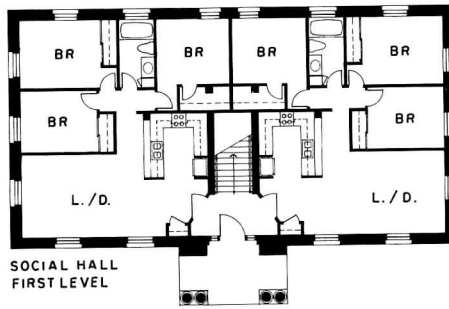






NURSES ANNEX - SECOND LEVEL

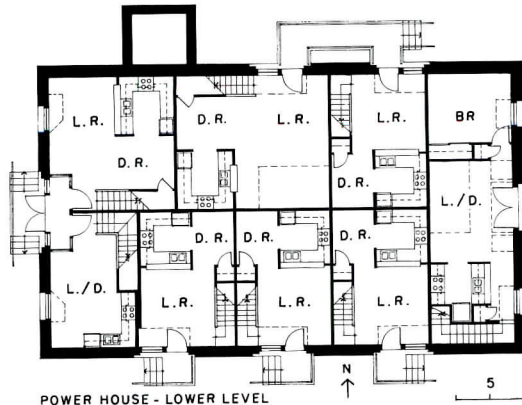
A pedestrian bridge once joined the nurses' residence to the main hospital (top plan). The architects closed off the bridge and converted the space into a laundry room that enjoys fine views in two directions. Natural light enters the double-height units of the powerhouse through new roof skylights (opposite). These units feature metal grilles that serve as railings when up while providing emergency access to operable windows when lowered.



SOCIAL HALL  
FIRST LEVEL



POWER HOUSE - UPPER LEVEL



POWER HOUSE - LOWER LEVEL

**Credits**

*Mercy Family Plaza*  
*San Francisco, California*  
**Owner:** *Mercy Family Housing California*  
**Architect:** *Sandy & Babcock, Inc.—James Babcock, partner-in-charge; M. Paul Schwartz, project architect*  
**Engineers:** *Peter Culley & Associates (structural); Hawk Engineers (mechanical/civil)*  
**Consultants:** *Anthony M. Guzzardo & Associates (landscape); Page & Turnbull, Inc. (historic preservation consultant); The John Stewart Company (financing)*  
**General Contractor:** *Midstate Construction Corporation*







# At Home on the Prairie





*The Minneapolis Institute of Arts  
backs a careful restoration of this  
Purcell and Elmslie landmark of  
Prairie School architecture and  
decorative arts.*

*Restoration of the  
Purcell-Cutts House  
Minneapolis, Minnesota  
MacDonald & Mack Architects*





In the first two decades of the 20th century William Gray Purcell and George Grant Elmslie produced a significant group of buildings which, along with the work of Sullivan and Wright, are acknowledged monuments of the Prairie School. One of the high points of Purcell and Elmslie's domestic architecture was the stucco-covered lakeside house that Purcell built for his own family in Minneapolis in 1913. Purcell occupied the house until 1919, when he sold it to Anson Cutts. In 1985 Cutts's son, Anson Jr., bequeathed the house, essentially unaltered but in serious need of repair, to the Minneapolis Institute of Arts, which has restored the dwelling under the direction of architects MacDonald & Mack and opened it to the public.

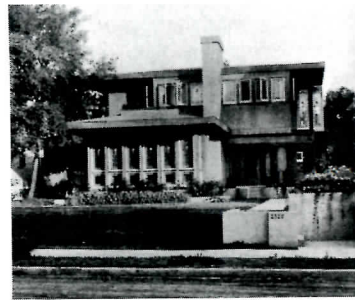
Like much of Purcell and Elmslie's work, the Minneapolis house is filled with an array of architect-designed furnishings. Freestanding and built-in furniture, draperies, carpets, stenciled wall patterning, leaded-glass windows, and terra-cotta and sawed wood ornament all exhibit the functional and decorative invention one would expect in an architect's own home. Though Elmslie's art glass reveals no geometric surprises here, his colors for the glass and the stenciled friezes work well with the interior's delicate palette. Restoration artisan Alex Wilson uncovered convincing evidence for the original color scheme while preparing the walls and restoring the fireplace mural, and he re-used many original stencils found in the basement.

Several other unique interior finishes survived intact, including countertops made of an amalgam of mottled green magnesium and sawdust, and extensive oak woodwork rubbed with a faded lavender filler and beeswax. Purcell applied these lavish finishes with a careful eye to their cost, changing the oak to clear birch halfway up the stair, just as it disappeared from view. Purcell's originality throughout the house, in fact, seems tempered only by his need to get as much value as possible. (The house cost around \$6,000 at a time when larger, more conventional neighbors were built for \$4,500.)

Inside the house, the principal challenge facing project architect Stuart MacDonald was to reinforce the structure's sagging roofs, eaves, and ceilings without damaging hard-to-duplicate finishes. After temporarily removing several closet floors and ceilings, MacDonald convinced agile subcontractors to install most of the required new mechanical work by crawling into the furring (some exposed and inspected knob and tube wiring remains as a curiosity.) The architects concealed smoke detectors behind tiny openings at the apex of peaked ceilings; air is drawn to the recessed detectors through thin tubes.

The building's flush exterior cornice detailing, which stands in striking contrast to the generally deep eaves, had caused the fascia, frieze, and windows on the second floor to deteriorate. These elements were repaired, and the original exterior creosote finish was replaced with a pigment and oil treatment that will weather to a period gray-brown.

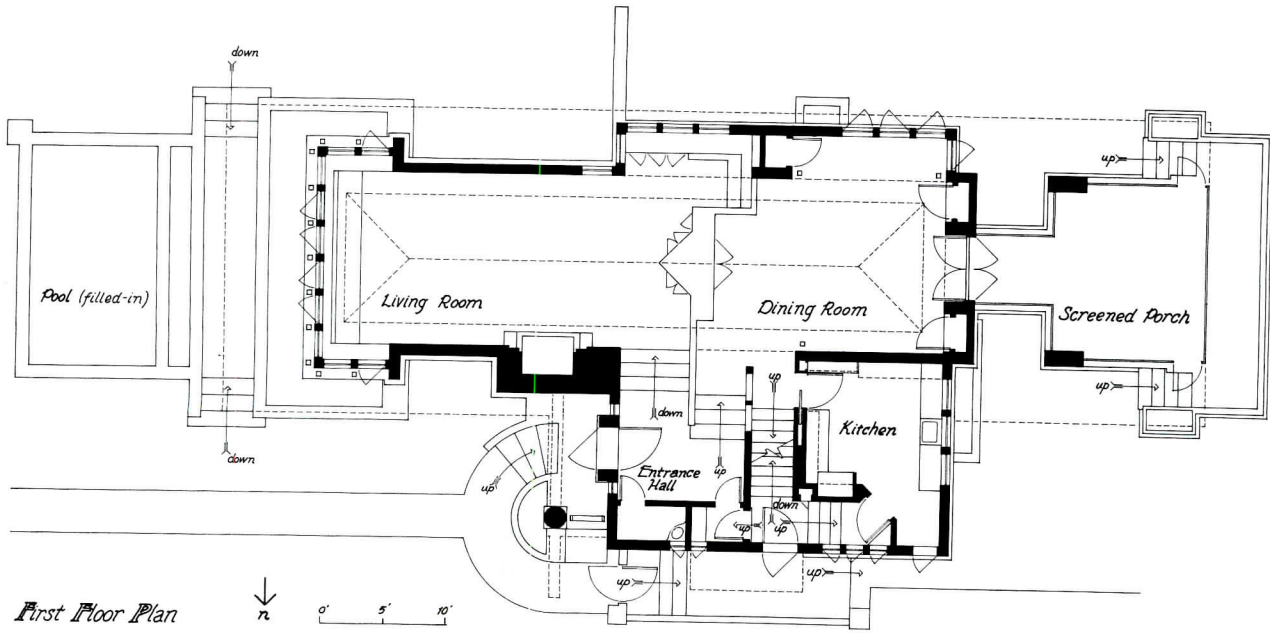
Regionally quarried aggregates that enliven the exterior walls, base course, and paving were especially difficult to duplicate. Each finish required the architects to comb the Midwest for the correct mix of colors, and some of the aggregates had to be crushed, graded, and sanded by hand. Cracks in the concrete base remain unfilled, attesting to the difficulty of matching and bonding to such a weathered surface. These gestures in an otherwise thorough restoration are a testament to the architects' less-is-more sensibility, and to the hands of the restoring artisans, whose light touch gives the project a welcome air of authenticity. *Anders Nereim*



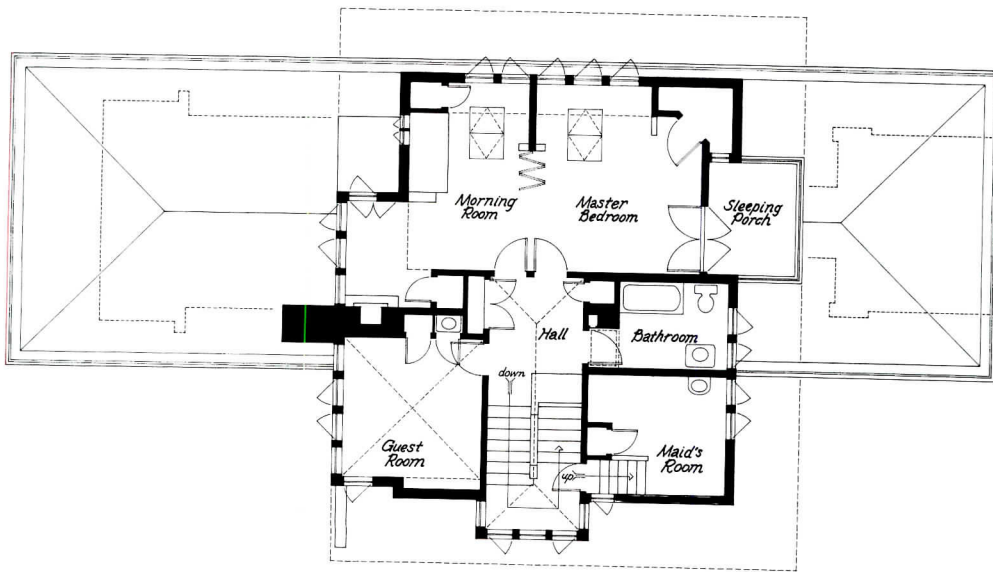
Minneapolis Institute of Arts

*Prior to restoration MacDonald & Mack prepared a complete set of new plans and sections of the Purcell-Cutts House (opposite), and the architects utilized period photographs of the structure as a guide (above). Visual centerpiece of the living room is a fireplace mural by Charles Livingston Bull (overleaf and cover). While cleaning the mural, restorers uncovered the original wall color, which was used to repaint the rest of the living room. The mural's fine scroll-sawn oak plywood detailing is inlaid with iridescent gold and rose ceramic slices, as are the raked joints of the Roman brick fireplace. The soft gray, lavender, and magenta tones of an oversized raindrop sandstone lintel echo the rich color palette used elsewhere in the house.*

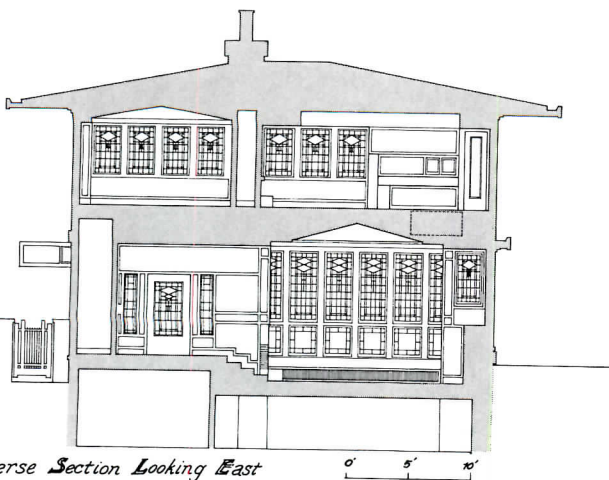




First Floor Plan



Second Floor Plan



Transverse Section Looking East



Transverse Section Looking West



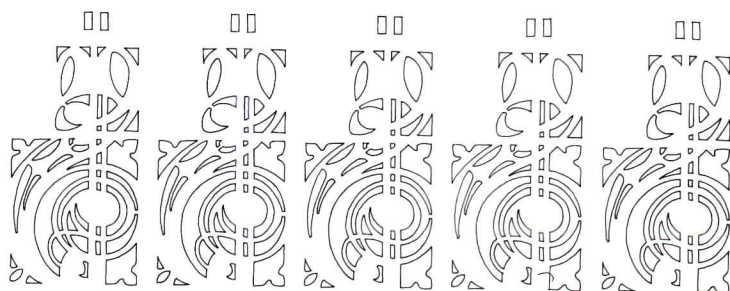
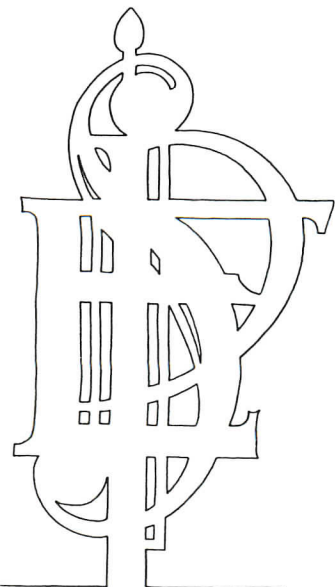




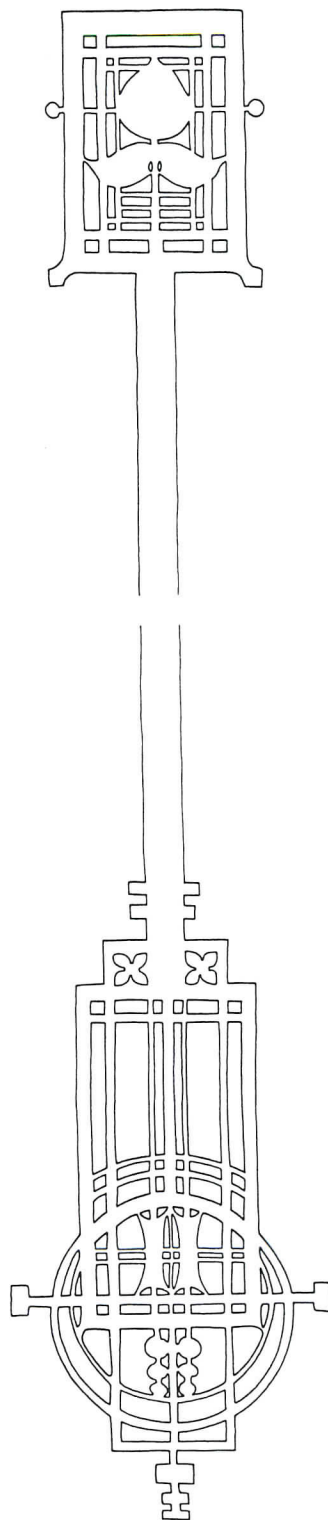
A prow-shaped storage unit separating the sunken living room and dining room (opposite) is cantilevered over a rug designed by William Purcell. George Elmslie designed the cabinet's stained-glass panel doors, one of which conceals a return-air grille. Throughout the restoration the architects sought to retain as many features of Purcell and Elmslie's original design as possible while upgrading mechanical systems. Half-inch-diameter pipes at each end of the pitched ceiling, for example, take air through a tube to smoke detectors. MacDonald & Mack rewove and custom-dyed the narrow-gauge period wiring of an original pendant lamp, and they rebuilt an original recessed can with a suspended art glass lens to UL standards (top right). A bronze sculpture entitled "Nils and his Goose" is a reduced-size replication of Richard Bock's original (bottom right). One of the trademarks of Purcell and Elmslie's Prairie School style is ornately stylized wood carving and stenciling. A carved monogram near the front door (below) combines the initials of Purcell's wife with a musical clef, referring to her love of music. The clef reappears in a three-color frieze that rings the second-floor stair hall.



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Top left: the incised "Grey Days and Gold" emblem over the side entrance stands in marked contrast to the flush Modernist detailing of the upper story.

Top right: the exterior woodwork's original creosote-based finish was replicated in a safer pigment and oil mixture that will weather to gray-brown.

Bottom left: A writing nook off the living room overlooks a soon-to-be-restored wildflower garden through a window decorated with wildflower patterns.

Bottom right: glass on the cantilevered stair landing boasts abstract designs in soft green, lilac, and golds, and a border of clear glass meant to resemble thin ice.

Opposite: Much of the property's original landscape plan by Harry Franklin Baker has been restored, including a reflecting pool planted with pale yellow water hyacinths.

**Credits**

*Restoration of the Purcell-Cutts House  
Minneapolis, Minnesota*

**Owner:** The Minneapolis Institute of Arts

**Architect:** MacDonald & Mack Architects—Stuart MacDonald, principal-in-charge and project architect

**Engineers:** Kopp Engineering Associates (structural); BKBM Inc. (mechanical/electrical)

**Consultant:** Close Grant Landscape Architects (landscape)

**Construction Manager:** MacDonald & Mack Architects







# Focus on Preservation

*James Marston Fitch, the pioneering educator who created the nation's first program in historic preservation at Columbia University in 1964, recently wrote that "preservation is now seen as being in the forefront of urban regeneration, often accomplishing what the urban-renewal programs of 20 and 30 years ago so dismally failed to do. It has grown from the activity of a few upper-class antiquarians... to a broad mass movement engaged in battles to preserve 'Main Street,' urban districts, and indeed whole towns." Four of the projects featured on these pages illustrate how*

## 132 Pierpont Avenue

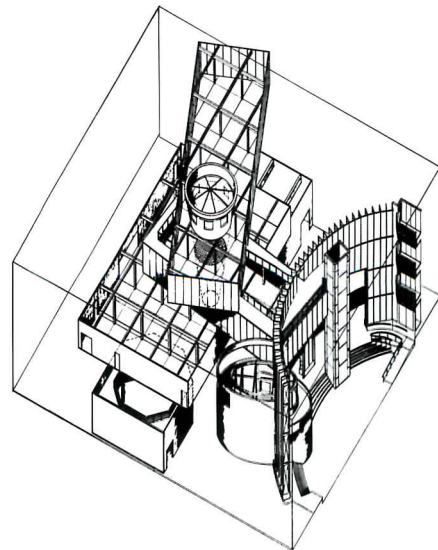
*Salt Lake City, Utah  
FFKR, Architect*



© Douglas Kahn

## Contemporary Arts Center

*New Orleans, Louisiana  
Concordia Architects*





preservation and adaptive use have served as catalysts for urban rebirth in Salt Lake City, New Orleans, Greensboro, N. C., and Baltimore. A fifth project, the completion of a series of carved stone niches at Carnegie-Mellon University in Pittsburgh, is a heartening reminder that the craftsmanship which produced notable buildings of the past is still available today—if we care enough to demand it.



#### **Adaptively used, again and again**

The Neoclassical brick structure that FFKR recently converted into two restaurants, speculative offices, and the architects' own quarters has seen a variety of uses since it was completed in 1896: offices for the Oregon Short Line Railroad, Salt Lake City's first public high school, an armory, a newsprinting shop, and, most recently, a warehouse facility. The structure is located on the western edge of Salt Lake City's central business district, in an area that has lost much of its 19th-century architectural context (left photo opposite). In the building's latest transformation, the architects converted an existing alley and light well into space for circulation and restrooms, and they designed a cascading stairway that provides dramatic access to the upper floors. They maximized developable commercial space by adding mezzanines, converting unused attic space into offices and enlarging light wells into the basement. New restaurant terraces enliven the street. *P. M. S.*



#### **Revitalized center for SoHo South**

When New Orleans's Contemporary Arts Center opened in an empty ice-cream factory in 1976, the nonprofit visual- and performing-arts group spearheaded the continuing conversion of the city's run-down warehouse district into a residential and arts-centered neighborhood. Now the CAC has undergone its own three-year, \$5-million renovation. Concordia Architects have cleaned and painted the masonry and wood exterior of the CAC's 1905 neo-Italian Renaissance building, located in the Lafayette Square Historic District, and added stainless-steel entrance canopies. Inside, the architects carved out a four-story, crescent-shaped atrium lobby, inserting a curved stainless-steel wall along the top of the building-wide interior stair. To the left past the wall—whose grid mimics the building's lightly sand-blasted, exposed post-and-beam structure—Concordia created a two-story elliptical circulation ramp. To the right, a freestanding elevator shaft, sheathed in Lexan and designed by one of nine local artists who collaborated with Concordia on the renovation, ferries staff to offices above the main exhibition spaces, which are on the first and second floors. The third and fourth floors, to be completed in the project's phase II, will be leased to other local arts groups. *P. D. S.*



## Greensboro Cultural Center

*Greensboro, North Carolina  
Cambridge Seven Associates, Architect  
J. Hyatt Hammond and Associates,  
Associated Architect*



© Greg Loftin

## Marsh & McLennan Building

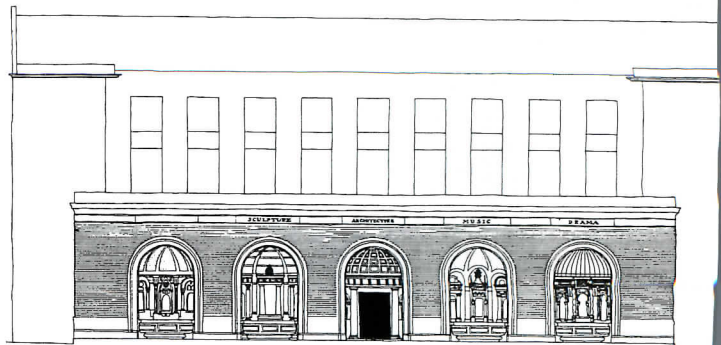
*Baltimore, Maryland  
RTKL Associates*



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## College of Fine Arts

*Carnegie-Mellon University  
Pittsburgh, Pennsylvania  
Henry Hornbostel, Original Architect  
Rosenblatt Lindsey Associates,  
Completion Architect*







### Southern synergy

Given a collection of five nondescript buildings that formerly served as offices and a printing plant for the *Greensboro Daily News*, Cambridge Seven and associate architects J. Hyatt Hammond created a 114,000-square-foot cultural center that now is home to 25 different visual- and performing-arts groups. The architects treated the series of low-rise brick buildings as pieces of an architectural jigsaw puzzle, pulling the disparate structures together by adding a major new piece: a four-story Galleria. The Galleria, built with translucent fiberglass panels and neon-edged roof trusses, serves as the central spine of the complex, connecting the various floor levels of the existing buildings with a playful array of bridges, ramps, and walkways. The interior street slices through the complex at an 18-degree angle, orienting itself to downtown Greensboro and following the route of an old railroad spur that ran through the newspaper plant. In place of the parking lots that once surrounded the old buildings, the architects and landscape architect Dan Kiley designed a series of planted green spaces for a variety of outdoor uses. *C. A. P.*

### Expanding a cast-iron maiden

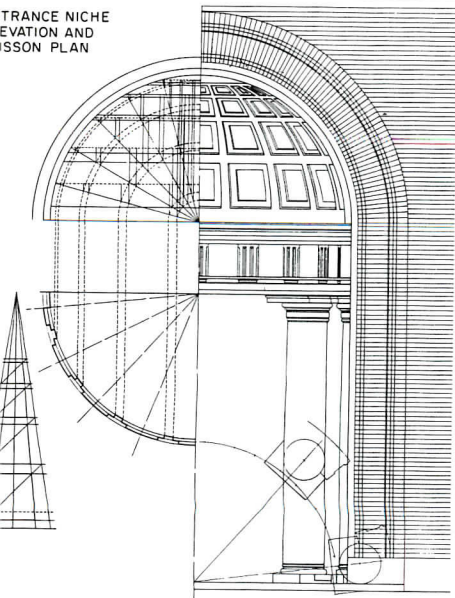
One of only three cast-iron buildings remaining in Baltimore, the former William Wilkens office and warehouse today serves as the heart of a new office block designed by RTKL Associates. The architects carefully restored the 1871 building's iron front and attached a new five-story structure whose forms harmonize with the old structure without precisely mimicking the 19th-century building's Renaissance Revival detail.

Renamed for its current lead tenant, Marsh & McLennan, the building has been adapted to meet the needs of today's businesses. RTKL removed mezzanines between the first, second, and third floors to create more full-floor space, and they installed state-of-the-art mechanical systems and a new service core. In the process of updating the building, however, the architects recycled as many original materials as possible. Wood joists removed along with the mezzanines, for example, were used to build the extensions of the second and third floors, while old wood sash were modified to accommodate double-glazing within their original muntin system. Nineteenth-century features such as metal fire shutters and rolling fire doors separating

the two 25-foot-wide bays of the cast-iron structure were also rehabilitated.

RTKL designed the new building wrapping around the old one to be more than just a neutral backdrop. A freestanding steel grid set in front of the structure's south facade echoes the dimensions of the old building, but comes with perforated aluminum sun shades. Although it employs new metals and has an essentially Modernist character, the addition captures the industrial spirit of the original building's cast-iron architecture. *C. A. P.*

ENTRANCE NICHE  
ELEVATION AND  
SECTION PLAN



ENTRANCE NICHE  
SECTION



### Taking up the chisel at Carnegie-Mellon

Interrupted over 75 years ago by the outbreak of World War I, carving resumed last fall on five monumental stone niches set in the facade of Henry Hornbostel's College of Fine Arts building, on the campus of Carnegie-Mellon University in Pittsburgh. The work is being directed by British stonemasters Nicholas G. Fairplay and Simon Verity. Cathedral Stoneworks, the commercial arm of the stoneyard at New York's Cathedral of St. John the Divine, is overseeing the two-year, \$1-million project. Carvers will execute new designs by Pittsburgh architects Paul Rosenblatt and Bruce Lindsey, who worked from original Hornbostel sketches depicting representations of the Greek, Roman, Gothic, Renaissance, and Moorish periods of architecture. The carvers, who were selected in an international competition, will first complete the partially carved Renaissance and Roman niches. Simon Verity will design and carve a new inscription over the Renaissance entrance: "Creare." *P. D. S.*



# Middle-Age Makeovers

*With owners seeking to retain tenants in a tough market, the renovation of outdated commercial buildings is coming into its own—and the scope can be scaled to suit the market.*

**F**or reasons that go beyond the current oversupply, owners are finding millions of square feet of commercial space built since World War II hard to rent. Some buildings have relatively minor, curable problems; others are victims of circumstance: their location is not what it once was. Though new commercial construction has collapsed in most sections of the country, there are opportunities to improve the fortunes of many existing properties, some as little as 10 years old, and there are owners highly motivated to do so.

Jacques N. Gordon, who has been monitoring this kind of activity for Baring Institutional Realty Advisors in New York, offers this assessment of the current situation: "Two things have changed very recently. There is a credit crunch, which makes it difficult to finance new buildings, even where demand can be demonstrated. And the weakening economy means there is not a lot of growth to share among buildings in markets where there is an oversupply." Why update older buildings? "Older B- and C-grade buildings are going to have to scramble because newer buildings are offering very competitive rents and can support the sophisticated computer and telecommunications needs tenants are looking for." Owners of buildings that are losing favor will continue to upgrade their structures, but the scope now will be more modest. And, adds Gordon, "You won't be doing it with debt."

## How comprehensive a renovation?

Gordon and LiseAnn Shea (writing in the January 1990 issue of the journal *Urban Land*) have defined three categories of what they call "the renovation spectrum." A *cosmetic* renovation includes remodeling the lobby and other public spaces and replacing elevator cabs. The facades are cleaned and minor landscaping improvements are carried out. *Significant* renovation entails upgrading all building systems (elevators, plumbing, hvac, electrical, security). The facade is cleaned and repaired, and energy-efficient glazing is installed; the roof is repaired, and asbestos is removed where feasible

between tenancies. (For more on asbestos management, see RECORD, October 1990, pages 110-111.) Minor structural work that improves floor layout or increases live-load capacity is undertaken. An empty building is often a prerequisite for *comprehensive* renovation. Electrical service is upgraded to serve ubiquitous microcomputers, asbestos is removed from the entire building, and the roof is replaced. Structural changes may be significant: the floor plate is reconfigured, while column covers are removed to bare steel, reinsulated, and recovered to take up less floor space. Any structural deficiencies are remedied. An entirely new facade may be installed over bare steel or attached to the existing curtain wall. The lobby is remodeled and may be expanded or reconfigured.

According to Gordon and Shea, the costs for such renovations can range from 10 percent of purchase price to 100 percent. The advantage of renovation over new construction in the current downturn is that the scope of work can be scaled back to suit the market. Two projects (opposite) give a sense of the spectrum. On the following pages we show two other projects in more detail. Hammond Beeby and Babka recently transformed 745 Fifth Avenue, a 1931 office building, to derive the full value from its extremely important retail frontage on Fifth Avenue and 58th Street in New York City (pages 158-159). Rather than build a wholly new structure for the World Bank, in Washington, D. C., Kohn Pedersen Fox proposed wrapping two of seven existing buildings with new construction (pages 160-163). Craig Nealy, KPF's project designer, credits that decision with winning the job.

In today's difficult market, projects can often be divided into packages small enough to allow a comprehensive scope of work to be accomplished over a period of time. Upgrading hvac, telephone, and electrical service must often be done nights and weekends to avoid service disruptions during business hours. In other hands and in another location, for example, Rockefeller Center (built from the early



New owners of 1301 Avenue of the Americas, in Manhattan, retained Skidmore, Owings & Merrill to renovate the lobby and update the faded porcelain-enamel and extruded aluminum exterior (bottom). Various primers were tested until three were found to be appropriate foundations for a two-toned pattern of field-applied Duranar, a Kynar-based paint (in progress, below).

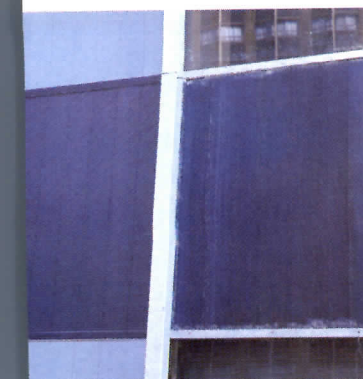
Instead of giving 660 Madison Avenue, in New York, a slick new identity, joint-venture architects Peter Marino + Associates and Kohn Pedersen Fox have designed cladding for the 1958 glass-and-metal curtain wall structure (bottom) that evokes its 1920's neighbors (below). The bottom nine floors will be occupied by a men's clothing store. The upper floors will remain offices.



'30s to the '50s), would be losing tenants. By carefully staging work, however, the complex has reached the halfway point of a \$60-million upgrade. New refrigeration equipment, which has added cooling capacity while reducing fuel costs, was installed late at night to avoid disturbing daytime office tenants and evening Radio City Music Hall performances. Occupancy remains high.

### What makes a building work

With wide experience designing speculative buildings as well as spaces for tenants in existing buildings, Brad Perkins, of Perkins Geddes Eastman, has learned a few lessons. Chief among them is that clients are more sophisticated than ever in analyzing factors that determine the *efficiency* of office space, which can vary considerably, even in recent buildings. (According to Perkins, one Manhattan tower has a "loss factor" of 33 percent. Good plans can yield efficiencies in the 90th percentile.) Efficient plans, when laid out on a conventional 5-ft module, leave little unusable space; the core arrangement should minimize circulation. For sophisticated hvac equipment, floor-to-floor heights need to be at least 12 ft 6 in. for steel buildings and 11 ft 9 in. to 12 ft for concrete framed structures. One lesson learned in the last recession, Perkins asserts, is *quality pays*. Well-constructed and maintained properties with an identity (such as the Seagram Building in New York) remained fully rented, while cookie-cutter buildings nearby had to discount deeply. He sees the same trend playing itself out in suburban Stamford, Connecticut. With a vacancy rate above 25 percent, competition is cutthroat. "A few buildings have leased well, others remain empty years after completion," he says. Since the floor plate is today formed to very exacting specifications, quality is often in the proportions, the exterior skin, the extent to which the building takes advantage of views and other local amenities, the lobby, and street-level finishes and articulation. In-building amenities such as ample parking, day care, a cafeteria, a fitness center, and conference rooms may support a higher rent for the location. *James S. Russell*



James S. Russell



# 745 Fifth Avenue New York City

*This 1931 building, originally designed by Ely Jacques Kahn, occupies an enviable corner on Fifth Avenue in New York City, diagonally across from the Plaza Hotel. "The client came to us to turn a building into a Class A structure," explains Phillip Liederbach of Hammond Beeby Babka. The building was cleaned, the steel windows replaced with double-*

*glazed aluminum-framed units; missing or broken glazed brick and decorative terracotta units were replaced, and a new mechanical system installed. The most visible changes are in the lower six floors. The bottom two levels were stripped to steel and reclad in dark granite trimmed with bronze to create enticing retail spaces. New stone installed above the sec-*



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ond floor was applied over existing limestone (before, bottom, and after, below). At the sixth floor, oversized medallion windows terminate the street-scaled bays and read from a great distance (opposite left). At the lobby entrance, a new metal grille, similar to the structure's original, was installed (opposite right). New lighting was designed for the entrance. Inside the lobby, cove

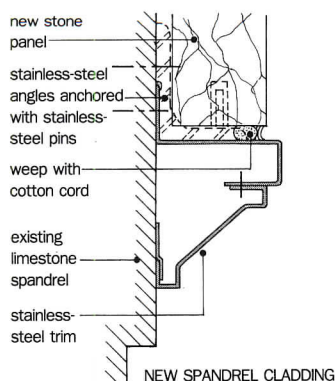
lighting was removed, a mural by August Coffey restored and extended down the far wall, and new uplighting and downlighting was designed (opposite bottom). "The original idea was to provide 15 separate storefronts," explains Liederbach. "Instead, one tenant [the Bergdorf-Goodman department store across the street] took the entire ground and second floors."

**Credits**

**Architects:** Hammond Beeby And Babka with Russo + Sonder—Bernard Babka, Charles Young, Phillip Liederbach, Richard Sonder, Ephraim Wechsler

**Engineers:** Wiedlinger Associates (structural); Cosentini Associates (mechanical)

**General Contractor:** Morse/Diesel, Inc.

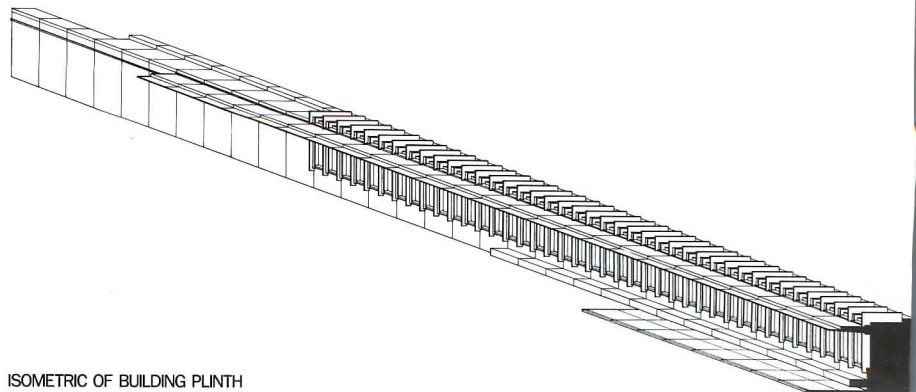
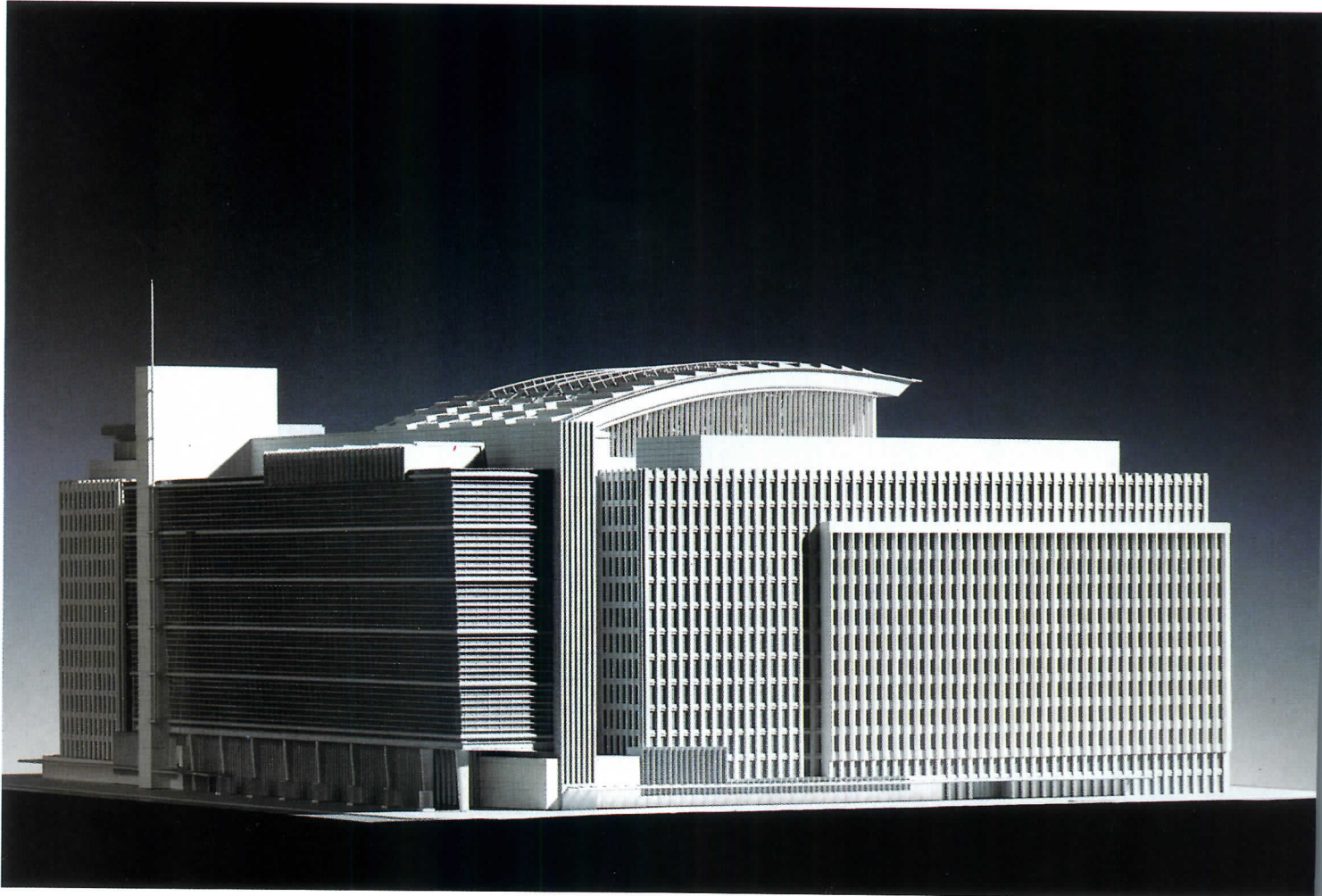




# The World Bank Washington, D. C.

*The competition brief for the World Bank's expanded headquarters assumed demolition of all seven structures on its full-block site. In choosing to retain two of the buildings, one a 1964 design by Vincent Kling, (lower left on plans opposite), the other by Skidmore, Owings & Merrill, opened in 1969 (bottom right on plans), the design solution will lower costs and ease relocation. Architects of*

*the project are Kohn Pedersen Fox with KressCox Associates and Naegele Hoffmann Tiedemann, associate architects. Retaining the existing buildings (shown in tone on elevations, opposite) meant designing a very dense complex to accommodate the 2.1-million-sq-ft program within Washington's 130-ft height limit. The architects expanded an existing courtyard for views*



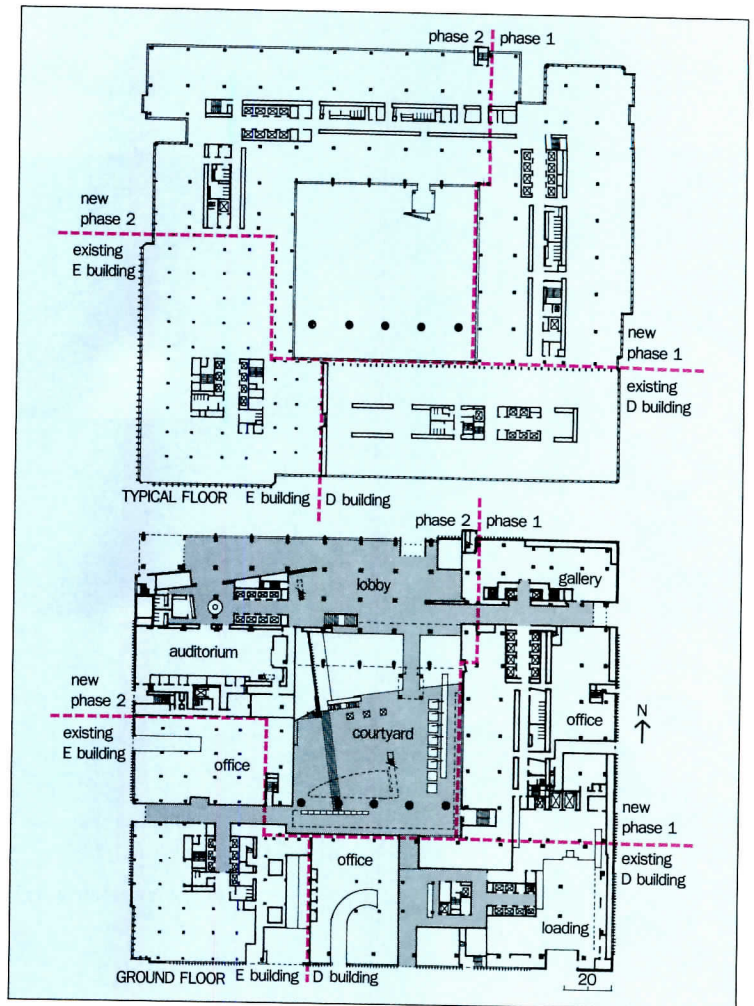
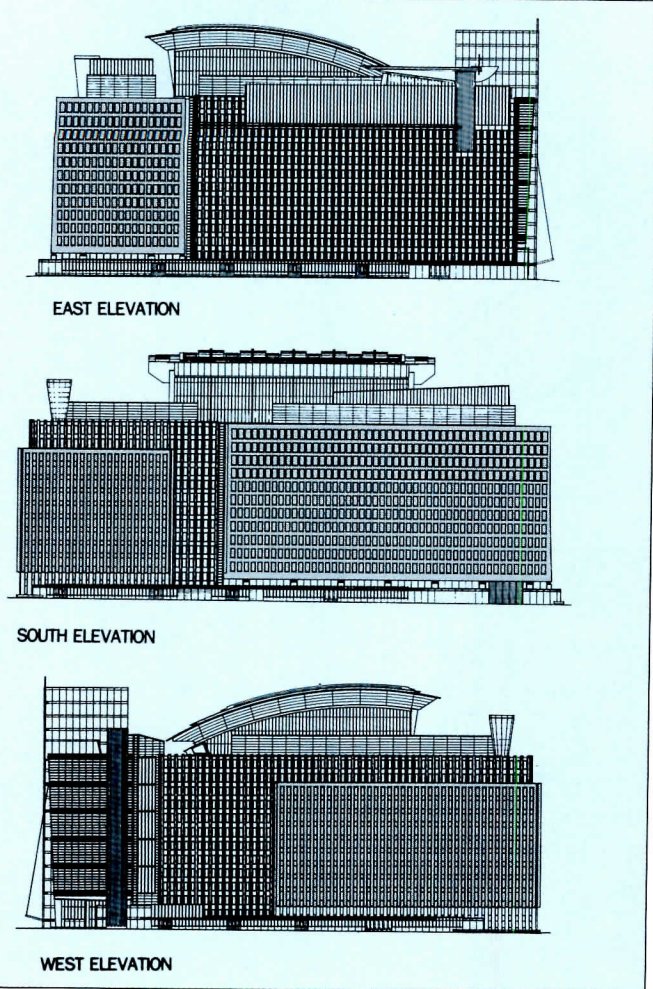
ISOMETRIC OF BUILDING PLINTH



to the interior and carved away the corners to increase outside offices. Large mechanical shafts in plan reduce the size of horizontal ductwork so that the low 10-ft 1-in. floor-to-floor height can be maintained. The upper levels are supported on a ground-level, metal-paneled "plinth" (opposite bottom), which contains intake and exhaust shafts and unites new and existing structures (the lat-

ter were built on recessed piers with window-wall infill). "The construction schedule is closely tied to the bank's needs to keep each department and its related agencies running uninterrupted," says Joseph P. Ruocco, job captain at Kohn Pedersen Fox. The work is staged so that the Phase 1 building is erected concurrently to renovations in building D (plans below). The

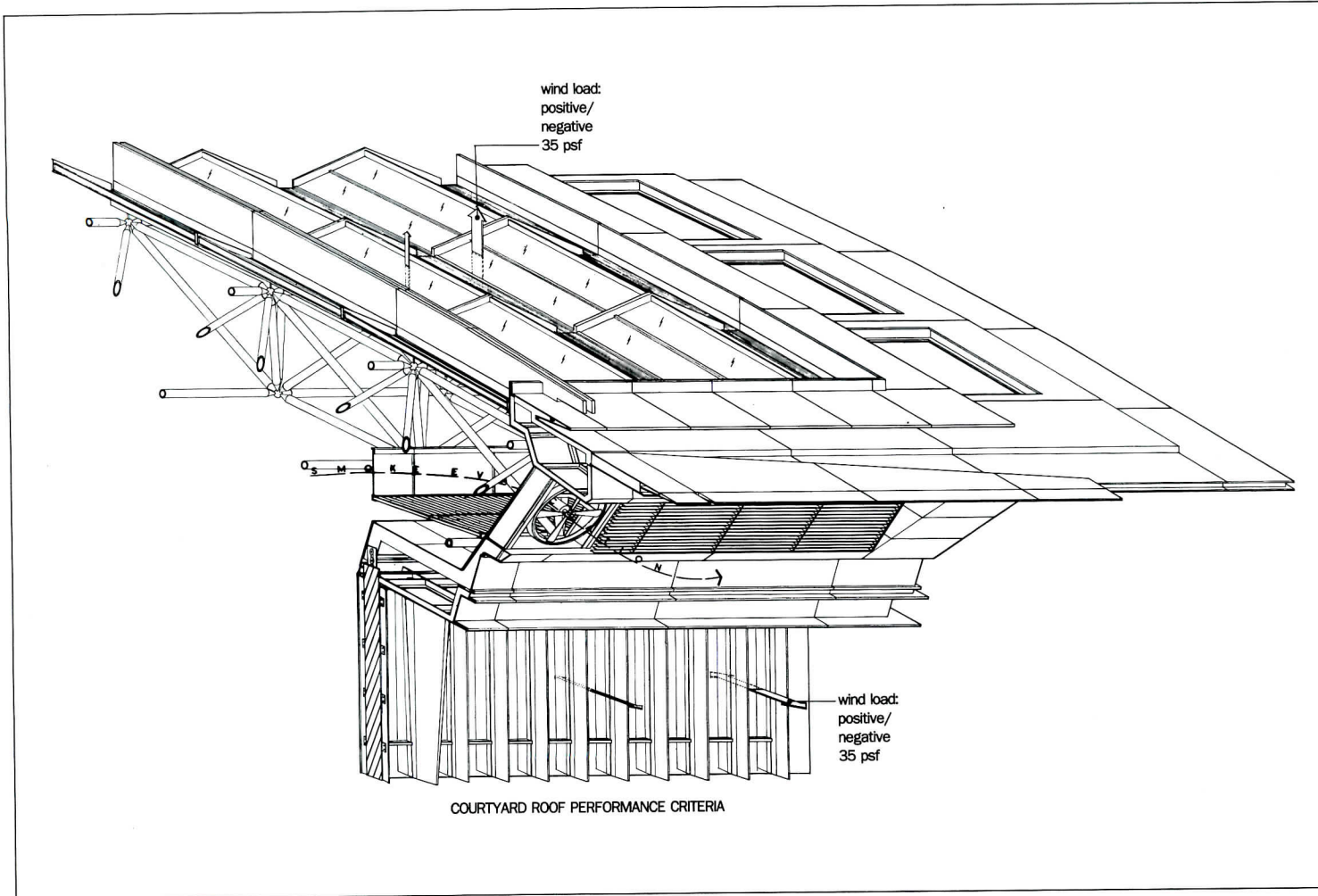
second phase will likely include work on building E. Improvements to the existing buildings will include provision of new fire separations and life-safety systems. Ramps will connect existing and new structures (alignment differences range from a few inches to 3 ft). Completion of the entire complex is planned for 1995.



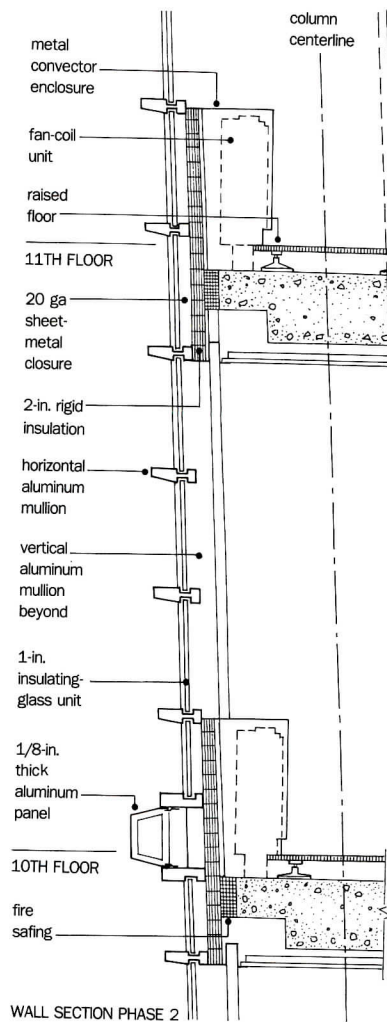
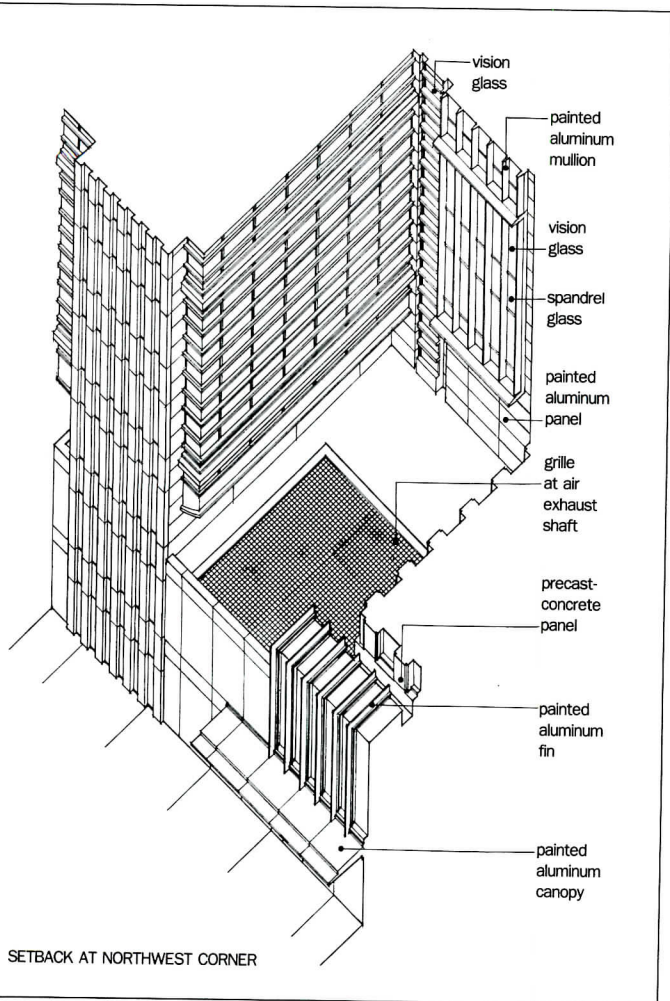


An expanded courtyard, covered by a skylight, will bring light to grade level and to two lower levels. (The courtyard within the existing structures on the World Bank site is uncovered.) The curtain wall of Phase I has been designed to be weatherproof, since the courtyard will not be roofed until the second phase is built. The skylight (below) has been detailed to resist wind loads and

incorporates an atrium smoke-exhaust system. A space-frame will convey loads to a row of columns within the courtyard, which minimizes the added load to three new walls and the existing fourth wall.







developing the new elevations, the architects took cues from the retained buildings. From the east, west, and south elevations a densely patterned glass-and-metal curtain wall picks up the 2.5-ft module of the masonry-clad existing buildings. A strip of horizontally glazed glass on the north marks the entrance elevation facing Pennsylvania Avenue (wall section right). The transition

between the vertical and the horizontal systems is shown above. From Pennsylvania Avenue visitors can see through the glass-walled lobby deep into the central courtyard, which will contain "allegorical sculptures," according to Craig Nealy, KPF's project designer. "This will give the bank an outwardly directed urban presence, rather than being a fortress."



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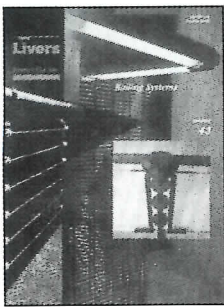
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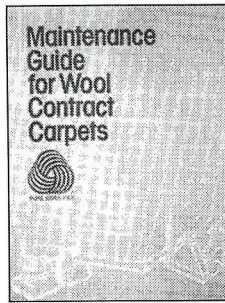
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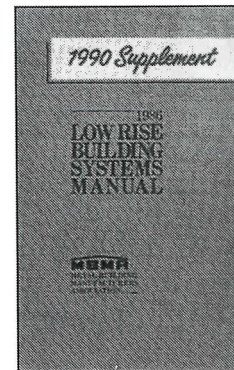
**400**



**Carpet Upkeep**

An illustrated brochure outlines basic maintenance routines recommended for wool carpeting in contract installations. Specifies detergent types and cleaning methods. The Wool Bureau.

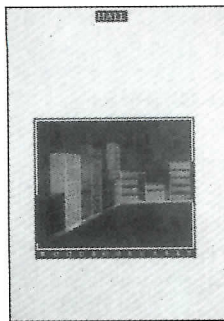
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**Low-rise Design**

48 pages of data for the design and construction of low-rise metal buildings. Features wind-loading on single-slope roofs and fire-resistant assemblies. \$5. Metal Building Mfgs. Assn.

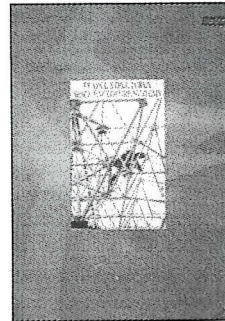
**402**



**Hardwood Bookcases**

An 18-page catalog on open shelving and display cases illustrates units for office, library, and home use. All wood-finish options are shown. F. E. Hale Manufacturing.

**403**

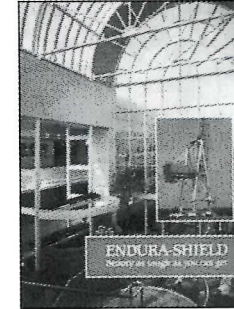


**Space Frames**

Architectural steel enclosure systems for canopies, atriums, domes, and complete structures illustrated. Layout, support, and glazing options for space frames listed.

Pearce Structures.

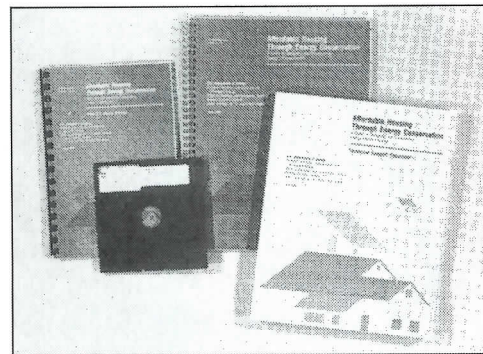
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**Enamels for Steel**

Series 75 Endura-Shield coatings come in 261 standard colors. Meet current VOC regulations; resist abrasion and corrosion. Suggested for architecturally exposed structural steel. Themec.

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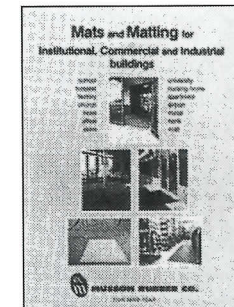


**Energy Conservation**

A guide to the design of affordable energy-efficient homes offers strategies from awnings to weatherstripping for site-built wood-frame and masonry structures. Compares costs of energy-saving op-

tions across 45 climatic regions. Includes PEAR 2.1 software, developed by Lawrence Berkeley Laboratory as a technical basis for improved building design. \$26 charge. U. S. Department of Energy.

**406**

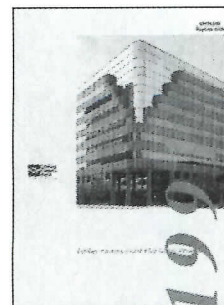


**Rugged Floorcoverings**

Indoor/outdoor carpet, anti-static and anti-fatigue mats, and entrance walk-off products for institutional, industrial, and many commercial applications. 20 pages.

Musson Rubber.

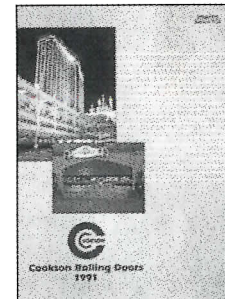
**407**



**Architectural Glass**

Design, loading, and appearance criteria for monolithic, insulating, and residential glass. Reflective, Low-E, tinted, and transparent-mirror types included. Libbey-Owens-Ford.

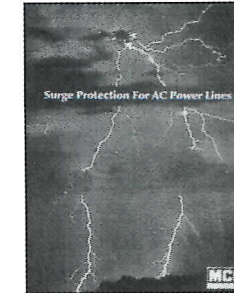
**408**



**Rolling Doors**

Steel-slat doors and side-coiling closures for a variety of functional and decorative requirements. Includes service, fire, and smoke-control doors, as well as wood counter units. The Cookson Co.

**409**



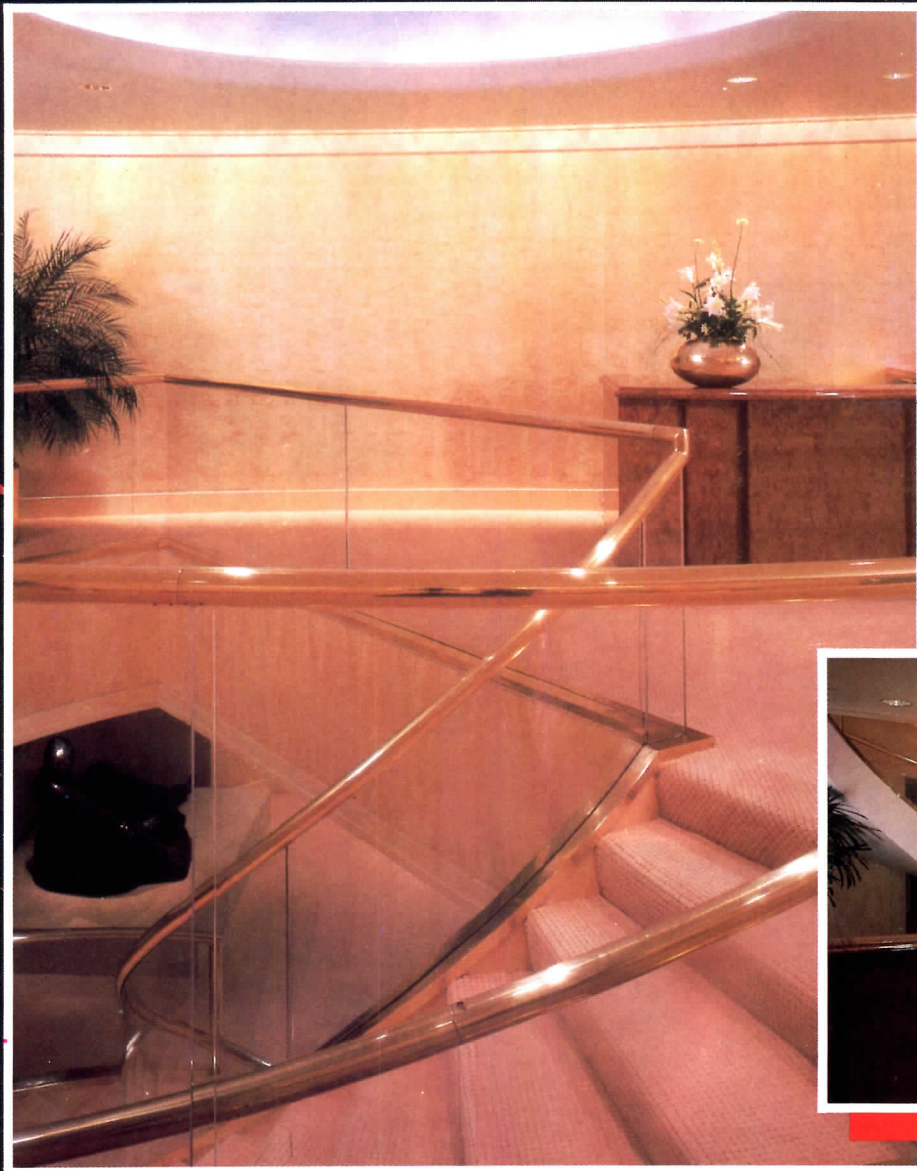
**Surge Protection**

Booklet describes the damage potential of voltage transients, and suggests some code-compliant devices ranging from whole-facility protection to plug-ins for equipment. MCG Electronics.

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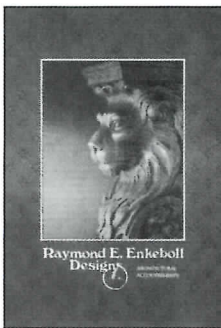
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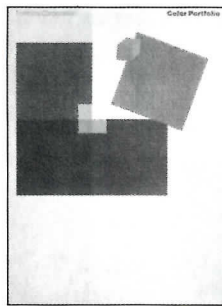


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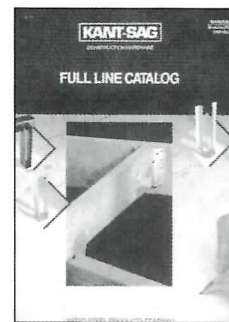
**Carved-wood Moldings**

Folder highlights carved and sculpted corbels, balusters, and other architectural details made of solid wood. Full-line catalog available on request. Raymond E. Enkeboll Designs. **411**



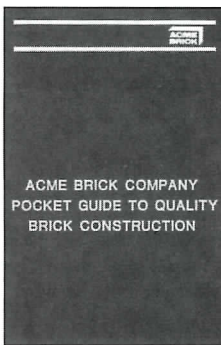
**Laminate Selection Guide**

25 new shades—neutrals, chromatics, and deep, saturated tones—are included in a specification chart featuring all 119 standard solid-color laminates. Formica. **412**



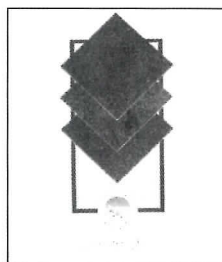
**Framing Hardware**

60-page catalog features Kant-Sag hangers for specific structural-wood beam types and the requirements of high-wind-resistant construction. United Steel Products. **413**



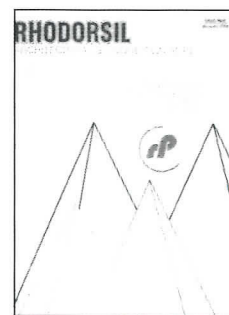
**Brick Construction**

Pocket-size guide has over 100 pages of design data, from grouting to brick-veneer metal-stud curtain walls, and charts wall properties for king-size, modular face, and other brick types. Acme Brick. **414**



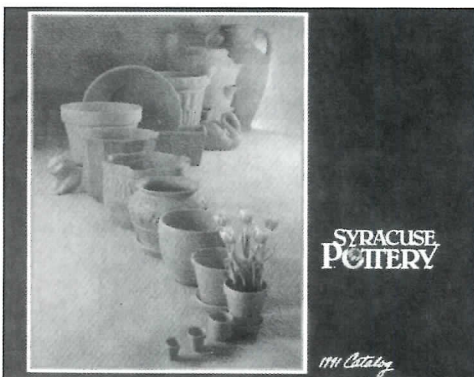
**Mahogany Granite**

A single source supplies calibrated tile for paving and architectural cladding applications. Colorations include black-swirled Badlands and salmon-streaked Crazy Horse. Dakota Granite. **415**



**Architectural Silicones**

Catalog describes Rhodorsil products for structural and curtain-wall glazing, and weather and perimeter sealing. Details suggest installation for each use. Rhône-Poulenc. **416**



**Planters**

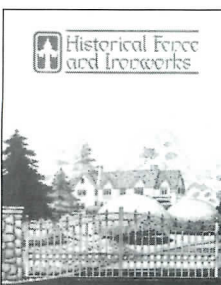
Color catalog illustrates clay pots and jardinières for both indoor and outdoor use, in garden or atrium. Finish options include solid-color and patterned glazes as well as red clay and Italian Terra Cotta; plastic planters are also

shown. Dimensions are given for each design; single-unit and bulk prices listed. Syracuse Pottery. **417**



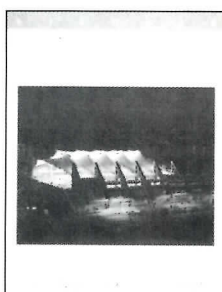
**Modified-bitumen**

Polyester-fabric-reinforced membranes are made with either APP- or SPS-type elastomeric modifiers. Brochure evaluates systems for both new construction and reroof projects. Firestone Building Products. **418**



**Ironwork fences**

Fences, gates, garden ironwork, and roof crestings shown with contemporary and traditional ornamentation. Custom-design and restoration work a specialty. Historical Fence and Ironworks. **419**



**Fabric Structures**

Color portfolio demonstrates how tensioned structures combine performance benefits and esthetics. Applications illustrated include retail malls, stadiums, zoos, and hotels. Birdair. **420**



**Custom Entrances**

Masterworks entrances are made to architectural specification in bright stainless steel or Muntz metal. Door may be as high as 10 ft, in single, pair or multiple configurations. Kawneer. **421**



## Preserving preservation. . .

*Continued from page 89*

considered "the exclusive avocation of an elite few," in the words of Patricia Wilson, executive director of the D. C. Preservation League in Washington, D. C.

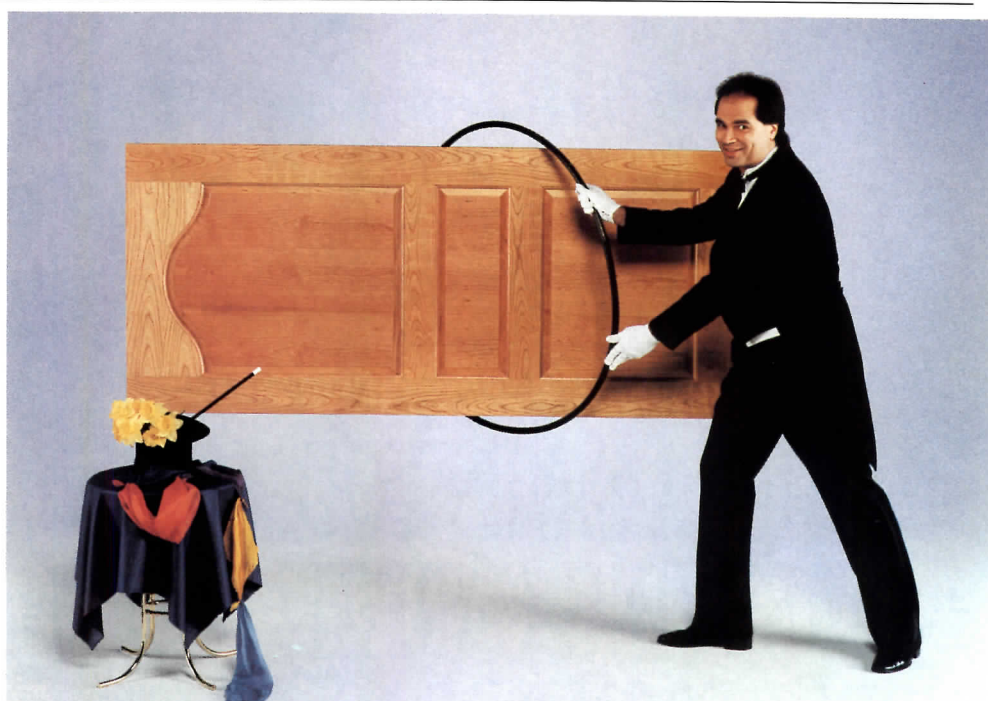
Hurricane Hugo and the San Francisco earthquake caused a rumble among preservationists. Not only were important buildings lost, but salvageable, historical resources were plundered. In the panic to clean up the rubble in California, "demolition fever" was so prevalent that the state legislature eventually prohibited demolition of buildings unless there was an imminent threat to the public or the state historic preservation officer had approved. In the East no conclusive inventory of historic resources—buildings or sites—existed either for the ravaged sections of Charleston, S. C., and surrounding counties or for Puerto Rico and the U. S. Virgin Islands. Inadequate documentation made precision repairs difficult. Clearly, rapidly evolving computer technology and software can aid in the documentation of historic resources.

Perhaps an impossible challenge for preservationists in the 1990s will be the protection of the environment that surrounds a historic property. Neil W. Fortsman, resident director of Mount Vernon near Washington, D. C., asks, "If we preserve a historic building or area but fail to safeguard its nearby environment, have we only done half our job?" The protection of significant Modern buildings may also prove difficult. Will the economics of taller and bigger skyscrapers threaten post-World War II buildings? Will the National Register, which first calls a building historic at 50 years, provide enough, if any, protection? Can local landmark commissions plug the hole in the dike? Will Modern buildings prove as flexible for adaptive use as older ones? And would their modernity be ruined?

Is there a glitch in the historic continuum? When restoring 18th- and 19th-century structures, it has been possible to reproduce materials that were once handmade: i. e., stamped sheet-metal ceilings, clapboard, and terra cotta have been re-created for historic rehab, if not contemporary use. If the technology has been lost, the factory-produced products of the machine age may be nearly impossible to refabricate. What replaces enamel steel panels, corrugated aluminum sheets, or plastic laminate? Is freezing Modern buildings in time ironic, given that modernists encouraged the discovery of new, expressive materials and the adaptation of buildings to *changing functions*?

Adding to Modern masterpieces is another tricky task mired in controversy. Should esthetic sensibilities complement or recapture those of an earlier age? Or can a clear juxtaposition of styles work? Take Michael Graves's 1985 proposal to add a Postmodern addition to the Whitney Museum of American Art in New York City. Or Romaldo Giurgola's 1989 plan for adding cloned wings to the Kimbell Art Museum in Fort Worth. Is Gwathmey-Siegel's 11-story, limestone-clad tower addition to Frank Lloyd Wright's Guggenheim Museum suitably deferential?

But controversies aside, this is a year for celebration. Preservation has gained much ground in the past 25 years. And as a new century approaches, so does the creation of environments that will offer even more humane mixtures of old and new. Architects must be on the front lines, as guardians of urban esthetics and livability. Scholar William Murtagh wrote, "At best, preservation engages the past in a conversation with the present over a mutual concern for the future." The 1990s promise a lively dialog. ■



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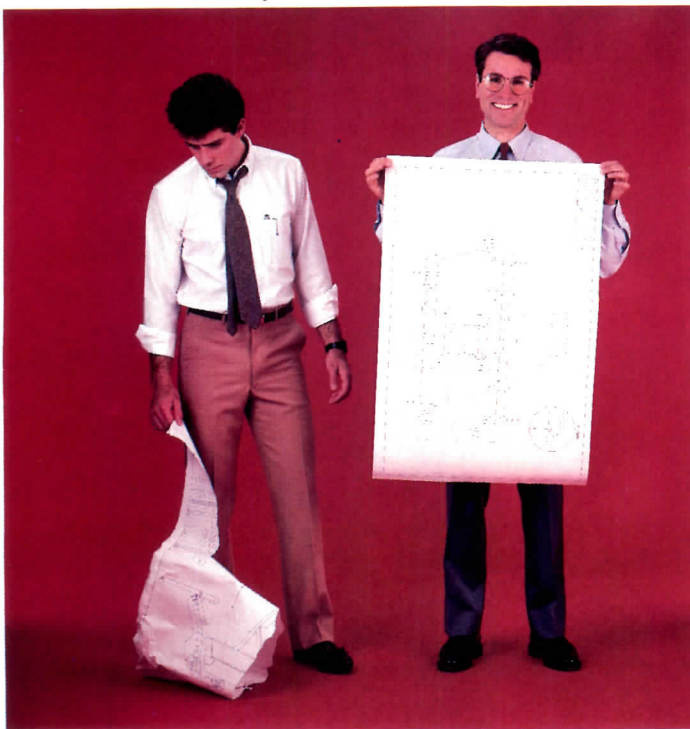
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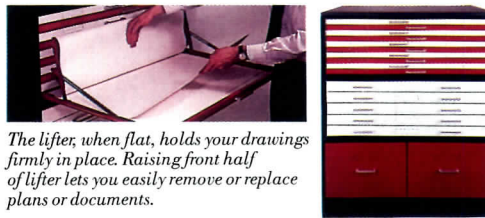
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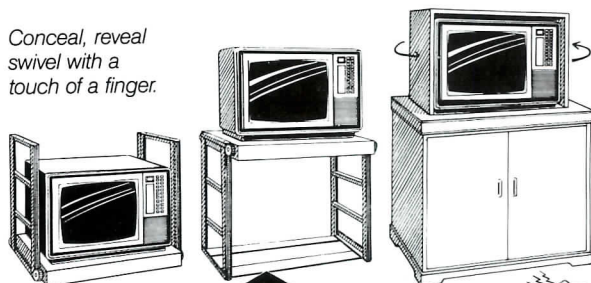
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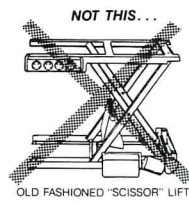
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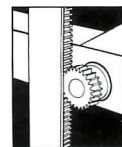
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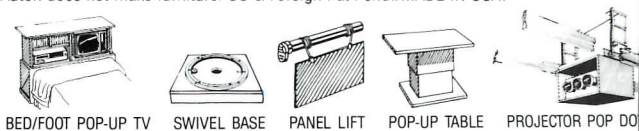
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Boston...

(continued from page 67)

read his speeches, letters, and diaries, the great landscape architect's career illuminates much about the nature of planning, his obligation to reconcile the immediate solution with the long-range goal. "From Olmsted I have gained an understanding that it can take years for a project to be realized as you have envisioned it. Every night I go out of my way to drive home along the Emerald Necklace [the park system Olmsted designed for Boston and environs], and it always strikes me that people stood back and resisted the pressures of their day, knowing the benefits of their plans would not be realized in their lifetimes. You plant trees along the Arborway and 35 years later people start to appreciate what you were thinking about. You build a park of key open spaces in the 19th century, and it creates a set of lungs for the city of the 20th century. That gives you a lot to think about."

"We tend to do two kinds of plans well in this country," he continues. "We do a good job on project plans for a particular place, like Battery Park City. They're very detailed, and they emanate more from the art and science of architecture and engineering than they do from planning. Then we tend to do long-term studies about what our city will be like in the middle of the next century. We do a lot of those because there are no real political costs associated with them. But somewhere in the middle ground, between the project plan and the over-the-horizon plan, is a kind of planning that has incorporated all the disciplines of city planning—let's say city building—and reconcile them with the social and economic realities of the city. And to do that you must try to understand the values of the city, its identity as a set of beliefs as opposed to a collection of buildings."

**uncertain future**

There is much speculation as to how long Coyle will remain director, and what he will do next. In the past few years he has been held high-level municipal jobs in several cities, including St. Louis and New York. According to local newspapers he has just declined an offer to join the cabinet of Massachusetts's new governor, William Weld. If he stays at the BRA, he will certainly confront new dilemmas. The "Massachusetts Miracle" has receded into memory, developers from across the coun-

try and around the world are no longer clogging the BRA's switchboard, and several major BRA-approved projects have been stalled for want of financing. The agency's task today is not to temper but to spur development, while holding fast to the city's planning standards.

When asked about his plans, Coyle says he would like, at some yet-to-be-specified point, a sabbatical from the intensity of public life, with time to read and to study. It is hard,

though, to imagine him leading the quiet life for long. As he himself admits, "I've had the good fortune, for almost 20 years now, to be involved in trying to build things in cities. After you've done that for a while, and know how to put a building in the ground, or how to put a proposal together, or how to design a master plan for a city, or how to sit down and mediate issues, you get to the point where you can say, I am now beginning to know what I mean when I say, 'I'm a city builder, that's my profession.'" ■

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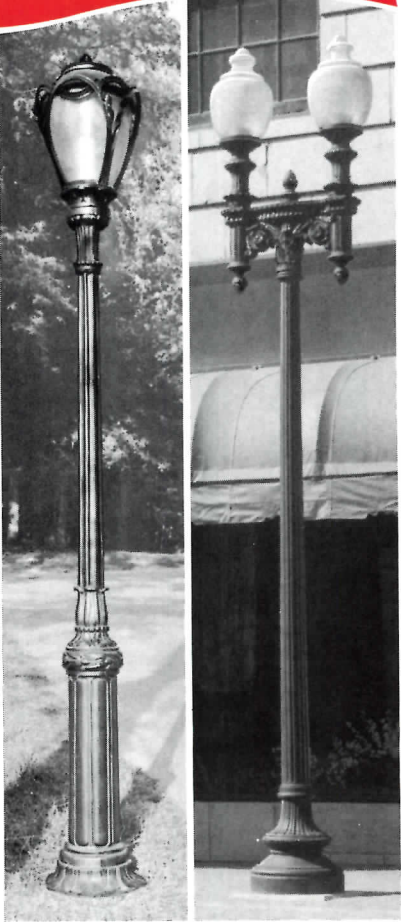
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**WASHINGTON POST**  
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## Manufacturer Sources

For your convenience in locating building materials and other products shown in this month's feature articles, RECORD has asked the architects to identify the products specified.

### Pages 90-99

the Berkeley Building.  
Potter Finegold + Alexander, Architect  
Applications of terra cotta elements: Fibertech. Terra cotta on ground level: Boston Valley Terra Cotta. Other terra cotta: M. G. M. Studios. Bronze entrance: Tajima. Storefronts: Architectural Woodworking. Skylight: SuperSky. Aluminum windows: Custom Windows. Replacement wood windows: Ricketson Woodwork. Lampposts: Spring City Electrical Manufacturing Co. Paint on metal surfaces and interiors: Benjamin Moore. Balconies: Pole Tech. Facade lights: Devine Lighting. Porcelain panels: California Metal Enameling. Column surround: American Marazzi Tile. Wood finishes: U. S. Paint. Sconces: Boom. Pendants: Custom Metal Craft. Wallpaper: Scalamandré. Lobby railing and atrium guardrails: Southeastern. Elevators: Montgomery. Cabs: Southwest Elevator Cabs. Atrium and exterior window treatments: Carey-McFall. Atrium storefronts and windows: Kawneer Co. Finish: DeSoto.

### Pages 100, 103

La Italiana Zerilli-Marimò  
Lipern Architects  
Roofing: Carlisle Syntec. Quarry tile: American Ocean. Casement and double-hung windows: Marvin. Locksets: Baldwin. Acoustical ceiling: U.S. Acoustics. Cherry-wood details: S & G Woodworking. Paints: PPG. Lecture-hall carpet: Stratton. Auditorium seating: Irwin Seating Co. Special lighting: Glashutte Limburg; Lightolier.

### Pages 101, 102

the Onassis Center for Hellenic Studies  
Lipern Architects  
Double-hung windows: Marvin. Wood doors: September Woodworking. Locksets: Baldwin; Baldwin. Hinges: Stanley. Cabinetwork: Herbert Construction Co. Hardware: Ives. Paints: PPG. Reception seating and tables: Rialto. Specialty fixtures: Rejuvenation Lamp & Lighting.

### Pages 106-113

the Gary Group  
the Owen Moss Architect  
OU: Orco Block Co. Storefront windows and entrance: Rebo-West. Awning windows: Torrance Aluminum. Roof coating: Arithane Foam Products. Architectural metal roof: GSM Sheet Metal. Light: Daylight Glazing. Polished concrete: Orco. Fluorescent fixtures: Prudential Lighting. Exterior lighting: Harvey Hubbell.

### Pages 114-119

Andrew's Episcopal Church  
Beha Associates, Architect  
Window restoration: Detail Millwork. Locksets: Baldwin. Hinges: Stanley. Closers: LCN. Exits: Duprin. Interior and exterior paints: Benjamin Moore. Flooring stain: Minwax. Carpeting: Tons. Sconces and chandelier restoration: Custom Metal Craft. Recessed downlights: Kurt Olsen. Ceiling fixture: Metropolitan. Pews and restoration: Crenleigh/Harris.

### Pages 120-129

Harborside Financial Center  
Beyer Blinder Belle, Architect  
Brick: Ram Brick. Curtain wall, infill windows, and entrance: Eastern Architectural Systems. Clear glass: Falconer. Frit glass: PPG (Patternlite). Panelized stucco: Insulcrete. Atrium: Dominic Iron Works. Skylights: Wasco. Translucent panels: Kalwall. Granite flooring: Granicor. Quarry and ceramic tile: Summitville. Paints: Benjamin Moore. Uplighting: Eliptipar.

### Pages 136-143

Mercy Family Plaza  
Sandy & Babcock, Architects  
Roofing: Manville. Fence restoration and interior railings: Sun Iron Co. Hollow metal doors: Ceco.

Oak panel doors: Haley Brothers. Locksets: Schlage. Hinges: McKinney. Closers: Sargent. Cabinetry: Rainier. Woodwork: Tacoma Valley. Paints: Fuller O'Brien. Countertops: Wilsonart. Vinyl flooring: Azrock. Site lighting: TrimbleHouse.

### Pages 144-151

Restoration of the Purcell-Cutts House  
MacDonald & Mack, Architect  
Wall and millwork finishes: Wilson-McLaren Restorations. Art glass: Monarch Studios. Sliding and other doors: S & W Builders. Exterior stucco, interior float plaster: Stephen Donnelly Co. Mural: James S. Horns. Security system: Honeywell. Smoke detectors: Fenwall Vesda. Reproduction fixtures: The Brass Light Gallery.

PPG Place, Pittsburgh, PA.  
Architects:  
Philip Johnson & John Burgee.



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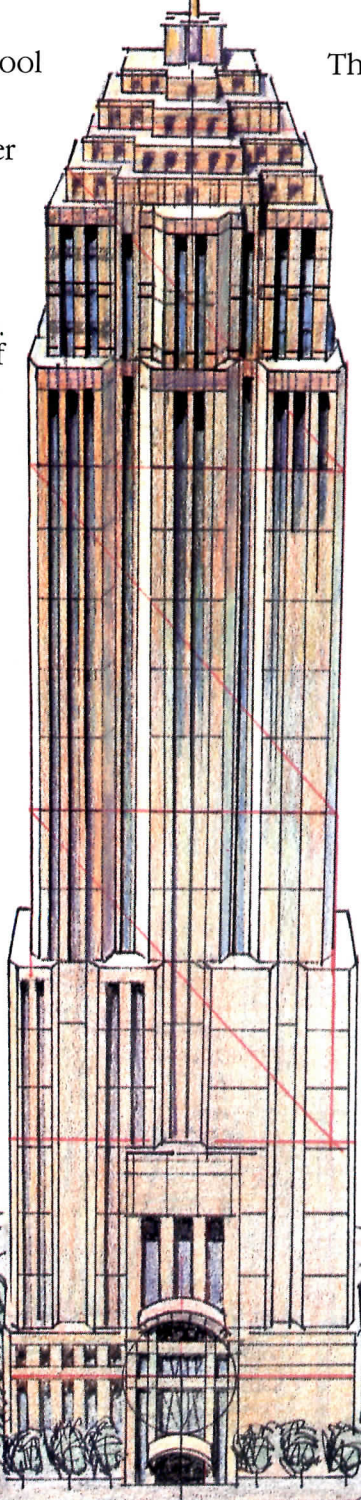
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