

# BRNA



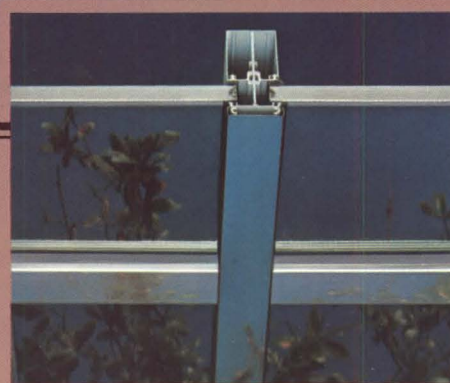
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That's the conclusion of Consulting Engineer Frank T. Andrews of Fullerton, California, who's had long experience in dealing with Las Vegas hotel complexes. When he was given the MGM Grand Hotel energy-saving assignment, Andrews knew that because of the many variables and intricacies involved, the job required a computer solution with a flexible input format and almost unlimited scope. After investigating several energy analysis programs, he selected E CUBE because it was the best way to:

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In recommending the best program for MGM Grand, and simulating the most appropriate series of conservation options, Frank Andrews was able to verify that:

- Chilled water pumping horsepower could be increased to adequate size and controlled to reduce electric consumption.
- Oversized variable air volume system in low rise building areas was wasteful and should be renovated.
- Existing fan coil units for tower

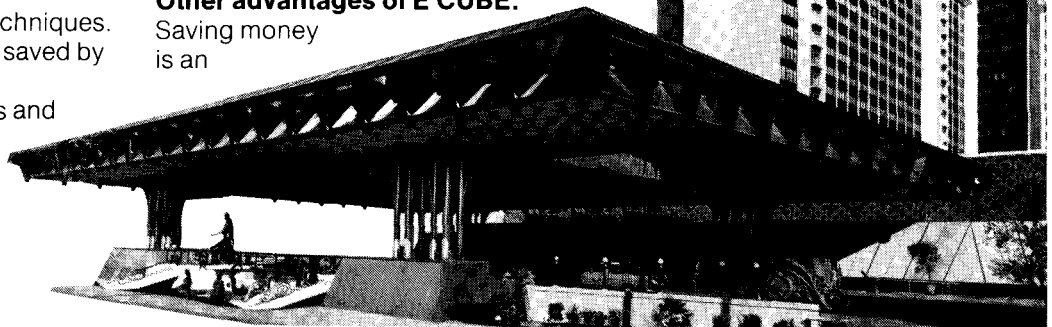
guest rooms were inadequate for optimum guest comfort.

- Economy cycle cooling for public spaces in conjunction with airside balancing should be implemented.
- Modifications to air conditioning procedures in some of the Hotel's 53 individual zones were indicated.

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AIA-29

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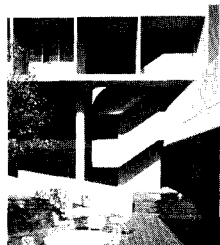
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**Cover:** Photo by Norman McGrath at Stockton State College, N.J., (see story, page 28).

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GBQC



Practice



Wilmington

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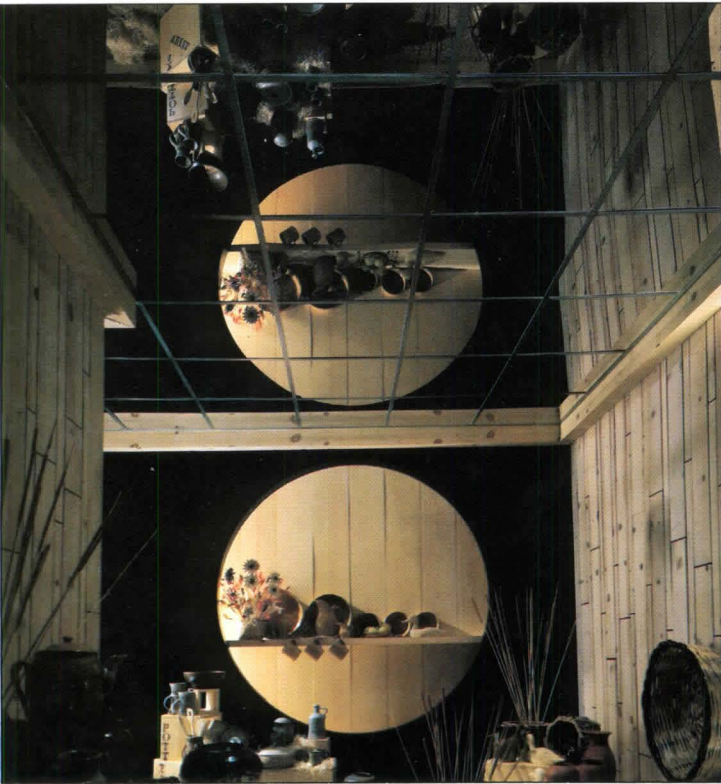


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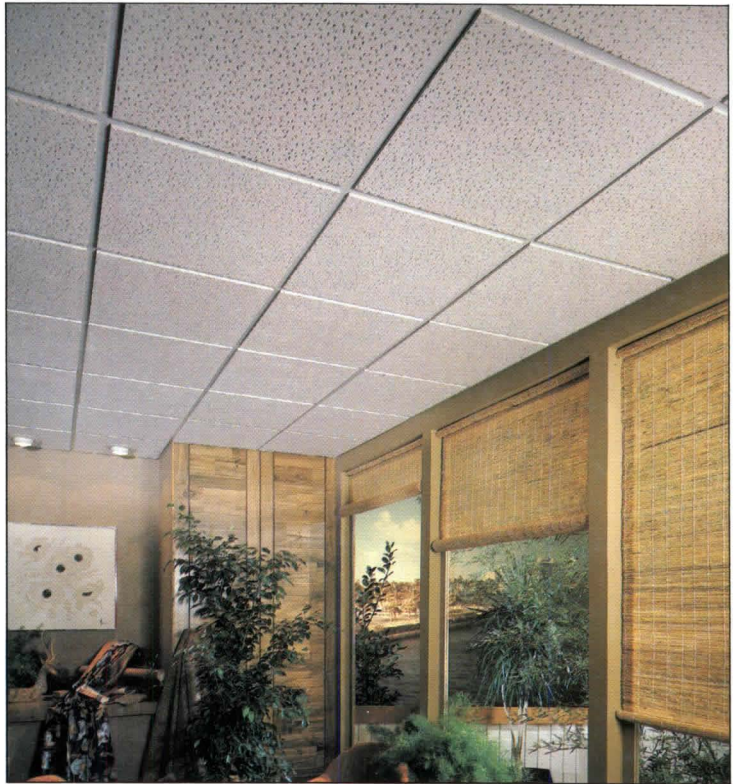


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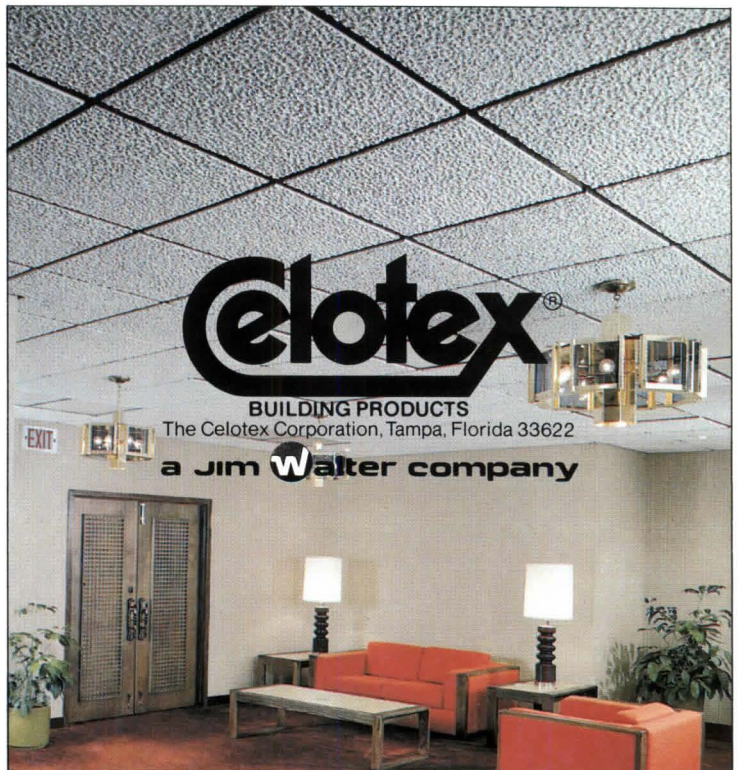
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## EVENTS

**Mar. 4-6:** Construction Industry National Legislative Conference, Hyatt Regency Hotel, Washington, D.C. Contact: CINLC, 815 15th St. N.W., Suite 902, Washington, D.C. 20005.

**Mar. 4-7:** National Insulation Contractors Association annual convention, Hilton Palacio del Rio, San Antonio, Tex. Contact: NICA, 1120 19th St. N.W., Suite 405, Washington, D.C. 20036.

**Mar. 5-7:** Conference on State Energy Audit Impact '79, Hyatt Regency Hotel, Dallas, sponsored by the Department of Energy and the American Institute of Industrial Engineers. Contact: AIIE, 25 Technology Park/Atlanta, Norcross, Ga. 30092.

**Mar. 6-7:** Seminar on Energy Management in Buildings, Houston, sponsored by New York University. (Repeat seminars: Mar. 20-21, San Francisco; April 17-18, Denver; May 8-9, Washington, D.C.; June 12-13, Los Angeles.) Contact: New York Management Center, 360 Lexington Ave., New York, N.Y. 10017.

**Mar. 12-13:** Course on Construction Law, Hartford Graduate Center, Hartford.

**Mar. 12-16:** Course on Advanced Concrete Technology, Portland Cement Association, Skokie, Ill. Contact: Educational Services Department, PCA, 5420 Old Orchard Road, Skokie, Ill. 60077.

**Mar. 14-15:** Conference on Energy Auditing and Conservation, Case Institute of Technology, Cleveland.

**Mar. 15:** Applications deadline, AIA/AIA Foundation scholarships. Contact: Ray Charity, AIA Headquarters, (202) 785-7349.

**Mar. 15-16:** Conference on Federal Programs, Brown Palace Hotel, Denver, sponsored by the Committee on Federal Procurement of A/E Services. Contact: Government Affairs Department, AIA Headquarters, (202) 785-7383.

**Mar. 16-21:** Associated General Contractors of America annual convention, San Diego. Contact: AGC, 1957 E St. N.W., Washington, D.C. 20006.

**Mar. 19-20:** Workshop on Solar Energy Storage Options, Trinity College, San Antonio, Tex., sponsored by the Department of Energy. Contact: Trinity University Continuing Education, 715 Stadium Drive, Box 79, San Antonio, Tex. 78284.

**Mar. 19-20:** Institute on Public Works Construction Inspection, University of Wisconsin, Madison.

**Mar. 21-22:** Government Affairs Seminar, Mayflower Hotel, Washington, D.C. Contact: Air Pollution Control Association, P.O. Box 2861, Pittsburgh, Pa. 15230.

**Mar. 21-22:** Conference on Downtown as Resource: Strategies for Main Street Revitalization, Nashville, Tenn., sponsored

by the National Trust for Historic Preservation and the Chamber of Commerce of the U.S. Contact: NTHP, Southern Field Office, 456 King St., William Aiken House, Charleston, S.C. 29403.

**Mar. 22-23:** Virginia Society/AIA spring meeting, Williamsburg, Va.

**Mar. 23:** Seminar on Tax Incentives for Historic Preservation, Del Monte Hyatt House, Monterey, Calif., sponsored by the Department of Interior's Office of Archeology and Historic Preservation and the American Planning Association. (Repeat seminars: April 2, Parker House, Boston; April 16, Netherland Hilton, Cincinnati.) Contact: APA, 1776 Massachusetts Ave. N.W., Washington, D.C. 20036.

**Mar. 26-28:** Geotechnical Exhibition & Technical Conference, Hyatt Regency O'Hara, Chicago. Contact: Geotechnical Publishing Co., Inc., P.O. Box 673, Rosemont, Ill. 60018.

**Mar. 26-30:** Course on Basic Concrete and Related Field Practice, Portland Cement Association, Skokie, Ill. Contact: Educational Services Department, PCA, 5420 Old Orchard Road, Skokie, Ill. 60076.

**Mar. 29-30:** Professional Services Business Management Association spring conference, Philadelphia. Contact: PSBMA, Barr Communications Services, 262 Washington St., Boston, Mass. 02108.

**April 1-4:** Edison Centennial Symposium on Science, Technology and the Human Prospect, San Francisco Hilton, San Francisco. Contact: ECS, 4733 Bethesda Ave. N.W., Washington, D.C. 20014.

**April 3-5:** American Society for Testing and Materials Symposium on Building Security, National Bureau of Standards, Gaithersburg, Md. Contact: G. R. Stevenson, (215) 299-5504.

**April 4-8:** Society of Architectural Historians annual meeting, Savannah, Ga. Contact: SAH, 1700 Walnut St., Philadelphia, Pa. 19103.

**April 7-10:** Association of Collegiate Schools of Architecture annual meeting, Savannah, Ga. Contact: ACSA, 1735 New York Ave. N.W., Washington, D.C. 20006

**June 3-7:** AIA convention, Kansas City, Mo.

## LETTERS

**Saarinen's Gateway Arch:** I thoroughly enjoyed "The Arch: An Appreciation" by George McCue, Hon. AIA, in the November '78 issue (p. 57). As a member of the St. Louis Chapter/AIA from 1949 to 1967, I was much involved with the efforts of the chapter to see Saarinen's magnificent design come to fruition, and would like to add one important series of events connected with the project.

Shortly after the competition was completed, our country became embroiled in the Korean War and the federal govern-

ment withdrew its commitment to construct the arch for financial reasons. Next, the government postponed funding the construction until such time as the federal budget was in balance. Surprisingly, to us today, this occurred in 1956; however, there were several influential members of Congress at the time who felt that building "that big wicket" was a total waste of taxpayer money and managed to prevent appropriation of monies for furthering the project.

The St. Louis Chapter, under the direction of President Eugene Mackey, took it upon itself to introduce a resolution at the 1957 AIA convention (the 100th anniversary convention), held in Washington, D.C., calling upon the federal government to live up to its previous commitment and appropriate the monies needed. This resolution was passed unanimously by the convention. With this strong support from the Institute, Congress proceeded during the next session to take steps to assure completion of one of the outstanding features of the national parks system.

Charles E. King, FAIA  
Jacksonville, Fla.

**From the 'Tree People':** The articles in the November '78 issue on underground architecture raise the ultimate question: *Why?*

Having visited the earth covered Wildwood preschool in Aspen, Colo., and finding that the experience aroused deeply buried and hard to analyze feelings—perhaps deep prehistory of the human race—I am not sure that adults would prefer this mode of building. The developer of the school pointed out the wonderful response of the preschool age tots to the feeling of enclosure and the lack of vertical walls.

Going back to a prebirth state may not be an ennobling and stimulating direction. The illustrations in the November issue appear to be regular buildings covered with dirt. I find myself restrained from sudden enthusiasm, but am not inclined to put the concept down. I want to think about the effect of this on architecture. I feel it drags us back to an aboriginal period in our stream of development. Perhaps I came from the tree people.

Francis R. Walton, FAIA  
Daytona Beach, Fla.

**Correction:** The book *Architecture and You: How to Experience and Enjoy Buildings* by William W. Caudill, FAIA, et al., reviewed in the October '78 issue (p. 96) does not have color photographs. We apologize to reviewer Buford Pickens, FAIA, for the editorial error.

The Journal welcomes reader comment, not just on its content, but on any matters of concern to the profession. *Ed.*





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## Urban Affairs

# New Help for the Nation's Abused City Parks

An unusual alliance, including both civil rights and conservation groups, has launched a campaign to ease the plight of urban parks, many of which are now ravaged by overuse, vandalism and shortages of space and funds.

Urban parks have experienced more use—and abuse—as more people seek recreation closer to home due to inflation. At the same time, most cities' parks departments have drastically reduced their budgets, which in turn reduces park maintenance and protection.

Joining in the formation of a new "national committee for urban recreation" last month were such diverse groups as the National Urban Coalition, the National Association of Counties, the National Association for the Advancement of Colored People, the National Audubon Society, the Sierra Club, the American Federation of State, County and Municipal Employees and the National Parks and Conservation Association. The Urban Environment Foundation in Washington, D.C., will serve as committee headquarters.

M. Carl Holman, president of the National Urban Coalition, at the committee's first meeting deplored the lack of progress since the 1968 commission on civil disorders reported major dissatisfaction with

urban recreation in 20 cities. "Urban communities," he said, "need parks and facilities which are close to home and which are readily accessible. The intensive use which these parks and facilities receive—and you have only to look at a pocket park or a playground in any big city neighborhood or urban county to see the proof of numbers—is in direct contrast to the amount of support they receive from government, especially from federal and state government."

The committee will monitor implementation of the new federal urban park and recreation recovery program, which provides 70 to 85 percent federal support for park programs if states allocate 15 percent of the funds. The group will seek increased public and private support for recreation in distressed urban areas and encourage diverse interest groups to participate at all levels of recreation decision making for urban parks. It will also promote policy changes in the Departments of Defense, Transportation, HUD and Health, Education and Welfare for programs to better serve recreation needs. Some possible changes were suggested in the Interior Department's 1978 national urban recreation study, such as:

- giving special assistance to local governments in acquiring necessary open space and recreation land;
- creating a comprehensive national reserve program based on a partnership between local, state and federal governments;
- undertaking a new federal assistance program for rehabilitation of large urban parks with regional or national significance;
- giving adequate attention to open space and recreation in HUD's urban development action grants and other HUD programs;
- changing the land and water conservation fund to address high priority urban recreation needs more effectively, to allow funding of indoor recreation facilities and to increase funding in core city areas of high need;



- administering the general revenue sharing program to encourage effective coordination of recreation with other municipal services in allocation of funds;
- encouraging effective use of the Comprehensive Employee Training Act programs to help meet park and recreation staff needs.

The Interior Department study, the first in depth federal examination of urban parks in highly populated regions, concluded that indeed urban parks are deteriorating due to lack of funding, overuse and vandalism. "Crime or fear of crime is a deterrent of park use in almost all of the core cities studied, as well as in many suburban jurisdictions," said the report. The report did suggest that in a number of cities underused or decaying areas have the potential to be reshaped for public recreation. The study also criticized the federal government for its lack of a coherent national urban policy, as well as the absence of a national recreation policy.

Meanwhile, the federal government took steps that may bring significant improvements to urban parks. In November, President Carter signed the omnibus parks bill, a five-year, \$725 million program to help cities restore parks and recreation

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### Urban Affairs

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## Urban Affairs from page 9

facilities. The program is the first of its kind targeted specifically at cities and is the largest amount of federal money yet provided for urban parks.

Last year, Congress passed the National Parks Access Act, which provides \$10 million over the next three years to subsidize low-cost public transportation to a number of national parks. This is the first time Congress has provided funds to help make such parks accessible to a large number of people without cars.

The federal government was not concerned with urban parks until 1970 when Congress created three urban national recreation areas: the 100,000-acre Golden Gate Park, which runs from San Francisco across the Bay to Point Reyes National Seashore; 26,000-acre Gateway Park at the entrance of New York Harbor at Breezy Point (Brooklyn), Jamaica Bay (Queens), Great Kills Shoreline (Staten Island) and Sandy Hook, N.J., and the 29,000-acre Cuyahoga (River) Valley in Ohio between Cleveland and Akron. The program will cost an estimated \$413 million. The land and conservation fund provides \$900 million annually, but this goes mainly for outdoor recreation and many states use their money for highway picnic and rest areas.

## Under 30, Over 65 Age Groups Expected to Spur Housing

A "growing army of young home seekers" will be an important segment of the home buying public between now and 1984, said Jay Janis, under secretary of HUD, at the building and construction expo and conference in Chicago. As a result of the postwar "baby boom," the Census Bureau estimates that the age group from 20 to 29 years will increase in size every year until 1984. Despite such social trends as the declining marriage rate, increased employment of women and delayed child bearing, this group will provide the "highest volume of recruitment to the household-forming population in the history of the U.S.," he said.

Another influential group for the housing market of the future will be the segment of population aged 65 or over, which will increase by more than 20.6 percent between now and 1988. "So what we have waiting for us in the near future," Janis said, "are nearly 42 million young Americans and almost five million older Americans, all in need of some form of housing."

Because of both social and economic factors, household size has been decreasing, Janis said. Thus, housing needs of the future "will best be met by smaller and more economical units than in the past." Because of the growing predominance of

one- and two-person households, rehabilitation of inner city properties is now economically feasible, he said. Between now and 1988, he predicted, there will be rehabilitation of more than 500,000 units in cities and close-in suburbs.

Although it is still the American dream to own a detached, single-family house, high costs have prevented the dream from becoming a reality, Janis said, pointing to the fact that the new single-family house has more than doubled in cost in the past seven years.

The cost of energy, he said, is the biggest and most unpredictable factor in home ownership cost. If energy costs continue to rise and shortages occur, there will be more higher density housing built closer to cities, located near transit lines.

Janis said that HUD was negotiating with the National Aeronautics and Space Administration to design and build a house for 2020 A.D. "that will be completely self-sufficient and independent of outside sources of heat, electricity, water and sewage disposal. Looking into the dim future for the planet earth, we are turning to the space agency to give us realizable visions of the space age." He said that HUD was also looking at underground space—"not at true underground houses, but at houses that are sheltered by the earth and built partially underground."

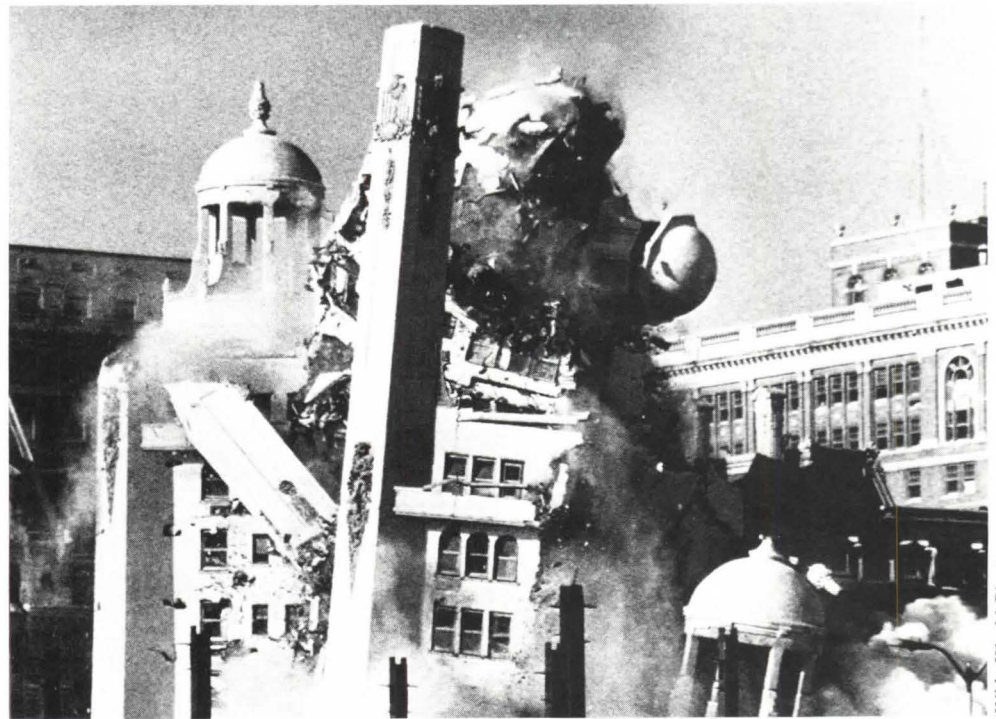
## HUD Lists Anticipated Benefits In Rehabilitation Loan Program

In his urban policy, President Carter ordered all federal agencies to conduct an analysis of the impact of major policies and programs on urban and regional areas. The first such assessment has recently been completed by HUD on the section 312 rehabilitation loan program.

HUD anticipates the following with this year's \$190 million (about 225 percent) increase in the program's budgets:

- Central cities will benefit more than the suburbs, and metropolitan areas more than nonmetropolitan;
- nearly 15,000 new jobs will be created, mostly in the inner city, of which 2,600 will go to minority workers;
- increases in wages and profits will total about \$121 million in central cities, \$51 million in suburbs;
- property values, sales, business and income taxes will increase, thereby slightly improving the fiscal condition of local governments involved in the program;
- because the amount of housing is not expected to change, the population of neighborhoods will not be affected;
- the program is concentrated in distressed neighborhoods, and these areas

*Urban Affairs continued on page 17*



**Death of a Landmark**—The Blenheim Hotel rotunda on Atlantic City's Boardwalk crumples to rubble Jan. 4, 11 seconds after 400 pounds of demolition dynamite were set off. The developers of the land won a long struggle when the state determined that the 73-year-old structure, listed on the National Register of Historic Places, had deteriorated beyond reasonable repair (see Dec. '78, p. 38). A consultant to the state found "a loss of structural efficiency of the elements" because the reinforcing steel in the concrete hotel had rusted or corroded, "principally because of its closeness to the surface of the concrete columns and beams." He said that a mantelling of columns on the building facade with additional concrete and reinforcing steel would be necessary to make the structure sound, a measure that would have considerably altered the appearance of the ornate rotunda.



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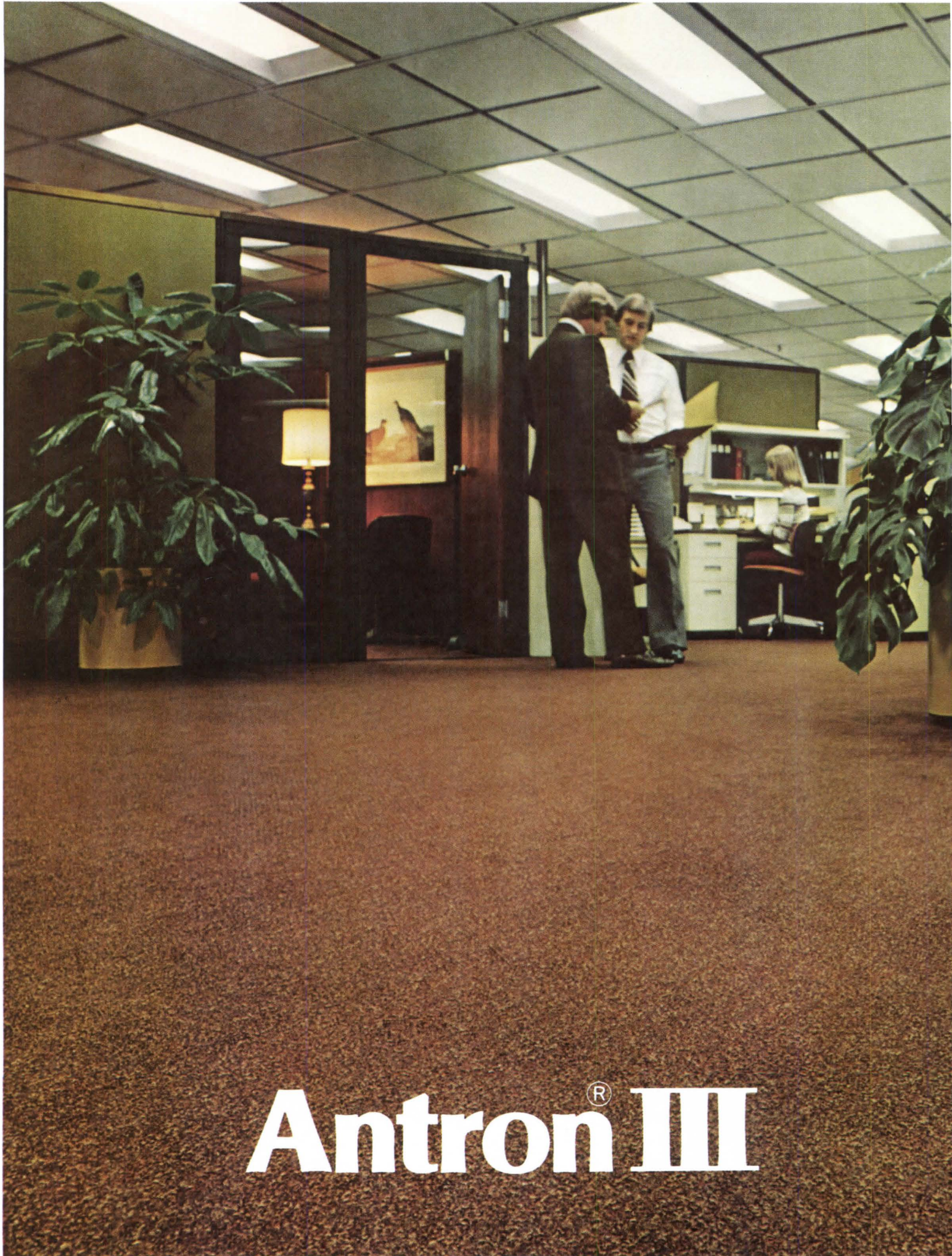
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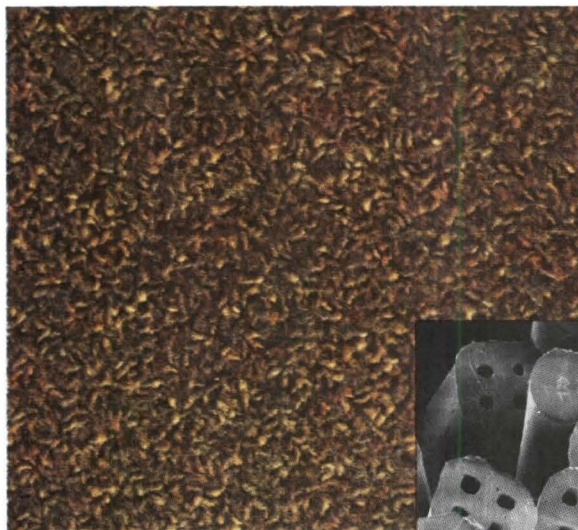
# Antron<sup>®</sup> III hollow filament nylon. The carpet fiber with lasting good looks and durable static protection. At Upjohn.

**"Antron" III hides soil.** Antron<sup>®</sup> III hollow-filament nylon is designed to mask the presence of soil. You can see the remarkable hollow-filament structure of this fiber in this 250X electron micrograph. The four microscopic voids optically scatter light to hide soil. This configuration also creates the effect of blending soil concentrations into the overall carpet look. The smooth exterior shape minimizes soil entrapment to facilitate cleaning.

**"Antron" III controls static shock.** "Antron" III nylon offers built-in protection against static shock. Its nylon sheath and core of polymeric conductive material is designed to control the generation of static electricity comfortably below the level of human sensitivity. This protection works well in all locations, including areas where relative humidity is extremely low. Extensive Du Pont tests confirm "Antron" III maintains effective static control even after 3 million traffics, repeated vacuuming and regular

Flooring Contractor: Central Tile and Terrazzo Company, Kalamazoo, Michigan

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shampooing.

**"Antron" III is durable.** Fiber loss due to abrasive wear is negligible, in regular or heavy-traffic sites, with pile of "Antron" III nylon. And "Antron" III has a subdued luster which, unlike bright or sparkle luster fibers, does not dull rapidly in contained high-traffic areas.

**Why Upjohn chose "Antron" III.** The Upjohn Company wanted carpet outstanding in low maintenance, wear

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Magnification of 250X "Antron" III nylon showing hollow filaments and round, anti-static filament.

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# LOF

Circle 10 on information card

Urban Affairs from page 12

are expected to improve as housing stock improves.

Since 1966, the 312 program has provided 55,000 loans, the majority to the Northeast and North Central states, to low- and moderate-income neighborhoods and to families with incomes below the national median.

Two alternative approaches were examined for the program and both rejected. If it were changed from a loan to a grant program, fewer properties would be affected and the income, employment and other impacts would be less positive. The second alternative, no federal funding, would have left rehabilitation to free market forces and would have a negative impact on distressed communities and low-income families.

## 21 Groups Share \$2.5 Million For Neighborhood Revitalization

HUD recently initiated a program to support and strengthen self-help neighborhood revitalization groups by awarding 21 organizations a total of \$2.5 million.

The 21 groups, representing a diversity of geographic, racial and cultural origins, will receive contracts ranging from \$80,000 to \$140,000 for community projects. With these awards, "HUD has taken a strong step in making neighborhood groups active partners with local government and the business community in rebuilding our nation's communities," said HUD Secretary Patricia Harris.

The program is administered by HUD's office of neighborhood development under assistant secretary Geno Baroni, with money from the discretionary fund of the community development block grant program.

"This is our way of building on what works—on the experiences of neighborhood groups over the past years," Baroni said. "Our goal is to make it possible for successful organizations to lend their skills and strategies to other neighborhoods." While encouraging greater access to HUD programs, Baroni added, the awards should increase the capacity of neighborhood groups to gain public and private funding from local, state and other federal sources.

The projects include such activities as the development of a home repair industry in Buffalo; renewal of business districts in Brooklyn, N.Y., Toledo, Ohio, and Chinatown in San Francisco; construction of a solar manufacturing plant in Hartford, and revitalization and antidisplacement strategies of Kansas City, Mo., New Haven, Newark, the South Austin neighborhood of Chicago and Watts in Los Angeles.

## Competitions

# 450 Architectural Students Vie To Build a Better McDonald's

Residents of Martha's Vineyard, an island off the southern coast of Cape Cod in Massachusetts, have succeeded, at least temporarily, in a fight against McDonald's Corporation. The fast food chain wanted to convert a health store into a restaurant for the dispersal of hamburgers and other specialties. Admirers of the quiet island, including such celebrities as John Updike and Mia Farrow, were able to stave off the Big Mac, just as they have jet airplanes and neon signs. One of the leading protesters called McDonald's a "symbol of asphalt and chrome culture that we do not have here." A McDonald's official said that the corporation had an obligation to its stockholders to go in where it could. "But we have other things to do here," he said, "and no one needs the aggravation of a Martha's Vineyard."

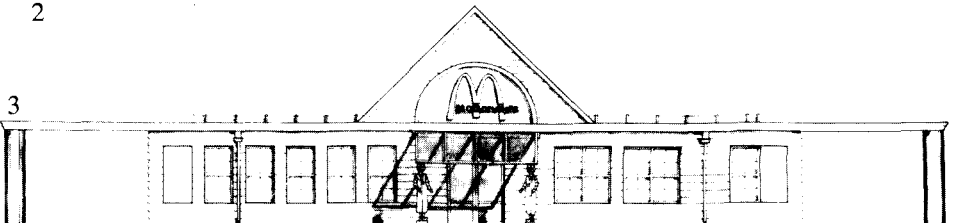
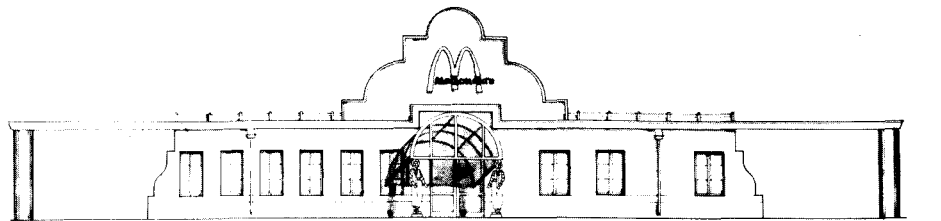
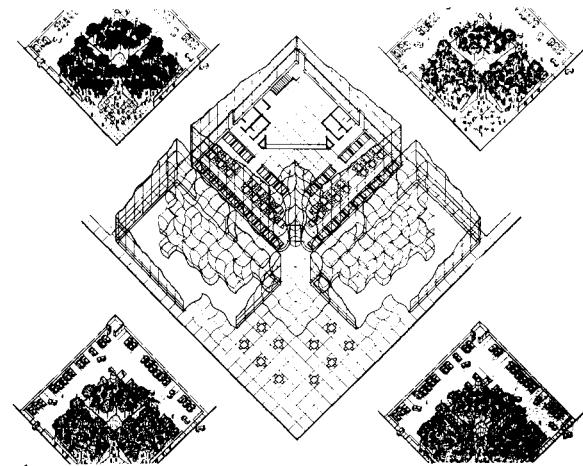
At any rate, McDonald's officials have been considering a change in the look of its structures, and the corporation and the Association of Student Chapters/AIA co-sponsored a competition for architectural students for the design of the "most innovative McDonald's of the future." More than 450 entries were submitted, with first prize going to Richard Pielli, a student at Pratt Institute. Jon Mark Halper, University of Illinois at Chicago Circle, won second prize and Austin K. Smith, Mississippi State University, captured third prize. Nine other submissions were given honorable mentions.

Final winners were selected by a jury of architects and students from a collection of 12 entries. Architects on the jury were Emilio Ambasz, New York City; Stanley Tigerman, FAIA, Chicago, and William Turnbull, FAIA, San Francisco; student jurors were Jeffery Chusid, University of California at Berkeley, and John Wilson-Jeronimo, president of ASC/AIA.

James Crabb, McDonald's corporate architect who served as liaison with ASC/AIA for the competition, told an architectural critic that McDonald's had not yet decided whether to use any of the designs. The corporation wanted "to get some ideas." The winning entries will be published in a catalog and a traveling exhibit is planned for 1979. The competition designs will be on display at AIA's convention in June.

The winning design by student Pielli (1) incorporates two large rectangular structures cut on a diagonal, with trees planted in the interior. The rectangles, called McDonald's "sandboxes," provide space for the Big Mac customer to relax and children to play, presumably while an order is being filled. The interior landscaped area would change with the seasons. A grid, hard-edged but bent at the center, would cover the complex.

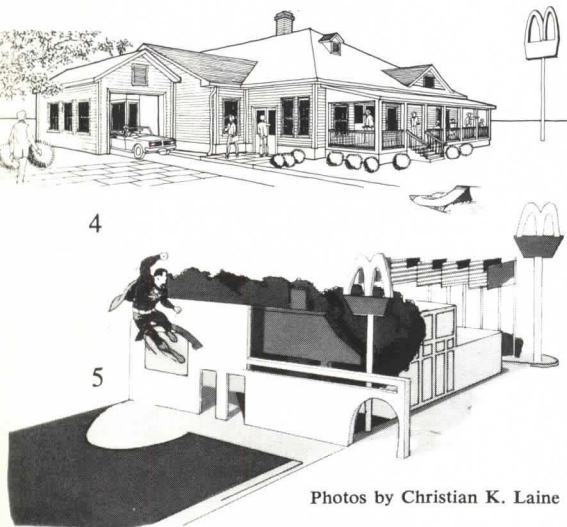
Halper's second prize design would permit the facade to change according to its locale—from Spanish mission in New



Photos by Christian K. Laine

Mexico (2) to a shingled house in New England (3). The facade, set in front of a standard fast food structure, is sheathed inside and out with an appropriate and inexpensive material, such as aluminum siding or stucco panels. Distinctive in color and shape, the facade is intended as a "billboard" to attract the customer. Interiors are in themes according to the geographical location.

The third place design by Smith (4) is a clapboard farmhouse—an effort, said the Mississippi State student, "to appeal



Photos by Christian K. Laine

to the nostalgic simple appetite." Because the construction is basically that of a residence, it's like coming home for supper. This McDonald's is viewed by its designer as a "relaxing spot along the fast-paced commercial strip."

An honorable mention, with special designation as a fourth award (5), was won by Claire Cowen of the University of Houston. A fifth place honorable mention went to Patrick Burke and Ricky Lukasik of the University of Illinois at Chicago Circle. Other honorable mentions were awarded to Geoffrey E. Butler, Tim Culvahouse and Ted Matheny, Tulane University; Ian S. Cook, Nova Scotia Technical College, Halifax; Kevin Dwight Gordon, Miami University; Bill Gotsdiner, University of Houston; Mahmood Saniee, University of Maryland; Stephen A. Smith and Karen W. Grover, Harvard University, and John Pickard, Yale University.

As critic Paul Goldberger of the *New York Times* described the entries, the designs ranged "from serious modern structures that could have been banks or churches to the inevitable submission of a McDonald's building in the shape of a two-story hamburger." Many of them looked to the past rather than the future. "Some of the designs celebrated McDonald's while others criticized it, but they all started with the premise that the fast food hamburger chain was a significant presence on the American scene."

If the designs by the present-day architectural students are any indication of

what future architecture will be like, it seems we are in for more eclecticism and a more than wistful look backward. Christian K. Laine, who coordinated the competition, wrote in the *Chicago Sun-Times* that some entries were "metaphoric forms of Stonehenge, Greek temples, Gothic cathedrals and . . . [the] Arc de Triomphe." Among the influences cited were Le Corbusier, Gropius, Mies van der Rohe—and even Saarinen's gateway arch in St. Louis.

"Yet, most of the submissions demonstrated a fascination with the artifacts of near-history—the vernacular environment, Pop versions of the Strip, the clichés of suburbia, main street and the commercial fast food world," Laine said. Thus McDonald's may be confused in its search for a design for the future. Laine is of the opinion that the competition confirms the idea "that the fast food design of the '60s—disdained for its banality and regarded as a universal travesty—has been acclaimed as the new popular architecture of the '70s." Maybe. But maybe not on Martha's Vineyard.—*Mary E. Osman*

## Weese Firm Selected to Provide Master Plan for Federal Triangle

Harry Weese & Associates has been chosen by GSA to develop a new master plan for the Federal Triangle in the nation's capital to resolve the clash between its neoclassic design and the Romanesque old post office. In all, 34 firms entered the competition to breathe new life into the area, with GSA narrowing the contest to three finalists.

Earlier plans for the Federal Triangle called for the removal of the old post office to create a "great circle" with the colonnade facades of adjacent buildings. Today, it is known as "Delano's hemicycle," forming a crescent-shaped plaza along 12th Street. In 1975, the National Capital Planning Commission voted to save the old post office building, which

left the truncated ends of the Internal Revenue Service building unresolved (see June '78, p. 29).

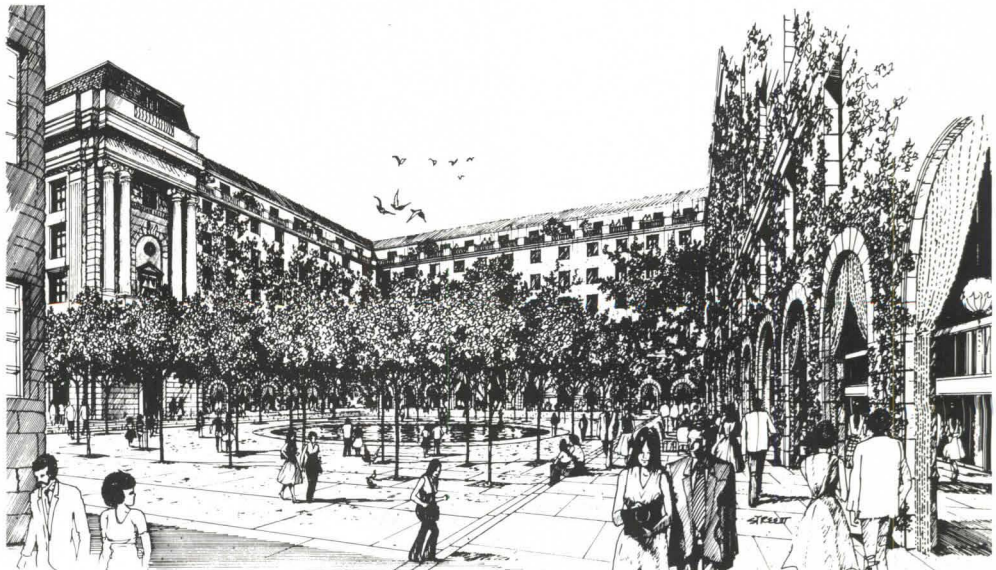
The three final proposals called for restaurants and stores to draw tourists and residents to the area and enliven the place after 5 P.M. The central attraction of the triangle is expected to be the old post office building, renovated for mixed use: restaurants, shops, etc. (see July '77, p. 48)

Harry Weese & Associates designed a proposal with the philosophy of minimum intervention in the triangle. Thus, the proposal calls for completing the unfinished sides of the IRS building in the style of the existing architecture. The arcade court (between the old post office building and the IRS) would feature a water pool area that could be converted in the evening to a courtyard stage for ethnic dancing and music.

Since the wall around the court was not built for public use and is "drab," the proposal would add a new 20-foot-wide arched facade similar to the arcade in the hemicycle. The new facade would house international restaurants and would add 20 additional feet to the IRS working space, with the top floor as a balcony. In addition, there would be an entrance from the arcade court into one of the IRS inner courts which would be covered by a domed structure. A new entry plaza to the arcade court would be built at the termination of 11th Street with an entrance to the post office building.

Steps would lead from the arcade court to the hemicycle: a symbolic "gateway to the city." Ten water jets would line the hemicycle arcade and the area could be used for art festivals and other exhibits. A pedestrian zone would be created at the entrance of the hemicycle and 12th Street would be converted into a three-lane northbound roadway. Tenth Street would be changed to a southbound roadway and bus service would be moved to the lower grade of the great plaza. Parking for 200

*Competitions continued on page 21*

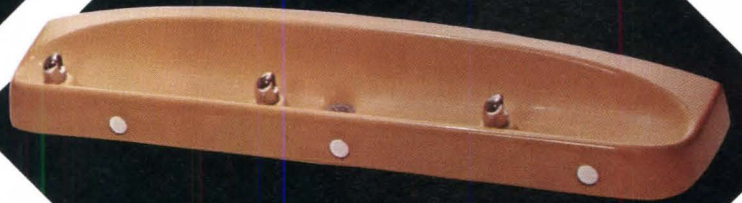




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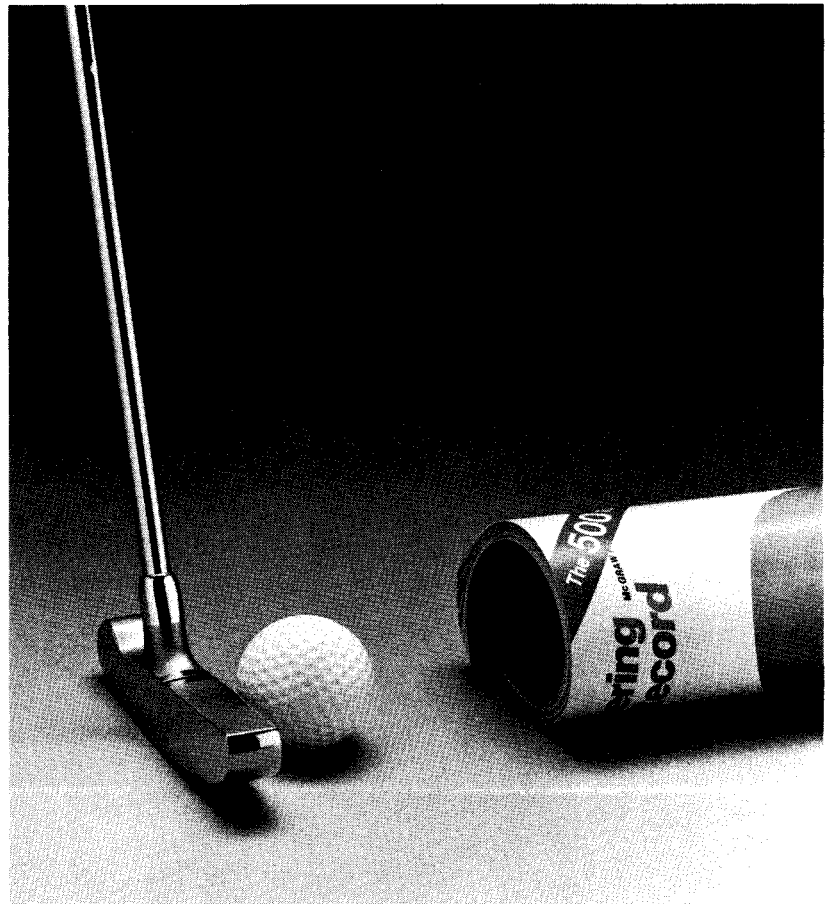
During the past year we won the nod from 32% of the nation's 52 largest design-constructors to supply their E&O coverage. Among ENR's top 500\* firms, Shand, Morahan's share of clients grew to an impressive 28% in the same period.

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\*Engineering News-Record, May 18, 1978

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EVANSTON, ILLINOIS

### Competitions from page 18

cars would be provided under the arcade court and access to the subway would be from the ground floor of the old post office.

The two runners-up are the joint venture of Sasaki Associates Inc., Shepley, Bulfinch, Richardson & Abbot and Gindale & Johnson, and the joint venture of Sert, Jackson & Associates Inc., Lozano, White & Associates, Jerome W. Lindsey & Associates and S.W.A. Group. Unlike Weese's, these two proposals would have squared off the unfinished ends of the IRS building, abandoning any suggestion of a circle. Sasaki Associates, et al., designed an indoor/outdoor cafe for the arcade court and a fountain for the hemicycle. Sert, Jackson, et al., called for a water garden and cafe in the arcade court and a sunken Metro court with water fountains and cafe in the hemicycle.

All three proposals noted that ultimately the huge parking lot area now located on the great plaza should be moved underground so the area could be landscaped for a more attractive pedestrian area.

## Hardy Holzman Pfeiffer's Design Wins Willard Hotel Competition

The Pennsylvania Avenue Development Corporation has chosen Hardy Holzman Pfeiffer Associates, New York City, to renovate the Willard Hotel into a 600-room luxury hotel with an adjacent retail mall. Stuart S. Golding, Clearwater, Fla., is the developer of the project, and Fairmont Hotel Co., San Francisco, will manage the hotel in Washington, D.C.

The design was chosen from nine entries (see Oct. '78, p. 20). The two runners-up are the team of Oliver T. Carr

Co., Washington, D.C. (developer), Intercontinental Hotel Corp., New York City (manager), Cossutta & Associates, New York City, David N. Yerkes & Associates, Washington, D.C., Hellmuth, Obata & Kassabaum, Inc., Washington, D.C., (architect) and the team of MAT Associates, Chicago (developer), Trusthouse Forte, Ltd., London (manager), Welton-Beckett Associates, New York City (architect).

The Willard's main lobby, its central arcade (Peacock Alley), and its two main dining areas (the Crystal and Willard rooms) will be restored to their turn-of-the-century elegance. The hotel's 408 rooms will be repartitioned into 300 larger rooms and another 300 rooms will be in the addition.

The addition, to be built between the Willard and Washington Hotels, will extend the Willard's Beaux-Arts facade—corners, cornices, turrets and porticos—in stepped buildings. A park will wind through the new property providing pedestrian access from F Street to Pennsylvania Avenue. In this area, with linkage to the hotel, will be a retail arcade (32,500 square feet) of about 40 distinctive, quality boutiques. The hotel/shopping complex will be served by an on-site underground parking garage for about 200 cars. "The thrust of the effort is directed to creating a facility, an atmosphere and a general ambience that will serve to heighten the return of this historic area to a position of pre-eminence as a center of Washington's civic, social and business life," said the team's proposal.

The project is estimated at \$50 million, and the opening is planned for January 1982. Principal equity investor will be the banking firm of Lazard Freres & Co.

The two runner-up plans would have

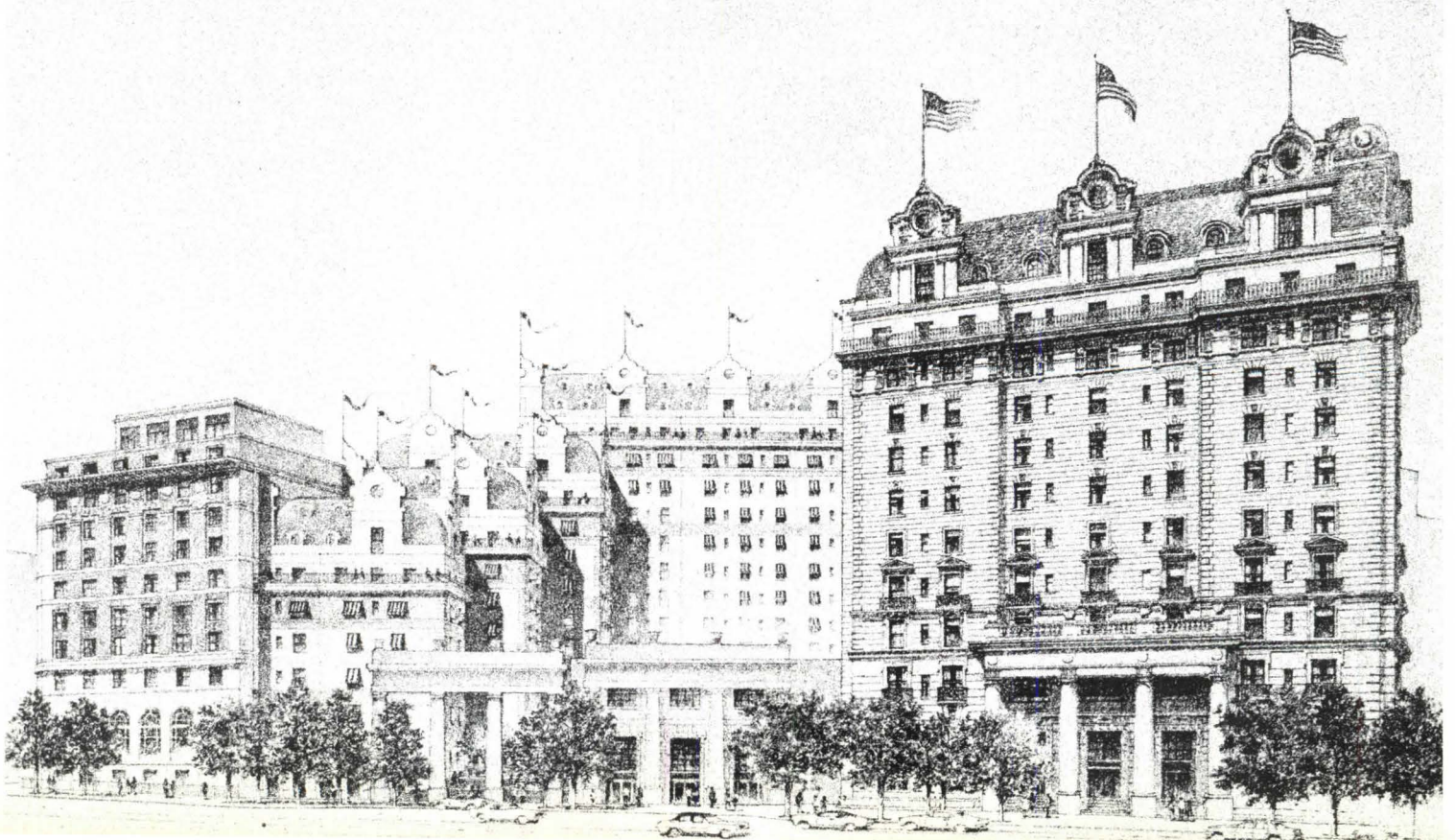
also restored the lower floors of the Willard and gutted the upper floors for new guest rooms, approximately 400. These two plans would have also included space for retail stores: 13,731 square feet on the lower level of Carr's office building and 36,662 square feet of boutiques in the MAT design.

The main difference in the proposals is the use of the space between the Willard and Washington Hotels (which is currently a parking garage). The Carr proposal introduced a 14-story office building featuring a skylight with full height atrium court and rooftop terrace. The proposal was criticized by one PADC board member as "another IBM card building." The MAT proposal called for a multifamily residential complex with offices and retail space between the hotels. An open center court would have been surrounded by two levels of retail stores.

The Willard was designed in 1901 by H. G. Hardenburg, architect of the Plaza and the Waldorf Hotels in New York City. Its doors closed in 1968. The PADC paid \$5.5 million for the gutted shell and will soon acquire the land between the Willard and the Washington for the addition.

Including the Willard, the PADC has spurred about \$200 million worth of construction in the Pennsylvania Avenue corridor. The Marriott Corp. and the Quadrangle Development Corp. were recently chosen to build an office complex and 850-room hotel east of the Willard, across 14th Street. Boston developers Cabot, Cabot & Forbes plan to build an office building between 12th and 13th streets. An estimated \$180 million of additional development will be announced within the next year and a half.

*News continued on page 22*



# Brooks A/E Selection Approach Is Readied in Five More States

As the American Bar Association considers this month the adoption of a model A/E procurement code based on the Brook's bill approach (see Nov. '78, p. 9), five states are in various stages of preparing A/E selection proposals for introduction to their legislatures. They are Maine, Indiana, Ohio, Virginia and Connecticut. Nine other states currently have A/E procurement similar to the federal procurement law, the Brooks bill; four additional states choose A/Es by selection board procedures, and Maryland uses competitive bidding.

Often, a state's AIA component or society of architects or of engineers, or both, draft the proposals. In Maine, for example, the MAE com (the Maine architect engineer committee) wrote a proposal based on the Brooks bill, i.e., demonstrated competence and qualification with a fair and reasonable fee negotiated after a firm is selected. In order to reach each of the 194 political districts, both architects and engineers volunteered to individually lobby a state legislator. The results so far, according to Judith Harvie, executive director of the Maine Chapter/AIA, are that the majority of legislators is neutral, with only a few against and the rest for. But Harvie believes there is a good chance that the state will pass the bill. The Maine Municipal Association is against it, saying that it is a violation of home rule, so the MAE com proposal will mandate the procedure for state agencies but only recommend it for towns.

Indiana's A/E procurement proposal was written by the consulting engineers of Indiana and supported by the Indiana Society/AIA. All construction associations support the proposal, which is based on the Brooks bill. Jim Cox, executive director of the chapter, doesn't expect much opposition. The lobbying effort is helped tremendously by the fact that Tom McComb, head of the American Council of Consulting Engineers of Indiana, was once a state senator.

In Ohio, the architect and engineer societies are just beginning to draft a proposal. Neal Layne, AIA, executive vice president of the Architects Society of Ohio/AIA, said the final form has not yet been determined. And in Virginia, the AIA state component supports an A/E procurement bill based on the Brooks approach, written by the engineering council. The bill will be introduced into the state legislature soon.

Connecticut's A/E proposal is in part

a reaction to an announcement by Edmund J. Mickiewicz, acting commissioner of administrative services, that A/E procurement would be by competitive bidding, with sealed bids. Under Connecticut's previous procedure, the commissioner selected one of four firms chosen to develop their ideas and negotiated a contract.

The change brought protests from architects and engineers who then met with Governor Ella Grasso. She halted the competitive procedure and requested that the Connecticut Society of Architects/AIA and the state chapter of the National Society of Professional Engineers prepare proposals for A/E selection based on the Brooks bill.

In a recent article in *The New York Times*, Peter Borgemeister, director of the Connecticut Society of Architects/AIA, explained the history of the state's A/E selection process, which has had a reputation for giving preferential treatment to certain architects and engineers in obtaining state work. According to Borgemeister, the system wasn't open to all architects until 1975 when Robert Weinerman was elected as commissioner of public works. He agreed to publicize all upcoming projects and invite design professionals to participate. During 1975-77, 24 firms were chosen to design 31 projects and "firms from all over the state, who had never gotten state work before, were being hired," wrote Borgemeister. When Weinerman resigned in early 1977, James Bergen, who succeeded him, promptly stopped publicizing projects, did not invite firms to participate nor did not publicly announce the selected firm. "In short," continued Borgemeister, "the former closed system had returned."

The executive branch of the state was reorganized in late 1977, and Daniel MacKinnon, commissioner of the administrative services, agreed to reinstate the open selection process. However, Borgemeister said, "The state's vacillating designer selection policy has not proved to be above abuse." Borgemeister hopes that the Connecticut Society's proposal for A/E procurement based on qualification will "reduce the possibility of political contributions being a factor in the selection of design firms for state work" and avoid selection of architects and engineers on the basis of price. Borgemeister expects a tough battle in the legislature because many "professional/political types will be inclined to not pass the proposal."

In West Virginia, the state has used fee negotiations, in isolated experiences, but often enough to bring protests from A/Es. About two years ago, for example, a legislative committee hired an architect to propose a solution to a parking problem, for which the architect was paid. In order to implement the plan, the committee had to open the project to other interested architects, who were not paid. In the end, the committee simply abandoned the project and never considered any of the design proposals.

In response to criticisms of the state's procurement practices, the department of finance and administration is developing A/E selection procedures similar to the Brooks bill. However, fees will be a part of the interview process. The West Virginia Society of Architects/AIA protested and suggested that the state adopt a fee schedule depending on the type and complexity of the project. Then, according to Steve Branner, AIA, president of the West Virginia Society, "fees don't enter into the interview process—just competence and qualifications are the basis of judgment." But the state did not renege. However, the state promised to modify procedures if price discussions dominate the evaluation of proposals. *Nora Richter*

## Possibilities and Expectations Of Carter and the 96th Congress

As erratic weather can fool a weatherman, there is no precise way to predict how the wind will blow during the 96th Congress. There are, however, some hints as to what the next two years may bring.

For one, President Carter has learned that he must play the political game of compromises, hard lobbying and political favors as he tries to push the Administration's legislation through Congress. Therefore, Administration officials expect more success this session than last. The Administration also acknowledges that introducing a great number of complex proposals in a short period was a grave mistake. Even Carter's successes in the last months of the 95th Congress—the energy and tax bills, for example—were passed by Congress greatly altered from the original proposals. (See Dec. '78, p. 20.)

The Administration's anti-inflation drive will put great restraints on the federal budget. Carter has said that only by controlling inflation can social welfare goals be met. The President has set a target of a \$29 billion budget deficit. Given the Administration's estimate of \$502.6 billion in revenue, spending cannot exceed \$531.6 billion, barely higher than the inflation rate. Defense spending will expand 3 percent faster than inflation, while nondefense outlays will be frozen.





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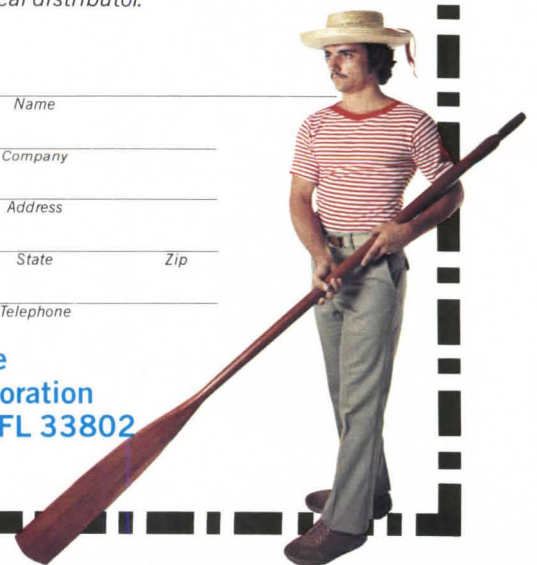
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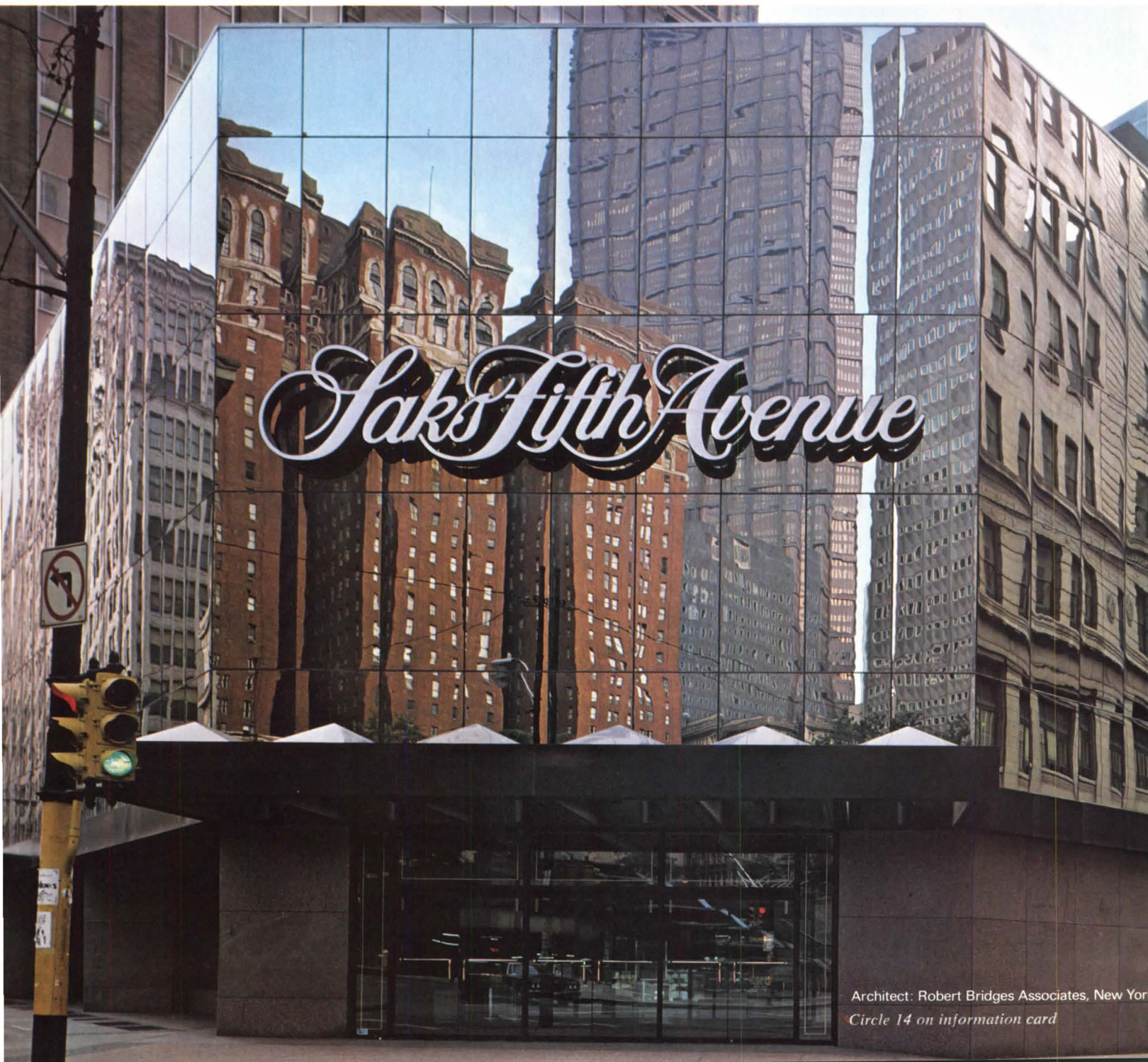
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While grants for community development are expanded in the budget, the housing rehab program was cut from \$230 million to \$130 million. Public service employment and public works aid were sharply reduced. And the Administration will not be seeking any major new spending for urban programs. Instead, it is expected to offer several urban proposals that won't require new spending.

Environmental proposals expected to go before Congress in 1979 may "face greater hostility and resistance than ever before," said the Conservation Foundation. A number of crucial decisions may be made by Congress in environmental areas such as Alaska's national lands, nuclear waste management, waste resource projects, environmental regulatory programs in general and air pollution.

AIA's congressional liaison staff expects significant activity by Congress in the following areas:

- architect selection procedures for which AIA will seek legislation which maintains the selection for government contracts on the basis of qualifications and competence at a fair and reasonable negotiated fee;
- Capitol Hill master planning for which AIA will support legislation appropriating funds for the development of a master plan for the U.S. Capitol area, as initially mandated by 1976 legislation;
- energy conservation, supporting energy legislation implementing programs to achieve the full potential for energy savings offered by the built environment;
- federal construction programs/public works, monitoring legislation involving authorizations and appropriations for all major domestic federal civilian and military construction programs and supporting a national public works program.
- national health insurance and facilities, supporting legislation establishing national system of health care with adequate measures for immediate and long-range comprehensive planning for areawide and individual facilities and supporting legitimate costs savings measures, but opposing arbitrary prohibitions that could prevent cost of effective physical changes;
- tax reform, supporting legislation initiating tax reforms with emphasis on changes affecting growth patterns, housing, historic preservation, energy conservation, barrier free environments, favorable treatment of exported services;
- west front of the U.S. Capitol building, supporting legislation authorizing and appropriating funds for the restoration rather than the extension of the west front;
- workers' compensation, supporting legislation setting minimum federal standards for state worker's compensation laws provided that immunity to employers is extended to include all who are connected with work on a construction site;
- service contract amendments, oppos-

ing inclusion of professional employees in coverage of the service contract act for federal contractors.

AIA will also continue to push for a professional liability law that allows a tax deduction for contributions to self insurance liability trust, so that self insurance is treated the same as purchased insurance for tax purposes.

The Department of Justice has indicated that it may introduce such a bill for doctors, and AIA will seek inclusion of design professionals as well.

## Resolution Moves Plans Ahead For a Museum of Building Arts

Both houses of Congress passed and President Carter recently signed a joint resolution that would initiate preliminary studies for the restoration and renovation of the Pension Building in Washington, D.C., as a national museum of the building arts (see May '78, p. 10). The resolution prepares the way for the reintroduction of new legislation, earmarks the structure as a museum, ensures that occupancy by federal agencies will be only temporary and obtains for Congress advice from GSA, the National Endowment for the Arts and the Smithsonian Institution on the physical and programmatic aspects of the proposed museum.

AIA has worked over the past months with the Committee for a National Museum of the Building Arts, Inc., urging the establishment of a museum of the built environment. It has been stressed that the Pension Building, although almost 100 years old, could be adapted to museum use with little alteration of the original design by Gen. Montgomery C. Meigs. This view has been endorsed by Mrs.

### *The Institute*

## I.M. Pei, FAIA, Will Address June 'Celebration' in Kansas City

AIA's year-long celebration of architecture will come into its "maturity" at the convention in Kansas City, Mo., June 3-7, according to Ehrman B. Mitchell, FAIA, Institute president (see Jan., p. 31). Almost all of the convention activities will focus on the celebration.

AIA's 1979 honor award winners and those who have been cited for individual and group achievements will be saluted on Monday, June 4. Also on that day the Institute's new fellows will be invested. These "celebrations" will occur in the Municipal Auditorium's music hall. Earlier on that busy day, there will have been

Walter Mondale who has said that "this hall is a natural exhibition space, and the building itself is a model of excellence."

In testimony before a House subcommittee on public buildings and grounds, David Olan Meeker Jr., FAIA, executive vice president of the Institute, said that our largest national asset, aside from the land itself, is probably the stock of existing buildings. "Yet, despite the importance and pervasiveness of this asset, we as a nation have no organized institutional memory about our physical plant," he said. The effects of this lack "are manifold and detrimental."

Meeker said that many innovations in the building industry are lost, simply because there is no place to record the knowledge. "Reams of studies," he added, are produced only to gather dust "for lack of a central depository and retrieval system." It is this archival aspect of a museum of the building arts, he said, that in the long run will be of importance to the architectural profession.

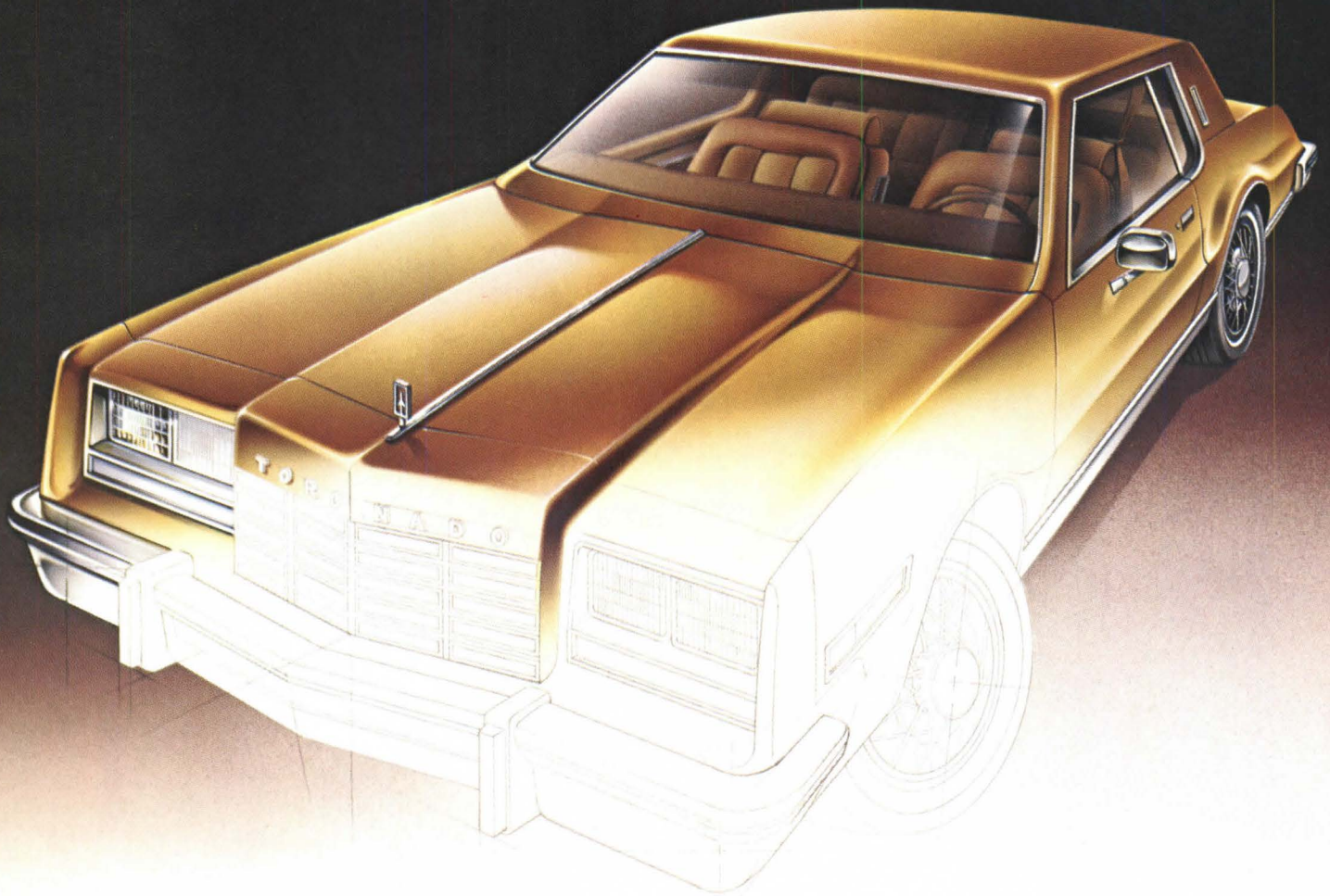
This view was held as well by Cynthia R. Field, president of the committee, who testified that a document center and library would serve "as focal points for the collection and cataloging of all documents and printed materials relating to the broad subject of building and planning." She said that the committee envisions "facilities directed by museum information specialists with computerized indices, traditional files, microfilm storage and other tools that would become the bibliographic center for the building arts," such a center linking existing archival and library collections.

The committee estimates that the cost of renovation would be about \$12 million, with special museum uses conceivably adding another \$1.5 million.

the "preservation breakfast," led by Bernd Foerster, AIA, and Professor Richard W. Longstreth.

On June 6, President Mitchell will present AIA's gold medal to I. M. Pei, FAIA, of New York City. At that time, Pei will address the convention. The gold medal dinner that evening will be an unusual event. For the first time, not only the 1979 gold medalist but all architects who have received AIA's highest award will be honored for their part in designing "an architecture of consequence."

On June 4, Norris K. Smith, chairman  
*The Institute continued on page 86*



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# AIA JOURNAL



**Pier Luigi Nervi, 1892-1979.** The image above, from the Palace of Labor at Turin, says a great deal about the AIA gold medalist, who died at his home in Rome in early January. His work achieved an undemonstrative strength and unaffected grace, both totally integral to structure and materials, notably the reinforced concrete whose potential he revealed to generations of architects before and after World War II. The great engineer at times resisted, at times relished, his stature as a maker of architectural form. He once said that “materials, statics, the technology of construction, economic efficiency and functional needs are the vocabulary of architectural speech. It is impossible to elevate such speech to the level of poetry—architecture—without a perfect understanding of this vocabulary.” Too modest to proclaim himself a poet, he nevertheless achieved great poetry. *D.C.*



# Profile: The 1979 Firm Award Winner

*It is Geddes Brecher Qualls Cunningham of Philadelphia. By Andrea O. Dean*

If you had been a juror to select AIA's 1979 firm award winner, what reasons would you have given for choosing Geddes Brecher Qualls Cunningham? The question was addressed to Robert Geddes, FAIA, acknowledged by his firm as its guiding spirit. His answer: "Probably balance—coherence between design and technology, design and services, services and management, but also balance between doing individual buildings, groups of buildings and master planning, maintaining a sense of continuity among the three."

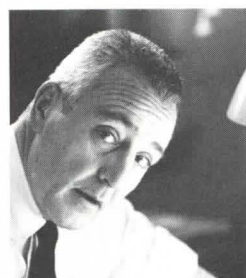
Since it was founded 25 years ago in Philadelphia, Geddes Brecher Qualls Cunningham (GBQC) has grown from a two-

man office (founded by Geddes and Melvin Brecher, FAIA) into a practice with nine principals and 49 other professionals, 15 of whom are now in its Princeton, N.J., office. GBQC operates as a group practice, with small teams being responsible for the design, building technology and management of each project. The firm's work over the years has included planning and design of major urban spaces and almost every possible building type—housing, community, health and educational facilities for private and public clients, plus commercial and industrial structures.

Geddes and George Qualls, FAIA, are the firm's principal designers, along with Robert Brown, AIA, James Dill and Neville



Norman McGrath



From top: G, B, Q & C.  
Left: Stockton College

Epstein, all three of whom joined the firm in the mid-1960s. Warren Cunningham, FAIA, is GBQC's technical mastermind, while Brecher "has always been the guy who kept the office solvent, the manager, the financial man, but also a first rate architect," in Qualls' words.

With five of its principals teaching full or part time, GBQC is rooted in intellectual principles and theory that are broadly based in humanism and were passed on to it in somewhat differing forms by three former deans of architectural schools: Joseph Hudnut of Harvard, Holmes Perkins, FAIA, of the University of Pennsylvania and Jean Labatut of Princeton, though Labatut's influence would not be felt until 1965 when Bob Geddes succeeded him as dean and the firm established an office in Princeton.

GBQC's two founders were classmates at Harvard, graduating in 1950; Qualls, who joined the firm in 1956, was Harvard class of 1951. "The kind of education we got there has influenced everything that's happened to the practice since," says Geddes. "Though Gropius' influence was much less strong than Hudnut's,

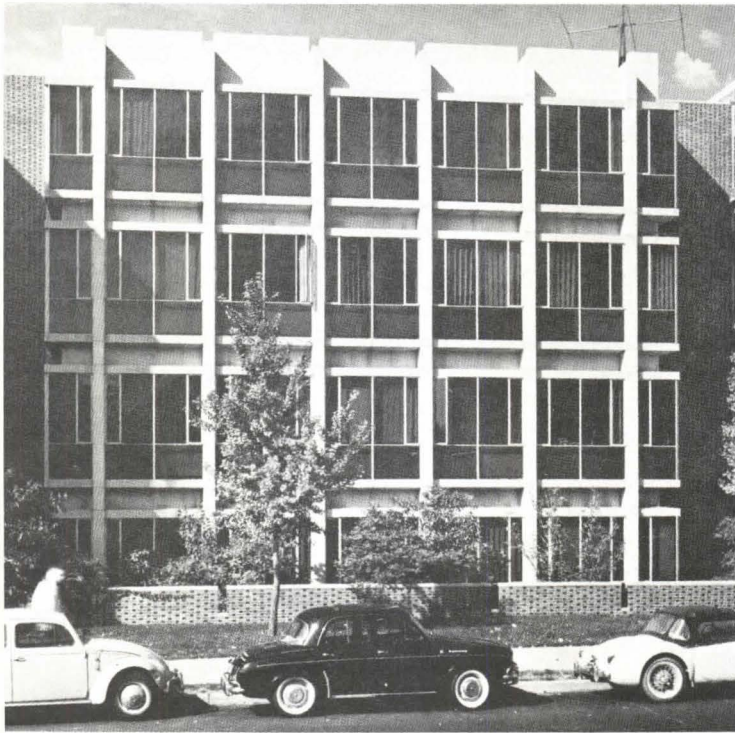
Gropius' concern with technology and collaboratives certainly had its effect, but he leaned toward minimalism, and our office has never been minimalist or polemical in any way." Hudnut, on the other hand, served as wellspring for GBQC's early and abiding interest in history and culture as design determinants, for the firm's view of architecture as an enabling mechanism (though not as a determinant) for shaping social, moral and political behavior and for its enduring interest in neighborhoods and the role of landscape in architecture. It was Hudnut, according to Geddes, who coined the term postmodern, way back in 1949, in a book which attacked prevailing definitions of modernism as being too narrow.

"The University of Pennsylvania, where Bob and I taught after leaving Harvard, was a kind of extension of Harvard because of Dean Perkins," says George Qualls. In 1950, Perkins left Harvard, where he taught planning, to transform Penn's arcane architecture department into an interdisciplinary school that embraced even painters and sculptors. And the city of Philadelphia in the mid-1950s was an ideal stamping ground for young architects interested in what they called social architecture. Edmund Bacon, FAIA, was eagerly planning a renaissance for the still moribund city, a building boom was starting and Mayors Richardson Dilworth and Joseph Clark "made architecture into something important to the public, politically and symbolically," recalls Geddes.

In 1956, Geddes, Brecher and Qualls were offered their first major commission, a new wing for the University of Pennsylvania's Moore school of electrical engineering—on the condition that a Penn alumnus be part of the design team. They enlisted Warren Cunningham, who joined the firm as a partner four years later. The Moore school addition, the first modernist building at the University of Pennsylvania, won an AIA national honor award in 1960 on the basis, thinks Geddes, "of its technical integration and its urbanistic qualities. It was a clear expression of modernism in juxtaposition to historicism and coexists harmoniously with the Tudor, brick and limestone buildings on either side of it because of its scale and use of materials." The key to harmony in buildings, he says, comes from an understanding of what "in the Renaissance was understood to be proportion and scale and coherence."

When the young firm was designing the Moore school wing, "Lou Kahn used to come around to our office and look at the drawings," says Geddes. "We worried about whether the university would accept the building because of its modern design. Lou kept saying, 'It's very good; they will build it.'" Though his effect on Geddes and colleagues was less compelling than on such other Philadelphia architects as Romaldo Giurgola, FAIA, and Robert Venturi, FAIA, Kahn's influence is still apparent. He too was at Harvard when Geddes, Brecher and Qualls were students, and Geddes writes about architecture as "a coherent and idealized representation of nature and ourselves," of form deriving from "arrangements that serve users and their social institutions (in other words, by life) and by the arrangements that have so far been tried out (by historical precedents)." Which is very Kahn-like, indeed. Geddes also cites Kahn's influence on his firm's consistent inclusion in design schemes of universal spaces, loft type spaces, "but we've gone beyond to include very much more specific and humanized spaces," he says. Also sympathetic to GBQC's sensibilities was Kahn's concern with materials and handcrafting, as was already evident at the Moore school where they used cardboard boxes to board form concrete.

"People in Philadelphia became aware of our existence in



panding into the private sector. The Philadelphia office, especially, became increasingly involved in working from early stages of design with the construction industry, which not only streamlined the firm's production work, but helped it win commissions, a major one coming from the Turner Construction Co.

Until recently, the Philadelphia office remained responsible for all production work. Princeton was primarily a "think tank," led by Geddes and two younger designers, Neville Epstein and James Dill, both of whom were former students of Jean Labatut, as was Robert Brown, who, along with Qualls directs design at the Philadelphia office. Geddes cites Labatut's influence on the development of the firm's emphasis on "procession"—linear axes for physical and visual movement—on its ideas about color, light, complexity and on what Geddes calls classical coherence.

The first series of projects designed at the Princeton office came in rapid succession; all were educational facilities. "They had enough in common," says Jim Dill, "to allow us to explore and develop certain fundamental concepts that we were toying with at the time—and which are still basic to the firm's work and thought."

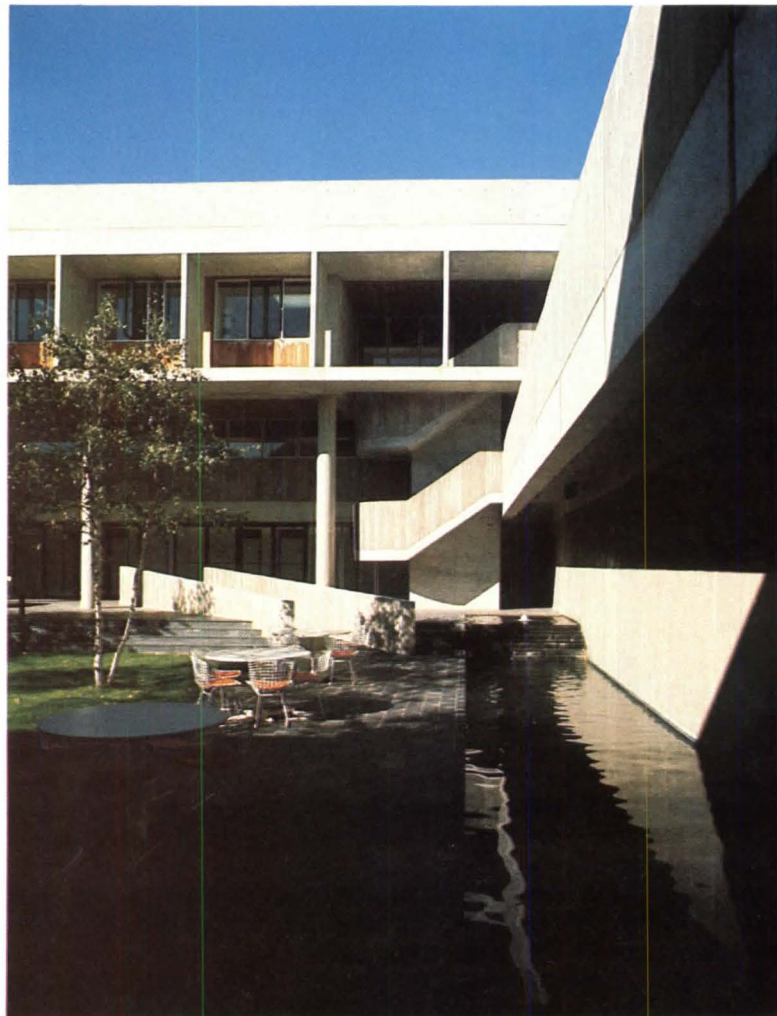
Among these were the use of linear galleries as unifying ele-

## A continuing interest in public architecture.

1957 when we won second prize in the Sydney Opera House competition," says Qualls. Geddes explains, "George and I were very interested in the potential of circular forms. For my Harvard thesis I did a circular building. I think it may have been a way of thumbing our noses at Gropius." Their Sydney competition entry, a radial plan with pie-shaped, prefabricated elements, was parent to their first major public commission, the Philadelphia police headquarters building of 1962. It consists of pie-shaped elements rotated around three circular cores. The idea was to achieve a maximum amount of space without building a tower that blocked views. Mayor Dilworth, who commissioned the structure, "wanted a fresh symbol," says Geddes. "He wanted a baroque palace and he got a baroque palace. And now," he adds, "let me tell you the truth. Don't ever build a circular building. It's tyrannical; it has no escape."

Quite opposite in intent was GBQC's public planning and housing work for the city of Philadelphia. Their plan for the renewal of Penn's Landing, the first scheme for which was completed in 1961, was a conscious understatement. Their design for the West Chester, Pa., housing development, a HUD design award winner in 1966, shows again the benign influence of Joseph Hudnut, according to Geddes. This small, lowrise complex, with facades resembling indigenous architecture, blends easily into the existing streetscape, yet forms a community of its own by virtue of being set back and having small plazas and play areas. Kitchens face the street so that mothers can supervise their children, and each unit—slightly different from its neighbor, with its own porch and recessed front doorway—has a sense of individual identity and territory.

The year 1965 marked a major change for GBQC. Bob Geddes was appointed dean of the school of architecture at Princeton, and the firm opened an office there. GBQC in Philadelphia maintained its interest in public architecture, while ex-





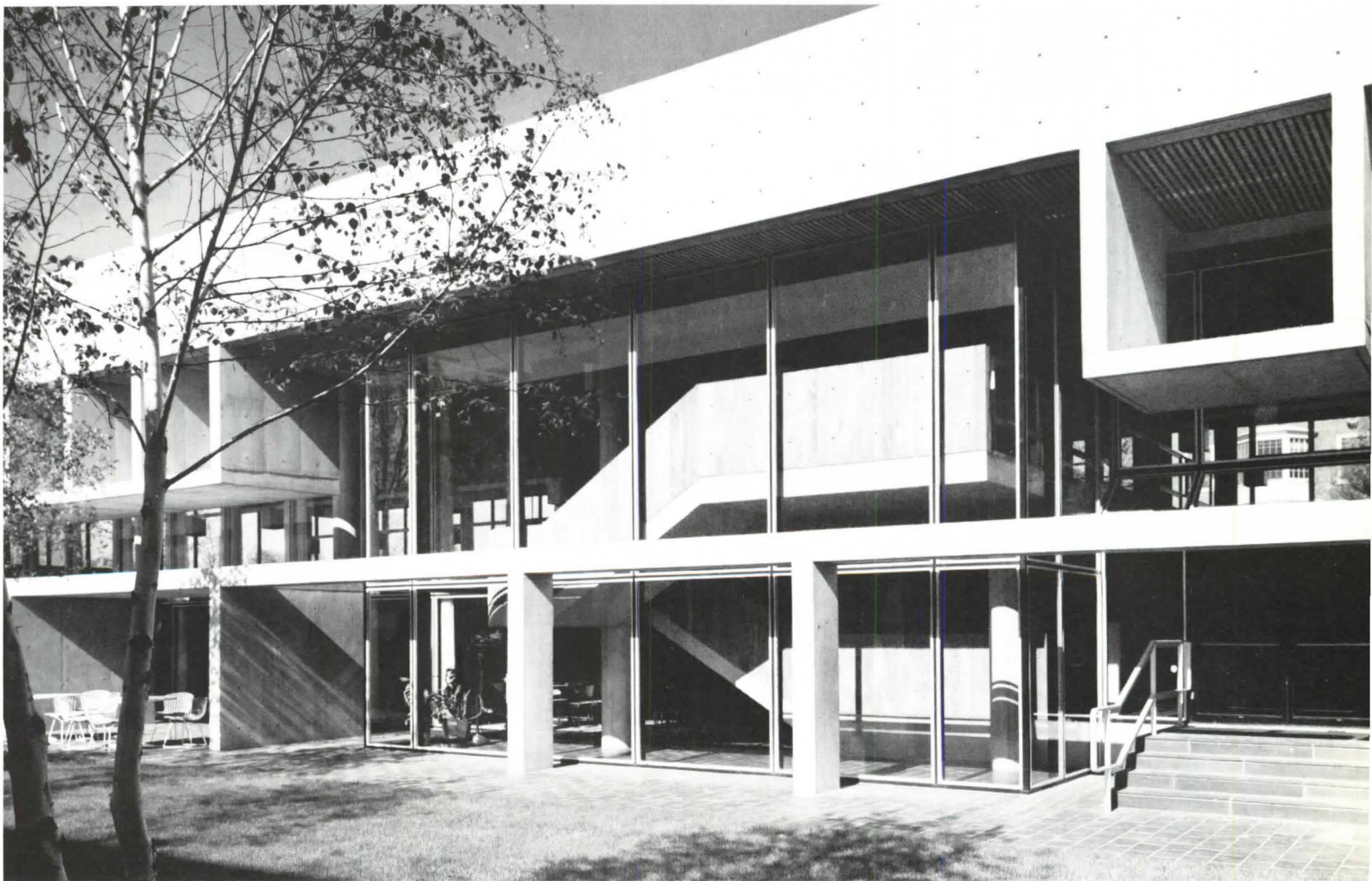
ments, with projecting loft spaces for general and flexible use plus fixed spaces for specific functions, courtyards in between. These architectural elements derived from Geddes' conviction that "buildings must understand the need for private spaces and spaces for small group and communal use." Key to his thinking is the statement: "If architecture is separated from human social experience, it loses its values, it loses its ability to speak. And it loses its source of imagination." Architecture for art's sake is, for him, the road "finally to escapism." The firm's early concern with scale—integrating buildings with overall planning processes, with landscape and existing structures—remained constant. In terms of architectural style, Geddes and colleagues were searching, in his words, for "an enriched architecture, but still a modern architecture, developing ornament out of materials, texture, the symbolic aspects of entrance or even of the structural wall and with light as a generating element."

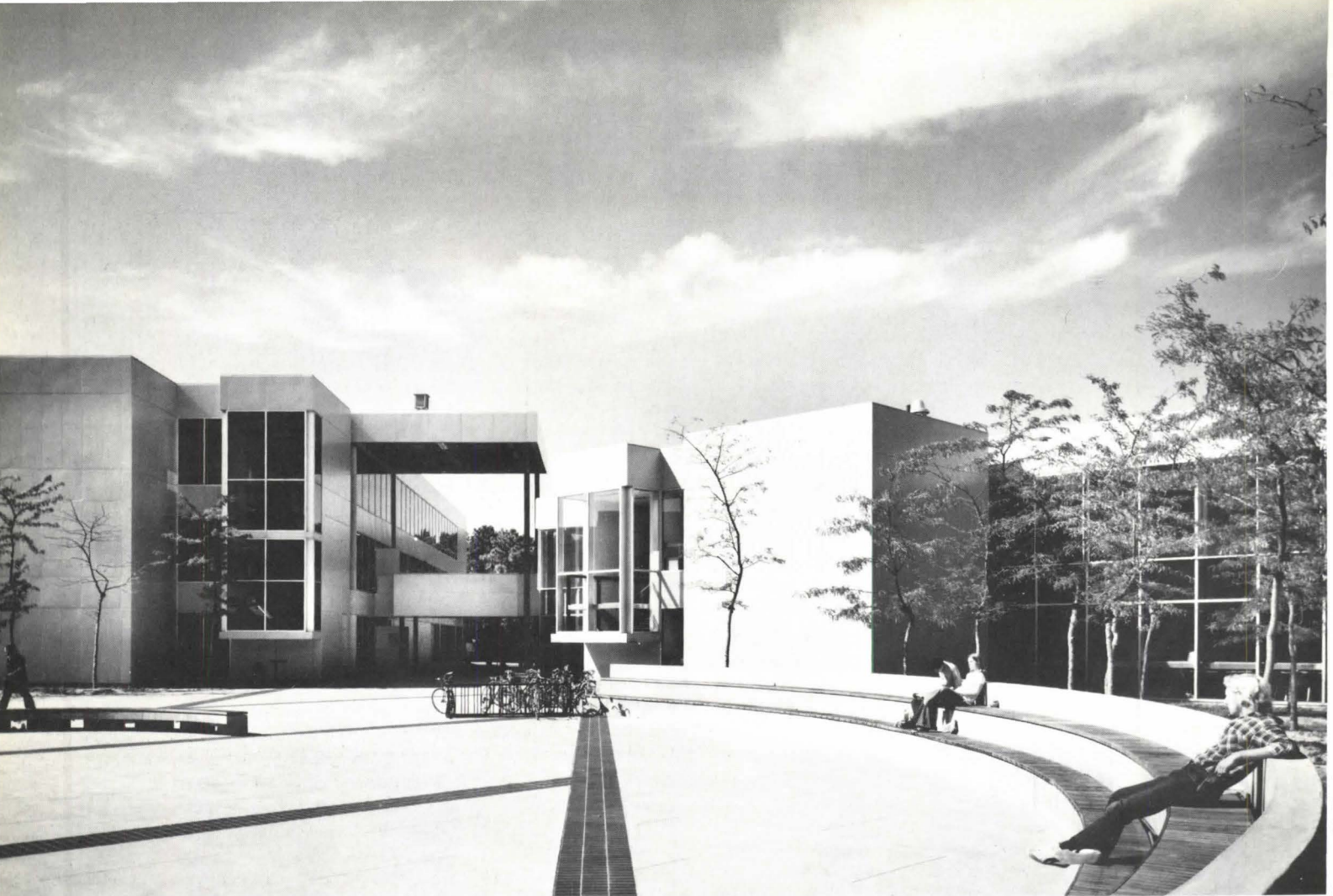
Three institutional buildings, especially, show the firm's application of theory to practice: The humanities and social sciences center at Southern Illinois University (SIU) in Carbondale, an AIA 1977 national honor award winner; Stockton State College in Pomona, N.J., and the dining hall and academic office

building for the Institute for Advanced Study, Princeton.

"I think the Institute for Advanced Study [GBQC's dining hall and academic office building] especially argues against all this talk about architecture not influencing behavior—the possibility that architecture is trivial to behavior," muses Geddes. The program was for a cafeteria/boardroom and offices, but "our intuition told us," he says, "that there should also be a courtyard as an enabling mechanism for social activity." Geddes defines intuition as "prepared imagination." The intent at the institute was to meet needs for privacy while providing opportunities for scholars to socialize and exchange views, and to create a symbolic as well as literal "grove of academe." The new buildings were also charged with "responding properly," as Geddes puts it, to the institute's existing group of buildings, six of which

*The contrast between the Moore school, 1959, and the Institute for Advanced Study's dining hall and academic office buildings, 1974, shows GBQC's evolution toward more varied forms within a modular grid. The institute has a birch-planted courtyard (below left) to create a sense of community. Deep sun screens reduce glare on the west-facing entrance facade (below).*





Norman McGrath

## A new campus and a centerpiece for an old one.

are neo-Georgian. A seventh, of modernist design, is the work of Wallace Harrison, FAIA.

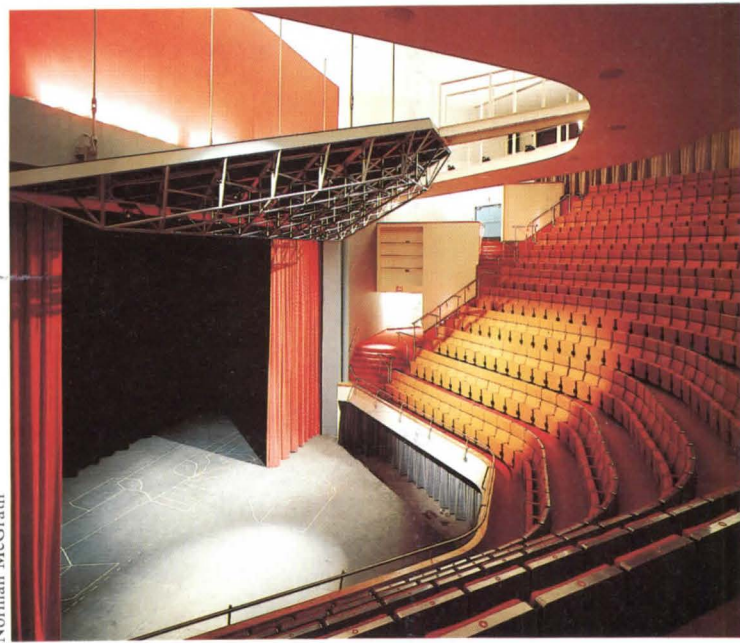
GBQC's addition consists of two parallel, linear buildings of poured-in-place concrete. One is a three-story academic office building, the other a two-story dining hall and commons. Between the two is a courtyard of birch trees. The glass walled dining and commons area, with spaces that range from open to closed with many variations in between, allows intriguing views of the academic building. The cornices of the new buildings are level with the eaves of the old, scale being very consciously related. Commenting on the new buildings, Ada Louise Huxtable wrote in the *New York Times*: "And for once, there is a tie between the standards of scholarly endeavor and the setting where it takes place. At a time when arrogance is often synonymous with architecture, these buildings teach human and artful lessons in the building environment. They are lessons of quality as well."

At Southern Illinois University (SIU), the firm was charged with creating a unifying focal point for a university that had become a hodgepodge of 19th and 20th century buildings. "We consciously had to look at the question, 'How do you make the center of a campus?'" says Neville Epstein. "The old way was to make a single center. At SIU we were influenced by the Free University of Berlin plan, the idea of building a gridded structure where anything can plug in." The humanities and social sciences building is three and four stories high, and almost 1,000 feet long. The organizing principle is a linear grid on which pedestrian paths resemble a tartan plaid with major and minor lines. The result is not one center, but many, linked by an outdoor covered arcade. Classrooms, laboratories and a museum are on the first level adjacent to the arcade. Seminar, meeting rooms and faculty offices are on the upper floors.



Above and across page bottom: the humanities and social sciences building, Southern Illinois University. The two-level arcade serves as linking element and connects with the campus' existing circulation paths.

Across page top and below: Stockton College, where GBQC employed a systems approach using metal elements. The circular outdoor space is for concerts, graduations, etc.; another gathering place is the theater.



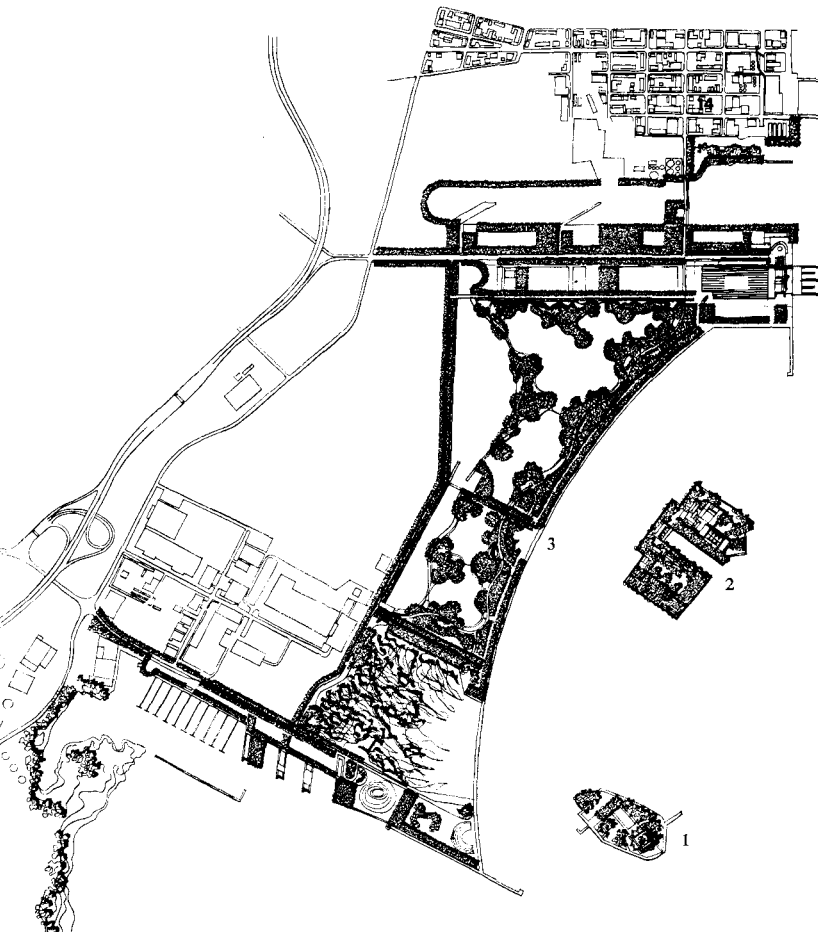
Norman McGrath

At Stockton College, a brand new school in a wooded setting near Atlantic City, the architects, though faced with a very different set of problems than at SIU, used a similar approach—linear grid, connecting gallery, loft spaces, fixed spaces, courtyards. “One of the issues,” says Geddes, “was that one half of the college would be residential, the other half for commuting students. We wanted a spatial organization that could unite the two. Stockton’s attitude toward education was similarly democratic, the program calling for as little differentiation of departments as possible.”

GBQC’s solution was a two-level spine that serves as a main circulation gallery, linking all teaching and faculty spaces. Most of these are loft spaces, organized with 30-foot grids, and have completely movable partitions within. The spaces between these finger lofts are planted with trees, the untouched pine forest coming to their outer edges. “The buildings on the exterior are thus an edge to the woods and the courts, an unobtrusive framework for student activity,” says Geddes. The circulation gallery at Stockton is bent to accommodate the existing landscape. At the far western end of the complex, where the gallery jogs, is a trio of fixed spaces—gymnasium, exercise room and swimming pool; beyond them is a theater.

George Cserna





## An emphasis on urban design and ‘diplomacy.’

Because of cost and time constraints—one year from beginning of design to completion of the first phase of the building—GBQC employed at Stockton a systems approach, using prefabricated metal elements organized on a five-foot module. A prebidding procedure was used for five subsystems: structural, ceiling and lighting, interior partitions, HVAC and exterior skin. Manufacturers bid on schematic drawings and performance specifications of the subsystems prepared by the architects. GBQC then selected the manufacturers and worked with them while simultaneously developing construction documents.

The program also required the building to be energy efficient. Hence the use of deep sun screens that latch neatly onto the windowwalls which, in turn, latch onto the external structure. Covered passageways, shaded open spaces and the encroaching woodland also help reduce demands placed on mechanical systems.

GBQC’s development and evolution as a firm can be seen as dividing into three phases. The first ends in 1965, with the move to Princeton. The second terminates in the mid-1970s after completion of SIU, Stockton and the Institute for Advanced Study. That brings us to the present, about which Geddes says, “I think in terms of formal organization, we are moving toward further expression of the surface. For the first time, for example, we are doing a building [a convention hotel in Kansas City] that is made up of many different materials in a kind of polychrome that hasn’t existed in architecture since Queen Anne. It is brick and tile of many colors, porcelain, stainless steel, aluminum in silver and white, natural wood and white plaster. The range now is going much more to the conscious study of foreground and background colors, colors that are related to nature. Our second kind of evolution results from having different kinds of clients, many more private urban developers and corporate clients. Our most significant current jobs are, for me, the Chesapeake Life Insurance building in Baltimore and our urban design projects in Miami and at Liberty State Park, N.J.”

The Chesapeake Life Insurance building, designed under the direction of Bob Brown of the Philadelphia office, is in early stages of construction and will cover more than a block of downtown Baltimore. The complex, shaped in a squared U surrounding a large garden facing the street, includes an office building with ground floor shops, an apartment tower and garage. The arrangement is a linear grid on a sloping site with pedestrian connections on several levels. Brick was chosen as material to blend the new complex with neighboring, mostly Georgian-style buildings. “But two colors of brick are used, so it isn’t just square boxes,” says Brown. There is also a variety of window sizes to complement adjacent buildings and achieve a richer surface.

“In terms of long-term significance, Liberty State Park is probably the most important thing we’ve ever been involved in,” says Geddes. The project, begun in 1975, is a joint undertaking with landscape architects Zion and Breen. (Robert Zion was graduated from Harvard in 1950 with Geddes and Brecher, reminding us that past is prologue.) More than 20 years from now when it is completed—if it is ever completed, since funding will depend on a multitude of sources—Liberty Park will transform 800 acres of New Jersey shoreland from a forsaken jumble of weeds, litter and rotting piers into a huge recreation area over looking the Verrazano Narrows Bridge, Ellis Island, the Statue of Liberty, most of Manhattan and, in the distance, Brooklyn Bridge.

*Liberty State Park (left): 1) Statue of Liberty, 2) Ellis Island, 3) crescent walk, 4) restored railroad terminal, 5) urban recreation, 6) residential neighborhoods. Across page, the two-level gallery at Stockton College that links teaching and faculty spaces.*



A crescent-shaped, stepped embankment will form a strong sculptural edge for the park and provide ample seating for river watching, fishing, fireworks displays and the like. Topping the embankment will be a broad, paved promenade providing what Geddes calls "the most exciting walkway in the world." At the northern end of the park, nearest Jersey City, will be what he describes as "an intensely urban recreation center," with swimming pools, ice skating rinks and tennis courts within walking distance of the city. He hopes there will also be a farmer's market and shops in the vicinity. GBQC will transform a nearby, deteriorated railroad terminal probably into a transportation museum.

Another of Geddes' favorites among the firm's current projects is the master plan for Miami's new government center. It was begun just last summer and is similar, he says, to I. M. Pei's plan for Boston's government center "in its intent to stimulate

the downtown and serve as a center of government." As with Pei at Boston, GBQC at Miami will design none of the proposed buildings. Rather, the firm's task is to integrate schemes by the firms of Johnson/Burgee (one which has stirred controversy), Hugh Stubbins & Associates, Harry Weese & Associates, Cambridge Seven and others into a coherent whole. "What we've gone back to here," says Geddes, "are our fundamental ideas of movement systems, the coordination of pedestrian armatures—east-west, north-south—an arcade as at SIU and Stockton that borders open space."

When GBQC received the Miami commission, the *Miami Herald* announced, "Government center gets a diplomat designer." And, in fact, the firm's role in several recent urban projects has been, among others, that of "public architect and diplomat," in Geddes' words. It is a task for which GBQC is well suited. For it is a firm mercifully free of polemic and dogma. □

# The Healing Role of Inner City Gardens

*Their produce includes 'enhanced self-esteem and improved neighborhood spirit.'* By Charles A. Lewis

In the city, man and nature are in closest harmony in the cemetery, wrote landscape architect Ian McHarg. But this wry comment on the misfit of biological man in a technological world need not be the last word. Are there not ways to cushion the interface of living flesh and the steel, asphalt and stone of the urban environment? We might start by searching cities for life-enhancing activities involving nature which also create a sense of tranquility and well-being.

Urban gardening is one such activity. I do not refer to the plantings found at elegant penthouses and town houses. But rather gardens which grow at public housing projects amid the rubble of vacant lots or on tenement rooftops. For my view goes beyond the traditional horticultural concepts of plants, flowers and vegetables. I look for the human meanings in gardening which become evident when we stop focusing only on plants and learn to see person and plant together as they interact in the process of gardening. The benefits include enhanced self-

**Mr. Lewis**, a horticulturist, is administrator of the collections program of the Morton Arboretum in Lisle, Ill. This article is adapted from his address to the annual meeting of the American Institute of Planners held last September in New Orleans. It was the 11th annual B. Y. Morrison memorial lecture sponsored by the science and education administration of the U.S. Department of Agriculture.

esteem, improved neighborhood spirit, cleaned up streets, grounds and buildings.

From the human standpoint, gardening includes all the thoughts, actions and responses from the time a gardening activity is first contemplated through planting and growth of seeds to mature plant. To understand the human benefits of the gardening process, we must experience gardening as the gardener does.

For 16 years as adviser for gardening activities in public housing and other low-income areas, I have seen how gardening can, in the chaotic environment of the inner city, re-establish and reinforce needed human values. It can help people to find themselves. The following four examples of urban gardening demonstrate its human benefits.

The New York City housing authority, largest landlord in the world, initiated a tenant garden contest in 1962 to improve both residents' morale and communication between them and management. The program, which continues today, is simple. Tenant groups wishing to enter the contest are assigned plots of ground adjacent to their buildings. The housing authority gives assistance by providing manpower to dig up the bed, gardening instruction and a small stipend for the purchase of plants and other materials. Tenants do everything else: work out designs, decide on plants to be used, start them as seedlings or cuttings indoors or purchase them from commercial sources.



Photos by Charles Lewis

They plant gardens in late spring and tend them carefully all summer long. Maintenance includes the normal tasks of watering, weeding, pruning and fertilizing, plus the responsibility of protecting the plants from vandalism. In August, judges—including garden writers, horticulturists, landscape architects and educators—tour the gardens to select the winning entries. Prizes of scrolls, silver cups and trays are awarded at a September meeting before an audience of civic leaders and tenant groups. Excitement runs high as slides of the winning gardens are flashed on the screen and spectators recognize their handiwork. Enthusiastic participants return home looking forward to entering the contest again the following year.

I considered this a pleasant, but innocuous, exercise in beautification—gardening in the ghetto—until, as I talked to the contestants each year, I began to sense a deeper kind of involvement. I began to understand that the importance of these gardens lay not in the flowers, but in the gardener's response to the plants. Here are comments from housing projects in some of the most difficult areas of New York City, where crime is high and life a harsh struggle.

One contestant told me, "This is the first creative thing I have done in my life," adding that she had gone to the library to study every book available on gardening. In lower Manhattan, a Spanish-speaking woman proudly said, "They told me that you couldn't grow flowers on Avenue D, but I wanted to try. Now you should see how the old folks come out every day to enjoy the flowers." I particularly remember an older woman who, with a group of children, had produced a garden with flowers, vegetables and even a cotton plant. She had carefully labeled each type of plant because, she explained, it was important for children to know the names of all the plants.

Probably the most astonishing garden I saw was Japanese-inspired, complete with pond, bridge, stones and walks, constructed of bricks and cinderblocks. It was the entry of teenagers, members of a street gang, who were guided into the contest by a social worker. He told me how diligently the boys worked bringing the building materials from across the city to construct the paths and edge the beds. Maintenance was meticulous and their pride was obvious. Each of these boys had a police record.

Over the years the contest became a focus for social activities, with wedding and graduation pictures being taken at that favored spot. Gardeners revealed pride in their accomplishment in several ways. When judging housing authority gardens in New York, it was not unusual to suddenly find someone at your side who would urgently whisper something like: "Isn't this the best garden you have seen? Don't you think we should get first prize?" The same pride was evident in the faces at windows above us, watching our every move, to make certain that we fully appreciated the wonder they had created.

In a letter to the housing authority, a tenant wrote, "... what is more important is everyone getting to know each other. Everyone smiles and discusses our garden, they worry over too much rain, not enough rain, they're all so pleased that children are interested in caring, not destroying. From early morning till late at night you can see neighbors leaning over the garden fence. It has become the center spot of our court where everyone is a friend."

I wondered how in the inner city where vandalism abounds, fragile gardens could grow seemingly unmolested. The answer came from gardeners; one said, "We know who the troublemakers are, so we invited them to join our garden group and assigned them the job of guarding the plants. Now we have no more problems." Others told of residents joining together to patrol the gardens, mothers sitting with their babies near the plot, boys and girls taking turns watching, tenants in their tall buildings having the gardens under constant surveillance, all ready to sound the alarm if anyone tried to destroy the plants. A woman on the East Side said she expected no vandalism because "all the rotten kids are in the contest this year!" No one asked for police protection.



*Flower circles in New York (top and across), vegetables in Chicago.*

After a few years, the program started to produce unexpected results. Public housing tenants who grew flowers and vegetables joined together in a warm kind of pride and neighborliness. They saw to it that gardens and surrounding areas were kept clean and neat. They urged the groundsman to mow lawns adjacent to gardens more frequently. Building managers reported that at buildings with gardens children who usually trampled grass were cultivating and watering, and tenants no longer airmailed the garbage—threw it out the windows. Vandalism was reduced outside and inside the buildings.

Where it had been common experience to see new landscape plantings around public housing destroyed, tenants began to ask the housing authority for permission to help landscape around the buildings. Inspired by their summer contest garden, tenants in several projects contributed their own funds for the planting of spring flowers, tulips and daffodils, which would bloom before the contest gardens were planted. Tenants asked permission to install planters, which they would maintain, in the lobbies of their buildings. They even organized garden clubs in many of the projects.

Philadelphia has had similar good results in a different situation. In the inner city, where dwellings are privately owned row houses, a successful window box garden contest started in 1953 by Louise Bush-Brown led to the formation of the Neighborhood Garden Association. For any block in which 85 percent of the residents agreed to plant and maintain window boxes for two years, the association provided contact with a garden club which brought plants to help start the window boxes. Soon colorful

## Harvest festival for Chicago public housing.

flowers blossomed on these inner city streets. Also quite soon, neighbors banded together to clean up the streets and to white-wash curbs, front steps and windowsills. They converted vacant, debris-laden lots into playgrounds and gardens. These activities were spontaneous—not part of the program—but somehow inspired by the window boxes.

Why should planting petunias in window boxes lead to cleaning up streets? Part of the answer lies in the new spirit born in the gardens. It is reflected in gardener comments: "Before, it was just a house; now it looks like home." "I've lived on this block for 15 years. It's so nice to come to know the names as well as the faces of the other people on the block. I never knew them before." "This was the most dumpified place I had ever seen. Now it even smells good." "I guess I'll wash my windows now." The program, now supported by the Pennsylvania Horticultural Society, continues in more than 100 blocks.

The Chicago housing authority initiated its flowers and vegetables contest in 1974. Again there were gardens at highrise dwellings and again there was individual pride in accomplishment. A youngster who said he, formerly was ashamed to say where he lived became proud to give the address of his highrise public housing building after residents planted bright flowers all over the front lawn. The gardens have become special places, "holy ground," one tenant calls them. "The first thing we want to look at in the morning is how the garden is doing, especially after a rain. It's the satisfaction of seeing things grow you planted yourself." Residents tell of the friendship and closeness that develops among gardeners. They say, "We share our produce and ourselves." This can be plainly seen at the end of the summer when at many buildings community harvest dinners are held where neighbors share their bounty around the table.

At the annual Chicago housing authority harvest festival, residents set up booths to display their vegetables and flowers at Daley Plaza in the Loop. Downtown workers and shoppers have a chance to see the colorful displays, taste such homemade delicacies as carrot cake and squash bread and meet the proud city gardeners who produce them.

In Chicago, the clean-up and paint-up took a new direction at Robert Taylor Homes. A red and white garden inspired tenants of the impersonal highrise buildings to paint entrance pillars, benches and chains in matching colors. Down the street, pillars were painted blue with white stars to match a blue and white garden. Soon large murals, geometric or pictorial in design, appeared on the walls of other buildings at Robert Taylor. The anonymous decorations (housing authority rules then forbade painting of the buildings) were exceedingly well designed and carefully executed. During the ensuing year, no graffiti appeared on decorated portions of the buildings.

In public housing, grass around the buildings is considered distinctly a part of the physical plant to be maintained by management, and not the concern of residents. However, at Robert Taylor, the gardening tenants sowed grass seed and created a large area of lawn on what had been bare ground surrounding their gardens. Would results have been the same if the housing authority had asked these tenants to paint the buildings or plant a lawn?

In a reverse situation, gardening was intentionally introduced into the devastated lobby of a public housing highrise to see if it would encourage tenants' interest in maintaining that area. The lobby housed rows of mail boxes opposite the elevators, which, because of repeated vandalism, were relocated outside the building entrance, a site under more continuous surveillance. The lobby area had deteriorated and was covered with graffiti. In consultation with the tenants, an artificial light garden was installed and tenants were invited to plant it and care for it as their own. This they did, and they cleaned and painted the lobby in bright designs.



*This page, an elderly woman in Vancouver and a handicapped man on an adjustable stool. Opposite page, Philadelphia's window box program in 1954 and in 1972.*



One of the newest public housing garden programs was started in 1977 by the British Columbia housing management commission in Vancouver. During the first year, gardens blooming at public housing developments added to the beauty of a city already famous for its parks and plantings. Again there were unexpected benefits. Residents were very proud of their gardens. A prime example was one 94-year-old public housing resident who had seldom ventured out of his room. He became an enthusiastic gardener, and went outside every day to water and weed and talk with his neighbors. In 1978, the housing commission extended the program beyond Vancouver to include all public housing in British Columbia.

In 1977, the U.S. Department of Agriculture initiated an urban gardening program in six cities. Through the network of cooperative extension personnel, they brought gardening expertise to the inner city. The program emphasized community vegetable gardening and offered gardening know-how by extension agents to any interested group. Gardeners and local organizations provided the land, seeds, plants, fences and fertilizers. Though off to a late start in its first year, the program showed strong potential for success. It was expanded in 1978 to 16 cities, and by the end of last summer it was apparent that a needed resource had been tapped.

In Houston, C. W. Thompson, medical director of a senior citizens center, reports that many of the folks at the center who were lonely and felt unneeded became interested in gardening and soon were planting seeds, weeding and enjoying the fruits of their labors. "It helped lower their blood pressure," Thompson says. "Some patients are taking less medication and are more relaxed. They are eating better and spending less money on food." Al Harris Jr., who heads the U.S.D.A. urban gardening program in New York City, says, "The gardens have improved and revitalized many blighted areas of the city. We didn't just grow vegetables, we actually grew hope." A survey of Chicago urban gardeners revealed that 97 percent want to garden next year; 67 percent believe they saved money; 60 percent feel better about themselves when gardening; 52 percent feel better toward their family, and 52 percent feel better about their neighbors.



Only 3 percent feel the same, and nobody feels worse.

What human motivations, born in the garden, are expressed through these acts of neighborliness? Having been trained as a horticulturist, I did not feel competent to say. I assumed that the phenomenon would be well documented by researchers in the behavioral disciplines. That was not the case. Psychologists and sociologists were interested, but could not refer me to a body of research which would explain the human responses associated with gardening. My search was aided by Mrs. Enid Haupt, who, already sensitive to the human importance of plants, provided a grant to the American Horticultural Society which established a people-plant program. For three years as coordinator of the program, I made contact with professionals in other disciplines who helped to explore the role of vegetation in human well-being. In particular, Patrick Horsbrugh, AIA, professor of architecture at Notre Dame, and professors Rachel and Stephen Kaplan, psychologists at the University of Michigan, have been helpful in interpreting the human aspects of gardening.

The strong rehabilitative effect of self-esteem, particularly in a demeaning environment, was pointed out by Dr. Edward Stainbrook who wrote: "An environment of ugliness, dilapidation, dirtiness, over-built space and lack of natural surroundings confirms the negative self-appraisal a person may have developed through other contacts with society. Self-esteem is the keystone to emotional well-being; a poor self-appraisal, among other factors, determines how one treats his surroundings and how destructive he will be toward himself and others. These factors set up a vicious circle that is difficult to break."

How does gardening enhance self-esteem? The gardener takes on a responsibility when he grows a plant. It is a living entity, its future dependent on the gardener's ability to provide conditions

for growth. The gardener observes the growth of plants, anticipates and watches the progress from seedling to young plant to full maturity and flowering. New leaves, stems and flowers are the reward. The gardener builds a personal relationship with the garden, which becomes a visible representation of individuality. When it blooms, there is brilliant evidence of success. He or she also soon becomes aware that perhaps hundreds of people pass by each day and enjoy the garden. It is an anonymous gift which makes the grower feel better about himself or herself and better about where he or she lives.

Plants also have intrinsic qualities which encourage people to respond to them. They depend on the gardener for care if they are to survive. In a world of constant judgment, plants are non-threatening and nondiscriminating. They do not respond to the race or the intellectual or physical abilities of the gardener, but rather to the care given. The garden can be a benevolent setting in which a person can take first steps toward confidence. Plants display rhythms that are different from those of the man-built environment. Their growth is steady and progressive. The gardener sees continuous, predictable change from seedling to mature plant, and observes that change need not be disruptive, but can be a part of a dynamic stability. The reoccurrence of natural cycles gives a sense of relief from the schedule and regulation of technological society, its fads, distractions and manmade terrors.

Plants take away some of the anxiety and tension of the immediate Now by exhibiting long, enduring patterns of life. It takes time for a cutting to grow roots, for a seed to germinate, for a leaf to open. Plants respond visibly to the sun in its daily course and signal the change of the seasons. These rhythms in plants were biologically set in their genes by the same forces that set human biological clocks. There is reassurance in knowing that a rose is a rose is indeed a rose.

Rachel Kaplan surveyed more than 4,000 members of the American Horticultural Society seeking the kinds of benefits and satisfactions they found in gardening. More than 60 percent gave "peacefulness and tranquility" as the most important kind of satisfaction gained from gardening. The response of this more affluent group underscores the fact that humaneness, not economic or social status, qualifies us to benefit from gardening.

Fifth City, a 40-block community development project in an old and decaying ghetto on Chicago's West Side, has shown that gardening can strengthen a sense of community, reverse blight and be a starting point for new development. Mark Welch, a community organizer, emphasizes the effectiveness of fast, highly visible changes—such as gardens, cleanups and play lots—as rallying points to maintain interest until slower, more substantial changes can be made. The 3500 block of Van Buren Street two years ago came together under the leadership of a resident, Lee Haley, a retired metal worker. Soon Haley had his neighbors spending their time and money to garden together. Next came sidewalk repair, then planting of 25 street trees and finally applications for housing rehabilitation loans.

The increasing popularity of plants in the built environment, both indoors and outdoors, can be seen everywhere—from potted plants on windowsills to more ambitious endeavors. Kevin Roche, John Dinkeloo Associates wrapped the 11 stories of the Ford Foundation Building around a garden and buried Oakland, Calif.'s museum under a terrace. Kevin Roche sees the open office and garden as a way of restoring the human birthright denied in the sterile cubicles of commercial offices. John Portman, FAIA, says elements of nature make a "human environmental connection" in architecture.

Twentieth century man carries with him responses and reactions acquired during primitive evolution. They accompany us like shadows as we walk the streets of sophisticated cities. What can we learn from them? To provide a place for plants or gardens is to provide the opportunity for peacefulness and tranquility, the opportunity for a more humane environment. □



# When an Architect Becomes a Novelist

Archibald Rogers, FAIA, awaits publication of 'The Monticello Fault.' A.O.D.

After finishing his term as president of AIA during 1974, Archibald Rogers, FAIA, went home to write a novel. Its hero is architecture.

Since early childhood, Rogers' home has been a 400-acre estate called Belvoir, in Crownsville, Md. It happens also to be the scene of much of the action in his recently published book, *The Monticello Fault*. The land of Belvoir rises in the form of a broad-based cone that is gently leveled at the summit and crowned by an 18th century Georgian residence of rose colored brick and field stone with white wood trim. The dwelling began in the late 17th century as a two-room Jacobean cottage and was fleshed out by 1730 to its present form—a two-story central block with four corner rooms on each floor. Sheltered from the main highway nearby by a slowly winding road, the house looks down over a stand of oaks and other hardwoods to the Severn River flowing into the Chesapeake Bay.

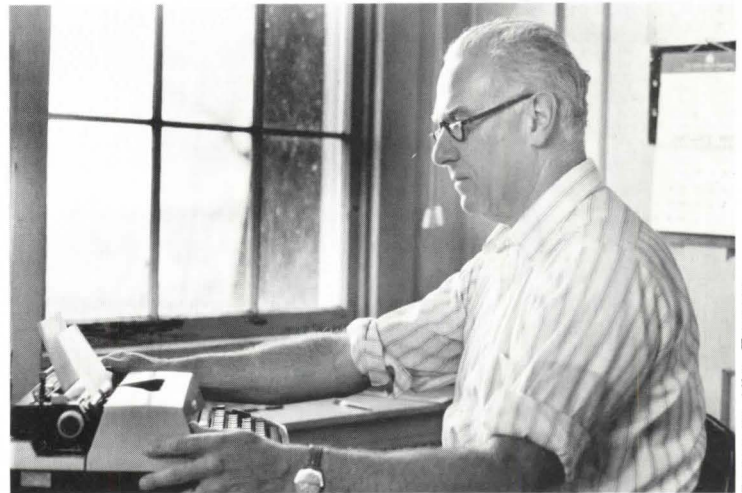
It is, according to Rogers, the only residence in southern Maryland which was never abandoned nor restored. In 1918, just a year after Archibald's birth, it was acquired by his father.

In almost each room on original two-foot thick walls are portraits of four generations of Rogers' family, whose founding patriarch in America, James Habersham, emigrated from Yorkshire to Savannah with James Oglethorpe and became the first governor of Georgia. His likeness hangs over the fireplace in the living room.

In the formally appointed, unostentatiously elegant areas of the house are rare carpets and antiques from various periods; a bedroom or two upstairs, the sitting room and study downstairs are casually furnished in country-like style. Rogers' study is small and unimposing. The flooring is cork, the furniture without distinction and slightly worn—a drafting table, rolltop desk, a couple of plain chairs, a lightweight electric typewriter that jumps with each return of the carriage. One wall is lined with bookcases containing collectors' volumes; the rest are dotted with pictures of Archibald in his Navy and Princeton days. Brushes, rules, pens, pencils, notebooks, journals, miscellaneous papers and stuff—things which under less orderly management quickly grow into chaotic heaps—are neatly aligned and stashed. There are mementos of historical and sentimental value, the most prized, perhaps, being the drafting case used by Rogers' engineer grandfather, a gift which Archibald credits for his decision at age 15 to study architecture.

Rogers himself appears as a cheerful, friendly person. His ruddy, broad-planed face loosens easily into a genial, large toothed smile. He is dressed with casual care, narrow striped shirt, gray trousers, sturdy sandals, white socks. The blue eyes are sometimes hard to read, screened in part by half glasses, in part by an aristocratic sense of propriety and tact that imposes a slight distance, at least from casual visitors. Yet, in talking about his book—his intentions in writing it, its possible literary merit and public reception—Rogers speaks with unreserved candor.

He admits, without embarrassment, that the idea of writing a novel began obliquely. He had intended to leave RTKL, the architectural firm he founded in Baltimore, to write a philosophic



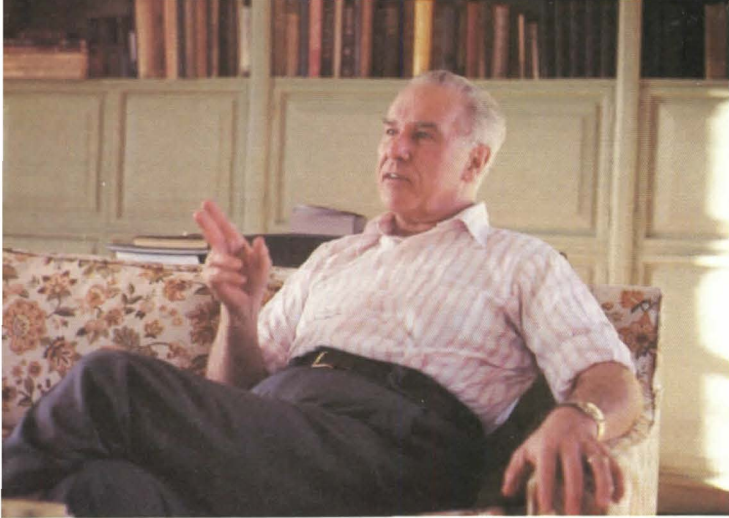
Photos by Allen Freeman

tract detailing his ideas about architectural and political processes and structures. The metamorphosis into fiction started when his then-secretary, now-agent challenged, "But who will read it?" Her cousin, who worked at *Reader's Digest*, recalls Rogers, "said that if I were to put my thoughts into the minds and mouths of characters, the book probably would get read. With some trepidation, I started writing a novel. I began with a schematic, then did the specifications for the ideas."

He had always intended to write following his architectural career. "I had always done poetry and philosophic articles," he explains, "and was suddenly going to be 60. I figured if I was ever going to do it, now was the time. People say I have a lot of guts to drop everything. But at 60, what am I sacrificing? Also, one of the reasons I left the firm, quite apart from wanting to write, is that I feel you cannot go from the AIA presidency back into practice. You had to leave the firm on its own for perhaps four or five years. With the best of intentions you cannot go back. I'm enjoying myself thoroughly and am quite at peace with myself. This is my reward for a lifetime of work."

Rogers prepared for his life's work first at the Lawrenceville School, then at Princeton. He served in World War II with the Navy where his job was to write damage control documents. In 1946, he set up a small architectural firm in Annapolis, Md., and by 1961, after moving his office to Baltimore, became involved in urban design, first as a consultant to Baltimore's Charles Center, later to the cities of Hartford, Greensboro, N.C., Eugene, Ore., Cincinnati and Albany, N.Y. "It was during that period," he says, "that a great deal of my philosophy emerged and I coined the term 'political design,' by which he means that design can help shape politics—which is the major theme of *The Monticello Fault*."

Rogers committed himself to writing full time in December 1976 (he still works for RTKL one day a week to retain medical and other benefits). Just two and a half years later—this spring—it will be published by the Moore Publishing Co. in Durham, N.C. With evident pride he compares this "with the sad tale Leon Uris tells of spending two years writing *Battle Cry* and then seven years finding a publisher."



Archibald Rogers in his study (across page) and in the casually furnished family room (left). Below, Belvoir as one approaches from a winding road leading from the main highway.



His work schedule, at first, began at 3 or 4 in the morning “so that I could relish that very beautiful, uninterrupted period” stretching from dawn to mid morning. The hours soon exhausted him, and he settled into a more work-a-day routine, 9 to 5 with a break for lunch. First, he would prepare a careful outline for each day’s work, then write a rough draft, edit it, revise it, edit the revised copy. A day’s work came to 800 to 1,000 words, “pretty much the way Ernest Hemingway specified,” says Rogers.

Though he talks of admiring certain authors—Gibbon, Conrad, Galsworthy—Rogers can think of none who served as models, even remotely. “Certainly not as far as style goes,” he says. “The style is not like anything I’m aware of. It’s been said that I write the way I speak. It’s been said that there are too many clichés in the book. My answer is that I just can’t take the time to invent another phrase; if it’s really good, it would become a cliché in time. So why bother? Also, I’m not writing for the literati at all. I despise research. I want to write what I know, what I can imagine, and let Alex Haley and the rest do research.”

The germ for the narrative of *The Monticello Fault* was Rogers’ experience as an urban design consultant to the City of Albany when Nelson Rockefeller was governor. “What we came up with was to move the capital of New York state out of Albany and put it in the middle of the sister cities of Albany, Troy and Schenectady. The governor certainly took it under consideration, but the politics would have been atrocious,” says Rogers.

The main story line in *The Monticello Fault* focuses on the creation for the U.S. of a new capitol on a new site. The hoped-for result would be a capitol to serve as a symbol of America’s traditions and strengths and an end to what Rogers, in the voice of his characters, calls “the mess in Washington.” In the novel, the U.S. President’s chief adviser, the canny Dr. Marco, describes that mess as, “a powerful and mindless bureaucratic monster created by a suicidal Congress that has delegated its powers to [the House speaker’s] aged chairmen, to his barons who play footsy with the senior bureaucrats on behalf of—their constituents? Not at all. On behalf of the well-oiled and well-heeled lobbyists representing one or another special group of pursuivants, each seeking to skew the rules of the game to its advantage—to skew not only the rules but also their administration. And this monster has been allowed to grow by the Head Umpire—by a succession of Presidents more interested in sheltering within the trappings of the White House than in the hard work of wielding Presidential power—of leading. And allowed to grow, too, by the referee, the timid federal judiciary that interprets its referenda not on the merits of Constitutional issues, but on purely procedural grounds whenever this is possible—which is nearly always.”

The solution: “A Capitol shaping a Congress that is a living monument to America,” a Capitol without committee hearing rooms. The bureaucracy would remain in Washington to separate the civil service “from the bountiful breasts of its Congressional wetnurse”—à la Capetown.

The challenge for architecture in creating the new capital city,



Belvoir in profile, with the original cottage structure at left.

## The capitol crumbles and architects squabble.

in Rogers' own words, is to "preserve the old fabric of our nation, to express America to Americans and to others in the symbolism of the new capitol, in a style that is indigenous American rather than the currently fashionable International style of Le Corbusier, to give expression to America today without abandoning yesterday or slamming the door upon tomorrow."

Rogers had, of course, to invent a precipitating cause for moving the Capitol. The book opens with an earthquake that topples the structure on Labor Day of 1985, a result of the newly formed Monticello Fault centered under the District of Columbia. The following July 4, comes a second quake, which the President has prepared for, with ministerings from adviser Marco. He then accurately predicts it, to the hour, to the nation, over all television networks. The prediction is based on a dream by a 12-year-old girl named George with parapsychological powers, who lives with a mute Indian, who can communicate with animals, who know about earthquakes before they happen. The second quake and the President's ability to predict it and avert catastrophic damage give him the needed credibility to mandate the building of a new capital city a safe distance from the Monticello Fault.

Rogers describes his novel as "a fantasy—but a fantasy rooted in reality. Its theme is the reality of ideas." In addition, it has adventure and romance: a fight for power between the executive and congressional leadership; a fight about design issues between a young American architect and his adversary/mentor Lerasoir (Le Corbusier); a love affair and secret marriage between the President and a famous artist; a love affair between the President's wife and his chief architect; a surprise ending, and more.

"The characters in the book evolved really as chessmen in terms of working out a plot and subplots," says Rogers. "They also derived in some cases from real persons, at least in part. They're bigger than life and so intended, because there is a symbolic play being acted out here of clearly large dimension, and therefore there is no need, nor any attempt, to reduce the characters to the reality of a Babbitt, say, to something that you understand and know. Let other authors do that."

The President of the U.S., Max Constable, is modeled in part, Rogers says, on Nelson Rockefeller, "in terms of his interest in architecture, public life, wealthy background, exuberance, impetuosity. Max is a very youthful person, though he changes very radically through the story."

In the President's chief architect, Pellegrini, Rogers sees

aspects of himself. "Pellegrini is constantly searching," says the author, "trying to see beyond the here and now, torn between his work, his self, his home, concerned with users, and the role of intuition in design. No, I was not as single-minded and missionarylike as he, but part of me has been the pilgrim, Pellegrini."

Though the President's clever adviser, Dr. Marco, is "an original, not really modeled on anybody," according to Rogers, he sees in Marco at least one aspect of himself. "He is a puzzler," says the author, "and I've always puzzled over words, written acrostics, been fascinated by them. I remember the poet Dickinson—words were her life. And in a sense that's my life too. I just love them. Lucia, my wife, teases me because I'll sit and count each word. *The Monticello Fault* has 213,522. Miser in his counting house counting out his gold."

Since finishing the novel, Rogers has been sifting through his life's experiences, ideas, speeches, journals to come up with a five-year writing plan. It includes "codification of my philosophic ideas onto a card file system for later use," completing a diary he began of a trip to China in 1974, writing a semifictional autobiography and—another novel.

The second novel would be "a sort of *On The Beach*," he says. "Civilization would be destroyed, probably by germ warfare, as a result of our excessive dependence on energy and inability to create any coherent way of dealing with it. One or a few colonies in the U.S. would survive. The task: to design a sophisticated habitat, partially from scratch, partially by refurbishing a few surviving landmark buildings."

Plain and simple, Rogers loves his new career and says that writing "has changed me in my ability to live, because suddenly each day seems so vivid. It's not a beautiful day nor an ugly day. There's no such thing. The days are filled with vignettes, birds that I see, gray-horned owls hunting. I keep storing images in my mind. I'm constantly aware of things which one cannot be as an architect, particularly running a firm. One needs to empty oneself, to be open. The by-product is that I've become extremely absent-minded. It bugs the hell out of Lucia. The book is sort of her enemy."

What if *The Monticello Fault* is greeted with enmity? What does Rogers think of its prospects? "If the readers are really turned off," he answers, "I would certainly have to re-examine my five year plan. I might want to write a very different kind of novel or get some feeling for why this book bombed, or not write another novel. But, I'm an optimist."

"As an architect, if I don't enjoy designing a building, nobody's going to enjoy living in it," he continues. "I have enjoyed writing this book, therefore I hope that quite apart from anything else, that people will enjoy it simply as a story. There is suspense in it; damn little blood and gore. There's a good bit of love in it and sex, but not, I think, of a pornographic nature. That's supposed to be what people want. But the book was not written to satisfy any image I have of what people or reviewers want, because I have no such image. It's written to satisfy me, essentially. But, I think there is a growing readership for a book on architecture and the political concerns I deal with. There is also the catastrophe film constituency." (One television network has put out feelers for a possible miniseries based on *The Monticello Fault*.)

Rogers feels that the book will be read as a result of word of mouth, because "damned few readers go by what reviewers say." And he is not particularly sanguine about its reception from literary critics. "I think it's going to get panned pretty good," he says, "because it violates all the rules. The reviewers, who are tastemakers of considerable influence, would probably see this as something rather different and rather outrageous, asking people to believe something that's basically incredible. That coupled with my personal style of writing. Obviously it's well written."

"But I would like it to be accepted as the great American novel. I would hate for it to bomb. It's my child." □

# Problems of Practice Through the Centuries

*Or, making a living on two drachmas a day.* By Seymour Jarmul, AIA



Some 50 years ago, an English architect named Martin S. Briggs wrote a 400-page book entitled *The Architect in History* (Oxford, England: Clarendon Press, 1927). Recently, when I was rearranging some bookshelves, I came across the book and was soon caught up in some of Briggs' anecdotes. I thought fellow architects would be interested in how little certain aspects of our profession change over the centuries. Briggs wrote his history chronologically, but in the quoted and paraphrased sampling that follows, I have grouped incidents relating to similar aspects of practice. Quoted are original sources as various as Vitruvius and the *RIBA Journal*.

## On Getting Work

*Greece-Hellenistic period:* The means by which Dinocrates, an architect of Macedonia, attracted royal notice are worthy of the attention of every aspiring professional man. The usual letters of recommendation to influential persons having proved futile, "he had recourse to his own efforts. He was of very lofty stature and pleasing countenance, finely formed and extremely dignified. Trusting, therefore, to these natural gifts, he undressed himself in his inn, anointed his body with oil, set a caplet of poplar leaves on his head, draped his left shoulder with a lion's skin, and holding a club in his right hand, stalked forth to a place in front of the tribunal where the king was administering justice."

As soon as the king noticed him and asked his identity, Dinocrates put forward a scheme "for shaping Mount Athos into the statue of a man, in whose left hand I have represented a very spacious fortified city, and in his right a bowl to receive the water of all the streams which are in that mountain, so that it may pour from the bowl into the sea." . . . And by this charlatan's trick he attained his end.

*Rome—first century B.C.:* "Other architects go about and ask for opportunities to practice their profession; but I have been taught by my instructors that it is the proper thing to undertake a charge only after being asked, and not to ask for it; since a gentleman will blush with shame at petitioning for a thing that arouses suspicion."

*Egypt—first century A.D.:* When Ibn Tulun, the amir or governor, was informed that 300 columns would be required for his new mosque if the ordinary method of construction were adopted, and that this would involve the destruction of a large number of provincial churches from which the Arabs rifled marble columns, he was very much troubled and declined to authorize

the work. This difficulty came to the ears of Ibn Kathir al-Farghani, an unfortunate architect then languishing in prison. The governor had imprisoned him and substituted 500 blows for a fee of 500 dinars, because a short time previously his horse had stumbled over a heap of mortar adjoining an aqueduct that this architect then had in hand for him. The prisoner saw in the amir's dilemma a chance of release. He wrote to Ibn Tulun and undertook to build him a mosque of the requisite size without employing a single column except the pair flanking the mihrab. He was brought before the governor and offered to draw a plan for him on the spot, if parchment could be brought to him. Ibn Tulun was surprised and delighted with the result, released the architect immediately, arrayed him in rich robe and authorized him to commence operations at once.

*Italy—16th century:* Professional rivalry was sometimes acute, but when Borromini was appointed architect at St. Peter's under Bernini's direction, he soon became ambitious, then envious and finally the enemy of his master, endeavoring to supersede him in all his offices. Lastly, though a long and successful career had brought him fame, he came to the conclusion that his reputation was still inferior to Bernini's, fell into a state of melancholy and had to be put under supervision, but succeeded in getting possession of a dagger one night and committed suicide.

*England—19th century:* Architects like Street, Scott and Waterhouse, in spite of their enthusiasm, were men of the world, capable of dealing successfully with clients of all types; indeed, it was said of Waterhouse that his smile was worth 10,000 pounds a year to him, which must have been an appreciable fraction of his income. But Welby Pugin, who spent his later years "under restraint," was always something of a crank, liable at any time to throw up a good commission in a tiff.

## On Fees and Compensation

*Greece—third century B.C.:* At this period, the unskilled laborer, finding his own food, earned one and a half drachmas . . . the architect received two drachmas; but certain bricklayers and carpenters were paid as much as two and a half drachmas. . . . It is clear that the architect, though paid more than the inferior workers, did not rank as high as some skilled craftsmen.

*Spain—12th century:* Maestro Raymondo came to an agreement with the Bishop of Lugo that if the value of money dropped during the period of his employment (full-time) as master of the works at the new cathedral, he should be paid in kind on the following scale instead: six marks of silver, 36 yards of linen and 17 loads of wood annually; "shoes and gaiters as he had need of them"; and each month two sueldos for meat, a measure of salt and a pound of candles.

**Mr. Jarmul** is a partner in the architectural and planning firm of Jarmul, Brizee & Levitt, Lake Success, N.Y.

*England—14th century:* In 1368, there is a reference to Master Robert de Patryngton (architect) to whom “for his good services rendered and to be rendered for the term of his life, we (the dean, et al.) have granted . . . 10 pounds a year, together with the houses within the close . . . provided that he shall well and faithfully attend to the works, and shall not employ his time upon any other operations. And if he shall undertake any works elsewhere, and apply himself to them, neglecting, delaying or leaving undone our works; and after being a third time admonished on our behalf, shall not return to our works and diligently employ himself about the same, then his salary shall cease until he shall return and duly make up for his failures. If smitten with blindness or other bodily infirmity, whereby he may be disabled from bestowing his bodily labor upon the said works, then, so long as the infirmity shall continue, he shall receive 10 marks yearly, together with the houses aforesaid, bestowing his counsel and advice as far as he is able. In the event of his being unwilling to labor, or withdrawing himself altogether from the works, then the grant shall forthwith cease, until he shall fully return and attend to our works.”

*England—18th century:* Brief mention must be made of ways by which certain well known



DENTILES AND DENTURES

architects supplemented their incomes, besides such subsidiary hobbies as purchasing antiques for “noble patrons,” designing furniture and costumes for ladies of fashion and writing books on the orders. Vanburgh acted as lessee and manager of the Opera House in the Haymarket, which he bought for 2,000 pounds; and those artistic souls the Adams ran a lucrative business in “real estate” in London, abreast of their more legitimate and professional activities, until an unlucky speculation in cement brought them to ruin. The Adams seem to have been fully cognizant of all the accepted methods of architectural advertising—permissible and otherwise.

### On Work Pressures

*Spain—13th century:* Street tells a story about the building of the beautiful bridge of St. Martin at Toledo about 1212. “The architect, whilst the work was going on, perceived that as soon as the centers were removed the arches would fall, and confided his grief to his wife. She with woman’s wit forthwith set fire to the centering, and when the whole fell together all the world attributed the calamity to the accident of the fire. After the bridge had been rebuilt again she avowed her proceeding, but Archbishop Tenorio, instead of making her husband pay the expenses, seems to have confined himself to complimenting him on the treasure he possessed in his wife.”

*Italy—the Renaissance:* Michelangelo, although rich, lived like a poor man; rarely did any friend or other person eat at his table, and he would accept no presents, considering that he would be bound to any one who offered him such. His temperance kept him in constant activity, and he slept very little, frequently rising in the night because he could not sleep, and resuming his labors with the chisel.

Bramante’s hustling of the foundations of the Belvedere at the Vatican, to please an exacting master, afterwards led to a failure, and Raphael is also typical of the architect who is too ready to meet unreasonable requests; in fact, at the Vatican he was “so courteous and obliging that for the convenience of certain among his friends, he commanded the masons not to build the walls in a firm uninterrupted range, but to leave certain spaces among

the old chambers on the lower floors” . . . and again the result was disastrous. Michelangelo’s troubles of old age with the authorities at St. Peter’s may be compared with those that darkened Wren’s latter days at our own St. Paul’s; and Jacopo Sansovino was once thrown into prison, fined and degraded at the instance of detractors, but afterwards released and reinstated in favor when it was discovered that the collapse of a vault which had led to this accusation was in no way his responsibility.

Of all the pictures that Vasari gives us of an architect’s cares, there is none more vivid than that of Brunelleschi working on the dome at Florence, dealing with labor troubles, locking out strikers, organizing canteens in the dome to save time lost by workmen descending for dinner at midday, inventing and improving scaffolding and tackle. Yet Brunelleschi, though hampered by all these sordid details and capable of dealing with every one of them, was one of the foremost artists of Italy.

*England—19th century:* But all of the architects were tremendous workers. The stories of their energy are appalling. The instances that I have already cited of their hectic Continental tours and their furious efforts in commencing practice are matched by their continued activity after they had become famous and prosperous.

They never slowed down. Barry often rose at 4 or 5 A.M., never later than 6, and normally worked till 11 or 12 at night. Pugin wrote most of his letters in the railway train, and often continued his drawing through tea, with a board propped up against the table. One day he rushed down to receive instructions for altering a large house near Bournemouth, made his first inspection of the existing building during the afternoon and submitted sketch design to his client after dinner the same day. On another occasion he produced two alternative designs for a stained glass window within a quarter of an hour. He broke down before he was 40, and his medical man said that he had done “a hundred years work” in his lifetime. . . . But the most illuminating sidelight of all upon Victorian success is furnished by the story often related of Sir Gilbert Scott at the height of his immense practice, showing that his “jobs” were almost too numerous to remember. He left London by train one morning at 6; when his staff dawdled into the office a few hours later they found a telegram from him at Midland station asking “Why am I here?” On another occasion Scott paused to admire a church, and asked for the architect’s name. “Sir Gilbert Scott” was the laconic reply.

### On Landmarks Preservation

*Italy—the Renaissance:* According to Lanciani, the architects of the Renaissance were guilty of shocking vandalism in Rome. “This system of wholesale plundering, of promiscuous usage of pagan and Christian materials, of ruining many edifices for the benefit of one, inaugurated by Constantine, was followed by his immediate successors, and even more mercilessly by the architects of the Renaissance.” . . . They “had no compunction about burning into lime antique statues and portrait-busts and historical inscriptions than of leveling to the ground temples, baths, porticos, triumphal arches, etc., provided such misdeeds made easier and cheaper their task.”

Bronze doors and beams, bronze ciboria and roof tiles, were stripped ruthlessly from old churches and temples, especially from the Pantheon, which supplied a large part of the 80 tons or so of bronze used in Bernini’s famous baldacchino at St. Peter’s. It is unfair to attribute all the blame for this vandalism to the architects, who were probably only carrying out the orders of clerical employers, but one cannot help feeling that they were partly responsible.

*England—19th century:* When at the end of 1814, Napoleon’s exile opened Italy once more to Englishmen, Cockerell [an English architect] determined to go there. His farewell to Athens was characteristic of the Turkish regime. The Turkish commandant of the fort on the Acropolis told him “to bring a cart at night to the base of the Acropolis to receive a present, about which he

maintained a mysterious reticence. Cockerell obeyed, and as he reached the rendezvous heard a great body crashing down the hill, and rushed to the spot where it came to rest. It was the right-hand slab of the south frieze of the Parthenon. I need not say that such treatment did not improve the sculpture, which still bears the marks of its adventure on its face. Cockerell, however, immediately put it in his cart and shipped it off from Pireaus. He afterwards presented it to the British Museum, where it is to be found in its due place.”

### On Construction Budgets

*Ancient Rome:* At Ephesus, according to Vitruvius, there was a law under which, if an architect’s “extras” exceeded the contract amount by more than 25 percent, he was held liable for them personally.

“Would to God that this were also a law of the Roman people, not merely for public, but also for private buildings. For the ignorant would no longer run riot with impunity, but men who are well qualified by an exact scientific training would unquestionably adopt the profession of architecture. Gentlemen would not be misled into limitless and prodigal expenditures, even to ejections from their estates, and the architects could be forced, by fear of the penalty, to be more careful in calculating and stating the limit of expense, so that gentlemen would procure their buildings for that which they had expected, or by adding only a little more.”

*France—17th century:* Even if one does not take the blackest possible view of J. H. Mansart and his contemporaries, the fact remains that Louis XIV’s building department became a vast family party. Of the Gabriels it is said that “what the architect designed, his brother or his uncle contracted for, and some other relation checked the accounts, and it must have been almost impossible for an outsider to break into the ring-fence of this early Office of Works.”

And finally one may quote, from Shakespeare, a passage in the “Second Part of King Henry IV,” written in 1598:

“When we mean to build,  
We first survey the plot, then draw the model;  
And when we see the figure of the house,  
Then must we rate the cost of the erection;  
Which if we find outweighs ability,  
What do we then but draw anew the model  
In fewer offices, or at least desist  
To build at all? . . .”

### On Consultants

*Middle Ages:* In 1499, Martin de Chambiges was called to Paris as a consultant by Jean de Soissons, who paid him a fee for advice on the facade of the cathedral at Troyes. The architect of Salisbury spire was paid a regular salary for his work there, though at the time of his appointment he was already engaged on work at Bath and Reading. The agreement with him, dated 1334, stipulated that “he should repair thither and make such stay as the necessity or nature of the fabric shall require; and

that, notwithstanding his prior obligations at Bath and Reading, he should not neglect or delay the works of the church.”

*Spain—14th century:* Spain provides us with similar instances.

Jacopo de Fabriis of Narbonne was appointed architect of the cathedral at Gerona on condition that he should come from Narbonne six times a year to examine the work.

*England—19th century:* Barry’s

work at Westminster was complicated by the appearance of “specialists,” in the shape of the civil engineer who supervised the construction of the river-wall, scientists who advised on the

selection of stone, a medical man who was introduced to design the whole system of warming and ventilation, the ubiquitous Lord Grimthorpe of St. Alban’s fame (then plain Mr. Denison) who undertook to design Big Ben and the clock, and lastly a fine arts commission on which the architect had no place.

### On Client/Architect Relations

*Ancient Greece:* Trophonius and Agamedes built a temple to Apollo. Homer gives us to understand that the god not only chose his site but actually got to work with the architects and masons. The architects asked the god for a reward for their labors. Apollo promised them the best of all gifts, and consequently within three days they were both found dead.

*Rome—second century:* Hadrian’s encounters with the architect Apollodorus indicate that the older man was jealous of his imperial client. On one occasion Hadrian sent Apollodorus his designs for the Temple of Venus and Rome. Apollodorus pointed out that, if the deities whose statues were sitting in the temple were to stand up, they would bump their heads against the roof. The tactless remark, unworthy of an experienced professional man, cost Apollodorus his head.

*Italy—the Renaissance:* Michelangelo insisted on having a clause inserted in his contracts that he should not be interfered with. Once, when the assembled cardinals, constituting what we should call the “building committee” of St. Peter’s, objected that insufficient lighting had been provided, Michelangelo replied:

“. . . I neither am nor will be obligated to tell your lordship or any other person what I intend or ought to do for this work; your office is to procure money, and to take care that thieves do not get the same; the designs for the building you are to leave to my care.”

Nor must one forget the case of Verrocchio, who stipulated that, wherever he was working, but “more particularly for monks or friars . . . the door of the cellar or whatever place the wine was kept in, should be constantly open, that he might go to drink whenever he pleased, without asking leave from anyone.”

*France—15th century:* The Countess Albereda beheaded the architect after the castle was finished, in order that he might not construct another.

*England—17th century:* On another occasion he [Sir Christopher Wren] ventured to play a trick on the civic fathers of Windsor, for whom he was building a new town hall. “The Mayor and Corporation came to make a state inspection . . . and objected that the supports of the floor above the open basement were insufficient. Wren explained the reason of his conviction of its security, but finally consented to add two columns besides those of his plan. These supplementary columns he made of set purpose so short that a space intervened between their capitals and the ceiling. Seen from below, however, all seemed reassuring, and the civic deputation expressed themselves satisfied. The columns stand as they did then, and the space has not lessened between them and the ceiling.”

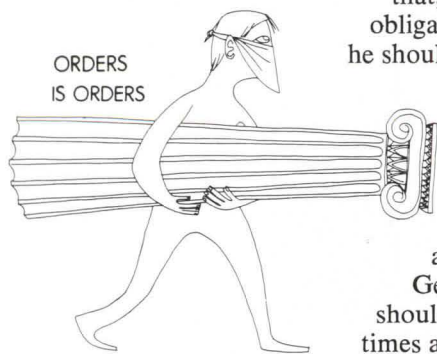
### Update

Dick Cavett, in an interview with Philip Johnson, FAIA, on public television, asked the architect to define the ideal client. “He’s someone who walks through the door, writes a big check, then leaves on a long cruise not to return until the building is completed,” Johnson replied. One of my partners wrote the AIA gold medalist to ask when we might expect to encounter this paragon. In response, Johnson wrote across the letter, “Never, never, never.” □



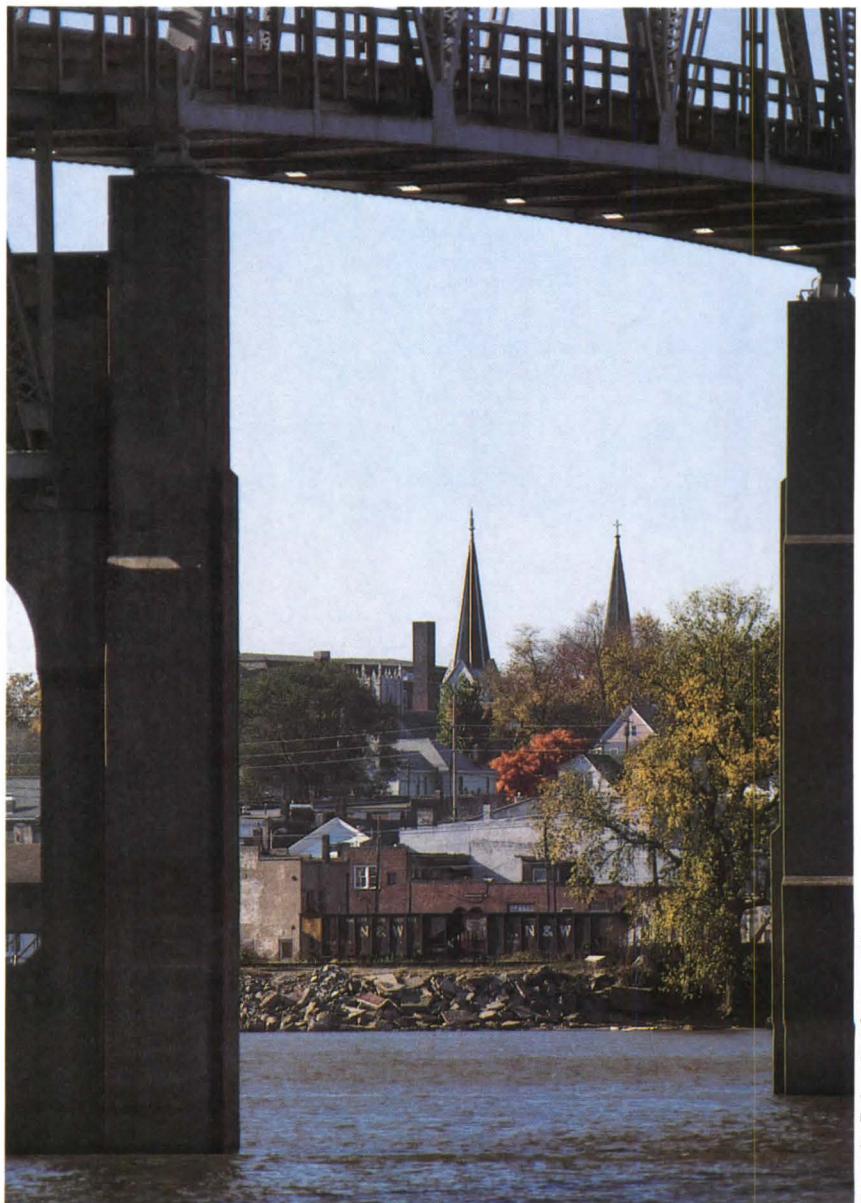
Drawings by Forrest Wilson, AIA

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*A barge (top) on the wide Mississippi near Fort Madison, Iowa; a fisherman near Audubon Park, New Orleans; and Hannibal, Mo., framed by bridge (right).*



Photos by Robert T. Mooney, AIA





# Waterfronts: Building along the Mississippi

*An exploration of the environment lining our greatest river. By Robert T. Mooney, AIA*

The Mississippi River is a storied passage, described with eloquence by Herman Melville and romanticized by Mark Twain. Along its banks grew urban places that rivaled Europe's. Beyond lay the challenge of the West.

It ranks third in length among the great rivers of the world, after the Amazon and the Congo, and it is the only one of these three that is, for the most part, a working river. Combined with the Missouri, it is the longest navigable river system in the world. But swift currents, wide shallows near the banks, dense vegetation and high levees make it difficult to explore by boat. To best see and examine river related structures, you must drive and walk the shoreline.

Six months ago, I began a sabbatical leave to do just that. What began as a hesitating probe rapidly drew me to a strong affinity for the river, the river culture and its people. My first of many visits was late one brilliant winter day on the Illinois side across from the Hannibal, Mo., of Tom Sawyer and Huck Finn. The frozen river was abandoned. Against the lowering sun, its church spires gleaming among deepening shadows, Hannibal at this distance could have been a medieval hill town. It was a vivid introduction to the river and its architecture.

There is no single place where one should begin to explore the built environment along the Mississippi. All along the shoreline, the landscape and meandering river offer a kaleidoscope of image and scale: old homes, vast industrial complexes, tow boats and barges, urban sprawl, churches reviving many architec-

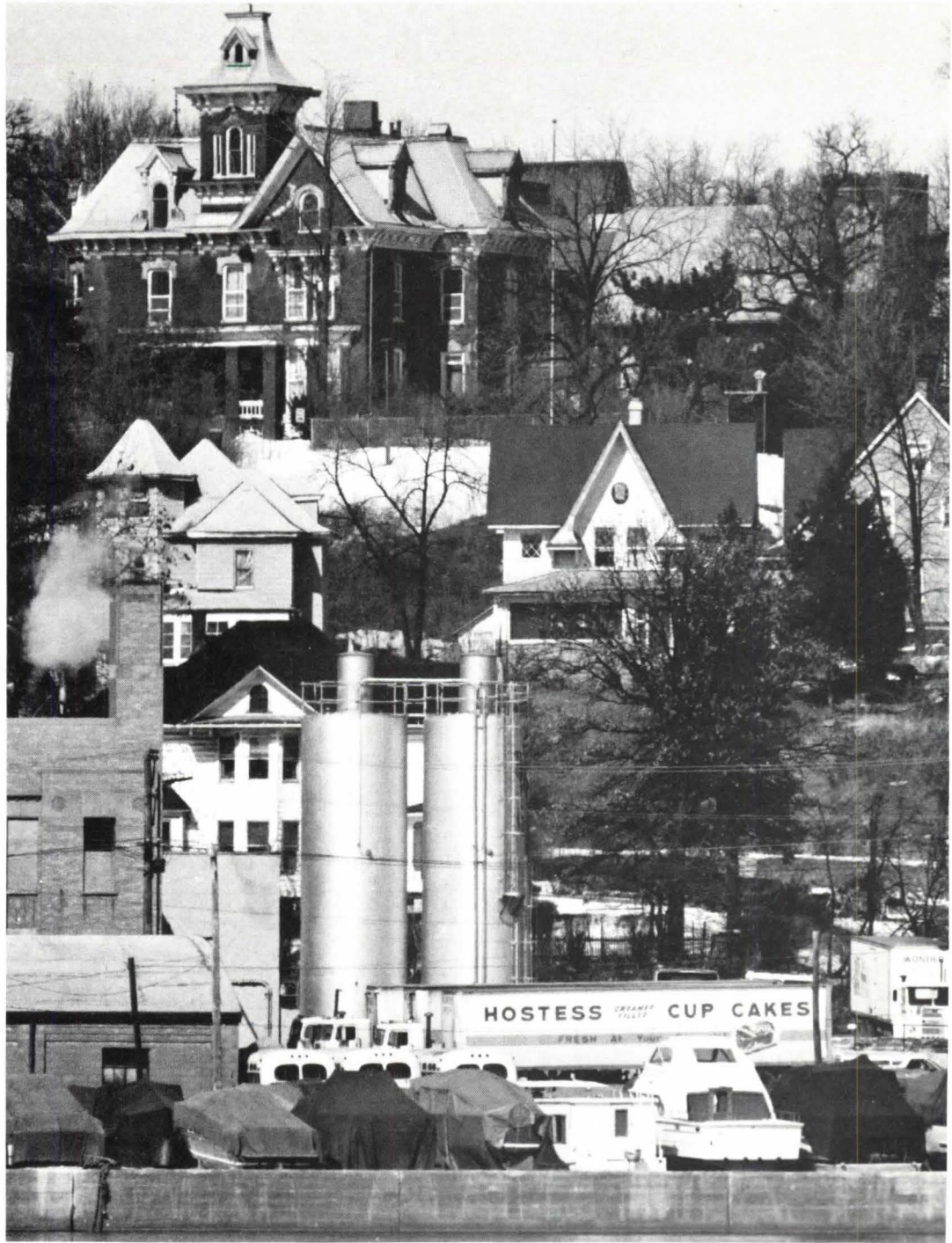
**Mr. Mooney** is associate head, department of architecture at the University of Illinois at Urbana-Champaign.

tural periods, great bridges and, here and there, hamlets extending from the river to high on the bluffs. The detailing, color and texture of many of these structures is a pleasant blend of sensitive design and handhewn craftsmanship, the latter once considered a trade, but today a lost art.

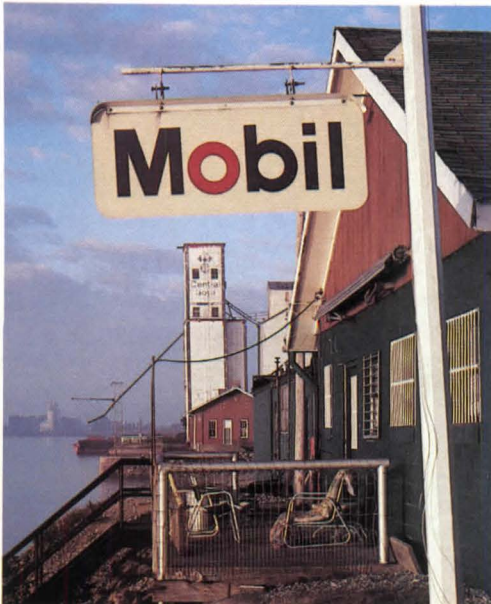
Urban areas along the Mississippi reflect the origins of the Spanish, English, French, German and Scandinavian peoples who explored and settled the Mississippi River corridor. Occasionally the architecture of vanished American Indian nations is also in evidence. In age structures along the shores range from Indian burial mounds to nuclear reactors, in scale from river shanties to vast urban centers, in detail from intuitive vernacular to classic order, in texture from hand-formed brick to great concrete monoliths and in color from the absence to the essence.

The working river stretches between Minneapolis-St. Paul and the Gulf of Mexico beyond New Orleans. Even here, almost 200 years after immigrants started building, man is still an intruder.

Because of sensitivity to the landscape, to site and to scale in the design process, 19th and early 20th century structures demonstrate a greater sense of place and of harmony with the river than do most later 20th century structures. For instance, antebellum plantations in the South, such as at Parlange, Houmas House and San Francisco, exhibit fine detailing and treatment of both interior and landscaped exterior spaces. The plantation house was the focus of life on the plantation and, through orientation, that focus was directed outward to the surrounding agricultural lands and to the river, the latter a source of recreation and beauty as well as transportation. The plantations were so



*Two of Iowa's industrialized shorelines, in Davenport (right) and Muscatine (below); below right, Houmar Plantation, south of Baton Rouge, La.; across page, a nuclear reactor looms beyond a shanty at Grand Gulf, Miss.*



## Pushing pedestrians away from the river.

scaled that people had a sense of place there within the grand extent of the larger scale river environment.

By contrast, much of the development in traditional river towns since the 1930s has ignored the landscape, turning away from the exciting interface of town and river. It is difficult to find pleasant areas of human scale in towns and cities along the river. Flood control devices such as levees have complicated this problem, but all too frequently locations for simple visual linkage with river activities have been usurped by marinas, parking lots, industrial blight and warehouses. In virtually every central business district with potentially good sight lines to the river, I found massive air polluting industrial walls obliterating those lines. Roadways along the water's edge have pushed pedestrians farther and farther from the river, and vehicle scale has replaced human scale. Only a small number of landscaped green areas help tie the river to the urban areas, the majority of those the work of service clubs and not designed by professionals. With few exceptions—such as the Army Corps of Engineers parks at many of the locks and dams or the greenways of Minneapolis, the new levee at Clinton, Iowa, or Audubon Park and the Moon Walk at New Orleans—the urban edge of the Mississippi is uninviting to pedestrians. One need only experience the wild disarray of the built environment along the river in once-classic river towns such as Dubuque, Iowa, St. Louis and Memphis to support this thesis.

Burlington, Iowa, is typical of the many upper river communities which have lost their interface between the river and their central business districts. Industry and parking lots have encroached upon a once handsome shoreline. Grand houses which not long ago occupied the bluffs overlooking the river have nearly vanished, replaced by tract housing. The river is so

ignored as to appear a negative element. The city council of Burlington recently was asked to rank, in priority order, 17 planning problems facing the community. Those affecting the river shoreline ranked 4th, 16th and 17th. Margaret McCarten, director of Burlington's department of planning and development, told me that since 1939 many projects have been developed to re-establish the river as a primary, positive element in the cityscape, but insufficient funding and changing priorities have prevented this from happening. The federal government agreed more than once to make funds available to assist in an extensive shoreline development, but the city has failed to respond. On one occasion, the government earmarked funds for Burlington for such use, but rather than participate in that project, the city fathers voted 5 to 0 to build a municipal swimming pool.

In an overview, Burlington's topography undulates gracefully up from the river flats over a succession of hills to the crest of a bluff on the west side of the river and is reminiscent of many Rhine River hill towns. On closer inspection, romantic vistas yield to a different reality. For example, a downtown mall was recently developed as an economic stimulator for the central business district. The opportunity was there to design a small and appropriately scaled pedestrian street linking the central business district directly to a shoreline parkway along the river. But rather than meeting the river, the mall terminates in front of a rundown auditorium, a parking lot, a granite copy of the 10 Commandments and a flagpole. Also, owners of shops and stores have not carried through; their aluminum storefronts remain. The essential ingredient missing was a design theme, and the most obvious theme in the city, the Mississippi River, was ignored. Burlington lacks both a guiding hand in matters of design and the money to make needed improvements.

In contrast, great sums have been spent in larger cities, but not always to the best effect. For example, the federal govern-



## Monuments, and mistakes, along the shore.

ment went to great expense to encourage development of the shoreline along the Mississippi in Minneapolis. At the same time, it commissioned the design of a parking structure in conjunction with a post office there, all but sealing off two blocks of the shoreline. The parking structure destroyed a major sight line between downtown and the river. Certainly even the best of designers err, but Minneapolis can hardly afford such mistakes. The government's decision to proceed was made in spite of a negative recommendation by qualified professionals from the metropolitan area.

In another instance not long ago, a grainery at the edge of the river near Davenport, Iowa's central business district was destroyed by an explosion, breaching the industrial wall of the shoreline. The city turned down an option to purchase the property, forsaking an excellent opportunity to develop a green area adjacent to the river and central business district. Today, the former break in the industrial wall has been filled by a sand and gravel company's buildings.

In Minneapolis, Johnson/Burgee's IDS Center is set far back from the river. But it rises integrally from Nicollet Mall, which in the future will be linked to the river's edge. IDS is the most beautiful and dignified highrise in sight of the Mississippi.

A short distance down river in St. Paul, a holding facility for criminals, designed by the Wold Association, is near completion. Located adjacent to the core of the city, it is pleasantly integrated with the face of the bluff above the Mississippi. And the building is oriented to take advantage of a dramatic view of the river. Although isolated by function from the rest of the city, its architecture is in harmony with both the river environment and the city's center.

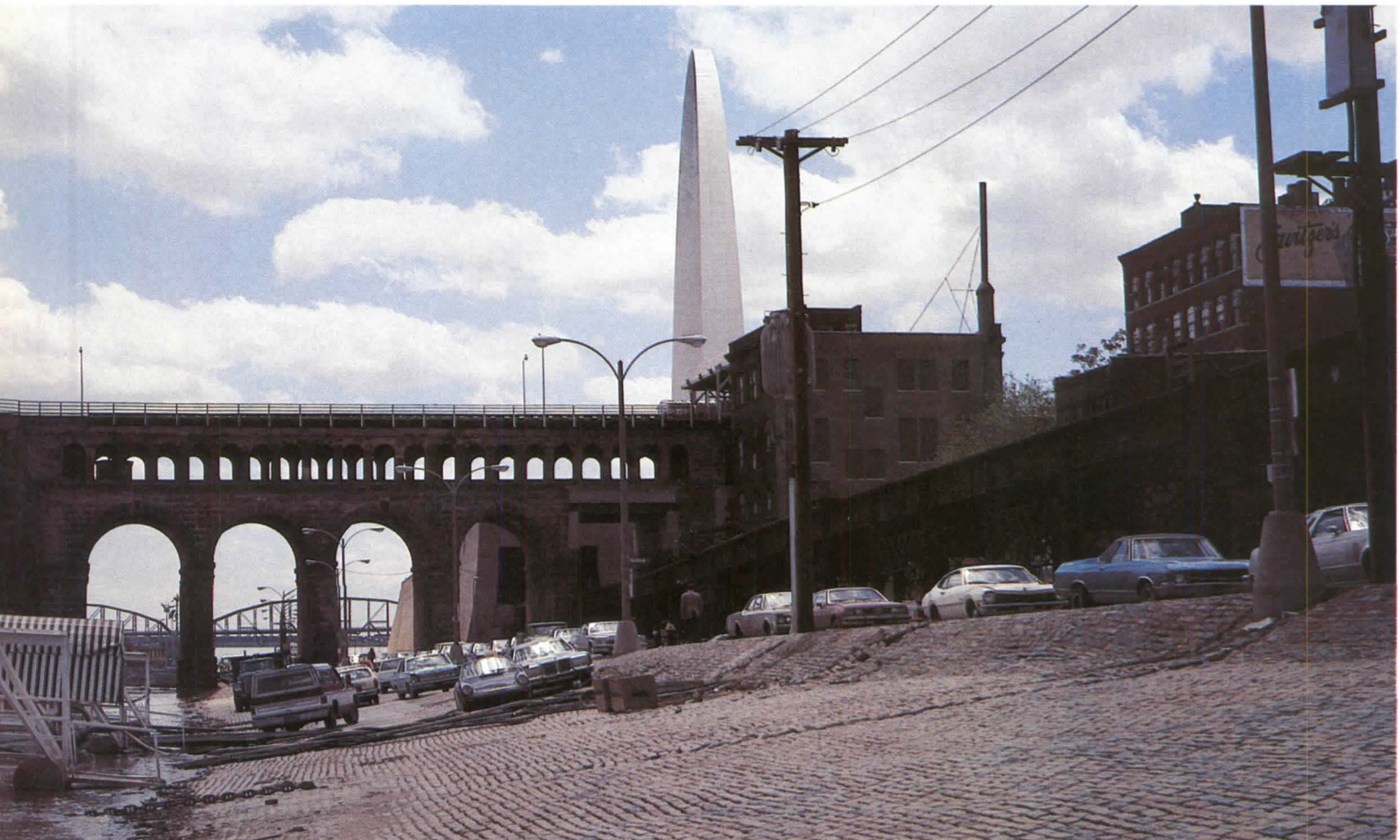
Only now, 30 years after Eero Saarinen won the competition for the Jefferson National Expansion Memorial in St. Louis, is the landscape plan being completed (see Nov. '78, p. 57). The

railroad below the memorial is still a major barrier to pedestrian movement. But even when that problem is solved, Saarinen's dream will only be partially fulfilled. He has been quoted as saying that the other side of the river—East St. Louis—must be brought into the composition: "We must make this a great green park." But the social and economic problems of East St. Louis may prevent his great plan from ever coming to fruition. Just north of the arch, a preservation project is saving what remains of the old St. Louis waterfront at Laclede's Landing. Classic Bogardian iron and masonry riverfront buildings are being restored for a variety of uses. The city-river interface is being re-established through the original architecture, and it is meeting spectacular success.

Beyond the arch and the landing, one may travel for miles and see the river only through infrequent gaps among factories and warehouses. However, on the bluffs overlooking the river south of the central business district and famous Souldard Market, an area known as Dutchtown relates visually to the river. There is a strong preservation movement there among magnificent century-old mansions and more recent row housing of handsome design.

Designers are rediscovering the river at Memphis. The Mud Island project for a river museum and the planned restoration of historic Beale Street give hope for changing Memphis from a city on the river to a city oriented to the river.

New Orleans' port facilities twist and meander along the shoreline, forming a visual barrier between the urban districts and the water. It was not until the early 1960s that the city began to recognize that it should once again establish its interface with the river. As a result, the industrial wall of the port facilities has been recently opened with three major pedestrian accesses: one at the Moon Walk, a boardwalk below Jackson Square; a second at the Spanish Plaza, a pedestrian area in one of the major ship docking facilities, and the third at Audubon Park, a green area between Tulane University and the river.





*Left, St. Louis' Lecleres Landing with the gateway arch in the background. This page, clockwise from top, IDS tower and the downtown skyline of Minneapolis; St. Paul's riverfront with new jail facility (in center of photo), and folk singers on the Delta Queen at Natchez, Miss.*





*In New Orleans, the Moon Walk (above) and the home of the last steamboat captain on the Mississippi (right); below, a resting tug at Muscatine, Iowa, and across page, the fan vault of Louisiana's Old Statehouse, Baton Rouge.*





## A dearth of professional design concern.

The Superdome acted as a catalyst for new developments near and adjacent to the waterfront, such as the Hyatt hotel, the International River Center, the Italian Piazza and most recently, Canal Place, a \$750 million multiuse river center. Revised zoning ordinances in districts near the river encourage historic preservation and stimulate development of parks, arcades and pedestrian ways. I found the zoning revisions, the Moon Walk and the Audubon Park designs to be the most architecturally appropriate efforts for this city of intimate spaces and fine details. The recent tourist-oriented hotel and public function complexes do not capture the same atmosphere.

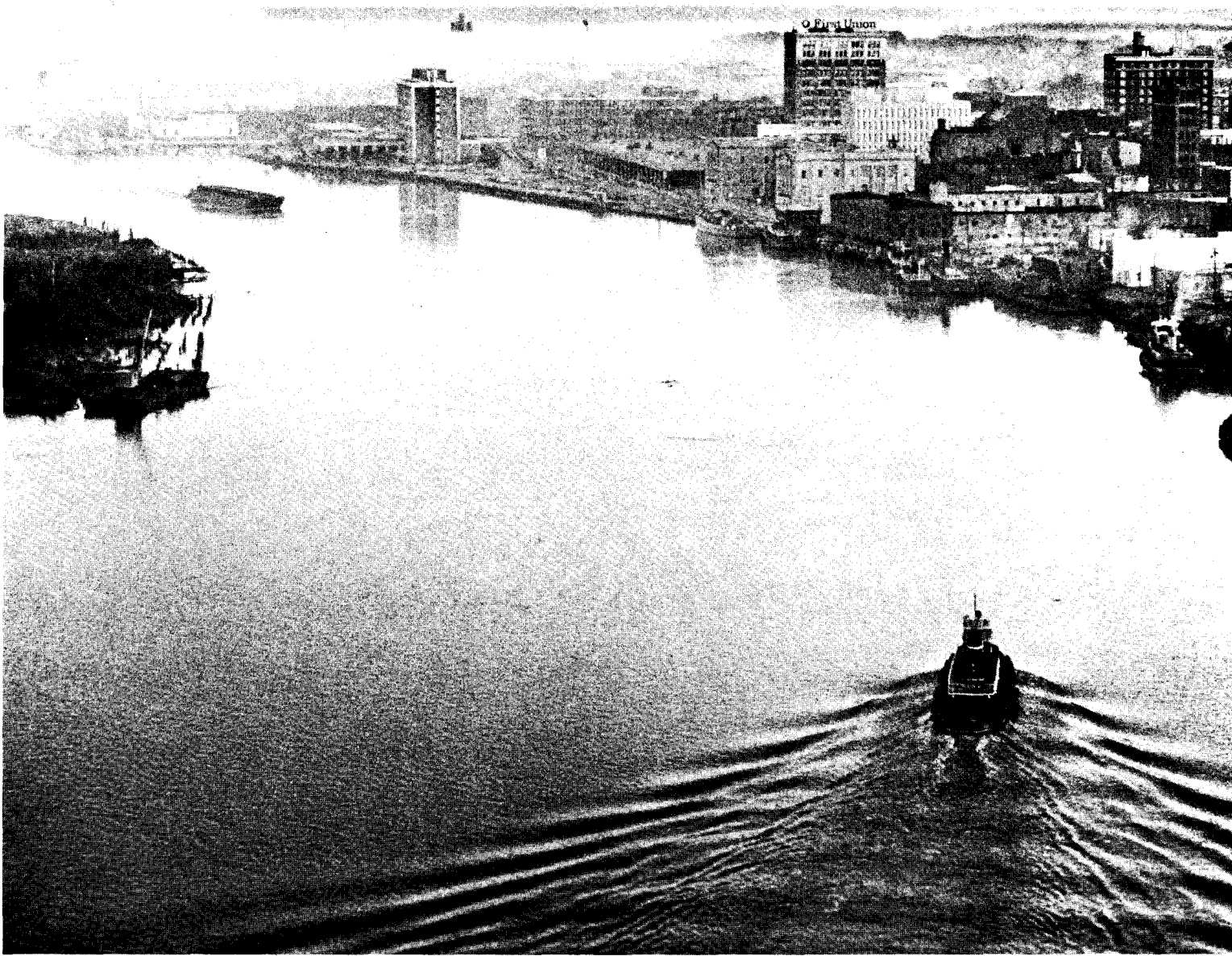
Among many smaller urban areas, there is evidence of pride in their character as river towns. Winona, Minn.; Bellevue, Iowa; Elsah, Ill., where Maybeck designed at Principia College; Natchez, Miss., and Baton Rouge, La., are typical of towns and cities that demonstrate a sense of recognition of the importance of their place along the river. I found in them an awareness of appropriate design, attention to detail and an acknowledgment of the significance of successful restoration and preservation. Splendid, elegantly restored plantation houses may be seen on both the east and west shores of the river between St. Francisville and New Orleans. There are sites to visit, well known among architectural scholars, such as the restored Moroman Community at Navoo, Ill., the plantations of the False River near Baton Rouge and the fishing towns in the delta below New Orleans. Mingled with the expected, one finds surprises such as James Dakin's magnificent Gothic revival stained glass skylight in the old state capitol building in Baton Rouge, or perhaps an unpublished residence by an architect long forgotten,

located in a coppice high on a bluff with only the tip of its verge-board indicating its presence. Perhaps the best stretches of combined architecture and panoramas are between Dubuque and the Twin Cities and south of Natchez to the Gulf.

The ecology of the river is the concern of the Army Corps of Engineers and the Great River Environmental Action Team. The corps does not attempt to determine what the quality of design along the shoreline should be, but it does support governmental agencies and urban areas by advising on feasibility and in executing proposals for shoreline development, as well as maintaining the lock and dam system and the waterway channels for shipping.

The Great River Environmental Action Team is federally supported. For the past several years, it has been involved with such issues as reclamation and proper placement of dredge material. With the corps, it is studying the area between Guttenberg, Iowa, and Hannibal. The team, which assists communities along the river in addressing river problems through a public participation program, only recently has given serious consideration to the visual and ecological impact of what is built. Up to now, there have been no design professionals on the team's staff.

The lack of coherent and coordinated design attention is an obvious shortcoming of most recent development along the Mississippi. For the river and its diverse culture are priceless national heritages. What man has built there is an integral part of that way of life. If we value these heritages, the river corridor and its contiguous urban fabric must be maintained and improved. The alternative is a protracted death for the river system that drains nearly one-eighth of the continental U.S. Architects, planners and landscape architects have the opportunity to help protect this treasure. □



## Waterfronts: Rediscovering a Neglected Asset

*In Wilmington, N.C., revitalization begins on the river. By Geraldine Bachman and Robert Knecht*

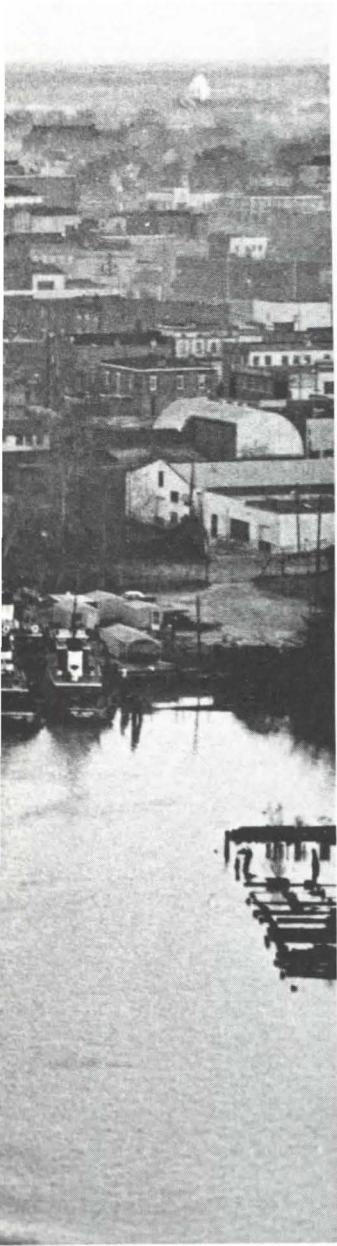
Over the past century or so, American cities have turned their backs on their waterfronts. But several places recently have begun to rediscover and reassess the contribution these intriguing areas can make to the quality of urban life: on the East Coast, Baltimore and Boston; and on the West Coast, Seattle and San Francisco, where residential, recreational, commercial, professional and educational pursuits coexist, recalling the way cities were prior to single-use zoning and monotonous uniformity. Smaller waterfront cities too are waking up: Bath and Portland in Maine, Bridgeport and New Haven in Connecticut. And Wilmington in North Carolina.

**Ms. Bachman** is an art specialist at the National Endowment for the Arts. **Mr. Knecht** is assistant administrator for coastal zone management at the national oceanic and atmospheric administration, Department of Commerce.

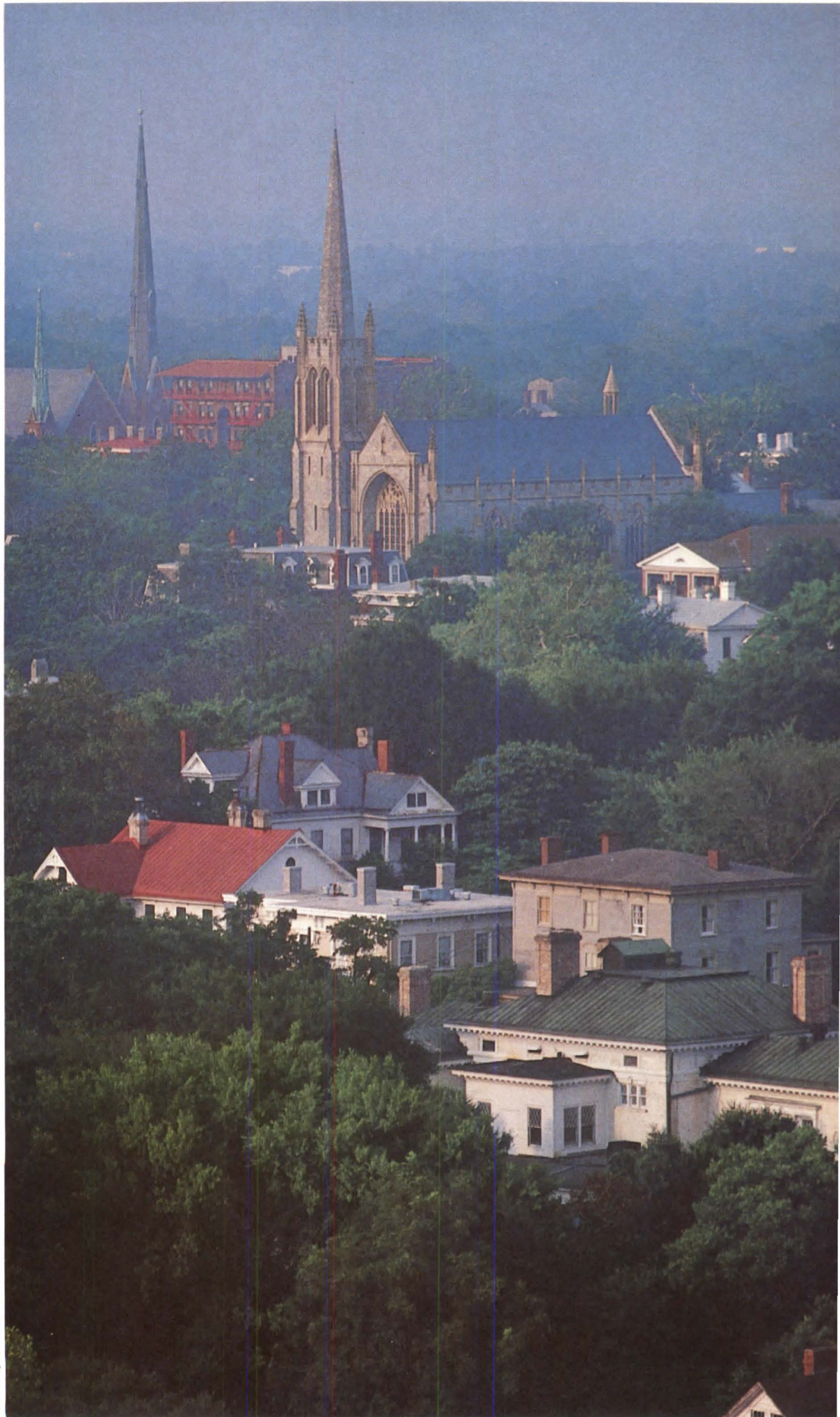
Wilmington, less well known than nearby Charleston, S.C., was founded in 1733 at the strategic junction of two branches of the Cape Fear River. It early became a trading center for inland settlers. Shipping, lumber, naval stores and rice provided the main sources of income for the area. In 1880, it was the largest city in North Carolina and one of the largest ports in the world for shipping tar and turpentine. By the time of the Civil War, Wilmington boasted three newspapers, three shipyards and three rail lines. Due to the geographic arrangement of the entrances to the river and the effectiveness of Fort Fisher, advantageously located on the Atlantic at the river's mouth, Wilmington was the last port of the Confederacy to fall into federal hands.

The deepwater port has continued to provide for an expanding economy based on agriculture, commercial fishing, lumbering and light manufacturing. The city, with a population of 50,000, is the center of a region of about 200,000. But central





*Wilmington from a tower of the lift bridge across the Cape Fear River. Along the shore above are the Hilton (top left), Lennon office building and Cotton Exchange.*

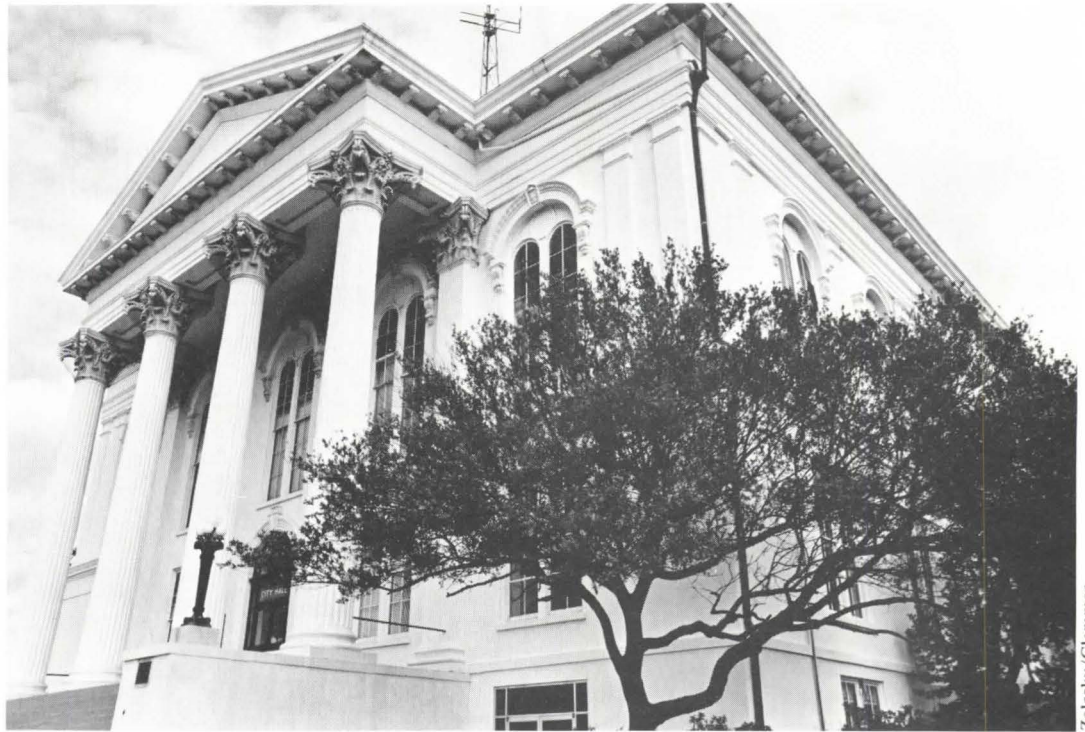


Photos by Zalesky/Clemmer



Zalesky/Clemmer

Above, a restaurant adapted from Stemmerman's grocery store and the former Palace pharmacy next door. Thalian Hall (right) is a combination city hall-theater of the 1850s designed by New Yorker John M. Trimble and Wilmington architect James F. Post. The theater has been restored to its turn-of-the-century decor. Below, two of the tourist attractions on the waterfront. Across, the de Rosset house, ca. 1842, an Italianate design with Greek revival portico on a terraced site overlooking the river.



Zalesky/Clemmer



Robert Knecht



## Restoring both vitality and history.

Wilmington has experienced the neglect and decay common to American cities since World War II. Grand old houses of the inner city neighborhoods deteriorated as suburbs multiplied, and shopping centers sapped the strength of the central business district. (The latest is Independence Mall, a 750,000-square-foot, \$18 million complex going up four miles from downtown.) In the early '50s, the city fathers tried urban renewal, an effort that further weakened the downtown area.

In 1960, the Atlantic Coast Line Railroad announced the relocation of its headquarters from Wilmington to Jacksonville, Fla. The move was first perceived by Wilmingtonians to be a fatal blow. Twenty-five hundred jobs suddenly left town and company payday no longer created a bonanza for shopkeepers. But newscaster David Brinkley, a native of Wilmington, and others soon came to perceive the Seaboard exodus as a blessing in disguise because it forced more thoughtful planning for the future and an increased appreciation of the old port.

In an attempt to turn Wilmington around, strategists have since forged a revitalization policy anchored on the original waterfront, its downtown and the adjoining historic neighborhoods. Their goal is to attract a variety of daytime and evening users into the downtown area and to keep the neighborhoods populated with involved citizens.

Two recent private developments at opposite ends of the waterfront are encouraging for long-term prospects for the vitality of the old port area. One is Chandler's Wharf where a local entrepreneur and history buff has recreated the bustling waterfront atmosphere of the post-Civil War era. Occupying an entire block of the waterfront, Chandler's Wharf includes a reconstructed warehouse which now serves as a museum, a restaurant converted from a 19th century house and moved to its present location, a two-story clapboard harbor master's house built in 1853, now serving as offices and a nautical library, and several other historic buildings. Workboats and commercial sailing craft are moored at the reconstructed wharf and are open to visitors. The most impressive craft is the 147-foot, two-masted schooner, the Harry W. Adams, restored to her original rig and appearance.

A leisurely 15-minute walk brings one to the other end of the downtown waterfront where the Cotton Exchange, the other major private redevelopment effort, is located. This center of small specialty shops and restaurants was adapted from cotton and grain warehouses, old buildings with two-foot-thick brick and ballast stone walls and hand-hewn and finished pine beams, 40 feet long. Hurricane rods and iron balconies accent the structure.

The waterfront area of greatest potential for pedestrian amenity is the half-mile strip located between these two private developments. This waterfront stretch includes a fine old brick ware-

house, a federal office building, a still active tugboat pier, a Coast Guard wharf, several scruffy storage buildings and a parking structure. Planners hope to retain and enhance the variety of activities which now take place along the waterfront. The Hilton Hotel already has a landing pier and waterfront patio where people can sip a drink and watch the barges and tugs. More piers are being planned to accommodate a new ferry service. The Coast Guard is expanding its wharf to make a home port for one of its largest icebreakers, the Northwind. The colorful tugboats will remain an asset to the waterscape.

An early initiative to restore vigor to the waterfront was the acquisition in 1961 of the decommissioned battleship U.S.S. North Carolina. This memorial, permanently berthed on the shore of the Cape Fear River opposite the historic waterfront, now receives 250,000 visitors annually. City leaders believe that if only a fraction of these tourists could be lured across the river, the downtown would get a critical boost toward long-term stability. A vital element in the city's revitalization plan is ferry service linking the battleship with the historic port. A ferry landing adjacent to the battleship is now under construction.

The Historic Wilmington Foundation was established in 1966 for the purpose of preserving and restoring buildings in the historic area, where some of the finest structures had been threatened by urban renewal. The foundation set to work assisting in preparations necessary to nominate the historic downtown district to the National Register of Historic Places. In 1974, a 200-block area comprising the downtown and the old inner city neighborhoods was placed on the register. Meanwhile, the foundation has bought a number of houses, restored and retained some and sold others. Through demonstration, the foundation has generated considerable private sector activity in adaptive use of historic structures. For example, with a grant of \$78,000 from the city, the foundation has just bought five houses on the edge of the historic district which will be finished in the rough and sold to private individuals at cost. The foundation will use the money earned from the resale to buy and restore additional houses, again for resale. In this way, a revolving fund will enable the foundation to expand its activities to stimulate neighborhood revitalization.

The city government has also begun trying to rejuvenate the downtown, making the waterfront revitalization program a major strategy. Interest in the waterfront was abetted by North Carolina's coastal area management program, which requires local governments to inventory and plan for the wise use of coastal resources. A city-sponsored plan is now being developed by Edward D. Stone & Associates.

Another element in the city's downtown revitalization strategy is the restoration of Front Street, the main shopping avenue. Many lovely Victorian buildings remain: Some have been restored, some are in process, some have been boarded up and some still retain their ugly 1950s false fronts. There are two attractive old buildings, taller than the others, located at the two downtown ends of Front Street. An application has been submitted to HUD for an urban development action grant to finance conversion of one of these buildings to condominiums in an effort to increase downtown residential use.

The city is also providing two-thirds of the funding, with the rest coming from private sources, for a new organization which promotes investment in the downtown. A staff of three encourages shopkeepers to renovate their buildings, persuades others to locate downtown, collaborates with local investors to provide financing and arranges for loans and grants from state and federal governments. The city is preparing design standards for renovations. Design ordinances governing facades, setbacks and provision of sidewalk amenities for pedestrians are being considered.

To help diversify downtown employment and attract more office workers and professionals, mixed use in the Alton Lennon Federal Office Building, an imposing, marble facade structure in



## More waterfront land is becoming available.

a prime position on the waterfront, is now being discussed. Almost 20 percent of downtown office and professional space is vacant.

Thus, are Wilmington's strategists seeking to promote their beautiful waterfront setting which offers a contrast to outlying shopping centers, and an urban alternative to suburban sprawl.

And what of other American waterfront cities? Obvious factors making waterfront reuse possible are the changing industrial and transportation needs of the American economy. Many industries which located along the waterfronts in the late 18th and early 19th centuries have either closed their doors or have moved to other sections of the country. These industries often have simply abandoned their old plants and left them to rot. This happened with the textile industry of the Northeast and also with breweries and flour mills.

Waterfront land is also recently available because of changes in port facilities. With the advent of containerized shipping, once thriving ports have become obsolete virtually overnight. Container ports require great land areas to accommodate the huge, tracked cranes that handle giant containers the size of railroad boxcars, and vast parking areas and roadways for the trailer-trucks that pick up and deliver the containers. Old ports in congested downtowns generally cannot service this new shipping industry. In New York City, for example, 40 percent of the waterfront is no longer used for water related purposes, in part because of new container ports built in suburban New Jersey. The abandoned warehouses and piers are often solidly con-

structed and beckon reuse.

Other changes in transportation which have diminished waterfront activity include the growth of interstate highways and the trucking industry. Railroads, pipelines and airlines have also changed the ways goods and people are moved in the U.S.

At the same time, there is a growing need for recreational opportunities located close to population centers. There is more leisure time and more leisure money. Within the last several years our environmental cleanup measures have begun to take hold and improvement in water quality can be seen. But the full effect of the billions of dollars now being invested in upgraded treatment facilities is yet to come. The potential of some waterfronts is being realized with the help of the Coastal Zone Management Act of 1972 (see Aug. 1978, p. 46). Planning for better recreational access and wider public use of shorelines is part of the process.

Travel abroad has probably played a role. Increasingly, Americans have discovered wonderful waterfronts in Paris, Budapest, Amsterdam, London, Copenhagen, Stockholm and elsewhere. And the bicentennial preparations of the early '70s led research efforts straight to the waterfronts, the original sites for most early colonial settlements.

Generally, the most captivating urban waterfronts are those which offer the greatest array of uses and activities. Commerce, residential units, transportation, outdoor vendors, museums, historical events like the tall ships, restaurants, rich people, poor people, visitors and natives all rub shoulders along the busy waterfront. It is a movable feast—beautiful, engaging, romantic, practical, active, always changing. □



# Evaluation: Designing for Confused Elderly People

*Lessons from the Weiss Institute. By Bernard Liebowitz, M. Powell Lawton and Arthur Waldman*

Thirteen years ago, a group of Philadelphia Geriatric Center staff, architects, behavioral scientists and service workers in gerontology came together to plan a treatment center for institutionalized older persons with organic brain syndrome (OBS). The result was the opening in 1974 of the Abram and Helen Weiss Institute and later a postoccupancy evaluation of the facility.

Despite the fact that 60 percent of all elderly people in institutions (600,000 individuals) suffer from some degree of confusion associated with OBS, typical care is usually limited at best to humane attention to feeding, dressing, toileting and basic medical care. Often, such people are "warehoused" in surroundings that are dehumanized in the interest of easing the effort required of staff and maintaining cleanliness.

During the several years of planning, discussions aimed at finding ways to improve the wretched circumstances of OBS patients were also held among all levels of staff, the more articulate patients and families of patients. As ideas emerged, it seemed clear that strategy should aim at compensating wherever possible for the disorientation, memory loss, loss of social skills and sense of self typically displayed by organically brain damaged older persons.

One of the major consultants was the psychiatrist Humphrey Osmond, who with architect Kiyoshi Izumi had designed an innovative treatment environment for schizophrenics. The so-called Osmond plan was intended to increase opportunity for

social interaction among schizophrenic patients and provide them with a choice of private, small group or public spaces. The basic concept includes a large central space with residents' rooms located around its periphery.

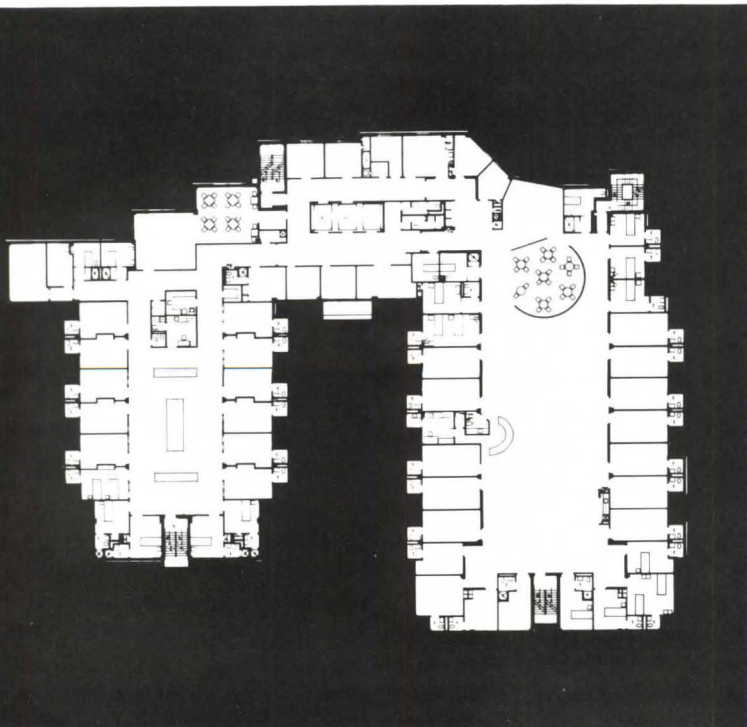
The long hallway has for years been recognized as contributing to the debasing environment of many institutions and to disorientation. Detail disappears quickly in perspective; at best one can perceive a couple of—usually identical—room doors beyond the point where one is standing. On the plus side, patients tend to place their chairs in the eight-foot-wide corridor, and staff members find it convenient. The hallway creates close physical proximity of residents and staff, and even in the absence of social interaction, there is the enjoyment of watching the action in the corridor. But the result is congestion, a heightened institutional look and a safety hazard. Widening the traditional hallway would give the benefits of the institutional hallway while avoiding its undesirable aspects.

The organizing principle of the Abram and Helen Weiss Institute was the widened hallway. Ten single and 15 double bedrooms are arranged around three sides of the 40x100-foot central space. A dining area at one end of the space is set off by a low rail and divider. Most of the central space is an informal social area, articulated by easily movable groupings of furniture. The visual focal point of the open space is a gazebo with plants. At the far end of the space beyond the gazebo is an area for more formal activities such as crafts, games or therapeutic groups. The nurses station is an open counter near the center of, and projecting into, the central space, allowing direct surveillance of all areas. Across from the gazebo is a "therapeutic kitchen" that can be kept locked, but may be used by residents under staff supervision. At the end of the floor near the entrance is a lounge and television area. Professional staff offices are located just beyond the entrance to the treatment area.

Disorientation and memory loss not only set off the individual as deviant by social norms, but are also sources of great anxiety to the disoriented person who is aware of his or her impairment. The open treatment area is intended to diminish the effects of disorientation and memory loss by giving residents an almost complete view of all areas from anywhere in the space. The entire treatment area is entered through a divider and half-door. Control of the wandering resident is achieved by a latch that opens easily when two buttons are pressed simultaneously, a task that is impossible for the impaired wanderer to master.

Confusion about time is counteracted by providing a view of such spaces as the dining and occupational therapy areas, where specific activities provide clues about time. A prominently placed large clock and a so-called reality orientation board showing the treatment area name, the date, the weather and the next meal in large letters are further aids. Decor is similarly planned so that door jambs and bedroom colors are coded to help residents distinguish his or her own room from others. Each room has both the name of the occupant and a three-dimensional room number at eye level. Adjustable fluorescent ceiling illumination is pro-

**Mr. Liebowitz** is executive vice president of the Philadelphia Geriatric Center; **Dr. Lawton** is director of behavioral research; the late **Mr. Waldman** was a former executive vice president.



*Wide central spaces (rather than long hallways) accommodate a range of patient activities and bring residents and staff closer.*



Photos by Harry Finberg



## Feedback from Weiss informs a new design.

vided at daylight levels instead of the more usual dark institutional corridor lighting.

Because the dining space is close to other activity areas, even marginally ambulatory patients can take meals here, rather than alone in their rooms. Every bedroom has a toilet to help residents remain continent. Ample bedroom storage space for clothes and other possessions, it was hoped, would help motivation to dress and choose clothing.

The choices provided in the original Osmond plan are preserved at the Weiss Institute: the private or semiprivate space of the bedroom, the small-group space of the lounge and the informal, large group space of the central area. All these spaces are in close proximity to one another to aid patients who are often severely restricted in their movements.

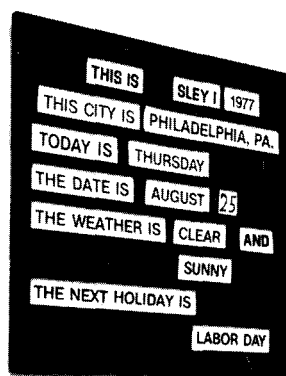
Almost all activity takes place in the central area to encourage unplanned encounters with others and socializing. The plan also aimed at increasing participation in planned activities by making them visible to all, and therefore more accessible. Activities that require some separation from the main central space take place in the area to the far side of the gazebo.

In the design of bedrooms, an attempt was made to encourage the use of personal possessions by varying room decors, providing a bulletin board for photographs and mementos and a mirror to keep the resident in touch with who she or he is. Washable vinyl wall covering of a neutral shade is background for fabric wall hangings and pictures.

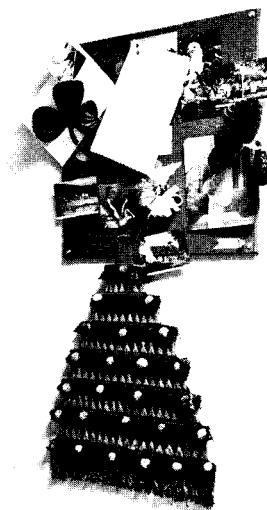
Warm-colored, natural wood is used in the ward entrance, on handrails, the dining area divider, physical therapy construction and gazebo. Bright colors occur frequently as accents in door jams, nursing station, graphics and room decor. The furniture was designed with help of anthropometric studies of older persons (the Skandiform chair). It allows some adjustment in basic dimensions and additions, while still maintaining considerable appeal.

The postoccupancy evaluation had three components: the observation of residents' behavior in the old and the new building over a period of 18 months; staff ratings of residents' behavior, and direct evaluation of the old and the new buildings by both staff and relatives of the residents. (Residents' evaluations could not be obtained because of their inability to communicate verbally.)

While the new environment did not affect the inevitable de-



(1) informal social area; (2) centrally located nurses station allows surveillance of all areas; (3) dining area; (4) so-called reality orientation boards; (5) a bedroom bulletin board; (6) plan for a replacement for the original building.



cline in residents' intellectual function and ability to care for themselves, a number of desirable changes were observed. Patients spent more time in a "social" space and less time in bedrooms, there was less crowding, more participation in enriching activity and signs of increased interest in the physical surroundings.

User evaluations were also obtained from staff and from relatives of residents who had lived in both old and new buildings, on the theory that their reactions were important to resident treatment. Both groups overwhelmingly favored the new environment, from the point of view of both their own use and their perception of its value to the resident. The functional design was most positively evaluated, as were the esthetic aspects, the greater privacy afforded and ease of visiting. Actual rate of visiting increased.

Some compromises were made for economy: The bedroom toilets are too small, the double bedrooms are not large enough



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to permit a division of each room into halves that clearly “belong” to one or the other occupant and fewer single rooms were built than originally desired. Noise is sometimes a problem, though much of it is produced by the paging system. The absence of daylight in the central area was a necessary compromise, and the ceiling fluorescent lighting is too uniform; the addition of wall-mounted incandescent fixtures would have provided warmth, shadows and textured light. The nurses station counter is too large and it is too easy for staff to work behind it rather than to work with residents.

In most situations, it is uneconomical to house fewer than 40 residents in a medical unit because of nursing staff requirements. With this number of rooms, however, the central area becomes quite large; and in the case of the Weiss Institute, it is probably somewhat larger than necessary to achieve its prosthetic and therapeutic purposes. The large size, of course, also adds to the cost. Increasing bedroom width to allow a division into two equal sides, including equal amounts of window space, would have greatly increased the size of the central area. In a traditional double-loaded corridor design, the proportionate increase in hall space resulting from increasing bedroom width would be less.

However, the overall treatment gains provided by the design clearly outweigh the added cost, which is estimated at about 10 percent more than for a traditional concept. Some of the addi-

tional cost is offset by savings in staff time that would otherwise be required to transport patients to areas normally located outside the residential floor.

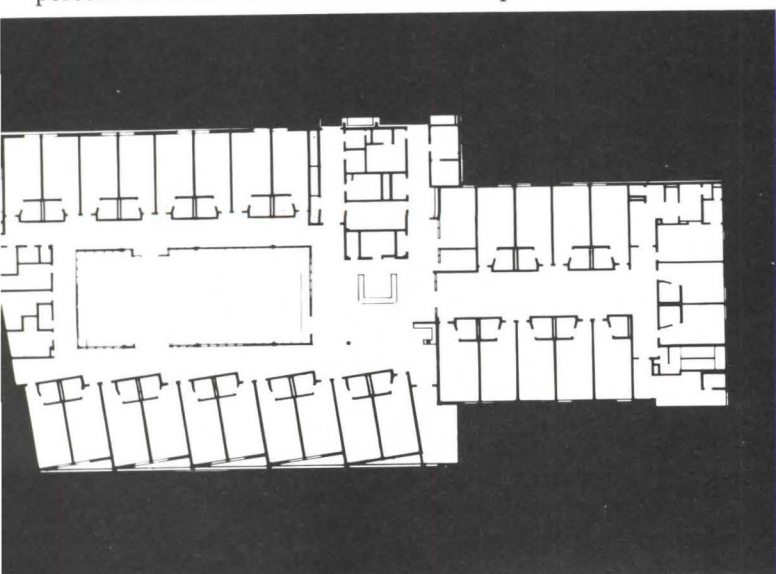
At this writing, it would unfortunately be impossible to construct another Weiss Institute because of a new life safety code requirement that the eight-foot corridor be enclosed on both sides. The Philadelphia Geriatric Center is currently engaged in designing a new structure to replace its original building. The preliminary design of this new building incorporates the functional character of the central space within the limitations of the code by providing an inner wall of glass so that the activity in the central space will be visible as it is in the Weiss Institute plan. In addition there will be multiple entrances to the central area from the hall; these entrance doors will remain open except during fire alarms. The glass partition will lessen the noise problem of the Weiss Institute and give enough additional bedroom width to allow territorial zoning for semiprivate rooms.

Some of the excess space from the core will be added to the corridor to create a “porch” for two or three people immediately outside each pair of rooms—providing another choice between the privacy of the bedroom and the small group space of the lounge.

A small wing with 13 bedrooms on a 20-foot corridor will afford full views of most of the larger area; it represents a hybrid between the central space and the traditional institutional concept. This wing might house the more competent resident or those who value more privacy than the central core design allows. It would allow adding more beds per nurses station—a maximum of 56-59 in this plan—with much closer proximity to the station than with a single length of double-loaded corridor. Variations in lighting, ceiling height and surfaces will give the new central space a variety that is lacking in the older model.

Thus, the central space plan appears to be adaptable to the vagaries of codes. The Weiss Institute and the building now in planning stages illustrate how knowledge regarding the characteristics and needs of a specific user group may be incorporated into design, and the experience recycled into the design process for yet another building.

The unusual design process employed encouraged the architect to think as a physician, the gerontologist as an architect, the administrator as an interior designer and so on. Finally, all of the actors in the design process remain in the scenario as the postconstruction research evaluation proceeds, ensuring useful feedback for the next design problem. □



6

# BOOKS

## Two Contrasting Guides To Opening a Practice

**Running an Office for Fun and Profit: Business Techniques for Small Design Firms.** Rosslyn F. Foote. Stroudsburg, Pa.: Dowden, Hutchinson & Ross (distributed by McGraw-Hill), 1978. 116 pp. **Starting and Managing Your Own Engineering Practice.** John A. Kuecken. New York: Van Nostrand Reinhold, 1978. 175 pp. \$12.95.

*Running an Office for Fun and Profit*, a minibook for architects thinking about opening their own offices, can be read in one sitting. Written in the vernacular by a consultant on management of small firms, its style is breezy, the advice sage. Subject matter ranges from deciding on goals and form of organization through all the things one should know about before venturing forth. Financial management and negotiating fees are stressed.

Charley Vitruvius is the hero of this story. He wants to be his own boss and has just read Foote's book which tells him his own office's survival must be his top priority. This means he has to plan ahead. So the first thing he needs is capital: greenbacks from under the mattress to pay for the rent and a drafting board, the ad in the telephone book, the one and a half persons he plans to hire, even a bit for his own groceries, for that interminable period before the first dribble of fees comes in. And to keep afloat between dribbles. This is the theme of the book: a good flow of money to keep you going while you have fun doing architecture. Without profit, there is no fun.

After weighing the pros and cons and deciding on an organizational form, Charley picks a nom-de-plume for his firm which doesn't reveal to the client whether he is a one-person, vest-pocket operation or an SOM. While figuring this out, he arranges for at least one good line of credit and makes a deal to rent an unused corner by the front door of a nearby office and the unused time of his landlord's secretary. He now has a firm basis on which to estimate his operating expenses and payroll for the months ahead and can balance the outgo with the income he's expecting for those first two jobs he has rounded up. His projections will show the time frame of anticipated income and expense, and how they balance or don't.

Foote guides Charley through the mysteries of the profit plan, cash flow projections, costs of time, balance sheets, earnings statements and all those good things relating to financial management. She also tells our hero about how to file, buy insurance, treat people, plan for retirement and the grim reaper and the tax man, and get out while he's still ahead. The part on negotiating compensation has been paraphrased from the 1978 AIA publication *Compensation Guidelines for Architectural and Engineering Services*.

If you don't learn anything else from the book, study the numbers in the budget examples very carefully to discover that to get a profit of 20 percent of the bot-

tom line, you must add 25 percent to the next to the bottom line. A lazy reader will miss this fine point, which could mean the difference between life and death. And the other equally important thing a lazy reader may miss is the author's stated view that for budgeting, profit is only considered on that part of the fee used to pay in-house expenses.

This could mean that the 20 percent at the end of the rainbow is only 12 or 14 percent. Caveat emptor! Next time you hear somebody bragging at an AIA meeting about his last year's profit margin, ask for his definition of profit. There are many of them.

This little book will tell the little guy



**Balustrades and Gingerbread: Key West's Handcrafted Homes and Buildings.** Photography by Marion Bentley Wall and Roland James Dack; research and writing by James R. Warnke. Miami: Banyan Books, 1978. 93 pp. \$6.95. The more than 70 full color illustrations in this book afford an insight into the "conch style" architecture which makes Key West like no place else on earth. The early builders—ships' carpenters for the most part—designed from memory, incorporating such features as New England's cupolas and widow's walks and roof openings in the ships in which they sailed. We are told that "housewives learned to 'rig' their homes for maximum coolness just as their husbands rigged their ships at sea." Built to withstand hurricanes and with a sure knowledge of passive solar energy, the architecture is beautiful and at the same time highly functional. Above is the Fogarty house "that has been a private residence, a rooming house and—twice—a restaurant." One of its owners, Dr. Joseph N. Fogarty, was a mayor of Key West; he once held a reception on the lawn for President Taft. Other famous persons who are associated with this island city are President Truman, John Dewey, John James Audubon, Ernest Hemingway and Tennessee Williams. Their fascination with Key West is contagious.



(or the big guy) about the fundamentals of many of the realities of practice. It will lead to an understanding of what's involved in keeping the business going so that you'll know what to look for in other books that tell you how.

Not incidentally, the cartoons by the 1978 president of the Philadelphia Chapter/AIA (John F. Hayes, AIA) are worth the price of admission alone. They are as breezy as the text. There is absolutely no excuse for falling asleep while enjoying this book.

Compared with Foote's book, *Starting and Managing Your Own Engineering Practice* is a crashing bore. Both are written for the design professional (engineer, architect, planner, what have you) intent upon setting up a private practice. Foote's book stresses understanding fundamentals; Kuecken's discusses issues. One dwells on a subject the other only mentions, so maybe you need both. It's just that one is a lot harder to read.

Kuecken, a consultant in electromagnetic engineering development and author of other books and articles as well as a holder of many patents, takes a "no-nonsense approach that will help anticipate potential problems, minimize risks and maximize chances for success," in the words of the publisher's PR people; "this book can help make that giant step forward from working for a boss to being your own boss." Perhaps so. The releases also mention "engaging anecdotes."

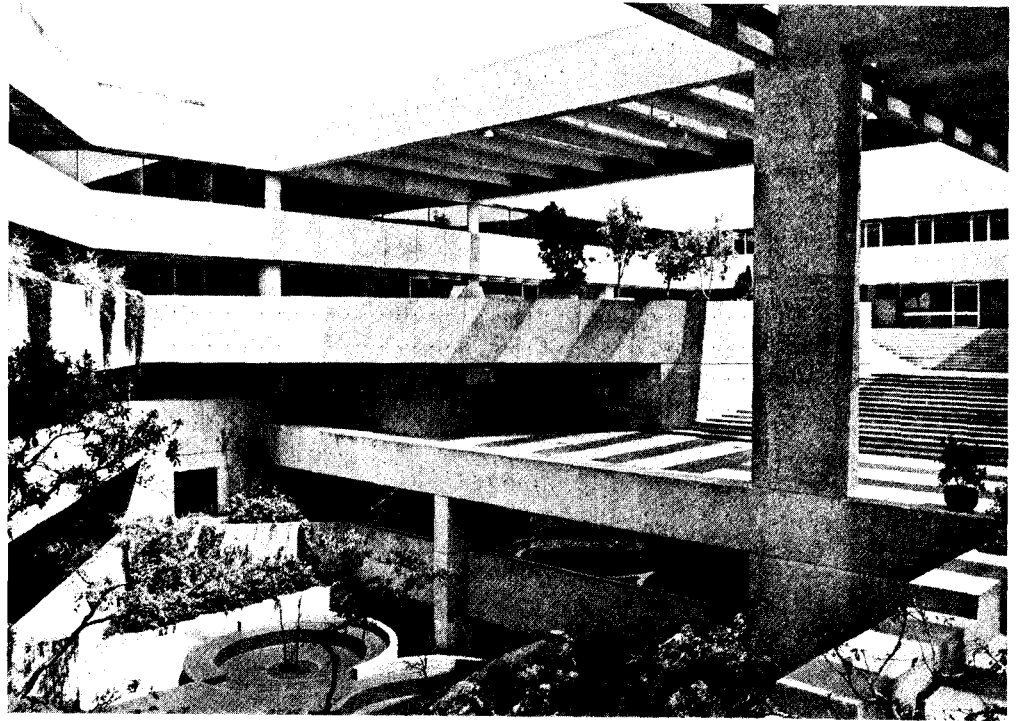
Subjects covered include a discussion of the nature of practice and starting one, obtaining clients, fees and financing, taxes, renting versus using your own spare room, making presentations and writing reports. Much space is devoted to the all-important subject of "how long will it take?" The mathematical model projections predict a crisis in three years, an income in five that matches what your ex-boss was paying you and a recapture of your capital in eight as you enter the realm of making more as a principal than as an employee. Encouraging or discouraging?

The book's graphics are matter-of-fact engineering in style. *Robert Allan Class, AIA, Director of the Institute's Practice Division*

**Rockefeller Center.** Carol H. Krinsky. New York: Oxford University Press, 1978. 223 pp. \$9.95. **Rockefeller Center: Architecture as Theater.** Alan Balfour. New York: McGraw-Hill, 1978. \$19.95.

Thirty-nine years have passed since John D. Rockefeller Jr. was photographed driving the so-called last rivet in the structure of the original Rockefeller Center complex. (See Feb., p. 26, for an evaluation of the original and new parts of the center.)

Only very recently, however, have his-



**Mexican Architecture: The Work of Abraham Zabludovsky and Teodoro González de León.** Paul Heyer. New York: Walker & Co., 1978. 141 pp. \$25. Paul Heyer, AIA, has assembled in this copiously illustrated book designs of two of Mexico's leading "new generation" architects. As the author comments, there is in Mexico a "passionate involvement with architecture, a social concern, a love of art and an eagerness to rise to professional responsibility that is inspiring in its intensity." The Colegio de México, (above), he says, has a "sense of culture and tradition as a constructive influence." The two architects have worked individually and in partnership in the design of houses, housing complexes and public buildings shown in this book. The publisher is correct in saying that the book "is a rare picture that points to the breadth and character of Mexico's creative vigor today." The text is in English and Spanish.

torians and critics considered the buildings of Rockefeller Center and their contemporaries (the Chrysler Building, for example) anything more than weak and fruitless attempts to blend the influences of the Beaux-Arts and the modern movement.

Time, and the realization of the harsh urban design impact of more "pure" modern buildings, have mellowed our judgments of much eclectic work of the late '20s and early '30s. Hence, we have two wonderfully rich books about the development of Rockefeller Center appearing in the same year.

Carol Krinsky's book is rich in historical background and is supported by voluminous documentation of source material. (The authors of both books were allowed access to Rockefeller family archives.) Krinsky's approach reveals her background as an art historian. She is professor of fine arts at New York University. Her judgments of quality seem to be based on implicit but unspecified standards of good design. This makes her book provocative as well as informative.

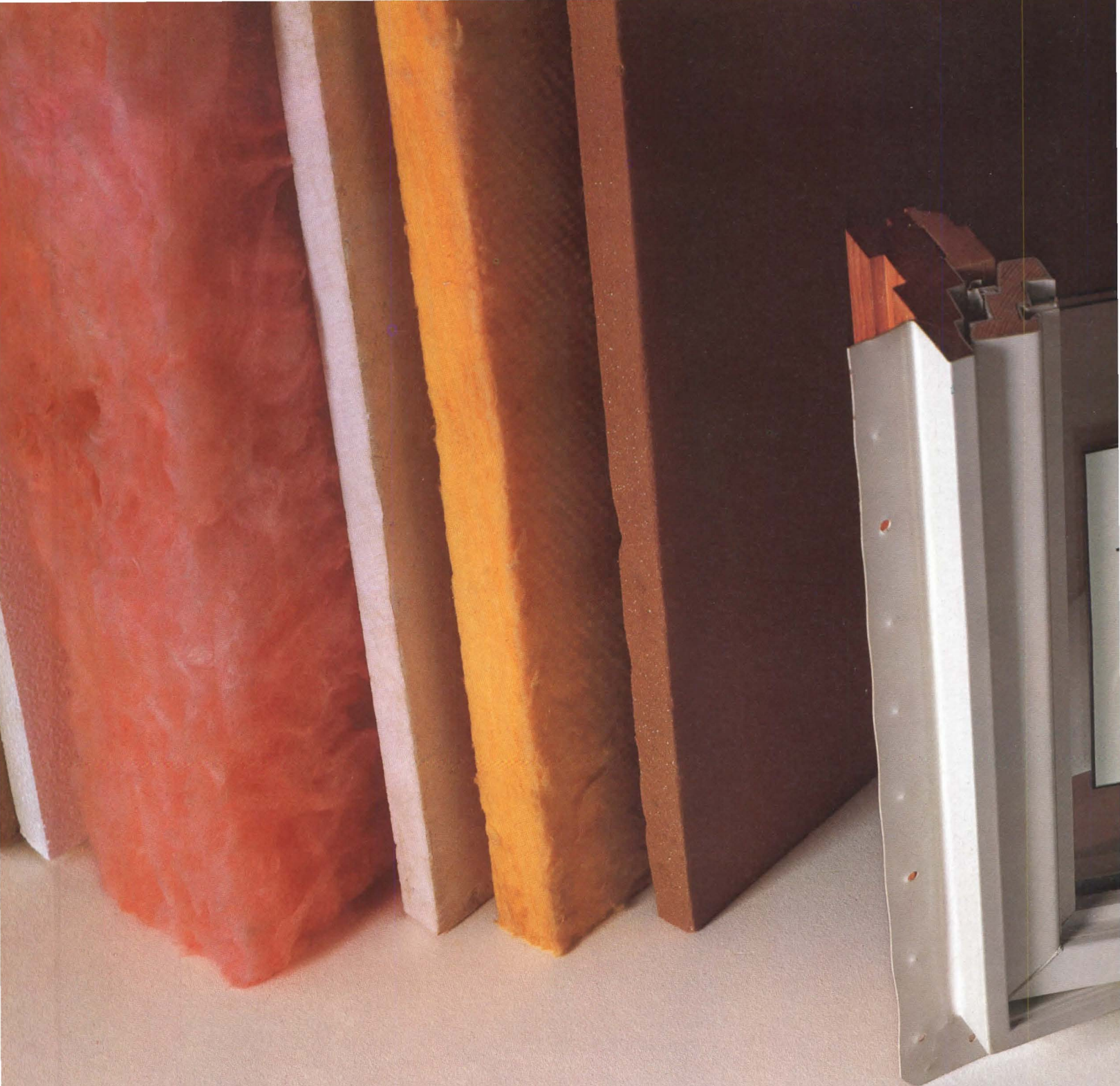
Balfour's book has the advantages of more pages and larger format. For people who do not visit Rockefeller Center regularly, it presents a more comprehensive

visual record. Balfour's commentary is based on the kind of thinking we might expect from someone with his background as an architect and research analyst. There is greater attention to the economic, social and technical forces which influenced design decisions. The Balfour book has another valuable bonus. In his penultimate chapter, he traces the changes over the years in the style and attitude of the critics who put in print their interpretations of the significance of the project. *Bernard P. Spring, FAIA*

**Mind and Image.** Herb Greene, Lexington, Ky.: University Press of Kentucky, 1976. 210 pp. \$22.50.

In the deluge of publications on professional competence and topical issues such as energy, there have been a few recent serious works on architectural theory. *Mind and Image* is such a work and one of major proportions. It is a fresh exploration of that most important energy: human energy. It is a thoughtful view by a working contemporary architect, Herb Greene, about the meaning of built forms. It is an important book because its sensitive perceptions are both wise and worldly.

The subject is the conscious articulation  
*continued on page 66*



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**Books from page 63**

tion of human images and their resultant subconscious response. The context is architecture. The values include environmental, social, cultural and esthetic images. It is a visual/verbal exploration well based on knowledge of the works of Whitehead and Merleau-Ponty and Langer and Koestler on perception and creativity. It is about iconography in the fullest sense, although the word does not appear. Appropriately, the book was partially funded by the American Council of Learned Societies. Indeed, although the words sometimes flow thickly, the ideas are the ones we always knew about, but have just seen in print for the first time. The familiarity is there at the first reading.

It takes a second reading to appreciate the richness, the freshness and the thoroughness.

Herb Greene is an acknowledged and self-described member of the "organic" tradition. For him that means an architecture specifically responsive to site, climate, available technologies and building function. The organic tradition also draws on "the organic nature of life, represented above all by human sentience, emotion and purpose (especially), as these qualities manifest themselves in individual lives." Thus, it is not stylistic designation, but a philosophical commitment.

Greene's embrace in both his view as well as his work is catholic. His appreciation of images ranges from Rembrandt to

Ronchamp; from SOM to Salisbury Cathedral; from James Sterling to "Jesus Christ Superstar." This multicultural awareness is paralleled by his own mixed media collages, as well as by the intensity and divergence of his own sensitive designs for idiosyncratic houses.

Greene also writes about Bauhaus inspired architecture; about Miesian and Corbusian monuments; about the palace at Mitla—their inclusions prove the depth of his appreciative schema. His understanding of the timeliness and timelessness of human value systems is a hint of the importance that he attaches to cultural continuity in his most recent work.

As an "organic" author, Greene is among the most thoughtful and profound. His few accomplished fellow travelers are not usually distinguished by such verbal depth. In contrast, Greene's words are, if anything, too high a distillate. The intense, precise sentences are sometimes too finely honed. And while the early chapters are short and simple, a crescendo of descriptions and references thickens the later chapters. There is no idle speculation; each successive subject is thorough in its perception of shared experience and, thus, meaning.

Greene's informal essay is articulate in its discussion of the mysterious power of certain architectural images regardless of their age or origin. His matrix theory proves to be an analytic tool of surgical refinement, whether the subject is subdivision housing, highrise development or a highway commercial strip. By examining popular taste and high design within a common framework, Greene provides a truly democratic and inclusive esthetic structure.

The book is carefully and handsomely produced, with many attractive illustrations. But with a subject so broad and so vital, one wishes for many more. With each word so carefully chosen, this book goes well beyond problems of syntax. Indeed, for an exploration, its maturity is hard to hide. Tying architectural theory to the emotive response of wooden prairie chicken images, of goose feather ceilings and of facial expressions on Volkswagens and airplanes, requires a skill in cognition and literacy that makes this a milestone in esthetic theory. Greene's humanist perceptions are as powerful as they are gentle. *Jeffrey Cook, AIA*

**Color and Human Response.** Faber Birren. New York: Van Nostrand Reinhold, 1978. 141 pp. \$11.95.

Faber Birren has written 25 books on many aspects of color and is without doubt one of the leading authorities in this field. His recently published book, *Color and Human Response*, covers only a limited area of this broad subject, as indicated in the subtitle, "Aspects of Light

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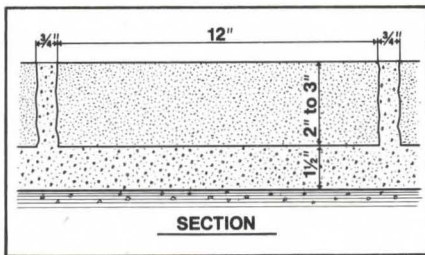
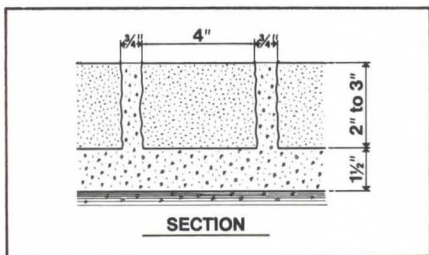
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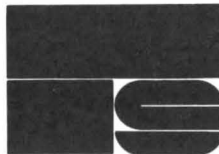


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Circle 18 on information card

and Color Bearing on the Reactions of Living Things and the Welfare of Human Beings.”

Although Birren is thoroughly grounded in the science of color and writes about it in a way that the layman can understand, he also keeps up with the latest developments in biology and psychology where light and color are involved. In addition to his scientific interests, Birren is also familiar with esthetics and the relation of light and color to art and culture. This is an unusual combination where the scientist and artist meet.

Beyond all this, Birren is willing to give serious thought and study to the combinations of light and color as they apply to ancient and modern mysticism. This book tells the history of color symbolism and magic from early times down to the present and describes in detail the research today in the use of light and color in medicine and psychology.

The last chapter of the book has to do with personal color preferences. This is a controversial subject. Birren treats it lightly, but predicts the personal traits of anyone who shows a marked preference for a color. *Waldron Faulkner, FAIA*

**Sun Angles for Design.** Robert Bennett. Bala Cynwyd, Pa., 1978. 76 pp. \$5.

Certainly, for the design of buildings one does not need the trying accuracy of

complex formulae, or the excessive input and output of computer programs. This book is an obvious simple source of sun angles for architects. Bennett combines solar azimuth and altitude angles within single charts for a series of latitudes. Starting at the equator for every 4 degrees to 24 degrees N and then every 2 degrees to 60 degrees N should cover the populous Northern Hemisphere of most practices. The charts are an elementary graphic information device that is virtually foolproof. Yet, for some designers, the use of the sun angles tables in the *ASHRAE Handbook*, with its easy numerical accessibility may still remain the standard reference.

The Bennett system has been extended by demonstrating solar time, shadow mapping and solar site analysis as well as a simple method that uses the Bennett charts for analyzing sun control devices. Everything is direct and clear. Unfortunately, it is also clear that the engineer/author does not understand orthographic projection as it is related to sun angles. He confuses sun altitudes and azimuth with profile angles. Indeed, he does not even mention profile angles. And, although his method is completely compatible with both the profile angle concept and with buildings that are not aligned north-south, these subjects are not approached. Such omissions and errors are

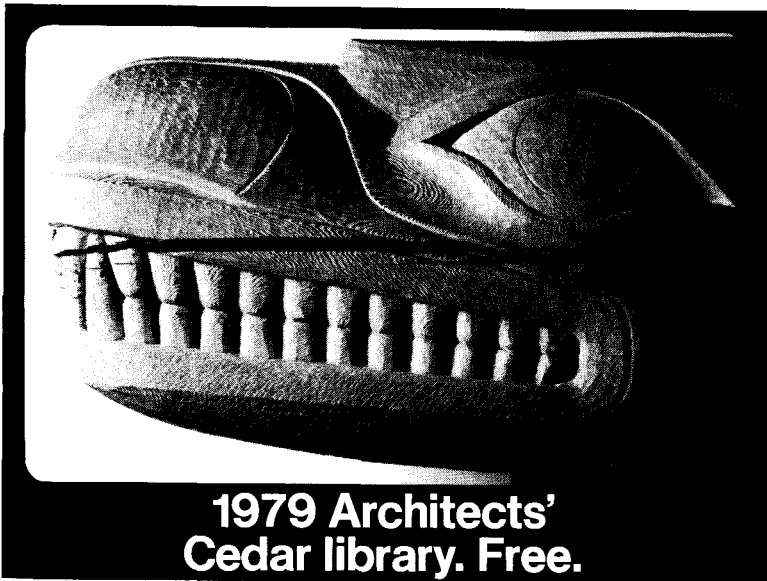
serious flaws in an otherwise sound guide.

A secondary disappointment is the photographic collection of nameless solar buildings that are used to decorate more than half the pages. Their locations, latitudes, purposes and architects are unfortunately not mentioned. From those known from other sources, it is evident that they are a casual presentation with no relationship to the issues on the adjacent text. The use of a known north-facing skylight to illustrate a south-facing sun angle is not very honest. There are lots of needy southern skylights that would appreciate the token of such an examination. It is regrettable that illustrations are not chosen to correspond to the latitude whose chart is opposite.

Other detracting aspects of the book include two world maps that are unreadable: magnetic variations (p. 7) and standard time zones (p. 9). Also, there are no references, acknowledgments, bibliography, dedication, glossary or index. As some believe about “ole sol” himself, this book appears instantly without patrimony. Nevertheless, *Sun Angles for Design* does offer, in spite of its flaws, the promise of sensitive solar architectural progeny.

The book is available from Robert Bennett, 6 Snowden Road, Bala Cynwyd, Pa. 19004. *Jeffery Cook, AIA*

*Books continued on page 70*



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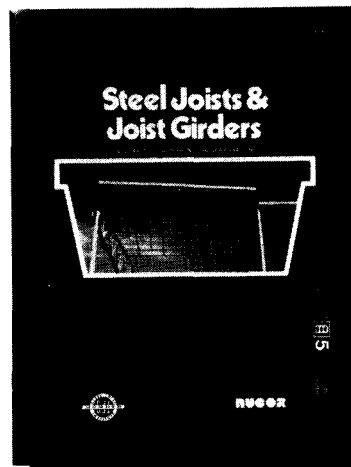
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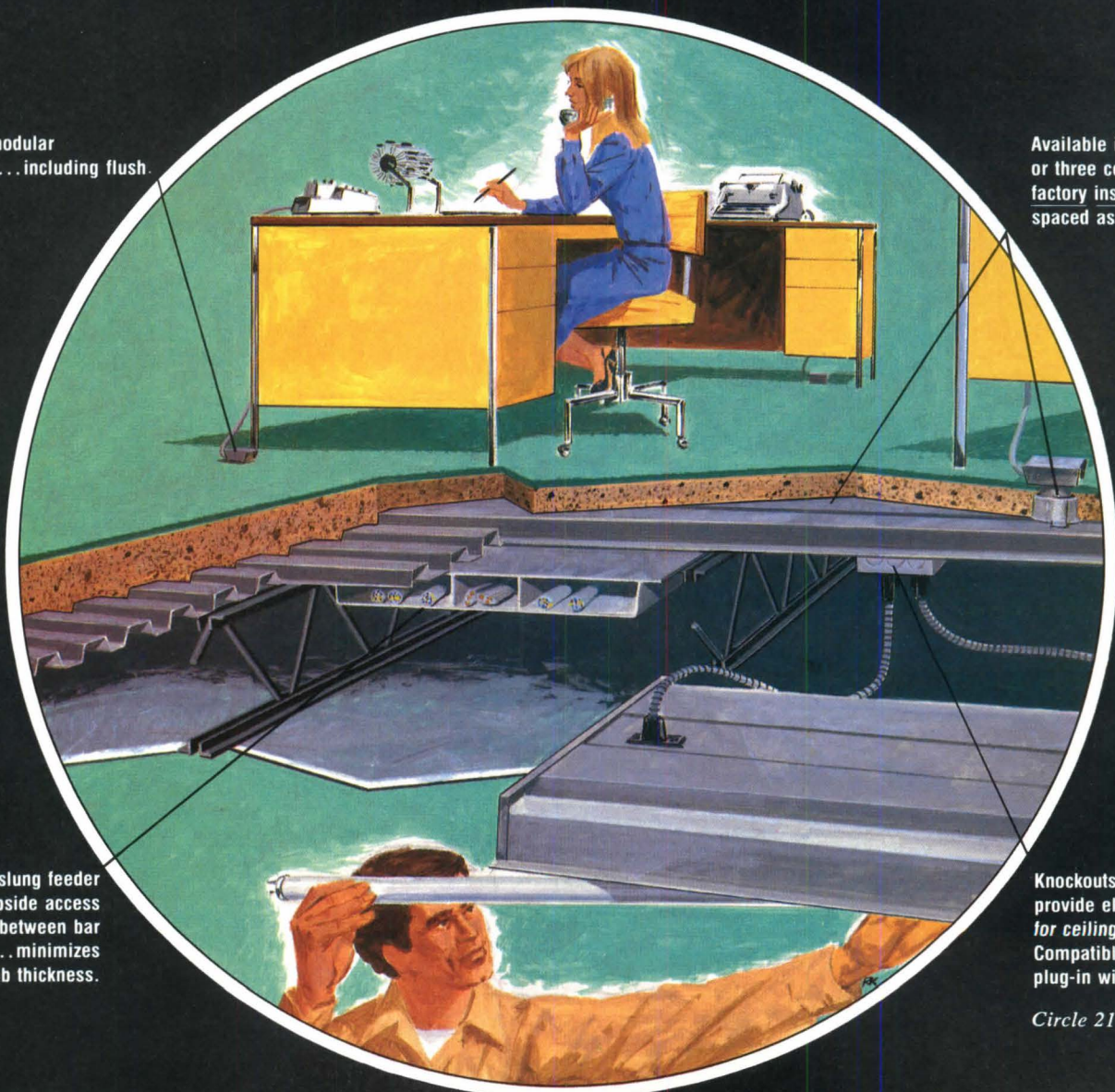
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**Washington University in St. Louis: Its Design and Architecture.** Buford Pickens, FAIA, and Margaretta J. Darnall. St. Louis: School of Architecture, Gallery of Art, Washington University, 1978. 79 pp. \$5.

On the occasion of the 125th anniversary of Washington University, an exhibit was held on its design and architecture and this publication was issued. Founded in 1853, the university bought the site of the present campus in 1894 and a competition was held, which drew national attention, for its design. The winner was Cope & Stewardson of Philadelphia.

The contributions to the publication by Buford Pickens, FAIA, professor emeritus of architecture, include an interesting survey of campus architecture in this country and an account of how the St. Louis world's fair of 1904 was a benefactor to Washington University. The university, says Pickens, "began its 'new' existence with a strong and well-studied matrix of harmonious buildings under design control by architects committed to carry out the intentions of an original space conception." Succeeding architects until recent times have respected the major guidelines, he says.

Margaretta J. Darnell, assistant professor of architecture, discusses campus planning in the 1880s and '90s and the competition for Washington University. She also is editor of a chronology of buildings, ranging from Busch Hall (1900, by Cope & Stewardson) to the Life Sciences Support Building (1973, by Hoffmann/Saur).

Attractively designed and containing many plans and photographs, the book also contains a ground floor plan of the university. It may be bought for \$5 from the Gallery of Art, Washington University, St. Louis, Mo. 63130.

**Dale Eldred: Sculpture into Environment.** Ralph T. Coe; photographs edited by James L. Enyeart. Lawrence, Kan.: Regents Press of Kansas, 1978. 144 pp. \$35.

Sculptor Dale Eldred is firmly convinced that artists must work "in the environmental dimension" to save the future of art. Hence his sculptured playground (now destroyed) for a Kansas City park and his design of the 12-block urban renewal program for Minnesota Avenue in Kansas City, both intended as landmarks that take into consideration ecology, social programming and vast scale. Chairman of the department of sculpture at the Kansas City Art Institute, Eldred's huge, principally minimal sculptures are of steel, concrete, industrial mirror glass and put together with heavy industrial earth moving equipment. The text of this illuminating study is based on

interviews with Eldred conducted by Ralph Coe, director of the William Rockhill Nelson Gallery of Art in Kansas City, and attempts, in Coe's words, to "explain the development of one of the most important of the American sculptors who have matured in the wake of David Smith."

**Hyde Park Houses: An Informal History, 1856-1910.** Jean F. Block. Photographs by Samuel W. Block Jr. Chicago: University of Chicago Press, 1978. 156 pp. \$12.95.

Hyde Park-Kenwood is one of Chicago's oldest neighborhoods. Eight miles south of the city's center, it was saved in Chicago's great fire of 1871—the fire simply never reached this section. Consequently, some of the frame houses still standing (photo below of an existing



dwelling built before 1868) are significant as examples of balloon framing, a technique that originated in Chicago in the 1830s.

To walk the streets of Hyde Park, says the author, is to participate in the story of Midwestern people and their homes—from simple cottages to mansions designed by such architects as Holabird & Roche, Alfred Alschuler, Howard Van Doren Shaw and Frank Lloyd Wright.

Influences on Hyde Park, still evidenced today, include the decision to hold the 1893 World's Columbian Exposition there and the opening of the University of Chicago in the period between 1856 and 1910. The effects on architecture of these two events go even beyond Hyde Park. This book chronicles all these happenings in an engaging manner. In addition to the many photographs in black and white, there is an appendix on "Notes on the Architects" and one called "Checklist of Existing Dwellings."

**Multi-Storey Buildings in Steel.** F. Hart, W. Henn and H. Sontag. G. Bernard Godfrey, editor of the English edition. New York: Wiley, 1978. 360 pp. \$67.50.

First published in the Federal Republic of Germany in 1974, with financial sup-

port of the European Coal and Steel Community, this book has also been issued in French, Italian, Dutch and English editions (both British and American). It is undoubtedly a standard reference work on steel construction. The emphasis throughout is upon the advantages of steel construction for all categories of multistory structures.

Part 1, prepared by Franz Hart, is on structural steel and architecture. He begins with a 100-year survey of steel-framed structures. Interesting to the American reader is the coverage of skyscraper architecture in the U.S. Hart also includes a discussion of the applications and possibilities of steel-framed structures today, concluding that steel "is an eminently contemporary material."

In part 2, by Walter Henn, there are 62 examples of international multistory steel-framed buildings. They are divided into categories according to their function; the result is an examination of relatively small structures to some of the world's tallest buildings. Henn describes the structural features of each building, giving information on its form and function. U.S. examples are a group clinic in Salt Lake City (Sugden Associates), a high school in Chicago (Mies van der Rohe), medical research laboratories in San Francisco (Marquis & Stoller), the headquarters of a steel company in Pittsburgh (Skidmore, Owings & Merrill) and the World Trade Center in New York City (Yamasaki & Associates, Roth & Sons).

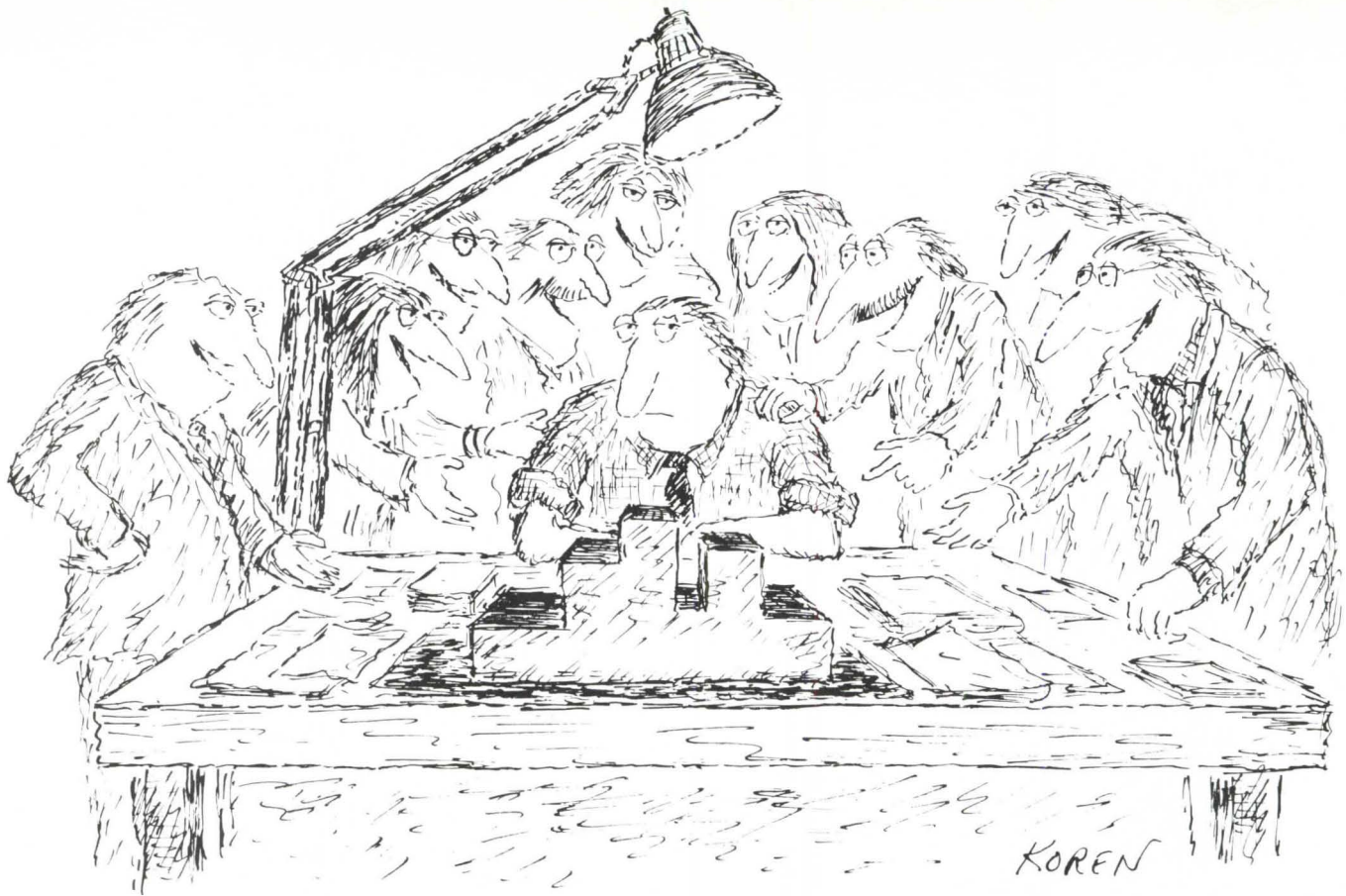
Part 3, by Hans-Jürgen Sontag, is on the principles of design and construction. He discusses, among other things, the fundamentals of planning, types of supporting structure and execution of the scheme.

Although \$67.50 seems a steep price, the book is well worth the money for any architect engaged in the design and erection of structural steelwork. The book is illustrated liberally with photographs, diagrams, plans and drawings.

**Life in the English Country House: A Social and Architectural History.** Mark Girouard. New Haven: Yale University Press, 1978. 344 pp. \$19.95.

The English country house has always drawn the attention of architectural historians, but, as the author of this book points out, most of the work has dealt with the architecture, landscape, craftsmen and family history. Girouard's purpose is to examine how the families used the houses. He describes the country houses as "power" houses—homes of the ruling class whose power was based on ownership of land, not for farming but for the tenants and rents. "A landowner could call on his tenants to fight for him, in the early days of the country house, and to





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vote for him—or his candidate—in its later ones.” The money from the rents was used to persuade even more people to fight or vote in accordance with the landowner’s wishes.

This truly fascinating and readable book tells of the life lived in the country houses from the Middle Ages to World War II. A social history, it describes how the people—owners and servants—lived on a day-to-day basis. It gives insights as well into the architecture of the various periods. Girouard’s descriptions of the goings and comings, the London social season and the journeys to spas, the entertaining of friends and disposition of rivals, the meals and the use of rooms, the politics and wars make this book most rewarding reading.

**Penn Station: Its Tunnels and Side Rodders.** Fred Westing. Seattle: Superior Publishing Co., 1978. 184 pp. \$14.95.

This is a two-part book, the first comprising a reprint of a 1912 publication “History of the Engineering Construction and Equipment of the Pennsylvania Railroad Company’s New York Terminal and Approaches,” edited by W. Couper. Much of the reprint is devoted to a detailed account of the construction of the North and East River tunnels, which provided rail access to the station.

One chapter discusses the construction

of the station, mainly its technical aspects, and there are numerous exterior and interior views of the station when it was new. W. Symmes Richardson of McKim, Mead & White contributed a short article on the architectural motif of the building. Of interest are two pages of statistics about the project, covering such varied items as number of station building columns (650), exterior granite (490,000 cubic feet), dimensions of concourse floor (475x125 feet).

The second part of the book contains Westing’s own contribution on the side rod engines used in the terminal area. This is an interesting account of a major engineering project, much of which still survives in service, although the building with its impressive features has been destroyed. *George E. Pettengill, Hon. AIA, Institute Librarian Emeritus*

**800 Years of Finnish Architecture.** J. M. Richards. Pomfret, Vt.: David & Charles, 1978. 191 pp. \$24.

The architectural pilgrimage to Finland has long demanded the well-illustrated and comprehensive account it has now received from J. M. Richards in this somewhat extravagantly titled work. More than a tourist’s handbook, although based on the author’s earlier 1966 *Guide to Finnish Architecture*, it describes concisely the historical architecture of the country, the

period of national independence that prepared the soil for the vigorous exponents of the modern movement, of which Alvar Aalto is the most celebrated, and the work of architects of the post-Aalto generation—Ervi, Pietala, Ruusuvoori, Korhonen and others.

Much new ground is broken in chapters dealing with the delightful 19th century wooden town houses and the rural vernacular. The work is organized on a geographical basis, with notes on the buildings described arranged by place. The resulting critical capsules make up in their insight whatever may be lost in the absence of a historical setting.

The black and white illustrations are excellent, although some have been spoiled in the reproduction (p. 62). Many were provided by that unique and invaluable institution, the Museum of Finnish Architecture, now directed by Aarno Ruusuvoori. Those who believe something can be learned by the experience of other lands and peoples will be pleasantly reinforced by the brief account (p. 141) of Käpylä, a social housing project of 1920-25 which has now been renovated to find an extended use as a “highly desirable residential quarter occupied by the professional classes and the intelligentsia rather than the workmen for whom it was originally built.” *Frederick Gutheim, Hon. AIA, Washington, D.C.* □

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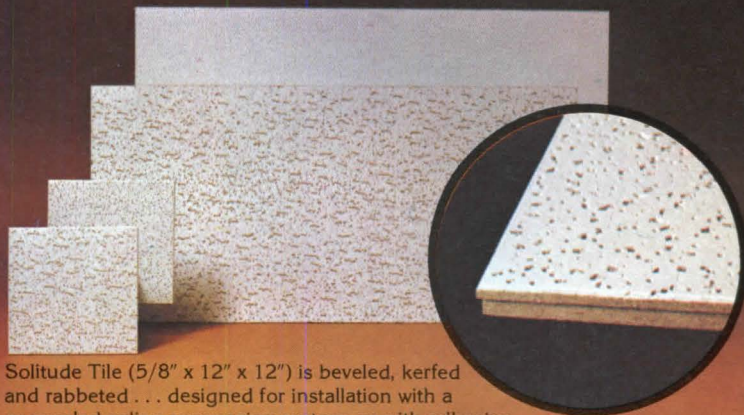
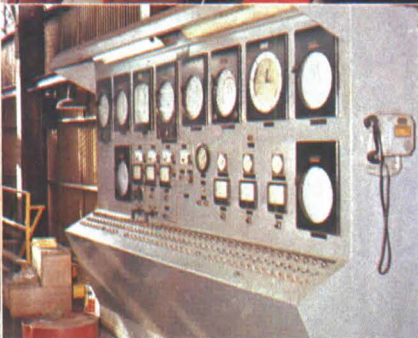
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# Protection for Architects in Copyright, Patent Laws

*The latter may offer more promise. By Edward M. Prince, David W. Brinkman and Dianne Elderkin*

Protection for architects under U.S. intellectual property laws—specifically those dealing with copyrights and patents—has been somewhat illusory. This was true for two basic reasons: The copyright laws have been ineffective in important ways, and architects have failed to explore all means of protection. In this article, we first look at the recently revised copyright law; then we describe the availability of patent protection for architectural designs and models.

The first major revision of U.S. copyright law since 1909 was signed into law Oct. 19, 1976, and became effective Jan. 1, 1978. Although the new law encompasses significant changes with respect to many areas of the copyright law, it does not offer the protection architects have sought for plans and drawings. Prior to the new revisions, there were two distinct areas of copyright law: common and statutory. Common law copyright was determined according to state judicial decisions and protected only unpublished works. Statutory copyright, under federal copyright law, protected published works.

Common law copyright law was inconsistent and undeveloped. State courts generally recognized that an architect's plans were protected by common law copyright, but such protection was limited to unpublished works. Protection was discontinued if the work was deemed to have been published without bearing a statutory copyright notice. The question of what constituted a publication of an architect's plans was never clearly settled. One court held that a publication had occurred where a firm distributed 30 sets of its construction plans to bidders, placed no limitation on their circulation, permitted all interested people to see, visit and inspect the building in all stages of construction and advertised the construction extensively. Several other courts held that publication (and the concomitant loss of common law protection) occurred simply by the filing of plans with a public authority or by construction of a building based upon such plans. Unfortunately, the decisions were often neither predictable nor understandable. Thus, common law copyright was not a satisfactory means of protection for the architect.

Under the old system, statutory protection picked up where common law protection left off for works published with a copyright notice. Thus, the act of publication which divested the author of his common law copyright served to invest him with federal copyright protection, provided the appropriate copyright notice was affixed to the original and each copy. As under the common law, there was much litigation concerning what constituted a publication, because a publication without the copyright notice left an author without either common law or statutory protection.

Under the revision, common law was pre-empted and the concept of publication was made irrelevant. Now, published and unpublished works are generally protected from the date of their creation instead of from the date of publication; also, publication of a work without a copyright notice on it will no longer

necessarily result in forfeiture of the copyright because the deficiency can be corrected within certain time limits.

Statutory copyright protection also suffered from drawbacks which prevented it from being a wholly satisfactory means of protection for the architect. The problem with respect to statutory copyright for architectural plans lay in the so-called *Baker* doctrine, derived from the 1897 Supreme Court case of *Baker v. Selden*, 101 U.S. 99.

The *Baker* doctrine went to the heart of the distinction between patent and copyright law. Patent law granted to the patentee "the right to exclude others from . . . using . . . the invention." The rights granted to a copyright owner under the Copyright Act did *not* include the right to prevent others from using the copyrighted work. Thus, although the copyright owner may prevent others from copying, selling, distributing, recording or publicly performing or displaying his work, he cannot prevent others from reading his copyrighted book or listening to his copyrighted record or viewing his copyrighted work of art.

The *Baker* doctrine recognized that there were certain types of copyrightable works which may not be put to their intended use without infringing the copyright owner's right to prevent copying. In the *Baker* case, the author, Selden, owned a copyright on a book explaining a new method of bookkeeping. The book included a series of blank forms designed for use in connection with the system described in the work. Selden sued Baker for copyright infringement, alleging that Baker had copied the blank forms from his book. The Supreme Court held that Baker could not be held guilty of infringement, for to so hold would be to effectively grant Selden the exclusive right to control use of the bookkeeping system because the system could not be used without using the special forms. Succinctly stated, the *Baker* doctrine held that the owner of a copyright on a work of "useful" art may not keep the public from copying his work for purposes of using the art.

The *Baker* doctrine has been held to apply to copyrighted architectural plans. Thus, it has been suggested that the owner of a copyright on architectural plans cannot prevent another from building a structure based on the plans. It has even been held that it has not a copyright infringement to copy the plans for the purpose of building a structure therefrom. It would appear that, under the *Baker* doctrine, there can be an infringing use only if copyrighted plans are reproduced for purposes of distribution or sale. Obviously, the *Baker* doctrine severely circumscribes the statutory protection of architectural plans. The doctrine has been criticized by many. It has been suggested that a possible way to avoid the results of *Baker* is to register architectural plans as models or designs for works of art rather than as technical drawings, but this is no longer relevant under the new law, which has redefined and revised the categories of copyrightable works to eliminate this category as such.

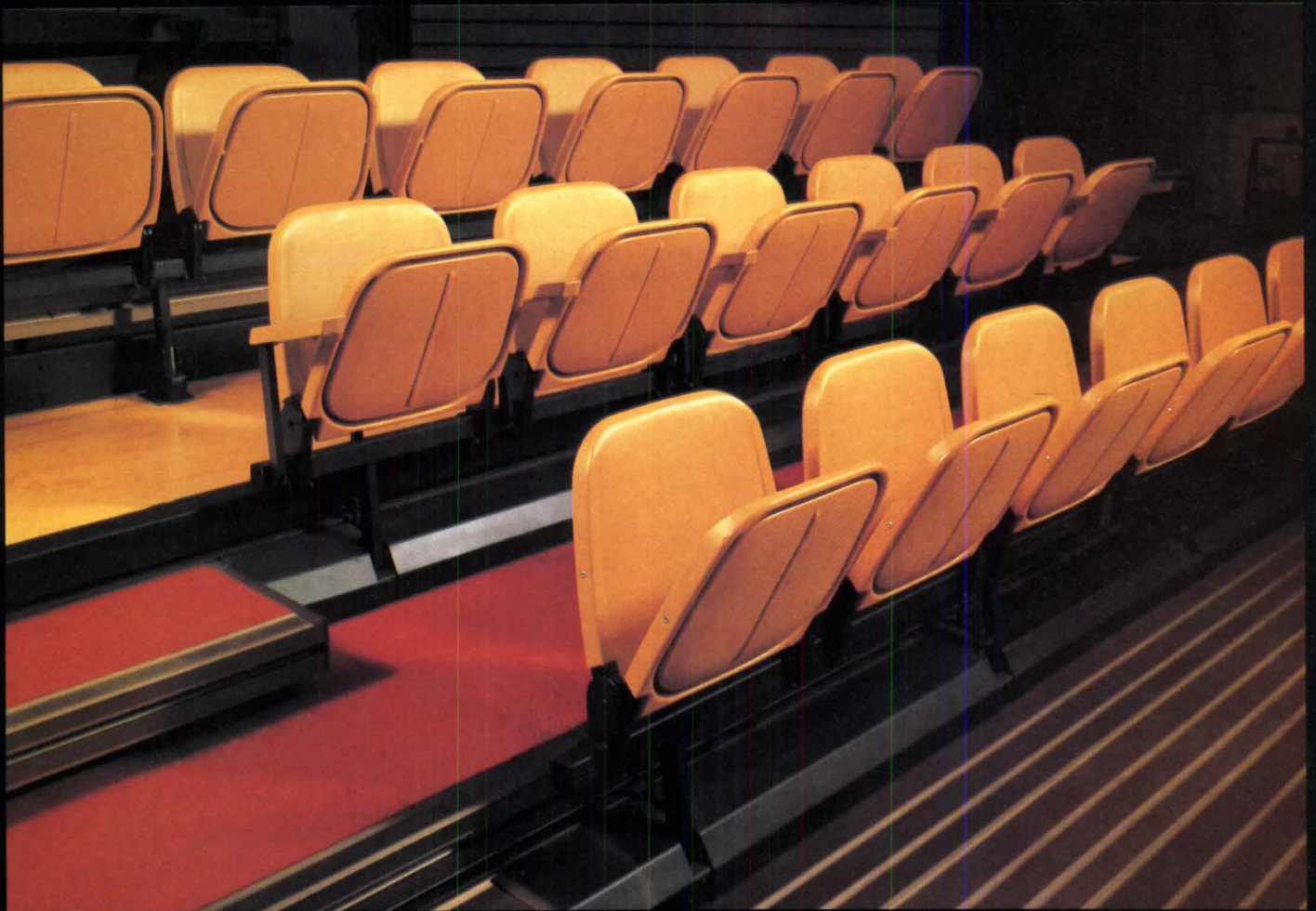
One of the categories of copyrightable works under the new law is pictorial, graphic and sculptural works which are defined by the new act as including "works of artistic craftsmanship insofar as their form but not their mechanical or utilitarian aspects

*continued on page 76*

**Mr. Prince** and **Mr. Brinkman** are partners in the Washington, D.C., law firm of Cushman, Darby & Cushman, **Ms. Elderkin** is an attorney for E. I. duPont de Nemours Co., Wilmington, Del.

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**Copyright from page 74**

are concerned." Thus, a design of a useful article would fall in this category only if the design incorporates pictorial, graphic or sculptural features that can be separated from and are capable of existing independently of the utilitarian aspects of the article.

Applying this criteria to architectural plans, the report of the House of Representatives for the 1976 act states: "An architect's plans and drawings would, of course, be protected by copyright, but the extent to which that protection would extend to the structure depicted would depend on the circumstances.

Purely nonfunctional or monumental structures would be subject to full copyright protection under the bill, and the same would be true of artistic sculpture or decorative ornamentation or embellishment added to a structure. On the other hand, where the only elements of shape in an architectural design are conceptually inseparable from the utilitarian aspects of the structure, copyright protection for the design would not be available."

Although, under the *Baker* doctrine, it would appear that the architect cannot prevent another from building a house from his plans, he can prevent another from publishing the plans in a magazine or elsewhere. The general protection provided by the new statute gives the copyright owner the exclusive rights to do and to authorize any of the following:

- to reproduce the copyrighted work;
- to prepare derivative works based upon the copyrighted work;
- to distribute copies of the copyrighted work to the public;
- to perform the copyrighted work publicly;
- to display the copyrighted work publicly.

These rights are limited to an extent by the "fair use" doctrine, codified for the first time in the new act. It provides that an unauthorized use of copyrighted material which is reasonable and which does not harm the copyright owner's rights will not be treated as an infringement. There are no hard-and-fast rules as to what constitutes a "fair use," and the issue must be de-

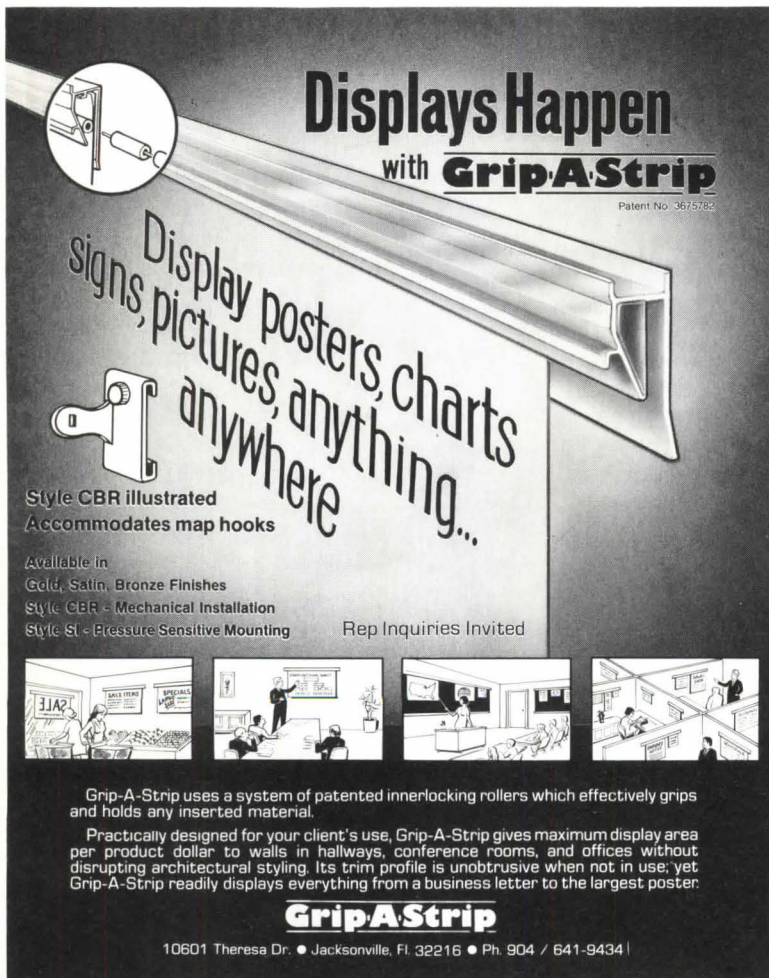
ecided on a case-by-case basis. The act does, however, list four factors to be considered in determining whether a use made of a work in a particular case is a fair use. These factors are: the purpose and character of the use, the nature of the copyrighted work, the amount and substantiality of the portion used in relation to the copyrighted work as a whole and the effect of the use upon the potential market for or value of the copyrighted work. Examples of fair use are copying for the purposes of criticism, comment, news, reporting, teaching, scholarship or research. Library photocopying also may, under limited conditions, constitute fair use.

When the rights granted the copyright owner are infringed, the statute provides several remedies. The copyright owner can seek a court injunction against any further infringing actions. Courts are also given the power to impound allegedly infringing articles during the time an infringement action is pending in court. When a court finds that a copyright has been infringed, it can award the copyright owner the actual damages suffered as a result of the infringement as well as any profits made by the infringer that are attributable to the infringement. In the alternative, the copyright owner can elect to recover statutory damages, an amount between \$250 and \$10,000, to be determined by the court. The court may also award costs and attorney's fees to the prevailing party. Finally, certain copyright infringements may constitute criminal offenses, punishable by fine, imprisonment or both.

One of the fundamentals of copyright law is that the author of a work is the source of ownership in any copyright on the work. As simple as this principle would appear, there are numerous complications. Consider obtaining legal advice in the following two situations:

**Joint works.** If two or more authors contribute to a work, such as the drawings for a project undertaken by a joint venture

*continued on page 78*



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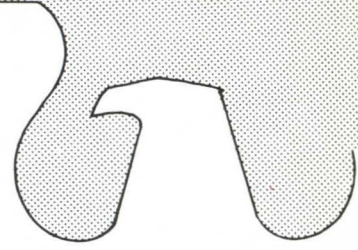
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## Copyright from page 76

of several firms, the coauthors are deemed co-owners of the copyright on the work. The new statute attempts to define such "joint works" for the first time. The touchstone in determining whether a work is a joint work is the intent of the author. Where two or more authors prepare a work with the knowledge and intention that their contributions are to be merged into "inseparable or interdependent parts of a unitary whole," the resulting work is a joint work. The statute itself does not describe the respective rights of the coauthors with respect to the copyrighted work, but the legislative reports point out that court-made law in the area is left undisturbed. Because each co-owner generally has the right to independently use or license the use of the joint works (subject to a duty of accounting to the other co-owners for any profits), care should be taken to avoid a joint copyright where the firms are in a principal-consultant relationship.

**Works for hire.** One of the most complicated areas of copyright law involves the "work for hire" concept. It has long been established that the rights to any work created by an employee within the scope of his employment belong to the employer. A work is deemed created "within the scope of one's employment" where the employer had the power or right to supervise and direct the creation of the work. It was thought that since the work was prepared at the employer's expense, the employer should reap the benefits of the work.

The revision of the copyright law retains this rule for works made within the scope of one's employment and also includes certain works prepared on special order or commission within the work for hire concept. Work done by an engineering consultant might be categorized as a joint work, part of a collective work, or a work for hire. Also, it is important to consider copyright ownership where the client insists on having ownership of the documents. For a commissioned work to be considered a work for hire (thus vesting all rights in the party ordering the work), the following requirements must be satisfied. First, the parties must expressly agree in a signed writing that the work to be done will be considered a work made for hire. Second, the work must come within the categories enumerated in the statute. Only four of these categories appear to be germane to such works as construction documents: a contribution to a collective work, such as a periodical; a supplementary work, such as an

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## **A copyright owner may sell the rights, grant licenses and bequeath the rights by will — provided it is put in writing and signed.**

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illustration prepared for the purpose of explaining or illustrating another work; a compilation, or an instructional text.

Thus, the design professional has to worry about the work for hire concept in only two situations: where one has prepared plans as an employee of a firm within the scope of employment, and where one has prepared plans under commission for one of the four purposes above and has signed an agreement that the work will be considered a work for hire. If one of these two descriptions is applicable, the employer or party commissioning the work owns the copyright in the work.

Another consideration is the transfer of ownership. The owner of a copyright is free to transfer all or any part of his rights to another by any means. He can sell his rights, grant licenses and bequeath his rights by will.

The only requirement of such transfer of ownership is that it be in writing and signed by the copyright owner. It should be noted that the sale of a material object (a copy of an architectural plan, for example) does not carry with it the copyright in the work unless there is an express agreement that it does. The

buyer of the copy thus does not obtain the right to make and distribute further copies.

The owner of a copyright or of any exclusive right in the copyrighted work (this could be the author or a transferee of the author) may register a claim to copyright at any time during the copyright term. Both published and unpublished works may be registered.

There are several reasons for promptly obtaining copyright registration even though failure to do so will not result in complete loss of copyright. A copyright owner may not institute a suit for infringement unless his copyright has been registered. When registration is made before or within five years after the first publication of the work, the registration will serve as prima facie evidence of the validity of the copyright and of the facts stated in the registration certificate in any judicial proceedings. Thus, a copyright owner who takes an infringer to court may

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## **Copyrights and patents are not either/or forms of protection: Both may be obtained on the same subject matter.**

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be saved the burden of proving the validity of his copyright. Registration also provides the copyright owner with extraordinary remedies in an infringement suit. If the copyright was registered before the infringing acts occurred, the owner may be awarded attorney's fees and statutory damages. Finally, if a work has been published without the appropriate notice of copyright, timely registration can preserve the copyright in the work.

To register a copyright, one must merely deliver to the copyright office the required deposit of copies, a completed application and a fee of \$10. Architects use Form VA to apply for registration of plans and blueprints. Application forms may be acquired, free of charge, from the Information and Publication Section, Copyright Office, Library of Congress, Washington, D.C. 20559.

When copies of a copyrighted work are publicly distributed, notice must be placed on the copies in a manner and location likely to give reasonable notice of the copyright claim. The required notice contains three elements: (1) the symbol © or the word "Copyright" or the abbreviation "Copr."; (2) the year of the first publication of the work, and (3) the name of the owner of the copyright in the work, or the abbreviation by which the name can be recognized, or a generally known alternative designation of the owner. Thus, an appropriate notice would read "© John Doe & Associates 1978."

Under the old law, an author who published his work without the appropriate copyright notice often forfeited all copyright protection. The new provisions are far less rigid.

Omission of notice from published copies according to the new law does not necessarily invalidate the copyright if either of two conditions are met. The copyright is not affected if "no more than a relatively small number of copies" were distributed without notice. Alternatively, if the work had already been registered at the time of the publication without notice, or registration is made within the next five years, the copyright will not be lost. A reasonable effort must be made to add notice to the copies after the omission is discovered. Errors in the notice itself—for example, in the name or date—are also not fatal and can generally be remedied.

Copyrights and patents are not "either/or" forms of protection. The obtaining of a copyright registration does not preclude the designer from obtaining patent protection on the same subject matter. Patent protection in the U.S. is available for inventions (or discoveries), designs and botanical plants. An "inven-

*continued on page 80*



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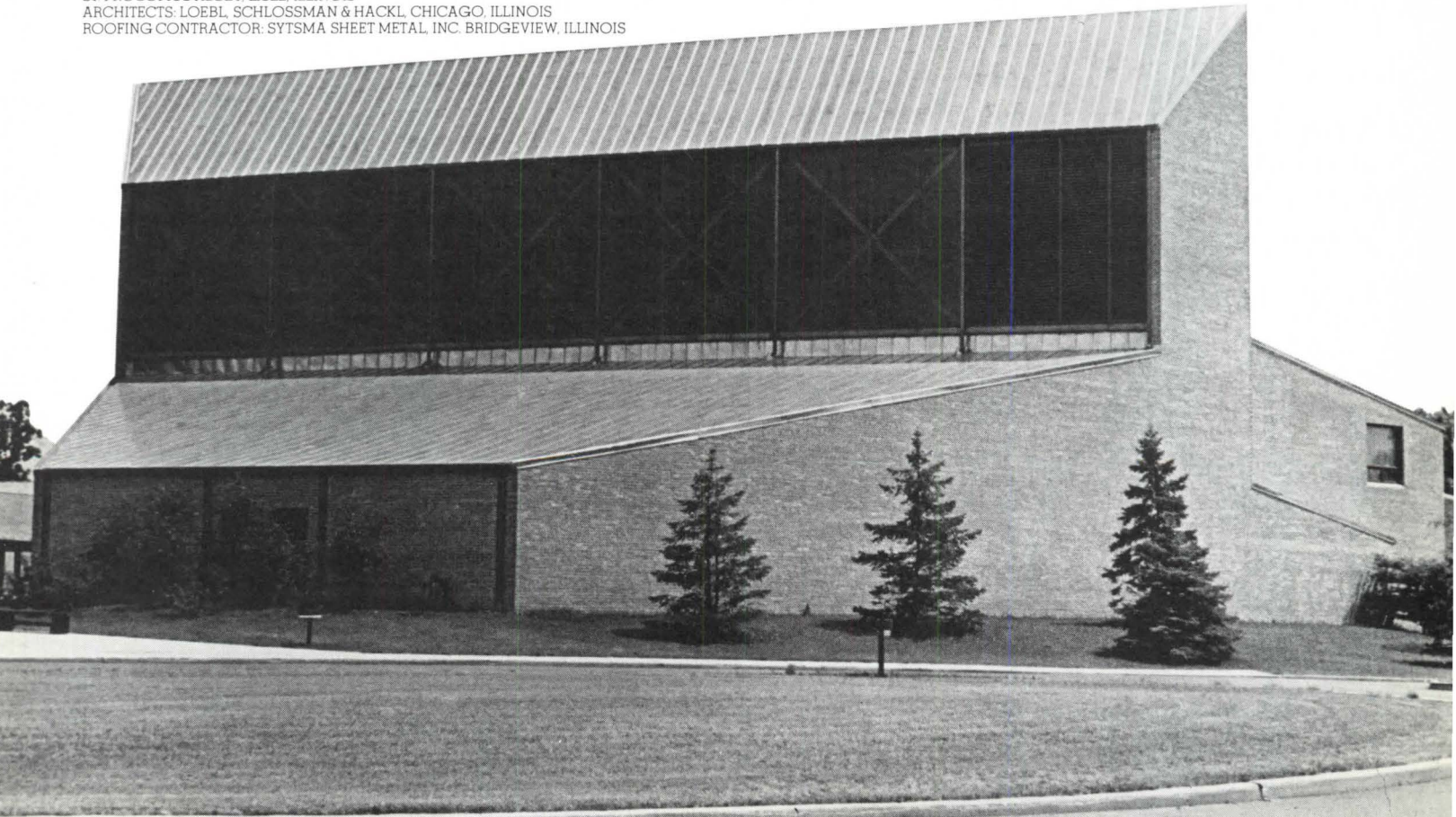
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Copyright from page 78

tion," broadly also including a discovery, may be of a new and useful process, machine, manufacture or composition of matter, or of any new and useful improvement thereof. Patents for inventions are commonly termed "utility patents," since they seek to protect some aspects of the usefulness of the subject matter, such as the steps by which a product is made or is put to use or the structure of a product from a mechanical, electronic or chemical standpoint. Patents for designs are commonly termed "design patents" and are granted to protect the ornamental appearance of articles bearing the design. Only a new, original and ornamental design for an article of manufacture is patentable.

The U.S. patent law was established in much its present form in 1836. A general revision became effective in 1953. The U.S. Patent and Trademark Office of the Department of Commerce accepts and processes patent applications and grants patents. In this office, all existing technology is broken into categories which are further subcategorized into classes and subclasses. As an example, under the subject matter of utility patents, the list of subclasses under the general class "Static Structures—e.g. Buildings" runs on for eight small-print double-column printed pages in the classification manual, which lists and breaks down all the categories. Some of the subclasses of this class relate to whole structures, such as the subclass "Compound Curve Cover, Geodesic Type," but most of the subclasses relate to components and portions of building structures. Typical of these latter subclasses are the ones headed "Roof Movable As Entity Relative To Its Sub-Structure," "Facing of Coplanar Veneer Tiles Held By Nonload Bearing Holding Means" and "Opaque Stone-like Module."

The body of existing patented designs is also split into many classes and subclasses. The principal class of architecturally related design patent subject matter is entitled "Building Units

and Construction Elements." It includes subclasses relating to whole structures, such as the one entitled "Single Occupant Type, i.e., Telephone Booth, Privy, Ticket Booth, Etc.," and to components such as one headed "Architectural Stock Material," under which there are more than two dozen subclasses with further subcategorizations such as "Transparent or Translucent" and "Pitted, Cratered or Drilled." The design class entitled "Tools and Hardware" contains several subclasses of interest, including ones relating to door and window hardware designs. The design class "Fluid Distribution Equipment, Sanitary, Heating, Ventilation and Air Conditioning Equipment, Solid Fuel" contains subclasses relating to mechanical equipment designs.

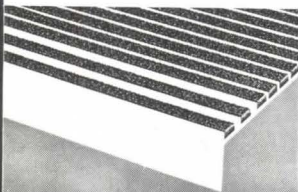
The U.S. Patent and Trademark Office holds the position, for which some judicial support exists, that certain inventions which one might think would fit into one of the categories of patentable inventions are not patentable. Of present interest, it has been held that one may not patent merely an arrangement of printing, the significance or meaning of printed matter, a method of doing business, a scientific principle or a series of mental steps. Sometimes these established decisions truly forestall the opportunity for an inventor or designer to gain any patent protection for the contribution the inventor or designer has made. In other instances, and most often, the invention or design may be protectable by patent provided it is described and claimed in a way that avoids giving the impression that all of what is important about the inventor's or designer's contribution lies within one of these excepted categories.

The architect is faced with a problem of determining whether there is a statutory basis for obtaining patent protection for what originated as an idea which has become embodied in a set of architectural drawings.

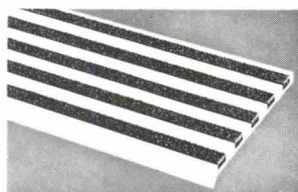
A patent application claim covering an architect's plans per se would be subject to rejection as printed matter. Yet most if

*continued on page 82*

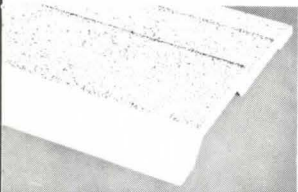
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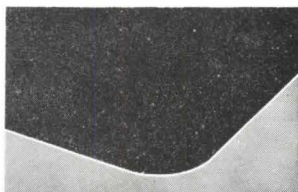
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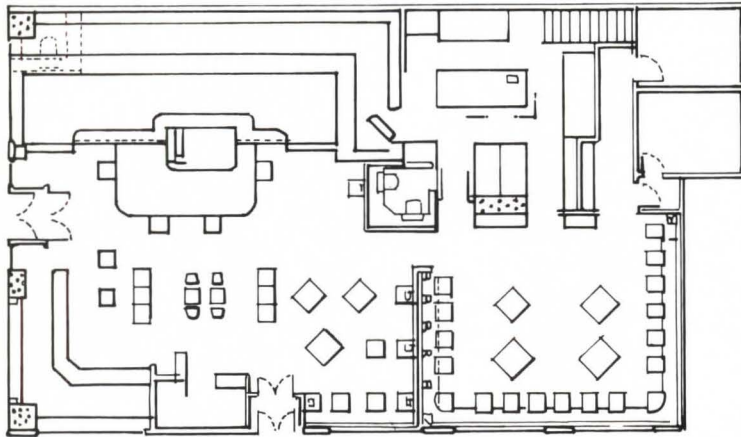
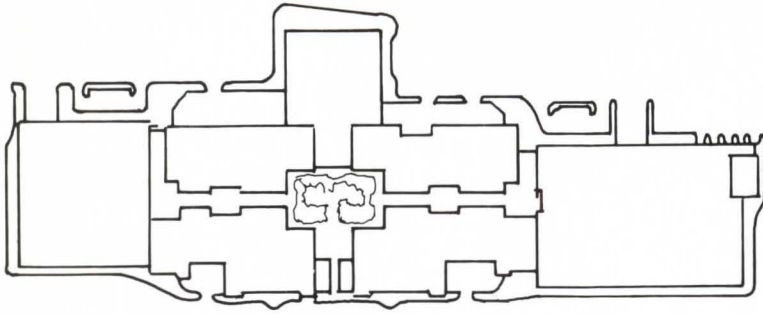
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**Copyright** from page 80

not all the new, useful or ornamental and unobvious inventions or designs embodied in the plans, and certainly the important and significant ones that can be translated into concrete form, can be patented.

Whether the architectural plans should be translated into a utility patent application, a design patent application or both will depend on the nature of the new features embodied in the plans. To illustrate, consider an actual patent for a "Building for Fast Food Restaurant or the Like." It contains five figures: a perspective, elevations of three sides and a fragmentary sectional view showing an outside planter box. The text of the patent merely identifies these views and states that the unseen back, top and bottom of the building are "plain and unornamented," and are of no significance to the patent. The claim, which is of required form and content, defines what is protected as "the ornamental design for a building for fast food restaurant or the like as shown and described."

The drawings of a design patent application must depict an article which bears the design sought to be protected, but the scale of the drawings does not enter into whether the design is patentable or, once patented, what the resulting patent covers, size having no effect upon appearance. Thus, for instance, one cannot tell from a design patent's drawings of a building whether the building is a model or a full size structure. The claim equally covers both.

The inventor in utility patent 3,992,824, issued Nov. 24, 1976, was faced with the problem of how to devise a two-level shopping mall in which neither level would be considered a less desirable basement or second floor. The patent includes a number of drawings illustrating various aspects of the mall, one of which is reproduced at the top of this column.

The solution was to provide access to the mall only on an intermediate level and to locate anchor stores and level transfer means such as escalators in such a way as to gently urge brows-

ers to traverse the mall first on either shopping level and then to change levels for the trip back towards the entry point. (The inventor in this instance, an employee of a large developer and owner of shopping centers, is not an architect by profession.)

Although the drawings of this patent include ones which were based on those used as architectural plans, the patent's claims describe the invention in terms of the various components and component relationships essential to carrying the problem solution into effect.

Shown below left is one of the drawings from another recently issued utility patent, 4,074,793, entitled "Restaurant Dining System."

This patent's claims describe various fundamentals of the layout which permit the restaurant management to provide improved communications for the patrons and among various parts of the business. This is yet another illustration that often what is found patentable depends more on the skill with which the information is organized and presented than with the fundamental nature of the underlying subject matter.

U.S. patent law includes a one-year grace period within which to place a patent application on file, from the date the invention or design first was disclosed to the public or placed on sale. For three reasons it is advisable to file an application as soon as an invention or design has gelled. First, some foreign countries do not have such a grace period and the right to patent the same invention in those countries can be lost by the first disclosures or sales of the invention or design in the U.S. Second, there have been many court cases in the U.S. sorting out what activity constituted the first public disclosure or sale of an invention. The guiding principles remain difficult to apply, so that filing early avoids the necessity of interpreting these principles. Third, when two patent applicants apply to protect substantially the same invention or design at nearly the same time, the procedures for resolving which should prevail favor the first to file an application.

There is no requirement that an actual example of an invention or design be made before a patent application is filed. One may proceed to protect the patentable aspects before any building is done, before a model is made or even before any commitment has been made or undertaken to proceed with the project.

A utility patent lasts for 17 years from the date it is granted. A utility patent application remains pending from the time it is filed until the Patent and Trademark Office either agrees or

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**A patent cannot be renewed, nor may a once-patented invention or design now in public domain be repatented.**

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finally disagrees that a patent can be granted. This period normally lasts one or two years.

A design patent lasts for 3½, 7 or 14 years, at the applicant's option, after a usually shorter period of application pendency. A patent grants to its owner the right to prevent others from making, using or selling that which has been patented, during the life of the patent. Once the patent expires, what it formerly protected becomes public domain material. A patent cannot be renewed, nor may a once patented invention or design which has come into the public domain be repatented, regardless of whether the invention or design was ever put into practice during the life of the patent.

Because tests of infringement have been applied in such a broad array of complex circumstances using many differing terms, only in extreme cases can a conclusion about infringement be easily drawn. Copying, however, is not a fundamental

*continued on page 84*

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Copyright from page 82

test. One can be an infringer and have been unaware of the patent or of the invention or design covered by the patent. This is an important distinction between patent protection and copyright protection where copying is an essential element.

For utility patents, the claims are definitive, so one may proceed phrase by phrase through a utility patent claim seeking corresponding elements between the claim and the process, thing or material in question. If the two correspond identically, there is infringement. If they fail to correspond in some clearly important detail, there is no infringement. Where they fail to correspond in some detail of limited importance or where there are analogies and equivalencies tending to bridge over the differences to some degree, it becomes unpredictable whether a court would find that infringement exists.

The usual remedies for patent infringement include damages for past and present infringement and an injunction against continuation or repetition of the infringement. Additional or other remedies are fashioned where equity would be served. Often, where there is infringement, the owner of the patent rights can sue more than one party. For instance, both the builder who "made" the infringing construction and the client who "used" it, or either of them, could be sued as infringers. Skillful drafting of a patent application can provide the owner of the resulting patent with a greater range of possible defendants, enhancing the value of the patent.

Once a patent application is pending, any concrete examples of the invention or design which are made, as well as any written or pictorial material describing or showing the invention or design, may be marked with the term "Patent Pending" or "Patent Applied For" or any variation of either term that is not misleading. Although such a notice has no legally prohibitory effect, it may forestall plagiarism, especially in the building industry where a long time must pass and much money be spent

between the planning and completion of a project. Further, the project can be halted by an injunction once the patent issues.

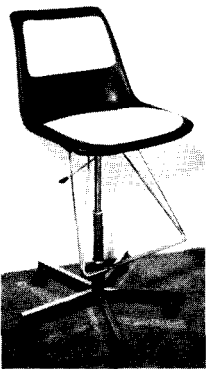
It is not essential to maintaining a U.S. utility or design patent in force that any notice be placed on the concrete examples of the invention or design produced by or under the authority of the patent owner. But here is a catch: Unless a notice, including the patent number, has been placed on the concrete examples made by or under the authority of the patent owner, damages may be recovered for past and present infringement only back so far as the time at which it can be proved the infringer actually was aware of the existence of the patent. With marking, damages can be recovered for infringement (since the patent issued), for the period up to six years prior to when the patent infringement action was filed in court.

It is unfortunate that Congress, in enacting the recent copyright law revision, did not take the opportunity to provide greater copyright protection for architects. There is no rational basis for granting architects less protection than authors, sculptors or composers. It is certainly in the public interest to create an economical, esthetically pleasing environment, and protection for the architect's work has to be the best incentive there is for architectural creativity.

This article is by no means intended to discourage the architect from seeking copyright protection. Rather, it is only meant to point out that, due to the fact that many courts have limited the scope of protection granted to architects for their drawings, the copyright is a less than perfect means of protection, perhaps even a fictional one from the viewpoint of a skeptical architect.

At the same time, the U.S. patent laws offer a prospect for effective protection. While an architect's plans will prove unpatentable if presented merely as architect's plans, the inventions and ornamental designs embodied in them, properly organized and presented, can lead to the granting of protective and valuable utility and design patents. □

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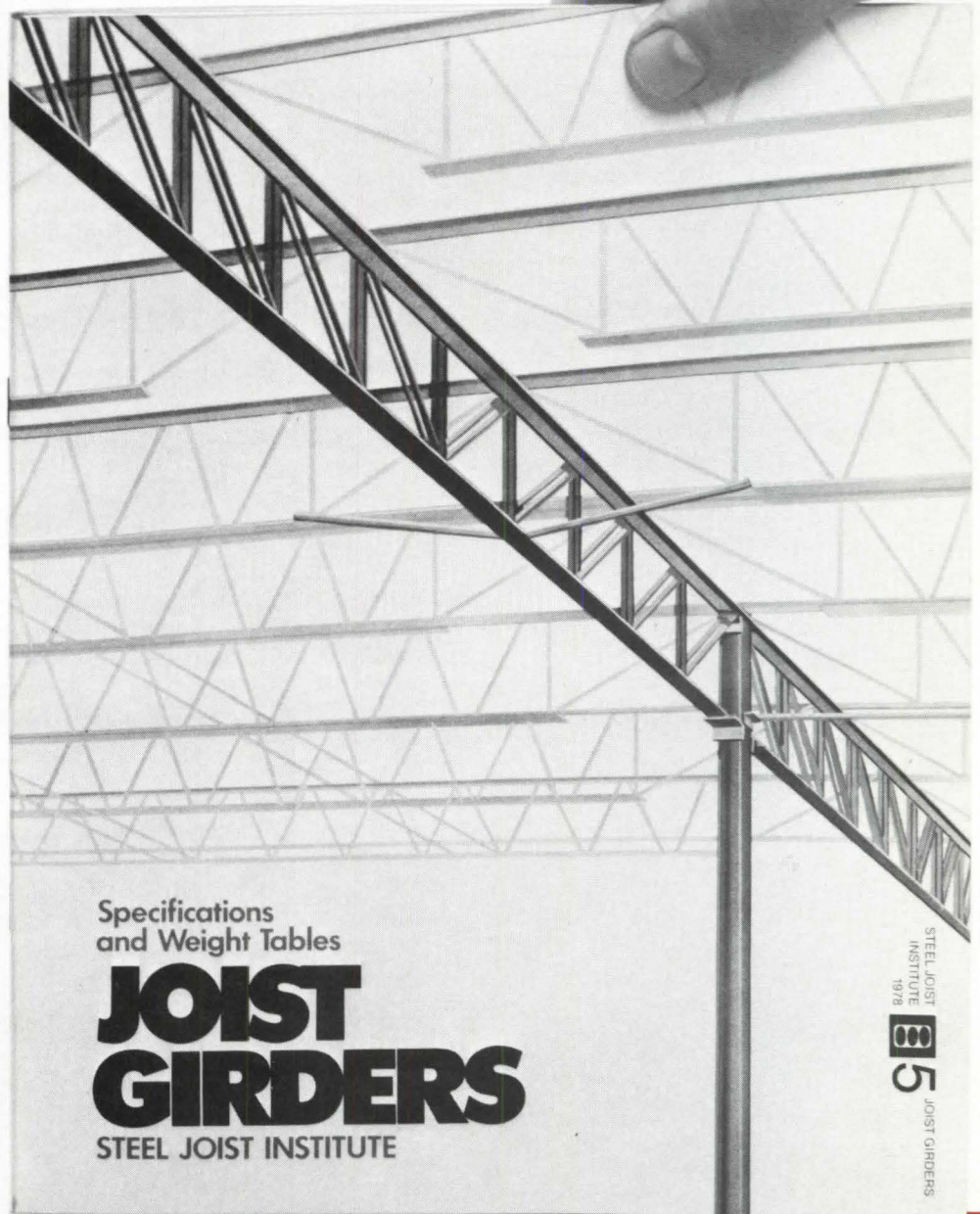
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## The Institute from page 25

of the department of art and archeology at Washington University in St. Louis, will speak. He is billed to make a "hard-hitting and sobering" assessment of contemporary architecture. Smith will be followed on June 5 by John Q. Wilson, former director of the Joint Center for Urban Studies at Massachusetts Institute of Technology and Harvard University.

Discussions during the convention will be related to events initiated before the convention officially opens. From May 25 through June 2, there will have been a "city in celebration" extravaganza sponsored by the Kansas City Chapter/AIA and other local groups. With a grant from the National Endowment for the Arts, Kansas City will have an eight-day celebration of contributions made by its major ethnic and cultural groups.

A series of multidiscipline and multicultural events will take place in the city's central corridor. Celebrations of the city will also occur in areas away from the central core to emphasize the city's socioeconomic and ethnic subcultures. This "celebration of arts consciousness" is designed to instill an appreciation of cultural differences as well as the creative energy which unifies the city.

The celebration will come to a grand conclusion on Saturday evening, June 2, when Marilyn Wood, Hon. AIA, dancer and choreographer, will orchestrate a presentation by her company of dancers, musicians, visual artists and site designers. She is experienced in city celebrations, having staged them in New York, Boston, Cincinnati, Detroit and other places.

Another preconvention activity will be a R/UDAT design studio to consider the planning of a large area north of the Missouri River annexed by the city in 1961. Over the years, the city has looked southward for development, but the north area has great promise because of its spots of natural beauty in close proximity to the downtown.

One of Kansas City's assets is its residential neighborhoods, organized around a boulevard system laid out in 1893 by George Kessler. The subject of the R/UDAT enterprise will be to develop a plan for extending the Kessler boulevard and parks plan from the Missouri River north to the airport. Working with citizens and public officials, the team hopes to use Kansas City as an urban laboratory to show how design quality can also enhance the general quality of life. The team's conclusions will be presented to the AIA convention.

Quality design will be celebrated in other ways during the convention. The concept of the professional development seminars is to use honor award winning projects and other AIA recognized proj-

ects as resources and design links to further recognize architecture of consequence. Each seminar will attempt to demonstrate that design and competence are one. The 24 programs are structured in groups of three related subjects for successive afternoons.

AIA's award-winning projects and other architecture of quality will be featured in visual presentations throughout the convention, demonstrating President Mitchell's idea that a celebration "is a performance, a proclamation, a public announcement of joy." During the convention, he says, architects will participate in a design process in discussions and workshops. "Celebrate . . . in Kansas City," he suggests, "the great challenge of architecture: the challenge to improve the physical environment, the challenge to elevate the human spirit, the challenge to enhance the quality, the *dignity* of life."

## 10 Foreign Architects Named Honorary Fellows of Institute

AIA reserves the title of honorary fellow for architects of "esteemed character and distinguished achievement" who are not citizens of the U.S. and do not practice architecture in this country or its possessions. The following foreign architects will be invested in ceremonies at AIA's convention in June:

- Yoshinobu Ashihara of Japan, known internationally for his designs of cultural centers, sports facilities, commercial complexes and university buildings, as well as the Japanese Pavilion at Expo '67 in Montreal.
- Irving David Boigon, president of the Royal Architectural Institute of Canada, who is the architect of award-winning buildings. He has been in private practice in Toronto since 1952.
- E. Gresley Cohen, who as president of the Royal Australian Institute of Architects forged closer bonds between capital and labor in his country. He has contributed substantially to the development of downtowns throughout Australia.
- Charles M. Correa of India, a pioneer in the development of low-cost shelter in tropical climates. His work has ranged from the master planning of New Bombay to the Mahatma Ghandi Memorial. He has written books and essays on urban architecture, planning and housing.
- Wladimir Alves de Souza of Brazil, a fellow of the Royal Institute of British Architects, who is known for the design of new buildings as well as for the restoration of Brazil's most important historical landmarks.
- Augustine Akhmemokhan Egbor of Nigeria, past president of the Nigerian Institute of Architects, who served as director of public buildings, retiring from

government service in 1970 to establish his own practice. He is a fellow of RIBA.

- Erik Krakstrom, who has made major contributions to planning and urban design in Scandinavia. In addition to directing the practice of his firm in Helsinki, he has served on government councils and committees, including Finland's council on environmental design and control.
- Ricardo Legorreta of Mexico, whose projects include the Camino Real Hotel in Mexico City and office buildings, factories, clinics and housing projects. He is also the architect of the restored Iturbide Palace in Mexico City and partially underground resort apartments at Cabo San Lucas.
- Eduardo Orrego, currently dean of the Peruvian Architects' Association, who as a Lima deputy to Parliament prepared laws designed to provide a systematized plan for land reform and land use control.
- Marion Tournon-Branly, director of the Schools of American Art in Fontainebleau, France, who has designed more than 50 major projects. Her involvement in urbanism includes the protection of Loire villages and the reconstruction of the city of Berlin.

## Directors of Minority Affairs And Federal Liaison Appointed

Bill Street, who holds a degree in architecture from Harvard University and a master's in environmental design from Yale University, has been appointed director of minority affairs at AIA. He recently served as executive director of the Shaw Project Area Committee, an advisory citizens' organization funded by HUD to provide planning and community organization services to residents of the 680-acre Shaw urban renewal area in Washington, D.C.

Street will serve as AIA's representative for minority and community assistance programs, giving technical aid to AIA components, minority architectural firms and the more than 80 community design centers throughout the country. He will also coordinate the publication of a national directory on minority A/E firms.

Steven L. Biegel has been promoted to director of AIA's federal agency liaison program in the department of government affairs, replacing Bruce Schafer, who came to the Institute in May 1973 and is leaving to explore other aspects of the architectural profession. Biegel was formerly assistant director of the program. He was national vice president of the Association of Student Chapters/AIA in 1975 and came to the Institute in 1977 from the architectural firm of Donald J. Stephens Associates in Albany. He will be responsible for AIA contacts with federal agencies and the White House.



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**"State Solar Energy Offices"** is a 26-page pamphlet that lists the name, address, telephone number and specific contact to call for solar energy information and assistance. Free copies are available from the National Solar Heating and Cooling Information Center. The toll-free phone number is (800) 523-2929 in all states except Pennsylvania—(800) 462-4983 and Alaska and Hawaii—(800) 523-4700. The center is operated for HUD and the Department of Energy by the Franklin Research Center in Philadelphia.

**The Kansas City Chapter/AIA** has for sale posters that herald the 1979 national AIA convention. Designed by Stuart Hutchison, AIA, president of the chapter, there are three types of posters: 18x25-inch offset printing on silver currency cover paper (\$4 plus \$1 postage and handling); 40x60-inch black on silver, Technasheen process (\$40, plus \$2 postage and handling), and 40x60-inch black and white print (\$4 plus \$1 postage and handling). Order from the chapter at 20 W. 9th St., Kansas City, Mo. 64105.

**Skyline**, a new monthly newsletter issued for the design community by New York Institute of Architecture and Urban Stud-

ies, has a threefold aim: "accumulation of information, the synthesis of that information and the assessment of its value and relevance." It presents a calendar of art and architectural exhibitions, lectures and symposia in the New York City area and signed critical reviews of such events and of significant projects. Editors are Andrew MacNair and Craig Owens. Subscriptions are \$10 yearly. For further information, contact: Institute of Architecture and Urban Studies, Eight W. 40th St., New York, N.Y. 10018.

**Karl Kamrath, FAIA**, of Houston has been selected by the Longhorn Hall of Honor Council to be "enshrined" in the Longhorn Hall of Honor.

**"Looking at Guidebooks, Looking at Architecture"** is the title of a seminar sponsored by the Indianapolis Chapter/AIA scheduled for Mar. 23 in Indianapolis. For information, contact: Indianapolis Chapter/AIA, Architectural Center, 148 N. Delaware St., Indianapolis, Ind. 46204, (317) 634-3871.

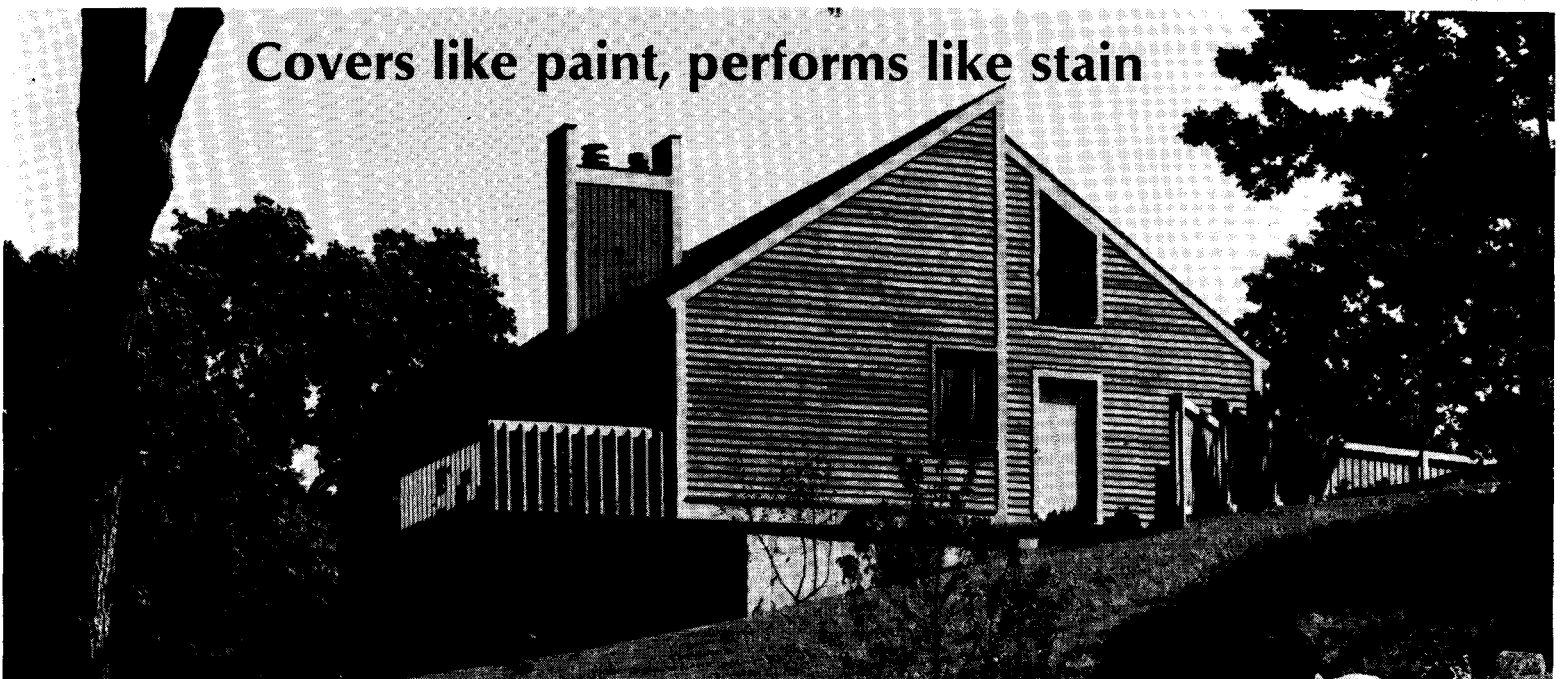
**"Common Ground: Changing Values and the National Forests"** is the title of a new film produced by the Conservation Foundation. It recently represented the U.S. at the 8th World Forestry Congress in Jakarta, Indonesia. It is available for

general distribution at the cost of \$10 per showing to cover postage and handling. For further information about the 16mm, 29-minute documentary which explores national forestry policy issues, contact: Conservation Foundation, 1717 Massachusetts Ave. N.W., Washington, D.C. 20036.

**To expand the energy conservation efforts** of the nation's 7,000 hospitals, a grant of \$481,193 has been made by Exxon Corporation to the Hospital Research and Educational Trust, an affiliate of the American Hospital Association. Among the project activities: establishment of an energy conservation clearinghouse for hospitals, analysis of hospital energy use patterns and development of a prototype program of financial incentives for energy conservation in hospitals.

**The British Architectural Library**, formerly the library of the Royal Institute of British Architects, has microfilmed many of its rare books and has made the reels available to libraries and scholars. A descriptive brochure, available upon request, lists each book's title, author and date of publication, as well as supplying prices. For further information, write: World Microfilms Publications, 62 Queen's Grove, London NW8 6ER, England. □

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Thomas R Crow

79 Hilltop Trail

Sparta, N.J. 07871

**New England/New York State**

(617) 632 8185

Robert L. Tagen

87 State Road West

Westminster, Massachusetts 01473

**Chicago** (312) 887-1171

Robert M. Brown

201 E. Ogden Avenue

Hinsdale, Illinois 60521

**St. Louis** (314) 569-3210

Richard D. Grater

1466 Summerhaven

St. Louis, Missouri 63141

**San Francisco** (415) 348-8222

Jules E. Thompson

1290 Howard Avenue #303

Burlingame, California 94010

**Los Angeles** (213) 378-8361

Bert Charlton

2560 Via Tejon

Palos Verdes Estates, California 90274

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# The basic forms of light.

## **Crouse-Hinds Bollards.**

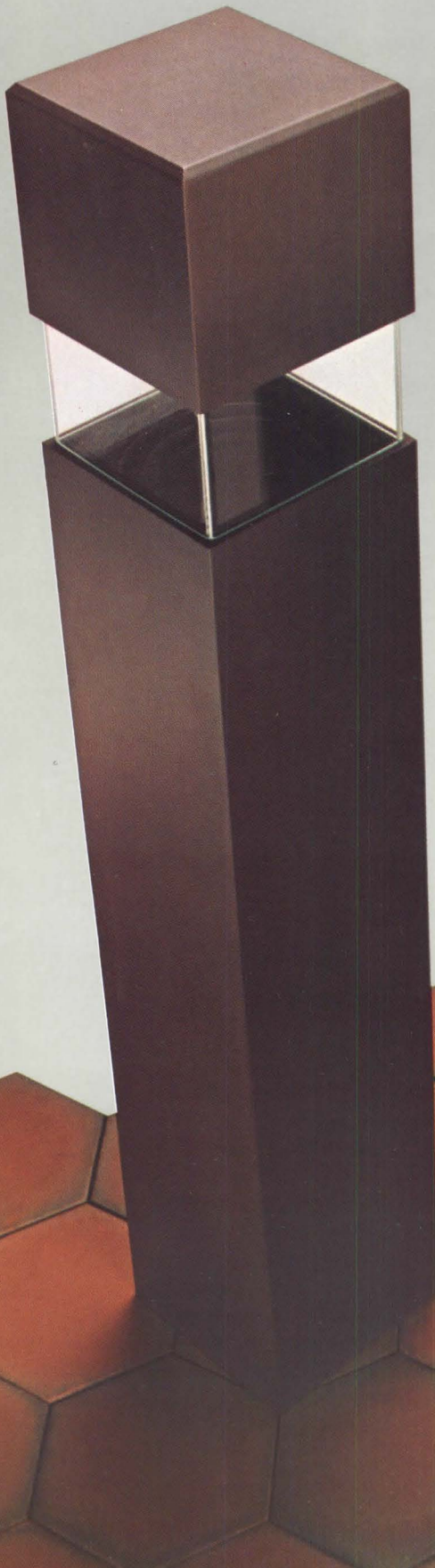
Rugged, strong, and comfortable to view. Superbly constructed with seamless extruded aluminum housings. No exposed set-screws, fasteners, or other hardware to clutter the design. Simple. Clean. Vandal resistant. Basic.



Crouse-Hinds Company  
Lighting Products Division  
Syracuse, New York 13221.



**CROUSE-HINDS**



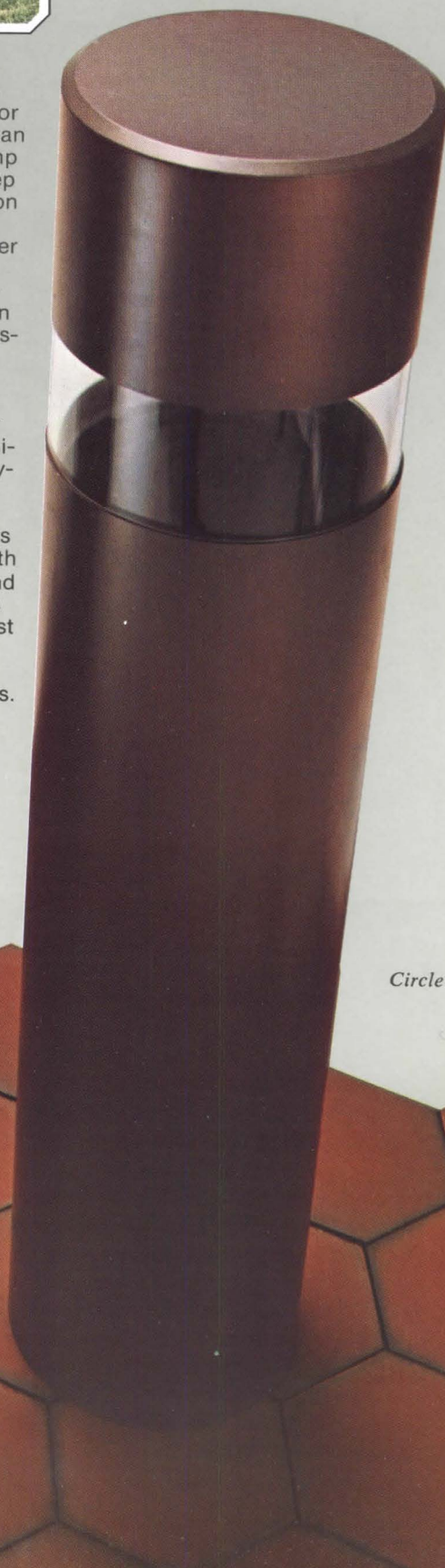
Bollards and people go together. Crouse-Hinds Bollards are designed for people. Beveled tops mean no sharp edges. The lamp is below the lens to keep the temperature down on the top housing. This makes our Bollards cooler to the touch.

And our unique "see-through" look is easy on the eye. The impact-resistant acrylic lens is an integral element of the housing. There are no reflectors, refractors, or other optical devices visible in the lens area. Polycarbonate lenses also available.

Crouse-Hinds Bollards are designed for use with 70 and 100 watt HPS and 100 watt mercury lamps to accent or set off almost any pedestrian area.

Bollards. A good example of basic shapes.

When you think of "basic forms of light," think of Crouse-Hinds. Write for our literature.



Circle 38 on information card

# Beauty that's more than skin deep.



Architect: Wendell Lovett, FAIA, Seattle, Washing

Enhance and protect the natural beauty of wood with Olympic Oil Stain. Olympic *penetrates* wood to protect from within. Rich linseed oil and micro-milled pigments soak down into the fibers, giving wood a deep, uniform finish that stays beautiful no matter how wet or how dry the weather gets.

For additional information, consult your 1979 Sweet's Catalog. Or write Olympic: Dept. P, P.O. Box 1497, Bellevue, WA 98009.

**Penetrates to  
protect wood  
beautifully.**



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