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A MODEST REMODELING BY WARREN PLATNER
PACIFIC CENTRE: A NEW LANDMARK FOR VANCOUVER
BUILDING TYPES STUDY: CAMPUS ARCHITECTURE
FULL CONTENTS ON PAGES 10 AND 11

ARCHITECTURAL RECORD

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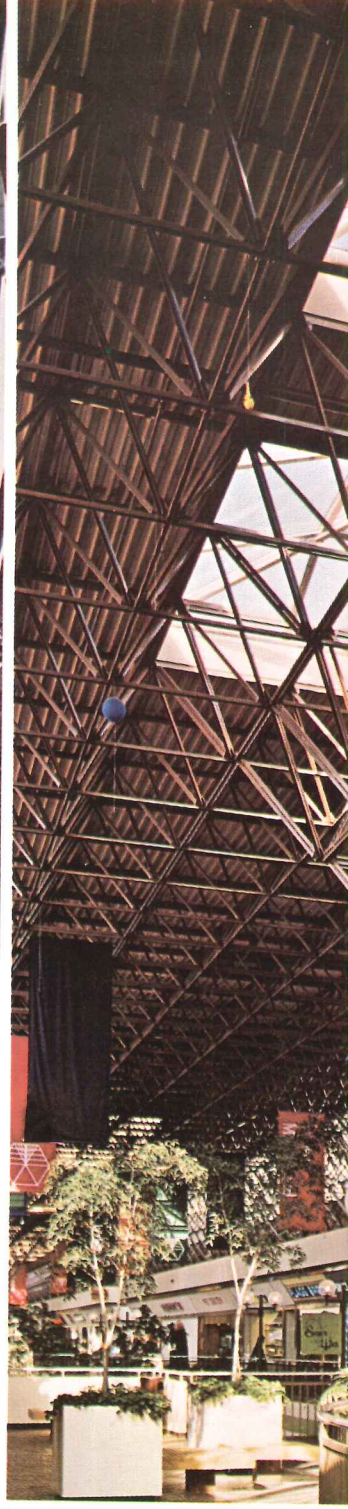

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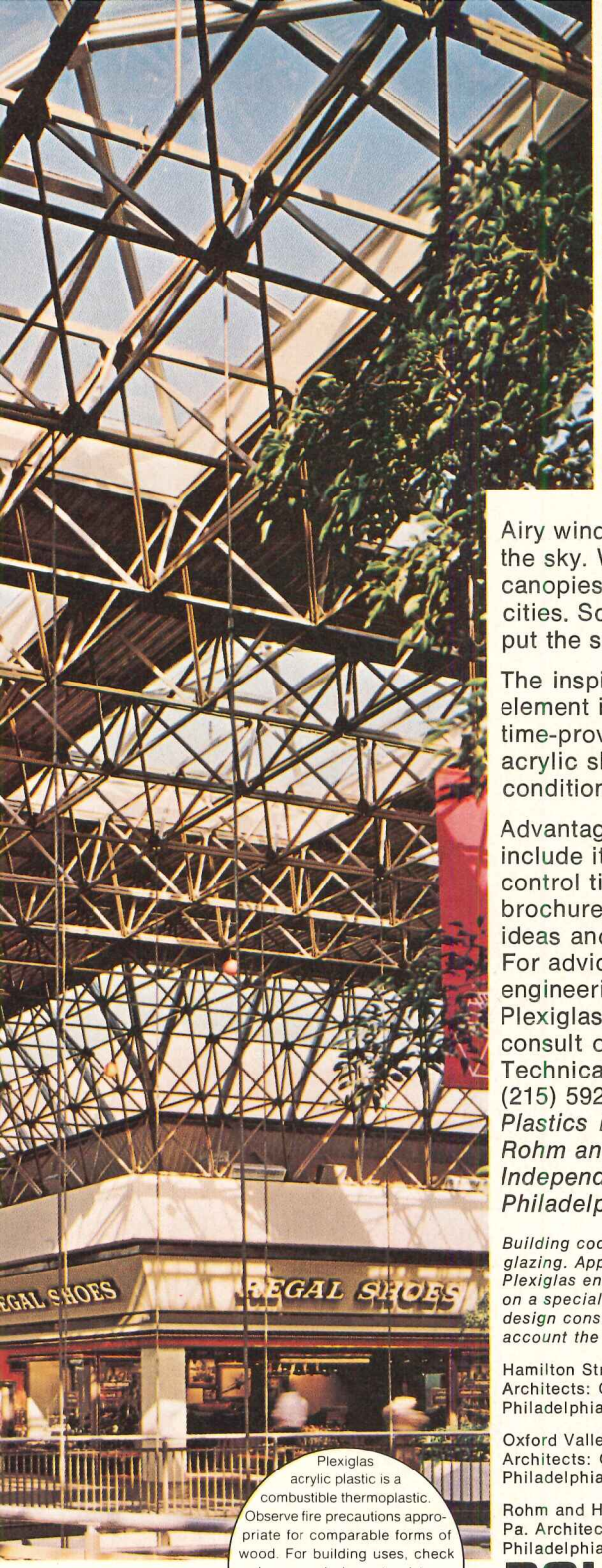

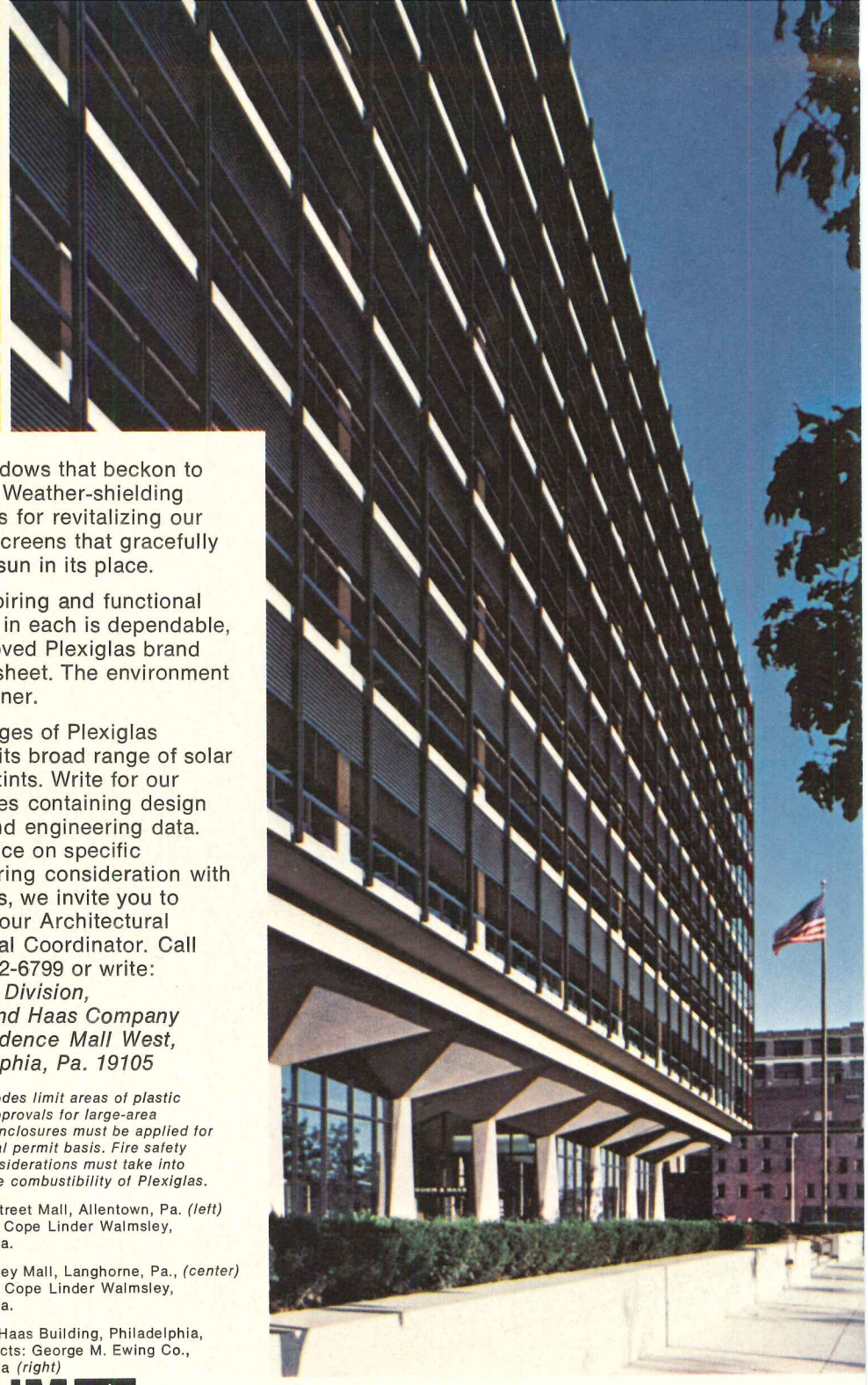

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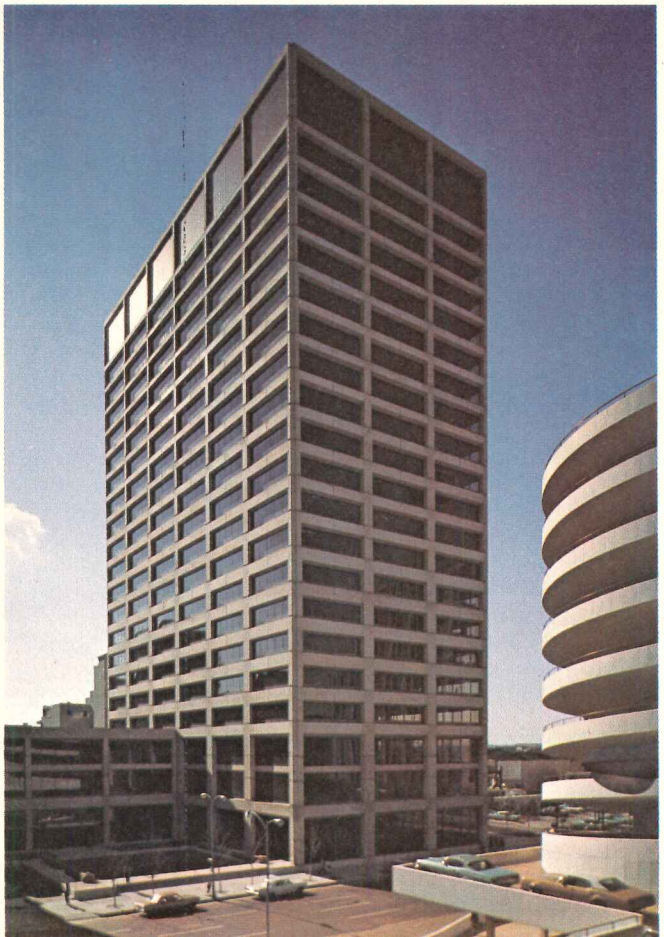
Below: FIRST NATIONAL BANK BUILDING, DAYTON, OHIO. ARCHITECT: Harry Weese & Associates, Chicago. GENERAL CONTRACTOR: Turner Construction Company. DEVELOPER AND LEASING AND MANAGEMENT AGENT: Arthur Rubloff & Co., Chicago. Six Dover Gearless Passenger Elevators installed by Dover Elevator Co., Dayton.



Letters to the editor

While on jury duty I had the opportunity to really absorb your Building Types Study No. 464 on Health Facilities (August 1974) which included the design of the VA Hospital, Bronx. I wouldn't have believed that anyone could have captured the entire complicated process of the design and construction on three pages (mostly illustrations) but "you did it." I was especially impressed that you included the part that, to their credit, the Veterans' Administration has broadened their collaboration with the architect on the Bronx project in a sincere effort to build the best of contemporary medical facilities. Hopefully, they will extend this policy to other future projects.

I found your descriptions of all of the other buildings in the Study equally comprehensive to VA Hospital, Bronx. Your Building Types Study series has to be one of your most effective and informative offerings to the architect.

Philip F. Moyer, PE-AIA
Executive vice president
Max O. Urbahn Associates, Inc.

The pictorial treatment of the Glen Park and Balboa Park stations is very good and your writing very thoughtful and generous.

One of the important things about both stations is color, although strong color does not occur anywhere. Consequently I was a little disappointed that it was not found feasible to use color in one or two views. In this respect the New York Police Station treatment is very successful.

The enclosed copy of a letter from Sprague Thresher just came. Without him, and one or two others with vision, these stations would not be as they are today.

Ernest Born, FAIA
San Francisco, California

"The November RECORD has just arrived and I was really thrilled to see the piece about your stations. Not only the two finest ones, but I thought it a very perspective analysis of the problems and their relation to the system."

Sprague Thresher,
Chief architect
"Metropolitan" system
Washington, D.C.

I, a student of architecture in Bombay, would like to take this opportunity to thank you for the very interesting and informative articles that you publish in RECORD month after month. I certainly appreciate the time and trouble that you and your staff devote to the research and development of architecture in all its different aspects.

I have undertaken to research on one of these different aspects, i.e. architecture in relation to blind people. India, as you might know, has the highest number of blind people in the world. These thousands of people are extremely unfortunate in not being able to see or enjoy our beautiful world. I am deeply interested in finding out, how, as an architect, I could help in the betterment of their lives. With a deeper understanding of their needs, an architect could create spaces for them, which are not merely functional, but are also pleasing to their mind and body.

Perhaps your staff has carried out a similar research in America. I would be greatly indebted to you, if you could inform me about your findings and conclusions. This would greatly help me in making a very small but purposeful contribution in the betterment of the lives of these unfortunate blind people.

Farrohk D. Billimoria
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Neserwanji Petit St.
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Calendar

JANUARY

9-10 Seminar on How to Market Professional Design Services, New Orleans. Sponsored by ARCHITECTURAL RECORD. Contact: Building Industry Development Services, Suite 104, 1301 20th Street, N.W., Washington, D.C. 20036.

10-11 Conference on Undergraduate Non-professional Architectural Education. Sponsored by the Architectural League of New York in cooperation with Columbia University Graduate School of Architecture and Urban Planning, and the Institute for Architecture and Urban Studies. Contact: Deborah Nevins, Architectural League of New York, 41 East 65th Street, New York, N.Y.

13-15 1975 Canadian Floor-covering Market, Automotive Building, Toronto, Ontario. Sponsored by the Canadian Carpet Institute. Contact: Southex (1970) Ltd., 1450 Don Mills Road, Don Mills, Ontario, M3B 2x7, Canada.

19-23 National Association of Home Builders convention, Convention Center, Dallas, Texas. Contact NAHB headquarters in Washington, D.C. or NAHB Dallas Convention Office, 1507 Pacific Street, Suite 1750, Dallas, Tex. 75201.

26-30 ASHRAE semi-annual meeting, Chalfonte-Haddon Hall Hotel, Atlantic City, N.J. For more information, contact: ASHRAE, 345 East 47th Street, New York, N.Y. 10017.

27-30 International Air-conditioning, Heating, Refrigerating Exposition, Atlantic City Convention Hall, Atlantic City, N.J. Co-sponsored by ASHRAE and ARI. Contact: International Exposition Co., 200 Park Avenue, New York, N.Y. 10017.

FEBRUARY

2-9 International Furniture Show, London. Contact: British Information Services, 845 Third Avenue, New York, N.Y. 10022.

4-5 Improving the Practice and Utilization of Engineering Laboratories Services seminar, Orlando, Florida. Sponsored by the Florida Engineering Society/Florida Institute of Consulting Engineers, Engineering Laboratories Forum. Contact: Florida Engineering Society, 1906 Lee Road, Orlando, Fla. 32810.

4-7 Thirtieth Anniversary Conference of the Reinforced Plastics/Composites Institute, Shoreham-Americana, Washington, D.C. Contact: Charles Condit, Reinforced Plastics/Composites Institute of the SPI, Inc., 250 Park Avenue, New York, N.Y. 10017.

6-7 Seminar on How to Market Professional Design Services, Miami, Florida. Sponsored by ARCHITECTURAL RECORD.. Contact: Building Industry Development Services, Suite 104, 1301 20th Street, N.W., Washington, D.C. 20036.

6-8 ALI-ABA Study Course on Land Planning and Regulation of Development, International Hotel, New Orleans. Sponsored by the American Law Institute–American Bar Association. Contact: Paul A. Wolkin, or Donald M. Maclay, ALI-ABA, 4025 Chestnut Street, Philadelphia, Pa. 19104.

11-13 Contract Marketplace–New York, an exhibition of contract furniture and accessories, Americana Hotel, New York City. Contact: Contract Marketplace, Ltd., P.O. Box 908, Larchmont, N.Y. 10538.

21-23 National Home Improvement Council annual convention, Houston Oaks Hotel, Houston. Contact: Irwin Rosenberg, Convention Director, P.O. Box 13037, Pittsburgh, Pa. 15243.

MARCH

5-8 Fifth Annual Historic Preservation Seminar of the San Antonio (Tex.) Conservation Society. Contact: Mrs. R. Jean Osborne, seminar chairperson, 511 Paseo de la Villita, San Antonio, Tex.

6-7 How to Market Professional Design Services seminar, New York City. Sponsored by ARCHITECTURAL RECORD. Contact: Building Industry Development Services, Suite 104, 1301 20th Street, N.W., Washington, D.C.

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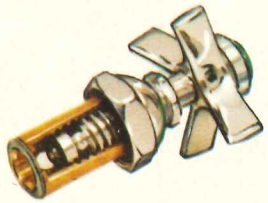

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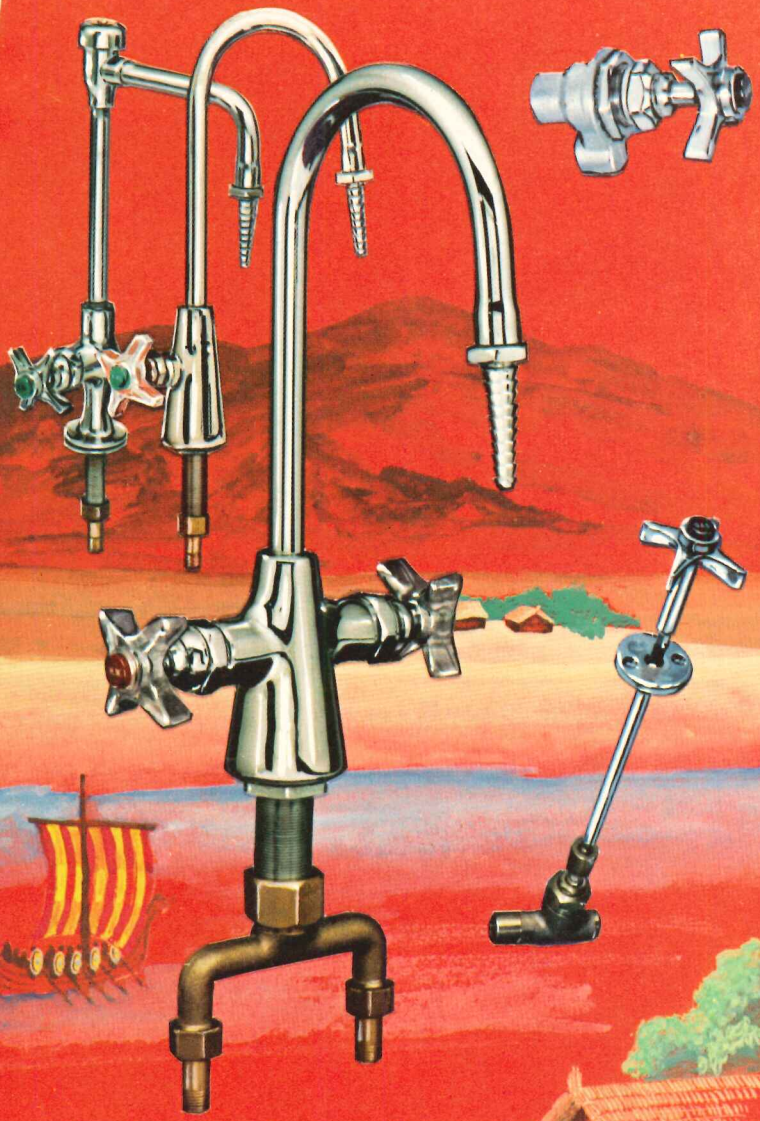

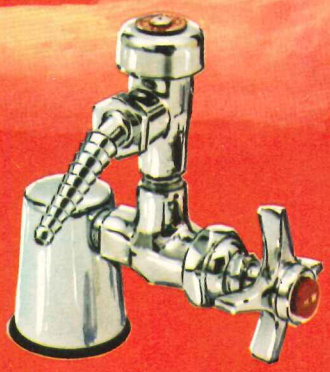

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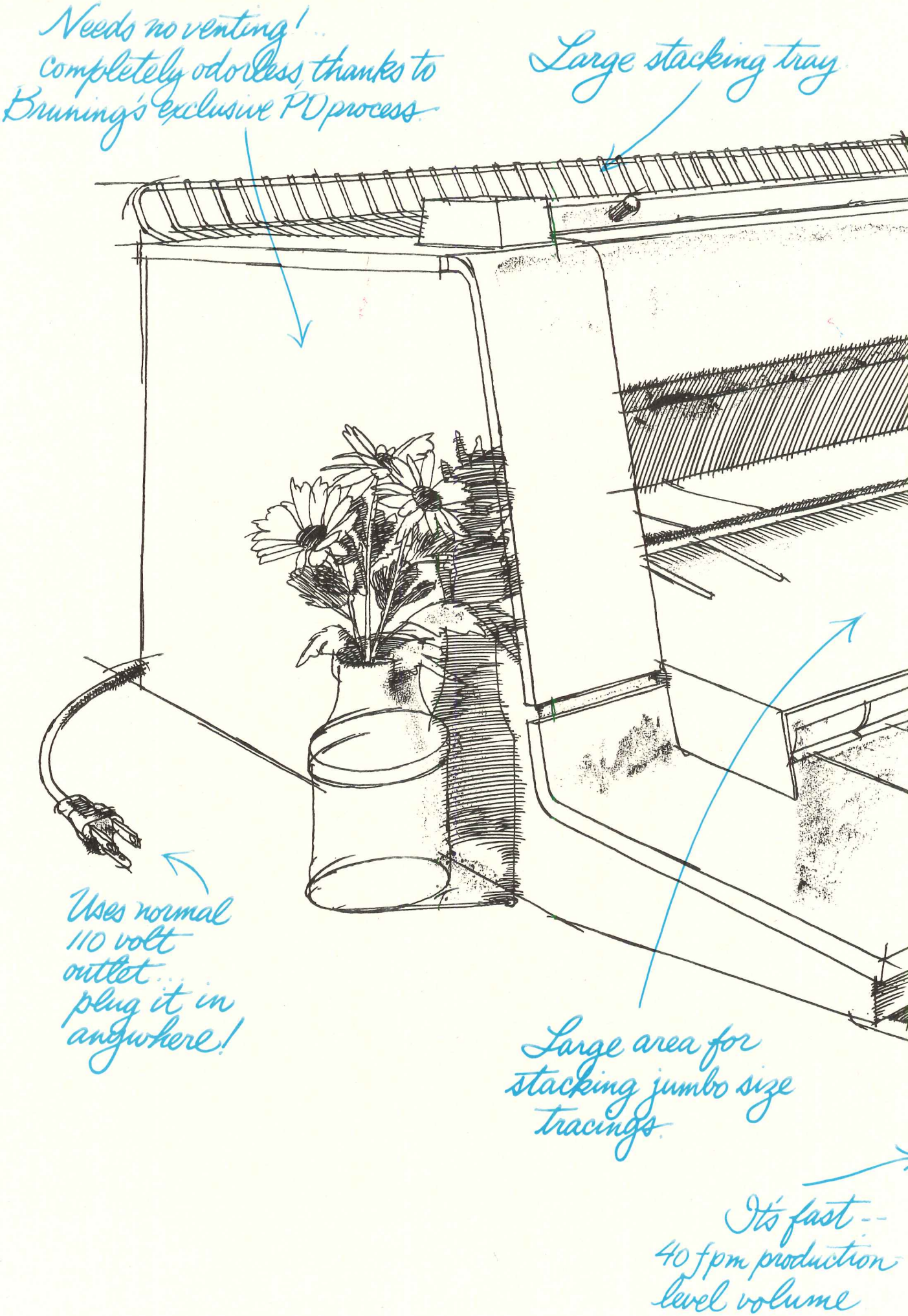
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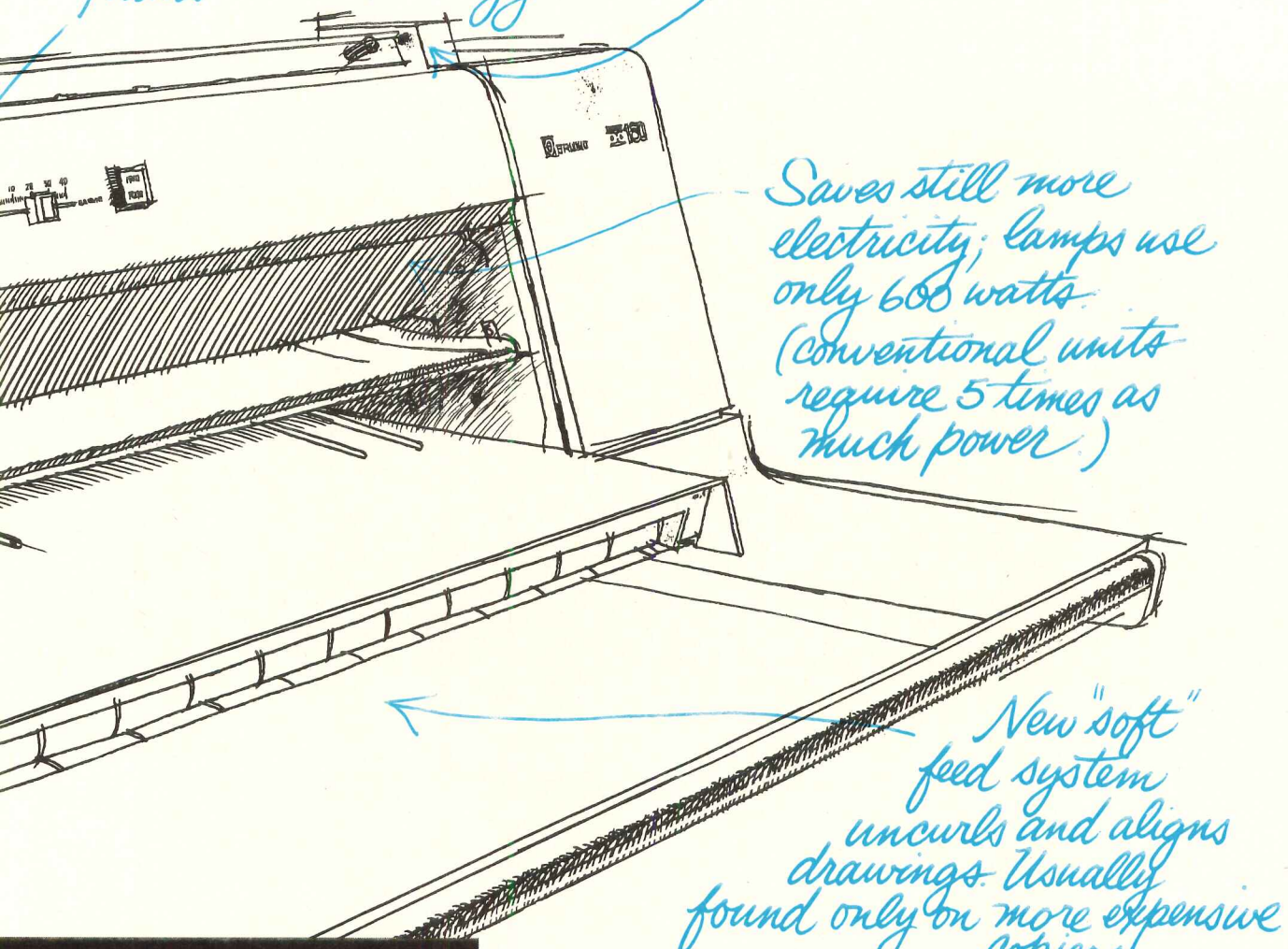

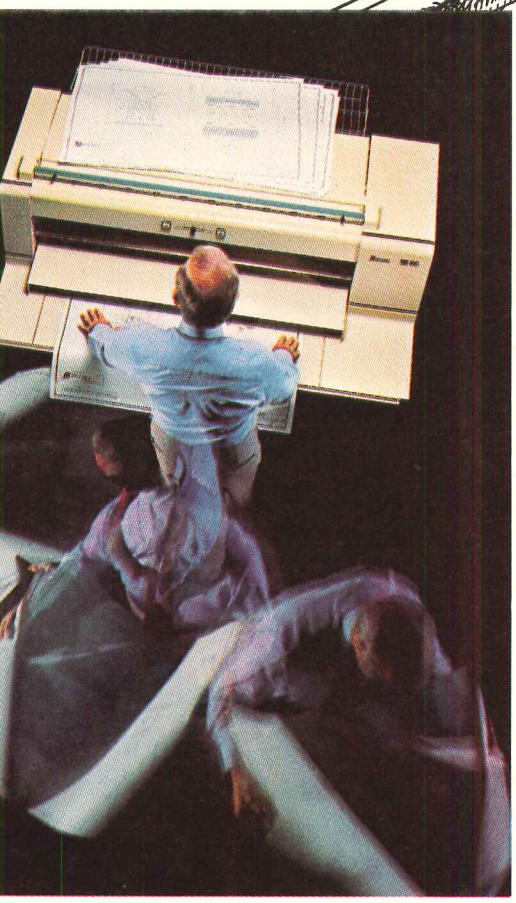

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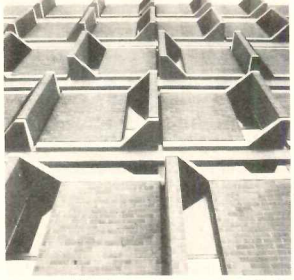

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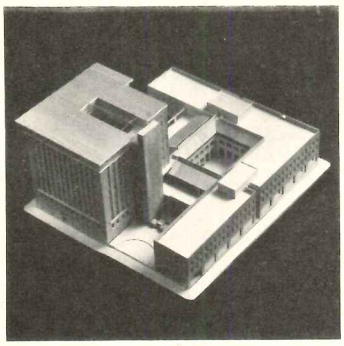

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ARCHITECTURAL BUSINESS

ATURES

Norman McGrath

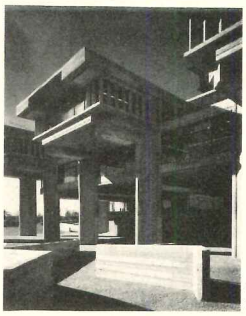
Teknor Apex Company offices
Pawtucket, Rhode Island

Remodeling urban plant space is the kind of job that seldom gets much design attention. Within this modest framework, architect Warren Platner not only converted old structures to new needs —he gave the neighborhood new spaces of quality—and a new sense of quality.

Pacific Centre
Vancouver, Canada

Cesar Pelli of Gruen Associates designed the exterior of this glass tower—the first really dark tall building in downtown Vancouver—as a true glass skin with the glass completely dominating the metal mullions. Sharing the block is a concrete-framed structure, Eaton's department Store, by the same architects.

BUILDING TYPES STUDY 470



Y. Futagawa

ARCHITECTURAL ENGINEERING

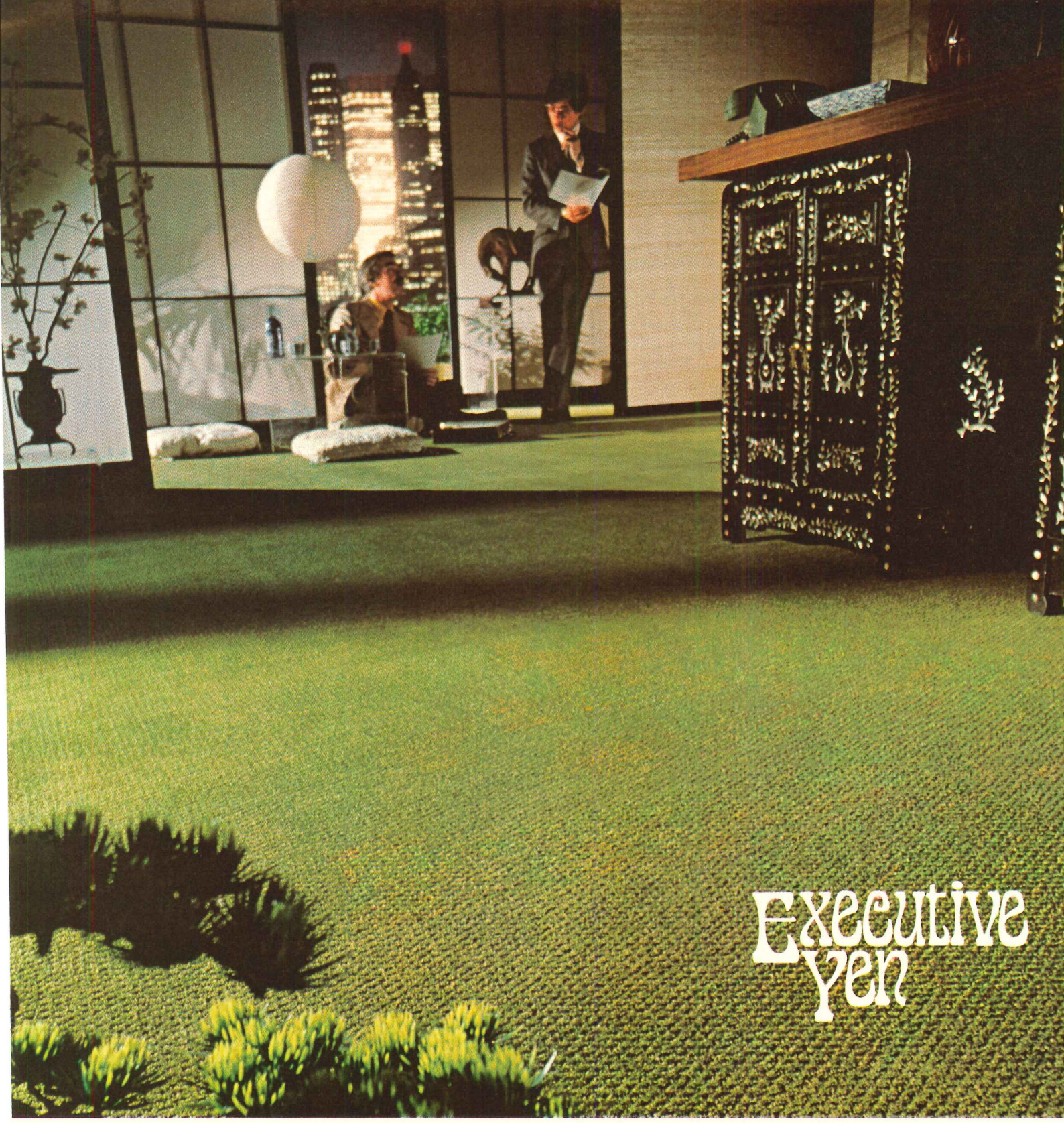
NEXT MONTH IN THE RECORD

Building Types Study: Health facilities

A review of impending national health planning legislation indicates continuation of state-oriented policies of Federal grant programs, modified now by national planning commissions to assure actual need for new or modernized non-profit health facilities of various kinds. The Building Types Study will probe implications of such legislation and will also show a variety of recently completed and/or projected work.

Acapulco Cultural and Convention Center

A massive new complex, designed by architect Pedro Moctezuma, serves several down-to-earth purposes in a resort long known for the frivolity of some of its inhabitants and many of its tourists. Part of a comprehensive program of urban development known as Plan Acapulco, the Center is the product of creative thinking which encourages local financial growth, and simultaneously provides public benefit within the same project.



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Guiding principles for Federal architecture; Part 2. Or, why shouldn't the government live over the store?

In May of 1974, as reported in the June editorial, the first document leading—hopefully—to a new set of Guiding Principles for Federal Architecture was released by a task force of the National Endowment for the Arts. Entitled "Federal Architecture: A Framework for Debate," the report outlined in broad—but fresh and appropriate—terms "the special obligation of the Federal government to seek quality in its buildings." The report made a lot of critical points: about the cost of quality (and the cost of banality), about the community benefits of quality Federal building, about the necessary talent of design professionals in public service, about architect/engineer selection for public work, and on and on.

Among these important ideas was a strong statement that "Federal buildings used by the public should enhance as well as protect the environment by encouraging street vitality and a lively pedestrian setting in and around the buildings."

One of the ways you accomplish that is mixed use, and the report suggested that "Federal buildings should provide the widest possible range of uses along with public use . . . including other levels of government, commercial, education, institutional, civic, cultural and recreation uses."

Available this month is the first of a series of detailed supplementary staff papers on various aspects of the "Framework"—this one on mixed-use (or "multiple-use") facilities. Intended primarily for the client—Federal administrative and legislative people—it makes a strong and persuasive case that mixed-use in Federal office buildings is not just practical, but desirable and necessary; should not just be allowed, but vigorously promoted.

What kind of mixed-use? The report points out a wide range of such planning: Apartments above the store in a thousand neighborhoods—including very fashionable settings in Georgetown and Boston and New York City. Rockefeller Center—combining horizontal mixed use in a compact area, as well as vertical mixed use within buildings. Similarly, Penn Center in Philadelphia, and Prudential Center in Boston, and more recently Peachtree Center in Atlanta and Crystal City in Virginia—all of which flank office towers with apartment buildings, with bases of stores and sometimes rooftops of restaurants and observation decks. There are also examples of vertical multiple use in Marina City and the John Hancock Building in Chicago, Olympic Towers in New York (now under construction with retail at the base, office space on the lower tier of floors, and apartments above) and Holyoke Center in Cambridge, Massachusetts.

Why not multiple-use Federal buildings? The staff report notes, and argues against, the commonly offered reasons:

1) Objection I: "Agency demand for ground-floor space makes leasing this area to commercial use impractical. . . . Moreover, overbuilding to provide space for multiple use objectives would be opposed by Congressional committees." To the first proposition the report argues that except for a few Federal activities where significant public contact is required (Social Security payment centers, passport offices), most Federal buildings feature vast lobbies occupied solely by information and/or security desks. You recognize the scene. Most agencies *don't* need ground-floor space, and with proper planning and financial arrangements (for instance, private renters could pay rent into the Federal Building Fund just as agencies now do) Congress could have no rational financial objection.

2) Objection II: "Security must be considered." Argues the Report: "Government security claims must be continually tested against reality [lovely phrase!]." It argues that even such agencies as the CIA, FBI, and AEC can accomplish the extra security they require by such means as separate entrances and elevator banks, or elevators that require a special card or key to gain entry to a particular floor. It points out that the Pentagon maintains an extensive retail concourse for the convenience of its people.

There are other oft-quoted objections—shouldn't government lease private space, instead of vice-versa; what about the real-estate tax impact; or the heavy administrative burden of planning and operating multiple-use buildings? There's even "the question of whether the Federal government should engage in real estate leasing in competition with private enterprise." Answer: the amount of Federal space to be leased would be miniscule compared to existing private space, and even if there were some objection, "the decision to include multiple uses should be made in consultation with local government bodies that are responsible not only to local developers and real estate interests, but to the public at large."

And the report accurately concludes that

"the issue is not the propriety of the Federal government competing with the private sector per se. [It does that all the time; take timber sales, offshore oil leases]. Rather, the issue is the desirability of using public intervention in the market system to pursue urban design objectives in the public interest."

And there is indeed much in the public interest in the concept of mixed-use buildings. As the report points out: "Mixing residential, office, retail and recreational activities . . . assures that people are continually moving about on the streets through the day and night. . . . And people on the streets can make others, perhaps more reluctant to venture forth, feel more secure and by so doing entice them out.

"Beyond these obvious advantages is the issue of resource scarcity. . . . We must conserve the resources available to us and use them in the most efficient way possible. Multiple-use facilities can play a role in the effort to make more intensive use of available resources." Like what? Like compacting residential, shopping, and business facilities to reduce traffic congestion, the demand for roads, and the use of fuel. Like creating new urban centers that could attract the suburban middle-income families back to town (who says schools could not be part of the mixed use?).

Like giving new vitality to the cityscape. New York City's model incentive zoning concepts have effectively reversed the trend to replace the city's multitude of small restaurants and boutiques and art galleries and specialty stores with the paler fabric of corporate showrooms, airline offices, and banks. So could Federal multiple-use buildings.

And what better client to set the lead and the standard for more mixed-use? The Federal government, as the report points out, "is a major (indeed, *the* major) public works builder, with a responsibility for assuming a leadership role. The government . . . is in a position to assume certain risks and take certain initiatives that profit-private developers might be hesitant to pursue."

For instance and specifically: if the GSA can undertake the construction of two highly experimental buildings to explore new concepts in energy conservation (with the explicit objective of pioneering techniques that can be transferred to the private sector), shouldn't the government explore in other buildings new urban-design concepts?

This report is a fine supplement to the original Guilding Principles proposal—and as I said before, I think its recommendations deserve support by every professional because they point a clear way to better public architecture—and we sure need that.

—Walter F. Wagner Jr.

Wanted: case histories for Engineering for Architecture

Last year at this time we asked architects and engineers to submit their best examples of architect-engineer collaboration, in the form of case histories, for RECORD'S first Engineering for Architecture issue, published in mid-August. The submissions, as exemplified by the 30-odd case histories we had in this issue, were every bit as good as we hoped for. Because of the highly favorable reception to this issue, we plan to repeat it again this year.

We expect that a lot of new people, as well as many of those who sent us material last year, will participate this time. The basic criterion is simply that the case histories be interesting technical ideas that other professionals would like to read about. They're interested in trends, imaginative solutions—in other words, they want to know what forward-looking and inventive professionals are doing, and what the implications are of new or modified equipment and materials.

Here is what the qualifications are for consideration of your case histories for the Engineering for Architecture issue: 1) submit only buildings that are completed, under construction, or out to bid; 2) submit written statements from both architect and engineers involved, describing the building's significance in the context of architect-engineer collaboration; this information should be supported by sufficient detail and documentation to allow fair evaluation; 3) submit graphic materials, such as schematics, perspective drawings, plans and photographs; 4) list credits for owners, architects, consulting engineers, technical consultants, and any suppliers who contributed to the solution, and, finally, the name and location of the building. We will consider all technical disciplines that affect building.

If you decide you wish to send us a case history, please write for the simple submittal form. Send your letters to Robert E. Fischer, senior editor, engineering; ARCHITECTURAL RECORD 1221 Avenue of the Americas, New York, N.Y. 10020.

Our vanishing heritage and what to do about it

. . . is the title of an excellent and moving brochure just published by the Boston Society of Architects. It's designed to show the public (and especially town administrators) what they can do to protect the heritage of their New England town—and offers a good deal of sensible advice on how to go about it.

Pointing out that under Massachusetts law (and there are, of course, similar laws in many states) areas can be protected under Historic District regulations, the architects urge administrators to ask themselves "what areas, such the Common and its buildings or the 18th a 19th century structures along Main Street ha enough unity, beauty, and importance to preserved as an Historic District?"

After a number of pages of picture some of lovely old buildings of the sort report has in mind saving; some of fine buildings that have been spoiled by inapp priate use, by splashy commercial signage, inappropriate neighbors (the gas station n to the Town Hall), by thoughtless placemen overhead wires—the report offers a spec eight-point program:

1. Establish an enlightened and active H torical Commission.
2. Make and publish a survey of assets
3. Set up historic districts.
4. Get listed on the National Register.
5. Properly locate traffic-generating b nesses ("since parking and the old town lay are probably incompatible.")
6. Establish a program of historic mark
7. Teach local history in the pub schools (as the report correctly points out: " markable as it may seem, history is an alm unknown subject in our schools systems.")
8. Give tax relief to historic structures— stead of rewarding neglect and punishing g maintenance of historic properties.

In all, as you sort of expect from th thoughtful activists in and around Boston fine piece of work. If you really care ab conservation and you ask nicely, maybe Boston Society of Architects at 320 Newb Street has a spare copy.

A commentary on present conditions . . .

. . . written (in his spare time)
by architect Rhoderic F. Taylor
of Melbourne, Florida:

"Less is more."
Mies meant
bare bones are harder design
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under the skin.
The brain thinks the lines
are down, blown out
in the tight-money storm.
Less is mort-
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bills boiling in the every day,
the lean clients cowering
in leaky caves far from the bank.
Less is also less, Mies.

—W

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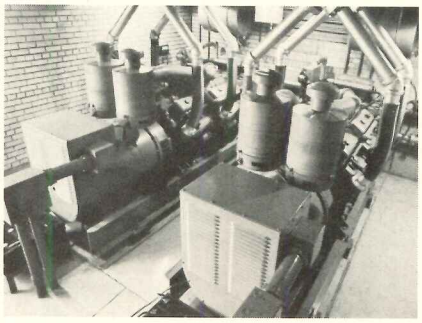
Today, the Moffat Filter Plant supplies the people of Denver with 170 million gallons of water a day. Obviously, the continuous operation of this plant is vital to the city. This is why its power source is so carefully protected. Protected by two Detroit Diesel Generator Sets.



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(a)

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(b)

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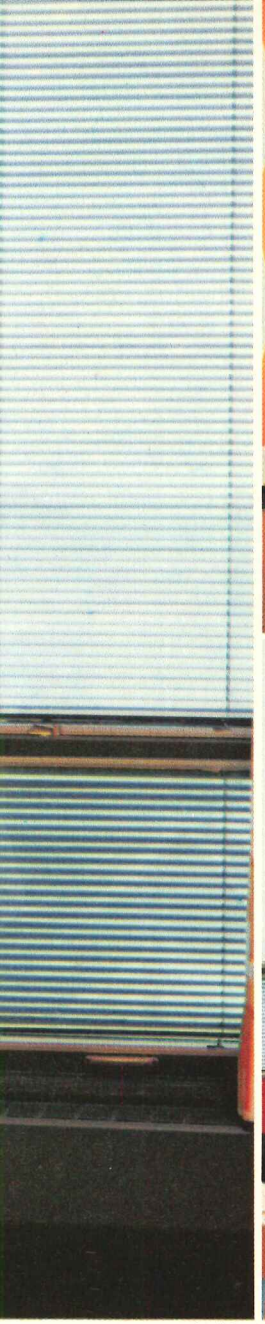

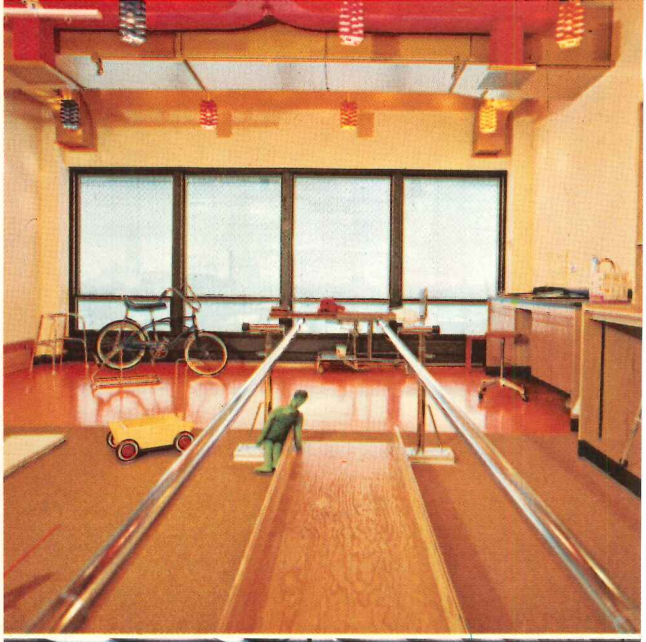

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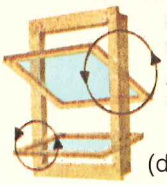

(d)

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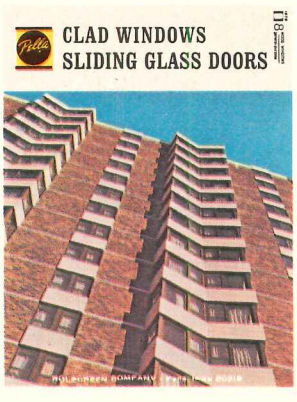

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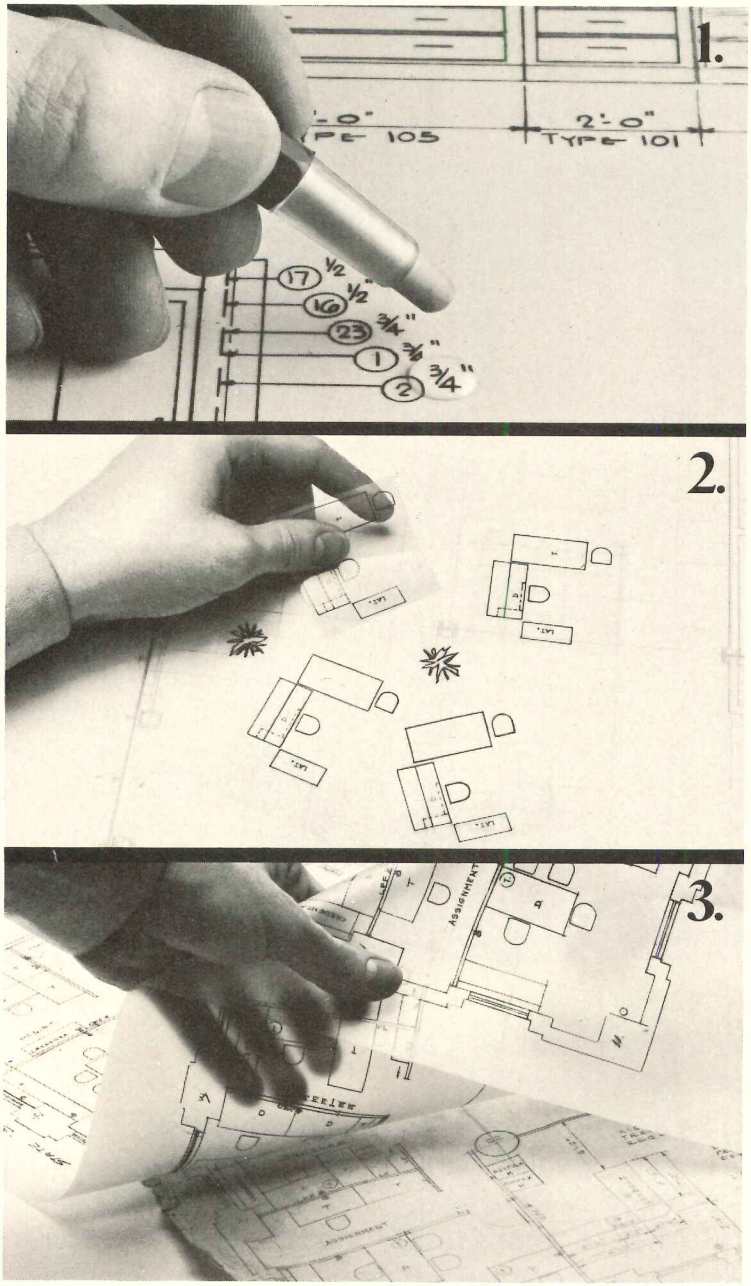

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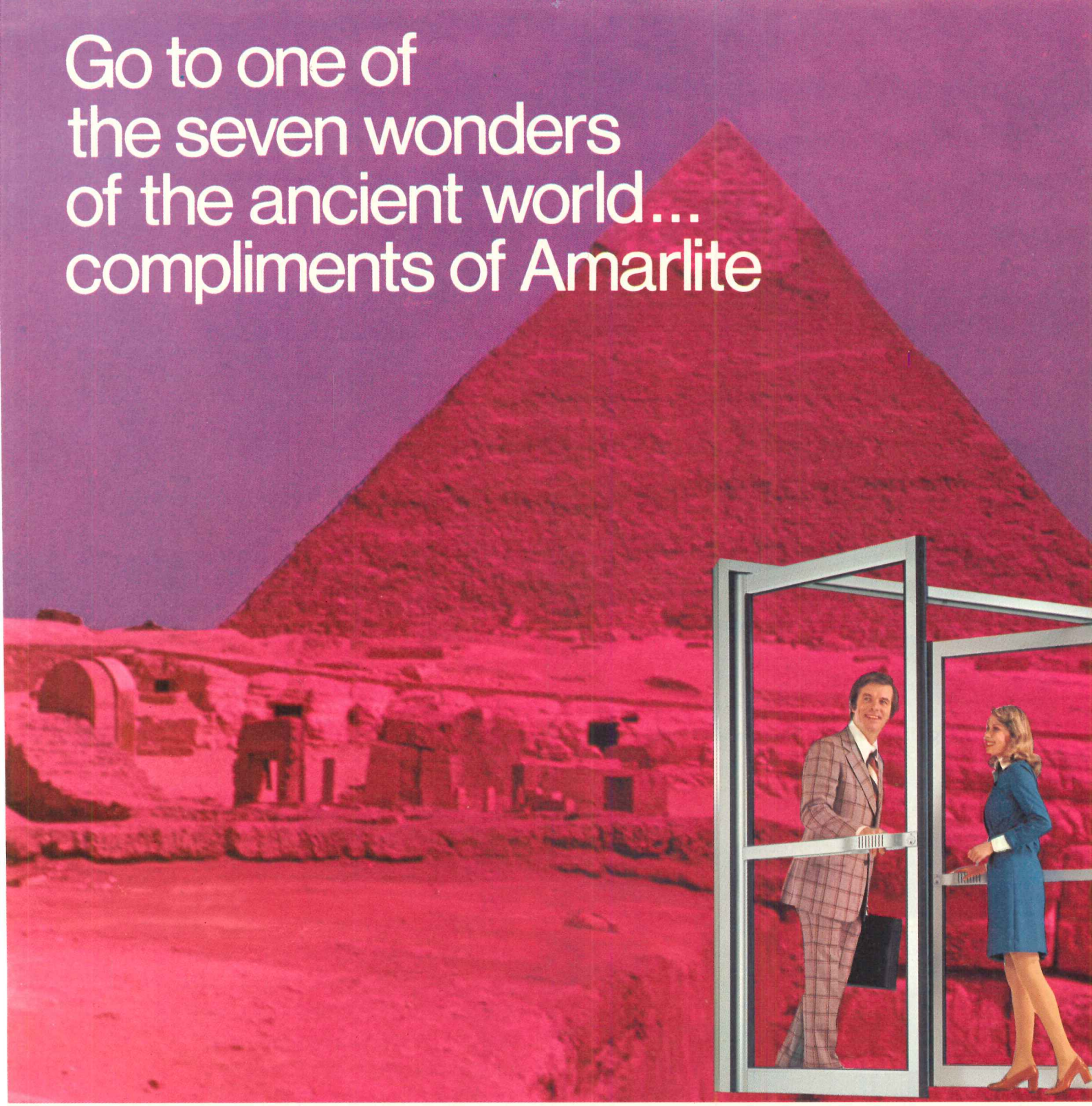

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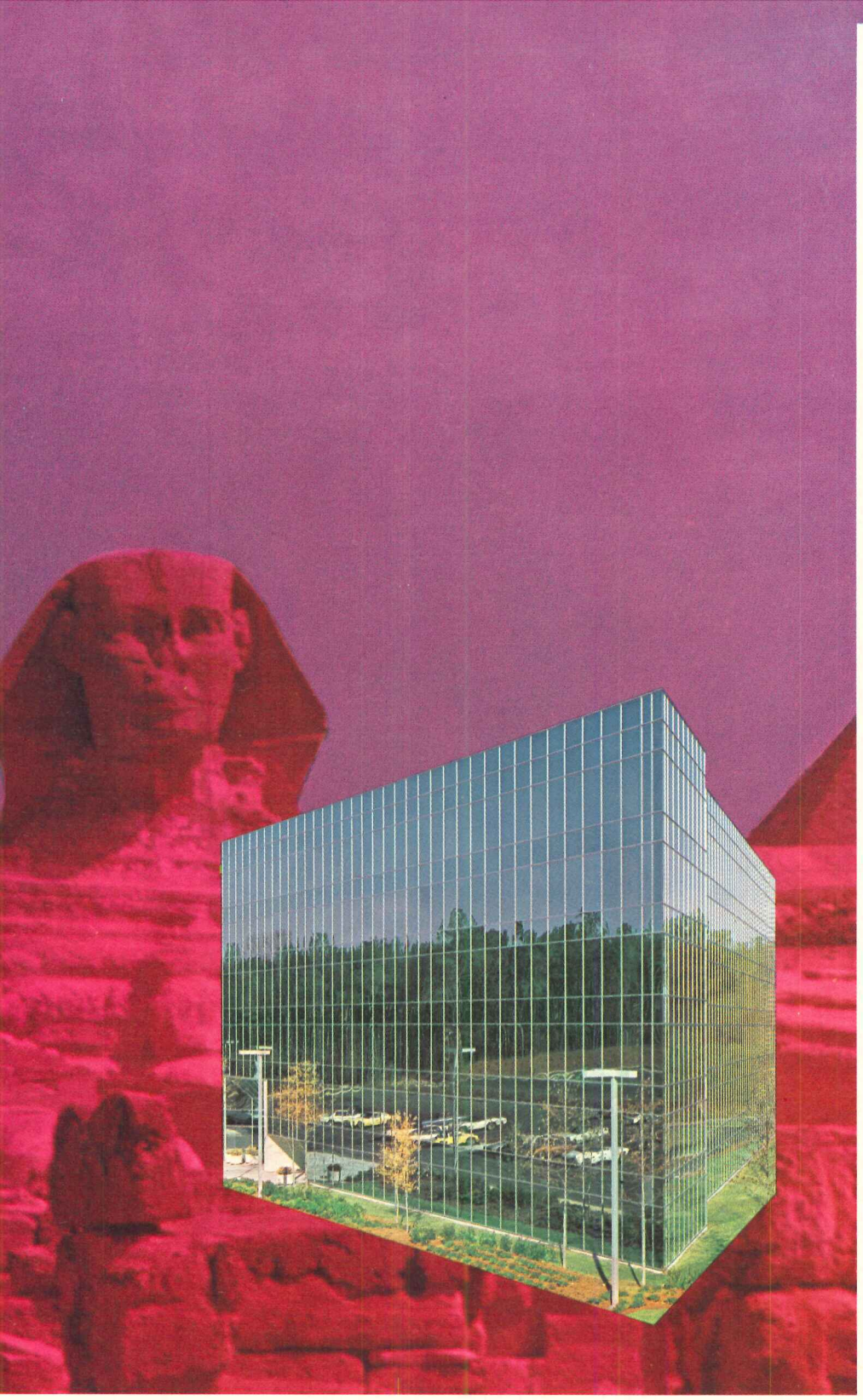

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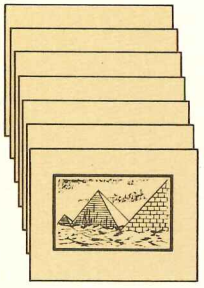

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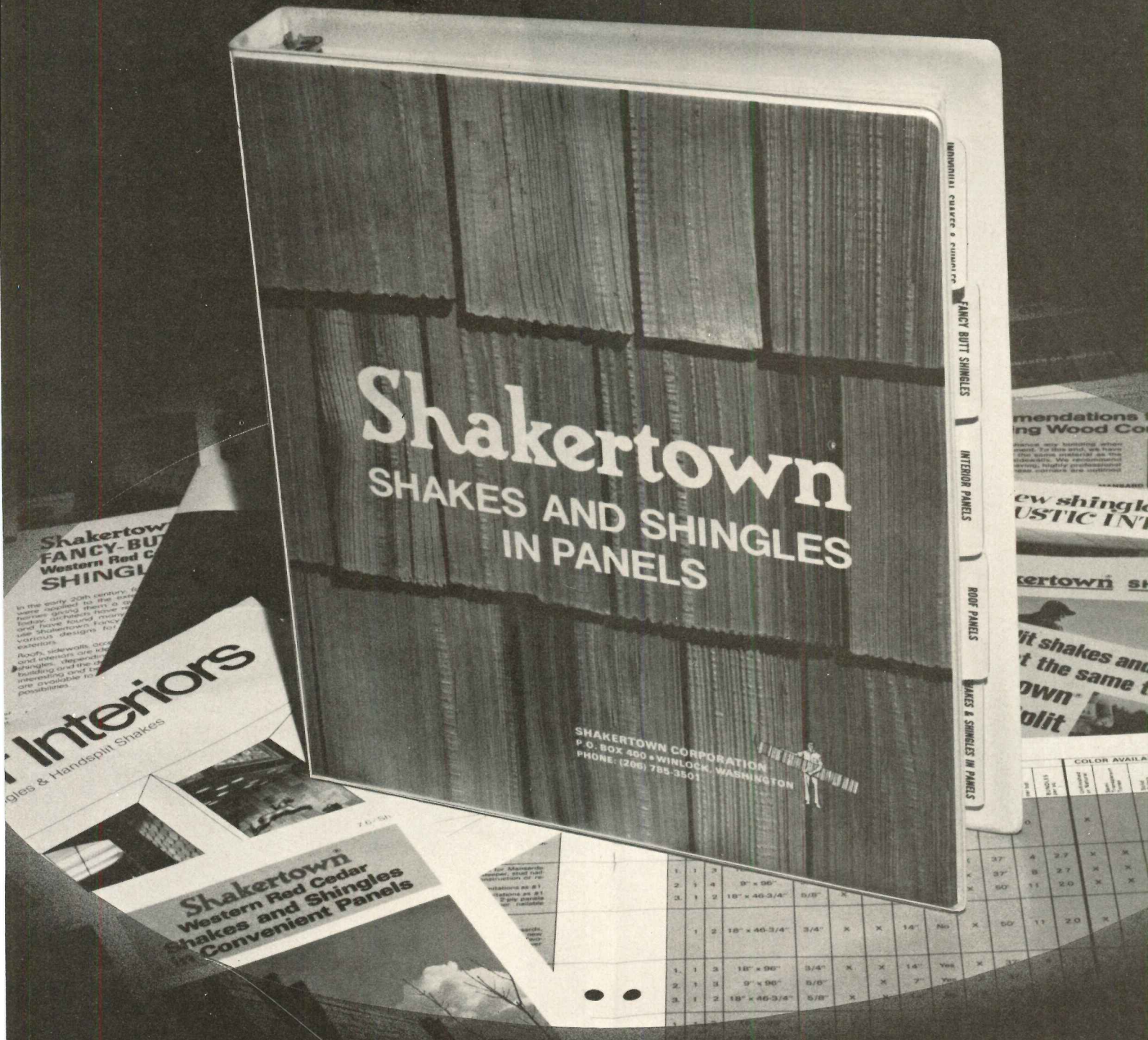

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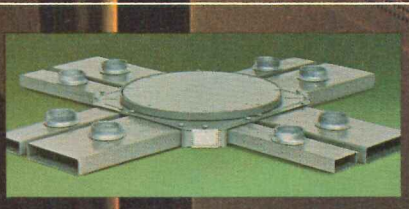

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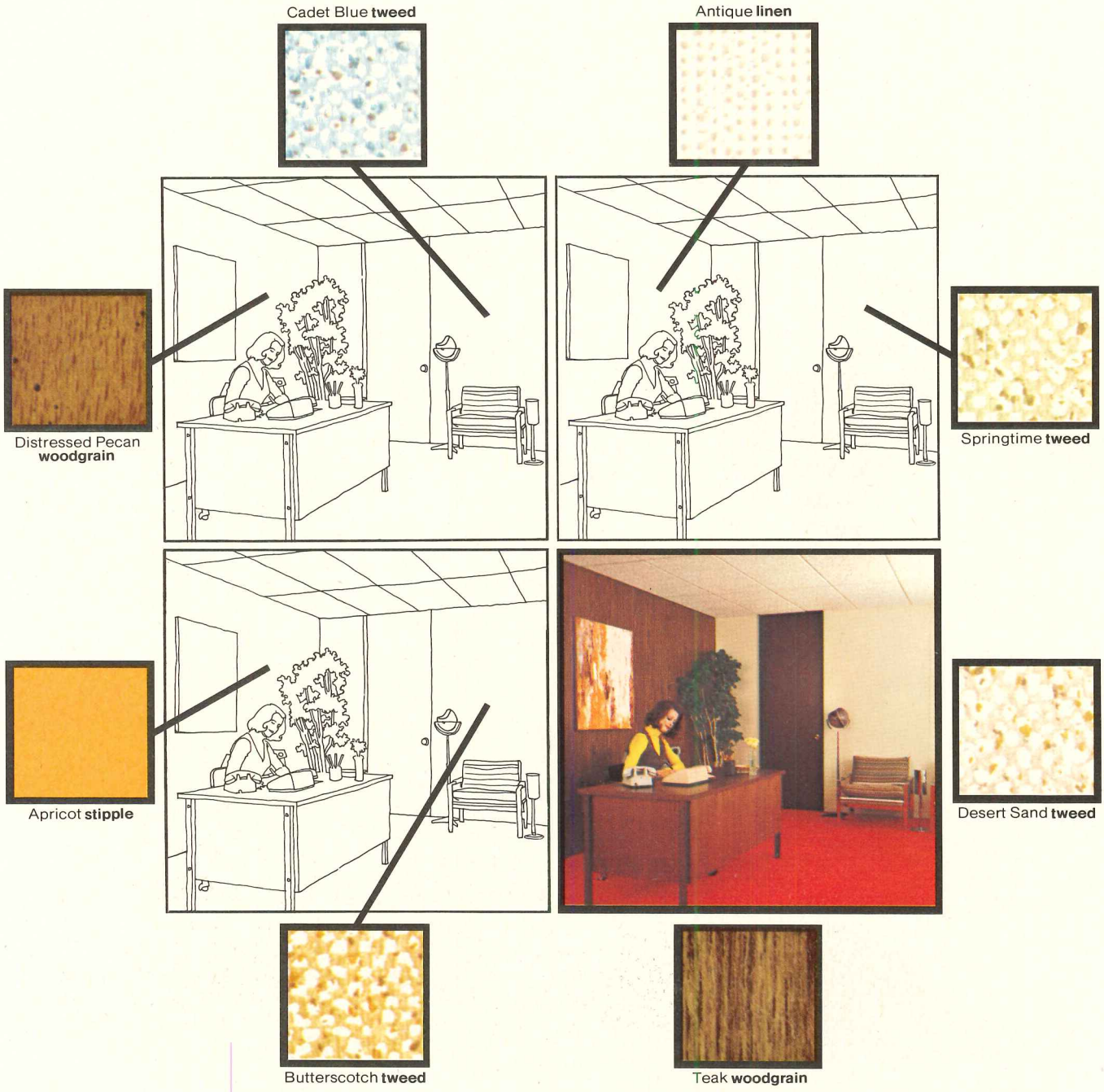

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UNITED STATES GYPSUM
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The Federal government expects new construction to grow by 12 per cent this year, to some $150 billion, spurred by an expected surge in housing construction. This prospect was carried in the *U. S. Industrial Outlook for 1975,* released by the Commerce Department, in November. The forecast states that while physical volume this year will recover some ground lost in 1974, more than half the dollar outlay increase will probably result from cost increases. A 7 per cent increase in spending for public works is projected, but no gain in physical volume is seen; state and local expenditures will rise more rapidly than Federal ones.

William Marshall Jr., Norfolk, Va., was formally installed as the 1975 AIA president December 6, in Washington, D.C. He succeeds Archibald C. Rogers, Baltimore, Md., as head of the 25,000-member professional society. Five other AIA officers were also installed and they include first vice president (president-elect) Louis de Moll, Philadelphia; three national vice presidents—Elmer E. Botsai, San Francisco; Carl L. Bradley, Fort Wayne, Ind.; and John M. McGinty, Houston; and secretary, Hilliard T. Smith, Lake Worth, Fla.

The community development block grants program began January 1, and is approved for three years. Also, HUD regulations for disbursement of some $8 billion authorized by Congress became effective November 13, with their publication in the *Federal Register.* Under the new approach, the grants are consolidating seven programs: urban renewal, model cities, water and sewer facilities, neighborhood facilities, public facilities loans, open space, and rehabilitation loans.

The $11.8 billion Federal mass transportation bill has been enacted, and for the first time Federal money will subsidize hard-pressed urban mass transit systems. The major portion of the money, however, is slated for construction. The measure provides for $4 billion over six years for construction and improvement grants to be allocated on a basis of 80 per cent Federal and 20 per cent local funding. Operating costs during the same period will be on a 50-50 basis. Use of the money, not expected to have a marked effect on the current fiscal 1975 budget, would be tied to comprehensive plans including local and state transit considerations.

In Washington, an appeals court has ruled that the historic Willard Hotel can have its facade demolished, and that the owner can gut the interior as well to create an office building. The hotel was featured in the "Sitting Ducks" article, page 136, in last month's RECORD devoted to "Conservation in the Context of Change." A three-judge panel in the District of Columbia Court of Appeals ruled in favor of the owners despite opposition in Congress, the Fine Arts Commission and the Pennsylvania Avenue Development Corporation. The owner of the Willard is New York realtor Charles Benenson.

Construction costs rose nationally an average of nine per cent for the year ending September 30, 1974. This compared with 12.5 per cent a year ago, according to the Dodge Building Cost Services Department of McGraw-Hill Information Systems Company. Declining lumber prices were the main reason for the slower rate of increase in building costs over the past year. An average 10.6 per cent rise in building materials costs, plus a 6.6 per cent wage increase were said to account for the year's over-all climb. Craftsmen's wage increases were lower than a year ago, when they advanced 7.5 per cent for the period.

Konstantin Melnikov, one of Russia's leading modern architects, died in Moscow last November, at age 84. Mr. Melnikov was known for his 1925 design of the Soviet Pavilion for Decorative Arts at that year's Paris Exposition, and he was said to have helped shape "modern Russian architecture in the nineteen-twenties." Expelled from his profession during the Stalin purges, he was permitted to teach again after Stalin's death.

The National Endowment for the Arts has announced a new program to weave the arts into everyday life. Called City Spirit, the program will provide matching grants up to $25,000 to encourage community interaction among the "arts" and "non-arts" segments. For projects to begin June 1, applications must be postmarked by January 31, 1975. For projects to begin October 1, applications must be postmarked by April 15, 1975. For further information, contact: Grants Office, National Endowment for the Arts, Washington, D.C. 20506.

The doctoral program in architecture at the University of Michigan is offering $5000-per-year fellowships, plus tuition, to qualified persons enrolling in the three-year doctoral program beginning in the fall of 1975. Deadline for submission of applications is February 1, 1975, and requests for additional information may be obtained from: College of Architecture and Urban Planning, University of Michigan, Ann Arbor, Mich. 48105.

The National Sculpture Society is seeking nominations for distinctive architect-sculptor collaborations. Awards will be given for projects showing exceptional use of sculpture with architecture in these categories: religious, monumental or memorial, and institutional or commercial. Nominations will be considered during March, 1975, and further information may be obtained from: Claire A. Stein, National Sculpture Society, 75 Rockefeller Plaza, New York, N.Y.

Eames television show to air in February

A 90-minute color film for television, "An Eames Celebration—Several Worlds of Charles and Ray Eames," will be broadcast over the Public Broadcasting Service, February 3, 1975 at 8 P.M. (Check local listings.)

Produced and directed by Perry Miller Adato, this production of WNET, Channel 13 in New York City, provides a personal portrait of the architect-designer, and Ray, his painter wife who is a full-partner and collaborator in work that includes furniture and exhibit design, and film-making.

In this 90-minute television program, which includes excerpts from 18 of the Eames' films, Charles and Ray Eames are shown in a few of the design pursuits which have made them renowned the world over. The program features commentary by Peter Blake, Philip Morrison, Eliot Noyes, Kevin Roche, Buckminster Fuller (shown above, with Eames) and others.

As a not-to-be-missed program, it nearly captures the essence of what Charles Eames strives for in his work: "The kind of pleasures that one has gotten from the arts or looked for, should come from the business of life itself."

AIA regions report gloomy past year

Directors of the American Institute of Architects, reporting recently on economic, chapter and general conditions in their regions, give a dismal picture as far as private work is concerned. Public work is up in some places, but over-all current slow-downs are pictured, and there is little optimism about any upturn early this year. Capsules of regional reports on economic health are as follows:

California: Draftsmen employment is down as much as 30 per cent in Southern California; in the north and central areas of the state some offices, both large and small, are hiring while others are marginally alive. Public and institutional projects continue but residential, small commercial and developer projects are on the shelf. No improvement is expected in the next few months.

Central States: Tight money is a problem here, but improvement is expected in the first quarter. There is little unemployment and most firms report relatively stable work loads. Conditions after the first quarter are questionable.

Florida: A startling slowdown is felt by the absence of new starts. Many firms are reducing personnel, some drastically. Tight money and high interest rates are blamed. The greatest decline is in multi-family housing; condominiums are depressed.

Gulf States: Public work is showing a good volume but private work is stymied in many places due to high interest charges. There is little residential work, and some layoffs are evident.

Middle Atlantic: Members are pessimistic as work loads are substantially lower than last year; several smaller firms have closed and others are barely hanging on. The trend is toward mergers.

New York: Upstate conditions are poor with a trend downward at an accelerating pace. Workloads are light with backlogs limited or nonexistent. Profitability is down; significant deficit financing of office operations is reported and some closings and bankruptcies are expected. Those participating in or serving the development field are hardest hit with investment losses, and large uncollectables.

Northwest: Alaska and Hawaii are busy but in general, high money costs and recession talk is affecting office workloads. Firms marketing A-E services and/or providing a broader scope of services are doing better than traditional firms.

Ohio: Architects are noticing a definite slowdown though less than elsewhere in the nation. Fewer new business prospects are reported for 1975 and few public works bond issues were approved in recent elections. Many firms anticipate reductions in staffs. Over-all, the trend is negative with no certainty about turnaround time.

Texas: Economic health is depressed. While some cities report good new start situations, new work is developing slowly and many firms face financial difficulties. Increasing layoffs throughout the state are noted, except in the far west.

AIA chapter activity appears to be strong in most areas, with membership growing and good meeting attendance reported at improved programs.

Building product manufacturer provides $100,000 for historic upgrading

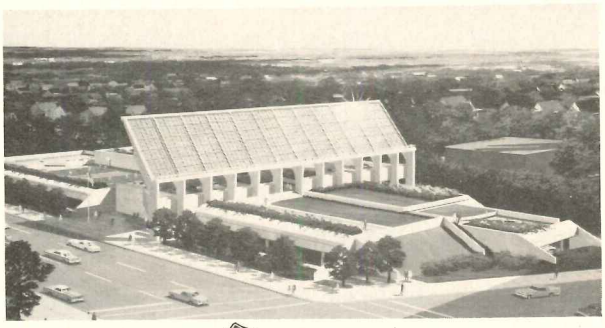
A $100,000 matching grants program for the preservation of national historic sites was announced at a news conference November 21 by Ralph E. Heim, president of Bird & Son, Incorporated.

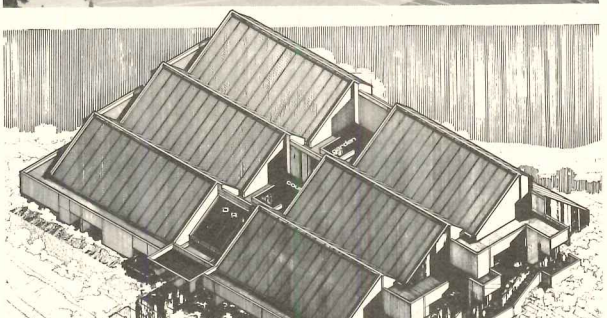
The program, initiated in celebration of the Bicentennial, offers matching cash awards up to $5000 for exterior restoration of historic sites.

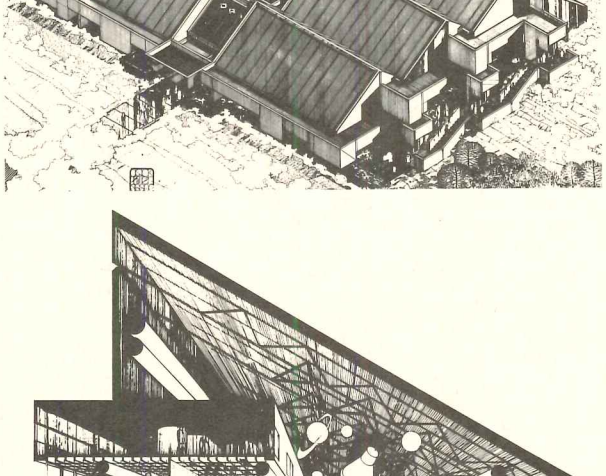
Bird & Son will award the grants for projects that are "designed to visibly improve the exterior of historic properties, to make them more accessible, understandable or environmentally compatible to the public they serve."

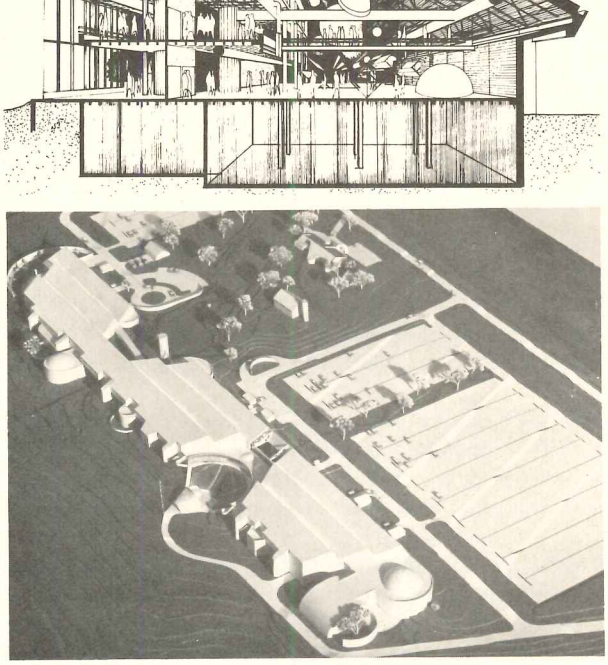
Applications will be acceptable for sites open to the public and registered or under consideration for registration by the National Register of H Places. Only one propos be accepted per nonprofi nization for exterior p that have not been starte can logically be comple January 1, 1976. Evide matching funds must a submitted. Proposals are March 31, 1975 and de on awards will be made J 1975.

Owens-Corning Fiberglas Corporation announces energy conservation w









Smith Hinchman & Grylls ciates Inc., Detroit, has w place honors in the g mental category of O Corning Fiberglas Corpor Third Annual Energy Co tion Awards Program.

The firm was cited fo chitectural and mechani sign of the Saginaw (Mich eral Building (top) descr RECORD, Mid-October, 19

The most promine ergy-saving feature is an square-foot flat-plate so ergy collector, which is o to take maximum advan the sun's heat at the bu latitude.

Jack Miller & Asso Architects & Engineers, h top honors in the insti category. The Las Veg was cited for the design University of Nevada S Desert Research Institut ond from top), Boulder C vada.

A 4000-square-foo collector meets 98 per the heating and 96.6 per the hot water demand.

The Richmond, Va. Hankins & Anderson, In sulting Engineers, wa honorable mention for chanical design of the Museum of Virginia (thi top), in Richmond. Ar for the project were Newman & Anderson, Richmond.

Energy conservati tures in the 56,000-sq- ture include solar ener heat recovery systems.

The ABR Partne Denver, has won hon mention in the institutio egory for its design of th munity College o ver/North Campus at W ster, Colo. The 291,000 foot structure combin heating with a heat pu tem. A 50,000-sq-ft sola tor is mounted on the ro

For the first time Owens-Corning award petition, there were no in the industrial and c cial categories.

ess and solar energy: legislative summary

erable confusion has
d the passage of three
y the 93rd Congress
deal with the subject of
nergy development and
stration and which, as
ublic laws, deserve the
tention of architects and
ers.

e future development of
eating and cooling sys-
ubsystems and compo-
involved and as the pro-
develop under the new
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nt.

ne enactment of the
Heating and Cooling
stration Act of 1974,"
mple, signed by Pres-
ord on September 3 as
Law 93-409, led the
an Institute of Architects
ch Corporation to com-
hat it had been given a
challenge for the profes-

hile this measure pro-
uthority for only $60 mil-
er five years, it requires
competitions for residen-
uctures incorporating
chnologies for solar heat-
solar heating and cool-
'substantial number" of
g units will be employed
e experiments.

ongress also passed, and
sident signed, the "Solar
Research, Develop-
nd Demonstration Act of
(Public Law 93-473)
authorized $75 million
coming fiscal period—
June 30, 1976—to carry
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which the National
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r a $1 billion outlay over
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en there is the more in-
"Energy Reorganization
1974" which dissolved
mic Energy Commission
eated a new Energy Re-
and Development Ad-
ation and a new Nuclear
Commission. Under
f this law (PL 93-438),
October 11, the ERDA,
finally constituted and
ng, will take over super-
f these activities.

id President Ford on
the bill, "It (ERDA) will
s greatly strengthened
ment scientific and engi-
capability to expand
grade our research into
use of new and poten-
nportant forms of energy
s solar and geothermal
sources."

In establishing this new agency, Congress intends that all possible sources of energy be developed consistent with "warranted priorities." This new entity will manage R and D programs, both near- and long-term.

It will have transferred to it the National Science Foundation functions relating to solar heating and cooling development as well as geothermal development. (Designers note that the ERDA Administrator is empowered to attach his own "seal of office" to any devices that he approves with proper judicial notice being taken of such a seal.)

Specifically, ERDA will claim jurisdiction over laboratories and facilities of the Atomic Energy Commission, the Office of Coal Research and the Bureau of Mines research centers, solar and geothermal development programs from NSF, and programs for developing alternative automotive power systems from the Environmental Protection Agency.

The Housing and Urban Development Department moved promptly under authority extended by the September 3 demonstration law, contracting with the National Bureau of Standards for preparation of definitive criteria covering the development of solar heating and cooling hardware, installation and monitoring.

In November, NBS completed a draft and promised it would meet the law's deadline and have interim criteria ready for HUD by January 1, 1975.

The criteria draft was prepared in such a way that "on-shelf" available technology could be used in demonstration structures, including a number of dwellings.

HUD and the National Aeronautics and Space Administration have been assigned responsibility for drafting and carrying out a comprehensive program of system, subsystem and component development and installation for solar heating and cooling. Details have already been drafted.

(Note: Earlier, Congress passed a "Geothermal Energy Research, Development, and Demonstration Act of 1974," also signed, which provides for bringing unused resources to a point of commercial demonstration by the end of the decade. It covers design and construction of plants with loan guarantees limited to $25 million for a single project, and $50 million per borrower.)

Society of American Registered Architects confers honors at meeting

The Society of American Registered Architects held its 1974 Convention near Disney World, in Lake Buena Vista, Fla., November 20 through 23, 1974.

With its theme, "Continuing Education," the Convention opened with keynote speaker, General (retired) W. E. "Joe" Potter, vice president of EPCOT (Experimental Prototype Community of Tomorrow). EPCOT is a subsidiary enterprise of Walt Disney Corporation and is greatly responsible for many of the themes and over-all planning of the Florida Disney World activities. General Potter went into detail regarding the entire planning and construction stages of the theme park, the commercial areas as well as the environmental buffer areas surrounding the entire development. Other convention sessions heard speakers discuss NCARB, and construction management as it affects the architect/developer.

Each year the Society of American Registered Architects holds a professional design awards competition. The awards chairman, LeRoy Everett, of Allentown, Pa., was in charge this year, and SARA Gold Medal Awards were given to: Maxwell Starkman & Associates of Beverly Hills, Cal. for their project, Gemco Freemont Shopping Center (above), San Leonardo, Cal.; A. Epstein & Sons, Inc., Chicago, for the Jell-O Facility, Lafayette, Ind.; Salvatore Balalmo & Associates, Inc., Chicago, for Kingdom Hall of Jehovah's Witnesses, Oak Bridge, Ill. Blue Ribbon Awards were given to: Law/Kingdon, P.A., Wichita, Kansas, for the Twinlakes Office Park; Welton Becket & Associates for Grand Ole Opry House, Nashville, Tenn.; and Brown, Zajaceck & Roth, Fountain Hill Elementary School, Bethlehem, Pa.

The Society chose as recipient of its Synergy Award, the founder of the Society, Wilfred J. Gregson, Atlanta, and unanimously elected the following members to lead its activities for 1975: Charles J. Faroni, president, Cleveland, Ohio; Herbert L. Berger, president-elect, Wichita, Kan.; vice-presidents—Sidney Epstein, Chicago; LeRoy C. Everett, Allentown, Pa.; Jean P. Boulanger, Westfield, N.J.; Donald S. McKerchar, North Palm Beach, Fla.; Jerome Salzman, treasurer, Chicago; Richard E. Shields, recorder, York, Pa.; Norman E. Hodge, regent-at-large, Denver, Colo.; and Chester A. Stark, archivist, Chicago.

The 1975 convention of SARA is scheduled for November 20-23 for Phoenix, Ariz., with its theme of "Recycling and Rejuvenating the Architectural Environment." This past convention chairmen were Donald S. McKerchar and Frank Masiello, Jr. Mr. Masiello is past president of the Society.

Architects are asked to participate in major housing design competition

An architectural competition for the next 1000 apartments planned for the new community being developed on Roosevelt Island (New York City) was announced November 25, by the New York State Urban Development Corporation (UDC). The new community is being developed by the Roosevelt Island Development Corporation, a UDC subsidiary, under a lease agreement with the City of New York and the first 2100 apartments in the new community are nearing completion.

Participation in the first stage of the competition is open to any architect registered in the United States. Associations of architects, designers, and their consultants who group together expressly for this competition, will be admitted provided that at least one member of the group is a registered architect. The 9.2-acre site (outlined in white, right foreground) is programmed for 1000 units of housing as the second phase in Northtown on Roosevelt Island.

Upon completion, the Island will be a vehicular-free community of 18,000 residents.

Requests for Announcements (free), or Programs (accompanied by a check or money order for $25) should be sent to: Theodore Liebman, Roosevelt Island Housing Competition, New York State Urban Development Corporation, 1345 Avenue of the Americas, New York, New York 10019. Deadline for registration is February 15, 1975, and the deadline for first stage submissions is April 15, 1975.

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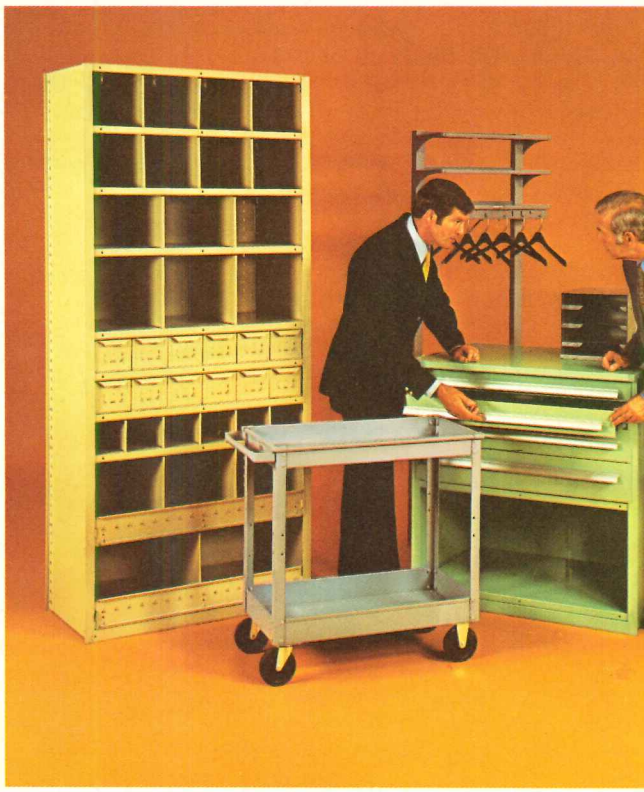

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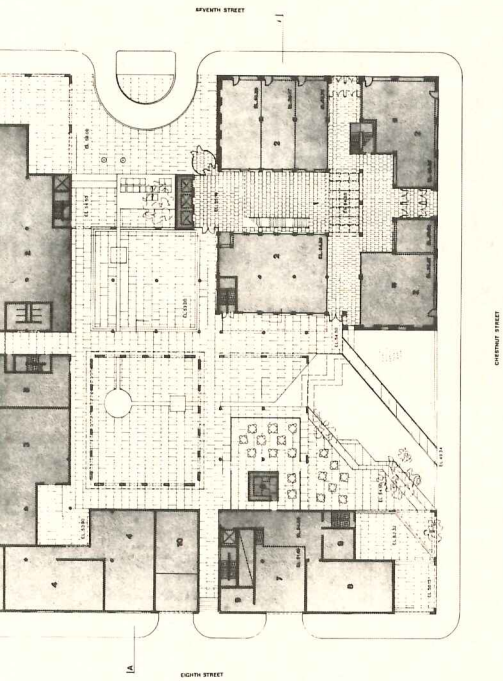
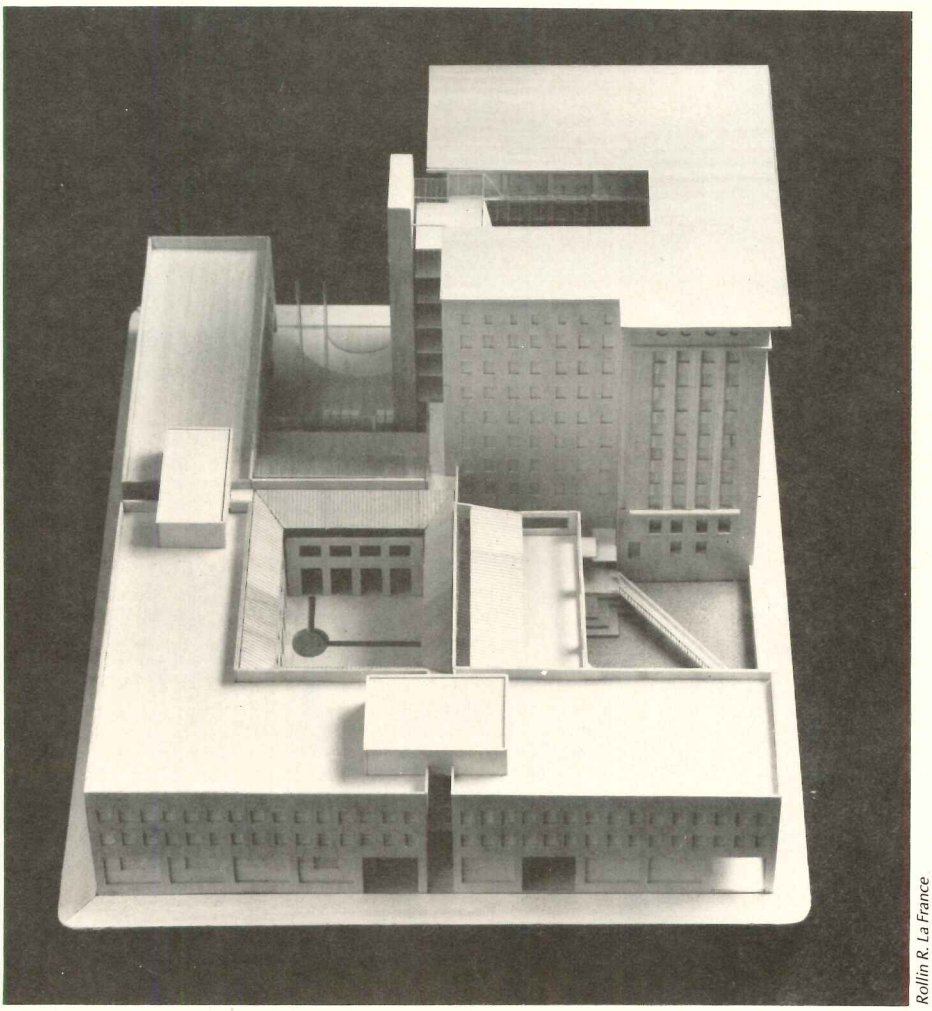
ng design for Wainwright restoration . . .

n by Hastings & Chi-. Louis, in association itchell/Giurgola Asso-Philadelphia, was cho- winner in a national tion to provide a con- d state office complex in vn St. Louis. The his- ainwright Building, de- by Adler and Sullivan t in 1891, will afford an 200,000 square feet space with its new ad- t a construction cost of lion. The site is a 19th- urban block, divided drants, one of which is d by the Wainwright . The other three quad- e to be used for three new L-shaped units, emphasizing the block's parts and forming three courts. One of these is a formal reception area including car arrival (top of plan), the entry to the building vestibule, and a commemorative fountain. Through a covered area, it will be possible to reach the second enclosed court relating to the hearing rooms and courtrooms. The sequence of courts ends with a third opening onto a Mall, more entertaining in character, with fountains, sitting areas and street access. The walls of the new building will be red sandstone like the Wainwright Building. The State intends to move right ahead.



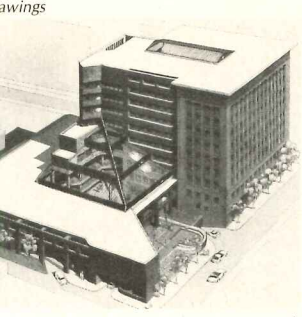


Rollin R. La France

. . . and four runners-up shown in national competition

Four finalists were selected for recognition. Second prize (1) was awarded Urban Architects, Kansas City, for a low, horizontal design with interior court, and sidewalks recessed into the building. Third prize (2) was awarded William B. Ittner, St. Louis, in association with Perkins & Will, Chicago, for an elevated building design equaling the mass of the Wainwright Building, and providing a large open plaza. Honorable mention (3) was accorded HNTB Inc., Kansas City, and Joseph W. Albert, Milwaukee, for a terraced addition with roof gardens. And an honorable mention (4) went to Perkins & Will, New York, and William B. Ittner, for a low design exploiting the city's proposed skyway system, making the site a key pivotal point.

awings



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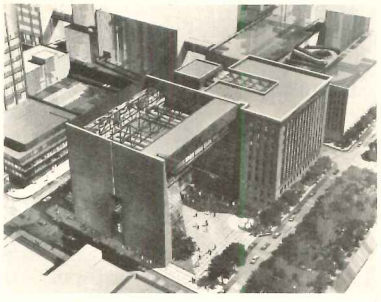

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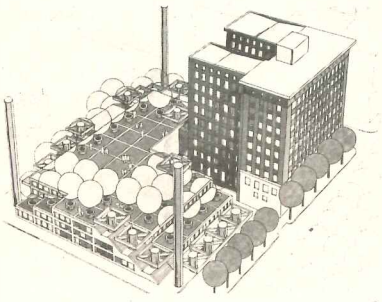

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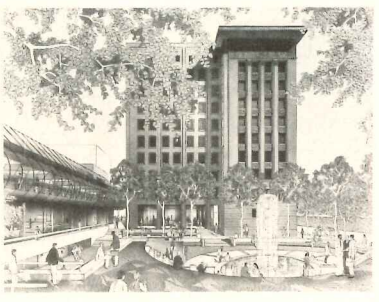

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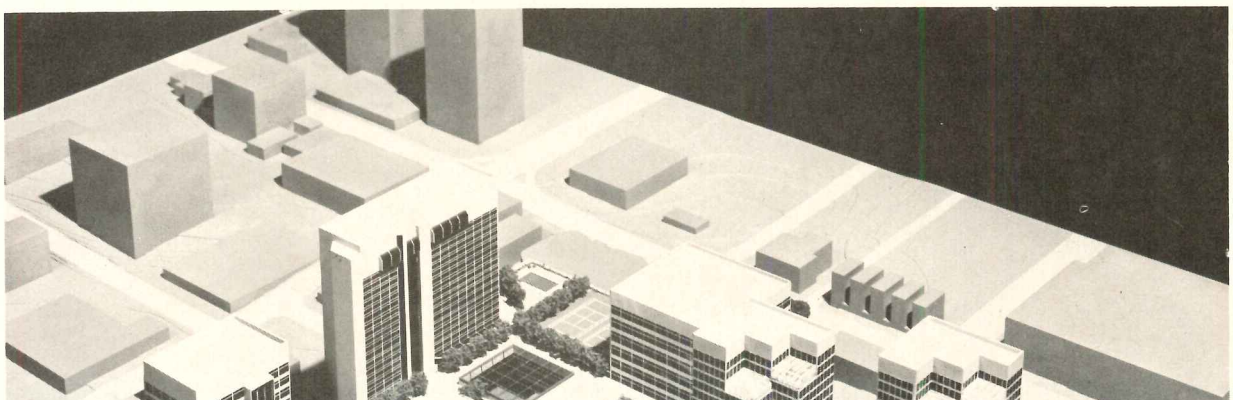
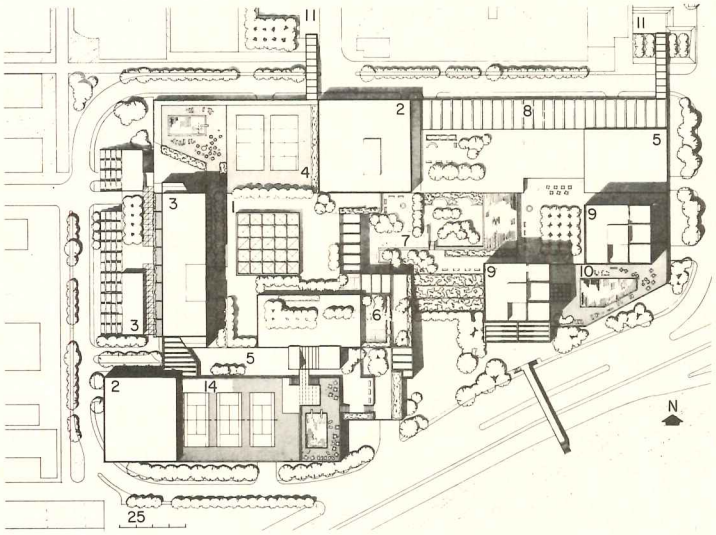


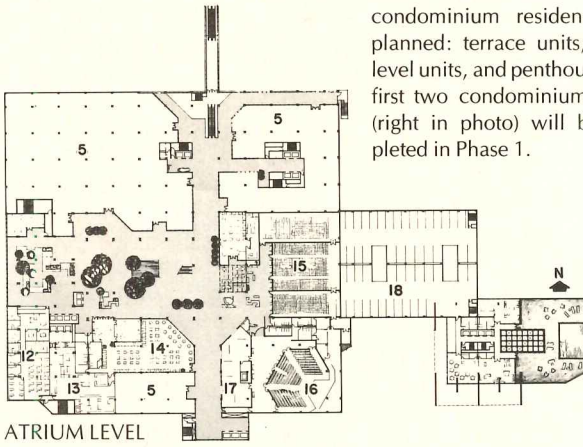
Robert Pettus

Multi-function com in suburban St. Lou

Clayton Center is a m complex to be located c acre site in Clayton, Mis suburb of St. Louis. The the total developmen completion will excee million, with the expecte pletion of Phase 1 in a mately two years. Pha shown in site plan and Anselevicius / Rupe / As are the architects of the which will focus on a fo atrium (see plan) servin and retail areas, as w 500-room hotel. More per cent of the master pl signated for open space ing of the atrium, tre plazas, fountains and po emphasis will be on the trian amenities, with a bile traffic and parking beneath public areas components of the d ment include outdoor ca taurants, theaters, a per arts center, art galleries letic facilities. Three t condominium residen planned: terrace units, level units, and penthou first two condominium (right in photo) will b pleted in Phase 1.

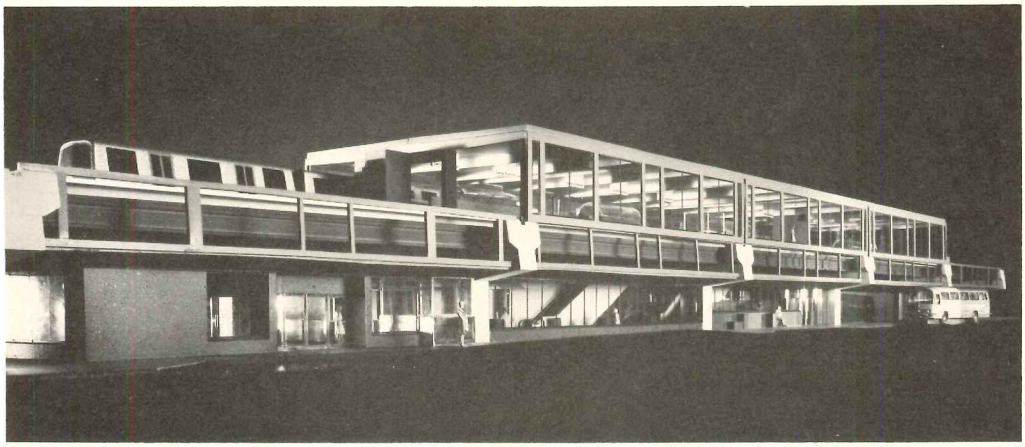


1 Central atrium
2 Office
3 Hotel
4 Recreation
5 Retail
6 Cultural and civic center
7 Center square
8 Galleria
9 Condominium
10 Pool deck
11 Entry plaza
12 Administration
13 Kitchen
14 Restaurant
15 Movie theater
16 Performing arts
17 Art gallery
18 Parking



ATRIUM LEVEL

SITE PLAN—PHASE 2



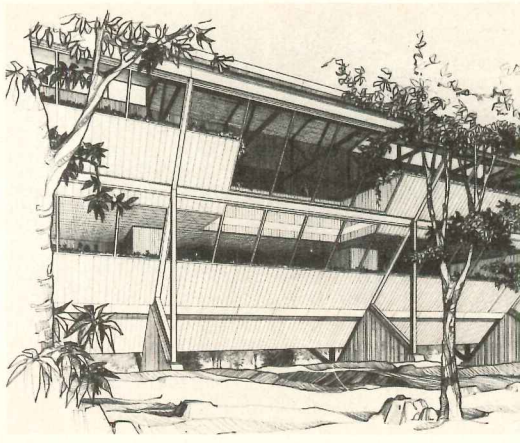
Dick Brehl

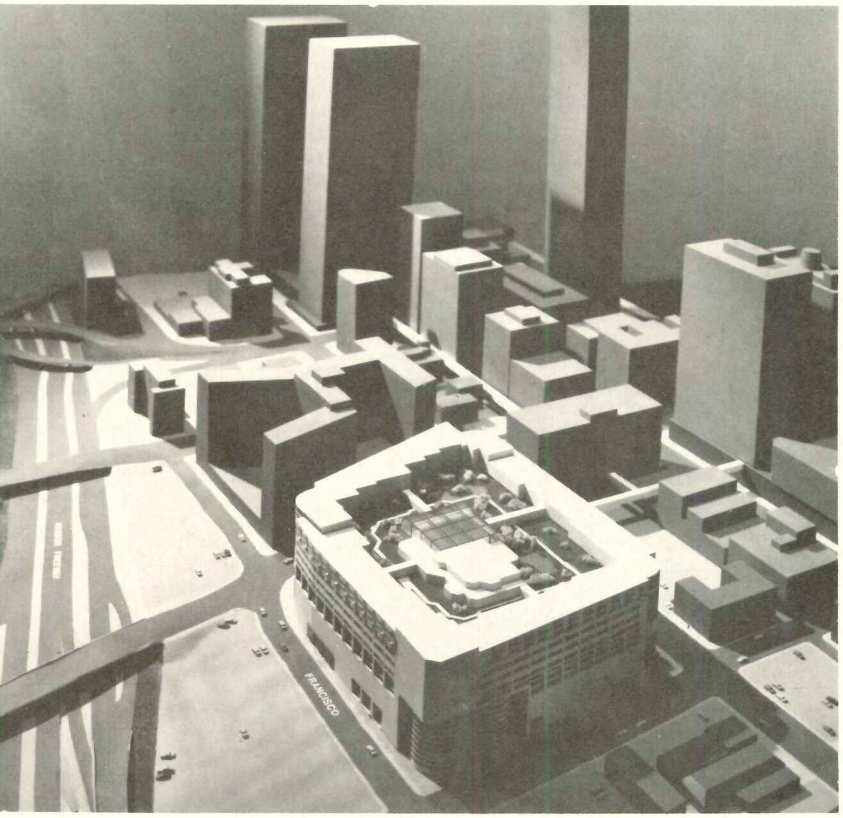
Prototype station for Pittsburgh transit out for bids

Celli-Flynn and Associates designed this prototype station, one of ten along the 10½-mile-long first line of the new Pittsburgh Rapid Transit System, which expects to start revenue service in 1978. The $2.3-million station prototype features Vierendeel trusses spanning concrete columns. At present, three bays are roofed and enclosed for platform waiting, but as longer trains go into service, additional bays may be enclosed. The design was done for Kaiser Engineers of Pennsylvania, prime consultants on the system.

Minimal impact is sought in office

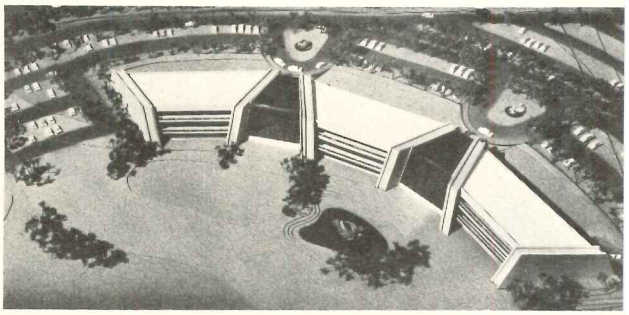
The Simmons Compar quarters in Atlanta, one of which is shown, will 000-square-foot, 450-f structure cantilevered cial trusses to permit drainage and minimize tions on the site. The to be completed in M designed by Thompso cock & Witte Associate

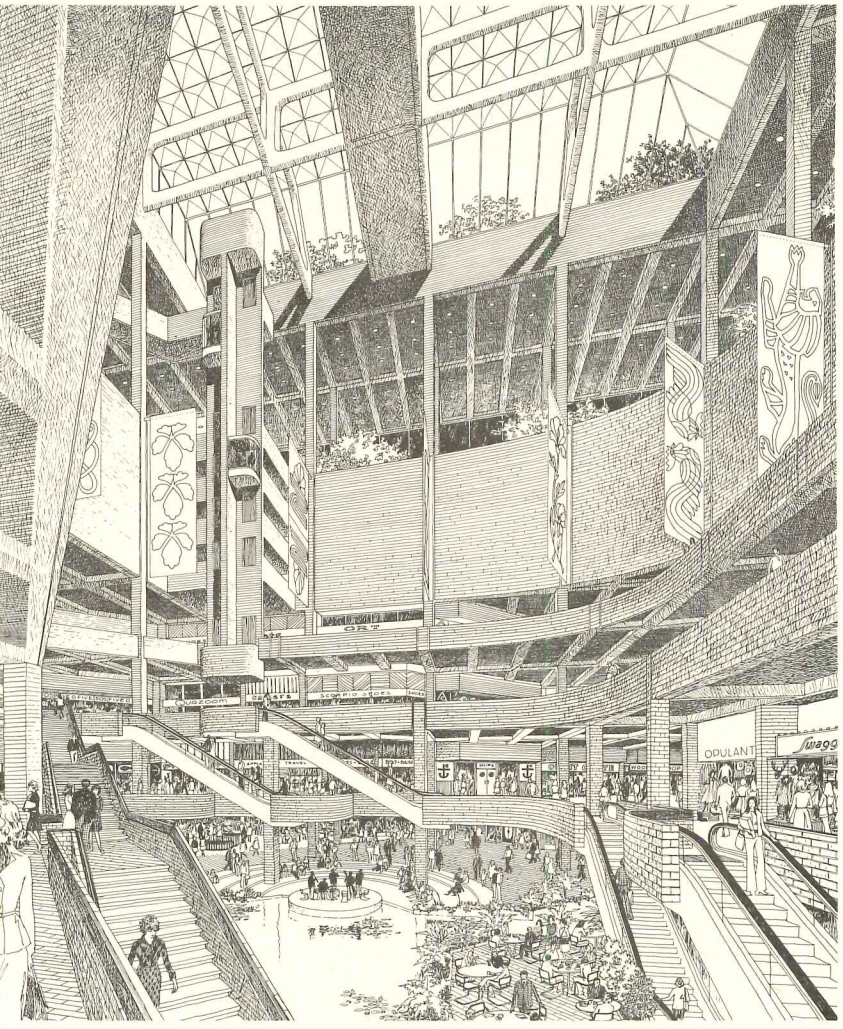




Construction begun on Indianapolis offices

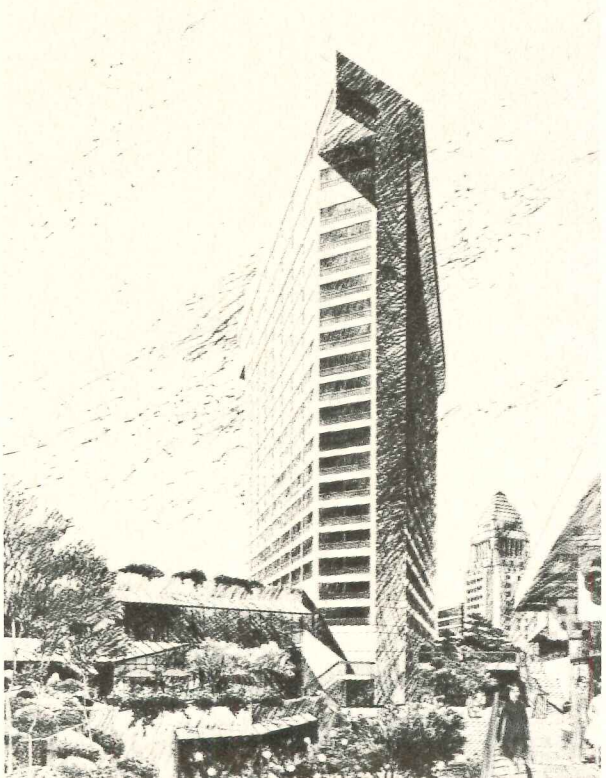
Copeland, Novak and Israel designed this headquarters building for Melvin Simon Associates. Meant to harmonize with the residential neighborhood, the low-profile structure includes finger-joint-like skylighted areas for reception and eating functions, balconies along the length of the building, and floor-to-ceiling tinted glass. Indiana limestone will be used on the 120,000-square-foot project.





Hotel for Little Tokyo in Los Angeles

Construction has started on the 21-story Hotel New Otani in the developing Little Tokyo district of Los Angeles. The $24-million structure was designed by Kajima Associates of Los Angeles and William B. Tabler Architects of New York. When completed in 1976, the 500-room hotel will be operated by the New Otani Company, a Japanese corporation which owns the Hotel New Otani, largest hotel in Tokyo.



125 million multi-use complex announced for downtown Los Angeles

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ix-acre site. A 165-foot
um topped by a 15,000-
oot skylight is said to
nearly the full site and
provides interior lakes, streams and landscaped areas. The project, called The Centrum, will contain 2.8 million square feet, making it one of the largest buildings in Southern California. Ray Affleck and Ramesh Khosla, partners in Arcop Associates of Montreal, designed the building; the firm's work includes the Place Bonaventure, a similar building in Montreal. Associated with Arcop on The Centrum project is the Los Angeles firm, Gruen Associates. Completion of the complex is planned for 1978, according to the owner, Karam Ventures.

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Low-rise design guide for developing areas

The latest Building Science Series publication of the National Bureau of Standards, "Development of Improved Design Criteria for Low-Rise Buildings in Developing Countries to Better Resist the Effects of Extreme Winds," is a 166-page book covering the procedures of a November, 1973 workshop on the subject held in Manila, the Philippines.

It is part of a three-year project sponsored by the U.S. Agency for International Development and appears as BSS-56 in the NBS series. It may be purchased for $2.35 per copy from U.S. Government Printing Office, Washington, D.C. 20402.

Peace Corps seeks architects, engineers

The Smithsonian Institution and the U.S. Peace Corps have announced an increased effort to obtain qualified architect-engineer personnel to assist developing countries in environmental and natural resource assignments. Requests are said to be mounting, with openings in field projects, and administration.

The Smithsonian-Peace Corps Environmental Program, created as a result of a formal agreement between the two agencies in 1971, is working to help determine the best utilization of Peace Corps A-E personnel. Among the countries seeking professionals for spring 1975 are:

Venezuela: The Foundation for the Development of the State of Monagas is requesting an architect, a landscape architect, and a regional planner to perform a wide range of architectural and planning functions, including the development of regional plans, design of low-cost housing, and planning for parks and other recreational settings in cities throughout the state. The Foundation for Community Development and Municipal Improvement is also requesting four city planners, three architects, and two landscape architects to help meet a rapidly growing demand for public services in Venezuelan cities of 50,000 to 80,000 people.

Ethiopia: The Ministry of Interior in the province of Adwa has requested a planner to prepare a detailed development plan based on the master plan already drawn by a previous Peace Corps volunteer. He will also be asked to prepare preliminary development plans for the five capital towns in Adwa's 10 districts.

Afghanistan: Kabul University, in the capital city, is seeking two architects to teach a wide variety of architecture-related courses, and to participate in on-going review and modification of the architecture curriculum.

Philippines: The government is seeking 14 planning professionals to work at regional, provincial, and local government levels to help prepare for orderly urban development made necessary by continuing population shifts from rural to city environments.

Botswana: A local and district government council have jointly requested a volunteer with a BA degree in architecture with extensive preparation in town planning to help plan and design construction for expansion programs anticipated within the context of the nation's current five-year development program.

Nicaragua: The Vice Ministry of Urban Planning is seeking two city planners to help plan and implement the rebuilding of the capital city of Managua, which was badly damaged by earthquakes in December, 1972.

Barbados: the Ministry of Education is seeking an architect to design public buildings at 23 projected sites, with responsibilities to also include overseeing land and building purchases, construction activities, etc., and supervising the work of the Ministry's Building and Maintenance Division.

Other assignments in architecture and planning will be available in Bahrain, Fiji, Oman, Morocco, Tunisia, Western Samoa, Yemen, Zaire, Botswana, Ghana, Kenya and Liberia.

Civil engineers are needed for assignments in:

Western Samoa: The Public Works Department has requested three civil engineers to supervise design and construction of buildings, roads, harbors, and other projects.

Fiji: The Public Works Department is seeking a variety of skills, including water and sanitation works engineers; an engineering draftsman; and ten civil engineers for the nation's rural development program.

Nicaragua: The Vice Ministry of Urban Planning is seeking a civil/structural engineer to help plan and implement the rebuilding of Managua.

Sarawak: This Malaysian district has requested two civil engineers and two hydraulics engineers to plan for orderly growth of Sarawak cities and to help plan and implement water and sewer supply systems, highways and airports.

Thailand: The Department of local Administration needs ten civil engineers to assist with irrigation and other water works projects.

Honduras: The Office of Urban Affairs is requesting three civil engineers to help cities meet their requirements for water and sewage systems, and to help plan municipal streets.

For more information and applications, please contact: Robert K. Poole, Office of Ecology, Smithsonian Institution, Washington, D.C. 20560.

Latin America focuses on transit problems

The Transportation Commission of the Guayas Province, Guayacil, Ecuador sponsored the First Latin American Seminar on Urban Transportation, held October 10-12, 1974, and attended by some 50 persons from six Latin American countries.

Participating in the seminar was the University of Miami, Coral Gables, Fla. which provided lectures on: urban transit; growth and land-use; transit management, quantitative analysis of transportation; and goods movement. The University team was drawn from the Ryder Program in Transportation and the School of Engineering and Environmental Design, with Dr. A. J. Catanese coordinating the effort. The Ryder Program is a multi-discipline endeavor bringing architecture, planning, engineering, business administration and urban studies together in research efforts in transportation.

Recommendations of the seminar, forwarded to the President of Ecuador, included improvements in the process and methods of transportation planning; utilization of technology from other countries; improved citizen input in planning; improved urban design for transportation facilities; and government reorganization and better accountability.

Professor Catanese's group at the University of Miami has been asked to produce another seminar in Ecuador on highway planning, and it appears that there will be a second Latin American Urban Transportation Seminar in Santiago, Chile this fall.

The South American interest in mass transit is growing as is the congestion in urban centers due to increased private car use. Housing is still the number one priority of many of these governments, but mass transit is approaching equal importance. Caracas, Bogota, Sao Paulo, Buenos Aires and Santiago have or are building rapid rail systems, with Santiago, Chile having purchased the French system used in Mexico City and Toronto. Bogota is looking into a system similar to BART, in San Francisco.

Capital funding remains a problem in South American mass transit, although the World Bank and the Bank of International Development are supporting some projects. The U.S. government, through AID (Agency for International Development), recently tried unsuccessfully to persuade Bogota to develop a freeway system, which citizen groups strongly opposed, focusing new attention on mass transit alternatives to the auto.

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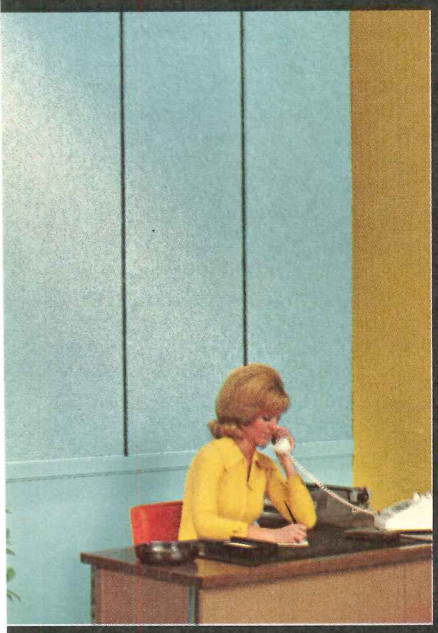

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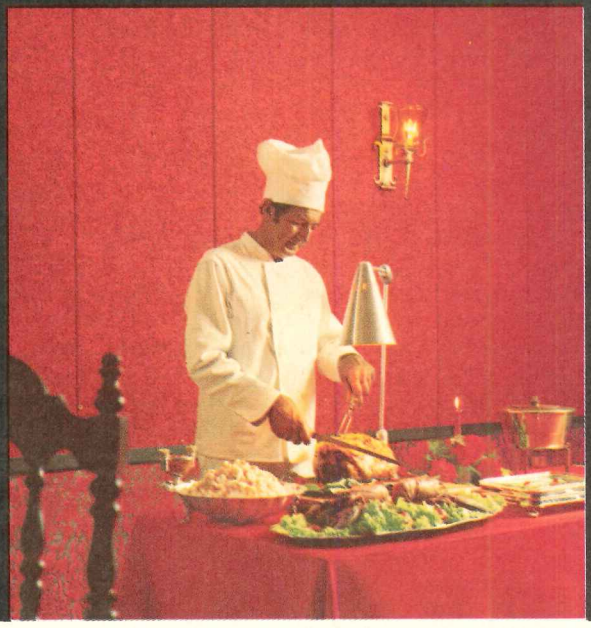

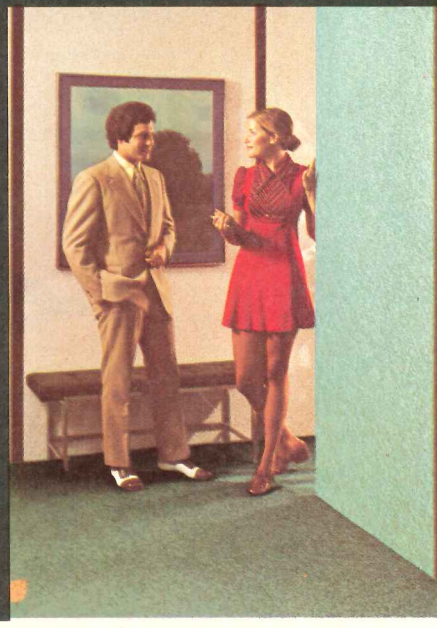

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lling the American dream house

OW TO DECORATE MODEL HOMES AND ARTMENTS, *by Carole Eichen; edited by June R. llman; House and Home Press, New York 1974, 5 pages, illustrations, $24.95.*

role Eichen has a profound understanding of L. Mencken's observation that no one ever nt broke underestimating the taste of the nerican people. One of the most successful corators of model homes in America, she gan her career working for her builder/ signer husband and now heads her own est Coast design firm. With a firm grasp the finer points of marketing and demo-phics, she applies the principles of mass ychology in *How to Decorate Model Homes d Apartments* as skillfully as any example il-trated by Vance Packard in his studies of the lden persuasion of the American status-ker.

It is made clear at the outset that this is not book about interior decorating per se, but ner about what makes houses sell. The au-r, both in theory and in application, sets th a series of considerations about the tastes, otivations and aspirations of Mr. and Mrs. n Q. Homebuying Public that simultane-sly fascinate and distress. The fascination s in her uncanny knack for psyching out, in-ed supplying, the dreams that can propel the spect's subconscious attitudes toward the nscious act of buying a home. The distress architects) lies in the realization that the dified standard of design-consciousness set th in Modern architecture since World War as had about as much effect on the average th-century American as the Renaissance had the average 15th-century Tuscan.

One can hardly disagree with Ms. Ei-en's cardinal rule that you'd better give them at they want if you want them to buy it. As hitects from LeCorbusier on have found h amazing regularity, the inhabitants of ss-produced housing have little likelihood itting their tastes into a mold, no matter how netically "correct," to whose values they ve not been "educated." And since this ok is essentially about selling, albeit selling product quite unlike any other, the author kles her subject for what it is. Architects will nt the book even though they won't like it; y will not get high style but they will get ir money's worth (and some useful insight) proven marketing successes.

The book is arranged with large color otos of the author's own designs, accom-nied by schematic drawings of the interiors efore" and "after." We are led through the oms amidst a plethora of decorating do's and n'ts: parrot green has "good mass appeal

High Style: "a step up in prestige" in living room at The Woodlands, Memphis, Tenn.

Low Style: "fun accents" in living room at Westridge, Anaheim Hills, Cal.

A Room with a View: "privacy and luxury were the merchandising goals" in bathroom at The Woodlands, Memphis, Tenn.

and a minor offensiveness factor," while hunter green "should be handled with discretion." Bedrooms should always have two dressers and two night tables with lamps flanking the bed (not beds, since "75 per cent of the public owns a queen- or king-size bed"). Be sure to use large accessories ("It eliminates the temptation for people to drop your accessories into their pockets or purses"). Large mirrors that make occupants "uncomfortable, even nervous" in the living room can be used "to almost sinful limits" in the bathroom, presumably a reference to her use of a floor-to-ceiling mirror in full view of both bathtub and toilet (bottom photo).

With her eye ever aimed at the income-tax tables, Ms. Eichen presents even more specific "parameters" for different markets. For the first-time buyer of a $25,000 home, over-decorating will likely frustrate and scare off the prospect with decor beyond his means. "Cheeriness," "warmth" and "charm" are the watchwords here. (Nevertheless, her *horror vacui* belies in practice the simplicity she espouses in theory.) Whatever one's opinions of the schemes themselves, it must be admitted that the author has worked wonders of sorts with some atrociously designed interior spaces that she gamely calls "architectural bloopers."

But as one ascends the economic ladder and descends the actuarial charts, things change: the oranges and yellows suitable for young families fade into the beiges and off-whites chosen for a luxury condominium development for older, more affluent types. Patterned wallpapers, pinball machines and schoolroom clocks are replaced by baby grands, knock-off Barcelona chairs and a fake Turner over the mantelpiece (top photo). And even though her examples of high-style decor are likely to draw snickers from the Billy Baldwin/Sister Parish set, the author once again removes herself from the considerations of "good" versus "bad" design by the catch-all escape clause of demographic appropriateness.

As architects Moore, Allen and Lyndon perceptively note in their recently published book *The Place of Houses,* (RECORD, December, 1974 page 45) "The dreams which accompany all human actions should be nurtured by the places in which people live. Houses have always embodied aspirations, and often they have recalled places and times not quite their own." Ms. Eichen subscribes to that belief, too, perhaps not quite so consciously, nor directed toward the same goals as architects involved in the more comprehensive process of creating an entire building. Yet with small touches like placing a copy of *The Wall Street Journal* in a room to signify "that the person who can afford this type of shelter has *made it* in life, and has most probably *made it* in the business world," she bespeaks that understanding.

But in this book she is limited by the passive, rather than active, designer/client relationship she defines. By assigning clients the dreams that her well-calculated demographies

continued on page 45

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promise they will want, she short-circuits their ability to dream for themselves. It is certainly worth admitting, nevertheless, that her recurrent and somewhat poignant use of fantasy symbols like ice cream parlor tables and chairs, a gumball machine (middle photo), or a little red wagon topped with glass and used as a coffeetable, are aimed at—and most probably succeed in—reaching her audience's dream life as effectively as an architect who presents his client with the latest in drop-dead chic on the dunes of East Hampton. The paradox of this book is that it acknowledges the importance of people's dreams, but, with its pat formulas, it may limit the growth of those dreams.

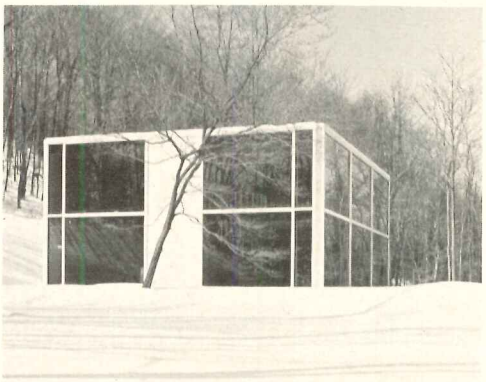
Claiming to be the first book of its kind, *How to Decorate Model Homes and Apartments* gives a provocative look at an aspect of decorating that will be of acute interest to mass-market builders and designers alike. If most people know what they don't like, Carole Eichen knows what they *do* like, and for better or worse, she is giving it to them.

—Martin Filler

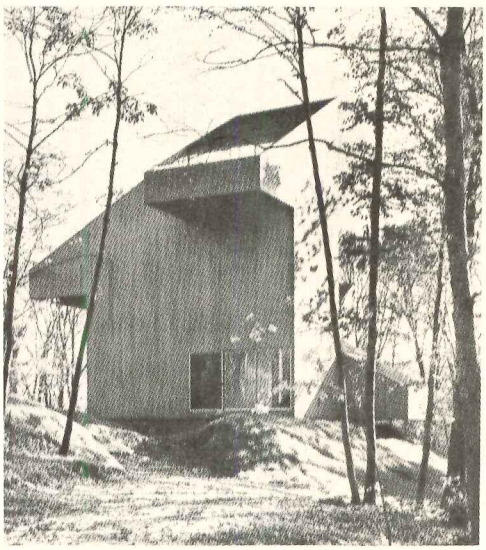
Mr. Filler is assistant manager of ARCHITECTURAL RECORD *Books.*

Also received

HOUSES ARCHITECTS DESIGN FOR THEMSELVES, *edited by Walter F. Wagner and Karin Schlegel; Architectural Record Books, New York, 1974, 230 pages, illustrations, $16.95.*



Robert E. Fitzpatrick House, Yorktown, New York

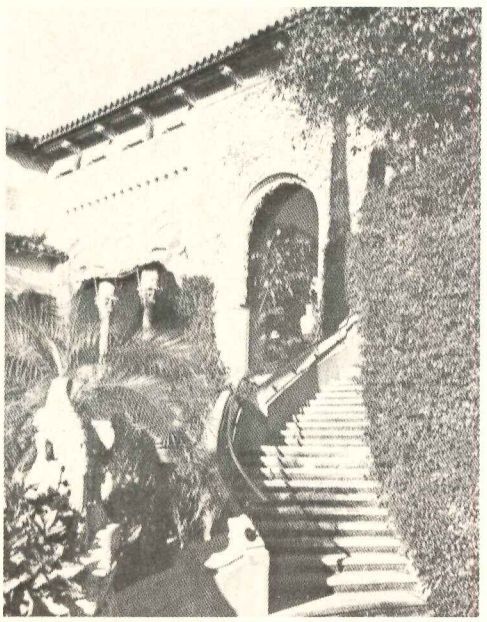


Myron Goldfinger House, Waccabuc, New York

A collection of 61 houses designed by architects for themselves and previously published in ARCHITECTURAL RECORD. The houses are grouped according to concerns which, according to their designers, were the primary determinants of their forms—site, budget, family needs and preferences, desire to incorporate traditional or regional design into a contemporary approach, desire to experiment with forms, plans or structures, renovating the city dwelling, special custom features, and unique problem situations.

The book is designed as a study-guide for potential house-buyers; "Houses are intensely interesting to study," it counsels, "because each one, in a different way, explores a way of living, and every house—for better or worse—expresses the way of living of the people who have built or bought or rented that house and made it their home. . . . Look for ideas that reflect what you want, perhaps the way you want to live. For a house is (or can be, or should be) perhaps the most personal expression of your life."

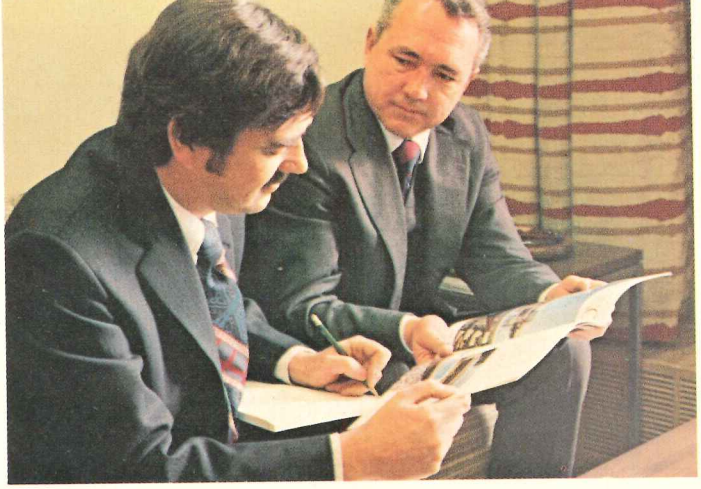
LANDMARK ARCHITECTURE OF PALM BEACH, *by Barbara D. Hoffstot, with an Introduction by Arthur P. Ziegler, Jr.; Ober Park Associates, Pittsburgh, 1974, 227 pages, illustrations, cloth $10.00, paperback $3.95.*



Mar-a-Lago, Palm Beach, Florida, by Joseph Urban and Wyeth, King and Johnson

What has given Palm Beach its fame is the same combination of causes that made Bath famous in the 18th century: a very few clear-sighted men—they can be counted on the fingers of one hand—wealthy families attracted by what these men had to offer, and some remarkable architecture that came into being in consequence.

Landmark Architecture of Palm Beach records that architecture, which includes the work of Addison Mizner, Marion Wyeth, Maurice Fatio, and Joseph Urban. The book is small and handy for the architectural touring buff to carry around in a pocket—and it employs what has almost become a lost vocabulary of architectural terms that are in themselves a delight to wander through: cartouches, barge boards, chinese railings, belt courses, and *oeil-de-boeuf* windows.



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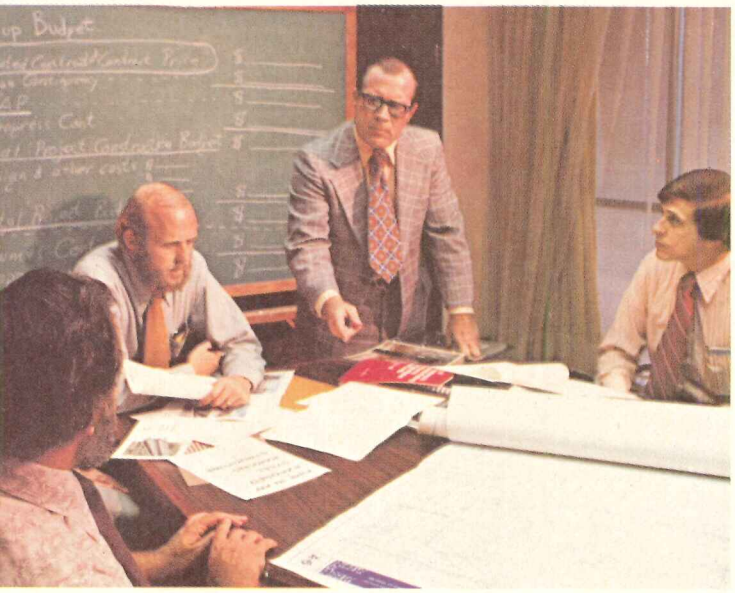

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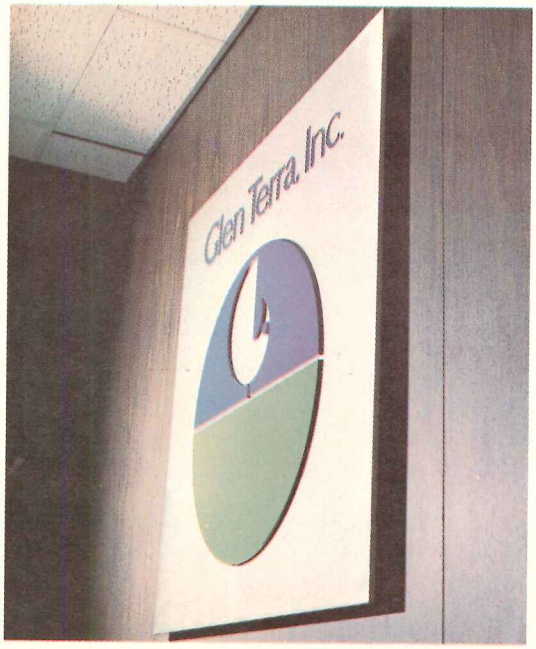

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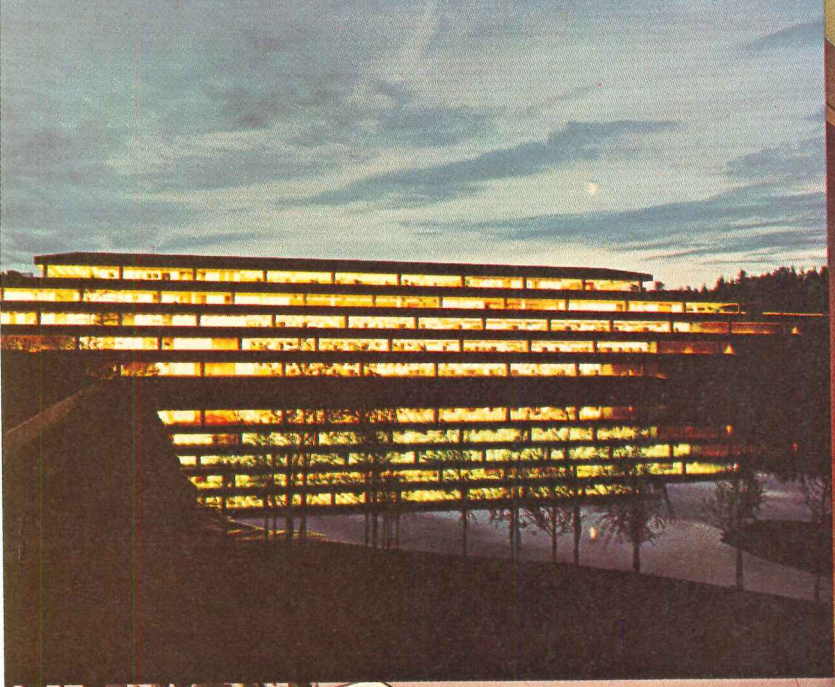

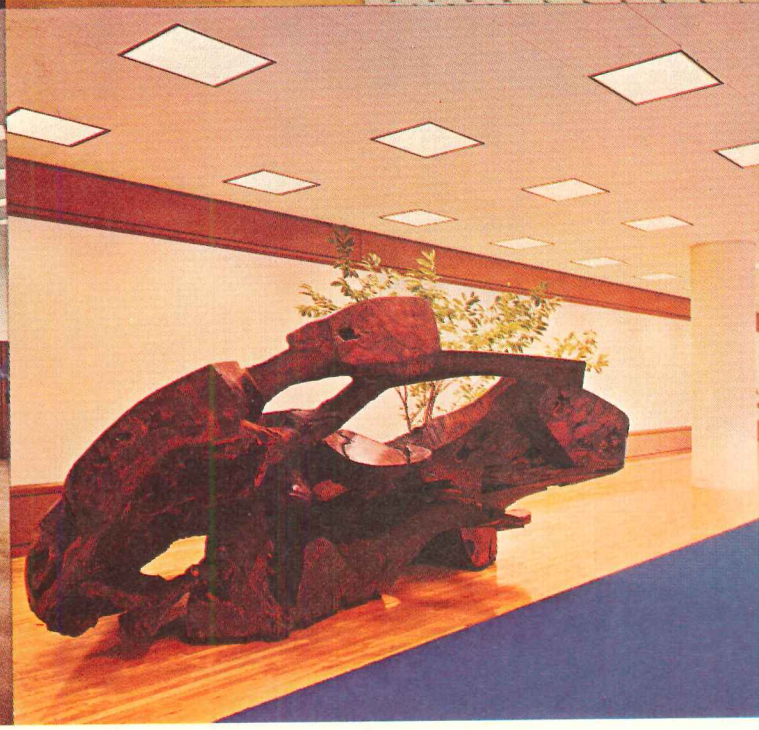

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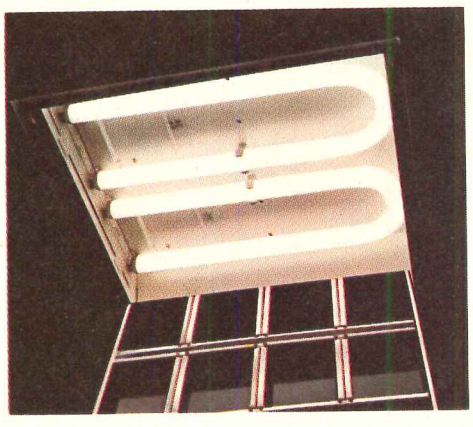

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For details, call your GTE Sylvania representative or local independent electrical distributor (in the Yellow Pages under Lighting)—or write to Sylvania Lighting Center, Danvers, Mass. 01923.

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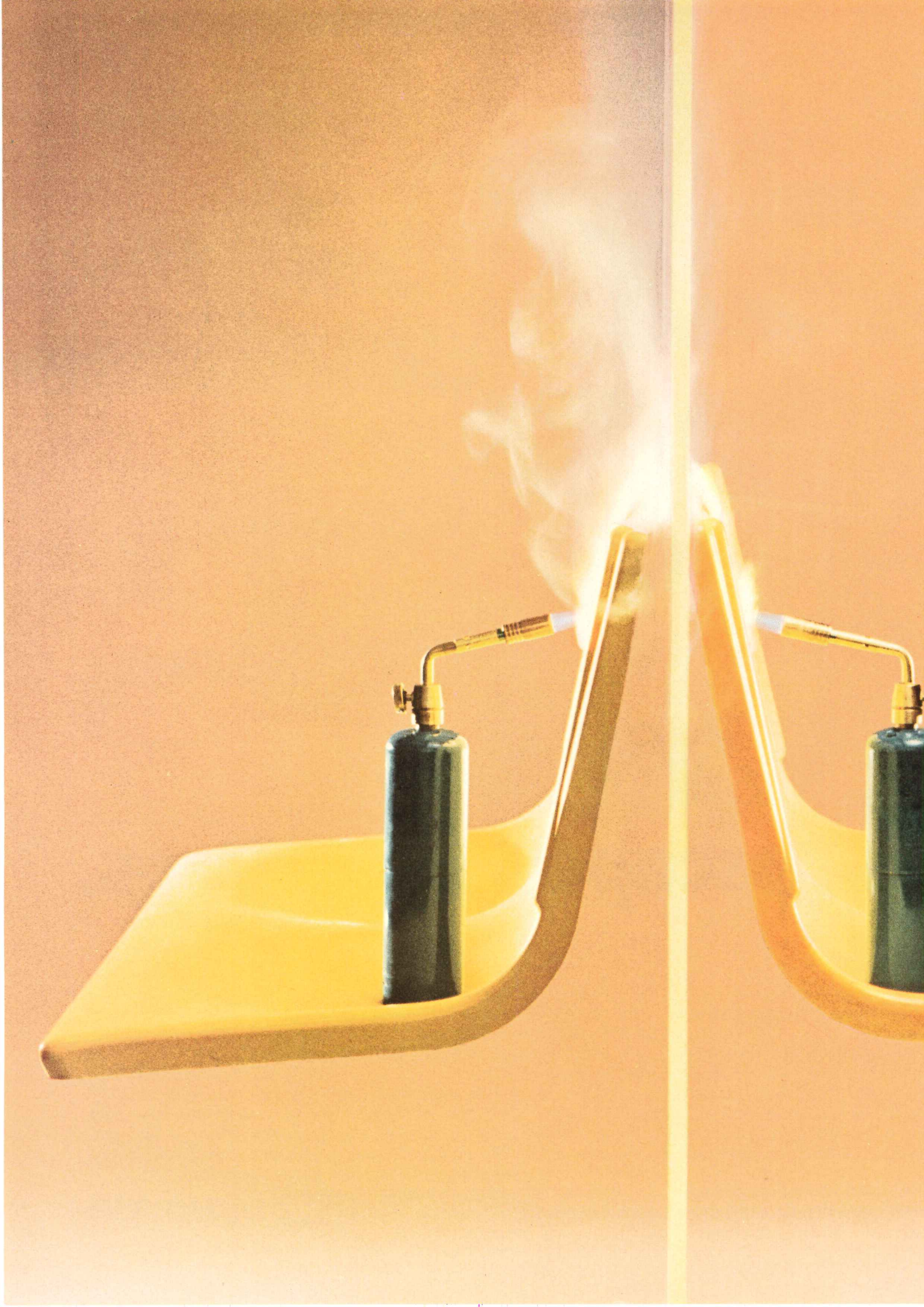


These fire-retardant seats prove a point about Alcoa hydrated alumina.

ere's less smoke.

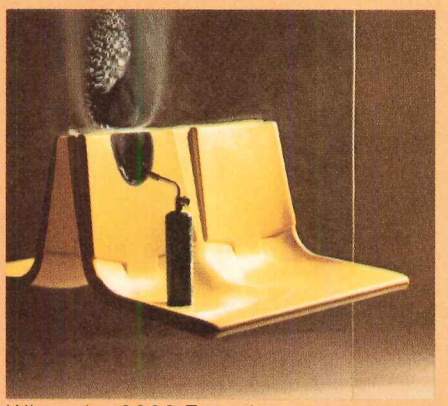
Both of these FRP seats fire retardant, as indicated comparable Limiting ygen Indices of 26. But the e with Alcoa® hydrated mina filler does more than p stop fire. It helps reduce oke. Which means far less oke to obscure exits and rwells.

Up to now, the common proach in making these ts fire retardant would have en to use halogenated resin d antimony oxide. But that o would have meant that seats would typically pro- ce voluminous smoke when posed to flame—as the seat the left.

Now...there's hydrated mina. It retards the fire cause it absorbs heat to help ol plastic below its kindling nt. If the flame isn't removed, ter evolves from hydrated mina and dilutes combus- e gases. So the mechanism which it retards the fire isn't pendent on generating char and smoke. Hydrated alumina is nontoxic. The only gas it can liberate is harmless steam.

It's simple and it works... with polyesters, epoxies, phenolics and many other resins. It's also inexpensive. It can be used in previously unfilled systems to replace some of the resin, so there's less resin to volatilize and produce smoke. It can even help reduce smoke in halogenated resins. And Alcoa hydrated alumina is available in several grades, in quantity, from three manufacturing locations in the United States.

For our new hydrated alumina bulletin, write Aluminum Company of America, 830-A Alcoa Building, Pittsburgh, PA 15219.



When the 2000 F torches are removed, both fire-retardant benches stop burning. The facing bench achieved its fire retardancy by the addition of Alcoa hydrated alumina filler. The bench made with the more expensive, chlorinated resin and antimony oxide, on the other side of the acrylic sheet, derived its fire retardancy at the expense of smoke generation, producing much heavier deposits.

Alcoa thanks American Seating and Cincinnati Milacron, Molded Plastics Division, for their considerable assistance in preparing materials for this demonstration. Initially, Cincinnati Milacron prepared panels which were subjected to the Fenimore Martin LOI Test (ASTM G-2863-70T) to establish equivalent fire retardancy. They then used American Seating molds to produce the seats tested with the pre-established formulations: 50 parts chlorinated polyester resin and 2.5 parts antimony oxide plus 50 parts simple mineral filler (plus fiberglass) for one, and 47 parts general-purpose polyester resin plus 53 parts Alcoa hydrated alumina (plus fiberglass) for the other. It was felt that it was much fairer to compare 2 filled systems rather than one unfilled (which would generate considerably more smoke than shown) and one hydrate filled.

Change for the better with Alcoa Aluminas

ALCOA

the logical way to buy a generator system.

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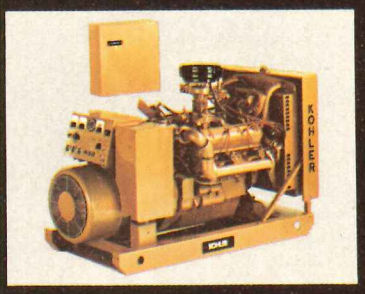
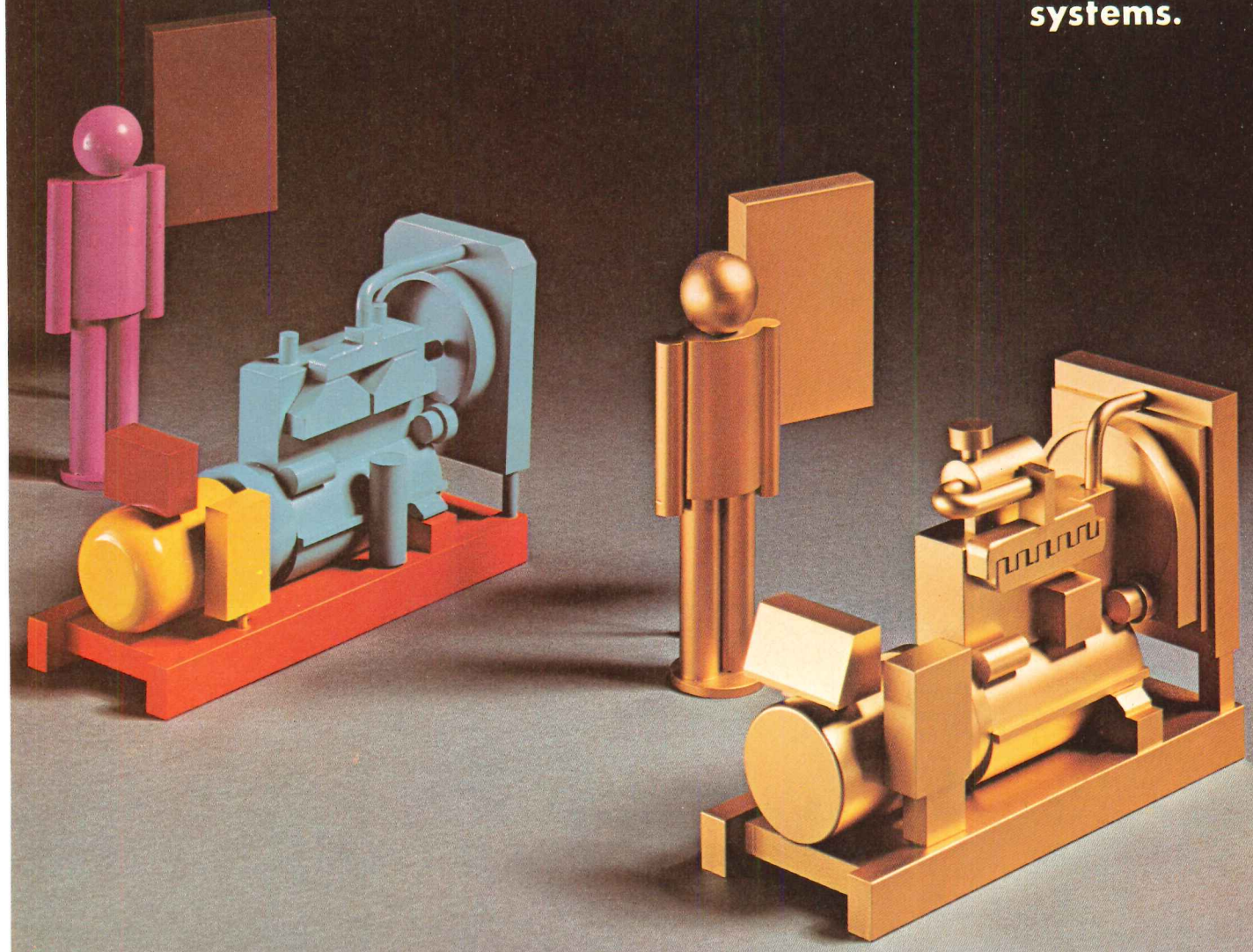
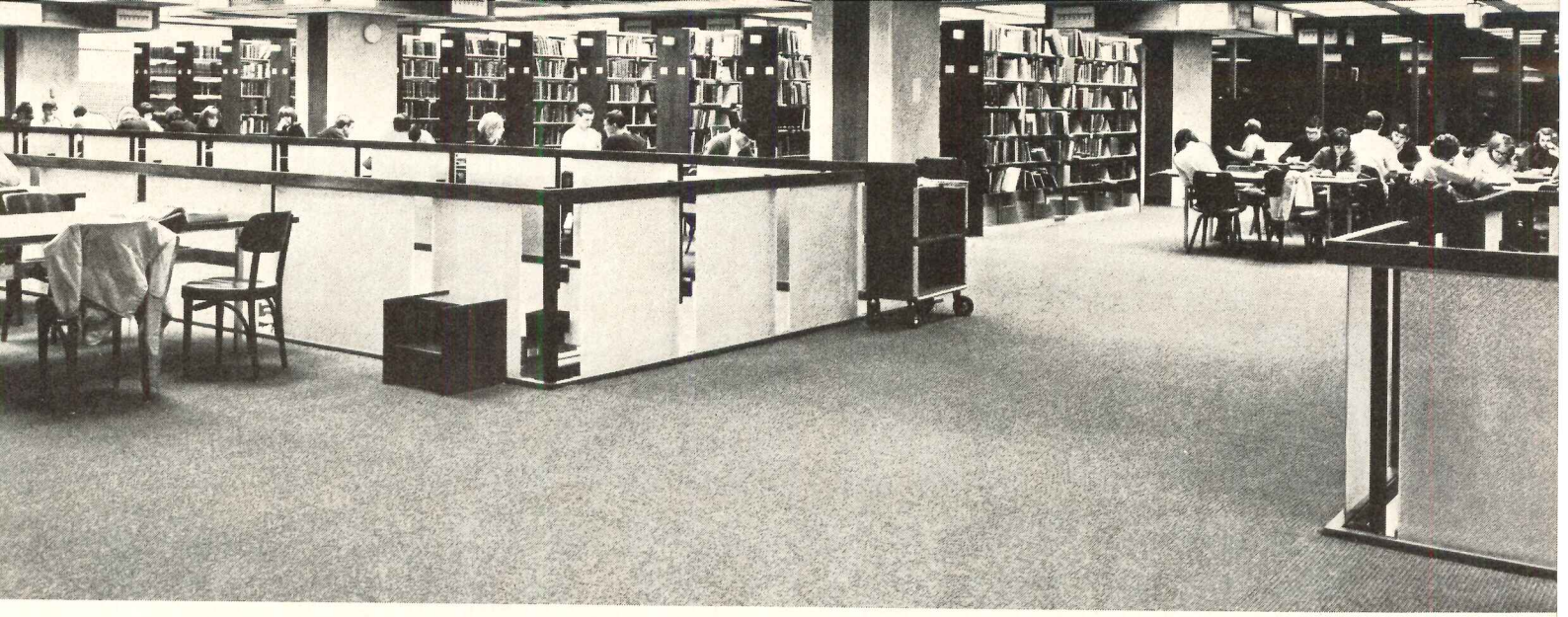
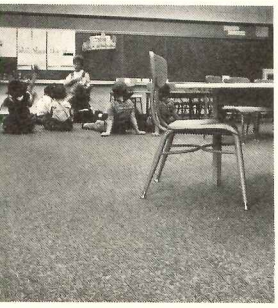


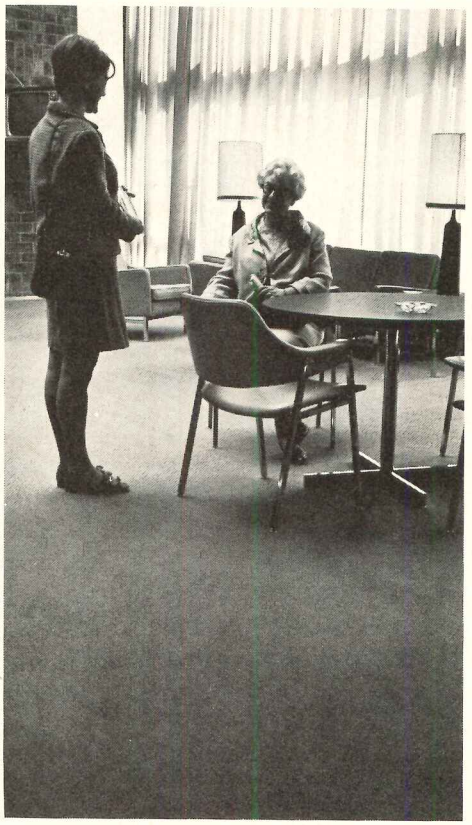
depend on Kohler "gold" generator systems.



KOHLER







School after school after school gives top grades to proven carpet by Bigelow.

If you're doing a school job, you can create your own specifications for the carpet you want. And we can make it for you.

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Bigelow has that kind of proven in actual school use carpeting ready for you in a wide selection of styles and patterns. Carpet that is the result of research and development combined with the realistic experience gained in hundreds of school installations.

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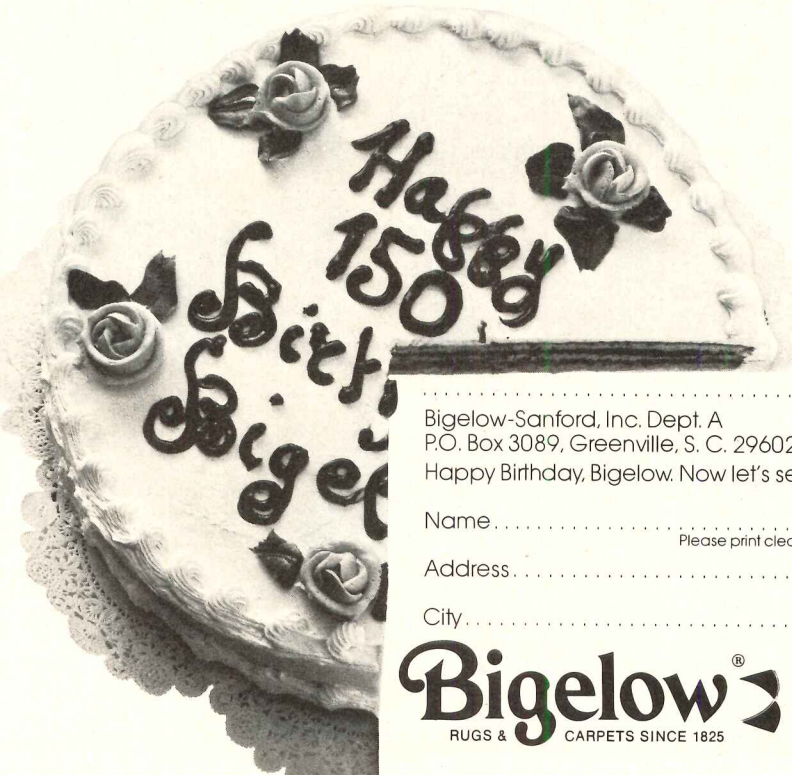

Bigelow-Sanford, Inc. Dept. A
P.O. Box 3089, Greenville, S. C. 29602

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BERLIN STEEL WAS IN BUSINESS SEVENTY THREE YEARS BEFORE THEY SPECIFIED JOIST GIRDERS FOR THE FIRST TIME. ELEVEN DAYS LATER, THEY DID IT AGAIN.

t Girders. The advantages they over I-beams were more than ugh for Berlin Steel to specify n for the Sage-Allen Department e they were building in West tford, Connecticut. So much

oist girders have a simple span design. Which ns why ponding calculations are easier. And lesign time is shortened.

e, that eleven days later they ified them again. Only this time National Plastics and Plating ply Co. in Plymouth, Connecticut. Where did Berlin Steel learn about e advantages? From meeting with craft. The people who knew as

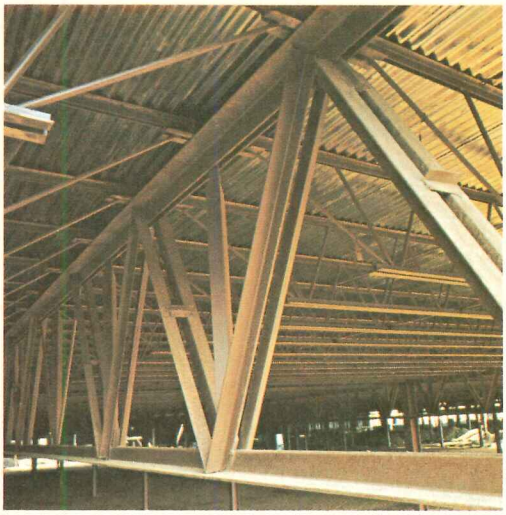
oist girders need fewer foundations and ns. Which means less work for you and larger eas for your clients.

h about joist girders as Berlin about steel fabricating.
nd the first thing the Vulcraft neers did was show Berlin Steel why joist girders are easier to specify and erect. By explaining that the simple span design of joist girders make ponding calculations easy. And shorten design time.

By telling them about the larger bay areas possible with joist girders. And by talking about the fewer foundations and columns needed with joist girders than with I-beams.

Then came the subject of the advantages joist girders offer after they're erected.

And to explain that topic Vulcraft talked about the modified Warren truss configuration used in joist girders. And that it gave joist girders a high strength to weight ratio.



Joist girders have a modified Warren truss configuration using hot rolled double angle sections for top and bottom chords and single and double angle sections for web members. What that means is a high strength to weight ratio.

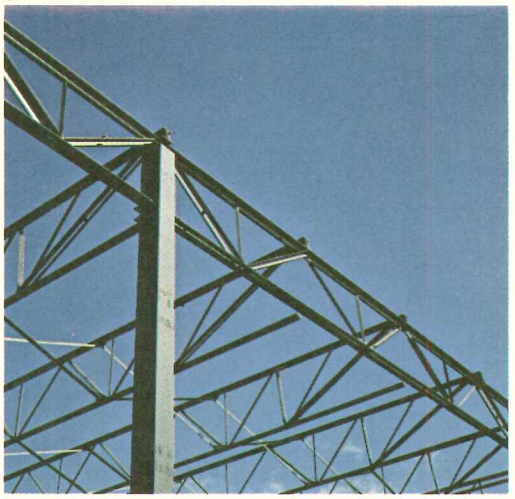
They mentioned further, that bar joist erection was faster. Because top chord panel points show joist location, eliminating a lot of measuring.

Finally, the matter of ducts, pipes and conduits came up. And Vulcraft explained how these things go right through a joist girder. Something no one can say about an I-beam.

What it all added up to for Berlin Steel was a change. A change from I-beams to another roof-framing system. A roof-framing system that was more economical and easier to erect for anything over 10,000 square feet.

It wasn't surprising to Vulcraft, though. Because architects and engineers all over the country are discovering the advantages joist girders have over I-beams.

Joist girders have top chord panel points that show joist location. Which makes a lot of measuring unnecessary.



Joist girders already have spaces for pipes, conduits, and ducts to run through. So you don't have to cut them yourself.

If you'd like more information about how joist girders can work for you, send for Vulcraft's Joist Girder Specification Guide. Just contact your local Vulcraft sales office. Or write P.O. Box 17656, Charlotte, N.C. 28211. Or call (704) 366-7000. You'll find a few things even Berlin Steel didn't know. Until they asked.

VULCRAFT

Allen Department Store, West Hartford, Connecticut; Architect: Associated Architects, Farmington, Connecticut / General Contractor: Bartlett-Brainard & t, Inc., Bloomfield, Connecticut / Consulting Engineer: Hallisey Engineering Associates, Inc., Hartford / Steel Fabricator: Berlin Steel Construction Com- Inc., Berlin, Connecticut. National Plastics and Plating Supply Co., Plymouth, Connecticut: Architect: Andrew C. Rossetti, Bristol, Connecticut / General ractor: S. Carpenter Construction Co., Bristol / Consulting Engineer: Hallisey Engineering Associates, Inc. / Steel Fabricator: Berlin Steel Construction Co., Inc.

New rule for where carpet was ruled out...

Glue down double Jute-backed carpet

You probably prefer carpet. For aesthetics, mai tenance savings, sound absorption, thermal eco omies, morale effect. But did you rule out carp for one of these reasons?

1. Initial cost? Jute-backed carpet costs less tha the same plus separate padding, or with equ pile and attached cushion.

2. Worry over seams? Carpet can't flex or shift strain and pull at seams, as with separate paddi or attached cushion.

3. Floor condition? Install even over old hard su face flooring. Fill in only large crevices. Jute thickness prevents smaller cracks from bei outlined or felt.

4. Caster slowdown? U. S. Steel, Ford Moto others use castered secretarial chairs witho underchair pads. Chairs, carts, mobile equipme roll easily on level-loop pile.

5. Safety codes? Jute helps qualified carpe pass flame-spread, smoke density tests. Utiliz in H. E. W. Dayton facility, Chicago Federal Buil ing, many hospitals and schools.

For secure bonding to any subfloor, use Jut backed carpet. Only Jute among no-pad backin has the fibrous composition and mesh weave fully accept and retain adhesive.

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No other commercially available wood surpasses wood for beauty in any setting. Left natural, it weathers soft driftwood gray. And redwood is exceptionally stant to surface checking, making it outstanding for ability and maintenance in any climate.

Simpson Custom Ruf-Sawn, with its rough-sawn surface and pleasing contrasts of heartwood and sapwood, enhances redwood's natural charm. And because it's plywood, you get all the advantages of plywood, too. High strength-to-weight ratio. Easy handling. Excellent workability. Plus economy when compared with solid lumber.

Simpson Custom Ruf-Sawn Redwood Plywood. A beautiful way to get back to nature.

For details on patterns and sizes, contact Simpson Timber Company, 900 Fourth Avenue, Seattle, Washington 98164. Phone 206-292-5000.

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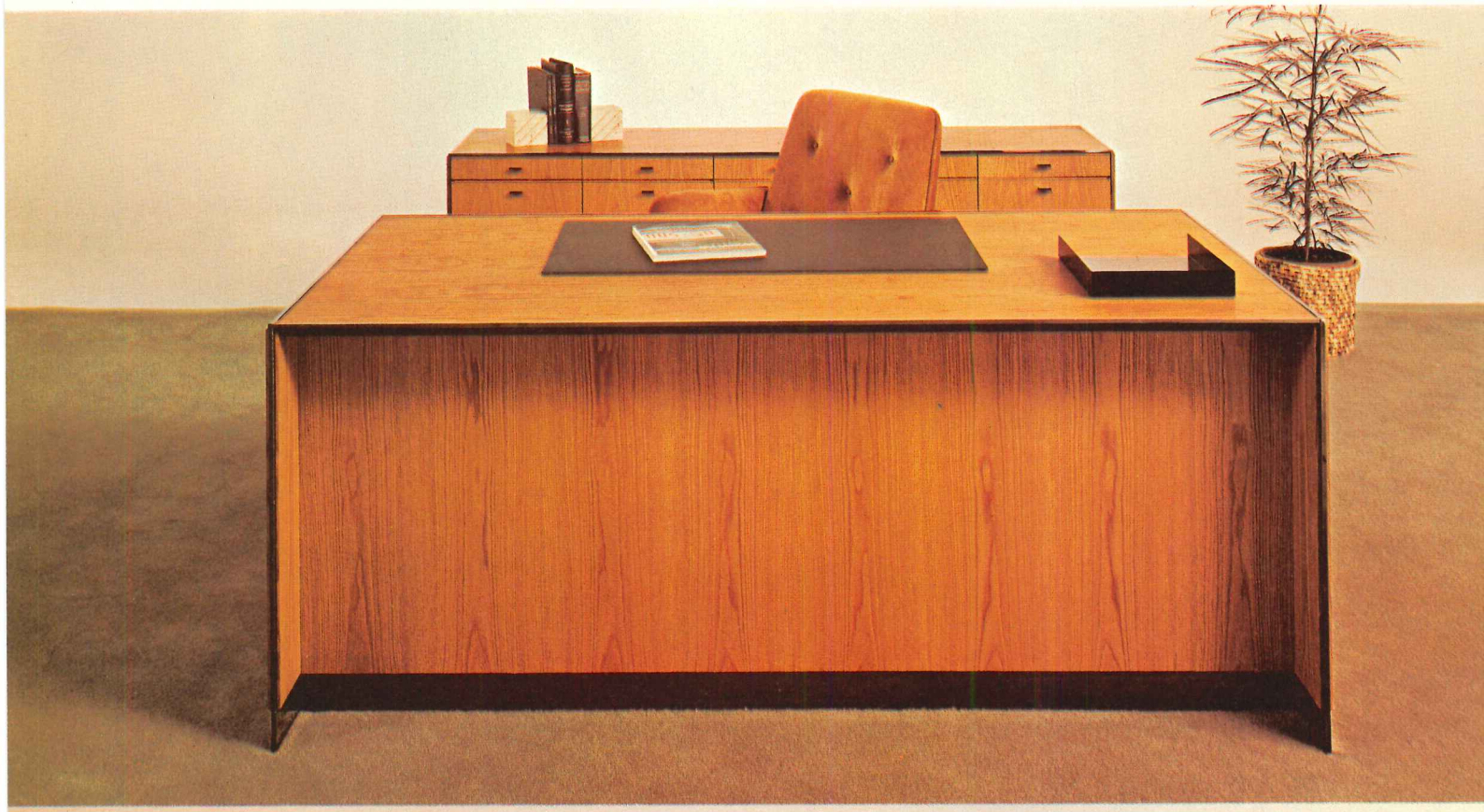

The Davis Allen Collection in walnut, oak or 22 enamel finishes.

For detailed information, write GF Business Equipment, Inc., Youngstown, Ohio 44501. In Canada, Toronto, Ontario.

Office Furniture Systems
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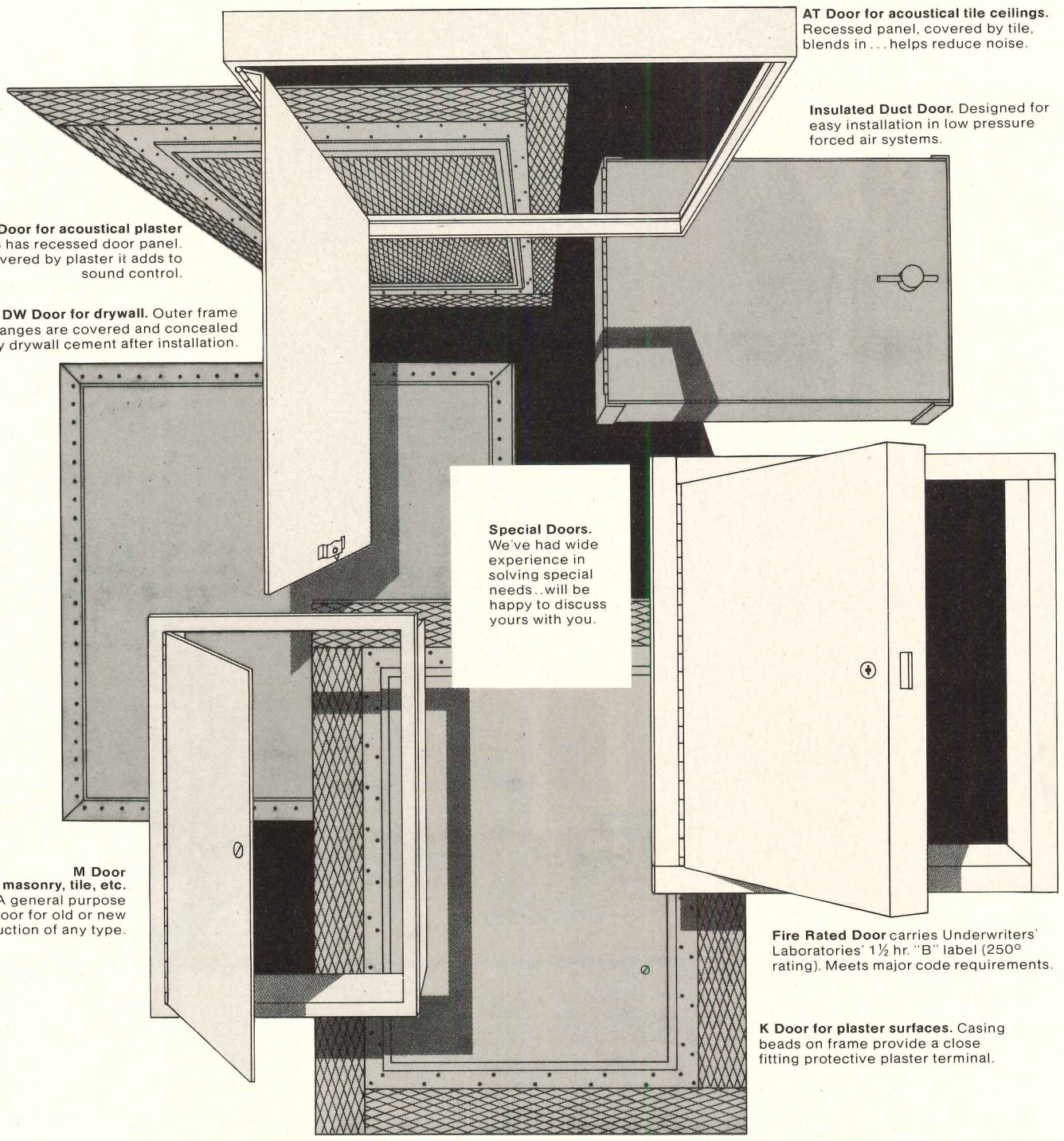

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For complete information, see Sweet's, section 8.12/InL. Or write for catalog 33-1 to: Milcor Division, Inland-Ryerson Construction Products Co., Dept. A, 4033 W. Burnham Street, Milwaukee, Wisconsin 53201.

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e energy use significantly and still
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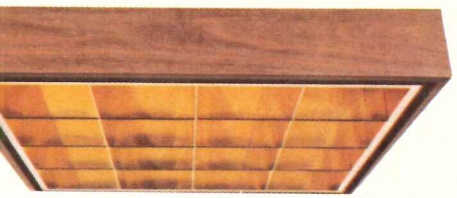

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***Here's how it works.**

3 lamps: 124 fc at 3.7 watts per sq. ft.
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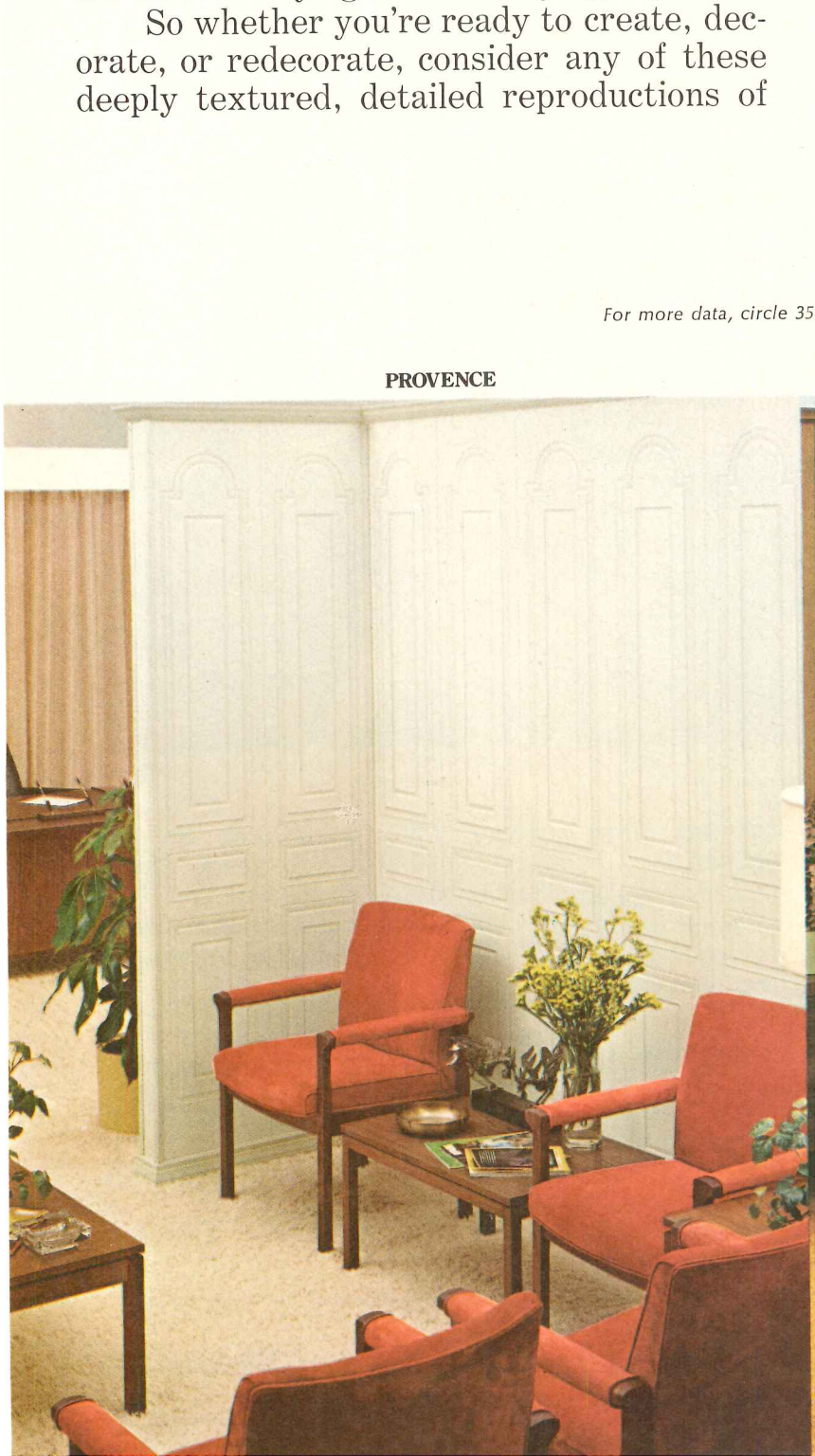


BRIARCLIFF

st microfilm reproduction of bid packages may imply savings for A-E firms

rking on overnight deadlines, microfilm rators at each office of a national network onstruction information centers microfilm o 15 complete sets of construction bidding uments daily for distribution to subscribing contractors, manufacturers and distributors onstruction materials. Automatic photo-reduction machines help them complete e bid packages—from receipt of documents to mailing to customers—in an average .2 days. Take-off dimensional accuracy of full-scale projected image (and automatic file reduction of bulky documents) may gest applications of the process in production and storage problems in the offices of architects and engineers.

Because of their uses in job bidding and duct promotion, speed in production and ibution of the bid packages is a key factor heir ability to save subscribers' time and ey, says Albert J. Spivey Jr., the Scan product planning manager in the F.W. Dodge Division of McGraw-Hill Information Systems pany, New York, N.Y.

The Dodge/Scan product, he explains, is ries of selectively issued microfilm copies idding documents detailing the plans for petitively bid construction jobs. Typically, e bidding documents as issued by architects consist of at least 100 pages of drawings specifications, which cost as much as 0 to $600 a set to reproduce in hard-copy .

Because of the cost and bulk of these documents, architects normally don't prepare e than 40 sets. These usually are distributed to general contractors' offices as well as number of other selected locations where contractors and building material suppliers gain access to them.

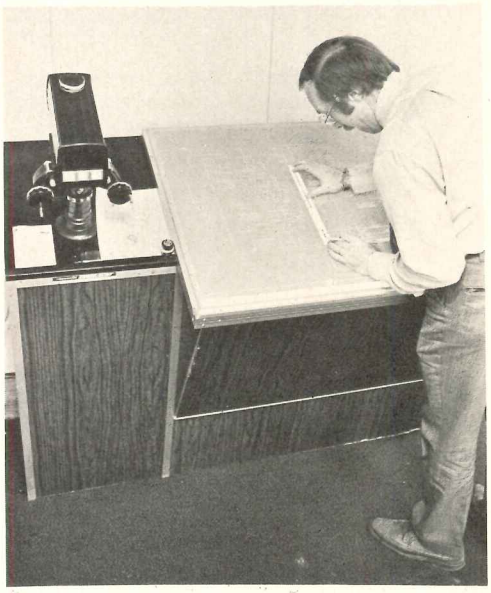
These locations typically include the geographically appropriate Dodge Plan Rooms ng 116 such rooms in various parts of the on. These facilities provide a respository of s for current construction projects of local est. (The F. W. Dodge Division also publishes *Dodge Reports, Dodge Bulletins,* four regional construction industry newspapers, and ides several construction statistics information services.)

The distribution of some 40 sets of bidding uments, however, even with easy access to Dodge Plan Rooms, doesn't satisfy all the ls of the construction industry. On a typical million-dollar job, it is not unusual for 0 subcontractors and building material pliers to refer to the plans and specifi-

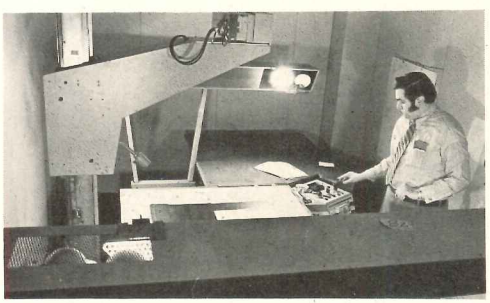
1. An estimator, working with paper copies of bidding documents, travels to the nearest general contractor's office, plan room or other source and does his take-offs from bulky drawings and books of specifications. Deadlines for bids usually are 14 to 18 days after the availability of the bidding documents.

Eastman Kodak Company Photos

2. Drawings of projects currently under bid are filed in long, large racks in the Dodge Plan Rooms. Estimators often wait in line for bidding documents on popular projects.

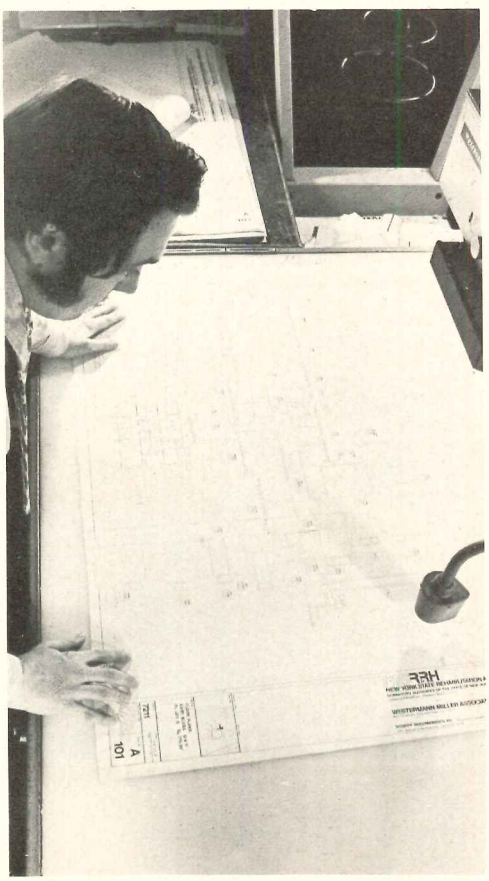


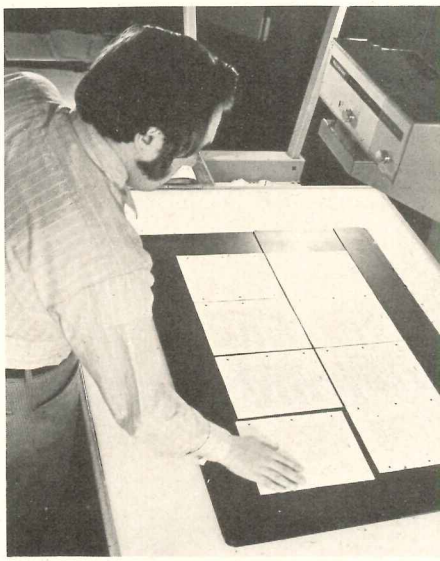
3. Dodge/Scan provides bidding documents on microfilm and its own patented Scan viewer to its customers. Estimators then can study the documents in their own offices, at their own working schedule.



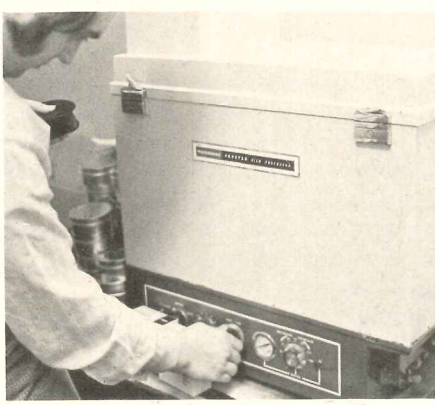
4. Filming of the bidding documents is done at 116 Dodge/Scan locations throughout the country, using Recordak Micro-File machines.

5. Consistency of exposure, even though the density of the original documents will vary, is maintained by the automatic exposure control built into the Recordak Micro-File machines. When the exposure is made, the photocell swings up and out of the field of view.





6. Pages of specifications are exposed eight at a on a single frame of microfilm.



7. Processing of the original silver microfilm is at a constant 90 degree temperature in Rec Prostar film processor, model DVR, installed Dodge/Scan filming centers.

cations—and as many as three-quarters of them enter bids.

The crush of people seeking information from the bidding documents is complicated by the fact that there often isn't much time between release of the documents and the date bids have to be made—usually 14 to 18 days. Yet, to make accurate bids, subcontractors and building material suppliers have to be able to take the time needed to make precise measurements from the project drawings. They also have to be extremely accurate in interpreting the detailed specifications.

As a result, estimators have had to invest time and money to obtain access to the bidding documents. Then, they would often spend additional hours waiting their turn, while other estimators were at work on available sets of documents.

The time and money invested in getting accurate information for bidding was one built-in limitation to the system, but it wasn't the biggest problem.

"Many estimators simply didn't get the information needed for their companies to make accurate bids," Spivey says. "So, either they didn't bid or, if they did, they based their estimates on whatever information they had at hand. This limitation in the bidding system, of course, also reduced the options of the general contractor." It also added to building costs by increasing the "safety factor" of available bids.

What was needed, Spivey adds, was a way to reduce the cost of copying and distributing plans and specifications so estimators would have direct access to the accurate information needed with enough time to make really competitive bids.

Microfilming provides a key to fast, accurate bidding

The logical answer was microfilm. A typical set of bidding documents consisting of 300 pages generally can be reduced to about 75 frames of 35 mm microfilm. The film can be reproduced inexpensively and distributed to subscribers on a selective basis—just those jobs of interest—giving them direct access to basic, original bidding information.

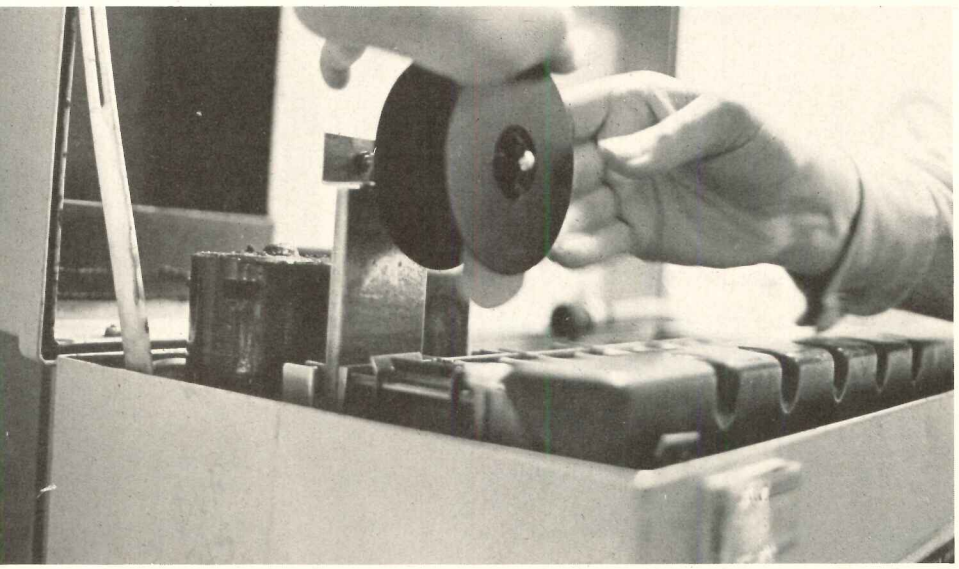
Dodge Reports staffers gather the bidding documents from architects during their normal course of collecting project information. Spivey estimates about 90 per cent of all competitively bid building projects of $50,000 or more in this country are made available to the rooms.

The most difficult task, he says, is ge the bidding documents transferred to m film fast and accurately. To expedite this cedure, Dodge/Scan set up 16 regional m filming centers all over the country. Eac these centers has at least one automatic m filming machine and a tabletop film proce

"We can't afford to lose any deta transferring this information to microf says Allan C. Stewart, manager of admin tion for Dodge/Scan, "even though we g ally start out with a hodge-podge of orig of mixed quality."

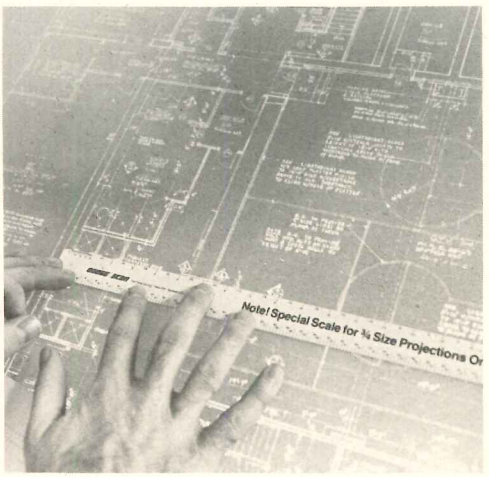
Bidding documents delivered to the crofilming centers range from sepias to prints and wash-off intermediates and all least second-generation. In addition, each set of bidding documents comes fr different architectural firm, the drafting q ranges from very good to poor.

"Under these circumstances, consis of the microfilming equipment, film, and cessing is an absolute necessity if the end uct is going to be readable," Stewart says much as possible, Dodge/Scan relies upo



Easy threading and automatic operation of the Recordak Prostar film processors, model DVR, help main- consistency of the film and speed processing for the operators, who are on newspaper-like deadlines.

All film produced by the Dodge/Scan service is lity-checked on a densitometer. Density varia- is limited from .9 to 1.1.



10. Accuracy of reduction and enlargement is as important as speed of production at Dodge/Scan because estimators often take measurements directly from the microfilm images enlarged to the actual drawing size.

11. Duplicate microfilms of construction bidding documents are sent out to Dodge/Scan customers by mail. This roll of microfilm contains the images enlarged to the actual size of project drawings.

natic exposure controls on the camera and chine processing to provide consistency, operators also have been trained to solve blems themselves.

"We can actually improve faded or un- exposed originals with the lighting controls microfilmers."

Microfilmer operators use a technical nual especially prepared for this operation. addition, each microfilming center also has uality control check.

For the most part, however, quality speci- ations outlined in the operating manual e to be met the first time around.

There is no way to even out the microfilm- work load. However, during the busiest iods, Dodge/Scan is able to distribute mi- film within less than a day and a half fol- ing receipt of the originals.

A typical day, Stewart says, is one in ich each operator will film from five to 10 jects, ranging from 25 to 200 frames each. a busy day there are as many as 15 sets of lding documents to film, and a major proj- , like the World Trade Center in New York y, can fill up as much as 200 linear feet of crofilm.

Speed and accuracy maintained by automatic camera operations

To make sure of an even flow of work, while maintaining control of quality, most of the variables during microfilming are automated. Drawings of different dimensions must be filmed, along with 8½ by 11-inch specification sheets. The latter are filmed eight to a frame at a reduction ratio of 21:1. When drawings ranging up to 30 by 42 inches are filmed, the operator pushes a button on the control keyboard. This changes the reduction ratio to 24.1.

For larger drawings too big to reduce to scale on a single frame, the camera operator uses a reduction ratio of 32:1. In all cases, a legend identifying the scale is placed on the camera copyboard along with the drawing.

The film is processed at the microfilm centers, where it is inspected for quality.

While the film for each project is being produced, Dodge/Scan uses a computer to determine which subscribers will want copies. The parameters of the project, including the type of job, the dollar value, and the geographic area, are fed into the filming center's computer. The computer matches these parameters to its memory of subscribers' interests.

Then it prints out a list of subscribers, by project. A roll-to-roll microfilm duplicator is used to contact-print the number of copies needed for each project. The Dodge/Scan microfilm centers time their operations so that the originals are ready for duplicating about the same time the computer tells them how many copies are needed.

Usually, the day after the drawings and specifications are made available for a new construction job, the data are transferred to microfilm and mailed to the appropriate subscribers. Almost all of these subscribers use the patented, precision Scan Estimator 24 table-viewers, made available as part of the service.

These viewers have a 30 by 42-inch horizontal screen and project the image at 24x enlargement. As a result, the specification pages, filmed at 21x reduction, appear larger than actual size, and the majority of drawings, filmed at 24x reduction, are projected at actual size. Precise dimensions are a must for accurate costing and bidding.

Spivey believes the wide acceptance of this information service utilizing microfilm, plus the favorable results reported by both subscribers and architects, speak for themselves.

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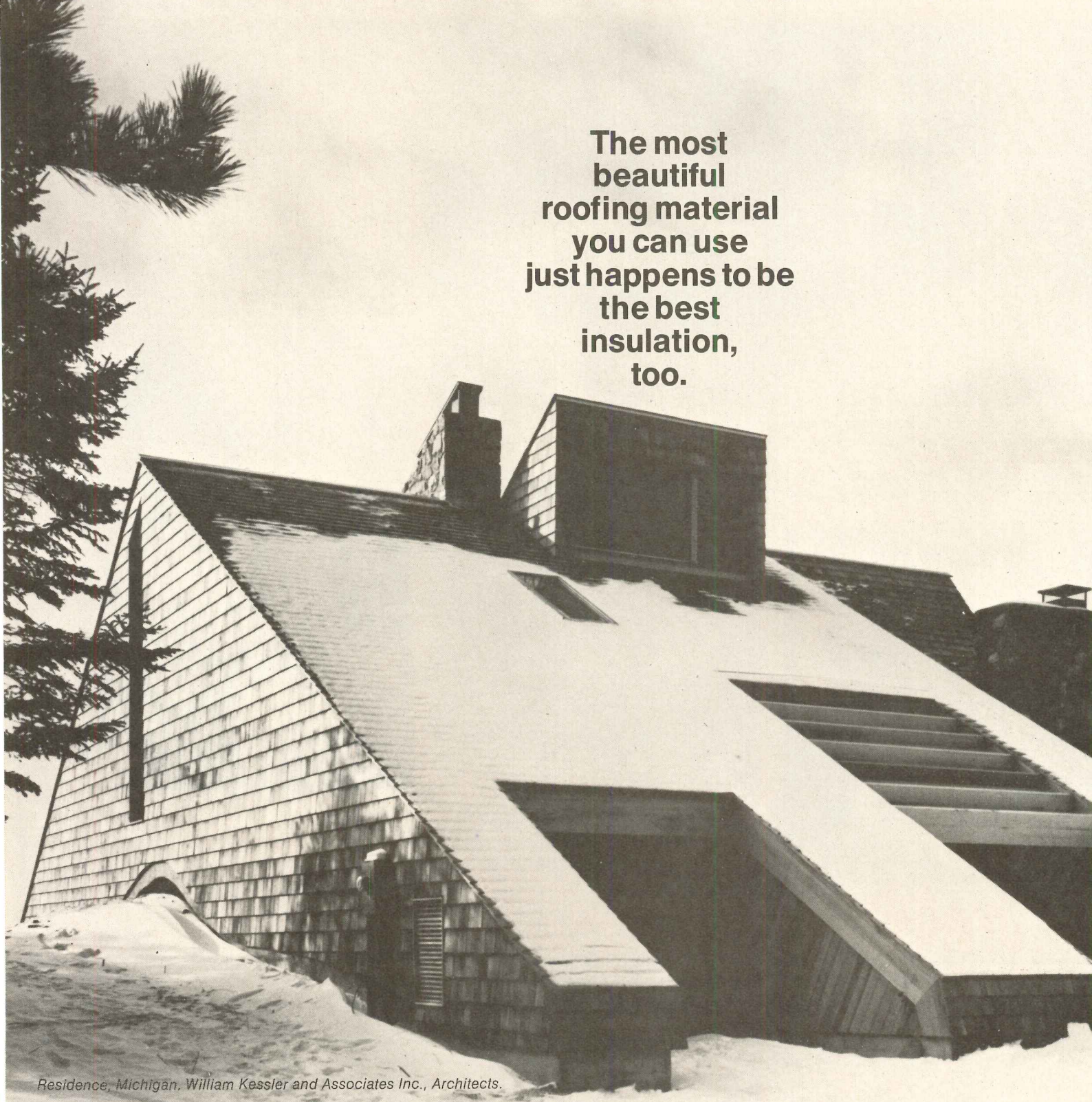

Residence, Michigan. William Kessler and Associates Inc., Architects.

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*ASHRAE Handbook of Fundamentals, 1972 ed., Chap. 20 "Design Heat Transfer Coefficients" Table 3A, pp. 362-63.

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M: the only way to go fast track—Part 2

ign and construction management rela-ships for the new Johns-Manville World dquarters near Denver were the subject of ree-way panel discussion among owner, itect and construction manager. Sum-ized here last month were remarks by H. AcElyea and Joseph Consigli of Johns-Man-, Joseph P. Hoskins of The Architects Col-rative and Barry Sibson of Turner Con-ction Company. Construction manager Sib-s further description of how the budget developed and the project costed out dur-succeeding design phases follows.

first Turner activity on the project, Sibson es, was the preparation of an over-all get estimate. Since the architect was se-ed on the basis of a design competition, matic plans of the proposed building were ediately available. Using these plans, ard Clunn, Turner's project executive, e a quantity survey of the major items of k. Obviously, at this stage of design, there ry little detailed information on the draw-, but there is sufficient to determine ap-imate quantities of such items as excava-concrete, structural steel, curtainwall and y other items. With these quantities and an ty to conceptualize the items not shown, rprisingly accurate budget estimate can be ared.

An informal interaction with the designer f utmost importance at this stage as the ifications, in effect, are established in con-ations between the architect and the esti-or. The estimate resulting from Mr. Clunn's rts was summarized on a trade breakdown s, showing budget figures for each of the contract packages. A final review of this es-te was made in a joint meeting with Johns-ville staff, the architect's staff and their en-ering consultants. Upon acceptance, this et estimate becomes a useful measuring to judge performance throughout the de-development and working drawing stages.

As each of the subcontract packages is ght a comparison with the corresponding get is made, providing a current reading of gress toward meeting the budget. With this rmation, the architect can select high or options in subsequent design to keep the ect on target.

Following acceptance of the budget esti-e, Turner prepared an over-all project sched-for the sequence of construction opera-s. Approximate starting dates for the ous trades were estimated, lead times for fabrication were allowed and purchasing deadlines were set. From this information, the critical items of design were identified and milestone dates for the completion of these design items were established. Thus, the efforts of the architects could be coordinated with the needs of the construction schedule.

During the development of a design from the schematic phase through working drawings, there are many alternates which face the designer. Many of these alternates can have widely varying effects on the eventual cost of the project and on the construction schedule. In today's market, they may even require materials that are just not available. As construction manager, it has been our responsibility to provide relative cost estimates of these competing alternates, to advise as to the availability of the materials under consideration and to alert the architects and engineers of any labor situation which might affect the timely or economical installation of a particular piece of work.

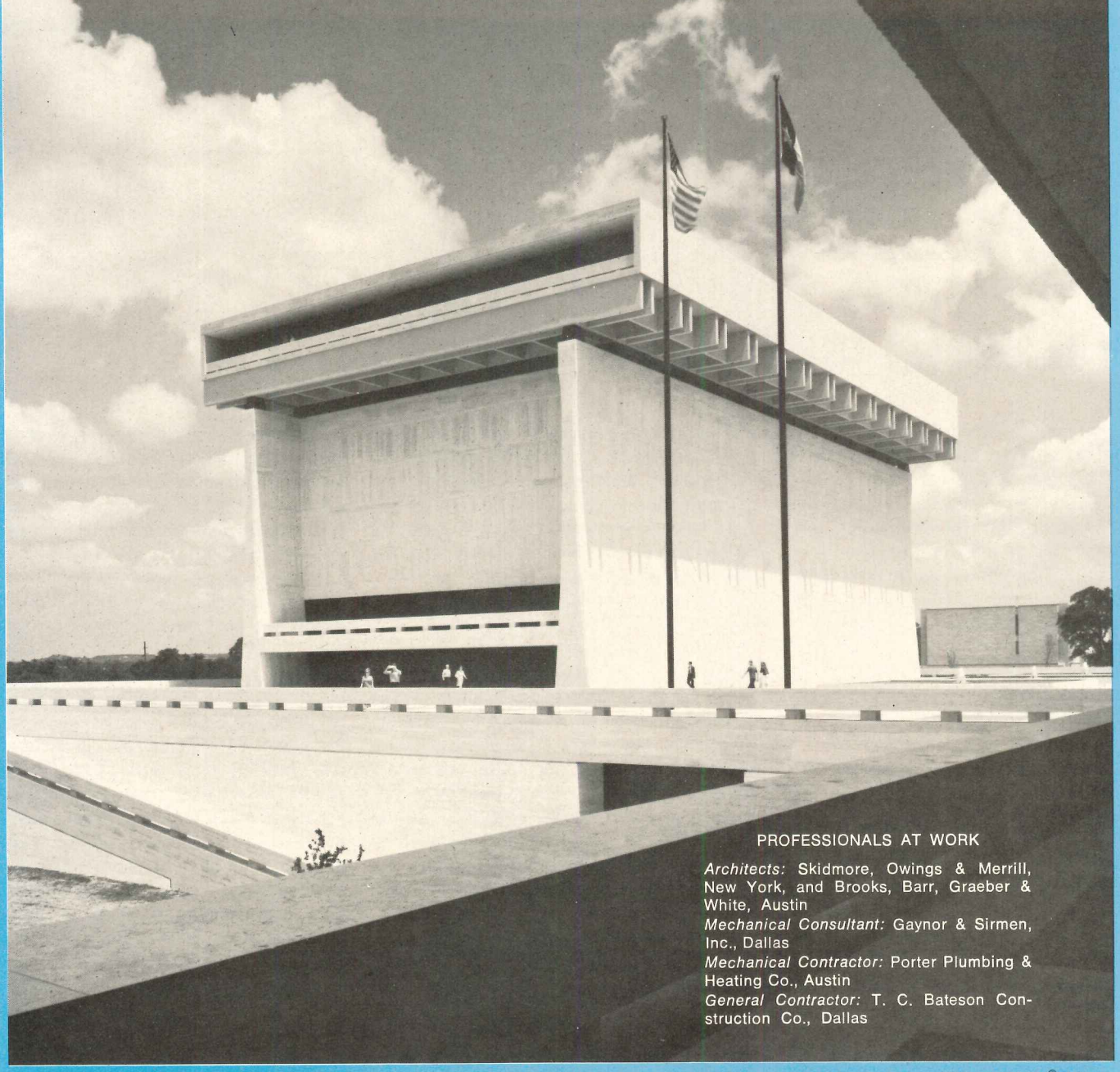
Examples of alternates which have arisen during the design of the JM project are as follows. Because of the degree of slope across the site, the base elevation of the building could have been set anywhere within a range of approximately 50 feet in elevation. Impinging upon this decision, of course, were many design factors, not the least of which was the cost of the excavation work. To assist the architect in making a decision on the building elevation, Turner estimators prepared relative cost studies for the various alternate placements. Other studies were made to establish the relative costs of a precast concrete frame versus a structural steel frame, and for various exterior wall configurations incorporating varying areas of glass and opaque panels. Because this decision also affected the design of the heating, ventilating and air conditioning system, these studies had to include figures for the relative costs of the competing mechanical systems as well.

One of the other major differences between Turner activities on the Johns-Manville project and those of a typical general contractor is the utilization of a fast-track schedule. The advantage of this procedure in an escalating market is obvious, not only in speeding the work, but also in pre-purchasing materials. For example, in July 1974, Turner purchased the structural steel frame for erection to start early in 1975. Thus, in comparison to conventional bidding after the completion of the entire shell design, the project is six months ahead of a normal schedule. And although it is always dangerous to talk of what might have been, says Sibson, Turner believes that this early purchase of steel has saved Johns-Manville between a quarter and a half million dollars in escalation costs. In fact, it is believed that the total savings achieved through the use of the fast track method on steel and other systems will amount to close to $2,000,000.

"To complete our responsibility for the preconstruction phase of the project," said Sibson, "Howard Clunn and his estimators will make a complete and detailed quantity survey of all the materials required for the job. We will price all portions of the work that have not been previously bought and will gather a complete and definitive cost estimate. This estimate will be presented to Johns-Manville and when accepted by them, it will become a guaranteed maximum price. This price sets the upper limit of Turner's reimbursement and the risk of any costs in excess of that price is Turner's. However, Turner will be paid only the actual cost of the project, if, as we all hope, the actual cost is less than the guaranteed maximum price.

"In a further effort to avoid material escalation costs and reduce subcontract costs, we are making available, at the site, storage space for materials and equipment delivered prior to the date that they may be needed in the construction process. We have also agreed to reimburse our subcontractors and material suppliers for material and equipment when it is delivered to the site. There are indications that a number of subcontractors will take advantage of this opportunity and that our costs will be lower for these materials. Additionally, in a few selected situations, we have bought at current prices, and have negotiated limited escalation clauses. In these situations, we are confident that the actual escalation factors will be less than the subcontractor was protecting himself for. Thus, we will achieve a lower actual cost than we could have received as a fixed price."

It is because of procedures such as these, and the savings in cost and time that are derived from them, that Turner strongly believes that some form of construction management is the best method of producing a building project such as the JM-Headquarters. A key element to eventual success of the CM method is a high degree of interaction between the owner, architect and construction manager. Certainly a higher degree of interaction prevails on a phased-construction project with construction management than is normal under the usual, sequential, design-build procedure.



PROFESSIONALS AT WORK

Architects: Skidmore, Owings & Merrill, New York, and Brooks, Barr, Graeber & White, Austin
Mechanical Consultant: Gaynor & Sirmen, Inc., Dallas
Mechanical Contractor: Porter Plumbing & Heating Co., Austin
General Contractor: T. C. Bateson Construction Co., Dallas

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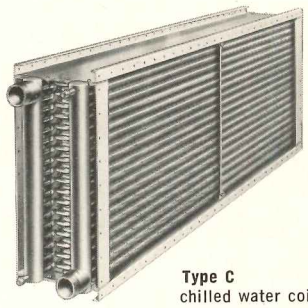

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ding em	Low $/SF	Low %Tot.	Average $/SF	Average %Tot.	High $/SF	High %Tot.
impr.	1.85	6.7	2.26	7.4	2.71	7.8
ndations	1.16	4.2	1.16	3.8	1.16	3.3
rs on grd.	.47	1.7	.47	1.5	.47	1.3
erstr.	4.78	18.0	4.78	15.5	4.78	14.6
fing	.53	1.9	.53	1.7	.53	1.5
rior	3.16	11.5	3.86	12.6	4.63	13.4
tions	2.59	9.4	3.17	10.3	3.80	11.0
l fins.	.37	1.1	.40	1.3	.48	1.3
r fins.	.54	1.9	.59	1.9	.64	1.8
ing fins.	.66	2.4	.81	2.7	.97	2.8
veying	1.59	5.7	1.73	5.6	1.90	5.5
cialties	.46	1.6	.50	1.6	.55	1.6
d equip.	.28	1.0	.31	1.0	.34	1.0
AC	3.19	11.6	3.90	12.7	4.68	13.6
nbing	1.66	6.0	1.81	5.9	1.99	5.7
trical	2.67	9.7	2.91	9.5	3.20	9.3
eral	1.55	5.6	1.55	5.0	1.55	4.5
otal	27.46	100	30.74	100	34.38	100

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impr.	.85	4.2	1.04	4.7	1.24	5.2
ndations	.71	3.5	.71	3.2	.71	3.0
rs on grd.	2.31	11.4	2.31	10.5	2.31	9.6
erstr.	3.11	15.4	3.11	14.1	3.11	12.9
fing	1.33	6.6	1.33	6.0	1.33	5.5
rior	2.18	10.8	2.66	12.0	3.19	13.3
tions	.45	2.2	.55	2.5	.66	2.7
l fins.	.13	.6	.17	.8	.20	.8
r fins.	.12	.6	.14	.7	.15	.6
ng fins.	.18	.9	.22	1.0	.26	1.1
cialties	.45	2.2	.49	2.2	.53	2.2
d equip.	.40	2.0	.44	2.0	.48	2.0
AC	1.91	9.4	2.33	10.5	2.79	1.6
nbing	1.82	9.0	1.98	9.0	2.17	9.0
trical	3.24	16.0	3.53	16.0	3.88	16.1
eral	1.05	5.2	1.05	4.8	1.05	4.4
otal	20.24	100	22.06	100	24.06	100

INDEXES: January 1975 — 1941=100.00 (except as noted)

Metropolitan area	Cost differential	Current Indexes non-res.	residential	masonry	steel	% change last 12 months
U.S. Average	8.3	475.1	454.6	466.2	454.8	+ 8.53
Atlanta	7.5	582.5	549.2	571.1	560.3	+ 5.45
Baltimore	8.6	543.9	511.4	532.2	517.7	+12.25
Birmingham	7.2	427.1	397.3	412.5	408.7	+ 4.62
Boston	8.7	469.0	443.1	466.1	452.3	+ 5.52
Buffalo	9.1	525.7	493.7	518.0	503.6	+10.10
Chicago	8.3	537.5	511.1	518.8	511.3	+ 4.03
Cincinnati	8.6	507.1	477.2	495.3	482.8	+ 8.04
Cleveland	9.0	517.1	486.6	505.6	494.0	+10.11
Columbus, Ohio	8.2	500.9	470.4	492.4	479.6	+10.65
Dallas	7.8	482.7	467.4	472.9	464.1	+ 9.38
Denver	8.2	516.1	485.6	506.2	492.6	+10.51
Detroit	9.7	545.1	519.4	555.1	532.2	+ 7.42
Houston	7.1	431.1	404.9	418.1	412.3	+ 8.62
Indianapolis	7.7	430.0	403.9	420.9	411.3	+ 8.22
Kansas City	8.2	451.1	426.3	443.7	430.4	+ 9.50
Los Angeles	8.4	545.0	498.3	531.1	519.5	+ 5.37
Louisville	7.6	470.2	441.6	458.5	449.3	+ 7.69
Memphis	8.3	488.3	458.6	469.8	463.0	+12.62
Miami	7.8	491.8	468.7	476.8	467.2	+ 8.44
Milwaukee	8.2	524.1	492.2	513.7	499.6	+ 9.45
Minneapolis	8.6	494.4	465.2	485.2	476.6	+ 7.01
Newark	8.8	466.1	437.7	458.5	448.0	+11.03
New Orleans	7.2	448.3	423.2	442.6	432.3	+ 5.01
New York	10.0	527.7	490.7	515.3	502.5	+ 6.07
Philadelphia	9.0	524.7	499.9	520.8	504.3	+ 6.78
Phoenix (1947 = 100)	7.8	271.3	534.6	262.0	257.6	+ 8.00
Pittsburgh	8.8	471.2	443.3	466.1	451.8	+ 9.58
St. Louis	8.5	483.4	456.3	478.6	467.4	+ 7.20
San Antonio (1960 = 100)	7.6	184.5	173.3	180.4	176.3	+14.77
San Diego (1960 = 100)	8.4	199.7	187.6	196.4	191.5	+10.38
San Francisco	9.2	687.9	628.9	683.7	660.6	+ 6.27
Seattle	8.4	462.3	413.9	458.0	441.0	+ 5.95
Washington, D.C.	8.2	469.1	440.5	458.9	447.4	+15.38

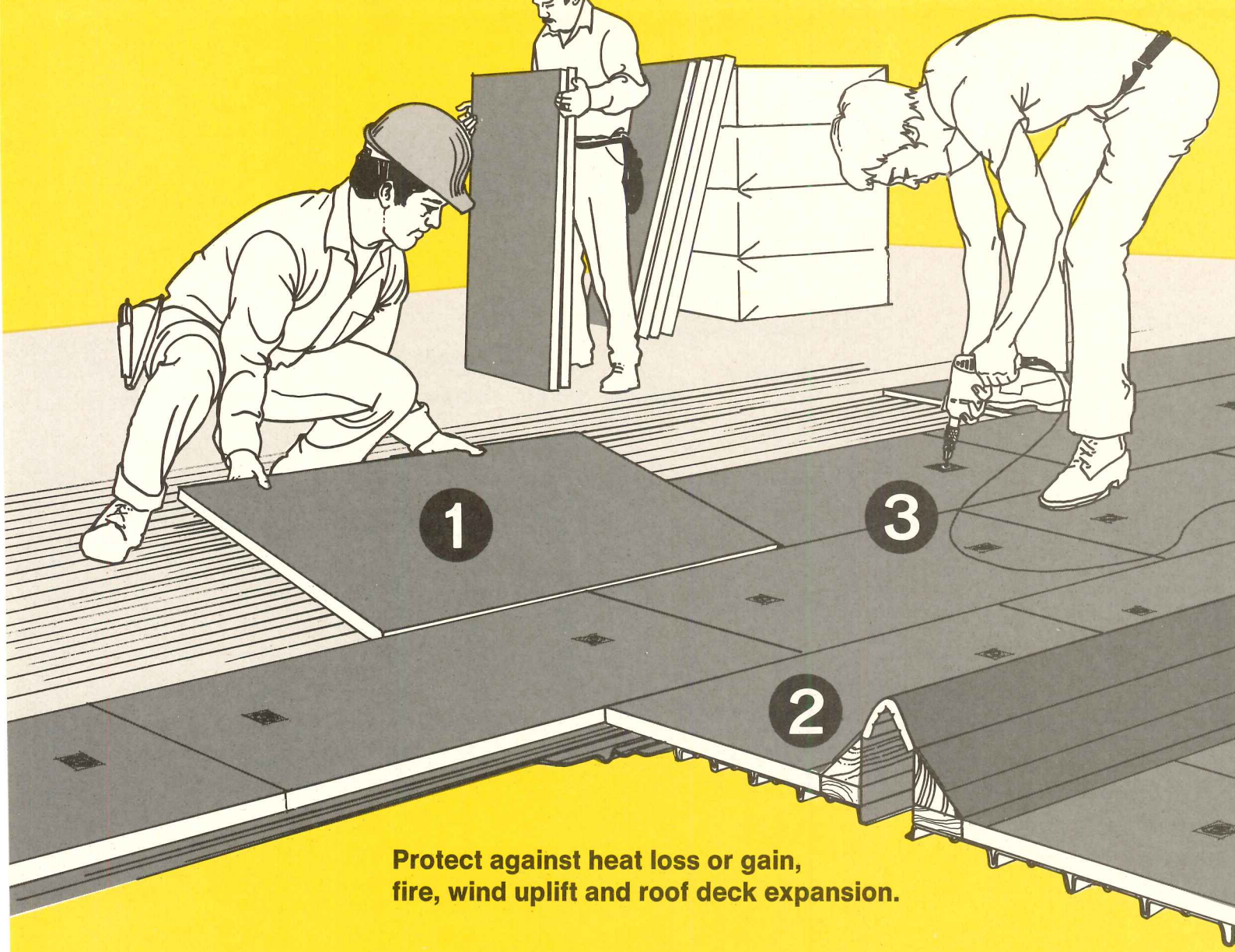
Cost differentials compare current local costs, not indexes.

Tables compiled by Dodge Building Cost Services, McGraw-Hill Information Systems Company

ISTORICAL BUILDING COST INDEXES—AVERAGE OF ALL NON-RESIDENTIAL BUILDING TYPES, 21 CITIES — 1941 average for each city = 100.00

etropolitan rea	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973 (Quarterly) 1st	2nd	3rd	4th	1974 (Quarterly) 1st	2nd	3rd	4th
lanta	313.7	321.5	329.8	335.7	353.1	384.0	422.4	459.2	497.7	516.4	518.0	543.8	544.8	555.2	556.7	573.5	575.0
ltimore	280.6	285.7	280.9	295.8	308.7	322.8	348.8	381.7	420.4	441.8	443.6	474.5	475.5	516.3	517.8	532.8	534.3
rmingham	260.9	265.9	270.7	274.7	284.3	303.4	309.3	331.6	358.3	371.7	373.2	401.1	402.1	405.5	407.0	419.7	421.2
ston	252.1	257.8	262.0	265.7	277.1	295.0	328.6	362.0	394.4	414.0	415.6	436.8	437.8	455.1	456.6	461.0	462.5
icago	306.6	311.7	320.4	328.4	339.5	356.1	386.1	418.8	444.3	465.3	466.9	507.6	508.6	514.2	515.7	528.1	529.6
ncinnati	269.5	274.0	278.3	288.2	302.6	325.8	348.5	386.1	410.7	430.4	432.0	461.4	462.4	484.5	486.0	498.6	500.1
eveland	283.0	292.3	300.7	303.7	331.5	358.3	380.1	415.6	429.3	436.7	438.3	461.2	462.2	490.3	491.8	508.0	509.5
llas	256.4	260.8	266.9	270.4	281.7	308.6	327.1	357.9	386.6	407.3	408.9	435.4	436.4	453.7	455.2	476.4	477.9
nver	287.3	294.0	297.5	305.1	312.5	339.0	368.1	392.9	415.4	429.5	431.1	460.0	461.0	476.1	477.6	508.5	510.0
troit	277.7	284.7	296.9	301.2	316.4	352.9	377.4	409.7	433.1	463.4	465.0	500.0	501.0	519.5	521.0	537.2	538.7
nsas City	250.5	256.4	261.0	264.3	278.0	295.5	315.3	344.7	367.0	387.7	389.3	404.8	405.8	435.6	437.1	443.4	444.9
s Angeles	288.2	297.1	302.7	310.1	320.1	344.1	361.9	400.9	424.5	453.3	454.9	503.2	504.2	514.3	515.8	531.3	531.8
iami	274.4	277.5	284.0	286.1	305.3	392.3	353.2	384.7	406.4	419.0	420.6	446.2	447.2	467.6	469.1	484.6	485.5
inneapolis	282.4	285.0	289.4	300.2	309.4	331.2	361.1	417.1	412.9	430.6	432.2	455.1	456.1	469.7	471.2	487.1	488.6
w Orleans	240.9	256.3	259.8	267.6	274.2	297.5	318.9	341.8	369.7	382.1	383.7	419.5	420.5	437.5	439.0	440.6	442.1
w York	289.4	297.1	304.0	313.6	321.4	344.5	366.0	395.6	423.1	453.5	455.1	484.3	485.3	497.4	498.9	513.8	515.3
iladelphia	275.2	280.8	286.6	293.7	301.7	321.0	346.5	374.9	419.5	459.3	460.9	484.1	485.1	495.7	497.2	517.0	518.5
ttsburgh	263.8	267.0	271.1	275.0	293.8	311.0	327.2	362.1	380.3	406.3	407.9	423.4	424.4	443.7	445.2	464.1	465.6
Louis	272.1	280.9	288.3	293.2	304.4	324.7	344.4	375.5	402.5	427.8	429.4	443.2	444.2	458.7	460.2	475.2	476.7
n Francisco	365.4	368.6	386.0	390.8	402.9	441.1	465.1	512.3	561.0	606.4	608.0	631.3	632.3	647.1	648.6	671.0	672.5
attle	266.6	268.9	275.0	283.5	292.2	317.8	341.8	358.4	371.5	388.4	390.0	423.4	424.4	437.8	439.3	448.7	450.2

sts in a given city for a certain period may be compared with costs in another period by dividing one index into the other; if the index for a city for one period (200.0) divided the index for a second period (150.0) equals 133%, the costs in the one period are 33% higher than the costs in the other. Also, second period costs are 75% of those in e first period (150.0 ÷ 200.0 = 75%) or they are 25% lower in the second period.



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Dimensions of the current housing cycle: Part 2

t month's article traced the path of the cur-t housing cycle from its beginning back in 70 to the peak in early 1973. Now let's see spects for recovery ahead.

hile the trend in single-family housing owed surprising uniformity from region to ion during the current cycle, the behavior of lti-family building was found to be some-at erratic. Three regions, the Northeast, dwest, and West adhered to a fairly uniform tern as far as multi-family building was con-ned, but the South charted a course along re individualistic lines. It turned upward a r after the other regions; gained much more rply; and remained strong a year after lti-family units in the rest of the nation gan to decline. Demographic shifts—wage ners moving in search of expanded employ-nt opportunities, and retirees seeking the vantages of the region's climate—helped tain this boom through 1973.

But, booms in housing, or anywhere else, that matter, have one major flaw—they're very durable. The torrid monthly pace of 72 and early 1973 soon gave way to the ep declines of late 1973, and 1974. This ar-e will analyze the factors involved in the rent housing collapse, keying in on the im-cations they have for the impending upturn.

ht money policies
uelch housing boom

pate of tight money can always be counted to squelch a housing boom. And, this is at the general economy began getting early 1972, as the Federal Reserve Board feared t recovery from the 1970 recession was pro-eding at too fast a pace. Credit tightening n't really begin to have an impact on the rtgage markets until 1973, though, and it s not until the third quarter of that year that real squeeze showed itself in a sharply ris-tide of mortgage rates.

Contracting for both single-family and lti-family units all over the nation began de-ning just about on schedule, bearing out using's critical reliance on the availability of dit. Multi-family construction in the South d its ground, however, tracing out another r of high level activity.

The South really began to falter in the be-ning of this year. The annual rate of con-cting for multi-family units in the region nt from $7.0 billion in 1973's fourth quarter $2.6 billion in this year's third quarter, a de-ne of 60 per cent.

Why did multi-family housing in the region fall so far so fast? It's true that the gain in rental vacancy rates has been relatively large. Current rates are 7.9 per cent of the region's multi-family housing stock, against 7.2 per cent, a year ago. But, this is not necessarily excessive by historical comparisons. The West during a similar boom period in the early 1960's sustained rental vacancy rates as high as 10 per cent, with no apparent ill effects until demographic conditions turned against it. Growth areas can support—and in fact need—higher than average levels of inventory to sustain a boom.

The problem is: rental vacancy rates are not really the ones to be looking at in analyzing the current situation in the South. Because, while rental vacancy rates are traditionally associated with trends in the multi-family market, the South's current problems are linked more to multi-family units that are *for sale*—i.e., condominiums—the housing types that caused the excessively large gains in the region during the boom period. To the extent that this is the case, we have to look at the vacancy rates that are traditionally associated with single-family units—homeowner rates.

Here, the figures for the South are somewhat more revealing. Current rates are 1.4 per cent of the "for sale" stock, up from 1.0 per cent a year ago. Admittedly, this is a relatively small percentage increase, but when applied to the base on which it is calculated, the numerical gain turns out to be something like 100,000 units. And, the figures indicate that the mix shifted sharply in favor of units in multi-family structures between the two periods.

The data imply then, that the Southern condominium boom of the early 1970's was characterized by excessive optimism as far as the market's ability to absorb new units was concerned. The result has been localized pockets of severe overbuilding. Now, there has been a tendency to compare the South's current troubles with a situation (mentioned earlier) that developed in the West in the early 1960's. In 1964, a multi-family boom market west of the Rockies turned sour, precipitating a decline that didn't begin to correct itself until after the 1966 mini-recession.

While the current rate of decline in multi-family units in the South is comparable to that which occurred in the West in 1964—steeper, in fact—the factors that prolonged the West's decline for another two years, are not currently operative in the South The West's decline in the 1960's was the result of two adverse economic factors on an already vulnerable market. A series of military base closings, and cutbacks in aerospace spending had a grave short-term impact on the region's economy at the time. One measure of this impact on housing demand in the region, net migration into the West, dropped from an average of 500,000 people a year in the early 1960's to 150,000 average in 1965 and 1966.

Despite the recession, no comparable change in the economic advantages the South has enjoyed in recent years is discernible. Indications are that the current decline in the South's multi-family housing market, though severe, will be of relatively short duration. The region should share in the housing upturn expected for the nation generally, in 1975, but at a lower level of activity. While residential contracts in the nation as a whole are expected to advance between 10 and 15 per cent next year, growth in the South will be slightly under 10 per cent. And, multi-family units, which slipped to 40 per cent of total housing in 1974, shouldn't get much above that in 1975, due to this lag expected in the South. Multi-family units had accounted for 45 per cent of total housing in the nation in both 1972 and 1973.

Now that the Federal Reserve Board has shifted to a policy of relatively easier money in the face of the current recession, the availability of mortgage funds will be less of a problem in the months ahead. The recession itself could become an obstacle to a strong housing recovery, though, depending on its severity. Reduced aggregate purchasing power of consumers, plus the sharp run-up in construction costs in recent months, translates into something less than an ideal housing market in 1975. These conditions must be viewed as limiting factors to the breadth and substance of the housing recovery, though, not as reasons that will prevent its happening. They could make the turnaround somewhat slower, and the recovery somewhat weaker than it might otherwise be. The stretchouts that occur in 1975, though, will serve primarily to make growth in 1976 more buoyant.

Condominium-type housing has shown enormous popularity in recent years. Despite the current setback, it should prove to be quite resilient, bouncing back in late 1975 and 1976 to again play a major role in the housing picture. This should be true not only in the South, but in the rest of the nation as well.

James E. Carlson, manager, economic research
McGraw-Hill Information Systems Company

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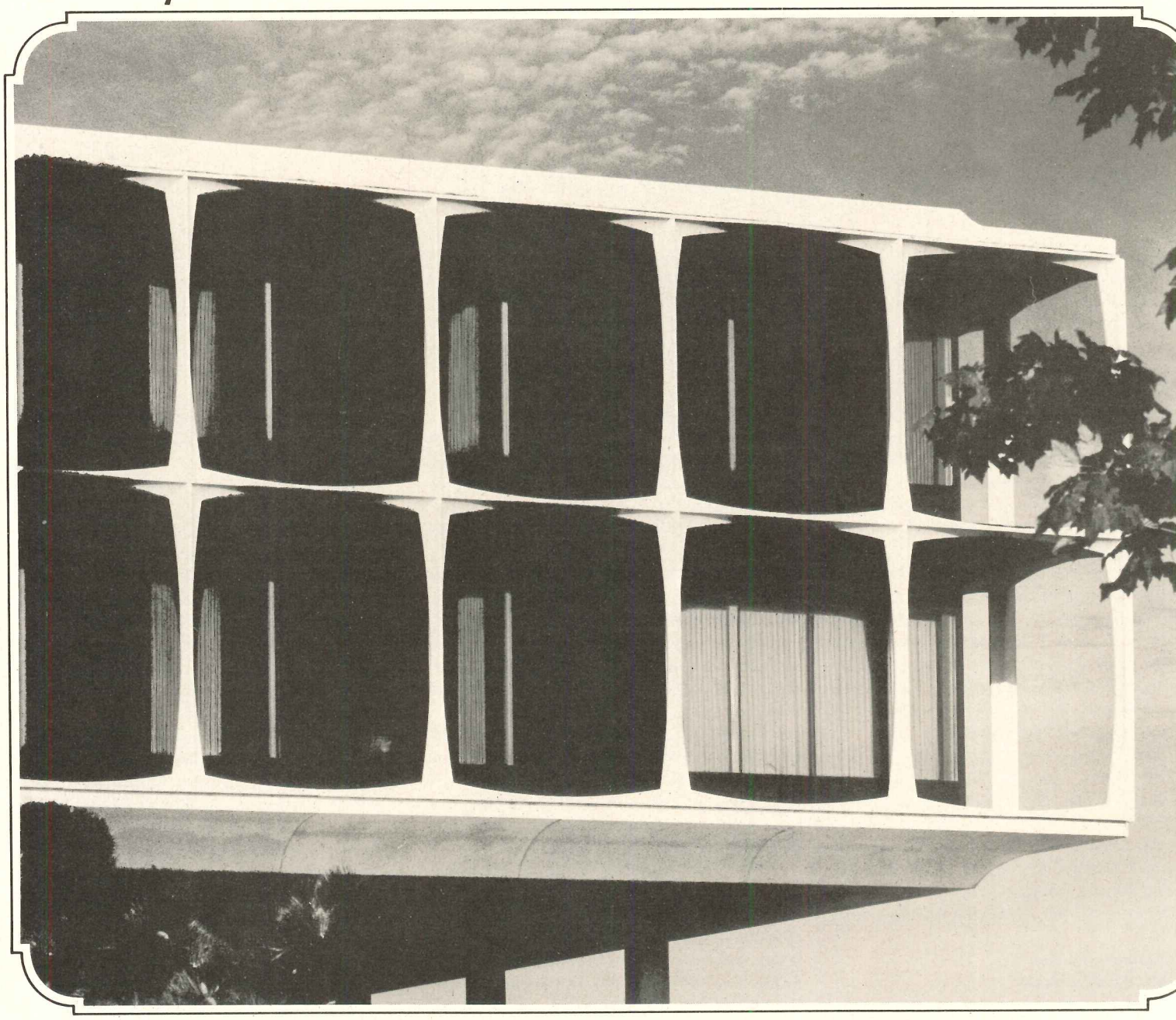

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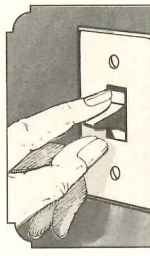

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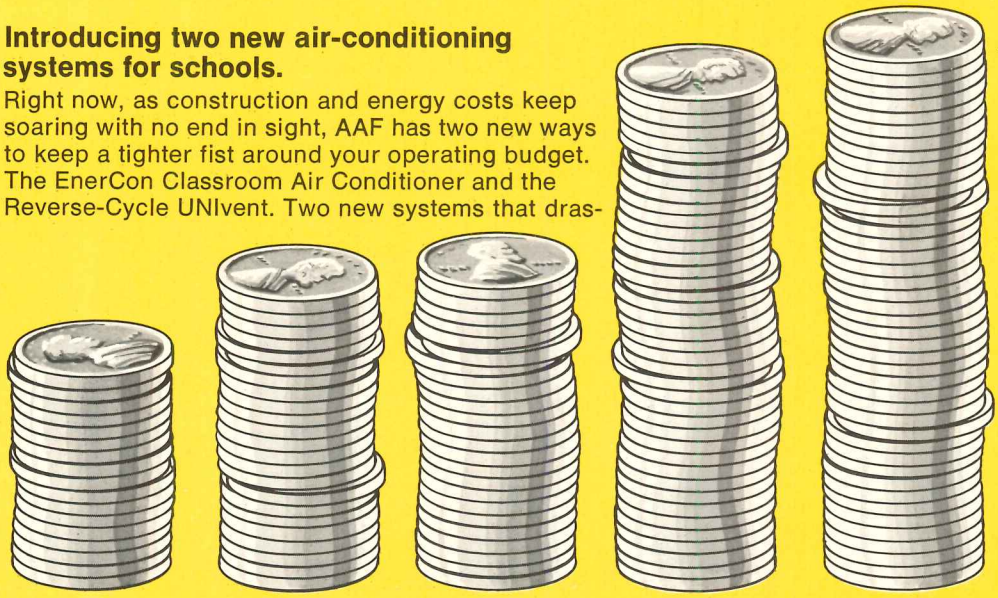

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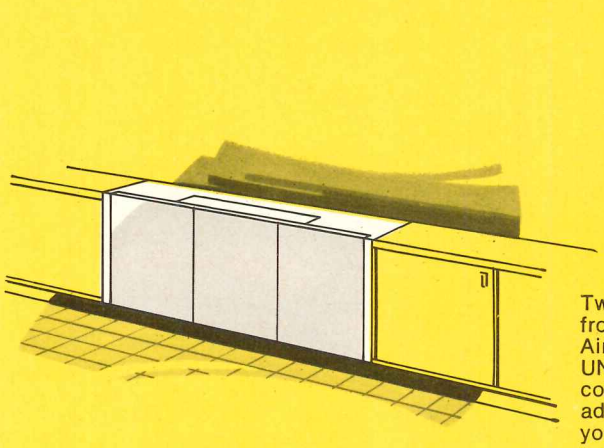
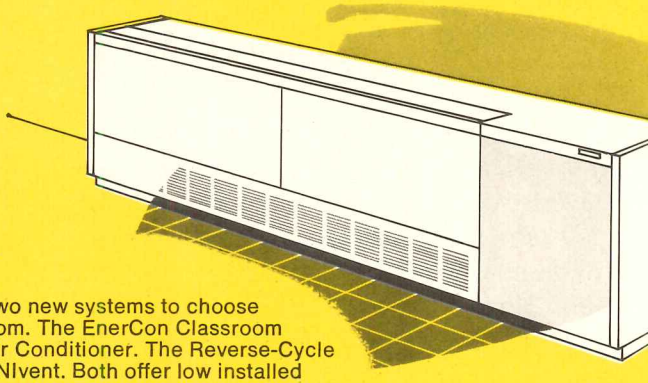
And the Reverse-Cycle UNIvent is a perfect so tion to modernization, too. Existing "heat-only" ventilators are easily replaced by Reverse-Cycle UNIvents. A larger wall opening is *not* necessary and frequently it is possible to reuse the existing water piping for the water loop.

The EnerCon Classroom Air Conditioner system.

This Reverse-Cycle unit also cuts power costs to the bone. EnerCon Classroom Air Conditioners c be used as an individual system or in conjunction with Reverse-Cycle UNIvents. Either way, they're





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r for offices, corridors and administrative areas 100% fresh air isn't essential—the EnerCon oom Air Conditioner brings in up to 25% e air.

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verage school frequently calls for both cooling eating at the same time, even during the middle ter. For instance, heat gain from lights, equip- and people means that core areas need to oled whenever they are occupied. So, core must usually be cooled even while perimeter are being heated.

during moderate weather conditions, the g of the sun from one side of a school to the can make the difference as to whether you r cool the perimeter. Conventional systems st the heat from the areas being cooled, on reuses and utilizes this energy. You get cooling or heating where you want it, quickly and efficiently, at less cost.

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How EnerCon works in a school building.
All EnerCon units in system are interconnected by a common water loop that transfers heat from spaces needing cooling to spaces needing heat, or stores excess heat for utilization later.

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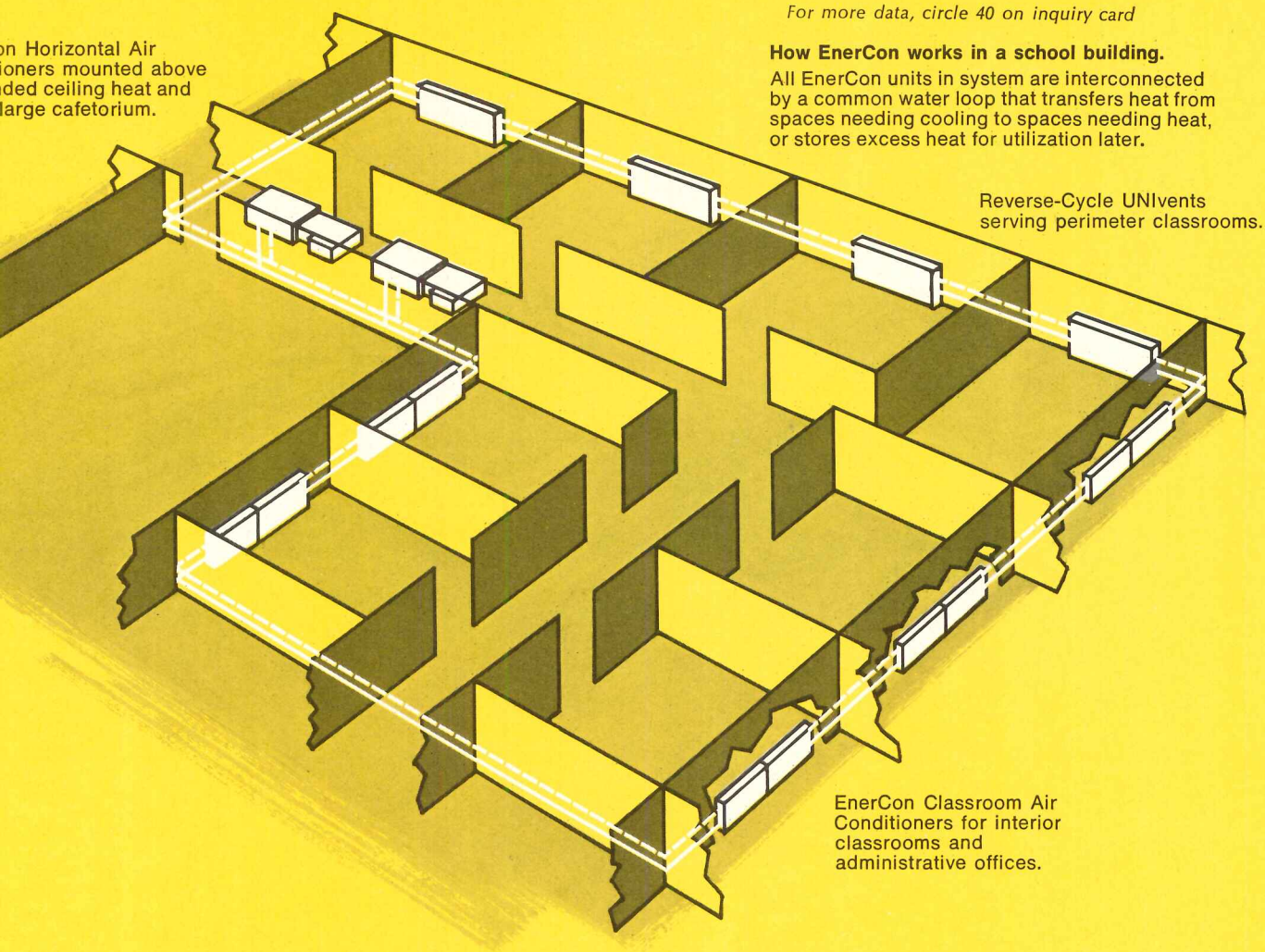

Reverse-Cycle UNIvents serving perimeter classrooms.

EnerCon Classroom Air Conditioners for interior classrooms and administrative offices.

Presenting the 1974 winners of the Owens-Corning Energy Conservation Awards.

Desert Research Institute, University of Nevada Systems, Boulder City, Nevada

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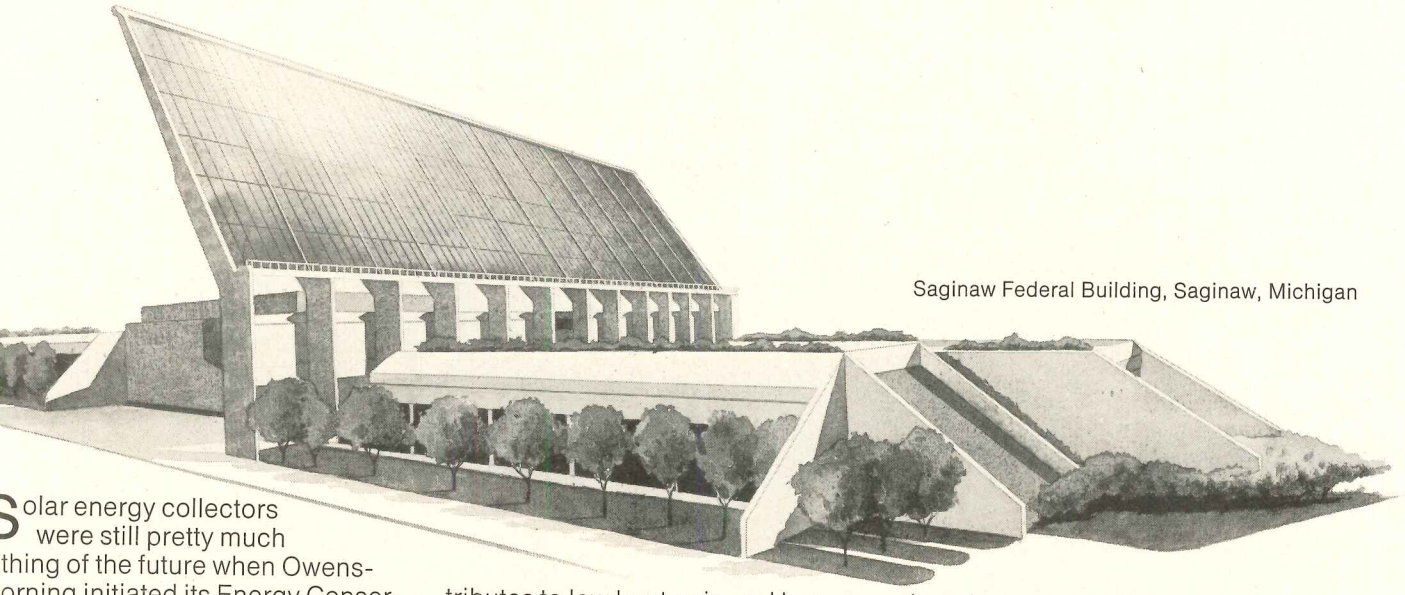

Saginaw Federal Building, Saginaw, Michigan

olar energy collectors were still pretty much thing of the future when Owens-orning initiated its Energy Conser-ation Awards Program in 1971.

This year, both our Award Win-ers—plus two designs receiving onorable mention—rely heavily on e sun for their energy needs.

Look these designs over. They ay suggest a way your company an conserve energy and cut el costs.

Desert Research Institute, niversity of Nevada Systems, Boulder City, Nevada

4,000 sq. ft. solar collector pro-des energy for 98% of the heating, tons of cooling, and 96% of the t water demand in this 8,800 sq. structure. Estimated energy sav-gs: 63,000 KWH annually.

Concrete walls and ceilings act an insulation envelope that pro-cts against temperature fluctu-ons and an uneven draw on the ergy collector.

Structure is built into a hillside for rimeter shielding from heat and ld. Plant life on exterior walls ves additional shielding.

Design by Jack Miller & Associ-es, Las Vegas, Nevada, in associ-on with Arthur D. Little, Inc., mbridge, Mass.

Saginaw Federal Building, Saginaw, Michigan

8,000 sq. ft. flat plate solar ergy collector provides energy heating and cooling.

Fenestration is pushed into the rth, and approximately half the f is landscaped with lawn, rubs, trees and seating. This con-tributes to low heat gain and loss.

Design by Smith, Hinchman & Grylls Associates, Inc., Detroit.

Two Honorable Mention Awards

The Owens-Corning Energy Conservation Awards Jury found two other designs worthy of special attention.

Science Museum of Virginia, Richmond, Virginia. Combines a 28,000 sq. ft. solar energy collector with a heat-recovery system for heating and cooling. Expected energy operating cost: $12,000 vs. $50,000 for a conventional heating and cooling system. A saving of 75%.

Mechanical design by Hankins & Anderson, Inc., Consulting Engineers, Richmond, Virginia.

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Design by A.B.R. Partnership, Denver, Colorado.

How the Awards Program works.

Owens-Corning accepts entries in any of four building design categories:

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Commercial—office buildings, shopping centers, retail stores and similar structures.

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Any registered architect or professional engineer in the U.S. is eligible to enter a design. The only requirement is that the design be a *commissioned* building project. (The use of Fiberglas* insulation—although an excellent way to conserve energy—is not a requirement.)

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If you'd like to know more about the winners, or their designs, write for a free brochure giving complete details.

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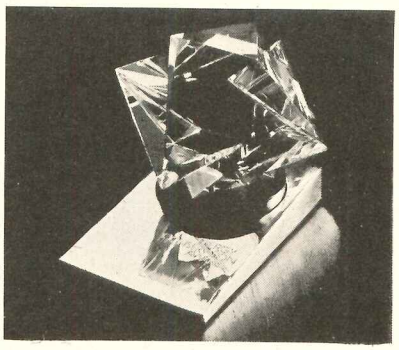

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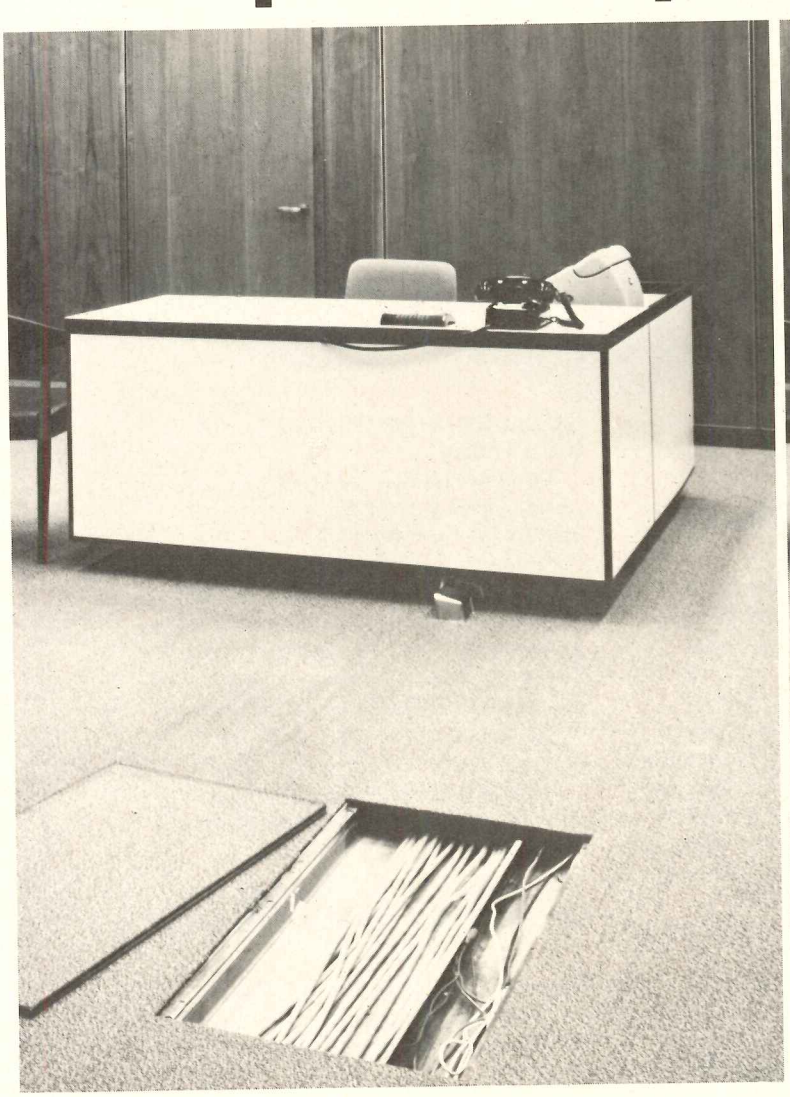

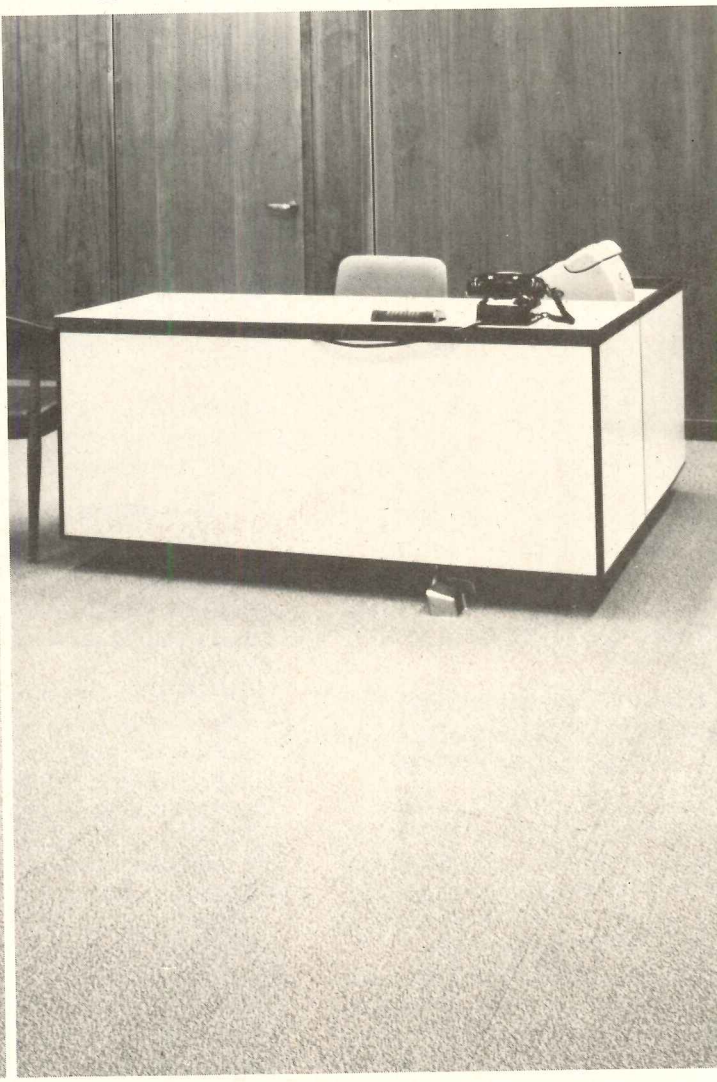

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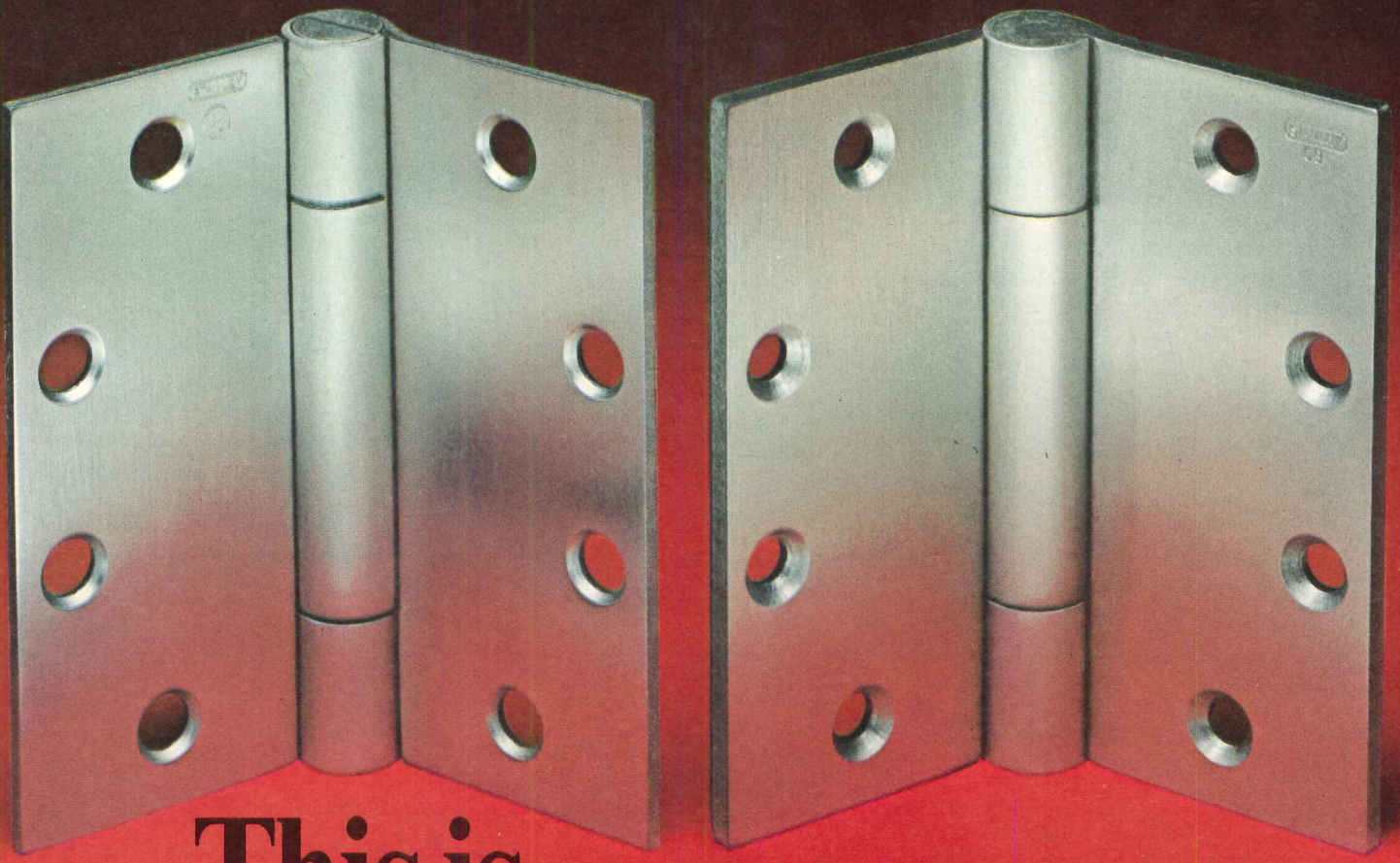

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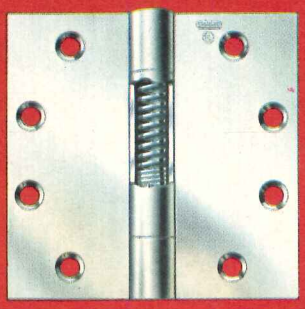

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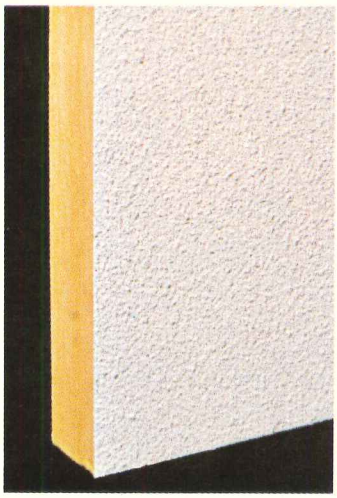

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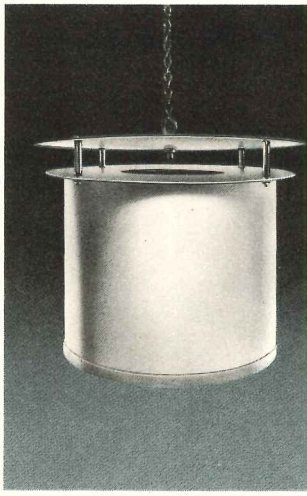
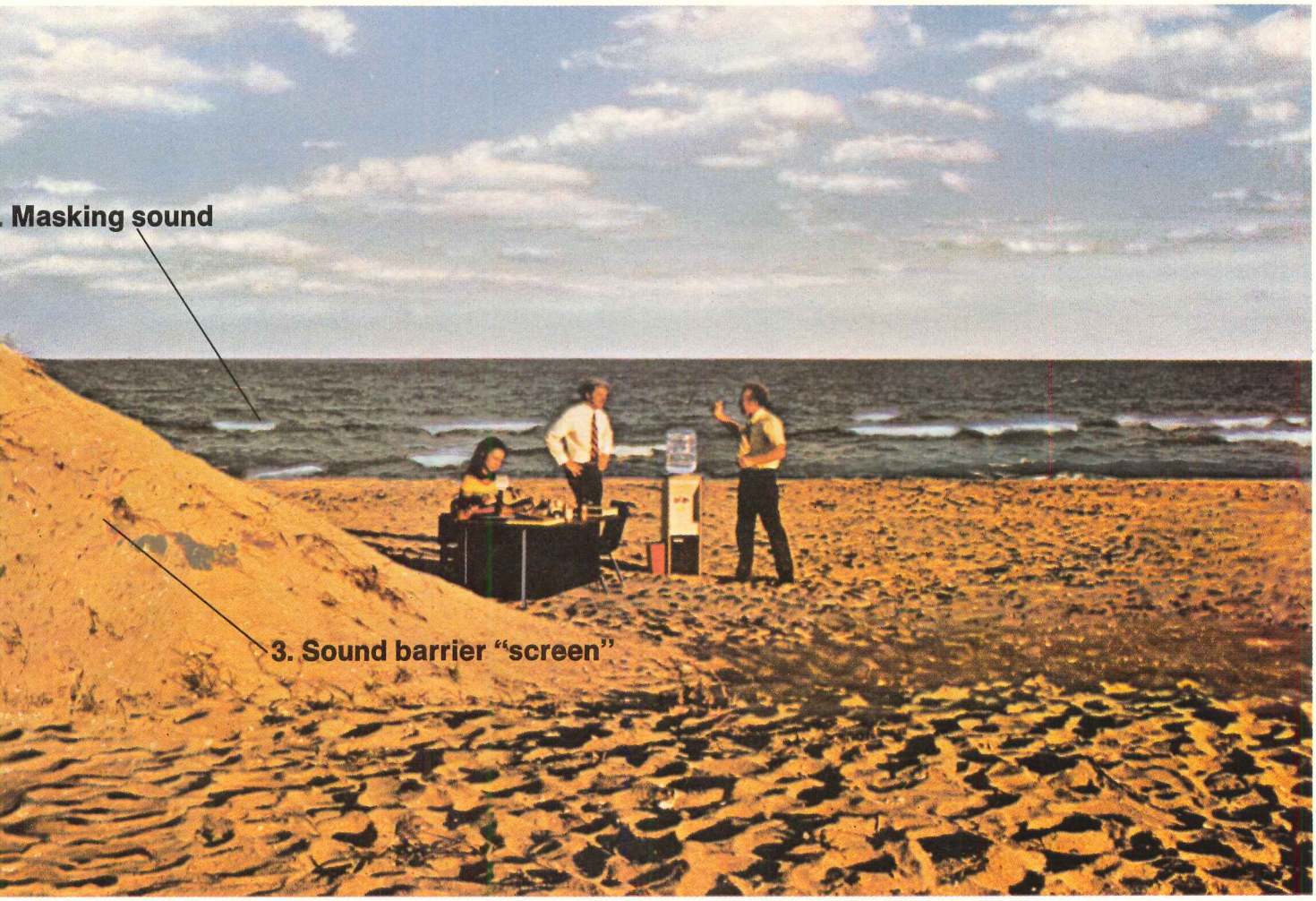


*Reg. T.M. O.-C.F.

or speech privacy in open offices. hat puts it all indoors.



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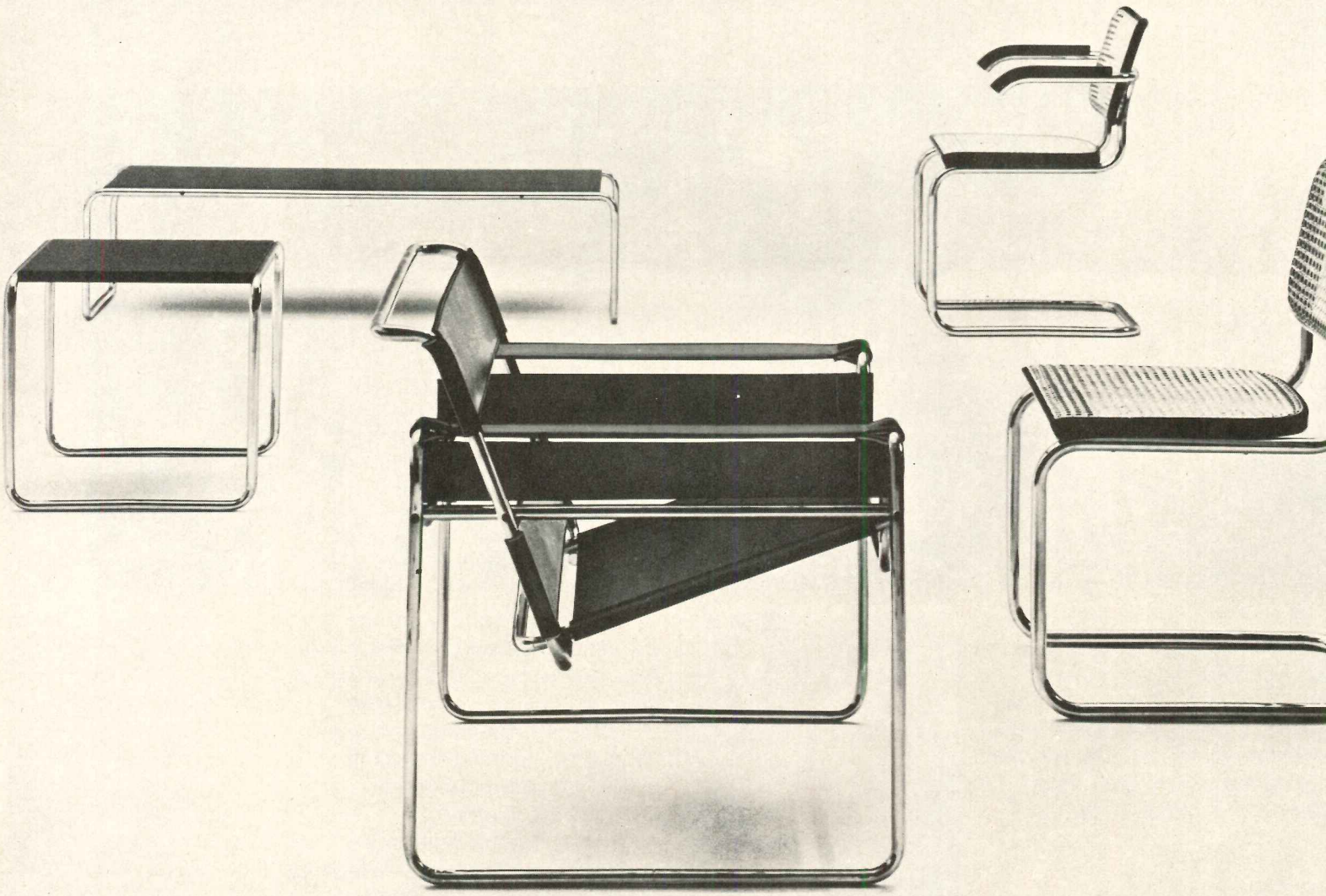

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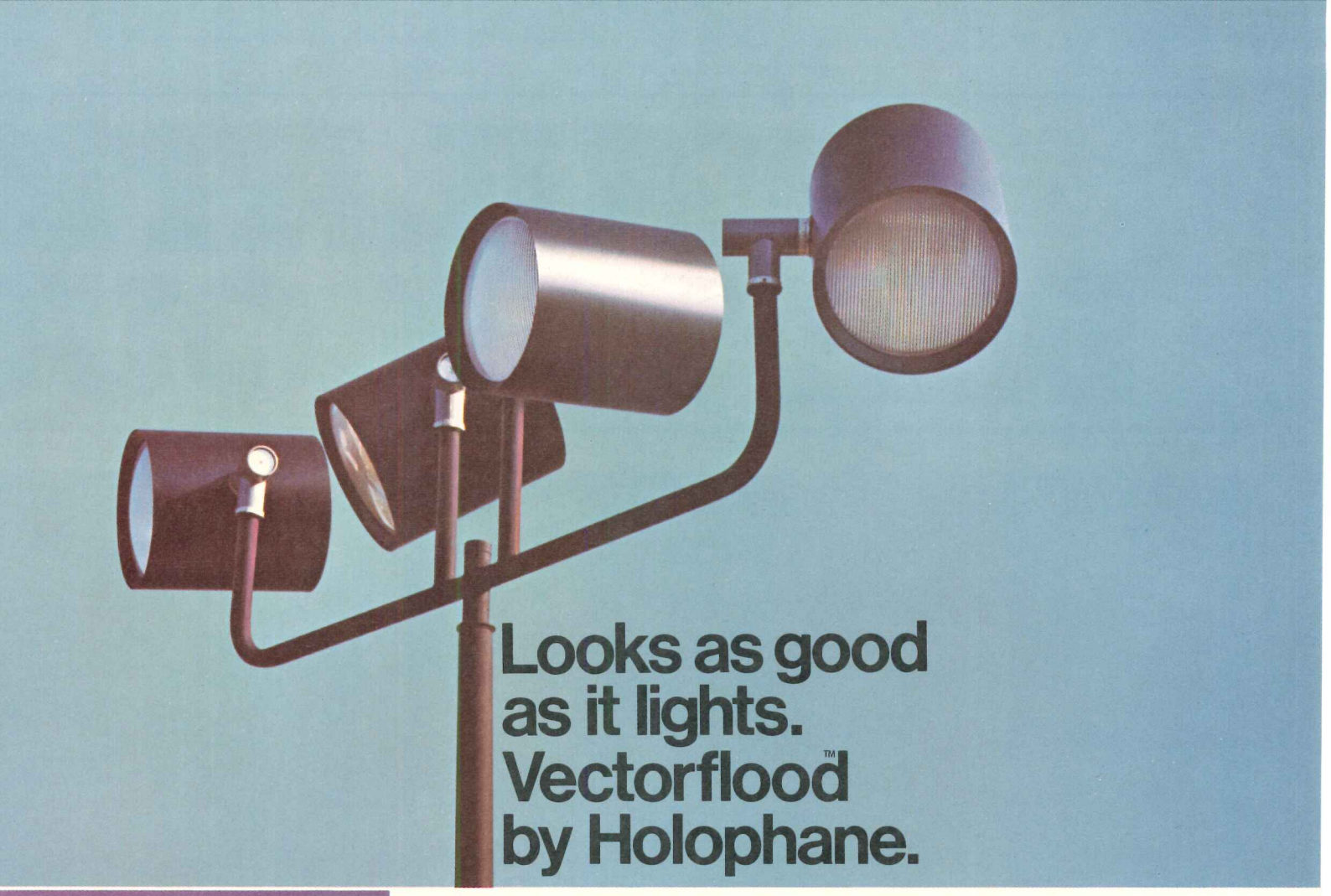

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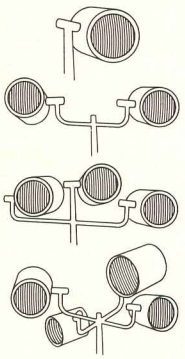

Design with cylinders: singles, doubles, triples, or quads.

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Division, Johns-Manville Sales Corporation
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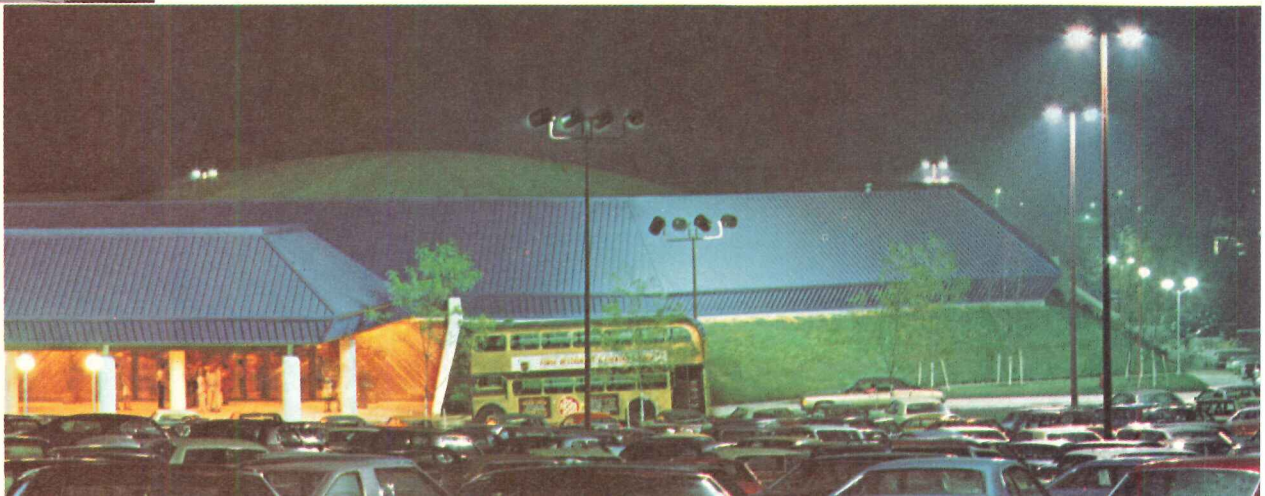
CREDITS

The Front Row Theatre,
Highland Heights, Ohio
Architect:
Richard R. Jencen & Associates
Structural Engineer:
D. T. Levigne Associates, Inc.
Electrical Engineer:
Denk-Kish Associates, Inc.
General Contractor:
Faro Construction, Inc.
Electrical Contractor:
The Max Oster Electric Co., Inc.
All firms located in
Cleveland, Ohio



INSULATIO
SEE THROU

Blue Cross and Blue Shield of North Carolina's Service Center, Durham, N. C. Architect: Odell Associates Inc.

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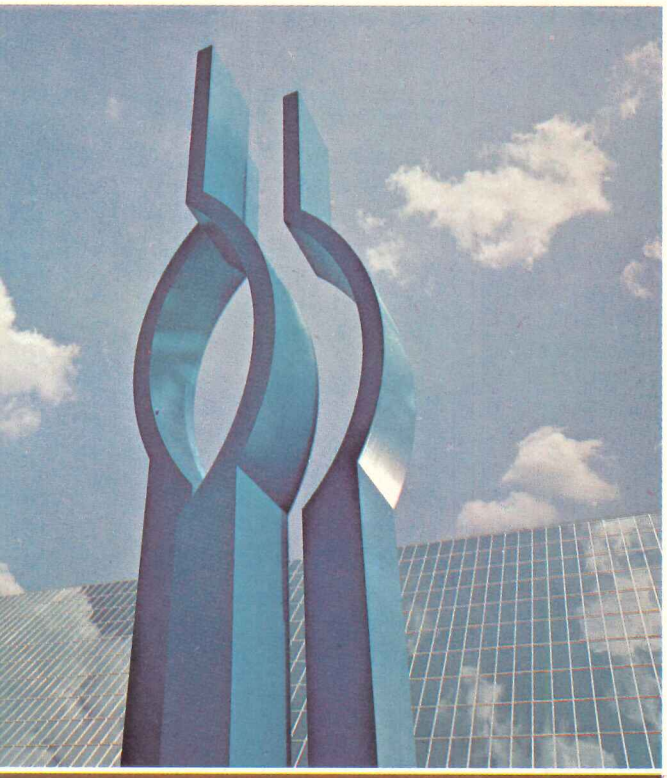
L, FROM LOF.



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Blue Cross and Blue Shield of North Carolina's new Service Center does more than reflect and complement a beautiful setting—it's a comfortable and energy-efficient structure as well.

LOF's Vari-Tran® 1-108 reflective glass in Thermopane® insulating units in combination with slanted walls resulted in a substantial reduction in needed cooling equipment.

If the building had been designed with traditional vertical walls of 50% clear glass and 50% masonry cavity, it would have resulted in a solar heat gain through the walls of 3,300,000 Btu per hour. Clear ¼" plate used in 100% glass vertical walls would have resulted in 6,000,000 Btu per hour solar heat gain. The final design, combining Vari-Tran with slanted walls, reduced solar heat gain to only 2,400,000 Btu per hour —a 60% reduction in energy load compared to the latter figure.

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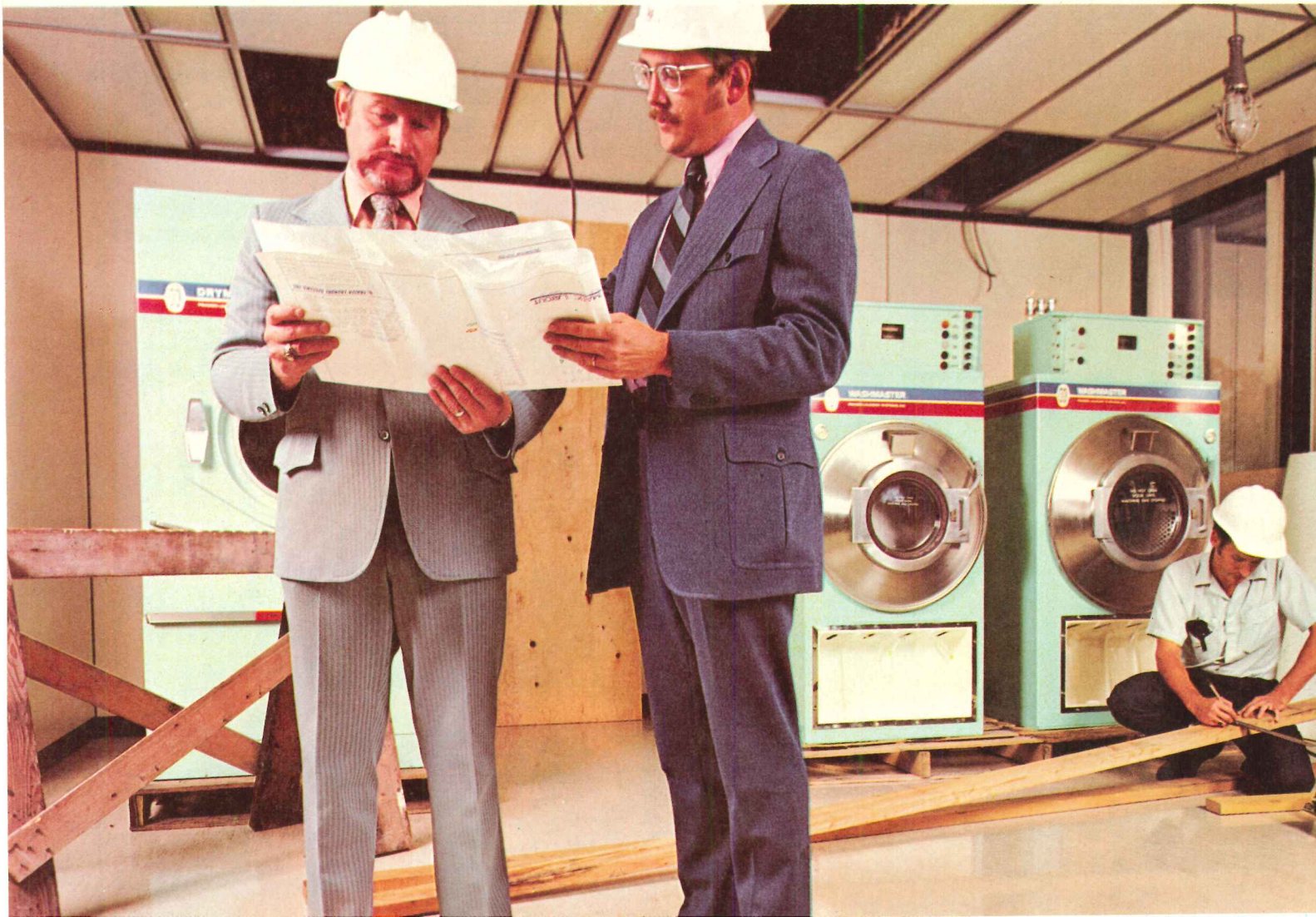
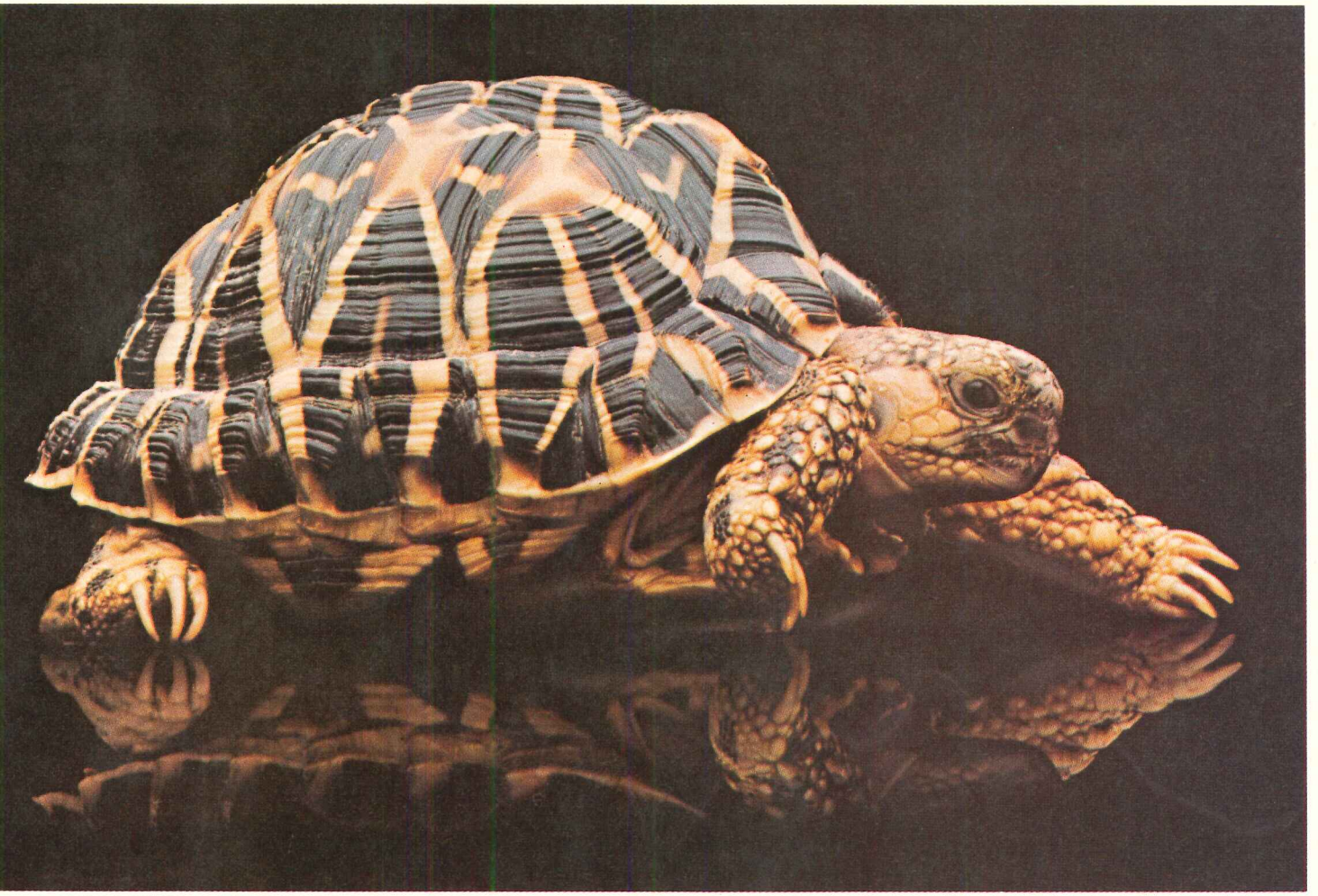


The only organic roof that might outlast the Owens-Corning all-Fiberglas roofing system.



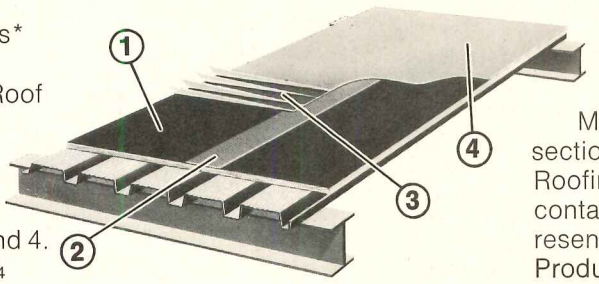
Conventional asphalt roofing systems have organic felts. So moisture and heat can cause them to curl, wrinkle, fishmouth, char and rot. And that can lead to an early failure.

Not so with our all-Fiberglas* roofing system. Here's why.

1. It begins with Fiberglas Roof Insulation. This has a bottom surface that conforms to minor roof irregularities. And a top surface that stays flat. (FM Class 1 construction. UL 1, 2, and 4. Thickness from 15/16ths to 2¼ inches. C-value certification.)

2. Fiberglas Roof Tape then provides reinforcement at the roof insulation joints and helps reduce failures caused by normal deck movement.

3. Fiberglas roofing felts come next. Unlike conventional felts, ours won't absorb or hold moisture. So they won't char or rot. They resist curling, wrinkles and fishmouths. And they're less subject to contraction and expansion due to changes in moisture.



4. Fiberglas PermaCap (where available) tops everything off. It's surfaced with inert, non-combustible ceramic granules that help beautify the roof.

More information? Refer to our section in Sweets Catalog, Built-Up Roofing Systems 7.1/Ow, or contact your Owens-Corning representative. Or write: Architectural Products Division, Attn.: Mr. W. A. Meeks, Owens-Corning Fiberglas Corporation, Fiberglas Tower, Toledo, Ohio 43659.

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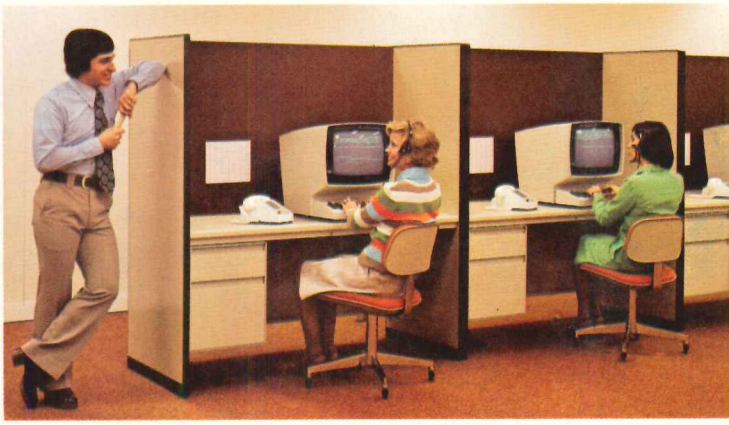
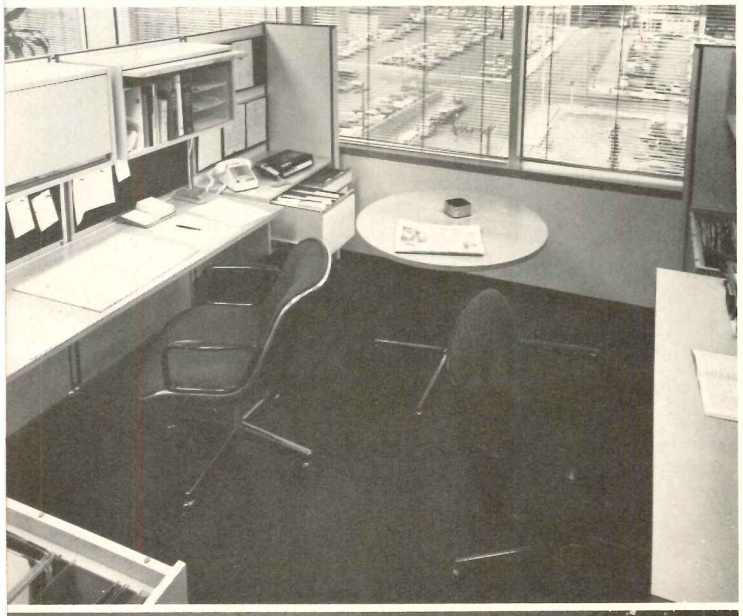


ECORD NTERIORS OF 1975

The nine award-winning interiors, shown here and on the pages that follow, range across a variety of building types and budgets but continue to express a remarkably unified approach to the design of interiors. Each is serious in purpose, energetic in its expression of function and insistent in the conviction that materials be brought together in orderly and carefully fashioned details. Without sacrifice to these values though, some of the projects, like C. Blakeway Millar's Toronto restaurant (pages 104-105) or Hellmuth, Obata & Kassabaum's offices for a bank holding company (where the mirror glass exterior turns under and into the building to create a reflective ceiling over the reception area, photo above) introduce elements of mystery and fun. These, when they are introduced with restraint—and without too many architectural calories—are, of course, exceedingly welcome—*B.G.*

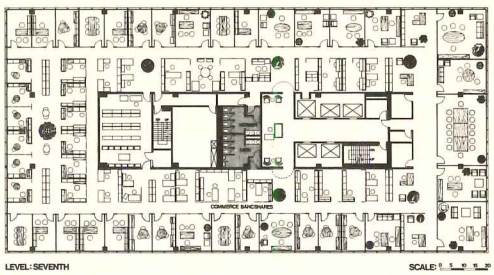


The decision to mix elements of open planning with conventional office layout produces handsome results in these Kansas City interiors

What most impressed the editors about these offices in Kansas City for a bank and bank holding company is the increasing skill with which elements of "office landscape" are introduced into a conventional office setting originally programmed as rental space. Here the mixture works well. Elements once thought to be antagonistic (indeed planned along opposing principles) coexist without serious conflict although the relationship between half-height partitions and perimeter wall (photo third from top, left) suggests less than complete resolution. Gone is the chaotic look that characterized earlier open-plan installations and gone too are the stiffness and formality of conventional office layout. Here in these offices, workspace is flexible and formal contours are softened by the generous use of plant materials and an extremely rich color palette. These colors, keyed by floors, are used in carpet, upholstery and in the vinyl finish on the interior core. The beautifully detailed full-height partitioning system, laid out on a five-foot module, includes large panels of glass that let daylight brighten the interiors.

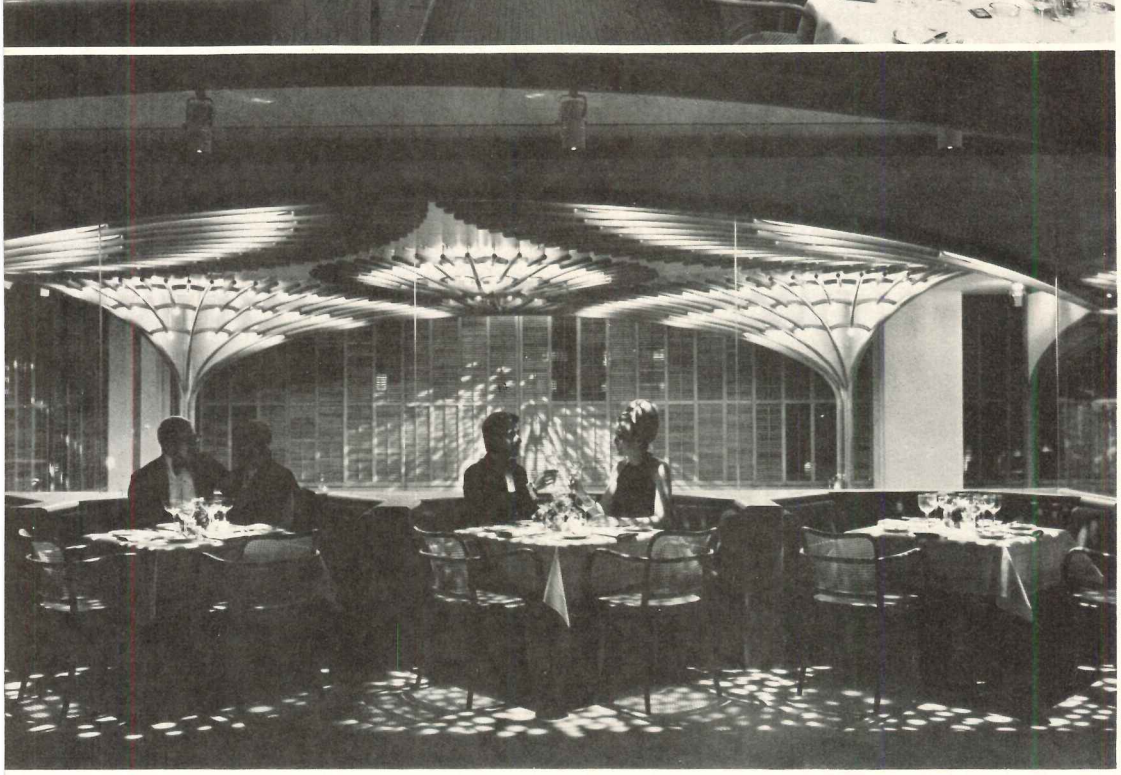
Using handsome furnishings and carefully devised interior systems, Hellmuth, Obata & Kassabaum have created a series of interior spaces that are elegant, comfortable, and unusually expressive.

EXECUTIVE OFFICE PLAZA, Kansas City, Missouri. Owner: *Tower Properties, Inc.* Architects: *Hellmuth, Obata & Kassabaum—Gyo Obata, partner-in-charge; Chester Roemer, principal-in-charge; Harry Culpen, designer; Robert Barr, project architect.* Interiors: *InterArc (subsidiary of H.O.K.) Michael Willis, president, Ken Hanser and Alan Louck.* Associate Architects: *Keene, Simpson & Murphy.* Engineers: *Jack Gillum* (structural); *Herman Blum* (mechanical/electrical). Contractor: *Winn-Senter Construction Co.*



Alexandre Georges photos

Changes of level, theater lighting and sumptuous details animate Warren Platner's rooftop restaurant for Crown Center

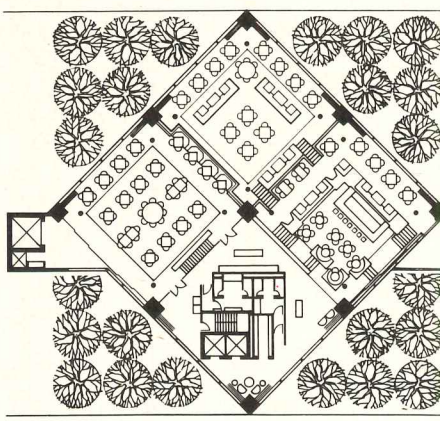


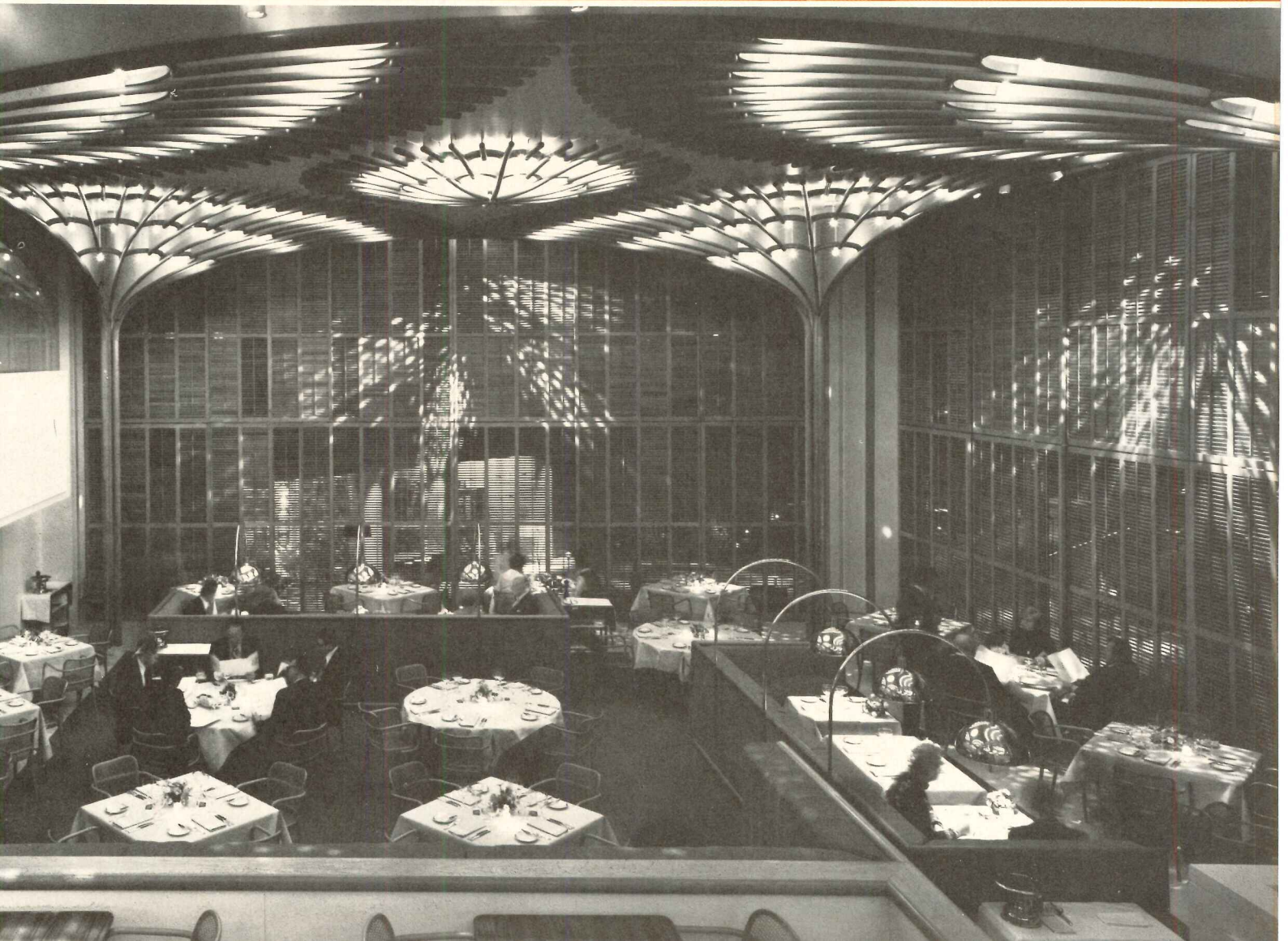
Few architects work more elegantly in inte
design than Warren Platner, and his Ameri
Restaurant, in Kansas City, mingles opule
with elements of fantasy to create his r
striking and theatrical dining space to c
The restaurant is a glass-walled penthouse a
a building by Edward Larrabee Barnes
overlooks Crown Center. The dining spac
spatially expressed as a group of three di
pavilions and a fourth that houses a recep
area and services. The pavilions are articul
by changes in floor level and by decora
ceiling canopies in floral forms that also c
ceal a myriad of clear-filament lamps that
vide a low but pleasant level of illuminatio
dining. Some tables are lighted directly
brass domes and others by theater lights s
the ceiling that wash diners (photo, bottom
in a scatter pattern reminiscent of falling pe
Similar fixtures throw sprays of light agains
oak window shutters.

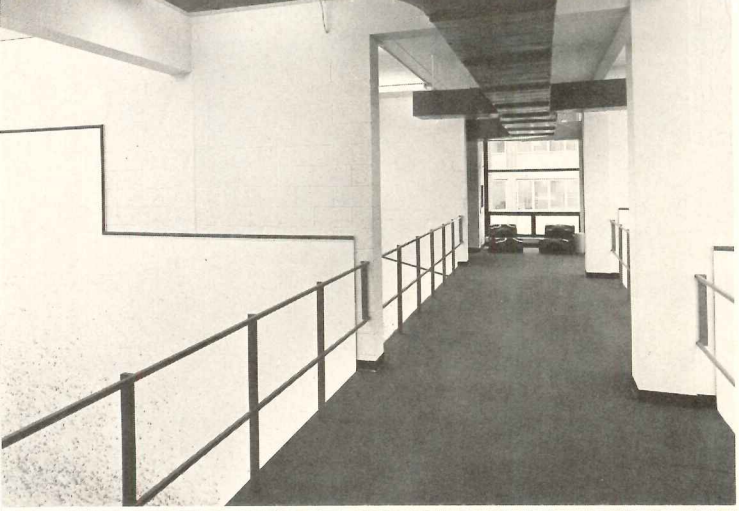
Upholstery colors in the banquette an
cove seating are red, pink and indigo. Pai
plaster wall surfaces are ivory cream, and
carpet is a bronze gold. The level of d
throughout is exquisite.

Some readers may find the whole s
overworked—too rich for their partic
tastes—but Platner set out to create a plea
dome and this he has done with enorm
skill. The American Restaurant is a place o
chantment, a place where routine conc
can be suspended, where the frictions
abrasions of day-to-day living can be mo
tarily soothed in an atmosphere of fine
and fantasy.

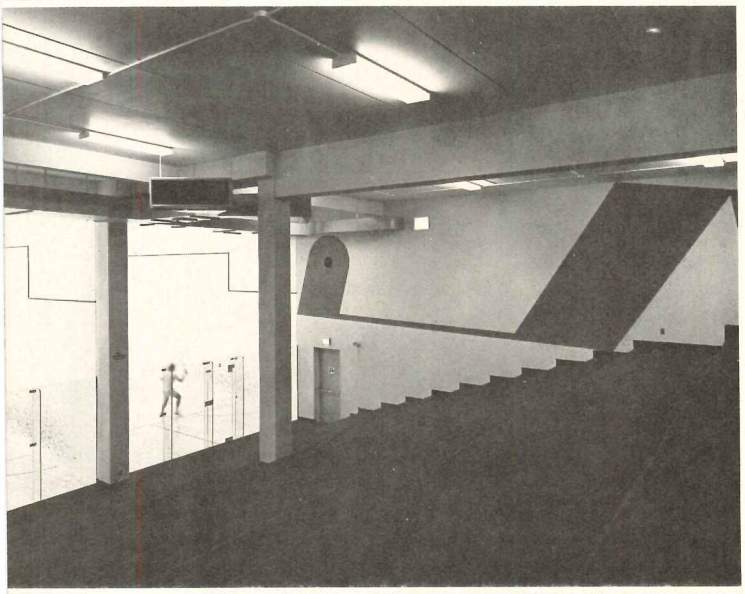
AMERICAN RESTAURANT, Kansas City, Miss
Architects: *Warren Platner Associates—David
nell—project architect; Jill Mitchell, graphics;
Stadler, construction documents; Lee Ahlstrom
nishings.* Contractor: *Eldridge & Sons Constru
Company, Inc.*

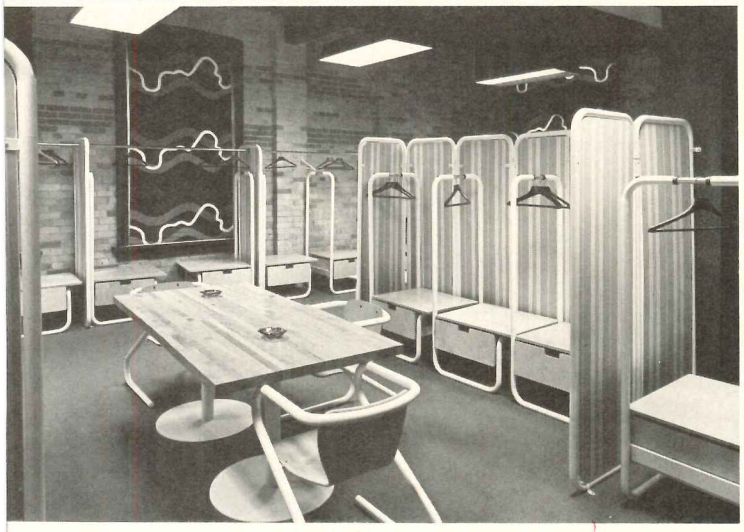






Part renovation, part new construction was the answer in this lively facility for Canada's fastest growing sport



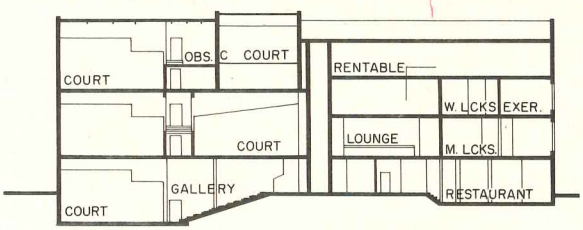


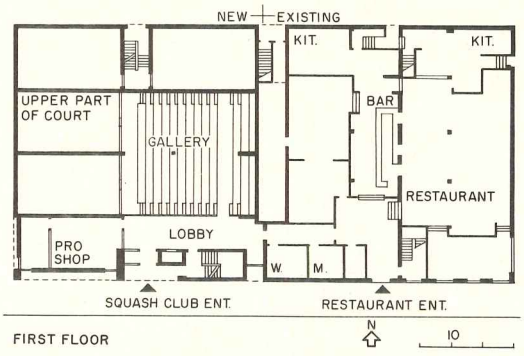
The owner of two four-story brick buildings and an adjoining vacant lot commissioned the architects to design a squash club using the existing structures for lounge, locker and restaurant space, then integrating these with a new building containing squash courts constructed on the vacant lot.

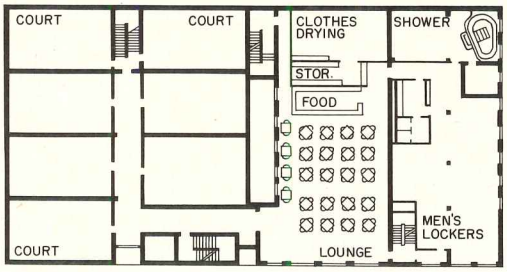
The main entry is at the first floor of the new structure and gives access to the 400-seat viewing gallery that overlooks two exhibition courts which are fitted with large, back-wall viewing panels. There are two additional floors of courts on levels 2 and 3 above and these include 15 American singles courts, one English singles court (dimensionally different) and one doubles court. Connected to these playing facilities, but occupying renovated space in the existing structures, are a restaurant (with separate entrance), lockers, lounge spaces and other support facilities (see plans).

The program was unusual and its requirement for blending old and new into a coherent unity was a challenge the architects gladly assumed. The result is an interior that is not only functionally efficient but visibly unified—this in spite of the disparate elements the architects began with and in spite of the radically different requirements placed on each kind of space by the program itself. The interiors, though not glamorous, achieve an even level of design concern throughout and seem to convey quite clearly that fun and physical exertion are elements that can be contained and given suitable design expression.

TORONTO SQUASH CLUB, Toronto, Canada. Architects: *Neish, Owen, Rowland & Roy—William J. Neish, partner-in-charge; Peter Manson-Smith, project designer:* contractor: *Camston Ltd.*



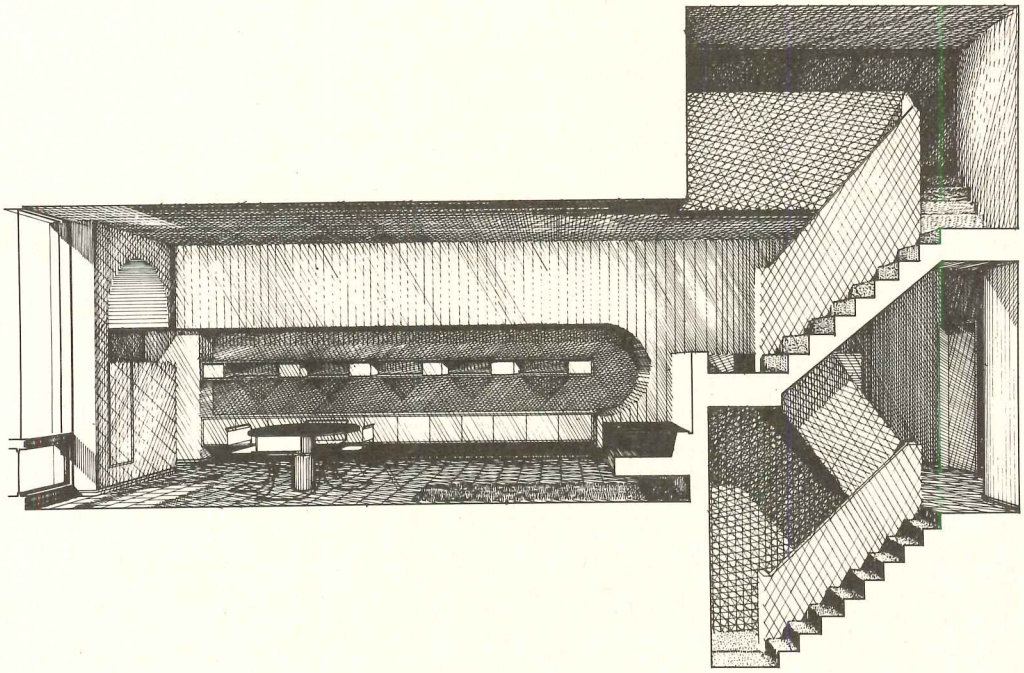


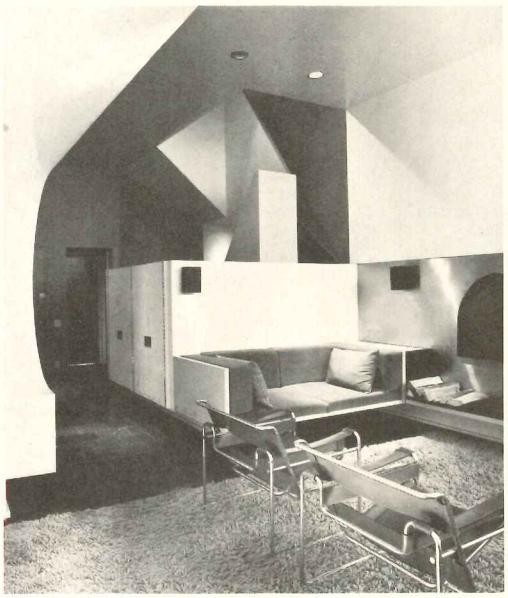


SECOND FLOOR

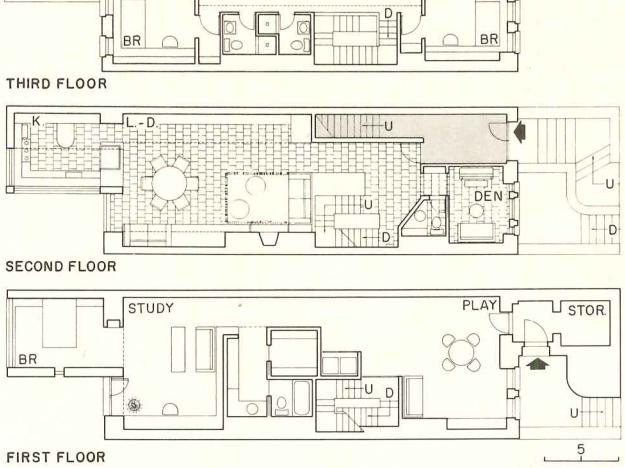
Panda Associates photos

In a renovated Manhattan brownstone, deep, curved inches expand a narrow space and open up a tightly-planned interior





Robert Perron photos

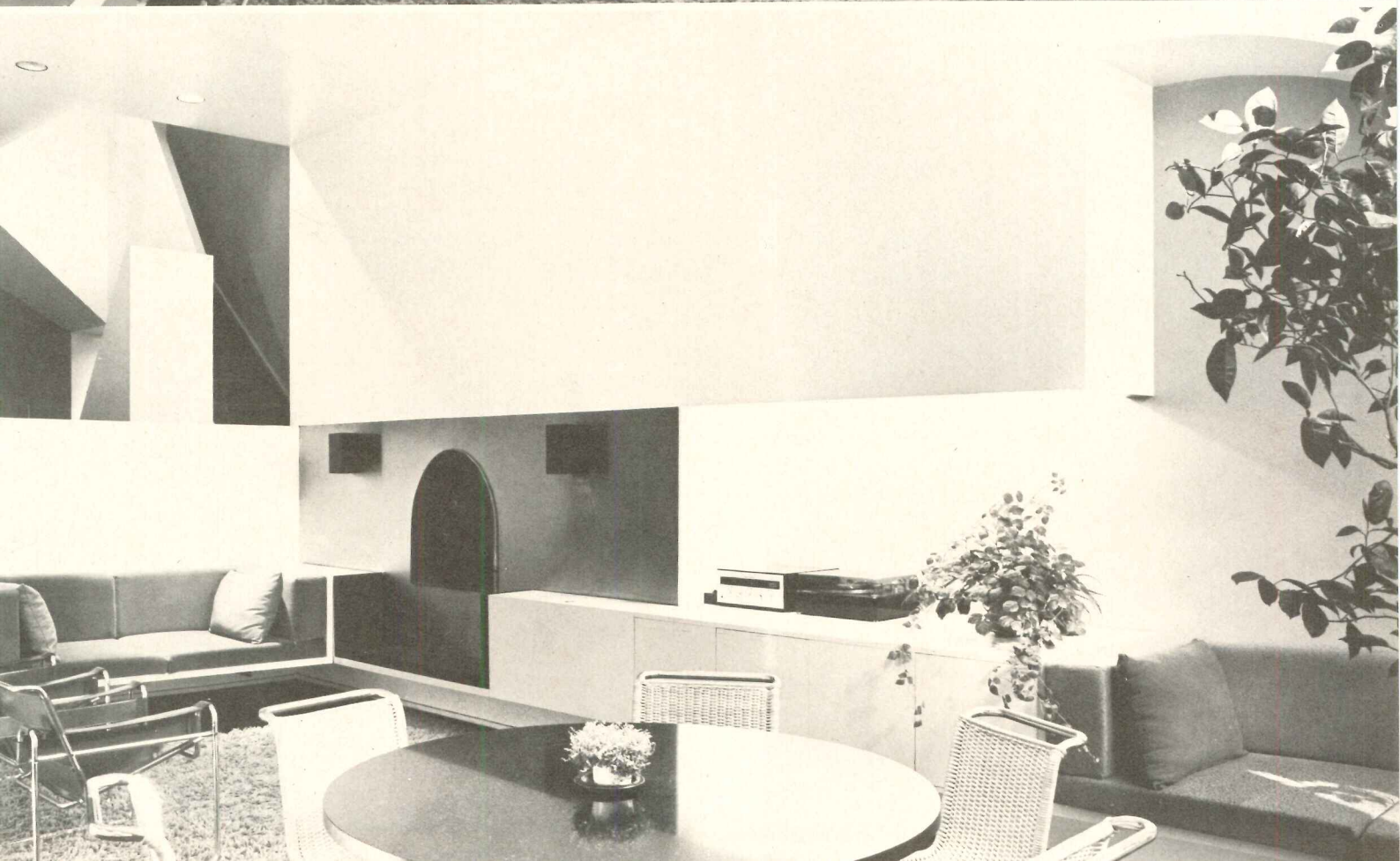


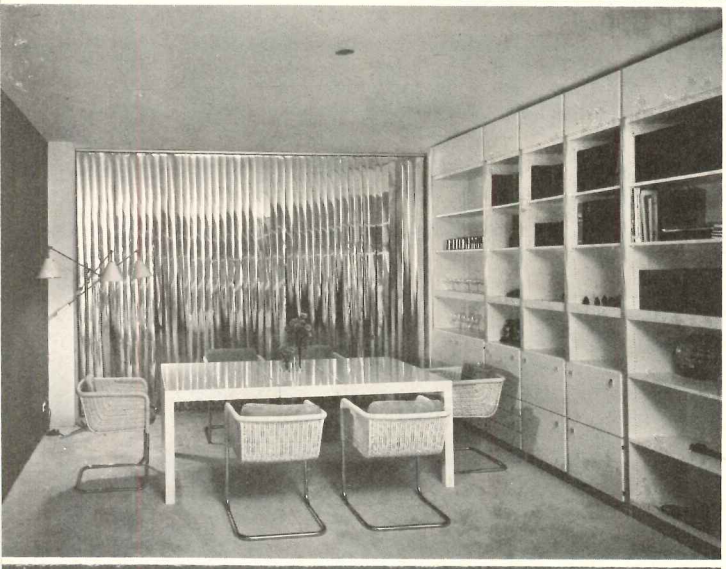
Architects Maurer and Maurer have m
something of a specialty of townhouse ren
tions over the last ten years, and their as
ance in dealing with this building type is
dent in this brownstone on Manhattan's W
Side. A number of limiting conditions are c
mon to these houses. They are, for one th
built out to the very edges of their exceedi
narrow lots (less than 25 feet). In addit
owners typically set aside part of the house
income-producing apartments.

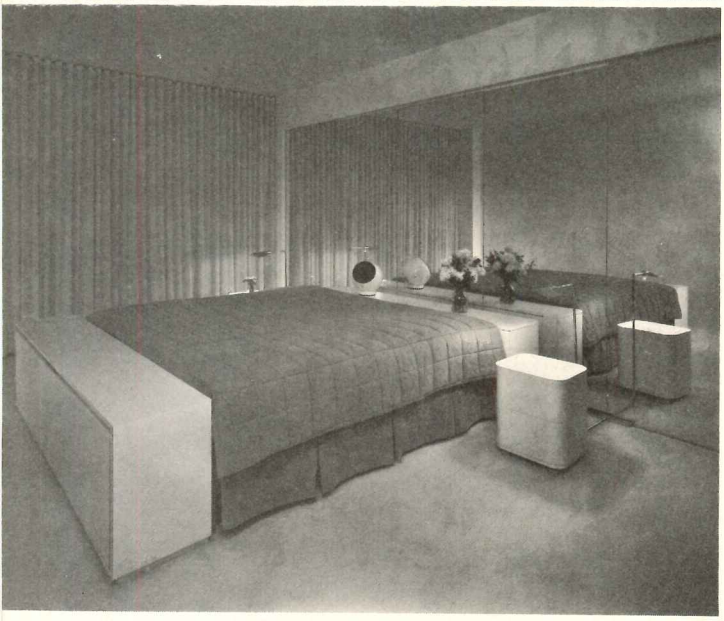
Here, the family reserved three of
building's five floors as a self-contained tri
for themselves. The Maurers' aim on the m
floor was to increase the apparent volum
the space by eliminating partitions, at the s
time creating a sense of lateral expansion
long, deep recesses stretching on either sid
the room. The reflective white enamel w
and stainless-steel fireplace enhance the
ing of openness—and, not incidentally,
vide washable surfaces for a household
four children. The kitchen, which like the m
ter bedroom below occupies a "bustle" ad
to the house earlier, has an arched ceiling
reflects the form of a round-headed win
overlooking the back garden. Children's ro
are on the top floor of the triplex.

The top two floors of the building con
a pair of interlocking duplexes—the lo
level living room of one at the front of
house, its upper-level bedroom at the b
and the other way round for the second
plex—so that each apartment has one south
exposure.

RESIDENCE, New York City. Architects: *Maurer
Maurer.* Engineers: *David J. Hofman* (structu
Robert Bedell (mechanical/electrical). General
tractor: *Gulli Construction Co., Inc.*







A tightly disciplined color scheme and subdued lighting yield unexpected richness in this extraordinary Manhattan apartment

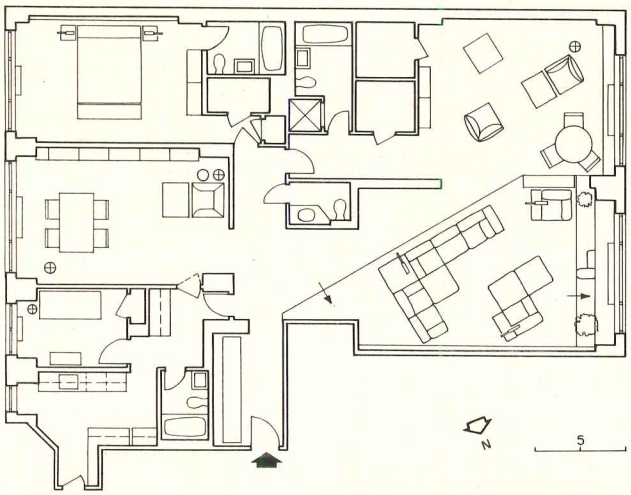
The client started with a two-bedroom cooperative apartment in Manhattan of more or less conventional design with exposures to the north and south. He enlisted the services of architect Der Scutt to advise him not only in the selection of a designer but to act as client's consultant for the project. Susan Forbes, of Forbes-Ergas Design Associates, was subsequently commissioned to work closely with the architect in design and preparation of the drawings.

To reproportion the entrance, a custom ceiling, covered with carpet, was hung from the existing slab. A carpeted bench, in what had been closet space, further expands the space. Both elements are fitted with concealed lighting that detaches them visually and dramatizes their floating qualities.

The living room was fashioned from two spaces and shaped by platforms that create a strong diagonal axis. Following this diagonal, modular furniture is oriented to long views overlooking Central Park. The bedroom, facing west, is an uncluttered retreat, mirrored to double its apparent size.

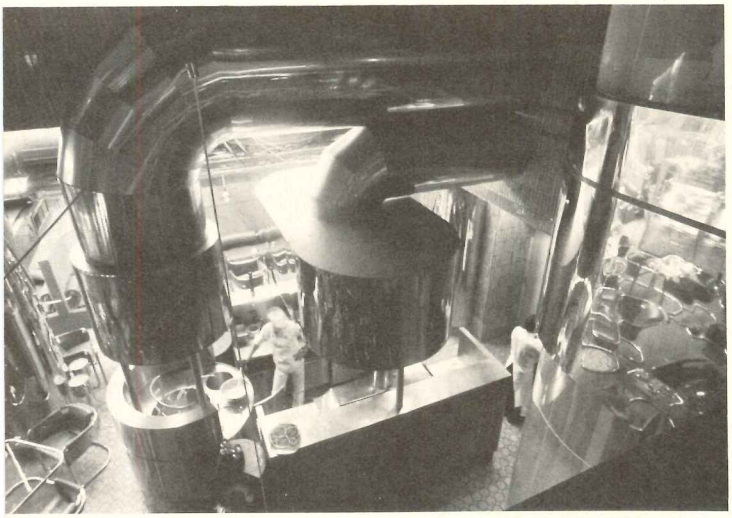
Throughout the apartment, storage, lighting and the selection of finish materials are handled with care and skill. The color scheme is largely monochromatic—staying in a range of neutrals, champagnes and beiges. Soft pools of artificial lighting, mostly from low floor lamps, are augmented by the wall wash from behind a custom valence that rings the living room at seated eye level. Together, these sources produce a warm, intimate lighting environment that reflects and sparkles from mirrors and Mylar blinds.

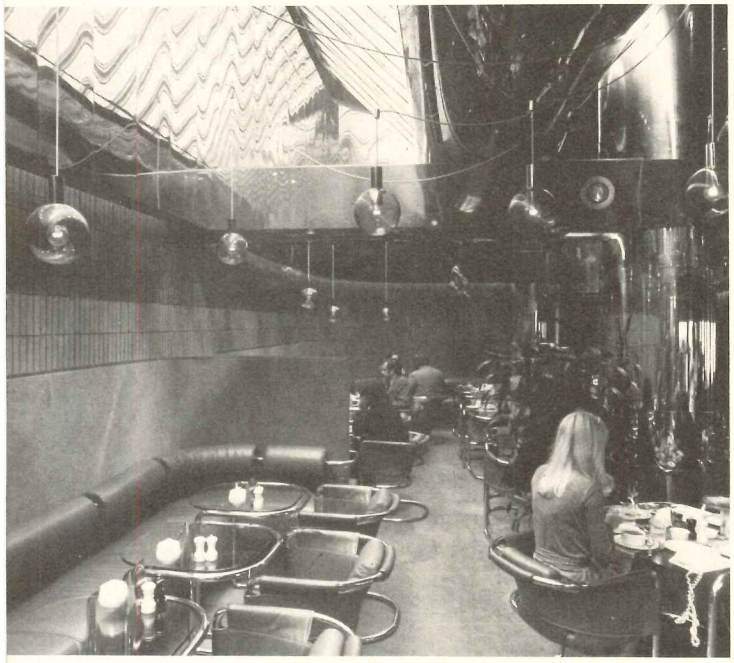
DiGIACOMO APARTMENT, New York City, Designer: *Susan Forbes.* Design consultant: *Der Scutt.*



Norman McGrath photos

A Toronto restaurant where fine food and glimmering images flow together to create an enchanting aura of elegance and ease

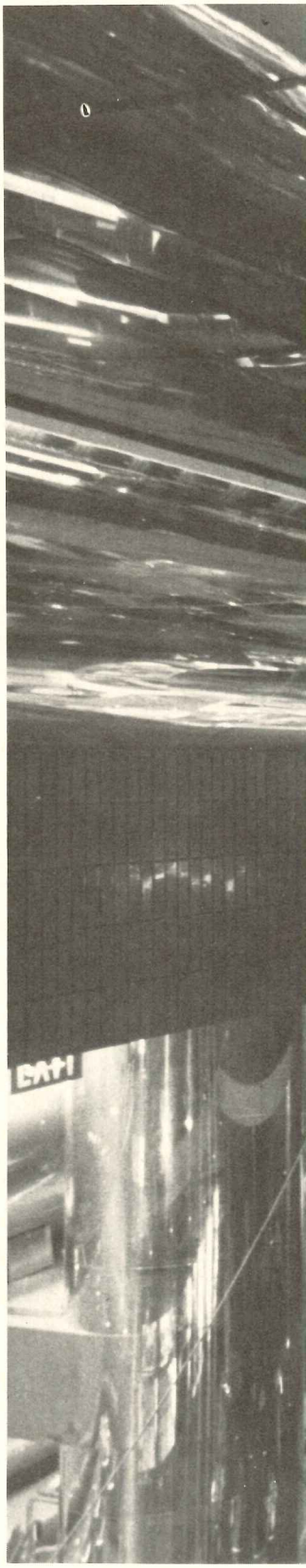


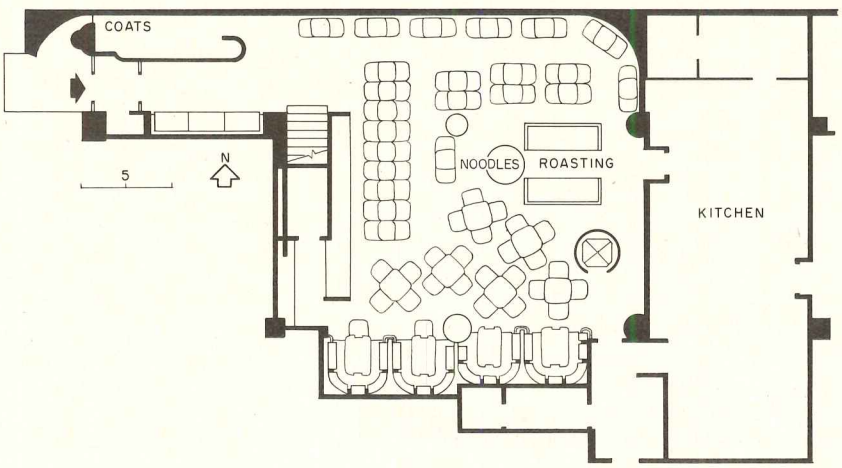


Noodles Restaurant, in midtown Toronto, is a shimmering space that awakens dulled senses and excites the imagination. Stainless steel cladding on columns and ductwork reflect fractured images back to the viewer and a mirrored ceiling, hung on a T grid, compounds the visual perplexity. Downstairs, a cook prepares food at a stainless steel servery right in the midst of diners who sit at individual tables or at long banquettes. The carpet is a bright orange and is turned up at the wall to meet a finish of hand-made Canadian tile. Concealed fluorescent lighting, marking the junction of wall and hung ceiling, washes the tile in soft, colored light that changes in both intensity and character at different times of day. Additional lighting is provided by pendant globes over the tables downstairs. Chairs and banquette upholstery is brown leather, legs and arm rests are chrome plated.

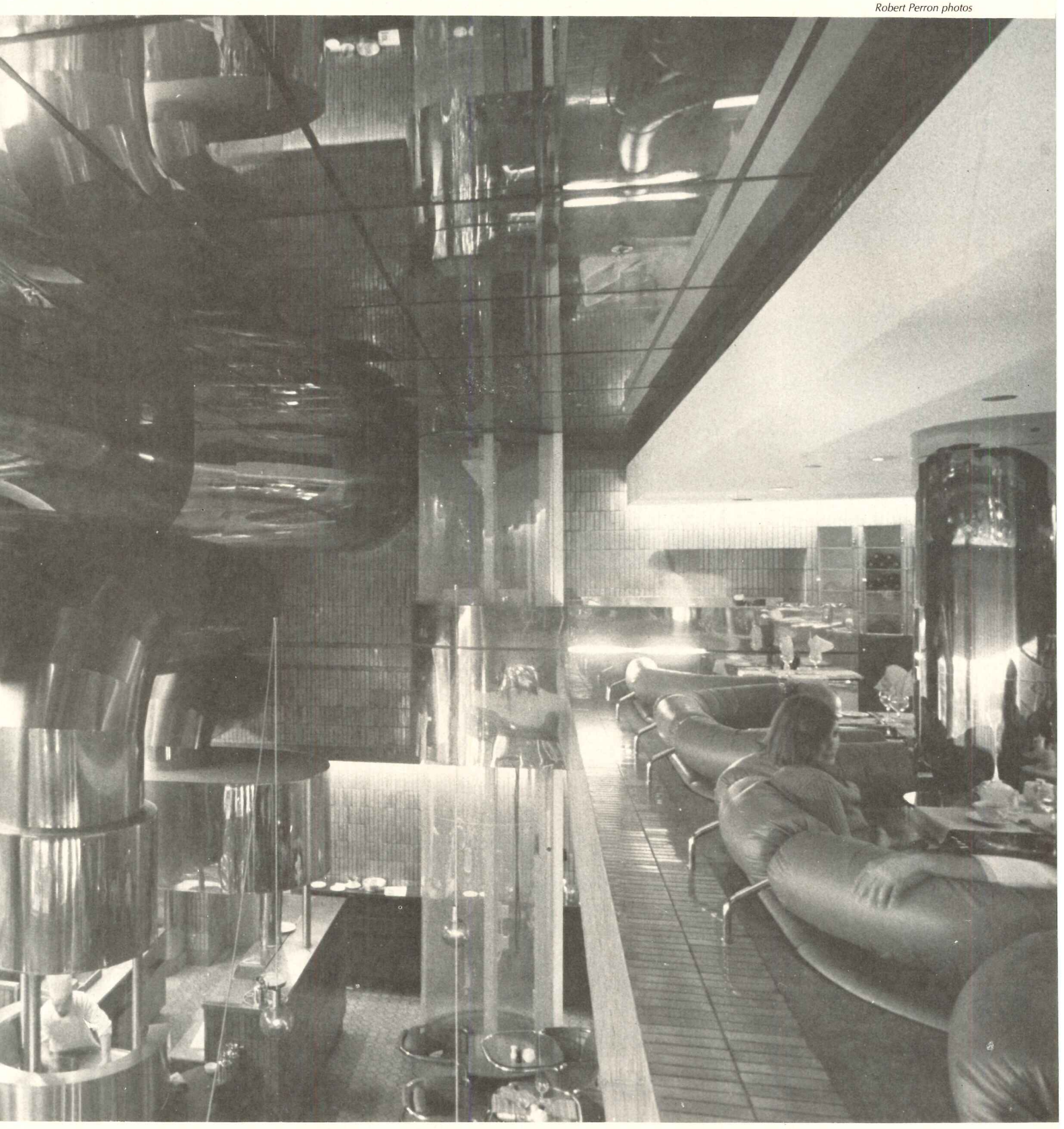
The richness of detail and finish combined with imaginative lighting make Noodles a favorite with a luncheon clientele that includes many advertising executives who work in the area. Open from noon until the early morning hours, the restaurant offers an atmosphere of easy elegance that enchants diners and urges them to linger.

NOODLES RESTAURANT, Toronto, Canada. Architect and interior designer: *C. Blakeway Millar-Robert Taylor, project manager.* Contractor: *J. Faion.*



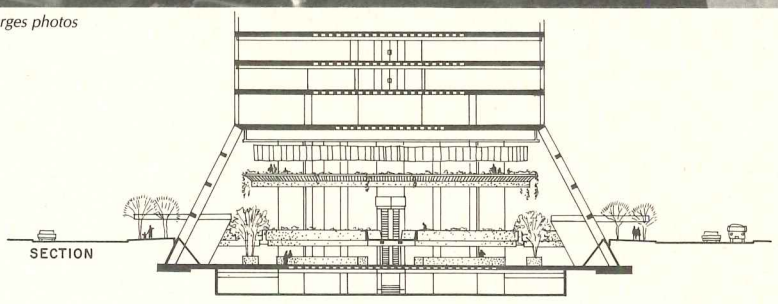


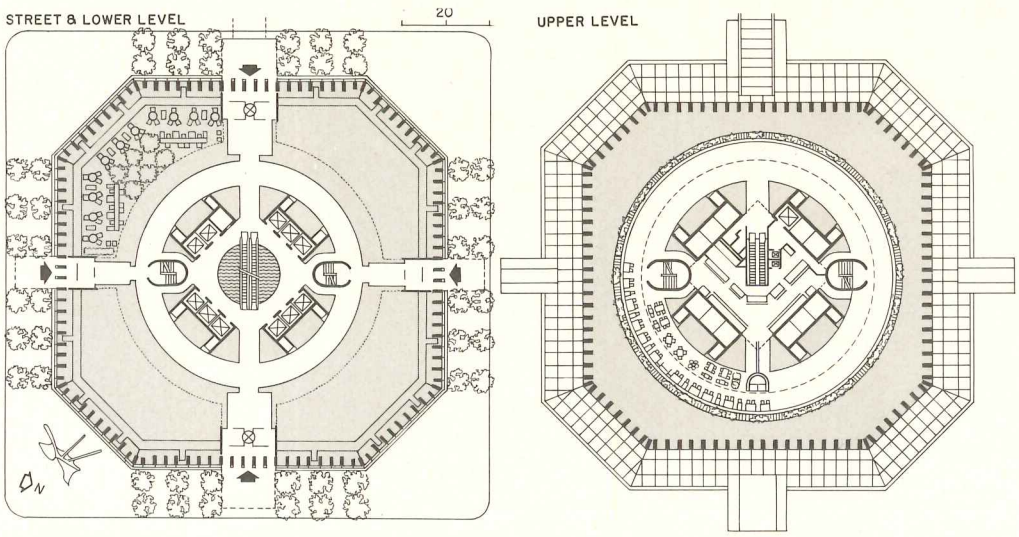
Robert Perron photos



In the atrium of the new Fort Worth Bank, John Portman cantilevers a circular restaurant over an untraditional banking floor

Alexandre Georges photos



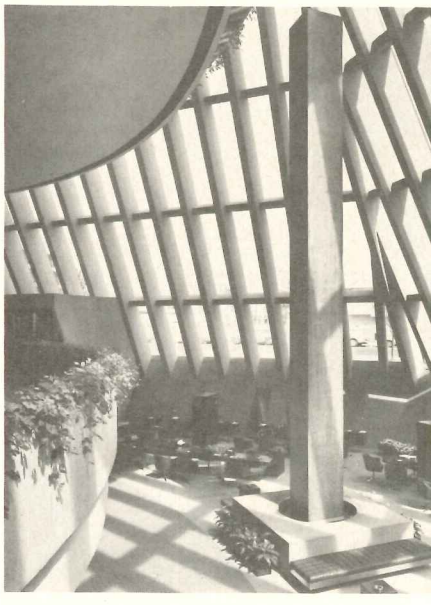


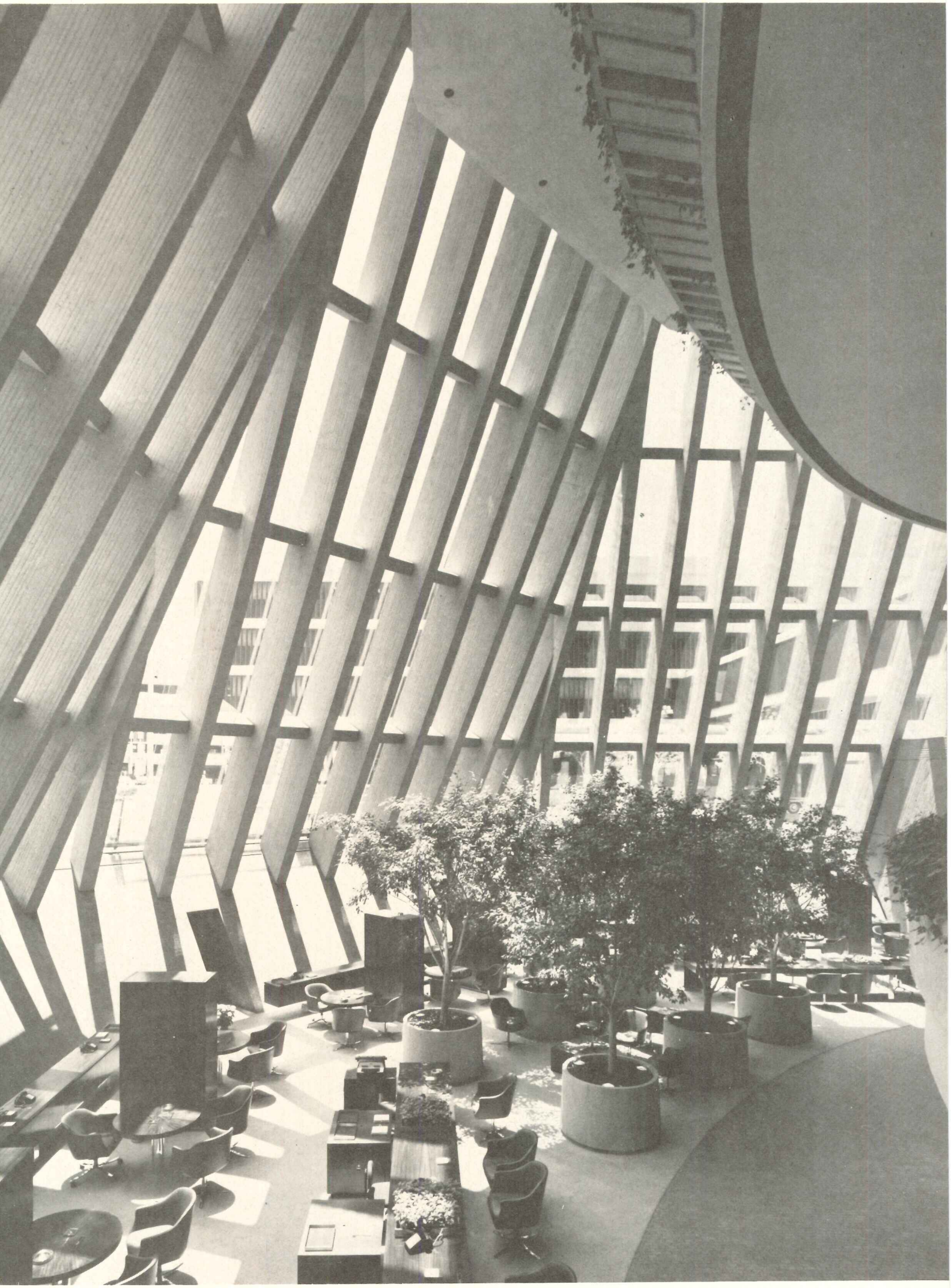
At the base of John Portman's Fort Worth tional Bank Building, the tower flares outw and perimeter loads are transferred oblic to spread footings (pinned to bedrock) thro rows of concrete ribs (see section). The m level, octagonal space thus enclosed ce on a service core made up of four elev shafts with concrete walls that serve as br and absorb all lateral loads.

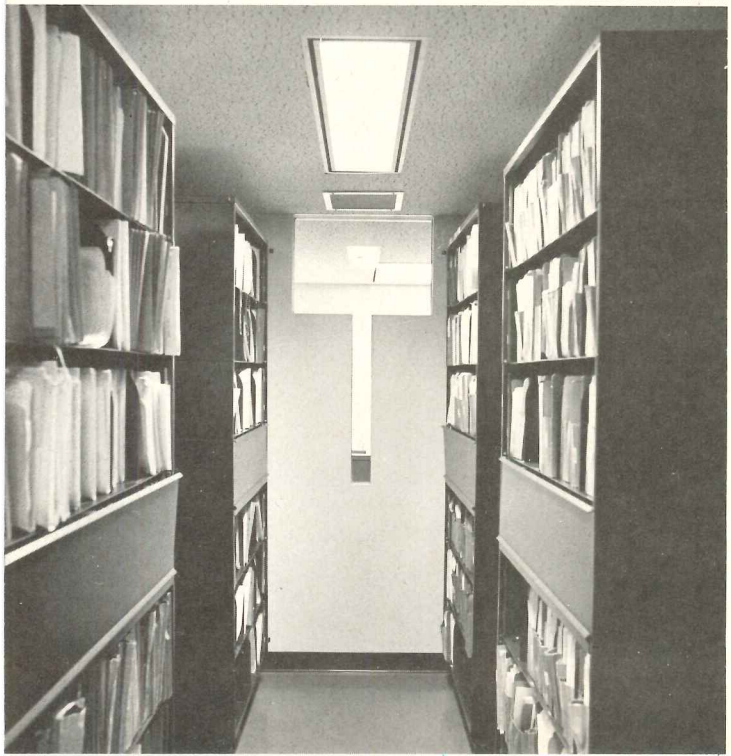
Visitors entering at street level from side move across concrete bridges to reach central escalator. From here, they may scend to the main banking floor or ascen the circular restaurant level that cantile dramatically from the walls of the core.

The interiors are conceived and exec with the kind of boldness and spatial livel for which Portman is justly famous. Like other atrium designs, space is freely excha between functions in a seemingly effortles namic. The color palette however is restrai staying in the beige, gray, soft brown rang cept where 15 foot trees, banners and art add important color accents. Upstairs down, the detailing and finish selection is ful and luxurious but it is the forcefulness o spatial expression that rivets the eye lingers in the memory.

FORT WORTH NATIONAL BANK, Fort W Texas. Architect: *John Portman & Associates.* neers: *Britt Alderman Associates* (mechan *Morris E. Harrison & Associates.* Landscape tects: *Henry M. Lambert & Associates.* Grap *Walter Landor Associates.* Contractor: *J. A. Construction in joint venture with Thomas S. B*





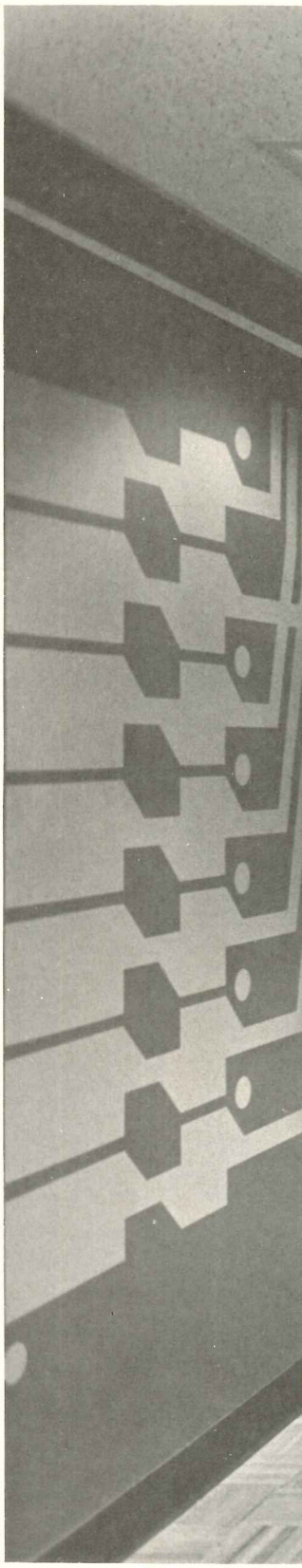


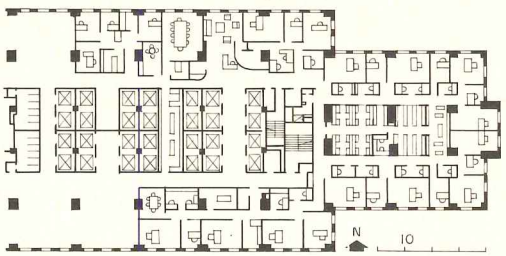
Supergraphic representations of patents they helped to obtain brighten the offices of a Manhattan law firm in a stylized and highly personal way

The search for dignity, continuity and solidarity—or at least the physical expression of these values—so often leads the design of law offices into gloomy, uninteresting avenues that a striking departure, like the office shown here, is an occasion for general note. For their new offices in Rockefeller Center, this firm wanted something bright and fresh, partly perhaps because they are patent attorneys who deal continually with innovation and invention. They also required a high proportion of private offices, small conference rooms and individual work stations. Architects Smotrich & Platt related these rooms to an open, centralized space that includes secretarial cubicles, a file area and a large glass-walled library. Some perimeter space is not enclosed in private offices so that natural light can penetrate deeper into the interiors. Additional daylight is borrowed from selected offices fitted with light monitors.

To give the office a special identity, the architects and graphic designer Wade Zimmerman developed a series of supergraphic murals that are actually abstractions of patents handled by the firm. In the reception area, photo right, the supergraphic depicts a printed circuit while at the end of the corridor, photo left center, the mural represents a weaving device on which the firm helped to obtain a patent.

LAW OFFICES, New York City. Architects: *Smotrich & Platt—Richard Saravay,* project architect. Graphics consultant: *Wade Zimmerman.* Contractor: *Rockefeller Center, Incorporated.*





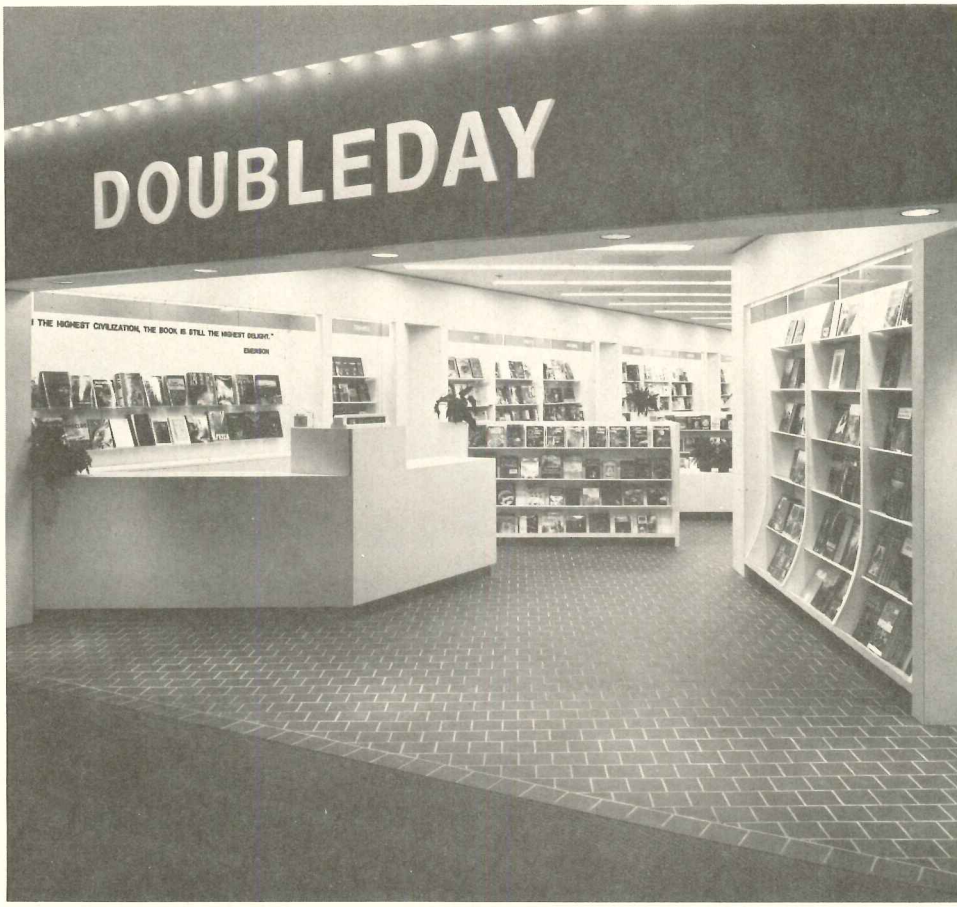
Norman McGrath photos

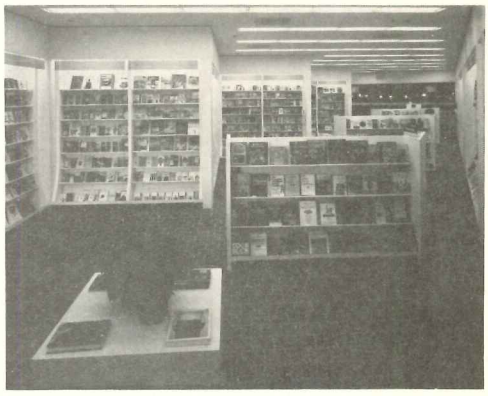
For Doubleday's new bookstore in Atlanta's Colony Square, a saw-tooth plan and diagonal geometry made the best use of a narrow, open-ended space

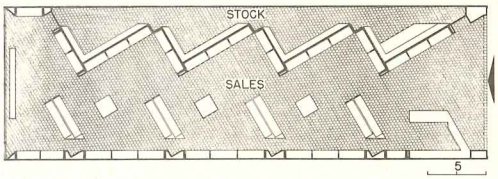
This narrow 2250-square-foot space is part of Colony Square Shopping Mall in downtown Atlanta. The entrance fronts on a public skating rink and the rear opens to a large pedestrian plaza. In converting the space into a retail bookstore, architect Jack Gordon kept this axis open by placing the stockroom along the long wall, a decision that narrowed the sales area even further. To compensate, however, he broke up the stockroom wall (see plan) into short 30-60 degree segments creating in this way a series of subspaces for browsers outside the main avenue of circulation. Both the quarry tile paving and the pattern of ceiling lights respect the angled geometry of the casework—casework that doubles front and rear as a window display. No wall separates the shop from the Mall. The entrance is simply closed off after hours by a roll-down grille.

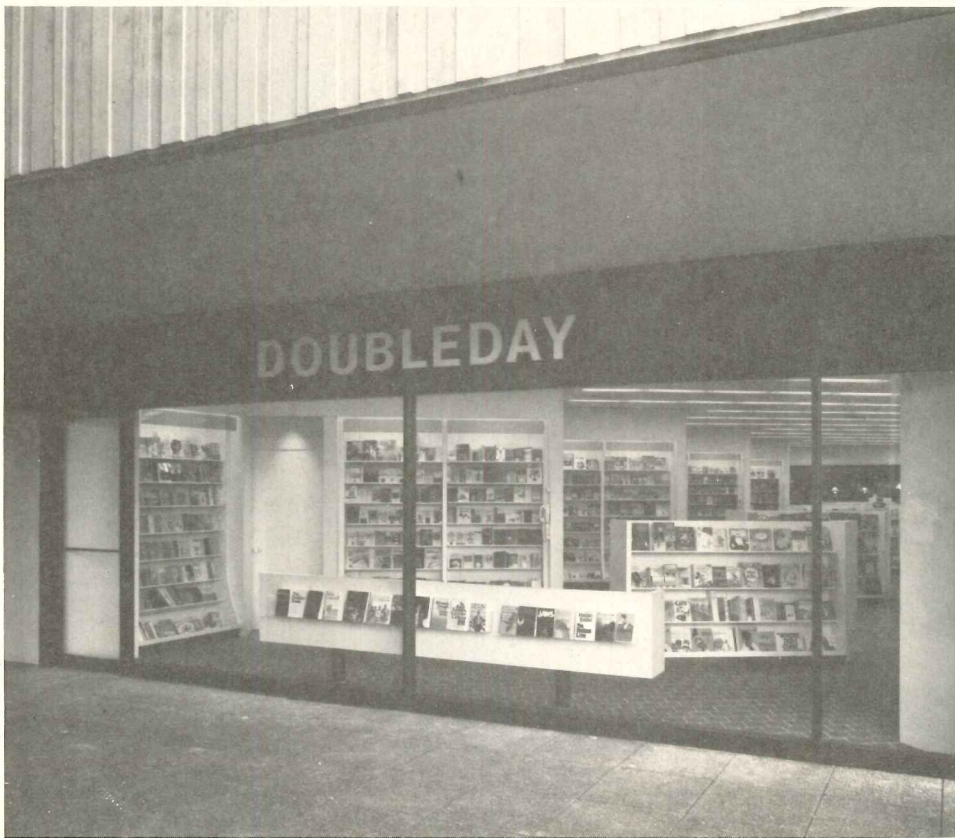
Sensibly planned and intelligently detailed, this new bookstore achieves a clear sense of identity using only the simplest elements but using them exceedingly well.

DOUBLEDAY BOOKSHOP, Atlanta, Georgia. Architect: *Jack L. Gordon.* Engineers: *Newcomb & Boyd* (mechanical/electrical). Contractors: *Unicraft Woodworking, Ltd.* (cabinet and woodwork); *Edward Robbins, Inc.* (consultant); *Merchandising Equipment, Inc.* (general).



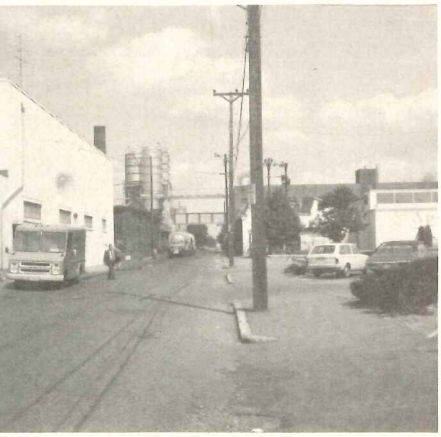






Bill Barnes photos

..SOMETHING OF DISTINCTION FROM VERY LITTLE"

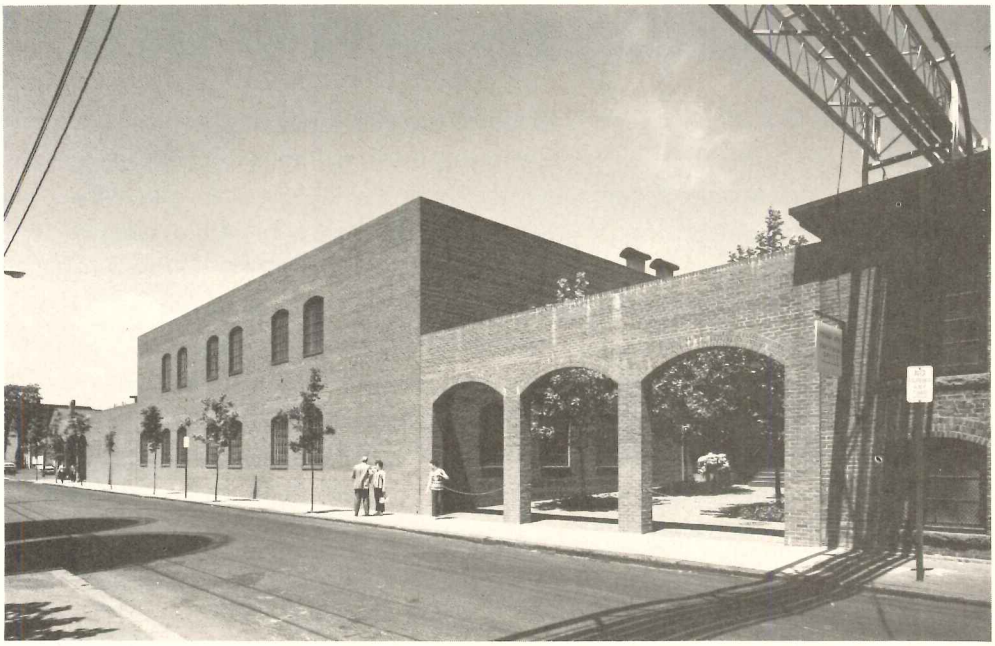


Central Avenue in Pawtucket, Rhode Island (photo left) is scarcely a dream site. Run-down at the heels, with some 19th century factory buildings mixed with cheap-as-possible cinder block warehouse space, some stores from the last era when glass block was groovy and lots of parking lots, it is—alas —typical of just-outside-downtown in a hundred American cities.

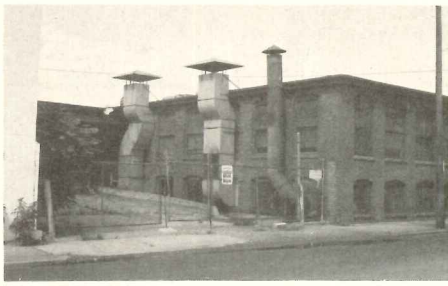
Teknor Apex' program for the remodeling of its Central Avenue corporate offices was similarly modest. The need was for new office space—"utilitarian, inexpensive, nothing ostentatious;" and since the company produces products only for resale to other manufacturers, "concerns regarding public image are limited."

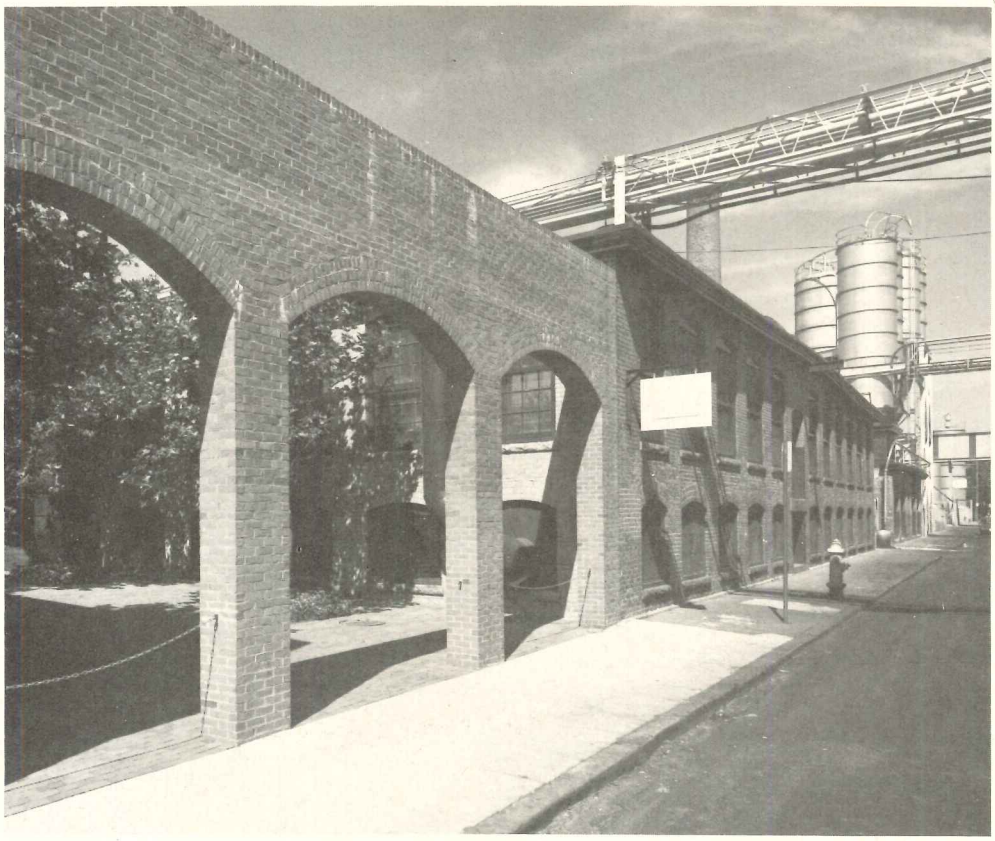
Says architect Warren Platner: "We rather enjoy the task of trying to make something of distinction from very little, especially if there is something inherited to respect." The photos on the next pages show how well he succeeded.

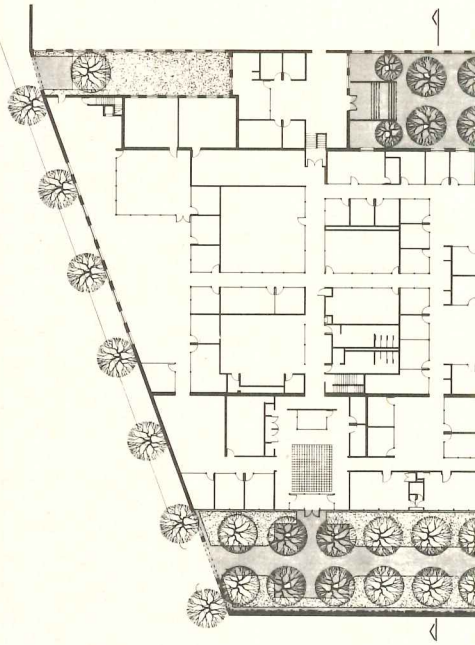
Photos of finished work: Ezra Stoller © ESTO

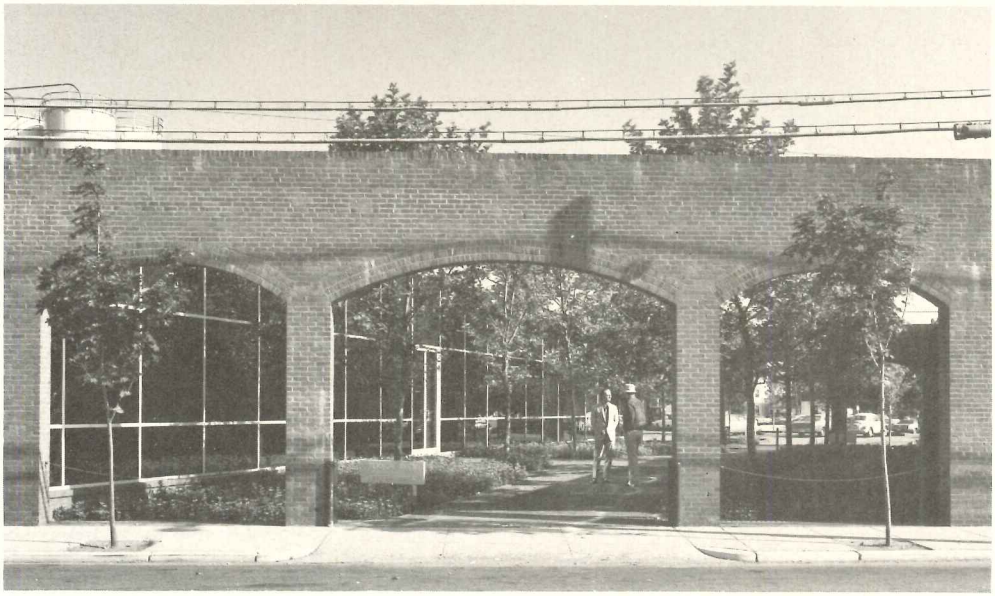


The starting point for the remodeling was
The 19th-century factory building shown
low—which behind patched-on exhaust du
and decades of grime did offer "something
herited to respect" in its old brick, arched w
dows, and New England forthrightness,
. . . 2. The completely featureless cinder bl
structure next door (see "before" photo on









vious page) which adjoined the plant, was ned by the client, and had been used as a count retail outlet.

Until the remodeling, Teknor Apex' office ce had been contained in the factory build- and a combined need for more production ce and more office space led to the job.

Platner's solution to the space problem to remodel the cinder block building for eral office space (top of plan) and add a ll, one-story addition beyond for executive ces (bottom of plan) which opens through ll-glass wall (photo below) to a tree-shaded rt. The planning of the new offices was, of rse, a fairly routine design problem. What ot routine is the totally new character of ce and environment and order created by tner and his design team.

The top photo at left shows that the cinder block building, to be used for general office space, was given new windows (simply punched through the cinder block walls and given the arch form borrowed from the plant) and refaced in brick matched as closely as possible to the factory. The brick chosen was an inexpensive common brick made by the same producer who provided the brick for the plant nearly 100 years ago.

The unsightly yard between the plant and the office building (again, see photo left) was landscaped and semi-enclosed with the arched wall shown in the photos. This provided a handsome new entry court for the plant employees.

As the top photo shows, the wall continues at the lower level of the new executive-office wing, extends past to form the arched entry to the main entrance (both bottom photos) and terminates in a freestanding wall at the property line. This second larger court is paved in matching blocks and planted with plane trees and euonymus. Platner's conscious decision (with the client's approval) to open this courtyard to the neighborhood was accepted by the neighborhood: it is now a busy and appreciated mid-block passage. The reflective-glass curtain wall assures privacy for company executives while giving them a pleasant and controlled view—and doubling the apparent size of the court.

The buttressed brick wall at the right in the color photo is freestanding, simply separating the courtyard from the not-too-handsome commercial buildings beyond.

The interiors are simple and spartan, and of common and inexpensive materials, but—as is characteristic of Platner's work—detailed with great care and precision. In the remodeled section (photos below and bottom right) the retail-store space ("before" photo at left) was stripped to its wood structure and concrete floor. The multitude of columns in the space were nearly all enclosed in new partitions, which are framed and trimmed in red oak, and are about half clear glass and half pre-finished hardboard with a random-groove pattern. Conference-room spaces are glass-enclosed, but have narrow-slat blinds which can be lowered for privacy when needed. Carpeting is on-slab, and the ceiling is a conventional hung ceiling with "the least expensive lighting fixture made by the manufacturer. We like the fixture," Platner says, "because being the cheapest was also the plainest and simplest." About per cent of the furniture was moved from old office and repainted to match new s furniture designed for the manufacturer Platner some years ago.

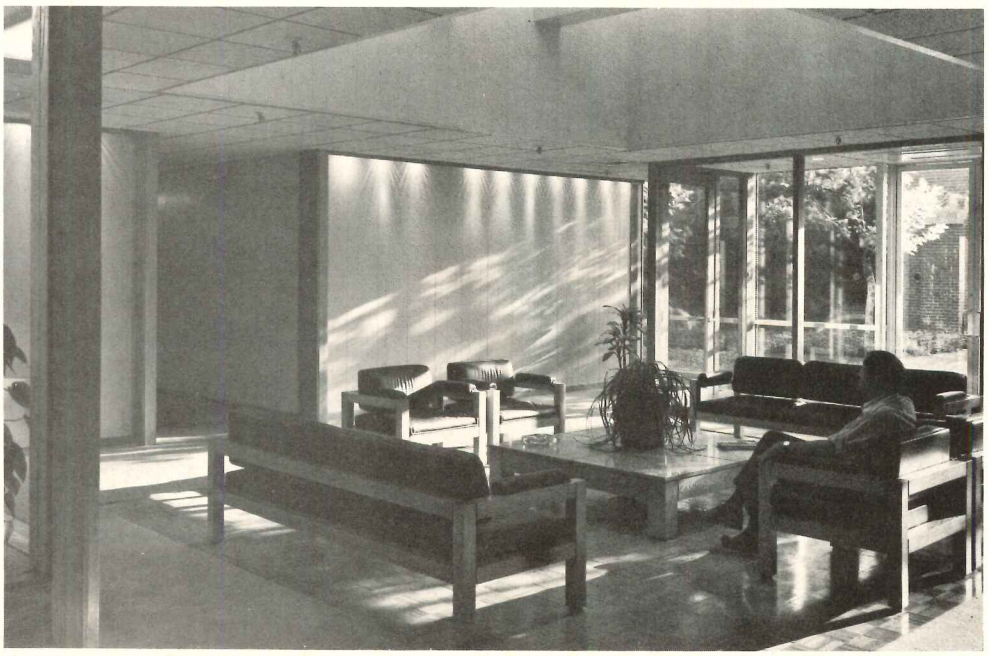
In the new executive-office space, same simple finishes were used, though, course, spaces are more generous and the niture more luxurious (mostly wood— again designed for the manufacturers by the chitect). As the top photos at right show, m of these offices share the view of the e courtyard, but have narrow-slat blinds beca the space faces west. In the entry lobby photo) a skylight and a panel of wood parc are intended to create "a sense of location.

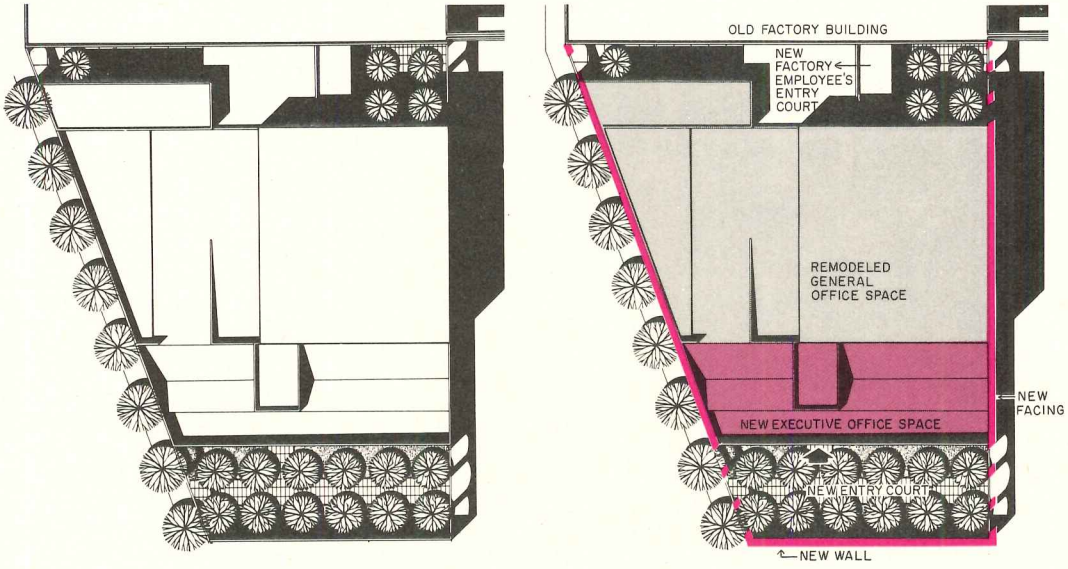
Construction of this new space is (to s

ney) short span, with columns of square el tubing and light weight trusses. But again tner achieved some elegance with such nple devices as incandescent wall-washers d a foot-wide strip of parquet as a border und the carpet.

Total cost of the job was $32.13 a square ot—$26.60 for all building work—renovan and new construction including sprinklers d air conditioning; $5.53 for all floor cover-, furniture refinishing, and new furniture.

So, despite a very limited budget, and no quest for "image," Teknor Apex got an age, and an appropriate one. "What was inded," says Platner, "is a forthright New gland quality to both interior and exterior—uality that derives from the simplest, spartan ic of fulfilling needs."



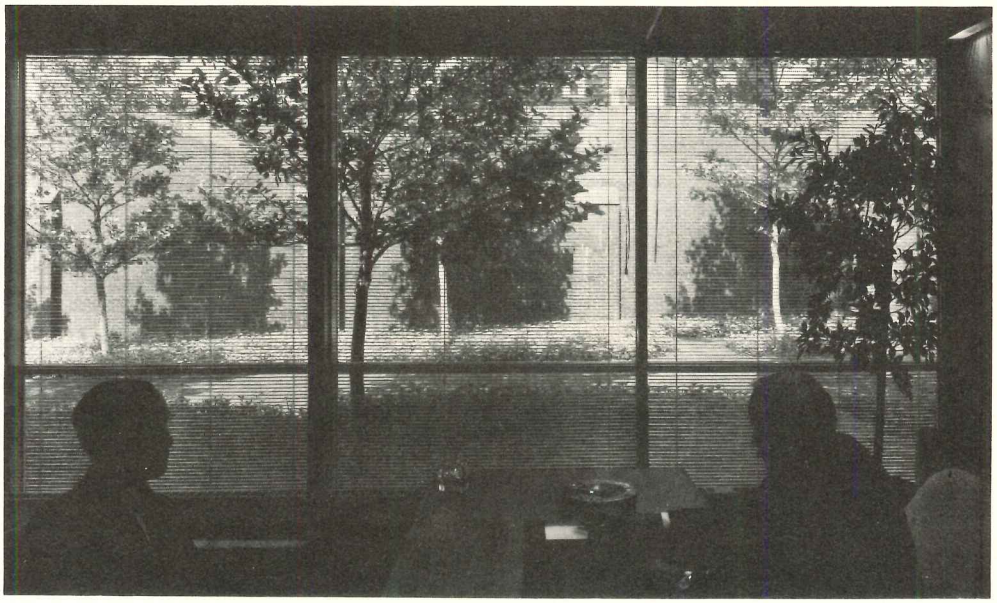


There's a moral:
In last month's editorial, the point was made that: "Architects are beginning to take on smaller jobs—and that's good for all of us. When things are chugging merrily along, it's hard to blame an architect who has several big jobs ahead for graciously declining a small job. . . . But there just are no unimportant buildings—and architects are beginning to react to that."

Warren Platner is probably best known for such work as the interiors of the Ford Foundation Building and some of the most elegant restaurants in the world (for a recent example, see The American Restaurant at Kansas City's Crown Center, pages 96-97 this issue), and for the design—for a number of leading manufacturers—of some of the world's most elegant furniture. His office is now busy with two acres of private club and restaurant space that will top both towers of the World Trade Center. The budget for the Teknor Apex project could probably have been dropped into any of those projects without anyone noticing. At least by comparison, this "remodeling" job is a humble and modest commission. A type of urban-industrial "fix-up" that seldom gets any design attention has here clearly benefited from hands as skilled as Warren Platner's.

As common in first-rate architecture, a single and clear design idea makes everything else work—and makes this remodeling so much more thoughtful than the more common solution of a freestanding office structure with the inevitable flagpole on axis. With the simple device of the continuous new brick skin, Platner not only unified disparate older buildings and a new building into a coherent whole, he maintained the desirable architectural character that was there as "something to inherit." And he not only produced pleasant and efficient work space for the client, he provided—in the three courtyards—a genuine amenity for the surrounding area, clearly improving the quality (and the sense of quality) of the neighborhood. —*W.W.*

TEKNOR APEX COMPANY OFFICES, Pawtucket, Rhode Island. Architects: *Warren Platner Associates Architects—associates of Warren Platner on this project: Jesse Lyons, project architect; Bob Brauer, project designer, Bill Smith and Lee Ahlstrom, furnishings.* Graphics consultant: *Jill Mitchell.* Engineer: *Alonzo B. Reed, Incorporated.* General contractor: *Owner.*



PACIFIC CENTRE

The tall, dark glass-sheathed Toronto Dominion Bank Tower, and the white concrete-framed Eaton's Department Store, are the first two buildings to be completed in Pacific Centre, a two-block commercial complex under construction in Vancouver, British Columbia, by Cesar Pelli of Gruen Associates.

Balthazar Korab photos except as noted

In the Toronto Dominion Bank building in Vancouver, British Columbia, Cesar Pelli of Gruen Associates has further refined his ideas on the design of glass buildings and, in fact, of modern office buildings. Glass buildings, he says, "should not really be so called for in most the glass is of lesser esthetic importance than the metal mullions which then become the character-giving elements." This newest of his glass buildings shows his particular interest in the quality of glass as a skin.

"The Toronto Dominion tower is designed as a glass prism," Pelli says. "The metal is the minimum necessary to hold the glass in place. Viewed at an angle, even a sharp angle, the glass dominates the exterior surface of the building; at a sharper angle, the reflective qualities of the glass are strengthened, made more mirror-like, and therefore more glass-like. It is the surface quality of the enclosing material, not the structural expression of the building, that is proclaimed.

"Although the exterior wall in a modern building is nothing but the separation of the outdoor environment from the controlled indoor environment, it has great esthetic importance. Strengthening its reflective and surface qualities makes of the structure a volume rather than a mass. A brick is a mass; a balloon and a cardboard box are volumes. Modern office buildings are enclosures of space, thus functionally volumes. Monuments are masses built for eternity, for things beyond human life. Today's buildings are for people to use."

The Toronto Dominion Bank tower stands on one corner of the first block in a two-block commercial complex. Sharing the site, and strongly contrasting with the dark glass of the tower is a large, low white concrete structure for Eaton's department store. Both buildings open onto a two-level plaza at the intersection of the city's two busiest streets, Georgia and Granville. When the second block of the complex is fully developed—a second office building, also glass-sheathed, and a hotel are currently under construction—another plaza, directly opposite the Toronto Dominion tower, will counterbalance the fountain plaza of the Provincial Courthouse on Georgia Street.

The Pacific Centre complex adjoins the new civic-cultural complex now under development in three blocks just west of Eaton's and the Toronto Dominion tower. Together, these two projects will transform and revitalize the most important and busiest section of Vancouver's commercial and office district.

James K.M. Cheng


EATO
BANTRS

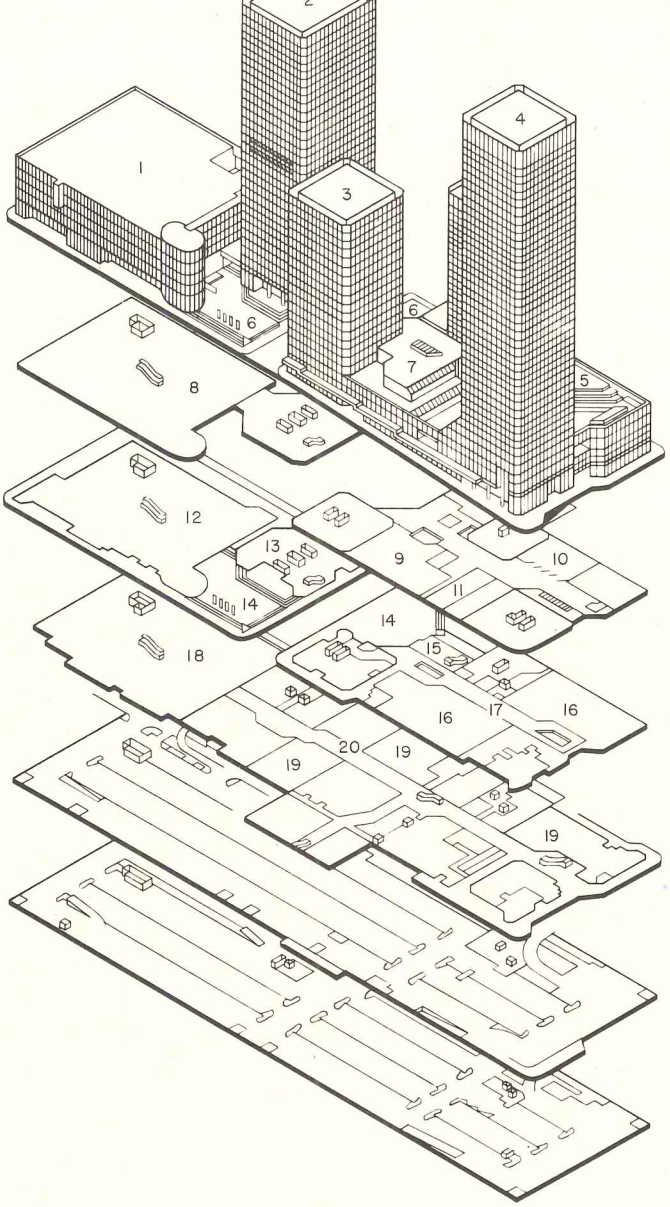
The reflective qualities of the glass surface of the office tower are repeated on the glass-sheathed half-cylinder at the plaza corner of Eaton's store, where the entrance leads directly to the high-fashion section of the store. Both reflective surfaces catch and change the images of clouds and of neighboring buildings. From different angles and at different times of day, the buildings themselves look different.

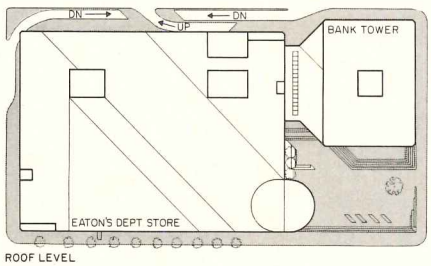
One of Pelli's refinements is the treatment of the corners of the tower building. Conceiving of the building as "a single facade that wraps around and is, in essence, a skin rather than four separate facades come together," he cut the corners at 45 degrees to the sides of the building, making the corner plane "an intermediary plane between the two sides and permitting the skin to wrap around the building. And the corner plane, being glass, catches different reflections and accentuates the difference between the planes as facets of a crystal do, producing a clearer feeling for the total surface. The sharpness of the prism is strengthened by carrying the line of the corners, where the tension is the greatest, unbroken from the ground to the top—just as the surface material carries through from ground to building top, and by designing the entrances to look as if they were carved into this crystal prism."

Under both blocks of the complex there will be a shopping mall, with Eaton's lower floor departments at one end and a connection across Dunsmuir Street to the existing Hudson's Bay store, merging new and old developments. Below the mall are two levels of parking for 800 cars in each block.

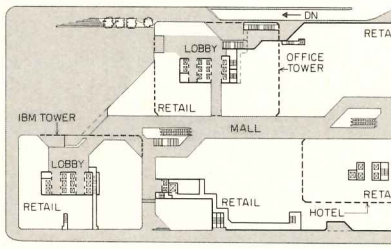
In the 10 years since planning began for Pacific Centre, the processes of development, like the processes of design, have been brought into a state of refinement. Where private enterprise and government once were antagonistic, the overwhelming mutual benefits of development led in the end to complete cooperation.

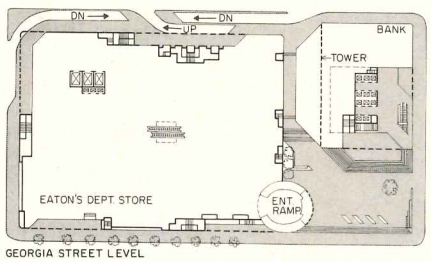
PACIFIC CENTRE, Vancouver, British Columbia. Architects: *Gruen Associates, Inc.* and *McCarter, Nairne & Partners—William Dahl, partner-in-charge; Cesar Pelli, partner-in-charge of design; Mel Gooch, project architect; Miloyko Lazovich, project designer.* Engineers: *Gruen Associates, Inc.* (structural); *H.H. Angus & Associates, Ltd.* (mechanical/electrical). Consultants: *Bolt, Beranek & Newman, Inc.* (acoustical); *Gruen Associates, Inc.* (graphics); *George Norris,* sculptor (plaza design, with Cesar Pelli). General contractor: *Bird Construction Co., Ltd.*



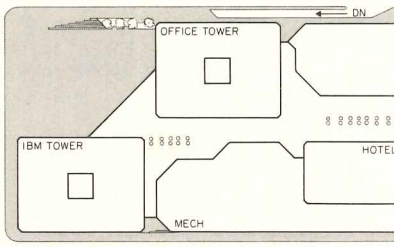


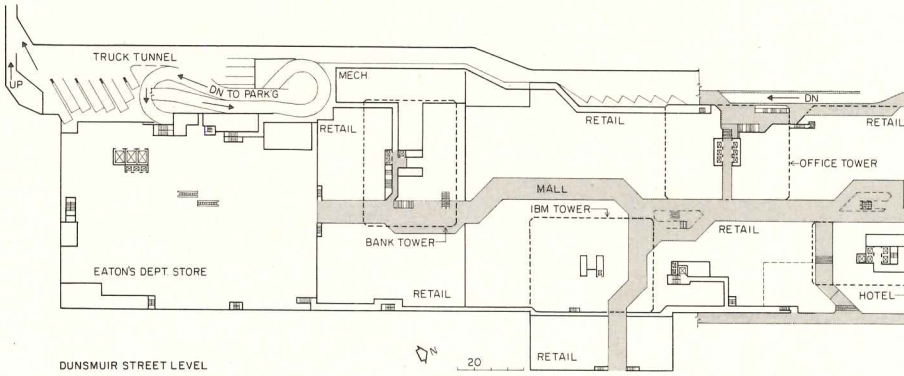
ROOF LEVEL



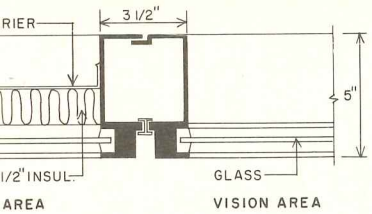


GEORGIA STREET LEVEL





DUNSMUIR STREET LEVEL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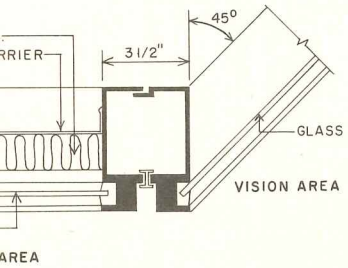
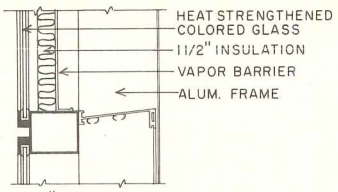
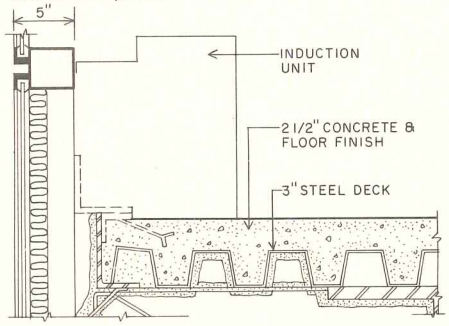
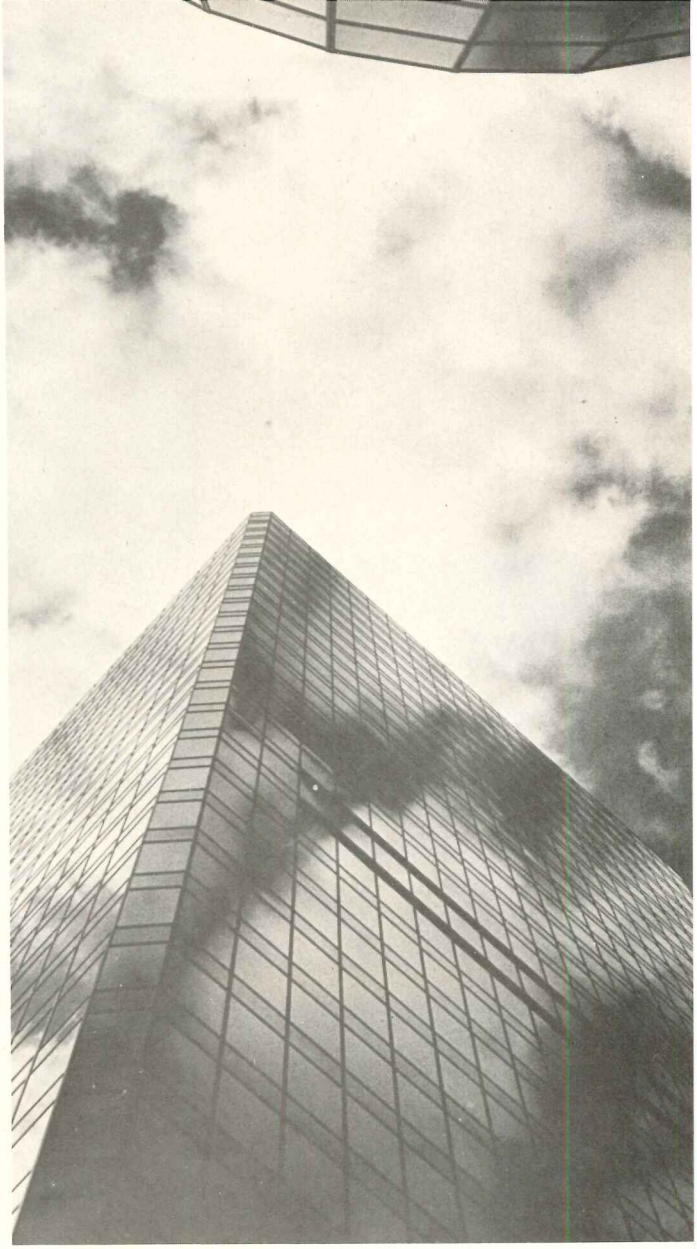
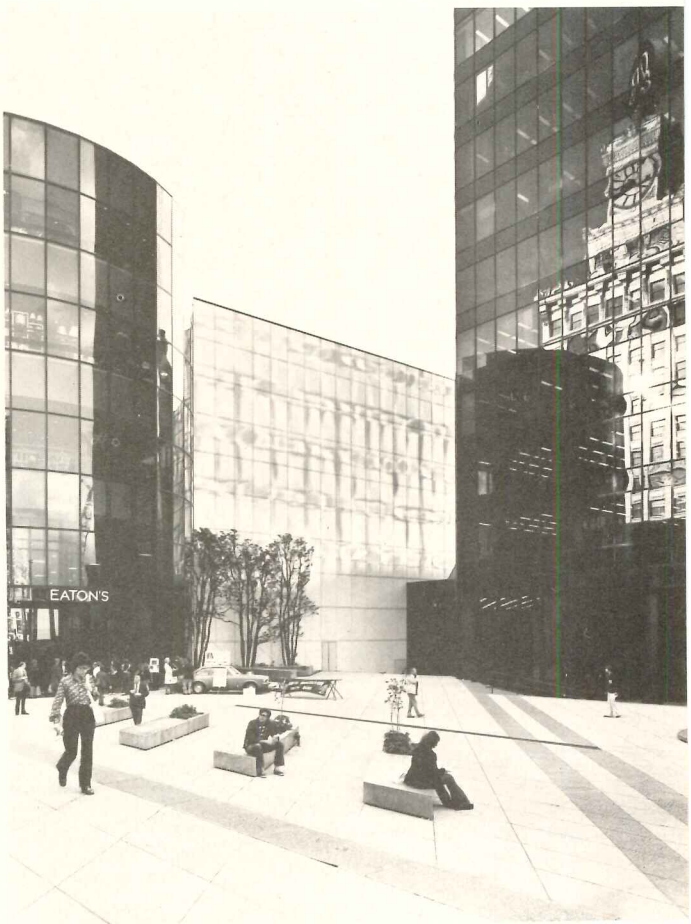

45°
RRIER
3 1/2"
GLASS
VISION AREA
AREA


HEAT STRENGTHENED
COLORED GLASS
1 1/2" INSULATION
VAPOR BARRIER
ALUM. FRAME

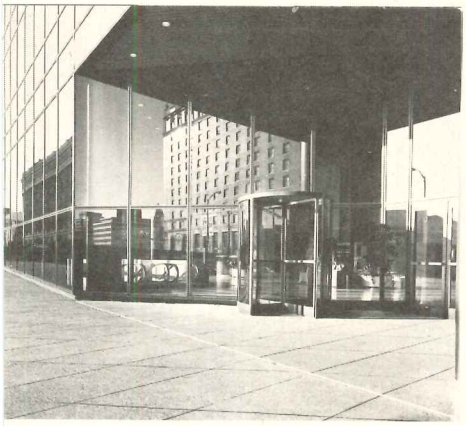

5"
INDUCTION
UNIT
2 1/2" CONCRETE &
FLOOR FINISH
3" STEEL DECK

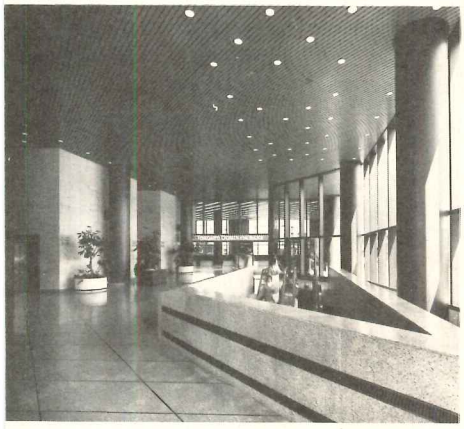

EATON'S

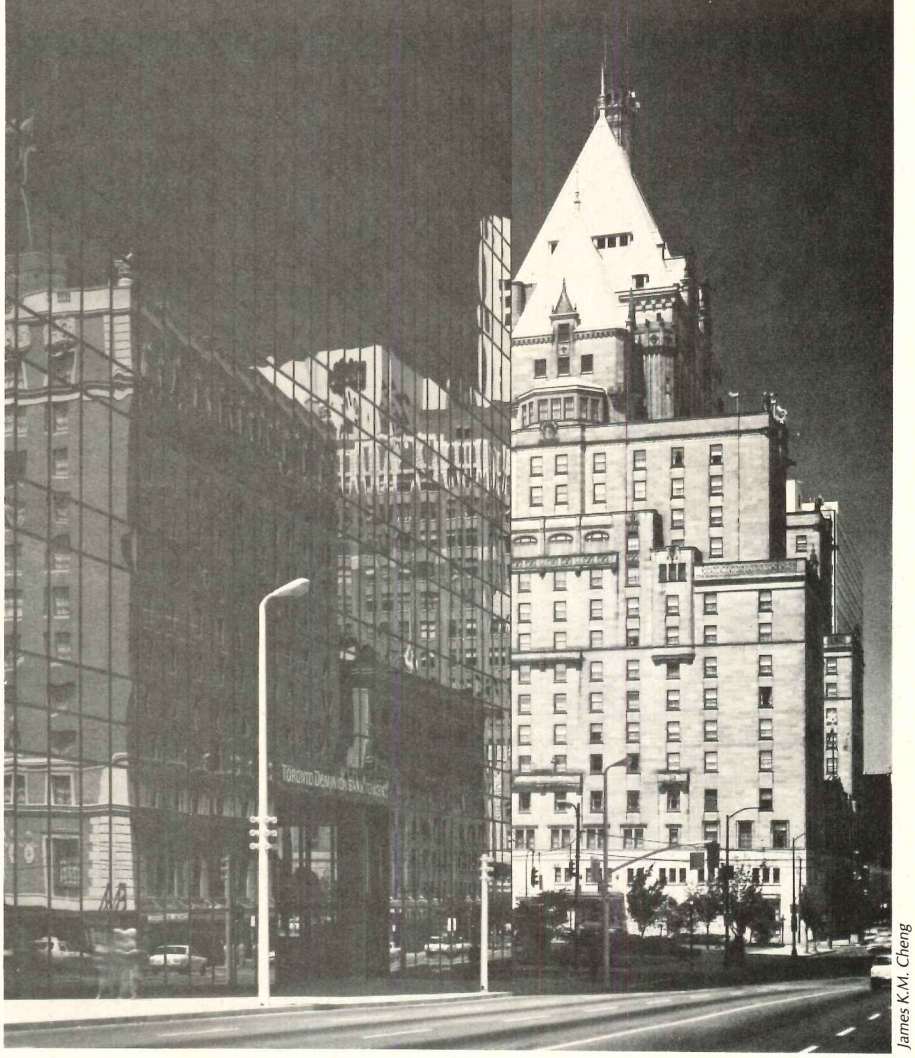



EATON'S

Wayne Thom







James K.M. Cheng

To maintain the concept of the tower as a crystal, Cesar Pelli designed the entrances to the office building lobby and the street level branch of the Toronto Dominion Bank as deep-cut openings in the glass exterior walls of the building. The splayed wall of the entrance catches reflections from down Georgia Street, just as the building itself takes the reflections of its neighbors—among them the venerable, elegant and picturesque Hotel Vancouver with its steeply-pitched roof over the central tower—and passing clouds. One entrance leads into the lobby from the plaza on Granville Street, the other opens directly off Georgia Street, one block away from the hotel. Inside the lobby an escalator connects the street level with the shopping mall below which, when the second block is completed, will extend the length of that block and across the street to an existing store with an historic name, the Hudson's Bay Company. From the lobby the bank branch, dramatically identified by a mirror-covered column, is immediately accessible.

CAMPUS ARCHITECTURE

The college campus as a unified architectural idea—with the integration and consistency of a single building—is by no means a new concept. Some of the best campuses designed in the United States have been just that. But the idea waned after World War I to be revived again under the pressures for college growth in the sixties. Three of the best current examples—by Paul Rudolph, Harry Weese and Tasso Katselas—are examined in this study.

In the past, large architectural compositions for college and university campuses have had the unity of single buildings. The quadrangular colleges of Oxford and Cambridge come first to mind as do their derivatives, the residential colleges at Princeton and Yale. Elsewhere in the United States, Thomas Jefferson's plan for the University of Virginia was one of the earliest to impose a strong formal order over a variety of buildings housing diverse functions. Other well unified compositions include Charleston College in Charleston, South Carolina built at the height of the Greek Revival style, Antioch College in Yellow Springs, Ohio whose Gothic Revival plan was never fully implemented, Trinity College in Hartford, Connecticut which celebrates English Tudor, and the turn-of-the-century plans for the University of Chicago which bring to the Midwest the quadrangles, towers and gateways of Cambridge, England. The original campus buildings for the Carnegie Institute of Technology in Pittsburgh, Pennsylvania (now Carnegie Mellon University), built in the first two decades of this century, were designed as a single entity by Henry Hornbostel in a manner inspired by the Italian Renaissance. Among the last great compositions which preceded our revived interest in unified campus design were two in the classical style: Henry Ives Cobb's 1899 plan for the American University in Washington, D.C. and the original 1916 plan for the Massachusetts Institute of Technology by Welles Bosworth.

By no means all of the 18th, 19th and 20th century U.S. campuses were as comprehensively master planned and built as the distinguished examples cited. Most were, and still are, built from the very beginning on a piece-meal one-building-at-a-time basis as the need arises. The best of these have controlling master plans, but most do not.

Only since the latter part of the 1960's have colleges and universities begun again to build learning, administrative, and student residential space at sufficient volume, scale and speed to permit the development of powerful over-all campus forms. One of the best of the earlier current examples is Scarborough College in Scarborough, Ontario by John Andrews ("Beyond the Individual Building," September 1966, pages 161-164). It was designed as a campus whose ultimate size could not be predicted. A nucleus of elements needed from the beginning by the entire college was established, including the library, gymnasium, administration wing and academic court. The teaching facilities radiate incrementally from this nucleus.

A distinguished foreign example of this period is the

University of East Anglia in Norfolk, England by Denys Lasdun & Partners (July 1969, pages 99-110). Considerably larger than Scarborough, but similar in concept, it illustrates that the basic ideas which Scarborough represents can be elaborated at a much larger scale.

Architect Paul Rudolph's concept for Southeastern Massachusetts University shown on the following pages unifies within a repetitive structural grid and mechanical system a campus capable of truly ordered growth in terms of circulation, topography and sequence of visual experiences. Begun in the late sixties and still under development, it now includes an arts and humanities group, a science and technology group, a library, a lecture hall complex, a student union and an administrative wing. The entire complex has very strongly modeled forms without which such a large concrete and concrete block structure would appear overbearing and dull.

Lake Michigan College in Benton Harbor, Michigan by Harry Weese & Associates—also included in this study—is a two-year community college for 5000 students. The campus esthetic is quite different from Rudolph's, but it is just as successfully of one piece. Architect Weese decided to concentrate his buildings on a 6.7-acre island in an 18.5-acre man-made lake in order to preserve the existing orchards and topography.

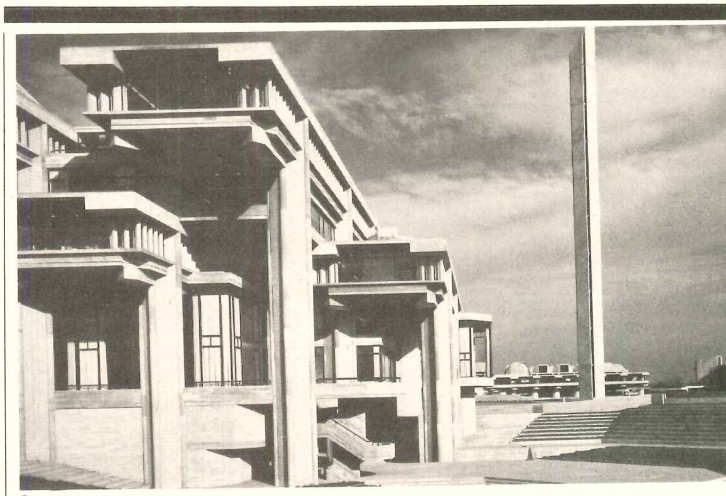
The artificial lake serves many purposes. It was necessary for the drainage and dewatering of the site which has a high water table, and serves as a flood control reservoir for the surrounding area. The earth excavated to create the lake was used to raise the grade of the roads and parking lots to assure their proper drainage. The lake is used for condensor cooling water for the air-conditioning system and drains the building storm water. The lake is also part of the educational program having been stocked with fish. Ducks, gulls and other wildlife use it and it is available to the students for boating and skating. It is surrounded by a mile-long walk and bicycle path located on top of the perimeter berms.

The over-all architectural concept of Lake Michigan College clusters the building masses around the central plaza in a closely integrated way which makes them function as a single building. This is economical and convenient. The entire campus is of reinforced concrete with buff-colored face brick. It includes a service building located under the plaza which contains mechanical spaces, maintenance areas and the book store. It is the major indoor circulation element. The three-story classroom building is 800 feet long with a constant cross section. A lecture center and a combined library and cafeteria building have also been completed.

Allegheny Community College by Tasso Katselas (page 136) occupies a hilltop overlooking downtown Pittsburgh. It consists of classrooms, lecture halls, faculty offices, a library and gymnasium all built of reinforced concrete and dark brown brick. It occupies a much smaller site than the other two campuses included in this Study and it is denser and more compact. It is similar in spirit to the Rudolph campus at SMU, but even more aggressive in its forms.—*Mildred F. Schmertz*

1

SOUTHEASTERN MASSACHUSETTS UNIVERSITY—A MASTER PLAN AND DESIGN VOCABULARY BY PAUL RU ESTABLISHED A PATTERN FOR OTHER FIRMS TO WORK



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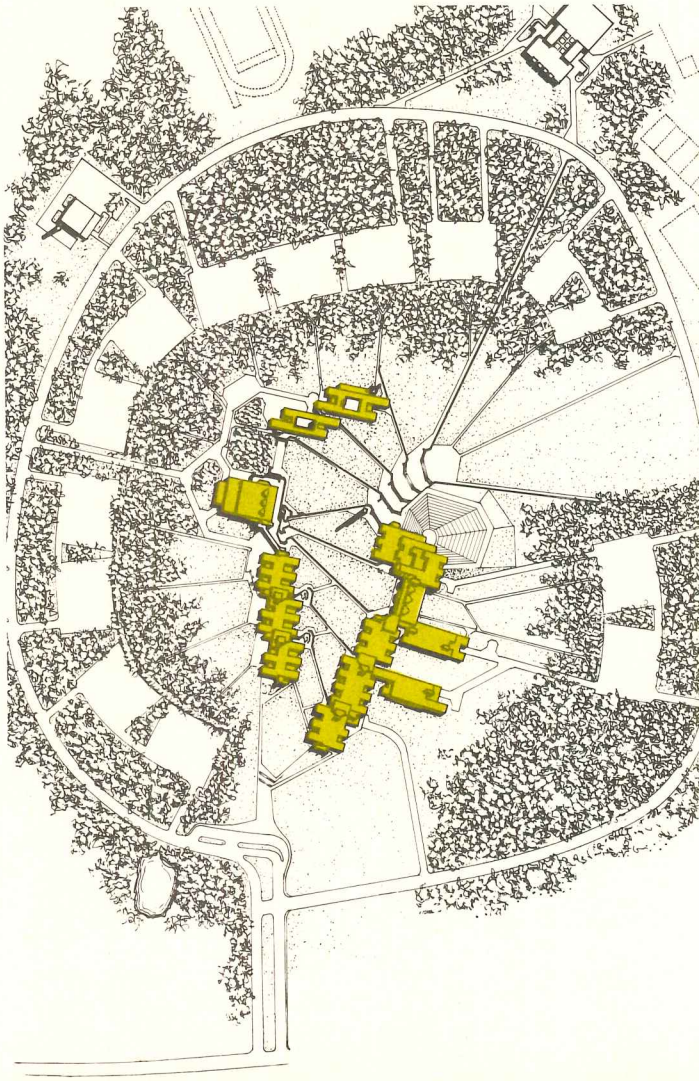
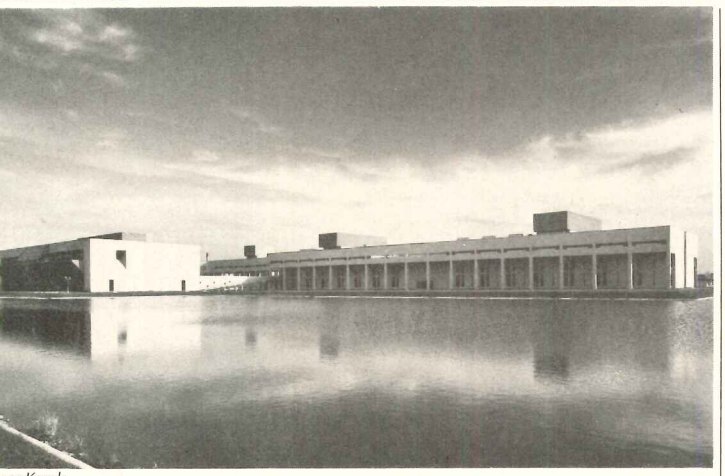
In the early 1960's the firm of Desmond & Lord, Inc. was hired to design SMU's new 730-acre campus. Because projected enrollment (5000 students by the mid-1970's) called for a significant volume of buildings to be constructed on a rapid schedule, Rudolph was invited to head the design team to provide a strong master plan and design vocabulary to avoid the visual and functional chaos which rapid growth brings.



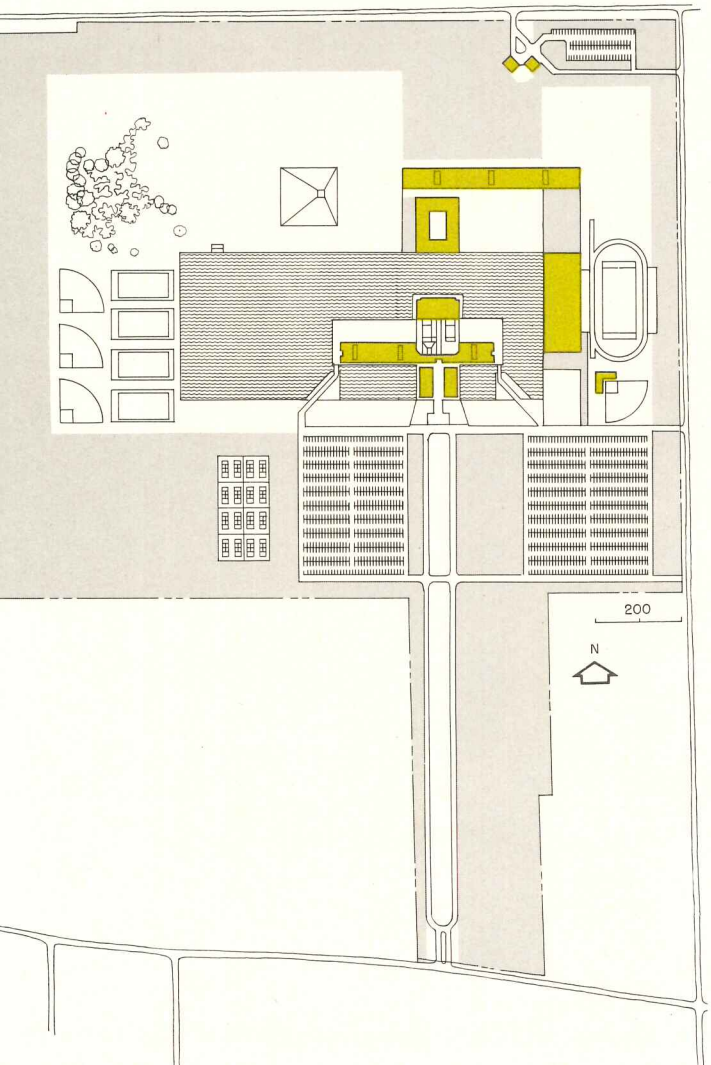
2

LAKE MICHIGAN COLLEGE— DESIGNED BY HARRY WEESE & ASSOCIATES TO OCCUPY AN ISLAND IN A MAN-MADE LAKE



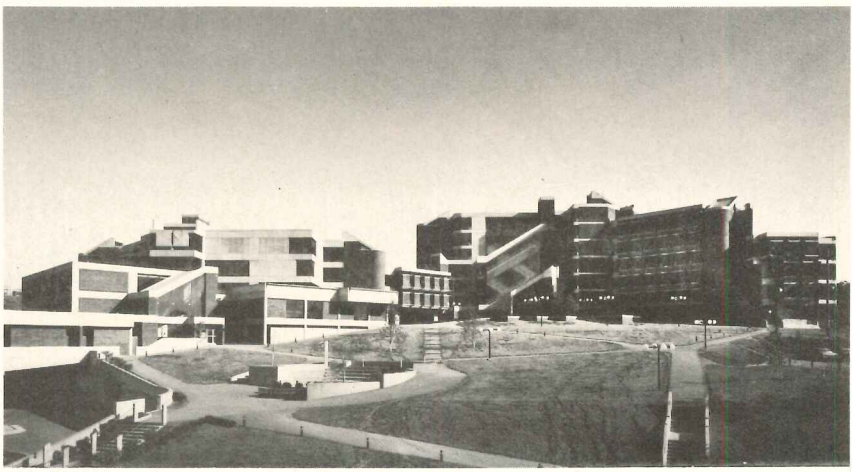
zar Korab

Located on 259 acres of farm land in a Michigan fruit belt between Detroit and Chicago, this two-year junior college was designed to preserve the character of the area by retaining its existing orchards and topography. The low lying sandy soil required flood control which caused the architects to develop a site plan which includes an artificial spring-fed lake. The resulting composition is serene and ordered.



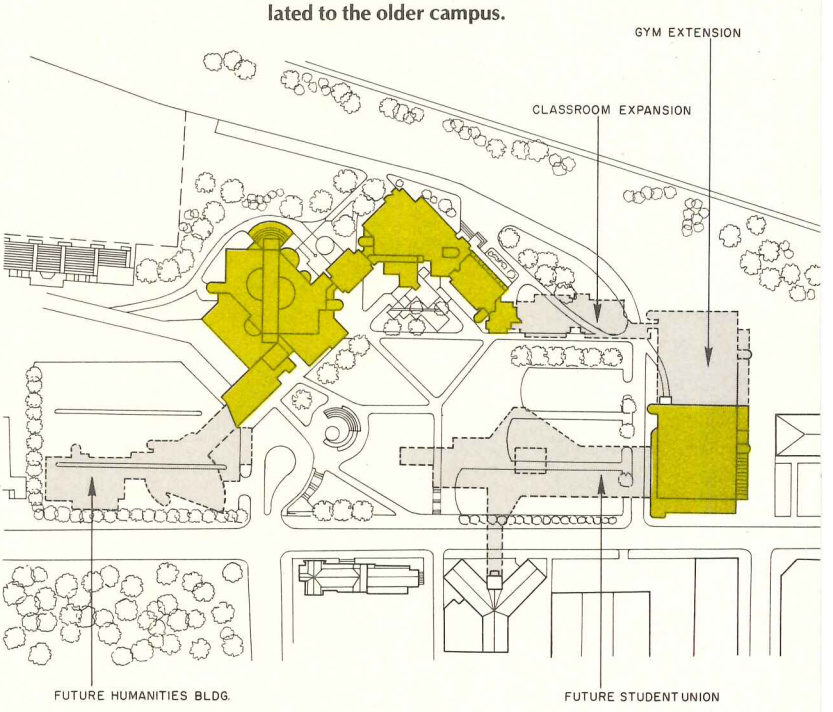
3

ALLEGHENY COMMUNITY COLLEGE— DESIGNED BY TASSO KATSELAS AS A STRONG STATEMENT FOR A STRONG SITE

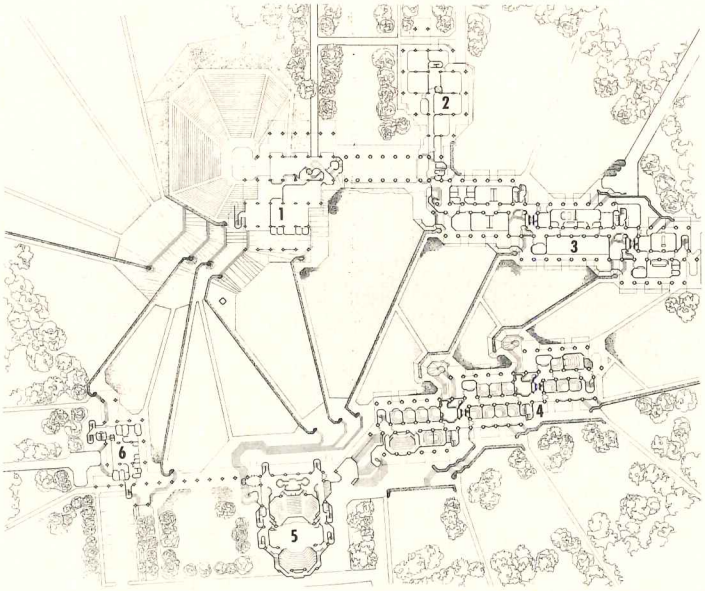


John W. Hobbs

This urban school is located on a dramatic hill top site across the river from downtown Pittsburgh's Golden Triangle. This site has the advantage of visually linking the school to the main city and calling attention to itself. The complex has been designed to take advantage of this prominent situation. The building forms are strong and sculptural within a formal structural order and well related to the older campus.



CAMPUS 1 SOUTHEASTERN MASSACHUSETTS UNIVERSITY



1 Library
2 Textile
3 Science & Engineering
4 Arts & Humanities
5 Auditorium
6 Administration

If a strong architect's ideas are to prevail over time, they must be carried out by other architects who respect and understand his work. Although Rudolph himself (as the credits which follow indicate) has been in and out of work on the SMU campus since he created its master plan in the mid-1960's, his hand is in everything. The tower, for an example, was conceived originally by him as the necessary pivotal point for the entire composition, as in Siena or Venice or as yet to come in his own Boston State Service Center. At first Desmond & Lord's architects referred to the projected SMU tower as a campanile, but later, at Rudolph's urging, straight-facedly upgraded it to a "communications tower" topped off by a TV antenna (there was no other way to get the State of Massachusetts to pay for it). The actual tower itself was designed by architect Grattan Gill, then a principal at Desmond & Lord. "Paul was no longer directly involved," he said, "but he gave us the courage to do it."

The Library, for which Rudolph gave informal critiques to his friends at Desmond & Lord appears to the right of the photo (top) and at the center of the photo (opposite page).

SOUTHEASTERN MASSACHUSETTS UNIVERSITY, North Dartmouth, Massachusetts. Owner: *Commonwealth of Massachusetts.* GROUPS I AND II: ARTS AND HUMANITIES BUILDING AND SCIENCE AND ENGINEERING BUILDING. Associated architects: *Desmond & Lord, Inc. and Paul Rudolph—project manager for GROUP I: Grattan Gill; project managers for GROUP II: Grattan Gill and Jan Heespelink.* Engineers: *Congdon, Gurney & Towle, Inc.* (structural for GROUP I); *Sepp Firnkas Engineering, Inc.* (structural for GROUP II); *Francis Associates* (mechanical); *McCarron, Hufnage & Vegkley Inc.* (electrical); *R.W. Sullivan, Inc.* (plumbing). Consultants: *Bill Bagnall Assoc. Inc.* (interior design); *Industrial Estimating Services* (costs). General contractor: *Franchi Construction Co.* TEXTILE TECHNOLOGY BUILDING. Associated architects: (*same as above*). Engineers: (*same as above*). General contractor: *F.L. Collins & Sons, Inc.* AUDITORIUM BUILDING. Architects: *Desmond & Lord, Inc.—principals-in-charge: Grattan Gill and Jan Heespelink.* Engineers: (*same as above*). Acoustical consultants: *Cambridge Acoustical Associates.* General contractor: *C.A. Batson Corp.* ADMINISTRATION BUILDING. Architects: (*same as above*). Engineers: (*same as above*). General contractor: *J.A. Schroeder Construction, Inc.* LIBRARY COMMUNICATIONS CENTER AND TOWER. Architects: *Desmond & Lord, Inc.—principal-in-charge: Grattan Gill.* Engineers: *Sepp Firnkas Engineering, Inc.* (structural); *Francis Associates* (mechanical, electrical and plumbing). Consultants: *Philip McNiff* (library programming); *Carol Johnson & Associates, Inc.* (landscape). General contractor: *Westcott Construction Corp.* STUDENT UNION BUILDING. Owner: *Southeastern Massachusetts University Building Authority.* Architect: *Paul Rudolph—job captain: Terrance Mullen.* Engineers: *Nichols, Norton & Zaldastani, Inc.* (structural); *McCarron, Hufnage & Vegkley, Inc.* (mechanical and electrical). Cost consultant: *Industrial Estimating Service.* General contractor: *Walden Construction, Co.*

Joseph W. Molitor photos

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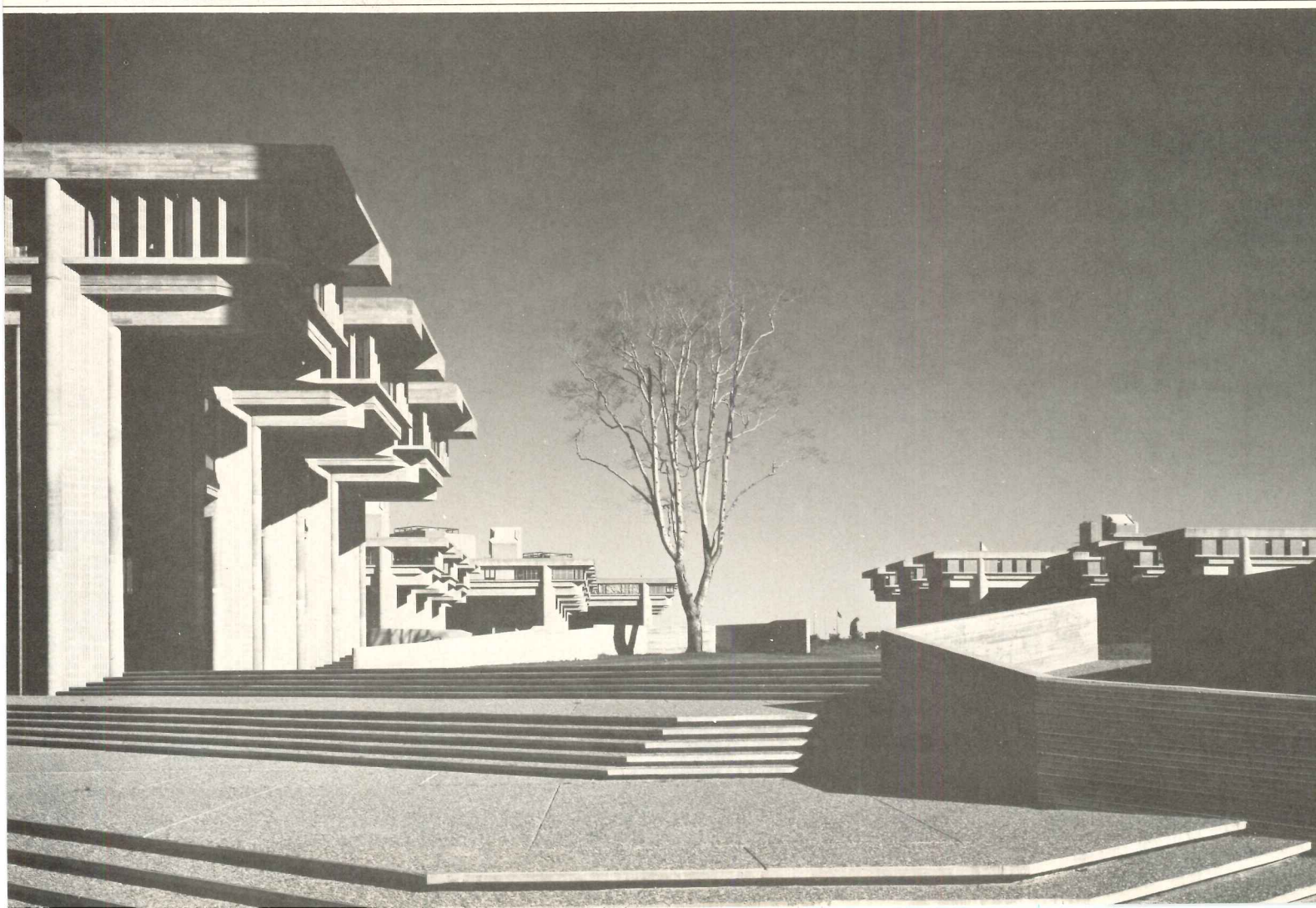
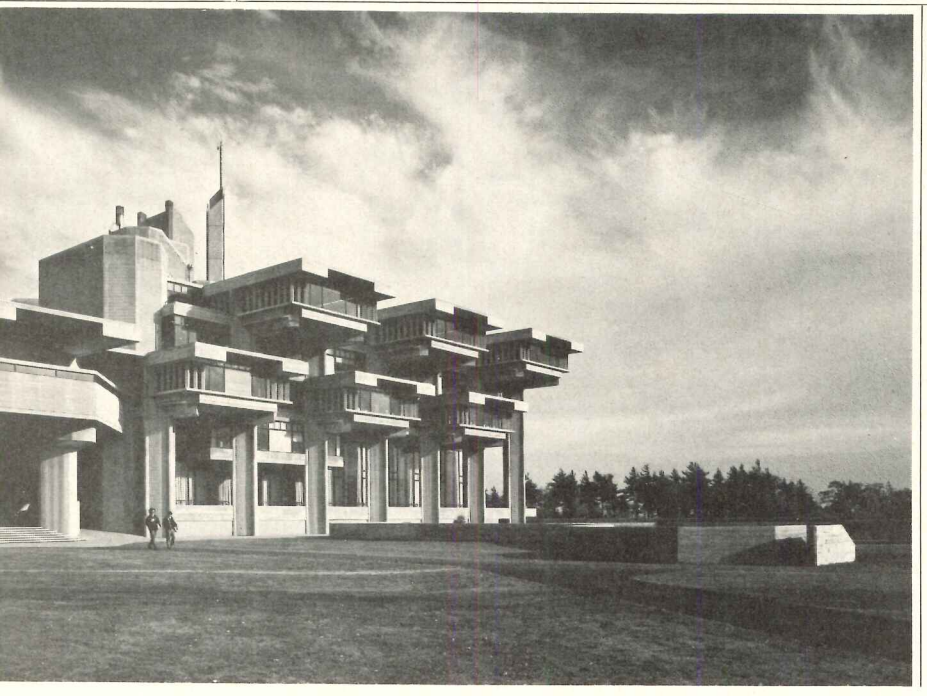
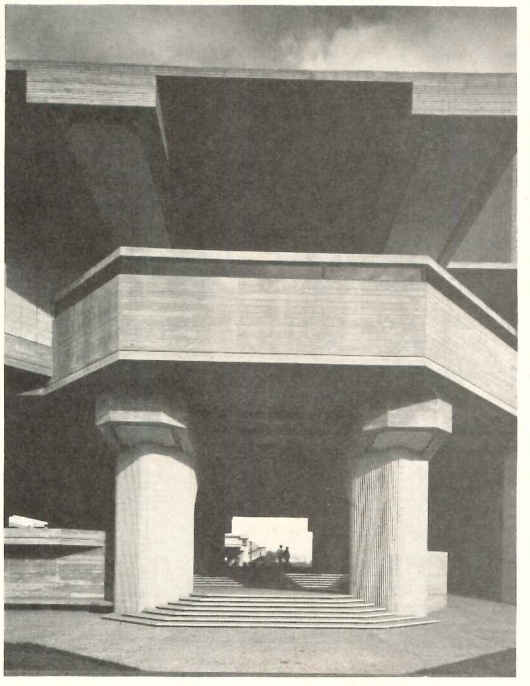
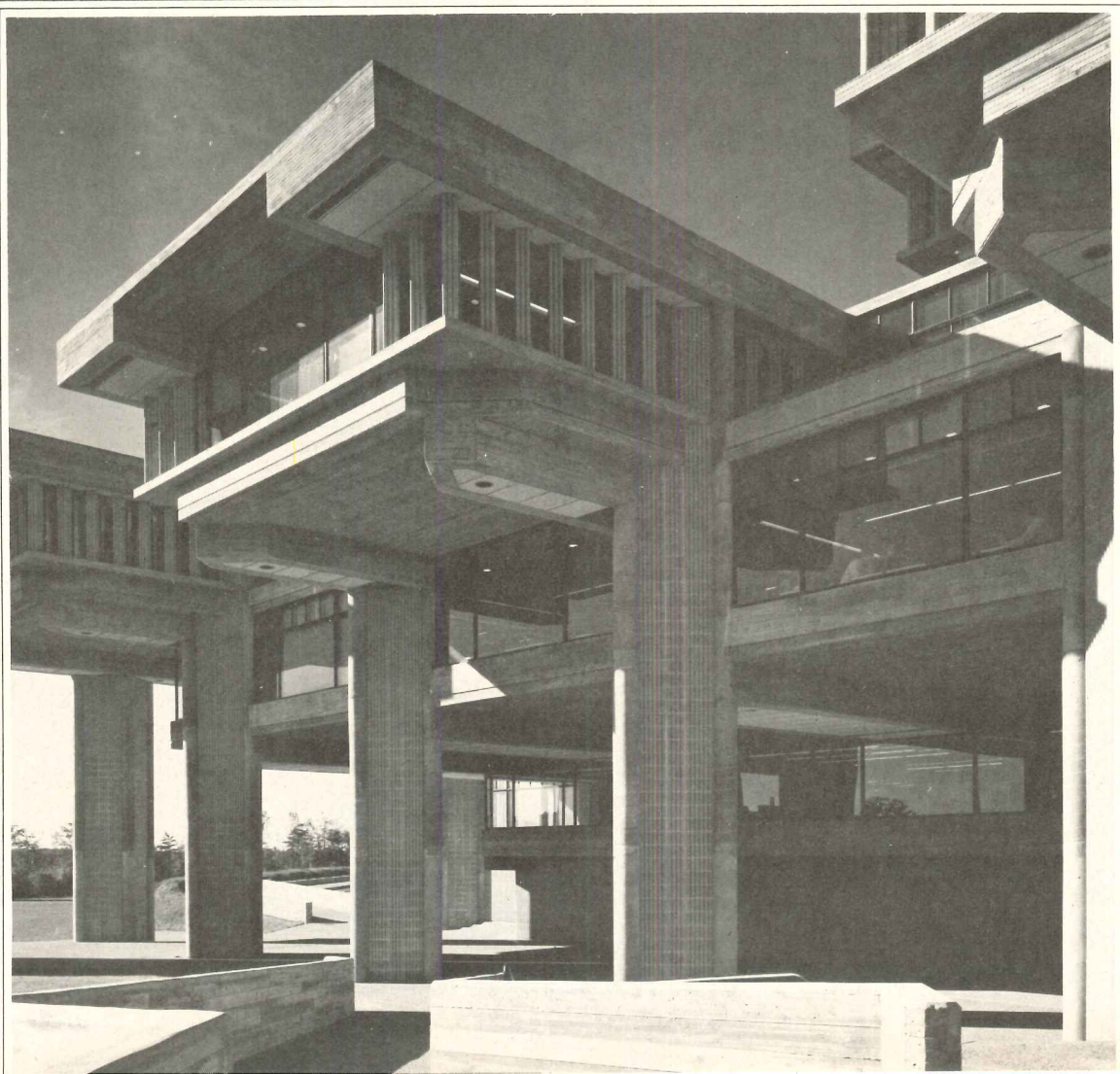


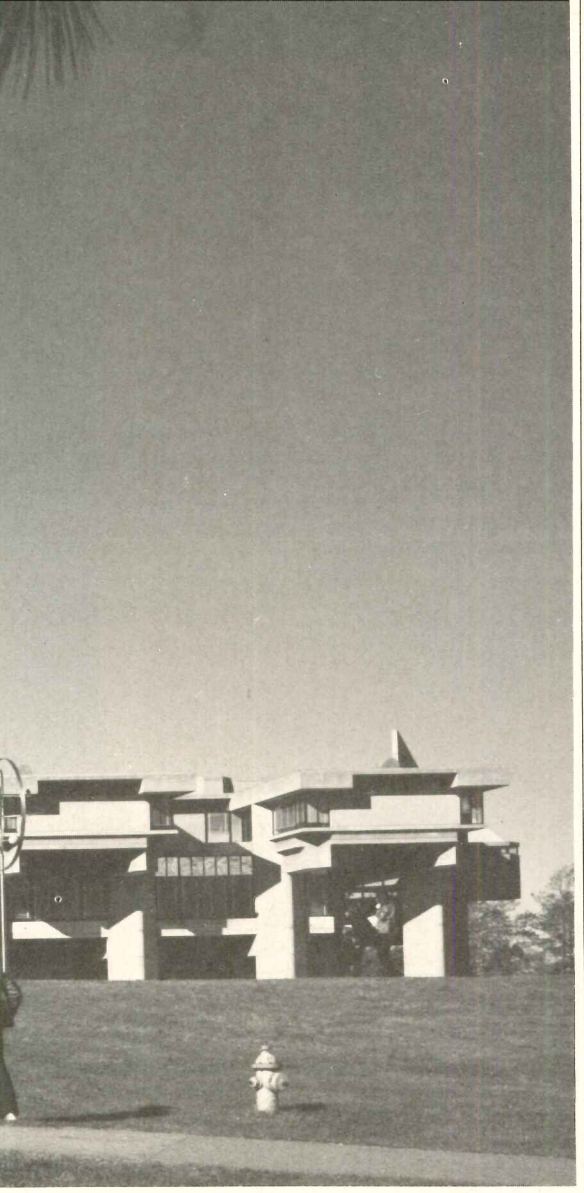
brary, amphitheater and anile which form the us core can all be seen in noto at right. The amphi- er (below) consists of steps planted in grass. state wanted asphalt d green, but happily the tects prevailed). The us fans out from this core eries of spirals intercon- l by broad shallow stair- almost Baroque in their eur (opposite page, bot- As the site plan overleaf tes, SMU is a commuter us with a large percentage students arriving by car. the main automobile en- all traffic is diverted to a oad from which the stu- an select the parking field t to his destination. Ad- of Rudolph buildings as ure can slowly circum- te the campus by this ring road watching the ing play of forms against other—the cantilevers ornices, the projecting owers and the bat-eared or penthouses against the here is much of Frank Wright in these build- -that part of Wright's which was most strongly nced by Japan. Interest- the photographs on these which most emphasize fluence were taken by the Japanese photographer, agawa.





Shown above is a portion of the elevation of the Arts and Humanities Building and at right a detail of the Library. A repetitive structural grid is used with great consistency throughout the campus. It incorporates much of the mechanical system within a pattern of evenly spaced hollow polygonal piers. The piers have four points of support in the form of rounded columns connected by ribbed concrete block infill panels. Mechanical risers are housed in the diamond-shaped voids of these piers. These voids also serve as janitor's closets, miscellaneous storage spaces, and chases for laboratory services. The piers support paired beams which carry the horizontal ductwork between them. The underside of these horizontal chases, on both the interior and exterior are finished in wood fiber cement plank, making it clear that they are nonstructural. The elevations throughout the campus are strongly modeled, consisting of alternately projecting bays at the top story. The ground floors are deeply recessed. Such vigorously articulated facades break down the scale of these huge buildings.





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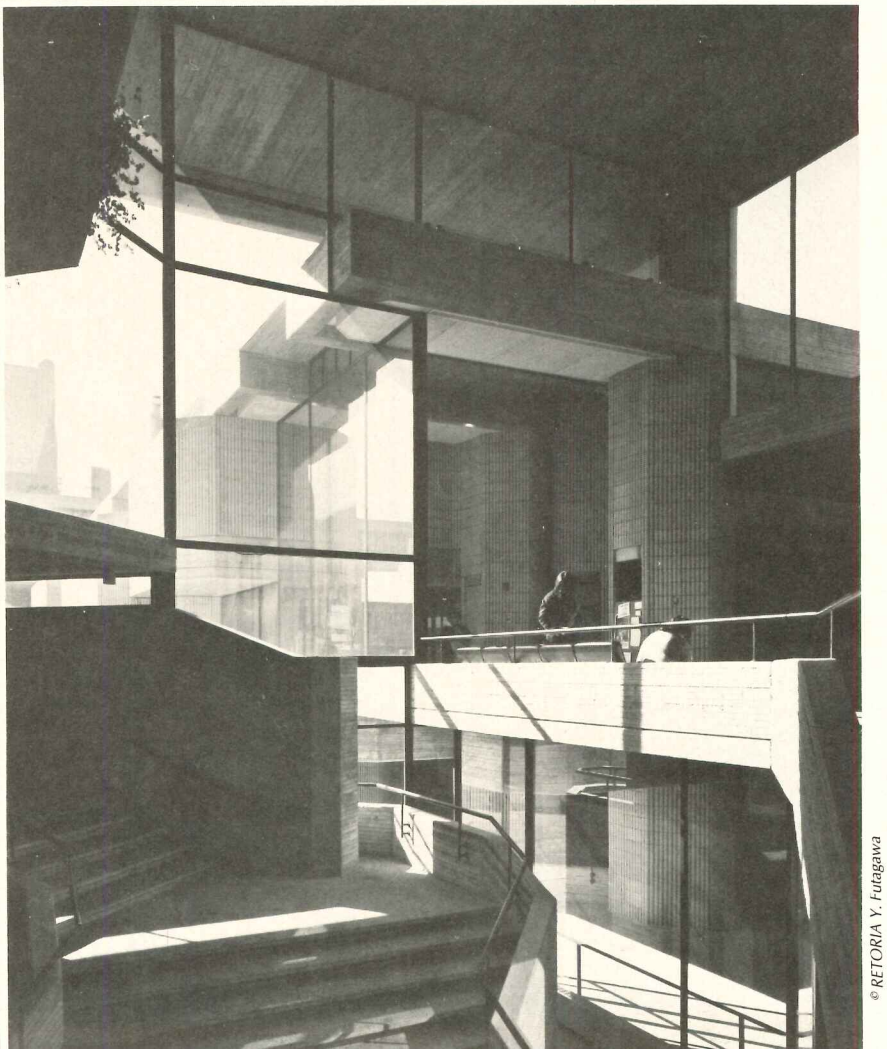
Joseph W. Molitor

Rudolph's interiors become most dramatic at points of vertical circulation (right and below right). These spaces include projecting balconies, fireplaces and well-scaled informal seating areas. The Student Union building with a cafeteria (top right) was recently added to the complex, and the Auditorium (bottom left) is now complete. The lecture hall (middle left) is typical. Ribbed concrete block is used throughout the interiors as well as on the exterior.



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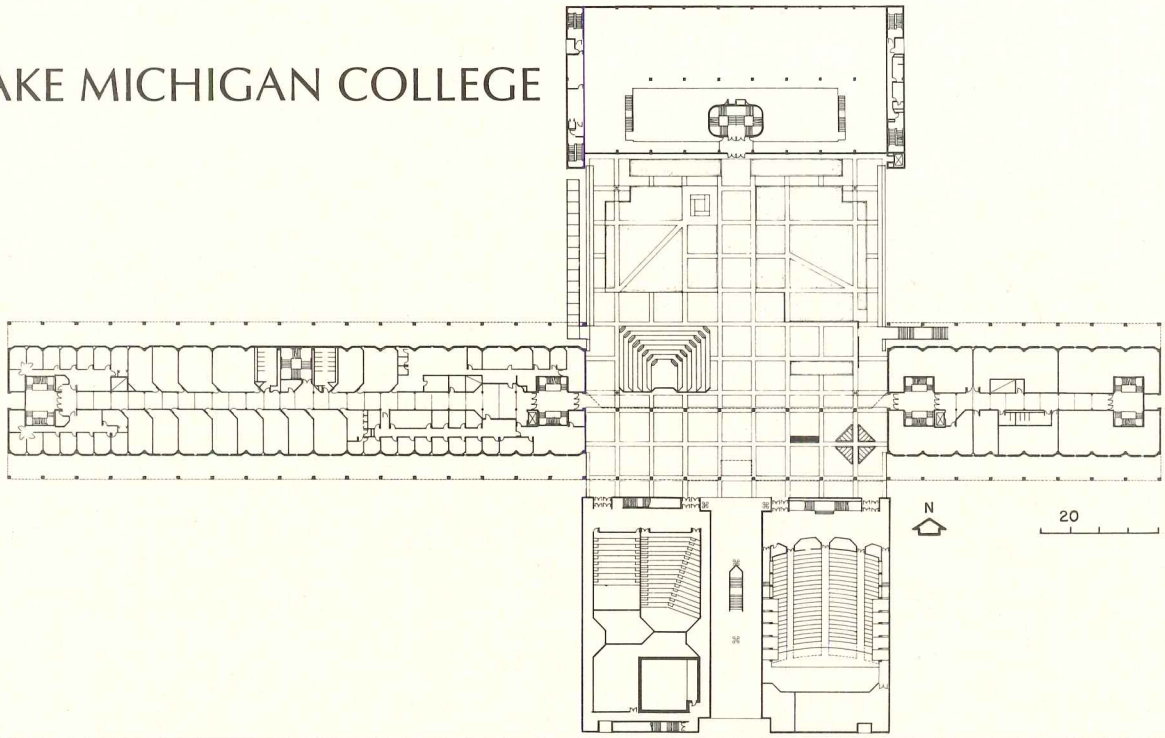
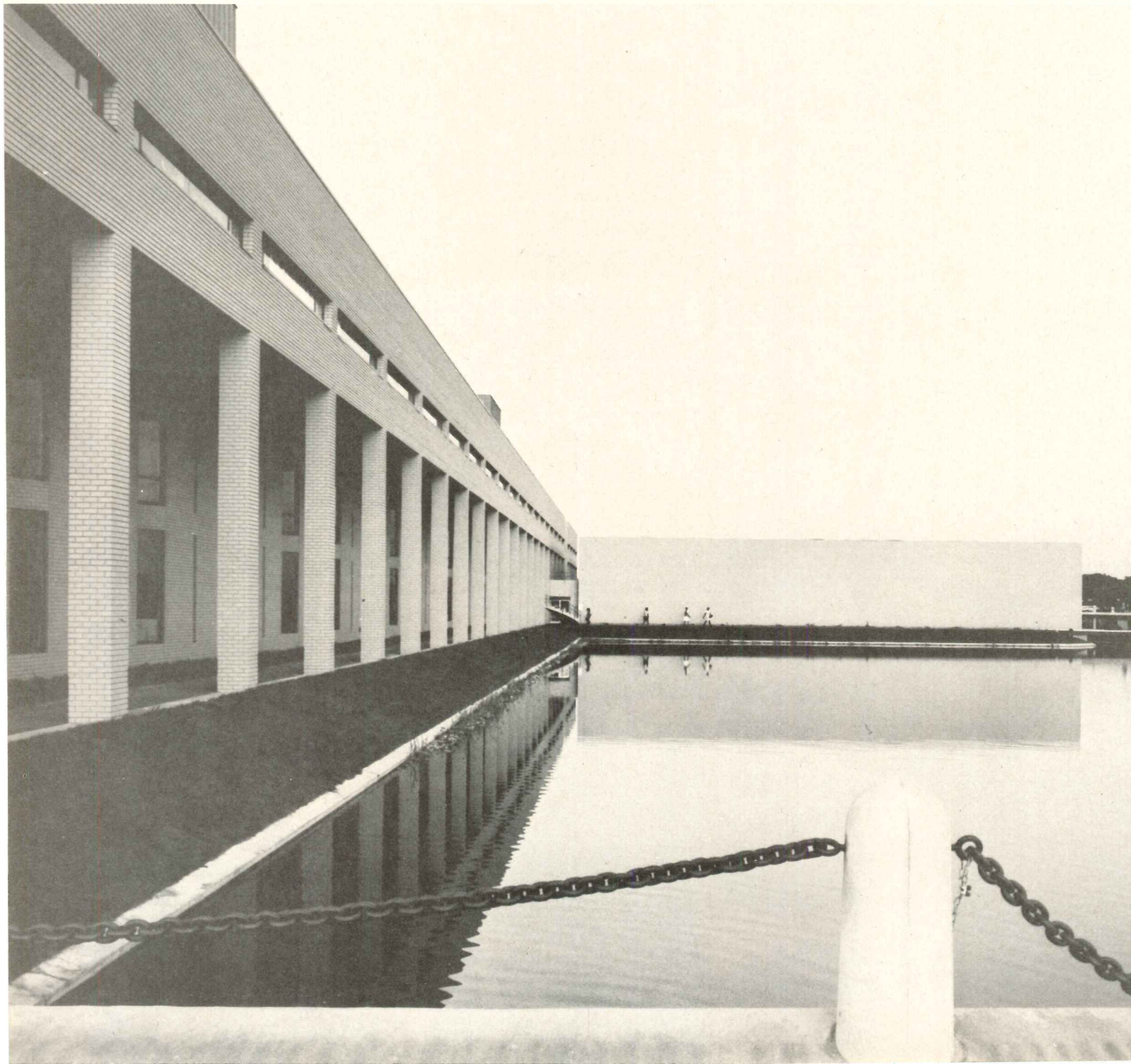
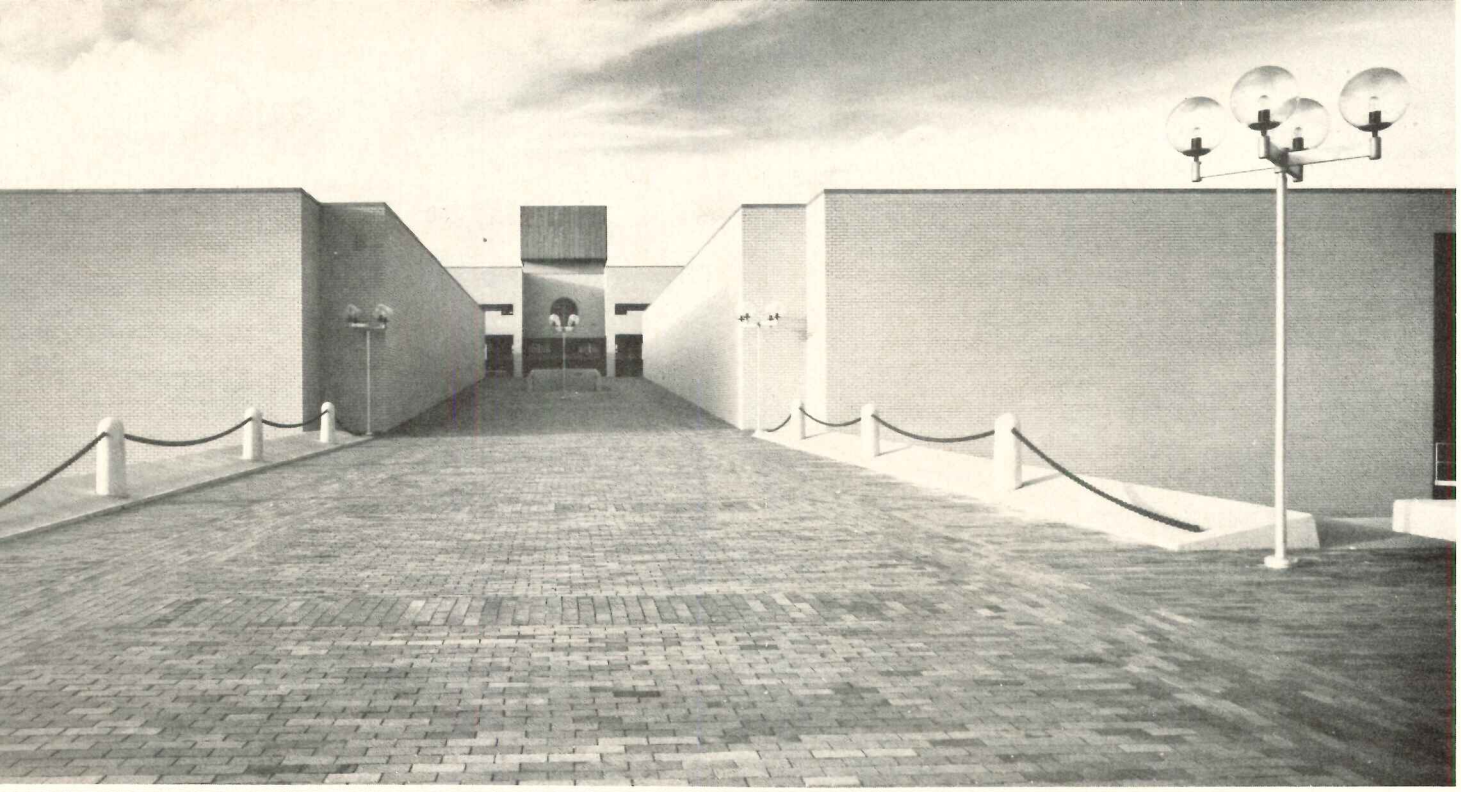
CAMPUS 2 LAKE MICHIGAN COLLEGE







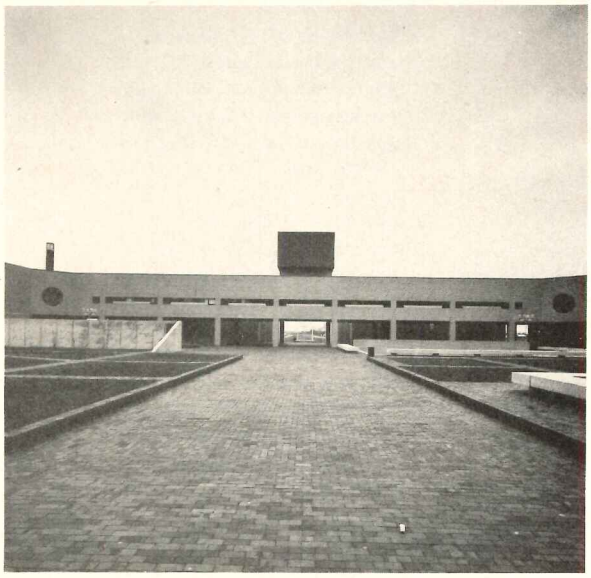
Balthazar Korab photos

Like SMU, Lake Michigan College in Benton Harbor, Michigan by Harry Weese & Associates has been designed for an enrollment of 5,000 students, and it too is a commuter college. Its site plan is as masterful in its way as Rudolph's. The main elements, however, are different—vast expanses of quiet water as opposed to broad terraced lawns, and a consistent use of beige brick instead of exposed concrete.

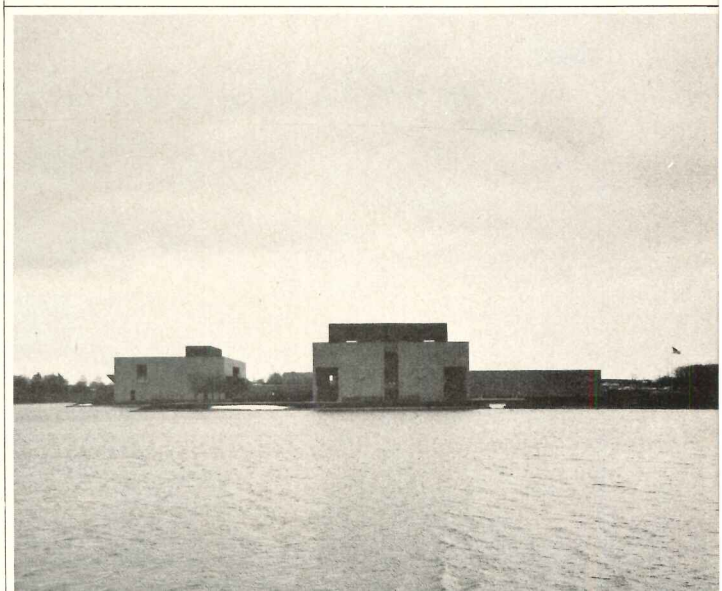
The architectural spirit of the two campuses is in more dramatic contrast. Weese's buildings are symmetric, classic and peaceful, while Rudolph's are asymmetric, romantic and exciting. Further, the methods by which each architect exercised control over his design were, by necessity, not the same. Weese and his staff, to their good fortune, have been the sole architects of Lake Michigan College from the master planning stage through the construction of each building. Rudolph, on the other hand, was required to set up a design framework which other firms could successfully follow with varying amounts of behind the scenes critical input from himself. Weese's campus, therefore, is consistent in its excellence, while Rudolph's has varying degrees of quality within the over-all brilliance of its concept.

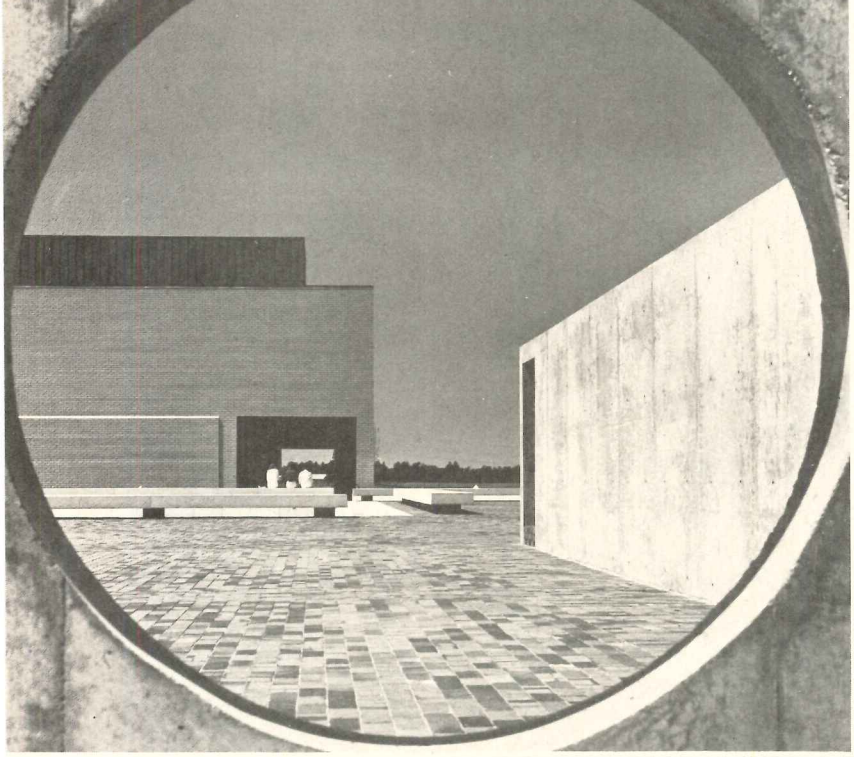
Weese's design concentrates the entire college into what is essentially one interlinked building for economic and functional purposes. His scheme permits the convenient multiple use of rooms and the easy rearrangement of departments when necessary. The building masses cluster around a central plaza which is the roof of the service area and the indoor circulation between the building elements. The buildings have been placed close to the water's edge separated wherever possible by a shallow sloping embankment. The complex presently consists of a classroom and administration building, a library and cafeteria wing and two lecture halls.

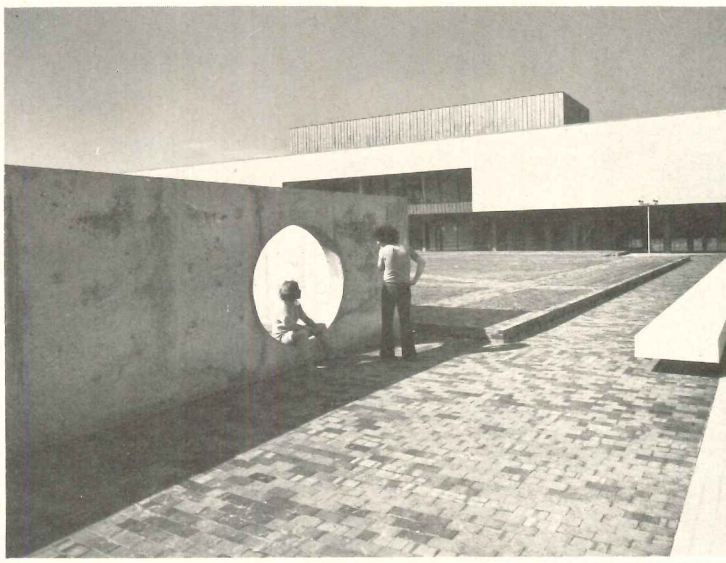
LAKE MICHIGAN COLLEGE, Benton Harbor, Michigan. Owner: *Lake Michigan College District of Berrien County, Michigan.* Architects: *Harry Weese & Associates.* Engineers: *Severud, Perrone, Sturm, Conlin, Bandel* (structural); *Cosentini Associates* (mechanical/electrical). Consultants: *Cerami & Associates* (acoustical); *Barton-Aschman Associates* (landscape). General contractor: *Pearson Construction Company.*

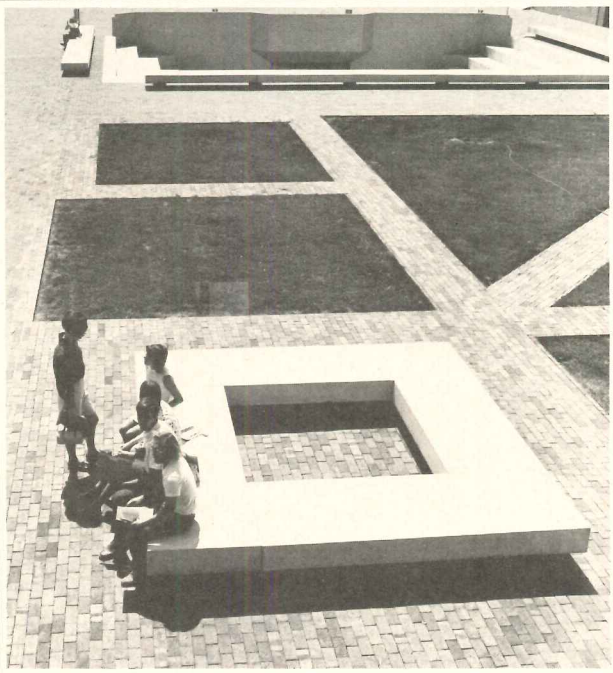


The plan (opposite page, top) shows the plaza on the roof of the service building, the classroom-administration wing, the library-cafeteria and the lecture hall and auditorium wings. Exterior views include the main approach (top) and the courtyard (above).



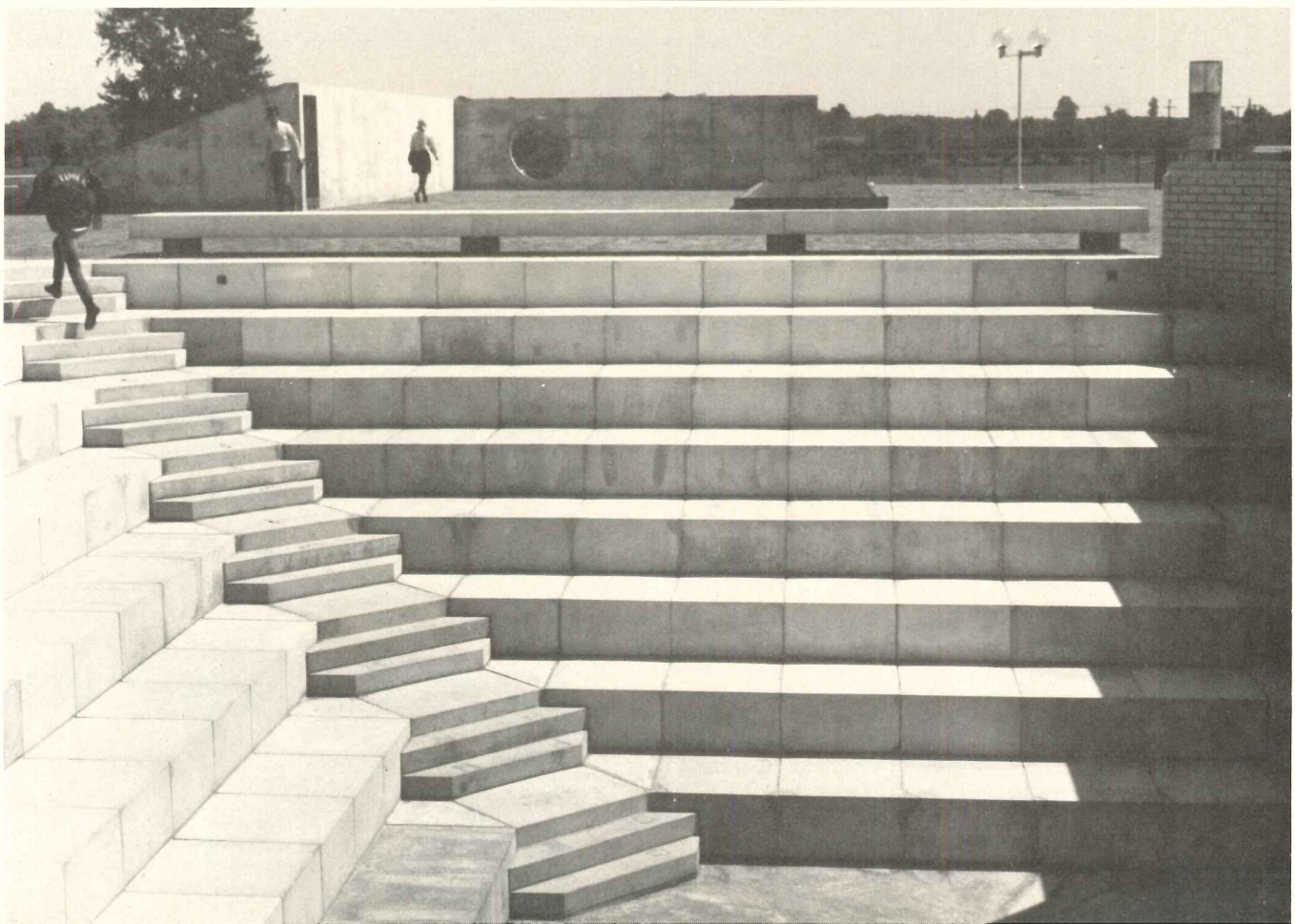


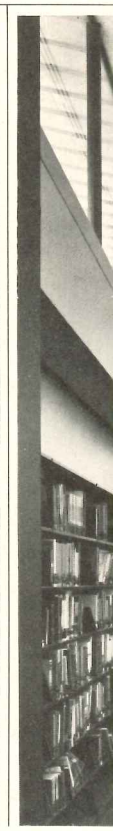


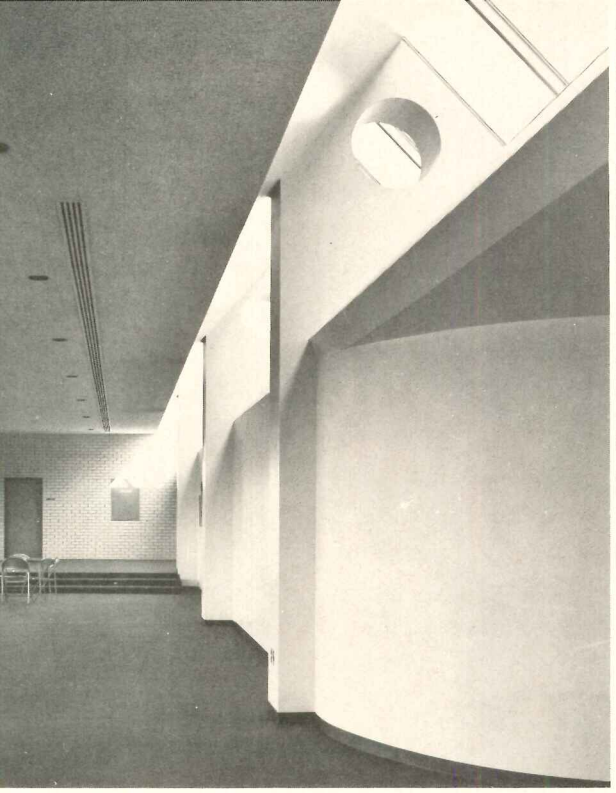


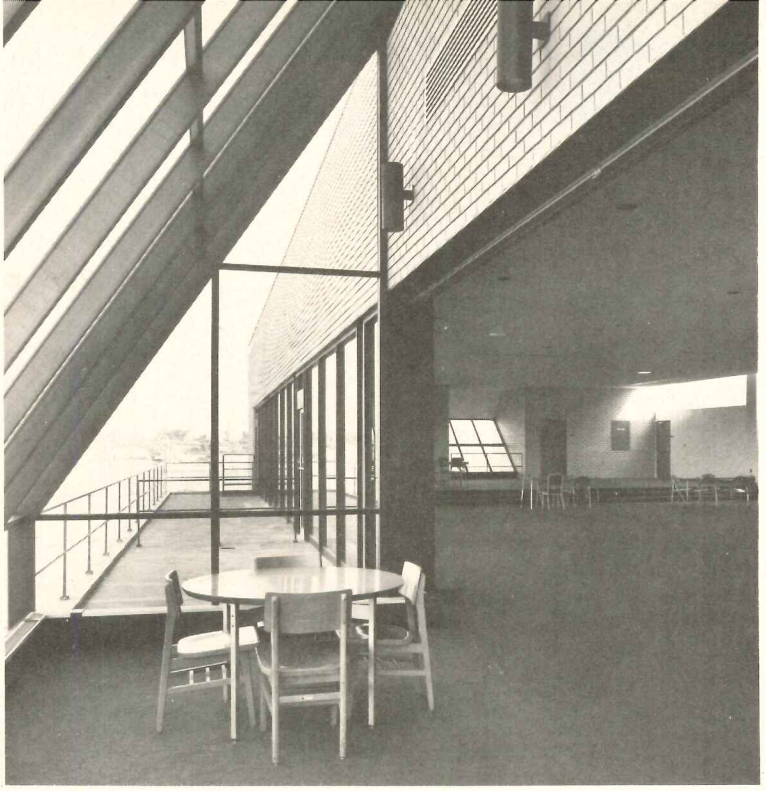
Balthazar Korab photos

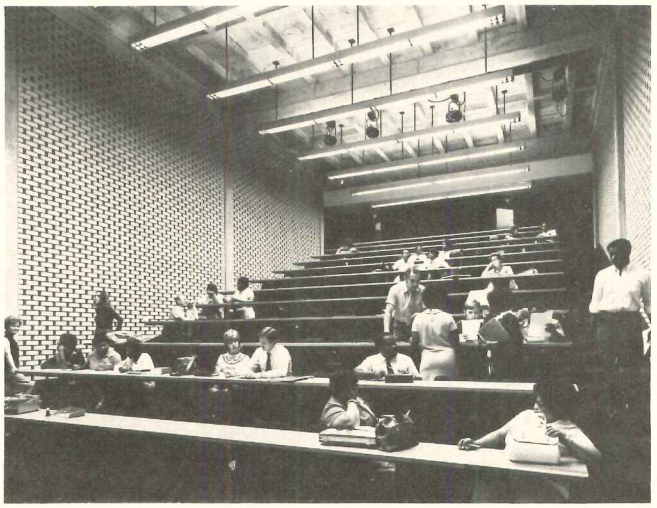
The 200 by 220 ft plaza is the heart of the complex. It is the main circulation element and provides access to all the buildings. It is connected to grade by a wide ramp, a stepped ramp and other stairs. Its 400-seat sunken amphitheater (below) also provides access to the service building below the plaza. The view through the moon gate is toward the classroom wing. A corner of the library-cafeteria can be seen in the photo at the top of the page. On the perimeter of the plaza, precast benches are used instead of railing.



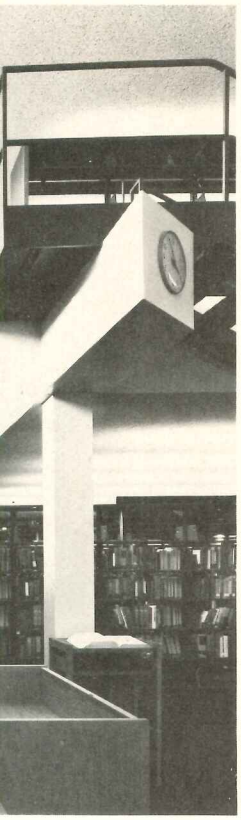




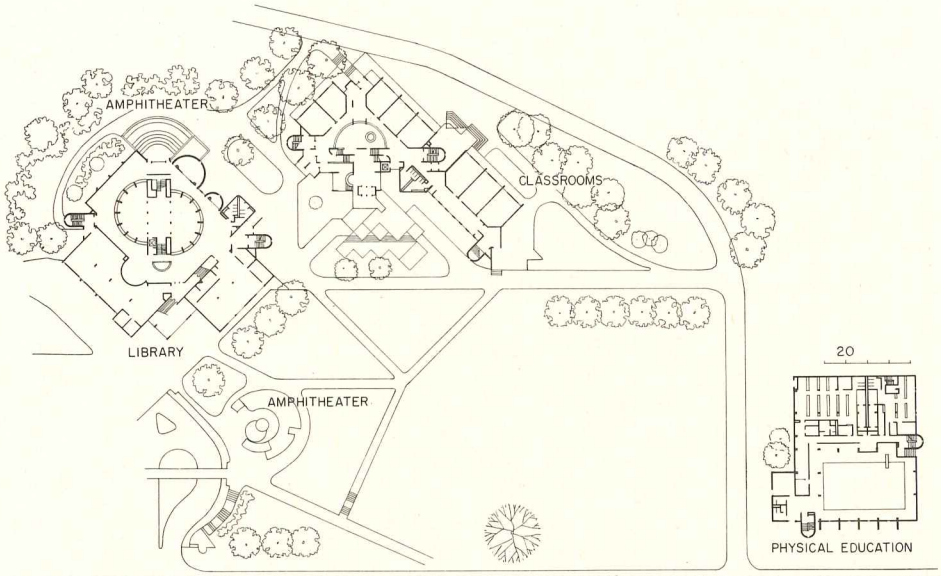


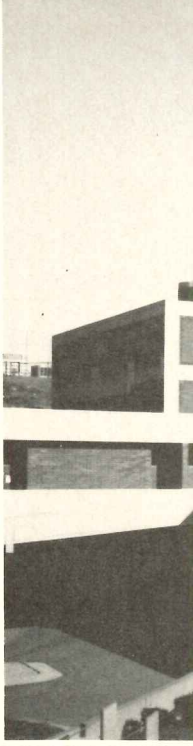


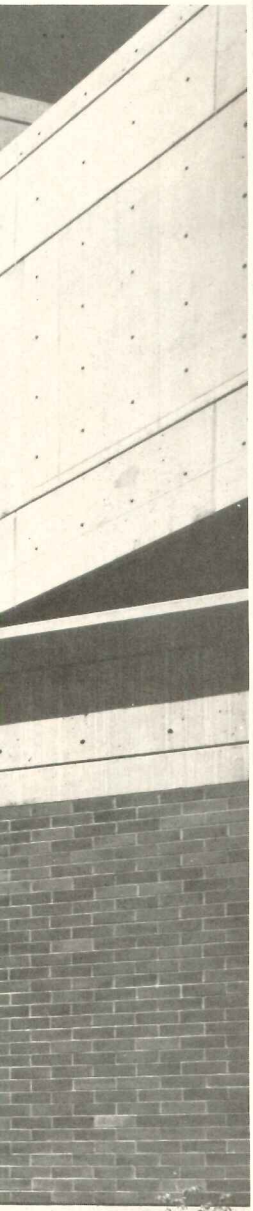
Two views of the cafeteria (minus furniture) appear above. It is located on the third floor of the three-story library-cafeteria building located at the terminus of the entry axis. The diagonal glass wall overlooks the lake and orchards. Service to the kitchen is by elevator which connects directly to the central receiving area in the service building. The library (below) is two stories high with a mezzanine which can be entered from the plaza. Like the cafeteria, it has a fine view to the north. The lecture hall (left) is typical.



CAMPUS 3 ALLEGHENY COMMUNITY COLLEGE







John W. Hobbs photos

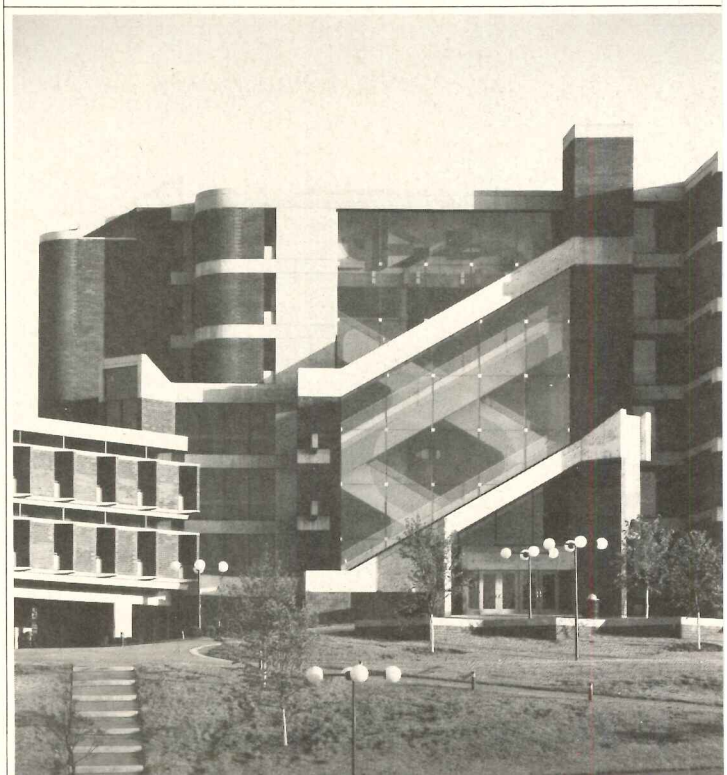
Tasso Katselas's campus for Allegheny Community College is bold, romantic and imaginative in the way its forms take command of the hill. Thus it has far more in common with Rudolph's architecture for SMU than with Weese's design for Lake Michigan College, which, while imaginative, makes the kind of subtle, quiet statement which has little interest for Rudolph or Katselas in their own work as artists. There are more than two ways to do architecture, however, and in this instance, Katselas' way is a third. Whereas SMU was designed as a repeatable system with the possibility of being carried out by others and allowing for great expressive quality within each module, Allegheny Community College is a one-of-a-kind work of sculpture which, when the final buildings are added, will be in no way open-ended.

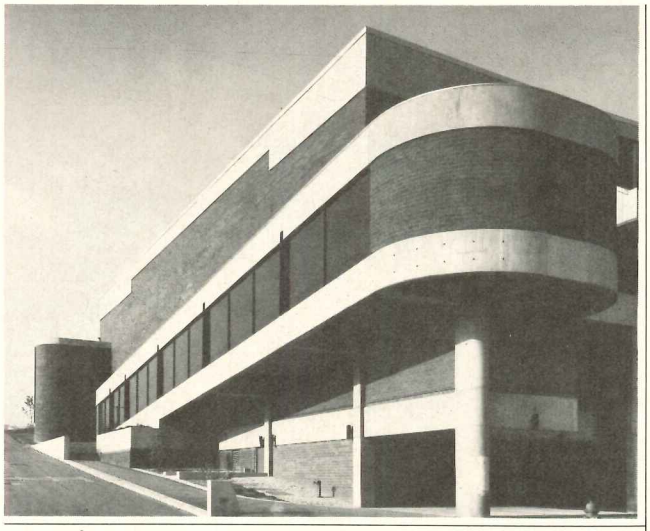
Where Rudolph's work appears to obey ancient laws of order, Katselas's flying cantilevers, deep recesses, assertive cylinders, jutting triangulated windows and criss-crossed diagonal escalators are fearlessly assembled without deference to known canons of taste. "Why not?", Katselas seems to be asking, and his question leads to the kind of exuberence in his work which we have again come to admire in late Victorian architecture and in certain venacular styles.

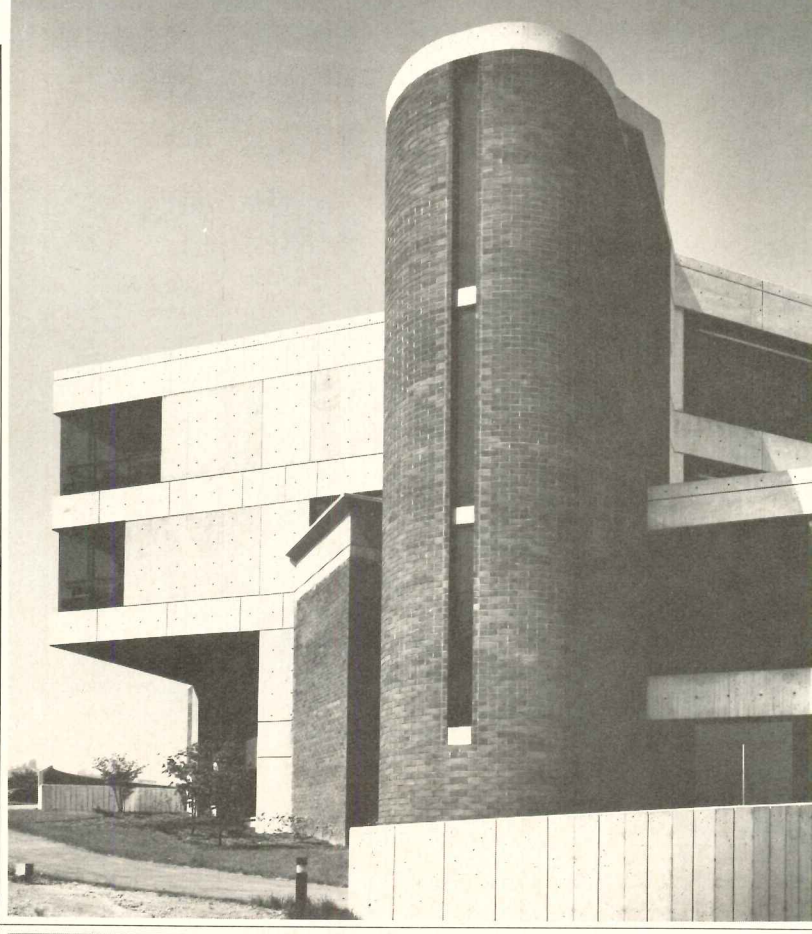
Much of the exterior complexity is the result of Katselas' interest that the internal spaces should be in his words "generative and flexible, able to adapt and absorb the changing needs of education. The hope was to create an intricate design with a variety which would surprise, lure, and upon occasion, awe the spectator. I have paid attention to the halls, the doorways, the landings, the stairs, the corners as well as to the main teaching areas. But in the end it is the students, by their activities, who give meaning to the spaces."

ALLEGHENY COMMUNITY COLLEGE, Pittsburgh, Pa. Owner: *Allegheny County.* Architect: *Tasso Katselas.* Engineers: *R. M. Gensert* (structural); *David Lewin Corporation* (soils); *Sanders and Thomas* (mechanical electrical). Landscape architects: *Joseph Hajnas Associates.* General contractor: *Dick Corporation.*

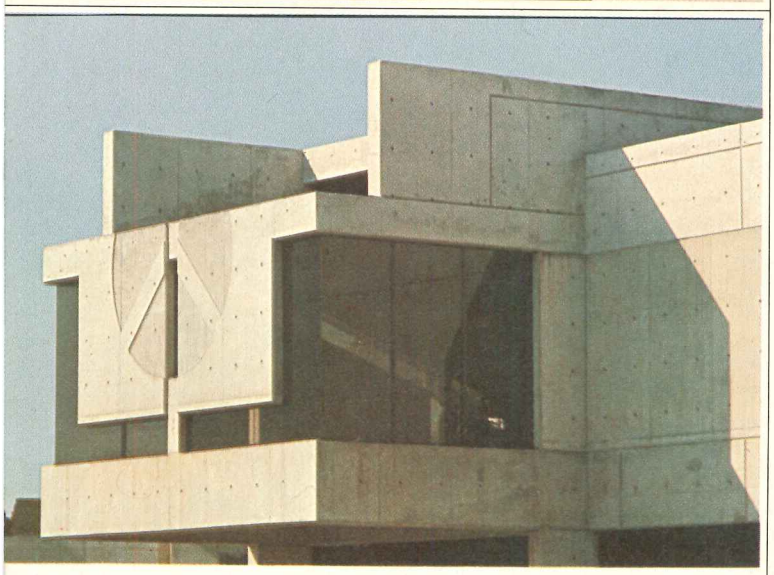
The comprehensive view (top) omits the physical education complex off to the right. The criss-crossed escalators shown in detail (below) connect the various levels of the classroom building. The amphitheater (above) is a popular gathering place for the students.

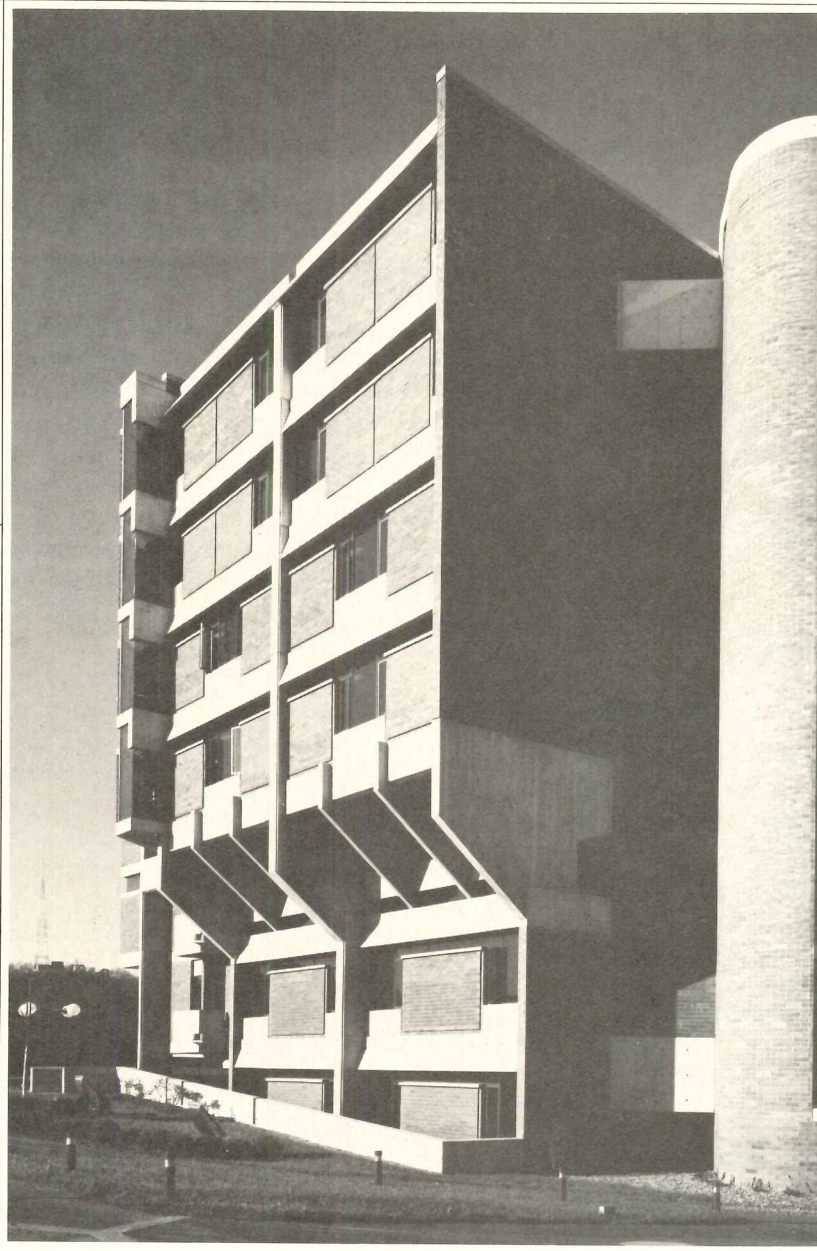


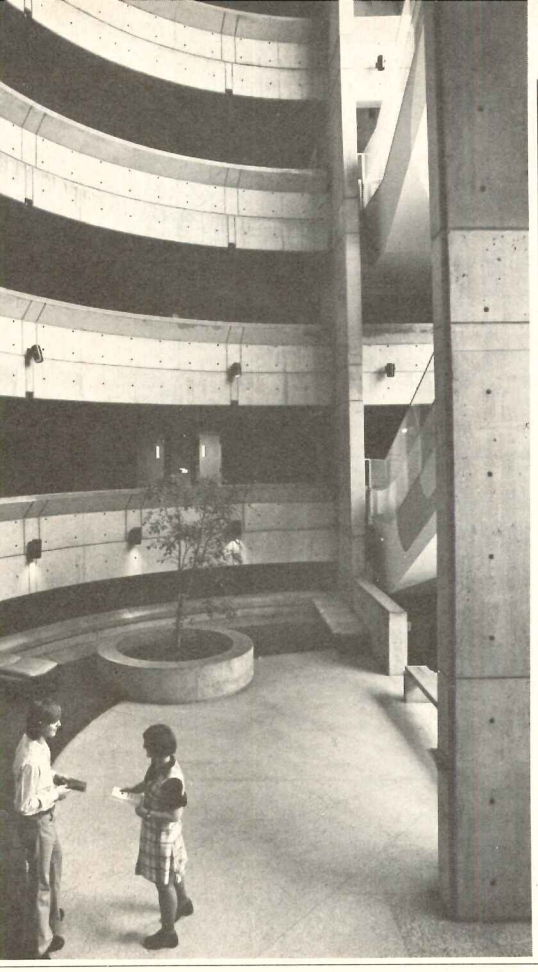


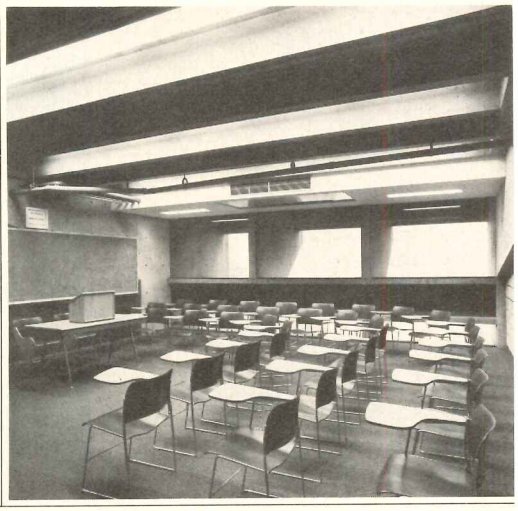


The physical education plant (above) has a full-size gym on the top floor with a competition-sized pool below. Fenestration changes with room size function and orientation as the photos on this page indicate. The triangulated windows increase the apparent size of small faculty offices. The peace symbol (bottom), cast in concrete, places these buildings firmly in their time.

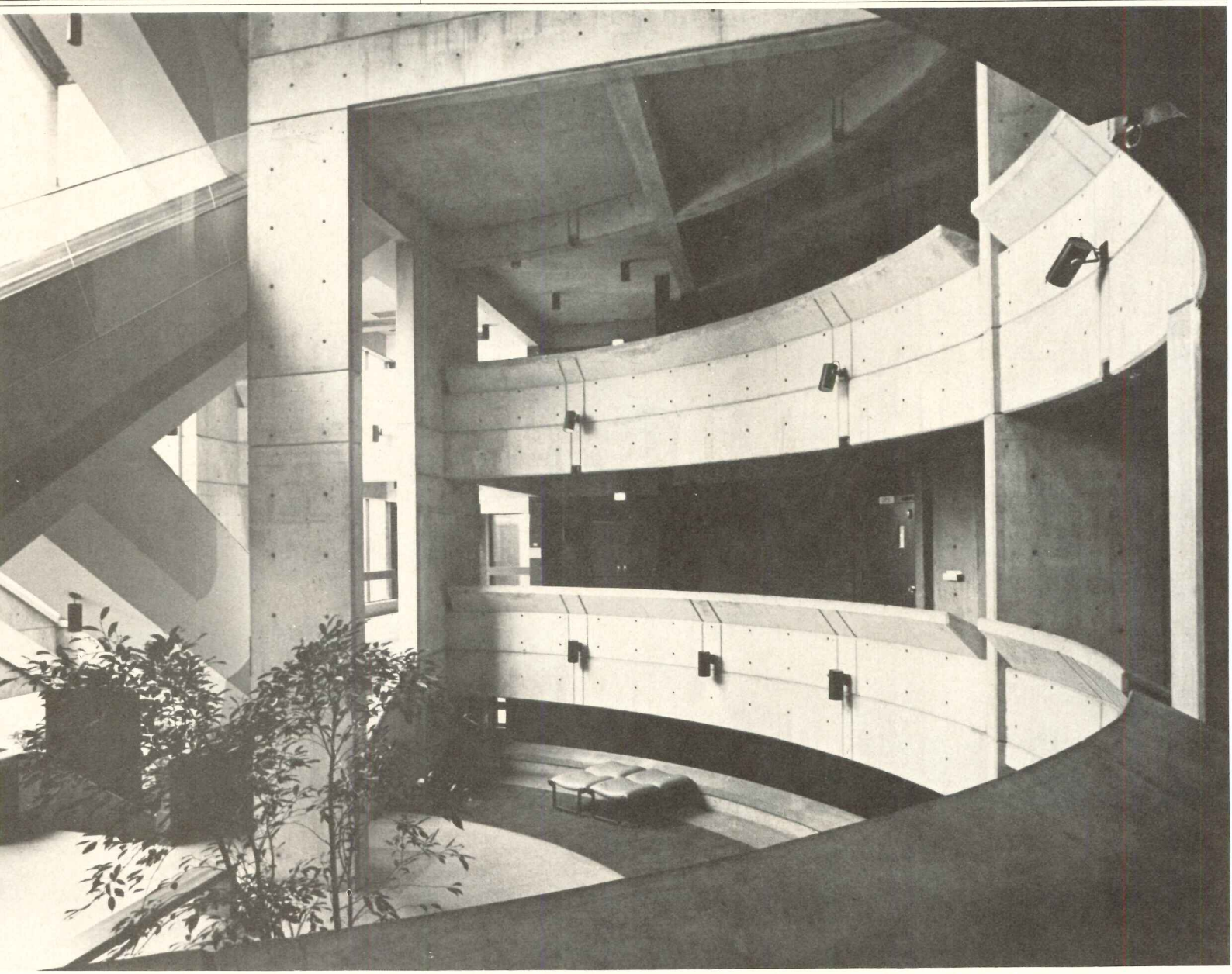




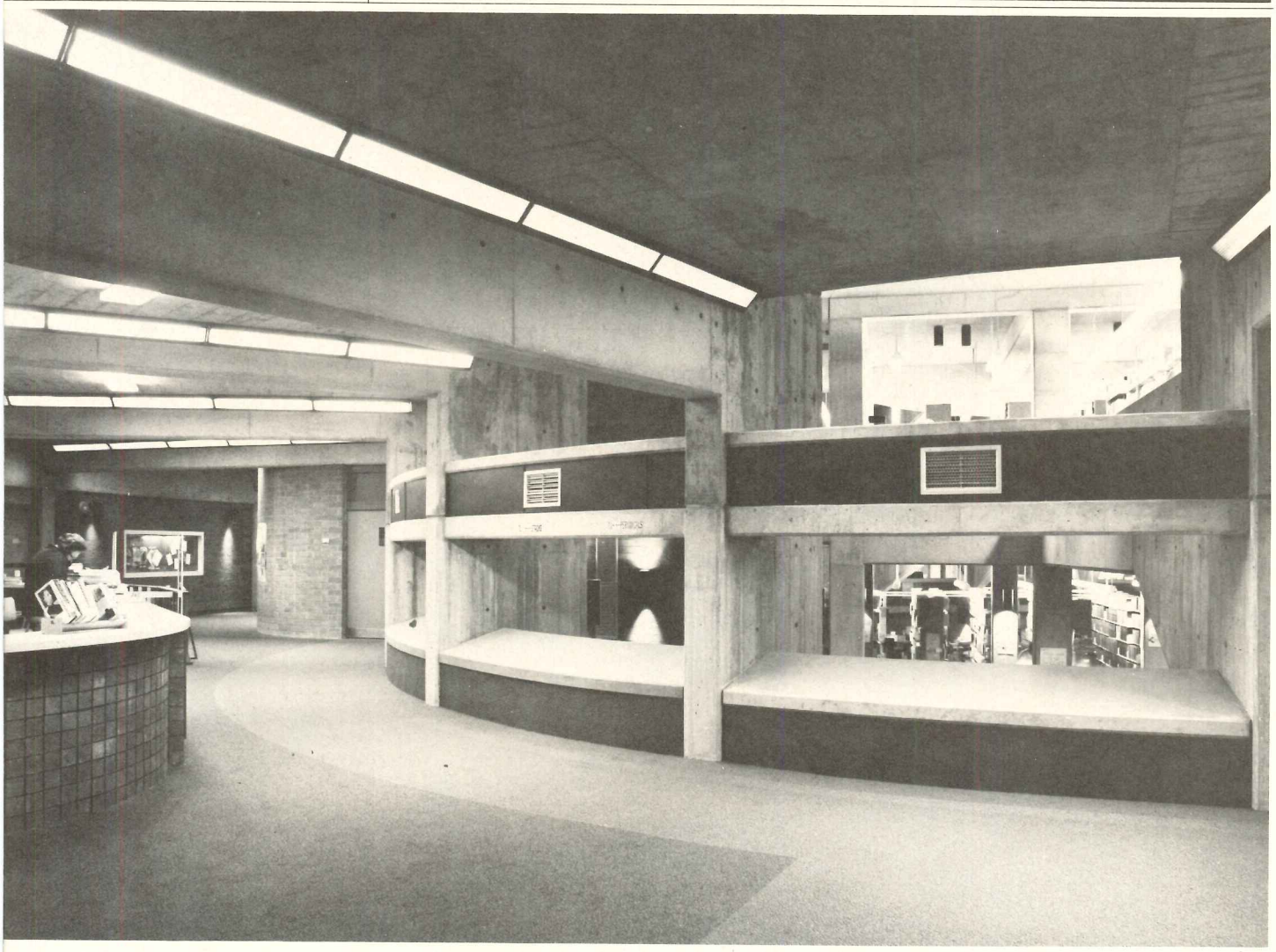




The classroom building is at the center of the complex. At its heart is a vast atrium, in the form of a half circle which extends the full height of the building. The escalators to the left of the bottom photo are principal circulation elements, interconnecting the various classroom wings. The mural (above) located at the atrium ceiling is by Jane Katselas.



The 60,000 book library is organized around a multi-story circular reading room. Throughout the campus, these circular forms are juxtaposed against the rectangular module of the classroom and laboratory structures. In this circular plan, the stack areas at the center are within easy reach of the reading and lounge areas on the perimeter tiers. The control desk at the main entrance can be seen in both photos.



esigners adapt pre-engineered structure for flexibility

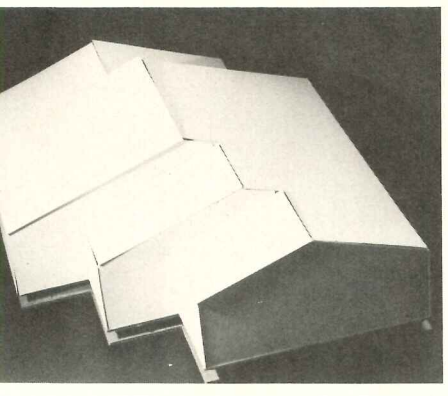
n manipulation and structural augmentation turn a standard building into nonstandard theater

ed with the assignment of designing a low-get ($600,000) theater at Phillips Exeter demy, architects Hardy Holzman Pfeiffer ociates contemplated certain advantages of re-engineered building—low price, con-ed cost, rapid assembly—and wondered if ould reasonably be adapted to the purpose. structure would require some modification both functional and site reasons—to ac-mmodate understage trap space, for in-ce, and to diminish the warehouse-like ap-rance of the large volume.

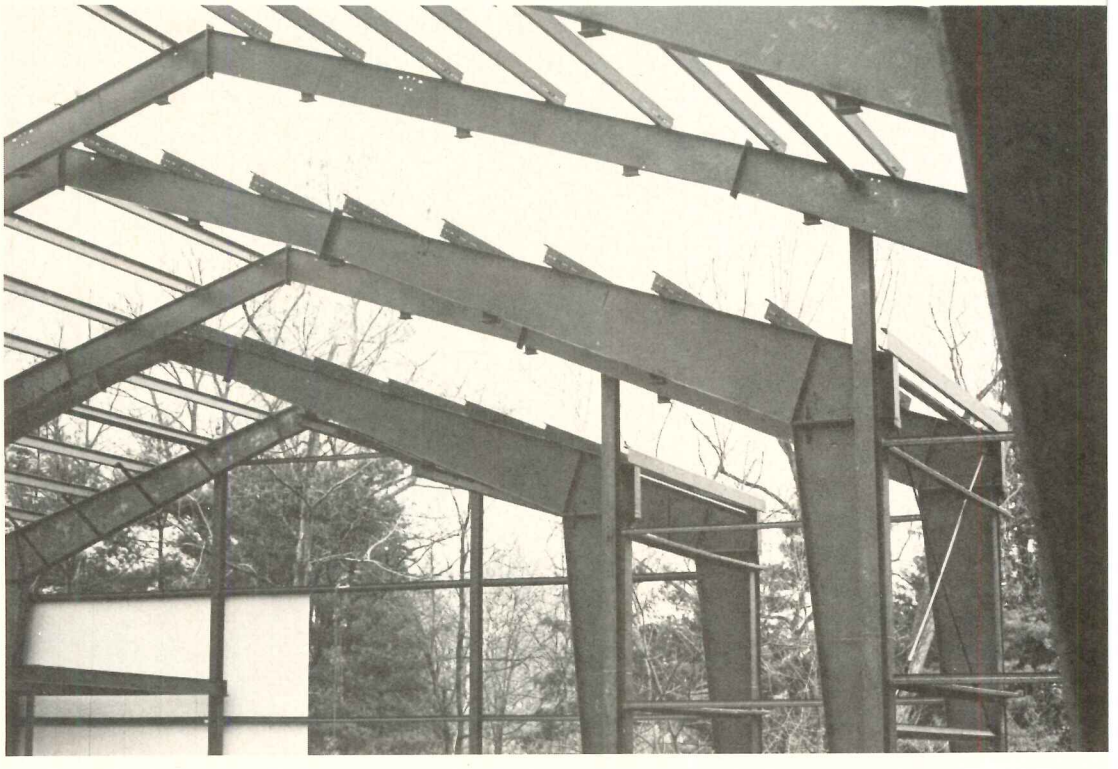
The building that evolved from these de-nds set some out-of-the-ordinary conditions his standardized system: an irregular build-volume with pronounced offsets and a bro-ridge line; heavy foundations and the ad-on of a second level to a frame intended for gle-story buildings; roof-hung lighting grid, walk and ductwork.

Adaptation involved extremely close co-ration of structural engineers Goldreich, e & Thropp, the architects, and the com-er services of Butler Manufacturing Co., o supplied the rigid-frame structural system the roof and wall panels. The engineers vided the manufacturer with the magni-es and placement of projected loads, and n, using computer-determined frame sizes, manufacturers supplied shop drawings.

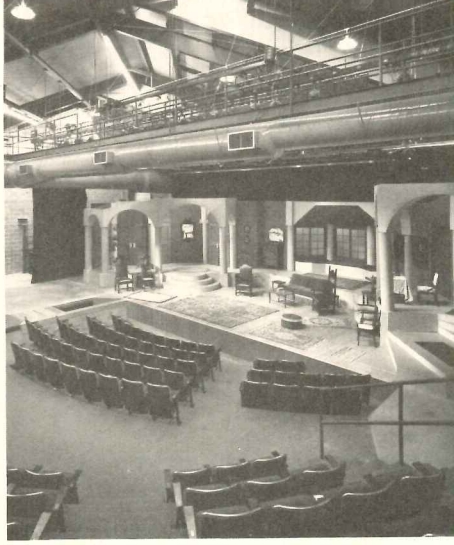
The project necessitated some radical nges in normal design procedure—both ar-ects and engineers use the word "back-ds." Only after the manufacturer's draw-s defined possibilities and limitations could engineers design supplementary support flooring, seating "dishes" and overhead . The engineers furthermore spent consid-ble time checking shop drawings against r stages of design.



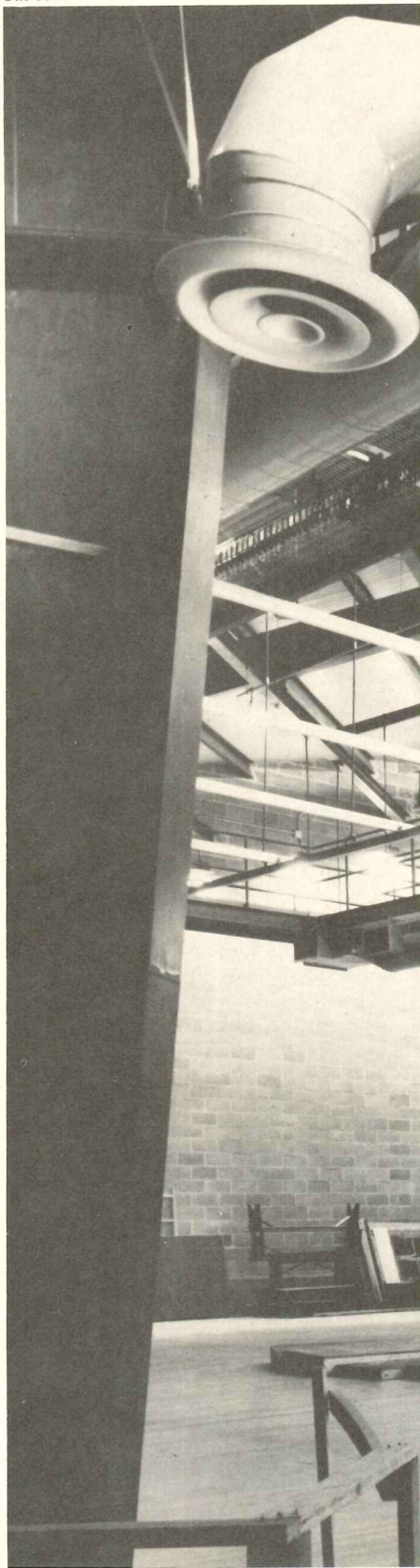
Norman McGrath



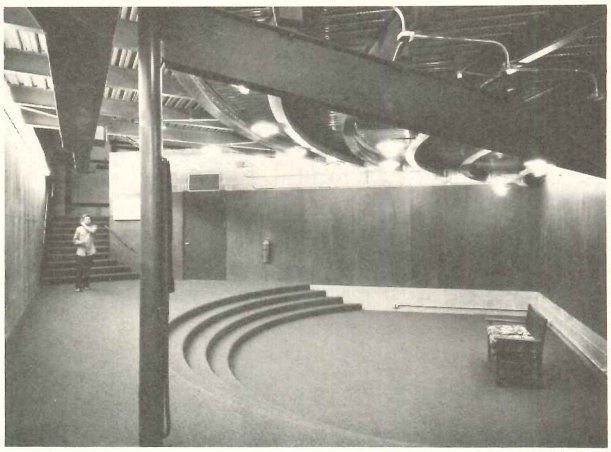
Norman McGrath



Otto Baitz

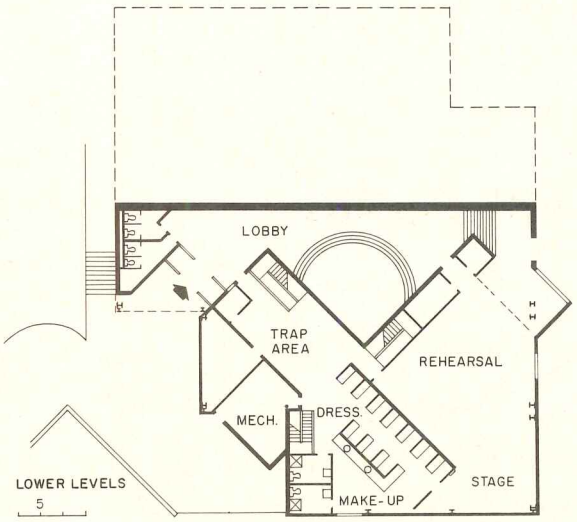


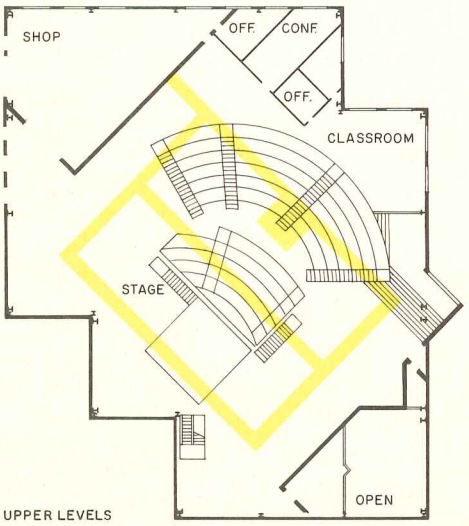
Sharply sloping site allowed a split-level plan not accounted for in the design of the standardized structure. Heavy foundations, an interior retaining wall along one side of the lower-level lobby, and some additions to standard framing bents were required to support the main floor and its seating dishes, the undersides of which are exposed in the lower-level lobby (near right). Bents are paired (above) wherever offsets occur in order to accommodate girts for the end walls (see plans).

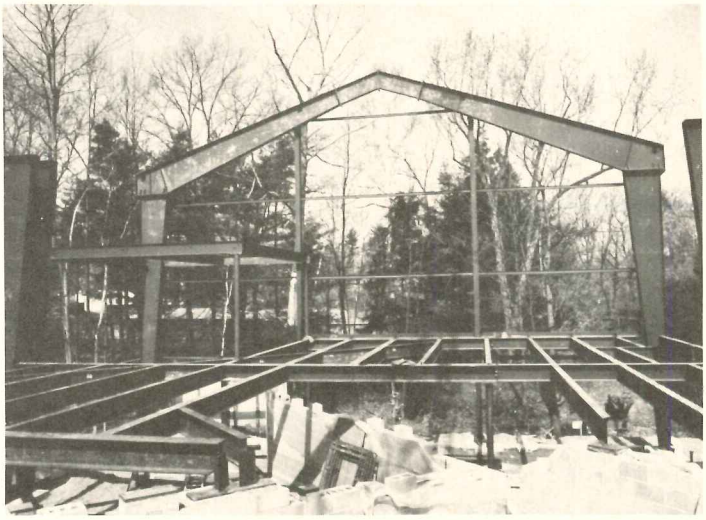


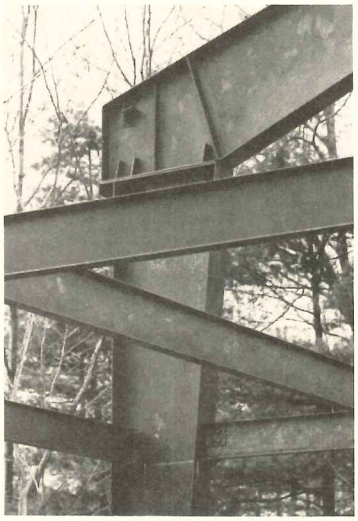
Norman McGrath

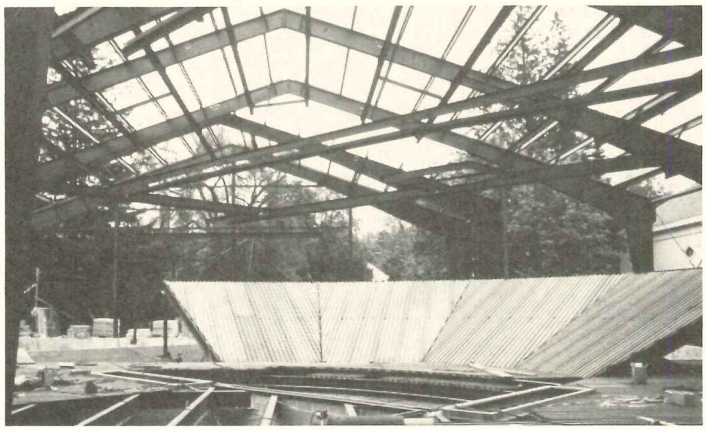
e and seating are set diagonally in an irregular enclosure to reduce apparent volume of the indus-type building and the insistent ctionality of the exposed roof cture. Catwalk, lighting tracks, and work are hung from a special set ceiling purlins because standard ins, designed to accept manufac-r's roof-panel connectors, could economically be altered. To ac-modate the extra loads, bents e strengthened where necessary.

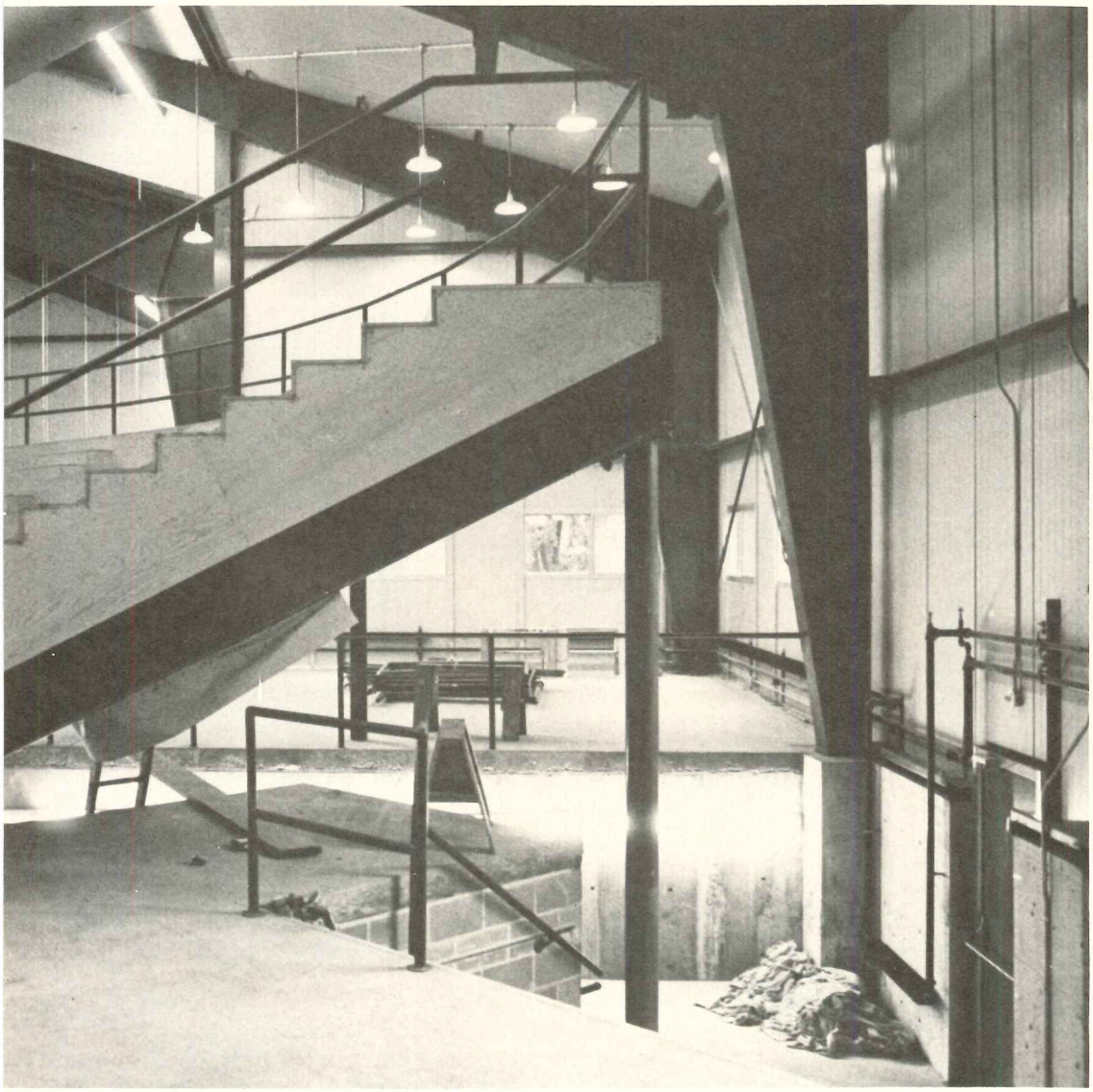






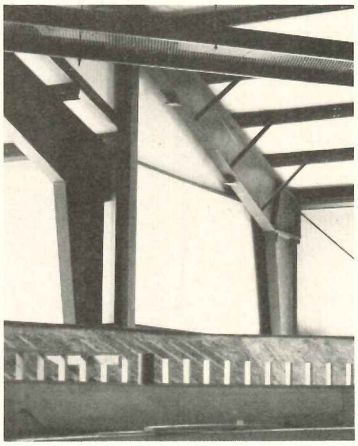




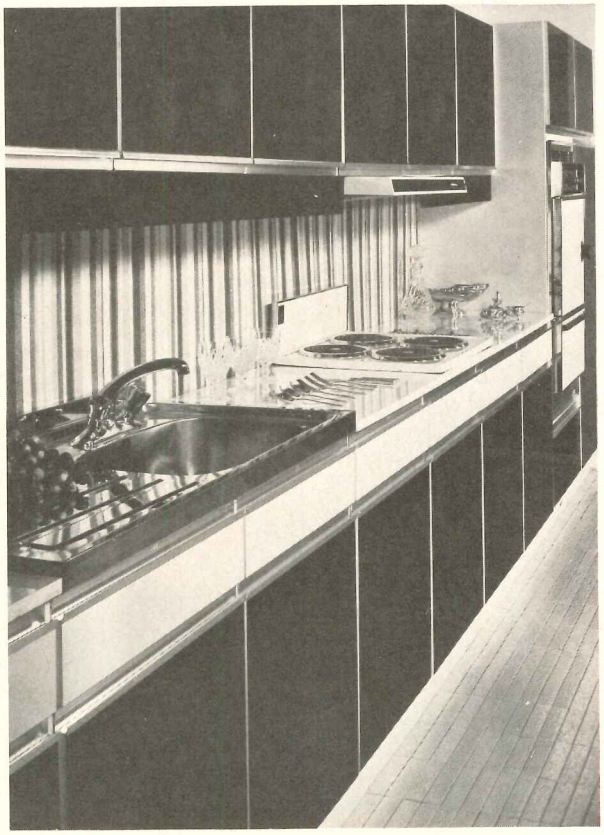


Nonstandard components include framing for the main floor (top left), supported partly by heavy foundations, partly by rigid frames. Brackets for floor beams were factory-welded to bents (above). On the main floor (center left), the asymmetrical lower seating dish, sunk below stage level, is supported by curving steel beams and by one pipe column beneath. The steeply raked upper seating dish (center and bottom left) is concrete and steel decking; pipe columns support its upper edge. To provide the roof height required by the two-level building, the bents, which are normally founded at grade, are set on concrete foundations or, as at bottom left, on a concrete pier adjacent to the retaining wall. Close-up of one of the offsets (below) shows doubled-up bents, as well as special end column, to support end-wall girts. Wall and roof are manufacturer's stock sandwich panels, colored olive green on the exterior.

FISHER THEATER, Phillips Exeter Academy, Exeter, New Hampshire. Architects: *Hardy Holzman Pfeiffer Associates*. Engineers: *Goldreich, Page & Thropp* (structural); *Dubin Mindell Bloome Associates* (mechanical); *Robert A. Hansen Associates* (acoustical). Contractors: *Davison Construction Company, Inc.* (general); *New Hampshire Steel Building Co.* (steel building erection).



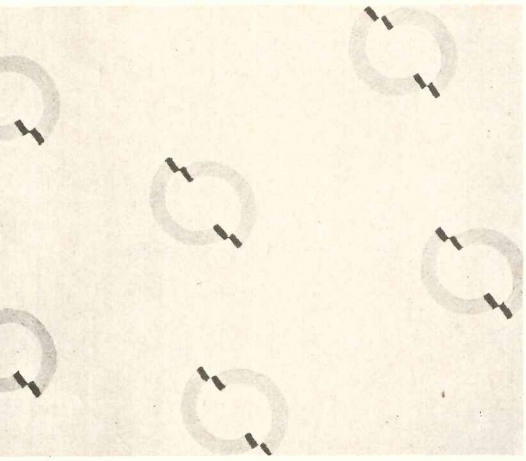
re information, circle item numbers on Service Inquiry Card, pages 209-210.



anufacturer introduces a cabinet line for North American kitchens

ailable in the United d Canada, this line of kitchen cabinetry is in high-gloss, high- laminates. The all- d construction features ver particleboard, and are finished in white *melamine* plastic. Contemporary styling is emphasized by long-line polished anodized aluminum handles and concealed, self-closing hinges. Four exterior finishes — white, teakwood, bright yellow and red-orange— are standard, but up to 12 other colors can be special-ordered. All units conform to American dimensions. North American distribution and inventory are being maintained, and units are moderately-priced. ▪ Murray Kitchens, Westfield, N.J.

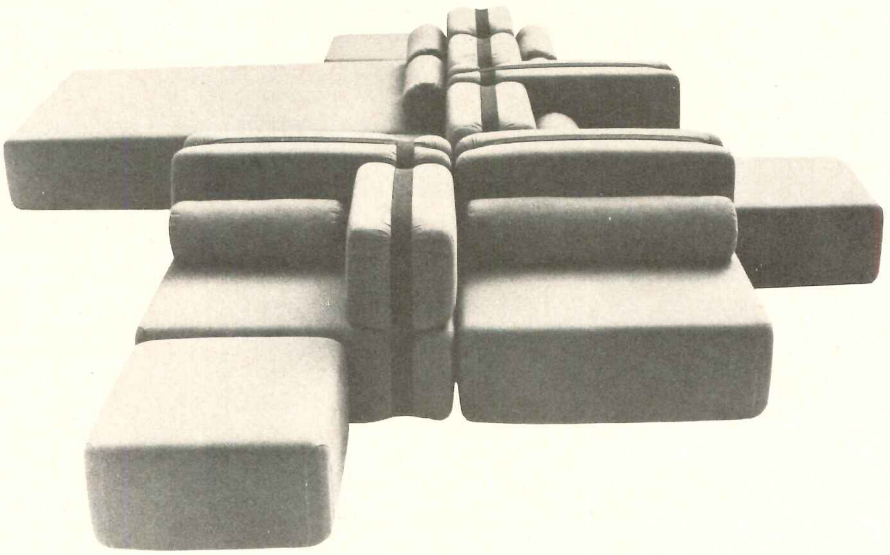
Circle 300 on inquiry card



tufted wool area rugs designed by artists

d by artist Richard Troy, '' is part of the com- Contemporary Custom on of area rugs which serve as wall hangings. is available in white on ith black. Many of these rugs provide graphic, abstract and mosaic patterns in all-wool construction, and applications include luxury offices, accents in hotel lobbies, etc. ▪ Saxony Carpet Co., New York City.

Circle 301 on inquiry card



Two basic components provide flexible seating

German designer Otto Zapf created this seating, ''Pollorama,'' which can—without mechanical devices—be rearranged easily, according to the company. A 2½-in. wide belt holds a combination of two basic foam blocks together. Bolsters and loose cushions are also available to further the design options of the user. ▪ Knoll International, New York City.

Circle 302 on inquiry card

more products on page 153

New steel deck saves money now.

Epic 2-inch roof deck provides greater strength at non-inflationary prices.

Prices firm for '75.
Epic 2B, delivered in 1975, will not be subject to price escalation, a major step toward stabilizing construction prices and ending the inflationary spiral.

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Epic 2B, 22 gage, will span farther than 20 gage 1½-inch decks. It has a minimum yield strength of 40,000 psi.

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For more data, circle 53 on inquiry card

nore information, circle item numbers on
lers Service inquiry card, pages 209-210.

ER TREATMENT SYSTEMS / A new brochure "Water Treatment Systems" describes the us apparatus engineered and fabricated by the pany for the treatment of municipal and indus- water supplies and waste waters. Illustrated with photographs and cross sectional diagrams, it s clarifiers, both rectangular and circular; auto- backwash filters; flocculation equipment; and ngers. ▪ Environmental Elements Corp., Balti-, Md.

Circle 401 on inquiry card

TRACT FURNITURE / The company has intro- d a new four-color, 16-page "Mini-Catalog" n features a representative selection of com- contract furniture lines suitable for office, con- ce, cafeteria, classroom, reception and waiting s. ▪ The Howell Co., St. Charles, Ill.

Circle 402 on inquiry card

L SYSTEMS AND ACCESSORIES / An integrated y of metal stud systems and accessories is the ct of a new brochure which describes pre-en- red systems for construction of load-bearing non-load bearing partitions, curtain walls and drel walls. Numerous illustrations and applica- photos supplement text material. Detailed load engineering tables and suggested specifications so included. Descriptive data is supplied for the pany's nailing channel system, drywall furring nel and related drywall accessories. Simple de- drawings show proper application tech- es. ▪ Allied Structural Industries, Detroit, Mich.

Circle 403 on inquiry card

SS DOOR BOOKLET / The new two-color illus- booklet offers both technical and general in- ation regarding glass *Tuf-flex* doors, choice of gs and operating hardware, styles and combina- and related information. ▪ Libby-Owens-Ford Toledo, Ohio.

Circle 404 on inquiry card

RGY-SAVING BRICK / "Walls to Save Energy," ign professional's guide to energy conservation brick, has recently been added to the Brick In- e of America's technical design library. Pri- y for architects and engineers, this report is an pth study of life-cycle energy efficiency design- vith brick. ▪ Brick Institute of America, Chi- Ill.

Circle 405 on inquiry card

AR SHAKES / A design idea and reference man- n Western Red Cedar shake and shingle panels, ding application drawings, technical data and fication sheets is available for architects and de- rs. Featured in the hardcover, three-ring binder full-color brochure on a variety of textured es and shingles, in panels for sidewalls, man- and roofs. Illustrated fact sheets on shingle ls for interior walls and fancy-butt shingle pat- are included. ▪ Shakertown Corp., Winlock, n.

Circle 406 on inquiry card

ER COOLER CATALOG / Thirty-eight models ater coolers along with optional accessories and es are featured in the company's 1975 catalog. r coolers are offered in full, semi- and simu- recessed designs in addition to a line of free- ing and wall-mounted units. Color selection e made from 13 paint and vinyl coverings plus ess steel and bronze. ▪ Ebco Mfg. Co., Co- us, Ohio.

Circle 407 on inquiry card

VENTILATION GUIDE / This 24-page booklet assists engineers in designing air handling and distribution systems, and ventilation systems. Topics covered, complete with charts, tables and curves, include principles of airflow, sizing of ductwork, effects of inlet and outlet conditions on axial fans, hood design, sound and noise engineering and electric motor data. ▪ Western Engineering & Mfg. Co., Marina del Rey, Cal.

Circle 408 on inquiry card

ELECTRICAL DISTRIBUTION / A comprehensive 370-page catalog provides typical specifications for electrical distribution and control products for use in industrial, commercial, residential and public works construction activities. Intended primarily for electrical equipment specifiers, including architects and consulting engineers, the catalog is intended to save time and effort in designing and specifying an electrical distribution system. ▪ Westinghouse Electric Corp., Pittsburgh, Pa.

Circle 409 on inquiry card

TUB-SHOWER ENCLOSURES / Included in the literature are specifications and four-color photography of sliding door enclosures, folding door enclosures, pivoted doors, hinged doors, door and panel entrances and special installations of glass and plastic glazing materials. ▪ Howmet Corp., Magnolia, Ark.

Circle 410 on inquiry card

GYM FLOOR FINISHING / New illustrated literature on gym floor finishing features two specific systems. One utilizes a penetrating finish with a glare-free sheen; the other utilizes a sealer and an oil modified urethane surface coating to create a durable high gloss finish. Both systems create a surface that is durable, efficient and easy to maintain; both are formulated for non-skid, non-slip safety and resistance to rubber burns, according to the company. The literature includes a discussion of the advantages of each system and the products required to obtain the desired finish. Application instructions are detailed. ▪ Minwax Co. Inc., Clifton, N.J.

Circle 411 on inquiry card

LABORATORY FURNITURE / This 16-page "brief-catalog" describes everything from base units to work-tops, service fixtures to fume hoods. The bulletin explains all-steel construction and phosphatizing treatments for the products, and how furniture styling can help create a pleasant working atmosphere for the laboratory. ▪ Fisher Scientific Co., Pittsburgh, Pa.

Circle 412 on inquiry card

FLUSH DOORS / Architectural and residential doors are shown in a new 1975 eight-page four color catalog. Complete descriptions, specification and illustrations are included for each type door. ▪ Paine Lumber Co. Inc., Oshkosh, Wis.

Circle 413 on inquiry card

TREATED-PLYWOOD PRODUCERS / A directory of firms preservative-treating plywood and lumber for wood foundations is available from the American Plywood Association. Names and addresses are provided for manufacturers subject to the American Wood Preservers Bureau treatment standard and quailty control program which applies to plywood and lumber for ground contact. AWPB-FDN identifies materials accepted for wood foundation use by HUD and FHA building code authorities. ▪ American Plywood Assn., Tacoma, Wash.

Circle 414 on inquiry card

more literature on page 161

TRAPEZOID AND TRIANGLE WINDOWS / Built-to-order trapezoidal and triangular windows feature 1-in. insulated glass glazed directly to a heavy 5/4 frame, making a rigid, clear view unit. To supply these units, the company needs only certain rough opening dimensions. Windows up to 35 sq ft are covered under a standard pricing formula. Units over 35 sq ft may be ordered under special arrangements. ▪ Marvin Windows, Warroad, Minn.

Circle 303 on inquiry card

RUSTIC ASPHALT SHINGLES / The new design was made possible by a method of on-line production of two-ply lamination of felts in the manufacturing of asphalt shingles. *Dimensional Shake Shingles* are available in tan, brown, desert tone and gray. They carry an Underwriters Laboratories Inc. Class "C" fire rating. Factory-applied thermoplastic sealing adhesive that bonds shingles to the shingles in the course below provides wind resistance. ▪ The Celotex Corp., Tampa, Fla.

Circle 304 on inquiry card

ARCHITECTURAL CALCULATOR / An inexpensive dual calculator, which enables the architect to perform quickly and efficiently every calculation normally encountered in architecture, will perform such calculations as the adding of dimensions, the estimating of material quantities and the computation of building areas. ▪ Robert Berge, New York City.

Circle 305 on inquiry card

CONCRETE SEALER / *ACS* architectural concrete sealer helps increase the life and appearance of concrete by sealing the surface against moisture, dirt, hydrocarbons, airborne industrial chemicals and other discoloring agents. It is said to make concrete surfaces resistant to efflorescence, fungi, ultra-violet deterioration, rust and oxidation. *ACS* also protects against damage from graffiti by shielding against most materials used for graffiti and making them removable with a solvent. ▪ Symons Corp., Des Plaines, Ill.

Circle 306 on inquiry card

DIAZOPRINTER / The *1000P* diazoprinter can accommodate materials up to 54 in. wide by any reasonable length, with speeds up to 100 ft per minute, and a 9000-watt, high-pressure mercury vapor lamp with a hi-med-lo intensity control. The adjustable front print stacking tray of the new diazoprinter holds prints up to 24 in. long, while the adjustable rear print stacking tray accepts prints up to 42 in. long. The printer is also engineered for either an anhydrous or regular liquid ammonia system. ▪ GAF Corp., New York City.

Circle 307 on inquiry card

more products on page 155

ARCHITECT:
J. J. Claret, Sarasota, Florida
STRUCTURAL STEEL:
Musselman Steel Fabricators, Inc., Tampa, Florida

STEEL JOISTS USED IN NEW FLORIDA CONDOMINIUM

The opportunity of getting seven buildings completed and ready for occupancy in fast time was a principal reason open web steel joists were selected for these Longboat Harbour Condominiums in Sarasota, Florida.

Planned and constructed by I. Z. Mann & Associates, Inc., they are located in an attractive setting in the beautiful Longboat Key area. Overall economy, plus the speed of erection for floor and roof support made steel joists the structural answer to this building need. The lighter total dead load also permitted savings in foundation construction costs in the sandy soil.

Learn more about the benefits of open web steel joists. Send coupon today.

STEEL JOIST INSTITUTE
2001 Jefferson Davis Highway
Arlington, Va. 22202

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7th Floor, 2001 Jefferson Davis Hwy.
Arlington, Va. 22202

Please send me your new copy of Specifications and Load Tables for Open Web Steel Joists.

Name_____

Title_____

Firm_____

Address_____

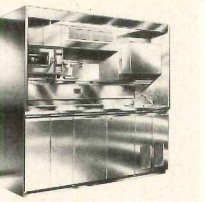
City_____ State_____ Zip_____

For more data, circle 58 on inquiry card

ECTRIC FIREPLACE / An electric wall-hung fireplace requires no structural changes, and can be hung on one wall bracket. The fireplace comes from the factory with a gray prime coat so that it can be painted or decorated to suit decor. The base is 30¾ by 19 in. When the unit is plugged into a ndard 115-volt outlet, room air enters a louvered ea under the raised hearth, is drawn by fan through heating element and returned to the room from der the flared hood. The heating element and fan thermostatically controlled. ▪ Heatilator Fireace, Div. of Vega Industries, Inc., Mount Pleasant, va.

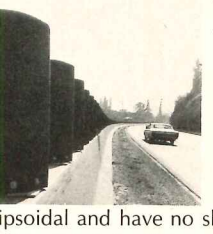
Circle 308 on inquiry card

ALLEY STATIONS / Two prefabricated stainless steel galley stations are designed primarily for main meal service. *Model 8430* is a 7-ft unit that includes all components for main and between-meal service. *Model 6030* (left), a 5-ft galley station, ides a sanitary ice maker dispenser. Both models corporate a single set of service connections and n be installed as freestanding units or permanently cessed in new construction or renovations. Both clude full-width unobstructed work counters, inless steel sink and a dual compartment underunter refrigerator/freezer. ▪ Crimsco, Inc., Kan- City, Mo.



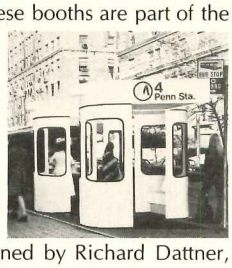
Circle 309 on inquiry card.

OUVERED GLARE SCREEN / Set at variable angles to the roadway and at intervals of from 21 to 48 in., according to local conditions, the green *Forward* screen is highly adaptable and easy to maintain. Its blow-molded polyethylene "blades" are ipsoidal and have no sharp edges. When hit, the xible "blade" will bend out of the way and return its original position. Available in heights of 2, 3, d 4 ft, the screen can be mounted on concrete diers, guard rails, or ground. It offers an impenetra- shield against headlight glare and at the same ne affords accessibility and visibility from one side a highway to another in case of emergency. ▪ oven Products, Inc., Portland, Ore.



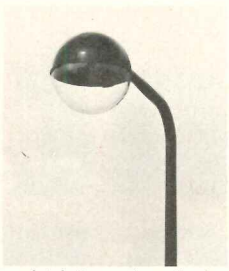
Circle 310 on inquiry card

ODULAR BOOTHS / These booths are part of the *reetscape* system of eet furniture and shels that can be adapted bus shelters, newsnds, self-service gasoe stations, restaurants, ardhouses and parking oths plus various prebricated buildings. Designed by Richard Dattner, shelters are available in either fiberglass, porcen enamel on steel or *Cadcrete* and produced in y size or configuration. Standard color is white, t other colors are available. Numerous accessories rmit varied usage of the modules. ▪ 2001, Inc., w York City.



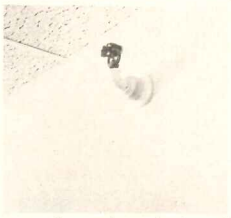
Circle 311 on inquiry card

HIGH EFFICIENCY LUMINAIRE / An efficient reflector system and a spherical luminaire highlight the new *Wingate* series of outdoor lighting fixtures. A bilateral reflector system is adjustable to provide a full range of IES light distribution patterns for various project requirements. Incandescent or high-intensity discharge lamps of 100 to 1000 watts may be used, and up to four luminaires can be arranged on various poles at heights of 7 ft 6 in. to 40 ft. ▪ Sterner Lighting Systems Inc., Winsted, Minn.



Circle 312 on inquiry card

SIDEWALL SPRINKLER / A new sidewall sprinkler design provides a long-throw spray pattern of up to 300 sq ft. This area coverage makes it possible to install a lower-cost sprinkler system with fewer sprinklers and fittings, less pipe and, frequently, reduced pipe sizes, according to the company. Exposed piping is minimized and piping can often be confined inside walls, corridors or other service areas. The product is offered in both bronze and chrome finishes, and the pipe flange and elbow can be painted. ▪ Automatic Sprinkler Corp. of America, Cleveland, Ohio.



Circle 313 on inquiry card

Don't ask the man who owns one.

He's probably forgotten he bought it, because the Rite-Hite Fully Automatic dock leveler was designed to be ignored. It has a history of uninterrupted performance that is flatly amazing. In more than 20 years, covering literally thousands of installations, not a single unit has ever failed mechanically.

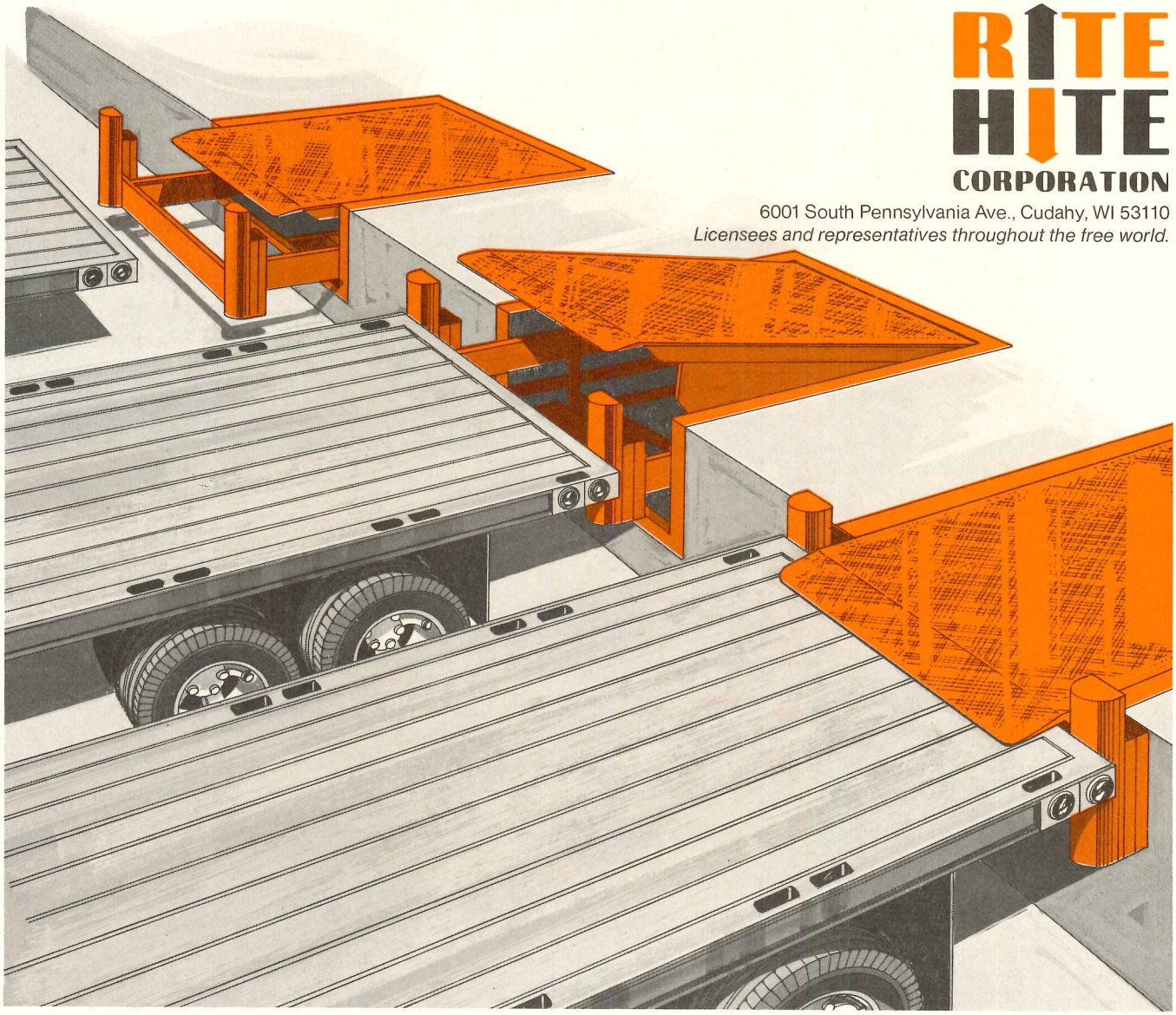
If you're a bug on maintenance, the Fully Automatic will probably make you nervous, because it can't be adjusted. No need. But no downtime, either. It will keep on operating 24 hours a day for many, many, many years. Which means your first cost is your last cost. Long term, it is easily the cheapest and most productive leveler you can own. Easiest to operate, too. It's activated by the incoming truck.

Sound incredible? Try this: We absolutely and unconditionally guarantee the Rite-Hite Fully Automatic leveler against mechanical failure of any kind for five years after it is installed. If, after five years, you're still worried about maintenance, have your dock crew wash it. But tell them not to fool around with it. It'll be working fine. Write for details.

RITE HITE CORPORATION

6001 South Pennsylvania Ave., Cudahy, WI 53110

Licensees and representatives throughout the free world.



For more data, circle 60 on inquiry card

RATION DAMPER / A two-page data sheet de-bing the *Sound Stopper Vibration Damper* for e control on metal surfaces is now available. The y-to-use material is engineered to damp reso-vibrations of steel, stainless steel and aluminum surfaces. Applied with spray, brush, roller or el, this visco-elastic coating retains its sound dening properties for years. It is fire-retardant, -free and chemically-resistant to most com-ly used acids, alkalis and solvents. ▪ Singer tions, Inc., Chicago, Ill.

Circle 415 on inquiry card

MBINGWARE GUIDE / A 20-page pocket-sized e of a full line of plumbing fixtures contains de-d specifications and gives references to product-roduct features, colors, options, sizes and instal-n information. It is divided into eight product ons covering the total line of bathtubs, lava-s, water closets, sinks and commercial fix-s. ▪ Briggs, Tampa, Fla.

Circle 416 on inquiry card

EGOODS LINE / The company is offering three color brochures on its complete casegoods line. *ENVIRO-70* brochure features casegoods for th care and hard use installations. *MOBILA-90* *SPECTRUM-80* brochures discuss lines for use in cational and other casegoods applications. ▪ net Industries, Inc., York, Pa.

Circle 417 on inquiry card

LTH-CARE EQUIPMENT / This health care pment catalog describes and illustrates a line of less steel refrigerators and freezers for hospital lab installation, as well as autopsy and morgue pment. The line includes freestanding, counter-under-counter, and wallmounted models. The -page brochure includes metric as well as Eng-dimensions and temperature ranges. ▪ The tt Refrigerator Co. Inc., Buffalo, N.Y.

Circle 418 on inquiry card

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With reference to the Airports article in the No-er issue of ARCHITECTURAL RECORD, the credits for esign of the Terminal B interiors of Newark In-tional Airport should read that Howard Grill, president, was the project Manager and that ll Brody, vice president and chief architect of tt, Merkt & Company, was the officer-in-ge.

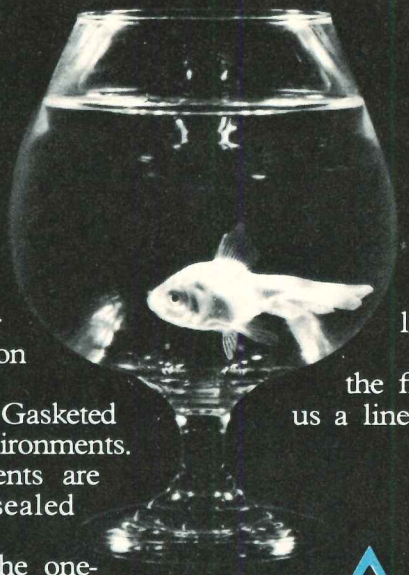
In our coverage of "Wood and Plastics," page the Mid-October 1974 PRODUCT REPORTS issue, were in error in stating that "three-ply ½-inch ood is being tested at the American Plywood ciation as an alternative to five-ply ⅝-inch s."

APA confirms that "tests have proven that the standard of structural performance can be ved using fewer plies in the production of ood. Three-ply and four-ply plywood are now interchangeably with five-ply plywood for nor-sheathing applications."

Also in the Mid-October 1974 issue, we wish to t the following photo sources for the article, Architect as Product Designer:" page 18, Fig-1 through 5, *Collection, the Museum of Modern New York;* Figure 6, *Kevin Roche John Dinkeloo Associates;* page 19, *Knoll International;* page *Wayne Thom;* page 20, drawings, *Peerless Elec-*page 21, Figures 11 and 12, *Jeremiah O. Brag-* Figure 13, *Collection, Museum of Modern Art, York;* Figures 14 and 15, *Sam Davis.* Mr. Davis, author, is Assistant Professor of Architecture, ersity of California at Berkeley.

For more data, circle 61 on inquiry card ▸

Fishin' for Fixtures?



Try our new moisture-proof Enclosed and Gasketed type!

If moisture, non-hazardous vapors or dusts are likely to cause lighting problems, American Louver Co. can throw some light on the situation.

Our new Enclosed & Gasketed Fixtures shine in these environments. Injection molded components are non-corrosive and are sealed against moisture and dirt.

Impact resistant, too. The one-piece chassis is injection molded from impact resistant ABS. Acrylic diffusers are also injection molded for perfect fit. (Impact resistant DR acrylic diffusers also available.) Captive latches require no tools. Make maintenance a snap.

Available in 50″ lengths, these new fixtures are designed for either one or two fluorescent lamps. Frosted diffusers give greater lamp obscuration plus greater lighting efficiency.

So stop fishing... we've got the fixture you need. Just drop us a line requesting Bulletin #400.

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For more data, circle 62 on inquiry card

OFFICE NOTES

New firms, firm changes

EDAW, Inc. announced the opening of offices in Fort Collins, Colorado and the appointment of Herbert R. Schaal as principal-in-charge of these offices. EDAW, Inc., based in San Francisco with offices in Newport Beach, Minneapolis, and Honolulu, will be located at Rocky Mountain Building, Suite 700, 315 West Oak Street, Fort Collins.

Copelin and Lee, Architects have announced that Mr. Lien Ching Chen has joined the partnership and that the name of the firm has been changed to **Copelin, Lee and Chen, Architects,** 150 East 79th Street, New York.

Gary R. Brown, Frank G. McCurdy & Charles D. Stickney have formed an architecture and planning firm to be known as **Brown, McCurdy & Stickney,** Pier 35, The Embarcadero, San Francisco.

Cambridge Seven Associates, Inc. have moved to new offices at 1050 Massachusetts Avenue, Cambridge.

Gordon H. Terwillegar, P.E. announced the opening of his office at 75 Augusta Road, Lavonia, Georgia.

Rosenfeld/Harvey/Morse, Architects have announced the relocation of offices to the Penthouse, 350 Madison Avenue, New York.

Benham-Blair & Affiliates, Inc. has acquired the firm of Wildman & Morris at 111 New Montgomery Street, San Francisco; at the same time has moved its West Coast headquarters to that location.

Claude Stoller and David Evan Glasser have announced that they will be continuing to practice architecture under the name of **Stoller/Glasser,** formerly the New York office of Marquis and Stoller.

Henningson, Durham & Richardson, Omaha-headquartered architectural-engineering firm, have established a new regional office in Atlanta, Georgia.

James M. Webb, Architect AIA and David A. Coon have opened offices in San Francisco and Altadena, California for the practice of architecture and planning. The firm will be operating under the name of **AESTHETIKA, INC.**

L. Jane Hastings and Carolyn D. Geise have recently formed a partnership for the practice of architecture. Known as **The Hastings Group,** their offices are located at 1516 East Olive Way, Seattle, Washington.

John Carl Warnecke and Associates, San Francisco-based architectural firm, has opened offices at 9665 Wilshire Boulevard, Beverly Hills, California.

Morris Ketchum, Jr., FAIA has announced his firm's new name is **Morris Ketchum, Architect,** 104 East 40th Street, New York.

The firm of James T. Canizaro Architect has changed its name to **Canizaro Trigiani Architects,** 733 North State Street, Jackson, Mississippi.

The architectural firm of **Jenkins-Wurzer-Starks, Architects,** P.C. has relocated its offices to the Builders Exchange Building, 65 College Avenue, Rochester, New York.

Neubeck and Tatler have reorganized under the name of **Tatler Rue Associates, Architects.** Operations will continue from 495 West State Street, Trenton, New Jersey.

School Outdoors

Large expanses of vision area in these high school buildings let the outdoors flow in. The openings are glazed with C-E Polarpane "20" Tempered Insulating Units in bronze . . . to keep the extremes of winter out.

C-E Polarpane insulating performance ("U" value .55) makes this open effect practical at George Junior Republic School . . . even though the school is located at Freeville in upper New York State, where winter means winter all winter long.

Students stay warm, comfortable and alert. A higher, more desirable level of humidity contributes to a feeling of warmth at lower temperature settings . . . and helps guard against itchy eyes, the irritation of dry skin and chapped hands.

Because C-E Polarpane holds higher temperatures at the glass, beneficial humidities can be maintained without condensation formation, dripping or inside frost, under most conditions.

Performance like this cuts initial investment in heating equipment. It means additional savings every year by reducing the requirement for fuels which are bound to become more expensive and harder to obtain in a situation of energy crisis.

For safety's sake, C-E tempering makes these units 3 to 5-times stronger than ordinary glass . . . providing welcome impact protection in areas of heavy student traffic.

To learn more about C-E Polarpane "20," see the C-E catalog in Sweets: 8.26/CE. For additional information, contact our local representative or write C-E Glass, 825 Hylton Road, Pennsauken, N.J. 08110, (609) 662-0400.

Architect: J. Victor Bagnardi, Ithaca, N.Y.
Glazing Contractor: Hires-Turner Glass Co., Elmira, N.Y.

Polarpane "20" can be fabricated with clear, tinted or pattern glass and is available in many irregular shapes. The units are hermetically sealed with C-E's primary butyl sealant which offers the greatest resistance to water absorption and lowest vapor transmission available anywhere. This sealant plus a secondary sealant and desiccant are enclosed by a stainless steel spring channel which maintains permanent pressure on the primary seal. This enables C-E to provide a 20-year warranty for moisture-free performance in the sealed area. This warranty is backed by Combustion Engineering, Inc., one of America's leading industrial firms.

C-E GLASS
COMBUSTION ENGINEERING, INC.

For more data, circle 64 on inquiry card

The Mansards, Griffith, Indiana

"The whole idea of "The Mansards" is to provide gracious living accommodations in a natural setting of trees and water. The convenience of city living is combined with the graciousness of country living here. We have put top quality into "The Mansards" and that extends to our coin-operated laundry equipment. We chose Speed Queen for one simple over-riding reason—it's the best we could get."

Duane J. Hicks, Jr., General Manager

Lake Point Tower, Chicago, Illinois

"Lake Point Tower represents a new kind of urban life—a completely self-contained city at the edge of Lake Michigan. We appeal to individuals and families of middle and upper income. They expect and get the best at Lake Point Tower. That's why we chose Speed Queen equipment for our laundry facility. Speed Queen represents quality which will be on the job—not out of order.
And I understand the Stainless Steel feature is a real plus when laundering durable press fabrics."

Robert E. DeCelles, Building Manager

"We chose Speed Queen laundry equipment for one simple reason–it's the best we could get."

Let SPEED QUEEN and your SPEED QUEEN COMMERCIAL ROUTE OPERATOR help you plan coin-operated laundry facilities

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S-1

Mr. E. W. Jess,
Manager, Commercial Department
Speed Queen, Ripon, Wisconsin 54971

Gene, please forward your laundry room design brochure.

☐ Please send me name of the Speed Queen Route Operator nearest me.

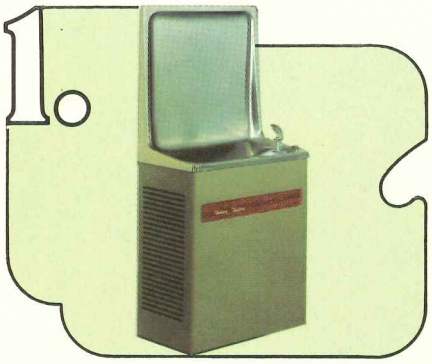
☐ I would like a Speed Queen representative to call.

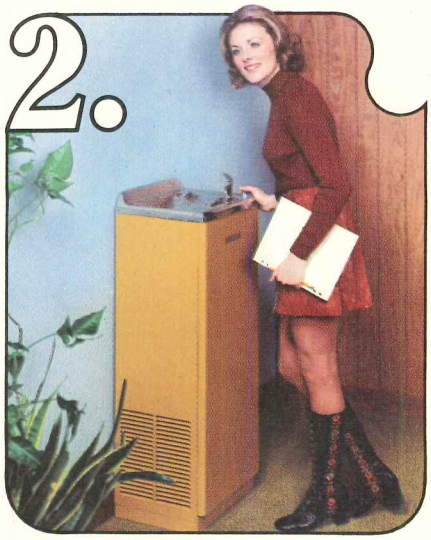
Name and title_____

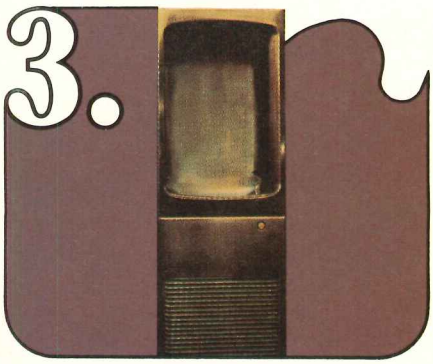
Firm name_____

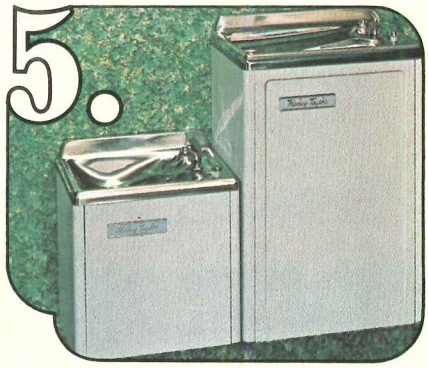
Address_____

City_____ State_____ Zip_____









Liquid assets.

Every Halsey Taylor water cooler is an asset to the people who own it and use it. It consistently lives up to its billing as the world's number one water cooler because we've established a standard of quality unmatched by anyone. And we never let it slip. We test every Halsey Taylor product—thoroughly—as it comes off the line. No spot checking. *Every* feature of *every* cooler must be perfect.

One more thing. Halsey Taylor offers the widest selection of water coolers you'll find anywhere. Coolers for just about any application, any decor.

For details on the following, write to Halsey Taylor Division, 1554 Thomas Road, Warren, Ohio 44481.

1. New simulated semi-recessed cooler—HBW Series. Designed for today's thin-wall construction. Requires no cutout yet looks like a semi-recessed cooler. Capacity: 8 and 13 g. p. h. of 50° water.

2. WT Series. For wall-tight installation. Standard gray or any of 8 Polychrome colors at no extra cost. Capacity: 8 to 20 g. p. h. of 50° water.

3. Fully recessed RC Series. One-piece, contour formed fountain receptor. No welds, no crevices to catch dirt. Grille vanes individually formed and fitted, not stamped out. Available in PATINA bronze-tone or satin finish stainless steel. Capacity: 8 and 12 g. p. h. of 50° water.

4. All-climate wall fountain No. 5905-AC. For all outdoor installations. Frost-proof supply valve and drain assembly. Vandal resistant. Other all-climate models available in fiberglass and porcelain enameled cast iron.

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6. SW Series. Just 20½" top to bottom. Can be wall-mounted at adult or child height. Famous anti-squirt, two-stream bubbler. Polychrome colors at standard cost.

7. Model 6800 WC fountain. Designed for wheel chair patients. Extends 19" from wall. Meets state and federal regulations for the handicapped. Lever-type control. Capacity: remote cooling units available from 5 to 19 g. p. h. of 50° water.

8. Outdoor fountain No. 6837. Weather resistant. Automatic stream control and positive shut-off service valve. Vandal-resistant exposed fittings. Cabinet also available in gray enamel.

Halsey Taylor®
KING-SEELEY THERMOS CO.

For more data, circle 66 on inquiry card

Our remote control blind is a shade above the others.

Alcan Mark II® blinds control heat, light and glare as well as any window treatment. But we made our blind a shade better than the rest. Because we made the only one-inch blind that is one inch all over: louvers, headrail and bottomrail. With nearly invisible ladders. So the slim-line effect is beautifully consistent from top to bottom.

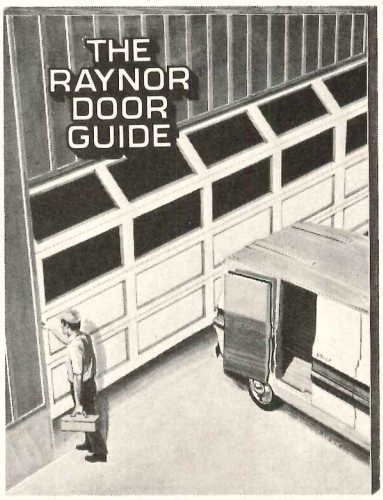
Now we've added another little touch. Motorized control. Two "C" batteries power a tiny motor that fits invisibly inside our one-inch-square headrail. And the control can be installed at the wall or anywhere in the room.

Remote control is just a shade of difference, maybe. But enough to set one executive office or conference room apart from another. And it's an especially good idea for blinds between the surfaces of double-pane windows.

We'll send you a list of window manufacturers who use Alcan Mark II blinds. We'll also send you a book full of other good design ideas — colorful ideas — for using the Mark II with or without motorized control. Just write for *Window Moods* to Alcan Aluminum. Dept. IA. Box 511. Warren, Ohio 44482.

Alcan Building Products
Division of Alcan Aluminum Corporation

ALCAN



All the facts you should know about garage doors can be found in this complete Raynor reference guide. Garage door styles, materials, mountings, applications, specifications (including handy door and track selection guides),... **PLUS** information on Raynor's new deep-ribbed, good-looking 'Security Line' steel doors. See why Raynor builds better doors.

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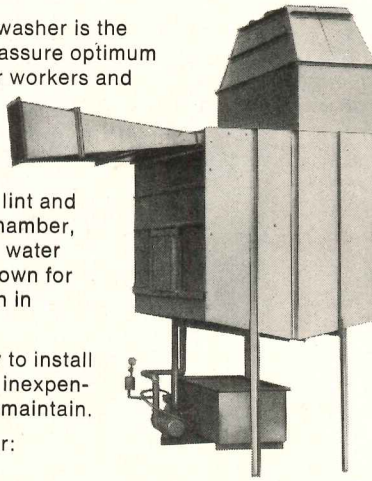
The ingenious way to clear the air.



ECI's exclusive air washer is the economical way to assure optimum efficiency from your workers and your equipment. Using a high-speed air stream, Mistair pulls superfluous particles, lint and dust into its main chamber, where a continuous water spray-mist wets it down for automatic collection in reusable bags.

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A change in course
And a final plea–to you–for help

A message from The International Architectural Foundation, Inc.:

The change in course: In lieu of an international design competition conducted simult neously for three cities in the developing world, all efforts will be concentrated at this tin on generating creative plans for a 3,500-person neighborhood in the heart of Manila.

The reason: This change results from the recent visit of our professional advisor to the Phili pines, where an intensive effort is underway to ameliorate the sordid living conditions of ov 200,000 squatters in the Tondo Foreshore area. Philippines authorities have expressed hop that The IAF Competition for the design of a neighborhood in Dagat-dagatan, a relocatio area near the Tondo, will generate ideas that ultimately will benefit *all* inhabitants in th area—as well as contributing to solutions in other developing countries.

A tremendous challenge and opportunity!

We need your help now. To open the Competition by February, we need approximate $50,000 more than has been pledged to date. To achieve this goal, we are inviti contributions from individuals as well as institutions and establishing four categories f donors:

Sponsors ($20,000 and over)
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This is your opportunity to be associated publicly with this unique effort to bring the skil of architects the world over to bear on the problems of the urban poor.

Please send us your check today, payable to The International Architectural Foundatio Inc. Your gift will be used exclusively for purposes of the Competition. For addition information, see Editorial, October page 13; or telephone Blake Hughes, 212/997-4685.

Our sincere thanks to the following organizations which have pledged their generous suppo The Graham Foundation; The International Development Research Centre (Canada); Th Johns-Manville Fund; The Asia Foundation; The Austin Company; Hellmuth, Obata Kassabaum, Inc.; C.P. Air; E. H. Grolle, RAIC; the George P. McNear Foundation. Smit Hinchman & Grylls Associates; PPG Industries Foundation; Arthur Sworn Goldman Associates, Inc.

Problems of excessive population growth, unemployment, environmental decay, disease, alienation and urban squalor are all interrelated—rooted in ignorance and disability, breeding despair and desperation. Nowhere are these ugly problems more clearly focused than in the urban slums of the developing world. Nowhere is there a greater need for human solidarity and creative contributions.

The International Design Competition is a modest means to these ends and aims to

- alert architects and planners to the gravity of the accelerating urban crisis in developing countries;
- increase the fund of talent and expertise available for planning human habitations;
- involve architects and planners in the design of a demonstration project in a major city of the developing world;
- contribute to the success of the important United Nations Conference-Exhibition on Human Settlements (Vancouver, 197
- act as a catalyst for further contributions by individuals, institutions, organizations, and governments to the solution of the multi-faceted problems of housing the urban poor.

The International Architectural Foundation, Inc., 1221 Avenue of the Americas, New Yor NY 10020. (212) 997-4685.

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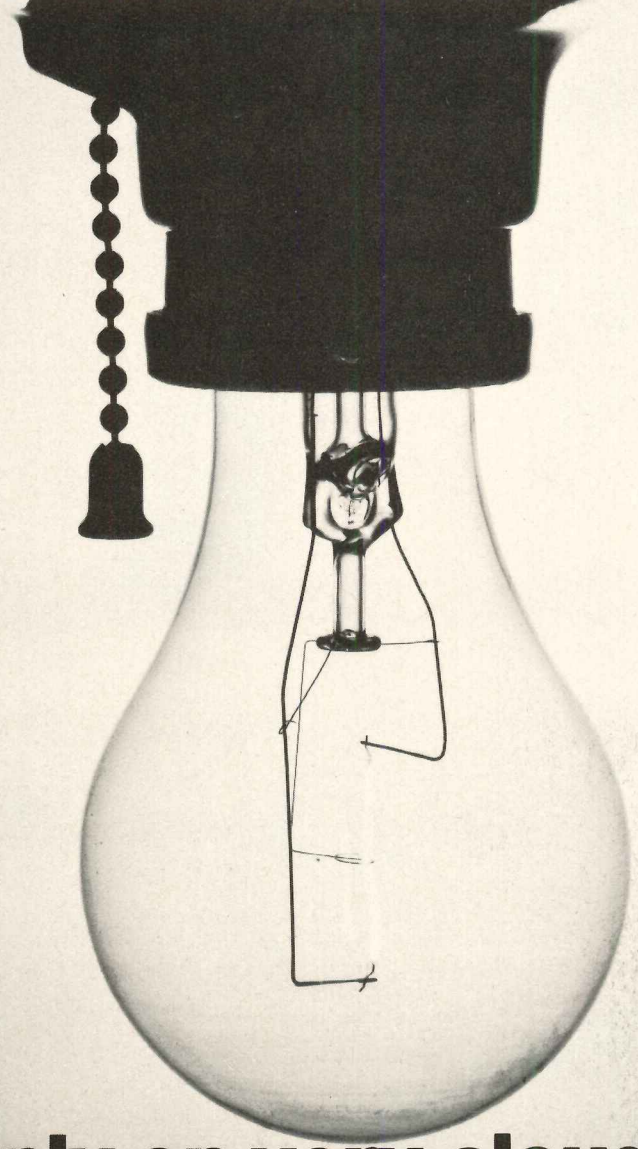

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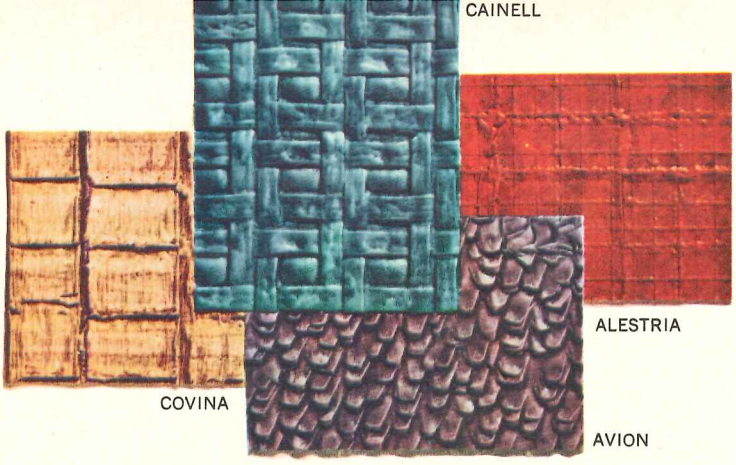

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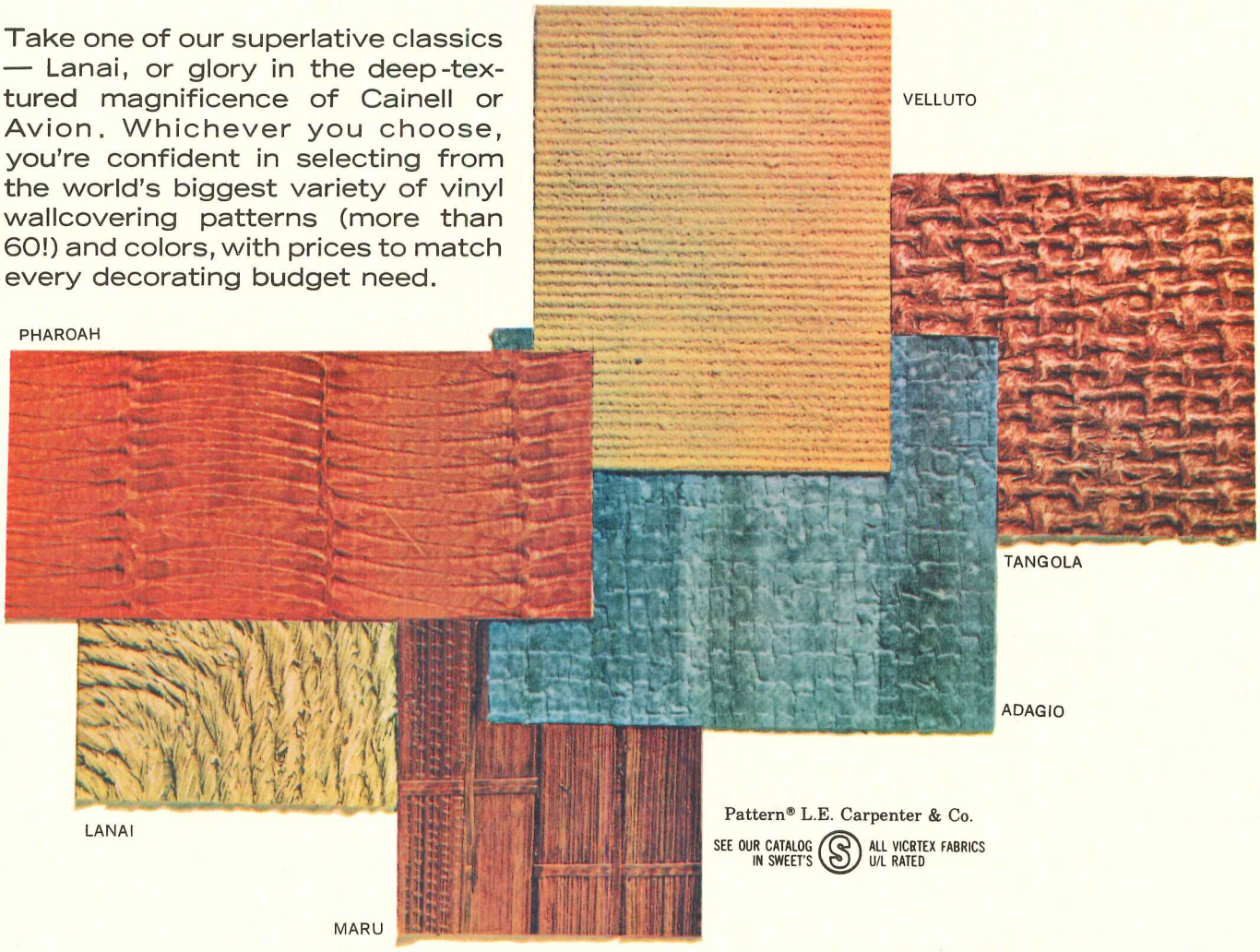

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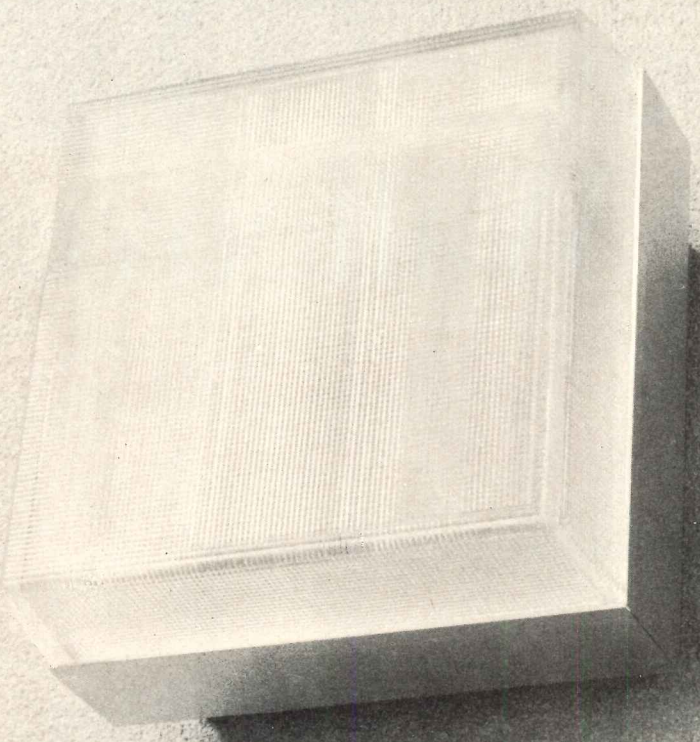

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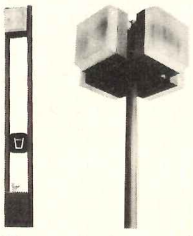

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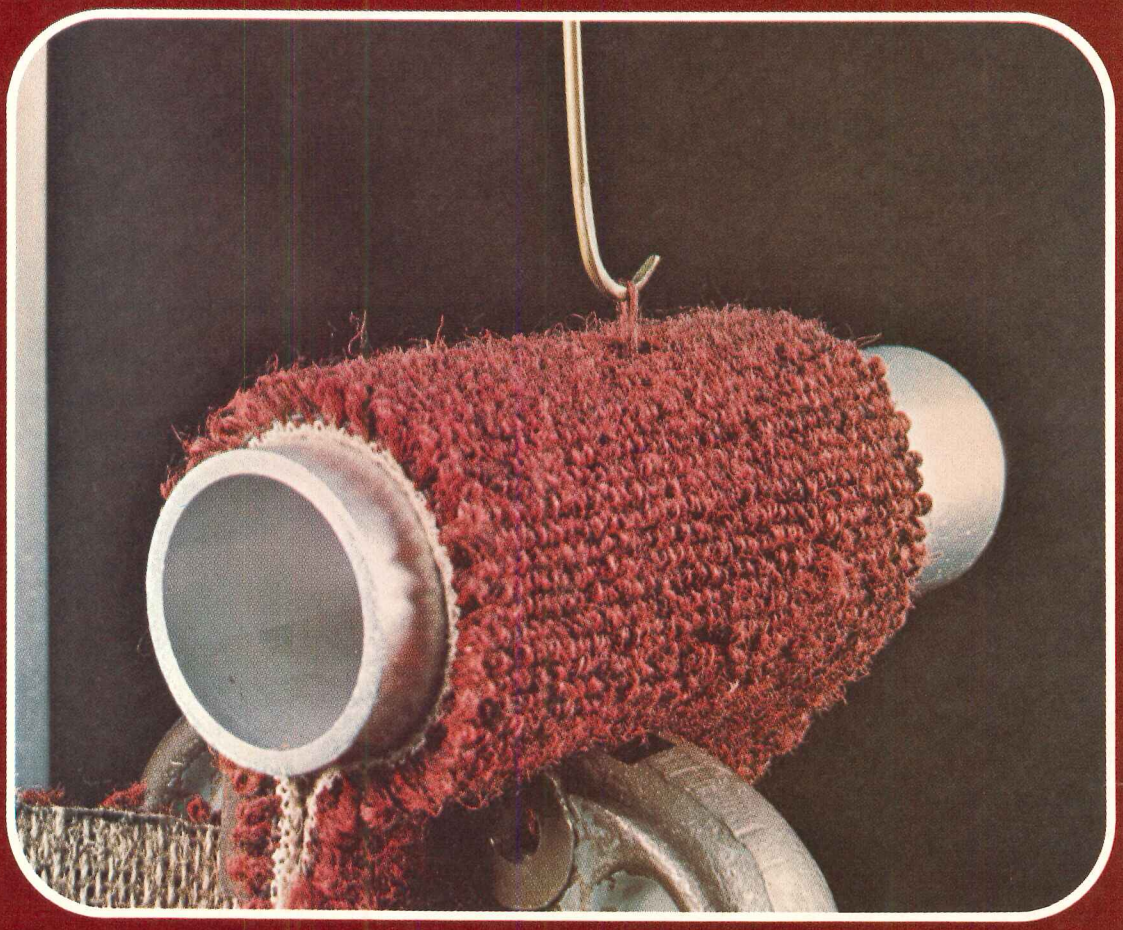
February	6- 7	Miami, Florida
March	6- 7	New York, New York
April	3- 4	St. Louis, Missouri
May	1- 2	Dallas, Texas
June	5- 6	Seattle, Washington
September	11-12	Detroit, Michigan
October	2- 3	Memphis, Tennessee
November	6- 7	Los Angeles, California
December	4- 5	Philadelphia, Pennsylvania

Dates and locations of workshops in other areas for 1976 will be announced.



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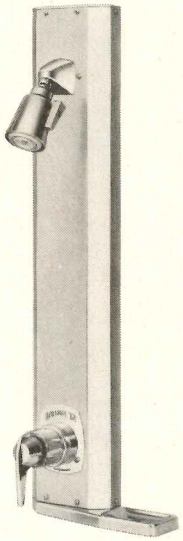

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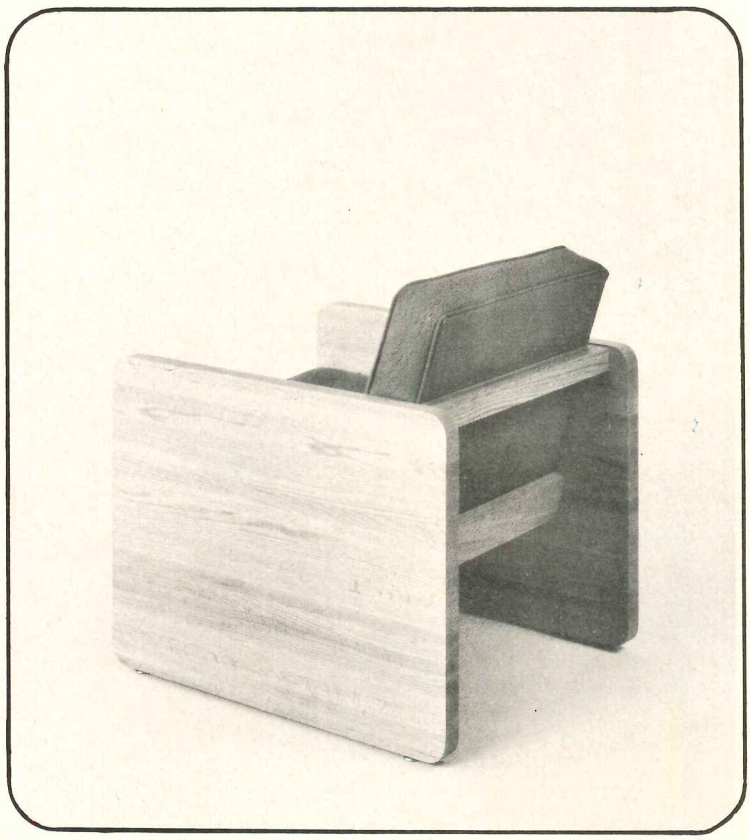

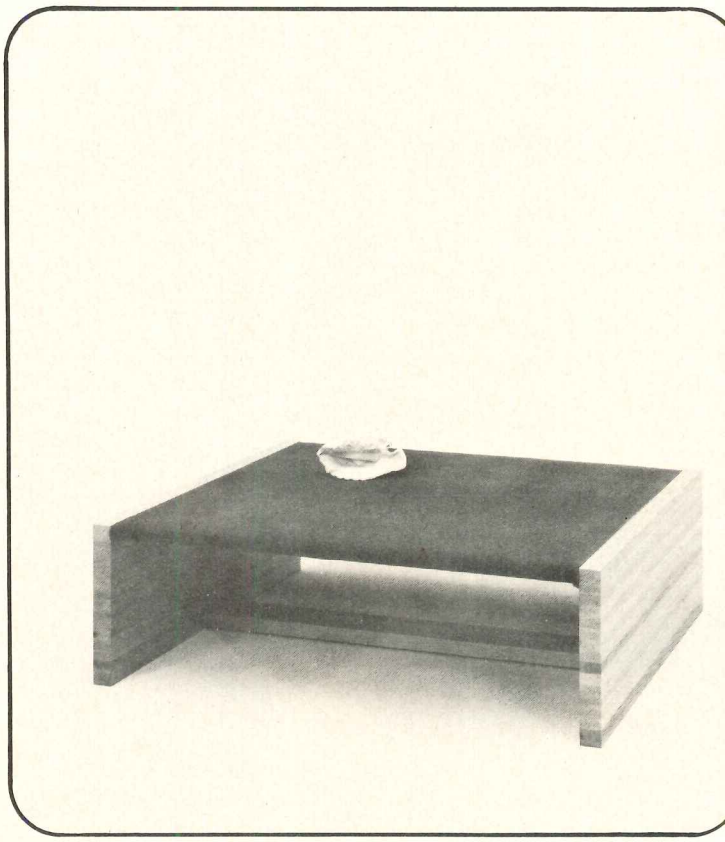

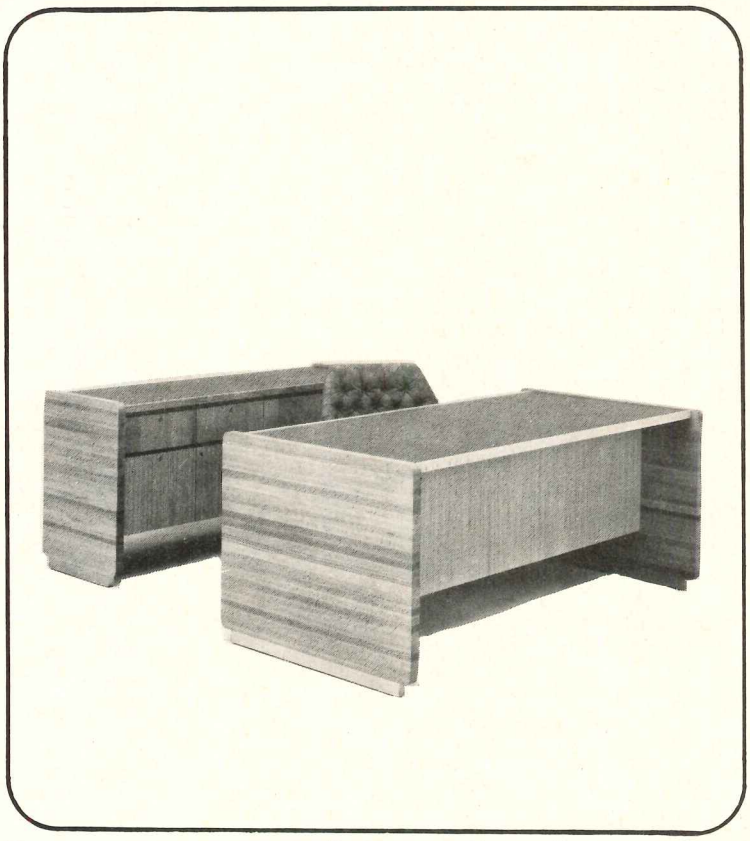

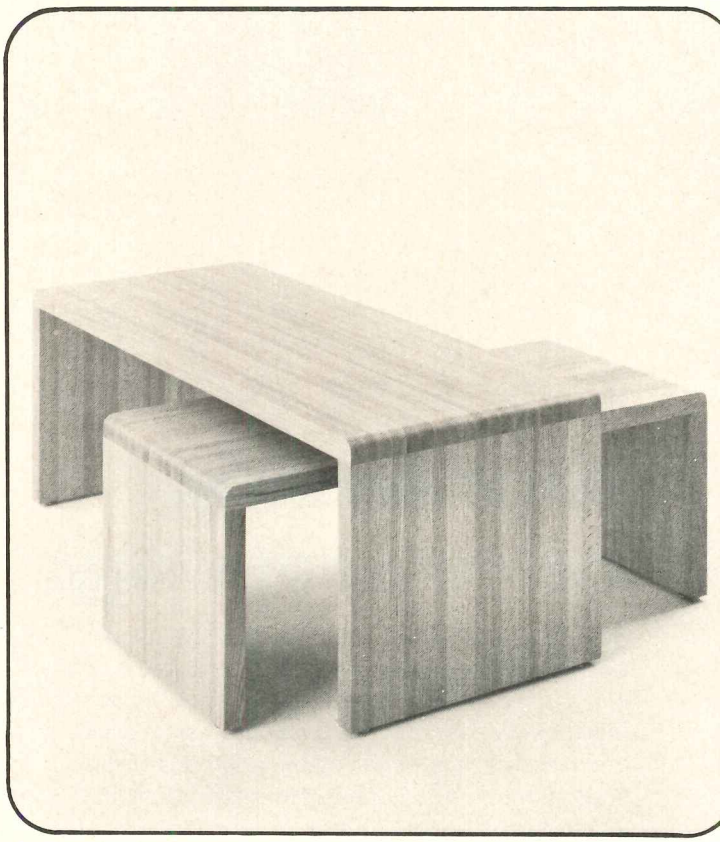

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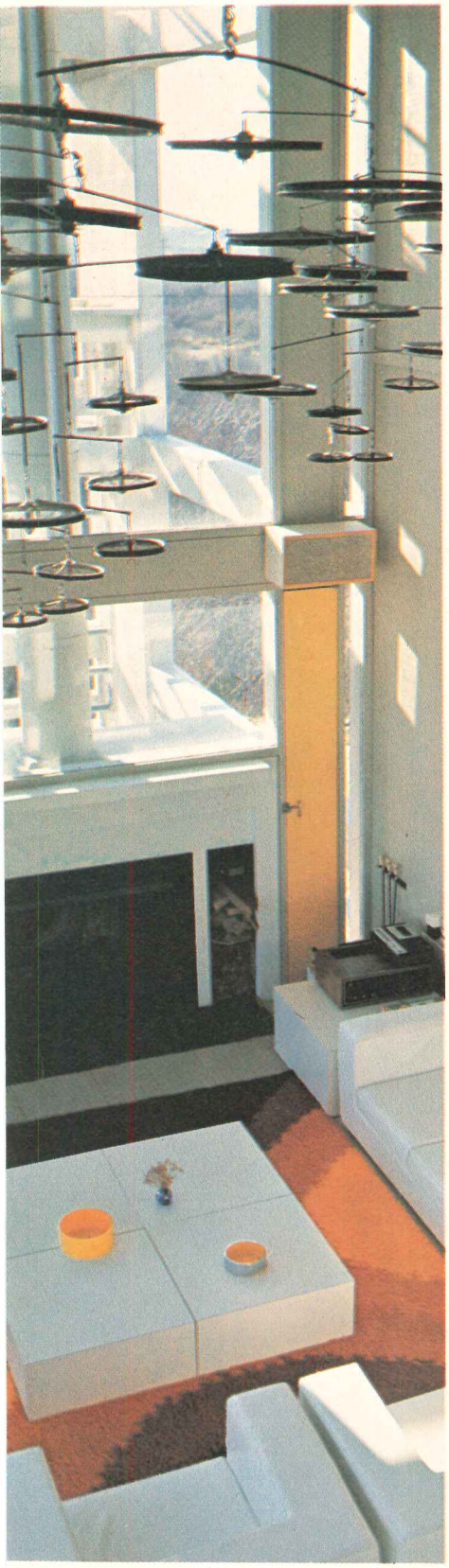

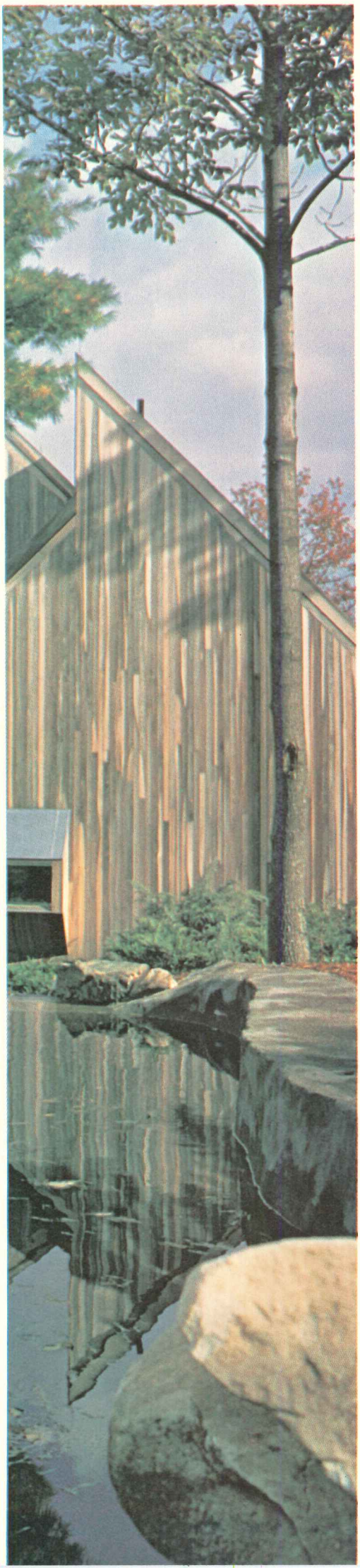

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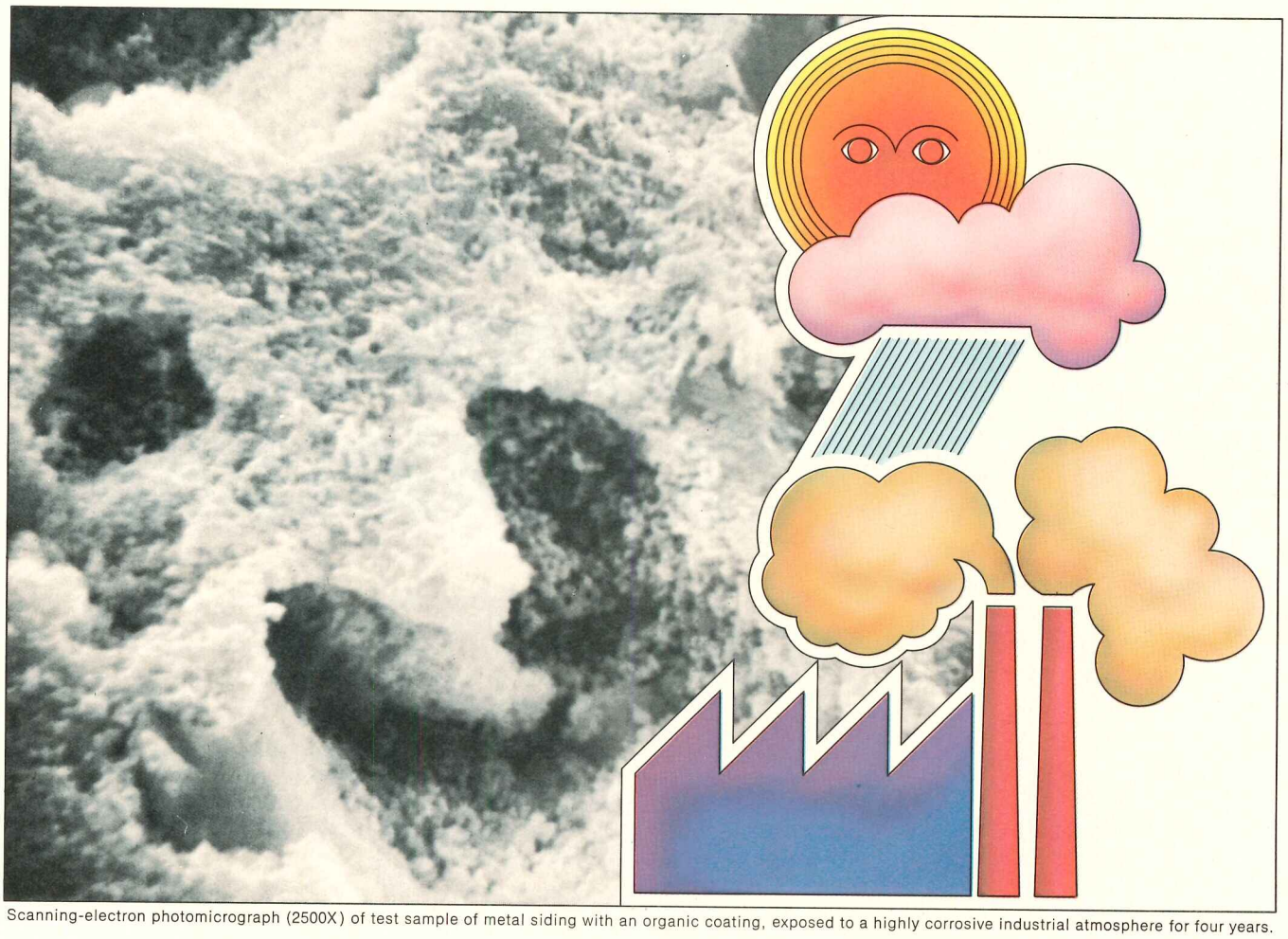
1221 AVENUE OF THE AMERICAS NEW YORK 10020

See how corrosion starts, then stops, because of an aluminum substrate.



Scanning-electron photomicrograph (2500X) of test sample of metal siding with an organic coating, exposed to a highly corrosive industrial atmosphere for four years.

The scanning-electron photomicrograph you're looking at shows how any organic coating weathers in time.

The coating has become spongelike and retains moisture. Wet cycles last longer. The hydrophilic cells trap such contaminants as sulfur dioxide, which combines with water to form sulfuric acid. Now the corrosive effects of electrolytic action include chemical attack at the interface . . . underfilm problems that can cause flaking or loss of adhesion . . . and staining or streaking, depending on the performance of the substrate.

At this point, however, an aluminum substrate helps to *protect* an organic coating because its natural aluminum oxide film resists the effects of electrolytic action. This stability at the paint-metal interface discourages flaking or adhesion loss. Painted aluminum can be drilled, punched and sawed without concern about chipping or undercutting.

If you want color in the second place, put it on aluminum in the first place. It will last. Especially if you specify an Alcoa® Super Alumalure® finish, the long-life PVF coating that offers the advantages of a super-tough fluorocarbon at a price you can live with.

For more information, see Sweet's Architectural or ICR/PE files. Or write Aluminum Company of America, 1085-A Alcoa Building, Pittsburgh, PA 15219.

Change for the better with Alcoa Aluminum

ALCOA

For more data, circle 87 on inquiry card

Whoever said "There are no shortcuts..."

...didn't know much about Sweet's GuideLines

Sweet's GuideLines is a method of improving catalog content by organizing product information clearly and logically for the mutual advantage of specifiers/buyers and manufacturers. GuideLines will pinpoint this information in the exact sequence and content that the construction professional requires for making comparisons and selections.

A GuideLines-organized catalog helps its user easily progress from logical thought to logical thought...to complete understanding for evaluation and appropriate action. A GuideLines-organized catalog helps the manufacturer by sequencing and presenting his product information in the most effective manner.

The GuideLines method has been proven in numerous applications and in the detailed analytical documents covering more than 230 specific product categories. Sweet's staff of Architectural/Engineering Consultants helps manufacturers implement the GuideLines principles in their individual product catalogs. These professionals are instrumental in Sweet's tradition of bringing industry buyers and sellers closer together.

If you'd like printed product information in Sweet's Catalog Files presented to you in this more systematic, easy-to-evaluate GuideLines manner...suggest that the manufacturers' representatives who call on you contact local Sweet's offices. Sweet's Professional Consultants will make themselves available to help manufacturers implement the GuideLines organization.

In their official document—E-101—the American Institute of Architects recognizes Sweet's GuideLines and recommends preparation of product information literature in a manner consistent with the GuideLines organizational concept.

See the GuideLines catalog 1.1/SW in any Sweet's 1975 File. It supplies detailed information on the GuideLines system for organization of product information. Many manufacturers have translated this information into action in the form of GuideLines-organized catalogs bound into Sweet's 1975 Files.

Sweet's Division
McGraw-Hill Information Systems Company
1221 Avenue of the Americas
New York, New York 10020

Ceco forms slabs for great buildings

World's tallest hotel is one

Nearly a million square feet of concrete slabs in Atlanta's new 70-story Peachtree Center Plaza, world's tallest hotel, are being formed by a unique method engineered by the Ceco Corporation to meet an unusual structural design. This method makes repetitive use of special pie-shaped panels "flown" floor to floor.

Ceco's work, performed for a guaranteed lump sum, includes slabs and ramps for the several floors below grade, and slabs for a nine-story base building; also, slabs for three floors of mechanical services and meeting rooms atop the 80-foot columns shown here, and then, soaring into the Atlanta skyline, 56 floors of guest rooms.

For more than half a century, Ceco has helped contractors by developing better ways of forming concrete slabs. Consequently, Ceco's forming services are used on hundreds of projects coast to coast every day. Ceco's field crews are the country's leading specialists in placing and removing formwork for ribbed, waffle and flat-slab floor construction. For more facts, refer to Sweet's or your nearest Ceco office.

For more data, circle 88 on inquiry card

Peachtree Center Plaza, Atlanta, GA
A Western International Hotel
Developer:
Portman Properties
Architect:
John Portman & Associates
General Contractor:
J. A. Jones Construction Company

CECO concrete forming services

The Ceco Corporation • General Offices
5601 West 26th Street • Chicago, Illinois 60650

LAST YEAR WE PROVED TO THE WORLD THAT NO NYLON HIDES SOIL BETTER THAN ENKALURE II.

Now Slone's Pharmacy is proving it every day.

When Slone's Pharmacy in New Milford, Conn. decided to remodel, they were sure of one thing. They'd have to get rid of the asphalt tile and replace it with carpet.

Carpet would have better acoustical absorption.

And since it's more resilient, it would not only prevent breakage it would be much more comfortable to walk on.

Besides, carpet looks better.

Now, which one?

Since Slone's is a heavy-traffic store, one of the requirements was that the carpet had to have good soil-hiding properties in order to keep maintenance costs to a minimum.

Also, it had to be durable. To be able to keep its fresh appearance, no matter what.

The choice was clear.

Slone's decided on a carpet made with Enkalure® II soil-hiding nylon.

And from the wide range of patterns and colors available, they easily found the one that was perfect for their new color scheme.

They chose "Sampson" by Criter

The special multilobal construction of Enkalure II causes light to actually bounce off the fiber, keeping the colors looking bright and clean even when the carpet is dirty.

Furthermore, Enkalure II has no deep grooves to trap dirt. Conventional nylon fibers do.

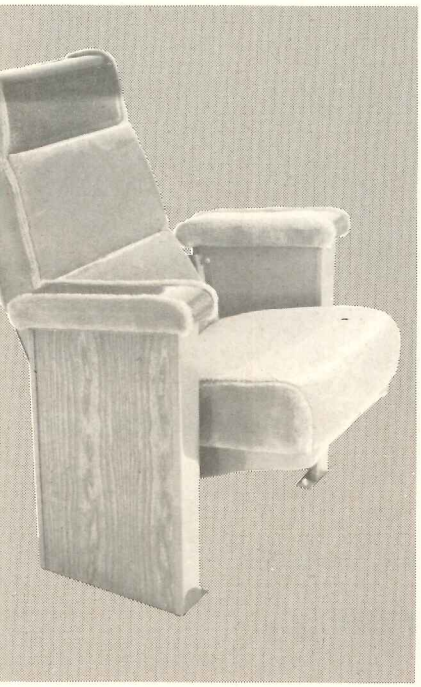
A grueling test by Nationwide Consumer Testing Institute proves that no nylon hides soil better than Enkalure II.

But the real proof is at Slone's.

For specific carpet information and a 14-page report of the test results, contact American Enka (Dept. AR), 530 Fifth Avenue, N.Y., N.Y. 10036. (212) 661-6600.

For more data, circle 89 on inquiry

The Big Sit-In



astroLounger

Massey has the solution to your deep-seated problems — a big, luxurious oversized lounger featuring three-pillar back support, with full depth foam cushion and back. You can always rest assured that the Massey Astro-Lounger will answer your seating questions most comfortably. Also available as the Astro-Rocker.

You're always sitting pretty with

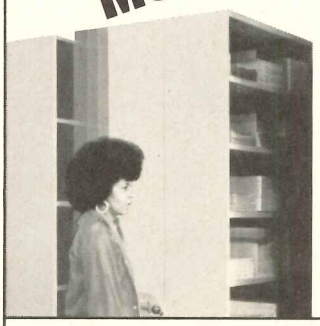
Massey seating co.

NASHVILLE, TENNESSEE 37208

S FOR REFERENCE SEE SWEET'S ARCHITECTURAL CATALOG FILE 12.5 MA.

For more data, circle 92 on inquiry card

DOUBLES STORAGE MOVABLE SHELVING



Compactus Mobile Storage Systems save on the high space cost of fixed shelving . . . help beat today's economic crunch! Movable shelving maximizes storage . . . minimizes space needs . . . eliminates all but one access aisle. Store anything in half the space. Semi-Automatic and Manual Systems available.

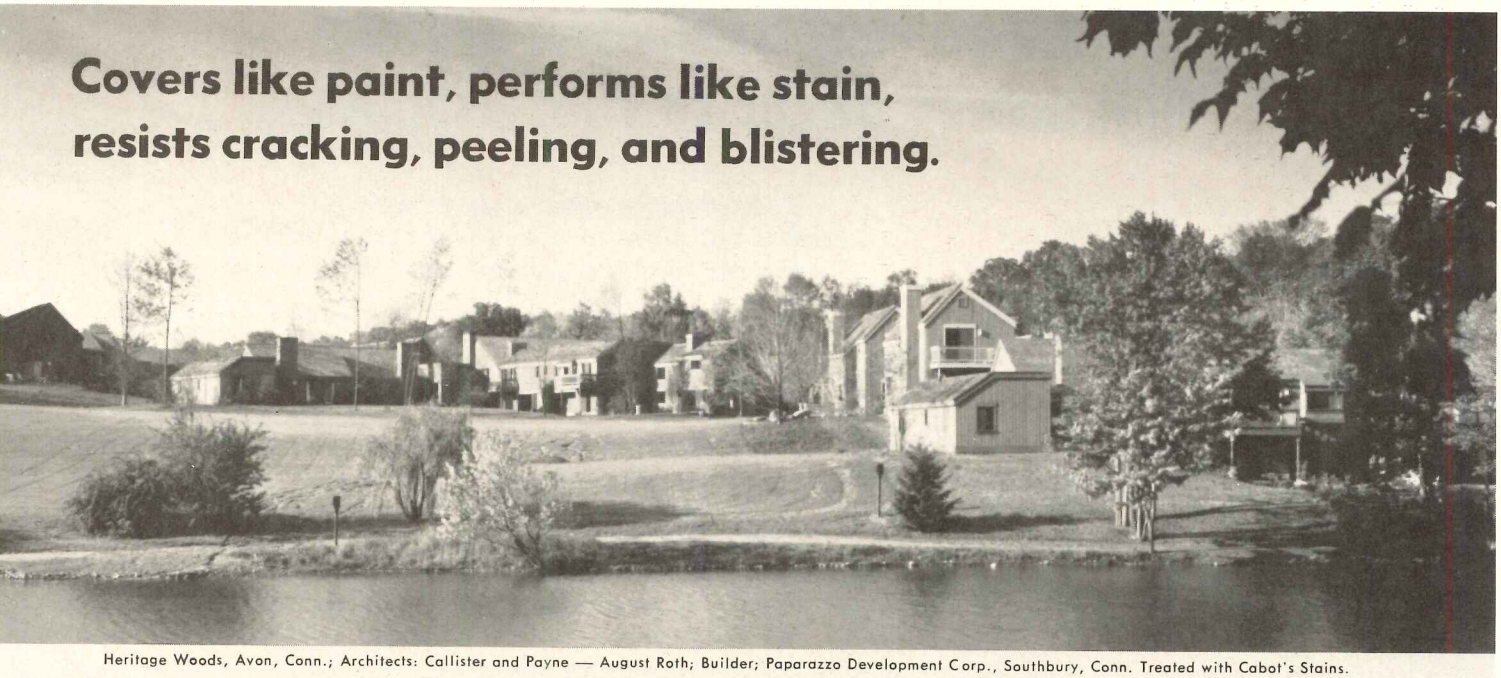
COMPACTUS—the storage maximizing system

POWERS

Powers Regulator Company Transitube Division
Skokie, Illinois 60076

For more data, circle 93 on inquiry card

Covers like paint, performs like stain, resists cracking, peeling, and blistering.



Heritage Woods, Avon, Conn.; Architects: Callister and Payne — August Roth; Builder; Paparazzo Development Corp., Southbury, Conn. Treated with Cabot's Stains.

Cabot's O.V.T. Solid Color Stains

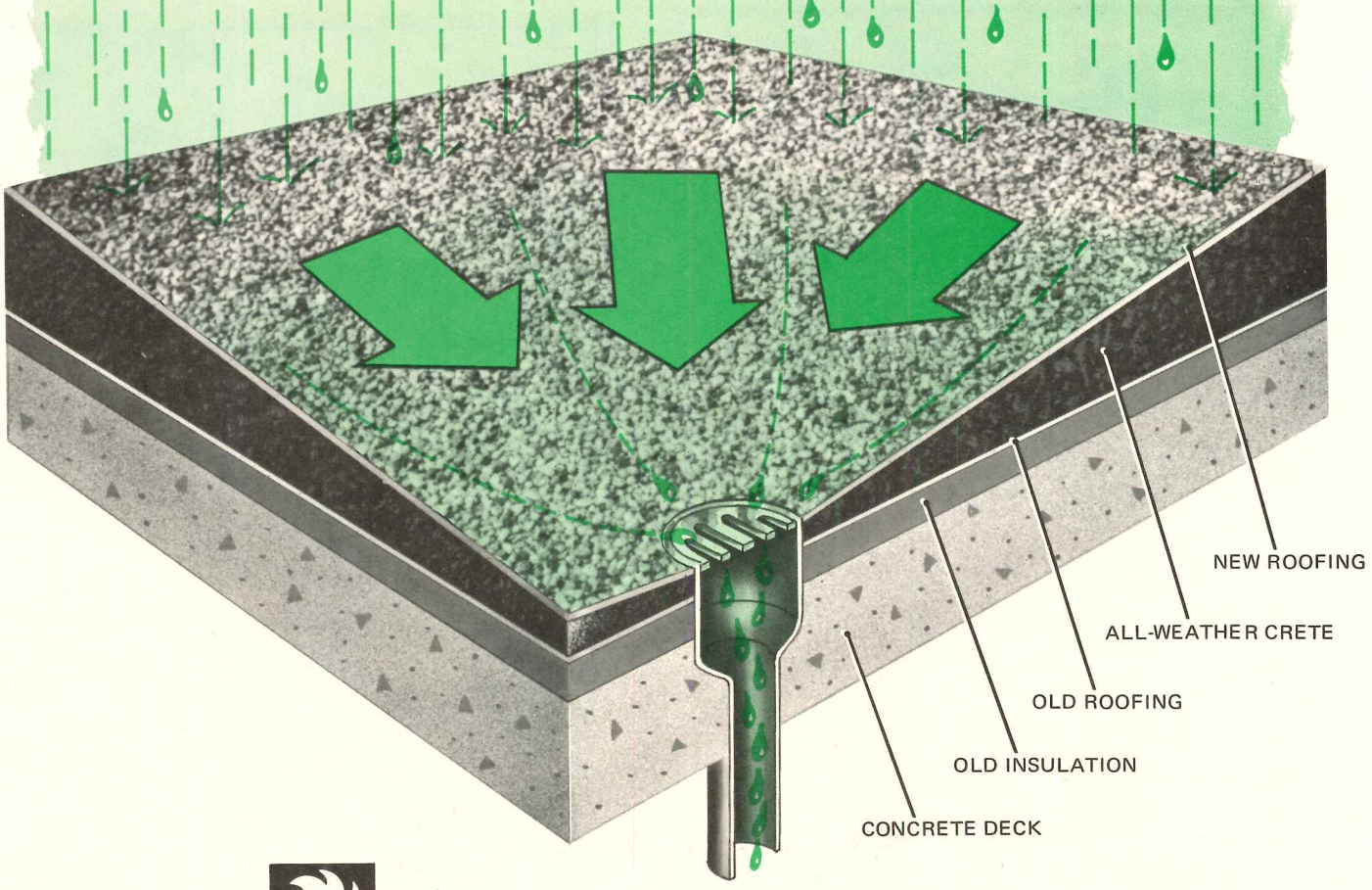
This fine product combines the best features of a stain and a paint. Cabot's O.V.T. Solid Color Stains, an oil-base finish of great beauty and durability, is suitable for wood, metal, masonry . . . and is applicable to all surfaces: textured, striated, smooth, previously painted. These unique stains penetrate the wood in the traditional manner of a stain, yet cover like paint (often in one coat). Available in 62 pleasing colors.

Samuel Cabot Inc.

One Union Street, Dept. 129, Boston, Mass. 02108

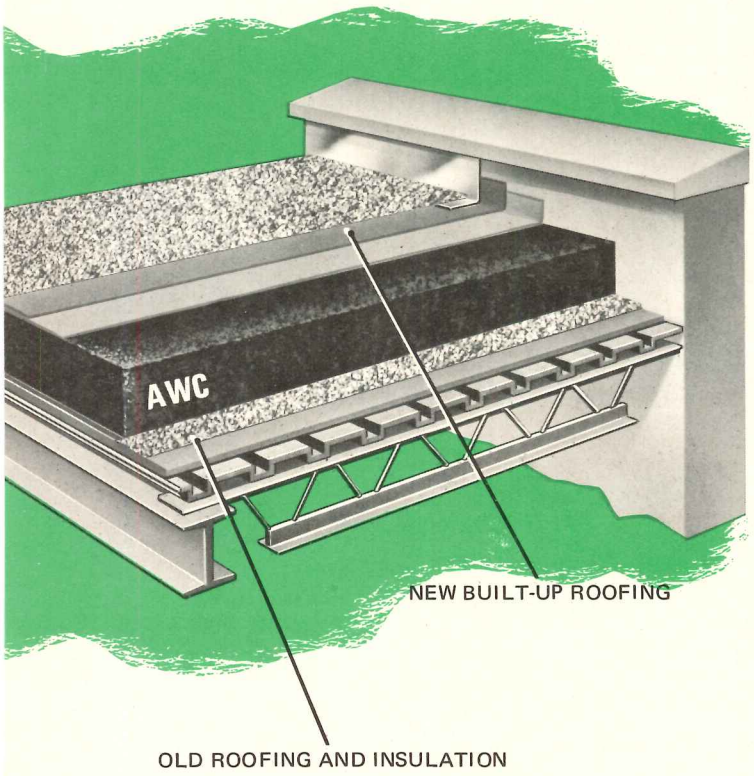
☐ Send color card on Cabot's O.V.T. Solid Color Stains
☐ Send Cabot's full-color handbook on wood stains

For more data, circle 94 on inquiry card



All-weather Crete®

the re-roof insulation system that solves major re-roof problems.



- **AWC adds positive slope to drains!**
- **AWC allows re-roofing without tear-off!**
- **AWC insulates to reduce heating/cooling costs!**

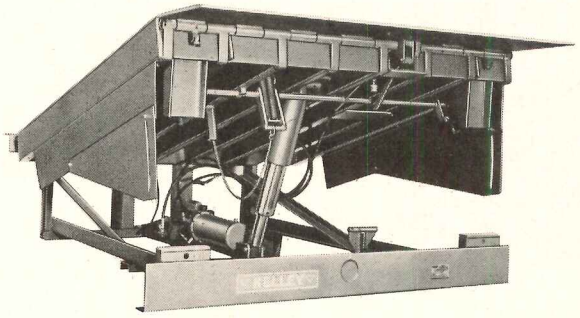
When the roof leaks, repairing the membrane may stop it temporarily, but it does not solve the problem of what made the membrane leak in the first place. One major cause is improper water drainage and the freezing and thawing of ponded water and blisters over insulation joints. A proven solution is All-weather Crete. It is a dry, thermosetting insulating fill that is installed at various thicknesses and contours to provide water drainage. All-weather Crete may be applied directly over the old roofing, smoothing out uneven surfaces to provide a firm, seamless base for new roofing. It permits normal activity in occupied buildings during repairs and saves the owner the cost of tear-off plus messy inconvenience.

AWC is economical! The application of AWC often costs less than a tear-off and re-roof. The intial cost of AWC can be paid for in a few years thru fuel savings and thereafter will save fuel costs every year. Solve those roof problems. Talk to your local AWC man now. He's listed in Sweets . . . or call:

SILBRICO CORPORATION
6300 River Rd. • Hodgkins, Ill. 60525
Chicago Phone (312) 735-3322

For more data, circle 95 on inquiry card

Does Kelley make HYDRAULIC DOCKBOARDS



YES...IN CAPACITIES OF 20,000, 35,000 AND 50,000 POUNDS FOR FAST, SAFE HIGH-VOLUME DOCK OPERATIONS!

Touch a button. Kelley Hydraulic Dockboards raise . . . lip extends and dockboard automatically lowers until lip contacts truck bed. Lip maintains full, firm contact with truck during loading/unloading operations. When truck pulls away, lip lowers and dockboard automatically returns to fully-supported, dock-level position.

Features? Here are just a few . . .

- Two-stage hydraulics for most efficient lift.
- OSHA safe . . . deep toeguards. Automatic, built-in hydraulic emergency system.
- Accommodates truck bed heights from 12" above to 12" below dock level.
- Exclusive torque-tube design accommodates out-of-level truck tilt up to 4".
- Fully enclosed, self-lubricated power unit.

If you want the most rugged automatic dockboard with built-in safety, ask for a Kelley Hydraulic Dockboard from your Kelley "No Shortcuts" Dockboard Specialist!

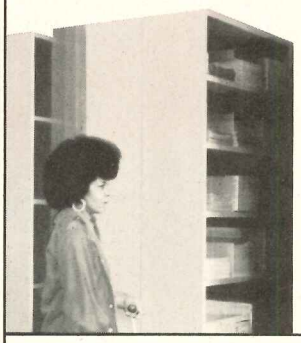
Kelley Company, Inc.
6768 North Teutonia Ave.
Milwaukee, Wisconsin 53209
Telephone: (414) 352-1000 • Telex: 26-661

KELLEY®

55-669

For more data, circle 96 on inquiry card

MAXIMIZES STORAGE MINIMIZES SPACE



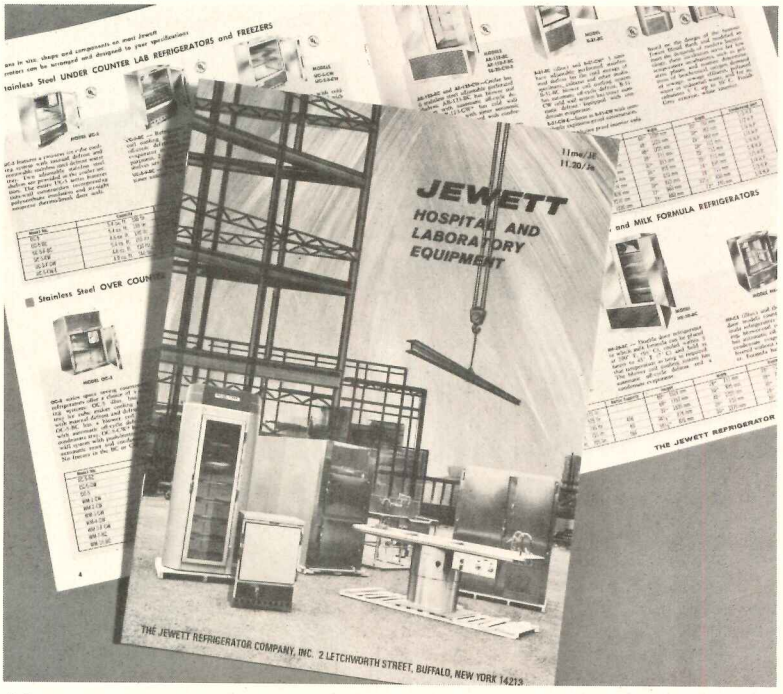
Compactus Mobile Storage Systems—cost saving movable shelving to help beat the economic crunch! Cuts present fixed storage space in half . . . frees up valuable space . . . eliminates all but one access aisle. Store anything. Semi-Automatic and Manual Systems available.

COMPACTUS—the storage maximizing system.

POWERS

Powers Regulator Company Transitube Division
Skokie, Illinois 60076

For more data, circle 97 on inquiry card



New health-care equipment catalog shows dimensions in metric as well as in inches

Health Care Equipment Catalog describes and illustrates Jewett's comprehensive line of stainless steel refrigerators and freezers for hospital and lab installation, as well as autopsy and morgue equipment. The line includes free-standing, counter-top, under-counter, and wall-mounted models. The new 8 page brochure includes metric as well as English dimensions and temperature ranges.

THE JEWETT REFRIGERATOR CO., INC.
2 LETCHWORTH STREET
BUFFALO, NEW YORK, 14213

For more data, circle 102 on inquiry card

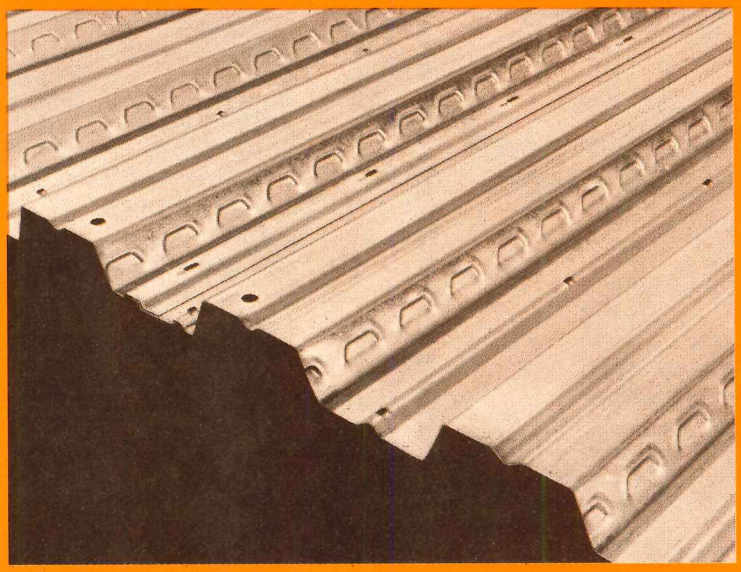
New Comdek by Granco.

Eight Reasons to Spec Our Composite Deck.

1. New deep embossed indentations bond concrete for full composite action. Structurally tested and proved one of the strongest composite action deck designs available.

2. Fewer sidelaps and faster erection with full 36" wide panels. Lengths to 45' mean fewer sheets to handle.

3. Easy, precise bay fit and line-up with new adjustable sidelap design that also eliminates lap leakage.



4. Faster welding with prepunched slots on a 12" module.

5. Light gages are double thick at sidelap to improve fastening strength.

6. Optional ceiling hanger holes in each rib (12" o.c.) fit any ceiling grid pattern.

7. Handling holes provide easier handling and faster erection.

8. Comdek has approved UL Fire Ratings up to 3 hours.

And for greater economy, Comdek is available in both 2" and 3" depths. For complete information, see Sweet's, section 5.5p, Metal Decking, composite. Or mail this coupon request for a free copy of the new Comdek brochure. Write now. Granco, P. O. Box 40526, Houston, Texas 77040.

Granco: Send the Comdek brochure fast.
☐ For my files ☐ For a job under consideration.

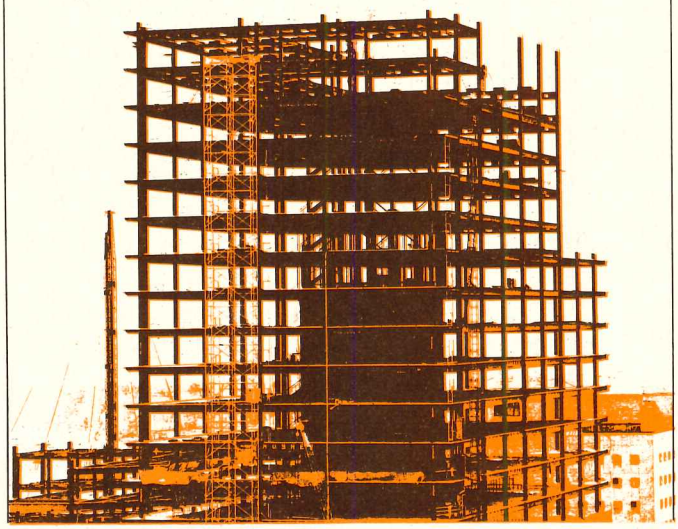
Name_____

Title_____

Company_____

Address_____ Phone_____

City_____ State_____ Zip_____



GRANCO®
Building products that perform

National Steel Products Company
Subsidiary of
National Steel Corporation

GUTH HAS JUST RE-INVENTED OUTDOOR AREA LIGHTING

. . . to more uniformly illuminate a *larger* area per fixture than conventional systems, *and do it with up to 18% less input wattage!*

Guth's "Dual" Area Light is a totally new concept that combines two separate optical systems and two H.I.D. lamps in a single housing. One is specifically designed to "throw" light, the other to "spread" light. They're available separately, too.

Less power per fixture and fewer fixtures add up to double savings. So, for more efficient lighting with fewer poles and less clutter, write or call:

GUTH LIGHTING SLB SOLA BASIC

P. O. Box 7079 • St. Louis, Mo. 63177 • (314) 533-3200

For more data, circle 99 on inquiry card

WON'T BREAK DOWN

TRANS-LOGIC™ pneumatic tube systems are super-reliable. Carriers can't open in transit. System 400's computer pinpoints trouble spots before trouble begins. All systems use solid state logic control to regulate carrier flow. No traffic jams. 4″ and 6″ dia. carriers.

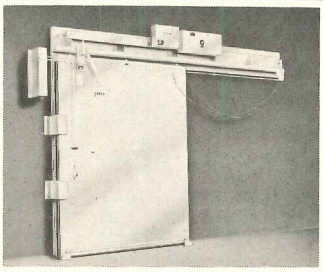
Trans-Logic, the breakthrough system.

POWERS

Powers Regulator Co. Transitube Division
Skokie, Illinois 60076

For more data, circle 100 on inquiry card

It's here! The world's first Cold Storage Fire Door.



New THERMADOOR™ has a Class A, 3 hr. UL fire rating...and it's filled with urethane foam.

New, urethane insulated THERMADOOR saves refrigeration and provides a positive fire barrier...in one, fast moving, easy-to-install door.

Write for this free descriptive literature!

CLARK DOOR

69 Myrtle St., Cranford, N.J. 07016
(201) 272-5100 Telex 13-8268

For more data, circle 101 on inquiry card

Send us this coupon, and we'll send you these folders. They'll tell you about all our commercial floors.

BOTH FREE

Name_____

Company_____

City_____ State_____ Zip_____

Armstrong Cork Co.
101 Rock Street
Lancaster, PA 17604

Armstrong

For more data, circle 1 on inquiry card

B.P. Centre, Cape Town, South Africa.

START AT THE TOP IF YO

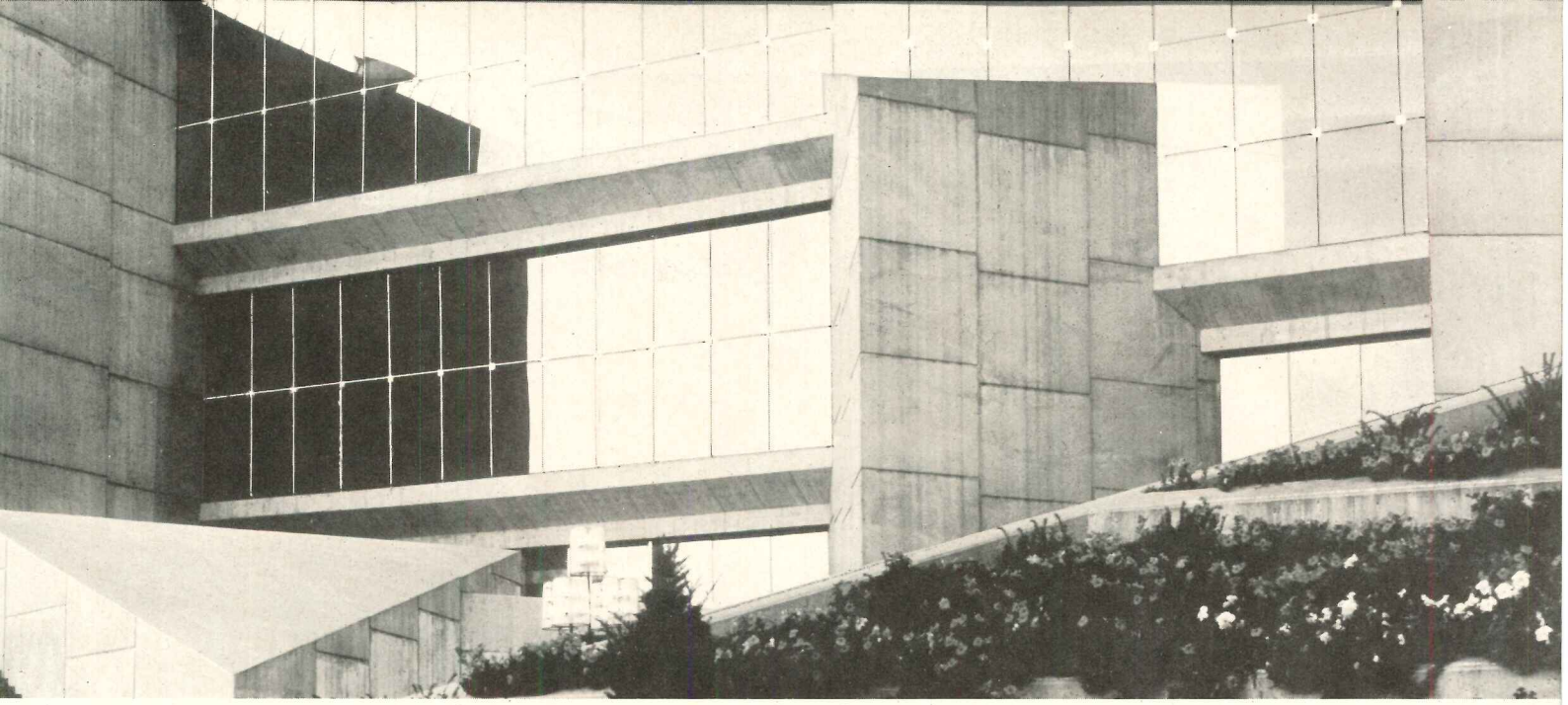
A unique combination of experience and sophisticated technology gives the Pilkington all-glass facade system an unrivalled design flexibility, allowing architects greater scope for creative expression.

Using specially processed and tempered 'Armourfloat' glass plates suspended from the building structure we can design single assemblies up to 75ft. high with no limitation in length. That's far in excess of all previous glass systems.

During the last 12 years over 50 buildings in 16 countries around the world have incorporated Pilkington 'Armourfloat' suspended glass assemblies.

The design potential for the system is enormou
The new Louisiana Downs grandstand, Bossie
employs a multiple assembly system 600ft lon
66ft high. One vast assembly 1000ft long and 5
high forms the complete facade of a new office
complex at Ipswich in England.

Inherently more versatile than other syste
Pilkington assemblies can be designed to satis
virtually any performance criteria. For example
assembly for the Centre Point building in Lond
was designed to withstand wind pressures of
and was tested to over 80psf. A completely no
spring suspension system was designed to co



sity of Akron, Ohio. *Glazing Sub-Contractor:* Sterling Plate Glass & Paint Company, Cleveland, Ohio. *General Contractor:* Mosser Construction Inc.
ct: Dalton, van Dijk, Johnson & Partners, Caudill Rowlett Scott, Carl E. Bentz. *University Architect:* Rudi Tishe.

o Dominion Bank, Canada. *Architects:* Webb Zerafa Menkes Housden in association with McCague and Sagan, staff architects for the Toronto Dominion Bank.
ion: Pilkington Brothers Canada Ltd., Contract Division.

VANT TO MAKE IT BIG.

the very large movements resulting from the ual structure of the Standard Bank building in nnesburg. And only last year completely pendent verification of our technology was n through tests conducted in the United dom, by the Government funded Agrément d on a series of full scale systems.

So if you want to explore the really big potential for all glass facade systems, start at the top, find out more about Pilkington 'Armourfloat' Suspended Glass Assemblies.

For an illustrated booklet write now to:
Doug Curry, Pilkington Brothers Canada Limited,
101 Richmond Street West, Toronto 1, Ontario.
Cables: Pilkho Tor. Tel: (416) 363 7561.

PILKINGTON GLASS

PILKINGTON 'ARMOURFLOAT' SUSPENDED GLASS ASSEMBLIES

Making life better through glass.

Martin Luther King, Jr. Vocational High School, Cleveland, Ohio
Architects: Madison•Madison International, Cleveland
Roofer: Korner Roofing & Sheet Metal Company, Cleveland

Photos by Abel Photographics

For more data, circle 104 on inquiry card

TCS AND THE VISUALLY SIGNIFICANT ROOF

TCS is stainless steel coated on both sides with a terne alloy of 80% lead and 20% tin.

TCS has no equal among standard architectural metals in resistance to atmospheric corrosion.

TCS solders perfectly without the need for expensive pre-tinning, acid fluxes or neutralizing agents.

TCS weathers naturally to a uniform dark gray and does not stain.

TCS provides galvanic built-in safeguards against failure which no competitive product can match.

TCS is reasonably priced and requires no maintenance.

FOLLANSBEE

FOLLANSBEE STEEL CORPORATION
FOLLANSBEE, WEST VIRGINIA

A mirrored wall; entrance to a grand conference room...wood paneling which screens floor-to-ceiling record and storage space ...great doors opened and closed with fingertips, without visible hardware.

Here are reflected the advantages of concealment, the functional superiority of floor-type door closers and the door pivots which have earned this company its reputation for exceptional door control.

ILLUSIONS

Ask the specialists:

RIXSON-FIREMARK, INC.

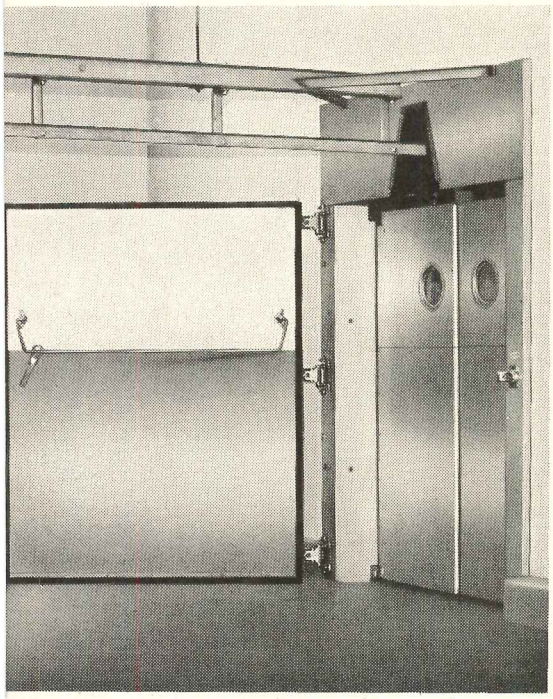
Pittsburgh National Bank Building, Pittsburgh, Pa.
Architect: Welton Becket & Assoc.
Hardware dealer: The A. G. Mauro Company

9100 W. Belmont Ave., Franklin Park, IL 60131
In Canada: Rixson-Firemark (Can.) Ltd.

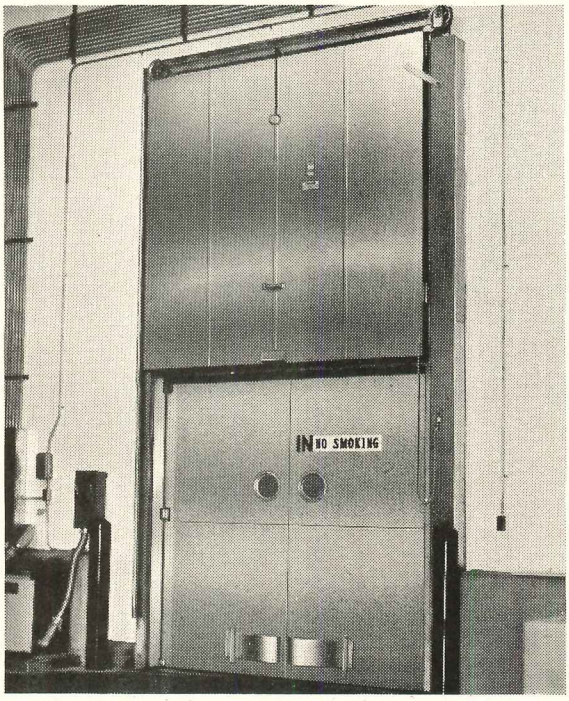
For more data, circle 105 on inquiry card

whose cold storage doors keep the products moving at major distribution centers?

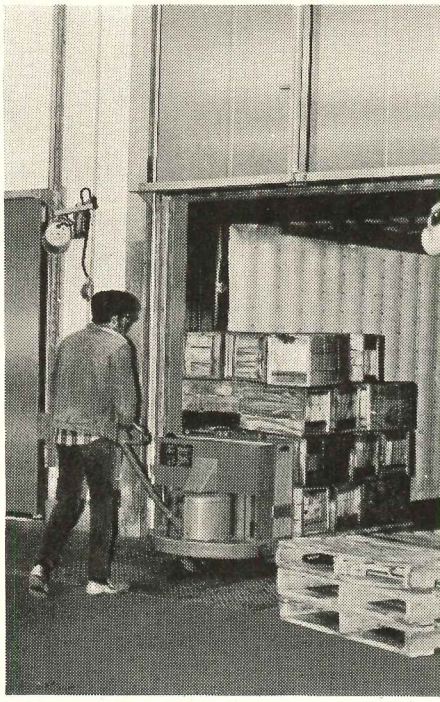
Ask Morrison Incorporated. They chose Jamison.



DOUBLE PROTECTION. Jamotuf® Vestibule Track door assures efficient refrigeration protection at doorway between beef receiving dock and cooler. Double batten door in same frame minimizes refrigeration loss when insulated door is open in this high traffic area.



UNIQUE REQUIREMENT. Jamison manual Mark II Vertical Sliding Vestibule door was selected for double protection in a high traffic area where space available would not permit use of a swinging or horizontal sliding insulated door.



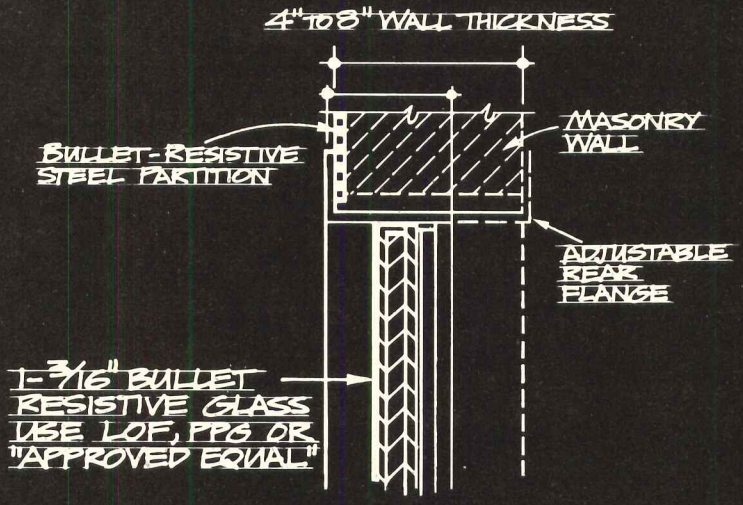
FOR LIMITED SPACES. Jamison power-operated Mark II Vertical Sliding doors are installed on exterior walls at shipping and receiving docks where space between truck openings won't accommodate horizontal sliding doors.

Morrison Inc. depends on Jamison doors to minimize refrigeration loss and help keep 100,000 lbs. of product moving steadily each eight hour shift. At its new Jackson, Miss., processing and distribution center, the famed southern cafeteria, restaurant, and motel organization uses 30 Jamison cold storage doors in 60,000 sq. ft. of refrigerated space. The doors are durable, versatile, and easy to clean. Because they are opened and closed up to 150 times a day, their quality workmanship, reliability, and low maintenance especially impress Morrison. Write today for complete data.

COLD STORAGE DOORS BY
JAMISON
JAMISON DOOR CO • HAGERSTOWN, MD 21740

For more data, circle 106 on inquiry card

YOU CALL US APPROVED EQUAL.'



OUR REAL NAME IS SAFELITE.®

And we produce quality U.L. approved BULLET RESISTANT GLASS. Our BULLET RESISTANT GLASS comes with mitered or sawed edges for butt glazing when specified and always with clean, clear vision.

Safelite's other specialty glass includes RIOT GLASS for maximum security and SOUND CONTROL GLASS for noise abatement and comfort. Besides clear glass, we utilize a wide range of acceptable architectural colors, each at a specific light transmission, a constant U-value and shading co-efficient.

So — specify us by name . . . . Safelite Industries . . . . . and we will deliver on time.

Write us for complete brochure or call for information.

Safelite is Service

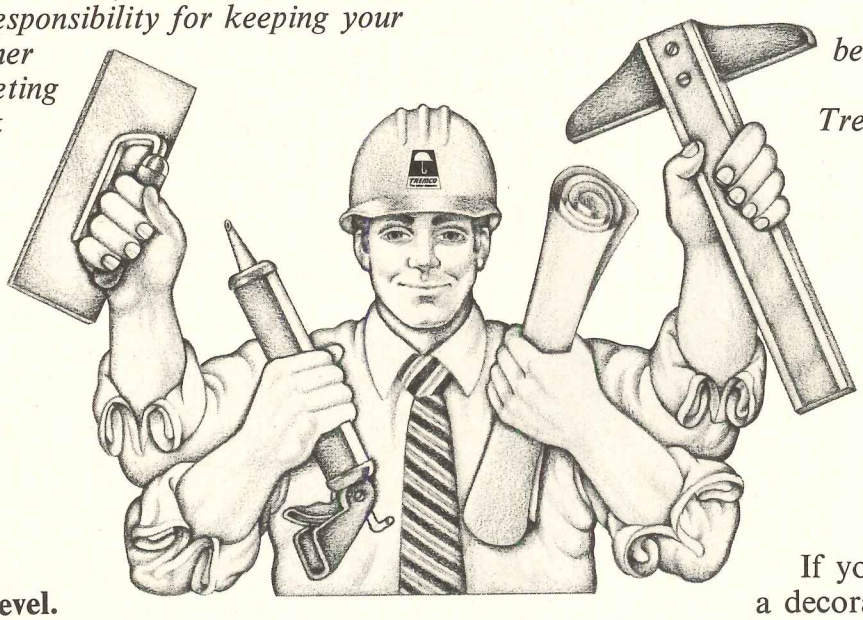
Safelite® Industries

P.O. Box 1879 / Wichita, Kansas 67201

1-800-835-2092

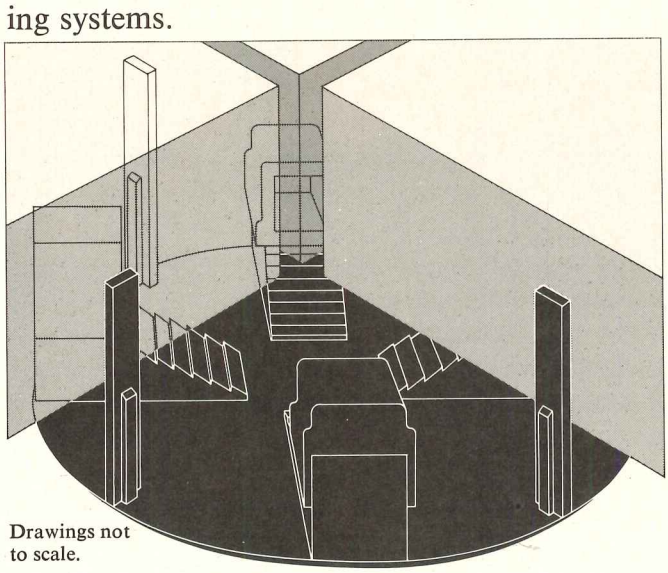
You can talk to a lot of different people about a lot of different waterproofing systems. Or you can talk to us about it all

Think of all the advantages there are to having one source for all your waterproofing needs —convenience, assured system compatibility and one overall responsibility for keeping your building dry. Rather than 3 or 4 competing sources, you work with just one. Tremco's representative assists you with specification information and service from drawing boa to job site instruction. And wherever you ne waterproofing below, on or abo grade—there's Tremco system th will do the jo effectivel



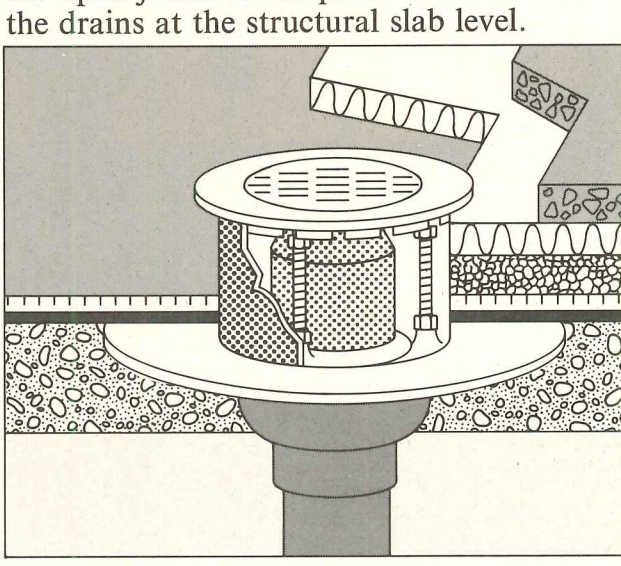
Two systems for keeping water out at the ground level.

TREMproof™ liquid polymers form a monolithic seamless blanket. They are adaptable to insulated or non-insulated applications, exhibit excellent cold weather flexibility and elongation properties, and will withstand continuous water immersion. These properties make them perfect for use with either of the following waterproofing systems.

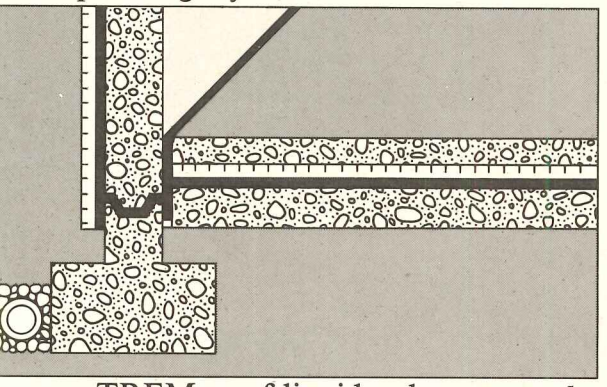


Drawings not to scale.

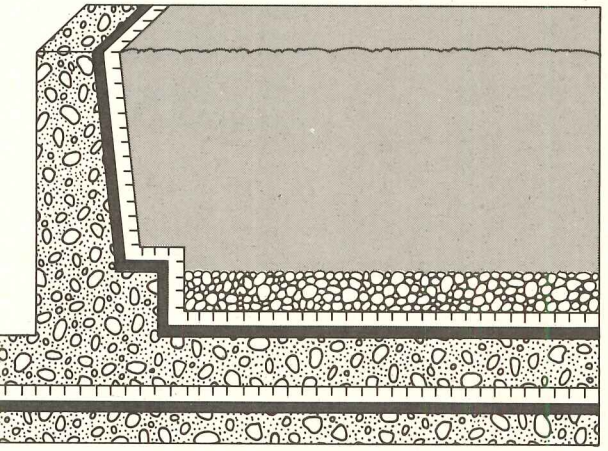
If you're consideri a decorative plaza, de or terrace, you should consider pavers. O KingPin™ pedestal gives you design freedo a level paver surface and uniform open joi between pavers. The KingPin supports t paver surface above the structural slab wat proofed with TREMproof. Water runs throu the open joints in the paver surface and do the drains at the structural slab level.



ou're designing a poured concrete wearing , our unique All-Level Drain used with EMproof assures positive drainage on all ls. Water is taken off the traffic surfaces, insulation layer, the percolation layer, and waterproofing layer itself.



course TREMproof liquid polymers can be d for the waterproofing of foundations, nters, reflecting pools, etc. They're self- ering and become an integral part of the

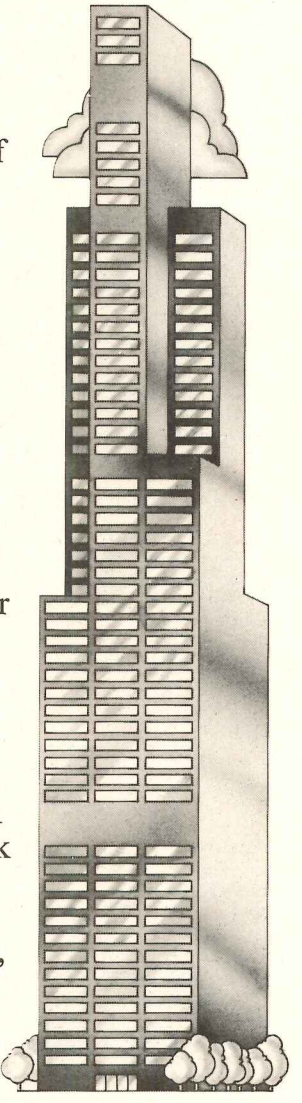


cture. Their superior adhesive quality pre- ts any lateral movement of water between substrate and waterproofing blanket.

tems to waterproof traffic-bearing surfaces.
EMproof Systems also come in a decora- , moisture-curing liquid polymer for the fic-bearing surface of plazas, balconies, aces, interior floors, etc. It cures to a flexible, nless blanket and becomes an integral part ne structure. It's easy to use and has excellent resistance to abrasion, chemical spillage and ponded water.

Systems for interior waterproofing.
For those difficult interior waterproofing jobs such as washrooms, and mechanical equipment rooms, TREMproof Systems make for easy, labor saving application in single- or twin-slab construction.

A variety of masonry preservatives.
To complete the waterproofing job, Tremco can provide you with a wide variety of preservatives to keep water out of masonry walls. You can select from heavy-bodied decorative preservatives available in architectural colors. Or, choose from our clear, transparent preservatives that retain the natural beauty of the masonry.



A complete system, one source.
Is there any reason why Tremco shouldn't be your one source for waterproofing?

We've waterproofed some of the world's largest buildings. For over 45 years, we've been providing top quality leak proof systems and products, such as our job proven sealants MONO®, DYmeric® and Lasto-Meric®, and our roof-edging system, Tremline.™ Tremco, 10701 Shaker Blvd., Cleveland, Ohio 44104. Toronto, Ontario M4H 1G7.

TREMCO®

ADVERTISING INDEX

Prefiled catalogs of the manufacturers listed below are available in the 1974 Sweet's Catalog File as follows.

A Architectural File (green)
I Industrial Construction File (blue)
L Light Construction File (yellow)
D Interior Design File (black)

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CLASSIFIED SECTION

POSITIONS VACANT

The Syracuse University School of Architecture has one full time position open for the fall of 1975. The position is in the undergraduate Architectural Design Studios. Applicants should have a strong secondary Architectural capability. Please send resumes and references to Julio M. San Jose, Chairman, Appointments Committee, School of Architecture, Syracuse University, Syracuse, New York 13210. Syracuse University is an Equal Opportunity/Affirmative Action Employer.

Architects—We have many career openings for architects to serve as project architects for large designer-builder of medical and institutional facilities. Excellent companies. Good salary, bonus and car compensation packages. Send resumes with salary history. Management Recruiters of Green Bay, 115 S. Jefferson St., Green Bay, Wis., 54301. Or direct dial 414/437-4353.

VOLUNTEER PEACE CORPS/VISTA
Architects/planners needed for Peace Corps projects in Latin America, Africa, Asia; VISTA projects in 25 U.S. cities. Housing projects, design of schools, hospitals, community centers, rehab, university teaching, regional planning, etc. Expenses paid, travel, medical, vacation and living. Information: Lynn Rotenberg,
ACTION,
ORC Box A-1, Washington, D.C. 20525.

Architect: Well established, design oriented midwest A-E firm with diverse, nationwide practice, serving major governmental, educational, and corporate clients, seeks imaginative, top flight design architect of proven capability. Will work closely with senior management. Returns commensurate with performance. Send resume and other details in confidence to Box 6544, Architectural Record.

Construction Administrator: Expanding department of 70-man firm has two openings for experienced construction administrators with demonstrable record of completing projects on schedule while maintaining good relations with owner and contractor. Minimum four years experience with hospital and mechanical/electrical involvement necessary. Salary commensurate with background. One position in Iowa City starting immediately. Submit resume in confidence to Hansen Lind Meyer, 116 South Linn Street, Drawer 310, Iowa City, Iowa 52240. An equal opportunity employer.

ARCHITECT—Established expanding national company, with over 100 stores, is seeking an architect. The qualifying person should be a registered architect with a background in architectural and interior design, and have the ability to head a department where the responsibility would also include business administration in terms of implementing and supervising construction, taking into account both technical know-how and cost control. There is excellent growth potential with this St. Louis based firm, and the benefit program is outstanding. Please contact Bernard Bloom, Edison Brothers Stores Inc., P.O. Box 14020, St. Louis, Missouri 63178.

DEPARTMENT OF ARCHITECTURE-UNIVERSITY OF TEXAS AT ARLINGTON—is seeking faculty for the 1975-76 academic year in the following areas: Director of City and Regional Planning, Director of Professional Affairs, Director Landscape Architecture, Director of Building Systems, Additions to faculty for: HISTORY, Basic Design, Architectural Structures, Interior Design. Resume and/or letter of application should state which position is of interest. Please apply to: Harold Box, FAIA, Chairman, Department of Architecture, University of Texas at Arlington, Arlington, Texas 76019. UTA is an Equal Employment Opportunity (M/F) Affirmative Action Employer.

DEAN, SCHOOL OF ARCHITECTURE: The University of Wisconsin-Milwaukee is seeking a Dean of the School of Architecture beginning July 1, 1975. The School offers a B.S. in architectural studies, a Master of Architecture, and Master of Urban Planning. The Urban Planning degree was initiated the Fall of 1974, with approval of departmentalization and a change in name now pending. Candidates should have administrative experience, an interdisciplinary view of architecture and planning, and a research orientation. They should have a history of meaningful personal accomplishment, as well as a record of contributing to the development of associates, and a willingness to work within a decentralized decision-making framework. Send resumes to: Professor Damie Stillman, Chairman, Search and Screening Committee for Dean of the School of Architecturer, Sandburg Hall W1340 A, University of Wisconsin-Milwaukee, Milwaukee, Wisconsin 53201, by January 20, 1975. An Equal Opportunity/Affirmative Action Employer.

ARCHITECTS—Permanent positions open for Graduate Architects with outstanding Design ability and minimum 3 years Planning/Design experience on major projects. Experience in the Health Facilities desirable but not mandatory. Outstanding opportunity for advancement and growth as key members of interdisciplinary teams, working on national/international projects. Company paid benefits. Submit resume, salary requirements: The Drake Partnership, Architects, 10425 Old Olive Street Road, St. Louis, Mo. 63141.

POSITIONS WANTED

Registered Architect/Planner, 36, seeks responsible and challenging design-oriented position at management level with progressive A/E or design-build firm. Over ten years of diversified experience including urban transportation planning with high quality architectural and engineering offices in New York City. NYC or Westchester County location preferred. Reply to: PW-6575, Architectural Record.

ARABIC ARCHITECT, registered, with 4 years experience in Arabia and the U.S.A. seeks position with architectural offices working in the Middle East and U.S.A. or would help American firms to establish offices in Arabia. Capable of rational design, experienced in directing team towards its goal. Write to: Kamal al Alawi 1324, North 82nd St., Seattle, Washington 98103.

Graduate Architect, B.A. Architect, age 26 seeking position with architect. Personable willing, able. Excellent references. Willing to relocate. Vanrenen, 801 Brooklawn Drive, Boulder, Colorado 80303.

Treasurer-Controller—Heavy exp. listed co. V.P., Controller; also Treasurer acquisitions, natl. public acctg. Expd. real estate, Construction industries. CPA, attorney. Personable, creative, take-charge. $28-32,000 required. PW-6758, Architectural Record.

Architect A.I.A. N.C.A.R.B., single, multi-lang. 21 years comprhen. experience: commerc, industri., relig., instit medical arch.-eng. background. Strong in project control coord. & prod. Prefer N.Y.C. area or overseas project assignment. PW-6789, Architectural Record.

Graduate Architect: B Arch age 27 3 years experience. Seeking design-related position with responsibility. PW-6778, Architectural Record.

ARCHITECTURE TOUR

25th Architecture and Gardens Tour of Japan, Taipei, Hong Kong. Depart Apr. 11, 1975. 26 days, deluxe. Non-architects welcome. Brochure from K. M. Nishimoto, 147 So. Los Robles Ave., Pasadena, Ca. 91101.

BUSINESS OPPORTUNITIES

PARTNERSHIP WANTED—Portion of architectural practice in Westchester, southern New York, or New England. Project Manager in large New York City firm, design oriented, varied experience, seeks equity participation. BO-6786, Architectural Record.

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Artistic renderings, architectural and engineering models, commercial and public interiors, meaningful exterior and interior lighting, all subordinated to your design concept, can be ordered from "VITRUVIUS DESIGNS CORP.", Box 1316 Radio City Sta., New York, N. Y. 10019, (212) 586-7382.

Consulting group specializing in fountains and custom water displays, offers comprehensive design and engineering services. Architectural and traditional ornamental fountains, unique water shows, rain and special effects, programmed lighting and water displays. Excellent facilities. Contact: Ptolemy Associates, 3944 East Oakdale Ave., Pasadena, Calif. 91107 (213) 684-0957.

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New Independent Report proves Sloan Flush Valves use 12½% less water than tank-fed systems

High-rise developers, especially, should read this comparative test report by Stevens Institute. It covers water usage, drain system compatibility and fixture performance.

We knew that Sloan Flush Valves saved water.

However, now an independent report published by the Davidson Laboratory of the Stevens Institute of Technology proves conclusively that Sloan Flush Valves use 12½ % less water than tank-fed water closets.

The Stevens Report also proves that Sloan Flush Valves are fully compatible with 4-inch wet vent drainage systems and meet all plumbing codes. No significant difference occurred between Sloan-operated and tank-operated water closets under various conditions of system stack flow, trap seal retention, or blowback failure.

Ten separate and severe fixture performance tests were also run. Here, too, Sloan Flush Valves equalled or bettered tank performance.

There's no point in talking about water conservation unless we all do something about it. Sloan Flush Valves do something. They save water. 12½ % over tanks.

Send for the Stevens Report now. It's free and it contains facts and figures available nowhere else.

SLOAN VALVE COMPANY
10500 Seymour Avenue
Franklin Park, Illinois 60131

SLOAN FLUSH VALVES THE WATER SAVERS

For more data, circle 111 on inquiry card