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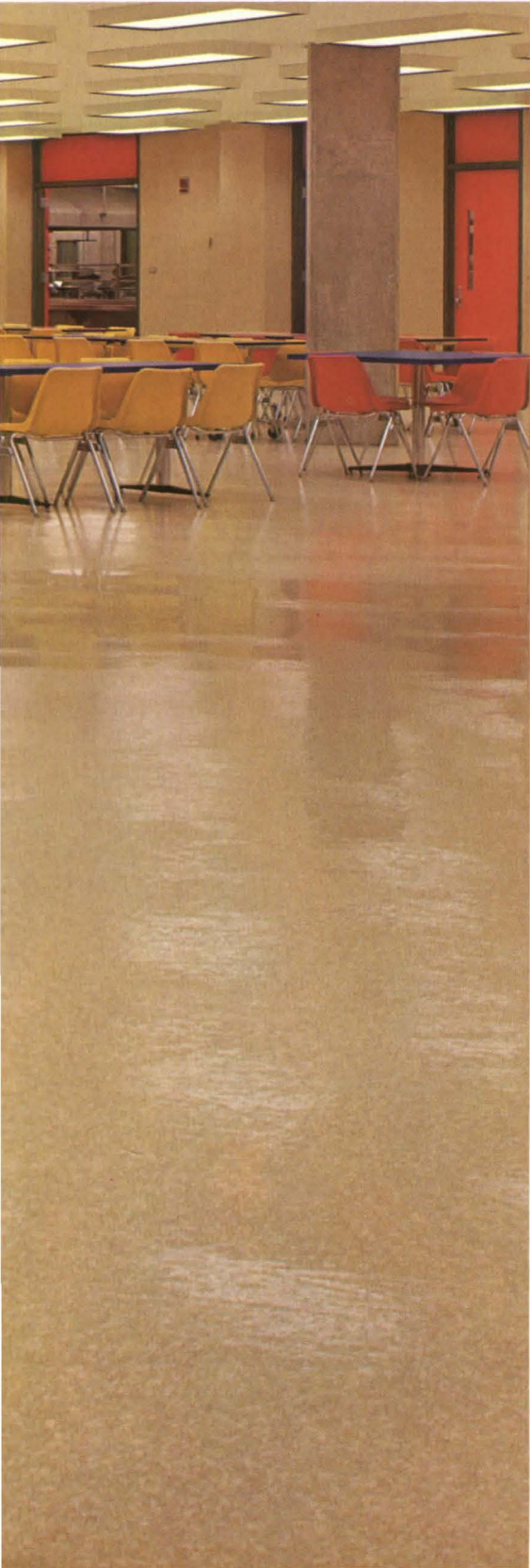
That's why, at Durfee, you'll find Brigantine in heavy-traffic areas like corridors. In heavy-work areas like classrooms. In heavy-spill areas like the cafeteria. First, of course, for its rugged vinyl composition and dense, smooth surface that makes spills and tracked-in dirt relatively simple to wipe up. But also for its deco-

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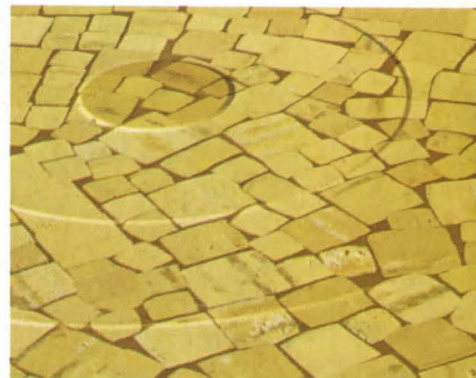
Rolls 6 feet wide and up to 90 feet long reduce seams to the minimum.



Stain resistant, easy to clean—unaffected by most substances likely to be spilled on floors.



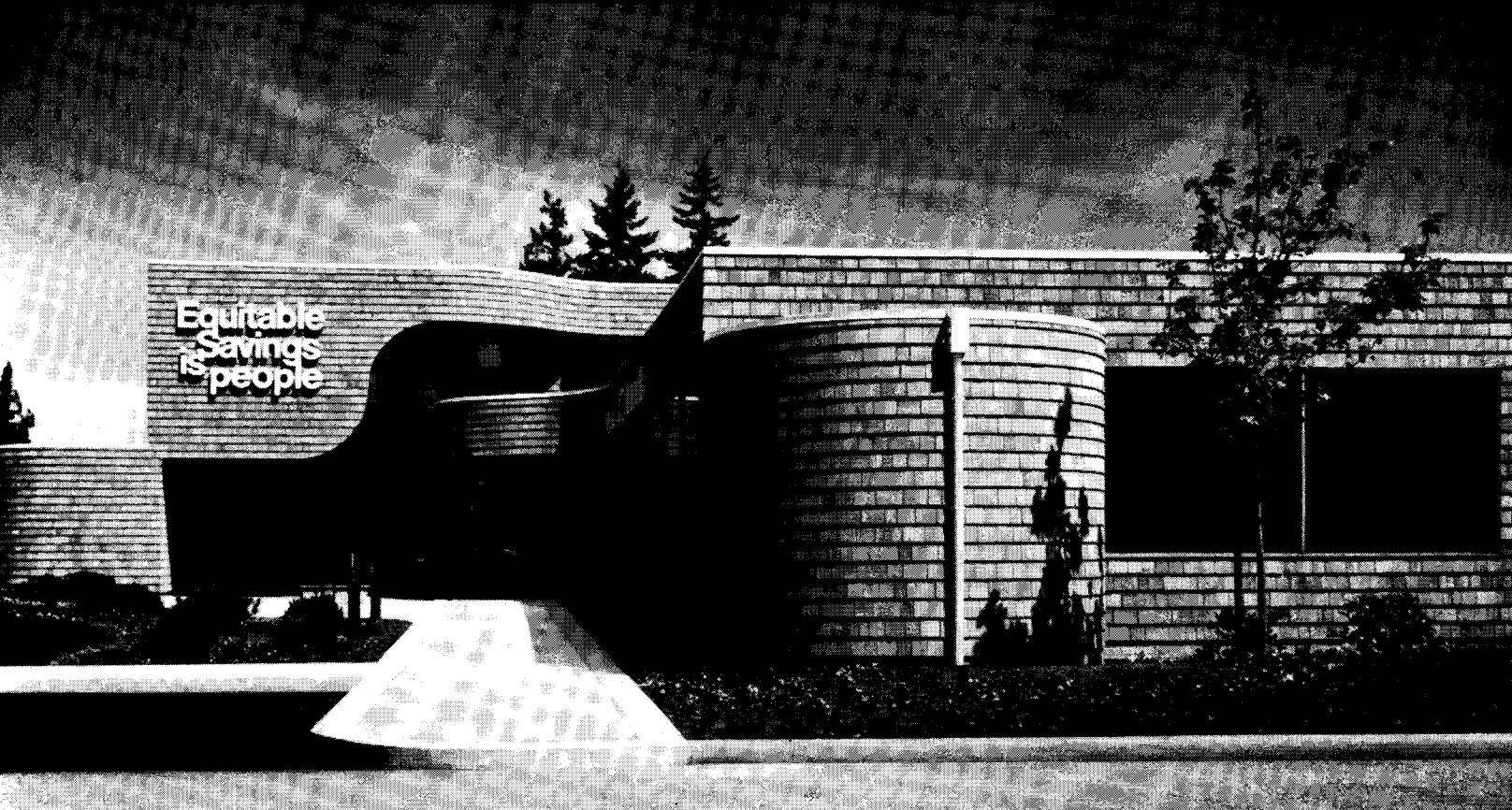
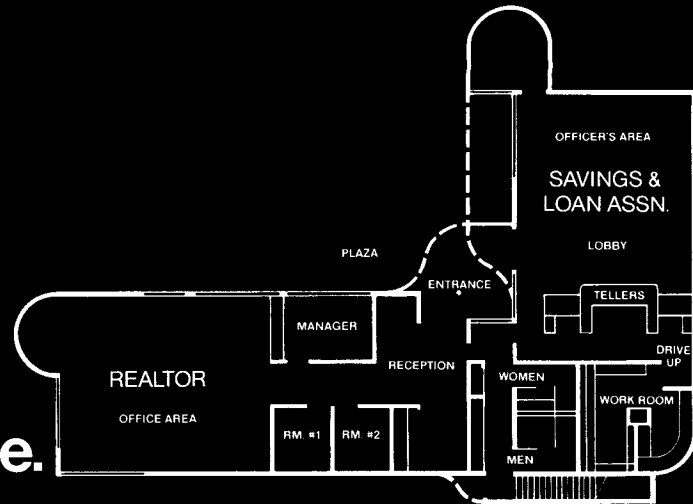
Chemically welded seams help to protect against penetration of moisture and dirt and to provide a monolithic look.



Inlaid construction—color and design go through the wear layer. Sample has been milled down in 10-mil increments.



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Office Building, Puyallup, Washington. Architects: Chillless Nielsen, A.I.A.

The natural ability of red cedar shingles to carry out novel design is apparent on this office building.

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"Red cedar shingles allowed us maximum flexibility in sheathing the building's compound curves within a realistic budget. In addition, their use helped achieve compatibility with the surrounding neighborhood."

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

Cedar Shakes (Heavy)	1.69
Cedar Shakes (Medium)	1.15
Cedar Shingles	.87
Built-Up Roofing, Slag	.78
Asphalt Shingles	.44
Built-Up Roofing, Smooth	.33
Asbestos Cement Shingles	.21
Slate	.05

Red Cedar Shingle & Handsplit Shake Bureau

Circle 2 on information card

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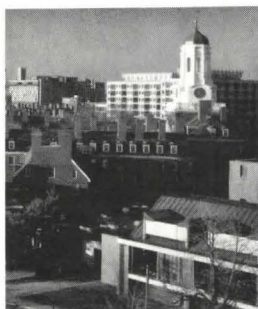
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Cover: Harvard University and Radcliffe College building construction or acquisition: ■ 1720-1869; ■ 1869-1909; ■ 1909-1933; ■ 1933-1953; ■ 1953-1970; ■ 1970-1975 (see story, page 40). Reproduced courtesy of the President and Fellows, Harvard College, © 1975.

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Harvard campus



Gund Hall



Holyoke Center

EVENTS

Feb. 5-10: Course on a Systematic Approach to Building Material Evaluation and Selection, University of Wisconsin, Madison.

Feb. 8-9: North Carolina Chapter/AIA winter meeting, Charlotte.

Feb. 11-14: Conference on Color Metrics, Williamsburg, Va. Contact: S. Leonard Davidson, Inter-Society Color Council, Inc., P.O. Box 700, Hightstown, N.J. 08520.

Feb. 12-15: Course on Construction Project Management, Orlando, Fla. (Repeat course: Feb. 20-23, San Antonio, Tex.) Contact: Educational Services Department, Portland Cement Association, 5420 Old Orchard Road, Skokie, Ill. 60076.

Feb. 14-17: Exhibition of School Architecture, American Association of School Administrators convention, New Orleans.

Feb. 16-18: South Carolina Chapter/AIA winter meeting, Kiawah Island.

Feb. 26-Mar. 1: Course on Engineering Project Investment Analysis, University of Texas at Austin.

Mar. 1: Applications deadline, Cintas Fellowships in the Arts, 1979-80, for young persons of Cuban citizenship or lineage who reside outside Cuba; in the fields of painting, sculpture, architecture, music composition and creative writing. Contact: Institute of International Education, 809 United Nations Plaza, New York, N.Y. 10017.

Mar. 1: Applications deadline, graduate study fellowships for civil or architectural engineering. Contact: American Institute of Steel Construction, 1221 Avenue of the Americas, New York, N.Y. 10020.

Mar. 4-6: Construction Industry National Legislative Conference, Hyatt Regency Hotel, Washington, D.C. Contact: CINLC, c/o Air Conditioning Contractors of America, 1228 17th St. N.W., Washington, D.C. 20036.

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

Mar. 8-9: International Symposium on the Behavior of Building Systems and Building Components, Vanderbilt University, Nashville, Tenn. Contact: Fred W. Beaufait, Box 1533, Station B, Vanderbilt University, Nashville, Tenn. 37235.

Mar. 14-15: Conference on Energy Auditing and Conservation: Methods, Measurements, Management and Case Studies, Case Institute of Technology, Cleveland. Contact: Yacov Y. Haimes, Association of Media-Based Continuing Education for

Engineers, Case Institute of Technology, Cleveland, Ohio 44106.

Mar. 16: Applications deadline, 1979 scholarship program for undergraduate engineering students, and Woodward-Clyde fellowship in applied earth sciences for graduate students. Contact: American Consulting Engineers Council, 1155 15th St. N.W., Washington, D.C. 20005.

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

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

LETTERS

'Sexual Chauvinism': I would like to object to the news story "RIBA Golfers Win Back Trophy from AIA's Team" on page 108 of the October issue. The story gives its full attention to the tragic defeat of the American men's team, and then gives cursory notice to the victorious women's team.

At first I thought the article was written that way purposely. With the winter doldrums setting in, I imagined an uninspired JOURNAL staff decided a pile of letters from irate feminists would add a little color to those Monday staff meetings.

Thinking further, however, I've decided that a case of political chauvinism is no excuse for sexual chauvinism. Although men and women are equal partners on the team, winners are definitely preferable to losers. If you are going to begrudge the women the praise they deserve, at least tell us their names.

Jessalyn Ann Wilscam
Administrative Assistant
Wilscam Mullins Birge Inc.
Omaha

We don't have the space to list the names of the 60 to 70 golfers who participated in this classic event, and wouldn't want to risk being accused of reverse chauvinism by listing all the women without the men. We do congratulate the women, however, and tip our hat to Mrs. Chris Wirth of Woodland, Calif., who represented the American women and received the trophy from Captain Dave Y. Davis of England. Ed.

A Ceiling on Color: Thanks for having the good sense to publish Mary Oehrlein's excellent article on "Color Selection as Part of Preservation" in the October issue (p. 66). Her expertise in the restoration field is well known, both locally and nationally, by those involved in this work. I am very happy to see her knowledge shared with other architects. Let's have more such reasoned and informative articles by restoration architects.

This article, however, shows a certain carelessness with details on the part of the JOURNAL. The photograph of the scraped ceiling at the bottom of page 67

is obviously of a different pattern from the ceiling of the restored room in the photograph above. I know that there are two different rooms, but someone who didn't know Ms. Oehrlein or the project might mistakenly assume that the ceiling pattern of this room was arbitrarily changed. Nicholas A. Pappas, AIA
Washington, D.C.

Color in Architecture: I was pleased beyond words by the October issue, which is largely devoted to the relation of architecture and color.

For years, I have felt that color is one of the essential ingredients of architecture and have preached this at every opportunity. It seems that for a long time architects neither knew nor cared much about color. But this splendid issue of the JOURNAL shows that times have changed.

My special interest in this field began when I became a member of the Inter-Society Color Council, which is composed of about 30 national organizations, including AIA.

In 1949, AIA made "color" the theme of the convention in Houston. The program was arranged by members of the council and AIA staff. Five members of the ISCC gave lectures, which were later published by AIA. I mention this to show how far back AIA and ISCC have collaborated, because most of us have forgotten about it. Waldron Faulkner, FAIA
Washington, D.C.

Welcome Kudos: My congratulations on the mid-August issue on AIA's resources. It fills a need not only for AIA members, but also for other professionals in the construction industry.

The planning and preparation of any issue of the JOURNAL requires much thought and effort on the part of all those involved. The effort and organization required for the mid-August issue must have been stupendous—the result is superb!

I was elected a corporate member of AIA in 1926; during the years since then, I have served as an officer and on committees at the local, state and national levels. The article on "Getting Involved with AIA: The Committees" (p. 22) brings to mind Theodore Roosevelt's statement with which I have always agreed: "Every man owes some of his time to the upbuilding of the profession to which he belongs."

E. James Gambaro, FAIA
Brooklyn Chapter/AIA
New York, N.Y.

Correction: The book designer of *Earth-scape: A Manual of Environmental Planning* reviewed in the October issue (p. 82) was Jan V. White.

OWENS-CORNING ENERGY AWARD WINNERS FOR 1978

THESE MEN ARE PIONEERS. They are pulling the energy-efficient building out of the windowless box. They have designed and engineered resourceful buildings that are visually bold and exciting. We are proud to honor them.



William A. Hall, AIA — William A. Hall and Associates, New York, New York.

NEW YORK STATE UNIVERSITY PLAZA, ALBANY, NEW YORK. This complex, a registered historical landmark, is now an energy landmark as well.

The interior was totally gutted and re-designed. Thermal insulation was added to the walls and roof. All windows were replaced with double-glazed units.

Computer analysis helped select the most efficient heating and air-conditioning system. Forty percent of the heating requirement will be met by heat recovery from lighting.

As a result, less gas will be needed to heat all three buildings of the complex than was originally needed to heat two of them in 1918.

This landmark, now well-scrubbed and skirted with a city park, brings new life to downtown Albany.

"Historic preservation need not be compromised by responsible and efficient and elegant engineering."—Jury

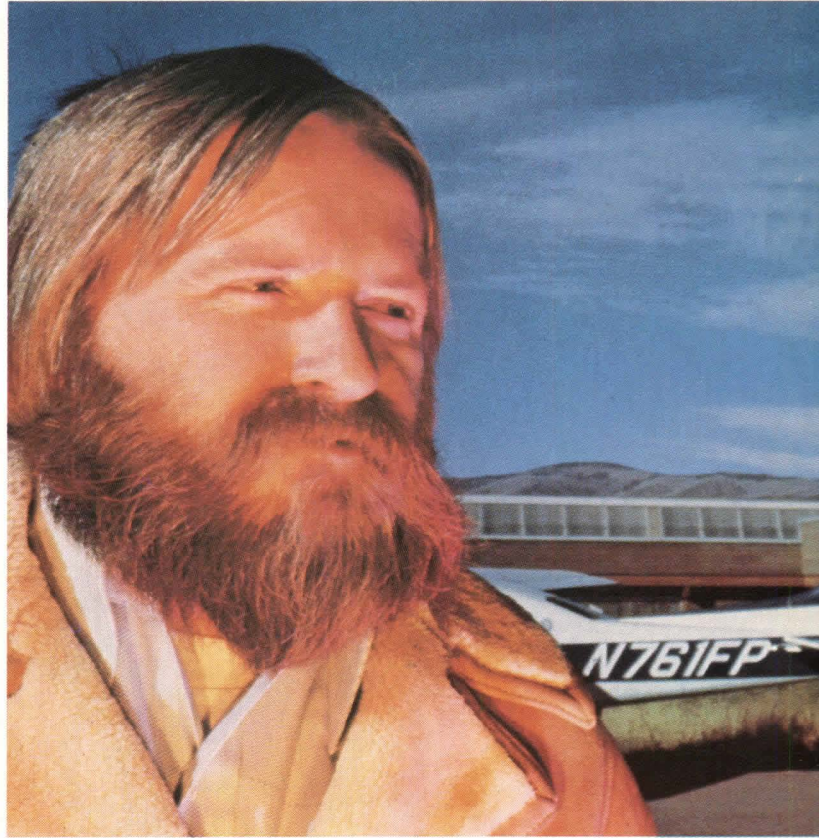
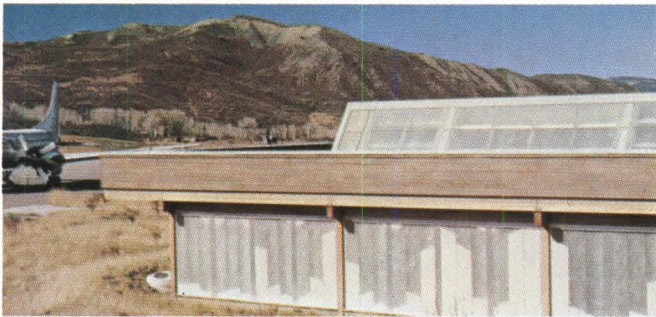
PITKIN COUNTY AIR TERMINAL, ASPEN, COLORADO. This is the first public building in America to complement solar heating with *moveable* insulation systems.

On cloudy days and at night, one system automatically covers skylights with insulated louvers.

The other fills southern-exposure, glazed fiberglass walls with insulating foam beads.

Actual energy savings the first year: \$1200.

"Here is living proof that advanced energy technology and human values can dwell together. If you have to get stuck in an airport, this is a nice place for it to happen."—Jury



Buford Duke, Jr., AIA—Benham-Blair & Affiliates of California, Inc., Los Angeles, California.





James Copland, Tim Hagman, Larry Yaw—Copland, Finholm, Hagman, Yaw Ltd., Aspen, Colorado.



STATE OFFICE BUILDING, SACRAMENTO, CALIFORNIA. This building design was already a winner.

It beat out forty other entries in a design competition held by the State of California in their search for a truly energy-efficient state office building.

Once built, the building will come close to achieving the impossible: maximum exposure for solar generation, minimum exposure for energy conservation.

For maximum exposure, there will be a six-story office tower. Solar panels covering the south side will generate energy for heating and cooling.

To conserve energy, the rest of the office space will be built underground, around a great sunken courtyard. Light wells will provide natural lighting. Overhead, an urban park will provide insulation.

"Here is a clear, strong, architectural statement relating to energy conservation through design."—Jury

MUSEUM OF SCIENCE AND INDUSTRY, TAMPA, FLORIDA. The roof will be the energy center of this building.

It will be canted on one side so it shades the museum. Roof vents will provide natural ventilation. Rainwater from the roof will be recycled for use inside the building.

A proposed photovoltaic solar system would generate electricity.

These systems will be exposed and displayed so museum visitors can see them work.

"This will be a national demonstration of the most progressive principles of energy conservation."—Jury



Thomas P. Reilly, AIA, Victor D. Langhart, AIA, Ronald L. Whatley—Rogers, Nagel, Langhart, Inc., Denver, Colorado.



HONORABLE MENTION—Commercial: Georgia Power Company Headquarters, Atlanta, Georgia, Heery and Heery, Architects and Engineers; South Central Bell Telephone Headquarters, Jefferson County, Alabama, Crawford Giattina and Associates, Architects. Governmental: Police and Fire Department Services Building, Mountain View, California, Goodwin B. Steinberg Associates, Architects. Industrial: University of Minnesota Law School Building, Minneapolis, Minnesota, Leonard S. Parker Associates, Architects. JURY—William W. Caudill, FAIA, Chairman of the Board, Caudill, Rowlett, Scott, Inc., Houston, Texas; David L. Grumman, P.E., Enercon



H. Dean Rowe, AIA—Rowe Holmes Associates, Inc., Tampa, Florida.



BUS MAINTENANCE FACILITY, AURORA, COLORADO. Ventilation and temperature control are big problems when three hundred city buses have to be serviced and stored under one roof.

The solution is a *direct-feed air solar system*. Air intake will be regulated by bus activity and smoke sensors.

Landscaped earth berms not only insulate outside walls, they also soften the scale of the building (349,000 sq. ft.).

"The sensitive contextual design doesn't give up major responsibility to energy conservation."—Jury



Limited, Evanston, Illinois; John J. Labosky, P.E., Smith, Hinchman and Grylls, Detroit, Michigan; James S. Polshek, FAIA, Dean of Architecture and Planning, Columbia University, New York, New York; Frank J. Powell, M.E. National Bureau of Standards, Washington, D.C.; Jack E. Tumilty, President, Jack E. Tumilty and Associates, Tulsa, Oklahoma.

For a free booklet with more information and pictures of this year's winning entries, write X.T. Meeks, Owens-Corning Fiberglas Corporation, Fiberglas Tower, Toledo, Ohio 43659.

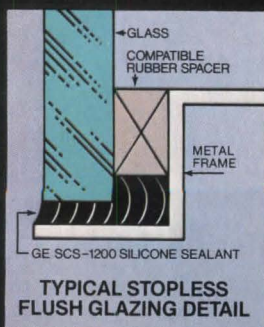
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The difference
between stopless
flush glazing**

and glazing with stops.



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That's because high-modulus silicone sealant, and only silicone, has the strength and resilience to keep its bond to glass and aluminum without mechanical aids. And GE silicone forms an unobtrusive, weathertight seal that holds even after years of joint movement, tem-

perature extremes, wind, rain, ozone and UV.

That's why GE silicone sealant is used in tough structural glazing jobs, like Ernest W. Hahn, Inc.'s executive offices (above left) near Los Angeles. GE silicone 1200 was the only sealant able to pass rigorous performance tests, exceeding all wind load and dynamic water penetration requirements established for this installation.

For more information, write: Section 448, Silicone Products Dept., General Electric Co., Waterford, NY 12188.

Executive Offices, Ernest W. Hahn, Inc. (Left)
Architect: Reel Grobman, Los Angeles, CA
General Contractor: Ernest W. Hahn, Inc., El Segundo, CA
Glazing Contractor: Model Glass Co., Irvine, CA
Curtainwall Mfr.: R.P.S. Architectural Systems, N. Hollywood, CA

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The Institute

I. M. Pei to Receive AIA's 41st Gold Medal

Ieoh Ming Pei, FAIA, who heads the New York City firm of I. M. Pei & Partners, has been selected by AIA's board of directors to receive the Institute's highest honor—the gold medal. He was chosen “in recognition of most distinguished service to the architectural profession or to the Institute.” The gold medal will be presented to him on June 6 at AIA's annual convention in Kansas City, Mo.

Since the inception of the gold medal award in 1907, only 41 persons have received this honor. Pietro Belluschi, FAIA, was gold medalist in 1972, and no further awards were made until 1977 when Richard Joseph Neutra was honored posthumously. Atypically, two practicing Manhattan architects have won the coveted award for the last two consecutive years: Philip C. Johnson, FAIA, in 1977 and now Pei in 1978.

Institute Director Anna M. Halpin, FAIA, who presented to the board the nominating statement regarding Pei, said that this architect “has found a way to approach architecture as a form of social art. In his own words, he defines architecture as the most public of the arts. With this understanding, he works for given conditions pertinent to time and place, rather than inventing conditions out of himself.”



Dennis Brack—Black Star

Halpin pointed to the fact that foremost in the experiences that have contributed to the formation of Pei's philosophy is his Chinese heritage (he was born in Canton, China, in 1917). Through this heritage, she said, “he found love of complexities and love of tradition, not as static worship of the past, but as respect for the ever presence of time.” Architectural critic William Marlin has commented that Pei has proved “how two very different cultural experiences can come together and open up whole new, unsuspected pathways of comprehension. An architect must create these pathways more than contemplate them. But because he has done so, he has given American cities some important places to identify with.”

Pei's professional urban work began in 1948 when he met William Zeckendorf, after having received a bachelor of architecture degree from the Massachusetts Institute of Technology in 1940 and a master's degree in architecture from Harvard University's graduate school of design in 1946. (He had come to this country in 1935 to be educated.) Associated with Zeckendorf in the New York City real estate firm of Webb & Knapp as the firm's “chief architect,” Pei learned how to deal with economic realities and to design projects of high quality on a low

budget. Zeckendorf once said that his employment of Pei “was a matter of a de' Medici looking for a Michelangelo.”

Pei himself has said that the experience with Zeckendorf took 10 years out of his life as a designer. But, he said, “I wouldn't swap that experience for anything. I learned things that serve me well today—the big picture; the flow of economic, political and civic decisions; the importance of seeing land as a precious raw material to be carefully used . . . and of being able to sense the influences that bear upon that land as well as what you want to do.”

In commenting on Pei's experiences with housing projects, Halpin said that he gained a knowledge of how to create “exciting urban space—instantly the gathering spots in those communities, and places for people to celebrate life.” Architectural critic Wolf Von Eckhardt, Hon. AIA, has remarked that Pei's plans “for the Government Center in Boston or La Defense, a mile or so beyond the Arc de Triomphe in Paris, or the completed Place Ville Marie in Montreal and the Mile High Center in Denver changed the face of an entire city. All bear the I. M. Pei trademark. No other architectural firm would have conceived them quite that way.” *The Institute continued on page 12*

The Institute	
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The Institute from page 11

Critic Ada Louise Huxtable, Hon. AIA, has said that Dallas' City Hall complex and Boston's Government Center are "undeniably among the most interesting urban constructions of the 20th century. This is true for a complex set of reasons, having to do with architecture, culture, symbolism and politics, the act of urbanism and the self-perception of cities—factors of which many significant monuments have been compounded in the past."

William Marlin has called the Christian Science Center in Boston "urban renewal in a timeless sense—that which improves human and community attitudes about what is possible. It is architecture as religion. Both have become tangible

Arthur Herzog in the *New York Times*, such urban complexes "become compositions of courts, squares and vistas in an attempt to get away from the gridiron pattern that, Pei thinks, imprisons American cities in a mold of sameness."

In the early 1960s when Pei turned to design again, his first major commission was for the National Center for Atmospheric Research in Boulder, Colo. He modestly says that the structure is "somewhat deficient design" but that the design experience was "startling." He said, "I began to know how little I knew and, finding that out, I acquired an appetite for designing more, much more." He slept in a sleeping bag at the site, "getting the full force of the elements and the atmosphere

seamless contemporary blend." That is art, she said, adding that Washington, D.C., receives the same art in the East building of the National Gallery of Art. The effect of the building's triangular motif, she called "dazzling, both in the way the geometry catches the eye, and as a demonstration of how the same geometry serves both purpose and plan."

Pei's firm has been the architect of 10 buildings receiving AIA honor awards and two awards of merit. Among other structures in addition to those already mentioned are the John Hancock Tower in Boston, the Society Hill towers and town houses in Philadelphia, the John Fitzgerald Kennedy library complex in Boston, the Denver Hilton Hotel, University Plaza at New York University, Choate School's Paul Mellon Center for the Arts and Spelman Halls, Princeton University.

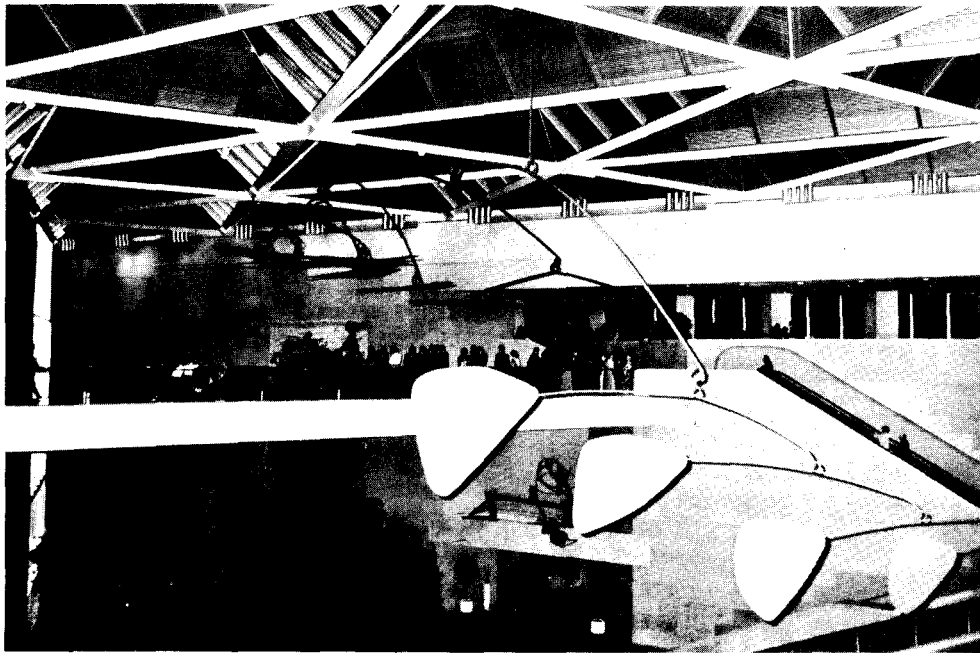
In 1968, I. M. Pei & Partners won AIA's architectural firm award, given annually to a firm "which has consistently produced distinguished architecture for a period of at least 10 years." Critic and former editor of *Architecture Plus* Peter Blake has said that Pei's partnership is "unique in the U.S., and possibly the world. . . . The single, most important reason for the uniqueness of this firm is, of course, Ieoh Ming Pei himself." Many of the partners of this "complex but extraordinarily well-integrated human being . . . believe that it is the synthesis of several distinctive qualities in him that has made possible his unique initiative in architecture," Blake said.

Pei adheres to a "rigorous standard of excellence in everything he has put his hand to," but as a pragmatic intellectual Pei knows that one person cannot meet the problems of today's large-scale projects, Blake said. Hence, Pei chose "to forge close and long lasting working alliances with other gifted individuals, thus creating the essential vehicle for the pursuit of his and their mutual goals. . . . He chose to create a pool of talent, integrity and expertise capable of taking on all comers and all problems. He and his partners have been remarkably successful in that effort. . . . This idealism persists; it attracts the best among the young, and solidifies earlier loyalties."

In summarizing her nominating speech in favor of Pei, Anna Halpin said that Pei "has found an expression of architecture that derives from the immediate circumstances of life, away from whimsical fad of styles and fashion. He has done so, not by describing it, but by building it. In nearly 40 years of work, Ieoh Ming Pei has given American cities and people many places to identify with, while giving a facet of American architecture a name that can be identified in the world."

Mary E. Osman

The Institute continued on page 15



AIA officers are installed (p. 15) in Pei's east wing, National Gallery of Art.

elements in Boston's everyday life, becoming to the better instincts of its people."

When a journalist once asked Pei if he would like to plan a city from scratch, he replied that he did not believe in "instant cities," saying that the most a planner can do is to formulate a planning strategy. The writer asked if such an attitude reflected Pei's confidence that old cities can be salvaged. Pei replied, "Yes. I would much rather devote my energy to that. After all, we are only tourists in this world; we come and go. Cities will go on forever."

Pei has said that a city, "so far from being a cluster of buildings, is actually a sequence of spaces enclosed and defined by buildings. This thought may be strange but it is the essence of urban design." He believes that a city should have only a limited number of buildings of strong, assertive character. "A city of Guggenheims would not be good," he said. Pei has designed urban renewal projects for a dozen cities, including Boston, Cleveland and Philadelphia. In Pei's hands, said

and the spirit of the place, and I realized all over again how intensely personal the process of design is." Since then, he has tried to keep "the personal dimension intact while also keeping the perspective."

William Marlin has said that it is hard to say which of Pei's structures is best. Marlin found the research center in Boulder "still one of the most breathtaking outcroppings ever to hit the mountainsides of Colorado. His plan for Boston's Government Center, also in the 1960s, is all the more compelling and cohesive a job because it has, in the years since, brought together the best design instincts of other designers in a brilliant, beautiful urban assembly of space and experience. The Christian Science Center . . . is a strong axial composition, almost baroque in its majesty."

Ada Louise Huxtable has said that each of Pei's buildings "attests to growing taste and power." She commented that anyone who has seen Pei's Everson Museum in Syracuse "knows how superbly he marries the sensuousness of space and art in a



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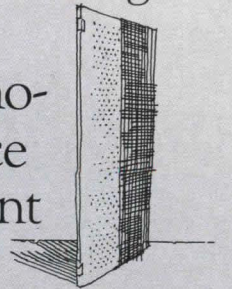
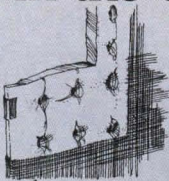
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Mitchell Installed as President In Ceremonies at East Building

Ehrman B. Mitchell Jr., FAIA, of Philadelphia was installed as president of the Institute on Dec. 8 during ceremonies held at the National Gallery of Art's new East building in Washington, D.C. He succeeds Elmer E. Botsai, FAIA, of Honolulu. Mitchell, a partner in the Philadelphia and New York City firm of Mitchell/Giurgola, has served on AIA's board of directors since 1973 and became a vice president in 1976.

Five other new officers were installed: Charles E. Schwing, FAIA, Baton Rouge, La., first vice president/president elect; Robert C. Broshar, FAIA, Waterloo, Iowa; James M. Harris, AIA, Tacoma, Wash., and R. Randall Vosbeck, FAIA, Alexandria, Va., vice presidents; and Robert M. Lawrence, FAIA, Oklahoma City, secretary (for a second term). Joseph F. Thomas, FAIA, Pasadena, Calif., continues as treasurer.

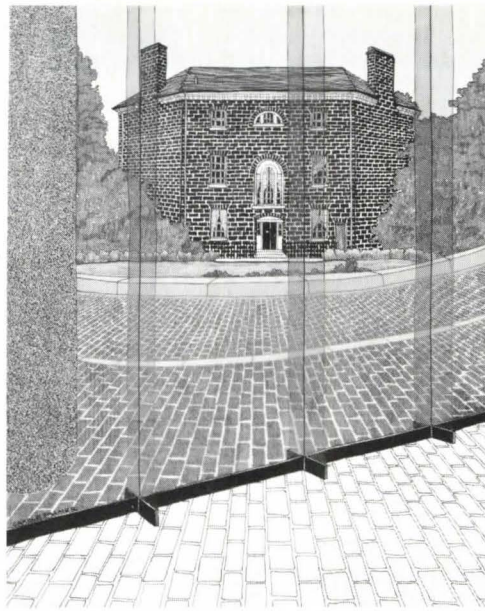
Also installed were 13 new members of the board of directors: James C. Dodd, AIA, Sacramento, Calif.; Henry W. Schirmer, AIA, Topeka, Kan.; Ellis W. Bullock Jr., AIA, Pensacola, Fla.; E. H. McDowell, FAIA, St. Thomas, Virgin Islands; Gaines B. Hall, AIA, Dothan, Ala.; Raymond C. Ovreset, FAIA, Chicago; James R. Nelson, AIA, Montchanin, Del.; William A. Rose Jr., AIA, White Plains, N.Y.; Edwin B. Crittenden, FAIA, Anchorage; Derek Martin, AIA, Pittsburgh; Theodore S. Maffitt Jr., FAIA, Palestine, Tex.; Pat Y. Sullivan, FAIA, Dallas, and John B. Rogers, AIA, Denver.

Special guests of honor at the installation ceremonies were Paul Mellon, president of the National Gallery of Art; J. Carter Brown, Hon. AIA, its director, and I. M. Pei, FAIA, architect of the East building. The Institute presented them citations in recognition of their collaboration and contributions to the new structure, thus beginning AIA's year-long "celebration of architecture" (see p. 31).

The citation to Mellon expresses "appreciation of his gift to the American people." The gallery, says the citation, "enriches understanding of the qualities of both art and architecture and exemplifies the highest attainment of their expression."

Brown was cited for his "distinguished career in the arts and his contributions to architecture." The East building, says the citation, "achieves a sensitive balance between the works of art and the arts of architecture."

Pei was recognized for "his distinguished achievement of art in architecture." The new gallery, the citation reads, "is a place expressive of the nature of art."



Carole Palmer

In response to interest expressed in the cover of this magazine's mid-August issue (reproduction above), posters are now available from the Institute's department of publications marketing. The four-color poster is 18x24 inches in size. The price for a single poster is \$3, or \$1.75 each for bulk orders.

Board Adopts Strong New Policy On Preservation, Adaptive Use

As part of its annual review and rethinking of AIA policy statements, the board in December adopted a strong new position on historic preservation and adaptive use.

The preservation of historic resources, the new statement says, "deserves high priority among the nation's programs and goals." To achieve this, AIA supports landmark preservation to preserve and/or guide the development of structures or sites with historic, cultural, architectural, archeological or esthetic significance and recommends that each such landmark be evaluated by a public body.

The policy further says that "abandonment and demolition of large numbers of useful buildings is uneconomical as well as socially and culturally destructive." AIA supports the preservation and adaptive use of neighborhoods and programs "which will maintain the fabric of a community" by the improvement of deteriorating structures, with minimum displacement of residents. The Institute further proclaims that new buildings in an existing neighborhood should be "sensitive and original" as well as compatible with the existing fabric. It supports the designation of particular areas or groups of buildings as historic districts.

In addition to supporting continued development and expansion of such incentive programs as grants and tax considerations, the Institute encourages the adoption "and creative application of codes and zoning regulations supportive

of preservation." In order to conserve the nation's architectural heritage, the Institute gives support to the preservation of original documents and information about significant structures and their architects. Recognizing the need for public awareness regarding preservation, AIA supports the introduction of appropriate programs of formal and informal education, encourages architectural schools to include education in architectural preservation as an objective and urges all architects to increase their knowledge through continuing education.

Among policy statements retired in the process of review was one on "national priorities" which was originally adopted in 1971 and included: support of reduction of military commitments and involvements abroad to the absolute minimum consistent with national security; release of impounded funds for housing and urban rebuilding; more effective administration of government programs, and national commitment to the rebuilding of urban America. In other business:

- Upon Elmer Botsai's request, the board adopted an "antibureaucracy" policy stating that AIA will work alone or with other associations to reduce "unnecessary or improper" federal regulations and will testify before Congress on federal policies, programs or regulations that are detrimental to the architectural profession and the public.

- After a heated debate, the board voted to hold the 1981 convention in New Orleans, despite the fact that Louisiana has not ratified the Equal Rights Amendment. Also, the board adopted criteria for judging future convention sites.

- James D. Baker, representing the Institute structure task force, recommended that AIA's regional structure is often redundant and in some places not effective. He recommended that the state components be made stronger and that possibly the regional structure should be eliminated. This brought protests from some board members who said that regions are important and useful for exchange of ideas and information and lobbying efforts. The long-range planning committee will study the report.

- The code and standards committee is too large, unorganized and not responsive, reported Donald L. Hardison, FAIA, of the codes and standards policy evaluation task force.

The task force recommended that the codes and standards committee should adhere more strictly to AIA procedures of policy making and that the Institute-committee relationship be strengthened. The committee should establish concise goals and policies, which should be published and represent AIA's overall position in that field, the task force said, and this should help eliminate overlapping

The Institute continued on page 18



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The Institute from page 15
efforts of the Institute.

• AIA's board approved making the Architectural Secretaries Association a subsidiary of the Institute. This is contingent upon legal and administrative review and favorable action of the ASA membership at its annual meeting in Kansas City, Mo., in May. The resolution directs AIA's president (or designate) and executive vice president "to complete the necessary steps to achieve this action."

ASA, which currently has almost 500 members and 27 chapters (see Nov. '78, p. 81), is dedicated to the educational and professional development of an architectural firm's employees.

Under the proposal for the association, the Institute would provide ASA/AIA with "adequate staffing and support services," and ASA/AIA would have direct access to AIA's board "on any issue affecting ASA/AIA." ASA/AIA would establish its own structure of chapters, regions, etc., and wherever feasible would follow the geographical boundaries of Institute components. Either ASA/AIA or the Institute, under the proposal, could unilaterally withdraw from the arrangement at the completion of any dues year.

Subject to approval, this action would take effect on Jan. 1, 1980.

Membership Status Clarified For Design/Build Employees

AIA's board of directors has affirmed that the 1978 AIA convention action that only employees of firms which follow the Institute's ethical code on design-build/contracting as a general practice in their operations are eligible for AIA membership. At its December meeting, the board clarified the status of design/construction employees and the responsibility of their firms to meet the written disclosure and other requirements of the new ethical rule.

Secretary Robert M. Lawrence, FAIA, said that nonmanagerial employees are not affected if a firm makes only incidental violations of the code. However, if a firm in its normal course of business acts contrary to the code, its employees are considered to be in violation themselves and are not eligible for AIA membership. Lawrence was instructed by the board to prepare more explicit language for inclusion in the ethical code.

The task force charged with monitoring the Institute's three-year design-build/contracting experiment plans to have its entire program underway in February. Herbert E. Duncan Jr., FAIA, chairman of the task force, said that data will be collected from architectural firms as well as clients at random to measure changes in the use of and attitudes about design-build/contracting over the three-year period. Opinion Research Corporation,

a subsidiary of the Arthur D. Little Co., has been retained to develop the overall data collection system.

AIA's Income Estimate for 1979 Is 13.6 Percent above 1978 Level

AIA's 1979 estimated income of \$9,185,905 is a 13.6 percent increase over 1978. This is due to more income in regular dues because of more AIA members and the increase of \$5 per member (solely for legal defense). Also more convention income is expected due to increased booth sales and there are greater revenues expected from publications and the AIA JOURNAL.

The projected dues income will pay for all programs and services for members and about one third of the cost of committee activity (54 percent of total expenses). The remainder of the income will pay for the balance of committee activity, total staff costs and administrative and operating expenses of the Institute.

The projected income includes: \$2,491,500 in regular dues (an increase of 5 percent); \$2,150,000 in supplemental dues (+7.5 percent); \$71,000 from other dues (+14.5 percent); \$367,450 from the convention (+10.3 percent); \$1,350,000 from publications (+16.2 percent); \$172,000 from continuing education (-28.9 percent); \$1,840,000 from the JOURNAL (+20 percent); \$114,530 from *Architectural Graphic Standards* (+67.8 percent); \$100,000 from the energy department (-33.6 percent) and \$528,925 from other sources (+33.2 percent).

The projected expenditures (also \$9,185,905) are broadly broken down to \$511,170 for the board (8.5 percent increase); \$336,005 for the executive office (+4.2 percent); \$625,075 for corporate expense (+7.4 percent); \$291,065 for the assistant secretary/legal counsel (+12.5 percent); \$783,845 for business management (+8.8 percent); \$2,207,335 for the program development group (+3.15 percent); \$3,841,410 for the component/information group (+19.4 percent); \$2,950,000 for staff expense (+10.9 percent); \$1,144,000 for administrative expense (+8.7 percent); \$4,631,855 for program expense (+18.9 percent); \$460,010 for commission/committee/task force (-4.5 percent), and \$590,000 for special accounts (+111 percent).

The decrease of 4.5 percent in the commission/committee/task force item is because only the steering group of a committee, rather than the entire committee, will be fully funded, in order to save money and to open the committees to more members. The 111 percent increase in special accounts includes \$150,000

carried over from last year's budget; the carry over figure was not included in the 1978 budget. The special account includes the general reserves, the conference and publications revolving fund and discretionary funds of the executive committee, president and executive vice president.

Herbert Duncan of Kansas City Will Receive '79 Kemper Award

Herbert E. Duncan Jr., FAIA, president of Duncan Architects Inc., Kansas City, Mo., has been named winner of the Edward C. Kemper award for 1979 by the Institute's board of directors. Established in honor of the late executive director of AIA, the award is given annually to "one AIA member who has contributed significantly to the Institute and to the profession." Chairman of 15 AIA committees or task forces since 1970, Duncan was elected to the board of directors in 1972.

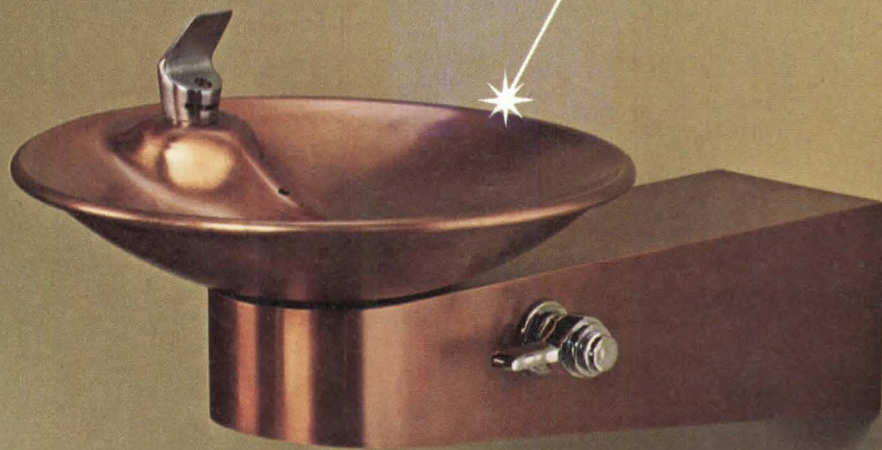
In 1978, he was chairman of the AIA jury of fellows and of the committee to retrofit Institute headquarters for energy conservation, as well as chairman of the design-build/contracting monitoring task force (a three-year appointment) and was energy consultant to AIA's honor awards juries.

Among his most innovative contributions to the profession, perhaps, have been in the fields of energy conservation and design/build. He served for three years on AIA's energy committee, was chairman of the task force which initiated the *Energy Notebook*, acted as consultant to the AIA Research Corporation's project on energy conscious design and was a member of the liaison committee of AIA and the American Association of Heating, Refrigerating and Air-Conditioning Engineers.

In 1971 and 1972, Duncan chaired the task force on architects on the development team. He was coordinator for the task force book entitled *Development Building: The Team Approach*, published in May 1972. A member of the AIA design/build task force in 1973, he also chaired the task force seminar on development building case studies. Made chairman of the design/build task force in 1974, he also was chairman of the task force seminar on design/build at AIA's convention that year, and again in 1975 was chairman of the design/build task force.

Long an active participant in local component affairs, he has served in virtually every elective position in the Kansas City Chapter/AIA and was instrumental in the founding of the Missouri Council of Architects/AIA, coauthoring the new state organization's bylaws in 1970 and serving as its secretary in 1971 and 1972. *News continued on page 22*

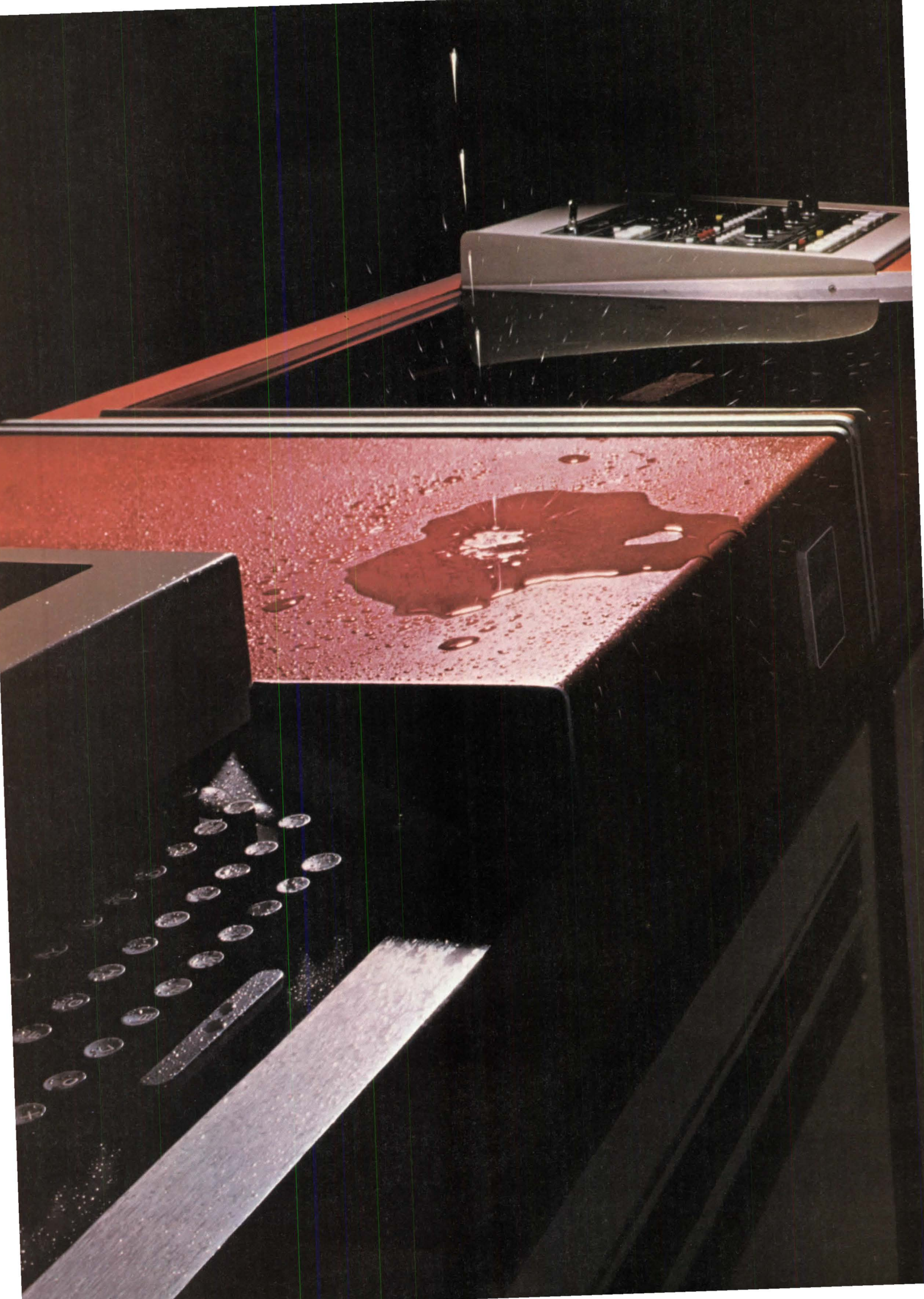
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National Trust Establishes Fund To Save Endangered Properties

The National Trust for Historic Preservation recently established a \$1 million endangered properties fund to help save nationally significant historic properties whose futures are in severe jeopardy.

Through the revolving fund, the National Trust will make loans, purchase options, acquire rights to protect buildings and pay for other emergency preservation techniques until there are permanent preservation plans. Half of the \$1 million is a grant from the Department of Interior, which matches a grant from the Andrew W. Mellon Foundation. An additional \$500,000 has been set aside by the Interior Department and will go to the endangered properties fund as soon as the Trust is able to match the amount in private dollars.

"Despite the best efforts of preservationists," said James Biddle, president of the National Trust, "scores of America's historic properties are lost each year, many because the public is not aware of the situation until the eleventh hour. Often by that time, it is too late. Now we have a way to act when all other practical methods of preservation have failed."

Biddle said that the endangered properties list will include buildings, sculpture, autos, railroads and natural areas, among others.

The fund's first action will be a loan of \$18,500 to help preserve the Thorstein Veblen boyhood home and 10-acre farm near Nerstrand, Minn. Veblen was an influential and controversial late 19th century economist who wrote *Theory of the Leisure Class*. The loan will enable the Veblen Preservation Project, a nonprofit corporation, to make a down payment on the purchase of the farm and the first annual installment. The group hopes to repay the endangered properties fund with

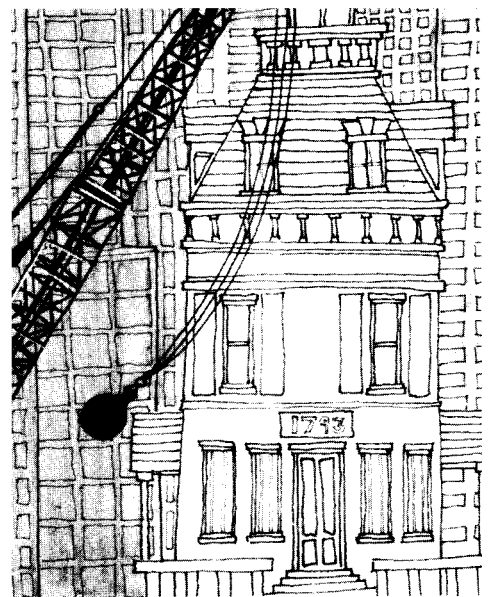
a grant from the federal government. The farm is abandoned and deteriorating rapidly (photo below).

Since 1973, the National Trust has invested \$171,500 to preserve five buildings: the Wainwright building, St. Louis; the Willard Hotel, Washington, D.C.; the Prudential building, Buffalo; the Armour-Stiner octagon house in Irvington, N.Y., the Tor house in Carmel, Calif.

Currently, more than 40 properties are on the trust's endangered list. Among them are: Casa del Desierto, Barstow, Calif.; the Manhattan Building, Chicago; Locke Historic District, Locke, Calif.; the Richardson & Robbins Factory, Dover, Del.; Cahokia Mounds, Cahokia, Ill.; Bear Butte, Sturgis, S.D.; Denmark Vesey house, Charleston, S.C., and the Boley Historic District, Boley, Okla.

The St. Louis Union Station may soon need the help of the Trust's endangered properties fund. Designed in 1896 by Theodore C. Link, in the tradition of H. H. Richardson, the station was put up for sale when the owners, the Union Center Venture, owed more than \$435,000 on a \$4 million loan to the Colorado Federal Savings and Loan of Denver. Union Center Venture had plans for renovating the station into a hotel complex with shops, restaurants and other facilities.

When the property came up for sale, there were rumors that a developer from New York City had plans to buy and demolish the station as part of an industrial or commercial project. It is estimated that demolition could cost from \$750,000 to \$1 million. The city is now holding the property and looking for a developer. The St. Louis Chapter/AIA would like the station and trainsheds engineered by George Pegram to house a national museum of transportation. *Nora Richter*



Drawing by Carole Palmer

\$5 Million Renovation Planned For Buffalo's Prudential Building

For more than five years, a fight has gone on to save the Prudential Building in Buffalo from the wrecker's ball (see Feb. '78, p. 80). One of the nation's first steel frame buildings and considered a prime example of the work of Louis Sullivan, the Prudential was saved from demolition by concerned citizens. Recently, the 83-year-old structure was acquired by developers Stanley Thea, New City; Rudolph Bersani, Tonawanda, N.Y., and Jack Shifrin, Cleveland. Terms of the sale were not disclosed.

A feasibility study, made under the aegis of the Greater Buffalo Development Foundation and released last year, outlined concepts to make the Prudential economically viable and in conformance with life safety code requirements. Construction plus restoration costs were estimated at \$6.34 million.

The developers intend to renovate the structure, making it into 110,000 square feet of prime office space in Buffalo's downtown. They say that they will spend \$5 million on the conversion. Because the Prudential is now designated as a national historic landmark, the developers expect to receive \$1.5 million ultimately from government grants.

Thea said that the plans are to "marry its elegant style and gracious past with the convenience of today's office building in a superb location. By making this monument economically viable, we will preserve it for architecture lovers throughout the world, while creating a good investment and major taxpayer to the City of Buffalo." The refurbished Prudential will contain a museum dedicated to the work of Louis Sullivan.

News continued on page 27



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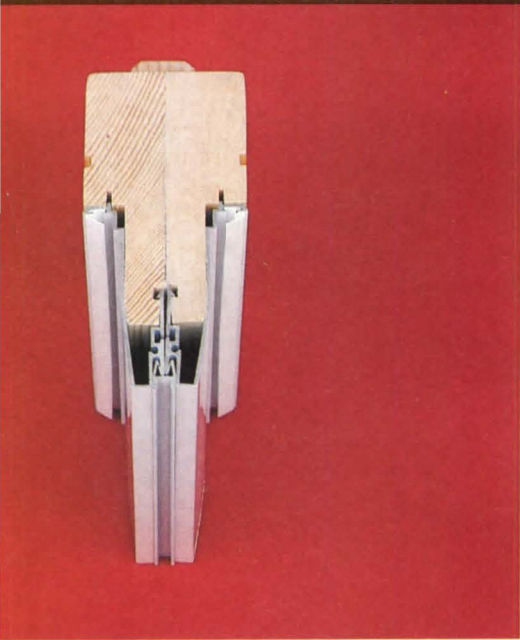
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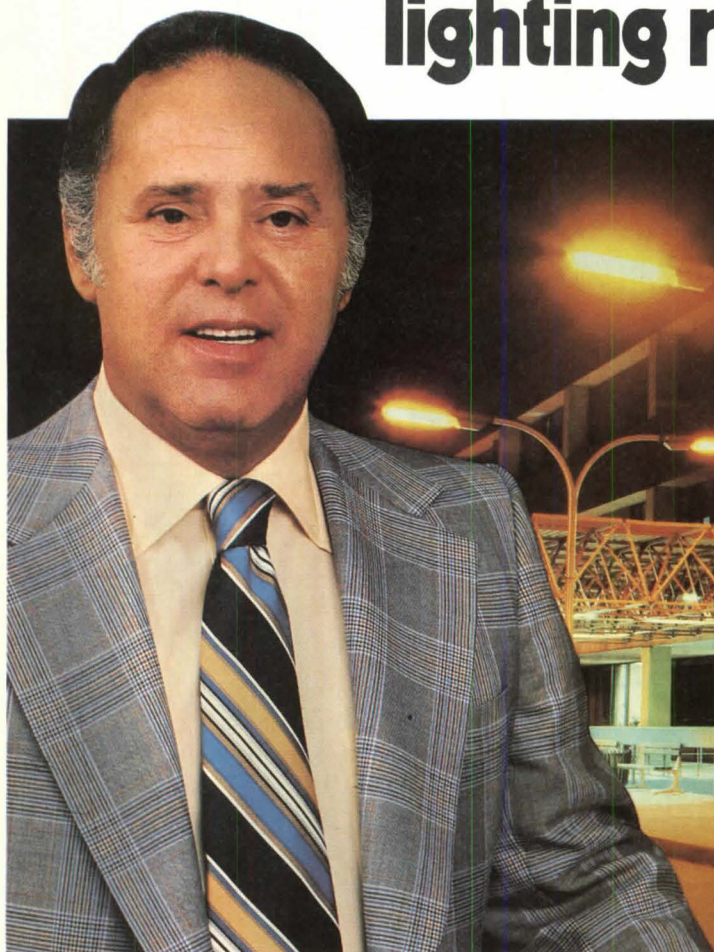


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Awards

Both Active and Passive Systems Win Energy Design Competition

The 10 winners of awards and honorable mentions in Owens-Corning Fiberglas' seventh annual energy conservation awards program were chosen from a record number of entrants, "indicating that the discipline of designing energy efficiency into buildings is becoming standard practice," said Charles E. Peck, OCF executive vice president.

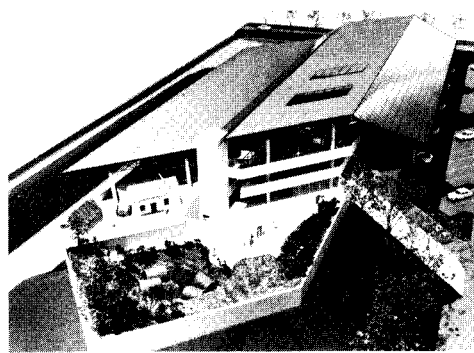
The top winners in the government category were William A. Hall & Associates, New York City, for the renovation of three landmark buildings that now are the Albany headquarters for the State University of New York (photo right) and Benham Blair & Associates of California, Inc., Los Angeles, for the California department of general services building, Sacramento.

The three buildings renovated at SUNY are the former Delaware and Hudson Railroad office building, constructed in 1914; the adjoining former *Albany Times Journal* building, a 1915 addition, and the former federal building, erected during the 1860s. The entire interiors of the buildings were stripped and transformed into a mixture of open and closed offices. A heat recovery unit recycles heat generated by lights, computer equipment, office machines and people, with a gas, oil or electric backup system when temperatures drop below 20 degrees Fahrenheit and for long weekends. Other energy features include double-glazed, tinted windows which can be opened to eliminate use of airconditioning, thermal insulation in the exterior walls and roof surfaces and multilevel lighting fixtures.

The design of the California department of general services was chosen from 41 entries in a statewide competition. A subterranean base will extend throughout the 237,000-square-foot site and under the dividing street. Over the base will be two wings of offices and housing and on top will be a public park. At the north end will be a six-story building with a 12,000-square-foot intensity solar tracking system. In the building, solar collectors will generate hot water which will pass through a solar-driven absorption refrigerator, for airconditioning. A mini-computer control system will be used for optimum efficiency. The energy use projected for the building is extraordinarily low: about 20,000 BTUs per square foot.

In the institutional category, the winning design was the Museum of Science and Industry (bottom photo) in Tampa, Fla., by Rowe Holmes Associates, Tampa.

Exhibits demonstrate the energy-saving features of the three-level 59,301-square-foot building, including its plumbing, electrical wiring and lighting systems. The building has a photovoltaic solar system which converts the solar rays into electrical power. When installed, the system will provide 10-15 percent of the peak load requirements of the building, or 80 percent of the exhibit load. In addition, the north roof will collect rainwater which will be used for water energy technology exhibits. The roof planes will also capture prevailing east and northeast winds in the



summer and channel them through the building by convection induced air movement.

Copland Finholm Hagman Yaw Ltd., Aspen, Colo., was the winner in a "special" category for the Pitkin County (Colo.) air terminal. The three adjoining single-level buildings were praised for sensitive integration with the natural surroundings of the Rocky Mountains. Two passive solar systems with movable insulation are used: a bead wall on the staggered south walls and an insulated "skylid" at roof locations. The bead wall is a series of three-inch-deep vertical cavity panels, made of clear Fiberglas skins that maximize the transmission of solar energy and also act as thermal glazing. The skylid is a series of insulated aluminum louvers that automatically open during heat-gain

periods and close during time of heat loss. About \$1,200 worth of energy is saved annually by the two systems.

In the industrial category, RNL, Inc., Denver, received an award for the regional transportation district east metro bus maintenance facility in Aurora, Colo. The structure, to be completed in 1980, will provide storage, servicing and maintenance for a maximum of 300 buses. RNL used a variety of environmental and energy-saving concepts, including landscaped berms and a solar heating system to supply 50 percent of the building's total heating requirements. Glare from the solar collectors on the roof was eliminated with a high parapet screening. The solar system heats the ventilation air that does not pass through the heat recovery unit. Outside air, which is required to dilute bus exhaust, is drawn by a fan through the collectors where it is heated by the sun's rays. Once the air reaches the temperature needed to heat the building, it is funneled mechanically to the building's interior. Excess solar heat is accumulated in rock storage areas for future use. Other energy-saving measures include total internal circulation of buses, which eliminates the heat loss caused by opening doors to move buses to and from service and repair areas, and the placement of main bus doors on one side of the building to prevent drafts.

Honorable mentions were presented to Goodwin B. Steinberg Associates, San Jose, Calif., for the police services and fire administration building, Mountain View, Calif.; the Leonard Parker Associates, Minneapolis, for the University of Minnesota law school; Malcolm Pirnie, Inc., White Plains, N.Y., for the southerly wastewater treatment center in Cleveland; Heery & Heery of Atlanta for Georgia Power Co.'s corporate headquarters, Atlanta, and Crawford, Giattina & Associates, Birmingham, Ala., for the Alabama headquarters of the South Central Bell Telephone Co.

Chairman of the jury for the competition was Jack E. Tumilty, president of Jack E. Tumilty & Associates. Others on the jury were William W. Caudill, FAIA; David L. Grumman, president of Enercon, Ltd.; John J. Labosky of Smith, Hinchman & Grylls Associates; James S. Polshek, FAIA, and Frank J. Powell, of the National Bureau of Standards.

14 Top Awards, 4 Jury Honors Given by Concrete Institute

Juries of architects and engineers have named 14 top award winners and four special jury awards in the 1978 Prestressed Concrete Institute awards program. The jury for buildings was chaired by Elmer E. Botsai, FAIA, past president

Awards continued on page 28

Awards from page 27

of the Institute; chairman of the jury for bridges was Lester A. Herr, chief of the bridge division, Federal Highway Administration. Winners were selected for "their achievements in esthetic expression, function and economy using precast and prestressed concrete."

The building winners:

- Calgary International Airport, Calgary, Alberta, Canada (architect/engineer: Stevenson Raines Barrett Christie Hutton Seton & Partners, Calgary).
- Federal Office Building and Post Office, Santa Rosa, Calif. (architect—joint venture—Roland/Miller/Associates; Frank L. Hope & Associates, Santa Rosa).
- Pecksland house, Greenwich, Conn. (architect: Dimitri Bulazel, AIA, Cos Cob, Conn.).

- Guam Reef Hotel, Marianas Island (architect: MacKinlay/Winnacker/McNeil & Associates, Oakland, Calif., and Agana, Guam).
- John Deere/Atlanta Branch, Office and Distribution Center, Conyers, Ga. (architect/engineer: Heery & Heery, Atlanta).
- John Deere Engine Works, Waterloo, Iowa (architect/engineer: Smith, Hinchman & Grylls Associates, Inc., Detroit).
- John Deere Ltd., Canadian Head Office and Eastern Distribution Centre, Grimsby, Ontario, Canada (architect: Neish Owen Rowland & Roy, Toronto).
- Picnic and concession shelters, Portsmouth, Va. (architect: Service, Hargrove & Brockwell, Ltd., Portsmouth).
- Rock Island municipal parking structure, Rock Island, Ill. (architect/engineer: Conrad Associates East, Chicago).

ture of their jobs the wish to make a genuine contribution to the work turned out by the firm. The third most wanted feature is access to tools, equipment and materials in order to do the job well. Both these ratings rank far higher than good pay (ninth) and such fringe benefits as vacations (tenth). Top rating is understanding the scope and responsibilities of the job.

Another surprising fact is that a solid 74 percent of all employees think they could produce more work in a day than they do currently, if working conditions were changed to make it possible. Even though such increased productivity might mean the same pay, 73 percent of the office workers say they'd simply feel better about the job at the end of the work day. The single greatest work problem, say the office workers, is having too much to do coupled with interferences on how well the job is done. Productivity problems cited also include insufficient information, unsuitable office furniture and inadequate tools and equipment.

A majority (62 percent) of the employees point to the need for proper furnishings and lighting for turning out first-rate work. And a whopping 92 percent believe there is a relationship between satisfaction with office surroundings and job performance, indicating that office planning should be given high priority.

When design professionals were asked if they saw a relationship between an employee's satisfaction with his work space and job performance, 75 percent said that there is a "great deal" of connection; 20 percent cited "only some effect." Corporate executives (53 percent) agree to a great deal of connection, and another 43 percent believe there is only some effect.

And what do the designers and executives say about the characteristics that help the employee do a job well? Sixty-two percent of the executives give highest rating to proper heat, airconditioning and ventilation; 50 percent vote for "ability to concentrate without noise and other distractions." Design professionals give greatest importance to shelter from noise and distractions, ranking the "ability to adjust work surfaces, chair and storage space to suit work requirements" as second in importance; lighting came in third.

Design professionals are more likely to believe that "access to other areas and departments," storage space for working equipment and work surfaces as important to job performance, while business executives tend toward believing that conversational and visual privacy are more important to the office worker. Both groups, says the report, tend to overestimate the employee's views on the relative importance of office size, storage space for personal possessions, the ability to

Practice continued on page 76

Practice

Appearance, Function, Privacy Valued Most by Office Workers

The population of people who work in offices is growing at the rate of 1.3 million a year. At the same time, there have probably been more changes in offices in the past five years than in the preceding 50. To find out how business executives and design professionals are meeting the needs of the great number of people who are spending more time in offices, Steelcase Inc., a manufacturer of office systems furniture, commissioned Louis Harris & Associates Inc., analysts of public opinion, to interview 1,047 office workers in their homes located in 200 statistically reliable sampling areas throughout the U.S. and to talk as well with 209 of the nation's top corporate executives and 225 office design professionals—members of AIA and the American Society of Interior Designers.

Some of the results of the survey are surprising. Entitled "The Steelcase National Study of Office Environments: Do They Work?" the report reveals that 94 percent of the office workers consider how offices look and function as of primary importance. One of the factors considered most important in the office environment is the ability to concentrate on the job without noise and other distractions. Most office employees give their working environments low ratings in this regard.

What most office workers want is a "neat, well-organized look, and personal space and privacy." Although more than 70 percent of the workers are "generally satisfied" with their work space, about 19 percent are less satisfied than they were five years ago, despite the fact that 40 per-

cent of the corporate executives report that their office facilities had undergone renovation or relocation in the past five years. Decline in satisfaction, say the employees, is due to failure to update and maintain facilities and inadequate work space. Workers also would like for business decision makers and office planners to "deinstitutionalize" work spaces, making them more adaptable to individual tastes.

The survey found that six out of ten professional designers believe that remodeling, repainting, refurnishing, etc., are major sources of improved employee satisfaction, but only one out of five employees share this view, preferring more adequate work space and more privacy. About 63 percent of the corporate executives think that the level of worker satisfaction has improved over the past five years, but only three out of ten employees are in accord with this belief.

To increase office productivity, executives and employees alike think that there would be improvement if job responsibilities were studied and work reorganized to flow more smoothly. The executives rank as second in increased productivity the installation of such things as computer terminals and electronic typing. Conversely, employees rank this kind of activity ninth among eleven alternatives, believing that greater productivity would result from such things as more personal space and privacy, provision of proper tools and a greater say in how the work is to be accomplished.

Contrary to the opinion of many bosses, employees rate as the fourth desired fea-



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AIA JOURNAL

1979

A Celebration
of
Architecture 

The idea behind the Institute's year-long "celebration of architecture" is a simple one, says President Ehrman B. Mitchell Jr., FAIA: "to renew our cognizance of what it is we're all about, which is creating architecture." He conceived the theme of celebration in the hope of transforming what he waggishly calls the American Institute of Architectural Practice into the American Institute of Architecture. The events comprising the celebration have as their goal to focus the attention of architects and the public on what Mitchell terms "architecture of consequence." He includes within this term not only distinguished design but also humble, everyday buildings and places that "evoke a response." (A selection of things worth celebrating, some made by Mitchell and some by the JOURNAL, is on the foldout at right.) The intention, says Mitchell, is "to uplift architects and heighten our own appreciation of the need to make architecture of consequence, while bringing to public officials, commercial clients and the general public a keener understanding and interest in environments of quality."

Virtually every AIA activity this year will be related to the celebration. The year's major meetings have been scheduled in places rich in "architecture of consequence": grassroots in Washington, D.C., New Orleans and Los Angeles; board meetings in San Francisco and Boston. Mitchell's intention is that those attending the meetings should both experience and give recognition to what each city has to offer, and thus raise its citizens' consciousness of architecture.

He sees the June convention in Kansas City as "the maturing of the celebration." It will begin with a R/UDAT to study the future of the city's relatively undeveloped northern section about four days before members convene. The R/UDAT's findings will be presented on the first day of the convention to city officials, the public and conventioners. Then students from schools of architecture in the Midwest will join a group of architects in a "design-in" based on the R/UDAT's recommendations. "What we'll have is a design demonstration of how the urban fabric and specific design come together, one as the extension of the other," says Mitchell.

Every aspect of the convention, from program to professional development seminars to business sessions, will be infused with the celebration theme. And the public will be invited to it all.

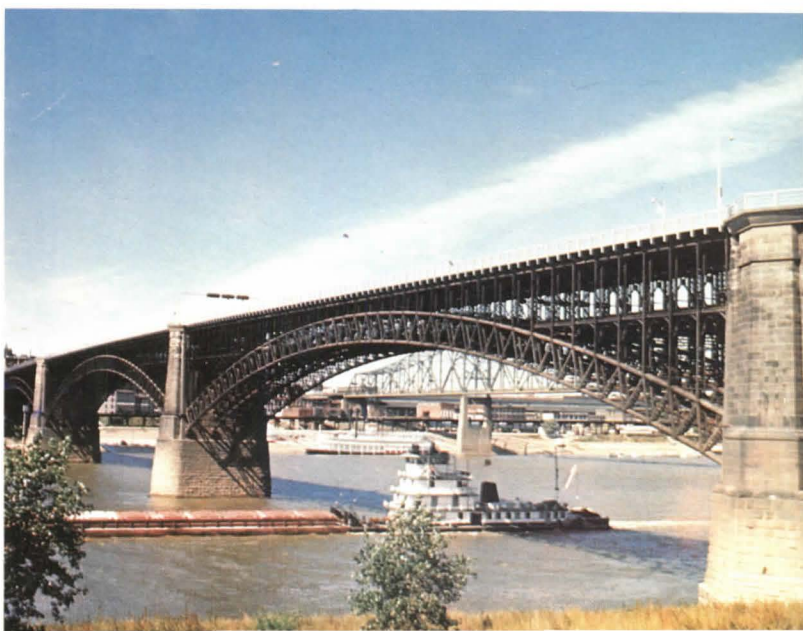
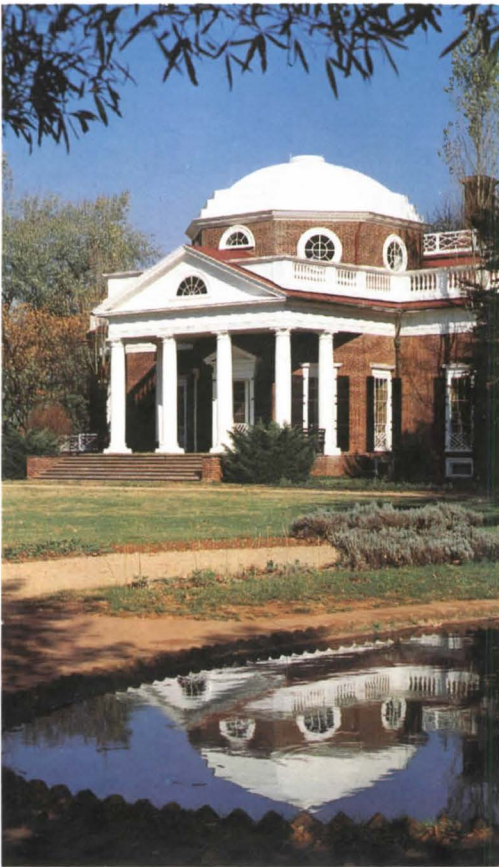
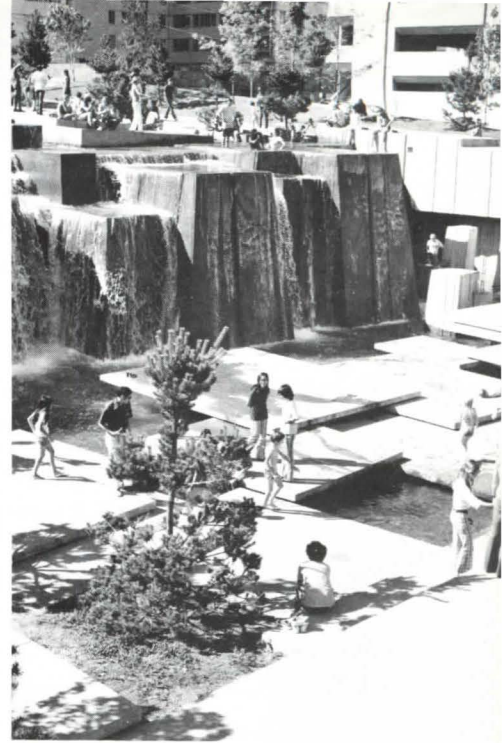
During the fall, hopes Mitchell, there will be state and regional conferences on subjects related to the celebration. "I see with the advent of our concern about energy conservation in building design the potential for a regional character of architecture coming back," he says, "because the regions will be relearning the lessons that our forebears knew about ventilation, orientation, insulation, that sort of thing." In addition, the design committee will hold at least one major design conference, which will have to do with emerging theories about architecture.

To Mitchell, a partner in the firm of Mitchell/Giurgola (winner of AIA's 1976 firm award), the idea

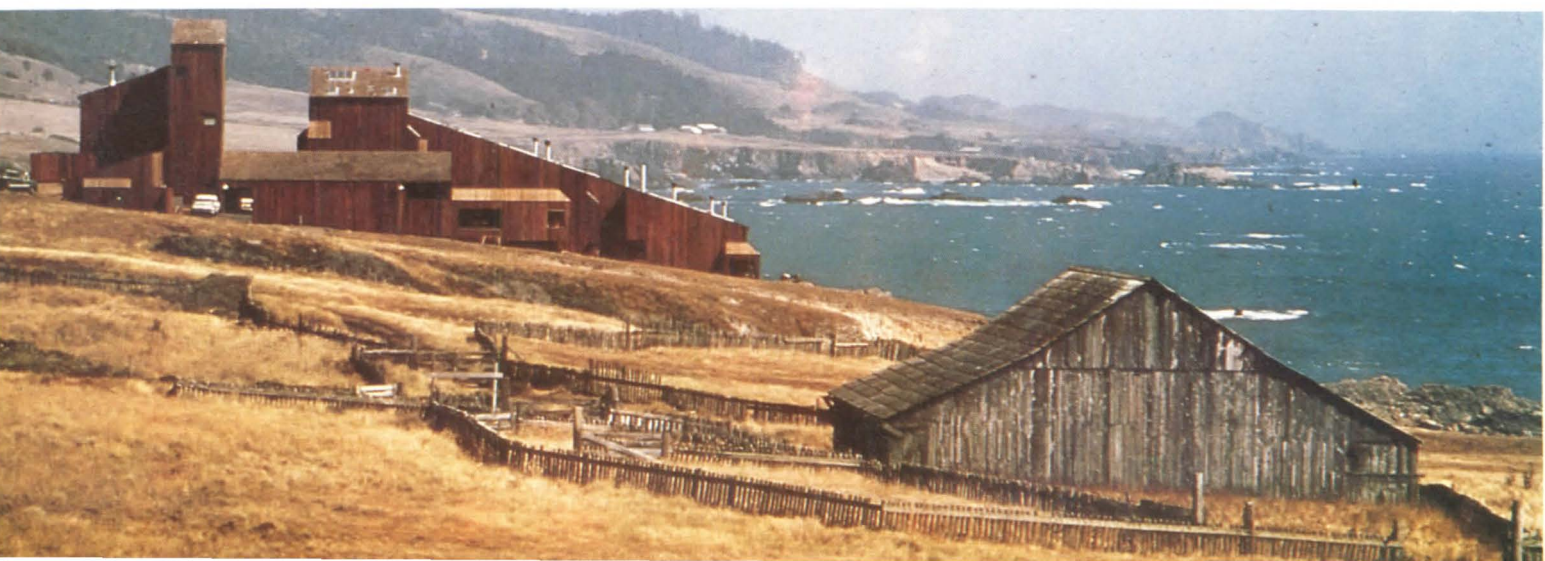
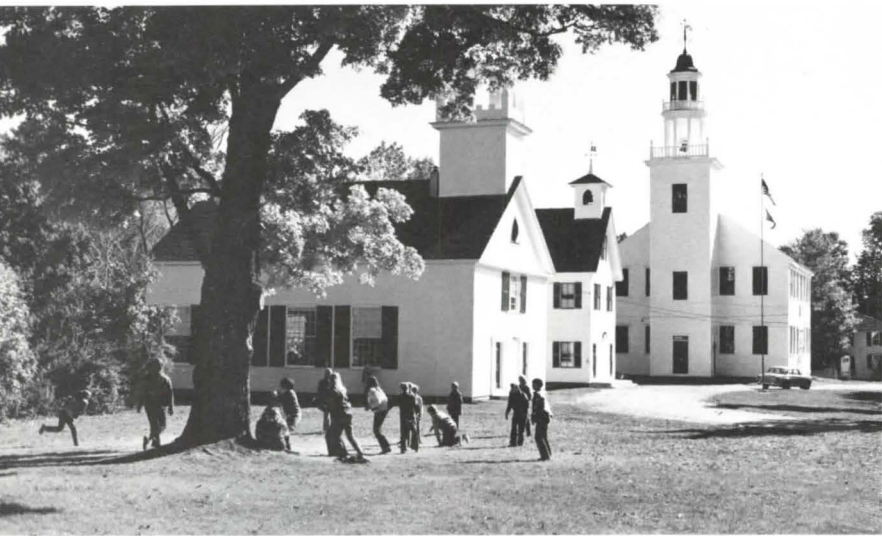
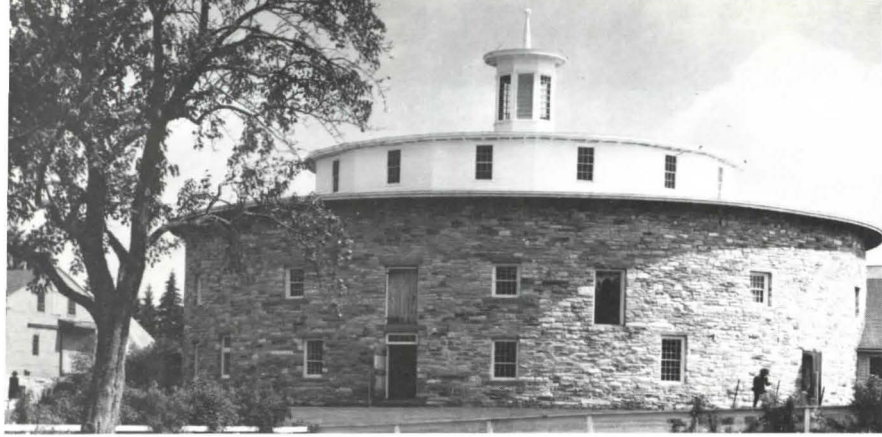
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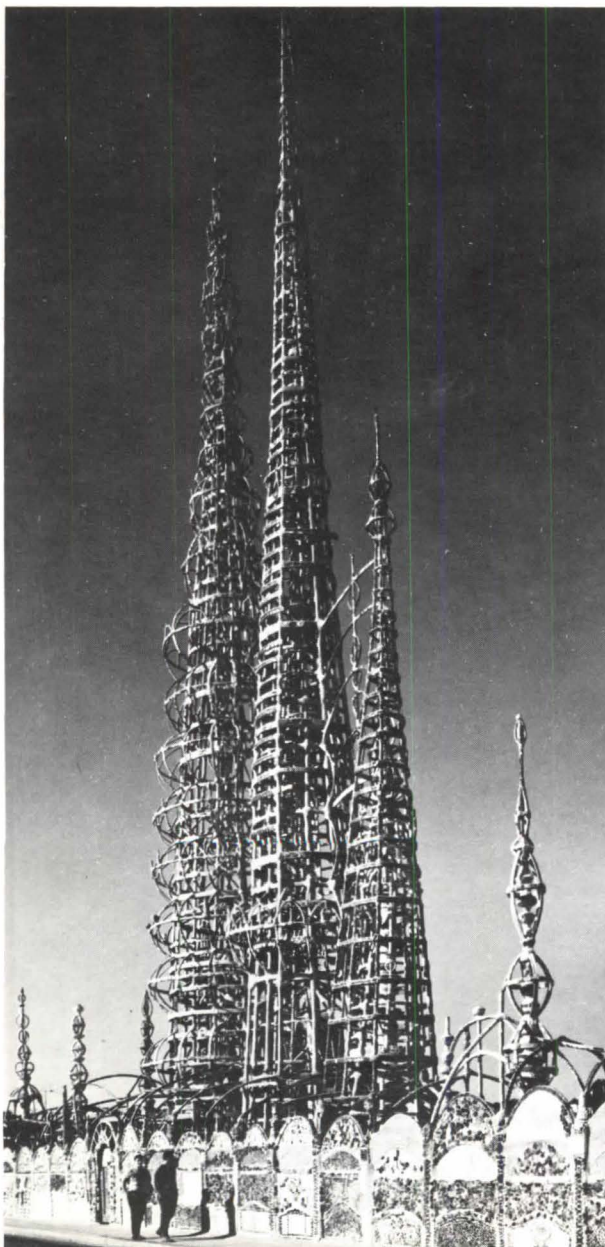
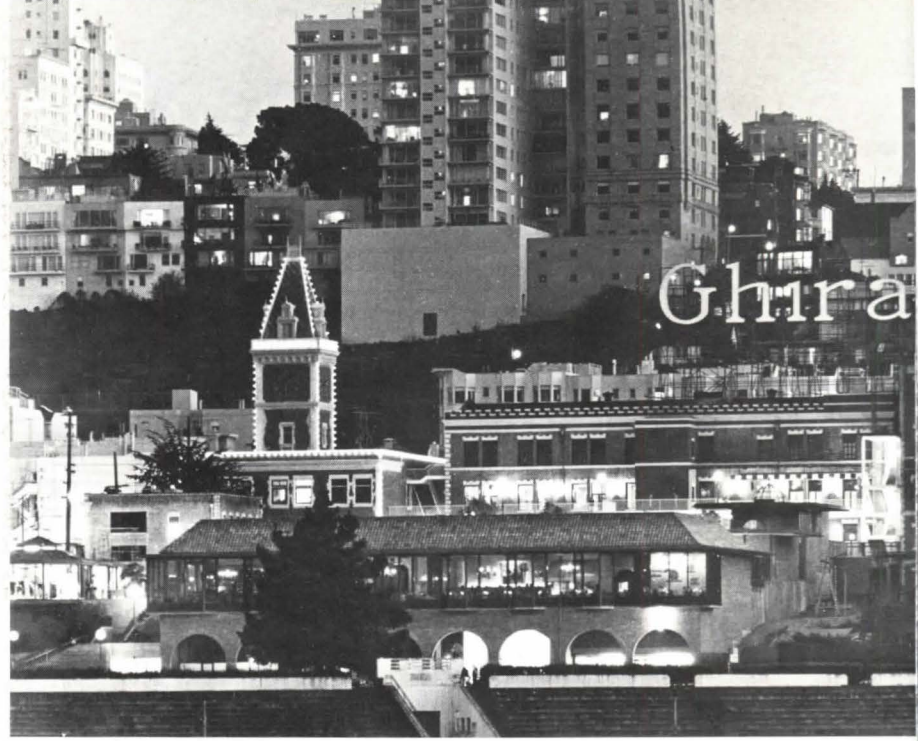
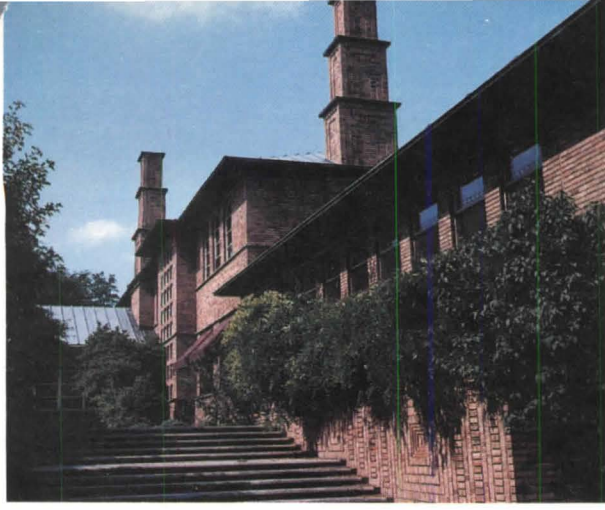
WORTH CELEBRATING

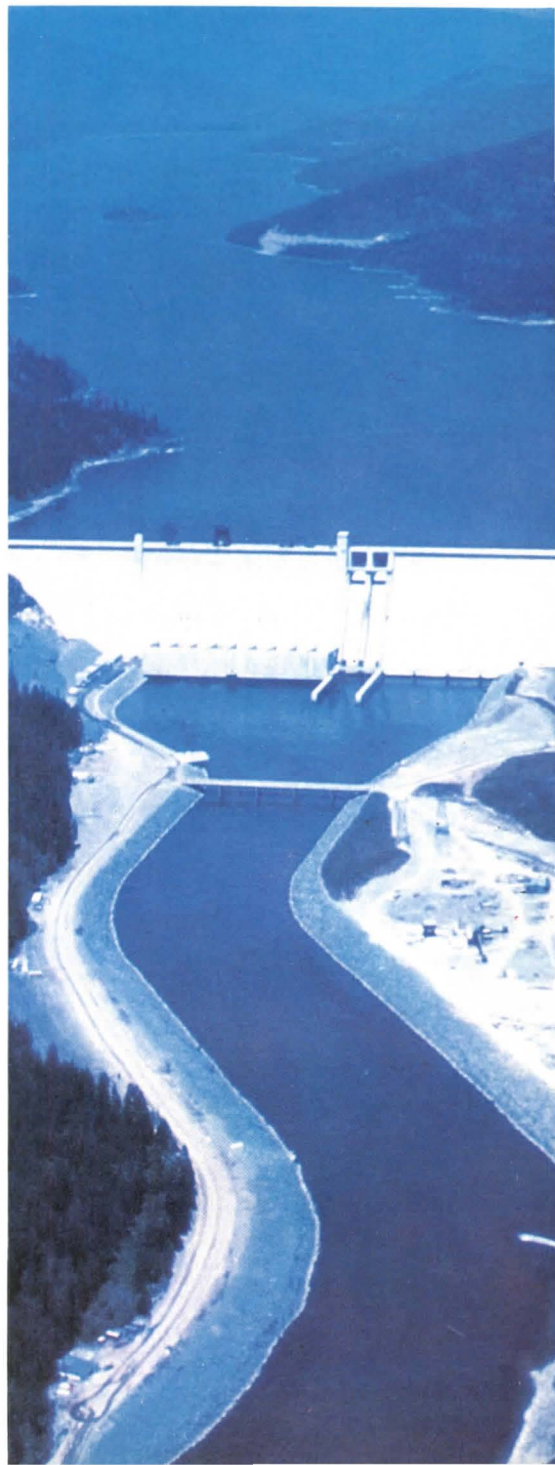
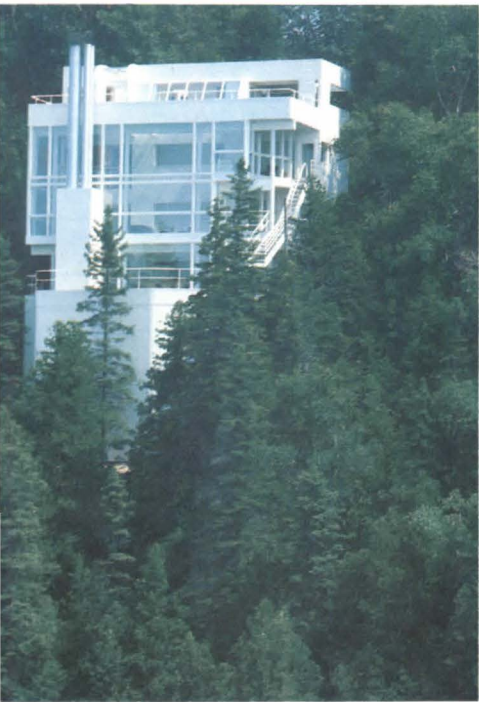
- Dumbarton Oaks, the Bliss Pre-Columbian Wing, Washington, D.C.; Philip Johnson, FAIA (architect); Ezra Stoller © ESTO (photographer).
- San Francisco row houses; Morley Baer (photographer).
- Charles Eames house, Pacific Palisades, Los Angeles; Charles Eames (architect).
- Douglas house, Harbor Springs, Mich.; Richard Meier & Associates (architect); Ezra Stoller © ESTO (photographer).
- Prudential (Guaranty) Building, Buffalo; Louis Sullivan (architect).
- Libby Dam, Libby, Mon.; Paul Thiry, FAIA (architect); Hugh Stratford (photographer).
- Kimbell Art Museum, Fort Worth; Louis I. Kahn, (architect); Ezra Stoller © ESTO (photographer).
- Cranbrook Academy of Art, Bloomfield Hills, Mich.; Eliel Saarinen (architect).
- Ghirardelli Square, San Francisco; Wurster, Bernardi & Emmons (architect); Ernest Braun (photographer).
- Chatham Park, Savannah, Ga.; Al Stephenson (photographer).
- Watts Towers, Los Angeles; Simon Rodia (architect); Julius Shulman (photographer).
- Chrysler Building, New York City; William Van Alen (architect); Cervin Robinson (photographer).
- National Center for Atmospheric Research, Boulder, Colo.; I. M. Pei & Partners (architect); Ron Partridge (photographer).
- Civic Auditorium Forecourt, Portland, Ore.; Lawrence Halprin & Associates (landscape architect); G. E. Kidder Smith, FAIA (photographer).
- Monticello, near Charlottesville, Va.; Thomas Jefferson (architect); Robert Lautman (photographer).
- Trinity Church, Boston; Henry Hobson Richardson (architect); Library of Congress photo.
- House for Vanna Venturi, Chestnut Hill, Philadelphia; Robert Venturi, FAIA (architect); Rollin La France (photographer).
- Kitt Peak Telescope, Kitt Peak, Ariz.; Skidmore, Owings & Merrill (architect); Ezra Stoller © ESTO (photographer).
- Central Park, New York City; Frederick Law Olmsted Sr. and Calvert Vaux (landscape architects); Library of Congress photo.
- Eads Bridge, St. Louis; James Buchanan Eads (architect).

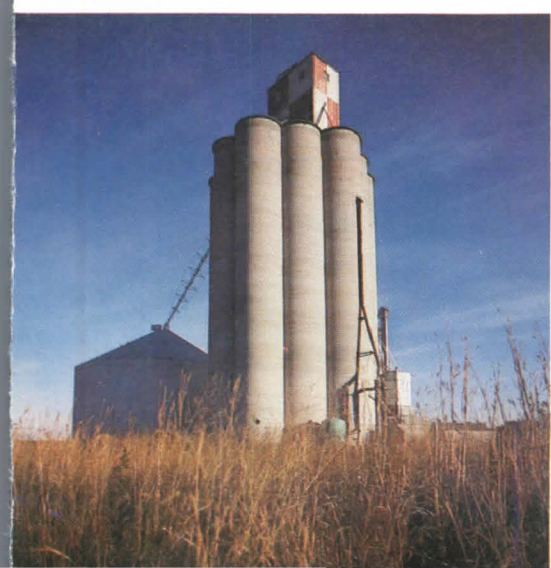
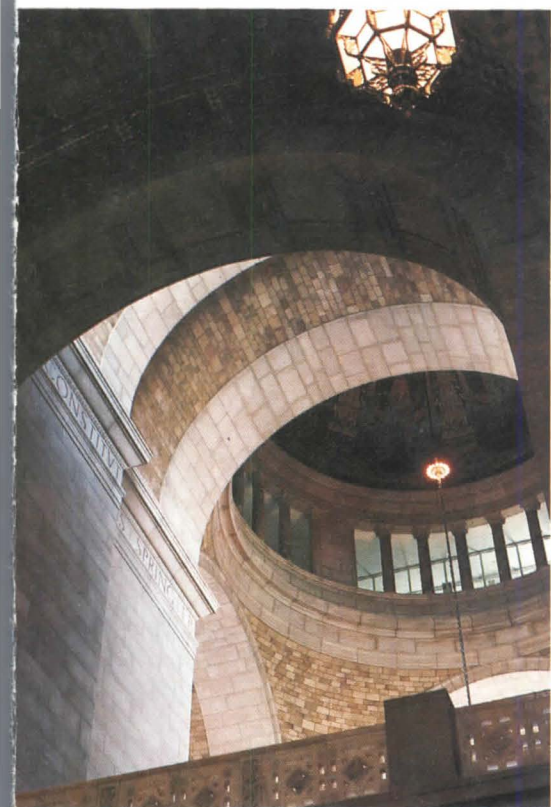
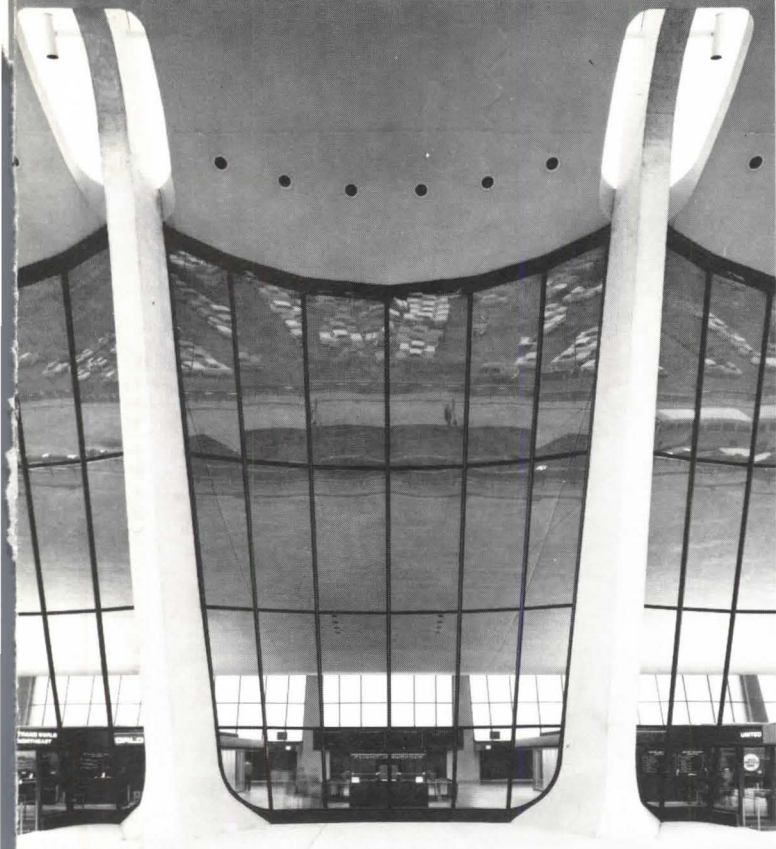












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- 21.** Lincoln Memorial, Washington, D.C.; Henry Bacon (architect); Robert Lautman (photographer). **22.** Vieux Carré, New Orleans; G. E. Kidder Smith, FAIA (photographer). **23.** Farnsworth house, Plano, Ill.; Ludwig Mies van der Rohe (architect); Hedrich Blessing (photographer). **24.** Pennsylvania Academy of Fine Arts, Philadelphia; Furness & Hewitt (architect); Day & Zimmerman (restoration); Pennsylvania Academy of Fine Arts photo. **25.** Rockefeller Center, New York City; Reinhard & Hofmeister, Corbett, Harrison & MacMurray, Hood & Fouilhoux (architect, initial project); Bo Parker (photographer). **26.** San Xavier del Bac, Pima County, Ariz.; G. E. Kidder Smith, FAIA (photographer). **27.** Hancock Shaker Village, Berkshire County, Mass.; G. E. Kidder Smith, FAIA (photographer). **28.** Butler Square, Minneapolis; Miller Hansen Westerbeck Bell (architect); Phillip M. James (photographer). **29.** Johnson Wax Co. Administration Building and Laboratory Tower, Racine, Wis.; Frank Lloyd Wright (architect). **30.** Village Green, Washington, N.H.; G. E. Kidder Smith, FAIA (photographer). **31.** River walk, San Antonio, Tex.; Sinclair Black (photographer). **32.** Sea Ranch Condominium I, The Sea Ranch, Calif.; Moore, Lyndon, Turnbull, Whitaker (architect); William Turnbull, FAIA (photographer). **33.** Dulles International Airport, Chantilly, Va.; Eero Saarinen & Associates (architect); Balthazar Korab (photographer). **34.** First Church of Christ Scientist, Berkeley, Calif.; Bernard Maybeck (architect); Morley Baer (photographer). **35.** Nebraska State Capitol, Lincoln; Bertram Grosvenor Goodhue (architect); Patricia Duncan (photographer). **36.** Grain elevator, Skiddy, Kan.; Patricia Duncan (photographer). **37.** Chicago Daley Center, Chicago; C. F. Murphy Associates, Loeb, Schlossman & Bennett, Skidmore, Owings & Merrill (architect); Hedrich Blessing (photographer). *Nora Richter, photo editor.*

of a celebration of architecture as the Institute's theme for 1979 was a natural. "It just seemed to me," he says, "that one might question why are we doing what we are doing. Chick Marshall and Lou de Moll were very heavily oriented toward developing the strength of leadership of the Institute and component leaders to give our members more for their money. Then with Jack McGinty came the resolution of the issues of AIA's ethics, membership and our dues. Then Elmer Botsai, with the emphasis on professional competence. All these are introverted measures. They address 'how we can make ourselves better.' Well, for what? Why? The link that had yet to be added, the one that links it all together, is architecture. Our goals should now be external, toward society."

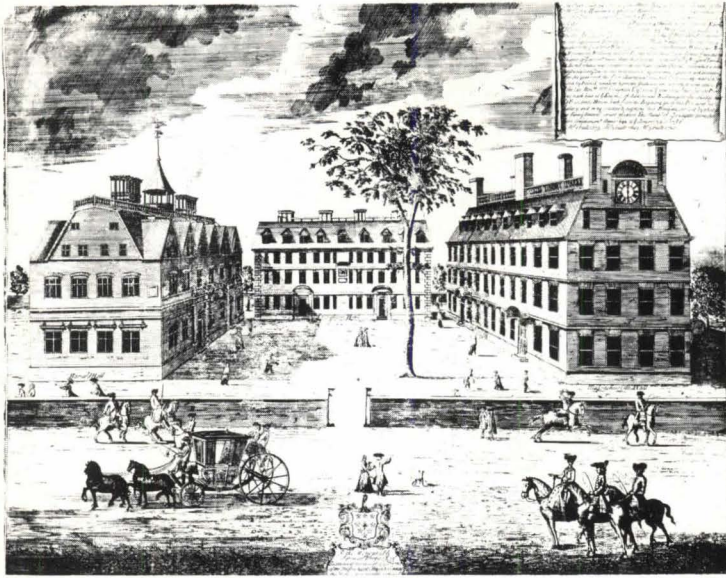
A few questions about the celebration: How, for example, does the profession distinguish for the public between architecture of consequence and schlock? "By focusing attention on quality architecture," answers Mitchell. But, what if the public likes tract housing and strip development and ends up expressing a desire for more Disneylands? "That would mean a lot of work for Venturi," says Mitchell, half facetiously. He adds that he regards the Disneylands and Las Vegas of the world as movie sets, not architecture of consequence.

How does the profession appeal to developers? "There is a distinct competitive advantage to the developer who has architects do work of distinction," says Mitchell, pointing to the success of such shopping complexes as the Gallery in downtown Philadelphia (by Bower & Fradley). "I think if the Gallery were a humble, ordinary type store, it might not have made it from a sales point of view; but it's exciting, lively architecture and people flock to it in droves. The developer realizes that 'holy mackerel, look at this sales success from architecture!'"

What then, about simple, humble works in which the hand of an architect may not have been present? "We need only to look at how we've learned from early buildings in the Southwest, their use of materials and classic forms," responds Mitchell.

Might the celebration appear self-serving to the public? As though architects are just selling themselves and packaging their wares in a noble-looking wrap? "What I think of sparking the idea of the celebration is to build a consciousness and awareness in the general public about our towns, hamlets, cities, villages, whatever, which are worthy of celebrating, as part of an advancement in the quality of the built environment. We do it in a way which is not focused on the architect, where we invite the public to come and see what they have, not necessarily what we did. We don't have a specific product; our work envelops it all."

Finally, how, if at all, can the momentum of the celebration be maintained after 1979? Answers Mitchell, "We'll be developing activities throughout the country that will mature and spread. Visualize a flywheel, if you will. I would hope that we will have spun that wheel fast and hard enough that it may slow down but never stop." □



Architecture, Urban Design and the Harvard Campus

By Lois Craig

Photographs by Steve Rosenthal

The visitor emerging from the subway stop at Harvard Square confronts the first anomalies of the urban university. The “square” is a small triangle formed by intersecting streets. At its center is neither a placid greensward nor a monumental building but a transit station canopy and a busy news kiosk surrounded by concrete and traffic. Here the pedestrian crush often dominates the automobile jam. Street musicians, atop the kiosk or across on a commercial strip, may add to the decibels. Content and associations, not structure and design, have given the square its renowned sense of place as an international academic crossroads.

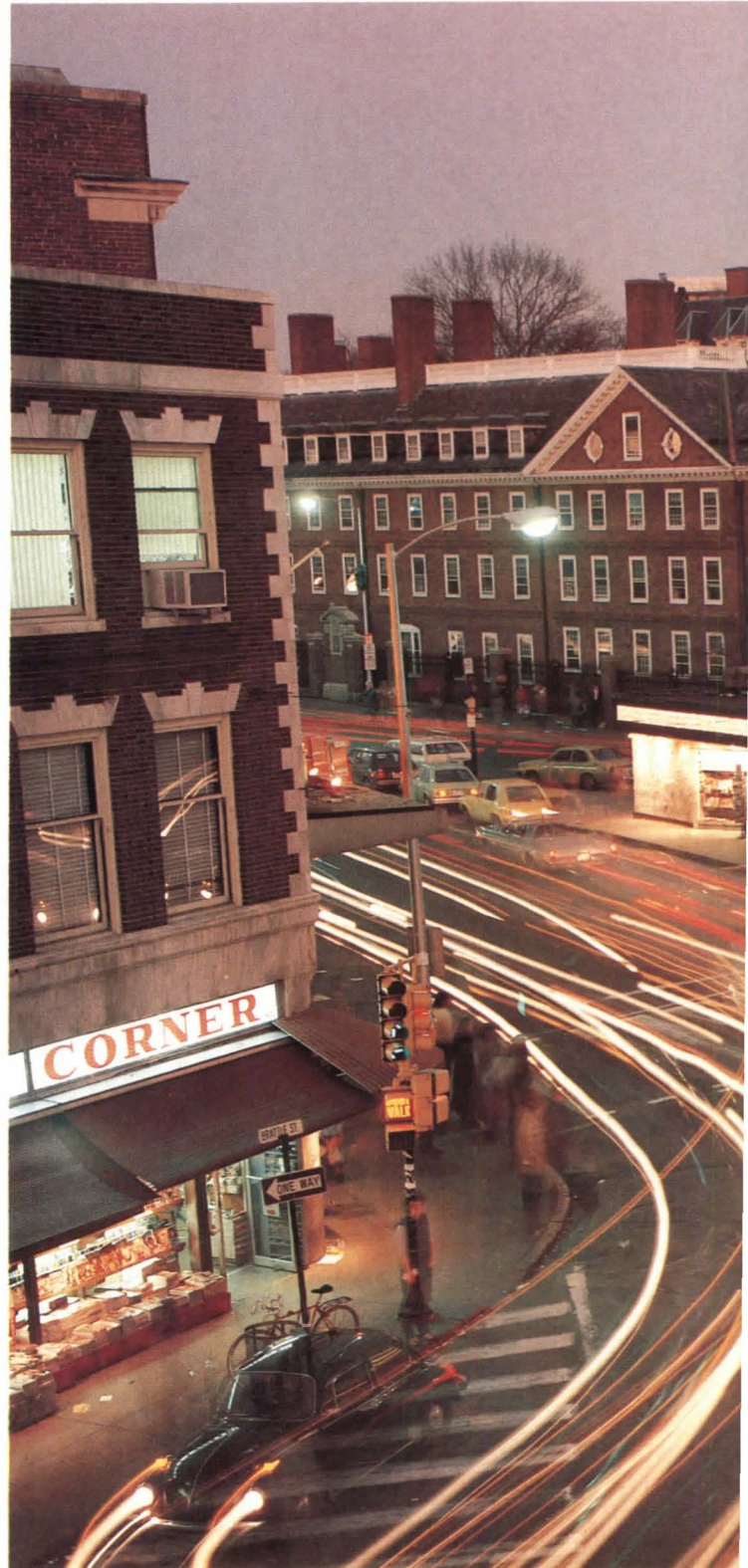
Like the square, Harvard University is a state of mind. Under a constitution that has governed the administrative structure since 1650, independent faculties, departments and allied institutions in loose confederation are legally directed by a corporation and a board of overseers, but are more practically allied, as someone suggested, to a central heating plant. Each major entity has its own administration, its own facilities and its own budget and funding sources.

The university’s physical properties within the city of Cambridge, Mass., have grown from a 17th century inventory of six buildings in a publicly donated cow yard to a campus that now accommodates the activities of 15,000 students and 3,000 faculty in 247 buildings on 220 acres of land. A subterranean service network of pipes, wires and tunnels, including a 7,000-foot-long walk-through tunnel with additional branches, sup-

Ms. Craig, a Boston writer and historian, was director of the National Endowment for the Arts’ federal architecture project. She is principal author of the project’s new book, *The Federal Presence*, which is reviewed on page 71.

ports the physical functioning of this academic city. Two major divisions of the university are outside Cambridge—the business school across the Charles River in Allston and the medical school in downtown Boston. In 1975, Hale Champion, then chairman of the university planning committee, wrote with what seems considerable restraint, “The only task more difficult than long-range planning for a complex, decentralized institution in a complex, diverse community is talking about it in a sensible and useful way.”

For the questioned academic strengths gained from its diversity and decentralization, Harvard has paid a price in visual coherence. Episodes of beautiful ensembles and compatible extensions can still be seen within the historic twists and turns of development. But the prevailing principle of expansion more often seems to be that one designer’s vista becomes another



Above, Harvard Square. Top left, a 1743 depiction of “the Colle

designer's building site—a point of view not uncharacteristic of the growth of most American cities.

Harvard's conglomeration of buildings, courtyards, passageways and parking lots, which comprise the sprawling Cambridge campus, can be most readily comprehended as an evolution, over nearly three and a half centuries, of university policies, urban growth and the visions, or idiosyncrasies, of Harvard's individual leaders and donors. Particularly in recent decades the fragile fabric of townscape has suffered from the physical intrusions encouraged by Harvard's mode of operation, described in the 1970 university report, *Harvard and Money*: "The fortunes of each school and 'tub' have been exceedingly sensitive to the pocketbooks and loyalties of its own alumni; the popularity of its subject matter among rich patrons, foundations and the government; the income-status and expectations of its

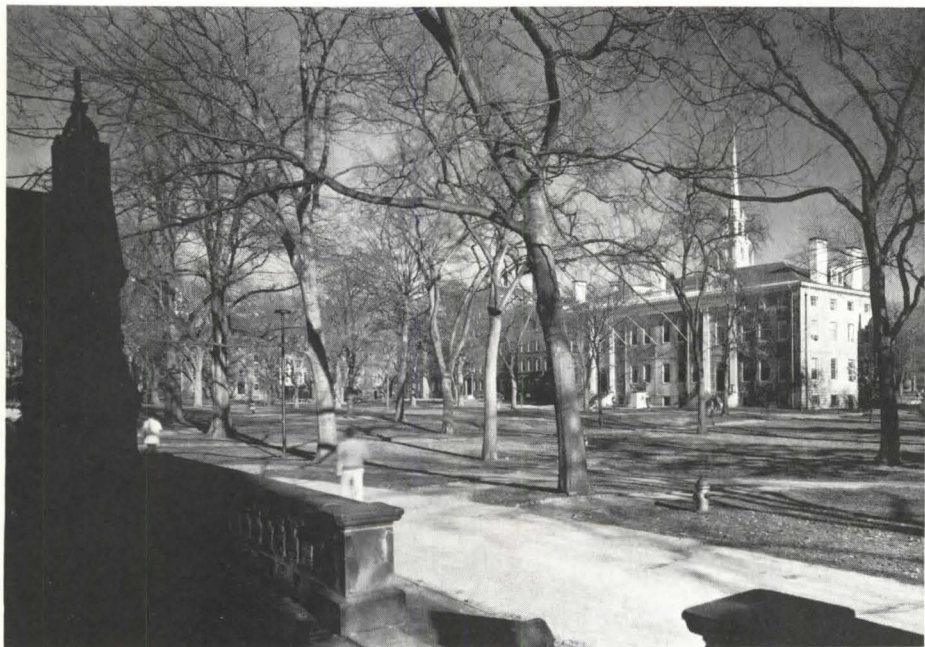
students; and in some cases, to the general state of the federal budget." In consort with rapid change and the design tenets of international modernism, this viewpoint leads to nothing so much as an architectural equivalent of the unexamined life.

In 1636, six years after John Winthrop led his Puritan band to America, the General Court of Massachusetts gave funds for the establishment of a college at New Towne, later Cambridge. As a basic tenet of its aspiration, Harvard College developed physically and intellectually around the idea of the "Collegiate Way of Living," then nurtured by the English universities of Oxford and Cambridge. Here would be an American model of students and faculty studying, recreating, praying and living together to educate the whole man.

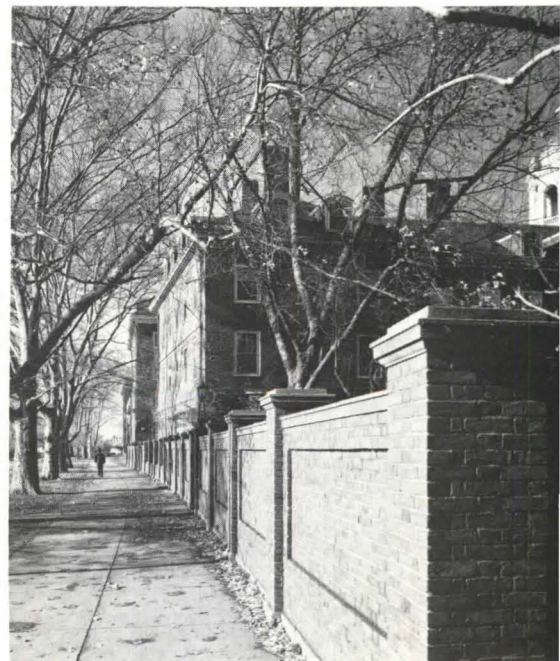
For most of two centuries, Harvard College was lodged in buildings arranged to this principle of education, scaled and



Cambridge." Only the building at right, Massachusetts Hall, still stands.



Above, the campus over the river. Left, the old yard with the spire of Memorial Church rising over Bulfinch's University Hall. At right, a gateway to the undergraduate houses.



A fondness for souvenirs from the past.

textured by the ready availability first of wood and then of brick and by the limits of staircases. Only the 1720 Massachusetts Hall remains of a colonial cluster that opened on to the village common and square. In 1816, Charles Bulfinch's University Hall, in the fashionable federal style, exemplified a major change. In larger scale and in new colors of gray granite with white trim, the building created the beginning of a quadrangle now called the old yard. And it shifted the focus of Harvard from the public areas of the town to the private compound of the college. Although Bulfinch's general concept of the inward-turning campus survived, the contextual aspirations for his building, in what became a Harvard tradition, would be ignored by later buildings.

As the college expanded, halls appeared that were related to the axes of preceding buildings, but of diverse styles. A new quadrangle of stone buildings took shape to the east of University Hall. In 1880 Henry Hobson Richardson's Romanesque Sever Hall marked another major change in taste, initiating a return to the red brick of colonial Harvard. Two stone buildings important to the alignment of Sever were later replaced by bulky, but brick, Widener Library and Memorial Church.

At the turn of the century, a third quadrangle was formed to the east of Sever by Robinson and Emerson Halls. And alumni financed a formal brick and wrought iron fence that enclosed the successive yards into the campus known today as Harvard Yard. In the 1920s and '30s a cloistering edge of neo-Georgian buildings emphasized the separation of the college from the noisy city.

Modern contributions to the yard muted their stylistic dating to the red brick consensus. Most recently, the Pusey Library fled the dilemma by going underground, introducing, however, the foreign elements of berm and moat. But both successes and failures are united in a sense of serenity by the yard's enclosing wall, by the interlocking courtyards and crisscrossing paths, by the predominance of red facades and by the natural seasonal adornments of green, gold and white.

The so-called North Campus, the center of Harvard's graduate expansion, has been less fortunate. Its sense of place has



been outmatched by its perception as a building site. And its compatibility problems have been compounded by the concept of graduate education based on research and specialized studies, which goes back to the medieval specialism of continental universities—in contrast to the undergraduate English college principle of integrated living and learning, dating from the Renaissance ideal of the rounded man.

During the presidency of chemistry professor Charles William Eliot (1869-1909), Harvard became a university and one of only two places in America where a student could pursue a formal liberal arts education at the graduate level. Endowment funds grew from \$2.3 million to \$22.5 million, the student body tripled, the faculty then quintupled and the new area beyond the old college began to fill.

Just outside the gates of Harvard Yard rose the massive Ruskinian splendor of Memorial Hall, which enclosed a transept dedicated to Harvard's Civil War casualties, a central dining hall and a still-used theater. It is a great "Valhalla," wrote Henry James, "which dispenses laurels to the dead and dinners to the living." Further to the north, new compounds for law and science began to form in the tradition of defining the edges of outdoor space with buildings. The University Museum, begun in 1859 with a state appropriation, became by 1888 a huge industrial-style brick complex and the center of burgeoning scientific studies. For expanding legal studies, a sturdy brick library, Austin Hall by Richardson, was soon dominated by the imperial pretensions of a gray, granite temple, Langdell Hall, its main section completed in 1907. (In 1906 the medical school moved to a complex of white marble temples in Boston.)

From 1909 to 1933 President Eliot's successor, Abbott Lawrence Lowell, added \$100 million to the university's endowment and more buildings to its inventory than in all of Harvard's previous history. Neo-Georgian and neoclassic styles were cloned for everything from chemistry lab to residence hall. Across the river a Roman coliseum resounded with the cheers of athletic combat. Contemplating this stylistic era, today's observer is reminded of H. G. Wells' complaint about the predilection of Boston intellectuals for souvenirs of the past. "The capacity of Boston, it would seem," wrote Wells, "was just sufficient, but no more than sufficient, to comprehend the whole achievement of the human intellect up, let us say, to the year 1875 A.D. Then an equilibrium was established. At or about that year Boston filled up."

Just such stylistic back-filling covered the grounds of Harvard during President Lowell's tenure. And contributed, too, one of Harvard's most memorable visual images, the famed riverscape of the undergraduate houses, complemented by the new campus across the river for the graduate school of business administration.

The houses were begun in the late 1920s with a gift from Edward Stephen Harkness, a donor who shared Lowell's dream of returning Harvard's undergraduate education to its first principle of collegiate living. Over the years of the expansion of graduate education, "the way" had fallen into neglect and its housing into disrepair. Wealthy undergraduates abandoned the old, cold and uncomfortable dorms of the yard to their poorer fellows and took up residence with their retinues of personal servants on the "Gold Coast" of nearby Mount Auburn Street.

The new undergraduate houses on the river and inside the yard were—with their clustering of individual rooms in suites, their own dining rooms, libraries, concerts and lecture programs—a conscious effort to democratize undergraduate life. Today the now-costly maid system and table service have vanished and general maintenance has deteriorated.

But, together with Harvard Yard, it is the image of the river houses, arrangements of red and white, courtyards and passageways, walls and towers, which most people recall when they picture Harvard.

Twentieth century additions to the North Campus varied

Stylistic breaks and physical connections.

from a divinity compound garbed in proper gray Gothic and a dainty music building to an enormous, now unused, electron accelerator financed by the U.S. Atomic Energy Commission. A block from the cyclotron an engineering sciences lab is housed in a corporate version of an Oriental teahouse.

A major vista for the North Campus was portrayed on a 1922 map by the Boston firm of Coolidge, Shepley, Bulfinch & Abbott, descendant of Richardson's office and, in its varied configurations, architect for many of the buildings at Harvard in the first half of the 20th century and many of them since.

At midcentury the fashions in architecture changed radically in their look, their source and their philosophy. In 1950 a compound at the far edge of the North Campus emulated the collegiate living arrangements of the undergraduate houses for students who had endured the independent living accommodations of a specialized graduate university. The eight buildings of the Harkness Commons and Graduate Center were designed by Walter Gropius, a leading proponent of the Bauhaus-derived International style, who came to the school of architecture in the 1930s. Sleek in line and yellow in brick, the graduate complex was soon dated by its luxurious use of land. But it was the harbinger of an era of anticontextual tenets and architectural statements that challenged and often defeated the continuities of earlier Harvard.

The tenure of President Nathan Pusey, from 1953 to 1971, coincided with new attitudes to land use and with the heyday of Harvard's romance with name architects, chosen, apparently, with a casualness that would never be tolerated in the selection of faculty. The demand for new academic facilities, combined with Pusey's belief that students and faculty should live near the campus to encourage the vitality of both day and evening life, dramatized the dwindling supply and increasing value of building sites. Also characteristic of this period were conflicts with the citizens of Cambridge who viewed with alarm the tax-exempt expansion of Harvard and the neighboring Massachusetts Institute of Technology.

Harvard's emphasis on the highest and best use of land spawned a rash of towers—William James Hall, Larsen Hall, Leverett House, Peabody Terrace, Holyoke Center—and under the dean of the architecture school from 1953 to 1969, José Luis Sert, FAIA, a circulation-oriented emphasis in campus design. At their worst, the towers sat in awkward isolation that blocked and repelled approach, out of character with residential neighborhoods and the traditional courtyard relationships of Harvard. Larsen Hall, for instance, is popularly presented in a distant photographic view from Radcliffe Yard, in seeming scale with red brick chimneys. In actual context, it presents to a neighborhood of small frame houses a nearly solid wall surrounded by a moat. Its latter-day red brick skin is an ironically misplaced nostalgia for old Harvard—or for an even more distant “little red schoolhouse.” As with so many modern buildings, the users, once inside the building, are reassured of connections, denied their neighbors, with artfully framed views of the outside world.

In contrast and with varying success, the designs executed or most directly sanctioned by Sert attempted more modulation of use and form, more connections to townscape and pedestrian movement. Sert's influence has extended, too, beyond building walls. In his time at Harvard he served on the city planning commission and on the design advisory committee of the Boston Redevelopment Authority. He was also chief consultant to a new university planning office, directed by Harold Goyette, a former student of Sert, who guided Harvard's successful effort to create a new green space by depressing and covering a busy street between Harvard Yard and the North Campus.

Sert's major concern for urban circulation has had a novel evolution. The arcade of Holyoke Center opens to a south gate-



Procession: The arcade in Sert's Holyoke Center (above) is on axis with a gate to the yard, which leads to another gate to Sert's Undergraduate Science Center and its interior 'street' (right). Below, Gropius' Harkness Commons. Below right, the Kennedy school of government by Architectural Resources, Cambridge.

way to Harvard Yard. Crossing the yard from here to the north, the pedestrian can exit through another gate, cross the newly created green space and enter Sert's Undergraduate Science Center to what is intended to be an interior street system that can be continued into the outdoor precincts of the North Campus. Like the hoped-for river passage from the Holyoke arcade, the exits to the North Campus now visually lead nowhere.

The ideas of passage and porosity embodied in Holyoke Center and Gund Hall (see following articles) have been impractical for Carpenter Center, Le Corbusier's sculptural lecture jammed in between its Quincy Street neighbors. A bare concrete plaza, which passes under the building, is inhospitable in the New England climate. And a slippery outdoor ramp, which crosses through the building, passes locked doors and ends in a parking lot—an inelegant terminus caused by the university's abandonment of a proposed development beyond the ramp.

“At no time in three centuries have the Harvard authorities anticipated the need for physical expansion,” wrote Samuel Eliot Morison in 1936. Many contemporary Cambridgians



New limits on both growth and aspirations.

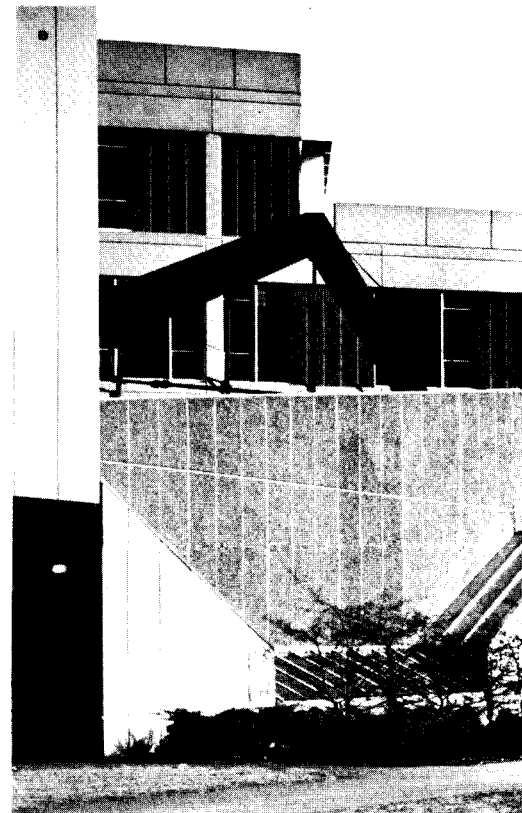
agree. Indeed, the university in the recent decades of its university planning office has eschewed the idea of a master plan, insisting that its planning reports are, rather, inventories for a process. But to attempt even a planning inventory with its requisite reports acknowledges that the problems of growth, the exacerbation of the town-gown dilemma by the modern building boom, must somehow be addressed.

The student unrest of the late 1960s demonstrated for Harvard, as well as other urban universities, that urban design, or nondesign, also includes social principles. More recently, continued community opposition to Harvard expansion forced the Kennedy library commission to give up its plans for a sumptuous and monumental memorial designed by I. M. Pei, FAIA. The community still loses some battles—the latest over the proposed construction of new athletic facilities on Observatory Hill, once used as a public park but increasingly filled with inaccessible university uses.

In 1975 Harvard drew a line, characteristically red, to mark the limits of acquisition of residential property. No mention was made, local leaders noted, of commercial and industrial property. But reality may be outpacing rhetoric. Inside and outside Harvard, student populations are stabilizing or diminishing. Soaring construction costs and concern about energy and resource conservation portend an emphasis everywhere on rehabilitation and reorganization for more efficient use of existing space. In 1983 Harvard will inaugurate its recently voted core curriculum—an educational change that may have important implications for the use of buildings.

The Harvard buildings of the 1970s are an infill development of the campus, and they architecturally manifest a distinctly more modest image than the heroic performances of the 1960s. Symbolically, the site of the defeated Kennedy library and museum is occupied by a new home for the Kennedy school of government, which was designed by Architectural Resources, Cambridge, in a low profile, modern red brick idiom more compatible with the historic Harvard ambiance.

What happens to the famed pathways and outdoor spaces is the more immediate urban design question that plagues the



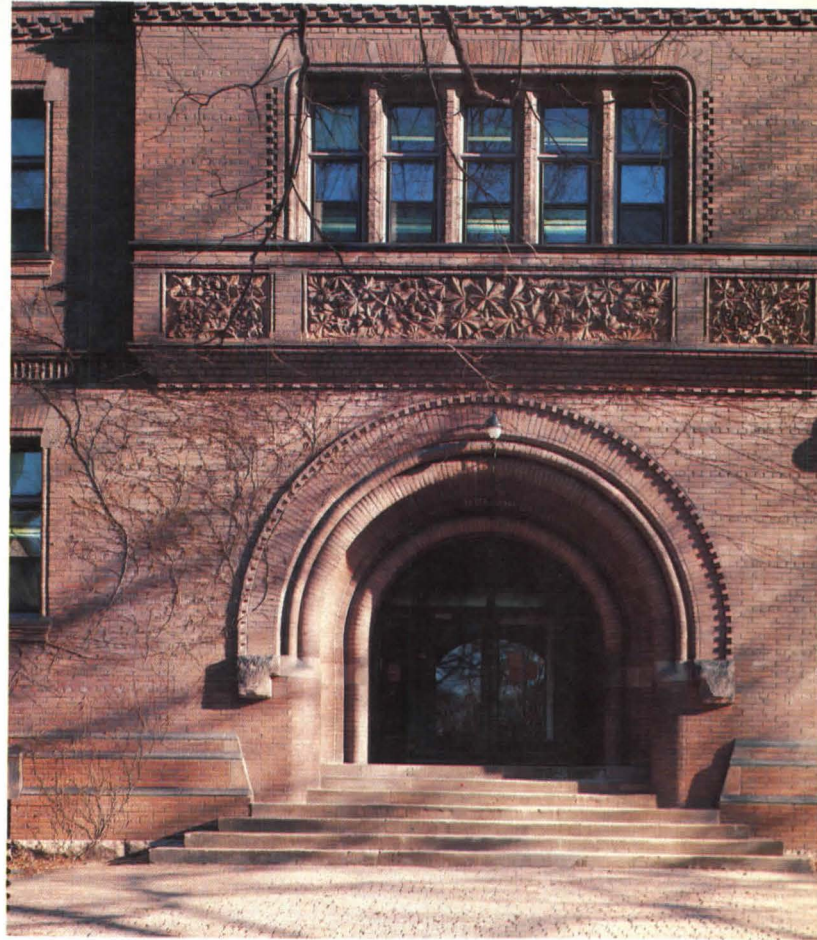
Small photos, clockwise from top: Lock at Carpenter Center, the base of William James Hall (Minuro Yamaski & Associates), street view of Larsen Hall (CRS), chain link fence at Peabody Terrace (Sert, Jackson & Gourley). Above, three generations of Harvard buildings by the Shepley office: Left, foreground, the 1930 Dunster House; behind its spire, the 1960s Leverett House, and at right, the 1970s Mather House.

visual amenity of Harvard. Unlike many American campuses, the interpenetration of the precincts of town and gown has been an active one. The city's unruly development around and among the boundaries of the university alternately impinges on and enlivens the life of the campus.

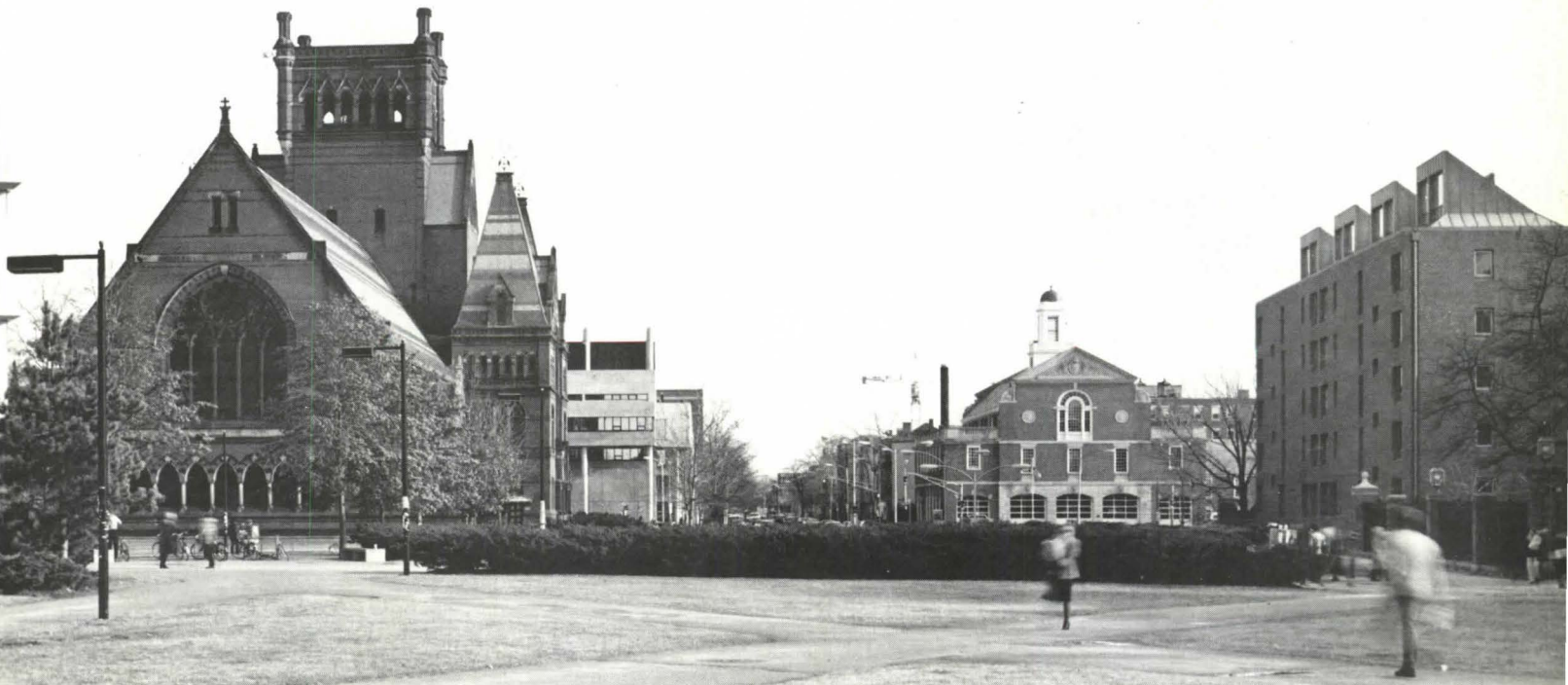
The edges of separation are testimonials to changing relationships. The publicly sponsored Harvard opened to the village. At the end of the 19th century a confident, privately wealthy Harvard unified and closed its central yard with an imperial edge entered through grand, ceremonial gates that decreed the decorum expected. Modern Harvard is less confident. An interim planning report of 1974 advised, "There are no areas of the university where a 'great wall' is required or desired, and such installations would tend to establish isolated segments in an otherwise open university. Segmenting the university with walls would also run contrary to the administration's concern for retaining 'soft' edges." Coupled with the appearance of a haphazard array of chain link fences, of the security system's locks and chains, Harvard reveals a siege mentality up against the growth of both citizen opposition and urban crime. And the rising costs of maintenance.

Today, the truncation of design visions is caused more by these new realities than by their replacement by new design aspirations. The pathway through Carpenter Center passes locked doors; the original 28 entrances to Gund Hall have been reduced to four daytime openings and one at night; the gates to the river from the courtyards of the undergraduate houses are locked; the chain link fence at Peabody Terrace visually and psychologically abrogates the connections of its plazas to the community. A major entrance to the Kennedy school overlooks a food services loading dock—each owned and operated by separate departments. Scattered on-grade parking testifies to the recalcitrance of this privilege. Trash receptacles and light fixtures are ready clues to the state of separate budgets and priorities.

Coherent and sensitive landscaping, maintenance and security might better knit together both the architectural errors and triumphs. The very organization of Harvard, however, now contravenes the central vision and power and budget needed to advance even the smaller amenities of urban design. □



Above, Richardson's Sever Hall. Below, a characteristically diverse assemblage of buildings around a new green created by burying a street. From left, the Undergraduate Science Center, Memorial Hall (Ware & Van Brunt), the edge of Gund Hall, a firehouse built by the city in Georgian style at the request of the university, and the university's subsequently modern Canaday Hall (the Ehrenkrantz Group).



Evaluation: 'Gray Elephant' in Harvard Square

Holyoke Center, most successful of the university's first-generation highrises. By Andrea O. Dean



The design of Holyoke Center began in the late 1950s, a time when "modern," oversized towers began sprouting among Harvard's aging and low-lying buildings. Looking for all the world like incongruous and isolated bastions, the new buildings threatened to undermine the university's visual and physical continuity. By contrast, Holyoke Center was intended both to fit comfortably into its surroundings and act as a connecting corridor to nearby structures and streets, despite being the only highrise (10-story) cast-in-place concrete building in its neighborhood.

Completed 14 years ago, the H-shaped complex occupies an entire block, owned by Harvard University. It is in the middle of that inviting jumble of small, unrelated, densely packed old commercial buildings, kiosks, conflicting signs and uncontrolled

traffic that is Harvard Square. Directly across Massachusetts Avenue is that archetypal grove of academe, Harvard Yard, with its venerable halls, ancient trees and swatches of green. Holyoke Center was intended by architects Sert Jackson & Associates, Inc. (Sert Jackson & Gourley during the building's design stages) as a connecting bridge between the yard, the square and student housing and playing fields extending south to the Charles River. Its brick-paved arcade (not a mall, nor even a shopping center) links Massachusetts Avenue and Mount Auburn Street, the shops on its side streets blending with those in the rest of the square, its windows sized to echo those in nearby Georgian buildings.

A precursor for recent multiuse buildings, Holyoke Center



Photos by Steve Rosenthal



Holyoke Center, looking toward Harvard Yard from the south (across page), and away from the yard across Mass. Ave. (above).

combines under one roof, but in separate towers, the university's health services and administration. Both previously had offices scattered from one end of Cambridge to the other.

Odd, perhaps, to now think of this bulky "gray elephant" (the words of José Luis Sert, FAIA) with primary-colored accents as old-fashioned, even in concept. During its early days, as Harvard's first tall and modern concrete building, Holyoke Center outraged some as an eyesore, though Sert Jackson attempted to diminish the feeling of bulk and allow the building to be read as a series of elements in the townscape. The towers are held away from the main streets to avoid what Sert calls "a canyon-like effect," the fifth floor facing Massachusetts Avenue has brise-soleils to prevent "a cliff-like facade" (the words of firm Presi-

dent Huson Jackson, FAIA) and low lying elements are placed on the fringes of smaller side streets.

Still, even today some feel the building is too big for its locale—Peter Blake, of the Boston Architectural Center, for example. (The idea for the block-sized complex evolved from a Harvard planning office directive that the land be developed for intensive use.) Others—like Michael Pittas, formerly with the Harvard graduate school of design, now director of the architecture and environment program of the National Endowment for the Arts—think the choice of materials is incongruous. (Sert's answer is that though he likes brick, he felt it inappropriate, to say nothing of too expensive, for a building of this size.)

By and large, passage of time and familiarity with the building have brought acceptance, not contempt. And as the first of its type in Cambridge, by its very presence, Holyoke Center helped to spawn other large, multiuse buildings that have transformed Cambridge, for better or worse, from a college town of mostly inexpensive shops and eateries into a high-priced, fashionable shopping magnet for consumers from all over the Boston area.

But the shops in Holyoke Center's arcade, far from being magnets, are for the most part quite staid—a travel office, optician, pharmacy, university press office, information center, shoe store. A bank fronts Massachusetts Avenue, Hertz and other enterprises open onto side streets. Owners of arcade stores that do not have street frontage say that their location away from thoroughfares is a disadvantage. To shopkeeper and student suggestions that a restaurant be included in the arcade to draw more people, Harvard planning office director Hal Goyette responds, "The problem is that restaurants generate tremendous amounts of trash and garbage and truck service plus increased ventilation requirements. The building already has so many uses, to include a restaurant of any size just doesn't make sense." Harvard has tried to keep the shopping spaces "dignified."

Not that the arcade is deserted. Sert calls it "the building's backbone," and as a covered street it receives ample general use, especially in bad weather, which in the Boston area means much of the time. A lot of the traffic, of course, is from people visiting or working in the building. Separate entrances, one for the health services, the other for university administration, open onto the arcade both to provide protected entrance and to leave more expensive, perimeter spaces of the building for commercial, taxable use.

Though covered, the arcade can be a wind tunnel, since both its ends are wide open, the south side having a small garden, the Massachusetts Avenue side an open plaza scooped out of the streetscape. This notch-like device may not be the best of architectural solutions, but closing the plaza off, even partially,

Varied facades and spaces, dashes of color.

to create more continuity with adjacent buildings would have created security problems in the arcade and eliminated the only open space in Harvard Square's tight network of asphalt and masonry. The open plaza is usually well populated and used.

Sert Jackson's careful attempts to achieve "human scale" are somewhat compromised by large, looming projections. But users don't complain about oversized overhanging elements until inside the so-called walk-in center of the university health services, which occupies a large, two-story space (called barnlike by some) with entry on the south side of the arcade. Here, heavy concrete beams hover, creating the feeling of a fractured, closed-in space, despite the architects' attempt to lift it open by punching out a mezzanine skylight and windows in the waiting space.

In other respects, the scale of interior spaces throughout Holyoke Center is admirable. No anonymous, long hallways here. Narrow spaces alternate with wide alcoves; low-ceilinged corridors with more generously scaled office spaces. As on the exterior there are dashes of color. Elevator lobbies on each floor have a large window framing views. Clear glass openings alternate with translucent glass fiber panels sandwiched between two panes of clear glass, giving a pleasant glow and masking office clutter from outside passersby. Placed to accommodate interior spaces and the wishes of their users—to frame some views and block out others, for example—the translucent and transparent panes alternate in random patterns on the building's facade. Both clear and translucent panels are held in metal frames attached to projecting precast mullions. Though they can be changed, they never have been.

As with the exterior of Holyoke Center, Sert Jackson sought to achieve in interior spaces the variety, balance and human scale that are principal hallmarks of the firm's work. Explains Sert, "I think there is too much emphasis in architectural schools on design and what is going to be written about it. The most important factor really is how happy people feel in the building once they occupy it. The reactions I have had from the medical care parts of the building have been rather favorable."

In fact, the main complaints by university health service staff members derive from changes in medical care that have occurred since programming and design of the four-phase building began in the late 1950s. But then, "Most hospitals are obsolete by the time they are finished," says Dr. Warren Wacker, director of health services.

Increased record keeping has brought many new clerical workers. They occupy areas intended as waiting spaces for patients, who now queue up in chair-lined hallways. Rooms for nurses are scarce and inadequate, but that, says Wacker, is typical of the period. Also, increased emphasis on preventive care—a countrywide phenomenon—has pushed up Holyoke's outpatient visits to 200,000 a year, far beyond original expectations. Physicians explain that they could treat more patients in less time with a cluster type office arrangement, where several examining and dressing spaces serve each consultation room. Doctors' offices in Holyoke Center are the old-fashioned kind, each having its desk, examining table and other equipment. But there are preliminary plans to expand health services to the sixth floor in a clustered plan.

Also unexpected when the building was programmed has been the increase in acutely ill patients. Fifty percent of admissions today are nonstudents. Doctors contend that the emergency room was badly planned. "It's almost impossible," says Wacker, "to get a stretcher in." He also finds the emergency examining room too small, the waiting and X-ray rooms too large, the outside ramp serving the emergency room too narrow. There are other complaints: The fifth floor infirmary rooms are badly lit, too stark in color and poorly laid out; kitchens have no airconditioning; there is no crutch closet on the first floor; the doctors' offices are too scattered.

Yet, while major changes in space configuration have been



Phokion Karas

made in Holyoke Center's administrative tower, the spaces in health services remain much as they were 14 years ago, and almost none of the perceived problems have been brought to the attention of Harvard's planning office. One must assume that either the problems have not been troublesome enough to warrant official complaints or that most physicians agree with Dr. Wacker that "we're locked into the spaces we have." The majority does share his view that "overall, the facility is much better than most people have in the way of university health services; it's not hard to practice medicine here."

Some who work in the administration wing of Holyoke Center also complain that the building is not flexible enough. Yet, among the several changes that have been made was the remodeling of the ninth floor into an almost completely open plan for Harvard's planning office. The cost, with carpeting, was just under \$100,000. Says Planning Director Goyette, "I think this is one of the most flexible buildings that the university owns and operates. But there are limits. It is not a hangar with spans of 180 feet in all directions. During the design of the building, we prepared a cost benefit analysis of constructing movable partitions and found we would have to move each partition at least once every five years to make it cost beneficial. The building has as much flexibility as was worth paying for."

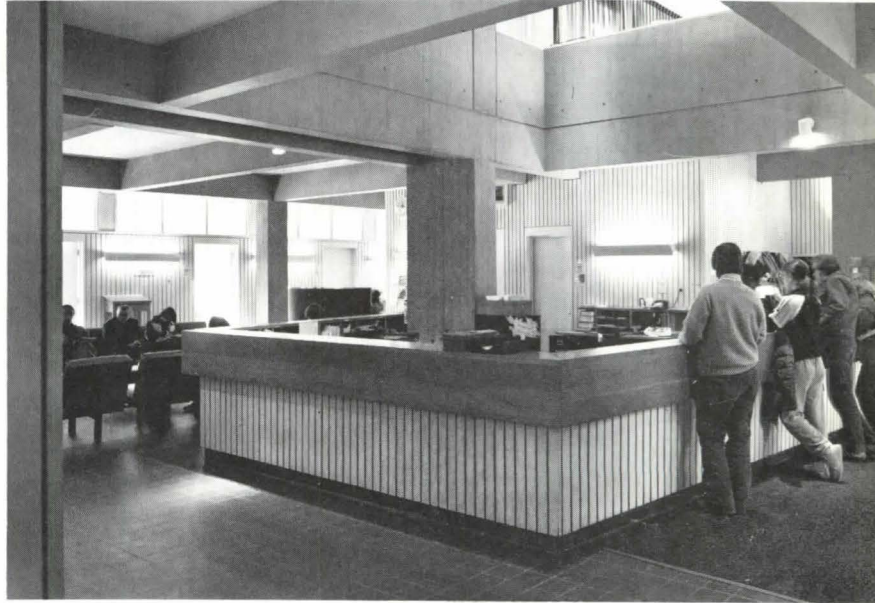
Without question, Holyoke Center's most serious problem is its temperature control system. Windows that don't open make the south side too hot, the north too cool. Ventilation is less than adequate and heating and cooling bills are high. Goyette explains that one of the problems "has to do with a decision made by the university in opposition to recommendations of the engineers and architects on the first phase of Holyoke Center's four-phase construction. That was to use a so-called three-pipe system in an effort to save money, instead of a four- or two-pipe system. Consequently, we have a complicated system requiring an awful lot of tender loving care by building management, which it doesn't receive, to work completely satisfactorily."

Then too, in the late '50s, when Holyoke Center was designed, glass was "in," windows that opened were not, and no one foresaw the skyrocketing of energy costs. If he had it to do over again, says Sert, Holyoke Center would be designed for greater energy efficiency. There would be less glass and windows would open. But, in other major respects, Sert and his colleagues are pleased with the building much as it is. With sufficient reason. □

Low lying shops edge out to meet side streets (across page). A conference room in the administrative tower has both translucent and clear glass panes (below left). At right, the health services' 'walk-in center'; at bottom, Holyoke Center's arcade.



Louis Reens



Steve Rosenthal



Steve Rosenthal



Evaluation: No One Is Neutral about Gund Hall

Born in turmoil, the home of Harvard's GSD continues to generate controversy. By Nory Miller

Photographs by Steve Rosenthal

Between 1968 when it was designed and 1972 when it opened, George Gund Hall—new home of Harvard's graduate school of design—was the subject of student protests, faculty opposition, debate in the press and battles royal between architect and client. By the time John Andrews/Anderson/Simpson (later John Andrews & Associates) of Toronto had brought the building through the student strike (whose manifestos, though primarily aimed at the Cambodian invasion, also maintained that university money should be spent on scholarships, not construction), a divided faculty (half enthusiastic, half hostile and bristling under the minimal consideration given their program and orders from then-Dean José Luis Sert, FAIA, to leave the architect alone), high inflation coupled with lengthy strikes (requiring cut after cut in both ambition and result), tempers were so high that the *Harvard Crimson* dubbed Gund Hall "the building nobody wanted."

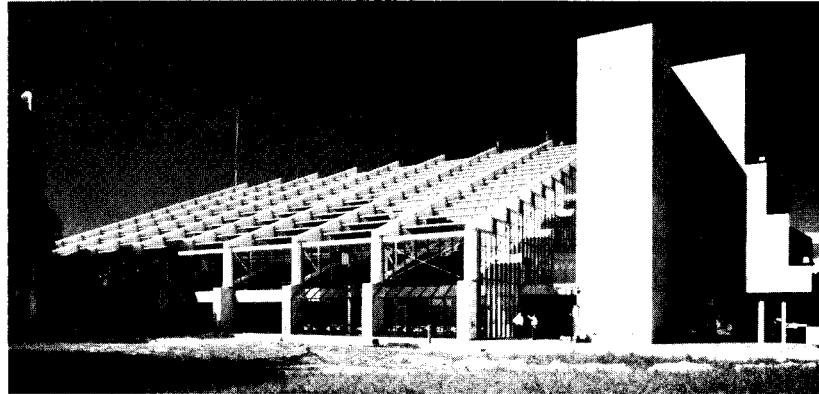
If it was controversial within Harvard's ranks, so too did it meet with mixed reviews from the architectural press. Peter Blake called it a palace for students, a challenge to the establishment from "youth, idealism, imagination and general snottiness." Wolf Von Eckardt, Hon. AIA, called it "something they ought to have a zoning law against. . . . It looks like a factory for plastic plants . . . no joy, no nobility, no inspiration." The national AIA conferred an honor award on it the very first year it was eligible. And Ada Louise Huxtable, Hon. AIA, was torn between the "brilliant parti" and her doubts about "an almost dictatorial design for a school grasping uncertainly for concepts and rent by dissension."

It is now six years after completion, 11 after the project began, and many things have changed. John Andrews and John Simpson, two of the designers, have left Toronto for Sidney, Australia, a move made shortly after the opening. The third designer of Gund Hall, Edward Baldwin, remains in Toronto with his own firm. Sert is no longer dean at GSD. Maurice Kilbridge, an economist from the business school, assumed that role the year construction started. There are new chairmen of all the departments. One thing hasn't changed: Gund Hall is still controversial.

It is also one of the most studied buildings around. It is routinely given as a studio problem not only at Harvard but at other Boston architectural schools as well. Ex-Harvard sociology of design professor John Zeisel began a postoccupancy study of it when it opened. And the Boston Architectural Center held a symposium last year on it as part of a series, facing off architect, engineer and inhabitants.

Why Gund Hall? Is it so great? So terrible? So avant-garde? Partly it is just very, very visible. It was intended from the first to be a contemporary landmark and it is that claim, implicit in its architecture, to which its inhabitants respond. Gund Hall is a kind of litmus paper that brings a number of central architectural questions into the light and often reflects as interestingly on its reviewers as on itself.

When Harvard University decided to pull its graduate school of design together under one roof, it set out to find a promising young Harvard graduate to design it. A competition was considered but rejected by then-President Nathan Pusey because AIA rules called for a majority of the judges to be architects and Harvard didn't want to relinquish control. John Andrews—GSD



Gund Hall's famous greenhouse step section studio (top), surrounded on two sides by offices and classrooms (above). Opposite: the approach from the south.

'58, second place winner in the Toronto City Hall competition as a student (with several other students), a designer of Scarborough College, chairman of the architecture department at University of Toronto—was chosen, with Dean Sert's approval.

Andrews was handed a fat book of program instructions put together by the faculty two years before. Several months later, the designers came back with essentially what has been built, with a few exceptions. What has been built is always referred to as the building's *concept*. It is that the studio experience is the essence of learning design, that all the students should have their studio space in one huge open space so that different years and disciplines intermix, and that that space should be a rugged model of what modern architecture can do with structural and mechanical engineering in the service of architecture.

There were five stepped levels, called trays, overlapping one another and covered by a vast sawtooth long-span skylit roof with structure and ducts exposed. On the first tray was a spacious lounge with a view onto the backyard. Around this central focus, on two sides, were offices and classrooms. On the ground floor were the library (continuing in the basement), a multipurpose auditorium and a technology workshop.

The design stressed accessibility. Not only was each student accessible to the next but each tray was accessible to and from the outside by two series of open air decks with stairways all the



Changes continued well beyond construction.

way to the ground. The ground floor had more than 20 doors to the outside.

It was a bold concept, one with drama and high purpose, and many were thrilled. The greenhouse form, made patent in James Stirling's History Faculty Building at Cambridge, completed that year, had stirred interest throughout much of the profession. But not everyone was enthusiastic. The faculty members who worked out the program were angry that it hadn't been followed in toto. Others said that would have been impossible. Then-Dean Sert and then-Chairman of Architecture Jerzy Soltan were among the latter.

The architects' idea of faculty offices and seminar rooms opening right onto the studio trays had to be scrapped because it didn't conform to the fire code, so a hallway was inserted between. Some said that destroyed the concept. Some said it didn't. Other changes were made fairly late in the game. The clients demanded windows in the fifth floor offices well after engineering work was done, and rather than redo it, the HVAC allowances for the change came out of the safety cushion. It was into construction, says Baldwin, when the clients noticed inoperable sash and gang lighting for offices throughout the building, and when they objected, the changes proved very costly.

The changes continued even after the building was occupied. A guard station was added in the lobby. Part of the technology workshop was converted into a cafeteria. (Actually the architects had been pushing for an all-night restaurant and outdoor cafe from the beginning).

The building cost \$8.2 million, \$2 million-plus more than estimated, a figure GSD faculty and administration consider very high and Baldwin considers to have been inadequate all along as a budget to do what they wanted. (The George Gund Foundation and Gund family were the primary donors, W. T. Piper Auditorium was donated by the Piper family and Francis Loeb Library was donated by John Loeb. The federal government,

through the Department of Health, Education and Welfare, gave \$2 million.)

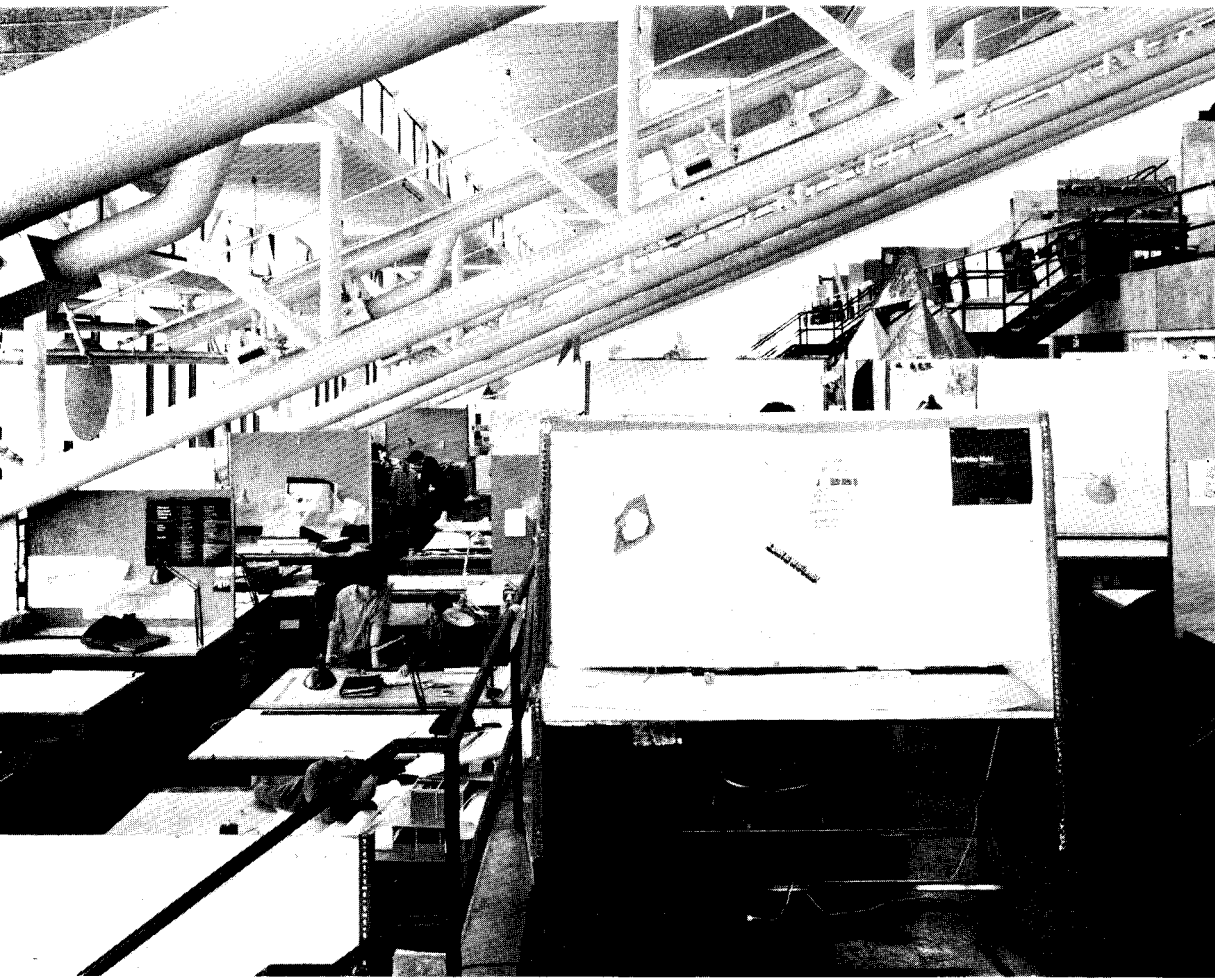
It had not been a pleasant project experience. The students, once they were convinced that money given for concrete could not be transmuted into money for something else, subsided. But they left behind much anger at being ignored. So did the faculty. There was a lot of talk about planning process. Several on the faculty still call Andrews the most "arrogant" architect with whom they have ever dealt.

Baldwin, who, with Andrews being in Australia, has become the spokesman for the designers, has equally bitter memories. "The general attitude," he says, "was against the building, so the faculty wanted no part in it. The apathy was shocking. And the students didn't want it. That was compounded by an inadequate budget and an unworkable program. That the concept was preserved all the way through is the only satisfaction."

The question is, what does everybody think of the concept and the building today, after six years of breaking it in and replacing people who remember the old battles with people who don't? At a basic practical level, there are many complaints. And in fact, it is about the only level at which there is any consensus.

According to everyone—teacher, student, secretary or occasional visitor—the heating, airconditioning and ventilation don't work very well. There are hot and cold spots throughout the building. The upper trays of the studio bake from the sun despite the reflective glass. One professor in a cold office on a floor where the rooms range hot to cold as much as left to right, pointed to the electric heater the school had bought him. Incompatible spaces (one with much glass to the outside, another without) are on the same circuit, and the rooms on the top floor, which despite heat's property of rising, are always too cold.

In addition, there is the problem of leakage. Many are pleased that it hasn't been worse with such an experimental roof system, but most remember a couple of years with buckets everywhere, and not just in the studio. There have been weekends when snow melted and ruined cardboard models by the score and Soltan

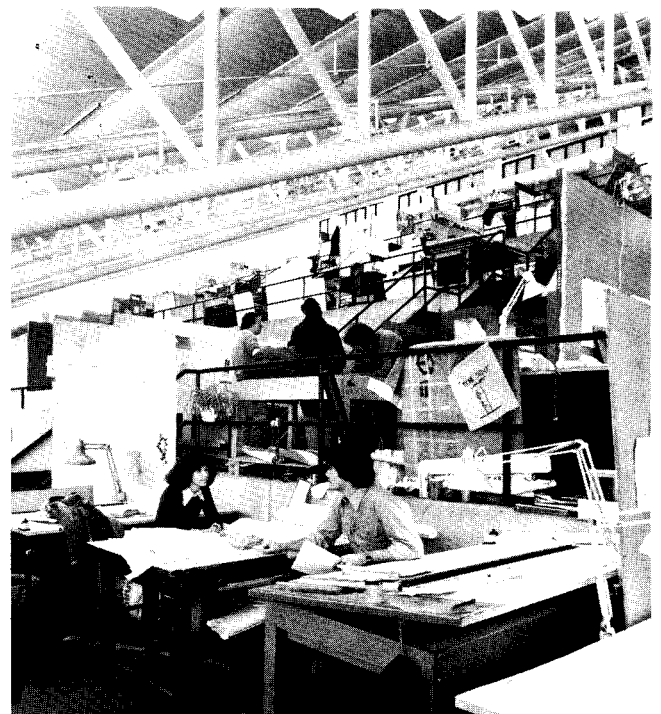


paints a picture of students working in the studio under umbrellas. The library had to install metal canopies over the bookstacks because of the damage there caused by leaky pipes. Gerald McCue, FAIA, chairman of the architecture department, has his secretary move his expensive leather desk chair every night because the leak in his office falls exactly there.

Planning faculty members, who spend most of their time in the classrooms, have had a few things to say about the blackboards, which were actually whiteboards. In the words of Howard Bloom: "You couldn't use colored chalk because it doesn't erase well while using. Some professors took a pail of water and sponge to work. Others were coughing from trying to use soft chalk. Magic markers bleed all over you when you wash them off. Finally, we repainted or replaced the boards so we could use them."

And then there are minor ironies. The handsome giant thumbprints in concrete running along the bottom of the exterior wall, for which there were special casting forms, were made to house recessed light bulbs. Early published presentations of the building were full of handsome night shots showing the lovely light they shed. What the photographs don't show is students at, say, 11 at night, reaching in, unscrewing the bulbs and, uh, recycling them. Maintenance gave up almost as soon as the building opened and only the photographer remembers the purpose of those funny concrete shapes.

Some of the not so minor ironies have come about through external changes which gravely affected the building. One of these is the rising crime rate in Cambridge. When the building opened, it had a serious theft problem. Typewriters were stolen, rare books from the library, women's purses, drafting supplies. Twelve Eames chairs disappeared before they were even unwrapped. The guard station was installed immediately. And most of the more than 20 ground-level doors were locked. There are only two places to enter now (one at night and on weekends) and all the other doors have actually done since they were installed is confuse newcomers. The patios on both sides of the



Then and now: The step section studio as it was designed (opposite page), with clear views of others' work and comfortable lounge at the bottom, and the studio today (this page). The lounge is gone, the views purposely obstructed and the south wall patched over to keep out the sun.

GSD itself has changed—and grown—hugely.

stepped studio space at each level are locked. The doors onto them read "Fire Exit Only." And the stairs down them are locked at ground level from the outside. There is some cheating on this, a sort of understanding between janitor and students on particularly sunny days when the doors are unlocked unofficially and propped with folding chairs for a few hours. But mostly, the easy access between indoors and outdoors that the program called for and the architects provided has been sabotaged. Whether it was sabotaged by a reality to which it was an inappropriate response or by an overanxious security crew continues to be a point of contention.

Another external change is the cost of energy. The first year GSD occupied Gund Hall, the cost of operating its HVAC system was \$44,887, a manifold increase over the operating cost of its previous five scattered properties. Partly this reflected the increased amount of glass, external perimeter and volume and partly this reflected the addition of airconditioning. Since then, that figure has doubled.

The cost increase has abetted a kind of Catch 22 situation. Each Harvard school is financially independent. Dean Kilbridge has made a particular mission of making GSD solvent as well. And no preparations were made, he says, for the upkeep of the new building, only for its construction. The escalating costs of upkeep have further aggravated an already bad situation. Since Kilbridge assumed the deanship, the number of students at the school has been more than doubled, partly to pay the cost of operating the building. There has been a shift from architecture students outnumbering all others two to one to an equal number of architecture and planning students. Further, the emphasis in the planning department has changed from physical planning to policy. The essential character of the school therefore has changed. Nor has that been an accident. Kilbridge explained his strategy to the visiting committee this past fall. The studio system, he said, is tutorial and inherently labor intensive. Design studios also take up valuable space. On the other hand, planning students require no more space than a seat in the classroom and a locker in the corridor; fewer teachers can serve more students. Kilbridge describes the growth in the school in strictly economic terms although he also suggests that the more students, the more specialization GSD can afford in faculty.

However, Gund Hall was built for a maximum of 400 students, all of whose primary activity was intended to be studio work, and 75 staff and faculty. There are now 640 students, 250 of whom take no studio courses, and 200 staff and faculty. The result has been one remodeling after another. The back halves of the studio trays on levels two, three and four have been converted into classrooms and office cubicles. The generous lounge on level one is now a studio. A smaller lounge on the fourth floor is now a classroom. Many of the original classrooms have been cut up for offices and all but a few of the original offices have been cut in half. Most of the storage space in the basement is now used for offices so that there is a serious storage problem. The technology workshop, which gave one quarter of its space for a cafeteria, has now given two more quarters for a large classroom and more studio space.

The irony is that Gund Hall was built because of the tremendous overcrowding in the previous locations. The goal was 105 square feet per student. That is now down to 50 square feet and falling. Another goal was to unite all the functions of GSD in one building. Now the school is looking to lease new space in a renovatable apartment building nearby. All this after only six years.

Can Gund Hall be faulted as inflexible? That depends. The design actually made a point of stressing flexibility—in the studio space. With one big open space, new courses could be added, old ones increased or decreased. The space was interchangeable. And this intention has been realized with great success. Two de-



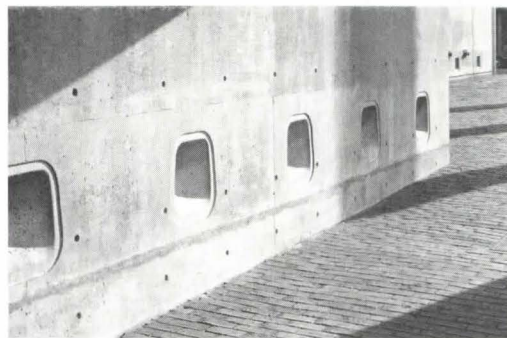
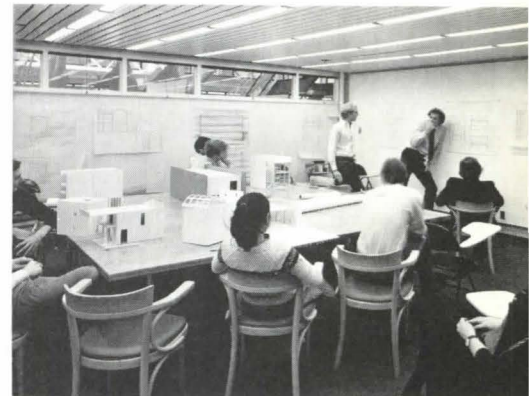
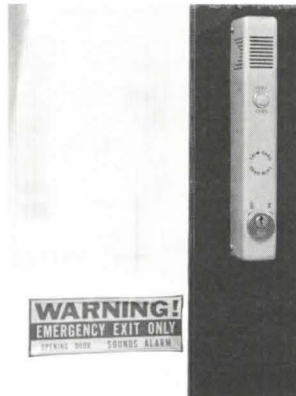
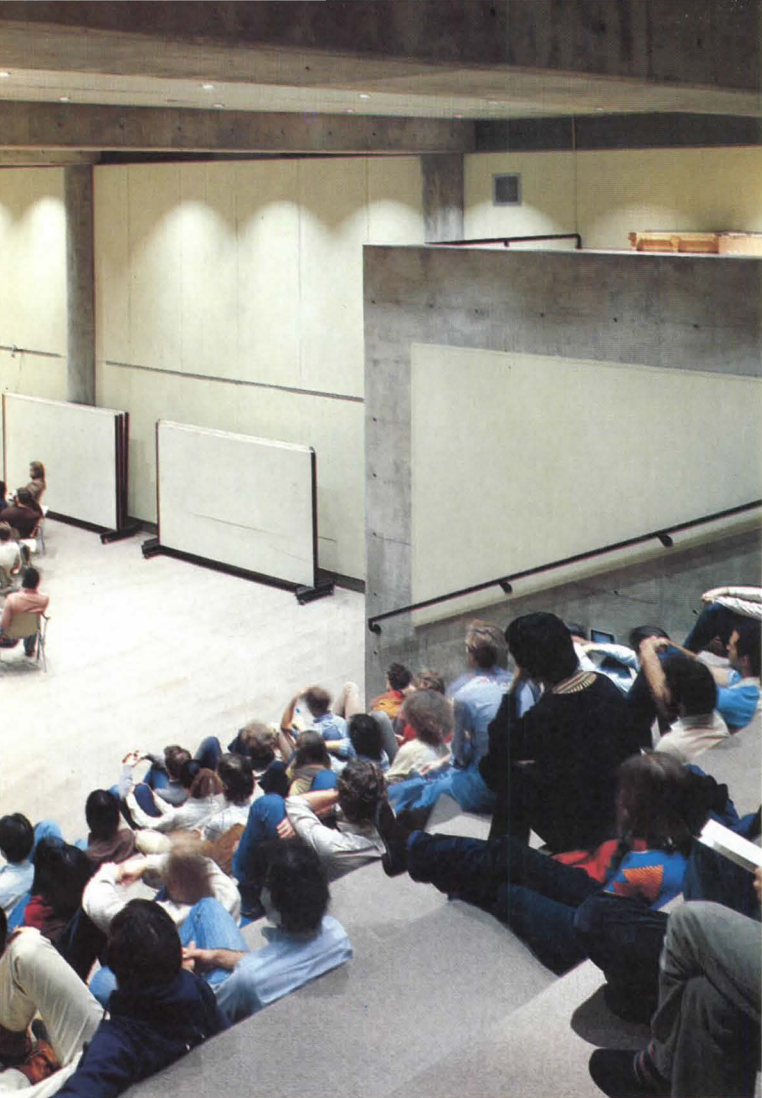
partments even switched floors and all routinely borrow tray space as needed. The problem arises with the nonstudio space.

It was not intended to need much revision, says Baldwin, only possible expansion for which room was allowed on the east end of the short office wing. Yet, as a result of an apparently unexpected change of direction in the school, it has required—and stood up to—a great deal of change. But, say GSD inhabitants, it has not responded well. Those who did the remodeling work say the electrical and mechanical systems were anything but adaptable. Those who live in the adapted spaces find them inadequate. The classrooms on the trays are low and dark and inadequately vented. The lecture room remodeled from part of the workshop, says urban design professor Michael Pittas, has terrible acoustics and is difficult to teach in. The ceiling shifts height; the wall behind the speaker is sound-absorbing; the light switch is outside the room, and the space is too wide in relation to its depth.

Why wasn't the office wing elongated when GSD needed more space, as had been planned? It was a question of fund-raising, something that rarely gets taken into account at program development time. And it is cheaper to renovate than build, says William Doebele, professor of planning and the man who did much of the raising of funds for Gund Hall in the first place.

But the story of Gund Hall is not simply one of technical inadequacy and changed demands. The architects put forth a number of architectural propositions in this building and for the past six years these propositions have been tested. Few agree on the results.

The major proposition, of course, was that the studio was the most important space in the building and that its most important purpose would be to promote interaction between disciplines by housing all under the same longspan roof. Among current students and faculty who use the studio, most say they find it comfortable, some even delightful. There is a vocal minority opinion that finds it an inducer of acrophobia, noisy and lacking privacy.



Clockwise from top left: a split-level lecture in Piper Auditorium; zigzag cubicles added to the fourth studio tray; entry to the sun-decks (left); classroom (right); lamps that sit dark; elevator lobby lounge; exterior office without windows; view of loading dock from cafeteria; one student's response to open planning.

'Trying to figure out how it landed here.'

As one third-year architecture student put it, "It's a debilitating atmosphere; it's like going to school in a gym." Another said, "I always feel as though someone is looking over my shoulder." Nonetheless, a majority seems to like the openness; the most popular desks continue to be the cliffhangers. But perhaps the split opinion might suggest the benefits of providing a choice. (Second most popular, it turns out, are the desks near the windowwalls, but only among first year students who apparently soon discover that they are always too hot or too cold.)

The studio is not nearly so open in practice as the published photographs show it. Each year, on the first day of classes, the students scramble for bits of homosote and corner brackets which they promptly attach to all sides of their tables, occasionally with a window cut into one side. They need tack surface, they say. As a result, one can only get an overview from the 300 studio staircases. To walk through a tray is like a visit to shantytown, with its rabbit warrens of squatter housing. What happened? Baldwin says it was a cost-cutting decision by GSD not to let the architects buy or design the low vertical system they thought would provide tack surface without egg-crating.

With level after level of studio space, architecture professors Gerhard Kallmann, FAIA, and Michael McKinnell, AIA, find that one kind of space is missing. They both think the space is superb, but regret the lack of in-between spaces. "We need a DMZ where work can be pinned up and talked about without formally scheduling a classroom," says Kallmann. The overcrowding has made discussion by a group larger than three almost out of the question.

Another thing that leaves certain misgivings is that for an almost all-glass, five-story space there is little in the way of an attractive view. To the north, it looks onto a concrete wall interrupted with a panel of mirror glass. To the east (the main view) there is a small part of the backyard and a large section of a quite undistinguished brick bunker. The south view is actually a not unattractive streetscene but, in an effort to block the overzealous sun, this windowwall is pockmarked with wrapping paper, cardboard and anything else the students can find to tape over it, especially at the upper levels. Says architecture professor Jorge Silveti, "The design is unbelievable. There was no consideration of what would be the focus."

But do the disciplines intermix? The landscape architects and urban designers on the whole say yes. They also tend to be on the same tray and take each other's courses. The architectural faculty is split on this question, as are its students. The planners are no longer in the game. According to Frederick Smith, who holds a chair in advanced environmental studies which is as in-

terdisciplinary as anything at GSD, "This reflects the institution, not the building. The isolation between departments is a result of the economic and administrative situation at Harvard. Planning doesn't even follow the same time schedule as the rest. It is asking too much of a building to overcome that."

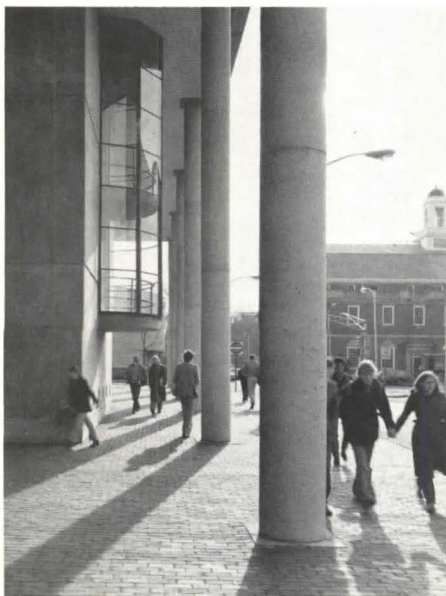
The strongest things people say about the studio space is what it cost the rest of the school. Even Baldwin acknowledges that making the trays meant treating the rest as a low budget building. As architecture professor Fred Koetter expresses it, "Most of the areas operate as residuals, as leftovers from the studio." The classrooms are too low for showing slides properly; most of the lounges are widened corridors in front of elevators. Several rows of offices have no windows at all, while a number of others have only narrow slits. "The great gesture," says McKinnell, "is paid for at some expense."

The discontent extends to the special rooms, Piper Auditorium and Loeb Library. Says McKinnell about Piper: "It's a disaster. Noisy. Brutalizing." Piper is a multipurpose room—one of the architectural propositions Gund Hall is based on. And the reaction to its effectiveness is mixed. Smith and Pittas, for instance, find it clumsy and unpleasant to be in, although quite workable. Others, including most of the architecture faculty, are even less enthusiastic. Silveti extrapolates: "It is simplistic to think that if something is bare, it is flexible. You can do different kinds of things there but none of them well. There are some types of places that should perform well, where the issue of flexibility cannot be dominant. An auditorium is one of them." The architecture faculty has a particular problem with the auditorium because that is where it says it must hold crits—often several at a time with flimsy partitions between. Baldwin says crits were intended to take place in the studio, for a dozen or so people, or in nearby seminar rooms. Crowding has removed the efficacy of either place.

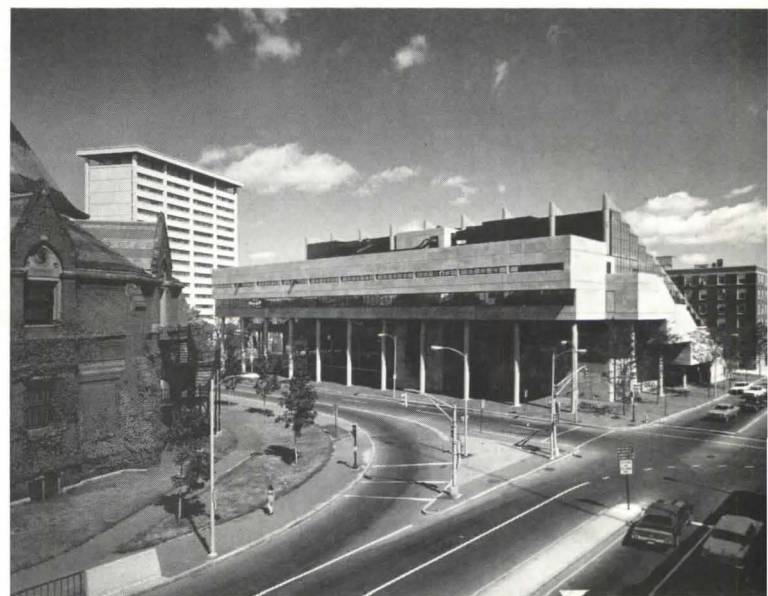
The library elicits less ire but no particular fondness either. Assistant librarian Christopher Hale has a small series of complaints such as fixed stacks that can't be rearranged as needs require (right now more stacks than needed and fewer carrels); lighting fixtures that stop short because of piping in the ceiling, leaving tables where you can't read; not enough electrical outlets, etc. Basically, however, librarians and library users agree that the library is workable but regret that it is not, somehow, more special.

Both library and auditorium were required to have separate doors to the outside so that they could be used independently of the rest of the building. It is not an unusual program demand but it may be of interest to those with similar choices that these doors have never been used.

It is the GSD architects also who find most fault with the en-



From outside, Gund Hall is criticized as an unidentified flying object, on a street of UFOs. Right photo shows Gund flanked by Yamasaki's William James Hall with Memorial Hall in the foreground. Opposite: Quincy Street from Le Corbusier's Carpenter Center (to right in photo) to Gund and William James up the street. Left: The building is also criticized for being unpleasant to walk next to, with a too high overhang, blank concrete wall and projecting stairwell.





trance and lobby. "The entrance should be the key," says Silvetti, "but it isn't. You don't know where to go. There is no shape to the lobby. This is a building that has no plan. It has a section, but no plan. Intelligibility comes from the plan." It is true that to find the elevators, newcomers must be mystics or stop to ask. From the main door to the main elevator is 20 feet forward, a 180 degree turn and 20 feet back, with a wall cutting off any visual connection.

There is a reason for this, sort of. The original design for the ground floor was an open paved street off which were entrances to Piper, the studio, the library and elevators. The design was rejected, some say because of the climate, some because Gund is on the edge of the campus and a walkthrough is not exactly a necessity. Baldwin says that the architects wanted an all-night restaurant in the building, office space to lease to practicing architects and a supplies store to give life to the street. These were rejected as noncompatible uses. The open street was turned down, he says, for security reasons and because the interior space of the lobby was needed. "Two years earlier," he adds, "it would have been accepted."

What happened is that when the street design was rejected, the architects responded by drawing sets of doors between the different parcels. There was no redesign, perhaps to keep something of the street idea. But it is a street going from nowhere to nowhere with nothing much going on around it. The furniture from the remodeled first tray lounge has found itself in the lobby with no plausible arrangement possible. It just lines the edges of the amorphous space. One can't help thinking that the classical tradition gave more definition to outdoor spaces than the architects here gave to an indoor one.

Larry Yont, who manages the daily catered lunches and other social events for Gund Hall, has another criticism of the ground level. There is no place to put garbage, he says. So it is piled on the formal outdoor brick deck that leads to the backyard. Not only must everyone going into the garden pass the garbage, but to anyone inside the lobby it is in full view through a floor-to-ceiling windowwall that focuses right on it. It is there because

that is next to the loading dock. Why is the loading dock there? Says Baldwin, "There was no other place to put a turnaround." As a result, the loading dock is the foreground view from the greenhouse windows of the cafeteria. That space, of course, was built as a workshop. But it still must be one of a few examples of a picture window looking onto a driveway.

Reaction to the generally low-cost, low-maintenance workaday materials is predictably mixed. One of the secretaries was adamant: "The tile floors make you feel as though you're in a basement. There are no colors anywhere. No feeling of comfort—no carpets, no draperies, no wood. It's like a prison, cold." The batten metal ceiling brings out the strongest comments. Said a visiting Fellow, "Now I know what it's like to be a cheese sandwich broiling inside a radar range." On the other hand, the building was intended as a workspace, factory-like, which some find appropriate. The designers' original intention was to soften the effect of exposed pipes and hard concrete with carpeted floors in the offices and end grain oak block floors in the studio and classrooms. That intention was eliminated when the bids first came back 25 percent over budget.

One of the major architectural propositions that Gund Hall puts forth is not untypical of its generation of university buildings. It ignores the traditional arrangement of Harvard's system of quadrangles. It omits even so much as a grassy forecourt. Instead, it hits the street. For this Gund Hall required a special zoning variance. Graham Gund, a Cambridge architect, member of the Gund family who donated the building and a GSD student at the time it was built, says the absence of forecourt also grew out of the interest in urban design that was a central proposition of the school. It was intended to make an edge for the green space across the street.

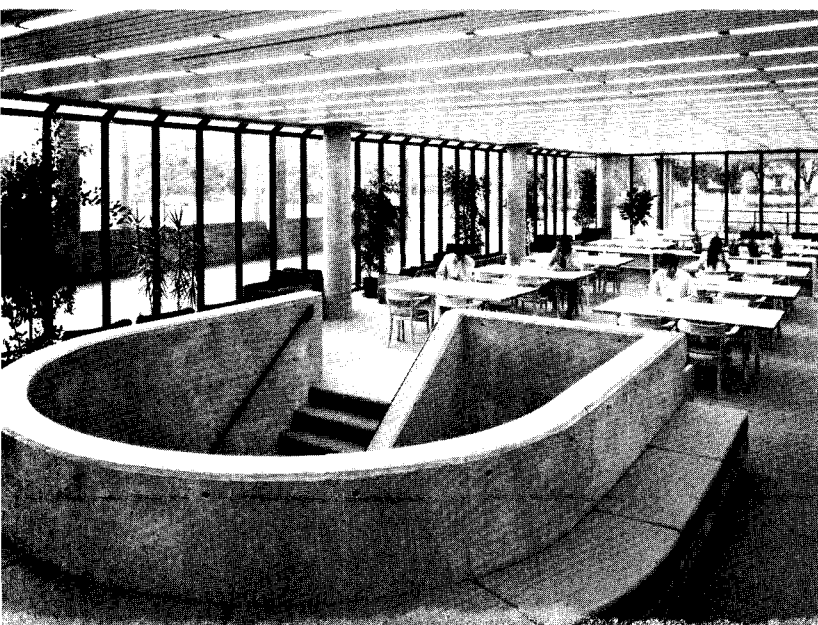
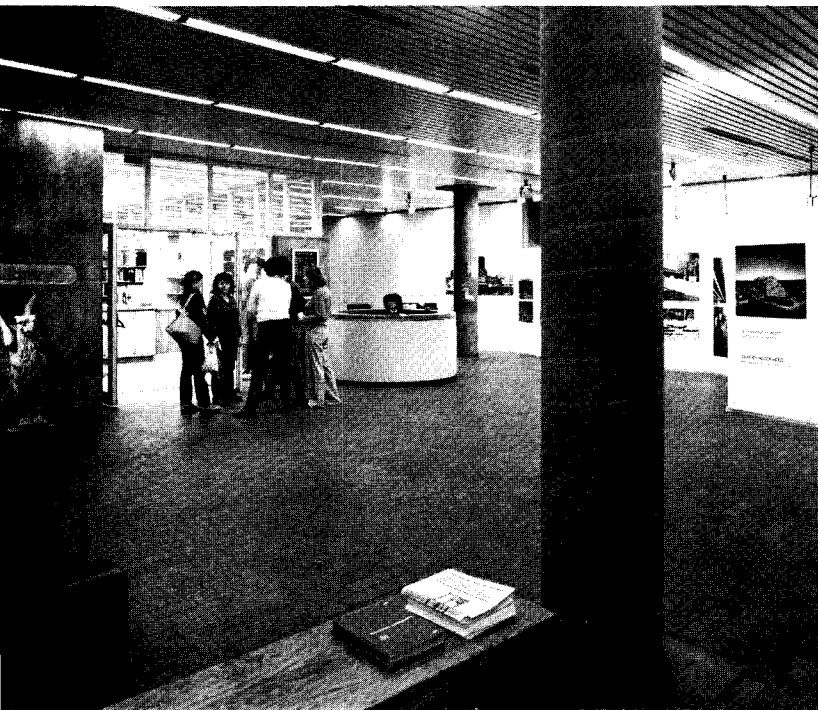
How well Gund Hall functions in context, however, deserves further comment. Visually, of course, it bears little resemblance to anything around. As one teacher described it, "We're still trying to figure out how it landed here." Others were disturbed by the difficulty of getting a sense of the building from any one point. Even the famous step section can only be seen from a

Lessons in the '70s from a creature of the '60s.

helicopter or the backyard. Said one student: "I'm petitioning to turn the building around so that when I describe it to my friends to come by, they can find it."

Others point out the interrupted brick plaza on two sides that no one uses; the colonnade that is neither arcade nor portico nor clear definition of edge; the suddenly and menacingly protruding stairwell; the overhang so high that it doesn't provide shelter from snow and rain; and the contradictory clues about entrance. Smith admits that due to the shape and character of the building, "I've never gotten over the feeling that I'm coming in under the back side of a football stadium."

That observation is echoed by Fred Koetter who remembers a comment by Colin Rowe that Quincy Street is full of buildings that want to be something else. Memorial Hall wants to be a church. The fire station wants to be a Dutch Guild Hall. The gallery an Austrian Schloss and Gund Hall a stadium. In



The lobby (top) is treated as a kind of infill between the library (above), cafeteria (opposite), workshop and auditorium.

this sense, he suggests, Gund Hall "has a nice contextual play with the buildings around it."

The real context of Gund Hall, however, is the 1960s. And to the extent that the tenets of that period are in question so too, and for the same reasons, are the propositions of Gund Hall. What is right or wrong with those architectural values, not even a group as presumably similar as the inhabitants and participants in Gund Hall agree on. When asked to summarize what they felt was the main lesson to be learned from Gund Hall, these were the responses:

Jerzy Soltan (chairman of architecture when Gund Hall was built, now professor of architecture there): "The sketch project complied with the priorities of visual contact between students, the library as a symbol, an imaginative technological conception, etc., but not many other needs that are so basic. The mistakes— not enough visual access to the outer world or clear communication of the circulation pattern, not providing for environmental needs, inattention to orientation to the sun—were noticed from the start but never corrected. If you look at it at the right moment, everyone is enchanted. On a daily basis, it is terrible. But in 10 years the students who have been graduated here will forget these problems and remember working with the opportunity of being in touch with other disciplines. If I had it to do over, I would keep my priorities and be an SOB in trying to squeeze out improvement of other aspects."

Charles T. Stifter (ex-Harvard architecture professor, was faculty liaison to architects when building was built): "Harvard got what it wanted, a powerful image. It reeks of success and money and courage. Its lesson has to do with the problem between form and content, that is, the ability of a building to communicate something in a powerful way that is irrelevant and even contradictory to what the building does and is about. There is a problem when you regard buildings as symbols and statements and lose sight of the physical and social aspects. In that way Gund Hall is just like the avant-garde buildings today, except it is expressing things that aren't considered good now."

Michael McKinnell (architecture professor): "Andrews was not interested in the final product. He was interested in process. It shows in the way he designed the building—the unpleasant visceral quality of the fabric—and what he doesn't provide—like good pin-up space or somewhere for crits. One criticizes the building for what Andrews placed low on his list of priorities. It is very successful within its own framework."

Gerald McCue (chairman of architecture): "I like Gund better than most new architecture buildings. At least it's not affected or cute. The idea has bravado, optimism."

A student: "It's a bubble diagram. The studio is separate from classrooms which are separate from offices, etc. No image was given to specific places like the library."

Michael Pittas (professor of urban design): "I've just felt better about the building over time. I've worked in others. There are fewer interferences with doing your work here."

Jorge Silvetti (architecture professor): "Buildings that are not generated by architectural ideas but are generated by other ideas, in this case sociological and technological, that are not inherent to architecture, are bound to fail. This building is a freak and as time passes it will become more and more hilarious."

Fred Koetter (architecture professor): "Traditional loft buildings with lots of access to the outside and tall ceilings are better than any new ones for teaching architecture."

Edward R. Baldwin (one of the designers): "From an energy conservation standpoint now, the building is hard to defend. Also, an institution like Harvard should never build a building without analyzing life cycle costs. In 1968, there was no thought of it."

Graham Gund (donor, ex-student, neighboring practitioner): "Today it might be more like the Kennedy school, brick with a slate roof, broken volumes, a greater sense of continuity with the neighborhood. That didn't seem necessary then." □



Anecdotes about Celebrated Architects

From a collection by Anthony C. Antoniadis, AIA

For many years, Mr. Antoniadis, an associate professor of architecture at the University of Texas at Arlington, has been gathering anecdotes about celebrated architects. Such moments, he feels, show these talents as people, "sometimes cynical, sometimes arrogant and egotistic, at other times poetic and humble." Herewith we present a basketful of such reminiscences (what Antoniadis calls "architecture from an inside lens"), some witnessed, some relayed and some hearsay. We also extend an invitation to our readers to send in their favorite stories for future collections. Antoniadis begins with one of our favorites:

* *

Frank Lloyd Wright once visited the land of his ancestors, Wales. Upon arrival they told him there was another architect living and working in the area with exactly the same name. This fellow was doing some sort of neo-Gothic revival. Wright visited the other Wright and saw his works. Afterwards, he was asked what he thought. "We both do God's work," he replied. "He does it his way, and I do it God's way."

* *

Wright once visited Philip Johnson's house (the glass house). Once inside, Wright took his hat off, then put it back on. Then took his hat off again, then put it back on. The same thing was repeated a number of times. Johnson started getting nervous. "Well," he asked Wright, "what do you think of the house?" Wright replied, "Philip, I don't know whether I should keep my hat on or off."

* *

In the heyday of minimalism, Philip Johnson and Eero Saarinen were having a conversation regarding color. Johnson was concerned at the time about color discipline. In his way, he said to Saarinen: "Well, Eero, I have thrown out all the colors of my palette except black and white. What about you?" "Philip," replied Saarinen, thinking of TWA, "I have kept only white."

* *

During his lecture at Rice University in Texas, James Stirling said: "I was dismayed to find that in the last 25 years of my work I have developed only five formal building types. But then," he continued, "another colleague has told me that this is three more than Mies and five more than Gropius."

* *

Alvar Aalto used to get a lot of visitors in his office. One morning a Japanese student arrived and Aalto showed him around. When the tour was over, Aalto sat by his desk, the earnest young student took out his notebook and in a mood for an interview asked the master: "Mr. Aalto, on what module did you design your office?" Aalto looked at him bemused. After some thought, he replied, "Approximately two millimeters."

* *

When in Boston, Aalto met Frank Lloyd Wright. The two drove together to view the American suburban landscape. Wright, with a majestic gesture of his hand in the general direction of suburbia, said to Aalto, "None of this could have been accomplished without me." Aalto, telling the story later to a group of his friends, said, "And you know I couldn't see it."

* *

A few days after the Savoies had moved to their famous house, the roof of their living room started leaking. They became very upset and called Le Corbusier to inspect the damage and suggest a solution. Upon arrival, Corbu was taken to the room.

He stayed for a few seconds staring at the water, then looking at the ceiling, then again down at the water. Finally, he turned to his clients and asked for a piece of paper. Mr. Savoie came back in a minute with a clear white sheet of paper and handed it to Le Corbusier. Corbu placed it on an adjacent table, folded it carefully and made a paper boat. He then walked to the middle of the room, bent down and placed the boat in the water, said *au revoir* and left.

* *

Erich Mendelsohn was very frustrated that Sigfried Giedion did not include him in his book *Space, Time and Architecture*. So Mendelsohn wrote a letter to his friend and compatriot Albert Einstein, asking him what he thought about the book and commenting something like this: "If Giedion is right, then I do not understand anything of the theory of Einstein." In reply, Einstein asked Mendelsohn about his health, his wife, his children, etc. Einstein rarely wrote anything serious in the main body of his letters, and so too in the case of this letter. But in the postscript, where he usually wrote his great messages, he gave his opinion on Giedion's book: "P.S. 'A shit well done.'" (Story from Bruce Goff.)

* *

A potential client asked Louis Kahn to do a colonial building for him. Kahn said he couldn't do it. When asked if he would recommend somebody who could, Kahn replied, "Yes, Thomas Jefferson, but he died some time ago." (From Martin Price.)

* *

A young colleague of Wright once showed him his work. Wright thought it was not good and told him so; whereupon the young architect, in an apologetic tone, said: "But Mr. Wright, I do these things because I have to live." Replied Wright: "Why?" (From Edgar Kaufmann Jr.)

* *

Wright always admitted that he was arrogant. In fact, he stated that he preferred "honest arrogance to hypocritical humility."

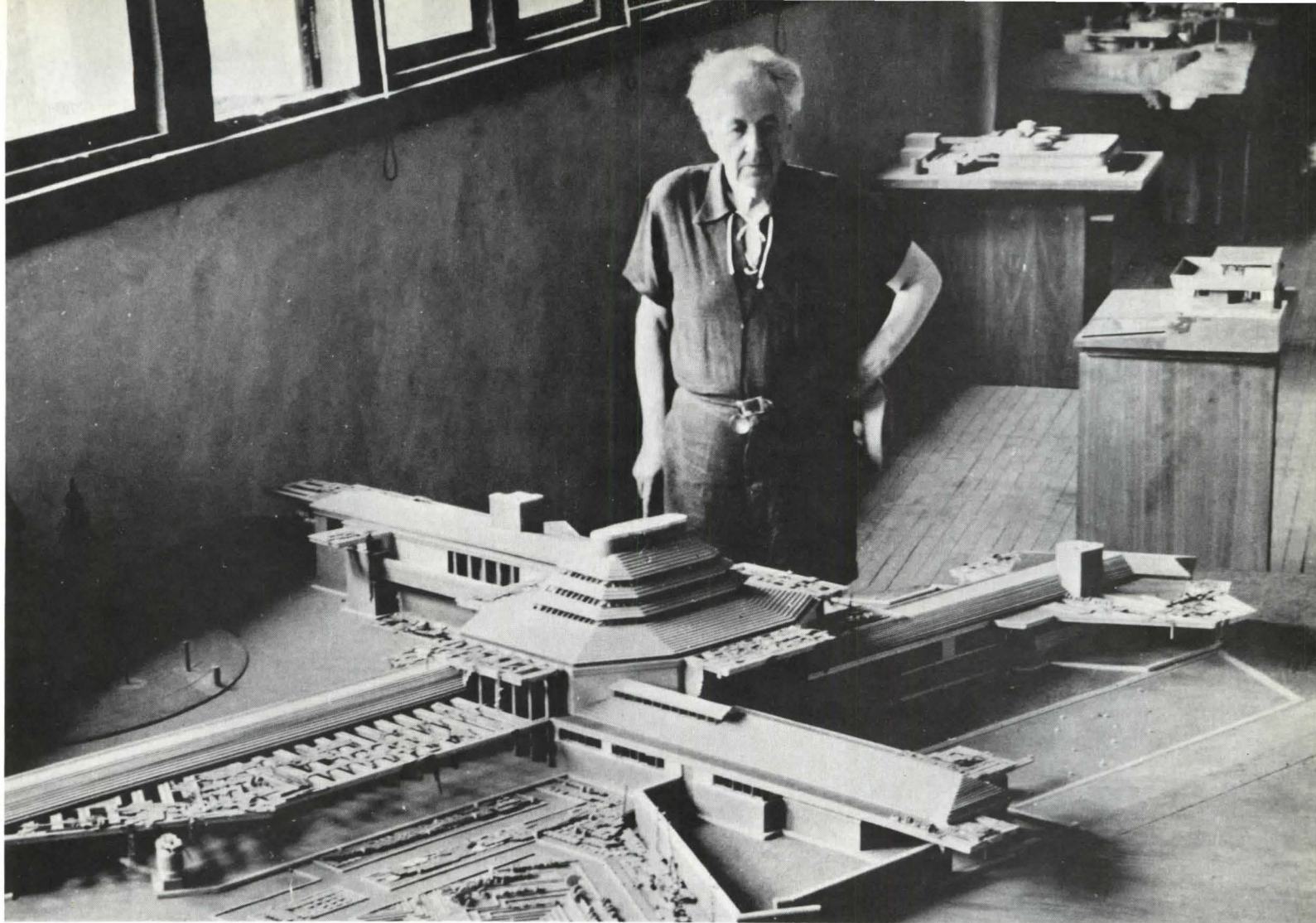
* *

In an interview for the book *Conversations with Architects* by John Cook and Heinrich Klotz, Philip Johnson said about Le Corbusier's Marseilles block: "I think Marseilles may be one of the greatest buildings of all time . . . if you don't go there too often. Under *pilotis* is one hell of a place to be unless you want to pee."

* *

Mrs. Bavinger, the owner of the spiral house designed by Bruce Goff, tried to keep the house available for visitors on specified days, despite the fact that the Bavingers had not only a new house but a new baby. One day some students called from the University of Oklahoma at Norman and asked if they and their teacher, Richard Neutra, could visit. They set a day. She was ready and had even prepared a tea, but no one turned up or called. The next morning, Neutra showed up alone at a very odd time when she was about to feed the baby. She asked, "Who are you?" An incredulous Neutra replied, "Don't you know? I am Richard Neutra." And Bavinger: "I thought I had made the appointment the previous day. I am very sorry, I feed the baby now." "But, madam," insisted Neutra, "*do you know who I am?*" And that was it. The door never opened for whoever he was.

continued on page 74



Mr. Wright and the Johnsons of Racine, Wis.

Reminiscences of 'Wingspread' and its architect.

Wingspread, the Johnson house (1937) north of Racine, Wis., is one of Frank Lloyd Wright's masterpieces. Appropriately named, the wings of the house "ride the grassed slopes as if they were floating on waves" (Henry-Russell Hitchcock). Now owned and maintained by the Johnson Foundation, the house was the site of a meeting in July of AIA's committee on design.

Committee members studied the house and the Johnson administration building and research tower, also designed by Wright, and made a trip to Taliesin East, Spring Green, Wis.

A highlight of the occasion, sponsored by the AIA Foundation and the Johnson Foundation, was an informal talk by Samuel C. Johnson, a fourth generation "waxmaker," who is chairman and chief executive officer of S. C. Johnson & Son, Inc., and chairman of the board of trustees of the Johnson Foundation. His reminiscences about FLW and comments on the Wright architecture commissioned by his father follow. The quotes from Wright's autobiography are used with permission (Frank Lloyd Wright Foundation, © 1977). Ed.

This occasion gave me the opportunity to rummage through some of the Frank Lloyd Wright memorabilia that we have in the company archives. One of the first things I did was to look through Mr. Wright's autobiography, published in 1943. There is a chapter in the book entitled "The Story of Hibbard the Johnson Who Did So Much for His Old Home Town—Wax Officiating." That is my father. I had a lot of fun, boning up on some of the great things Mr. Wright wrote.

In his autobiography, Mr. Wright says: "Hibbard (alias Hib), attractive young son of a great waxmaker, who was also the son

Photos courtesy the Johnson Foundation



Wright inspects a model of Wingspread which shows its 'zoned' plan (top) while Samuel Johnson (above), a 'fourth generation waxmaker,' surveys the company's headquarters, also designed by Wright.

The Wrightian presence lingered in the house.

of a waxmaker. Hib's father, so they say around about Racine, Wis. (his old home town), was famous for his 'hunches.' . . . This world-famous modern office building to house the administration of the ancestral wax manufacturing company was one of Hib's hunches. Hib's remarkable house too now [stands] broad, wide and handsome out in the prairie countryside near by. . . . Hib's hunches made him, for one thing, the only Racine boy to do anything really worthwhile to culture that industrial area: The big successful wealthy Wisconsin factory owners by Lake Michigan where millionaires originate and from which they always go somewhere else for fun, to spend their money for culture, if any."

My father and mother were divorced in 1934 when I was 6 years old and in 1936, my father married Jane Roach, who had two sons of her own; that was when my father began to think about a home, before Jane died in 1938. This is what Mr. Wright wrote about Wingspread: "Unhappily the young bride never lived to enter the home. Out of the blue (the house three-fourths finished) one day an old workman on the house told me that a white dove we had seen frequenting the belvedere of the building—in which both Hib and I were interested—had flown away and disappeared. The workman shook his head. A bad omen, said he. 'The young mistress will never live in this house,' and she too, as we soon learned, had passed away.

"Hib's interest in our building went way down. It took good persuasion to get him interested in ever going on with the house again. . . . I, friend now as well as architect, did my best to represent to him what I thought his young wife would wish were she living. . . . We completed the house in every particular as planned for a wife and four children. Hib seemed to sigh with relief upon seeing actually realized the home they had both worked on with me and of which he had fondly dreamed. The house, not yet a home, had begun to justify the hopes from the first invested in it. It turned out a veritable thing of the Spirit: a true consort of the prairie. The 'last of the prairie houses' it shall be, so I said and thought—though I don't know why there should be a last one. . . .

"The site was not at all stimulating before the house went up—but like developer poured over a negative, when you view the environment framed by the architecture of the house from within, somehow, like magic—charm appears in the landscape and will be there wherever you look. The site seems to come alive. Hib saw this. He felt it did express, in a finer sense, human feelings for a young wife lost than anything else he could have done. . . . That house, more than anything else, I believe, brought Hib back again."

And I guess I couldn't argue with the fact that the house had a major impact on my father, rehabilitating him to a new life without his young bride. I wouldn't give the house full credit for his launching himself fiercely and vigorously into the family business.

We moved into the house, and I lived in Wingspread from 1939 to 1952. When my father first informed me we were going to move into this not so modest building, from the south side of Racine, I thought it was a disaster. My friends were there and the house was here. But we soon discovered that my friends liked to be here more than there because we had this unique thing in those days—a private swimming pool—and my friends liked the environment that was somehow created here.

I have many happy memories of living in this house: the pool and the young friends who came to see me; the pond where we could always catch a bass; the playroom which was adequate for any young man; the tower where we used to go up and play war games because you could see everything around, the whole site, and the wigwam which is this room. The principle of the wigwam was that the family had privacy in the wings and could come together from time to time during the day and evening. We could have a family community within this open space

which probably represents one of the great concepts of organic architecture: everything flowing into everything else.

My father later married Irene Purcell, a movie actress and a very talented and interesting woman. She moved into Wingspread, a house not designed for her, and she never felt all that comfortable because she did not relate to it as a part of its creation. But she did try to live here in good grace and she tried to put her imprint on the house. She bought paintings and redecorated the interiors.

My father and Irene invited Mr. Wright to come here after they had been married a few years, and he graciously accepted, staying overnight. The next morning, Mr. Wright got up at 4 o'clock, came out and redecorated the whole main part of the house. He took some of the furniture that he didn't think was particularly appropriate and put it in a storeroom. He changed many of the paintings, and then waited for Irene to come down for breakfast at 8 o'clock. I am certain that she was not too pleased with what was going on, and a rather chilly relationship developed. I don't think she and Mr. Wright ever spoke seriously together after that time. When you lived in a Wright house, in many ways you lived with Frank Lloyd Wright as well.

Some things about the house didn't work out properly—for example, a dining room table that slid out. I think it was my father's idea and not Mr. Wright's, but he agreed to execute it. The idea was that the dining room table would slide out of the kitchen with all the plates on it. When courses were changed, the dining room table was pulled into the kitchen, the plates changed and then pushed out again. One night my grandmother was here for dinner, and she didn't quite understand the drill. She wasn't quite finished with her salad. As the table went out, she was following it with her eyes. Then all of a sudden, she was looking at other people's feet with a fork in her hand. But that was a worthy experiment, and why not?

The radiant heating system in the house was way ahead of its time. It was a good idea, but the control systems were not developed in 1939 to give area control; so when it was cold in the



playroom, it was hot in the bedrooms leading up to the playroom, because the heat came from the central system. With today's sophisticated controls, it would have worked admirably well.

The fireplace in the balcony was to have 12-foot logs leaning vertically against the firewall. One day, after we had been in the house for about three months, my father said, "Well, we should try the fireplace up on the balcony." So we fired it up, and the logs burned. All of a sudden, the logs started falling out into the room as the bottoms burned and broke. So we threw them out the window. There it was, a worthy experiment.

And, of course, there is the famous leaky roof story which has many versions. I have my own, and I believe that mine is the authentic one. One night, my father had some distinguished guests to dinner, and as a 13-year-old I was invited to sit at the side of the table and keep quiet. My father had men working



Left, the angular pool. Above and page 82, a spiral stair to an observatory penetrates the skylit living area.

very hard for a year with putty guns on the windows in the roof to keep them from leaking. It was successful until a thunderstorm occurred. I looked around a little nervously, and one leak started in the corner where the end of the table was, and the rain came down right on the top of my father's bald head.

He went into a rage. There was a phone on a desk in a little alcove near the table, and he asked the maid to give it to him. He sat right where he was as the water leaked down. He picked up the phone and said, "I would like to speak to Mr. Frank Lloyd Wright in Taliesin West in Phoenix, Ariz." Amazingly, in about five minutes, he said, "Frank, you built this beautiful house for me and we enjoy it very much. But I have told you the roof leaks, and right now I am with some friends and distinguished guests and it is leaking right on top of my head." Mr. Wright very clearly came back so that we could all hear it at the table: "Well, Hib, why don't you move your chair?"

I have to say that this was a happy place for my sister and me and our father to live. Now as to the Johnson Administration Building, I dug this quote out of Mr. Wright's autobiography: "An experiment in design and construction. There is an important difference between merely experimental and genuine experiment. The one may be a feeling for novelty, the other is rationally based on experience seeking a better way." Pretty good.

There are many things that could be criticized about the administration building: the great workroom, with typewriters going all the time, the OSHA [Occupational Safety and Health

Administration] railing we had to put up. When the building was erected, it was the only airconditioned building in Racine and probably in Wisconsin. Today, the airconditioning system is not as adequate as in some more contemporary buildings, but you live with that.

And the glass tubes, which to my knowledge have never been repeated in any other building. The executives' reaction to the tubes was that they couldn't see out to decide whether it was a good golfing day. If it was a very good day, then you worked anyway because you didn't know it was a good day; if it was a very bad day outside, then you worked because you were not gloomy about its being a bad day outside.

It's an enclosed building, and some of the new people who come here to work stay beyond 6 or 7 o'clock because they don't know it's dark outside.

But it was designed to be an inside building and, while the tubes have leaked, they are a really beautiful structure for the interior wall and, actually, beautiful for the outside as well. What has prevented them from becoming more common is the cost of fabricating those tubes at current labor rates.

On the positive side, however, the most important thing that happened to us was that we became a different company the day the building opened. We achieved international attention because that building represented and symbolized the quality of everything we did in terms of products, people, the working environment within the building, the community relations and—most important—our ability to recruit creative people.

When we get a really good person, he or she walks in that

continued on page 82



All supported floors are cantilevered to gain maximum floor area over the shallow site. The top floor has a diameter of 100 ft and overhangs the driveway below.

Steel frame wins first "round" in Port Huron

Citizens Federal Savings & Loan Association Building has the distinction of being Port Huron's first circular structure . . . and structural steel received the nod for the framing material.

Both poured-in-place and precast concrete frames were considered as alternate framing systems. But steel proved to be the best solution for several reasons: (1) the designer was able to hold the building height to the desired limit; (2) material costs were less, and (3) the frame could be erected more rapidly.

"An overnight building frame"

The 47,000-sq-ft project was built by the fast-track construction method. Construction speed was a major factor governing the selection of the framing material.

According to the design/builder, the alternative framing systems considered could satisfy esthetic requirements, but not within the owner's fixed budget. And that's where steel had the edge.

Work on the site progressed while the steel was being fabricated. Site work involved driving end-bearing piling and sea-wall sheet piling along the bank facing the river. As soon as the piling was in place, the steel was delivered to the site and erected. Time to erect the complete frame: 1½ weeks. Because of the rapid erection schedule, the structure earned the reputation as "an overnight building frame."

Hybrid frame most economical

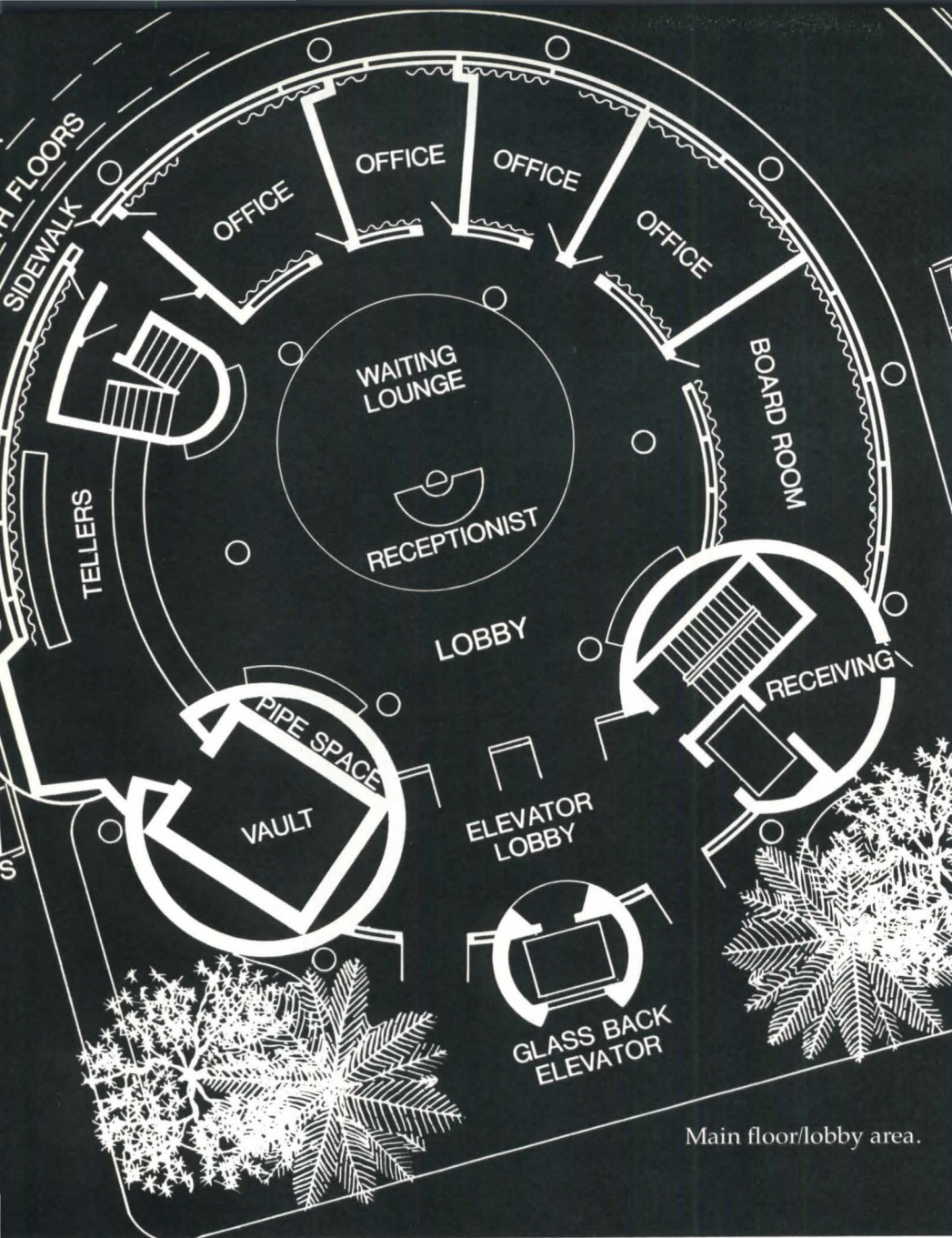
The fabricator had the choice of using ASTM A36, ASTM A572

Grade 50, or a combination of both, whichever proved most economical. On this basis, a hybrid structure of high-strength steel columns and girders, A36 beams, and a composite steel floor deck proved to be most efficient.

The floor system consists of 3¼-in. lightweight concrete topping on 3-in. composite steel floor deck supported on steel beams. Even though many of the connections were skewed, no difficulty was encountered during fabrication or erection.

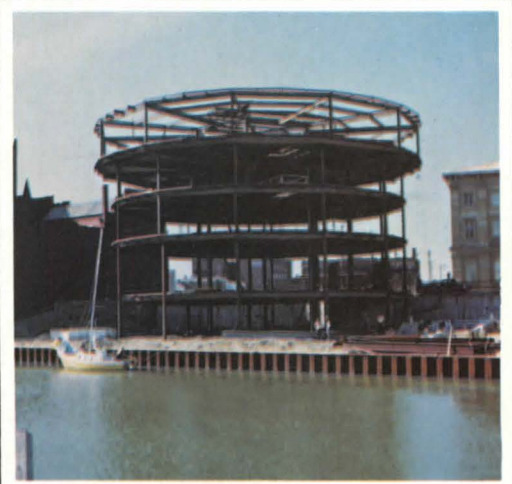
Cantilevered over tight site

The building is situated on a shallow 110-ft lot. By cantilevering the levels, the architect was able to effectively increase the building's floor area without encroaching on the re-



Main floor/lobby area.

The steel frame was erected in one and a half weeks. Bethlehem supplied all of the structural steel for the project.



Although many of the connections were skewed, no difficulty was encountered during the fabrication or erection of the frame.

Owner: Citizens Federal Savings & Loan, Port Huron, Mich.
 Architect: Richard C. Cogley, Architects, Port Huron, Mich.
 Design/Builder: Andries-Butler Corporation, Troy, Mich.
 Structural Engineer: Ray Covey Associates, Inc., Southfield, Mich.
 Fabricator/Erector: Ross Structural Steel, Inc., Detroit, Mich.

quired driveway and waiting space. The 80-ft-diameter second floor is structurally tied into the adjacent 20-ft-wide driveway and plaza. The third and fourth levels are 90 ft in diameter; the fifth is 100 ft in diameter.

The top floor, therefore, utilizes the full width of the property by overhanging the driveway below.

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Architect: Robert Bridges Associates, New York

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A Sweeping Panorama Of Federal Architecture

The Federal Presence: Architecture, Politics and Symbols in United States Government Buildings. Lois Craig and the Staff of the Federal Architecture Project. Cambridge, Mass.: MIT Press, 1978. 546 pp. \$37.50.

When I first saw this book, its contents were hanging on the wall of Lois Craig's office. She was then director of the federal architecture project of the National Endowment for the Arts from which has come much of the new spirit in government building, as reported in these pages (see June '78, p. 20), and much more can be hoped for the future. This book will be a vehicle for such further progress. So if it cannot be said that this book will help you get a federal job, it will certainly help by its description of past efforts in federal building design and its indications of the direction in which federal architecture is now moving.

But I am obliged to ask if *The Federal Presence* is a book or something else. Its origin on the wall strongly reflects the late Charles Eames, one of the most influential task force members of the federal architecture project. Eames was a tireless and talented collector, recorder, compiler. In his hands a lady's fan could evoke an historical period, a theater ticket stub encapsulate an entire production. Moreover, the wall was a perfect device to enlist any number of collaborators, who contributed quotations, Xerox copies of old photos, casual jokes and biographical tidbits.

It became a happening, an exploration of the topic, a survey. What we are describing may become an anthology. It certainly resembles a magazine. But it lacks the thrust and direction of a book, and above all it does not point to any conclusions. You will thus find yourself dipping into this question-begging production, and rather quickly putting it down; it is not likely to be read through.

Do not let this quibbling interfere with your enjoyment of what is not only the best introduction to its subject but for many aspects of it, the best treatment. For all of its 500-plus pages, the text and illustrations have been trimmed to the bone. Wherever you turn, fascinating bits turn up. If you object that they are bits, you are free to turn to the larger story in

references. But I, for one, find the photograph of the pageant mounted by AIA at the Lincoln Memorial in honor of Henry Bacon, its architect, as significant as the design of the building itself. This is not a work of architectural history, but an account of the larger story that shaped and determined what federal architecture would be.

Inevitably, much of this book is about the city of Washington, the scene of its "architecture, politics and symbols," as defined in its title, and until the Civil War, the location of the most important federal buildings. Here Jefferson, Latrobe, Mills and other early federal architects are shown creating the neoclassicism and federal style of that period.

We are then given a fair measure of post-bellum architecture, the darker brick and granite world of Mullett and Meigs.



Inspired by the "great white city" of Chicago and the ascendancy of *l'Ecole*, the account is brought to 1918 and the Great War. All this is solid stuff, imaginatively presented with new detail, but uneventful.

Then commences what has seldom received its due treatment, and is here given one-half of the book: the story of federal architecture through the boom and bust of the 1920s, the revival during the New Deal and the years since. The sprightly contribution of Edwin Bateman Morris in the pages of *The Federal Architect* greatly enhances these years and anticipates much of what would happen later. Morris was fully aware of the perils of giantism, bureaucracy and the general inflation of political aspirations and many architectural egos. The account of the

New Deal years is packed with evidence of worthy efforts, such as the TVA's dams and power houses, the mural paintings of the federal art project and an even handed treatment of the Public Works programs of the period. Social achievements, especially housing, are understated.

Comes now the last quarter century, the most important period for the issues raised by this book and by the federal architecture project. Here the tidy structure of the historical past falls apart, a multitude of voices is heard, design proliferates and the available space asserts its inadequacy. We have entered a new world. New architecture embraces expositions, expressways, memorials, works of high technology (nuclear physics, space exploration, supersonic transport) prefabricated housing and mobile homes, historic preservation and embassies overseas, inflated structures and dymaxion globes, jails and national parks. Here are the architectural superstars, the sharply articulated philosophies of Philip Johnson and Robert Venturi, the dilemmas of the memorials, the era of urban disarray and architectural disbelief. The typical federal project has become overscaled, immensely complex, inescapably ambiguous and beyond the grasp of the individual designer. Architecture itself demands redefinition.

The book ends with the evanescence of fireworks, like the bicentennial itself, and in its illumination the reader is free to write his own conclusions. We have been enriched by the experiences offered by *The Federal Presence*, but whether we are wiser will depend on what we have brought rather than what we have been given. That you will enjoy the book, there can be no doubt. The subject demands more. If you read Lois Craig's article on the Federal Triangle in the June '78 issue of this magazine, you will know what I mean, and know that she is the person who can deliver it. *Frederick Gutheim, Hon. AIA, Washington, D.C.*

Pioneers of Prefabrication: The British Contribution in the Nineteenth Century. Gilbert Herbert. Baltimore: Johns Hopkins University Press, 1978. 228 pp. \$17.50.

One of the persistent dreams of modern architecture from Le Corbusier to Moshe Safdie has revolved around prefabrication. Could not one take modern technology and production line techniques

and design prefabricated building units with an esthetic appeal? But between this grand vision that seemed so rationally obtainable and the reality of the situation there has existed a great gulf. Of course, there have been some successes, from individual building components to mobile homes, but in the area of architecture as a high art there have been few. Yet the dream persists and the failures of the 20th century have driven architects and historians back to the beginnings of modern industrial history to examine the origins of prefabrication. In the 19th century, prefabrication of buildings and components attained the status of a major industry and had a significant impact, albeit not in the centers of high art.

Until recently, the origins of prefabri-

cation had been sketched—roughly—by the major historians and proponents of the modern movement: Sir Nicholas Pevsner, Henry-Russell Hitchcock and Sigfried Giedion. To this one can add the contributions of Turpin Banister, Walter Knight Sturgis, Margot Gayle and Charles E. Peterson, who have examined prefabrication from a variety of viewpoints, but perhaps most importantly as a technique that covered all building types and not simply as a predecessor to modern design. This book is the latest and perhaps the most significant contribution to the growing literature.

Herbert's study, while confined to English attempts, takes in more than simply the British Isles—where there seems to have been little major impact of pre-

fabrication on the building stock—and includes the British Colonial Empire which can be said in truth to have been settled by the “importable colonial cottage,” the “temporary church” and “iron prefabs.” The history of prefabrication is not dramatic but rather is the story of almost anonymous individuals working not for themselves but for long forgotten iron foundries, engineers and galvanizing companies. While certainly men of vision were connected with its development, the history is more one of modest experiments carried out for a specific situation: the discovery of gold in Cunapiru, Uruguay, the need of hospitals for the Crimean War or the settlement of Swan River in western Australia. Many of these overseas colonies were built almost exclusively of prefabs, a combination of wooden cottages, corrugated iron warehouses and cast-iron stores. A photograph of De Beers New Rush (soon to be renamed Kimberley), South Africa, in the mid-1870s, shows a panorama of prefabricated structures.

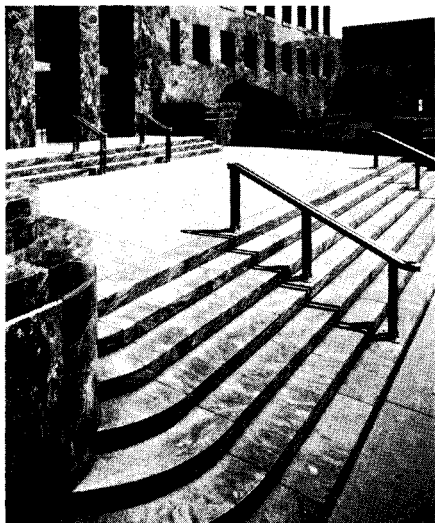
One of the significant pieces of information that emerges from Herbert's study is that corrugated iron was far and away the most popular material used, while cast-iron facades for complete buildings were widely used. Corrugated iron and a cast-iron or wooden frame provided the flexibility, ease of erection, mobility, standardization and interchangeability of components sought from prefabrication characteristics.

To most architects and historians Joseph Paxton's Crystal Palace for the London Great Exhibition of 1851 (photo across page) is the paradigmatic structure of Victorian ingenuity and daring—a bravura performance never to be repeated. As Herbert notes, however, the Crystal Palace depended significantly on the earlier developments in prefabrication, and that far from being a building “made up of a limited number of components . . . all standardized in size and design,” which is the usual received opinion, the simple form of the building concealed an incredible complexity of components—a vast system of different small elements.

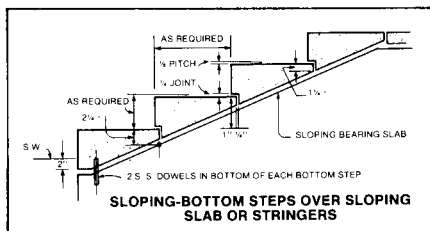
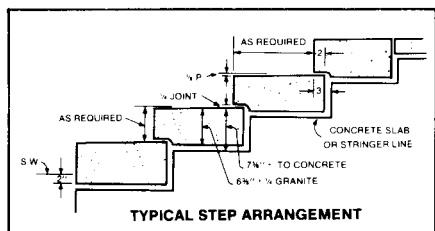
Also, it was far from being completely a cast-iron structure. Apart from the iron structural columns at 24-foot centers and the cast-iron decorative arches, the remainder of the building, except for the glass, was wood. The framing of the curtain wall, the intermediate columns, the sills, head, window frames and even the great semicircular window were timber. Finally, as Herbert notes, the amount of wood used brings into question the traditional assumption that the construction of the Crystal Palace was done in the factory and shops and involved very little site work. The question remains open,

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Tough enough to take the thunder of 10 billion feet.



Architect: Tinsley Higgins Lighter & Lyon, Des Moines, IA

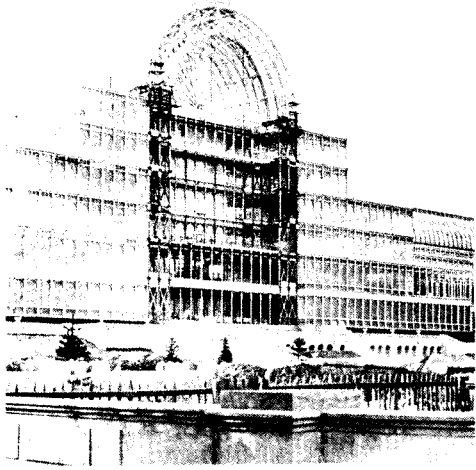


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buildings made a pretense at high art through the imitation of the popular styles and, of course, ornament. To the Victorians imitation was enough; one of the great manufacturers of prefabricated buildings, railings, fences and garden decorations was described as "the source of supply of useful and artistic foundings for all parts of the civilized and, we might add, the uncivilized world." No specific esthetic of prefabrication emerges from Herbert's study.

The second question revolves around the extension of the rationalized industrial system to not only production and construction but to the merchandising process. When did the practicality of business take over from art? Some companies such as Macfarlane's of Glasgow had a worldwide distribution system and were in close contact with clients, even allowing client participation in the design of new products. The impact of this new conception of architecture has scarcely begun to be assessed.

Soundly researched and documented, *Pioneers of Prefabrication* unfortunately suffers from some very pedestrian prose. Still though, it is an important book that begins to take a look at a long neglected area of architectural history. *Richard Guy Wilson, Associate Professor of Architectural History, University of Virginia*

Recycling the Central City: The Development of a New Town-in Town. Judith A. Martin. Minneapolis: Center for Urban and Regional Affairs, 1978. 161 pp. \$6 plus \$1 postage and handling.

Judith Martin, who wrote about Cedar-Riverside in the pages of this magazine (Nov. '77, p. 26), has written a comprehensive account of this Minneapolis new town-in town and its evolution in a declining area into a significant, albeit controversial, urban development. The book is more than a history of the first years of Cedar-Riverside, for the new town is placed within the context of urban development in this country. Martin says she never intended to become the historian of a single urban development despite its importance as the first federally funded new town-in town in the U.S. Rather, her aim is to examine also the potential for the new town-in town concept and to assess its impact on the future of American cities. She succeeds in her purpose, having made a contribution to the literature of American urban development. The lessons of Cedar-Riverside should serve as a guide for future urban experiments.

The book is available from the Center for Urban and Regional Affairs, 311 Walter Library, 117 Pleasant St. S.E., Minneapolis, Minn. 55455. □

but Herbert suggests that the extension of the rationalization of the building from factory to site may not have been as complete as usually thought.

Two profound questions relating to the impact of prefabrication remain at the end of the book. First was an esthetics of prefabrication ever developed? The story Herbert tells is one of technological processes and not esthetics; the buildings were not considered as architecture in the 19th century and the involvement of architects was the exception rather than the rule. Esthetically, most prefabricated

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Antoniades from page 62

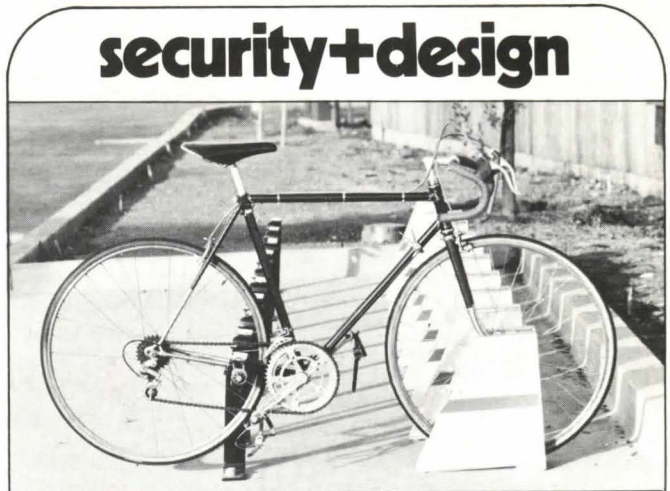
According to Bruce Goff, Frank Lloyd Wright used to refer to Skidmore, Owings & Merrill as the "Three Blind Mies." He also is known to have suggested that AIA stood for Arbitrary Institute of Appearances. When he was awarded the Institute's highest honor, the gold medal, he accepted it, joined the dais at the presentation and then refused to speak until handed his check. After a caustic speech, he left, check and medal in hand.

* *

One time when Kenzo Tange was visiting the U.S., he went to New Canaan, Conn., to see Philip Johnson. Johnson was, it is said, in bad humor this day and didn't really want to see anybody. As Johnson opened the door, the polite Japanese apparently sensed this, for what he said was: "Oh, I am sorry. I have come to the wrong place. I was not looking for Mr. Johnson, but for Mr. Johansen."

* *

Anthony Quinn, the movie star, dreamt of becoming an architect. His idol was Frank Lloyd Wright. One day, with portfolio and drawings in hand, Quinn went to see the master. This was long before he had serious thoughts of acting. He introduced himself to Wright, told him he had brought his drawings for him to see and asked his advice for the advancement of a career in architecture. Quinn had a handicap at that time — he stuttered. And Wright stopped him before the introduction had gone very far with, "There is no need for me to look at your drawings. Architects talk to people. If you want to become an architect, you must talk to your clients. The first thing you have to do if you want to be an architect is to have an operation to get rid of this stuttering. Then you come here and we will see your drawings." Quinn set about getting the money for the operation, and with his voice fixed, became an actor. (From Quinn's autobiography.) □



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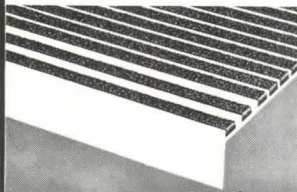
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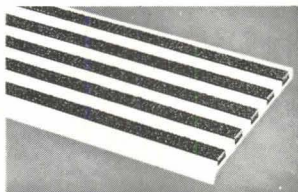
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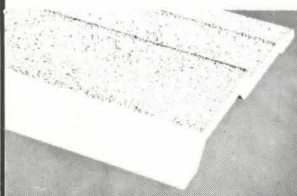
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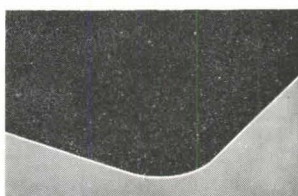
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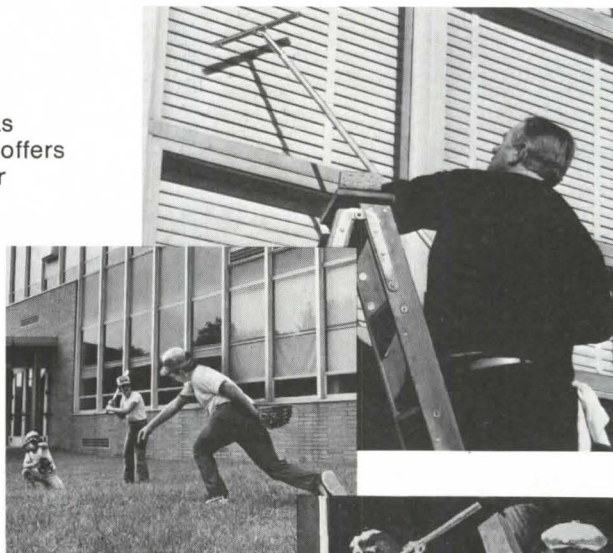
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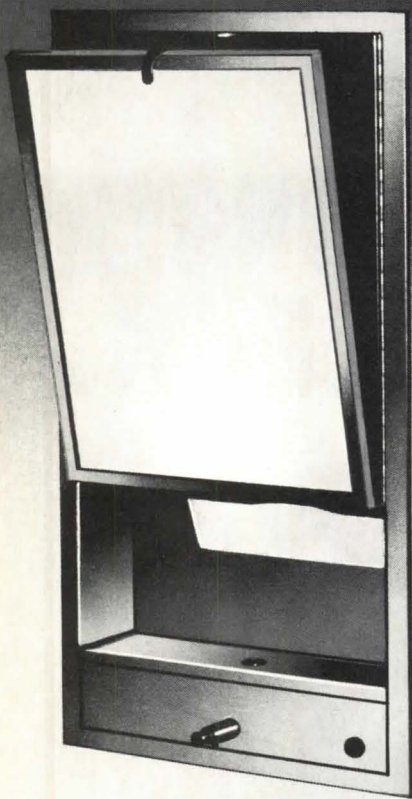
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Practice from page 28

adjust furniture and visual privacy. Both underestimate priorities given by employees to "overall lighting, conversational privacy, work surfaces, access to other areas and departments and access to tools, equipment and other materials." Designers are more accurate than executives in their assessment of the importance of lighting and chair comfort to worker.

The report also considers the office of the future. In the next 10 years, say the design professionals, the most important factors in office planning will be rising costs in construction and HVAC systems and changes in spatial requirements caused by new electronic equipment. Business executives see as the most important factors expanded work forces, company reorganizations and electronic equipment. Both groups agree that an issue that is important today will be even more so in a decade: energy-conscious design. Majorities in both groups also predict the open office plans will be more prevalent in 10 years. Interestingly, employees do not think it is likely that they will move from a traditional office to an open plan. "Overall, there is little indication that office workers are prepared for this kind of change," the report concludes. "This finding, in combination with the fact that office planners do perceive loss of privacy to some office workers to be a drawback to the open plan, indicates again that resistance to the open plan must be reckoned with."

Provincetown Theater Architect Chosen in Design Charrette

An unusual means of selecting an architect for the design of the Provincetown Playhouse's new theater and Eugene O'Neill archival center recently took place in Provincetown, Mass. Seven New England architects were asked to compete in a design charrette—an intense eight-day session conducted on-site.

The architects crowded into a restaurant to produce seven designs. For an hour during each of the eight days, the public could watch the architects at work. The visitors roared vociferously for their favorites, according to the Boston press.

A panel of jurors (I. M. Pei, FAIA, New York City, chairman; Raquel Ramati, New York City; Herbert McLaughlin, AIA, San Francisco; Arthur Cotton Moore, AIA, Washington, D.C.; Walter Wagner, FAIA, editor of *Architectural Record*, Laurence Booth, AIA, Chicago, and three nonarchitect Provincetown residents) examined the work of the seven competitors. After what is reported as "heated argument," the jury decided that the winner was William Warner, AIA, of Exeter, R.I.

The announcement of the winner was made by Pei to an audience of more than 400 people who jammed into a local church for the event. After the announcement, Pei released the podium to actress Helen Hayes who talked about the Provincetown Players, whom she had seen perform in 1916, and about Eugene O'Neill, whose first play was performed in Provincetown.

Pei said that the experiment "set a standard for the nation." The idea for the charrette is credited to William Marlin, architectural critic for the *Christian Science Monitor*, who coordinated the charrette. Background materials provided the competitors were supported by a National Endowment for the Arts grant.

In addition to winner Warner, the architects who competed were Turner Brooks, Starksboro, Vt.; Kennedy-Montgomery Associates, Cambridge, Mass.; Perry, Dean, Stahl & Rogers, Boston; Paul H. Krueger Associates, Watertown, Mass.; Morrish & Fleissig, Cambridge, Mass., and James Volney Righter, AIA, New Haven. Two representatives from each firm prepared plans, presentation renderings and models of their respective schematic designs.

What Home Buyers Are Seeking

Americans in the market for a house would like their dwellings insulated, but less than half are willing to reduce window space to conserve energy. Double-glazed windows are popular in cold weather cities; solar energy is more popular in Phoenix and Miami than in other areas. California home buyers won't give up cathedral ceilings to reduce heating bills.

These and other findings were revealed in a survey by *Housing* magazine conducted by Walker & Lee, a real estate firm in Santa Ana, Calif., among home buyers in the metropolitan areas of Washington, D.C., Chicago, Miami, Phoenix, San Diego and San Francisco. Overwhelmingly, the shoppers want fireplaces and a streetscape of homes of diverse styles. In Miami, they like contemporary dwellings; in San Diego and San Francisco, Tudors; in Washington, colonials, and in Chicago, ranch style houses.

Everywhere, except Phoenix and San Francisco, they want three bedrooms. In those two areas, they prefer four bedrooms. If they can afford any amenity, it would probably be a swimming pool. A luxury option for the kitchen would be a greenhouse window.

Most buyers are unwilling to spend more than 2.3 times their annual income for a home, exceptions being Californians and Chicagoans who will pay three times income for a new home. Most first-time home buyers have two wage earners in the household.

Briefs on page 80

Competition in the ENR 500 circuit is tough.

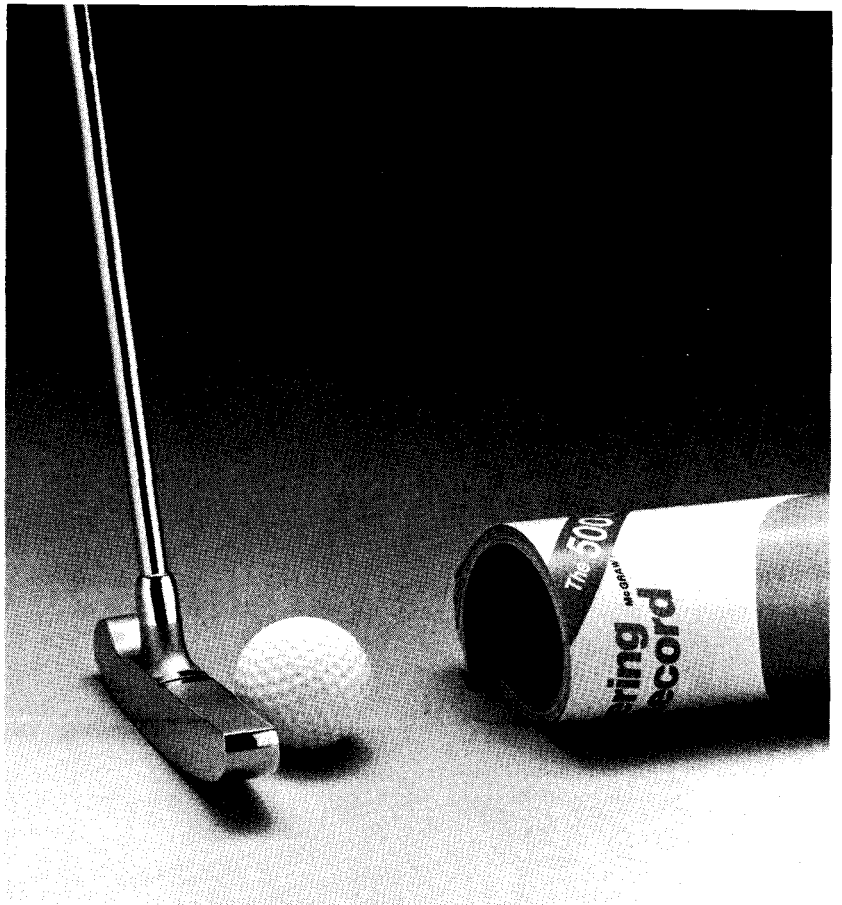
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*Engineering News-Record, May 18, 1978

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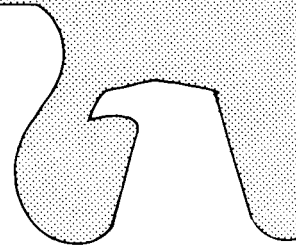
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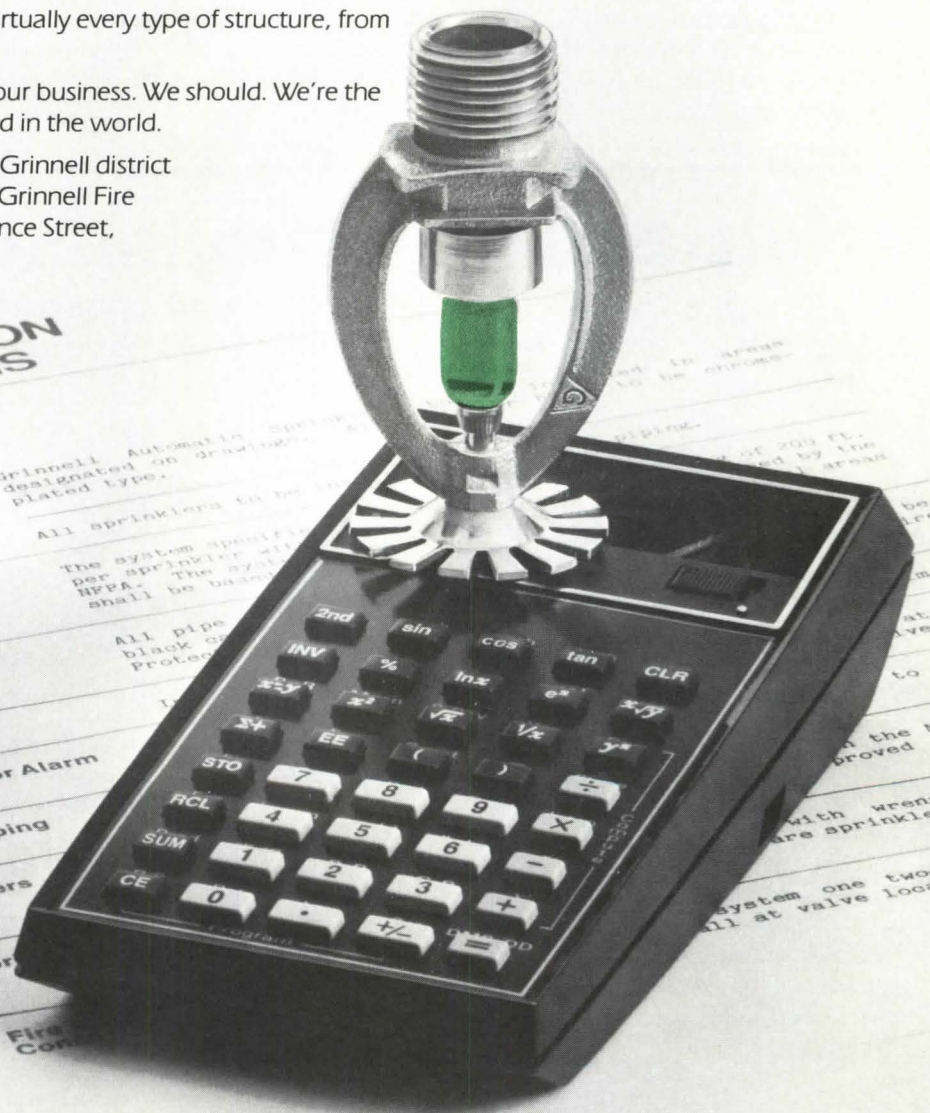
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DEATHS

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Basil G. F. Laslett, Fayetteville, N.C.
Jerrold Loebel, FAIA, Chicago
Francis D. McHugh, Douglaston, N.Y.
Timothy J. Quinlan, Severna Park, Md.
Erle G. Stillwell, Hendersonville, N.C.
O. Horace Tucker, Springfield, Mo.
Allen R. Williams Jr., Houston

Prentis Stafford Howard, AIA: A principal in the firm of McElvy, Jennewein, Stefany & Howard, headquartered in Tampa, Fla., Mr. Howard designed many structures, including the Hillsborough County Health Center, the Morgan Woods elementary school and the public library, all in Tampa. Mr. Howard, who died on Sept. 14, 1978, at the age of 46, was a past president of the Tampa Chapter/AIA. At the time of his death, he was president of the Florida Central Chapter/AIA.

John Miles Rowlett, FAIA: One of the founders of the Houston-based Caudill Rowlett Scott and a pioneer in the application of the team concept to architectural practice, Mr. Rowlett was instrumental in the firm's growth, having been personally involved in the opening of six offices and serving as managing partner in offices in Oklahoma City, New York and Hartford. Mr. Rowlett, who died on Nov. 22,

1978, at the age of 64, joined William W. Caudill, FAIA, in 1946 in organizing a practice under the name of Caudill & Rowlett. In 1949, Wallie E. Scott, FAIA, and William M. Peña, FAIA, joined the partnership which is known generally as CRS. A construction management firm, two engineering firms and the original CRS firm are under the jurisdiction of the parent firm. Currently, more than 1,000 people are employees. In 1970, the firm "went public" and is currently listed on the American Stock Exchange as The CRS Group.

Mr. Rowlett, chairman of The CRS Group, was design management consultant for many projects, including the College of Petroleum and Minerals, Dhahran, Saudi Arabia; the Pontifical Catholic University, Lima, Peru, and the University of the Philippines' college of agriculture, Luzon.

BRIEFS

Michael H. Spector, AIA, of Great Neck, N.Y., has given Syracuse University \$25,000 for an architectural design room in the school of architecture. Both he and his wife are graduates of the university.

The New York Landmarks Conservancy has awarded its first annual chairman's award for "excellence in the redesign of a

landmarks building" to New York University's institute of fine arts building on East 78th Street in Manhattan. Also cited was Richard Foster, AIA, who planned and supervised the \$1.2 million restoration. Completed in 1912 (Horace Trumbauer, architect), the structure originally was the mansion of James B. Duke; it was first converted to academic use by Robert Venturi, FAIA.

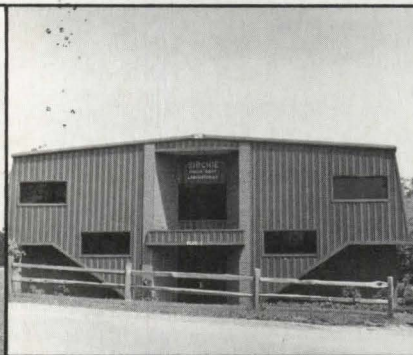
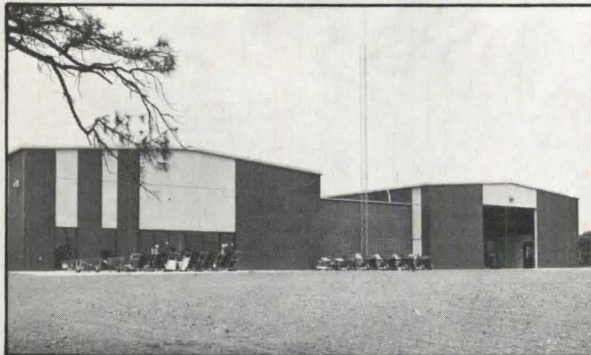
A map of geological faults in this country gives information about the size and age of the faults to assist in determining the possibility of future movements and earthquakes. It is available for \$1.50 (No. MF916) from the U.S. Geological Survey, Branch of Distribution, Eastern Region, 1200 S. Eads St., Arlington, Va. 22202.

A new 1978 specification for design, fabrication and erection of structural steel for buildings has been issued by the American Institute of Steel Construction. Copies may be ordered for \$5 each from AISC, Manual and Textbook Department, 1221 Avenue of the Americas, New York, N.Y. 10020.

The American Society of Civil Engineers has elected Joseph S. Ward of Montclair, N.J., to the post of president elect. He will automatically become president for a year's term in October. □

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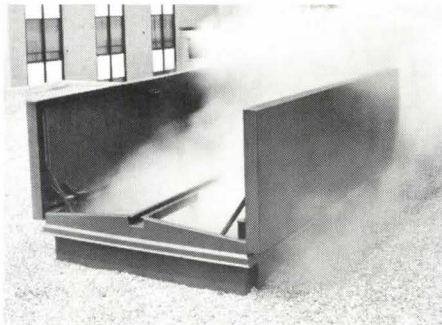
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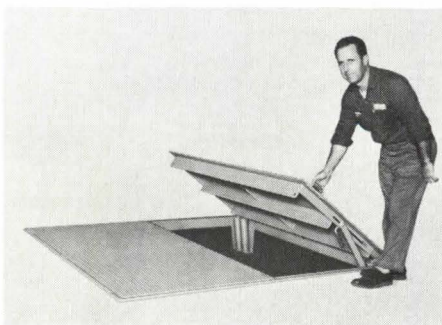
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to bottom.

Johnson/Wright from page 65

building and looks around, having worked for other companies, and suddenly comes to the conclusion that this place and this organization and the people that created this are different. That somehow this organization is interested in innovation, in new ideas and in the people who work in that enclosure. Over the years, we have been able to employ the most creative people who respond to that building. It's been a very favorable thing for the company. Mr. Wright said in his autobiography that "the Johnson Administration Building is better adapted to worshipful work than the cathedral ever was to workful worship."

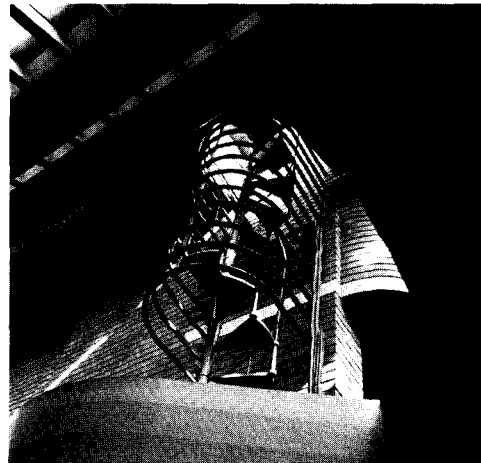
Just before the building was completed, my father said, "By the way, Frank, where is the sign going to be on the building?" Mr. Wright looked at my father and said, "Would you put a sign on the Washington Monument?" Not too humble a question, I guess. Mr. Wright said that he was convinced that he would rather be honestly arrogant than hypocritically humble, and then he said, "I've seen no reason to change over the years."

The administration building was built, the war went on and, of course, my father realized he was going to need some new research development space after the war. In the early '40s, he and his officers and Mr. Wright carried on a kind of debate about what kind of research and development facilities ought to be built after the war. And all our very scientifically oriented people argued with my father and they concluded that we ought to have a building designed by somebody who had already built laboratories and who understood how pipes ought to be hooked together and how people should relate to each other functionally within the building. Let's not go through this whole thing all over again, they said.

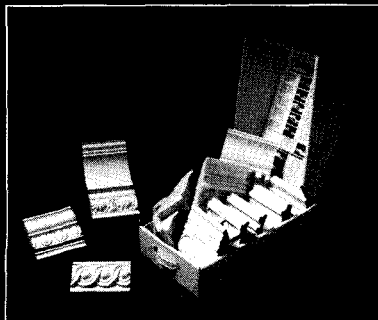
My father finally agreed and the message went back to Taliesin that the company had decided to use a conventional architect to design the new addition for the research facilities. Mr. Wright wrote my father a letter. It was dated Dec. 14, 1943. Mr. Wright wrote: "Dear Hibbard: It hath reached me, O King

of the Age, that Aladdin said to the sultan. 'Why build a heavy building sodden upon the ground facing awkwardly upon unsightly streets when, by creating a charming interior court space for parking, the lighting would come from above or from the court? A gallery would follow above and around the court space, O Master, and bridge tunnels would be seen connecting this space and the administration building itself to the research laboratory which has a tall shaft that would rise from the center of the court, etc., my lord, etc. Thy subjects would like to traverse the bridge tunnels even similar to the one thou now hast, etc., etc., from which to look down upon a goodly garden from the center of the spacious parking and, O Kelif, why not broadcast the year round your good tidings and amusing, too, from the top of the 18 stories from an inexpensive but beautiful radio mast rising out of the utmost height. And should not thy re-

continued on page 84



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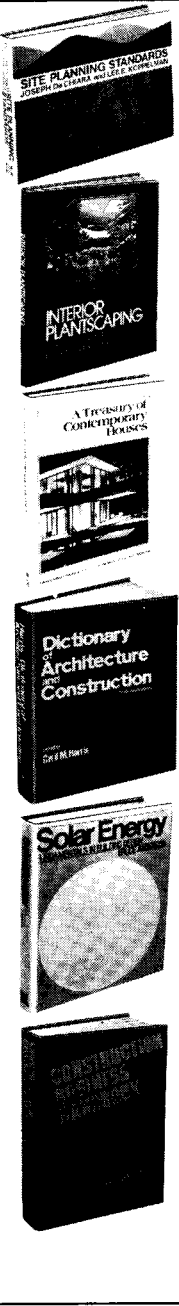
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Johnson/Wright from page 82

search extend to packaging containers, etc., etc., etc., and define a complete little printing plant where brochures by thy worthy self such as thou hast sent me to read could be executed? What a miracle of beautiful planning will be there to instruct thy foes, delight thy friends and convince thy subjects of the illustrious character of thy reign, O my Kelif, and in all arguments as to thy power, excellence and majesty. Affection, Frank Lloyd Wright."

Pretty good salesman. Unbelievable! My father decided to build the tower in spite of everybody who vetoed him in the company. The original tower cost was estimated to be about \$2 million. There was a heating and airconditioning contractor from Chicago who had bid, I think, \$60,000. As the project progressed, which was normal with design changes and additions made, it escalated the total cost to about \$4 million, which was par for the course with Frank Lloyd Wright. At the completion of the project, the heating and airconditioning contractor sent a letter to Mr. Wright, asking for more money because of the changes and indicating that he was in bad financial shape because of the contract. Frank Lloyd Wright telegraphed back immediately: "I don't have any money either. Frank Lloyd Wright."

But the tower, in a really positive sense, became a symbol of our commitment to innovation as a company. I remember Mr. Wright saying something like this to my father: "You can raise it like a torch—the tower—to inspire your people around the world." And it did, and it still does.

There was an interesting bit of publicity about the research building and the tower. Alistair Cooke, whom you may have heard on the air and read, arranged to have a radio interview with Mr. Wright in 1959. He said that he blocked out the feature, arranged rehearsals and went around for weeks in euphoria which was shattered when Mr. Wright passed down an ultimatum through an emissary: "No rehearsals; rehearsals

freeze the natural flow of the human personality."

Cooke wrote of the interview that Wright "delivered it in the delicate and warmly modulated voice which had for 50 years seduced wax manufacturers, oil tycoons, bishops, university boards of trustees and at least one emperor of Japan into commissioning cantilevered Aztec structures, most of which were later rescinded, condemned as unsafe or merely paid for and deplored. . . ."

I recently found a letter written by Bill Connolly, our public affairs director, to Alistair Cooke. Bill wrote: "Dear Mr. Cooke: I enjoyed your piece on Frank Lloyd Wright in the April 26 issue of the *Washington Post* and the *Times-Herald*, but I must set you right on one point. If we were seduced by Wright, you should know that following the injunction of Confucius we relaxed and enjoyed same, and it is a fact that the beautiful buildings he designed for us here have neither been rescinded, condemned as unsafe nor deplored. They were, of course, paid for. Some day why don't you come out and see us?"

The decision made by my father to join with Frank Lloyd Wright in the beautiful experiment to build an administration building and a home had a most favorable impact on the future of our family and our enterprise at a very critical time—the change from the third generation to the fourth. And I am a member of the fourth. Those buildings have proved to be an inspiration since I have been with the company and to all people who have worked with me in the company. They have contributed to our great growth. When the administration building was completed in 1939, our company had \$6 million in sales worldwide; this year, we are over \$1 billion.

There are many quotes from Frank Lloyd Wright, but the most meaningful one to me was a remark he addressed to me. One day I happened to ask him which he considered his greatest building. And he looked at me and said, "The next one, young Johnson, always the next one." □

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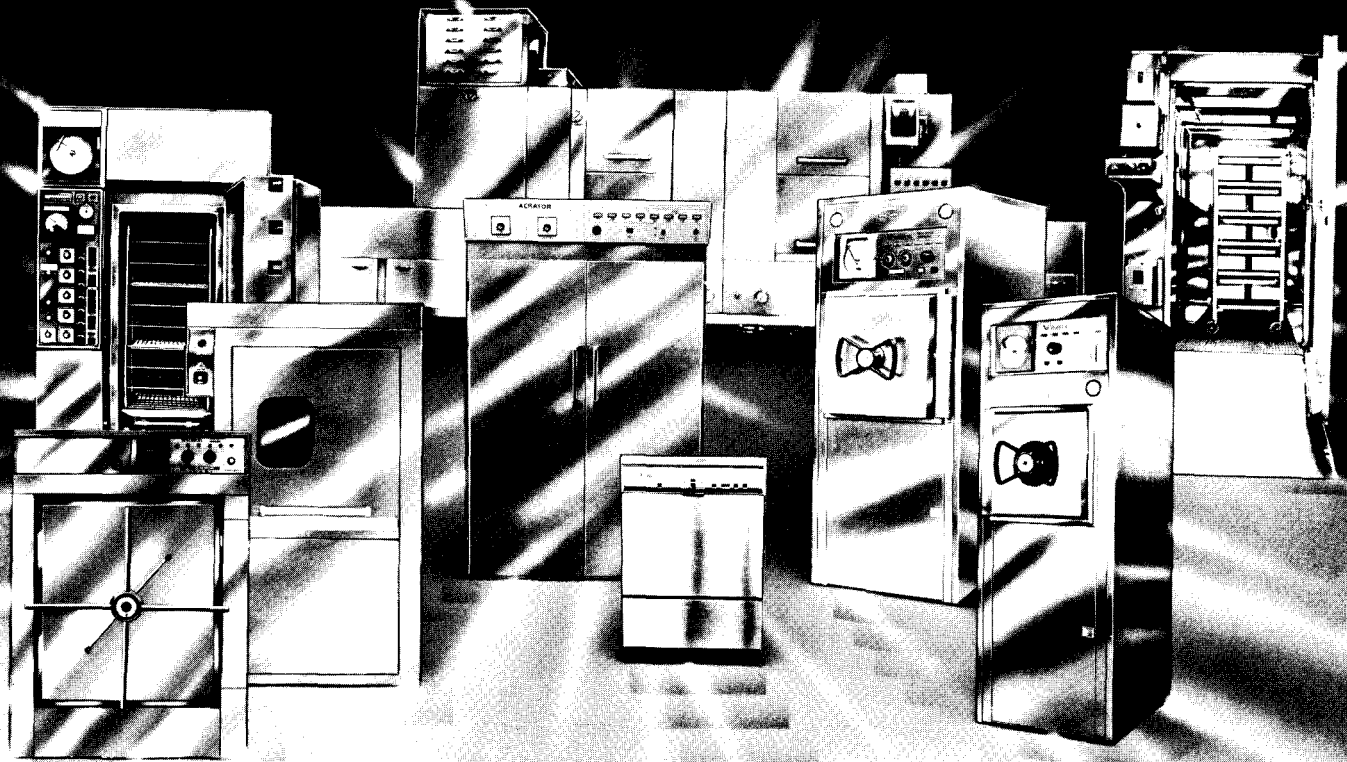
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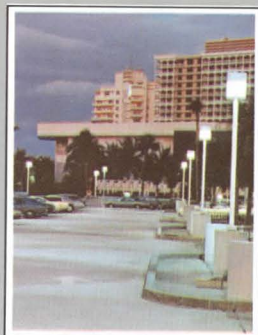
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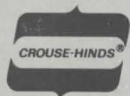
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