

COVER

MAY 1978

The Armstrong Commercial Corlon® Flooring System. A new concept that's been proved in use for over 20 years.



Sandoval™, newest of the Vinyl Corlons, is a styling breakthrough in resilient flooring. It offers the expensive look of terrazzo at a sheet vinyl flooring price.

Today, all across the nation, many millions of square yards of Armstrong Vinyl Corlon are performing beautifully. And many of these installations have been in place for over 20 years. That's just one reason Armstrong .090" gauge sheet Vinyl Corlon is one of the most widely



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It looks monolithic.

Corlon comes in 6'-wide rolls up to 90' long. You get a monolithic look because there are few seams. For example, you'll have about 93% fewer seams with Vinyl Corlon than with the same area of 12" x 12" tile.

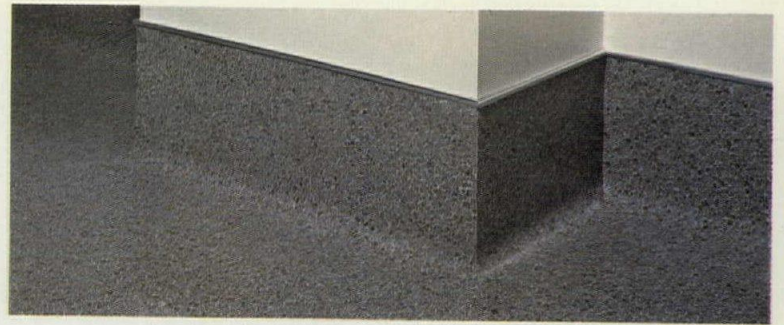


Chemically welded seams.

An exclusive Armstrong adhesive chemically welds the seams without heat or special tools. They won't come apart. And they won't trap dirt and moisture.

Wide range of colors and designs.

Armstrong Vinyl Corlon comes in five distinctive chip patterns and 28 colors ranging from bright and modern to neutral and natural.



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Armstrong Vinyl Corlons are inlaid materials. Because the pattern and color go all the way through to the backing, they won't wear off like printed products. And because the inlaid construction is smooth and dense, spills wipe right up. Simple regular maintenance keeps the floor looking like new. These resilient floors meet the flame-spread and smoke-developed requirements of the most widely recognized building codes and regulations.



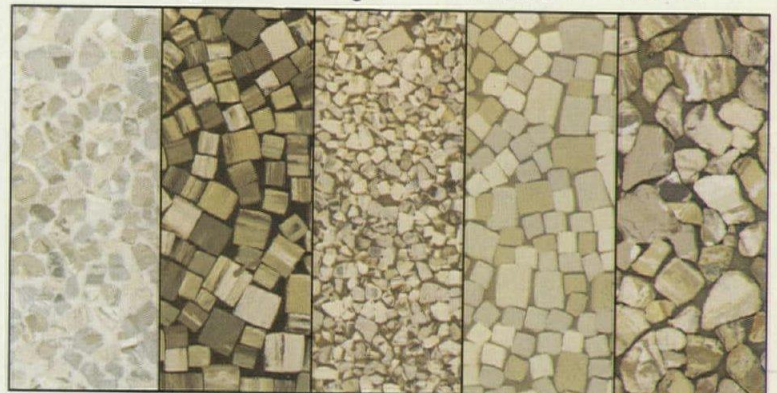
Vinyl Corlon floors can be installed with a perimeter bonding system developed by Armstrong. In most cases, you can install them right over an old floor and eliminate a lot of work and expense.

The Armstrong Vinyl Corlon Commercial Flooring System. Specify it, and you'll get one beautiful long-lasting floor. For more information, write Dept. 95FAJ, Lancaster, PA 17604.

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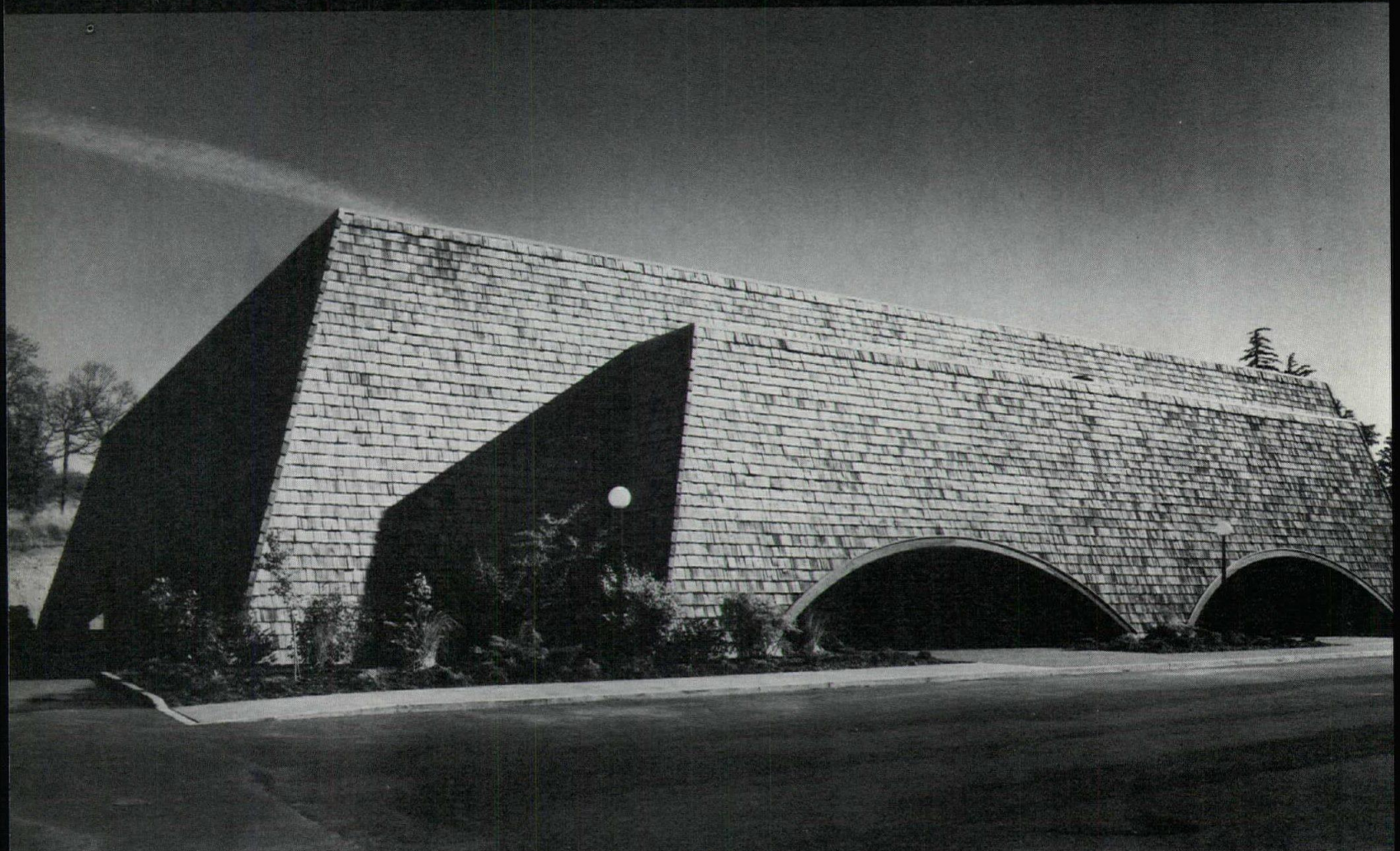
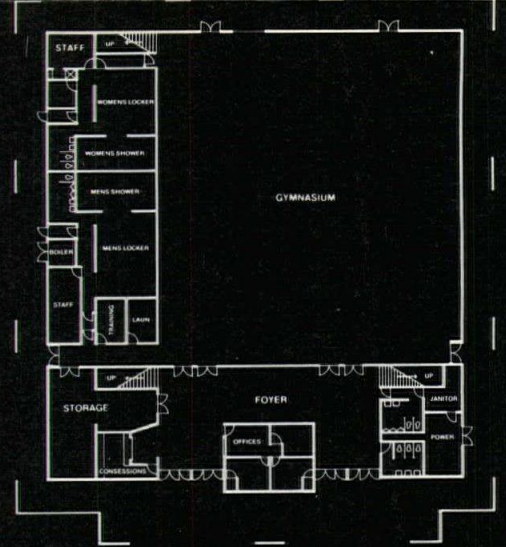
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Asbestos Cement Shingles	.21
Slate	.05

Insulative ("R") values of roofing products shown above. Source: ASHRAE Handbook, and California Energy Design Manual.



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*Sports Center, Salem, Oregon.
Architects: Kolbo, Bowman, Smallwood & Associates.*



Sammish Indian basket made from cedar bark strips. Cedar. To touch the earth.

Red Cedar Shingle & Handsplit Shake Bureau

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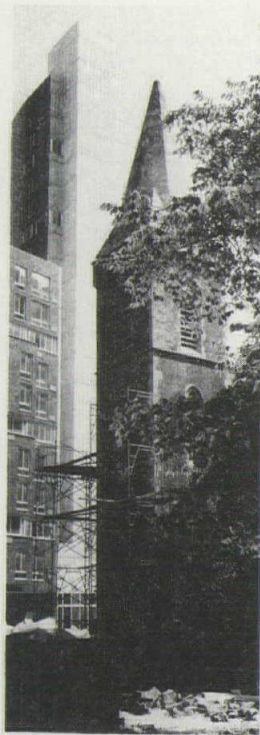
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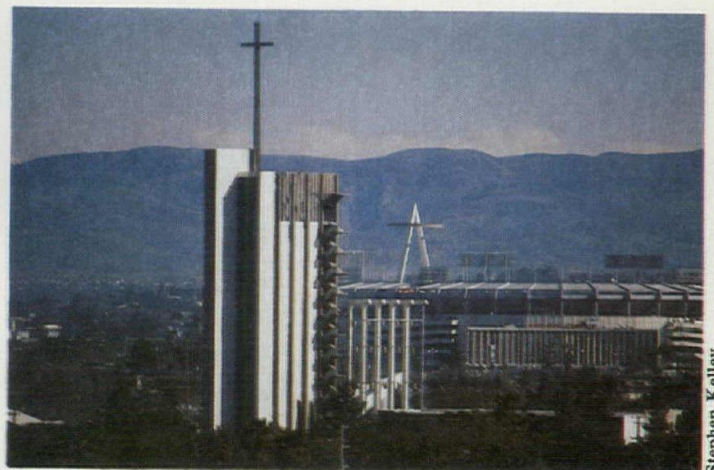
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Garden Grove Community Church

Stephen Kelley

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GENERAL  ELECTRIC

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EVENTS

June 2-3: Association of Architectural Librarians annual meeting, Radisson Muehlebach Hotel, Kansas City, Mo. Contact: Susan C. Holton, AIA Library.

June 2-7: Architectural Secretaries Association annual convention, Radisson Muehlebach Hotel, Kansas City, Mo.

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

June 4-5: Seminar on Developing the U.S. Metric Standards Strategy, Sheraton O'Hare Motor Hotel, Chicago. Contact: American National Standards Institute, 1430 Broadway, New York, N.Y. 10018.

June 4-5: Course on Wind Load, Tornadoes and Building Codes, Kansas City, Mo. Contact: Engineering Conferences, 1020 Engineering Building, University of Missouri, Columbia, Mo. 65211.

June 4-6: Biomass Energy Systems Conference, Colorado School of Mines, Golden, Colo. Contact: Solar Energy Research Institute, 1536 Cole Boulevard, Golden, Colo. 80401.

June 4-8 and 11-15: Course on the Principles of Color Technology, Rensselaer Polytechnic Institute, Troy, N.Y.

June 4-9: Course on Energy Assessment, Economics and Audits, University of Wisconsin, Madison.

June 6-10: Conference of the Environmental Design Research Association, State University of New York at Buffalo. Contact: EDRA, School of Architecture and Environmental Design, State University of New York at Buffalo, 3435 Main St., Hayes Hall, Buffalo, N.Y. 14214.

June 11-13: Workshop on Photovoltaics Material and Device Measurements, Stouffer's National Center Hotel, Arlington, Va. Contact: Solar Energy Research Institute, 1536 Cole Boulevard, Golden, Colo. 80401.

June 11-15: Seminar on Solar Energy for Buildings, Hartford Graduate Center.

June 11-15: Workshop on Value Engineering, St. Louis. (Repeat workshops: Sept. 17-21, Toronto; Oct. 15-19, Philadelphia; Nov. 5-9, Honolulu). Contact: American Consulting Engineers Council, 1155 15th St. N.W., Washington, D.C. 20005.

June 11-22: Design Graphics Workshop, University of Arizona, Tucson.

June 12-14: Seminar on Strategy and Techniques for the Planning and Design Professions, University of Wisconsin, Madison.

June 14-17: Course on Computer Aided Graphics and Design, Clemson University, Clemson, S.C.

June 15-16: Seminar on the Design and Analysis of Subterranean Structures, Brown Palace, Denver. Contact: Architectural Extension, 103 Architecture Building, Oklahoma State University, Stillwater, Okla. 74074.

June 17-22: International Design Conference, Aspen, Colo. Contact: IDCA, P.O. Box 664, Aspen, Colo. 81611.

June 19-24: AIA/Association of Collegiate Schools of Architecture Teachers Seminar, Cranbrook Academy, Mich. Contact: ACSA, 1735 New York Ave. N.W., Washington, D.C. 20006.

June 24-29: Air Pollution Control Association annual meeting, Cincinnati Convention-Exposition Center. Contact: APCA, P.O. Box 2861, Pittsburgh, Pa. 15230.

June 25-29: Course on Advances in Color Technology, Rensselaer Polytechnic Institute, Troy, N.Y.

June 25-29: Courses on Standards of Practice for Wind Loads and on Tornadoic Loads for Design and Evaluation of Structures, Texas Tech University, Lubbock.

June 25-29: Course on Advanced Solar Energy Systems Design, Hartford Graduate Center.

June 25-29: Course on Fire Safe Building Design, Georgia State University, Atlanta. (Repeat course on Aug. 13-17, University of Minnesota, Minneapolis.) Contact: National Fire Academy, P.O. Box 19518, Washington, D.C. 20036.

June 25-Aug. 3: Program on Career Discovery, Graduate School of Design, Harvard University, Cambridge, Mass.

June 28-29: Institute on the Structural Design of Parking Ramps, University of Wisconsin, Madison.

July 1-Aug. 11: Course on Comparative Land Use Planning Law, Oxford University, England. Contact: Oxford Institute on International & Comparative Law, Law School, University of San Diego, Alcalá Park, San Diego, Calif. 92110.

July 2-13: Institute on Factors Influencing Urban Design, Catholic University, Louvain-la-Neuve, Belgium. Contact: P. Laconte, Catholic University, 13 Avenue G. Lemaitre, B-1348 Louvain-la-Neuve, Belgium.

July 16-20: International Conference on Environmental Psychology, University of Surrey, Guildford, Surrey, England. Contact: Nadine Hunter, ICEP, Department of Psychology, University of Surrey, Guildford, Surrey GU2 5XH, England.

LETTERS

An Art for the 'Human Shaped Environment': Thanks for the very nice bio on me in the March issue [on the occasion of his having been selected to receive an AIA medal, p. 41], but there was one slip of the typewriter that I must correct. I was never editor of *Architectural Record*. Full editorship came to me later, at *Architectural Forum*.

Meanwhile, the most prophetic and important article on architecture that I have been able to write yet appeared in the May 17, 1941, issue of *The Nation*. In review-

ing what was then the new "Architecture of the TVA," I opened the subject of architecture as an art dealing with the whole human shaped environment and not, as others some five years later narrowed it down, with just the "built" environment alone. JOURNAL editors will recognize this theme of mine running through a couple of book reviews in the magazine of recent years and also through my December '76 article on Clarence S. Stein.

Douglas Haskell, FAIA
New York City

Home Remodeling: We are preparing a book on creative home remodeling, to be published by Prentice-Hall. We would welcome photographs (with or without plans), in either black and white or color, of completed projects, such as family rooms, bathrooms, kitchens, bedrooms and living areas. If readers of this magazine would like their photographs considered for the book, please send, with enclosed self-addressed and stamped envelope, to me.

Stanley Myers, AIA
21 Manet Circle
Chestnut Hill, Mass. 02167

James Buchanan Eads: The January issue is beautiful, colorful and interesting. On page 32, photo 20, the Eads Bridge in St. Louis is said to have had James Buchanan Eads as its architect. He was an engineer, not an architect.

In 1920, he was elected to the Hall of Fame of Great Americans in the general category of engineers and architects and was identified as an engineer and inventor. Eads is the only engineer so honored. There are no architects in the hall of fame; 10 AIA members have been nominated, but none was elected.

There is a clue as to why someone may have thought Eads was an architect. He was quite possibly one of the founders of the American Society of Civil Engineers and Architects, established in 1852. The society was called by that name until 1869 when, perhaps because of the growth of AIA after 1867, the words "and Architects" were dropped from the engineering society's name. Eads served as president of ASCE in 1882.

Eads' entire career was in engineering, and his expositions on water flow and calculated sediment won him international fame as a hydraulic engineer. His bridge in St. Louis is still an engineering beauty in a beautiful city.

The bronze bust of Eads by Charles Grafly, fellow of the National Sculpture Society, was unveiled on May 13, 1924, a gift of ASCE. The inscription on the bronze tablet under the bust is one of Eads' statements, which tells something of the kind of man he was: "I cannot die; I have not finished my work."

E. James Gambaro, FAIA
New York City

Patterned carpet offers solutions for almost any design problem. Anywhere you need to create interest, a touch of excitement, and dramatic space, there's a pattern to help solve the problem. Add to this the distinct advantage in patterned carpet's soil-hiding propensities and you've got a world-beater. No wonder patterned carpet has been the workhorse of the hospitality market for years. It can also offer design solutions for hospitals, schools, retail stores, and even the executive suite.

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The new international headquarters building for Mary Kay Cosmetics, Inc. in Dallas presents an elegantly curved, gold-windowed face to its neighbors. All administrative and accounting activities of the company are housed in the 115,000-sq.-ft. facility. The eight-floor building is served by three Dover Traction Elevators, housed in an interior core. For more information on Dover Elevators, write Dover Corporation, Elevator Division, Dept. G, P.O. Box 2177, Memphis, Tennessee 38101.

Mary Kay International
Headquarters Building, Dallas
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Foster + Meier Architects, Inc.
CONTRACTOR:
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Dover Elevators sold
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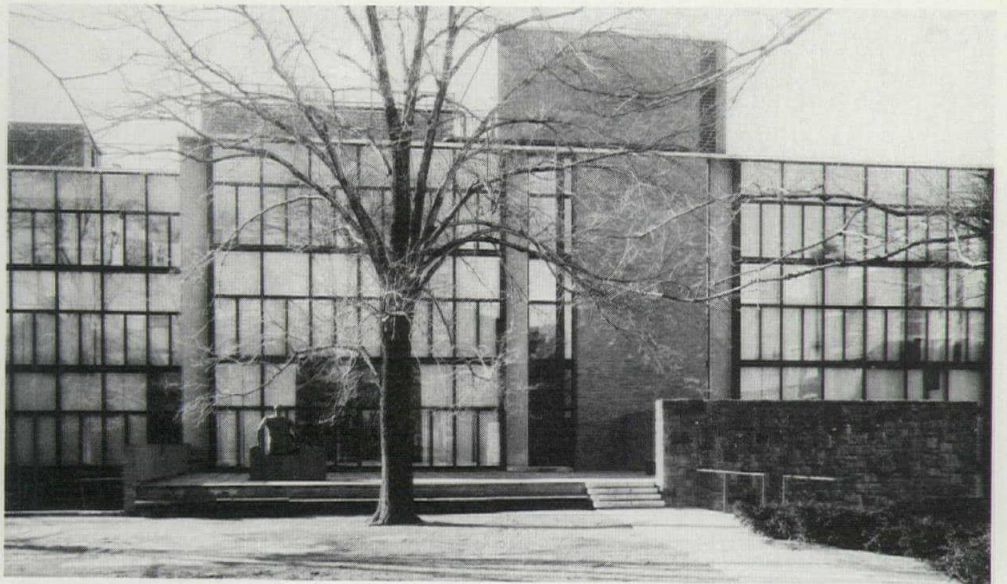


The Institute

Kahn's Gallery at Yale Wins 25-Year Award

Yale University's Art Gallery, designed by the late Louis I. Kahn in association with the office of Douglas Orr, is the recipient of AIA's 25-year award, given annually in recognition of architectural design of "enduring significance." The first modern building at Yale and the first work of Kahn to bring him international attention, the glass and concrete structure is in use today in its original form. The building was inspired "by the subtle structural integrity and convincing visual order of Gothic structures," said Boris Pushkarev in 1955 in *Perspecta*, Yale's architectural journal. The design resulted, he said, from Kahn's "conviction that order lies at the root of architecture."

Alan Shestack, the gallery's director, said recently that "it has turned out to be an extremely functional art museum which, with minor internal improvements, has been adaptable to all kinds of fine art exhibitions. Although the building itself is distinguished and has distinctive architectural elements such as its famous ceilings, it allows the works of art to dominate the space." He commended the building's "pleasing proportions" and "lack of clutter and architectural conceits," making it "an absolutely perfect showcase for its contents."



The Institute

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The four-story structure's tetrahedral ceilings are two-feet, four-inches-deep. Kahn created a space, said Pushkarev, "in which the structure and mechanical equipment—lighting, acoustical and climatic—would all live one life and would become the basic means of artistic expression." Soon after the building was completed, airconditioning was added, easily

accommodated by the integrated systems within the building.

Over the years, interior partitions have been added as a supplement to the original movable plywood panels, and the original concrete block infill has been covered with a continuous surfacing for the more effective display of arts works. And in 1976, an

continued on page 14



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systems. Or if you want more information on Perma Ply-R roofing, write to H.L. Meeks, Owens-Corning Fiberglas Corp., Fiberglas Tower, Toledo, Ohio 43659.

OWENS/CORNING
FIBERGLAS
TRADEMARK

*T.M. Reg. O.-C.F. Corp. **T.M. ©O.-C.F. Corp. 1979

The Institute from page 11

addition of 2,000 square feet for exhibitions and below-grade lecture hall was completed, accomplished partly by the roofing over of the lower west court. This addition, the design of Herbert S. Newman Associates of New Haven, won a 1979 AIA honor award (see April, p. 34).

Hugh Newell Jacobsen, FAIA, chairman of the jury to make the 25-year award selection, said that the gallery "represents incredible flexibility, while paying homage to its surroundings. It totally respects the architecture around it."

Celebrated in San Francisco: Market Street's Rehabilitation

San Francisco provided a great day for a celebration. The sun shone, the flags over the United Nations Plaza snapped in a fresh breeze; a Navy band played, and the plaza fountain splashed. Several hundred people gathered to listen to the band and stayed to hear Institute President Ehrman B. Mitchell Jr., FAIA, congratulate the city on a major achievement—the revitalization of its main stem, Market Street.

The event in March was part of AIA's year-long "Celebration of Architecture," aimed at sharpening citizens' awareness of positive values in their built environment. Mitchell cited the people who have played major roles in the Market Street effort: five mayors, two planning directors, other city officials and three design professionals whose firms were most closely involved as members of the Market Street beautification design team—Mario J. Ciampi, FAIA; John Carl Warnecke, FAIA, and landscape architect Lawrence Halprin.

At the end of the brief ceremony, spectators followed Mayor Dianne Feinstein as she stepped bravely off the curb and—while motorcycle cops held off the rush-hour traffic—snipped a red ribbon, officially opening the "new" Market Street. For one brief shining moment, the section of Market in front of San Francisco's Civic Center was what its boosters have wanted for more than two decades—a great ceremonial avenue.

The whole redevelopment scheme was born around the same time as BART, San Francisco's subway system. Plans called for a subterranean transit spine to be built under Market, to accommodate BART and tracks for streetcars operated by the Muni Railway. Since the surface would have to be torn up for construction, why not rebuild it as a magnificent promenade—a "Champs Elysées of the West?" Municipal amenities—widened sidewalks, plazas, trees and well-designed street furniture—would attract strollers and might inspire the business community to improve their properties fronting on Market.

Thus the whole strip, which was seriously deteriorated, would acquire a new vitality and prosperity. So the reasoning went, and by 1968, the voters were sufficiently convinced to approve some \$25 million in bonds to finance the project.

Eleven years later, the project has its boosters and its critics. Even its detractors concede that as a street, Market is handsome, with its broad brick-paved sidewalks, rows of London plane trees and bronze and granite street furniture. Newer buildings in the financial district near the Embarcadero contrast dramatically with poverty pockets where beautification stopped at the building line—but city officials are working with the business community to upgrade and revitalize those areas.

While Mitchell praised San Franciscans and their elected officials for their foresight and determination in pushing the project to its present stage, Mayor Feinstein was the first to point out that the job isn't finished. "We are standing at a critical place," she said, "but Market Street is going to undergo a great renaissance."

After acknowledging the contributions of the design professions to that renaissance, she added, "But we can have all the professionals in the world, and if their works aren't enjoyed and treated well, the whole effort will be a failure."

While critics like to write about winos and derelicts in the plazas and the coating of discarded chewing gum on the brick sidewalks, the mayor likes to talk about citizens like Walter Kaplan, who has voluntarily taken on the job of raising and lowering the U.S. and U.N. flags at United Nations Plaza. When the flags start looking dingy, he launders them. He does it because he's proud of his city, and he wants it to show its best—and cleanest—face to the world. *Marilyn Ludwig*

Minneapolis Approved as Site For 1981 Institute Convention

At its meeting in March, AIA's board of directors approved Minneapolis as the site of the 1981 Institute convention, replacing New Orleans as the convention city of that year. New Orleans was named as the convention site for 1983. The board approved the following five-year schedule for AIA convention sites: 1980, Cincinnati; 1981, Minneapolis; 1982, New York City; 1983, New Orleans; 1984, Phoenix. The schedule is contingent upon verification that a city can manage hotel rooms, exhibit space, etc., at the specified time, and any modification will be brought back to the board for review and approval.

Before the motion was passed by the board, a resolution to require that AIA conventions be held only in states that

have ratified the Equal Rights Amendment was proposed. After discussion, a substitute resolution which establishes the convention city sequence was passed.

The motion which passed, says Ehrman B. Mitchell Jr., FAIA, Institute president, "was prepared and sponsored by representatives of opposing points of view on the location of future AIA conventions. I consider this list final and expect no further board consideration of this subject."

In separate action, the board unanimously reaffirmed its support of the ERA and directed that the component affairs department press for ratification at the state level. AIA has supported the ERA since 1974 when a convention resolution to this effect was passed.

At the 1978 convention, delegates passed an amendment to a resolution which asked that criteria for the selection of future convention sites be recommended to the AIA board, including the criterion that conventions "shall only be held in states that have ratified" the ERA. AIA convention resolutions, although representing the position of those voting at a particular convention, are not binding until ratified by the board, under a mandate of the New York law under which AIA is incorporated.

At its September meeting, the board adopted the policy that positive state action on ERA should be one, but only one, of the criteria for convention site selection.

Hanks Will Address Convention; Introduction of Stamps Planned

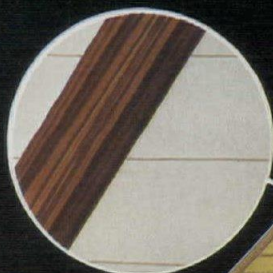
Joining theme speakers Norris K. Smith, James Q. Wilson and I. M. Pei, FAIA, at the AIA's June 3-7 convention in Kansas City, Mo., (see Feb., p. 25) will be Nancy Hanks, Hon. AIA, who served for eight years as chairman of the National Endowment for the Arts and is currently vice chairman of the Rockefeller Brothers Fund and a trustee of the Conservation Foundation and of Duke University. Described as a "national proselytizer for the arts," her record indicates concern for excellence in the total environment as well as the built environment.

Among the convention events recently announced is an opening day (June 4) introduction of a series of stamps honoring American architecture (photo p. 17). First day of issue ceremonies will be held in the Music Hall, at which time Carl C. Ulsaker of the U.S. Postal Service will present to Ehrman B. Mitchell Jr., FAIA, president of the Institute, an album containing the first block of stamps. A branch of the Kansas City Post Office will be set up in the convention center to make the stamps available for the first time.

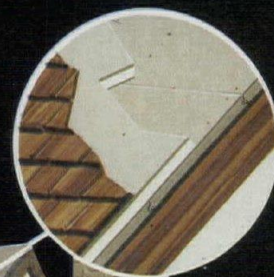
This year's gold medal dinner will have
continued on page 17

From roof to basement,
from wall to wall...

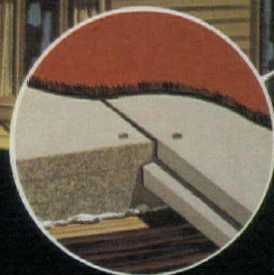
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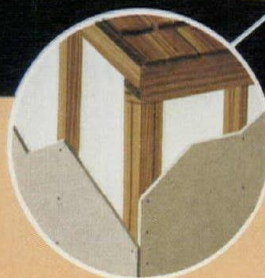
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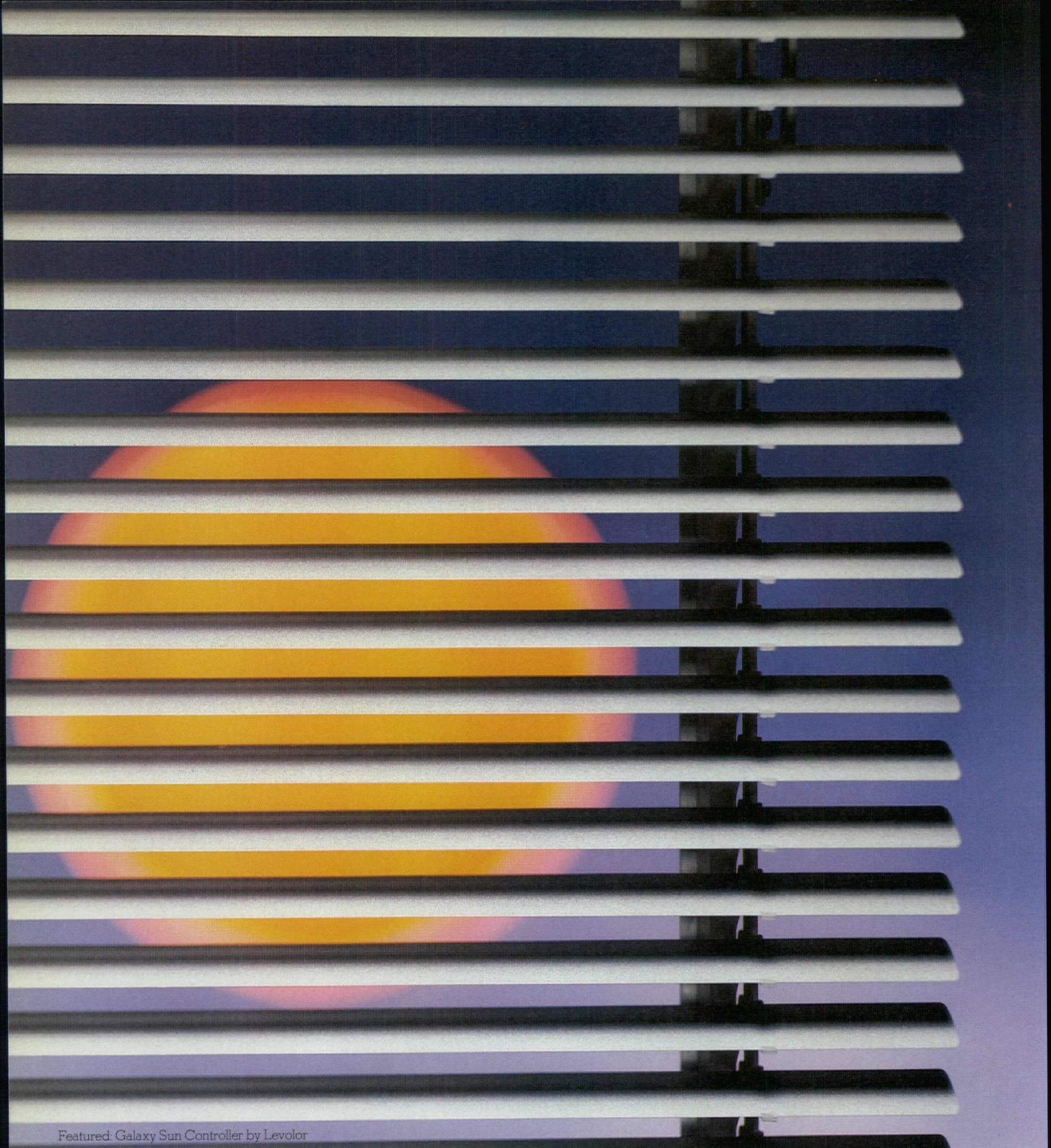
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Circle 9 on information card

The Institute from page 14

a new format. All living gold medalists and widows of deceased winners have been invited to participate in a celebration of design excellence. Following a reception and dinner in honor of I. M. Pei, FAIA, 1979 gold medalist, there will be an informal discussion involving the gold medalists in attendance.

Integrated into the commercial exhibits will be a major presentation of Pei's drawings of the East Building of the National Gallery of Art in Washington, D.C. Also within the commercial exhibit area will be an exhibition of AIA's 1979 honor award winning projects.

Another recently announced event, sponsored by AIA's committee on design and produced by George Nelson & Co. of New York City, will be a slide/tape presentation based on Steen Eiler Rasmussen's book, *Experiencing Architecture*. Rasmussen is the recipient of a 1979 AIA medal for his contributions to architecture. His book was described by the Institute honors committee as a "noteworthy contribution, valuable to layman and architect" (see Mar., p. 48).

Special emphasis is placed this year upon educational programs for spouses of AIA members attending the convention. On June 5 and 6, there will be seminars on such topics as financial planning, in-

Practice

Proposition 13: Are Low Taxes Raising Fees in Construction?

In 1976, property taxes provided 59 percent of all municipal revenues in this country. Unlike the taxes "hidden" in a loaf of bread, property taxes are highly visible to the taxpayer. Taxpayer resentment came to the boiling point when Proposition 13 was passed last June by California voters. It cuts property taxes by almost 60 percent (about \$7 billion). It does not limit increases in fees, however, and that is where some people are beginning to believe that Proposition 13 is a tax shift rather than a tax cut. A major part of the new and increased fees affects the construction industry.

Three reasons are cited for construction industry complaints, according to the *Tax Revolt Digest*, a nonpartisan publication of the California Center for Research and Education, edited by the staff of the *California Journal*. First, the major increases in fees and service charges, instituted to recoup some of the losses incurred by Proposition 13, involve such things as increased or new fees for building plan checks, water and sewer connections, zoning changes and building permits. Second, local governments have no tax incentives to approve construction projects, so residential and commercial proposals "are now given the cold shoulder by some cities, under the theory that they are tax eaters, not tax producers." And third, because funds for major capital improvements were shut off, developers are told that dollars must be provided before new subdivisions can construct schools, fire stations, libraries and the like.

The California Building Industry Association has made a study in the aftermath of Proposition 13 to assess the increases of fees and charges on construction activities. It appears, says CBIA, that "the activities of the construction and development industries have borne a disproportionate burden" of post-Proposition 13 fee increases by cities and counties.

For example, zoning and general plan amendment fees in Oceanside went from \$300 to \$1,000. The per unit sewer hookup fee in Simi Valley went from \$865 to \$1,440. In West Covina, construction related fees increased by 20 percent. The excavation fee in Belmont went from \$25 to \$100 and the fee for architectural review from \$35 to \$200. In Sacramento, the fee for park development rose from \$158 to \$315. The estimated increase of all fees on a dwelling in Fairfield is up from \$1,700 to \$4,789, and in

Suisun City the fees are up from \$1,700 to \$3,100.

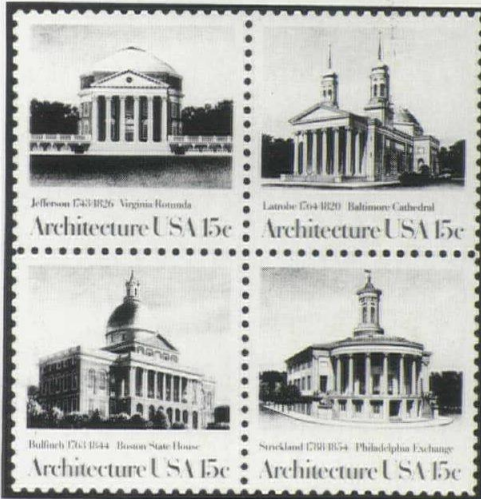
These examples and many, many more led the CBIA to ask in testimony before the California Senate: "Are the fees in excess of the cost of providing the services for which the fee is imposed? Is the construction industry uniquely affected?" And because "it is not possible for a private group to determine what are the actual costs of a government agency to provide services," CBIA said that it intended to introduce legislation "to require fee accountability" in order to determine "the part of the fee which represents the cost of the service and the part which is in excess of actual cost."

Howard Lane, FAIA, of Encino says that in the public sector some construction projects have been dropped because local public agencies have had to re-evaluate priorities. Purely on the basis of public scrutiny, he says, some projects, even where there were allocated funds, have been discontinued. But some of these projects are essential, he says, and the longer construction is delayed, the higher the costs will be.

Lane says that California architects "are very busy designing shopping centers, office buildings and the like." Such private building is taking place "not because property taxes were reduced, but because of marketing factors. This is totally independent of Proposition 13. Tax reduction is not the incentive."

Lane points to the reduction in the construction of apartment buildings. "As a byproduct of Proposition 13, Los Angeles put on a rent freeze because a few greedy landlords raised rents since Proposition 13 contained nothing that would require landlords to share tax savings with tenants." Other cities are looking toward rent control also, he says, and as a result the construction of new apartment buildings has come to a "virtual stop."

Barry Wasserman, AIA, California state architect, sees little impact of Proposition 13 on the state building construction program. "Inflation has been more damaging," he says. There are fewer risks being taken generally in construction, and there are constant cross checks on expenditures. Innovations are questioned unless they prove cost effective, he says, adding that first costs are scrutinized, and the impact is felt on any construction project that has a long period of payback. "There is simply more rigorous examination of any construction project as a re-



The new stamps 'celebrate' American architecture through the work of Thomas Jefferson, Benjamin Latrobe, Charles Bulfinch and William Strickland.

insurance, preliminary estate planning and tax information.

Other late developments are physical rather than cerebral in nature. On Saturday June 2, there will be a tennis tournament sponsored by Olympic Stain at the Overland Park Racquet Club. The tournament will be an open singles and doubles round robin, with a wine and cheese party preceding the presentation of awards at Glenwood Manor. Also, Owens-Corning Fiberglas Corporation and the AIA JOURNAL will sponsor five-mile and two-mile runs, both to be held on Sunday, June 3, in a park near Crown Center.

sult of Proposition 13," he says, and the big push is on saving money.

Although hospital construction has not yet suffered greatly, school construction has dropped considerably, he says.

The *Tax Revolt Digest* reports on a computer model developed by the Association of Bay Area Governments for use in the assessment of new construction proposals. It estimates the demand for new and increased public services as well as the amount of revenue each proposed project will produce. In its first test, the computer program (called CRIS for cost-revenue-impact system), "came to the conclusion that sales tax revenues are needed to offset new residential development. Most city officials had come to that same conclusion without benefit of computers," the newsletter says. No longer will cities and counties vie for residential and industrial development; rather, they will be doing all they can to bring in new shopping centers for those sales tax revenues, the newsletter concludes.

Observers have pointed out that the impact on localities of Proposition 13 has not yet been really felt because they were saved for the time being by a \$4.2 billion state surplus doled out to counties and cities. A panel appointed by Governor Brown to study the problems of Proposition 13 and make long-term recommendations has proposed state underwriting of such functions as welfare, schools, courts and health services. And many persons say that there will eventually be a restructuring of the tax system.

Brown's state planning director, William Press, says that Proposition 13 may be the "savior" of California cities. "Proposition 13 forces local decision makers to consider carefully the costs as well as the anticipated revenues of new development proposals. Many officials are coming down in favor of development in existing urban areas instead of outlying areas—an 'infill' pattern that's the cornerstone of the urban strategy." *Mary E. Osman*

HUD Retires Old FHA Forms, Accepts AIA's Document B181

HUD has instructed its field offices to accept use of AIA's new "Standard Form of Agreement Between Owner and Architect for Housing Services," document B181. Initial HUD approval covers use of B181 for projects with Federal Housing Administration mortgage insurance; it is anticipated that approval will be extended shortly for its use in section 202 direct loan programs for housing for the elderly, and that ultimately approval will be extended to cover other HUD housing programs.

Acceptance of B181 has resulted in HUD's retiring of FHA forms 2719-A, B

and C. Form 2719, created in the 1930s for use on FHA-insured mortgage projects, has been used, with only minor changes, until now. Although this form has the virtue of brevity, there were complaints that it did not cover a number of important matters and that its vague language permitted a variety of interpretations when arbitration or litigation occurred. AIA's housing committee has hailed the form's retirement as an "important breakthrough."

In the spring of 1976, a meeting of AIA's housing committee with HUD representatives led to a discussion of the problems with form 2719. AIA was requested to proceed without delay in the drafting of a form of agreement for housing services which HUD could adopt for its use in lieu of 2719. Work on B181 was spearheaded by Milton J. Prassas, AIA, of Washington, D.C., and a HUD/AIA liaison task force was formed with Prassas as chairman.

Three successive drafts, incorporating changes suggested by the task force and by HUD staff, were produced, with AIA's abbreviated form B151 chosen as a model rather than the longer B141. Four drafts followed. The final document, like other recent AIA agreement forms, contains a summary of the provisions with the differences between B181 and B151 spelled out. B181, unlike B151, does not call for the architect to provide statements of probable construction cost, unless a specific requirement is inserted in article 10.

All cost data are to be supplied by the owner, and other responsibilities of the owner are indicated in greater detail than before. All references to fixed limits of construction cost are eliminated in B181.

Government agencies may require a more detailed statement than is usual for the division of responsibilities, in which case the use of B162, "Scope of Designated Services," is suggested as a guide. As does B151, B181 permits a variety of fee methods to cover a wide range of specialized work.

The basic advantage of HUD's acceptance of B181 for architects working under HUD programs is that its validation can precede the architect's work on the project, with the knowledge that HUD, if satisfied with the scope of the work, will approve the document, thereby eliminating exposure of the architect to the ethical and practical hazards of working without a proper agreement or with one which HUD might later reject, says Wallace G. Teare, FAIA, a member of the task force which developed B181.

"All too often, with FHA form 2719, the agreement was not validated until after the architect completed his working drawings and specifications and the project was ready for initial closing and construction," Teare says. AIA's housing committee views B181 "as a major factor in elevating the practice of housing architecture to the position of respect and dignity now enjoyed in other areas of practice." *Practice continued on page 28*



Old State House Reopens: After extensive restoration and renovation (Roger Clark, architect), the nation's oldest state house is scheduled to be officially rededicated this month during all-day festivities in Hartford. Designed by Charles Bulfinch and completed in 1796, the Old State House served as Connecticut's state capitol until 1879 and then as Hartford's City Hall until 1915. In 1961, the building was designated a historic landmark. It will be used as a center for city activities, tourist information, cultural events and a museum of state history in its "new place in the sun."

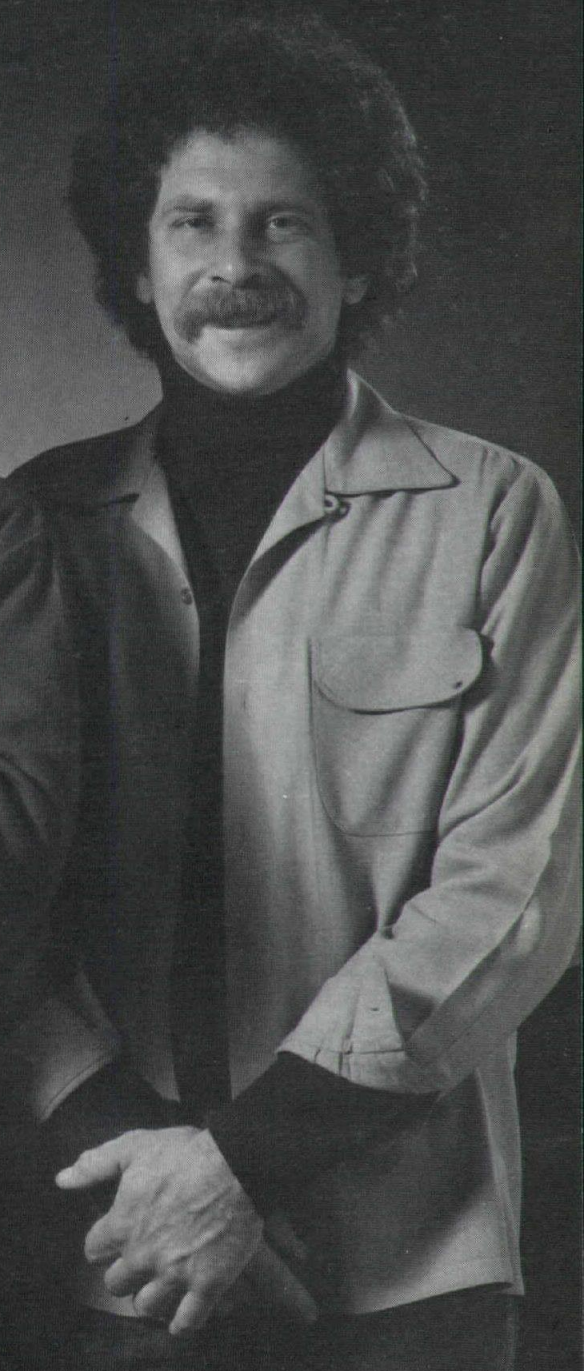
**The Winners:
1979 Plywood Design Awards**



TOM WILLIAMSON

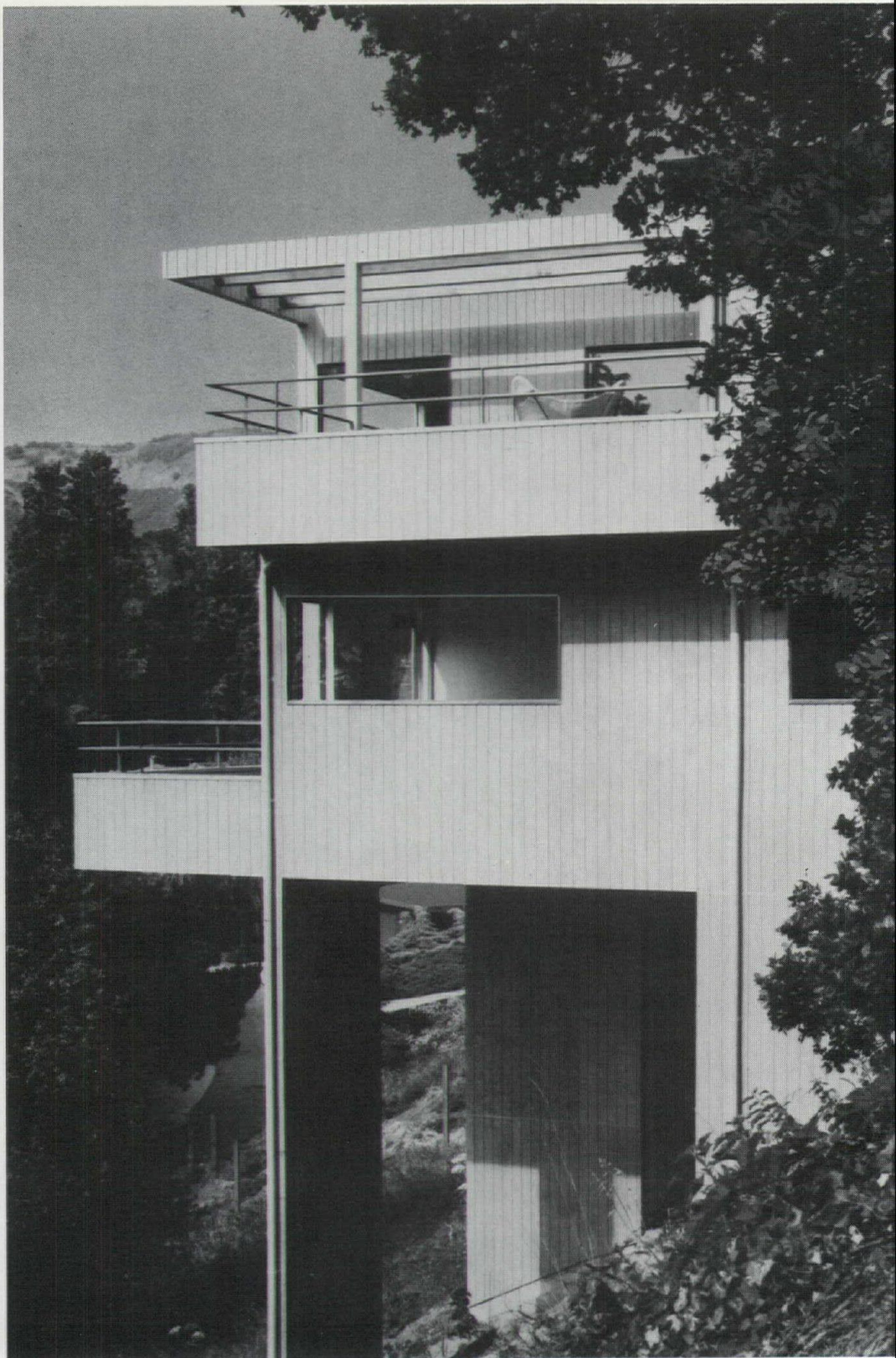
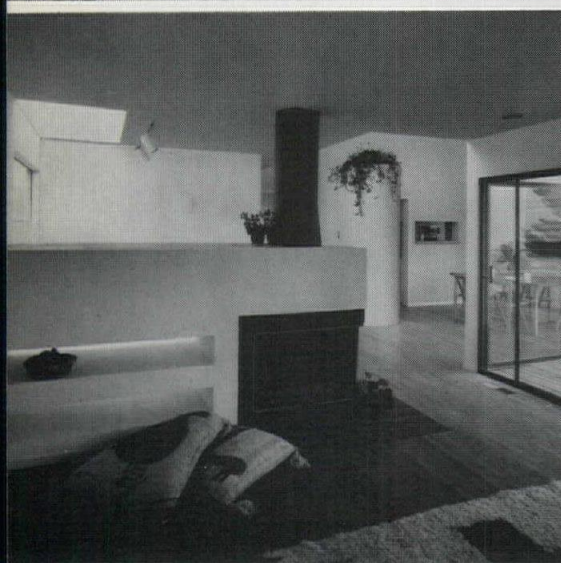
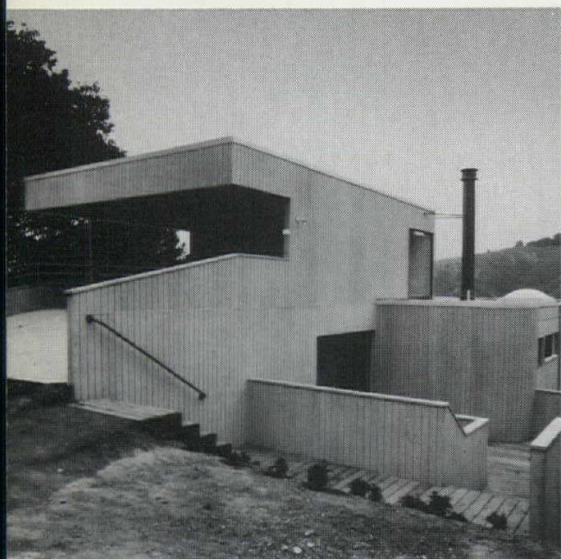


BOB SWATT



BERNARD STEIN

First Award Residential/Single Family



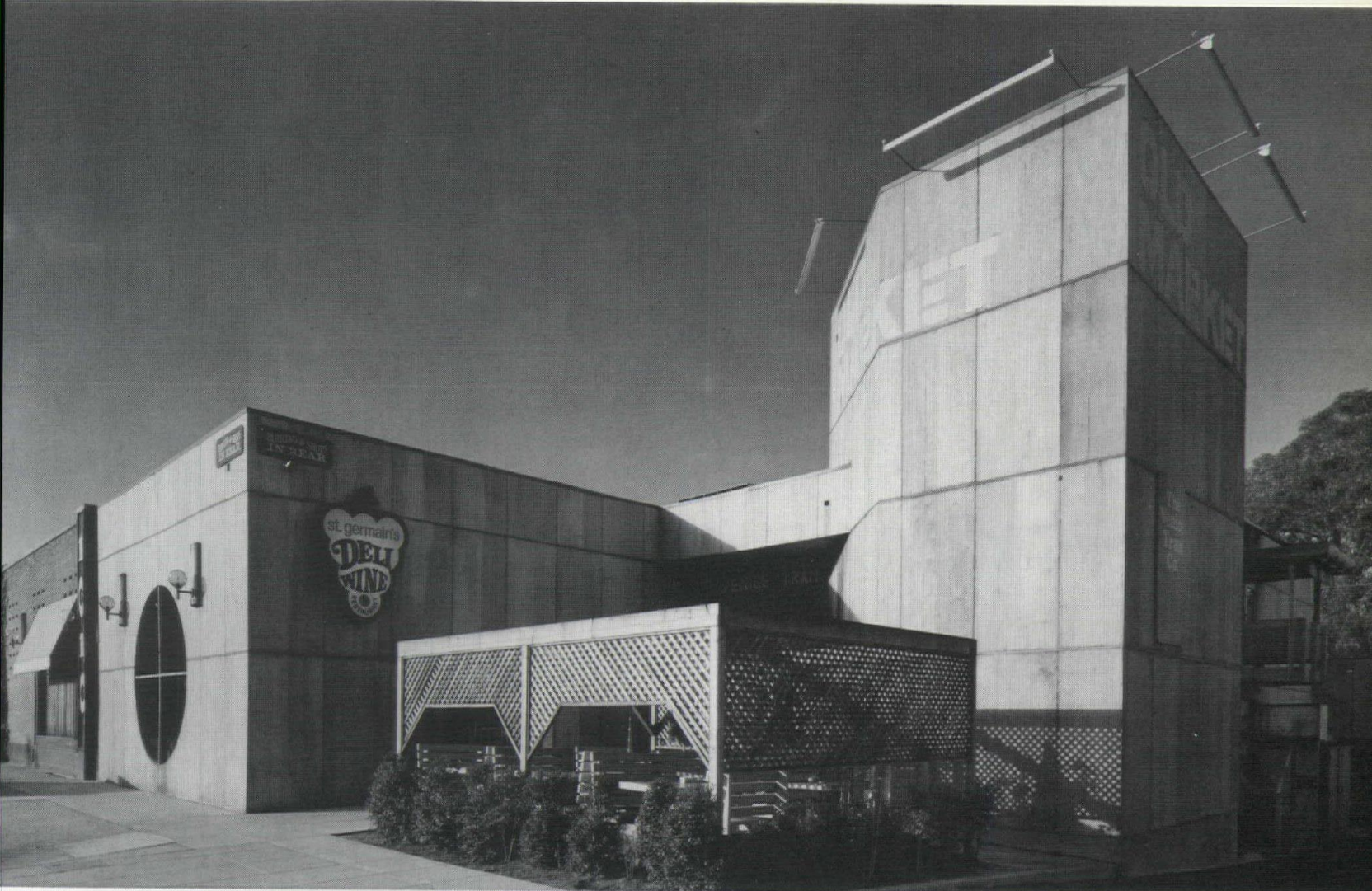
ARCHITECT: Robert Swatt, AIA/Bernard Stein. BUILDER: The Groupdesigners, Inc. LOCATION: Berkeley, California. JURY: "A by now classic style of design — the plywood cube — very nicely solved. This design is adapted beautifully to the steep site. The use of plywood fins versus posts carries the house to the ground, creates a good relationship to the site. Completely understated — every element and relationship carefully considered — a small house that will live and feel like a bigger home."

RESIDENTIAL/MULTI-FAMILY:
No awards were given in this category.

JURY: John D. Bloodgood, AIA, Des Moines, Iowa; Robert L. Durham, FAIA, Seattle, Washington; Richard J. Bertman, AIA, Boston, Massachusetts.

Circle 10 on information card

First Award Commercial/Institutional



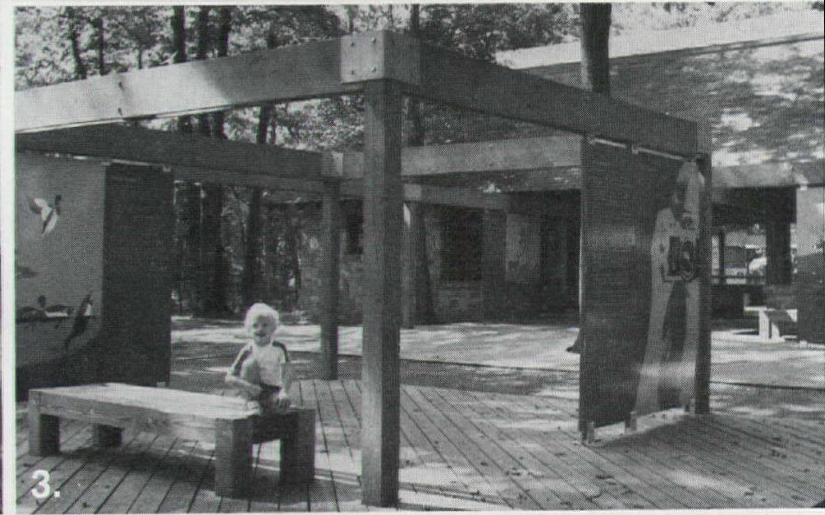
ARCHITECT: Thomas Williamson, Architect.
BUILDER: Charles Noble Company.
PROJECT: Old Market Addition, Encinitas, California. JURY: "A simple solution nicely handled, doesn't get carried away. Spatially very nice. Plywood panels neatly expressed as part of the design, not just a skin. The entire complex is expertly tailored to the basic character of a 4x8 sheet of plywood."



1.



2.



3.



4.



6.

RESIDENTIAL/SINGLE FAMILY

- 1. ARCHITECT: Don Doman, AIA, The Mithun Associates. BUILDER: Rescom Corporation. LOCATION: Bellevue, Washington. JURY: "Very straightforward. Simple, innovative use of pole structure within the house adds interest to the spaces and gives the house its own special tree-house character."
- 2. ARCHITECT: Donald K. Olsen, AIA & Associates. BUILDER: Ken Elkington. LOCATION: Sausalito, California. JURY: "Skillfully detailed and spatially very interesting. Difficult site has been

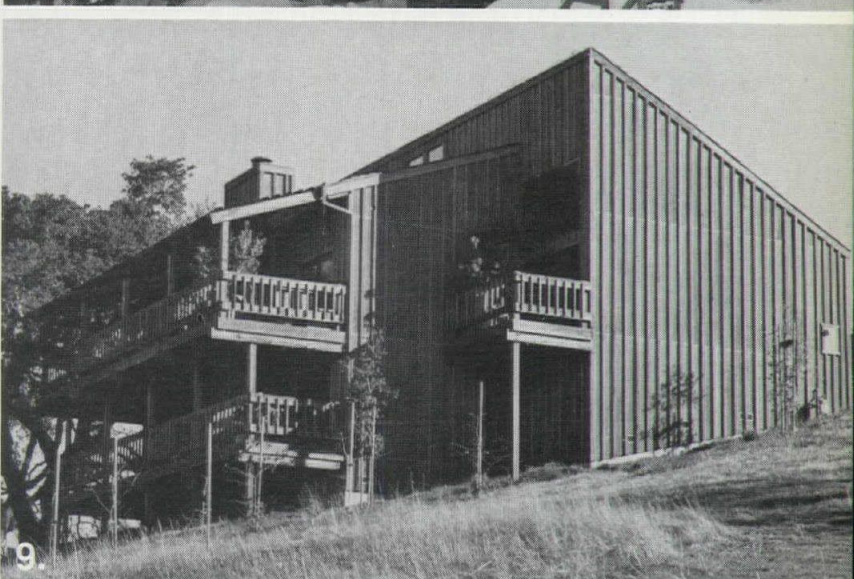
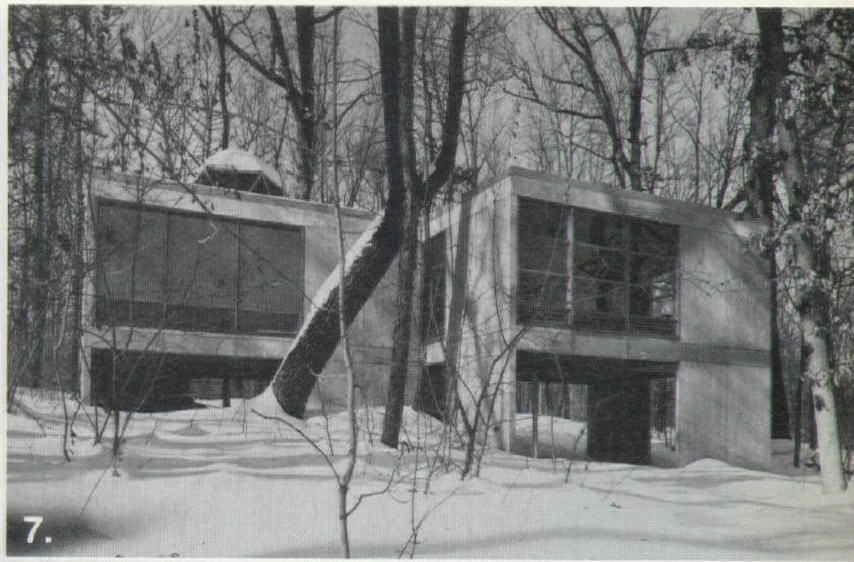
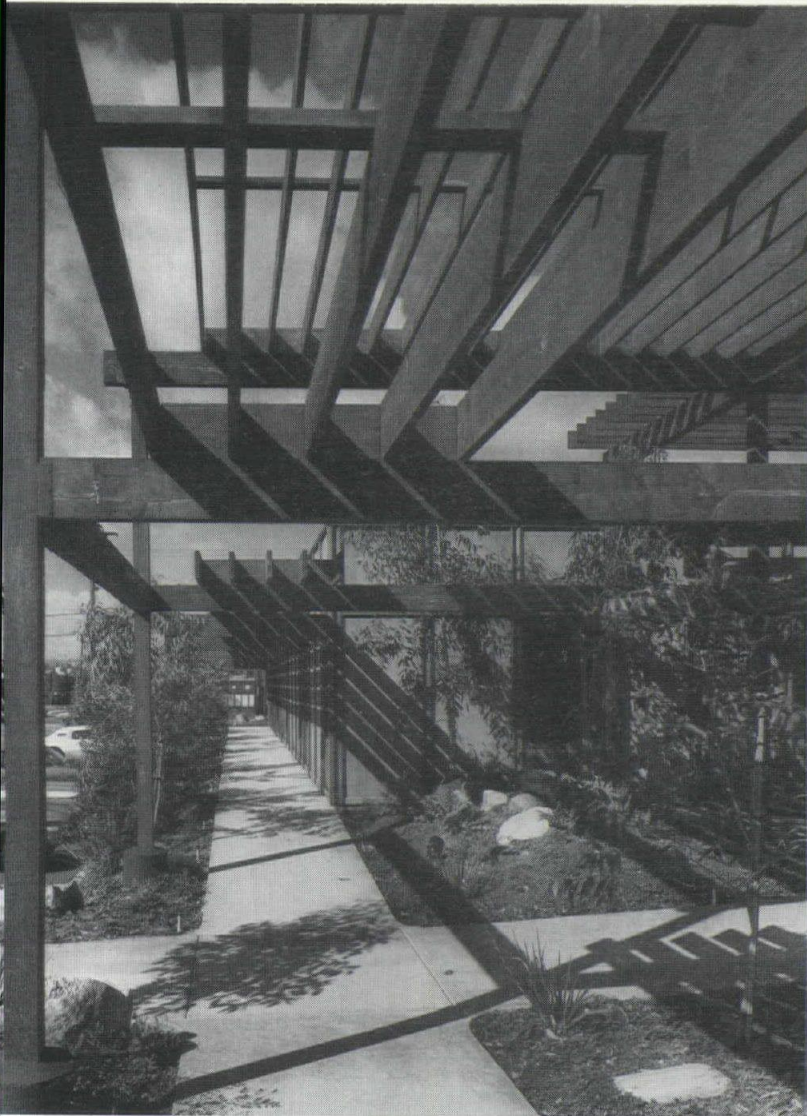
surmounted by an interesting design which integrates the man-made forms with the natural contours."

COMMERCIAL/INSTITUTIONAL

- 3. ARCHITECT: E. James Smith Architects/ Inc. BUILDER: Metro Park District, Toledo. PROJECT: Buehner Walking Center, Swanton Township, Toledo, Ohio. JURY: "Use of wood in an open three-dimensional structure adds to rather than detracts from the forest environment. Skillful integration of natural and man-made elements."

- 4. ARCHITECT: Roland/Miller/Associates. BUILDER: Fostmeier Construction. PROJECT: College Union/Sonoma State University, Rohnert Park, California. JURY: "Very pleasant wall surface interest by the application of battens on the plywood. Proportions of the exterior are particularly pleasing, give a human scale to the building, make it more flowing, at ease with the site."
- 5. ARCHITECT: Paderewski-Dean-Albrecht-Stevenson, Architects. BUILDER: Ninteman Construction Co. PROJECT: Avion Medical-Dental Office Building, La Mesa, California. JURY: "Well integrated with the environment. Wood texture has been skillfully used to

Vacation Homes



create the pleasant character presented to the public."

SPECIAL CITATION (Runner-up for First Award)

6. ARCHITECT: Sumner Schein Architects and Engineers. BUILDER/DEVELOPERS: Dimeo Construction Co. and Kates Properties. PROJECT: Mill River Square Building #2, Woonsocket, Rhode Island. JURY: "Very good New England flavor, charming. Not eclectic, doesn't copy past styles, but gives the viewer a sense of heritage appropriate to the area."

VACATION HOMES

7. ARCHITECT: Paul A. Zorr. BUILDER: Paul A. and Judy A. Zorr. LOCATION: Green Lake, Wisconsin. JURY: "Nicely articulated joint details, well thought out. Proportions are such that a small building looks much more important. A simple program with a simple solution well handled."
8. ARCHITECT: Davidson/Johnston, Architects. BUILDER: Interland Contractors Ltd. LOCATION: Whistler, B.C., Canada. JURY: "The buildings reflect a sporting look appropriate for recreational condos. Modular units create a successful solution for a steeply sloping site."

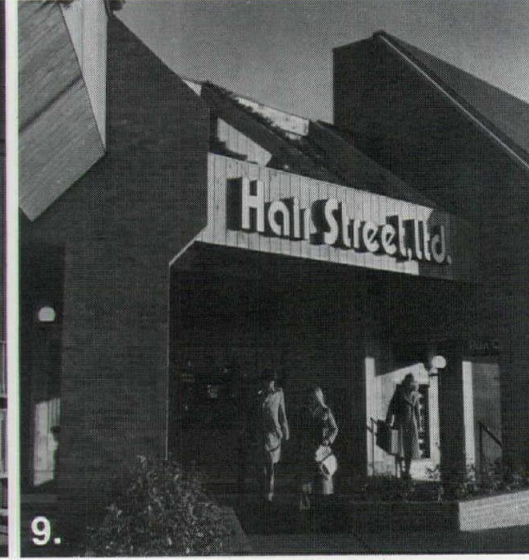
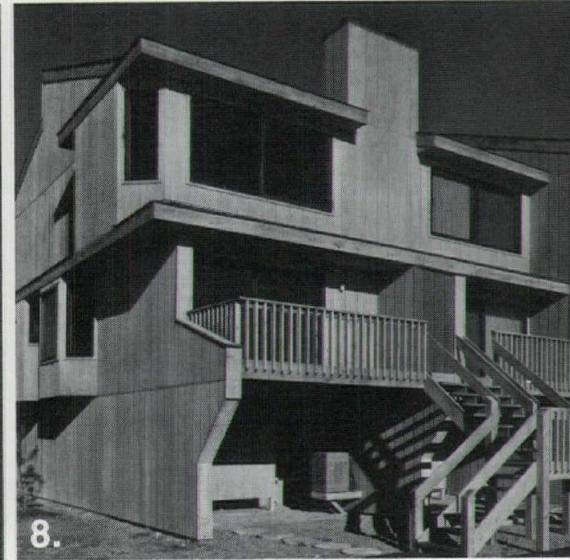
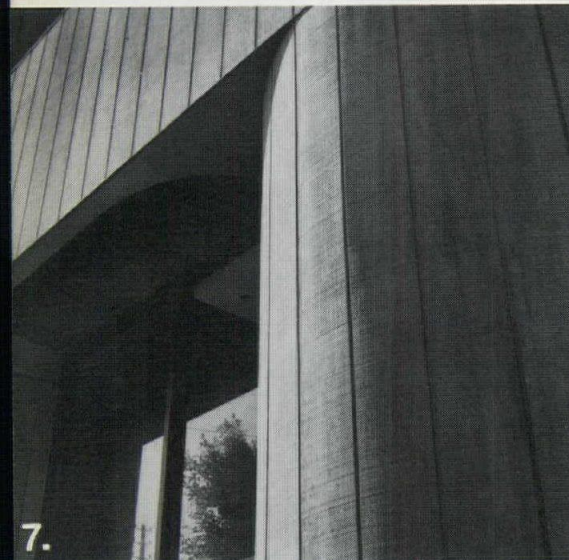
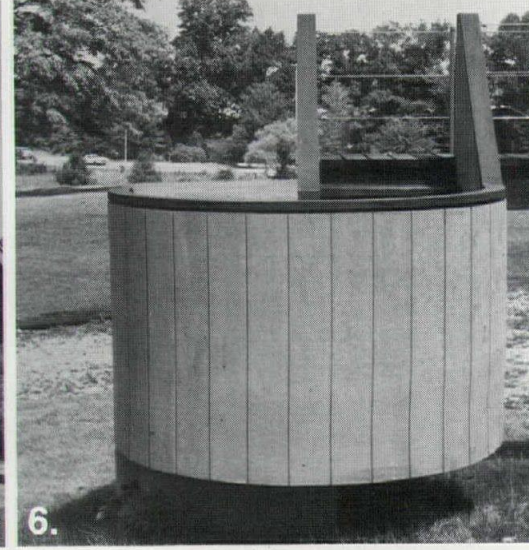
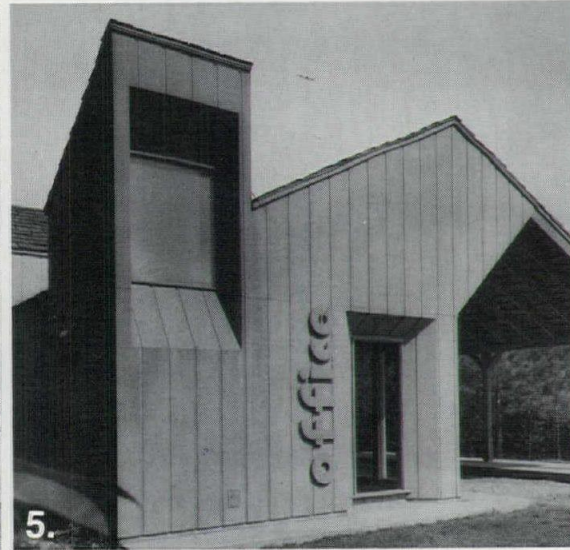
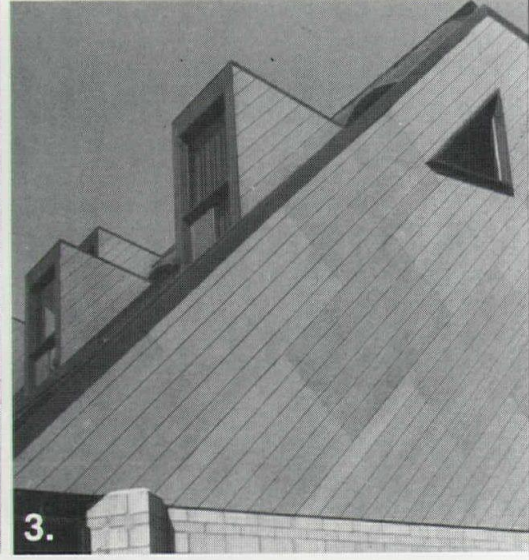
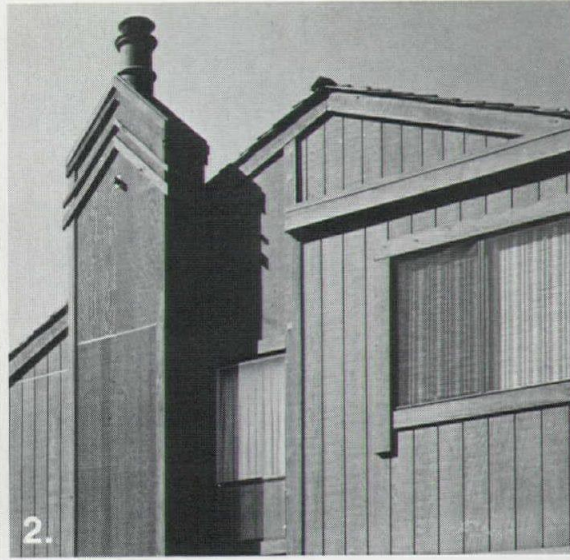
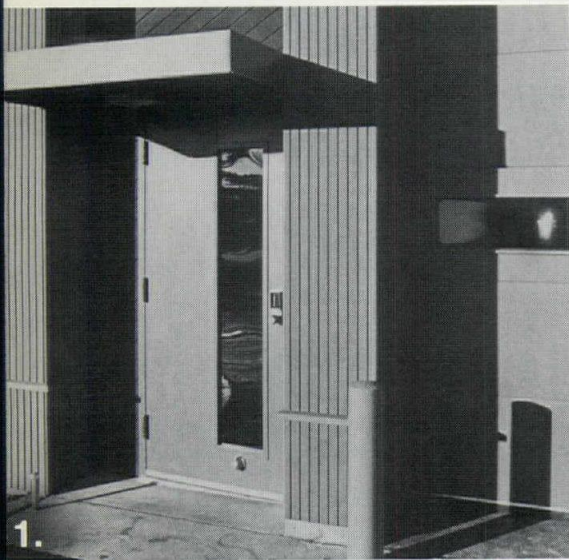
NON-CATEGORY AWARD*

9. ARCHITECT: Don Knorr FAIA and Associates. BUILDER/DEVELOPER: Joseph M. Whelan. PROJECT: Portola Valley Ranch, Portola Valley, California. JURY: "Sensitive use of the land. Good variety of exterior designs without losing the sense of unity. The simplicity of the architectural forms relates pleasantly with the native trees."

Footnote:

*Although it didn't fit well enough into the existing categories to classify, jurors awarded a special, non-category Citation of Merit to this entry on the basis of impressive siting, design and execution.

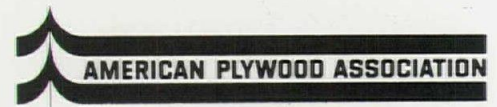
More Ideas



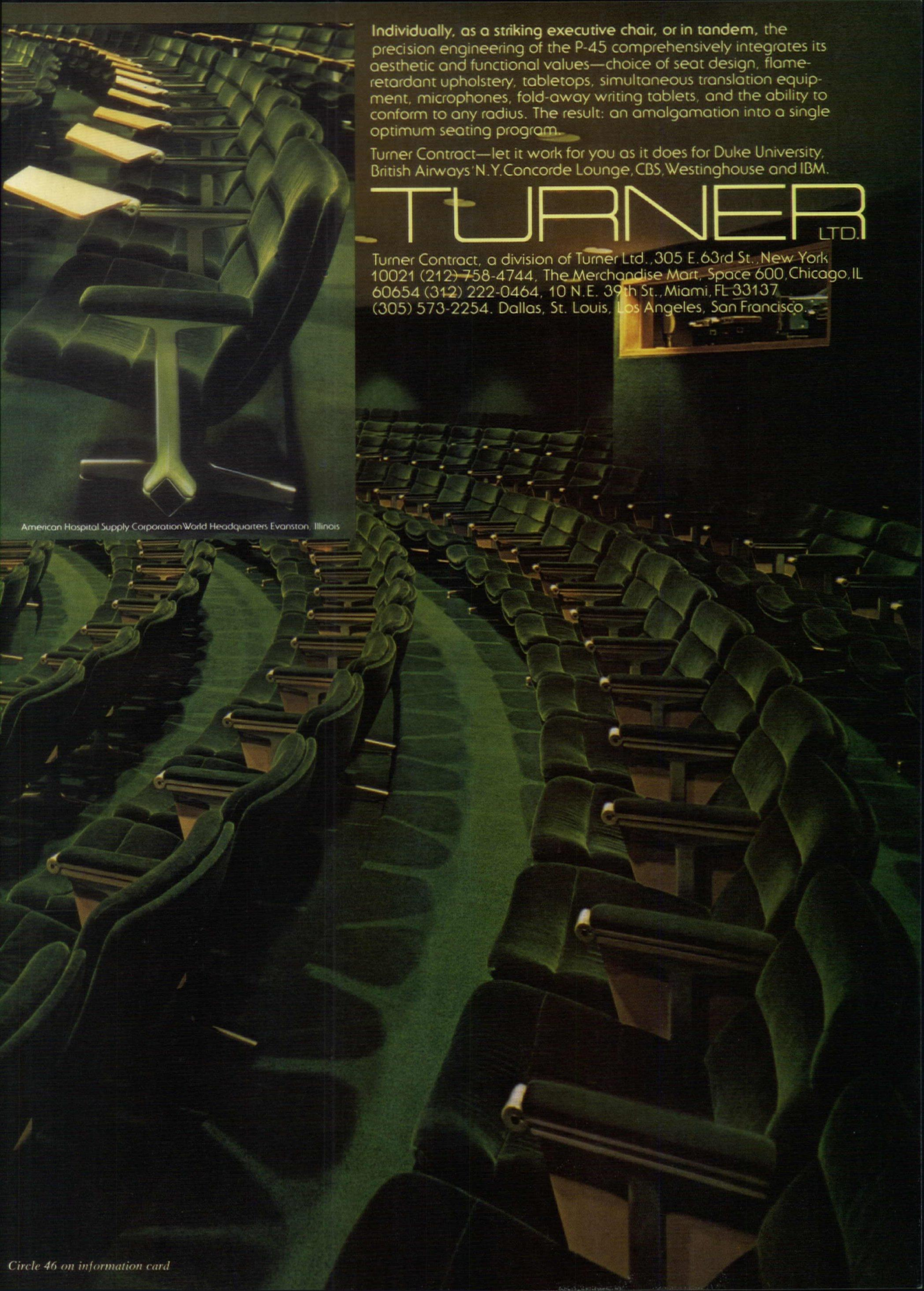
1. ARCHITECT: Don Niemi of Linn A. Forrest Architects, AIA; BUILDER: Berg Construction Co., Inc.; PROJECT: Auke Bay Fire Station, Juneau, AK
2. ARCHITECT: Goodwin B. Steinberg Associates; BUILDER: B-W Construction; PROJECT: Birchgreen Park development, Mountain View, CA
3. ARCHITECT: Lawrence Enyart; BUILDER: Davis & Hocking; PROJECT: Group 4 Solar units, Globe, AZ
4. ARCHITECT: Peter Jay Zweig; BUILDER: Peter Jay Zweig; PROJECT: Zweig residence, College Station, TX
5. ARCHITECT: Robert N. Smith & Associates; BUILDER: McInnis Brothers; PROJECT: Lake Claiborne State Park, Claiborne Parish, LA

6. ARCHITECT: Robert J. Noë, AIA; BUILDER: Herman Brothers, Inc.; PROJECT: The Kaplan residence, Lambertville, MI
7. ARCHITECT: Dan L. Rowland & Associates, Inc.; BUILDER: Leonard V. Bouas Const. Co., Inc.; PROJECT: "Don McIntyre Photography Studio, Anaheim, CA
8. ARCHITECT: Robert Sawyer, AIA, and Harry Watkins, AIA, Ballard, McKim and Sawyer, AIA Architects; BUILDER: Murray Construction Co.; PROJECT: "Station One" Condominiums, Wrightsville Beach, NC
9. ARCHITECT: Hastings & Chivetta Architects, Planners; BUILDER: Lincoln Property Co.; PROJECT: Westgate Centre, Creve Coeur, MO

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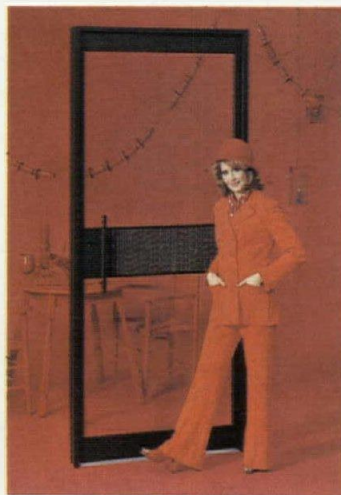
A photograph of a brick building entrance. The entrance is framed by a semi-circular canopy with a grid pattern. Four large, spherical pendant lights hang from the ceiling. The entrance doors are dark wood with vertical glass panels and circular decorative elements. The building is constructed of dark red brick. The text "Aluminum Entrances" is overlaid in white, bold, sans-serif font across the middle of the image.

Aluminum Entrances

Kawneer means variety. The broadest and most comprehensive selection of entrance systems from any architectural aluminum products manufacturer is available from Kawneer. From stock door "packages" to the exciting spectrum of monumental building entrances like the Entara entrance system, the variety is virtually limitless.

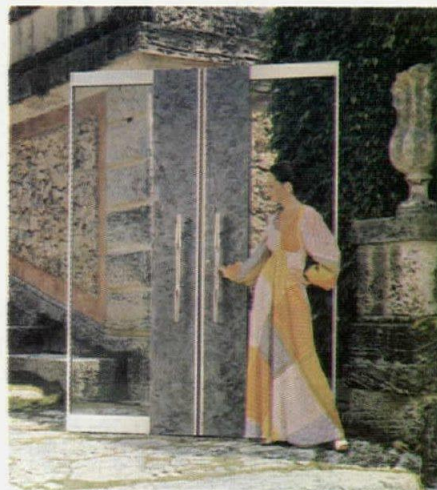
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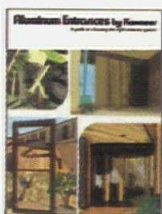
I-Line series 3000 door in Permanent Black finish with tapered pull and Stria textured panel in Pewter finish.

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"190" door in Clear anodized aluminum finish with F-2 style hardware.



Kawneer
The designer's element

Circle 11 on information card

Women's Architectural Group Shapes Program for Seattle

For the first time, the International Union of Women Architects (UIFA) will hold its world congress in this country—in Seattle at the Olympic Hotel on Sept. 30-Oct. 5. The conference theme is "New Design Concepts from Changing Resources" and the format will revolve around a major daily forum, augmented by discussions and exhibits. Women in architecture, landscape architecture and planning are invited to attend the conference and to participate in the programs and exhibits, as well as nonmembers of the UIFA. Deadline for submitting abstracts/information is June 15.

At its meeting in July 1978, AIA's board of directors voted unanimously to endorse and support the 1979 conference.

The conference will open with remarks by Solange d'Herbez de la Tour of Paris, president of UIFA; President Carter or a representative; Louis de Moll, FAIA, president of the International Union of Architects; Ehrman B. Mitchell Jr., FAIA, president of the Institute, and Washington Governor Dixie Lee Ray.

The UIFA exhibit will open on Oct. 1, with remarks tentatively scheduled by Princess Grace of Monaco. Another speaker will be Seattle Mayor Charles Royer. Patricia Harris, secretary of HUD, has been asked to speak to the conference on Oct. 3.

Inquiries may be addressed to Jean Young, AIA, Secretary General, UIFA, 5601 N.E. 77th, Seattle, Wash. 98115.

Few Architects Taking Advantage Of Relaxed Ban on Advertising

Although advertising in the printed media is now permitted under AIA's ethical code, an informal and limited poll by this magazine reveals that Institute members are not exactly flocking to newspaper and periodical offices with advertising copy. George S. Lewis, FAIA, executive director of the New York Chapter/AIA, for example, says that if any advertising is taking place in the state of New York, it is only in small town newspapers. AIA's staff knows of fewer than a dozen members who have advertised, and these instances have been uncovered in letters to AIA's secretary in which the "dignity" of the advertising is questioned.

The American Bar Association, whose ban on advertising was dropped in 1977 and which now permits lawyers to advertise in both the printed and the electronic media, estimates that only 3 percent of the nation's lawyers have advertised.

When ABA's ban was dropped, it was

feared that there would be "offensive" advertising, says David T. Link, dean of the University of Notre Dame's law school, who is chairman of a commission set up to assess the effect of advertising by lawyers. In the commission's report to ABA at the organization's midwinter meeting, the commission said that the problem was not offensive advertising, but ineffective advertising.

Lawyers don't know how to advertise, the commission said, and it is preparing a brochure on the subject to help them, hoping it will be ready in time for ABA's annual convention in August. Meanwhile, the commission has some tips on advertising for lawyers. For example, where the advertisement is placed in a newspaper is said to be important, with better results if the advertisement is placed in the real estate section rather than in a special section devoted to advertising by professionals. Timing is stressed as well. The report tells of a Houston lawyer who advertises successfully during a late night movie because "people who are contemplating a divorce aren't sleeping that well."

Urban Affairs

Home Insurers Are New Target In Continuing Redlining Battle

Battle plans are being readied for a new war against redlining. This time neighborhood groups around the country have picked a new enemy—not the mortgage lending institutions, but the home insurance industry. Judging by recent clashes, the campaign could be a protracted one.

Redlining is the practice of financial institutions discriminating against homeowners in poor or racially changing neighborhoods simply on the basis of the location of the property. Until recently, the banks and savings and loan institutions were thought to be the principal villains. Citizen groups accused them of using deposits made by city residents to finance housing construction in the suburbs, while simultaneously denying mortgages and rehabilitation loans in the cities. Under heavy attack from the public, the lending institutions have at least come to be more aware of the problem, even if they are not making as much restitution as some neighborhood activists would like.

The new target of the antiredlining battle is the property and casualty insurance industry, which community leaders believe is systematically withdrawing its services from certain city neighborhoods. The insidious thing about insurance redlining is that, without insurance, it is impossible to get a mortgage, leading inevitably to further neighborhood decay.

Honolulu Firm Signed to Design Shanghai Harbor Highrise Hotel

Wimberly Whisenand Allison Tong & Goo, an architectural firm in Honolulu, has signed agreements to design the first of a chain of hotels scheduled for development as part of China's modernization and tourism programs. According to a spokesman of the firm, these are the first U.S. designed projects "so far as is known" to have been officially accepted with sites approved by the People's Republic of China.

The first hotel is a 1,250-room, 38-story highrise hotel on the Shanghai harbor front. The second project in two phases of 600 rooms each is for a 12-story resort hillside hotel on the outskirts of Kweilin in south China. Construction is to begin on the Shanghai hotel this July and, within a few months, the Kweilin project is to follow. The estimated cost of the Shanghai hotel, if built in the U.S., is \$50 million, while the first phase of the Kweilin hotel is estimated at \$20 million.

"Insurance is essential to revitalize our cities," said a 1968 report of the National Advisory Panel on Insurance in Riot-Affected Areas. "Communities without insurance are communities without hope."

How widespread is insurance redlining? There are no figures on a national scale. Judging by the experience in Illinois and Michigan, however, a good case could be made that neighborhoods in the industrial cities of the North are being redlined by insurers.

Anton Valukas, a former assistant U.S. attorney in Illinois, investigated insurance redlining in 1977 and found insurers in the Chicago area to be engaging in a pattern of discriminatory practices that, in effect, added up to redlining of whole neighborhoods.

He found, for example, that some companies refused outright to insure houses (or imposed unduly strict underwriting requirements on houses) solely on the basis of the age of the house, its geographical location or subjective evaluations by the insurance agents. Among the terms used to justify rejecting policies were "changing," "deteriorating," "high crime" and "high vandalism" to describe neighborhoods. Some companies established artificially high premiums for policies in particular areas of the city, which had the

continued on page 31



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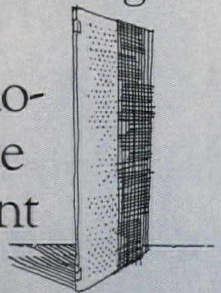
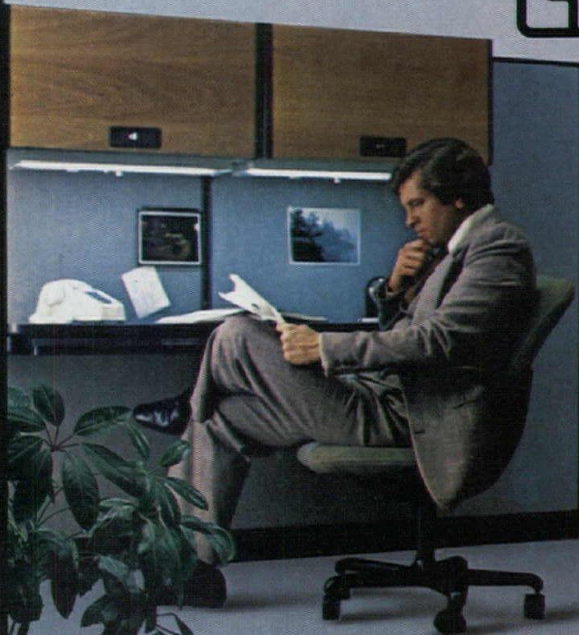
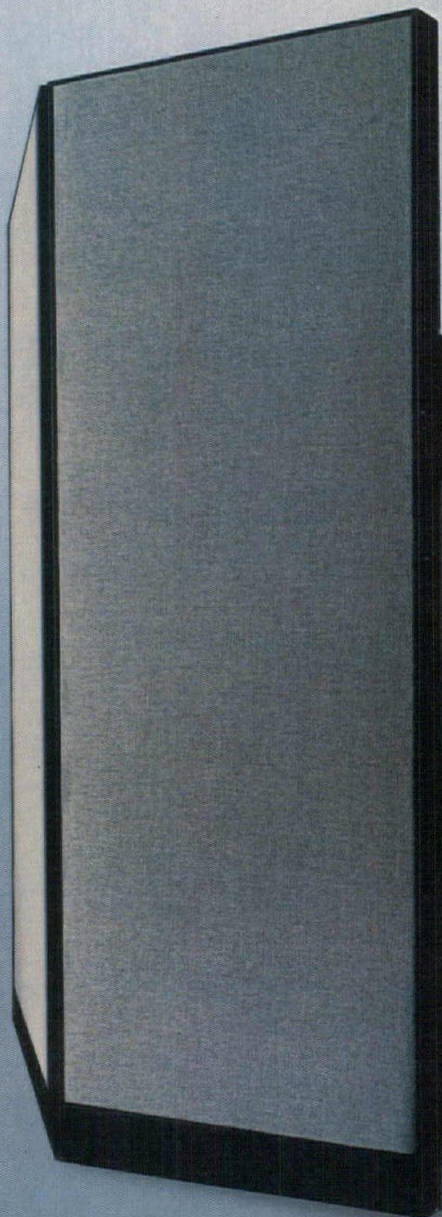
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Urban Affairs from page 28

effect of purposely pricing the company out of that location. Others placed their agents only in "acceptable" areas and withdrew them from "unprofitable" areas.

Other studies back up Valukas's findings. In Detroit, according to a 1977 report to the city council, it is a regular practice for insurance companies to redline by ZIP code or to refuse to accept new policies at all in the city. A report by the Michigan insurance commissioner found it to be a common practice of insurers to refuse to cover homes more than 30 years old or less than \$25,000 in value. Some companies also subject homes in the city to stricter and more numerous inspections than suburban homes, including an inspection of the neighborhood, the Michigan report disclosed. And a 1979 study by the Midwest regional office of the U.S. Civil Rights Commission found a racial bias in the granting of homeowners insurance. After comparing insurance company practices in white and black neighborhoods of Chicago, the commission found that "property insurance is more difficult to obtain in neighborhoods with a concentration of minority or lower-income residents or older homes than in other communities, and that these insurance availability problems contribute to the decline of many older communities—with racial minorities again suffering an undue share of the burden."

In every case, not one of the insurance companies investigated could give evidence to support its practices. There were no studies to show, for example, that insurers suffer inordinate losses in neighborhoods with abandoned buildings. (Allstate Insurance Co. *did* have figures to prove that homes less than five years old are better risks; they give a special rate on such homes.) Thus, an industry that prides itself on its objective, rational methods had no hard data to justify its actions.

Like the financial institutions, however, the insurance companies are beginning to feel the pressure from community groups and to respond. At a conference on "Insurance Redlining and Reinvestment: Directions for Change," held in Chicago in March, some of these initiatives were highlighted. Aetna Life and Casualty, for example, has a program to recruit new agents and place them in previously redlined neighborhoods. It has also started a pilot program to increase insurance availability in targeted neighborhoods in the Bronx, Brooklyn, Chicago, Cleveland and Philadelphia. Applications rejected by agents in these neighborhoods will be reviewed by the regional office.

In Milwaukee, an industry coalition has set up a Community Insurance Information Center, staffed by volunteers from the insurance companies, to answer the pub-

lic's questions about insurance.

Efforts are also being made to clean up state-run FAIR plans (Fair Access to Insurance Requirements) which were mandated by Congress in 1968 to provide insurance in the riot-torn cities of 27 states. The FAIR plan is an insurance pool that offers limited coverage to homeowners, often at higher costs than for conventional policies that provide better coverage. The loss suffered by each FAIR plan (which in 1976 amounted to \$50 million nationwide, according to the General Accounting Office) is shared by the insurance companies in the state on the basis of their share of the market.

FAIR insurance has been called "second-class coverage at first-class prices." But in Illinois, at least some improvements are being made to the FAIR plan. The state, which has the only law prohibiting insurance redlining in the country, now has come up with a policy to cover tenants and another one which is geared to the present market value of the house, not its replacement cost.

While these reforms were greeted warmly by neighborhood representatives at the conference, it was clear that they wanted the insurance companies to do more than just stop redlining. The industry controls billions of dollars in assets, at least some of which could be invested in neighborhoods. "There is a great potential within the insurance industry to direct its corporate investments to make the policy holders' premiums work for the benefit of their neighborhoods," said Gale Cincotta, leader of National People's Action, a coalition of community groups that fought bank redlining.

The more progressive insurers are taking a few faltering steps in that direction. Allstate's president, Robert Sheppard, announced a \$1 million grant to beef up the Neighborhood Housing Services program, which is a partnership of government, lenders and citizens to improve housing in declining, but still salvageable neighborhoods. Half the money will go toward establishing an NHS Redevelopment Corporation, which will acquire and rehabilitate properties in NHS areas. Of the remainder, \$150,000 will be used in a special internship program to train NHS personnel in the administration of their programs, and \$50,000 will be used to add insurance-related staff to NHS programs.

Citizen groups have won a few skirmishes, but the war is far from over. Officials of some companies still refuse to admit that any kind of discrimination against urban neighborhoods ever took place; others ignore the problem and simply refuse to do business in city neighborhoods at all. But, as Gale Cincotta put it, "The revitalization which could accompany such a new direction would help

assure the preservation of our most precious national resource—our neighborhoods." *Robert Cassidy, author of The Neighborhood Renaissance, to be published next year by Holt, Rinehart & Winston.*

Housing Slump and Shortage Seen by Engineering Executive

The dimensions of the "housing crisis" were examined at the annual meeting of the National Housing Conference, held recently in Washington, D.C. Participants said that inflation, a large drop in housing starts in January and February and high mortgage interest rates support the prediction that there will be far less than the needed 2.5 million housing starts.

"We are entering a period," said J. C. Turner, general president, International Union of Operating Engineers, "when we will suffer the worst of both worlds: a cyclical housing slump combined with a long-term shortage of housing. There is reason to believe that this will result in further inflation as the demand for housing outpaces the available supply." In recent years, the average total of new housing starts has been about 1.95 million, including 300,000 mobile homes. It is expected to decrease to 1.5 to 1.7 million this year. Mortgage interest rates are 10.3 percent and expected to rise above 10.5 percent. And the median price of a new house was \$61,000 by the end of 1978 compared to \$32,000 in 1974.

The conference also focused on the Administration's recommendation of 300,000 units for section 8 and public housing during fiscal year 1980. The NHC maintains that this is 60,000 less than fiscal year 1979 and 100,000 units less than originally projected and far below the widely accepted need for at least 600,000 new or substantially rehabilitated low-income housing units annually. The NHC wants Congress to increase the number to at least 400,000. Leon N. Weiner, NHC president, criticized the government for using "housing as a whipping post for inflation beyond any reasonable method of approach. It happened in 1958, 1966, 1970, 1973-74, and we're going to do it again."

Congressman S. William Green, agreeing with Weiner, said that the "housing policy is being held hostage to inflation by the Administration." Thomas Ashley, chairman of the House housing subcommittee and this year's recipient of the NHC Nathaniel Keith Memorial Award, said, "The commitment to assisted housing programs is not a popular commitment . . . and the future of our efforts is blurred." Ashley said that it will be a hard fight to get additional housing funding

continued on page 34

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Royal Orleans, French Quarter



Urban Affairs from page 31

through Congress in light of the growing concern for a balanced budget. If the constitutional amendment requiring a balanced budget passes, he said, "the consequences for housing will be dire." A strong attack on the Administration's budget was launched by Senator Harrison Williams, chairman of the Senate subcommittee on housing and community development. Williams said that the cost, focus and efficiency of HUD programs are coming under critical scrutiny and the debate

over the federal role in housing has been "vigorously renewed."

Meanwhile, the House banking committee recommended that the budget authority for assisted housing programs be increased \$2 billion above the Administration request; the Senate banking committee increased it by \$7.8 million. Both committees contended that the Administration's request of \$26.7 billion would not fund 300,000 units but 260,000. The increased appropriations would fund 300,000 and 360,000 units, respectively.

Education

Pennsylvania's G. Holmes Perkins Is Honored by ACSA and Institute

G. Holmes Perkins, FAIA, former dean and current professor of architecture and urbanism at the University of Pennsylvania, is the 1979 winner of the award for excellence in architectural education, given annually by AIA and the Association of Collegiate Schools of Architecture. The presentation was made at ACSA's recent convention in Savannah, Ga. Perkins will be honored again next month at AIA's convention in Kansas City, Mo. The award is given to a living educator who has taught at least 10 years and has made "outstanding contributions to the field of architectural education."

From 1951 to 1971, Perkins was dean of the University of Pennsylvania's graduate school of fine arts, serving also as chairman of the department of architecture and of the Ph.D. program in architecture. Under his direction, the division of architecture expanded its offerings to include not only architecture but also urban design and landscape architecture.

He was instrumental in the recruitment of outstanding persons to the university faculty, among them Lewis Mumford, Hon. AIA; Ian L. McHarg, Hon. AIA; Edmund Bacon, FAIA; Romaldo Giurgola, FAIA, and the late Louis I. Kahn, an Institute gold medalist.

Perkins has also been active in civic affairs, serving as chairman of the Philadelphia City Planning Commission and playing a role in other organizations responsible for the revitalization of Philadelphia. Before going to Pennsylvania, he taught for 21 years at Harvard University's graduate school of design and was chairman of the department of regional planning.

In a letter nominating Perkins for the award, Edmund N. Bacon, FAIA, wrote: "Holmes Perkins created an atmosphere that fine urban design was important in such a way that it extended out from the

university in all directions and finally impregnated the thinking of the city."

And in letters of recommendation the following statements were made: "He was consistently inspiring by relating divergent ideas, combining talents, involving the students and establishing a discipline of education which became a model for others to follow"—Romaldo Giurgola, FAIA. "He has led a generation of architectural educators to understanding architecture and urbanism in society"—Robert L. Geddes, FAIA. Students at Penn "have been exposed to the consideration of architecture in the widest possible context"—George W. Qualls, FAIA.

Vegetation Fibers Under Study As Low-Cost Building Material

Students in an advanced architectural design class at the Lawrence Institute of Technology have spent a semester on the development of a new, inexpensive building material for low-cost housing in Central and South America and other countries where the need for housing is great. They have done extensive tests on sisal, the durable fibers of the agave plant (a member of the cactus family) and have found it to be a "viable and perhaps revolutionary answer to the housing problems in underdeveloped countries." Sisal has been used many years in making baskets, bags and rope, but this is the first time it has been investigated as a building material.

The idea was first conceived by Irv Stollman, an industrial designer, who found that the mixing of the waste product from sisal production with polyester resin created a material of "exceptional strength." But the idea went nowhere until Robert Champlin, associate professor at LIT, decided to have his class make tests.

By the end of the semester, the students, aided by LIT's school of engineering, made some interesting discoveries about sisal, which grows so abundantly in southern U.S. and in Central and South America. They found sisal panels to be durable, waterproof and to possess the load-bearing capabilities of wood. They also found that the price of building a complete low-income house with sisal would be 25 percent less than with any other material now available. They also discovered uses for sisal in the upper-income commercial and industrial sectors.

For example, the material can be molded into nearly every conceivable shape, having great potential for furniture, doors, sinks, walls. With a new mold now being developed, the panels could even become dome-shaped.

Stollman, who has cooperated in the project, says that he has already had inquiries from as far away as Kenya, the Sudan, Nigeria and Cyprus. And investors are making plans for the first sisal production undertaking, to be located in El Salvador where there is critical need of low-income housing.

Museum Encourages Children To Look, Touch, Design, Build

Bill Lacy, FAIA, president of the American Academy in Rome, has turned the Hudson River Museum in Yonkers, N.Y., into learning laboratories to encourage children to observe, touch, design and build. The demonstration, called "1,000 Boxes: An Exhibition about Architecture for Kids," will run through July 14.

Included in the exhibition are the exposed structural elements of a building; and beams, columns and cantilevered balconies are labeled so children can see them and learn to understand their functions. In the gallery's highest space are two-story constructions to explain verticality. There's also a three-dimensional blueprint that the children can walk through to feel spaces on all levels.

Exhibited at a child's eye-level are models of architectural projects. Drafting paper and felt-tip pens are provided to let the children design their own buildings, and in one room of the gallery, they can construct their designs from cardboard boxes. A display of pictures of buildings through the ages explains the history of architecture. Another visual aid is a large-scale filmstrip on a "day in the life of a building," showing how site and climate affect architecture.

Associated on the design of the exhibition with Lacy was Brent Saville. The exhibition is funded by the New York State Council on the Arts, the Otis Elevator Co. and Continental Forest Industries.

News continued on page 82

“Gold Bond had an answer that saved me 20%”

“We selected the Gold Bond I-Stud Cavity Shaftwall System because it saves us up to 20% on each job over conventional systems and is easier to install. It offers many advantages over traditional methods of shaft enclosure”, says Bill Martin, president of Martin Brothers Plastering Co. of Gardena, California.

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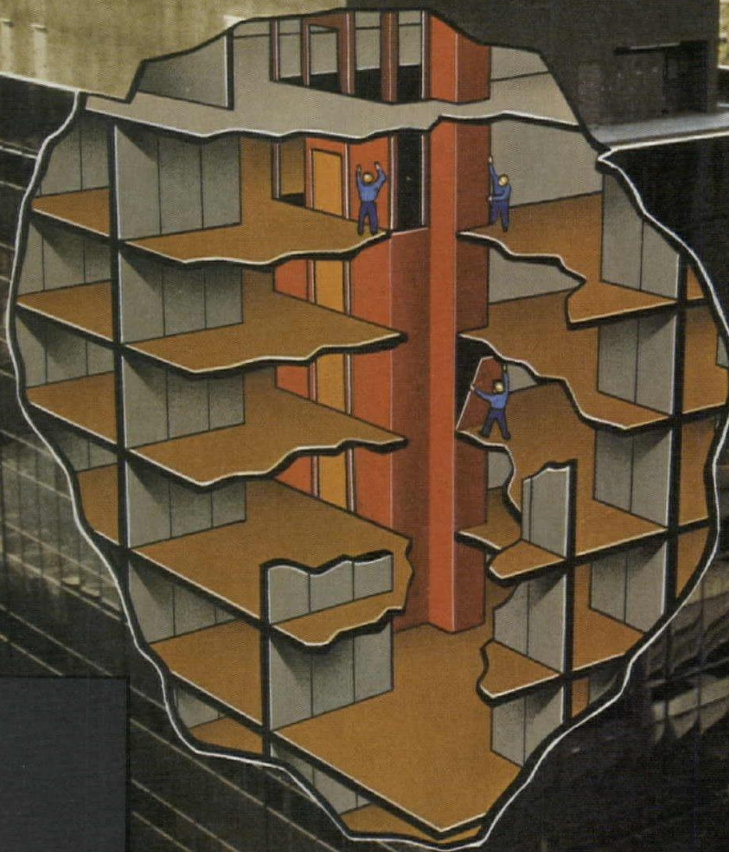
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PPG: a Concern for the Future



Architect: Robert Bridges Associates, New York
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AIA JOURNAL

Congratulations to two colleagues and mentors:

In a few weeks in Kansas City, the Institute will award medals to Douglas Haskell, FAIA, and John Entenza, Hon. AIA, architectural editors of a very special kind. While I only worked briefly for Haskell and never for Entenza, I feel that I learned a great deal about architectural journalism from the way that these two approached their magazines, *Architectural Forum* and *Arts & Architecture*, respectively. Both were continually and assiduously on the search for fresh talent, and fresh ideas, to bring to their readers. Both were active and influential protagonists of contemporary architecture without becoming shrill polemicists or narrow ideologues. And both worked to broaden the definition of architecture (see the letter from Haskell on page 6), each in his own way. Indeed, each has his own highly individualistic way; they are as different as the magazines they produced (the one a well-staffed and relatively prosperous monthly in a major publishing house, the other a far more personal venture). A sad fact that they have in common is that neither magazine survives. But their influence persists in the field—certainly in this part of it. *D.C.*



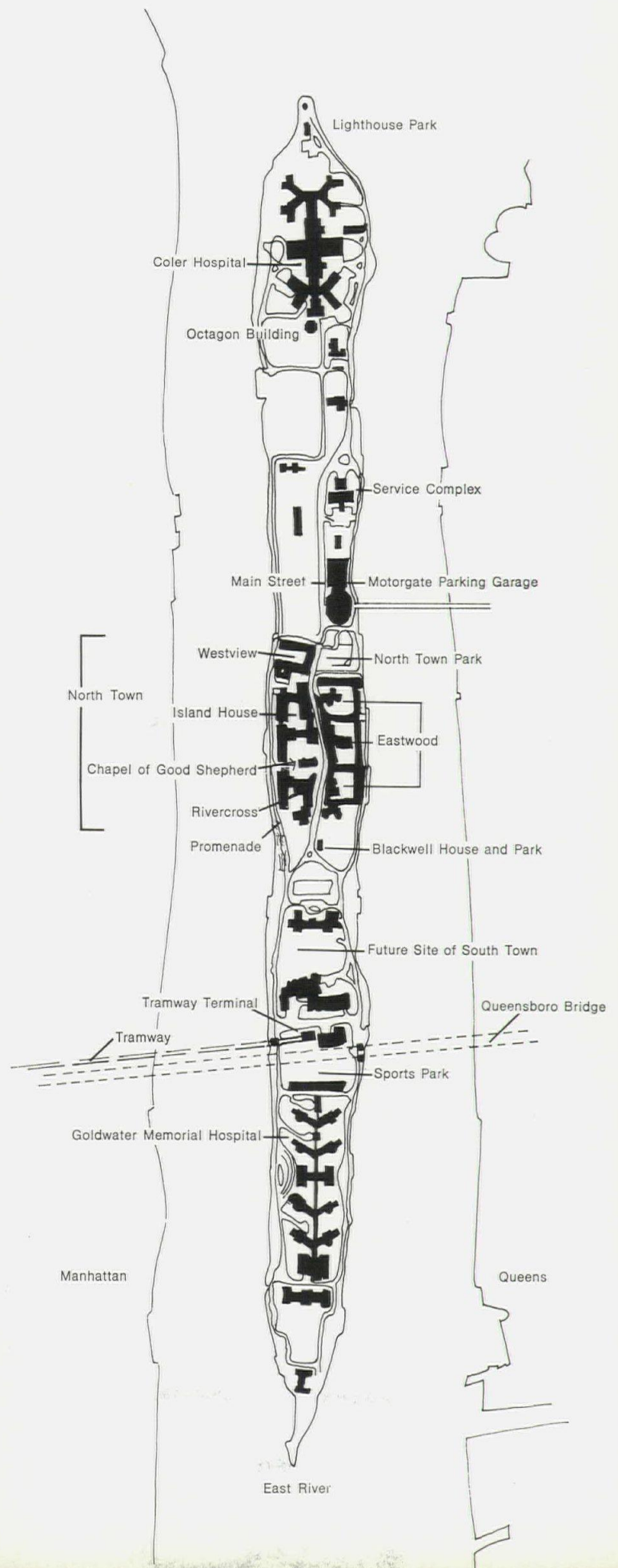
Evaluation: The Fabric of Roosevelt Island

A look at New York's experimental new town from a site planning viewpoint. By Steven R. Krog

Unabashedly described as a "deliberate attempt at social engineering" by Edward J. Logue, Hon. AIA, former president of the New York Urban Development Corporation (UDC), the Roosevelt Island "new town" is the home of 5,000-plus New Yorkers and the world's only commuter aerial tramway. Situated on a 146-acre island of the same name in New York City's East River, Roosevelt Island blossomed from a city planner's fantasy into a \$180 million residential community in a mere seven years, the first residents arriving in April 1975. To date, 2,100 dwelling units have been constructed by UDC and an additional and perhaps final 1,000 units (to be built by a private developer) are on the drawing boards of Gwathmey Siegel. A unique site coupled with experimental social and planning concepts raises myriad questions addressing issues in economics, politics, real estate, sociology, architecture, urban planning and site design. Roosevelt Island's answers at this early date are fascinating yet often predictable, provocative yet possibly misleading. Exploring Roosevelt Island in search of social and/or physical planning dogma reveals ever more questions, unexploited potential, unfulfilled dreams and a few brilliant gems. Let's uncover a few of each, first touching briefly on the island's general planning theory and then examining site planning specifics.

Purchased by the City of New York in 1828, Roosevelt Island, Welfare Island until the name was changed for obvious reasons, suffered the fate of similar inaccessible pieces of land in close proximity to urban areas—it became a repository for the city's outcasts. An insane asylum, poorhouse, prison and several hospitals (two of which remain) are all a part of the island's history. In 1968, the city studied utilization proposals running the gamut from a nuclear power plant to licensed gambling before giving UDC a 99-year lease as a prerequisite for constructing urgently needed housing. (UDC, it should be noted, was a corporation created by the State of New York to oversee, administer and expedite the financing, design and construction of housing in the state while circumventing much of the red tape seemingly inherent in such public endeavors.) A Philip Johnson/John Burgee master plan quickly followed and was supplemented by the input of educators, housing authorities and city planners, resulting in a community conceived "as an innovation and basic improvement on urban life." Although the latter point is arguable, Roosevelt Island has been relatively successful in providing a place where individuals of differing incomes, races and national origins coexist (much to the embarrassed surprise of real estate and banking authorities) as well as a living environment which entices middle-income families with children to remain in the city, another principal goal.

Ambitious without being pretentious, the Roosevelt Island embodied in the Johnson/Burgee master plan was diverse in land use and physical form. It was divided into two separate but interdependent urban "villages." South Town included the town center complex combining 200,000 square feet of office space, a 300-room hotel, 100,000 square feet of retail store area, a boat docking facility and a major plaza with approximately 2,000 residential units, while North Town remained essentially residen-



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Photographs by Steven R. Krog

A dream left truncated by the downfall of UDC.

tial with 60 percent of the total 5,000 units, basic staples being sold in small convenience shops along Main Street. All vehicles except those making deliveries were to have been deposited at the Motorgate Garage, electric minibuses providing the only motorized transportation on the island.

Main Street was to be the functional and symbolic spine joining North and South Towns. Views of and access to the river were to be maximized with the stepping of buildings from a high point at Main Street to a low point at the river's edge, with pedestrian promenades adjoining each shoreline. Clustering of the island's physical plant would have allowed major parks to occupy the northern and southern tips of the island, capitalizing on their prominent, dramatic locations. Improvement of the island's limited access to Manhattan required investigation of every imaginable alternative. The least plausible, the aerial tramway, eventually proved most feasible. An as yet unbuilt subway connection was intended to eventually carry the bulk of Manhattan-bound commuters.

Roosevelt Island's present fragmented condition is a direct result of the now infamous economic woes experienced by UDC in 1974-75. The construction of South Town is not considered even a remote possibility in the near future, seriously tarnishing the Roosevelt Island "dream." Many tired-looking existing buildings scheduled for demolition remain in curious juxtaposition to the glossy, clean-lined North Town; and except for the modest Lighthouse Park, most site development outside North Town is incomplete or unstarted. Of the landmark buildings to have been restored, only the Chapel of the Good Shepherd (Frederick Clark Withers, 1889) has been completed, while the potentially magnificent Octagon Building (Alexander Jackson Davis, 1839) remains dilapidated. A recent recreational master plan, prepared for the West Promenade and Octagon Park by landscape architect Nicholas Quennell Associates as a prerequisite for a HUD grant application, is one of the few signs that Roosevelt Island will continue to expand and mature.

While wandering along Roosevelt Island's Main Street or reading the new town publicity brochures, visions of Jane Jacobs' neighborhood appear. And in fact, Philip Johnson, FAIA, has commented that his Roosevelt Island master plan was done during his "Jane Jacobs phase." To complement the illusion, a painting for sale at the Island's restaurant/pizzeria is that of a quaint European village. But Roosevelt Island is no more a European village than it is an urban neighborhood Jacobs would wish to see indiscriminately emulated. That we are fortunate for the former condition is the subject for another discussion; that the latter is true is a significant blow to the common notion that Roosevelt Island might herald the arrival of a model new town in-town. The island's master plan purposefully combines many characteristics recognized as destructive to urban neighborhoods (largely homogeneous land use, relative scarcity of around-the-clock street life and the interruption of traditional street patterns, to name a few); mere lip service was given to Oscar Newman's principles of defensible space; and the community's size can be labeled in Jacobs' terms as "too large in scale to possess any competence or meaning as a street neighborhood, [while] at the same time too small in scale to operate as a district." Yet, seemingly in spite of itself, Roosevelt Island succeeds as a desirable alternative urban residential community, primarily due to extrinsic conditions.

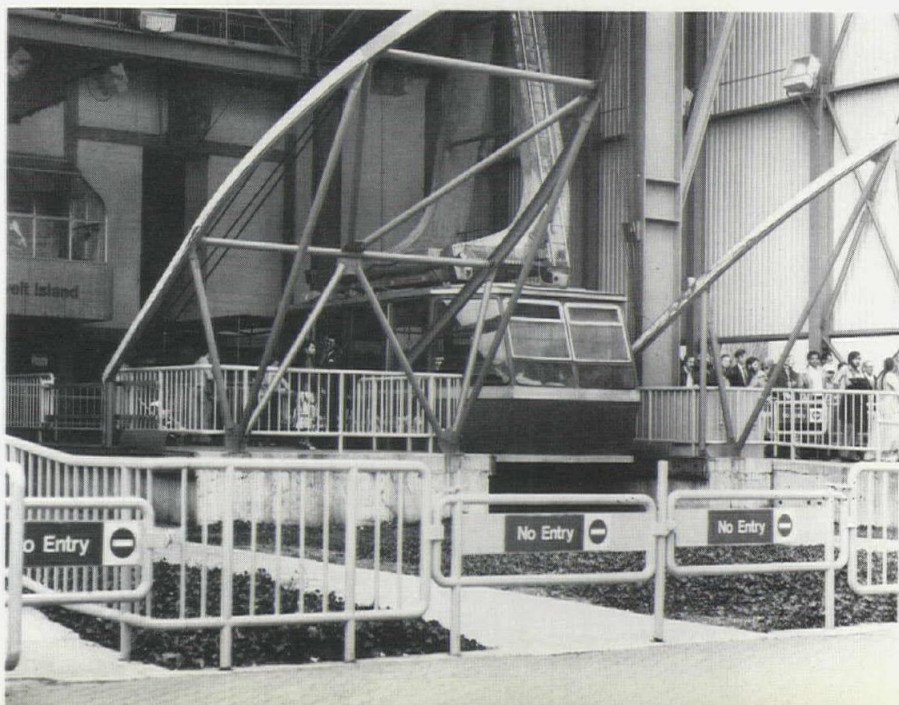
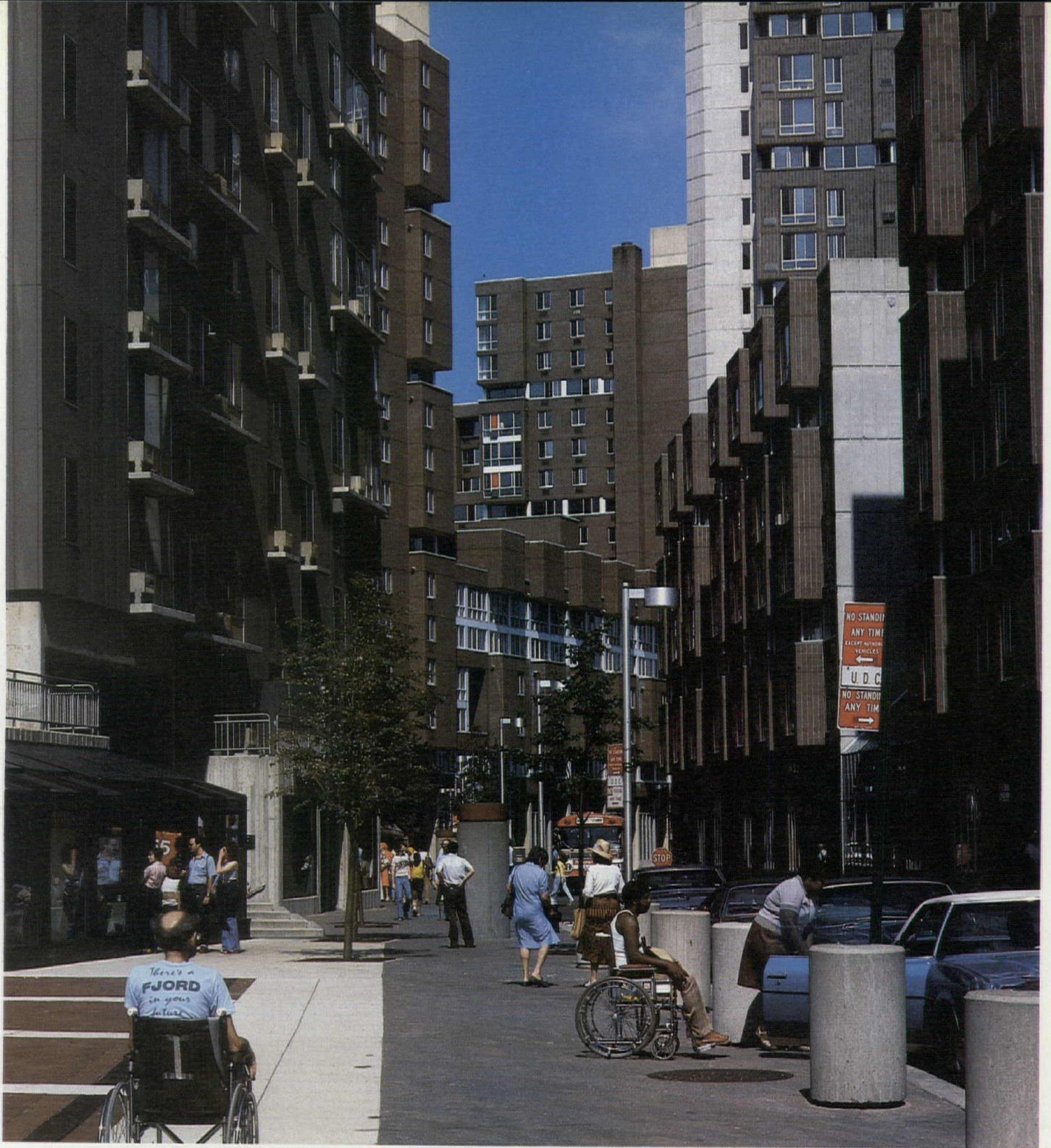
Surprisingly, most visitors—professional designers and planners as well as lay persons—fail to note the pivotal agent of Roosevelt Island's success: its comparatively remote location and concomitant isolation. Because the island was essentially vacant prior to the development's conception, no large-scale family relocation or building removal took place. As a built project, Roosevelt Island diverges from the normal urban condition in several significant regards. Except on warm weekends, the island is frequented by few nonresidents except for the curi-

ous. Vehicular traffic on Main Street, although an admitted problem during shift changes at Goldwater Hospital, is minimal. The island's restricted access is an unquestioned physical deterrent to much crime and a psychological stimulant to the residents' sense of security. (Escape for a criminal requires riding the tramway to Manhattan at 16 m.p.h. or crossing the single bridge to Queens, the gatehouse of which is manned 24 hours a day.) In addition, building entrances are under surveillance by an elaborate closed-circuit television system monitored by the island's own security force. To paraphrase Edward Logue, the prerequisite for a successful new town in-town is a substantial budget united with a vacant island in the middle of a river. The point is not that Roosevelt Island's responses to the complexities of urban planning are insufficient or erroneous, but rather that they do not address the proper questions. In fact, by virtue of its extraordinary siting, substantial budget and masterful planning concept, Roosevelt Island has elicited from its designers a singular residential community whose success simply happens to rely heavily on its physical isolation. Therefore, dispensing with the notion of the universal applicability of Roosevelt Island's planning principles does not amount to a categorical condemnation.

The very fact that Roosevelt Island has not been completed to the full extent of its master plan leaves the critic vulnerable to the obvious rebuttal that the parts built so far cannot be held liable for present inadequacies, for were its master plan realized, all but the most inconsequential flaws would be eliminated. The point is well taken. Lost as a result of the absence of South Town is the experience and potentially unifying magnetism of the town center which was to have married shopping, hotel and office space with a major plaza and boat docking facility. Similarly, the passive activity park areas remain undeveloped, prompting many adults to bemoan the insufficiency of quiet green spaces. And unknown is how effective the supportive influence of *two* residential clusters would have been in knitting the project into a more complete and truly new *town*. The following discussion therefore is concerned with one issue which legitimately lies open to our inquiry: the appropriateness, utility and appearance of the physical planning of the existing project as a home for 5,000 people.

The uninitiated visitor to the nascent Roosevelt Island is





Facing page, Chapel of the Good Shepherd plaza from Island House entrance; above, Main Street at North Town; left, the island tramway station.

Signs of impermanence and transience.

likely to note many of its gold rush town-like qualities. North Town's immediate context is made up of rock-strewn open fields and scattered vacant and semivacant buildings. The motorgate parking complex overlooks a burned-out building on which city firemen once honed their fire-extinguishing techniques, while elsewhere the riverfront promenade terminates abruptly at an abandoned roadway strewn with broken glass. Are the random empty storefronts along Main Street symptomatic of an expanding or of a declining community? Everywhere are signs of impermanence and transience which are the bane of master planners but which, to me, seem necessary and potentially important at this phase of Roosevelt Island's existence: "rough edges" which are ripe with direction-pointing information for students of new towns and urban living.

For example, it is my impression that the island's magnetism for families would be greatly reduced if its open areas, however overgrown, were not there. For children the island has the aura of an incomplete suburban subdivision where adventures can take place in the undeveloped, partially wooded building lots at the end of the street. Asked what they would like to see done with the currently undeveloped land on Roosevelt Island, residents frequently respond that it should be left to become wild and woody. Nonetheless, because "planning" seems to equate a desirable living environment with a programmed and manicured environment (preferably, also, a work of art), the master plan calls for the eventual eradication of such unkempt open spaces to allow for "beautification" of the island and the establishment of a sophisticated indoor/outdoor recreational/educational complex and other formal parks. Though one cannot criticize the master planners for lack of imagination, it appears that the real-life fantasy of planning a vacant island in New York City uncovered a wealth of proposals whose only shortcoming would be their effect of transforming Roosevelt Island into a miniature environmental Disney World. The obvious question is whether, for the residents, the island's desirability and attraction would be overshadowed and diminished by the program which was planned to someday evolve into a "World Awareness Center."

Some of Roosevelt Island's "edges" are comparatively "smooth" yet still tell quite a story. Main Street, originally conceived without curbs to reinforce the pedestrian nature of the community, was designed for "visual drama as much as for access" and to "stimulate curiosity and avoid the monotony of a long straight road," according to the Johnson/Burgee master plan. True to William Whyte's generic description of urban streets as a city's bloodstream, Main Street is indeed the forum for much activity on the island. Pedestrians, vehicles, mothers being exercised by their tots, skateboard daredevils, joggers and others are all common sights. But a brief perusal reveals that although Main Street stages much activity, its design promotes only *movement*. Benches, steps, stoops and ledges for sitting are scarce, making "people watching," an obsessive urban street pastime, difficult and uncomfortable. Even the tops of bollards are canted, discouraging use.

As Roosevelt Island's premier exterior space, Main Street's efficacy is further compromised by the arcades located east of the Chapel of the Good Shepherd and west of North Town park. The arcades shroud activity taking place in them, thereby subtracting arcade walkers from the total street scene. The transparent enclosure panels, though certainly welcomed during inclement weather, draw down the curtain of the highrise facade, placing an intermittent wall at the curb. It would be another matter if the arcade itself were a generous gallery which fostered comfortable participation in activities encouraged by or requiring a canopy. But it is not. Some 10 feet wide, the arcade is a mere corridor in which a single slow-moving wheelchair is a serious impediment to pedestrian circulation and where sitting on the inward-oriented benches affords little more than a momentary glance at passersby who walk within arm's reach. When

the arcade is crowded, the sitter becomes active in, rather than a relaxed observer of, the bustle. When the arcade is vacant, one can only sit and stare into the opposing storefront or restaurant as if window-shopping. As an acknowledgment of the need for protection from the elements, the arcade is welcomed; as a contribution to the life of Main Street, it falls short.

In certain respects Roosevelt Island exhibits signs of being a highrise suburb. Consider, for example, that "Main Street" is a bit of a misnomer for a street with stores that offer only a portion of life's essential commodities. There is a pharmacy, deli, dry cleaner, bank and two restaurants but no hardware store, book shop, clothing store, bakery or movie theater. Despite the compactness of North Town's development, as in a suburb, it is difficult to recognize precisely where the hub of activity exists, if it exists at all. Curt and unceremonial pedestrian and vehicular entrances to the residential core, succeeded by a relatively Spartan streetscape, allow the expectant seeker of bustling urban spaces traveling on Main Street to pass into, through and out of North Town almost before realizing he has arrived. The fact that vendors, fruit stands and other urban sidewalk businesses and entertainments are prohibited by the managing Roosevelt Island Development Corporation and/or by a population too small to support them further sterilizes and homogenizes the island. Acutely apparent is the lack of continuity and completeness South Town might have alleviated. We can only hope that Gwathmey Siegel's efforts will include a propitiously sited, multifaceted, effusive, yet nuclear gathering place which will be of communitywide importance.

While Main Street is disappointing in its lack of cohesiveness and concatenation, another of Roosevelt Island's building-to-site relationships, that involving the entrances to the residential highrises, furnishes a positive lesson in site planning. There are ceremonial gangplanks to Island House, modest Eastwood and Westview lobbies exiting under the Main Street arcade, long ramps approaching Eastwood's riverfront units and a discreetly formal, though slightly "cold," sunken plaza at Rivercross.





Left, an arcade on Main Street. Top, Main Street entrance to Island House in North Town. Above, an interior courtyard of Eastwood. Above right, the amphitheater set against apartments.

These entrances are an organizing force of significant dimension. In addition to their obvious function of ordering people's movement, they delineate principal spaces adjoining the buildings and coincidentally influence their use. The pleasing variety of sequential spatial experiences available to anyone strolling in North Town is largely the product of the placement of these doorways and the strategic employment of grade changes. In many instances, the act of leaving a building extends onto the adjoining plaza or sidewalk rather than concluding with the closing of the door. This helps obscure the sheer distinction between building and site, melting the buildings into their surroundings and into one another. If there is any complaint, it is that the success of these entrances and adjoining spaces works to the detriment of the more remote courtyards by siphoning away activity.

The North Town visitor will discover the building courtyards to be as dismal and inapposite as the entrance design and building siting are inviting and formative. Although Eastwood's ex-

terior appearance and interior layout are considered by many to be superior to the island's nonsubsidized buildings, its courtyards (all work done in-house by architect Sert, Jackson & Associates) are substantially inferior to those west of Main Street. Poorly handled grade changes, badly detailed pavements, drainage problems and an elaborate amphitheater of questionable value due to lack of lighting and electric outlets and its close proximity to apartments, combine to defile these potentially delightful and useful spaces. Token patches of grass, overrun by children's play because of their nearness to the residences, not because of their size, shape or layout, recently have been enclosed with chains. Perhaps a studied use of asphalt pavement and a few major trees and shrub masses might have been a more appropriate and less maintenance-intensive solution.

West of Main Street is better but still not brilliant. Working at Island House under architect Johansen & Bhavnani, landscape architect Laurence Halprin's New York office offers one row of benches in the shade of existing trees adjacent to the chapel but out of the mainstream of Main Street, and one grid of benches in a stark, perpetually shaded bit of space between buildings for which the term "courtyard" is but a euphemism. Due more to building locations than Halprin's work, the spaces encircling the



The constant joy of the adjacent Manhattan skyline.

chapel produce more of a corridor than a true plaza and do not substitute for the square to have been a part of the Town Center. Behind Rivercross (sitework by the office of landscape architect Dan Kiley) a lushly planted passageway is juxtaposed with a dreadfully barren, red asphalt-paved sitting space. In certain cases it appears that the designers had difficulty determining the explicit purposes of the courtyards: The larger spaces are too small to accommodate a crowd and the smaller spaces are too large to be intimate. In addition, west of Main Street the "hard" materials used in the public areas continue into the courtyards where a respite would be appreciated. This, coupled with building massing which prevents the penetration of sunlight, discourages use of these vital spaces.

This fizzling-out of what was obviously a well intended design concept is enormously disappointing in light of the crucial role played by these spaces in the residents' use and enjoyment of the island's landscape. Because of a lack of attention at the master plan phase to the intricate requirements of these courtyards, their subsequent designers were placed in the unenviable position of being asked to foster, solely through the molding of limited parcels, activities discouraged by the community's overall environmental design.

While environmental design is incapable of compelling par-

ticular behavior, it can produce a stage which more easily facilitates those behaviors should users be so inclined. In Roosevelt Island's case, the courtyards' lack of spirit is largely the product of the magnetism of Main Street which monopolizes the residents, leaving the courtyards to languish as appendages. No solid reason is given to make use of the courtyards. Like the seldomly used open space so carefully incorporated into suburban new towns, the courtyards' most significant contribution to Roosevelt Island appears to be the residents' satisfaction in simply knowing the courtyards exist, regardless of whether they ever plan to spend time there.

In contrast, it is an unmitigated joy to emerge from between the residential towers on the western edge of the island and to dawdle along the promenade (designed by landscape architect Zion & Breen) with the Manhattan skyline laid out before you. Although site conditions mandated a narrower walkway than originally intended, the promenade and meditation steps (a part of Blackwell Park by Dan Kiley) provides ample access to the shoreline and an unimpeded view of Manhattan. Little used many days of the year, on a warm spring or summer weekend these areas are besieged by residents and nonresidents who never tire of the varied skyline and ocean-going vessels passing within 200 yards of the island.

Similarly, it must be a joy for the island's master planners to watch children, lunch boxes in hand, wandering along Main



*Facing page, meditation steps
and Queensboro Bridge. Above,
the promenade and Manhattan
across the East River. Left,
Rivercross from the south.*

Shortcomings that are easier to cite than to mend.

Street relatively safe from encounters with automobiles on their way to the minischools conveniently located in the residential buildings. Although both the physical and curricular characteristics of these schools have been the subject of intense controversy, from a planning viewpoint their small size and locations obviate many of the difficulties associated with urban schools by lessening the institutional image of school and by distributing the school-related activities around North Town.

Perhaps the most successful and certainly the most intensively used exterior spaces on Roosevelt Island are the North Town park and the tot lot in Blackwell Park. Cognizant of the weak functional but strong visual relationship between the park and Main Street, Nicholas Quennell Associates produced a lean but purposeful design featuring planting where three-dimensional substance is desired and a low retaining wall to control circulation, while making logical use of a subtle change of grade. A moment or two to enjoy the seemingly endless paddle tennis matches instills a bit of delight into the otherwise tedious super-market-to-apartment trek. The strength of Blackwell Park's tot lot lies in the freedom it allows the children to play out of touch but within sight of their parents. The popularity of this play lot provides the best opportunity outside organized activities for parents to get to know each other.

There are few elementary solutions to Roosevelt Island's shortcomings. To indiscriminately install benches along Main Street may be more disruptive than productive. To disperse the Main Street shops around the island in hope of encouraging use of the buildings' courtyards would result in an inconvenient potpourri of spaces and uses. And the courtyards should not be redesigned without careful prior study. While I do not advocate the dismissal of the Roosevelt Island master plan, this community would seem the opportune site for systematic postoccupancy investigation before proceeding with any future island development.

I was disappointed that a Roosevelt Island Development Commission official was reluctant to see included in an informal residents survey circulated in preparation for this article a question regarding residents' desires for the future use of the island's vacant land. "We don't want the residents to think the master plan is open to revision," he commented matter-of-factly. Ironically, the single amendment made to the master plan as a result of residents' input—the substitution of North Town park at the site of a proposed residential tower—has been a resounding success, both functionally and esthetically.

Roosevelt Island warrants attention as it expands the meaning of "city." But those seeking in Roosevelt Island guidance to the future of cities will find only so far inconclusive experimentation. □



Top, North Town Park with 'Big Alice' electric generating plant beyond. Above, Blackwell Park playground. Right, North Town Park in front of the Motorgate Garage with the east promenade to the right. Facing page, the island across the East River.







The view from the driver's seat (above) and Robert Schuller (right) in his videotaped, nationally syndicated Sunday service.

John Pastier

An Evangelist of Unusual Architectural Aspirations

Twenty years in a Neutra church, Dr. Robert Schuller is building a Johnson cathedral. By John Pastier

Over the years, southern California has become known for its unusual architecture, innovative religions, endemic prosperity, television studios, nurture of the ego, theme amusement parks, suburban expansion, reverence for the automobile, unbounded optimism and, perhaps above all, for its fascination with success.

To touch base with all these variegated folkways of America's most spread-out metropolis, a visitor might reasonably expect to devote a month and a small fortune for gasoline to the effort. Yet there is a way to find all of these characteristics in one place, and to experience them in little more than an hour.

This distillation of the southern California culture lies near the population center of Orange County, which is itself smack in the path of the great exodus from Los Angeles. Deemed by the census bureau to be a separate metropolitan area, this collection of 1.8 million people is famous for its affluence, housing costs (the highest in the country), newness, conservatism, scarcity of minorities and its indifference toward the original reason for its existence, Los Angeles. In the almost complete absence of traditional urban cores, its focal points tend to be shopping malls, amusement parks such as Knott's Berry Farm and Disneyland, Anaheim Stadium and even the subject of this evaluation, the Garden Grove Community Church.

The church is already becoming familiar to architects, and in a year will be a household word within the profession. In 1980, Philip Johnson and John Burgee's Crystal Cathedral will be completed, and that fact will no doubt be commemorated by *Time* and *Newsweek* as well as by the professional journals. In that inevitable bandwagon of media attention, it is likely that some very interesting older buildings will go virtually unnoticed.

They are late works of Richard Neutra, and cast light not only upon the architect's approach to buildings of larger than residential scope, but also upon the initial efforts of one of America's few noncorporate patrons of architecture. That man is Dr. Robert H. Schuller, a minister of the Dutch Reformed Church in America, who began his California career in 1955 by preaching in a drive-in theater when a more suitable setting proved unobtainable in a community suffering from severe growing pains. In spite of an inauspicious start, Schuller's immense energy and optimism triumphed, and his growing congregation moved to a more normal setting for worship.

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To his surprise, however, Schuller found that he had lost some of his flock. For reasons as diverse as physical handicaps, lack of good Sunday clothes, personal shyness or reluctance to shave and dress up on a lazy weekend morning, people who found it comfortable to attend services in their cars and campers were reluctant to attend them in a church. Schuller therefore resumed some of the drive-in services, using the roof of the refreshment stand as his pulpit. This was one of the early manifestations of his successful approach to religion: serving the desires of the congregation, rather than making demands upon them by holding to tradition and recognized theology.

By the end of the 1950s, it was time for Schuller to build a church of his own. He was not bashful in his ambitions. After purchasing 10 acres of citrus groves (those were the days when Orange County was still a descriptive name), he sought out his designer. Recounting the process in his book, *Move Ahead with Possibility Thinking*, Schuller wrote: "When we decided to build a 'walk-in drive-in church' I called one of the greatest architects of the 20th century, Richard J. Neutra. I knew that Louis Sullivan, Frank Lloyd Wright and Richard Neutra were fathers of the new and exciting International Style of architecture. 'Let it not be said that the most beautiful building ever built is the Parthenon. The most beautiful buildings ever seen by the eyes of man have yet to be built,' I challenged Mr. Neutra. For we were a group of POSSIBILITY THINKERS challenged to do something bigger, or better, than had been done before."

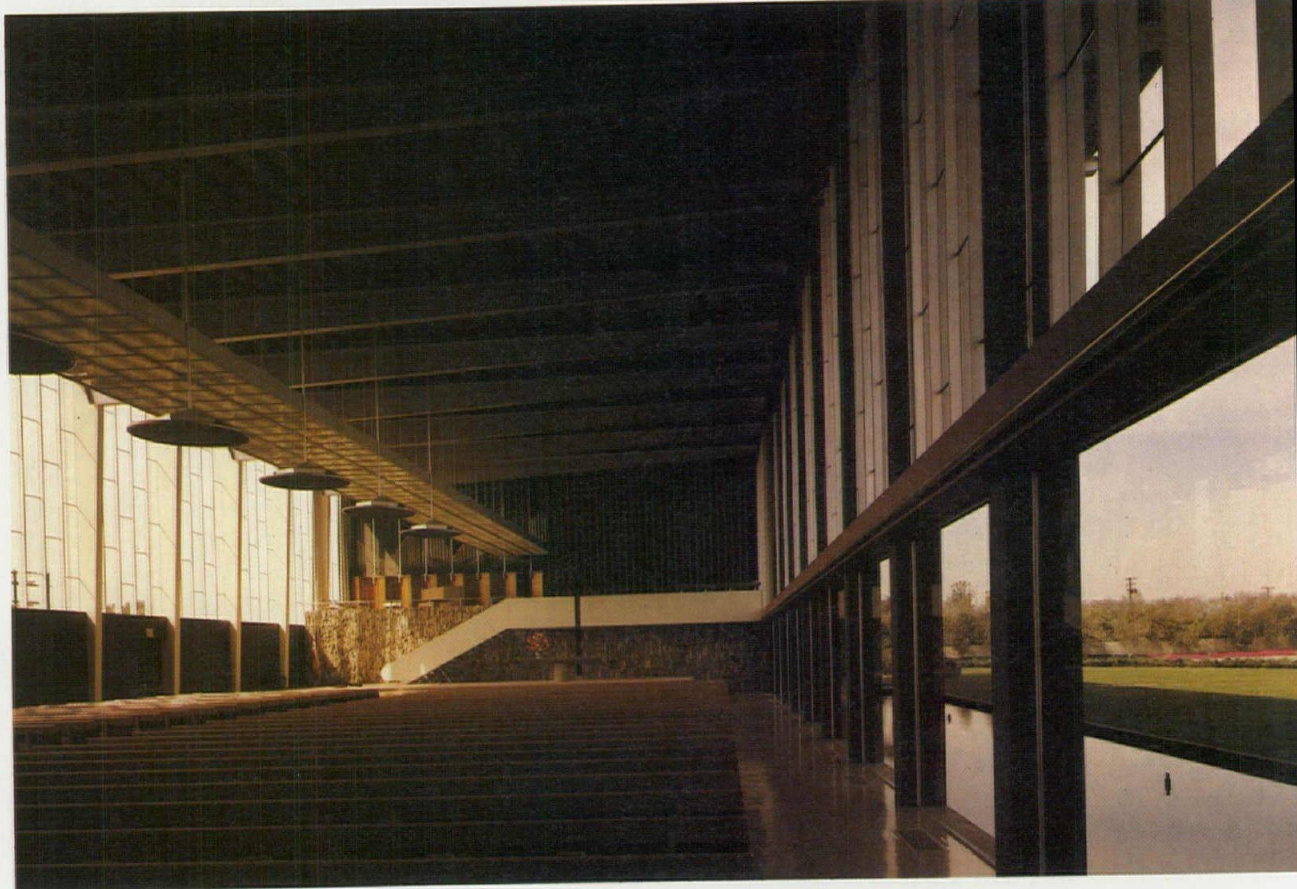
Schuller's notions of the International Style's paternity may have been approximate, but his instincts about Neutra's appropriateness for the commission were accurate. He was not only the grand old man of southern California architecture, but also a figure of world renown. His studio was a mecca for talented architects, both young and middle-aged, and it was considered a privilege to work under the master. There is an anecdote, perhaps apocryphal, that Neutra once complained about Wright (for whom he once worked himself): Do you know what he does out there in Arizona? He actually makes his students pay to work for him. I let mine work for me for nothing!

Schuller seems to have been attracted to Neutra not solely because of his talent, but also because of the glamour of his name. Two members of Neutra's project team have independently voiced the opinion that the showman in Schuller could not have settled for anything less than an established star. Thus the





Schuller preaches to his congregation in a drive-in theater in the 1950s (above). At right, two Julius Shulman views when Neutra's church was new. Facing page, the rolling flock gathers in semicircle at church-side. The 177-foot office tower was added in 1968.



A sanctuary serving seated and wheeled audiences.

stage was set: on one side Neutra, a world-class figure and inventor of an almost unbelievably light and open esthetic that had come to represent a quintessential image of southern California architecture, and, on the other, Schuller, an unconventional, energetic, astute, ambitious and boundlessly enthusiastic young pastor hoping that his first church, although inexpensive, might surpass the beauty of the Parthenon.

Not surprisingly, it didn't. And now, 20 years later, Schuller is building a far larger and more opulent structure that is clearly a direct challenge to the ecclesiastical monuments of the past. Neutra's church employs a cool understated esthetic within a modest, almost residential scale. It is a mere chapel when compared with Philip Johnson's accurately titled cathedral, whether one con-

siders size, budget or intensity of visual rhetoric. In his Neutra church, Schuller was informing southern California that he was on the path to success. In his Johnson cathedral, he is proclaiming to the world that he has achieved it.

Of course, it is not enough to say that Neutra's effort fell short of the Parthenon. For one thing, the resources of the Athenian treasury were unavailable, and, for another, the California program was more demanding. Ictinus and Callicrates had to accommodate but one Panathenaean procession each year, and that on foot, while Neutra had to contend with several caravans of cars each Sunday. He arranged the vehicles in concentric arcs, just as in a drive-in theater, complete with the slight banking and terracing that would help each row see over the one ahead. Sonic communication could be effected in two ways—through an outdoor P.A. system, or by tuning in the service on one's car radio.

The sanctuary had to serve a conventionally seated audience as well as the automobilized congregants outside. This was accomplished through a cantilevered balcony-pulpit that projected beyond the glass east facade of the church. (From the viewpoint of drivers, this was the front, but from inside the sanctuary, it was the right side wall.) Before a service, two 12-foot bays of glass could be rolled aside to open up the balcony, a detail derived from the indoor-outdoor classrooms of Neutra's 1935 Corona Avenue School. This arrangement allowed Schuller to stride in and out, and to face either of his simultaneous congregations. That such heroic efforts on behalf of the car were the work of an old-world humanist might have seemed ironic, had not Neutra brought off the trick with a dignity that verged on the miraculous.

But for all its restraint and ingenuity, there is something missing in the sanctuary of the Garden Grove church. It bespeaks an enlightened rationalism but does not convey the emotional feeling of a house of worship; it is slick, cool and impersonal. It could just as well be a university commons, a community center's multipurpose room, a high class industrial structure or a splendid dining room—which is exactly what it will be once the Crystal Cathedral is completed.

The sanctuary is part of a larger grouping of buildings planned and executed by Neutra's office. The first increment, built in 1960, also included a Sunday school classroom and lounge building, parallel to the sanctuary and separated from it by a grassy courtyard. The subsidiary building and the intervening space are almost intimate in scale, and are even more understated than the sanctuary. This portion of the project is the least pretentious and arguably the most successful, and can be recognized as in the tradition of his humanely scaled schools.

In 1966, the sanctuary was expanded by four bays, and addi-

tional seating, a vestibule and a balcony were placed within the space. The architect for this addition, Benno Fischer, AIA, had been a member of Neutra's project team for the original buildings, along with Sergei Koschin and John Blanton, AIA. Fischer's efforts were highly respectful of the original conception, and it is difficult to detect that this is an addition. Only the new rear wall, of rough vertically coursed stone, can be questioned esthetically, and even then there is ample precedent for the material throughout the original buildings.

Schuller's growing church led to yet another expansion in 1968, when he called on Neutra for a major new structure, the Tower of Hope. This extraordinarily slender (34 feet wide) building of 14 stories was 177 feet tall, and a huge neon-lit cross brought its total height to 250 feet. When built, it surpassed Orange County's two other vertical landmarks, Disneyland's Matterhorn and Anaheim Stadium's colossal A-frame scoreboard, and gave the church high visibility from the Santa Ana and Garden Grove freeways.

The tower, sited so as to close off the north end of the courtyard between the classroom wing and sanctuary, had a configuration that was more symbolic than practical. Each floor had less than 2,000 square feet of space which was impinged upon by two elevators, toilets and a stair. Its usable space was devoted to classrooms, offices and a two-story top-floor chapel with a panoramic view of the surrounding flatlands.

Neutra's son, and now successor, Dion, also worked on this phase of the church complex, which has a notably different appearance from the earlier buildings. Its most memorable features are a cantilevered exit stairway and two glass-walled elevators that command a westward view. The tower has a curiously abstract appearance and an ambiguous scale, in part because its floor heights are not clearly expressed. Its mass impinges visually



A Tower of Hope and the advent of television.

upon an adjacent set of 100-foot-tall bent-frame bell towers (whose bells are mute visual symbols of the real things) designed originally by Neutra to be the church's main vertical element.

More distressingly, from several vantage points the tower appears to rise, almost literally, out of the backyards of the residential subdivision that adjoins the church property. Architecture student Georgia Kajer, who grew up in one of those abutting homes, vividly recalls her father's wrath when he found a skyscraper going up next door to his hard-won slice of the suburban American dream. (In the bucolic pretower days, she used to chase rabbits with her friends in the well-landscaped church parking lot.) But she also remembers the Neutra buildings as her first direct experience with serious architecture.

The Tower of Hope is at once the most prominent and least successful of Neutra's buildings on the site, and stands as a reminder that his masterly sense of residential scale and proportion could not be easily adapted to monumental forms. And yet, from his client's standpoint, the tower must be counted a success. It gives the church landmark identity in the relatively flat and featureless Orange County landscape, and its very abstractness and lack of clear scale make it a powerful prop in the real medium of Schuller's ministry—television.

In 1970, two years after the Tower of Hope was built, Schuller began televising his services over a Los Angeles station. Called the "Hour of Power," the show has grown into a \$9-million a year operation employing 80 full-time people and is carried weekly by 140 stations from Maine to Australia. Visitors to Schuller's televised 9:30 service find themselves witnessing a most unusual scene. Cameramen on elaborate hydraulic booms teeter in space to capture the minister's mercurial expressions

and histrionic gestures. His upbeat, "I'm O.K., you're O.K." sermons seem directed not so much to his walk-in, drive-in audience of 1,700 as to the millions who will be soon watching the videotaped service. There are frequent, dramatic shots of the Tower of Hope (for counseling, dial [714] NEW-HOPE) which on television can appear to rival many big city skyscrapers. Schuller announces the availability of one or another of his many books (sample title: *Self-Love, the Dynamic Force of Success*). There are appeals to support the construction of the \$15 million Crystal Cathedral whose framework is rising within camera range.

Here is nothing less than the world's first electronic church. Just as Schuller was quick to embrace the technology of the automobile (his first tenet for church success is to "have surplus parking"), so too has he been alert to the possibilities of a religious ritual freed from the limitations of time and space. His prime sanctuary is not the long rectangular one designed by Richard Neutra, nor will it be the rhomboid prism of Johnson and Burgee. Instead it is the small, curve-sided universe that can be found in nearly every American living room—the cathedral of the cathode-ray-tube.

And yet tangible artifacts are still important to Schuller's increasingly dematerialized ministry. He calls his church "a 22-acre shopping center for Jesus Christ." He proudly notes that the Crystal Cathedral will be higher, wider and longer than Notre Dame in Paris, and justifies this ambitious project by saying, "I happen to believe that a work of art is good for man's spirit."

Like Walt Disney, whose Magic Kingdom is just two freeway exits away, Robert Schuller has blended psychology and technology to create a characteristic southern California monument. Unlike Disney, however, he has not been afraid to include eminent architects in the process of developing his particular form of Utopia. □



Left, Schuller gestures for his outdoor congregants. Above, the Sunday morning crowd. Right, the 14-story office tower above Orange County rambblers. Overleaf, Johnson/Burgee's Crystal Cathedral.

John Pastier

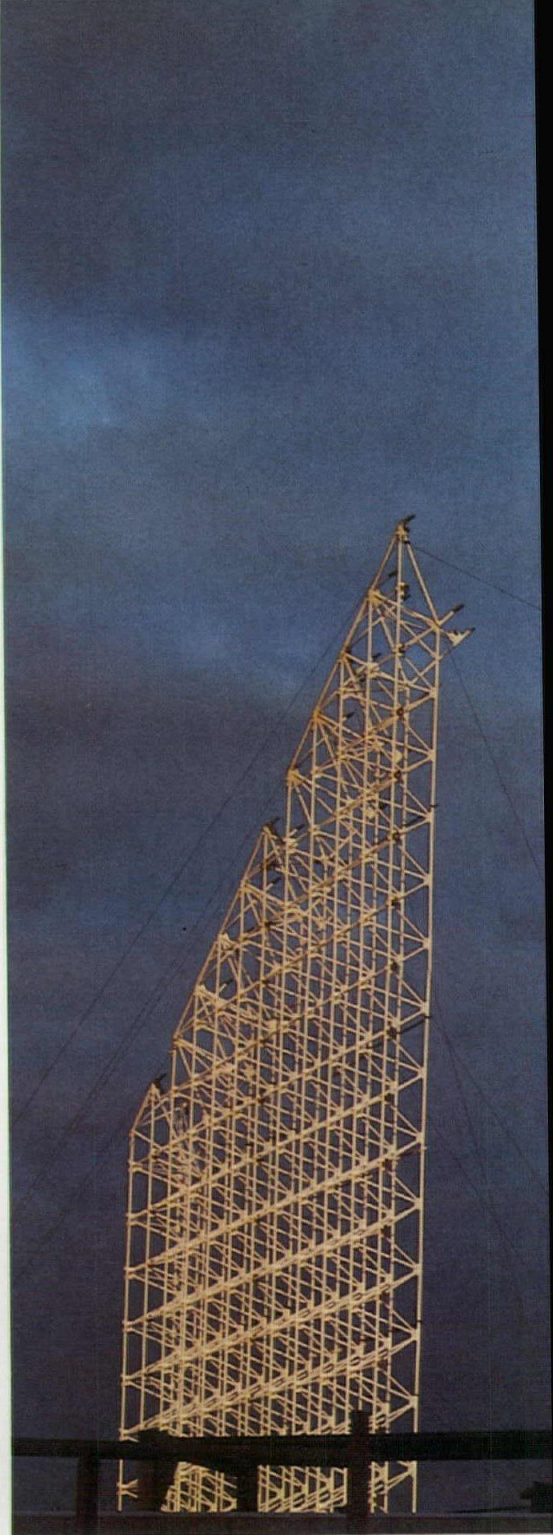


John Pastier

The prows of the cathedral rise past the tower.



Stephen Kelley



Louis Checkman





John Pastier

Johnson/Burgee's cage-like, mirror glazed Crystal Cathedral superstructure (model, left) will enclose a freestanding concrete balcony structure (above) rising from the parking lot of Neutra's church. The 400-foot long axis of the star-shaped cathedral will be perpendicular to the long axis of the church. Maximum width will be half its length. The steel frame that will form both the walls and roof will rise 50 feet at its lowest elevation and 120 at the crown. Completion is expected early next year for the \$10 million-plus, 4,000-seat structure.



'This Too Is Architecture'

Text and photographs by Fred Powledge

One dictionary definition of *architecture* is “the art or science of building.” That leaves quite a bit of leeway, as anyone who pays attention to bridges, bathhouses, cathedrals and condominiums can testify. For a lot of us lay people, though, the term also implies an element of professionalism on the part of its practitioners—some formal training in the science, an appreciation for the art, some grounding in the history of structures. And, at its best, *architecture* further suggests an ability to design buildings that are in the proper scale with the creatures who use or live in them.

I see another variety of architecture, as well, when I move around the nation. It is much less formal, absolutely unprofessional and often blatantly insulting of such concepts as “art” and “science.” It exists everywhere. You can see it from the Interstates and in the new towns, but there’s more of it along the secondary roads and in the older downtowns.

It’s an unconscious architecture that is created by the people who never think of it as architecture: who build homes 12 feet square because that’s what you get when you’re working with sheets of plywood; who use their bodies to improve the design of a building by sprawling on its steps on spring lunchtimes; who briefly superimpose the breath-grabbing image of a dirigible

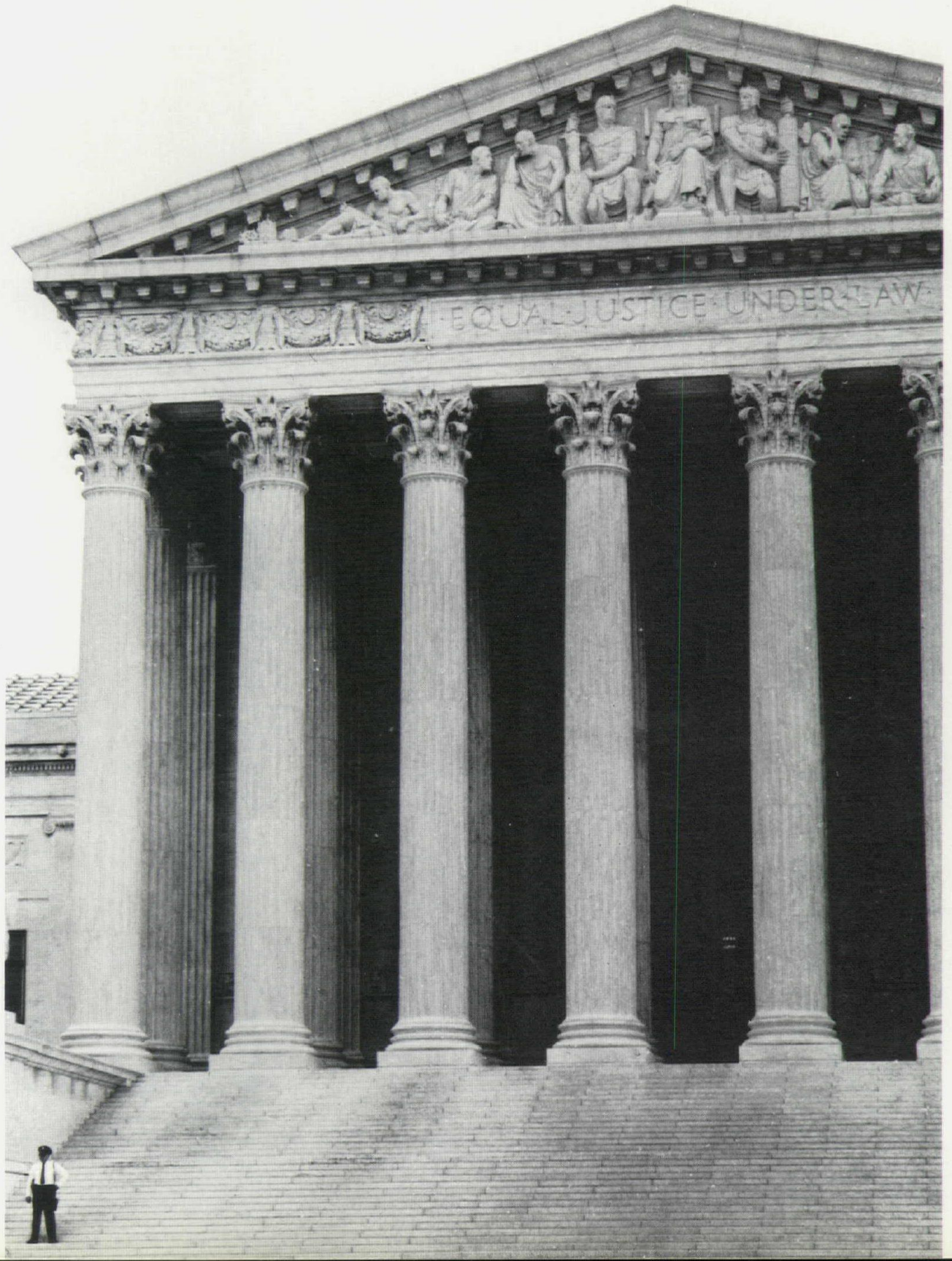
Mr. Powledge, a North Carolinian by birth now living in Brooklyn, writes for *The New Yorker*.

on the lower Manhattan skyline, itself no slouch in the awe department.

A lot of it is corny and a lot of it is tacky, and if any of you want to argue that it isn’t architecture at all, I won’t be able to convince you otherwise. But I know that it has one quality that professional students of “the art or science of building” seem always to be looking for: Almost all of it represents an effort by people—ordinary people, for the most part, people who can’t saw a very straight line and who wouldn’t know a lintel from a lentil—to modify their surroundings so their lives might be a little more comfortable and rewarding and, maybe, even more beautiful; to create and adorn structures that are complementary to their human scale. When you look at it in this light, then, a 4x8-foot sheet of plywood becomes architecture, too.

Shelter, for a growing number of retired folks, means a thin skin of metal, mounted on axle and wheels and towed behind a car. Each fall, when the first snow flurries start up North, thousands of these mobile Americans hitch up and head south—toward Florida, the Gulf Coast, the Southwest—in search of sunshine and warmth. These travelers above stopped on their meandering way from California to Florida at a small county campground on Padre Island, Tex., that is undistinguished except for the fact that it faces directly the Gulf of Mexico and the rising warm winter sun.

Inside this building the most awesome of decisions are routinely made. The Supreme Court of the U. S. decides whether we shall be free or slaves, whether women have the right to control their own bodies, whether the police may eavesdrop on citizens, whether people who have killed shall themselves be killed. The building where these decisions are made bears the promise, 'Equal Justice Under Law,' but it is a cold, heartless place until something on the scale of a human being approaches it. In this case, the human is a policeman.





I can't even remember where I saw this house. It was somewhere south of Wilmington, Del., on one of those busy highways where it's all packed together in one great orgy of attention-getting: the car dealerships and fast-food joints and truck stops and Sevens-Eleven and roadside Relaxation Studios. Each of these enterprises had gone to some trouble and expense to divert the attention of those of us who are supposed to be paying attention to our driving, but because there was so much neon and billboard, it was easy to avoid noticing any of it—until I saw this place. I don't even know what they were trying to sell. Maybe it was just patriotism, or perhaps serendipitous pleasure.



Shelter

This is a family of Mexican American migrant farm workers. They live in a rural community, known as a colonia, in the Lower Rio Grande Valley of Texas. Their income, educational levels and life expectancies are lower than most Americans'. Their bathroom is the small shack at the far right; their drinking water comes from a shallow well nearby. The man is an architect, of sorts. He built his home with his own hands, out of 4x8-foot sheets of plywood.



'Shelter' means many things to many people. In its most elemental form, it is protection from the elements, whatever they may be. In Mississippi and Alabama and a lot of other places, the elements frequently include tornadoes. A tornado can take away a house, a car or a family in a matter of seconds. A man in Tupelo is in the business of selling tornado shelters; here is one waiting to be bought and installed. The sphere is buried in the ground, and the projection at the left serves as the entry hatch. Stairs lead down into the Fiberglas ball. When you see the tornado coming, you gather your family together and descend into the ball. A few minutes later, the tornado will have passed, and you can climb back out and see if your house is where you left it.



Town and Country

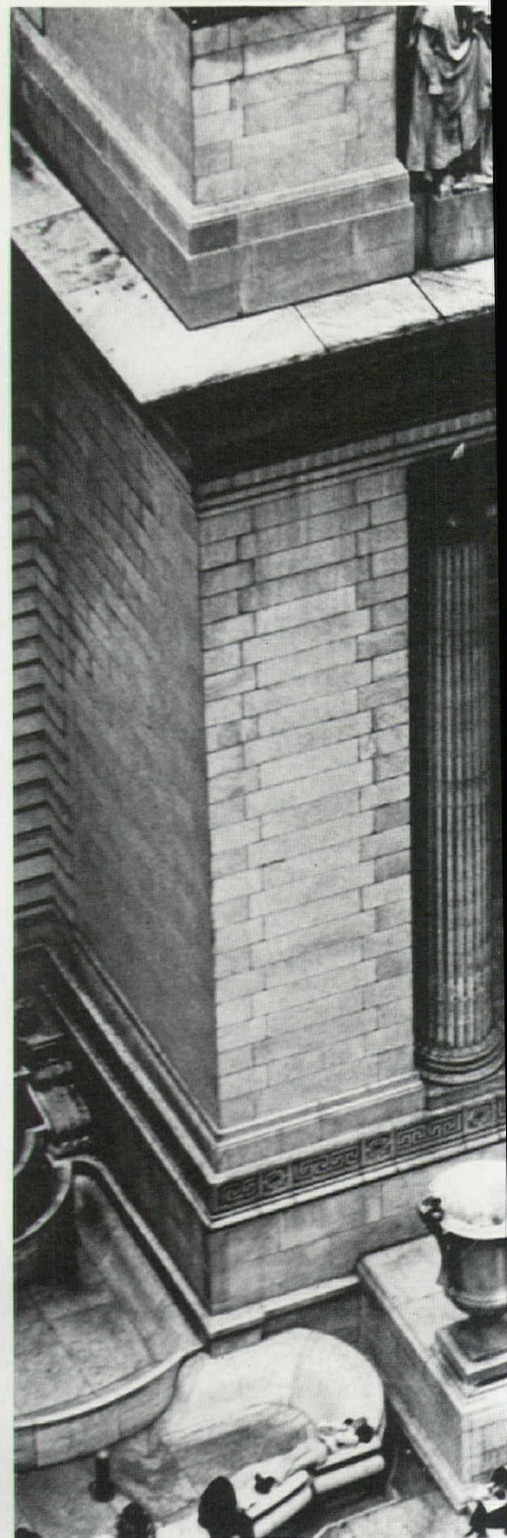
As you drive up Interstate 75, away from the factories of Toledo and Detroit and toward the wilderness of the Upper Peninsula, the population thins out and the farms start to take over. The barns all look pretty much the same—like barns everywhere—but every once in a while you see one that's distinctly different.

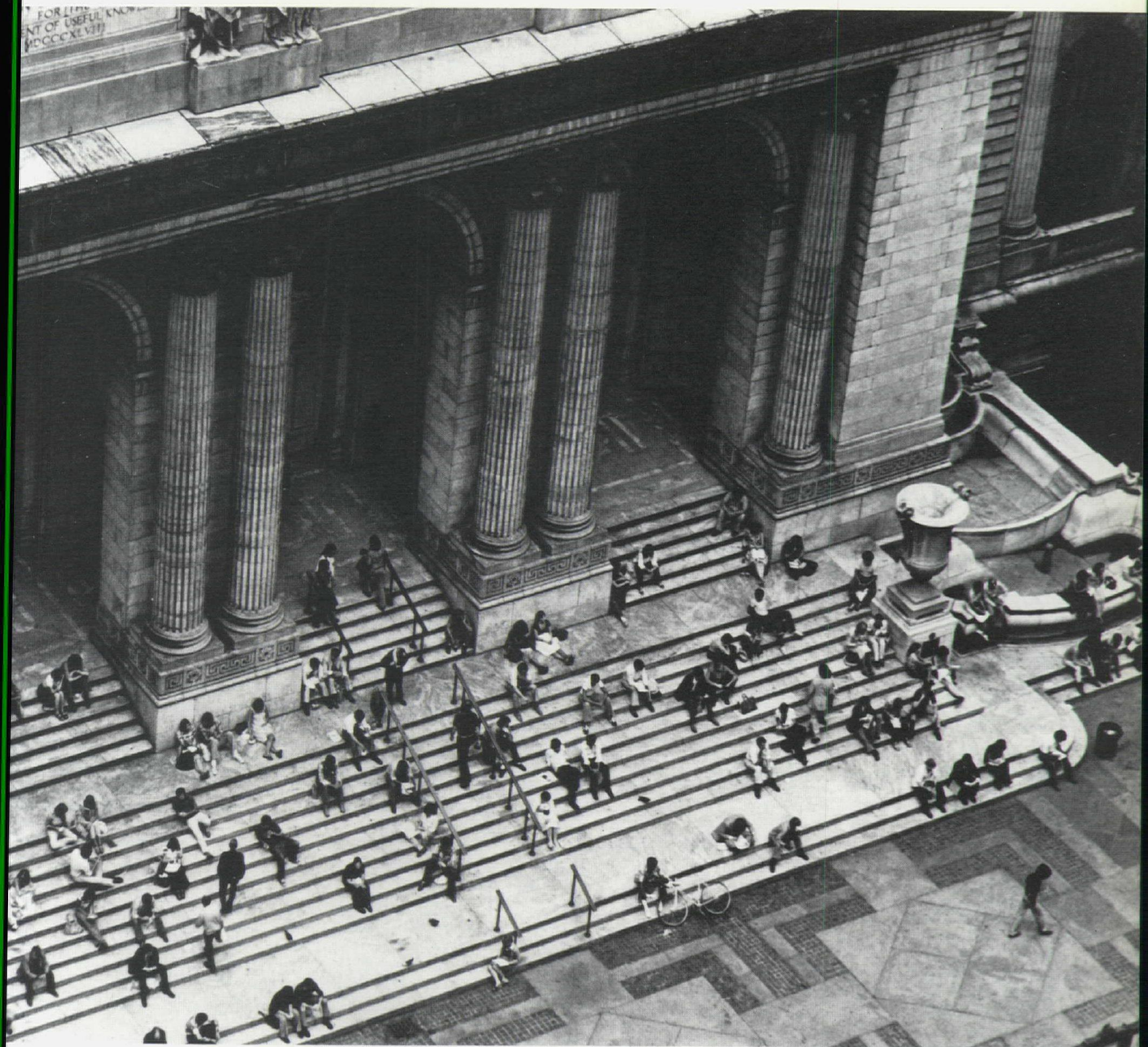


'Shelter' in the '50s and '60s also meant protection against atomic attack, although there was little indication that our system of what we called 'fallout shelters' was adequate or that we would get sufficient warning in order to get into them. We put up a lot of signs, though. Now, in the '70s, there's a better system: A neutron bomb will eliminate all the people (after a period of lingering agony), and the real estate will remain intact. The City of New York anticipated the neutron bomb by several years by employing the technique of municipal neglect. Buildings, neighborhoods, whole ghettos received fewer and fewer city services; the people left and the structures remained, to be bought up or replaced at some later date by real estate moguls at the usual handsome profit. This building is in the Bedford-Stuyvesant section: one of our largest black ghettos, with a population equal to that of Toledo, Ohio. Bed-Stuy exists completely outside the thoughts of the people who run New York City.

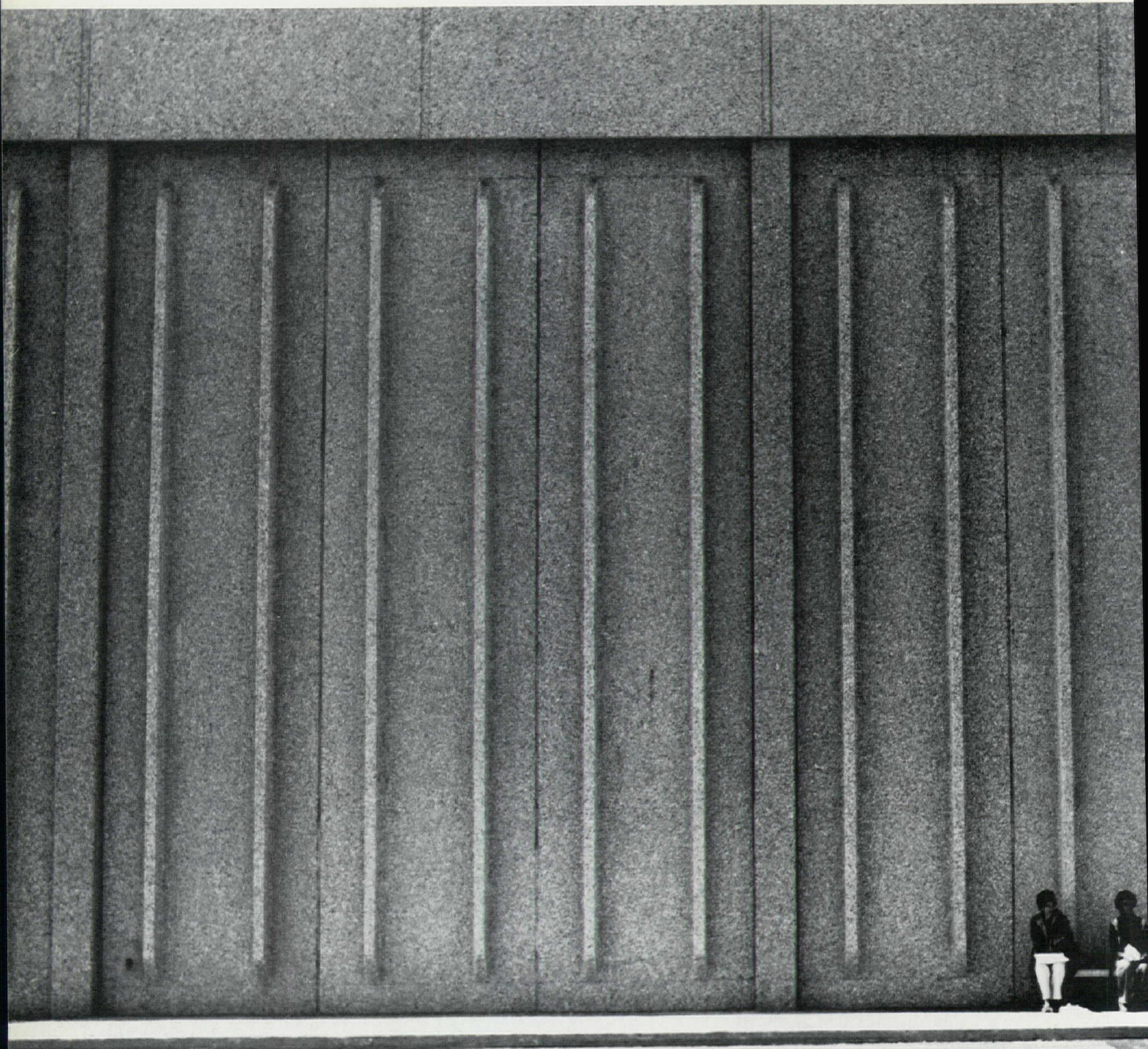
Porches

Porches are among the human race's most civilized inventions. They fill a distinct need, one that television and airconditioning and 'Florida Rooms' and waterbeds have never been able to meet. Porches are places where you may sit and watch the world go by, preferably from an elevated perspective. Rooming houses especially need porches. And if they don't have them, the tenants are likely to create their own.





Even big city people need porches (or maybe it's that they especially need them), as you can see at the New York City Public Library on any day when the weather is halfway decent. For a lot of people, the steps become every bit as important and comfortable as the carrels and shelves and stacks inside. But for some strange reason, the people who build cities and suburbs seem rarely to appreciate these needs.



America has become a nation of shopping centers, places where the majority of the population (which now lives outside the city limits) may go to shop in comfort and security. Security is a big component of it all; virtually every shopping center built since the mid-'60s' urban riots resembles more a fortress than a market. Tall, forbidding walls surround the stores, with occasional breaks to allow the shoppers in and out. Everything else faces inward, toward the interior connecting corridors with their artificial plants and piped-in music. These women are waiting for a bus outside a shopping center near Asheville, N.C.

Commerce

The way we advertise our goods for sale is part of architecture, too, I think. A sign saying 'Used Hubcaps' at this shack in Chesapeake, Va., might have served its purpose, but it would be nowhere as effective as the display of hubcaps themselves. It would be a shame if all the hubcaps got bought; they have become an important part of the building.



The gas station was obviously closed. But to make sure, they had put a sign up saying so. There was another one, left from better years, that said it was open, as well. Maybe they just hated to shut the place down. This is north of Opp, Ala., near the community of Friendship, on a highway you'll never see if you stick to the Interstates.





Majesty

Maybe it was majestic, once upon a time, but this part of Brooklyn has become a little less so in recent years. It'll no doubt be knocked down and replaced by a modern and modernistic 'quad cinema' or something. But never again will it be majestic.



The city is so often a place of straight lines and 90-degree angles that we sometimes are surprised when we come on a scene that includes curves and softness. It pleases, even shocks the eye when the lower Manhattan skyline suddenly gets upstaged by the Good Year Blimp. □





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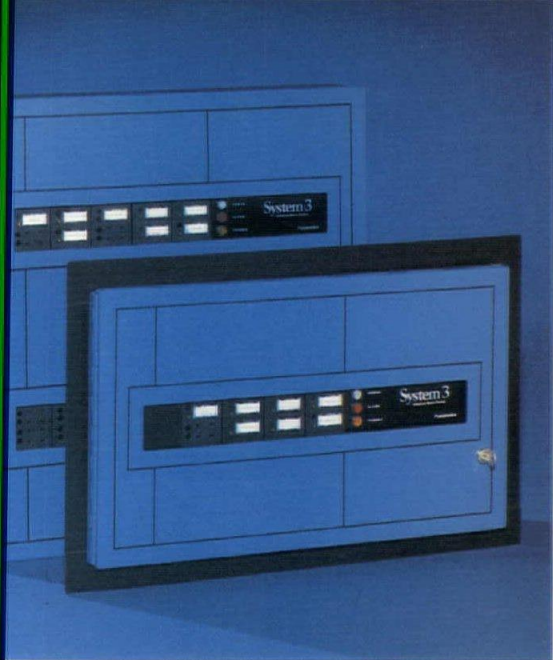
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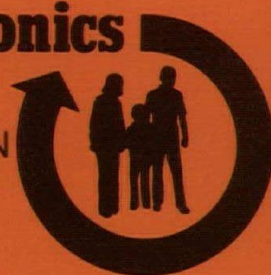
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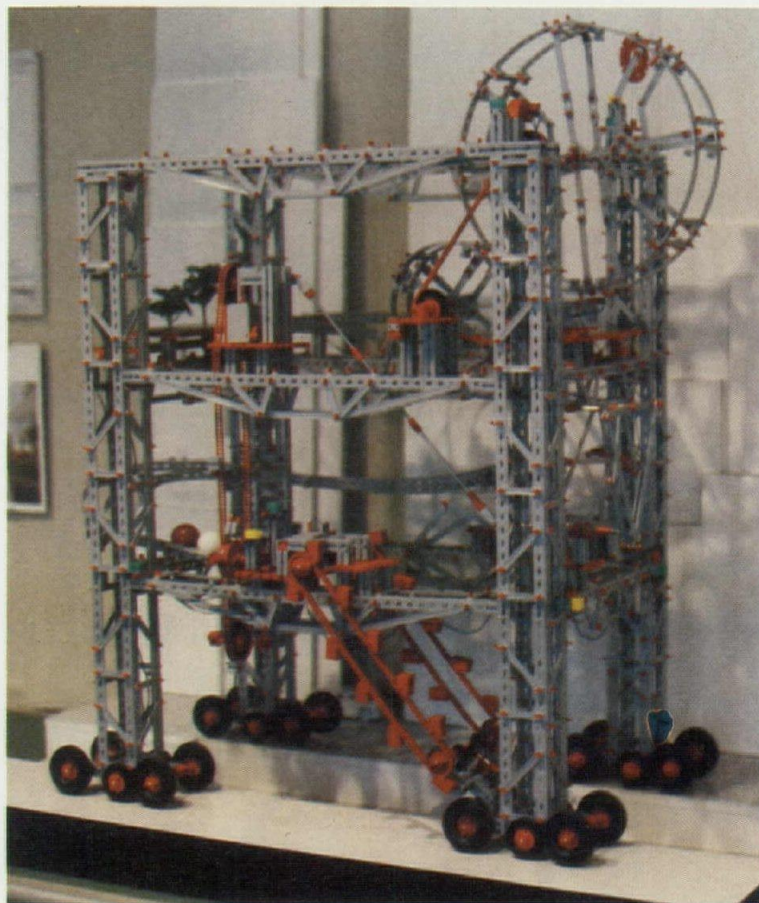
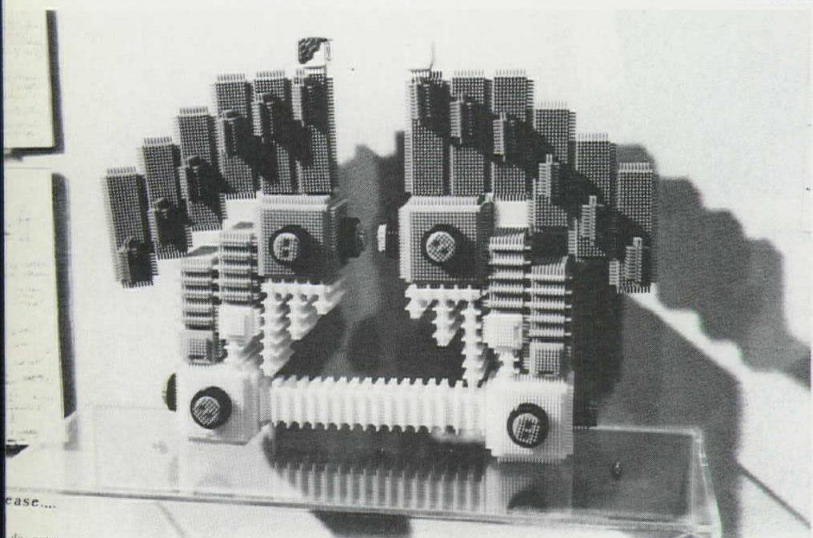
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Nora Richter



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Construction Toys at the Octagon 'Just for Fun'

An exhibit combines historic examples with contemporary creations. By Nora Richter

At age seven, says Frank Lloyd Wright in his autobiography, he was first introduced to kindergarten toy blocks: "A small interior world of color and form now come within the grasp of small fingers. Color pattern, in the flat, in the round. Shapes that lay hidden behind the appearances all about. . . . Here was something for invention to seize, and use to create." Perhaps many a child was architecturally inspired when creating with building blocks or when playing with architectural toys.

To honor the International Year of the Child and AIA's celebration of architecture, the AIA Foundation is sponsoring an exhibit of architectural toys, "Just For Fun," at the Octagon through June 17. The exhibit traces the history of architectural toys from 1744 to the present.

Architects have designed dolls' houses since the 18th century. There are dolls' houses representing most periods and styles of architecture from Palladian to Bauhaus to Levittown. On exhibit are the Homan-Greenough Doll House dated 1744 (considered to be the earliest documented dolls' house of American origin), the Tidewater Doll House dated 1750 (a one-room, pitched roof house reflecting 18th century vernacular architecture in Tidewater Maryland) and a 1920 windmill, among others.

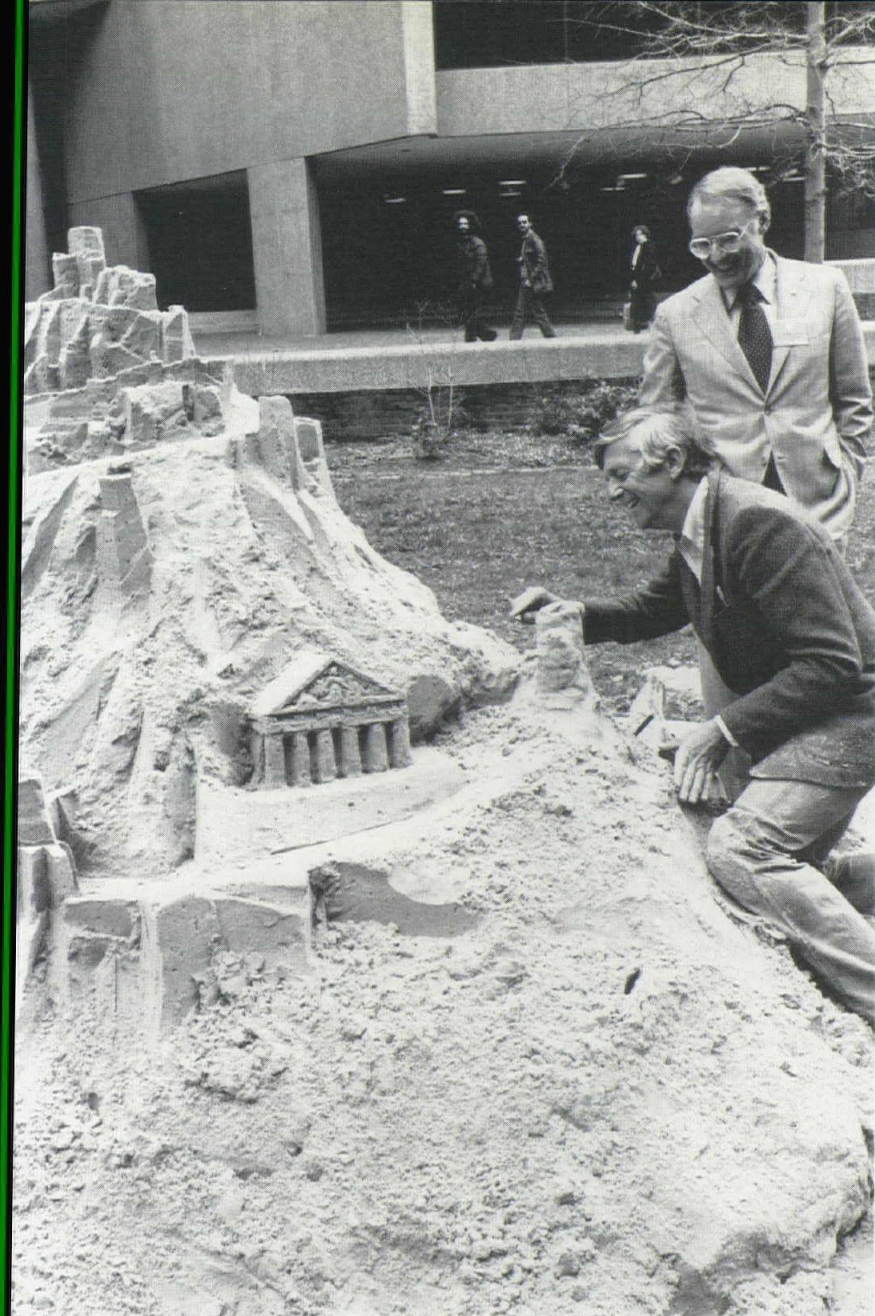
But it is toy blocks and Erector Sets that have probably inspired children to be "builders" and are even used by the young-at-heart architect. The first commercial construction toys were marketed in quantity in the 1850s. Many historians credit the growing interest in the construction toy to the kindergarten movement, implemented by Friedrich Froebel in Germany around 1840 and introduced to America in 1860. The most widely marketed ceramic brick of the late 1880s and early 1900s was Richter Bricks, on display at the Octagon. In the early

1900s, W. F. Crandall Co. created the first interlocking block systems. Lincoln Logs were patented in 1930 by John Wright, son of Frank Lloyd Wright. Also in the early 1900s came LEGO Bricks, Bauhaus Blocks and Bristle Blocks.

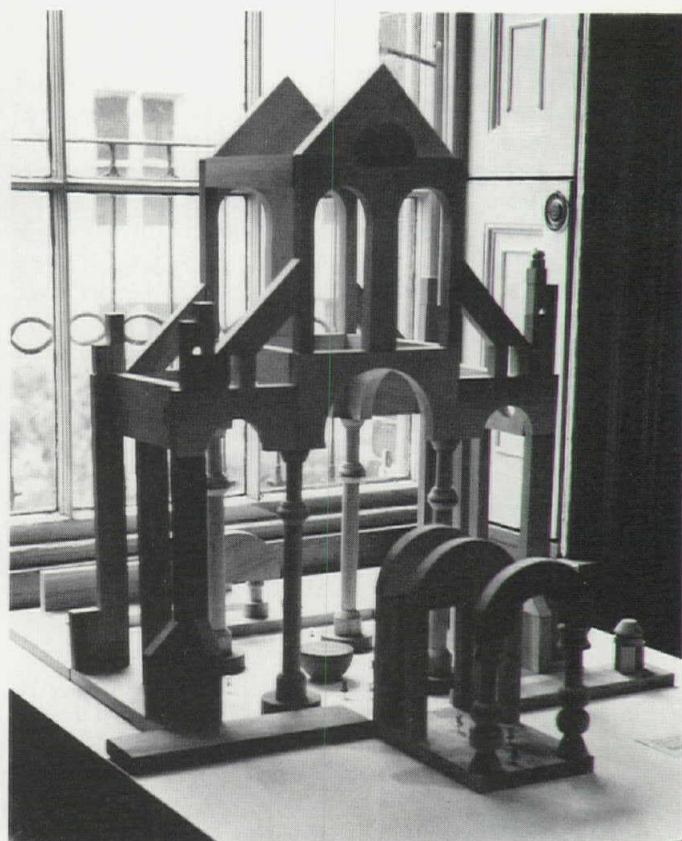
In the early 1900s, the first "structural steel" toys were sold: the Mecanno Set, Tinkertoys, Erector Sets. Dr. A. C. Gilbert got his idea for the Erector Set while watching railroad construction. His intention was to market a toy "to teach boys the principles of construction and engineering." The newest, most sophisticated building toy is the Fischertechnik Kit, made by a West German company and comprised of more than 400 different parts including circuits and motors. The company was founded in the early '70s to make industrial fittings and other hardware, but the rigid-nylon models became so popular that the company went into the toy business.

The AIA Foundation commissioned architects to create buildings with donated toys for the Octagon exhibit. The results reflect fantasy, humor and imagination. Nicholas A. Pappas, AIA, used Lincoln Logs to reinterpret Philip Johnson's glass house. Donald B. Myer, AIA, recreated the Octagon in Tinkertoys. With an Erector Set, The Architects Collaborative designed an elaborate space colony. John Q. Lawson, AIA, created "l'Arc de Triomphe/Brancusi's 'The Kiss'" with Bristle Blocks. Peter Ksiezopolski of I. M. Pei & Partners designed a "portable amusement park" with Fischertechnik. Avery C. Faulkner, AIA, built an English "Fishing Village" with Froebel Blocks.

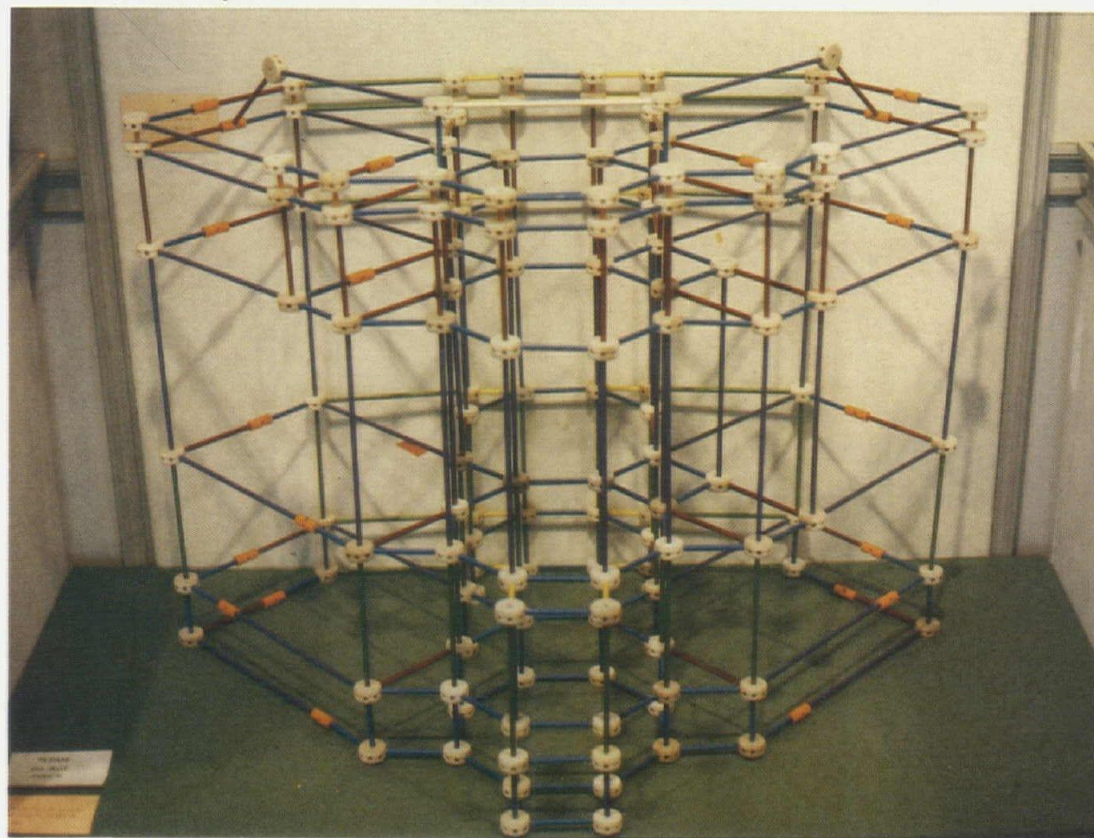
Passersby will notice the sandcastle sculptured by Hugh Newell Jacobsen, FAIA—reminiscent of a Mediterranean town complete with a Greek temple—in the Octagon garden. That is, if the castle doesn't erode in the Washington spring showers. □



Reed Baker © Ankers Capitol



Nora Richter



Facing page (left) *L'Arc de Triomphe/Brancusi's 'The Kiss'* in Bristle Blocks by John Q. Lawson, AIA, of Mitchell/Giurgola and (right) Portable Amusement Park in Fischertechnik by Peter Ksiezopolski of I. M. Pei & Partners. Above (left) David Olan Meeker Jr., FAIA, watches Hugh Newell Jacobsen, FAIA, sculpt a sand castle and (right) An Evocative Office Structure for an International Communications Corporation in Castle Blocks by Meeker. Left, the Octagon in Tinkertoys by Donald B. Myer, AIA, assistant secretary, Fine Arts Commission.

Seeking Permanent Benefit from an Energy Fair

A R/UDAT goes to Knoxville, Tenn., to advise on the planning of Expo '82. By Pete McCall

Between May and October 1982 and perhaps thereafter, Knoxville, Tenn., expects to be the "energy capital of the world." During those six months, this academic/power-system headquarters city in the heart of Appalachia will host Expo '82, an international energy exposition.

Expo '82 will be developed on a 78-acre site now occupied by an old railroad yard and some derelict buildings, wedged between the central business district and the University of Tennessee campus. In hope that what is built on the site will permanently benefit the city, the East Tennessee Chapter/AIA and the Knoxville-Knox County Planning Commission invited in an AIA Regional/Urban Design Assistance Team (R/UDAT).

The team that visited Knoxville Mar. 22-26 was led by Lake Charles (La.) architect and planner Joe Champeaux, AIA. Members were: John Andrew Gallery, an architect/planner who currently is director of Philadelphia's housing and community development; Dan M. Gatens, a transportation specialist from Boulder, Colo.; Percival Goodman, FAIA, a New York City planner/architect/humanist/author/educator; Houston architect/urban designer Frank S. Kelly, AIA; Alan Mallach, an economic and social planner from Philadelphia; Pete McCall, AIA staff editor, and Peter Rothschild, a New York City landscape architect/environmental planner. This national team worked closely with eight local professional humanists: Charles H. Reynolds, Michael J. McDonald, William Bruce Wheeler, Riggins Earl, Ferdinand Alexi Hilenski, Marian Scott Moffett and the Rev. Reynell Parkins, all of the University of Tennessee (UT)-Knoxville, and William MacArthur, Knoxville historian.

During an intensive four-day brainstorming "blitz," the team toured the Expo site and adjacent inner city neighborhoods, including some of Knoxville's most depressed residential areas. In gleaming information essential to its report, the "After Expo"

Mr. McCall is editor of AIA's *Memo*.

R/UDAT heard presentations from a dozen organizations including the local AIA chapter, plus the opinions of more than 30 individual citizens whose views ranged from extremely pro-Expo to rather anti-Expo. And they met with Expo developer—Knoxville International Energy Exposition Inc. (KIEE), composed largely of local citizens with a stake in the community—and city officials including Knoxville Mayor Randy Tyree, who reviewed the planning process that led to Expo.

The idea of a "world's fair" was spawned several years ago as a means to redevelop the central business district and the so-called Second Lower Creek Valley, site of the proposed exposition. Said Mayor Tyree: "At first I wasn't in favor of Knoxville's having a world's fair because that was too big a project for us to manage. An exposition is more manageable. We can handle that, and it can help us achieve some things in this city that otherwise would be a long, long time in coming."

Another local official said: "The opportunity we have in this community . . . is to develop a realistic and meaningful leadership structure."

On the other hand, one local community leader said: "Expo is like a bull in a china shop. It may shatter neighborhoods if not properly planned."

Testimony during two days of hearings suggested that "great expectations" have been raised by Expo relating to jobs and job training, community development and minority involvement. (Knoxville's black population is only 12 percent of the city's populace, but many live near the Expo site.) Citizens voiced concerns ranging from the government and media's "questionable" credibility in promoting Expo to such favorable residuals as city beautification, downtown business improvement, a better transportation system, more open spaces and energy-efficient housing. UT-Knoxville officials suggested that Expo's centerpiece, the U.S. pavilion, be used as a permanent energy research demonstration center.



"Residual development of the Expo '82 site into a model energy-conserving 'town-in-town' could be one of the lasting benefits of the energy exposition," reported the *Knoxville News-Sentinel* (Mar. 26) in its extensive coverage of the "After Expo" R/UDAT. Indeed, this concept was a major thrust of the eight-member team's comprehensive report.

Toward the end of its exhaustive study, R/UDAT worked around the clock in the UT school of architecture library to prepare the 50-page document that identifies potential effects of Expo on Knoxville. This report was presented to Mayor Tyree during a special press conference at City Hall. It was later presented to Knoxville citizens during a "town meeting" at TVA headquarters.

"Our focus in this report will be on the relationship of energy

policies to urban design," said R/UDAT. "We propose that the Second Lower Creek Valley area be developed after Expo '82 as a demonstration model of energy-efficient urban design and that all planning for the exposition itself be done in ways consistent with this larger goal.

"The immediate goal of the International Energy Exposition is to focus worldwide attention on the need to develop new energy technologies and to promote ways to conserve energy. The long-range goal of the Knoxville sponsors of Expo '82 is to revitalize the downtown district of the city," said the R/UDAT report.

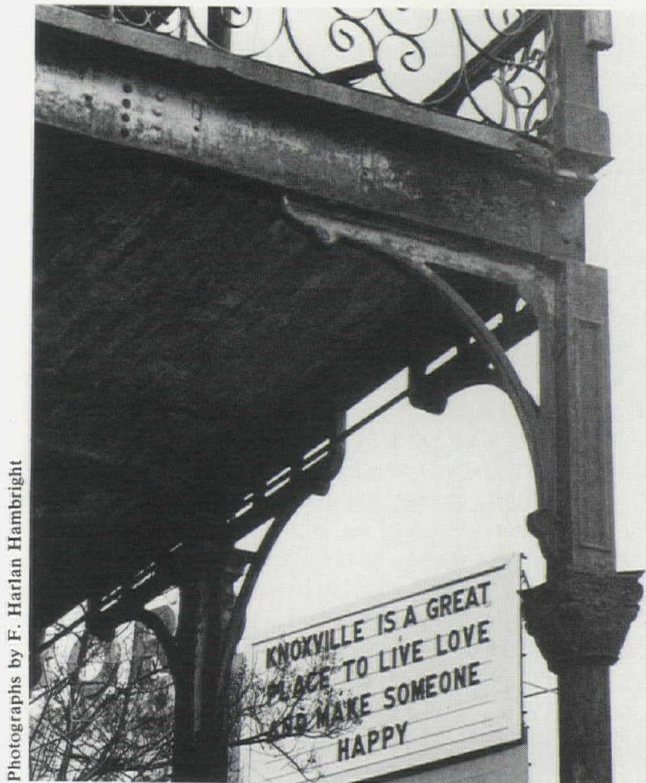
The team noted that the city that plans to host the exposition is "itself a city that by its current design and transportation system, both shaped by dependency on the automobile, represents the end of an era. Our cities must change and respond to the new era characterized by less and less dependence on fossil fuel energy sources."

In his stirring speech at the town meeting, R/UDAT spokesman Goodman noted that the Organization of Petroleum Exporting Countries (OPEC) has called for a 25 percent price increase. He challenged Knoxvilleans to lead the way in engendering a farsighted, energy-efficient life style for all cities—to move back to the central city—especially as a nationwide energy crisis appears more imminent. Goodman received a standing ovation.

"Planning for Expo has raised Knoxville's consciousness of itself as a potential center for energy research and development. The exposition has focused the theme of energy development and can serve to help generate a model for demonstrating future energy use," said R/UDAT. Expo has also focused attention on Knoxville's past and present—and future.

In recommending as many as 2,000 more housing units for central Knoxville (including 500 on the Expo site), R/UDAT challenged the city to become an energy demonstration center of the future. "The permanent development of the Expo site for merely conventional housing or commercial use would not embody the aspirations of Knoxville to be the 'Energy Capital of the World.' Rather than merely seek private developers in 1983, we propose that Knoxville commit to, and begin planning for, an innovative permanent development on the site now."

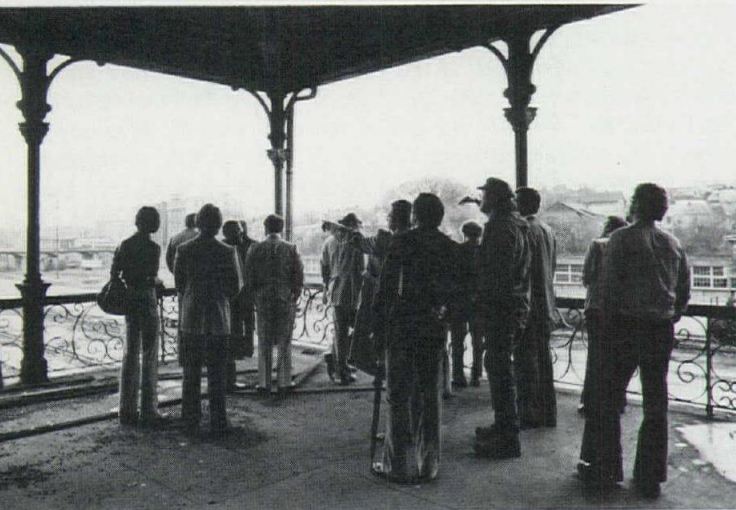
R/UDAT recommended that the site be developed predominantly for residential use demonstrating a variety of housing types and densities, each designed to achieve maximum energy efficiency within conventional market housing. "The entire site



Photographs by E. Harlan Hambricht

Below, rail yards in Second Lower Creek Valley, site of the planned fair. Above, a sign near the site.





The L&N station (top) could be converted to mixed-use, suggested R/UDAT (lower photo) during visitation.

development should maximize energy self-sufficiency, minimize the use of energy-consuming transportation systems and provide operating examples of urban development for a new era of city growth."

In making its recommendations, the team considered a number of site constraints and opportunities for developing the Second Lower Creek Valley. It suggested that at least two existing structures on the site—the old L&N Railroad Station and Millers' Warehouse—could be restored and developed into such mixed-use space as arts and crafts, boutique and restaurant facilities during and after Expo. Other suggestions call for improving access to the site from downtown, the university and adjacent neighborhoods; developing and repairing the creek edge and watercourse; maintaining existent and developing new natural amenities; renovating or removing derelict or unsightly structures from the site, and developing a comprehensive land use plan for future development.

The team recommended the creation of a Second Creek development corporation, composed of local business and civic leaders, government and TVA officials, to have responsibility for the "long-term residual development" of the Expo site. R/UDAT also called for establishment of a "greater Knoxville partnership," which would become a "permanent civic organization responsible for the continuing development of Knoxville."

To help revitalize downtown Knoxville, the team called for major commercial development in two areas of the site's east side—one in and around the proposed rehabilitation of L&N Station; the other on the CBD's new East-West Mall (where a new Hilton hotel is planned).

R/UDAT also addressed the need to develop open space along the Tennessee River at the site's southern edge. One member noted that "Knoxville has turned its back on the river." Riverfront development could include docks or fishing piers, a

riverside restaurant, a university boat house and an open-air concert or band shell.

Another specific feature proposed by R/UDAT was that Henley Street not impose a barrier between downtown and the site. It suggested that southbound lanes be depressed to a lower elevation so that Henley could become a local-express boulevard that bypasses the site development, while affording motorists "an excellent view of the site."

Near the site, the Fort Sanders and Maplehurst neighborhoods could be extended and strengthened through residual housing programs, the team noted.

On the site, the proposed U.S. pavilion could be developed into a center for monitoring and evaluating energy conservation and providing public information on energy. (A detailed plan for reuse of this pavilion has been developed by UT and the Energy Opportunities Consortium.)

R/UDAT emphasized that if its residual goals are to be achieved, the Expo itself must embody certain characteristics including: configuration of roadways adjacent to the site; adequate parking; plans to ensure that construction and operation of Expo have no negative impact on adjacent areas; landscaping; making the Clinch Avenue Bridge a pedestrian link between Fort Sanders and downtown Knoxville; retention of the creek valley's topography.

In its "After Expo" report, the team also dealt with Knoxville's congested highway system, including "malfunction junction" (where three Interstate highways converge near downtown), and roadway improvement plans; public transportation, and parking demand and supply. The team requested KIEE to update its parking plan, with emphasis on outlying parking lots coupled with shuttle bus service.

And finally, the team suggested an international design competition for permanent use of the site. Such a competition would bring international attention to the Expo energy theme and its application for architectural and urban development. It was suggested that AIA and TVA sponsor the two-stage design competition, with KIEE's support and endorsement.

Broad community impacts of "After Expo" were considered in the context of Knoxville's human environment as well as its physical revitalization. The team noted that suburban growth has resulted in a substantial loss of inner city population—from 30,000 to 16,000. In assessing potential effects of "After Expo," the team observed such positive tangible benefits as:

- Creation of a node of activity at the new derelict L&N Station, capable of bringing substantial numbers of people downtown;
- increasing the number of families and individuals in close proximity to downtown, all of whom are potential users of downtown facilities and services, and
- augmenting the market demand for downtown activities, and increasing the economic feasibility of downtown infill development and reuse activities.

R/UDAT strongly recommended a new course of direction for the city if it plans to benefit from the creation of new facilities on the Expo site. Active steps will have to be taken to redirect Knoxville's population and marketing activity from the suburbs to the central city. If not, "it is unlikely that increased demand will be enough to have any visible impact on downtown Knoxville."

The regional context of Expo was not overlooked by R/UDAT. The team considered the area's future settlement pattern and asked if the region will continue to grow in a "casual, decentralized sprawl," or will it reappraise its patterns of growth and settlement to become more energy efficient?

In challenging Knoxville's citizens to think "big" about the symbolic significance of Expo '82, R/UDAT said it only requests "that the theme adopted for the exposition be given its due. Energy can be treated lightly in today's world only at our own peril—and at the peril of civilization as developed in our cited traditions." □

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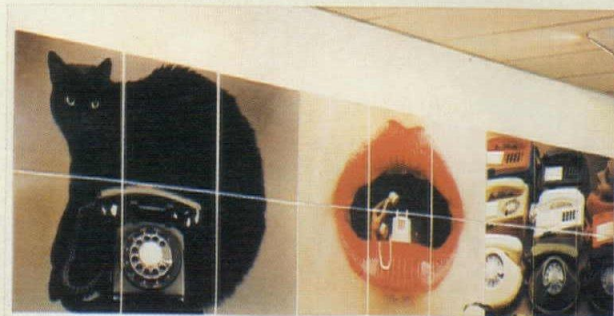
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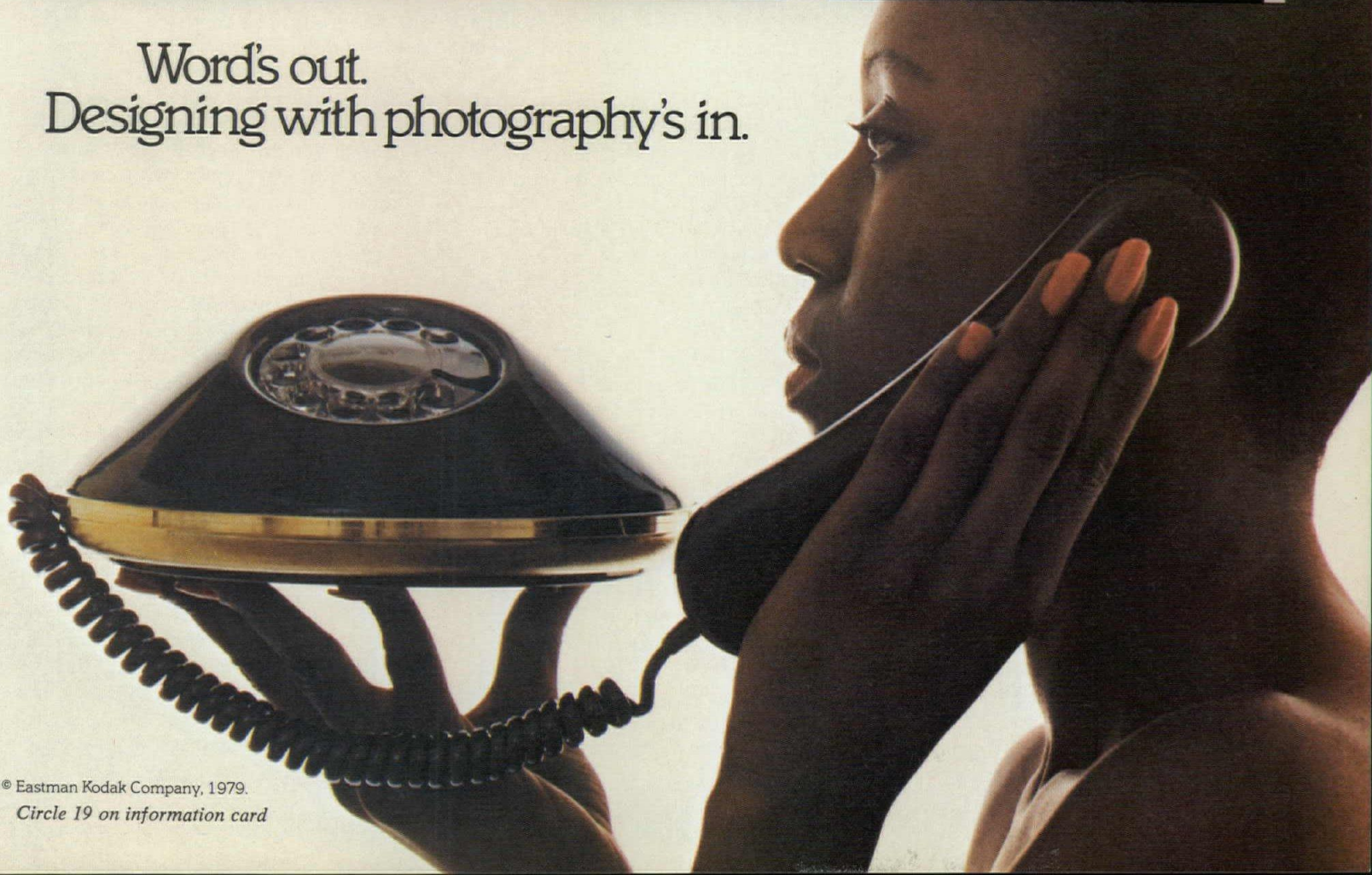
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BOOKS

Goff's 'Individualism' From Three Perspectives

The Architecture of Bruce Goff. Jeffrey Cook, AIA. New York: Harper & Row, 1978. 135 pp. \$20. (Available from the Institute's department of publications marketing: \$18 to AIA members). **The Architecture of Bruce Goff: Buildings and Projects, 1916-1974.** David Gilson De Long. New York: Garland Publishing, 1977. 2 vols. \$90. **Bruce Goff, Architect.** Yellow Stone Art Center (distributed by Prairie Avenue Bookshop, 1900 S. Prairie Ave., Chicago, Ill. 60616), 1978. 30 plates. \$40.

While a book by Takenobu Mohri published in Japan approaches the size of a monograph on the work of Bruce Goff, we will have to take a combination of the three American publications under review as a domestic substitute in expectation of a really comprehensive and artistically adequate documentation of Goff's incomparable importance as an architect, draftsman, painter and teacher.

Jeffrey Cook's book, *The Architecture of Bruce Goff*, is well produced and well written. It is a warm appreciation of a fair number of buildings of the author's choosing. Cook offers his analysis and evaluation in terms of criteria that we often find in the halls of an academe. Although this approach is not without interest, it frequently tells more about the critic than the subject matter. Goff's work is so strongly personal and unique that it speaks always the louder language of emotional impact—more than words can do.

In the midst of an architectural world that reflects much insecurity and even disdains the pioneering work of the early great modernists, Goff always works undisturbed by what he calls the "mainstream of architecture." He says that he is grateful for this.

The idea that Goff is a loner probably comes from his lack of interest in promotional competition. This, alas, leads to a neglect on the part of those who select architects for very large projects. Yet, the evidence shows that the sum total of his work is large by any standard. Also, the perception that he consciously seeks the unusual is unfounded. In fact, he is more careful about finding and understanding his client's needs than many another architect. However, it is the mastery of space, the inventiveness in the use of materials,



the beauty of form and often a fairy tale atmosphere with which Goff endows his solutions. He is a master of "discovering architecture step by step."

The quality of the photolithographic reproductions in Cook's book is much better than I have seen in many recent publications. Although he writes that black and white photographs are "poor communicators of the color and light that distinguish Goff's buildings," the irony is that the publisher affords no more than 11 color reproductions out of 120. (Photo of the Gutman house, 1960, above.) True enough, the excellent color photographs show beautifully the quality of Goff's architecture. Cook also offers in his narrative chronological events in Goff's practice. The book is a little treasure that should adorn the library of anyone who likes architecture.

De Long's study, *The Architecture of Bruce Goff: Buildings and Projects, 1916-1974*, was written as a doctoral dissertation, and it is an impressive piece of scholarship. A complete listing of Goff's work through 1974, extensive biographic information and a selected bibliography give an excellent overview of the architect's life and work.

The bulk of the first volume is a description of every building and project with profuse footnotes and references to interviews with Goff. This material furnishes a tremendous insight into Goff's thinking in general, his views on design and the history of each design. Many

notes relate to the bibliography and the relationships to the work of others.

The second volume, with photographs and drawings much reduced, provides primarily brief visual references to the text. The presentation is sufficient only in the sense that the reader is helped to identify each building or to imagine the full nature of a drawing. The approach is similar to what is done in guides for architectural walking tours or exhibitions. Any large scale monograph would need good full page illustrations, however, particularly in color, and drawings that are less reduced in size. With publishing costs what they are today, we may have to wait awhile.

The portfolio, *Bruce Goff, Architect*, contains more than 100 illustrations. It was produced in connection with an exhibition and provides a splendid supplement to the books by Cook and De Long. There are some photographs, but the importance of this collection is in the drawings. Goff's artistry as a draftsman makes understandable the significance of the ornamental aspects of his designs.

The design for the First National Bank of Independence, Mo., is a good example of how the geometry of the ornamentation becomes a functional part of the very complex structure.

Unfortunately, there are only two color plates of Goff's paintings, one of them done on an interior wall. Goff excels as an artist of abstract expressionistic paintings which often become pictorial, as a stage

setting for an other-worldly scene. The forms are animated and the colors beautiful. Goff produced a large number of paintings, and they should be included in any complete presentation of his work.

It is ironic and contradictory to our traditions that such a superb individualist as Goff still needs to be presented and explained in a country which prides itself on personal expression. Goff should not be categorized in terms of Art Nouveau, Expressionism, Japanese influence or any other influences. Goff is an original designer; since Frank Lloyd Wright, this country has had none like him. Perhaps someone will get the idea that AIA's gold medal should be given to such a strong master of American contemporary architecture.

As was the case with Frank Lloyd Wright, foreign countries have taken the lead in publishing Goff's work. Art historians rather than architects called attention to his importance. It is gratifying to see an increase in publications about Goff in this country. The three publications under review are rich enough to demonstrate the importance of his work.

Bruce Goff has had a great influence as thinker and teacher who tried to formulate the role of the architect. The portfolio's presentation ends with a personal coda by Goff. He writes that "the real architects are the young ones, regardless of age, with continuing enthusiasm, imagination, industry, inventiveness, curiosity and dedication to architecture for all people as their reason for being."

H. H. Waechter, AIA

AD Profiles, 15, 16, 17. London: *Architectural Design Magazine*, 1978-79. 3 vols. \$7.50 each. (Distributed in this country by Rizzoli International Publication, Inc., 712 Fifth Ave., New York, N.Y. 10019.)

Continuing its architectural monographs, *Architectural Design Magazine*, a British publication, has issued three dimensional numbers in its series. Issue 15, entitled "France: The Laboratories of Architecture," is a critique of French architecture and planning over the past decade. It is edited by Haig Beck. One of the guest writers says that the projects presented are "mostly marginal—they are the products of the 'laboratories' of architecture. As such they are 'finds'—those rare examples scattered across the field of contemporary practice."

Issue 17 on "The Beaux-Arts," edited by David Dunster, contains personal reactions of architects and critics to this classical style of the 19th century.

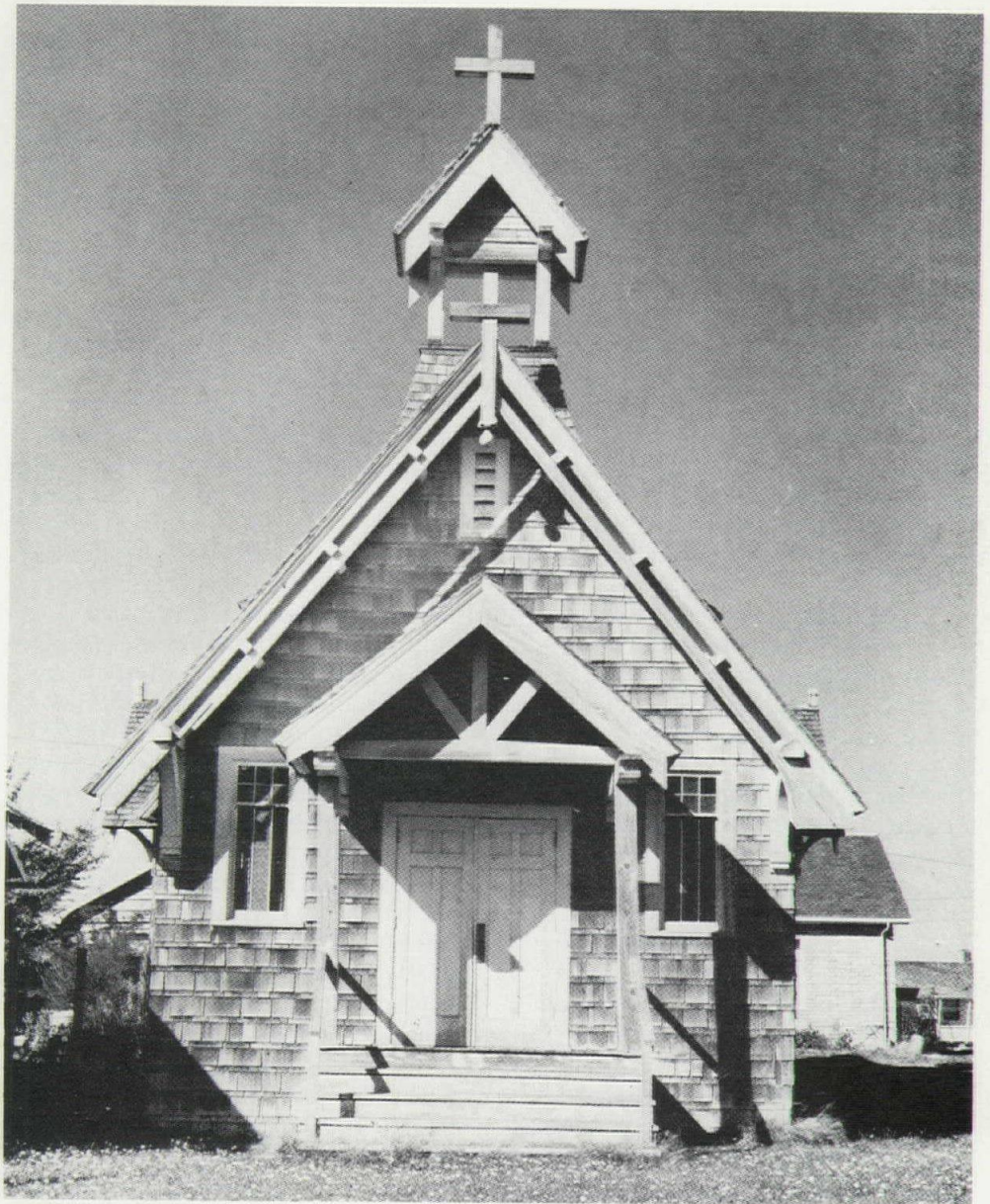
Says guest writer Robin Middleton, "Now that the visual imagery evolved by Frank Lloyd Wright, Le Corbusier and other such latter-day prophets is no longer sufficiently sustaining to architects, they

have turned for inspiration to the long-decided architecture of the Ecole des Beaux-Arts. They might learn from such a study how to compose buildings of dignity and coherence, they might begin to understand once again the felicities of mass set against mass, of volume succeeding volume, so that architecture becomes once again an experience of esthetic delight and fulfillment." But, he continues, architects who do turn to the Beaux-Arts "must be prepared to study with real seriousness the theories and ideals which once lay at the root of such architecture. . . ." This monograph is a good place to begin.

Issue 16 is devoted to a critical analysis of the work of Bruce Goff. It is edited by John Sargeant and Steve Mooring. Ser-

geant says of this American architect: "Goff's work is profoundly American. His constructional dexterity and skill fall squarely into the folklore of Mr. Fixit and the Yankee Tinker. . . . The structure of his buildings is not merely explicit, but *celebrated*, and their presence evokes feelings of the onlooker. In this he meets Sullivan's declaration that integral ornament should be the 'efflorescence of structure,' and the emotions as well as the intellect. . . . In Goff's eyes the message of postmodernism (the return to articulate, witty architecture) is redundant."

All of the monographs are profusely illustrated, and all contribute greatly to increasing knowledge about the architectural heritage, and in so doing point to the future. *Books continued on page 78*



Victorian West. Lambert Florin. Seattle: Superior Publishing Co., 1979. 190 pp. \$14.95. This book contains handsome photographs of gingerbread architecture in California, Oregon, Washington, Colorado, Montana, Nevada, Utah and British Columbia, including mansions, lighthouses, stores, temples, courthouses and other building types. Above is a Catholic church in Warrenton, Ore. Its red cedar sheathing was protection against the battering gales that sweep in from the Pacific Ocean. Primarily a picture book filled with many photographs by Florin, complemented by brief captions, the book is sure to delight lovers of Victoriana.

Recycling Historic Railroad Stations: A Citizen's Manual. Anderson Notter Finegold Inc. Washington, D.C.: U.S. Department of Transportation, 1978. 83 pp. (For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, stock no. 050-000-00143-1.)

The architectural firm of Anderson Notter Finegold Inc. has prepared this study which evaluates eight historic railroad stations adapted to new uses. The stations are in Ann Arbor, Mich., San Juan Capistrano, Calif., Little Rock, Ark., New London, Conn., Savannah, Ga., Lincoln, Neb., Duluth, Minn., and Ogden, Utah. The manual, useful to anyone undertaking railroad station recycling, gives the basic guidelines to follow for successful adaptation to a variety of new uses. It provides a list of resource agencies, funding sources and a selected bibliography.

Frank Lloyd Wright: An Annotated Bibliography. Robert L. Sweeney. Los Angeles: Hennessey & Ingalls, 1978. 303 pp. \$29.95.

It is a formidable task to prepare a bibliography of Frank Lloyd Wright. This comprehensive listing of books and magazine articles by and about Wright contains 2,073 items. Arranged chronologically, the books and magazine articles are listed alphabetically in separate sections year by year. The "ephemeral" publications from Taliesin are grouped together in an appendix. Another appendix gives a list of Wright buildings recorded in the Historic American Buildings Survey.

The Late Middle Ages: Art and Architecture from 1350 to the Advent of the Renaissance. Wim Swaan. Ithaca, N.Y.: Cornell University Press, 1977. 232 pp., 17 color and 300 black and white illustrations. \$27.50.

With this book we leap backward to a period that is pre-Renaissance and which produced a glorious array of buildings, sculpture and painting. The author, a professional photographer, has provided a fine pictorial record as well as a text of great interest.

In the first chapter Swaan relates briefly the historical events of the Middle Ages. Drought, crop failures and the famine that followed, plus the ravages of the Black Death, decimated the population in the early 14th century, causing great social change. Serfdom would practically disappear by the end of the 15th century. Class structure, particularly in relation to the rising stature of the merchant, became much more flexible.

The wealthy merchant became a patron of the arts. With the move from land to city, new money was created through the increase in the number of craftsmen and the formation of guilds and unions. This

opening chapter gives us an interesting historical background for the discussion that follows when, chapter by chapter, we explore the architectural monuments and visual arts produced in England and western Europe in the late Middle Ages.

The perpendicular style in England is thoroughly examined through picture and text, as is the *style flamboyant* of France. By the time the late Gothic appeared, France's great cathedrals were already built. But the addition of flamboyant towers, rose windows and transept fronts brought a new and highly decorative architecture to some of France's beautiful structures.

This thoroughly French style is represented by illustrations of singular beauty, including fortresses, no longer needed in an age of gun powder, that have been transformed into resplendent delights.

In the chapter on Germany and Austria there is a discussion of the use of brick in the northern plains of Europe, where natural deposits of clay provided the building material for a large area which contained no stone. The German craftsmen employed the brick to create patterns, light-play and Gothic height through buttresses and turrets.

The climate and a strong Muslim legacy affected the architecture of Spain during the late Middle Ages when Christian reconquest finally united rival factions and Spain entered an age of great cathedral building.

Portugal, which always seems to bring up the rear in any discussion of Europe, is accorded here a fine conclusion for this study of the last Gothic efforts before the onslaught of the Reformation. There is a description of one of the more romantic and gruesome interludes in royal history when Dom Pedro married Infanta Constanza of Castile, but fell in love with Dona Ines de Castro, a maid of honor in the Infanta's entourage. We continue with tales of further dynastical entangled skeins woven in a bewildering conglomeration of heirs, heiresses, mistresses, lovers and illegitimate offspring. All of this intrigue culminated in the building of the Batalha Abbey, a gem of the late Gothic era.

The book is a scholarly production. The author has included names of craftsmen, designers, masons, masters and architects which should be illuminating for historians. The illustrations are numbered and the text uses the numbers in discussion, making reference simple. There are, however, numbered notes which which prove a great nuisance, since much flapping back and forth between the text and the section containing the notes is necessary. There is a good map, a glossary, bibliography and index. *Elizabeth Class, Washington, D.C.*

Books continued on page 80

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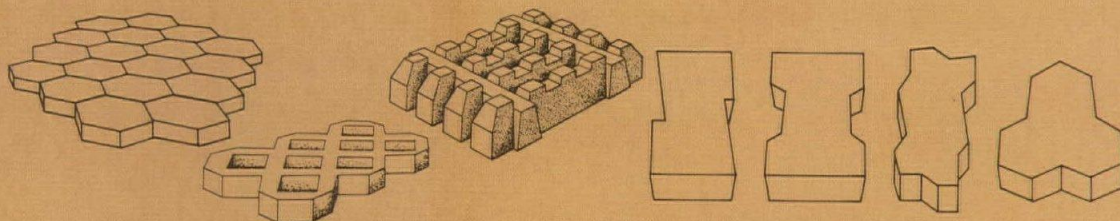
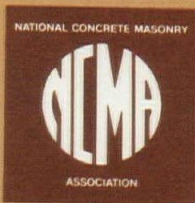


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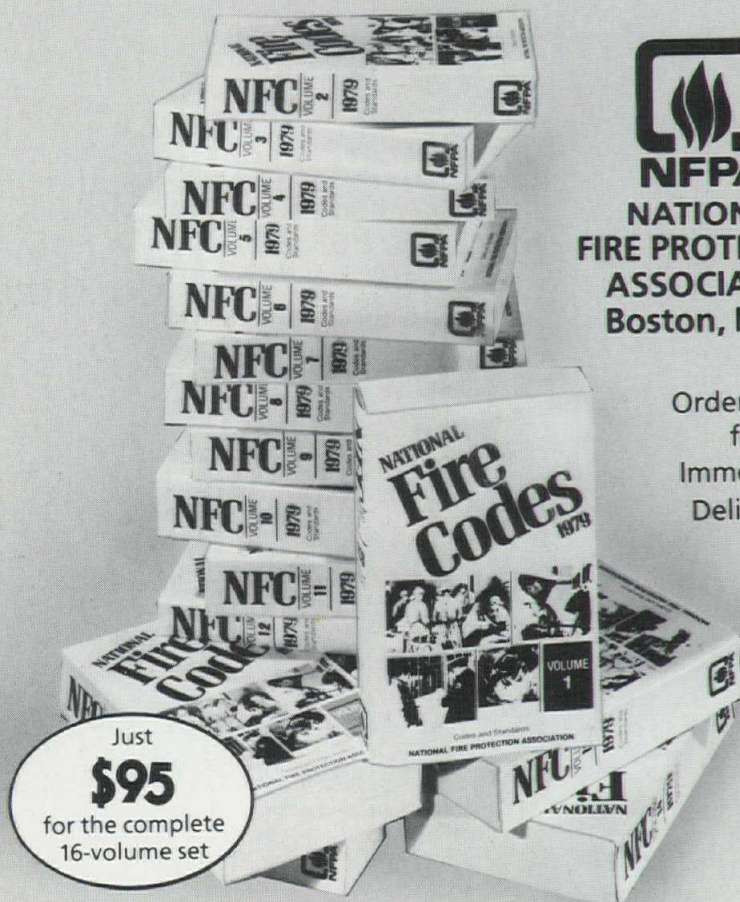
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Books from page 78

Interior Lighting. J. B. de Boer and D. Fischer. London: Macmillan, 1978. 336 pp. \$59.50. (Distributed in the U.S. by Scholium International Inc., 130-30 31st Ave., Flushing, N.Y. 11354.)

What a comfort to have lighting engineers say that "the lighting in a given interior is not good unless the occupants like it." Lighting, the authors of this book contend, is as much an art as it is a science. Their aim in this comprehensive book is to give the reader, whether engineer, architect or interior designer, a better understanding of the principles of indoor lighting practice and lighting design.

The book is divided into four parts, the first of which is on fundamentals. Attention is given to lighting levels, preferred luminances, glare, color, ventilation, airconditioning and acoustics and energy considerations. The next part is on lighting equipment, and here are discussed lamps, luminaires and other equipment, the electrical installation and lighting maintenance. The third part, on lighting design, considers lighting criteria, lighting codes and calculations and measurements. With these three parts understood by the reader, he may turn to the final section on applications. Practical advice is given on industrial lighting and lighting in offices and schools, in shops and stores, in museums and art galleries, in hotels, in hospitals and in sports buildings.

De Boer has been president of the Netherlands Institution for Illuminating Engineering; Fischer is professor of illuminating engineering at the Technological University in Eindhoven, the Netherlands.

Executive's Guide to Office Leasing: Complete with Check Lists and Illustrative Specimens. Bernard Schulak, AIA. West Bloomfield, Mich.: The author, 1978. 172 pp. \$17.50.

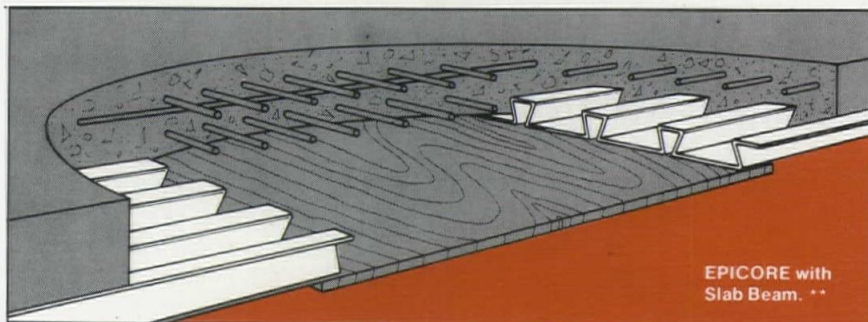
Any executive contemplating leasing office space will find valuable information in this book. The task of renting an office for the first time can be a nerve-wracking experience—it's a "jungle" out there, Schulak says. Like all jungles, it's "easy to be destroyed if one does not know the rules of survival." He gives those rules, making the complexities of leasing an office easier to comprehend. He tells the dangers to avoid, giving step by step solutions to the problems. In the first part of the book, Schulak gives general items to be considered. The longer second part is on specifics, with illustrative specimens for consideration in the negotiation and drafting of an office lease.

The book is available from the Michigan Society of Architects, Architects Bookstore, 553 E. Jefferson, Detroit, Mich. 48226. □

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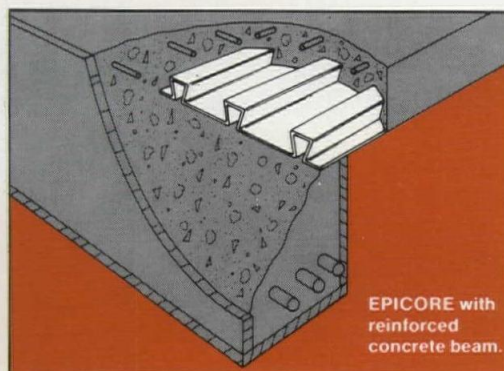
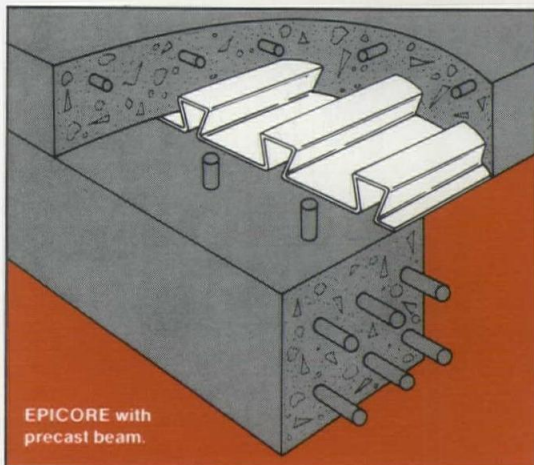
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Hexagonal-Module Wright House Is Placed on National Register

The Hanna-Honeycomb house at Stanford University in California has been placed on the National Register of Historic Places. The house was designed by Frank Lloyd Wright for Professor and Mrs. Paul N. Hanna who have donated the house to the university as a residence for visiting scholars of world distinction.

The physical preservation and maintenance of the house has been assured by an endowment gift of \$500,000 from the Nissan Motor Co., and now Stanford University is seeking donors to endow a chair to be occupied by a succession of statesmen, scholars, writers, artists, scientists, philosophers and others. Richard W. Lyman, Stanford's president, has appointed a board of governors for the house to oversee its use, maintenance and protection and to suggest names of scholars who may occupy the endowed chair and live in the Hanna-Honeycomb house.

The house is Wright's pioneer effort with the geometry of the hexagon. Several years before the Hannas commissioned Wright to design a house, the architect had been looking for a client who would be willing to be part of an experiment to "break open the box" of conventional square and rectilinear buildings. The 120-degree angle, Wright thought, was more conducive to human movement and response than the 90-degree angle.

The main house of Hanna-Honeycomb is only one part of a complex of several buildings, terraces and gardens which follow the hexagonal module of the bee's honeycomb. The six-sided geometric figure or its sections are used in the home furnishings and in the landscaping as well. Designed by Wright in the mid-'30s, the brick, redwood and glass structures are built into the brow of a hill. There are five chimneys which partially support the gently sloping and flat roofs, and roofs and trellises extend as wide overhanging eaves for protection from sun and rain.

The buildings are constructed on a concrete mat into which are cut the hexagonal block modules. A 4x4-foot cross section tunnel runs underneath the long axis of the main house. This tunnel contains all of the utilities which were stubbed up through the concrete mat when poured. Chimneys and brick retaining walls were laid on the cured mat, and then the roof was cantilevered to extend from the chimney masses and on fitch-plates strung over hexagonal piers.

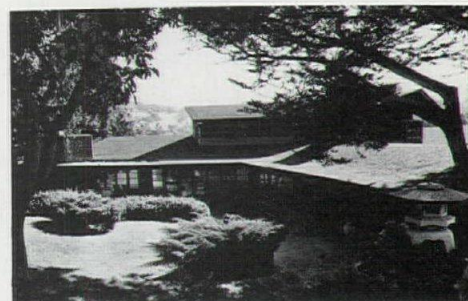
The framing of the exterior walls is of fir studs laid flat with 16-inch centers. Twelve-inch-wide redwood boards are fastened horizontally to the studs. The

edges of the boards are fitted to edges of redwood battens in such a way that friction between board and batten holds the redwood to the studs with screws only in the battens. This solution leaves the wide boards free to contract or expand with temperature changes.

The interior surface of all perimeter walls is identical—horizontal redwood board and batten screwed to the studs. Partition walls are identical in materials and construction to the exterior walls.

The use of the hexagonal angle makes the rooms flow together in a U-shape or half-hex pattern around the kitchen core. All rooms, except the kitchen and baths, open onto terraces which connect with the water cascade and pools and with the summer house, carport, guest house and hobby shop. Two inverted tree roots in the garden are sprayed with a fine mist through which sunlight creates rainbows. In the entrance driveway is a sculptured stone urn from Wright's Imperial Hotel in Tokyo.

The Hannas spent two years with Wright planning the house, moving into the main house in 1937. The entire project was designed to be built in three phases to meet the financial conditions of the owners. The main house and carport were built first. Later buildings and alterations were done according to Wright's original plans.



Two phases in the project remain. The first is the remodeling of the guest house and hobby shop to convert these quarters into an apartment for a caretaker couple to supervise the maintenance of Hanna-Honeycomb and to help interpret the architecture to the interested public. Preliminary sketches have been prepared by the Frank Lloyd Wright Memorial Foundation. The final phase planned by the Hannas would focus on several small but significant refinements designed by Wright in the beginning. They were not executed due to time and financial restrictions. For example, glass in the clerestory was intended to have wooden ornamental scrollwork screens.

In 1966, the Hanna-Honeycomb house was designated by AIA as one of 17 buildings designed by Wright "to be retained, as an example of his contribution to American culture."

Preservationist Effects in Tax Act Confirmed in Economic Analysis

The bottom line of a real estate deal is what really counts in determining whether an income-producing historic structure is saved or demolished, say some observers. They question whether the Tax Reform Act of 1976 and its incentives for rehabilitation are strong enough to save historic property over the long haul. While nearly everyone agrees that short-term tax advantages are provided, what about the economic benefits over the life of the building—after the first five years of tax shelter are less protective?

Facts have been unavailable until recently to make a considered judgment, but now Stephen F. Weber of the National Bureau of Standards' center for building technology thinks he has the data for an impartial analysis of the economics of the situation over a structure's life. He has written a report called "Historic Preservation Incentives of the 1976 Tax Reform Act: An Economic Analysis" in which he analyzes the economics of rehabilitation versus demolition from the perspective of life cycle cost analysis both before and after the enactment of the tax act. He concludes that the tax act has "significantly affected the economic trade-off between rehabilitation and demolition" and that the economic advantages, even over the long term, are on the side of rehabilitation.

Under the act, the owner of a "substantially" rehabilitated historic building can depreciate the entire cost basis of the structure as though it were new, and rehabilitation expenditures may be amortized over 60 months rather than over the entire remaining life of the building.

The act also penalizes demolition. Before the act was passed, the taxpayer

continued on page 86

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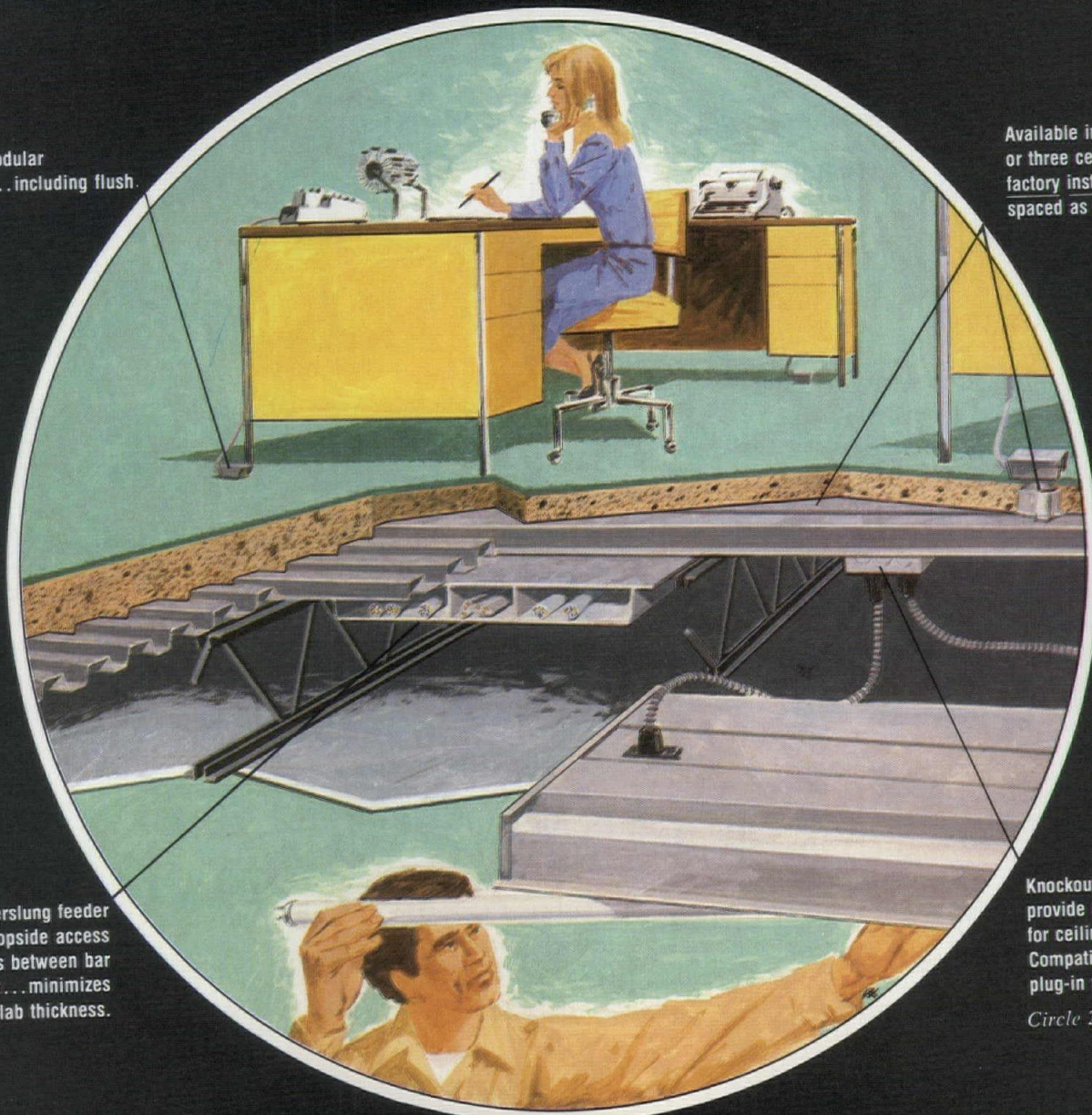
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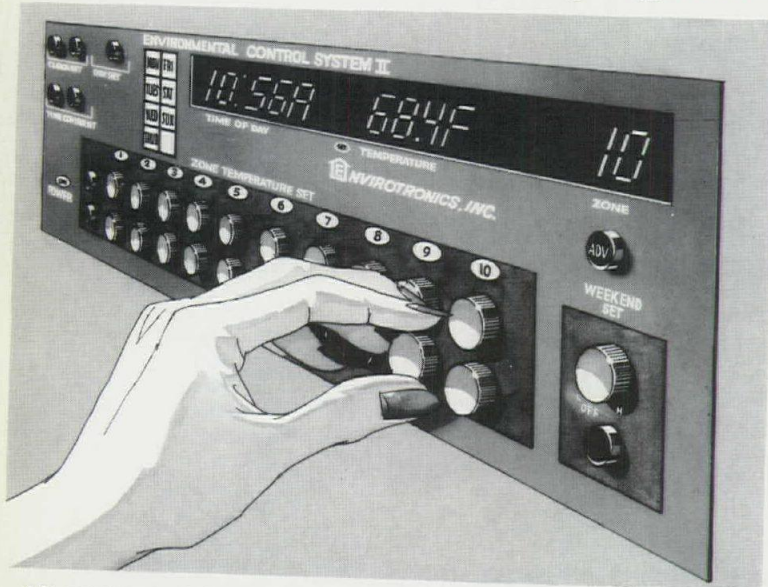
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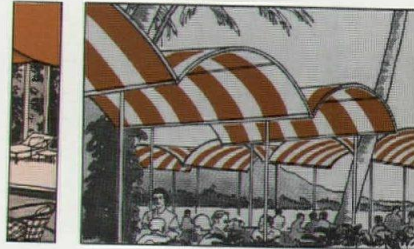
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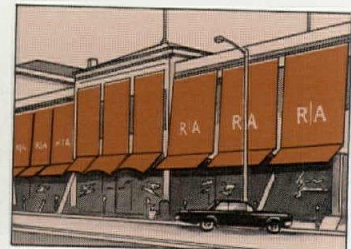
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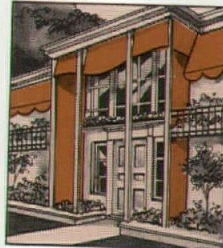
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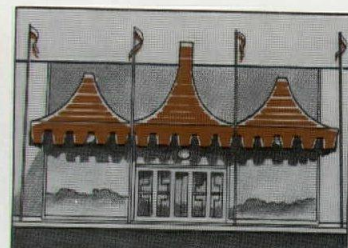
Arches



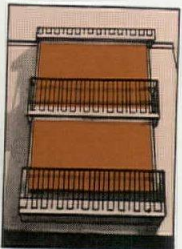
Identification



Townhouse Shades



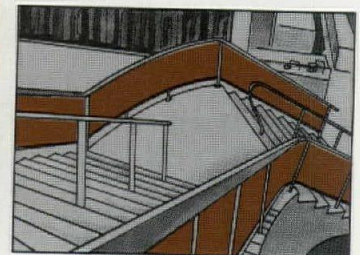
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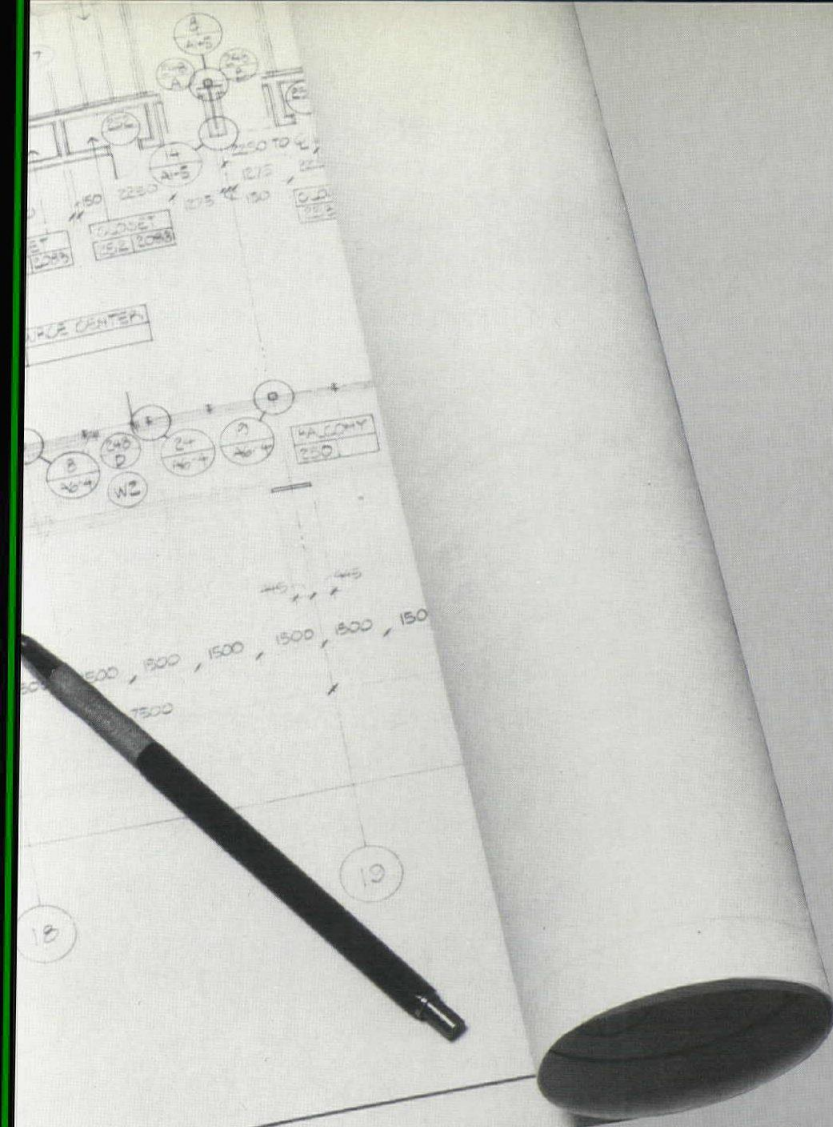
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Preservation from page 82

could deduct demolition costs in the year in which they occurred and the remaining undepreciated basis of the building as current expenses, provided the property was not acquired for the purpose of demolition. Now, demolition related costs must be added to the value of the land, offering no tax benefits until the property is sold, at which time they can help reduce capital gains taxes. Another penalty involves the depreciation of the replacement building, which is denied accelerated depreciation, with the taxpayer permitted to use only the straight-line method.

Weber's focus is upon the income tax effects of rehabilitation or redevelopment, and all other consequences of such decisions "are ignored by assuming that the

before-tax costs of both options are equal." Only nonresidential buildings are considered; the possible effects of inflation are ignored.

Weber's life cycle cost model, as he explains, calculates the sum of the following items: "(1) rehabilitation costs (or demolition and construction costs); (2) minus the present value of annual depreciation or amortization write-offs; (3) plus the present value of the capital gains taxes and recapture taxes due when the property is sold, and (4) minus the present value of the proceeds from the sale." Calculations are made for rehabilitation and for redevelopment both before and after the tax act.

On the basis of the life cycle cost analysis, Weber finds the tax act "tipped

the scale in favor of historic preservation." Before the act was passed, rehabilitation was between 4 and 9 percent more costly than redevelopment; after the act, rehabilitation is between 13 and 28 percent less costly.

Potential investors and current owners of income-producing historic property "now have a strong incentive to consider rehabilitation as a serious alternative to demolition and redevelopment," Weber says. Over the life of the building, the advantages are on the side of preservation.

The report is available for \$1.50 from the U.S. Government Printing Office, Washington, D.C. 20402. (stock number: 003-003-02015-0).

News/Energy

One-Fourth of Needs from Sun By 2000 Is the Goal of Coalition

In a recently published report, "Blueprint for a Solar America," a coalition of solar energy advocates has called upon President Carter and Congress to adopt programs that would enable the country to obtain a fourth of its energy from the sun and other renewable resources by the year 2000. Renewable resources—solar, wind, hydropower and biomass—now account for about 6 percent of our energy consumption.

The report maintains that this level of solar development "need cost no more—and could cost less—than would a program to obtain the same amount of energy using nuclear power or synthetic coal-based fuels. . . . The net costs to the federal government over the next 22 years would be approximately \$50 billion, or an average of roughly \$2.5 billion per year." If solar energy were subsidized as much as gas, electricity and nuclear fuel, argues the report, "the impact would be revolutionary." The lowest estimate of the amount of government subsidies for all major forms of energy is \$200 billion. In contrast, the subsidies granted so far to solar energy development are less than 1 percent of this figure.

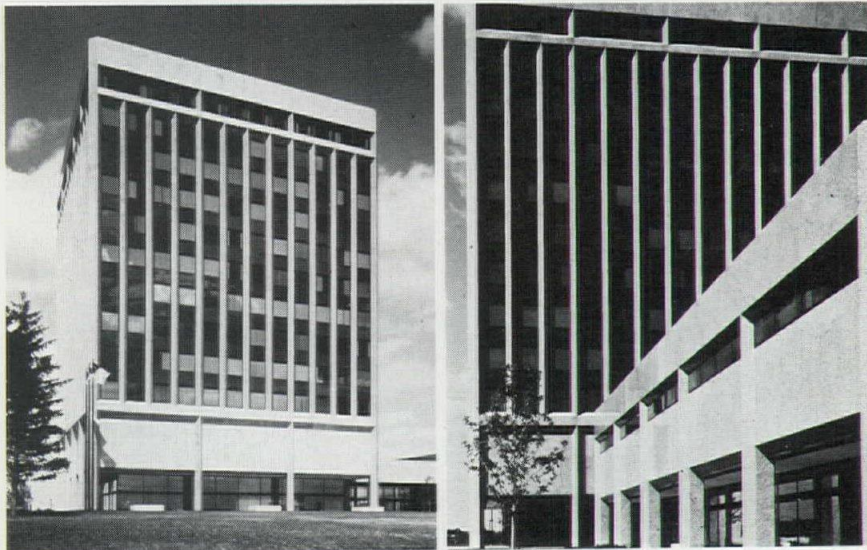
Suggesting that the accelerated use of solar energy would increase employment, improve environmental quality and diminish balance of payment problems, the report called for the following initiatives, among others:

- A solar energy development bank should be established to provide long-term, low-interest loans to owners and builders;
- regulations for all federal homeowner-loan programs should be revised to include solar installations among eligible activities and include loans for retrofitting, purchasing new solar homes and for lease or rental of solar equipment;

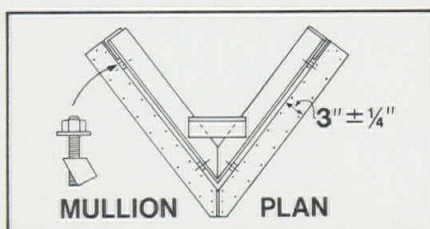
Energy continued on page 88

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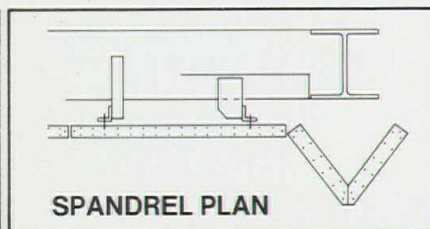
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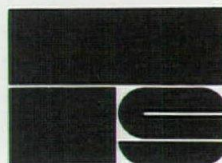


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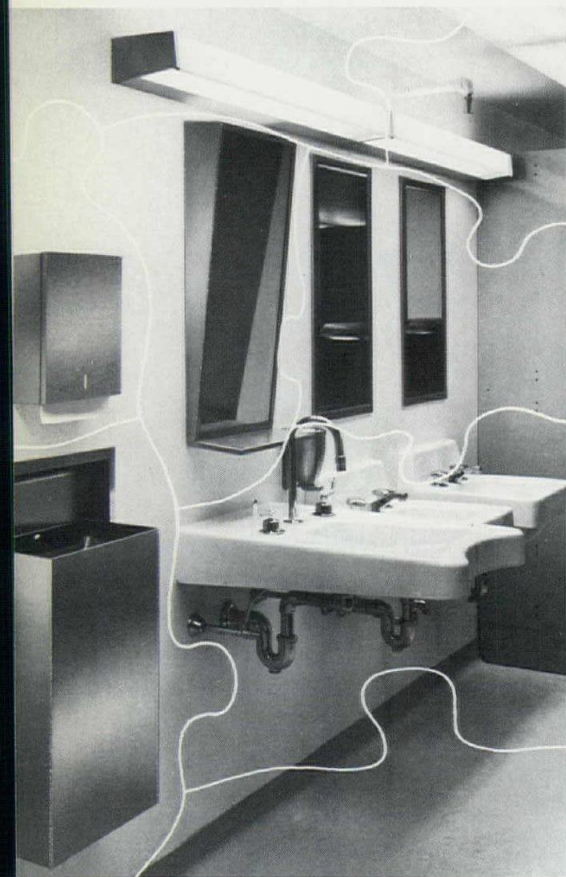


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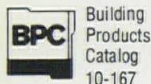
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Energy from page 86

- grants should be provided directly to low-income persons to meet all or part of the costs of installing solar technologies;
- industry should be granted a 30 percent tax credit for investments in equipment used to manufacture solar hardware;
- states should be encouraged to enact solar tax incentives;
- a tax credit equaling 40 percent of the incremental cost (if any) of passive solar structural features should be legislated;
- uniform methods of testing and certifying the performance of solar and other renewable energy systems should be developed;
- the federal government should purchase solar equipment for utilization in federal facilities.

The report urges the government to make a major long-term commitment to accelerate the development and use of solar energy: In fiscal year '80 budgetary levels should rise to \$1 billion and by FY '82 solar energy should be given clear priority over all other energy programs. The Administration's budget request for 1980 is \$650 million. Over the next 10 years, expenditures for solar energy research, development and demonstration should total at least \$30 billion. The report also called for the creation of a solar policy council to be headed by the vice president, a model solar building code and uniform testing for solar equipment.

"If our goals are realized, by 1985 the average of 80 percent of all new buildings will have conventional fuel bills 40 percent lower than the average for similar buildings constructed in 1975-76," said the report. "Eighty-five percent of all new buildings will be achieving 60 percent savings by 1990 and 90 percent of all new buildings will be achieving 80 percent savings per square foot by the year 2000."

The report concluded that if this program of tax credits, loans, guarantees, demonstration programs and other positive inducements to the private sector to make solar choices is implemented, "America will lead the world into a solar future." Denis Hayes, chairman of the Solar Lobby, said, "The President knows what the goal is and he knows what must be done to meet it. Now he must decide if he wants to lead America into the solar age or if he wants to hand over that leadership to others."

A report from the Office of Science and Technology Policy and the Department of Energy was not as optimistic for the future of solar energy. It said that a longer time frame is involved, particularly for the use of photovoltaics. According to the study, photovoltaics will not be capable of providing 10 percent of the nation's power for as long as 30 to 50 years. The study saw no one choice among photovoltaic options now ready for commercialization

and instead recommended continuing engineering research in the field. Photovoltaic cells now cost between \$5 and \$10 per peak watt. To be competitive they must drop to between 50 cents and \$1.
Nora Richter

Better Climatic Data Required By Designers, Government Told

Although building professionals are aware of solar radiation as a climatic factor in energy conservation, there are equally relevant climatic considerations that are underused, such as wind, humidity and ground and sky conditions. To discuss and make recommendations on climate and architecture, a conference of 50 professionals was recently held in Washington, D.C., sponsored by the National Oceanic and Atmospheric Administration (NOAA), the National Climatic Center of the Environmental Data Service and the Department of Energy.

A report of the conference recommendations will be published by the AIA Research Corporation, organizer of the conference. The National Climatic Center anticipates the publication of a climatological summary for each of the 138 major U.S. weather stations to be made available to all interested design and building professionals. This will add to the ultimate goal of the development of regional guidelines for energy conserving buildings.

The participants at the conference commented on the current climatic data of NOAA, saying that designers "urgently require" maps showing regional and local scale topography, graphics which reflect the interrelationships among climatic elements, information on climatic peculiarities and raw data and statistics for different hours of the day and seasons. They expressed the need for more data acquisition delivered in a manner allowing for rapid recognition and response.

For example, the participants said that airport data are not representative of areas being developed for homes and apartments. Current data are often incomplete and are for static values rather than for operational and hourly event values. Degree-day data, they said, may result in overdesign and a balance point temperature approach would be preferable.

The concepts linking climate and architecture generate an energy conservation/passive solar checklist. It was suggested that architects should consider the following early in the design process: Is the building designed for protection from outside temperatures (underground design, compact forms to minimize surface exposure, buffer storage or utility spaces to the outside, movable insulation to pre-

continued on page 90

The American Institute of Architects

Energy Planning for Buildings

Michael M. Sizemore AIA
Henry Ogden Clark AIA
William Ostrander PE

Building owners expect their architects and engineers to have the practical knowledge it takes to translate energy theory into a reliable form of practice.

This book, written by two architects and an engineer who have hands-on experience in energy-conscious building design and redesign, does just that. It presents a proven process that design professionals can use (or adapt) to study the present energy performance of a building, uncover opportunities for energy-conscious improvements, evaluate those opportunities, and see to it that they are carried out to the owner's best benefit.

The book describes in detail a manual technique for calculating energy usage and shows in a sample problem how that technique can be applied. This allows the reader to evaluate any energy design solution, including solar assisted alternatives. It also provides a basis for understanding computer-aided energy estimating techniques.

In developing their work, the authors have recognized that non-energy related concerns such as user comfort, environmental impact and visual appearance are as important in an energy-related design as energy performance itself, and they urge designers to iden-

tify these at the outset of a project and to keep them in mind to the end.

An opening chapter offers a look at the basic concerns of energy planning, including such concepts as comfort; illumination and daylighting; the building envelope; heating, ventilating and air-conditioning; and the very concept of energy itself.

Chapter 2 takes up the roles and responsibilities of the team needed to carry a project through to a successful end. Team members discussed include the owner, the architect/engineer, the building users and operators, energy suppliers, product manufacturers and building officials.

Chapter 3, a key part of the book, shows how to study a building's present performance (or, in the case of a new building, analyze a set of building plans) so the energy planner can examine the impact of any proposed changes suggested as a way to greater energy efficiency.

Chapter 4 pinpoints those opportunities, describing the best way of identifying them. The following Chapter 5 then shows how best to narrow the list of possibilities to those that make the most sense in terms of cost, time, payback and technical feasibility. Two

levels of evaluation are given—"quick" and "detailed."

Chapter 6 shows what is needed to carry out the recommendations stemming from the evaluation, and offers much sound advice to the energy planner and owner for monitoring the results and maintaining the renewed building at a peak of performance.

This chapter is followed by a sample problem which illustrates the procedural steps presented in the various chapters.

Finally, an appendix includes discussions on system response and cost benefit analysis.

There is also a glossary and a practical reference list.

ENERGY PLANNING FOR BUILDINGS fills a serious need for a practical, process-oriented book which energy planners can use, and owners can refer to, as they embark on a new building project or go about redesigning an existing one for greater energy efficiency.

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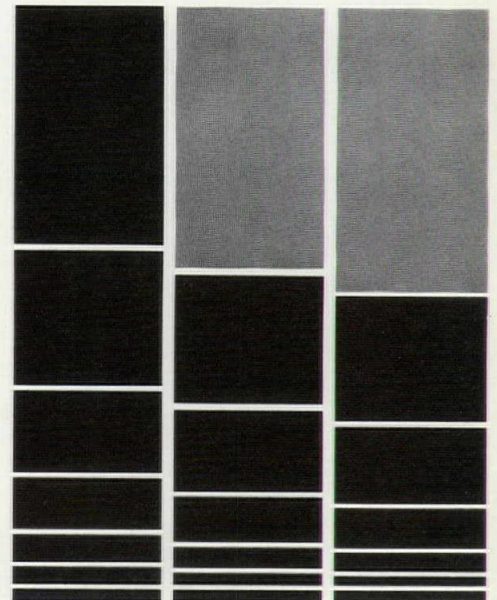
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Energy from page 88

vent excessive loss through openings at night)? Is it designed for protection from summer solar overheating? From winter wind infiltration? From high humidities? Have passive solar heating and cooling elements been included for the particular climate?

DEATHS

Edward C. Brett, Sun City, Calif.
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Grant Curry Jr., Pittsburgh
Stephen N. Dam, Seattle
A. P. Davis, Washington, D.C.
George Barber Davis, Baltimore
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F. D. Harrington, San Diego
I. L. Hyland, Quincy, Mass.
C. Raimond Johnson, Wilmington, Calif.
B. Kenneth Johnstone, FAIA, Pittsburgh
A. H. Lange, Edina, Minn.
Thomas E. McMullin, Drexel Hill, Pa.
Theodore S. Miller, West Pittston, Pa.

BRIEFS

Cornell University's school of architecture will give a six-week credit introductory program in architecture for high school students from June 26 through Aug. 10. It

is aimed at giving students who may enter the profession an opportunity to become involved in the design process. Application may be made to Director, Introductory Program in Architecture, Cornell University, 105 Day Hall, Ithaca, N.Y. 14853.

Proceedings of an international conference on the weathering and protection of stone monuments, held in Paris in 1978, are now published and may be obtained for 350 French francs from CEBTP, Service d'Etude des Matériaux, Domaine de St. Paul, 78470 St.-Remy-lès-Chevreuse, France.

Preservation of the built environment is the focus of a national film and video competition, sponsored by the National Trust for Historic Preservation. Up to six prizes of \$1,000 each will be awarded. Entries deadline is Aug. 1. For further information, contact: Audiovisual Assistant, NTHP, 748 Jackson Place N.W., Washington, D.C. 20006.

The National Bureau of Standards' center for building technology has received the Charles S. Whitney medal for engineering development from the American Concrete Institute. The award to the center is for "past and continuing, great contributions to research on cement, concrete and structural design of reinforced concrete build-

ings and to advancement of national and international performance codes and standards for concrete construction."

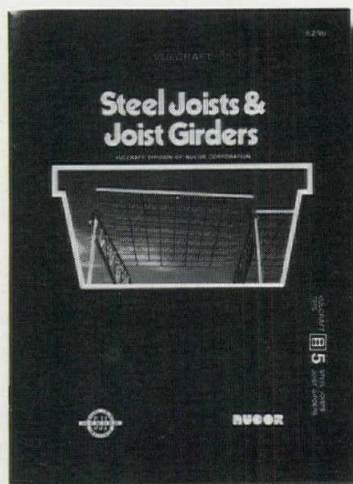
Photographs by Robert Mooney, AIA, of the Mississippi River as a boulevard are on view in the Chicago Public Library and Cultural Center through Sept. 9, after which the exhibit will travel to other American cities including Washington, D.C., Normal, Ill., and Champaign, Ill. Some of the photographs were in this magazine's February issue.

Paul Gapp, architectural critic for the past seven years for Chicago's *Tribune* has received a 1979 Pulitzer Prize for criticism. He has served as executive director of the Chicago Chapter/AIA and the Illinois Council/AIA. He once wrote for the defunct *Daily News*.

Sir Christopher Wren has been selected by the Bank of England to appear on its new 50-pound note. Wren, one of Great Britain's most renowned architects, shares the honor of appearing on a bank note with such historic figures as William Shakespeare and Sir Isaac Newton.

The National Sculpture Society has elected Elmer E. Botsai, FAIA, past Institute President, and John Noble Richards, *continued on page 94*

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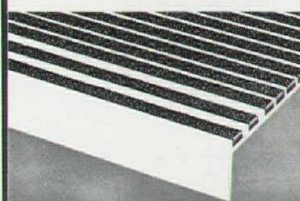
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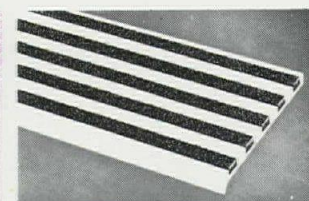
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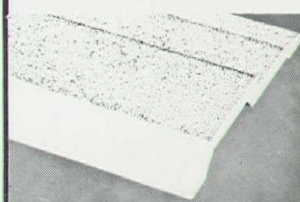
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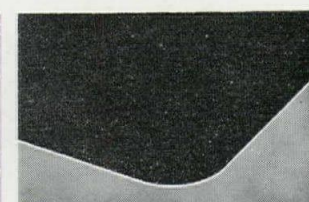
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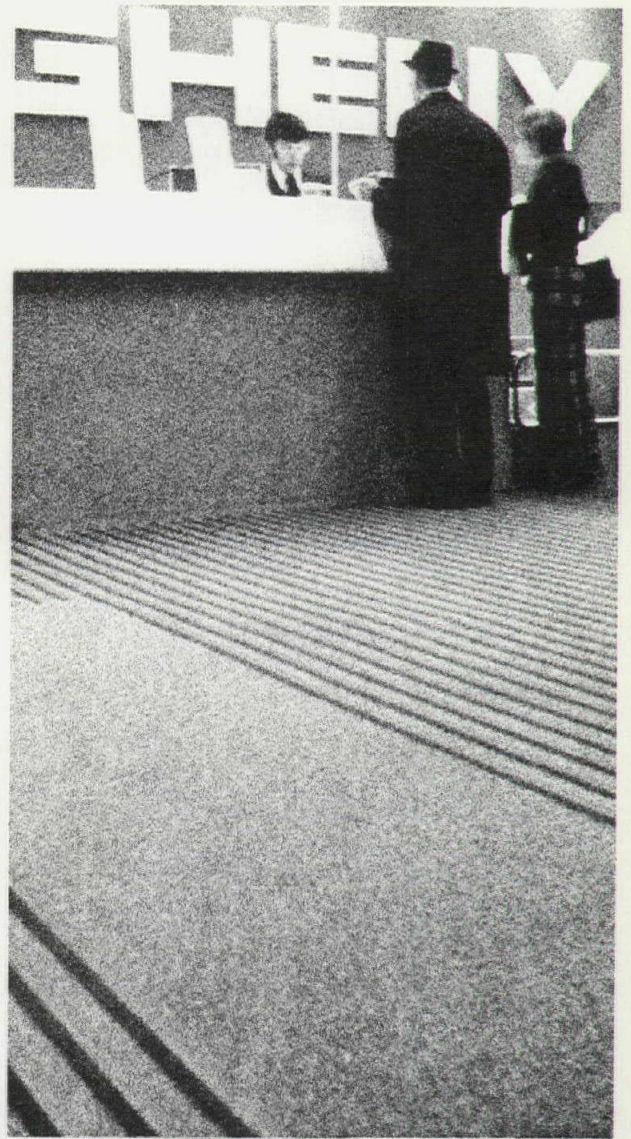
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Briefs from page 90

FAIA, as allied professional members. Organized in 1893, the society is the nation's oldest organization of professional sculptors. E. James Gambaro, FAIA, was recently re-elected second vice president; serving on the council of directors are C. Dale Badgley, AIA; Ferdinand Eiseman, AIA, and Edwin D. Thatcher, AIA.

Solar Law Reporter is a new bimonthly periodical designed to help development of a legal framework in solar energy utilization. For additional information, contact: *Solar Law Reporter*, Solar Energy Research Institute, 1536 Cole Boulevard, Golden, Colo. 80401.

The 29th architecture and garden tour of Japan and Korea, planned and directed by Kenneth M. Nishimoto, AIA, will depart on Oct. 5 from California. The 25-day study tour is designed for architects and allied professionals. Contact: Kenneth M. Nishimoto, AIA, 147 S. Robles Ave., Pasadena, Calif. 91101.

The Women's School of Planning and Architecture will take place on Aug. 9-23 at Regis College, Denver. The theme is "Transitions: Designing for the Future as if Women Mattered." Participants may attend the full two-week program or a four-day weekend session on the future

from a global and a personal perspective. For information, contact: WSPA, Box 102, Palomar Arcade, Santa Cruz, Calif. 95060.

"Conserving Architectural Resources" is an annotated bibliography prepared by the committee on historic resources of the Boston Society of Architects/AIA. It is available for \$1, to cover postage, from: BSA, 320 Newbury St., Boston, Mass. 02116.

Gregory E. Franta, AIA, who serves as a liaison between the architectural profession and the Solar Energy Research Institute, has been elected to the board of directors of the American section of the International Solar Energy Society. He also serves on the board of the Colorado Society of Architects/AIA and is president of the Colorado West chapter/AIA.

William Murtagh, the nation's first keeper of the National Register of Historic Places, a position he has held since the post was created in 1967, has resigned to become director of Columbia University's historic preservation program in the graduate school of architecture and planning.

Educational opportunities in solar energy are outlined in the *National Solar Energy Educational Directory*, compiled by the

Solar Energy Research Institute, Golden, Colo. The directory lists about 700 educational institutions which offer 1,200 solar energy related courses and programs. It is available for \$4.75 from the U.S. Government Printing Office, Washington, D.C. 20402 (stock number: 061-000-00210-3).

James Leslie Bodnar, a practicing architect engaged in graduate work at Yale University, is the recipient of Washington University's school of architecture's James Harrison Steedman traveling fellowship. He also won a companion prize, a fellowship of the American Academy in Rome.

Persons wishing to pursue study and research in the humanities are invited to apply for fellowships in the 1980-81 program of the National Endowment for the Humanities. Contact: Division of Fellowships, Mail Stop 101, NEH, 806 15th St. N.W., Washington, D.C. 20015.

The Masonry Research Foundation has been chartered in the District of Columbia as a nonprofit corporation for the purpose of "conducting, contracting for or otherwise engaging in or supervising" research into the application and design of masonry. It is initially supported financially by the eight member organizations which constitute the Masonry Industry Committee. □

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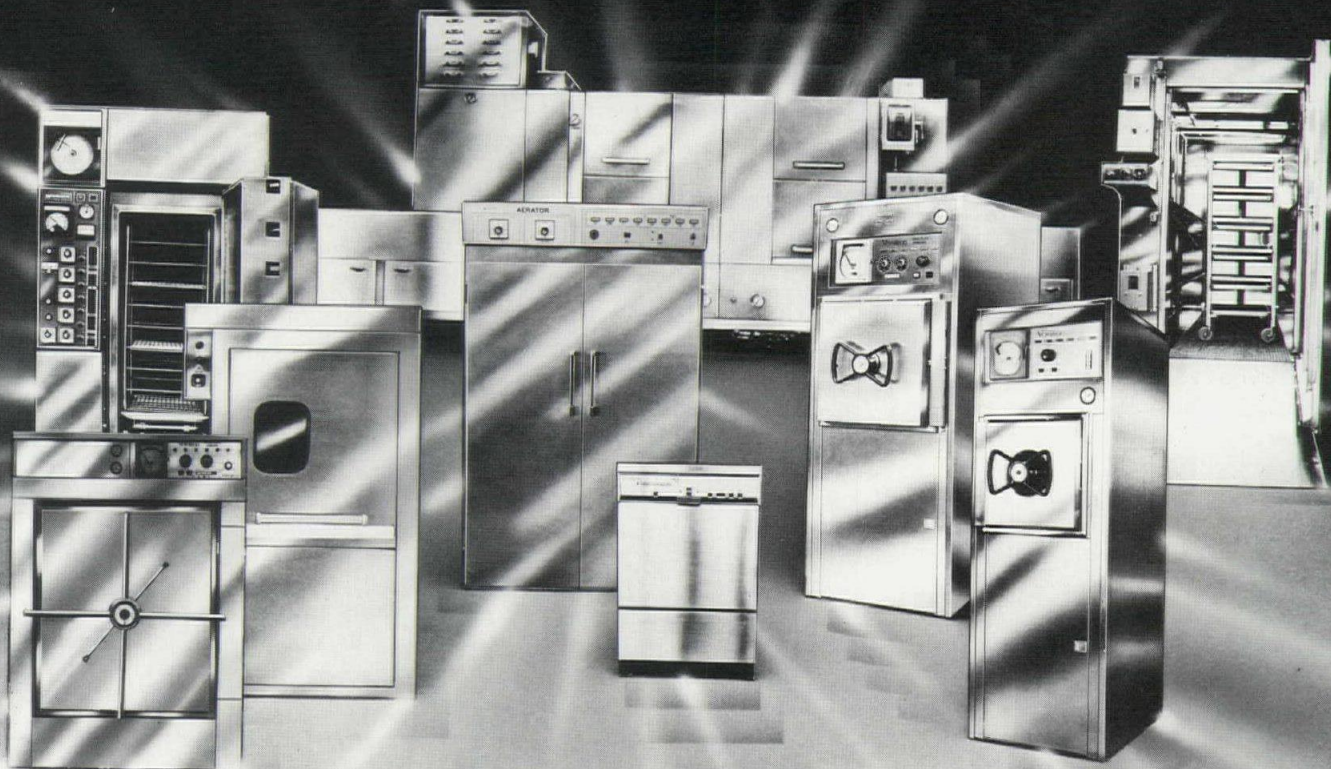
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