ARCHITECTURE

JANUARY 1985 FIVE DOLLARS

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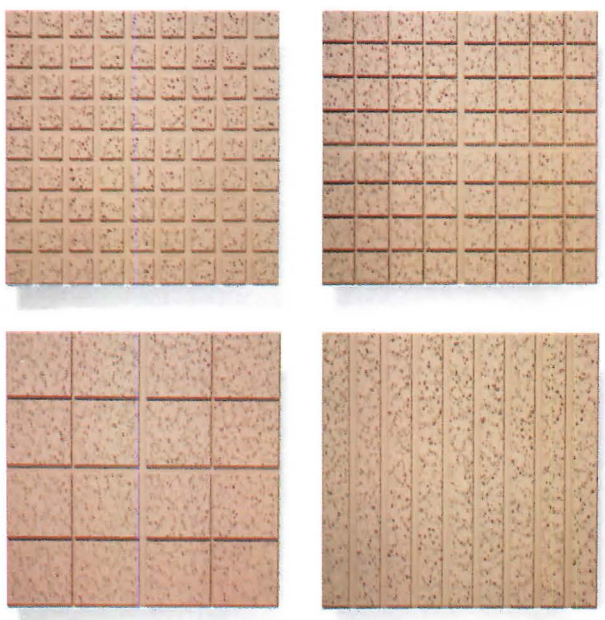

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For details on Suprafine acoustical ceilings, write Armstrong, Dept. 4INAM, Box 3001, Lancaster, PA 17604.

FROM THE INDOOR WORLD® OF Armstrong

Circle 1 on information card

CONTENTS

Cover: Interior of Evelyn Chapel at Illinois Wesleyan University in Bloomington, Ill., by Weese Hickey Weese, of Chicago. Photograph by Howard N. Kaplan (see page 45).

ARCHITECTURE: The AIA Journal, publication number; ISSN0746-0554, official magazine of The American Institute of Architects, is published 12 times yearly by the AIA Service Corporation at 1735 New York Ave. N.W., Washington, D.C. 20006. **Individual Subscriptions:** U.S. and its possessions; $28 for one year, $45 for two years, $62 for three years. Canada: $34 for one year, $53 for two years, $72 for three years. Foreign: $52 for one year, $93 for two years, $134 for three years. For special library and institutional rates, please contact circulation department. Single copies, $5 each (except for May and September issues, which are $10). Publisher reserves the right to refuse unqualified subscriptions. For subscriptions: write circulation department; for change of address: send circulation department both old and new addresses; allow eight weeks. Quotations on reprints of articles available. Microfilm copies available from University Microfilm, 300 N. Zeeb Road, Ann Arbor, Mich. 48106. Referenced in *The Architectural Index, Architectural Periodicals Index, Art Index, Avery Index to Architectural Periodicals.* Second class postage paid at Washington, D.C., and additional mailing offices.

VOL. 74, NO. 1.

Let's ta

Soil. Dust. Dirt. We have a fiber that practically makes these four letter words obsolete. It's called Zeftron® ATX nylon and it's made by Badische Corporation.

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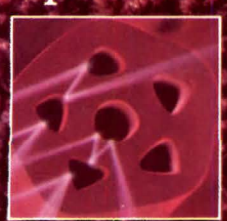

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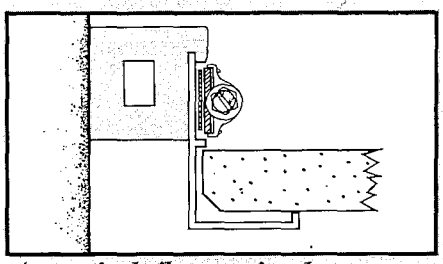
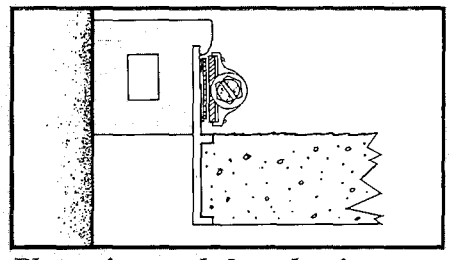
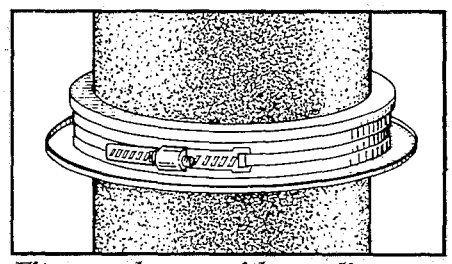
Fry Reglet's New Column Collar: You'll Find Us In Tight Circles.



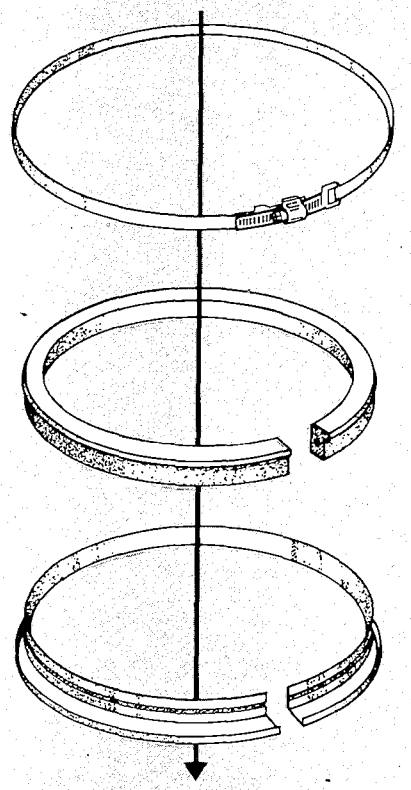
Acoustical tile rests in place on fitted aluminum angle.



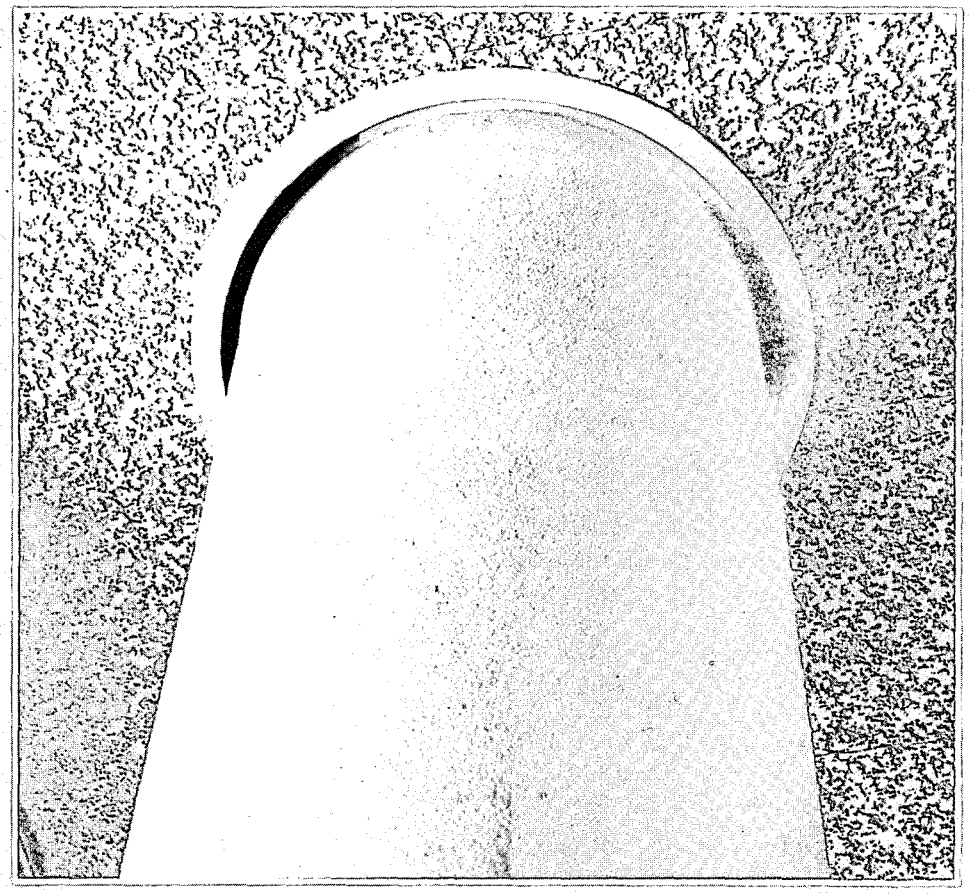
Plaster is screeded to aluminum reveal.



Fits on columns with a radius as small as six inches.



Two simple components secured by adjustable band.



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EVENTS

Jan. 31-Feb. 2: Grassroots '85—Leadership Training Conference for AIA Component Executives, Washington, D.C. Contact: Ann Kenworthy at Institute headquarters, (202) 626-7378.
Feb. 4-5: Workshop on Affordable Housing, Orlando, Fla. (Repeat workshop Mar. 7-8, San Francisco.) Contact: Christine Barbetta, 1313 E. 60th St., Chicago, Ill. 60637.
Feb. 4-8: Course on Effective Project Management for Building Design and Construction, Madison, Wis. Contact: Philip M. Bennett, Department of Engineering Extension, 432 N. Lake St., Madison, Wis. 53706.
Feb. 4-8: Course on the Application of Infra-Red Scanners to Detect Building Energy Losses and to Inspect Electrical and Mechanical Systems, South Burlington, Vt. Contact: The Infraspection Institute, Juniper Ridge, Box 2643, Shelburne, Vt. 05482.
Feb. 5-7: Seminar on Simplifying Communications Wiring, New York City. (Repeat seminars Feb. 12-14, San Jose, Calif.; Feb. 19-21, Los Angeles; and Feb. 26-28, Dallas.) Contact: Darlabs, Inc., Harvard, Mass. 01451.
Feb. 6-10: Minneapolis International Market Square Home Furnishing Market, Minneapolis. Contact: Merrill Busch, Busch + Partners, 1111 W. 22nd St., Minneapolis, Minn. 55405.
Feb. 7: Lecture by Richard Guy Wilson on Perspectives on the AIA Gold Medal, Washington, D.C. Contact: Susan Stein at Institute headquarters, (202) 638-3105.
Feb. 10-13: Inter-Society Color Council Annual Conference, Williamsburg, Va. Contact: Bonnie K. Swenholt, 5717 Gulick Drive, Honeoye, N.Y. 14471.
Feb. 21-24: University of Virginia School of Architecture Conference on Education for Preservation, Charlottesville.
Feb. 24-27: Solar Energy Industries Association Convention and Solar Day with Congress, Washington, D.C. Contact: Scott Sklar, SEIA, 1717 Massachusettes Ave. N.W., Washington, D.C. 20036.
Feb. 24-28: Accent on Design Exposition, New York City. Contact: Laura Susi, George Little Management, 2 Park Ave., Suite 1100, New York, N.Y. 10016.
Feb. 25-26: Training Course on Federal Projects and Historic Preservation Law, New Orleans, La. Contact: Shauna Holmes, Advisory Council on Historic Preservation, The Old Post Office, 1100 Pennsylvania Ave. N.W., Washington, D.C. 20004.
Feb. 25-26: Course on Design and Evaluation of Structures for Tornado Resistance, Dallas. Contact: Martha Hise, Department of Continuing Education, Texas Tech University, P.O. Box 4110, Lubbock, Tex. 79409.
Feb. 25-28: Material Handling Institute National Trade Show, Chicago. Contact: MHI Show Sales, 940 Western Ave., Pittsburgh, Pa. 15233.
Mar. 7-11: International Masonry Conference and Educational Trade Show, Las Vegas. Contact: George A. Miller, Mason Contractors Association of America, 17W601 14th St., Oakbrook Terrace, Ill. 60181.
Mar. 12-13: Seminar on Designing Concrete Structures for Wind and Earthquake Forces, Salt Lake City. (Repeat seminar April 10, Montreal, Quebec.) Contact: Education Department, American Concrete Institute, P.O. Box 19150, Detroit, Mich. 48219.
Mar. 12-13: Consulting Engineers Exposition and Management Conference, Washington, D.C. Contact: CE EXPO, 6900 Grove Road, Thorofare, N.J. 08086.
Mar. 14-18: Research and Design '85 Conference—Architectural Application of Design and Technology Research, Los Angeles. Contact: Kim Leiker at Institute headquarters, (202) 626-7560.
June 9-12: AIA Annual Convention, San Francisco.

LETTERS

Goodhue and Sexual Symbolism: Upon reading William Hubbard's swashbuckling review of Richard Oliver's biography of Bertram Goodhue (Nov. '84, page 97) I would suggest that the iconographic drift could benefit by a recognition of the duplex nature of art and politics.

The impulse to describe architectural form as anthropomorphic "sensual experience," further amplified by the statement that "their buildings . . . hold themselves up and out in ways our bodies do . . ." in his description of Goodhue's towers, seems to imply that the symbol of civic power utilized by the architect is the phallus. If so, then ostentatio genitalium is a frequent motif in design language.

If we accept the reviewer's iconography that sex and civic virtue were allied in some state of adolescent innocence, we are required to be oblivious of the political and social events of the period. To the contrary, it was a period of unrest characterized by the Sacco-Vanzetti case which began in 1920. This period, described as a "period of hope" by Hubbard, was one in which centralized authority and institutions were threatened by anti-authoritarian movements like the anarchists and labor unions. If the architect was attempting to apotheosize the power establishment by means of his works, others, like Raphael, also served the cause in the production of works describing civic virtue and allegiance in inspirational terms.

Granted that artists and architects are not always free in determining artistic reasoning, and that the role of fashion is an important one, the biological determinism promoted by Hubbard doesn't say much for culture and civilization.

William Firschein
Los Angeles

Another Perspective on Goodhue: One generation sees another through a glass, darkly. Interesting as William Hubbard's thoughts on *Bertram Grosvener Goodhue* and his cohorts are, they seem to me removed from the way his generation saw itself. Certainly there was an "after the war" feeling laced with Wilsonian idealism, but in my opinion Goodhue was first and foremost the leader of those architects who were trying to grope their way out of the sticky mess of eclecticism, aspiring to a U.S.A. "style."

The phallic tower of the Nebraska State Capitol (shortly to be echoed in Clarence Stein's Pasadena Art Institute project) was above all a "non-dome." Without exception, capitol buildings built in the early 20th century were copies of the one in Washington, on the sound—and, I'm sure, popularly endorsed—principle that this was the way a capitol should look! Just to build one without a dome was a courageous act. And a universal problem was how to design structures that were no longer built of stone, since virtually all design *thinking* was in terms of masonry.

The Nebraska Capitol tower was intended to have its elevators in the four corners—one in each (there are actually two)—a mad arrangement that shows how we architects will detour when preconceptions get in the way.

Goodhue proposed the same thing for a skyscraper church in Manhattan, and in his entry for the Tribune Tower competition. The idea was to make tall, slender buildings look strong enough to support the huge (imaginary) super-imposed weight. This not only preoccupied Goodhue, it imbued a whole generation. If you doubt this, have a look at the 50 or so published entries in the same competition, available in most architecture school libraries.

William Van Allen, of recently revived fame, had one of the most ingenious ideas. He proposed to employ the rectangles beneath and beside each of the next-to-the-corner windows as heroic "quoins." He actually did so in the Chrysler Building, where they are noticeable—perhaps fortunately—only to those who look for them. The worst result of this general obsession was the Foshay Tower in Minneapolis, with

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Additional Credit: Interior design of the employees' dining room in the Mid-Continent Tower, Tulsa, shown on page 52 of the November 1984 issue, is the work of J. Richard Blissit, ASID.

Institute

Caudill Selected Posthumously As AIA's 45th Gold Medalist

The late William Caudill, a founding partner of CRS in Houston, has won the 1985 gold medal from the American Institute of Architects. Only Louis Sullivan, Eero Saarinen, Richard Neutra, and now Caudill, have won the medal posthumously.

In bestowing its highest honor, the Institute said that "Bill Caudill was the role model for several generations of architects. Just by being himself, he proved that one can succeed in a very sophisticated profession while having respect for one's roots—that an architect can succeed without posturing."

Caudill might have winced at the "role model" part, but the Institute got the rest of it right. Like his friend and sometime competitor O'Neil Ford, Caudill was a tough-minded, prairie pragmatist who cast a skeptical eye at fashion, cant, and the blatant grandstanding of some of his colleagues. He skewered prima donnas with the deftness of a Greek chef preparing a shish kebab. One of his favorite sayings was "people are more important than buildings," and for most of his 40-year career he practiced what he preached. He was a hearty bone-deep populist in a profession that seems abstract and esoteric to the general public.

And yet beneath Caudill's folksy manner was a dedicated researcher and experimenter, a scholar of change who championed new ideas. As founder of the architectural division of engineering experiment station at Texas A&M, he pioneered numerous experiments for testing the effects of sun and wind on buildings. As director of the Rice school of architecture in the 1960s, he overhauled the curriculum, started an ambitious publications program known as "Architecture at Rice," and initiated a variety of work-study programs intended to give architecture students a dose of the real world to leaven all the theory. Visitors to the CRS offices in Houston were sometimes surprised to see the walls covered with columns of data and program requirements, all leading methodically and inexorably to the solution of some complex design problem. But that was Caudill's way.

"I guess I'll never learn to be fashionable where architecture is concerned," he once wrote, "particularly the fashions that

are given to us by the magazines. I still like the expression 'problem solving,' I'm *really* straight." (This was in one of a series of informal, short essays he wrote over the last 19 years of his life. Personal, serious, humorous, the little essays he called TIBs, for This I Believe.)

He trusted logic more than inspiration and the collective genius of the team over the solitary musings of individual designers, no matter how brilliant. He built his firm around these principles.

CRS (originally Caudill Rowlett Scott) made its mark in the early 1950s by designing innovative schools. Caudill and partner Wallie Scott got their first school commissions, in Blackwell, Okla., by moving their drafting tables and T-squares into the offices of the school board and "squatting" until they got the design right. "Squatting" immediately became standard procedure at CRS, and by the end of the decade the firm was the leading designer of schools in the United States.

In the 1960s CRS moved into hospital design with the same boldness; in the 1970s it took advantage of the OPEC oil bonanza to become one of the leading architecture firms in the Middle East. Today the firm is best known for complex, technologically demanding projects, ranging from sports arenas to hospitals. Caudill's logical, rational approach to design continues to guide the firm.

Yet unlike many talented designers, Caudill was able to loosen the reins of control sufficiently to allow young architects in his office room to grow. He loathed "yes" men, preferring to surround himself with bright combative types who from confrontation would produce the fresh ideas needed to keep CRS alive long after he was gone. By the late 1970s CRS (Caudill was also among the first to recognize the marketing value of the streamlined logo) had 1,500 employees and offices around the world. In August 1983, CRS bought the J.E. Sirrine engineering firm of Greenville, S.C., making it one of the largest architecture/engineering firms in the world.

Over the years the AIA gold medal has frequently gone to premier designers, whose life work has significantly affected the course of architecture. Caudill was an excellent designer, but he was many other things as well: teacher, writer, researcher, mentor, spokesman for the profession. Maybe this year the gold medal citation should read "for best all around performance by an architect."

DAVID DILLON

Redmon Wins Kemper Award, Bergstedt the Young Citation

Charles Redmon, AIA has been selected by the Institute as the winner of this year's Kemper award, while Milton V. Bergstedt, AIA Emeritus, is the recipient of the Whitney M. Young Jr. citation.

The Kemper award is made in recognition of an Institute member "who has contributed significantly to AIA and the profession of architecture." Redmon's work with the Regional/Urban Design Assistance Team Program (R/UDAT) was highlighted in his nomination.

Redmon participated in his first R/UDAT team in 1975, which visited Long Beach, N.J. In 1977 he became a member of AIA's R/UDAT task group, serving as its co-chairman for four years and its chairman for two years. During his tenure with R/UDAT he has been involved in the planning and coordination of nearly 40 R/UDAT studies.

In 1982 the National Endowment for the Arts awarded R/UDAT $40,000 for three research grants—an award that Redmon was instrumental in securing. A survey was conducted of 30 cities where the R/UDAT program had been implemented and led to modifications in the program to improve its effectiveness. A related study of R/UDAT's structure concluded that greater staff support was necessary to make the program a greater

asset to the profession. The appointment of AIA's first R/UDAT director resulted.

A practicing architect for more than 20 years, Redmon joined the Cambridge Seven firm in Cambridge, Mass., in 1965 and five years later became a principal. As project architect and senior project designer for the firm, his work has won numerous design awards. Redmon was educated at Rice University in Houston and has served as a critic at the Boston Architectural Center and a lecturer in Harvard's graduate school of design continuing education program.

The Whitney M. Young Jr. citation is awarded to "an architect or architecturally oriented organization in recognition of a significant contribution to social responsibility." Bergstedt was cited for his efforts to remove racial barriers of prejudice, segregated housing, and exclusionary employment practices in St. Paul.

Bergstedt has a lifetime of distinguished service in various organizations. In the 1940s and '50s he was on the board of directors of the St. Paul Urban League. Also during this time he was a board member and president of the St. Paul Council of Human Relations and president and international director of the St. Paul Downtown Y's Men's Club. In 1948 he sponsored Whitney M. Young Jr. as the first black member of the Downtown Y's Men's Club.

In the mid-1950s Bergstedt and others lobbied the legislature and the St. Paul city council on human rights issues. His efforts led to the passage of a fair employment ordinance in St. Paul, which eventually extended its jurisdiction to housing. St. Paul was the first city in the country to enact such legislation.

Since the 1960s Bergstedt has been active in the St. Paul United Fund, the St. Paul Citizens Long Range Capital Improvements Committee, and the Governor's Occupational Safety and Health Advisory Board. A native of St. Paul, Bergstedt earned his architectural degree at the University of Minnesota in 1931 and in 1951 founded his own firm, BWBR Architects.

NEWS CONTENTS

Unless otherwise indicated, the news is gathered and written by Allen Freeman, Nora Ritcher Greer, Michael J. Crosbie, and Lynn Nesmith.

Policy Calling for Control of Acid Rain Adopted by Board

At its December meeting in Washington, D.C., the AIA board of directors adopted a policy that "recommends the immediate implementation of a national program, coordinated by the federal government, to control acid rain." The board acknowledges the "global" problem of acid rain and encourages the U.S. government to work cooperatively with other governments, particularly Canada.

Acid rain, which also encompasses acid snow, sleet, fog, soil, and all deposits of acid particles on surfaces, is caused primarily by sulfur dioxide and nitrogen oxides. It seriously damages lakes, forests, animals, and humans, as well as buildings and monuments. The major sources are industries that burn medium or high sulfur content coal and smelting operations.

AIA's policy emphasizes the need for research and advocates legislation that provides a 50 percent reduction in annual sulfur dioxide, no relaxation of sulfur dioxide compliance requirements for Western smelters, and no trade-offs between sulfur dioxide and nitrogen oxides.

The board reaffirmed support of the designation of buildings, structures, and sites as landmarks to preserve them as part of the American heritage, in addition to programs that will maintain the "fabric of a community by improvement of deteriorating structures with minimum or no displacement of established neighborhoods." AIA supports the preservation of St. Bartholomew's Church in New York City and opposes development plans that would "significantly alter the architectural composition of the property" and also opposes the exemption of religious structures from being bound by landmark law.

In other action, the board approved a public policy that calls for the continuation of AIA's efforts to integrate minorities as full participants in the profession and affirms that "the architectural profession and AIA are entirely and equally open to all persons, regardless of sex, age, race, color, religion, or national origin."

A policy on architecture for educational facilities was approved that encourages "excellence in design" and the inclusion of architects in the formulation of design concepts.

The Architects Collaborative of Cambridge, Mass., was selected as architect for the space planning of Institute headquarters building, scheduled to begin this month. TAC was the original architect of the building, completed in 1971.

New officers were installed Dec. 7. Joining the new president, R. Bruce Patty, FAIA, is John A. Busby Jr., FAIA, first vice president, Donald J. Hackl, FAIA, Robert E. Gramann, AIA, and Ted Pappas, FAIA, as vice presidents, and Philip W. Dinsmore, AIA, as secretary, Henry W. Schirmer, FAIA, stays on as treasurer.

New board members are: Frederic P. Lyman, AIA, California; H. Kennard Bussard, AIA, Central States; Glenn Allen Buff, FAIA, Florida/Caribbean; Norman Koonce, AIA, Gulf States; T. Graham Bradley, FAIA, Illinois; Robert Calhoun Smith, FAIA, Middle Atlantic; John M. Laping, AIA, New York; Christopher J. Smith, AIA, Northwest; Sylvester Damianos, FAIA, Pennsylvania; Valpeau E. Hawes Jr., FAIA, Texas; and David A. Daileda, AIA, Western Mountain. George A. Allen is the new chairman of the Council of Architectural Component Executives.

AIA Regional Reports Show Healthy Economic Conditions

Economically, 1984 was a very healthy year for most (but not all) architects, according to year-end AIA regional reports. Of the regions reporting, most experienced a strong economic period, some a less vigorous climate, while only a few reported a poor situation. Generally, the outlook for 1985 is cautious.

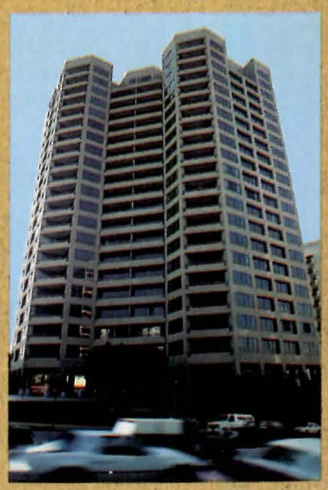
Perhaps the most dramatic comeback report was from Ohio. Having experienced several lean years, the Ohio region reported that the "economic situation is currently as strong as it's been in many years. . . . The termination of a moratorium on health care work, the release of a number of state projects, and the lowering of interest rates have all helped to fuel this spurt. . . . It is difficult, if not impossible, to hire architects and/or specifications people in the state due to the current surge." Only in Ohio's northeastern sector has business been sluggish, due to the previous shutdown of many of the steel mills.

Others reporting a healthy climate were the East Central region, with the most activity occurring in Indianapolis and Louisville; the North Central, although "many firms are anticipating a downturn in work by late 1985"; Pennsylvania, where the "economic health has improved considerably since last year"; the South Atlantic, which is having "an industrial expansion that is unbelievable"; and the Western Mountain, where the "economic situation has recovered from the poor conditions of 1982 and early 1983 and firms are actively looking to increase staff to accommodate increasing workloads."

Erratic to poor conditions are still evident in some parts of the country. In the Northwest, while Montana and Washington "experienced localized improvement," Oregon and Idaho have "not yet recovered from the recession," due to their regional economic reliance on the wood products

continued on page 19

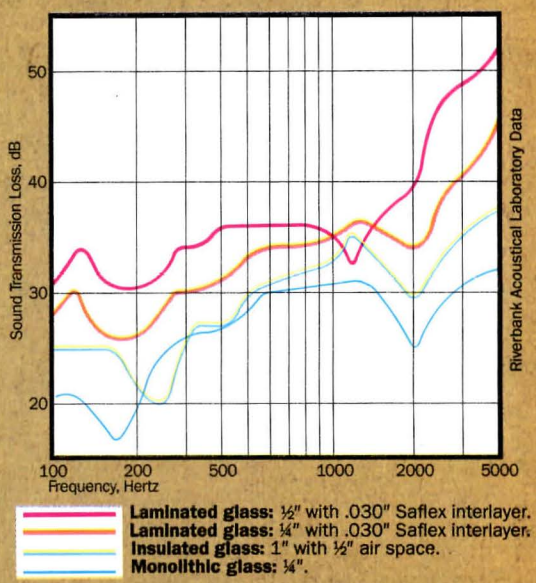
The building shown at left is Ten Five Sixty Wilshire Boulevard and shown below is Mirabella. The architect for both buildings is Maxwell Starkman.



Laminated Glass lets the residents of ten condominiums enjoy the sights of the city without the sounds of the city.

Los Angeles presents a complex acoustical environment. But the rumble, rattle and roar don't annoy residents of 10 high-rise condominiums on a 4-block section of busy Wilshire Boulevard—because the five architects who designed these buildings specified laminated architectural glass with Saflex® plastic interlayer for sound control.

Acoustical research proves laminated glass is a better noise barrier than both monolithic glass and insulated constructions. Laminated glass effectively minimizes the coincidence dip in the 1,000 to 2,000 Hertz range common to other glazings.



Laminated glass also solves other design challenges. A variety of reflective glass coatings and interlayer tints can be specified to provide precise control of glare, light transmittance, solar heat, and reflectivity. Laminated glass can also be combined in an insulated unit for increased thermal performance.

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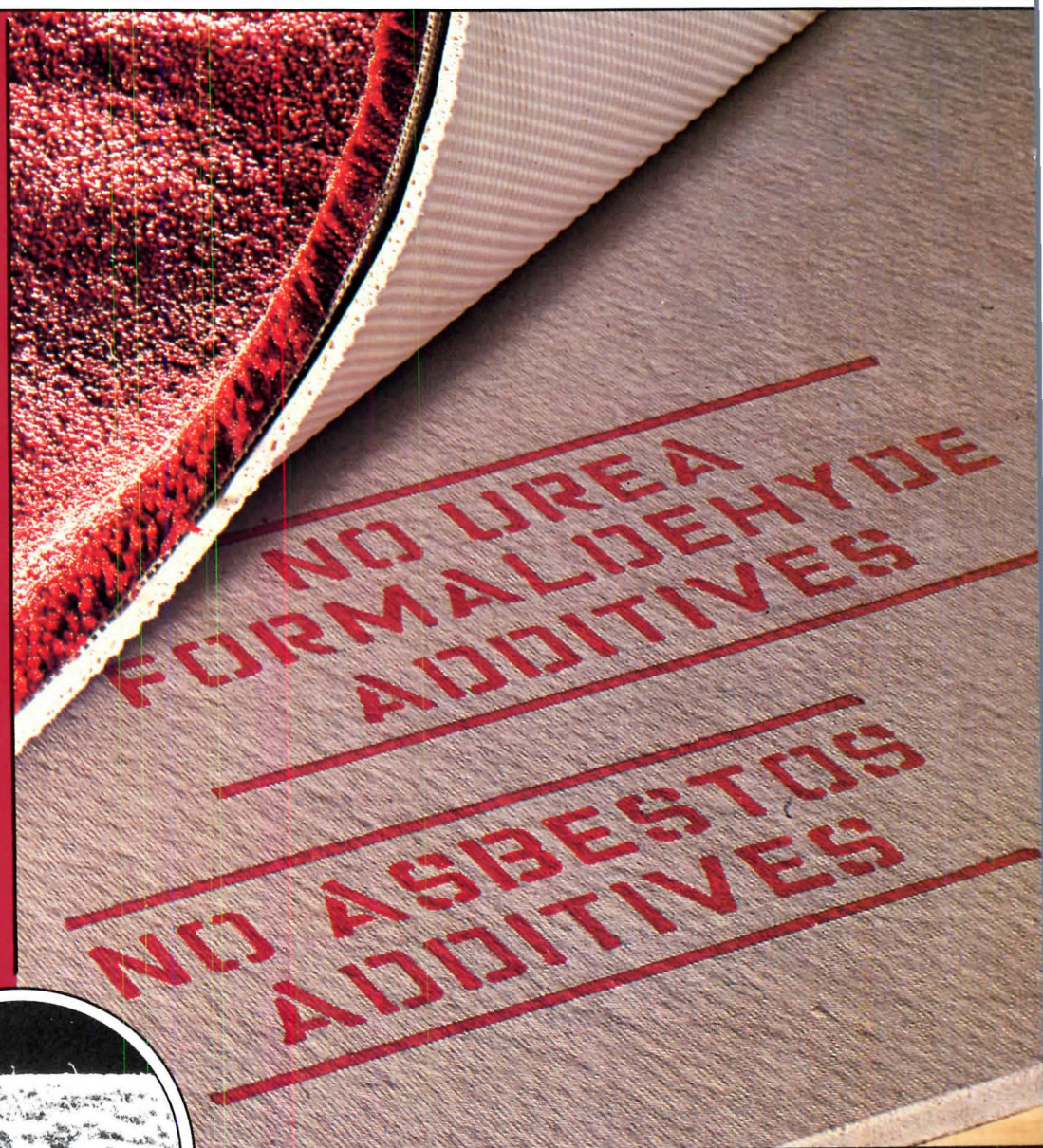

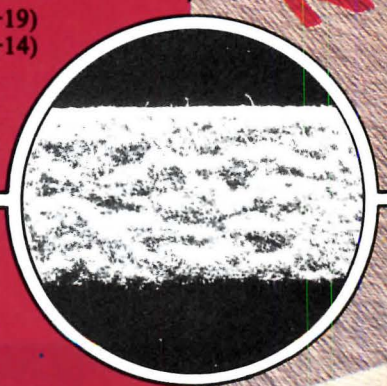

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The Institute *from page 14*
industry. Alaska, Hawaii, and Guam, which are "somewhat insulated from the mainland trends," were stable. In the Central States, the larger cities—St. Louis, Kansas City, Omaha, Des Moines, Lincoln—reported "active architectural firms," but the rural areas were experiencing "difficult times," a reflection of the health of the agricultural community. New Orleans is the healthiest in the Gulf region, with Alabama, Arkansas, and Tennessee "holding their own" and Mississippi "beginning to see improvements." And in the Mid-Atlantic region, the major cities (Washington, D.C., Baltimore, and Richmond and Norfolk in Virginia) are reporting strong economies, with the fringe areas being "a little spotty."

Issues of importance to architects, other than economics, as related through the regional reports, continued to be professional liability, competitive bidding for professional services, and sales tax on architectural services. Many regions report efforts aimed toward raising the public awareness of architecture.

Preservation Advocate to Be President of AIA Foundation

The AIA Foundation has announced that Mary C. Means will become its new president beginning Feb. 4. Means comes to AIA from the National Trust for Historic Preservation, where she served as vice president for program development.

In announcing the appointment AIA President R. Bruce Patty, FAIA, said, "The experience and vision that Mary brings to the Foundation provide the strongest possible base from which to implement and expand its mission: to encourage support and understanding of the public's stake in architecture and urban design."

Means became vice president of the trust in 1983, after serving as the director of special projects and as regional director of its Midwest office. She is widely known as the driving force behind the trust's acclaimed Main Street program. Means earned a master's degree in history from the University of Delaware and received a bachelor's degree in humanities from Michigan State University. She was a Loeb fellow at Harvard's graduate school of design in 1982.

In accepting the position Means said, "I'm tremendously excited about this opportunity. One of the most important design issues of the next two decades will be in understanding and resolving the challenge of building the assets of the future. Urban design is an inherently public issue that affects each of us in our daily lives, and the AIA Foundation is in an excellent position to focus attention on architectural design as an urban strength."

AIA President Patty's Message Will Be 'Value Architecture'

Ask R. Bruce Patty, FAIA, what his major message will be as president of AIA, and the answer comes quickly: "value architecture." By that he means architects "must design architecture of the highest quality and worthy of being valued by our clients and our communities," and, in turn, the "public must be made more aware of the environment and the impact that architecture has on a community."

The seeds of Patty's interest in "heightening public awareness" of the value of architecture were planted when he was chairman of the 1979 national AIA convention in Kansas City. Under then-AIA President Ehrman Mitchell Jr., FAIA, the theme was a celebration of architecture. "Mitch got me turned on to all the national impact the AIA can make," Patty says. Since then, on many occasions, Patty has stated that "the public awareness of architecture is a sleeping beauty and is just starting to awaken." Now, Patty's goal is "to make sure the public is very knowledgeable about the value of architecture—how it affects the human spirit, the conditions in which we live, and how it orders and organizes us. We want to help people identify architecture with excellence."

Patty credits his predecessor as AIA president, George M. Notter Jr., FAIA, with having made great strides in raising the public consciousness. "During this past year we have found that people value architecture and the role it plays in their lives," Patty says. "Of course, we have also found that the public expects value from architecture. People really do care what kinds of buildings we build. They really do want quality in their built environment. And they expect us to give it to them."

It is not surprising that Patty is an avid supporter of the Forum for Architecture, AIA's new public membership program, which Patty calls a "permanent vehicle for uniting the public and the profession in an ongoing dialogue about the future of design." He believes that AIA's investment in that program "will pay dividends many times over."

Patty sees as a "long-range" challenge addressing the issue of how well schools are preparing students to become architects. During his tenure as president, he plans to "pull together" a major symposium on architecture education to address the needs of the "profession tomorrow. . . . We have to start catching up today," he says. "We can't wait until the year 1990 or 1995 or 2000 to change our educational systems to meet the needs. . . . I think that has always been part of the Institute's mission—to be able to assist education in determining the roadway of architecture for tomorrow, but I think now we have a more specific need to address the issues because of technological advancements."


Allen Freeman

Prominent among those is advanced computer technology, one of Patty's personal interests, which he says will "drastically change the mode of practice by the year 2000." He suggests that "the Institute is going to have to be out front, on the leading edge in computer technology."

What Patty sees as most important for AIA's long-term health is the new budgetary process adopted for 1985 (see Nov. '84, page 22)—a three-year financial plan, which he says will provide a "higher level of continuity in programs and services." He also played a key role in urging the board to approve a dues increase, which he says will allow the Institute to "provide a higher level of services to our membership and restore the level of activity that is necessary for the committees to meet their end result."

While he is generally optimistic about the future of the profession, Patty is deeply concerned about national tax reform measures and the possible "effect on small business and consequently the practice of architecture." Tax reform will be the priority issue for AIA's government affairs department this year.

Asked about the personal rewards of being president, Patty answered, "Does it sound phony to say that you get more out of something than you put into it? . . . You do, and AIA is just that way. AIA is an opportunity to teach; it is also an opportunity to learn."

Born and raised in Kansas City, Mo., Patty received his B.S. in architecture from the University of Kansas. A founding principal in the Kansas City firm of Patty Berkebile Nelson Associates, he first became involved in local AIA activities in 1969 and since then has been a regional director on the AIA board, a vice president, as well as the first vice-president/president-elect. He has served as chairman of the membership services commission and the practice commission.

Patty's firm was one of those involved in the design of the Hyatt Regency Hotel in Kansas City, where in 1981 two pedestrian bridges crossing the hotel's atrium

continued on page 22

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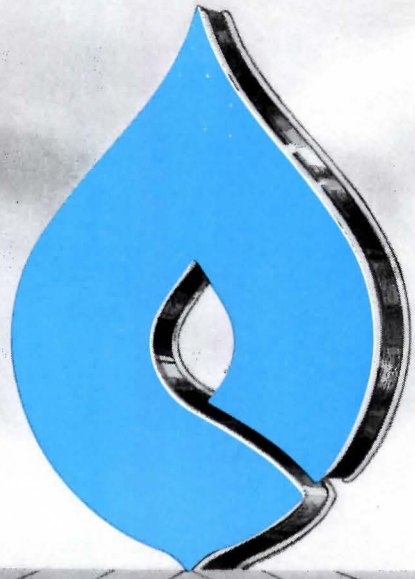

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The Institute *from page 19*

fell, killing 114 persons and injuring more than 200 others. Patty notes that PBN Associates "didn't design the structure, didn't do any engineering, didn't do any construction, didn't do any supervision, and didn't do any of the inspection work" and says that the firm has been dropped from all lawsuits. He calls it a "horrible, horrible tragedy" and says the point to be made is that "this Institute, because of tragedies such as the Hyatt, must constantly be addressing the needs of life safety and the very reasons for licensing. Changes in technology, changes in materials, etc., always need to be addressed to preclude, as much as we possibly can, anything like that from ever occurring again."

NORA RICHTER GREER

'Provocative' Tom Wolfe to Be Keynote Speaker at Convention

Tom Wolfe, author of the provocative best seller *From Bauhaus to Our House*, will be the keynote speaker at the Institute's 1985 annual convention to be held June 8-12 in San Francisco. Allen Greenberg, Michael Graves, FAIA, and Robert A. M. Stern, FAIA, are also scheduled to speak on the "value architecture" theme.

Wolfe, a native of Richmond, Va., who currently lives in New York City, published his first book in 1965, *The Kandy Colored Tangerine Flake Streamline Baby*. It was followed by a number of books including *The Painted Word*, his controversial portrayal of the world of modern art in 1975. He was presented the American Book Award for general nonfiction in 1979 for *The Right Stuff*, a national best seller on the U.S. space program.

Greenberg, an architect who lives in New Haven whose specialty is classical architecture, will speak on the "investment of heart and mind." He has served as a visiting professor at Columbia University, University of Illinois, and University of Pennsylvania and is a member of the board of the Society of Architectural Historians.

For the third evening's lecture, Graves will address "the investments of the architect." He has taught at Princeton University since 1962, and his recent projects include the Portland (Ore.) Public Services Building, San Juan Capistrano (Calif.) Library, and the Environmental Education Center at Liberty State Park in New Jersey. Graves is the winner of four AIA honor awards and the American Institute of Arts and Letters Arnold W. Brunner memorial prize in architecture.

Stern will conclude the lecture series with "what the public gets back out." He is a professor and the director of the Temple Hoyne Buell Center for American Architecture at Columbia University.

AIA has also scheduled five panel discussions to explore additional aspects of the value architecture theme. A panel of clients will address the benefits of quality architecture and the effects of exceptional design on a company's profits. Moderated by NBC correspondent Linda Ellerbee, the panel will be comprised of Andrew M. Lewis, chairman of the board of Best Products; Max DePree, chairman of Herman Miller, Inc.; Lucy Crow Billingsley, president of the Dallas Market Center (a subsidiary of the Trammel Crow Co.), and San Francisco *Chronicle* architecture critic Allan Temko.

In the first of two related presentations and panel discussions, syndicated columnist Neal Peirce will moderate an investigation of the characteristics of architecture that give value to the built environment. Benjamin Thompson, FAIA, of Cambridge, Mass., and Stanley Tigerman, FAIA, of Chicago, will each present a project case study followed by discussion by Joan Goody, AIA; John Johansen, FAIA; Raymond Kappe, FAIA, and David Weingarten.

The second discussion moderated by Peirce will address the benefits the public receives from architecture and public perceptions of the architect's investment. John Burgee, FAIA, Charles W. Moore, FAIA, and Charles M. Davis, AIA, will present case studies. *Time* magazine's architecture critic Wolf Von Eckardt, Hon. AIA; architect and educator Kathryn Anthony; and architect Steven Izenour will provide the discussion.

Other activities planned for the convention are: *continued on page 25*

The Institute *from page 22*

- A panel discussion addressing issues affecting an architect's business interests, including increased compensation and market share, technology, and communications. William Sharfman, senior vice president for strategic planning at J. Walter Thompson USA, will be moderator, and Charles B. Thomsen, FAIA, president of 3D/Inter...nal, will speak for the architect/manager.
- Stanley Tigerman and Michael Brill, president of the Buffalo Organization for Social and Technological Innovation, will discuss the rights, needs, and interests of the public. A "point-counterpoint" debate, also moderated by Sharfman, will address research on the interrelationship of design and behavior and its effect on the design process.
- John F. Hartray Jr., FAIA, will summarize the varied views and interest of clients, architects, and the public expressed in the convention's theme explorations, and offer his opinions of the future direction of architecture.
- A number of case study presentations will explore the architecture and urban planning of San Francisco. In one, New York *Times* architecture critic Paul Goldberger will moderate a panel discussion on San Francisco's 1982 downtown plan and its economic and legal effects on future development, and in another H. Grant DeHart, AIA, executive director of the Foundation for San Francisco's Architectural Heritage, will lead discussion on three case studies of preservation and adaptive use in the city. Also planned are programs addressing housing, transportation, industrial land uses, and tall buildings.

AIA has scheduled 42 consultation sessions on 24 topics, including marketing, financial management, federal government regulations, international markets, time management, computers, design for the aging, housing, restorations and historic preservation, interiors, and professional liability. AIA has also planned 104 educational programs—professional development seminars, case studies, student seminars—on 71 subjects.

Military Facilities Awards

Five military facilities have been recognized in the ninth biennial awards program for distinguished architectural achievement sponsored by AIA and the Naval Facilities Engineering Command.

The first honor award was presented to Smith Hinchman & Grylls Associates of Detroit for the Defense Intelligence Analysis Center on Bolling Air Force Base, Washington, D.C. The 840,000-square-foot building was designed to consolidate personnel and equipment for a federal agency housed in six different locations. The jury cited the structure's "strong architectural expression of high technology."

Media Five Limited of Honolulu was presented an award for energy conservation for the UEPH-193 Naval Station in Pearl Harbor, Hawaii. The station's high-rise housing for enlisted personnel utilizes passive solar energy and is oriented to take advantage of natural breezes to eliminate the need for airconditioning.

James McGraw Associate, AIA, of San Diego won an interiors award of merit for the LAMPS MK III Applied Instruction building in San Diego. The building has a large, central skylit area that houses administrative activities and serves as the main corridor. The jury praised the structure for its "colorful interiors and clarity of organization."

One of two awards of merit was presented to Kaplan/McLaughlin/Diaz of San Francisco for the Travis Air Force base engine generator building in Fairfield, Calif. The building houses two 500-kilowatt generators that provide emergency energy backup for the medical center. The jury cited the "care and effort taken by the architect in making what is usually an ordinary and mundane facility into a sculptural, fun, colorful, and pleasing addition to the built environment."

Ellerbe Associates of Washington, D.C., was also presented an award of merit for the O.C.S. complex dining facility at Quantico, Va. The low-rise facility with a garden pavilion was designed to blend with the older, surrounding Georgian buildings of the base.

The jury consisted of Tai Soo Kim, AIA, Hartford, Conn.; Homer Delawie, FAIA, San Diego; and Neil Jacobson, a student at the University of Utah.

Overseas

UIA's First Gold Medal Awarded to Hassan Fathy

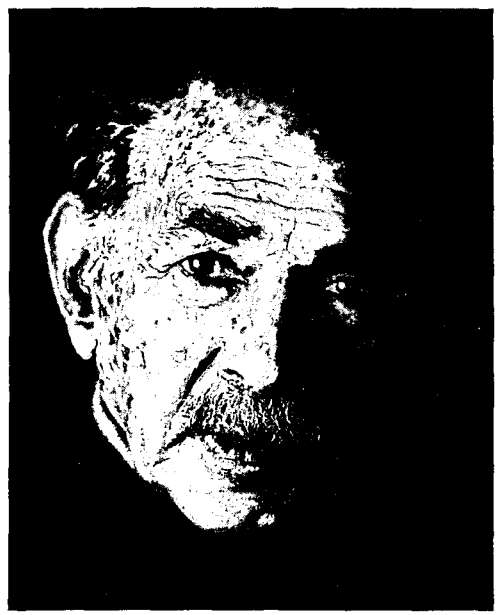
Hassan Fathy, Hon. FAIA, has been awarded the International Union of Architect's first gold medal in recognition of his "outstanding achievements in the field of architecture, and for his contributions and lifelong service to the improvement of the quality of life and of society throughout his professional life."

Fathy, an architect, teacher, and philosopher, is probably best known for his dedication to vernacular traditions in Middle Eastern architecture and his book *Architecture for the Poor.*

Born in Alexandria, Egypt, in 1900, Fathy was educated at the School of Engineering in Giza in the Beaux-Arts tradition. After his graduation in 1926, Fathy worked for the Department of Municipal Affairs and later taught at the Faculty of Fine Arts in Cairo.

During his travels to rural villages Fathy discovered the benefits of indigenous materials and techniques, and the traditional mud bricks, vaulted roofs, and domes, and first expressed these concepts in a farm project in Bahtim in 1941.

In 1945, Fathy began his most famous work, the New Goura in Luxor, a large-scale project to relocate a complete village situated on the Tombs of the Nobles, whose residents earned their livelihood by stealing and selling tomb artifacts. Resistance and sabotage by the local villagers, cost constraints, and bureaucratic problems led to suspension of construction after nine months. Although the project was only partially completed, Fathy refined the mud brick, vaulted roof, and



Martin Lyons

dome techniques, and it became the basis of much of his architectural philosophy.

Fathy moved to Athens for five years in the late '50s to work with Doxiadias Associates, but he continued to work on rural housing in Iraq and participated in a two-year study on "the city of the future."

In the late '60s and '70s Fathy designed a number of vernacular buildings for the ministry of culture and tourism. The buildings employed a wider range of Middle Eastern concepts, decorative Islamic details, and materials.

A group of American Muslim converts asked Fathy to design a master plan for a community in Abiquiu, N.M., and on his

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Overseas *from page 25*
first visit to the site in 1980 he brought with him two Nubia masons to teach the local craftsmen building techniques. The first structure built, a 2,260-square-foot mosque, is a combination of Byzantine and Sassanid domes, barrel vaults, and large pointed arches.

Also in 1980, Fathy was presented the chairman's award in the first Aga Khan awards program for his "lifelong contribution and commitment to architecture in the Muslim world."

The jury said, "Fathy has sought the cultural roots of building and has brought architects, craftsmen, and the community together in the creation of shelter. This working together in pursuit of cultural significance has not only provided lessons from old and traditional technologies, but has emphasized the spiritual qualities that are of prime importance for man in his social and cultural setting."

The jury was comprised of UIA president Rafael de la Hoz, Hans Hallen, Randall Vosbeck, FAIA, Kenzo Tange, Antonio Lamela, Mahdi Elmandjra, and Jorge Glusberg.

The medal will be presented to Fathy at the world congress of the UIA to be held in Cairo in late January. In addition to the gold medal, four prizes and five honorable mentions were presented in the 1984 UIA awards program.

The prize for town planning or territorial development was awarded jointly to Hans Blumenfeld of Canada and Lucio Costa of Brazil in recognition of their "extraordinary contribution to the development of town planning in this century." Honorable mention in this field was awarded to the urban design assistance program of AIA.

Charles Correa was awarded the prize for improvement in the quality of human settlements for his achievements in India. Joseph Kerenyi of Hungary received an honorable mention for his work in restoring and developing the town of Kecskemet, Hungary.

The prize for applied technology in architecture went to Joao Baptista Vilanova Artigas of Brazil for his adaptation of technological advance to the architecture of South America. Honorable mention was presented to Norman Foster of England for his use of advanced technology in the building process.

Julius Posener of Germany was presented the award for architectural criticism and education. Honorable mentions were given to Yukio Futagawa of Japan for his architectural criticism and photography and to Ilia Geuorguievitch Lejava of Russia for his contribution to architectural education.

Awards jurors were P. Murray (chairman), A. Belokogne of Russia, Jorge Glusberg of Argentina, K. Kikutake of Japan, and R. Taillibert of France.

Cairo's Growth as a Microcosm Of Developing Urban World

With an estimated 12 million inhabitants, Cairo is the largest urban area in Africa or the Middle East and the foremost cultural, religious, commercial, and education center of the Arab world. It is also a compendium of insufficiencies, a city that has been rendered chaotic by sheer numbers. And by the year 2000 it will have swelled to an estimated 18 million inhabitants. The question is: How can this already unworkable urban area be made to work with an additional six million people? It is a question relevant to some 50 cities in the third world that will probably each have more than 15 million people by the year 2000.

To address this looming crisis the sponsors of the Aga Khan award for architecture convened a seminar in Cairo last November, titled "The Exploding Metropolis: Coping with the Urban Growth of Cairo." Among the participants were internationally known architects, planners, transportation specialists, economists, sociologists, art historians, and Egyptian officials and academics.

In their magnitude Cairo's problems far surpass those with which we are acquainted in North America or Europe. Its population, almost half of which is under the age of 15, grows by one million every

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Overseas *from page 26*

four years and by the year 2000 will need an additional 1.9 million dwelling units. Total annual production is now less than 80,000 units, and the vast majority are illegal, constructed without licenses or permits. Most of it is on agricultural land, resulting in the permanent loss each year of thousands of acres of scarce arable land. Some of it consists of adding floors to existing buildings.

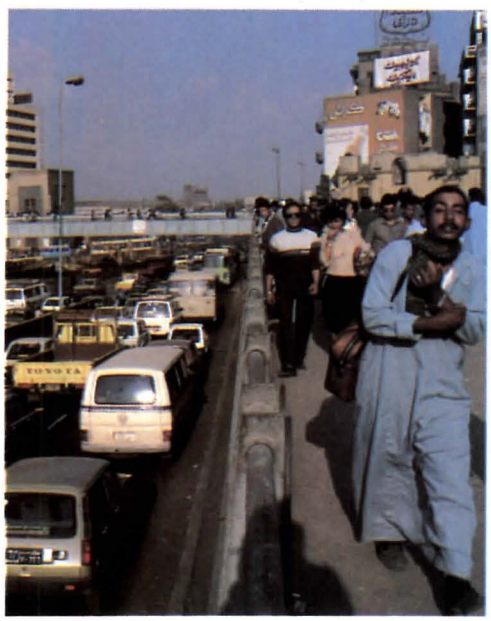
Still another form of informal housing is in the "city of the dead," where an estimated 250,000 to one million people live mostly in tombs that traditionally have included a grave, one or two adjacent rooms for visiting relatives of the deceased, and an open yard, all surrounded by a fence.

While one-third of households now have no sewage or water supply, half of the city's water is lost to leakage from deteriorating pipes or illegal hookups. As a result, the water table has risen to levels threatening the structural integrity of buildings, especially in the medieval city, which boasts some 450 monuments, most in various stages of decay. Much of the deterioration of monuments and the housing shortage is caused by speculators who allow buildings to stand vacant waiting for land values to rise. While letting upper stories virtually crumble, they reinforce only the first floor, which is used for profitable commercial use. Rent control makes rental housing, to say nothing of maintenance, unprofitable.

There is no public garbage collection; about 300 tons a day are left uncollected on the streets. The remainder is hauled away by contractors on donkey carts, which share the clogged streets with Mercedes, ancient rusted jallopies, and all manner of vehicle in between. Traffic lights don't

continued on page 31

Unmanageable with 12 million people, Cairo will have 18 million by the year 2,000.



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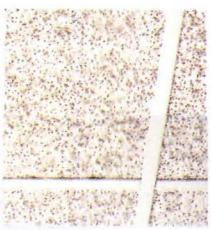

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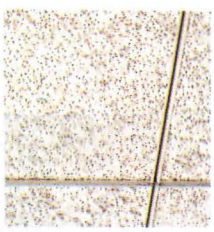

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Overseas *from page 29*
function or are ignored by motorists who assume they don't function and routinely speed through them at 50 miles per hour. Sidewalks are clogged with automobiles, since there is no other provision for parking. Buses are decrepit and jammed, and pedestrians, dressed in anything from a business suit to ragged traditional rural Arab garb, cross streets at their peril. On one side of the street just outside the central business district are slick new condominiums, on the other are mud huts housing peasants who live and work their patch of land much as they did 12 centuries ago. From a distance all this is obscured under a veil of pollution.

Two obvious, if partial, solutions to Cairo's problems were scarcely mentioned at the four-day seminar. One is population control, which is not prohibited by Islam, though large families are still valued as cheap labor and old age insurance. The second issue, that of controlling immigration into Cairo from impoverished rural areas, which accounts for about one-third of the city's annual growth, would probably require enforcement mechanisms that are antidemocratic and easily subverted.

Instead, since 1966 Egypt has committed itself, among other things, to a massive new towns program in the desert, plus smaller satellite cities that are closer to Cairo, and each have an existing economic base. One of the new towns, called Tenth of Ramadan, for a target population of 500,000 is under construction with an estimated cost of $2 billion. Because high risks and costs deterred private developers, the government built all initial housing—and costs exceeded estimates by 35 percent. To encourage industry to relocate, the government also had to provide such large-scale incentives as to make Tenth of Ramadan a very costly public undertaking. To raise revenues, it then sold land, mostly to speculators who have built virtually no housing.

And what of design and planning both in the new settlements and Cairo proper? Hassan Fathy, the renown Egyptian architect who has specialized in affordable housing, pleaded at the seminar for schemes that respect traditional Islamic approaches to town planning and architecture, with a separation of vehicular and pedestrian traffic, with curved short streets and broader axial boulevards. "The curve is the line of beauty, the straight line the line of duty," he said. But Fathy's work is restricted to, and intended for, the countryside, and as Ismail Serageldin, an architect and planner with the World Bank in Washington, D.C., said, "In searching for cultural authenticity many designers have fled into rurality. We have to look for an urban esthetic that is contemporary

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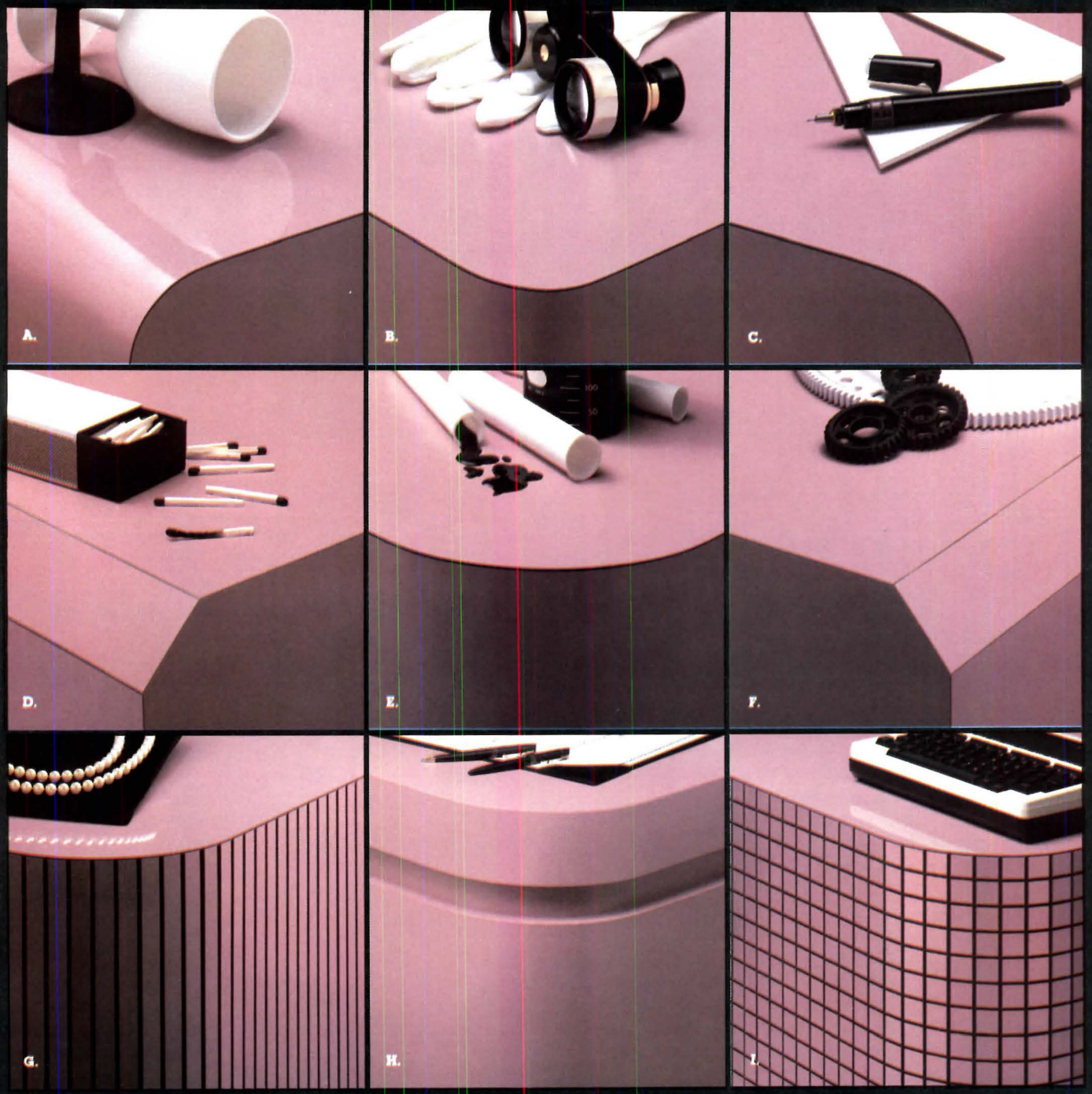

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Overseas *from page 31*
while maintaining continuity, that is compatible with the social and economic forces that interact in a city growing as rapidly as Cairo."

Various aspects of such interaction were underscored by presentations on the experiences of Bombay and Casablanca and the new capitals of Islamabad, Brazilia, and Dodoma.

Architect and winner of this year's RIBA gold medal Charles Correa pointed out that Bombay's squatters, who make up half the city's population, settle at the sides of railroad tracks and near train stations to be near work. "Jobs, food, education, health facilities have a far higher priority for poor people in the third world than housing," he said. He urged that Western town planning strategies be dropped, "not because they're Western but because they demand resources unavailable in third world countries and are meant for fine tuning cities that have ceased to grow. People are being invited back into New York and Detroit. Can you imagine inviting people into Bombay or Cairo?"

He added, "What I would like to learn from the colonialists who shaped present-day Bombay and Cairo is their political will for action. They succeeded in a few short years and made things work because, as Bucky Fuller said, they were world pirates."

He further pleaded for creating positive incentives for an organic pattern of development. Pointing to a slide of a high-rise cluster, he said, "You can see what madness comes from cloning these things 10 times." The slide was upside down, which made little difference, and, as Correa said, the towers would have served far better if toppled onto their sides to form 30-foot-high buildings with courts and terraces open to the sun. He also warned that Cairo's planned satellite cities might further concentrate the focus on Cairo, since it would remain as their hub.

In a presentation on Casablanca, Mahdi Elmandjra, a professor of international relations at the University of Rabat, explained how the French colonialists had built a brand new city next to the original one, which numbered 20,000 inhabitants in 1900. Today Casablanca is a city of 2.5 million. He showed slides of the dank, dark public housing that was built and concluded that "your *bidonvilles* are horrible, but at least you feel some sort of harmony between the individual and his surroundings there that you don't find in public housing."

"The French," Elmandjra continued, "were so intelligent in their objectives that they set up a city that was there to exploit the country at minimum cost, and

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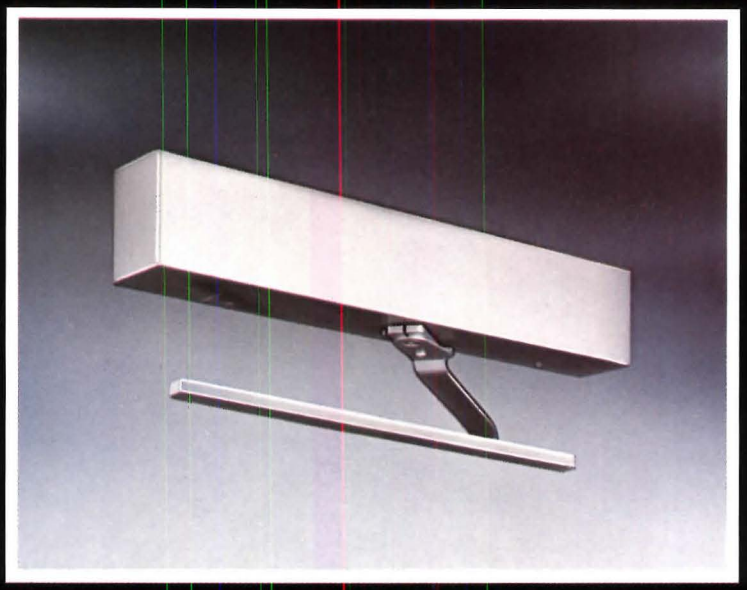

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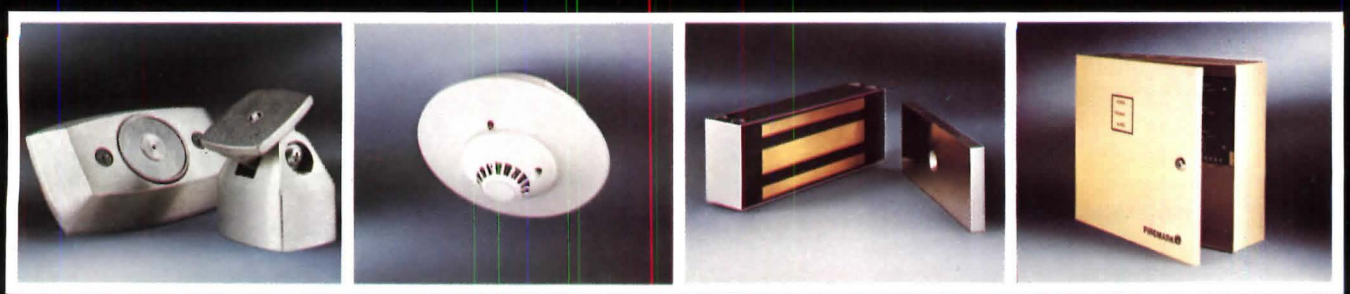

Circle 24 on information card

Overseas *from page 33*
present governments are carrying on their tradition." The vast majority of Morocco's resources—financial, educational, cultural, commercial—are concentrated in Casablanca, as Egypt's are in Cairo, which is the main reason immigrants keep pouring in. Elmandjra called for a model of long term development, rather than mere crisis management, for a vision that includes regional and national planning and provides incentives for farming. "If that model is not indigenous," he warned, "if it is not created from inside, not only from your brain and your heart but from your guts, all the expertise in the world, all the international financing is only going to make you sink further and further." He asked for "innovation that includes participation and anticipation."

In reporting on the new capitals of Brazilia, Islamabad, and Dodoma, Derek Lovejoy, a British landscape architect who has worked on all three cities, focused on the need for continuing maintenance and high design standards (the lack of which have made slums of much of Brasilia and Islamabad) and guaranteed funding (whose absence has aborted Dodoma's development).

In summing up part of the seminar, Francois Vigier, professor of city planning and urban design at Harvard's graduate school of design, told a story about a consultant who had been asked by the city of Cairo to prepare a traffic improvement plan. After weeks of study and data gathering, his report went something like this, said Vigier: "According to all international standards, not a single vehicle should be able to move in Cairo today. It is a miracle that the traffic moves. I therefore advise you to do nothing." Vigier recommended that the government get out of the business of housing, legitimize informal housing, and channel the energy apparent in it by directing growth through selective construction of infrastructure and services, that government emphasize cooperation with the private sector, establish such institutions for housing finance as are common in the West, and involve citizens in decisions that will affect their lives and environment. "New solutions," he said, "must be invented for third world cities, and these must first recognize the dynamics of their situation rather than prescribing a static vision of the future."

That there is no time to waste was made abundantly clear throughout the seminar. For, as Derek Lovejoy said, "Rising growth rates are causing the forests to be stripped for fuel, the land to be overgrazed and eroded. And rising growth rates are a major contributor to more authoritarian governments and to a move away from democratic structures."

ANDREA OPPENHEIMER DEAN.

News continued on page 37

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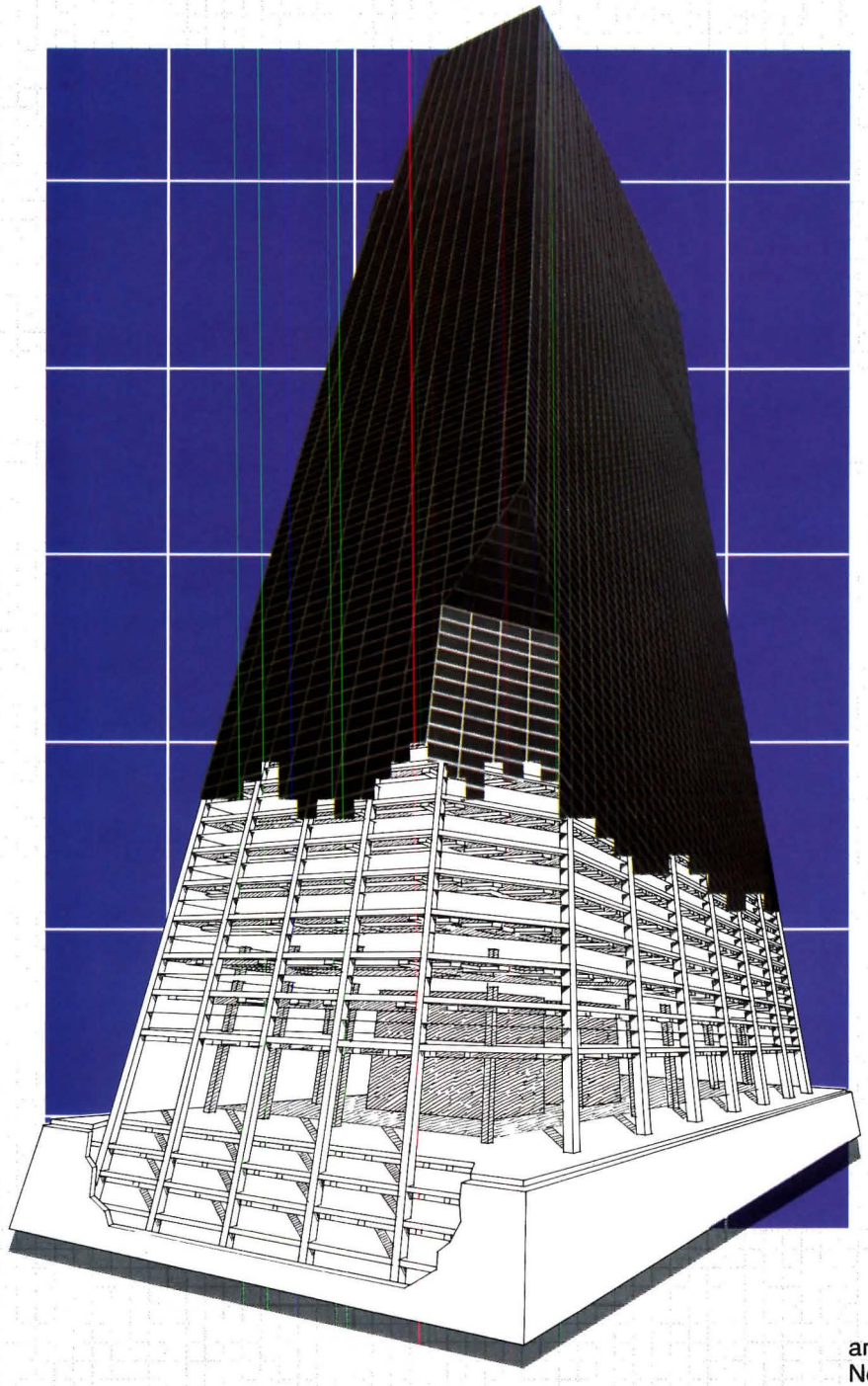

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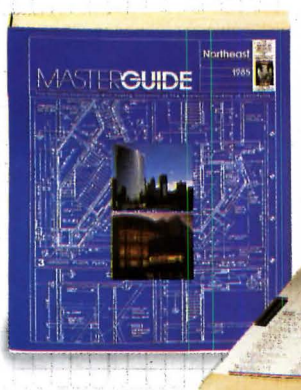

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11 Foreign Architects Named As Honorary AIA Fellows

AIA has named 11 foreign architects honorary fellows of the Institute for their "esteemed character and distinguished achievements." The honor is conferred upon architects who are not U.S. citizens and who do not practice in this country.

Receiving fellowships at AIA's convention in San Francisco in June will be:

- W. Kirk Banadayga, president of the Royal Architectural Institute of Canada.
- Gerard Benoit, a French architect and educator who has won several international design competitions.
- Ricardo Bofill, founder of the Taller de Arquitectura in Barcelona. Bofill is widely known for his high-density neoclassical housing developments as well as his concern with urban growth problems.
- Masako Hayashi, the first woman to receive the Architectural Institute of Japan award. Hayashi's major contributions have been in residential design.
- R.N. (Peter) Johnson, a founding partner of the Australian firm McConnel, Smith & Johnson and head of the school of architecture at the University of Sydney.
- Vladimir Karfik, a member of the second generation of avant-garde architects in Czechoslovakia who developed the Zlin architectural style in the '30s.
- Sir John Overall, the 1983 recipient of the Royal Australian Institute of Architects' gold medal and a key figure in shaping the Australian capital of Canberra.
- Sir James Richards, author and former editor of the *Architectural Review* in London.
- Miguel Angel Roca, an Argentine architect who has won 15 national and international prizes for his designs.
- Alberto Sartoris, an Italian architect who was a pioneer and documentor of the early modern movement in Europe.
- Fernando Margain Santos, president of the Mexican Society of Architects.

Jurors were Robert Madison, FAIA (chairman); Peter Samton, FAIA; Norman Schlossman, FAIA; Pat Spillman, FAIA; T. T. Hayes, FAIA; Norman Johnston, FAIA; and Charles Herbert, FAIA.

Schools

Spanish Architect Appointed GSD Architecture Chairman

A new chairman of the department of architecture at Harvard's graduate school of design has been appointed. Taking office in July will be Dr. José Rafael Moneo, a professor at the school of architecture in Madrid, co-founder and co-editor of the Barcelona magazine *Arquitecturas Bis,* and designer of such works in Spain as condominiums in San Sebastian, a town hall on Lograno, and a museum of Roman art in Merida.

Moneo, 47, has taught at Princeton and Cooper Union and published articles in English in the magazines *Lotus* and *Oppositions.* He was an early champion of the Italian architect and theorist Aldo Rossi. In announcing the appointment, Dean Gerald McCue, FAIA, emphasized Moneo's strength as a theoretician. "I know of no one better suited to guide the intellectual environment for exploring architectural theory than Rafael Moneo," McCue said. "Moneo has proved himself to be one of the leading intellectuals in the field."

As chairman, Moneo will succeed Henry N. Cobb, FAIA, who will continue at Harvard as an adjunct professor.

ROBERT CAMPBELL

UVA Begins Restoration Of Jeffersonian Buildings

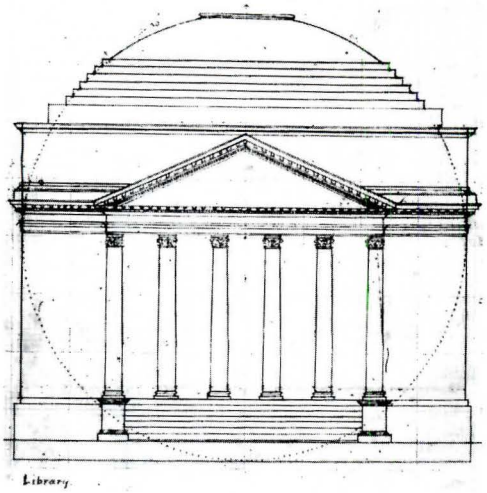
After 160 years of constant use, the 30 building units designed by Thomas Jefferson at the University of Virginia in Charlottesville are undergoing their first comprehensive program of conservation and restoration.

The ensemble, intended as a self-contained academic village, comprises 10 faculty residences, six refectories, one dominant academic building (a library, the Rotunda), rooms for 100 students, and gardens. This magazine's 1976 poll of architects, historians, and critics found Jefferson's university campus the single most admired work of American architecture. In that issue, the late Douglas Haskell, FAIA, editor of *Architectural Forum* from 1955 to 1964, wrote that the university is a great work not only because it "puts teachers and students in a well-organized, spacious, open quadrangle that closely associates living and studying and direct student-faculty talk . . . but because . . . Jefferson's whole architecture was conceived not as 'revival' . . . but as a fresh start on democratic simplicity and directness, basing itself on the Greek."

A decade ago, the university restored the Rotunda, but not the remainder of Jefferson's buildings, which in some cases were deteriorating at an accelerated rate. James Murray Howard, AIA, architect for the historic buildings and grounds of the university, says the most obvious damage "resulted from water penetration through roofs and walls, oxidation of the roofing materials, rising damp, and termites."

The university began major maintenance measures in 1979 to halt water damage, including replacement of deteriorated roof members, concealed gutter systems, and rotted portions of wood entablatures. Howard expects that effort to be com-

continued on page 38



Jefferson's drawing of the south elevation of the university's Rotunda (library).

Schools *from page 37*

plete by the end of this year. In addition, renovations have been carried out over the past two years in two of the buildings serving as single family faculty residences.

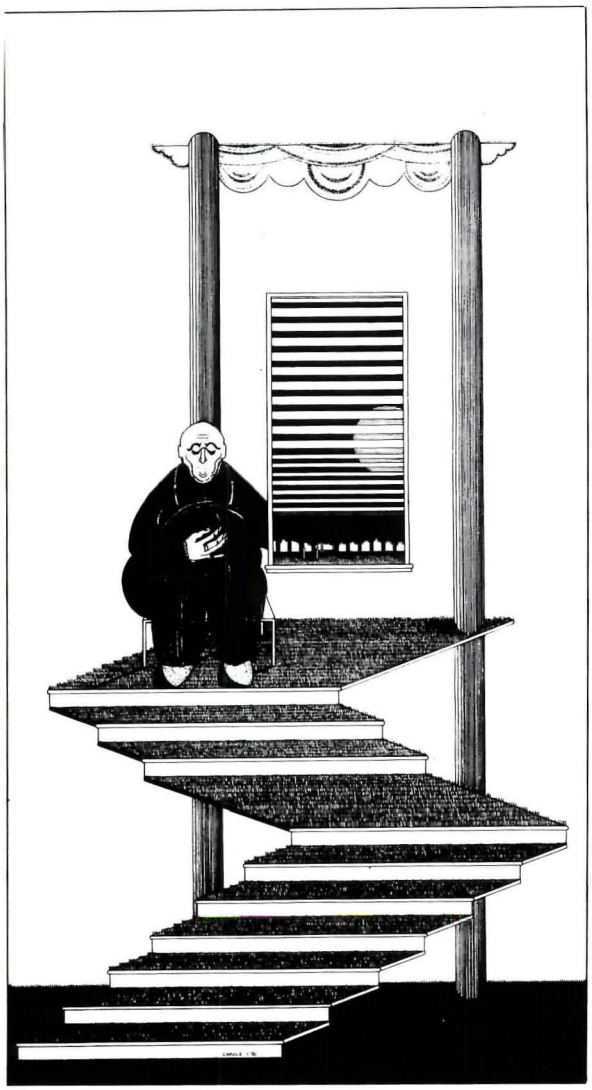
A year ago, the university established a "lawn advisory board" to guide and assist the ongoing conservation program. The group is made up of architects, preservation experts, historians, academicians, philanthropists, and laymen. Among its responsibilities is direction of documenting the buildings and their uses by means of drawings and photographs, and fundraising for continued preservation. Howard says the board is considering uses for the buildings in addition to their historic roles, including making them an academic resource for students of architectural history and conservation, a site for training craftsmen in preservation techniques, an active archaeological research site, and a place for symposia dealing with historic preservation and restoration.

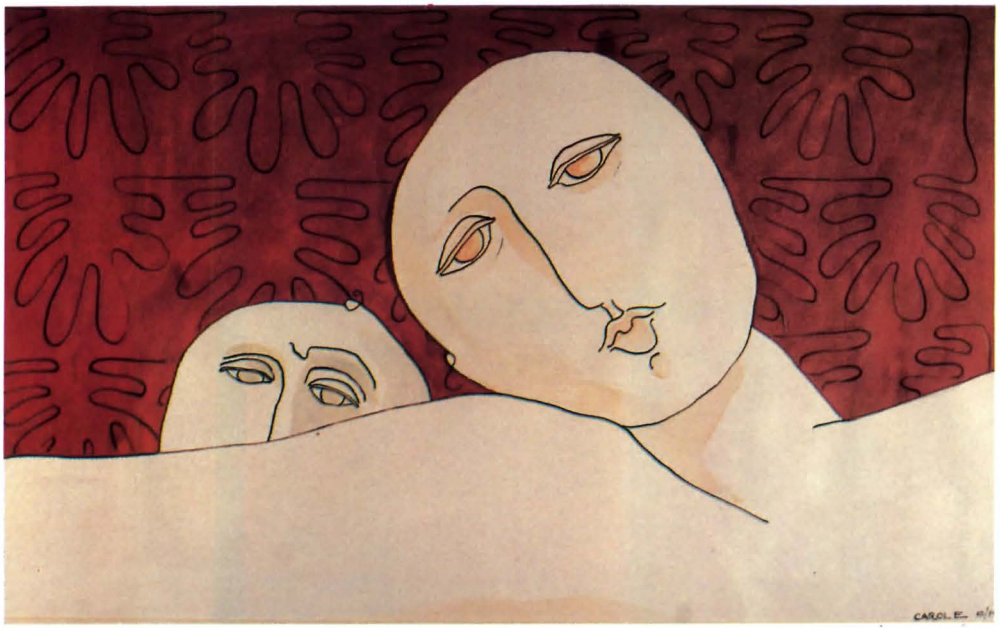
The continuing restoration work has resulted in particular solutions, Howard notes. For instance, decorative window sashes that are badly deteriorated have been removed, stored, and temporarily replaced with units of matching configuration and detailing while craftsmen are being taught how to repair them. Eventually, the restored originals will be reinstalled.

Another problem concerns exterior brick repair. The original mortar employed lime, but repointing over the past 50 years was done with Portland cement, which is stronger than adjacent brick and thus hastens brick failure. As a result, Howard says, the university has decided to repoint only the areas where lime mortar has deteriorated and can be extracted with minimal damage to the bricks. Repointing now employs the same local river sand as the original, washed with a lightly pigmented linseed oil to compensate for aging and staining.

News continued on page 92

The Palmer Method



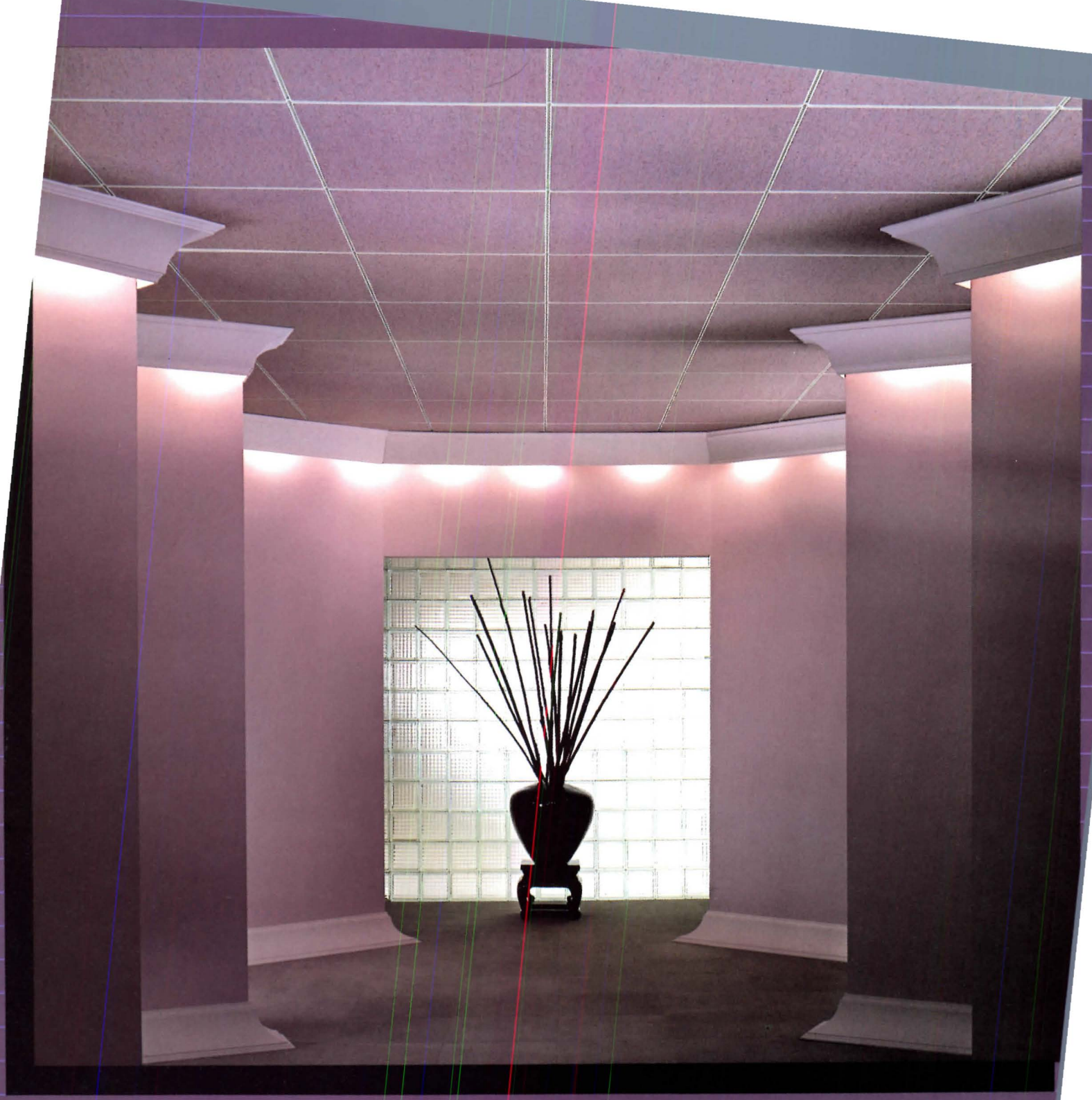


Carole Palmer's contribution to this magazine is consistently appreciated but seldom noted. As art director, she designs every page that contains editorial material. As the reproductions on this page illustrate, she is also a graphic artist of skill and scope.

Palmer majored in art at Endicott College and then struck out on her own, gathering a variety of experiences, including construction work in Santa Fe, N.M., and freelance art on both coasts. The pen and ink drawing and the painting in gouache above are products of three years in Italy, where, among other work, she did fashion illustrations. The gouache and ink at left was done soon after her return to the U.S.

Palmer acknowledges Beardsley and Matisse as influences, but says her art, other than sketches, never springs directly from the masters or preconceived ideas. Her approach is spontaneous, intuitive.

ALLEN FREEMAN



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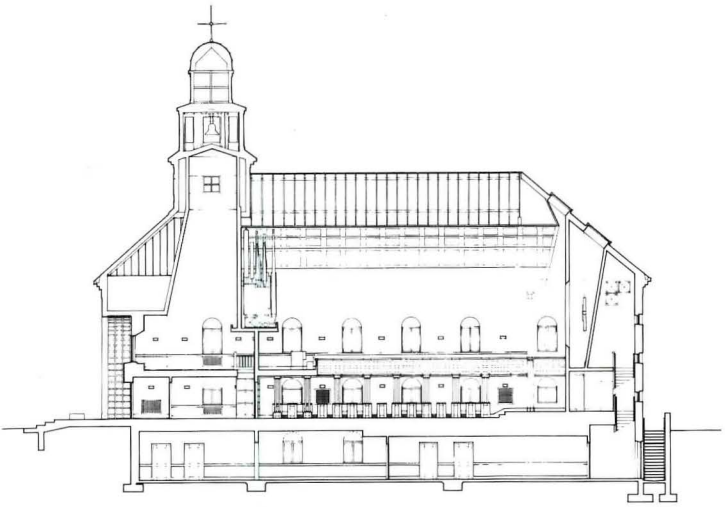
ARCHITECTURE

In the early 1980s architects have become ever increasingly concerned with interiors, as pointed out in an article on page 70 dealing with some of the consequences. One consequence has been a more architectural approach to interiors: more attention to space, light, form, and figure; less concentration on surface and appointments (although experimentation with color has exploded delightfully). On the following pages are some of the real life results of all this, some brand new and some going back to the beginning of the decade. They are followed, in turn, by a comprehensive report on a subject of growing concern in the area of interiors: their impact on the physical well-being of the people who inhabit them.

On another subject, we are delighted to report in the news section the selection for high honor of two architects characterized by concern for the people who inhabit their works. AIA gold medalist Bill Caudill and UIA gold medalist Hassan Fathy were quite different in many ways. Caudill headed a large firm doing large and sophisticated projects; Fathy works almost alone doing small projects with simple means and materials. But they shared a breadth of vision and a staunch humanism. Their honors speak well for the selectors, and for architecture. *D.C.*



Elegantly Detailed, Soaring Spaces

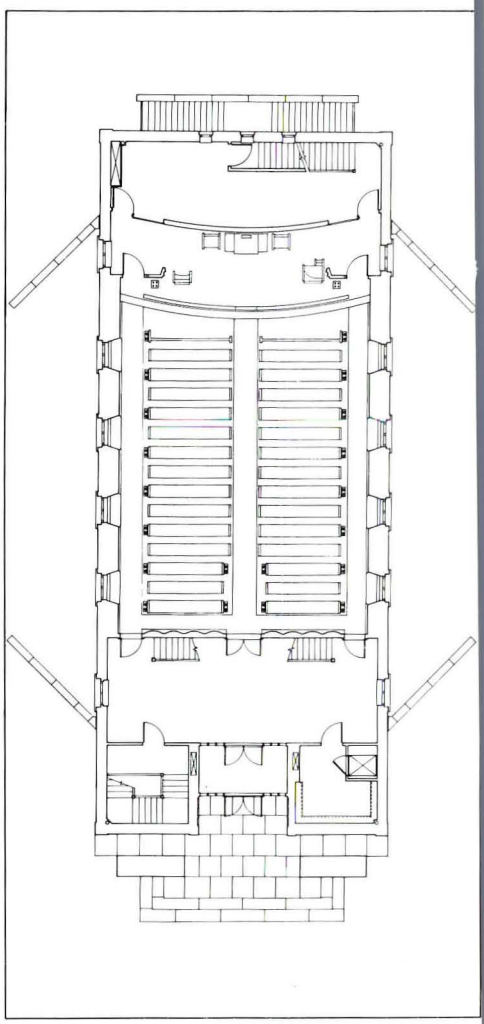
Wesleyan University chapel, Bloomington, Ill.
By Nora Richter Greer

Illinois Wesleyan University in Bloomington, Ill., is a small liberal arts college with strong ties to the Methodist Church. For the university's new chapel—the first separate chapel in the school's 130-year history—an image was sought that expressed the Methodist architectural tradition as well as provided a strong focal point for the campus. The solution by Ben Weese, FAIA, of Weese Hickey Weese, Chicago, is a simple, elegant design that Weese says attempts to "bridge between historic replication and tabula rasa by modifying, combining, and permuting known and experienced shapes and forms."

Through his research Weese found Methodist architecture to be generally "noncommital and eclectic." So instead he turned to Moravian architecture for inspiration: John Wesley, founder of the Methodist Church, had been influenced by the Moravian Anabaptists whom he accompanied in 1738 to Georgia and who later settled extensively in North Carolina. What impressed Weese was the Moravian tradition of "simple, somewhat naive, but powerful and well-crafted buildings reflecting both their rural backgrounds and their simple pietist beliefs." Of particular note were the "powerful building silhouettes, simple masonry openings, and very modest but handsome detailing," Weese says.

In plan, the chapel is straightforward and traditional. It is entered through the vestibule into the narthex that contains a cloakroom, an elevator for the handicapped, and stairs to the lower and upper levels. Two center and two side doors lead into the sanctuary, which seats a maximum of 206 on the first floor and 90 in the balcony. At the east end is the altar, with side doors leading to storage space behind. The lower level houses five offices (for the religious department faculty and the chap-

Across page, the altar's focal point is a 'floating' gold cross; above, the altar as seen from the rear of the sanctuary.



Above left, double columns support the balcony and define the side aisles. Right, dominant on the western wall is the organ, which was custom-designed for the chapel.

lain), a small conference room, a larger reception/gallery space, and the mechanical room.

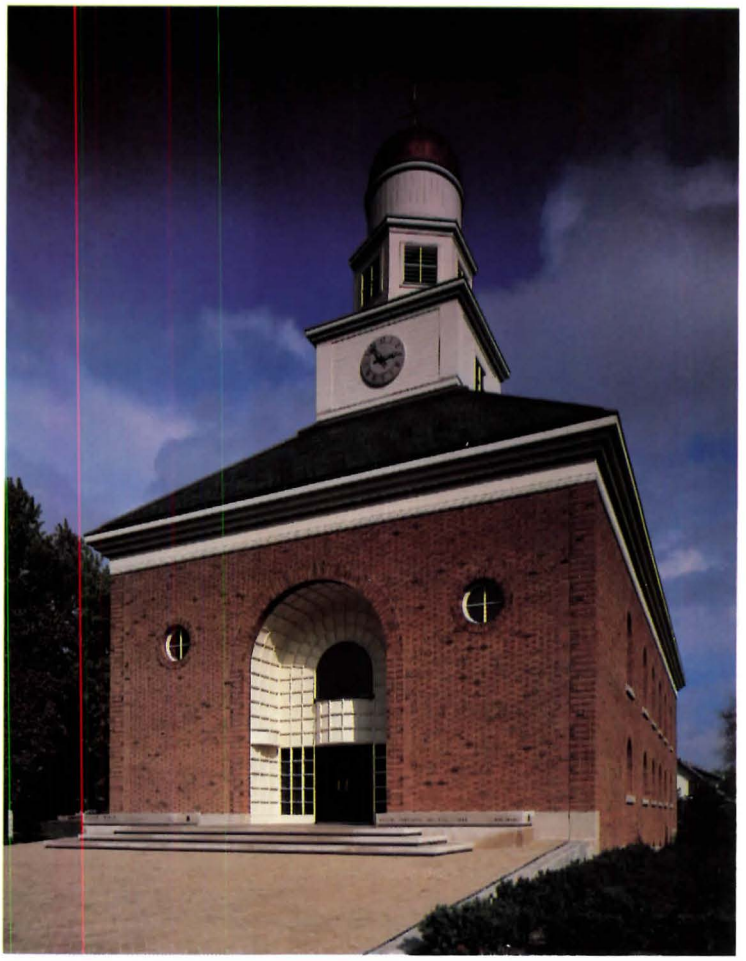
To make this straightforward plan architecturally interesting, Weese relied on dramatic volumes and spatial contrasts. The low, wood-slatted ceiling of the narthex explodes into the 35-foot-tall, barrel-vaulted sanctuary. The main focal point of the altar is a gilded cross that floats within a large oculus. This effect is created by separating two slightly curved walls, the front wall having the circular cutout and the rear becoming the background for the cross. On the second level the narthex space also explodes—this time upward into the bell tower. A large, rounded window permits a dramatic view out over the heart of the campus to the west.

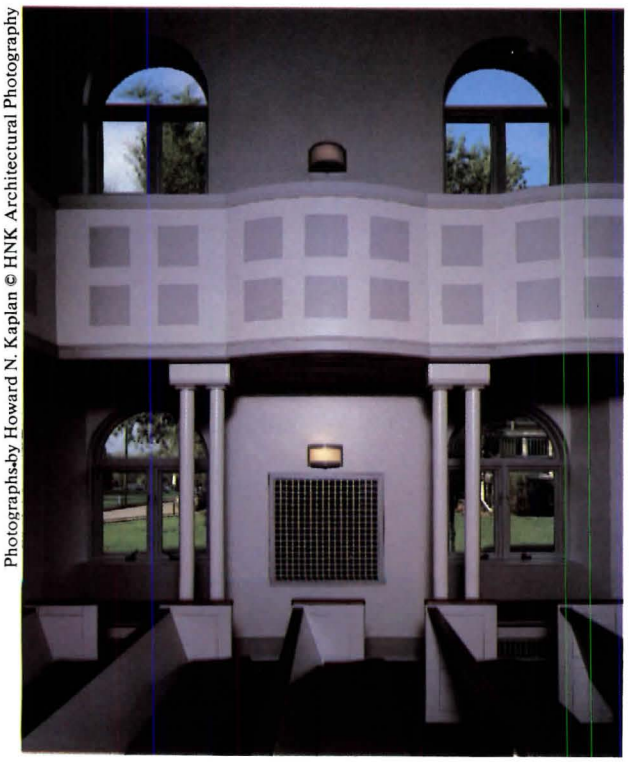
Of paramount importance in the design was creating an acoustical environment for the organ designed by Casavant-Freres of Quebec that, with its more than 1,650 pipes, dominates the western wall. The organ was designed for the chapel, and it could also be said that the chapel was designed for the organ. The barrel vault has unequal facets to avoid focusing sound. The balcony is scalloped with the same intent. All surfaces are hard in order to reflect sound (except the pew cushions and the carpeting) and irregular to spread it around. The altar's rounded walls are meant to aid in sound distribution, as well as reflect different light intensities. Special steps were also taken to diminish as much as possible the potentially loud rumble generated by the chapel's hydro-pulse gas furnace.

Natural lighting was also given important consideration. Two skylights are positioned above the altar, with each one directed at a different altar wall. Windows have solar gray glass and throughout the day admit abundant natural light. Light enters the lower level through full sized windows. This was accomplished by digging out the earth around those windows and berming the earth up and away from the church to ground level.

An important contribution to the visual impact of the interiors is the extraordinary level of detail and decoration. The dominant motif is a gray square set onto a white background, with the accent color being rose. All interior decorative elements respond to that theme and have been beautifully handcrafted—the pews, the altar furniture, altar candelabra, wood-slat narthex ceiling, balcony soffits, dadoes, balusters, newels, moldings, lattice wood heating grilles. Weese calls it "disciplining decoration to an essential sparseness."

Perhaps the strongest Moravian imagery is conveyed through the exterior. Brick is the traditional Moravian material, and here the bricks are irregularly shaped and laid up in Flemish bond. By slightly undersizing the arched window openings, Weese



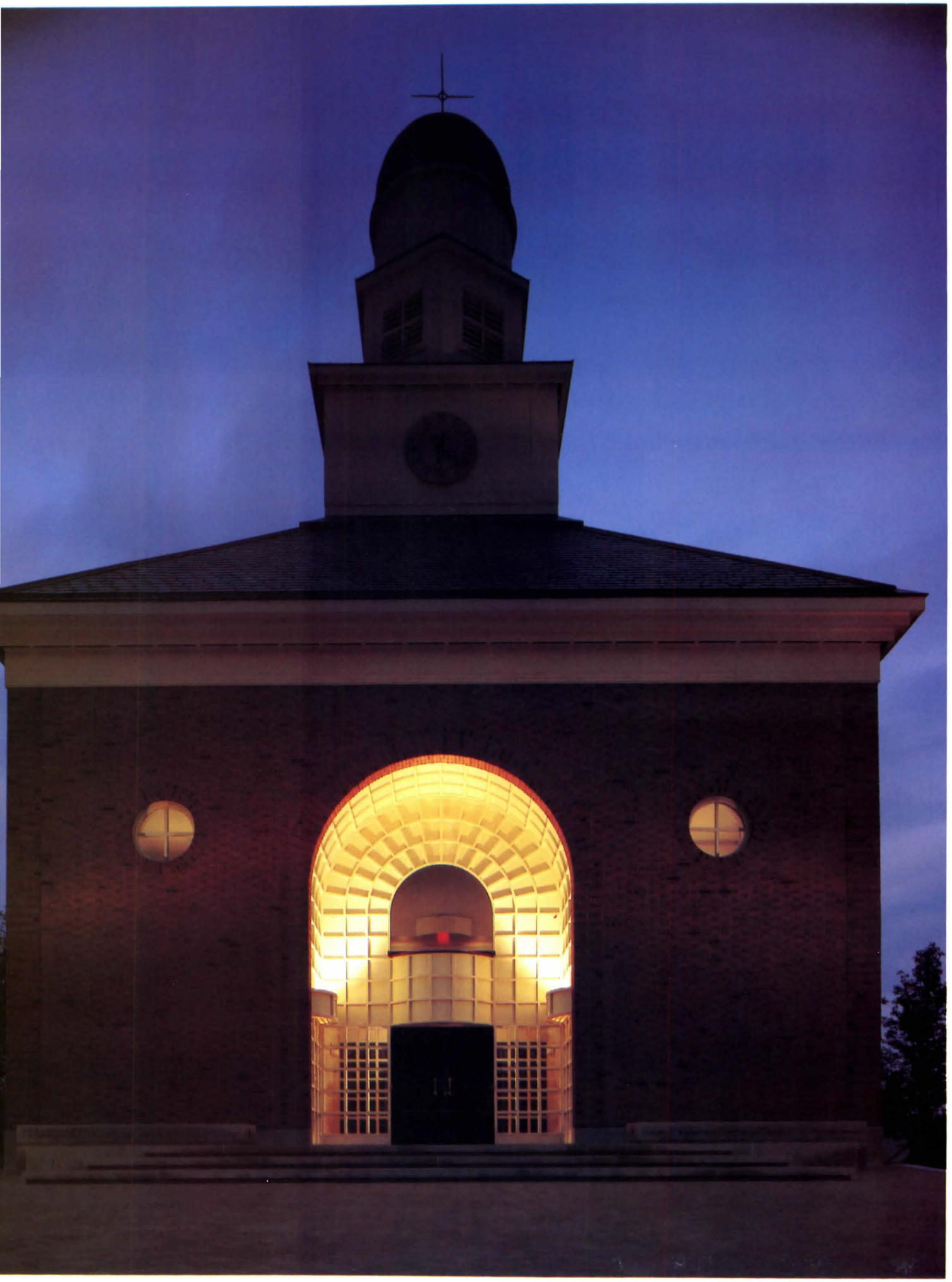


Photographsby Howard N. Kaplan © HNK Architectural Photography

sought "to dramatize the solidarity and mass of the brick walls." To provide a simple, welcoming front facade, Weese uses a deep arch cutout rather than a colonnaded porch. He also recognized the need for a "dominating presence," which was achieved by providing a strong roof profile. Beginning with a hip roof—the type traditionally found on Moravian barns—Weese added a visually complex bell tower. It consists of a square latern base (whose windows admit light to the upper narthex), a hexagonal belfry extension, an incised faceted drum, and a copper-clad half dome. Crowning the dome is a three-dimensional ornament meant to be symbolic of a cross, a lightning rod, and a weather vane. The tower parts were continuously increased in size during the design in response to the "set back position on the hip and the problem of optical dimuition," Weese says.

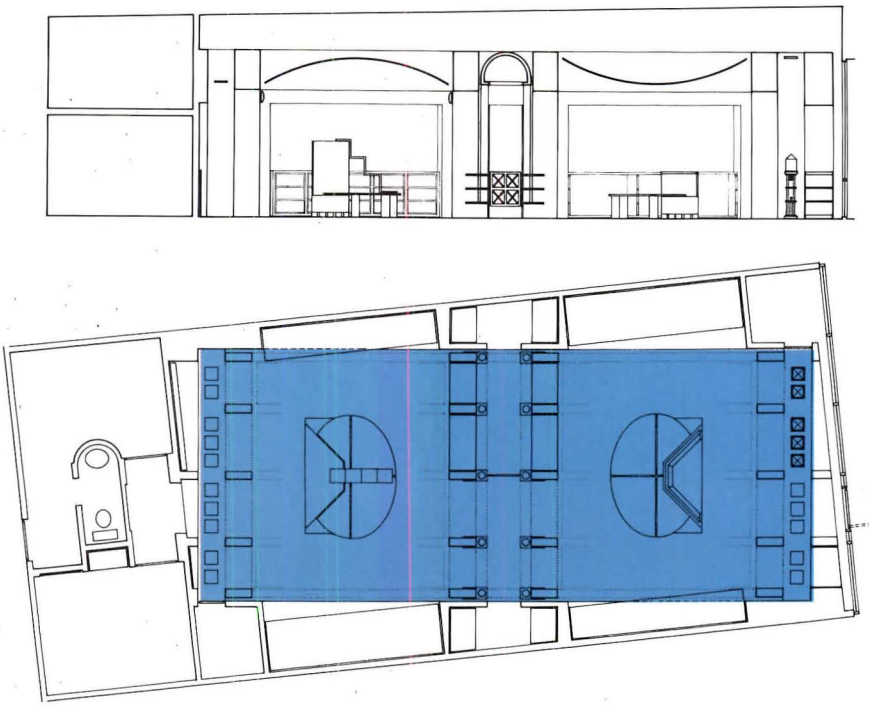
Overall, the chapel's imagery is so familiar and the building blends so well into its environs that it seems to have existed on this location for years, although it was just completed last September. As university President Robert Eckley related, one local resident recently wondered when the renovation of the chapel had been completed. □

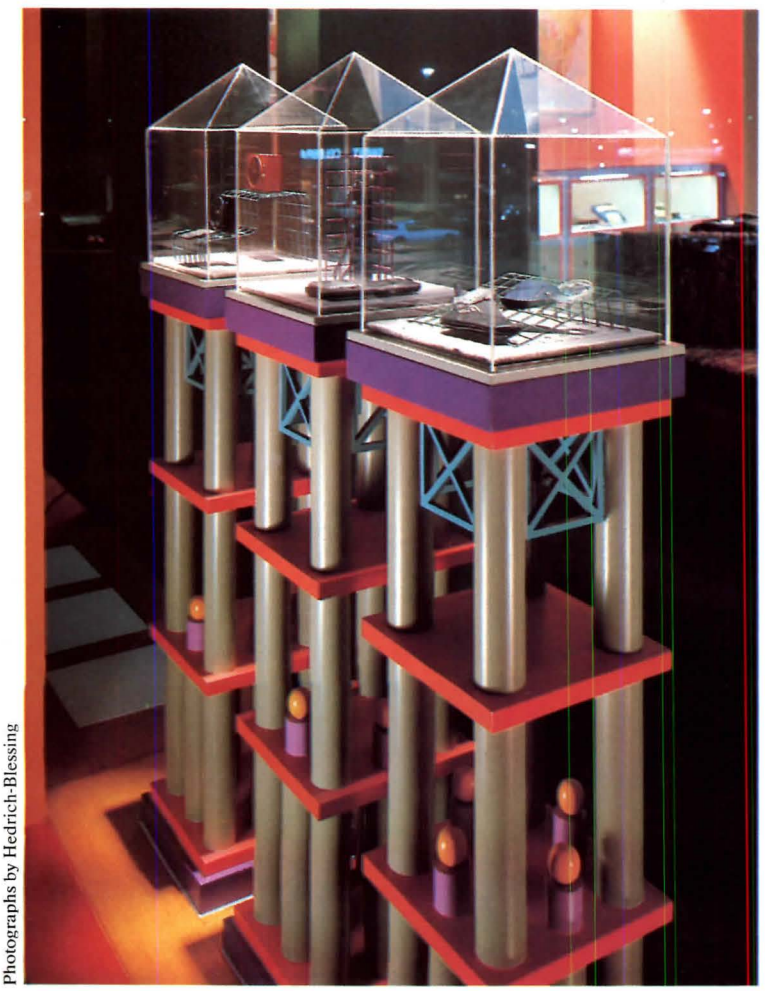
Left, interior detailing is meticulous, even down to the lattice wood heating grilles. Above and right, exterior features are Flemish bond brickwork, recessed front porch, undersized windows, and a hip roof with a distinctive four-piece bell tower topped by a spare, abstract cross.



Intensely Colored 'Get-Away' in a Suburban Mall

Map shop, San Antonio. By Michael J. Crosbie





Photographs by Hedrich-Blessing

Ferguson's Map and Travel Store sells not only maps, globes, and books on faraway places, but luggage and travel accessories as well. Bright colors and accent lighting have transformed this small store in a suburban mall into a mini getaway all its own—a bright jewel displaying the wherewithal to journey even farther. The intent, says designer Judith Urrutia of Chumney/Urrutia, San Antonio (who worked in close collaboration with architect William Curtis), was to create a setting that was anything but what one expects to find in a shopping mall.

The distinction begins subtly with the configuration of the space. The store's interior is shifted a few degrees to bring it into a perfect north-south alignment. The shifted axis has its own exotic connotation, but it also turns the store into a compass, appropriately enough. The front window exhibits a number of brightly painted millwork display cases, "lined up like little soldiers," as Urrutia describes them, topped with plexiglass and lit from above.

The 1,500-square-foot interior is divided into two cubiform rooms separated by a vaulted, column-lined hallway. The first room entered is the "day room," so described by Urrutia because of its natural illumination and bright colors. Above is a ceiling of sky blue lit with fluorescent cove lighting and then softened with silvery, transparent drapery that floats above the room like a cloud. At the center of this space is a couch and oval display table. At either side are alcoves where the shifted axis becomes apparent. These are painted a bright orange to call attention to the fact.

The narrow hallway beyond the first room is where the most intense colors are found, appearing even more vibrant in this

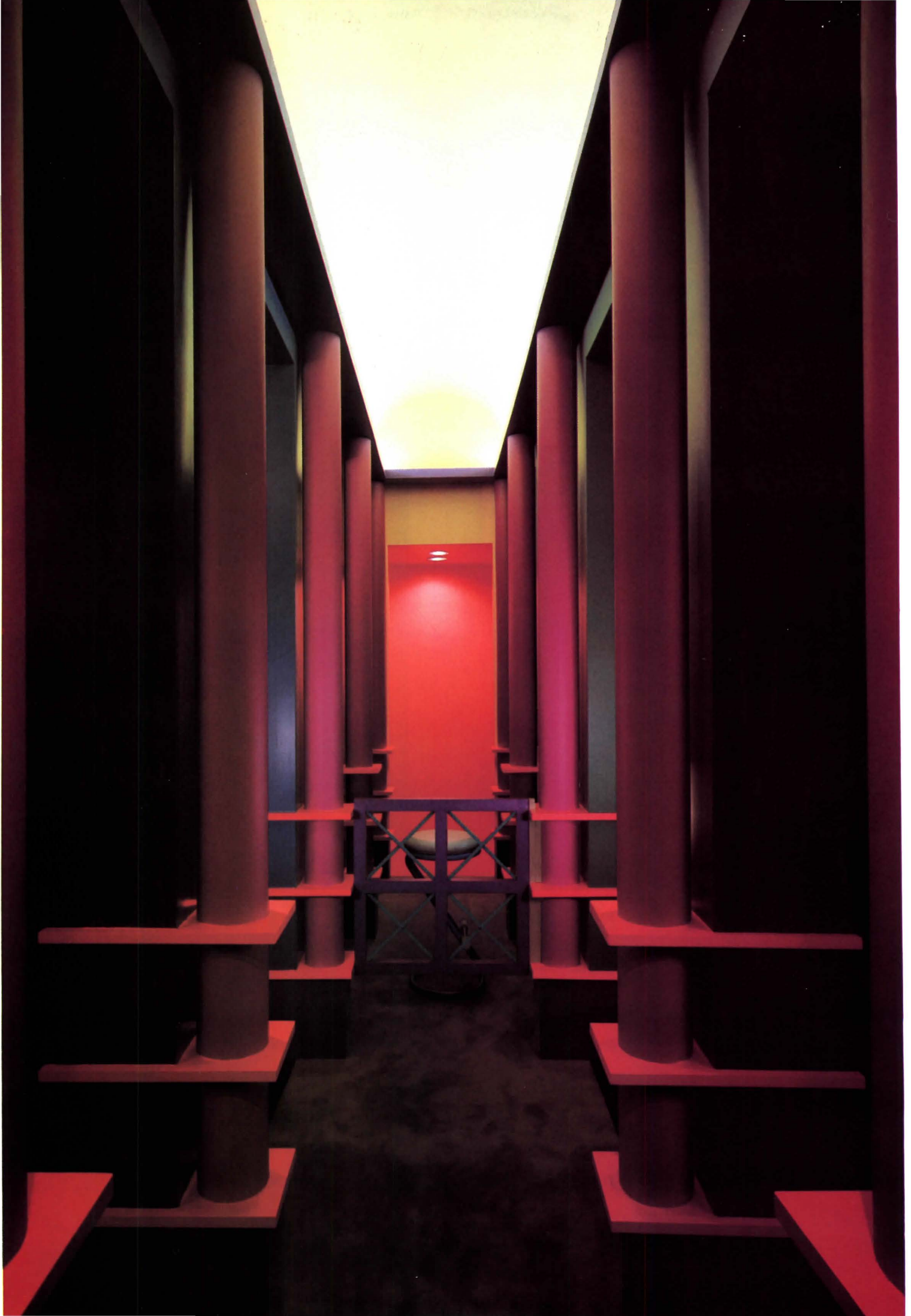
Left, the 'little soldiers' at attention—vibrantly colored display cases lit from above in the store's front window; across page, the first room entered with its cloudlike ceiling and center seating and display area, with sales desk at right in photo.


GREECE
EUROPE

Above, globes cascade down the stepped display in the 'night room,' with nocturnal blue ceiling and dark blue carpet. The skewed alcove with built-in map storage is lit from above. Across page, narrow hallway vibrates with intense colors.

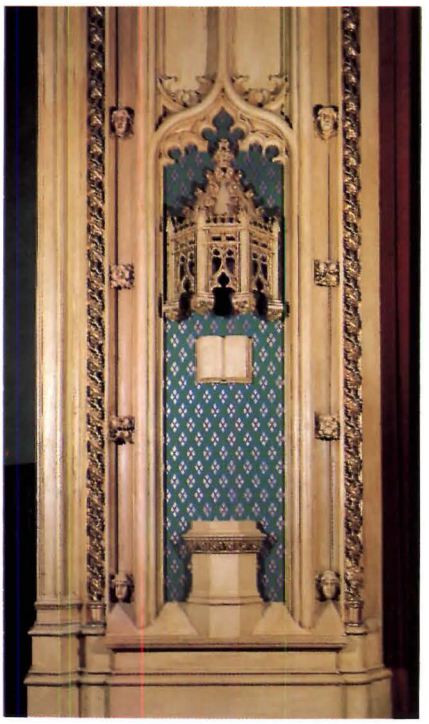
compressed space. To the left are bookshelves for travel publications and to the right is the back counter of the sales area. Above is a yellow, neon-lit barrel vault. The second cube, into which you move next, represents night. Where the day room's columns are green "to represent trees and plant life," explains Urrutia, the night room renders these columns deep blue, "enveloped in darkness." Above is a blue, satin lined ceiling with light fixtures that poke through dark reveals like stars. This room also has an oval display table with globes that descend brightly colored steps. At either side are flat drawers for storing maps.

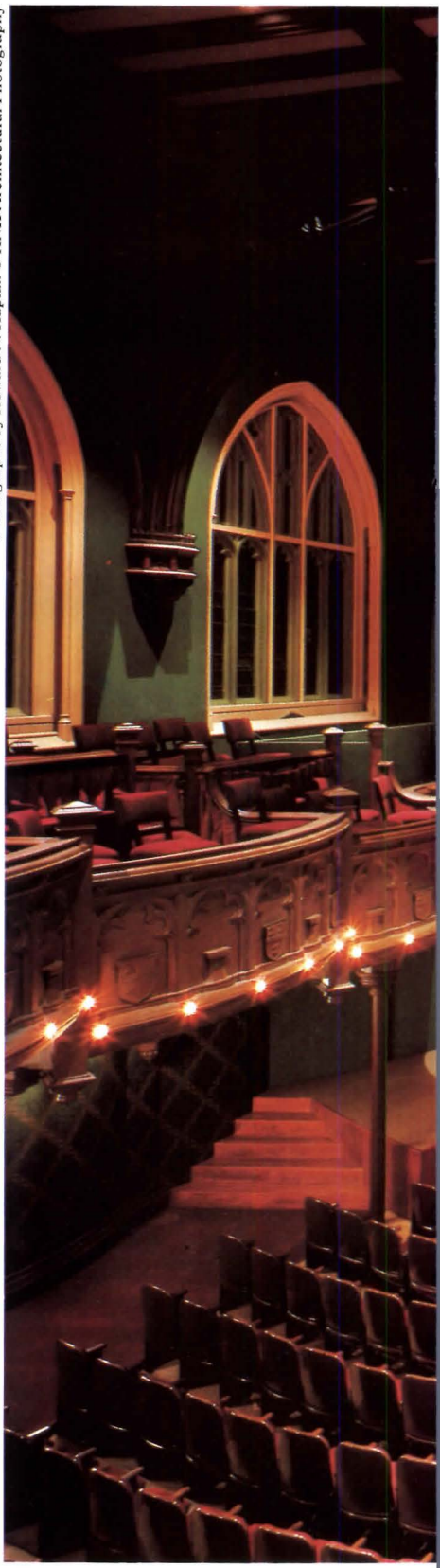
Urrutia says that the system of color for Ferguson's is based on all "clear" colors, either primaries or colors tinted only with white, as opposed to more "opaque" tones obtained by mixing opposite members of the color wheel or tinted with gray. The intensity of these colors is heightened in the hallway where opposites are used together—green with red or orange with blue—colors that tend to vibrate when placed next to each other. As one moves from the hallway to the store's periphery the vibrations lessen. Here compatible colors are paired or tinted with more white. A happy coincidence in the choice of these colors is that they happen to be the same as those used most often by map makers. □



Magnificence Made New

Mandel Assembly Hall, University of Chicago. By N.R.G.





Photographs by Howard N. Kaplan © HNK Architectural Photography

Designed by Shepley, Rutan & Coolidge and completed in 1903, the Leon Mandel Assembly Hall is part of the University of Chicago's tower group (the other buildings being Hutchinson Tower and the Reynolds Club House). It was at Mandel Hall that the Chicago Orchestra had its premier performance in February 1904. Since then the hall has remained an integral part of the university's and the community's cultural life, but over the years it had become tarnished and technically obsolete. The only improvements had been some repainting and an awkward insertion of more advanced projection, sound, and lighting equipment in the balcony.

A project to upgrade Mandel Hall to 20th-century music hall/theater requirements began in 1978 under the direction of Skidmore, Owings & Merrill/Chicago. SOM's intent was to provide a "renovation, not a restoration, with a careful integration of alterations and additions in the fabric of the building."

One major change was to enlarge and "more appropriately shape" the stage, in SOM's words. With the aid of hydraulic lifts, two extensions to the permanently raised proscenium apron can now enlarge the stage to 36x55 feet—large enough to com-

Above, acoustical umbrellas are suspended over the stage. Across page, below, detail of the proscenium arch, and above, the cinderblock addition that provides more backstage storage space.

Right, renovation of the hall involved tucking the projection, sound, and lighting booths behind the balcony wall at the upper rear of the auditorium. Below, the balcony box seats, and left, the rear of the auditorium's main floor.

fortably seat 100 musicians. Lowering one or both of the stages back to main floor level produces a smaller stage and also additional seating for chamber concerts, solo recitals, or plays. The lift nearest the proscenium can also be lowered farther, with the pit holding a maximum of 24 musicians.

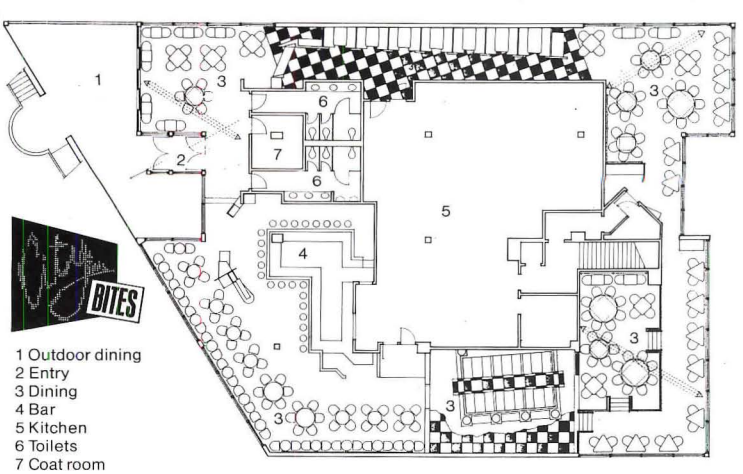
The most visible acoustical improvement was the addition of several umbrella reflectors, which are suspended over the stage and which reflect sound back to the musicians. Also, wood panels can be positioned inside the proscenium arch to block sound from getting lost backstage. Sightlines were improved on both the main floor and the balcony. On the main floor, the side aisles were moved to the outside wall; in the balcony, the front boxes on each side were altered. And by moving the makeshift projection, sound, and lighting equipment to new booths nestled behind the balcony wall at the upper rear of the auditorium, 60 seats were reinstated.

Other improvements involved moving the dressing rooms below stage into somewhat austere but adequate facilities. Between the backstage and neighboring Echart Hall, a small extension was delicately inserted and now serves as a loading dock, work space, and storage space for musical instruments, risers, theater props, rigging, and costumes.

While the theater's guts were modernized, its Victorian-era decoration was re-established. The intricately detailed proscenium arch was cleaned, repaired, and repainted in the original palette, as were the rich concert hall and lobby walls. □

An Exuberant Collection Of Varied Images

City Bites restaurant, Philadelphia.
By Allen Freeman



1 Outdoor dining
2 Entry
3 Dining
4 Bar
5 Kitchen
6 Toilets
7 Coat room

Photographs by Courtney Winston

Above left, booths grow progressively wider toward the rear of the restaurant, making narrow corridor seem longer. Unrelated floor grid disguises the size change. Top, a longer view of the same area; pie-shaped partition is minus a city-sized bite at its point; porcelain at right is 'Dog Man,' by Liz Stewart. Above, chrome edged tables, bentwood chairs, sail-like window coverings, and 'Blue Dog' by Susan Lowry above a striped false marble piece. Also in this area, a section of yellow chain link fence.

Ideally, a restaurant should comfort but never bore, be quiet enough to soothe the stomach yet lively enough to engage the eye.

City Lights in Society Hill apparently only half filled the bill. Like many other Philadelphia restaurants, it was finished in blonde wood, grays, and pastels. A place with lots of plants and peaceful, second-story views of the Delaware River, no one would have called it unpleasant, but few would have thought it exciting. City Lights was not a big success.

City Bites, its successor in the same location, is different. It started with an "attitude." Edwin Bronstein, AIA, recalls that restaurateur Steven Poses, with whom his firm, Edwin Bronstein Associates, had previously collaborated on several Philadelphia restaurants, took Bronstein to see "Starstruck," the Australian film by Gillian Armstrong about aspiring punk rockers in Sidney, and then played an album by Taco, whose neo-vo-dee-o-do "Puttin' on the Ritz" was then popular, while they looked at photographs of buildings by Arquitectonica and reproductions of David Hockney paintings. Bronstein remembers Poses as saying that he wanted to capture in spirit all of those things together, "to be on the edge of good taste—or bad taste."

To Bronstein, that translated into cultural images—high, middle, and pop, past, present, and slightly future—which he inter-

preted with unmistakable flair and in vivid colors. There is not a pastel in the place. City Bites has a certain punk esthetic, but with punk's anger tamed and palatable. Some two dozen irreverent, contemporary pieces of art seem at home here. Some of it veers toward camp, but the setting implies a deeper seriousness.

With only 10 weeks for the make-over from the beginning of design to re-opening the doors, time was a key factor for Bronstein. The architects kept the existing walls, ceilings, platforms, lights, bar, and kitchen, all of which Bronstein considered adequate for what he had in mind. But the plan, which centers on a kitchen entirely encircled by seating, had a couple of problem areas between the entrance and the area with river views at the opposite end. Both lacked interest, were shunned by patrons, and became the focus of Bronstein's efforts.

In one—a long, windowless corridor—he perversely accentuated the negative, first by painting it in dark colors and then making it seem even longer by progressively expanding the width of the booths that he placed along the outside wall so that they project into and effectively narrow the corridor. Then he confounded the perspective down the long, narrow spine by skewing the grid of the black-and-white checkerboard floor. He gave the booths vaguely postmodernist profiles, including *faux marbre* keystone cornices, from which hang long strands of keychain beads. Adding

This page, eroded temple as a diner, shown from inside, below, and outside, right, where 'Dog-Woman with Asparagus' by Jack Thompson stands guard. Temple floats on a 'cloud' of gray carpet. Facing page, bar entrance with imitation marble maitre d' stand and neon swirls on the ceiling.

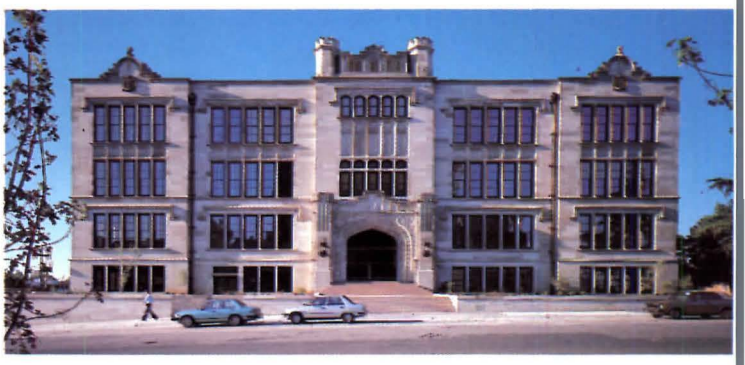
a certain mystery are eroded partitions between booths, geometric holes in the partitions, and small, slightly bizarre pieces of art on the wall next to each booth. One can have lunch with a cookie jar head by Michael Biello or dinner with Rhoda Zwillinger's mixed-media "Lana Turner Winging It." In company like that, who could feel relegated to an inferior table?

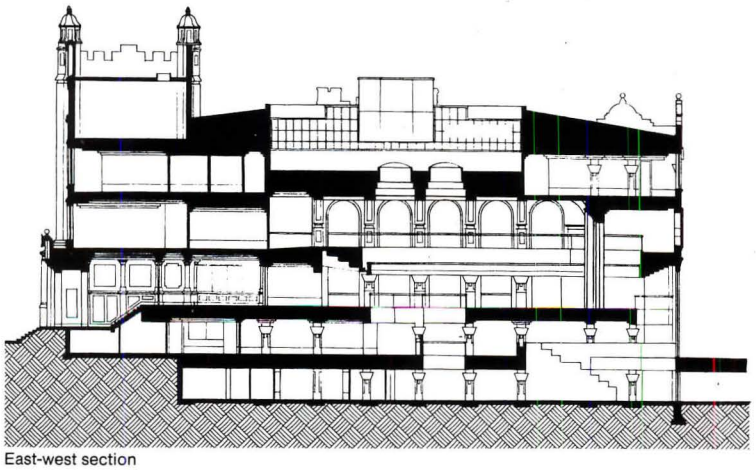
The other problem area was an elevated platform in a space with a high ceiling and clerestory windows behind the bar. Here Bronstein built a slightly cockeyed Doric temple with eroded walls and three huge headlight sconces. Could anyone seated in a temple feel shunted to the back of the house?

The bar was painted bright yellow and trimmed in pink and white ceramic tile, and the ceiling was given a couple of loose swirls of neon. Over in a corner are a pair of pinball machines (not electronic games) and a bus station photo booth ("4 Different Poses in Complete Privacy. Only 75¢"). The machines were added by the owner, and City Bites elevates them to cultural artifacts.

The restaurant has a varied clientele. Society Hill residents consider it a chummy neighborhood spot. Business people stop in for lunch. Families like it because children think it is fun. And real punkers from nearby South Street occasionally stop in to charge up.

Incidentally, the food is good. □

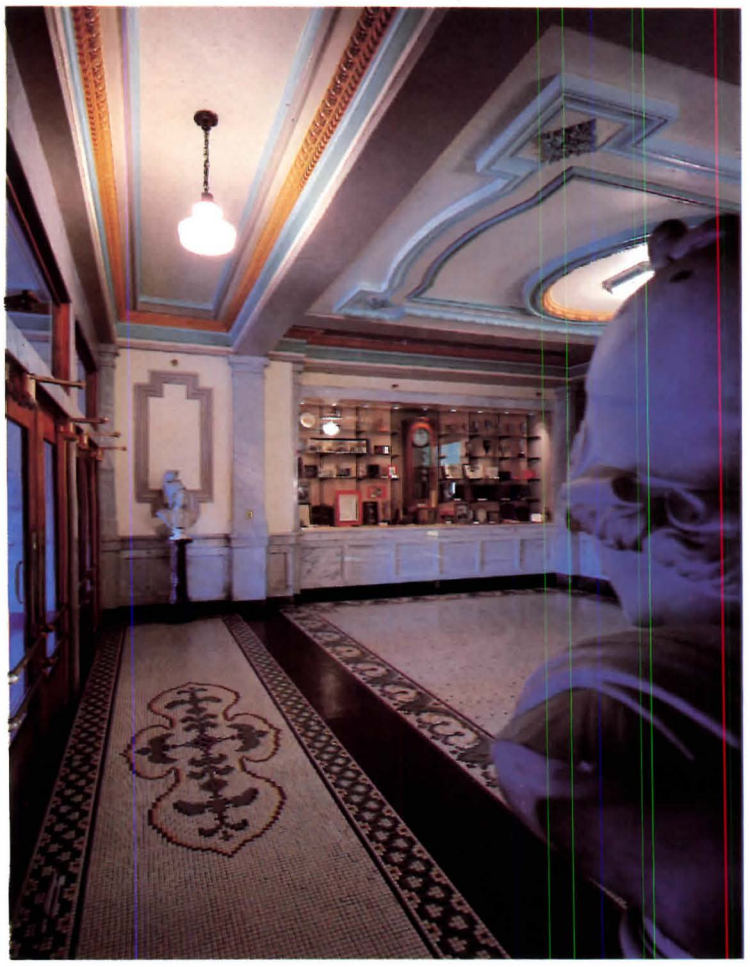




East-west section

Converted School Rich in Decoration

One Bell Central, formerly Oklahoma High School. By M.J.C.



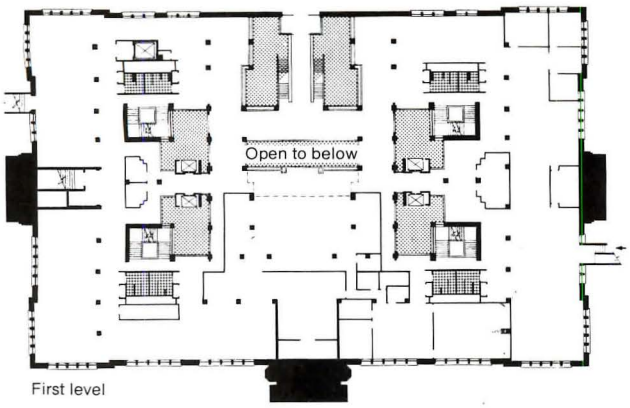
Oklahoma High School in Oklahoma City was completed in 1912, a scant five years after Oklahoma joined the Union, and at that time was the only high school in the entire state. This neo-Gothic building of collegiate bearing was designed by the firm of Layton, Smith & Hawk, also the architect of Oklahoma's domeless capitol (funds ran out before it could be completed). The school was in continuous use through the 1970s and gained a place on the National Register of Historic Places. By that time, however, it had grown into obsolescence because of shrinking enrollment and finally was closed—its shell and structure secure, its interior in virtual ruins. In 1981 Southwestern Bell Telephone Co. purchased the building for $2.7 million to renovate it into corporate offices for its Oklahoma division. The result, shown on these pages, is the work of HTB of Oklahoma City (with George B. Lewis, AIA, as project manager), which worked in collaboration with Southwestern Bell's in-house architects, headed by Dennis E. Krost, AIA.

Southwestern Bell's decision to restore instead of building anew had its financial as well as architectural benefits. Under the Economic Recovery Tax Act of 1981, those who carry out certified rehabilitation of National Register structures are entitled to a 25 percent tax credit. HTB estimates that the company saved $4 million by restoring rather than constructing a new 171,343-square-foot building. The entire renovation was completed at a cost of $56 per square foot.

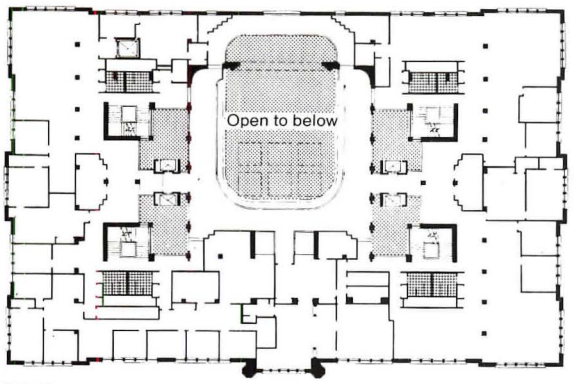
Very little restoration work was needed on the limestone exterior of One Bell Central (as the building is now known). Today it looks much as it did when it was completed 73 years ago. The stone was meticulously hand cleaned with brushes and a water-based solution, and stone was repointed and patched where necessary. All of the windows in the building were replaced with double paned glass and wood sash that replicated the original light arrangement of six over six.

One now enters the building on the west side, which faces a large plaza designed by Loftis, Bell & Downing and Frankfort, Short & Bruza, both of Oklahoma City. While the original entrance to the high school was on the east side, this new entrance was cut into the flywall behind the auditorium stage and

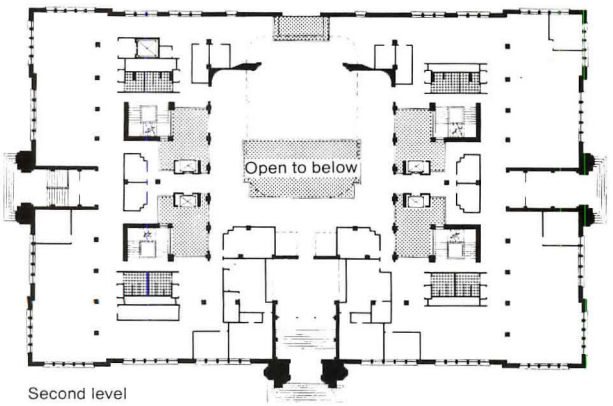
Above, the south entrance, looking much the way it did when the building was completed in 1912; above left, the restored foyer of the east entrance, now a museum for the school's alumni; right, view from beneath balcony level of auditorium space, now a central workspace.



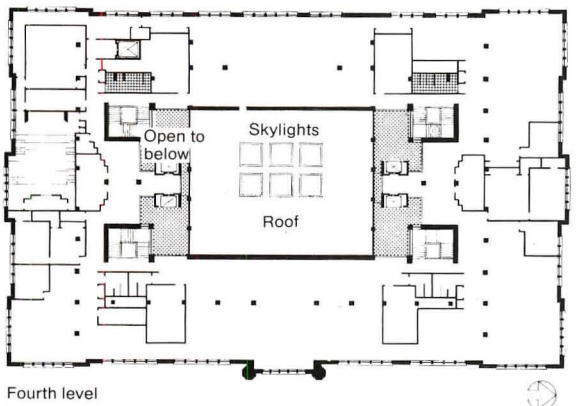
First level



Third level



Second level



Fourth level

© Greg Hursley

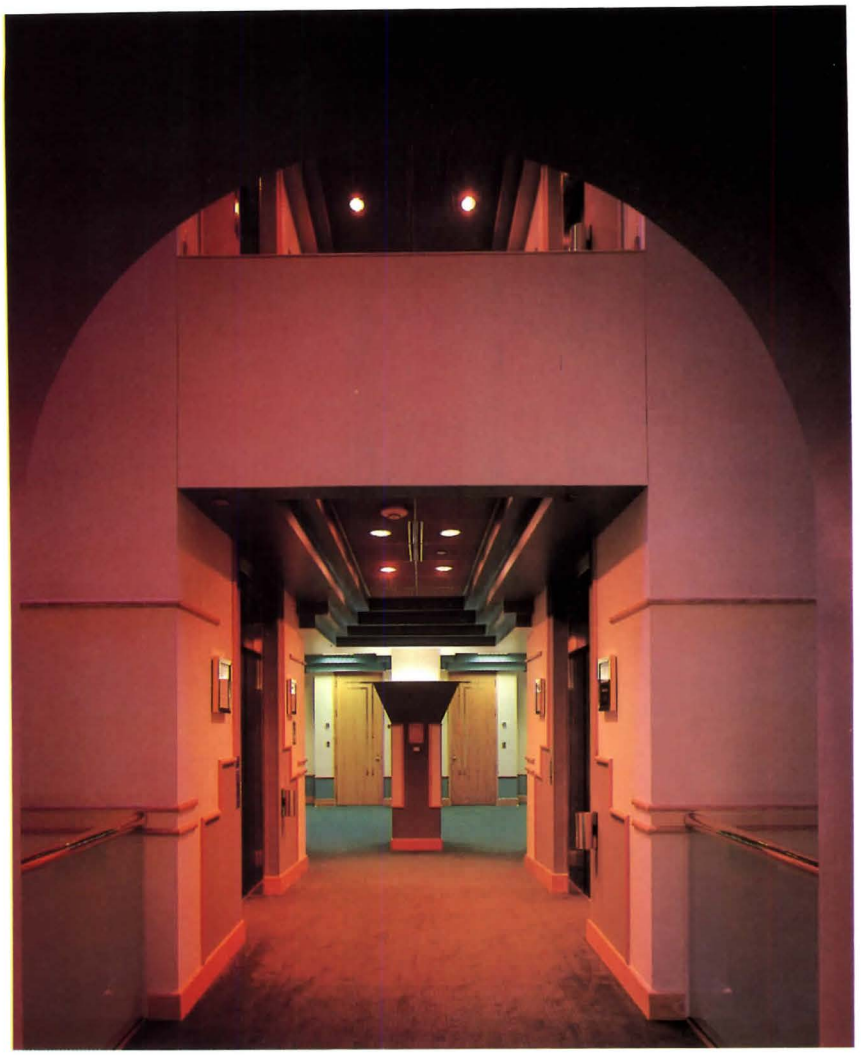
Courtesy of Charles Abel

Left, employee cafeteria on below grade level with views straight up to the skylights; above, photo of the auditorium space taken shortly after it was completed in 1912; right, view of the same space today, with central office workspace located on stage level.

filled with mullionless glazing. Unfortunately, much of this glass entry is hidden behind a clunky, freestanding portal pushed up against the building by the plaza architects. Once inside, you proceed across a bridge through a two-story space (formally the gym) and arrive at a rail that overlooks the employee cafeteria and allows limited views up into the refurbished auditorium space, the heart of One Bell Central.

Although the interior was in bad repair and was virtually gutted, HTB architect Larry Keller, AIA, director of design for the project, says that as much of the interior ornament as possible was salvaged "as a recall of the building's use as a high school," Keller explains, "a reminder to those who visit or work there of this building's importance to the community." To that end, Keller preserved and restored as much ornamental detail as possible, the best of which was found in the auditorium. This is a

Photographs © Greg Hursley



Across page, detail of sconce-topped columns with their oak trim and stepped motif, which occurs throughout the interior; left, one of two elevator lobbies that occupy former lightwells; below, president's office, with original woodwork, occupies former library.

voluminous space, 80x78 feet square and at one time capable of seating 1,500. The finely detailed proscenium arch now gives the central office workspace a certain theatrical flair. The rail of the auditorium's balcony was also preserved; now it rings the central workspace and offers a commanding view of the interior.

To the immediate right and left of this central space, Keller inserted free-standing elevator shafts into the middle of two former lightwells. The exposed, glazed cabs look out into the cores that now deliver light to interior offices and corridors. Existing stairways were also opened with stepped cutouts bringing in natural light. All of the floors were then ringed with offices (save for the below grade level) with work and circulation spaces demarcated by existing column lines. The president's office, accessible from the former balcony level, occupies a significant position in the building. The site of the former library, its leaded windows are framed by the east tower overlooking the original entry to the school.

The original entry's foyer, in fact, provided the precedent for the interior color scheme devised by HTB architect Edward J. Riley, AIA, ASID. As a public service, Southwestern Bell donated the foyer space of the east entrance to be used as a "memorabilia museum" for Oklahoma High School alumni and the community at large. Restoration of the foyer revealed a lively color scheme of mustard yellow and pastel blue. Light gray marble wainscot and pilasters were found in good condition, as was the decorative tile floor of green, yellow, and deep red. Also in this foyer are two murals painted in 1928 by alumnus Olinka Hrdy, who later worked with Bruce Goff. Hrdy's murals incorporate all of the colors found in the lobby. Riley says that these colors set the tone for the building's renovated interior, although his palette is softened and refined.

In the auditorium space the color scheme is used most effec-

Above, view from plaza of new west entrance to the building with new arched window on upper level; right, detail of west entrance with mullionless glazing and bridge to reception desk.

tively to recall the colors of the lobby. The proscenium arch with its monogramed keystone incorporates mustard yellow, salmon, pastel blue, deep red. The ceiling is a criss-cross of salmon edged in light and dark blue. Six stepped skylights in the ceiling are rendered in diminishing shades of salmon. (The skylights are original, reopened during the renovation, alas without their stained glass, which was lost many years before.)

Each level in the building has its own color: salmon, warm gray, bluish green, burgundy, rose. Each level's furnishings match the theme color, although the partitioning system throughout is a neutral gray. The carpeting near the lightwells on each floor is green so that in looking down from the highest level one sees a consistent floor color. Salmon terrazzo with black accents is used in the refurbished stairways. The columns throughout the building are flaired at their tops with light sconces that Keller describes as "abstracted capitals" and are decoratively trimmed with oak half-round molding, which is used throughout the building. Abstracted capitals or not, the sconces are very similar to the tops of the tie rods holding up the curved balcony. Each level's color is used in wainscot and column decor, and all executives have a choice from the color palette for their personal office interior.

Two details in particular give this interior a striking unity. The stepped pattern is a recurring theme throughout. One finds it as a device to mediate between the drop ceiling and the original window heights, as a transitional form in corners, as a molding pattern, and in elevator cabs, planters, and column tops. Another theme throughout the interior is brass. It is used for railings, terrazzo edging, light fixtures, Venetian blinds, door hardware, drinking fountains, electrical plates, and ashtrays. It weaves through the building like a glistening thread, catching the light and color of this elegant, finely detailed interior. □

Architects in the Interior Design Arena

It is growing, but it is also crowded and conflicted.
By N.R.G.

A set of long-standing trends has come together to the point of combustion in the field of interiors. One is simply the growth of the field itself, fueled in part by a new emphasis on preservation, restoration, and adaptive use of existing buildings. This has been paralleled by a series of sporadic construction recessions, in which the volume of totally new building has declined.

One result has been the proliferation of disciplines involved in interiors work: architects, decorators, space planners, facility managers, and, most recently, an increasingly assertive group who go by the title interior designer. The combustion has been ignited by this group's movement to be licensed under that title.

This aspiration runs into another well-documented result of the trends cited above: an accelerating increase in the number of architectural firms heavily involved in interior design, even to the point of specialization.

These architects acknowledge that part of their motivation is economic but cite other factors as well, notably including the increasingly sophisticated clientele for interior design. "I think clients are getting a lot smarter," M. Arthur Gensler Jr., FAIA, says. (Approximately 65 percent of the work of Gensler & Associates is in interiors.) "They are much more knowledgeable and articulate. When our business first started, they didn't have any experience. They just had loads of desks and vinyl tile floors and light fixtures stuck up in the ceiling, and that was about it. But today, certainly in the office, clients are recognizing that a good office environment is a tool for good management, and they want that." Gensler also acknowledges that "even the best interiors need to be thought of as dynamic spaces that will need to be changed," which, of course, generates more jobs.

Klaus Mueller, AIA, head of Skidmore, Owings & Merrill/Chicago's interiors operation, says: "Architecture is creating a whole environment for the people. It just doesn't stop at the window wall or the corridor." Architect/interior specialist Kenneth Folger, AIA, suggests that "architects are waking up to the fact that because they design a shell the project is not finished and they ought to be involved in how that shell is finished out and furnished to give a complete project."

While more architects are specializing in interiors, there has not been a corresponding increase in interiors courses offered by architecture schools. "Unfortunately the architecture schools have done a very poor job of teaching anything about interiors but especially about interior design," Gensler says. "And I'm talking about the design aspects of interiors, not just color picking and furniture picking. . . . There are some specific skills in developing a program and understanding clients and helping them understand their needs and requirements. There are much more elaborate kinds of analysis and planning needed because the environment is going to change." Says Thomas Beeby, FAIA, "In the Beaux-Arts days when you designed a building it implied a certain kind of interior. There was a stylistic implication of what was going to happen inside, from the moldings to the finishes to the furniture. By the time I got to Cornell that had all been trashed, and we were not offered any alternative. I think it is only in recent years that many of us have begun to educate ourselves in interior design."

What subjects are not being taught in architectural schools? Robert A. M. Stern, FAIA, says, "Most of the curriculum in architecture schools never gets past the schematic levels of buildings in general, and when that happens the interior of the building, just like the exterior development of the wall as an articulate set of relationships, is not very well developed." Folger suggests, "Not very many schools expose the students to the whole prob-

lem of manufactured furniture, of fabrics and their performances, of materials and finishes and how they are made and perform. . . . And I don't think very many of our schools train good planners."

Planning is of paramount importance, agrees Robert Kleinschmidt of the interior architecture firm Powell/Kleinschmidt: "The essence of interior design begins with the planning process. When we program properly we have a good plan, and this is the basis for the total design. I feel the biggest void in interior architecture is the lack of planning." Also needed, Kleinschmidt says, are analytical skills, scientific and technical knowledge, skills in computation, managerial skills, knowledge of human factors, esthetic and cultural considerations."

The general education of an architect compared to an interior designer (whose education is traditionally spread out among the architecture, fine arts, and home economics departments) is credited with creating a different approach to interior design. "Architects, I hope, have a fuller understanding of the whole building project," Gensler says. "I think they have become more knowledgeable about the construction aspects or the building shell aspects, whether it be the structural systems, the lighting systems, the mechanical, electrical, or airconditioning systems, and they understand the impact of those maybe more in detail than the people who are trained as interior designers. . . . Architects focus on the space, and then they put objects into it. The interior designer focuses on objects and then creating a space around them." Mueller agrees, saying, "In architecture school you deal more in three dimensions—in building masses, volumes, site planning, pedestrian movement, large scale projects. Interior designers tend to concentrate more on filling out a space."

Interior design, Charles Gwathmey, FAIA, says, "begins with how one perceives and interprets the nature of space. If you take a holistic approach to the design of buildings and see the design of buildings as a manifestation of their spatial organization, the concept of not designing the space simultaneously with the building is just not conceivable. Through the ages, good architects have always designed their buildings as a function of the space they enclosed. The split between architects and interior designers is a philosophical split."

Stern takes an even more caustic view: "I don't know what interior design is. I think there are two basic categories. There is architecture, which has to do with making buildings and the rooms in the buildings, and there is decoration. I think interior design is an unfortunate category and basically becomes space planning. But I do admire the work of decorators."

Many interior designers would disagree with these definitions. Bernard S. Vinick, president of the International Federation of Interior Designers, says, "Today's profession [interior design] no longer views interior spaces as simply something to 'decorate.' The interior designer is obliged to consider the total interior environment; interpret and analyze user needs; develop programs or requirements; *establish* functional relationships between organizational elements; prepare detailed working drawings and specifications for hundreds of square feet of space and administer construction contracts; deal with the design of the environmental systems that heat, cool, and illuminate interior spaces; and prepare budget cost estimates. We also select furniture and finishes."

Interior designers are seeking licensing because of two different threats to the status of their profession. On one hand, as Vinick says, "there is absolutely nothing to prevent totally unqualified persons from referring to themselves as interior designers." On the other hand, qualified designers worry that "without protection from falling within the purview of the architectural registration laws and without legal professional status of their own, interior designers may find themselves in a position of not being able to legally perform their services," in the words of lawyer Jerrold M. Sonett.

At the heart of the matter is definitions. Asks Carl Sapers, legal counsel to the National Council on Architectural Registration Boards, "If architects and interior designers do the same thing, why should qualifications differ and why should there be two separate registration procedures? . . . It is very likely that an interior designer is in fact more sensitive than a general practitioner architect to the specifics of interior design. But to license the interior designer's discipline separately from the discipline of architecture will cause a statutory diffusion that threatens the role of the architect as the all-encompassing harmonizer of all of the various components of the structure—both inside and out."

Key to the controversy is the difference between title and practice acts. The former regulates the use of a professional title only, whereas the practice act regulates the performance of a service. "A combined title and practice law for interior designers might prove to preclude from performing interior design services any architect who is not a registered interior designer," suggests Arthur Kornblut, AIA.

A certification process for interior designers—whether it be voluntary or involuntary—has been in the making since 1966. In 1972 the National Council for Interior Design Qualification was founded and has since developed a two-day qualifying examination for interior designers. NCIDQ hopes to make the discipline of interior design a federally accepted professional classification.

Meanwhile, the American Society of Interior Designers is recommending state title laws to protect interior designers. Currently three states have title acts—Alabama, Connecticut, and Louisiana—and several more are considering them. ASID has drafted model legislation that includes education and experience requirements, a code of ethics, grandfather and reciprocity clauses, and a qualification examination based on the NCIDQ exam.

AIA opposes the licensing of interior designers because "in their proper role, interior designers do not perform services or make judgments that implicate public health, safety, and welfare, the only basis on which licensing should depend," says Robert Brosher, FAIA, as spokesman for the AIA task force on licensing. "To the extent that the design of building interiors calls for services and judgments that can affect public health, safety, and welfare, the expertise derived from architectural training is required." The underlying concern is that "licensing interior designers could diminish the public opinion of the competence of architects to perform the same services. A title law for interior designers could be the first step of a sequence of events that would eventually push architects out of the role of interior designer altogether," Brosher added.

In a November roundtable at AIA headquarters some 90 architects and interior designers hotly debated the licensing issue. In summary, Stanley Abercrombie, AIA, editor of *Interior Design* magazine, said: "By seeking licensing laws, interior designers are worrying architects, making them fear they will be cut out of the interior design market. This worried reaction from the architects in turn gives concern to interior designers that architects will try to bar them from offering their services. These are legitimate concerns." □

Kaleidoscope

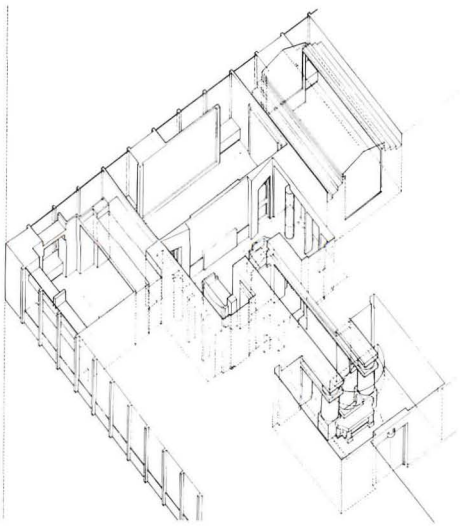
Furniture Made Architecture In a Place of Theatrics

The underlying design theme of the CBS Theatrical Film Division's New York City office is the "theatrics of architecture—arrival, procession, destination," according to Bartholomew Voorsanger, AIA, of Voorsanger & Mills, New York City. This theme is developed through the use of monumentally scaled, classically inspired furniture. As Voorsanger says, "The furniture in effect becomes the architecture."

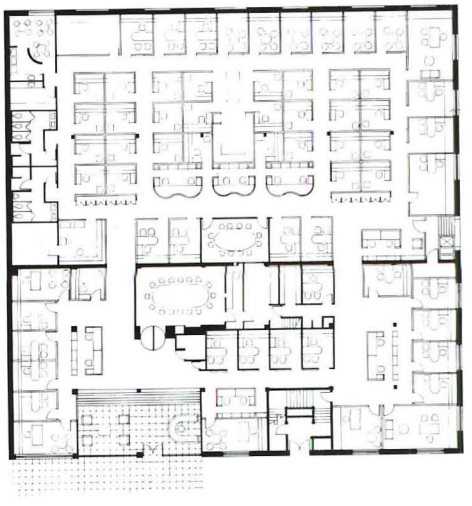
Upon arrival, the first image is the reception desk, the design of which plays with several sizes of columns. The largest columns frame the receptionist as well as the view down the colonnaded corridor to the individual offices. This corridor becomes the procession aspect of the design leading to the destination—the offices of president and vice president and the conference/screening room. To the left is the vice president's office, to the right the president's, and straight ahead the conference room.

The office is actually the New York branch of a production company headquartered in Los Angeles. Therefore, it had to serve as a temporary office for the president and others and a permanent office for the vice president and her staff. Through the architecture and the furniture, Voorsanger attempted to resolve the inevitable tension between the two divisions. The president's room is larger and more ceremonial. The vice president's office is more intimate, although a subtle sense of power is achieved by using the built-up window walls as a frame for the desk. Throughout, the classical columns are repeated in the furniture and the colors are pastels. N.R.G.

Across page, receptionist desk, the design of which is a play upon the classical column, dominates the lobby. The corridor behind the desk leads to the private offices, with the more formal president's office, above, contrasting to the more intimate vice president's office, left. Colors throughout are pastels.



Remnants of a Warehouse as a Background for Airy Offices



Located in the Jackson Square neighborhood of San Francisco, his renovation of a warehouse interior into offices for an advertising agency draws a clean, crisp line between old and new. According to James Follett, AIA, of Gensler & Associates, the idea was to display the old building's shell and structure as the backdrop for a new light, airy, and open contemporary workspace.

Before renovation began, the warehouse offered a yawning interior space of 25,000 square feet, punctuated by wood columns and intermittent skylights. Bisecting the square interior was a bearing wall through which only a limited number of openings could be made. (It supports a partial second story at the front of the building.) The columns, roof structure, and brick walls wore a dingy patina of age, says Follett, but a thorough cleaning revealed their warm, earthy tones. More skylights were added, further brightening the interior, while original skylights were cleaned or replaced. And the new, exposed mechanical systems are appropriate in a building that celebrates its skin and bones.

The most dramatic transformation in the warehouse occurs in the reception area. The former site of the building's loading dock, the four-foot drop between the dock and street level is now a welcoming staircase. The industrial overhead doors were replaced by a fully glazed entry.

Follett chose a subdued field of white walls and gray carpet to allow the brick and wood to stand out. Added to this in a sparing way are accent colors of pink, green, purple, yellow, and blue, "very bright colors to spark the space up," explains Follett. He adds that the clients have been encouraged to change the colors of different elements to freshen up the interior from time to time. M.J.C.

Across page, top, former warehouse loading dock is now the reception area for renovated offices; across page, bottom, skylights punctuate a corridor; above, pink accent walls.

Offices Echo Architectural Themes of a Famous Building

© Wolfgang Hoyt/ESTO

Tucked into a corner of the 66th floor of the Empire State Building is the office of the Mary Flagler Cary Charitable Trust, designed by James Rossant, FAIA, of the New York City firm Conklin Rossant. The theme of the interiors is appropriately art deco.

The small (1,500-square-foot), rectangular-shaped office is entered via a tiny foyer whose dominant feature is a mural designed by Rossant that is a somewhat abstracted Empire State Building. Also represented are the trust's major interests—music (a violin, a man playing the flute, musical staffs), conservation of natural resources (a hand holding trees, acorns), and playing cards. Surrounding the mural is the first presentation of the office's major theme—nickel stainless steel columns and horizontal bands. Identical columns and bands dot the interior; many become valances for the windows and blinds. The valances are also interpretations of the strips that vertically frame the windows on the exterior.

The foyer leads to a small reception area. Directly behind the mural is a storage room, and along the windows are a small room that is used by a trustee and the executive assistant's office. Running the width of the space and occupying the corner is the director's office, which doubles as a conference room. Colors are a shimmering turquoise and silver. N.R.G.

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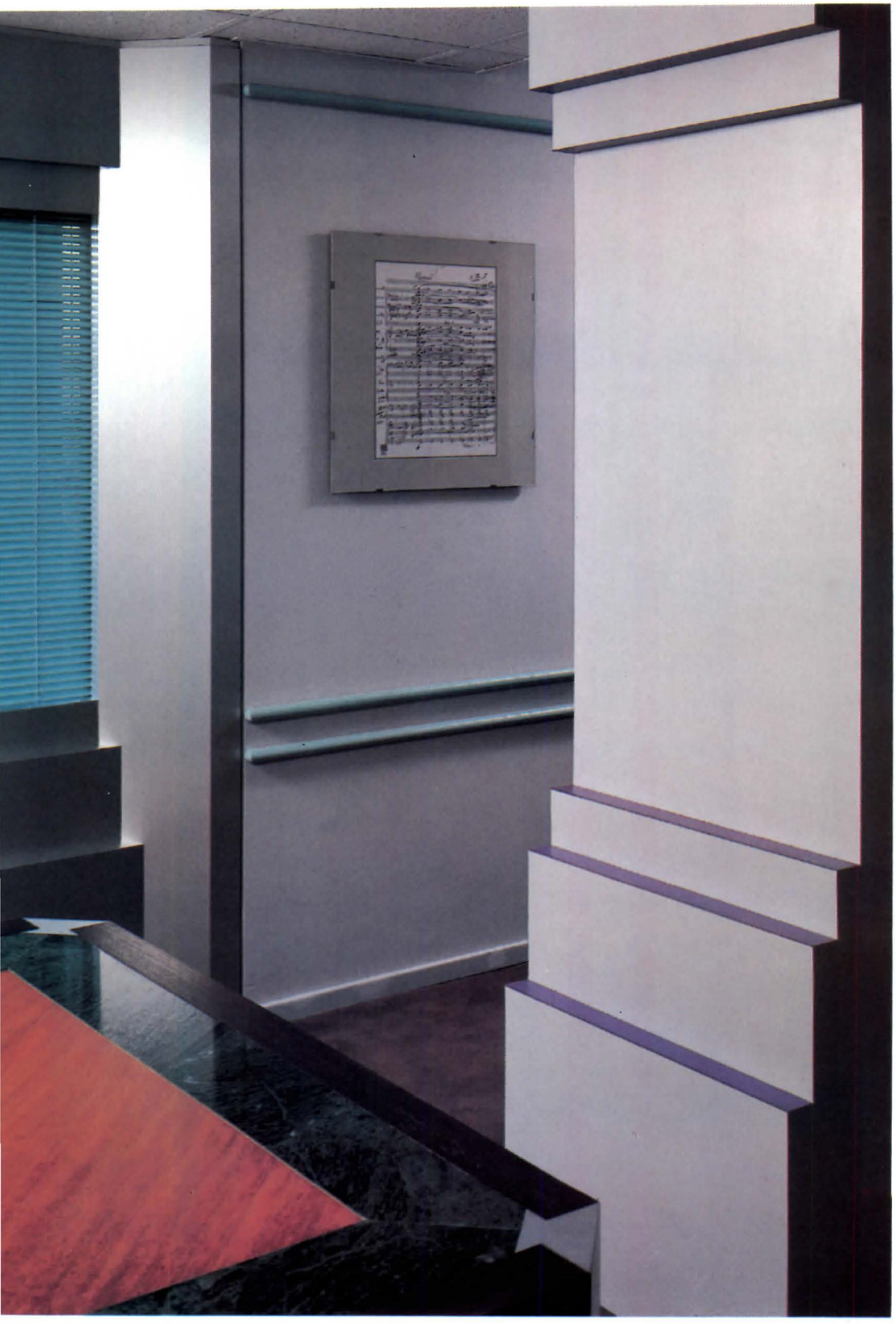

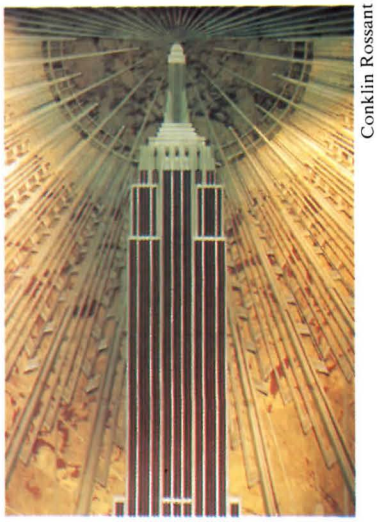

Conklin Rossant

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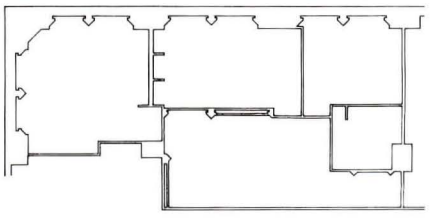


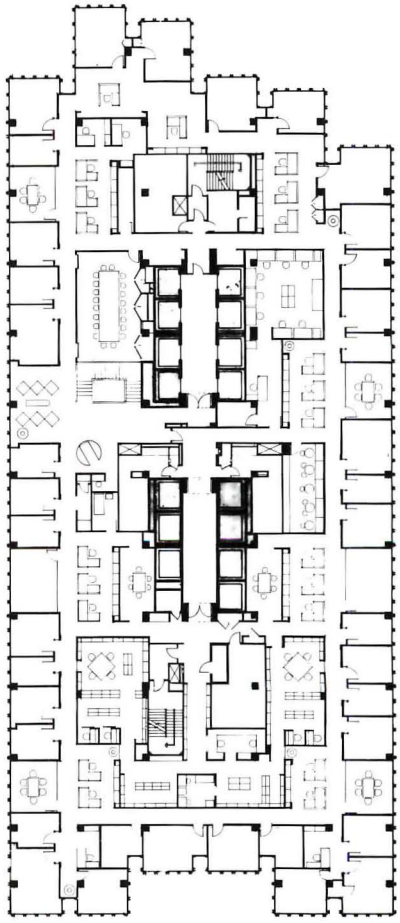
Across page, foyer mural reflects main lobby's, shown at top of this page. Across page, director's office/conference room. Above left, reception area. Above, inverted column becomes a light well.

Offices Designed to Give The Illusion of 'Streetscape'

Interior design as the art of illusion is a salient theme in this renovation of an office interior for a law firm in San Francisco, completed by Gensler & Associates. According to Kei Yamagami, chief designer of the project, 90 percent of the existing interior partitions had to remain because of cost. Transforming the interior was accomplished primarily by surface treatment and furnishings.

Yamagami says that the corridors of the office were considered as Italian "streets," complete with slate colored carpeting. Doors into offices and other spaces read as part of the streetscape. The wool fabric on the partitions as found was replaced with a parchment paper wall covering imported from Italy. The parchment is applied horizontally so that it takes on the visual characteristics of stone. The paper panels also have masonrylike horizontal raked joints to reinforce the illusion. Entrances into major interior spaces are celebrated by framing them with a stylized profile of an architrave. By painting these portals a light sand color they are differentiated in the streetscape.

Throughout the office secretarial stations are grouped in twos and threes across from conference rooms partitioned with fully



Across page, top, view toward secretarial station through 'torn paper' glass partition of a conference room; across page, bottom, the festive staff commissary; above, view of conference room with added privacy; right, art works displayed with accent lighting.

glazed walls to admit light into these interior spaces. The secretarial stations are clad in random-width, horizontally laid ash with its grain vertical, posing as a masonry material. The glass office partitions, however, turn the *trompe l'oeil* technique on its head. Here a rigid material is sandblasted to look like torn sheets of tracing paper.

A staff commissary offers an alternative to the conservative and reserved nature of the work spaces. Here bright lights, bright furnishings, mirrors, and red and white striped benches allude to the festive feeling on an Italian cafe. Also an integral part of the office design are featured art works that were chosen by Yamagami and the clients working with an art consultant. Lighting is strategically placed to highlight the pieces, lending a refined, museum atmosphere to these legal chambers. M.J.C.

EXAMINING 'SICK' BUILDINGS

Health hazards in the interior environment. By George Rand

"For those of you in the rear half of the room, the irritant you feel in the air is diesel exhaust from an idling truck that is unloading displays just outside. Gases are coming into the room from the public corridor."

The speaker paused and looked impassively at the 200 symposium participants seated in the ornate Gold Ballroom of San Francisco's Sheraton-Palace Hotel. "We've asked them to turn the engine off," he said, and then commented wryly on the fact that the architectural profession's first national symposium on indoor air pollution was almost being "gassed out."

The event last November, cosponsored by AIA and the California Council/AIA, came in response to growing concern over "sick building syndrome." In the past six years, more than 250 official government investigations have been carried out on buildings, usually newer, energy efficient, sealed office buildings with open office plans. The occupants are typically white collar workers who complain of stuffy air, undesirable odors, thermal discomfort, and a variety of health symptoms ranging from a general malaise to short term illness (skin rash, headache, fatigue, nausea) to chronic, long term problems (asthma, supressed immune system response)—all attributed to sources within the building. Adding to public concern are cases of contamination such as Legionnaires disease in which infectious agents or allergins circulated in building air and caused minor or major epidemics.

The causes of some persistent illnesses are not at all well understood, but there is a growing belief that symptoms have something to do with the chemicals used in building construction. Formaldehyde, for instance, an ubiquitous bonding agent in glues, is a prime suspect. Several thousand pounds of adhesive may be used in a high-rise building. The "off gassing" of large quantities of free formaldehyde continues for a long time after installation. Since formaldehyde is a known irritant and a possible carcinogen, there is some reason for concern, although the quantities of the chemical found in office buildings, for example, are fractions of that found in the closed environment of some mobile or manufactured homes.

The feeling by building occupants of being at risk is abetted by their perception that air flow has been reduced below comfortable limits. The use of variable air volume boxes in recent office buildings to conserve energy results in a system that is less demand sensitive than either constant volume or individually operated systems. VAV systems are responsive to temperature variation only and are incapable of being regulated on the basis of air quality requirements. More critically, people in the profession are asking whether there is something in office buildings today that might resemble the formerly widespread use of asbestos. Are the chemicals and materials employed in buildings likely to turn around and "bite us," as asbestos did? Are there ways to avoid complicity by being aware of the harmful nature of chemicals used in buildings or the limitations of the life support systems?

There was a deja vu quality about the San Francisco symposium. It held parallels with conferences in the 1970s concerning energy efficient buildings, handicapped access, and firesafety codes. Depending on your politics, the air quality meeting can be interpreted as opening a dialogue on a new and needed area of concern for the building industry or, alternatively, "there you go again" walking a path leading to premature regulation that will have a stifling effect on building.

From his perspective as head of the advisory board on the built environment of the National Research Council, John Eberhard, FAIA, assessed the reaction by the general public and researchers. "Given the present state of knowledge of health consequences of indoor pollutants as opposed to discomfort," he suggested, "it is unlikely to become a major public issue, and it is not ranked highly on the research agendas of any of the public or private participants in the council. If future research on health effects gives a clear set of signals on the nature of the danger . . . as with asbestos . . . then we may see legislation and other corrective measures."

Symposium speakers were selected from among a growing group of industrial hygienists, physicians, ventilation engineers, microbiologists, and health physicists who are devoting their efforts to the solution of the problem of sick buildings. Ironically, most researchers in this field know little about architecture. Such scientific presentations characteristically begin and end with codicils to the effect that results are tentative and require further scientific research to determine the actual causes of complaints concerning health in buildings. But as then-Institute President George Notter, FAIA, said, the architecture profession can ill afford to wait this problem out. Public trust is critical to professionals, he said, and an architect, the natural target of complaints as the "maestro" of the building team, is usually held to account for the whole building even if much of the construction and operation of buildings is outside his or her control.

The potential for liability faced by architects was discussed by Gerald Weisbach, FAIA, an architect/lawyer and partner in the San Francisco law firm Natkin, Weisbach, Brown. There is a high potential for litigation against architects in general, Weisbach said. This is augmented when it becomes possible to make highly accurate measurements of pollutants that can be linked to health effects. The question is whether architects are likely to be held accountable for knowledge about the health effects of buildings that they do not now possess.

In general, Weisbach said, courts have shifted from treating architects as "professionals" to considering architects as "manufacturers" or producers of products. A professional service is a form of judgment based on high educational achievement. Professionals are not insurers of work and must only show that they avoid errors due to negligence, he said. But an intepretation of architect as a "manufacturer" would suggest an implied warranty that the building is "suited for its use." The presence of pollution that compromises a building's use or incurs great costs to restore the healthy condition could be interpreted as a responsibility of the architect. Weisbach expects little protection from this kind of litigation in the future, with the courts likely to assert that the standards of the profession are too low.

From a legal point of view, architects would be wise not to use "space age products" that may have unknown side effects, Weisbach said. From a contractual point of view, he said, architects need to "bite the bullet" with clients so that risk is assigned to the party who can most afford to absorb the risk. If, for example, a client insists on substitution of inexpensive materials and finishes, the limitations of these materials need to be com-

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Mr. Rand is associate dean of UCLA's graduate school of architecture and urban planning. This magazine first published an article about indoor air pollution by Mr. Rand in October 1979. Drawings are from Vesalius' *De Humani Corporis Fabrica,* 1538.

unicated to the client and the architect indemnifed for "air uality" concerns if the questionable product is specified against ne advice of the architect and his or her consultants.

Veisbach said his single best word of advice is to document ne decision-making process as completely as possible so that n the unlikely event there is need to provide evidence the ata will be available. In this respect, the presence of a comlete "architectural program" becomes an aid to the architect.

An important aspect of this process has to do with the speciing of products and the liability of manufacturers of products nemselves, a subject explored in an informal workshop led y Hal Levin, a University of California/Berkeley architectural researcher. Following are some of the findings.

Manufacturers are understandably reluctant to reveal the off assing characteristics of their products. Since many products re in fact assemblages of products, a carpet manufacturer, or instance, may not even know the chemical properties of ne yarn, the backing, the padding, and the adhesive. Similarly, interior office partitions have a fabric, a backing, sound bsorbent materials, adhesives. Compounding the multiple otential sources in the products are cleaning materials, esticides, and other chemicals brought into buildings by ccupants. If, however, architects specifying large quantities f these products begin to express an interest in long-term hemical properties and health effects, the manufacturers may nd it good business to compete on the basis of tests performed n products in actual applications. Pollution avoidance may ecome a salable feature of a product, a quality that could be dvertised. This in turn would induce private industry to perorm research on new products with more healthful properties. roducts might be allowed to "cure" prior to sale, and this too ould become part of the sales pitch.

An architect in the audience, weary after two long days of resentations of this new, overwhelming set of concerns, tried to oil it all down to a practical course of action by posing a uestion. "If I called a staff meeting in my office tomorrow nd I said I want a single idea to communicate based on this ieeting, what would it be?" Research chemist John Girman f Lawrence Berkeley Laboratory, who was conducting the orkshop with Hal Levin, responsed that it is impossible to ffer guarantees that a new building will not become a "sick uilding." "Get the owner to throw away energy efficiency for x months to one year so the building has a chance to flush self out," Girman advised. "Don't move in a single person until ie entire building is completed and has been tested to make ire the levels of pollutants are below a baseline. Once a buildg develops the reputation as a problem building it is stuck ith it for a long time."

The engineering of mechanical systems for ventilation is a itical issue. While some analysts feel that a good HVAC sysm can cover the sins of a thousand pollution sources, there e others who see this concern with indoor air quality as nessitating a radical new look at the assumptions made by engiers about the function of HVAC systems.

Another symposium participant, Honeywell Corporation scienit James Woods,foresees a shift in concerns from conventional ethods of HVAC control to a broader "indoor air quality conol" discipline in which health and comfort control are managed ithout necessarily coming into conflict with energy savings goals. Woods, responsible for Honeywell's research and development in the area of indoor air quality, says that while the narrow pursuit of energy efficiency may have helped create a health crisis in buildings, the reverse is not necessarily the case. He proposed that buildings designed for "environmental acceptability" can also be cost-effective in their operation.

In a separate presentation Ralph Rowland, FAIA, noted that health issues have never before played a major role in building codes except indirectly—for example, in plumbing codes. If health issues in this context emerge as a focus of public concern, the profession needs to be prepared for a complex challenge, he said. Suggested Harry Jacobs, AIA, president of the California Council/AIA, "So many different types of people use our buildings, from infants to the frail elderly in nursing homes, as well as the hardy people in between who may not be at all sensitive to polluted air. Research on health needs to be taken as seriously as structural integrity of buildings, and it may mean adding a new type of consultant to the already long list of specialists needed to design a complex building. "The architect may now have to master the languages of chemistry, biology, and medicine in order to competently orchestrate the health aspects of buildings."

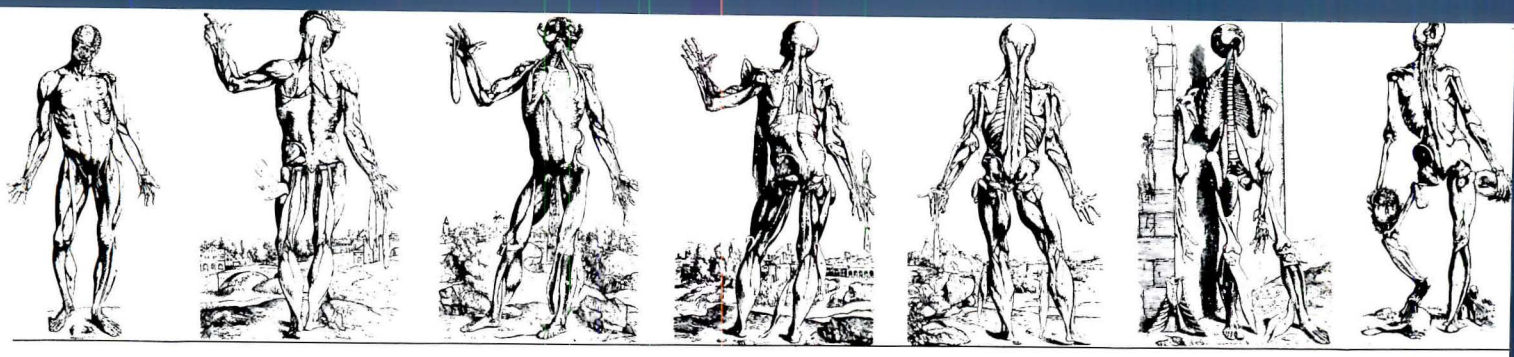
If the San Francisco symposium was accurately prophetic, data on the chemical profiles of air in buildings someday will become part of the conception of buildings. Specifications of finishes and materials will include review of off gassing by various chemical products, and the design and operational characteristics of mechanical systems will be subject to review from a health point of view. Further, health benefits of buildings that are well designed and operated with good indoor atmospheres may be marketed in part on the basis of healthy air and light.

One participant gave a very closeup view of the health problems. Philip Morey is an industrial hygienist with the federal government who has investigated buildings as environments for the growth of fungi and bacteria. His talk was about Legionnaires disease, but his concerns were general. Buildings are complex environments capable of growing all sorts of undesired organisms that may be a wallboard's thickness away from infecting large populations, Morey said. His closeup slides of gelatinous slime reveal colonies of fungi, mites that live on fungi, and other micro-organisms. His slides bring to mind army lectures on venereal disease.

Buildings, even those with Miesian design clarity, contain areas that can collect moisture or humidity and can allow fungal material to be spawned. If these pockets of growth are downstream of the air filters in buildings, serious health effects can result. There are horror stories of problem buildings that produced serious illness or widespread loss of work time by infected employees due to building sources. Yet, Morey said, "There is, to this day, no quantification of the scope of the problem.

"We know that micro-organisms thrive on moisture and warmth. What happens when we shut down buildings on weekends to conserve energy? Is this a source of microbial growth that is passed on to building occupants during the week?"

Morey cited the case of an air handling unit with a maintenance slot too small to permit cleaning of the equipment. Because the unit could not be properly cleaned, it spawned bacterial growth that became the source of infection in the building. In another instance, the fan coil units were not adequately maintained and were permeated by mildew leading to a spread of illness. The level of bacterial colonies was measured to be



literally as great as in a "pig pen," according to Morey, when the fan coil units were turned on.

Another important new perspective was offered by scientists studying the potential for exposure to known toxic compounds inside buildings. John Girman, research chemist with Lawrence Berkeley Laboratory, has performed detailed investigations of the chemistry of building materials using small samples placed in test chambers. Measurements are made of the gaseous products that emanate from the materials under different conditions of heat and temperature and over time using a gas chromatograph/mass spectrometer.

Girman reported a study in which he tested 31 building products and found that most emissions were from adhesives. A total of 50 adhesive products were then tested using gas chromatograph/mass spectrometer techniques. These adhesives are used for carpets and other applications in buildings. The tests were performed under so-called realistic conditions meant to simulate the kind of contact an office employee might have with the materials. Therefore, the materials were allowed to dry out for some period of time before being tested.

The results surprised the team in two ways. First, water-based adhesives turned out to have high concentrations of "alkanes," a summary term for a series of volatile hydrocarbons with serious potential health effects. This was surprising inasmuch as the water-based glues are favored because of ease of work, cleanup, and lack of odor. They actually had a broader spectrum of these organic compounds than did the solvent-based glues that gave off a large amount of toluene.

Second, the concentrations were within the gross range one uses to define risk to industrial workers and were far higher than expected. Standards for industrial workers—normally healthy males—are higher than the desired exposure in office environments, although there is no accepted standard of maximum allowable exposure for office workers. The tests took place after 14 days of drying the test materials. Girman's studies show that the behavior of these volatile organic compounds offer some surprises as well.

Using formaldehyde as a typical compound, Girman showed how the chemicals may be locked inside a wallboard, for example, only to be released later when ambient water from high humidity migrates into the product. The released formaldehyde can then migrate into other products such as wood studs so it is not exhausted out of the building. In this way, under certain conditions, buildings can act as "sinks" for volatile organics, sopping them up like a sponge and later releasing heavy doses of the compound when there is a rapid increase in humidity. By the time the investigators test the environment, the source of irritation may be long gone. These products have half-lives of as long as two years, so that they do not begin to fully disappear for that length of time after installation.

Evidence suggests that large amounts of volatile organics are in the air of buildings for long periods of time after construction or renovation. Many complaints about problem buildings occur during first occupancy when there is a rush to start rentals as soon as possible. In some cases of complaints in recently opened buildings, 20-30 percent of employees refused to come to work. The source of problems was eventually linked to carpet adhesives that were off gassing chemicals with the same "signature" as those measured in the laboratory.

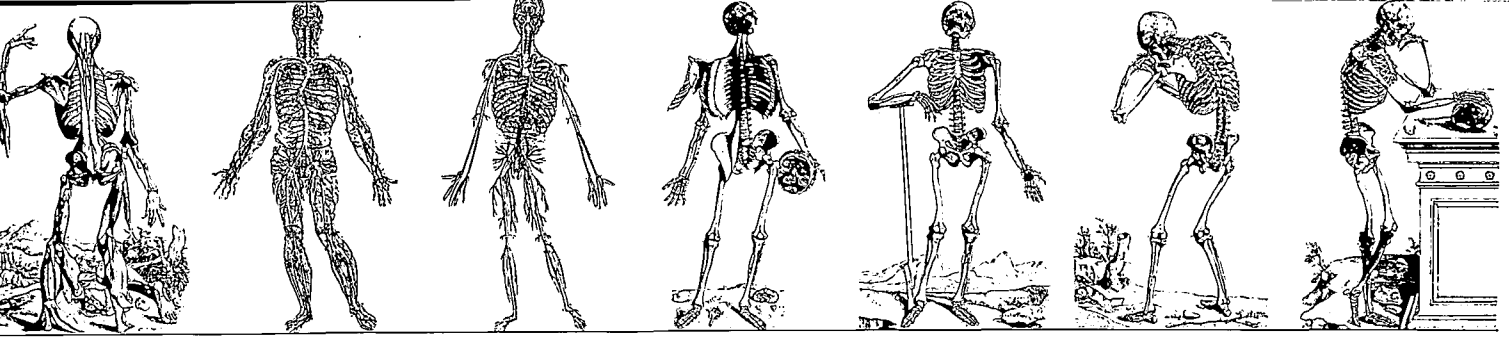
Lance Wallace is a physicist who worked for the Environmental Protection Agency studying personal exposure to indoor contaminants. Currently he is a visiting scholar at Harvard's school of public health where he is working with John Spengler, one of the leading researchers in this field. Wallace's research, which he explained in San Francisco, calls attention to the fact that the occupant of a building containing these organic compounds is the ultimate "integrator" of their effects. Depending on our life styles we may be exposed to multiple chemicals in the course of a day, each in different settings that we enter. The sum total of these exposures is hard to estimate, but the recent studies reported by Wallace show these space age chemicals to be highly ubiquitous in both indoor and outdoor air.

Wallace and a group of scientists have developed what they call the total exposure assessment methodology, which measures continuous personal exposure to 19 volatile organic compounds using personal monitors and regular testing of 355 residents of Elizabeth and Bayonne, N.J. He said daily sources of chemical exposure are common and usually taken for granted. But the exposures add up, especially if the ultimate target of their toxicity is a particular organ like the liver, the lungs, or the nervous system.

For example, breath sample studies of people who have just filled up their tanks with gasoline show a heightened level of benzene, a substance used to replace the lead in gasoline. While lead is known to be extremely toxic to a variety of human organs, benzene is a known cause of leukemia in humans, although its efforts at low levels of exposure are considered to be less dangerous than the known effects of lead. A visit to the dry cleaners produces measurable increases in the amount of tetrachloroethelene in the breath sample. This is a major ingredient in cleaning fluids. Dichlorobenzene, a widely contacted organic compound that is used in deodorants in public toilets, is being tested as a possible carcinogen. And styrene, a common component of plastics, rubber products, and cushions, is known to be a kidney and liver toxin.

Wallace was quick to point out that there is very little testing of compounds that are primarily found indoors because these are not within the charge of the research agenda set out for the Environmental Protection Agency in the Clean Air Act. One can only extrapolate from studies of outdoor air as to the individual and summative effects of these diverse compounds. He does however point to a tentative explanation for the "sick building syndrome" based on some of the research taking place in the laboratories of Prof. Birgitta Berglund in Stockholm and Prof. Lars Molhave in Aarhus, Denmark. Each of these investigators has found a way to demonstrate beyond doubt that there is something about the air that is responsible for the complaints. But it is not a simple matter.

Berglund has constructed a mobile laboratory out of three cargo containers that can be moved into place near a suspected sick building. Two heavily insulated ducts connect the laboratory to the building HVAC system. One duct is for supply and the other return. Air drawn out of the problem building is presented in precisely measured concentrations to subjects to sniff through a special device. They are not aware of the source of the air—that is, whether it comes from the building air or from the fresh air supply around the trailer. In fact subjects are selected who know nothing at all about the reason for the testing



or the nature of the problem building that is being tested.

In one instance Berglund reported on the study of a school building outside Stockholm with persistent reports of "bad air" by occupants. The task for the laboratory subject was merely to determine whether he or she liked the air. This judgment was made at various concentrations of the building air, over many trials, with shifts back and forth between building air and ambient air samples. Consistently, subjects with no knowledge of the source of air judged the air from the sick building as less desirable than outside air. While the results seem unremarkable, it was the first time anyone has demonstrated an objective basis for complaints when the amounts of individual compounds are below the threshold of sensitivity but where there is a configurative effect caused by several compounds.

Meanwhile, Molhave has demonstrated subtle objective effects of very low levels of these volatile organic compounds on memory function at concentrations far lower than occupational standards and more in keeping with the concentrations one finds in building air. Molhave and his colleague Bodil Bach tested subjects who had previously been exposed to "problem building air." The researchers exposed them to small doses of similar chemicals and found as a result a decrement of memory in tests.

Further studies by Berglund have begun to suggest that the presence of multiple organic compounds in the air may have a different "signature" than the blend of chemicals we have been preadapted to accept in our environment as a result of biological and cultural evolution. In other words, while we have learned to live with chemicals in wood and, as in cedar, even appreciate the odors of some chemical off gases, these new configurations of trace elements may not be acceptable to our bodies and may become a source of stress. Studies of the psychological and behavioral effects of very low levels of volatile organic compounds are just now being undertaken and may be the route by which further light can be shed on the chemical sources and effects of low level exposure to these compounds.

What seems apparent from the work of Wallace, Girman, and others is that comprehensive research is needed along the lines of work being done in Scandinavia to determine the composition and health effects of chemicals commonly found in indoor air. The lack of hard data on these health effects is to a great extent a function of funding sources for studies.

On the federal government level the Consumer Product Safety Commission is restricted to studying specific products like spacking compounds containing asbestos and kerosene heaters that can be sources of oxides of nitrogen if not properly vented. HUD has a limited role in overseeing formaldehyde emission rates in plywood and particle board products under its manufactured housing statutes. By far the most "empowered" agency in this arena is the Environmental Protection Agency, but its statutory powers are focused primarily on outdoor air. David Berg, employed by EPA but not speaking for the agency, told the San Francisco symposium that the agency denies responsibility for regulating indoor air quality under the Clean Air Act.

But another federal agency provides perhaps the best documentation of the scope of health complaints in office buildings. By far the largest number of investigations of this type has been undertaken in the past 10 years by the National Institute For Occupational Safety and Health. According to James Melius, M.D., of the institute (as explained in a written statement for the AIA symposium), complaints have increased dramatically in recent years. Rarely are the complaints readily traceable to a single source. Instead, studies usually reveal a variety of ubiquitous chemicals that are incapable of individually inducing symptoms due to the allegedly small quantities.

Nearly half of the institute's investigations concluded that symptoms were connected to inadequate ventilation, a finding that correlates with the "lore" of this field of research. Melius cited an investigation of a building in Washington state that later revealed that the air intake for the building had been covered to protect the air handling system from debris from the Mount St. Helens volcano. Another investigator found that a large piece of sagebrush had been blocking a building's air intake for some months and was also the source of allergenic material being brought into the building. And there is a famous case of an office building environmental control system designed to be run by a complex computer program. After a series of vociferous complaints by employees, the investigator said he discovered that the computer had never been plugged in.

Closed ventilation systems are frequently implicated in the "problem buildings," with the HVAC usually the means of conveying contaminants from one area to another. Once contaminants get into the system, either from external sources—for example, motor vehicle exhaust entering the building through an air intake that is poorly positioned—or from internal sources—e.g., methyl alcohol from duplicators and pest control agents such as chlordane—they are difficult to remove.

There are myriad stories of systems operating without one or another important element, Warren Manchester told the symposium. Manchester is an investigator with the Sacramento office of CAL-OSHA, the state agency that investigates complaints concerning safety and health in all kinds of workplaces. In some cases filters are not properly cleaned or maintained or need to be upgraded—for example by substituting an electrostatic filter—to filter smaller particles, Manchester said. Frequently, a test of the air balance reveals gross inadequacies in air changes per hour actually functioning in a space. This is always possible when a space in an office building has been rearranged several times after the initial occupancy.

Manchester characterized the ceiling plenums of many buildings as being like "the settling pond of a sewage treatment plant," with sloughed off skin flakes, mites, insect parts. Usually beetles infest the area, and sometimes rats and mice.

From these everyday concerns to more esoteric research in the field, there are many implications for architects to a problem that is getting widespread attention. The San Francisco symposium fell hot on the heels of a large international conference in August held in Stockholm. That meeting, called Indoor Air '84, drew 800 scientists from 25 industrialized countries, and some 150 scientific papers were presented.

As both conferences made clear, health in buildings represents an area of overlapping responsibility among many groups in government, the building industry, the professions of architecture and engineering, and in unions and other associations that referee environmental conditions on behalf of the general public. And, as George Notter suggested in an interview after the San Francisco symposium, if architects "are not part of the solution they will be part of the problem." □

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BOOKS

Sir Leslie Martin as an 'Architect's Architect'

Buildings & Ideas, 1933-83. Leslie Martin. (Cambridge University Press, $87.50.)

Many American architects will remember the lecture Leslie Martin gave at Harvard in 1966 on an architect's approach to architecture. That was a long time ago, but of all the Gropius lectures it was the most vivid. Gropius was still living and was indeed sitting in the front row.

Martin began by outlining simply and crisply a handful of basic ideas with which he identified Gropius, Le Corbusier, Mies, and Aalto—ideas that in his view are the intellectual sources of the modern movement. He then went on to talk about the impact of these ideas on a whole succeeding generation of architects in different nations and contexts. But in particular he used his own architecture in England as a demonstration.

As we left the Loeb Theater a prominent Princeton architect and educator remarked: "How can he be so arrogant as to come all the way across the Atlantic and talk just about himself—with the great man sitting right under his nose."

I was with a group of architects who had come from far and wide for this event. We were stunned by the Princetonian's response. Was he joking? To us Martin's performance was an astonishing mixture of intellectual rigor and openness: a definition of key elements, as he saw them, in the grammar and syntax of the modern tradition, illustrated for our critical scrutiny by a candid and detailed review of his use of that language as a practitioner.

At last we have in book—and expanded—form what he did in his Gropius lecture, and the result is perhaps the most important statement of design theory by a practicing architect that has appeared in many years. And it couldn't come at a more appropriate moment, when those very tenets of Gropius, Mies, et al. are being questioned—ironically and most vociferously by Princetonians!

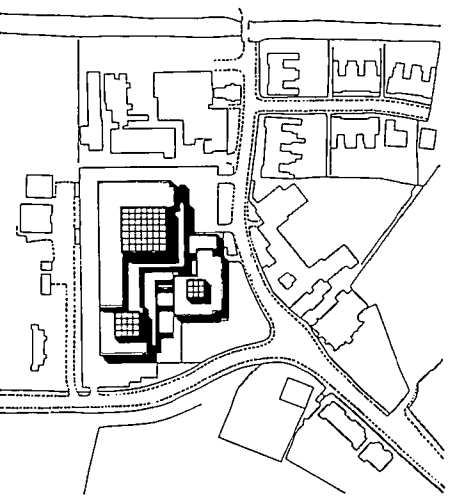
Martin is an architect's architect. His book's title is exact: buildings and ideas. Everything he does has an explicit theoretic basis to it. Once you understand the language you can read his architecture. Like written language, it has depths of meaning and a personal voice; but it is also linked to living traditions and to our common culture. These linkages have enabled him to excel in several fields—as an educator, as a public architect, as a writer and editor, and as a practitioner. In this sense he parallels Gropius. Like Gropius at the Bauhaus, Martin's relationship to artists is certainly one key. In the 1930s he was an editor with Ben Nicholson and Naum Gabo of *Circle,* a recently reprinted collection of paintings, sculptures, architecture, graphics, and statements by the then-young avant-garde abstract artists whose direction was classical, contemplative, concise. Hardly surprisingly, being English, his closest affinity was with Nicholson, whose paintings distilled the lyricism of English landscape in the language of international post-cubism.

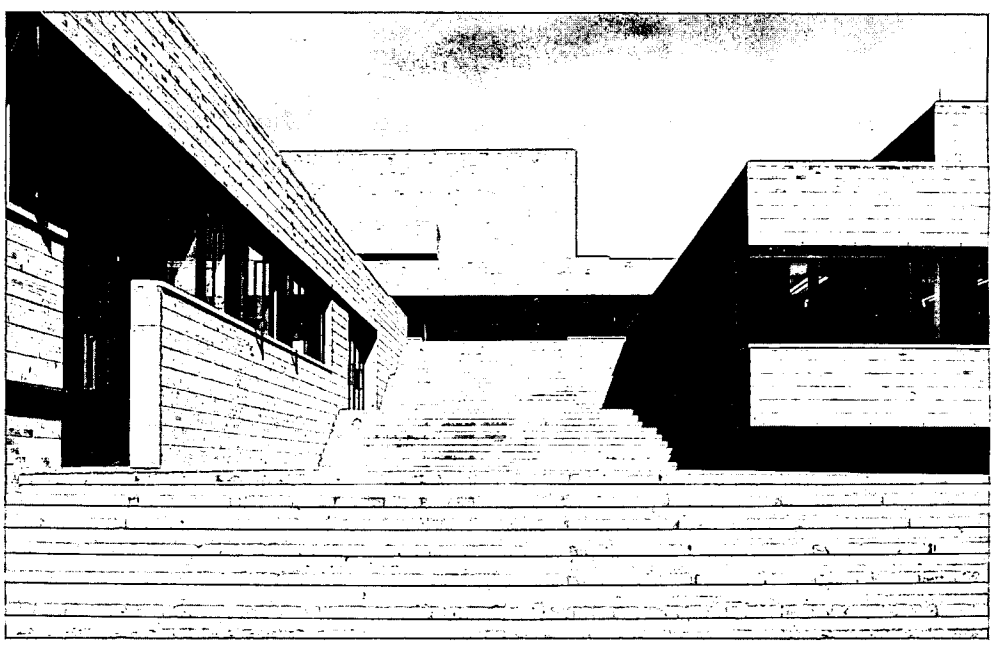
But let's get right to Martin himself. Talking of architectural composition: "I start from the simple and personal viewpoint . . . how a building is put together, how it has been composed around a particular idea or problem, is at the root of architectural thought." He makes a distinction between the formal systems of architecture—spatial and functional interrelationships—and changing fashions in architectural style. For instance, he sees parallels in the eclipse of Lutyens by Le Corbusier's generation, and Le Corbusier's eclipse by ours. Lutyens was put in limbo because his brand of Edwardian eclecticism went out of fashion; and Le Corbusier is in limbo now because his aeroplanes and passenger liners seem to us to be out-of-date propaganda for positions long since won. Yet the essence of both of them lies not in superficial images but in their sequences, rhythms, and precision of cubic volumes. Unlike Lutyens, Martin feels that the formal systems represented by Le Corbusier "are part of a process that is still developing."

Martin organizes his book in three parts: the theory of composing architectural form, a collection of his own buildings to illustrate this theory, and a section on form and environment. His work-process is to establish as early as possible a "type-form" appropriate to the building program, and then to refine it until it satisfies every programmatic condition. To demonstrate this he illustrates the evolution of his university buildings, libraries, and auditoria. The libraries begin as generic L-shaped plans, with corner entry to read-

continued on page 88

Below, site plan of Leslie Martin's library group at Oxford, one of the best examples of his use of the L parti in library design; right, entrance to library group.





Books *from page 87*
ing rooms and stacks on the opposite corner. This type-form for libraries leads to auditoria in which designs for seminar spaces, lecture rooms, and auditoria evolve into interlocking L's on the ground plane and on different floors providing an intricate yet coherent interrelationship and circulation around internal courts.

From these demonstrations Martin moves on to his section on form and environment. His indebtedness to Aalto is openly acknowledged. Aalto, like Martin, built up new designs on knowledge gained from the type-forms of his past solutions and refined them in intense and passionate dialogue with the landscape of his native Finland. Similarly Martin engages in intensive dialogue with English landscapes and traditions, and with English cities too. Sensitive to urban traditions, Martin identifies "two aspects of the problem of building in a city. At one end of the spectrum there is the question of significance, symbol, or the sense of place; at the other end there is the critical question of fitting in, of infill and anonymity." His range is from parts of cities, government centers, universities, and large housing projects to small houses and conversions, including his conversion of the 1642 village granary at Shelford, near Cambridge, in which he and his architect-wife Sadie have lived since 1977.

Martin is quietly modest yet proud. His writing is simple, spare, to the point. His pride emerges in his confidence that the accumulated evidence of his buildings spanning 50 years will prove his essential theory about the strength and logic of the modern tradition and will prove also the consistency within his increasing sophistication and complexity. Personally I am sad, knowing him over the years, that the book gives scant recognition to his extraordinary influence as chief architect of the London County Council when the face and structure of London changed in the crucial years immediately after the devastation of World War II and pays little heed to his impact as professor of architecture at Cambridge University.

One can but echo the citation accompanying the award of the RIBA gold medal to this remarkable architect in 1973. "He could have won the medal for his architecture alone, or his research, or his contribution to education; but it is perhaps his attitude to the whole range of his endeavors and skills that is his most important facet. Leslie Martin manages always to maintain a consistent philosophy that holds true for the entire range of his involvements. It is his thought that is central." DAVID LEWIS, FAIA, RIBA, AICP

Mr. Lewis is a founding partner of UDA Architects/Urban Design Associates in Pittsburgh.

Architecture of Death. Richard A. Etlin. (MIT Press, $37.50.)

For the recent secular past, Americans have tended to take for granted, or to ignore and even deplore as wasteful, the architecture and landscaping of cemeteries – this despite our earlier enthusiasm for the picturesque design of rural cemeteries on the outskirts of cities. A new look at our attitudes, as in the current widespread interest in approaches and feelings appropriate to facing death, may bring about a revival of concern with the "landscape of eternity."

Richard A. Etlin in this book, which is a meticulous study of Père LaChaise, a cemetery in Paris, gives us materials for thought, both in the text and in the 268 plans, photographs, and drawings that vividly illustrate the changes in social psychology as interpreted by architects. Etlin shows the transformation of the cemetery from burial in a church or churchyard to picturesque landscape.

Père LaChaise, high on the tourist's list of sites to visit in Paris, is more than a collection of tombs of distinguished French citizens. It is architectural evidence of fundamental changes in society. In 18th-century Europe, as the church declined in power, society went through revolutionary upheavals, and a pantheistic and then a romantic belief in nature took the place of both Church and Enlightenment.

The architect of Père LaChaise, Alexandre-Theodore Brogniart, began with a program that included an 18th-century garden on a hillside, appreciated for its beauty for 300 years, maintained as a Jesuit retreat, and embellished as "Mont-Louis" by Louis XIV for his confessor Père LaChaise. Confiscation of church lands in the Revolution had brought the property into the hands of the government at just the time when there was a public outcry for improved cemeteries. In 1804, Brogniart, as chief inspector general of public works in Paris, was given the site (about 35 acres) and a budget.

The architect respected existing planting and established a sequence of spaces that kept to the feeling of a garden with "gentle meanderings." A simple peripheral carriage path tied the site together, with diagonals planned for symmetry and convenience. This was a landscaped garden planned for a new use, combining regular and irregular elements to appear parklike within "wildness." Brogniart died in 1813, and later architects carried the plans to completion, holding to the variations of topography and the ideal of combining a sense of grandeur with one of "sweet melancholy" to create a funerary garden.

Once an ideal site for family picnics or a Sunday stroll, rural cemeteries in this country were designed by Olmsted and others with an eye on Père LaChaise, although size, topography, and effect differed widely. The movement spurred the development of public systems of parks which, in turn, have taken over many of the social functions of the earlier architecture of death. SARA HOLMES BOUTELLE

Ms. Boutelle is founder/director of the Julia Morgan Association, Santa Cruz, Calif.

Skidmore, Owings & Merrill: Architecture and Urbanism, 1973-1983. Introduction and regional prefaces by Albert Bush-Brown. (Van Nostrand Reinhold, $50.)

This book is a bargain for its price, considering the quality of its layout and paper stock, its length (almost 400 pages), and the number of illustrations (more than 600). The primary value of its content lies with its pictorial record—more than 100 color plates, some 260 halftones, more than 140 site and floor plans, and approximately 120 other line drawings.

The 76 projects selected for individual treatment reveal, as the text notes, considerable diversity in planning and expression. There is also no small range exhibited in the type and size of these projects. Nevertheless, large commercial buildings, for which SOM has always been noted, prevail. The examples shown suggest that the firm's major contribution to architecture continues to rest in this sphere. For different reasons, professionals and scholars will find the illustrations an informative source for reference. The introduction and five sectional prefaces, on the other hand, are more promotional than elucidating, and the text accompanying each project focuses on basic description.

One does not gain much fresh insight on programmatic, technical,or formal design issues, on the ways in which SOM's recent work has been innovative, nor on the workings of this remarkable organization itself. If this publication is accepted as a vanity book, however, it is a handsome and useful production.
RICHARD LONGSTRETH

Professor Longstreth, author of On the Edge of the World: Four Architects in San Francisco at the Turn of the Century *(MIT Press), is director of the graduate program in historic preservation at the George Washington University.*

The *English Terraced* House. Stefan Muthesius. (Yale University Press, £12.50.)
The English Vision: The Picturesque in Architecture, Landscape, and Garden Design. David Watkin. (Harper & Row, $55.)
The Last Country Houses. Clive Aslet. (Yale University Press, $29.95.)

These three books, which concern British architecture, will certainly appeal to the Anglophile. Each is lavishly illustrated.

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THE INNOVATIONS CONTINUE

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Books *from page 88*

Stefan Muthesius's *The English Terraced House* is an in-depth study of the most common type of house in Britain. The row house could be built rapidly, was economical, and built to a standardized design. He traces its development from the later Georgian period to the Victorian and Edwardian eras, discussing such topics as deeds and building regulations, sanitation, light, and air, the relationship of the row house to its environment, the plan of terraced houses and their varieties, the changing style of the facades, the materials and techniques of decoration.

David Watkin, another prolific author and scholar, turns to the picturesque whose theory and practice, he says, is England's major contribution to European esthetics. The picturesque, in which a landscape or a building looks as though it came out of a painting, was deeply rooted, says Watkin, in the country house. The first part of the book concerns the picturesque in garden design, from early landscaped gardens in the early-18th century to the Victorian era. If, says Watkin, the picturesque became less important in Victorian gardens, it survived in architecture, and he has lengthy descriptions of the picturesque house from Vanbrugh to Soane and from Salvin to Lutyens.

In *The Last Country Houses,* Clive Aslet, senior architectural writer for *Country Life,* writes entertainingly about the magnificent country houses built in Britain between 1890 and 1939. He puts his subject in a social context, telling about the ins and outs of daily life, the servants, the entertaining. He also describes the architecture in detail, the relationship between architect and client, the interiors, the gardens. The day when a client can build an addition of 25 guest bedrooms to a castle, as did William Waldorf Astor at Hever Castle, are gone, but it is interesting to read about such past glories.

Frank Lloyd Wright and the Prairie School. H. Allen Brooks. (Braziller, $11.95.)

Written by the author of the award-winning publication *The Prairie School: Frank Lloyd Wright and His Midwest Contemporaries* (1972), this paperback resulted from an exhibition mounted by the Cooper-Hewitt Museum. In a brief introduction, H. Allen Brooks surveys Wright's career over more than three decades and examines the work of such associates as George Neidecken, W. B. Griffin, and Francis Byrne. Most of the booklet is devoted to 91 drawings and photographs, many previously unpublished. They demonstrate, Brooks says, that the many hundreds of buildings of the prairie school "have more than stood the test of time and continue their useful service with little or no need of modification." □

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Letters *from page 8*

its Egyptian-like battered walls, not to be bested until recently by the San Francisco Spike!

Goodhue, and many others, were searching for ways to recover the structural integrity that had characterized architecture for thousands of years. A halfway solution, later employed by Hardie Philip of the successor-firm B.G. Goodhue Associates, was to use reinforced concrete buttresses and pointed arches in place of stone. He, and others, were also hunting desperately for a nonderivative or else indigenous form of ornament, as in Claude Bragwin's *Projective Ornament,* Lee Lawrie's intaglio sculpture (used in the capitol), and Clarence Stein's Aztec frieze on an art museum in Wichita, Kan. (Stein had been a designer in Goodhue's office and later became the most evident of Hubbard's "socially conscious" architects of the 1920s.)

I was pleased to encounter Hubbard's reference to Goodhue's entry in the competition for the Kansas City Liberty Memorial (won by H. van Buren Magonigle). As a neophite in the B.G. Goodhue Associates office in 1928, I got to know very well the beautiful wash renderings of Goodhue's version of the memorial that decorated the drafting-room walls. Years later, during my sojourn in the Midwest, I unexpectedly confronted the memorial as built. It was, I was startled to see, *wrong. This* wasn't to be here, *that* was! *Such* should not have been *such*! Simmering down, I realized that there really wasn't much to choose between Goodhue's version and Magonigle's. They were both honest-to-God masonry and looked it—as any building meant to last a few thousand years certainly should! (Or should it?)

Henry Wright, FAIA
Los Angeles

DEATHS

Morris Ketchum Jr., FAIA: Active as both a practicing architect and in service to the profession, Ketchum designed buildings all over the U.S. and in Europe, South America, and Africa. He also served in a variety of associations concerned with the built environment, most notably as president of AIA in 1965. Ketchum died on Nov. 22 at the age of 80.

A native of New York City, Ketchum studied architecture at Columbia University from which he received his degree in 1938. He was also a student at the school of fine arts in Fontainebleau, France. After working for Edward Durrell Stone, Ketchum opened his own office. Although he retired in 1974, he remained active in his practice until 1980.

Ketchum is most noted for his work in retail architecture. His design innovations included a recessed outdoor "shopping lobby," on which he collaborated with Victor Gruen in 1934, to relieve the continuous building-line storefronts on New York City's Fifth Avenue; and "Shoppers' World" in Framingham, Mass., built in the early 1960s, which placed an open-air pedestrian shopping mall into a ring of parking lots. His work in retail architecture led to his writing a planning text, *Shops and Stores,* published in 1948, which remained in print until the mid 1960s.

Other significant buildings designed by Ketchum included his renovation of and addition to New York City's old Squadron A building in 1960, which included a contextual new public school (designed before contextualism became an issue), and the World of Darkness and the World of Birds museums at the Bronx Zoo. He received a city award for the World of Darkness.

In addition to serving as Institute president, Ketchum was head of the Architectural League of New York from 1958 to 1960 and president of the Municipal Art Society of New York from 1962 to

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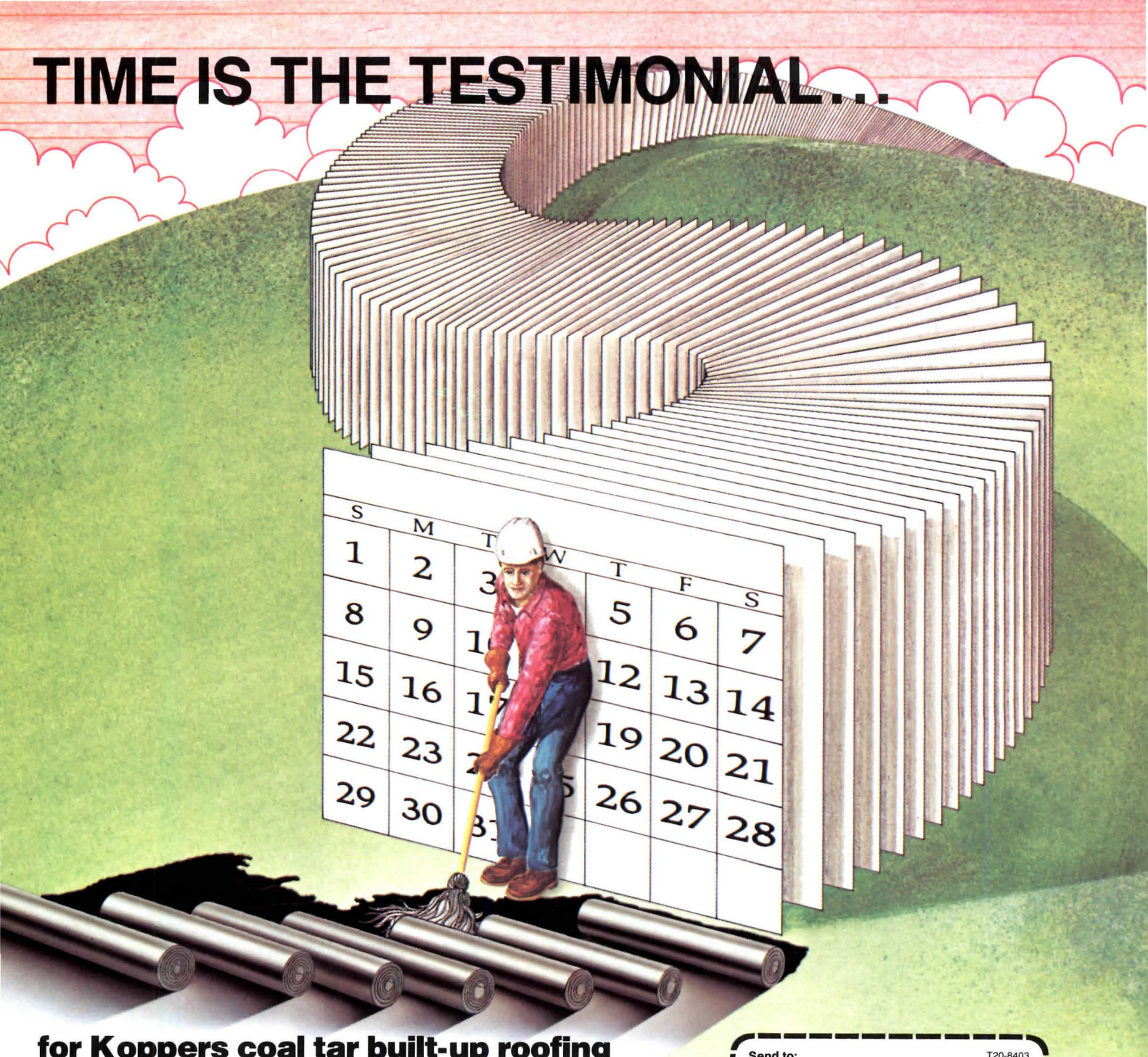
TIME IS THE TESTIMONIAL...



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Deaths *from page 92*

1963. In 1974 he became vice chairman of the New York City Landmarks Preservation Commission, a post he held until 1979. In August of that year New York City Mayor Edward Koch presented Ketchum with an award for his service to the preservation commission.

Edward A. Williams: In 1940, Williams co-founded with Garret Eckbo a pioneering landscape architecture practice in San Francisco. Their partnership eventually became EDAW, Inc., today a large and versatile landscaping firm with offices in seven U.S. cities.

Christopher Degenhardt, president of EDAW, writes in a brief tribute that Williams, "more than anyone, understood that landscape architects have a greater impact on projects through a team approach." In the mid-1960s, Williams promoted preparation of an open space plan for California that became a cornerstone in a comprehensive statewide planning effort. The plan classified open space and attempted to quantify its value according to need. In 1968 and '69, he orchestrated Hawaii's first comprehensive land use plan, a document that helped generate discussions about national land-use policy—although Williams later concluded that in most states land use planning was better left with the counties.

Williams, a 1972 fellow of the American Society of Landscape Architects, retired from active practice last June after 48 years in the field. He died in October at the age of 70.

Henry Klumb, FAIA: Practicing for more than 40 years in Puerto Rico, Klumb's work was reflective of the local conditions of the tropical climate, building materials, and craftsmanship, and sympathetic to the building problems of developing countries. Although he derided those who would make Puerto Rico's buildings look like Miami's, he advocated economic development. Many of his most recent buildings were pharmaceutical laboratories and manufacturing plants that were expressions of the new movement for "the rehumanization of the work place." Klumb was born and educated in Cologne, Germany, and emigrated to the U.S. in 1929 to work for Frank Lloyd Wright, with whom he remained until 1933. He died Nov. 20 at the age of 80 in an automobile accident in San Juan.

James T. Canizaro, AIA, Jackson, Miss.
William H. Carleton, AIA, Seattle
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Rudolph A. Goldstein Jr., AIA, Birmingham, Ala.
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Larry W. Taylor, AIA, Tulsa, Okla.
William C. Wertz, AIA, Dayton, Ohio
John D. Zamarra, AIA, Brielle, N.J.

BRIEFS

Women in Architecture Exhibit. The Chicago Historical Society will have on view through March 17 an exhibition celebrating the 10th anniversary of Chicago Women in Architecture, a professional organization established to advance the status of women in the profession. The exhibition consists of 30 wall-mounted shadow boxes each illustrating the work of a CWA member.

Penn Names Historic Preservation Head. Architectural historian David G. DeLong has been named chairman of the historic preservation program at the graduate school of fine arts at the University of Pennsylvania.

Peterson Prize Winners Announced. Harold John Bradley and Mary Reuman-Redenbaugh, both University of Virginia architectural history graduate students, won

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Briefs *from page 94*
a $500 first place award in the Charles E. Peterson Prize competition sponsored by the National Park Service and the Athenaeum of Philadelphia. The winning entry was a set of measured drawings of the Pavilion IV, designed by Thomas Jefferson, on the University of Virginia's lawn.

China Study Tour.
Art Explorer's Tours is sponsoring an 18-day tour of China with emphasis on the historical and current art and culture of the country. The tour departs May 3 and will visit Beijing, Xian, Builin, Shanghai, Wuxi, and Suzhou. For more information, contact Hank Baum, 2140 Bush St., San Francisco, Calif. 94115.

Design Competition Entries Sought.
The City of St. Paul, Mayor George Latimer, and the design arts program of the National Endowment for the Arts are sponsoring an open design competition to create an urban park from a 12,000-acre, triangular open site in downtown St. Paul. Cash prizes of $10,000, $4,000, and $1,000 will be awarded. The jury will be comprised of landscape architect Hideo, Sasaki, Bernard Spring, FAIA, Richard R. Whitaker, James Wines, and James J. Bellus. Registration requests accompainied by a $50 entry fee are due Jan. 30, and completed submissions are due May 20. For more information, contact Cityscape Design Competition, Douglas Foster, Department of Planning & Economic Development, 25 W. Fourth St., St. Paul, Minn. 55102.

Architecture Media Awards.
AIA has cited two daily newspapers, two monthly magazines, and a cable television network for their "outstanding coverage of architecture, urban planning, and design." The five winners are the *Christian Science Monitor,* the Charlotte (N.C.) *Observer, Arizona Highways,* the *Atlantic,* and the Arts and Entertainment Network.

CREDITS

Evelyn Chapel, Illinois Wesleyan University, Bloomington, Ill. (page 44). *Weese Hickey Weese Ltd., Chicago.* Mechanical electrical engineer: Brown, Davis, Mullins & Associates. Structural engineer: A. Batangelo Hason, Ltd. Acoustical consultant: R. Lawrence, Wally Barrow Kiericegaard & Associates. Renderer: James C. Smith. General contractor: Felmley-Dickerson Co. Sump basin: Fiberbasin. Insulation: Guardian Industries. Toilet accessories: Bobrick. Wood trusses: Lumbermate. Waterproofing: Volclay Panels, American Celloid. Precast planks: Material Service Corp. Hardware: Hager, Lawrence, Russwin, Best, Rixson, Brookline, Reese, Zero, Ives. Marble vanity tops: Georgia Marble. Stone: Indiana Limestone, Pickett Stone Co. Light fixtures: Elliptipar, Kliegl, Columbia Lighting, Prescolite. Bell and clock: I.T. Verdin Co. HVAC equipment: Trane, Greenheck. Drywall: Suspension System. Skimcoat plaster: U.S. Gypsum. Plumbing fixtures: Kohler, Sloan, Chicago Faucet, Ellray. Skylights: Wasco. Hardwood floor system: AGA. Handicap lift: Inclinator Co. of America. Windows: Pella. Isolators: Masson Industries. Paint and stain: Benjamin Moore. Temperature controls: Johnson Controls. Boilers: Hydrotherm Inc. Sealant: Tremco. Duct silencers: Industrial Acoustics Co. Carpet: Patrick Carpet Mills, Mohawk Contract Carpet. Brick and pavers: Glen Gary.

Ferguson's Map & Travel Store, San Antonio, Tex. (page 50). *Chumney/Urrutia, San Antonio, Tex.* Stool: Bieffe. Banquette upholstery fabric: Old World Weavers. Ceiling fabrics: Jack Lenor Larsen, Cowtan & Tout. Paint: Negley. Glass: Samuels Glass Co. Carpet: Knoll. Ceramic tile: Hastings. Lighting fixtures: Artemide, Edison Price, Lightolier. Plastic laminate: Colorcore by Formica Corporation. Ex-

continued on page 98

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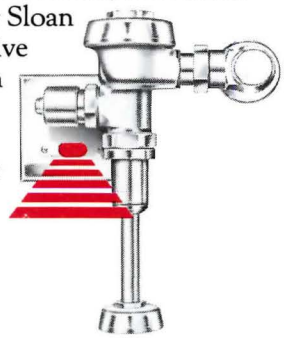

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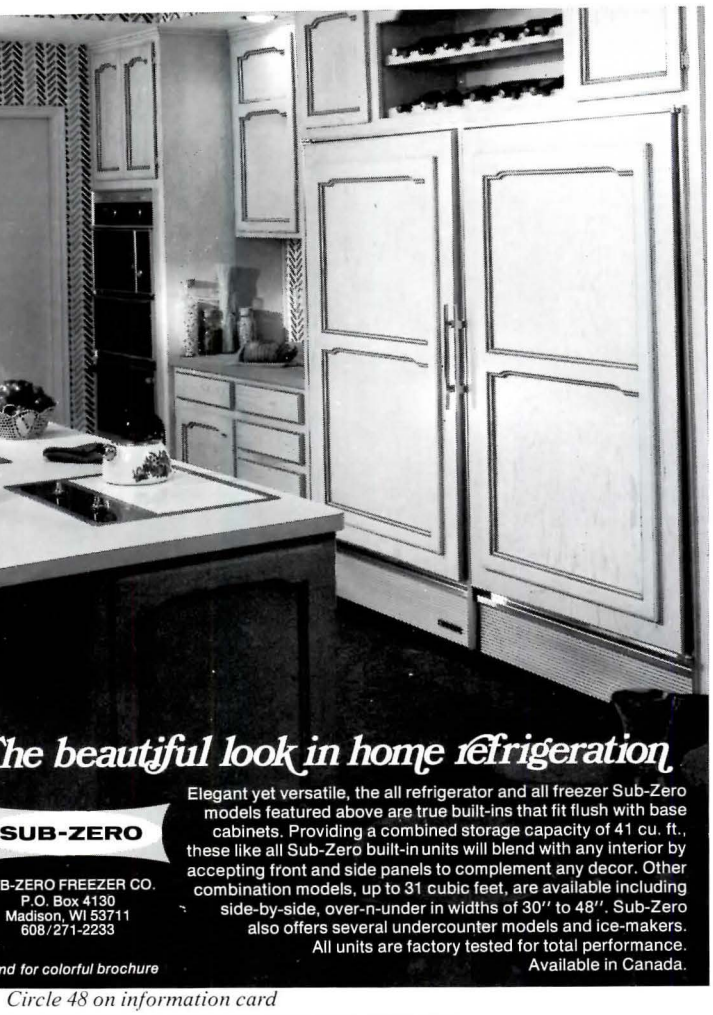
Credits *from page 96*
hibit display: Carlos Gonzales. Custom millwork: Alamo Store Fixtures. Painting contractor: LB Palmer & Co. Lighting design: Architectural Lighting Design.

City Bites, Philadelphia (page 58). *Edwin Bronstein Associates, Philadelphia.* General contractor: Ron Markee. Painting contractor: Michael Brennan. Window fabricator: Foamland. Window fabric: Howe & Bainbridge. Chair fabric: Clarence House. Booth upholstery material: Naugahyde by Uniroyal. Drapery workroom: Foamland. Custom tables: Palko Designs. Table tops: Nevamar. Lighting, metal structure: Options Lighting. Fencing: Alexander's Chain Link Fence Co. Columns: Schwerd Mfg. Marble: Integrity Tile. Carpet: Wunda Weve. Vinyl tile: Kentile. Faux marbre: Tish and John Albright. Chairs: Empire State Chair. Theme construction: Paul Sutcliffe. Space trusses: O.L.C. Lighting: O.L.C. Plastic laminate: Formica, Nevamar Matrix.

One Bell Central, Oklahoma City, Okla. (page 62). *HTB, Inc., Oklahoma City.* Suspended mullionless glass system: Pilkington Glass Binnswanger. Wood windows: Marvin Windows. Elevators: Westinghouse. Underfloor duct system: Robertson. Ceiling grid: Donn. Open office furniture: Steel Case. Glass railings and stair rails: Livers. Paint: Devoe. Carpet: Bigelow. Ceiling boards: USG. Slope glazing: Fisher. Shading device: Solar Veil. Mini blinds: Levolor. Seating in seminar room: J. G. Drinking fountains: Filtrine. Signage: ASI, Barton Graphics of Tulsa. Parabolic lighting fixtures and light tubes: Columbia.

CBS Theatrical Film Division, New York City (page 72). *Voorsanger & Mills Associates, New York City.* Principal-in-charge: Bartholomew Voorsanger. Project architect: Konrad Wos. Interior consultant: Zerline Joffe. Mechanical consultants: Jansen & Rogan. Contractor: Arrow Construction. Furnishings: Brayton International, Brickel Associates, Thonet Industries, GF Business Equipment, Jack Lenor Larsen, Knoll. Custom furniture: Voorsanger & Mills design, Navedo Woodcraft fabricating. Carpeting: V'Soske. Blinds: Marshall Murray. Paint: B. Moore.

Cary Charitable Trust, Empire State Building, New York City (page 76). *Architects: Conklin Rossant, New York City.* Floor surfacing: Stratton. Tile: Kent Tile. Lighting: Lightolier. Kitchen: R.K.A. Associates, L.S.Z. Wood. Horizontal blinds: Levolor. Paint: Benjamin Moore. Windows: R.K.A. Associates. Partitions: Cresdy Wall. Water fountains: Halsy Taylor. Communication/intercom: New York Telephone. □



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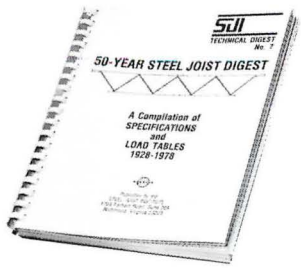

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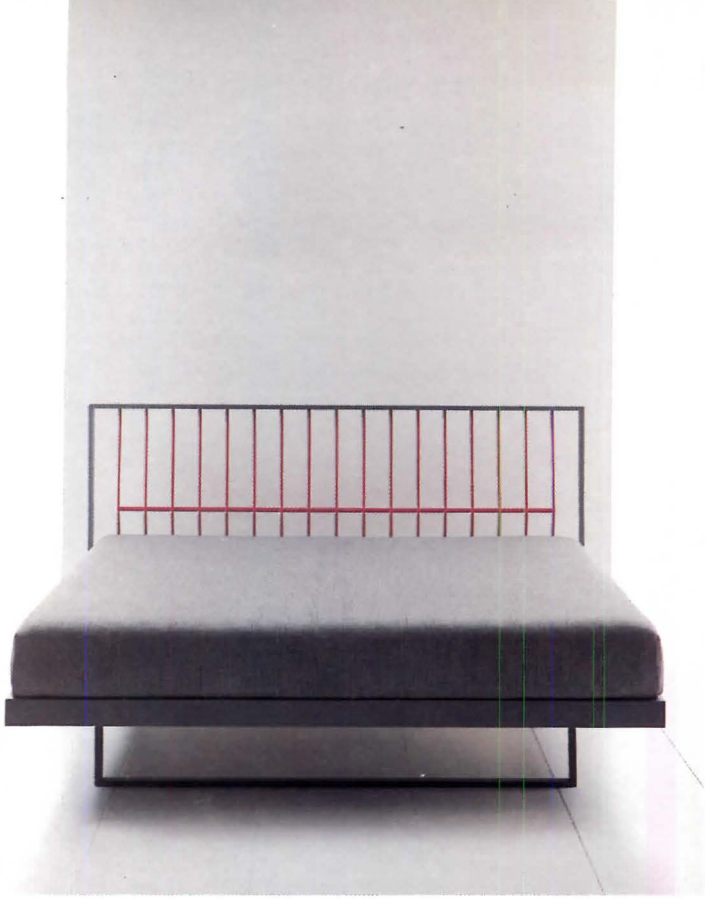

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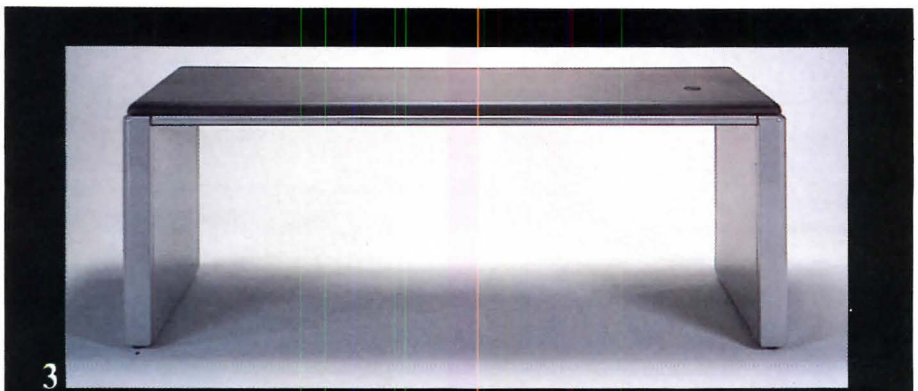

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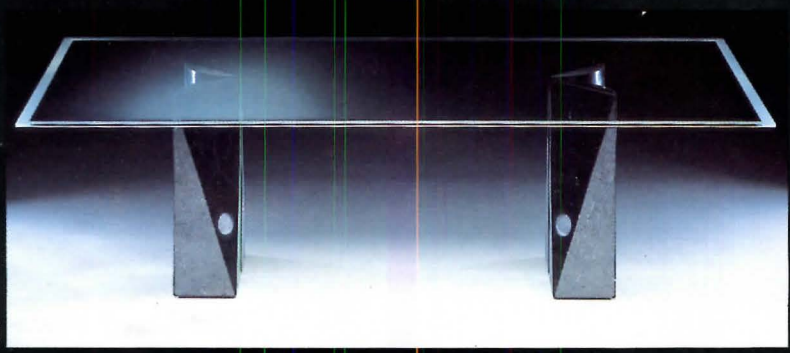

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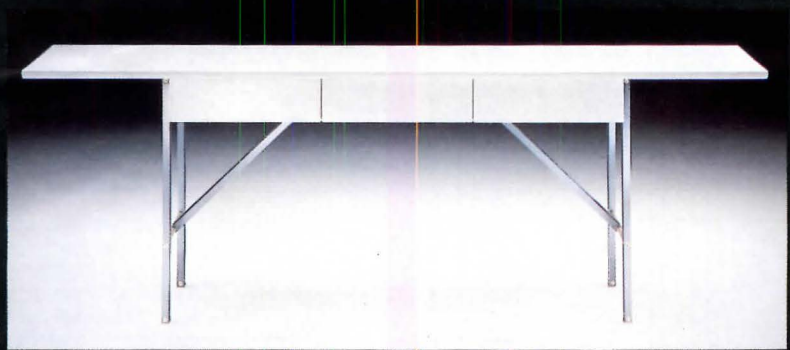
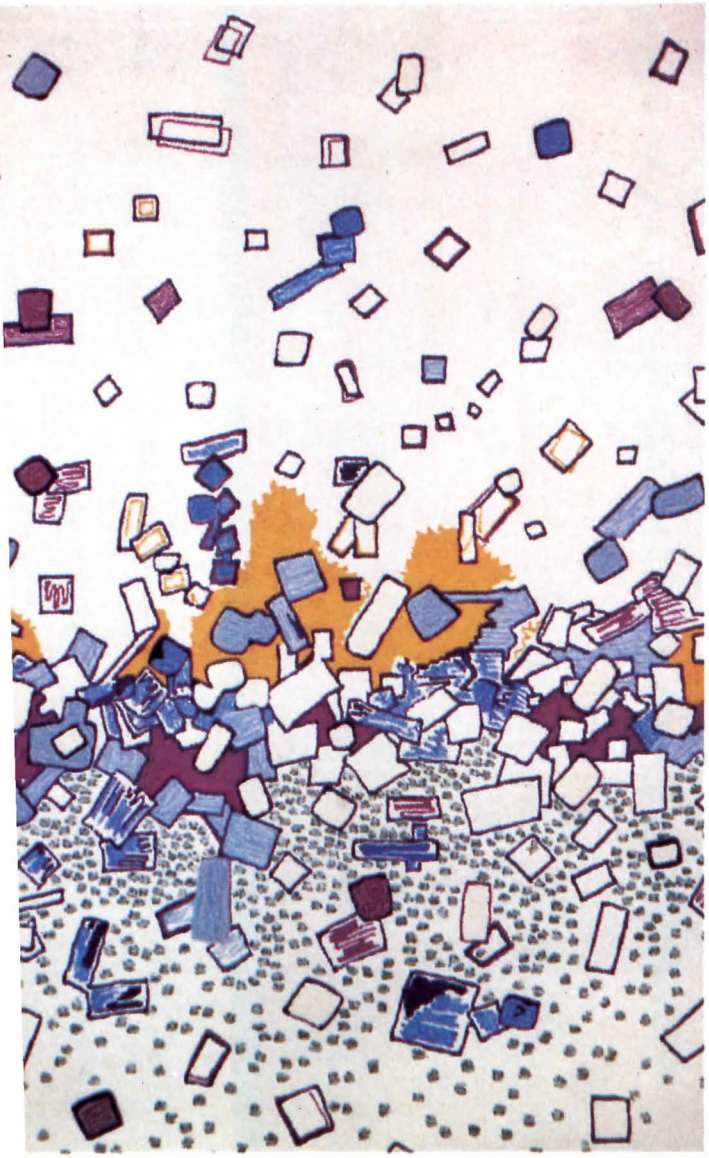


5

Furnishings

s resources for design and objects of design.
By Nora Richter Greer

6



The elegance of the LED bed (1), manufactured by the Italian firm OMA, is in its simplicity. Designed by August Mandelli and Walter Selva, minimal decoration is provided by the headrest's metal slats (shown here in red but also available in silver metallic). Atelier International Ltd.'s Veranda lounge seating (2) is the latest in floppy chairs. Designed by Vico Magistrelli, the two-seat sofa has three reclining positions, and its footrest can be folded underneath the chair seat or extended.

Metro Furniture's Kane table desk (3) has polyester resin side panels, aprons, and drawer fronts and a top of wood, leather, stone, or polyester resin. Included are two pencil-box drawers. Morphos' Yang table (4) is actually part of a pair, with its partner being, appropriately, the Yin table. Basically, Japanese designer Kengiro Azuma starts with a shapeless marble block from which he cuts a central circle. The circular piece is then cut into four quarters and becomes the Yang supports; the remainder is the Yin. The four quarters of the Yang piece sit beneath a glass table top. Designed by Lodovico Acerbis and Giotto Stoppino for Acerbis International is the handsomely proportioned, utilitarian metal Servant Odile desk (5). Accents are brushed brass, and the drawer container is coated in white or black Coaxol.

The prominent feature of Arflex's Strips seating (6) is the exuberant quilted covering, which is filled with polyester fibers. Designed by Cini Boeri in collaboration with Laura Griziotti, Strips are available in several models of armchairs, sofas, and sofa beds, with or without wooden feet. "An abstract profusion of color" is how interior designer Jack Rees describes his Piñata rug (7), an honorable mention in the Edward Fields 1984 wool rug design competition. Raised above the tight loop wool pile background to create a three-dimensional textured effect, the colored shapes are meant to symbolize the candies and small trinkets that come flying out once the piñata is broken. □

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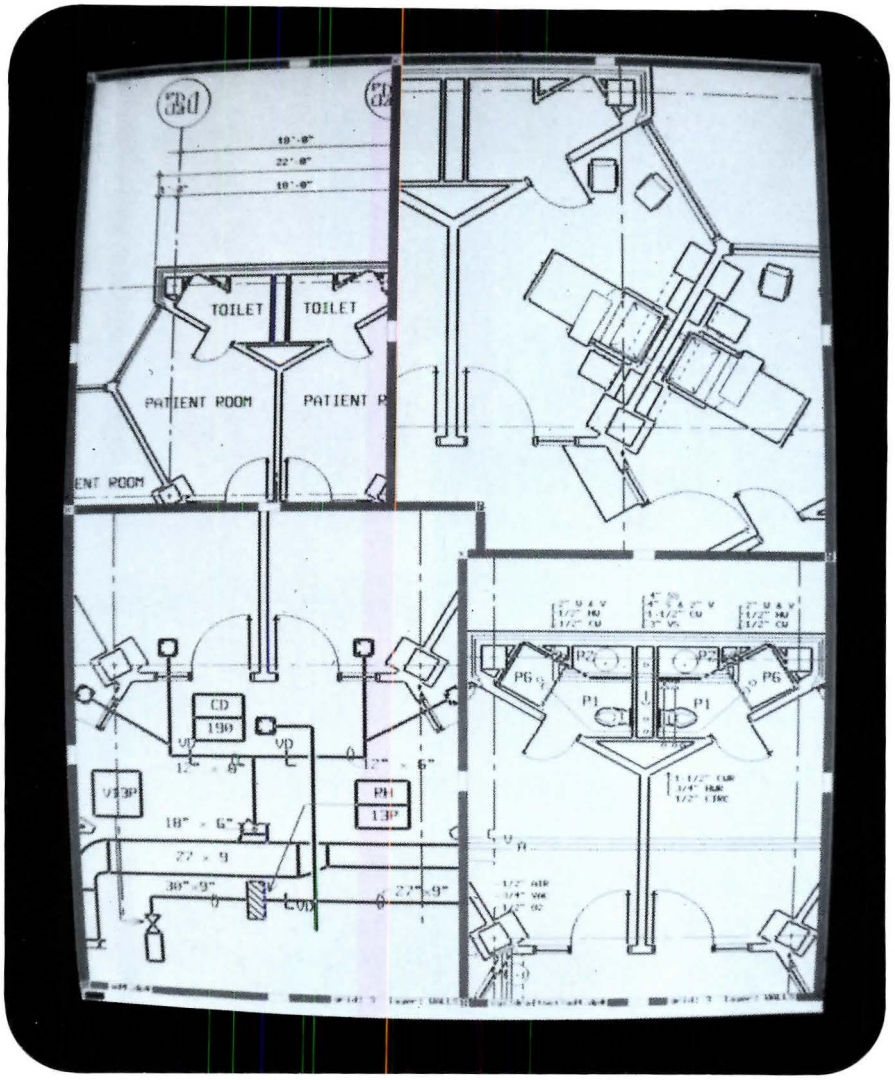

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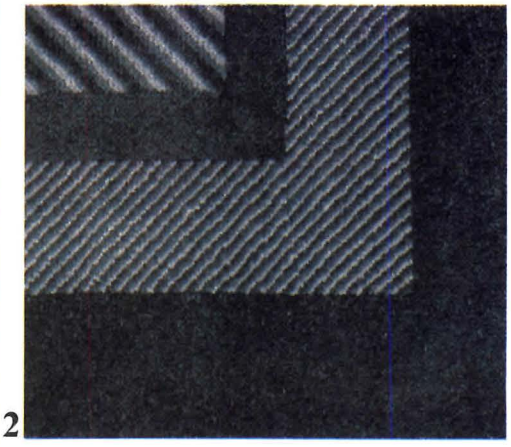
Products

A selection of notable offerings and applications. By Lynn Nesmith



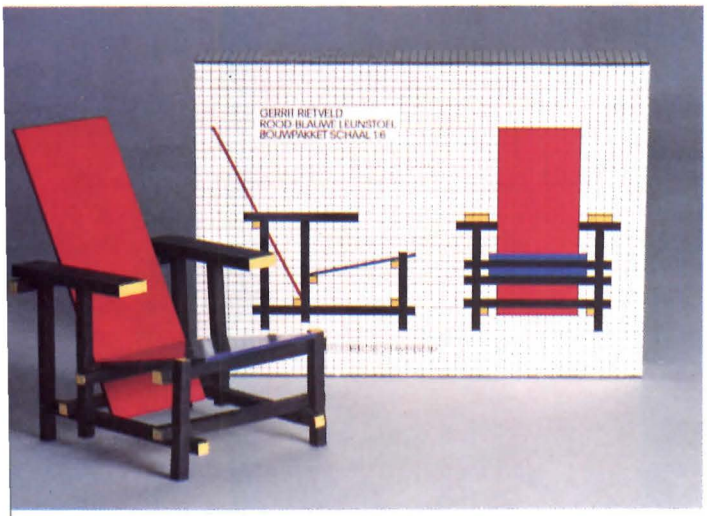
2

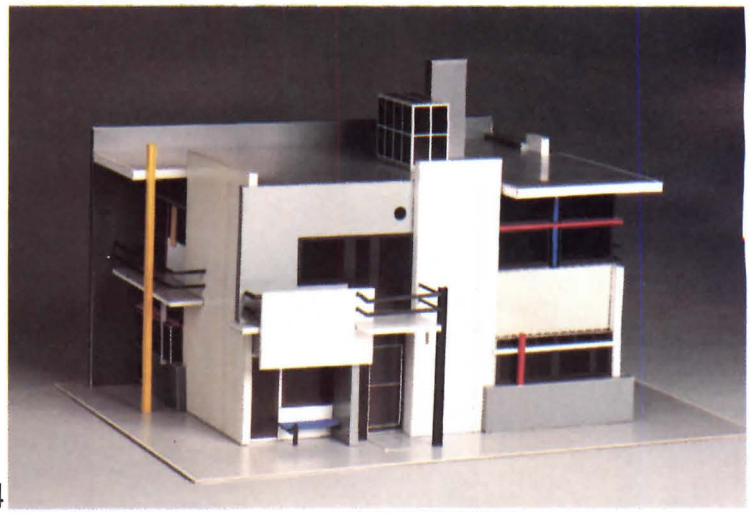
rge, unused attic spaces in two Princeton niversity residence halls were renovated d converted into dormitory rooms by nturi Rauch & Scott Brown to relieve ampus housing shortage. Copper-idded GGL roof windows by Velux nerica (1) were used to provide venti-ion and light and to meet fire evacua-n codes. The pivoting control bar is signed to let users pull open the unit m the top of the sash, allowing storage d heating units to be placed directly under the sill to conserve limited floor space. (Circle 201 on information card.)

Balmoral area rugs (2) by Carpet Innovations have an axminster weave of 80 percent wool and 20 percent nylon. The series is comprised of six colors (sand, mauve, Wedgewood, plum, evergreen, and pewter) in solids and four coordinated patterns, in addition to custom colors and designs. (Circle 202.)

Build-it-yourself models of the classic red and blue chair by Gerrit Rietveld (3) and the Rietveld-Schröder house (4) were designed by Peter Koopsmans and Wouter Keja for Academia Booksellers of Holland. The model of the chair is on a 1:6 scale. The kit includes wooden parts with pre-inserted dowels, miniature cans of paint in the *de Stijl* colors, and an instruction booklet with a short history of the period. Mallory Wellons, 339 Fourth St. NE, Atlanta, Ga. 30308, is the American sales representative. (Circle 203.)

Products continued on page 106





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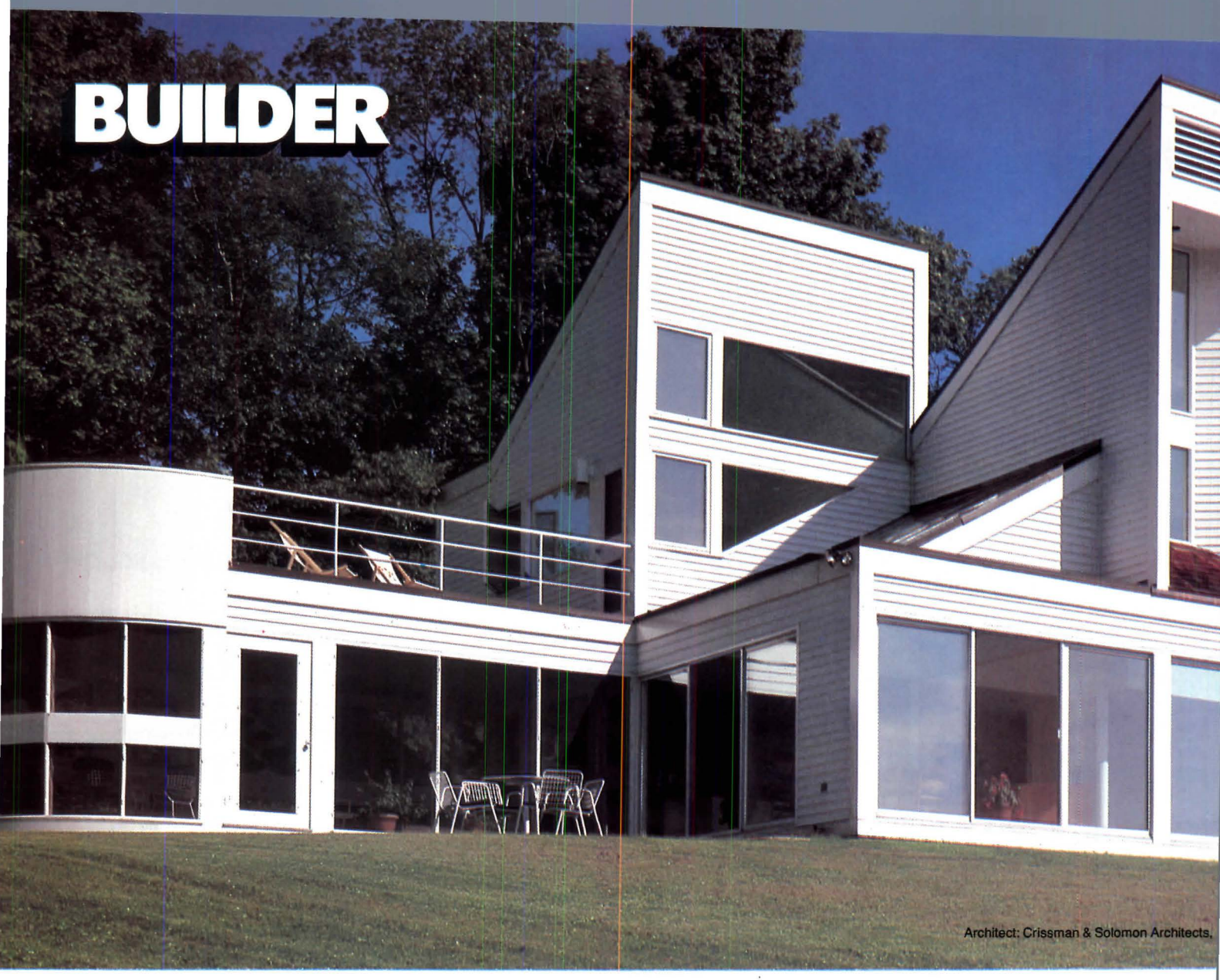

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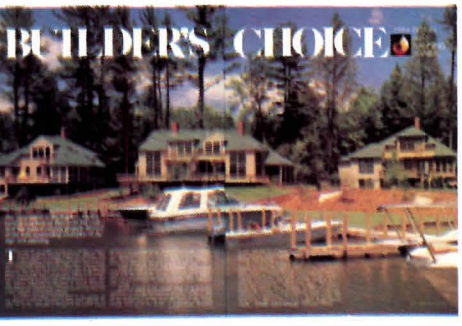

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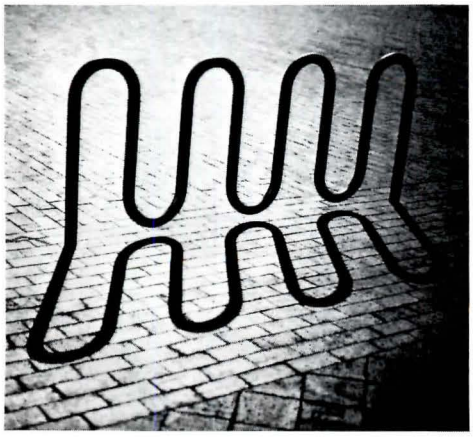

Bicycle Rack.
The Ribbon Rack bicycle storage unit (above) is constructed of sculptured, galvanized steel. The one-piece, tubular rack accommodates any size bike or moped and is compatible with all standard locks and chains. Available in four sizes, it has standard in-ground anchoring or optional flange mounting. (Brandir International, Inc., New York City. Circle 237 on information card.)

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Insulating Material.
Foil-Ray Plus reflective insulation is made of a ¼-inch, double polyethylene bubble pack with aluminum foil and a thin coating of clear polyethylene bonded to each side. It is designed to reflect heat back into a room and to act as a barrier to water vapor when installed with taped seams. In addition to wall and ceiling applications, it can be used as insulated padding under carpeting and rugs. (Energy Saver Imports, Inc., Broomfield, Colo. Circle 240 on information card.)

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Inn-Loc electronic security system for hotels combines a heavy-duty mortise lockset with a microprocessor controlled locking mechanism. Each plastic keycard is assigned a code by a compact encoder terminal at the front desk. When a guest inserts the reusable card into the battery-powered lockset it automatically invalidates the code of the room's previous guest. No prior guest's keycard will operate the lockset. The hardware includes a one-inch deadbolt and a ¾-inch latchbolt, designed to fit standard mortise door locks for new and retrofit construction. The system keeps a record of the last 10 entries to each hotel room and identifies the card that has opened the door. A hard copy printer records the identification of the authorized person assigning the keycards, the time and date of the cards issued, and the authorization level of other cards. (Russwin Hardward, Berlin, Conn. Circle 235 on information card.)

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Milano ceramic tiles are designed for floors, wall, and countertops in light duty areas in commercial and residential installations. Eight-inch-square, glazed tiles are designed with slip-resistant and scratch-resistance properties in eight colors. (American Olean Tile, Lansdale, Pa. Circle 221 on information card.)

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Mobile filing and storage pedestals are designed to be compatible with the Steelcase Valencia series and movable wall system furniture. They are available in a number of drawer configurations with a standard top drawer lock and an interlocking system. Hard or soft casters are available, and the units are counterbalanced for stability. (Steelcase, Grand Rapids, Mich. Circle 238 on information card.)

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Alabar monolithic ceiling tiles have concealed joint lines and a low-gloss surfacing with a smooth marble-like pattern. Commercial panels, measuring 12 inches square, are designed to provide strong sound control and a Class A flame spread. (Conwed Corporation, St. Paul. Circle 234 on information card.)

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Bathroom Cabinet.
Cameo-Star bath cabinet has an oval-shaped mirror-on-mirror design with safety vinyl backing for shatter resistance. Units have adjustable shelves and chrome plated pivot hinges. Silver or gold finishes are available for surface or recessed mountings. Sizes range from 18x28 to 96x48 inches. (Robern, Inc., Bensalem, Pa. Circle 191 on information card.)

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Custom Windows.
Aluminum replacement windows for commercial applications are available in complete circles, half circles, eyebrows, Gothic configurations, and trapezoids. They have thermal or nonthermal frames with operable or fixed configurations. Optional external grids are also available. (Season All Industries, Indiana, Pa. Circle 188 on information card.)

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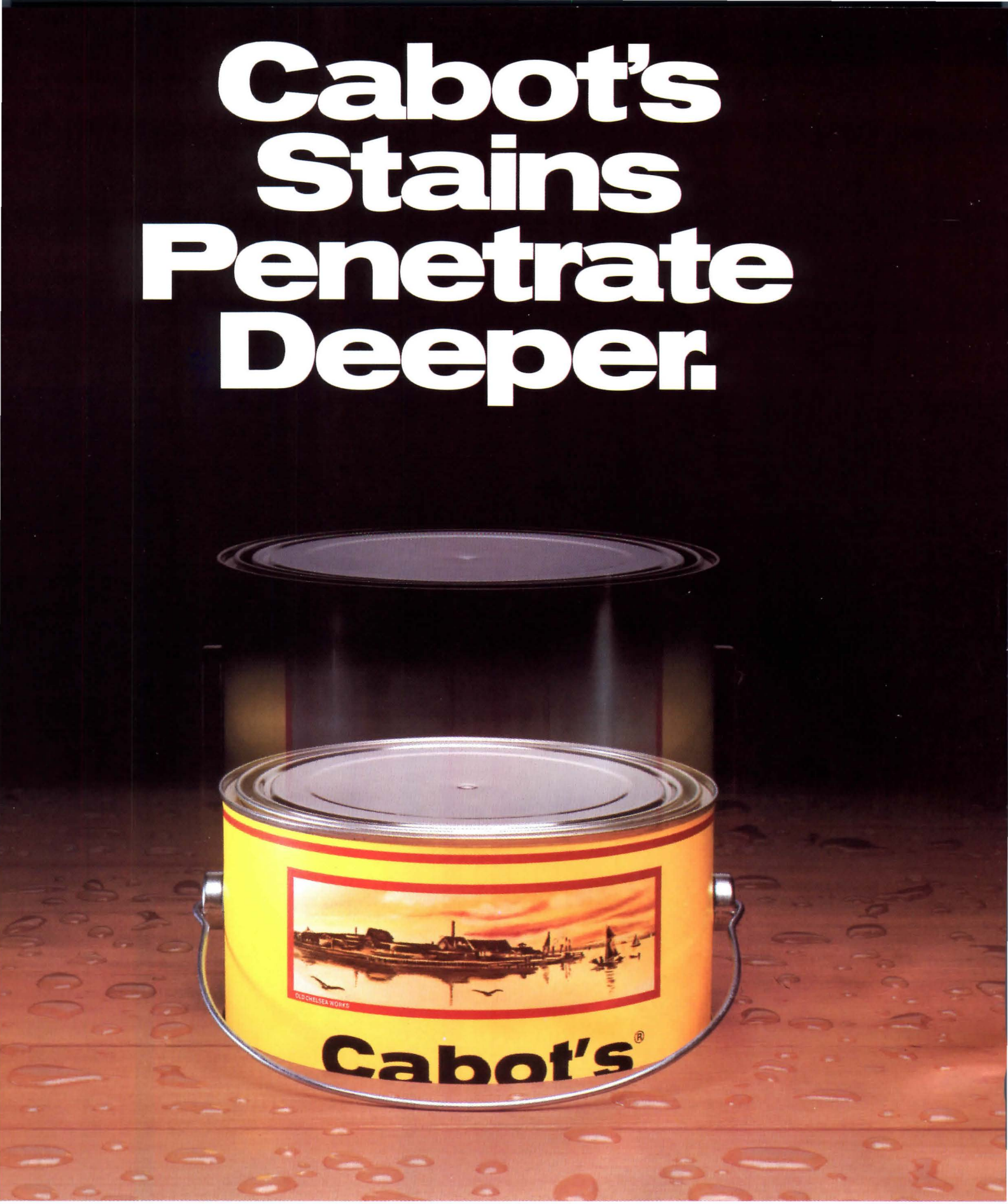

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