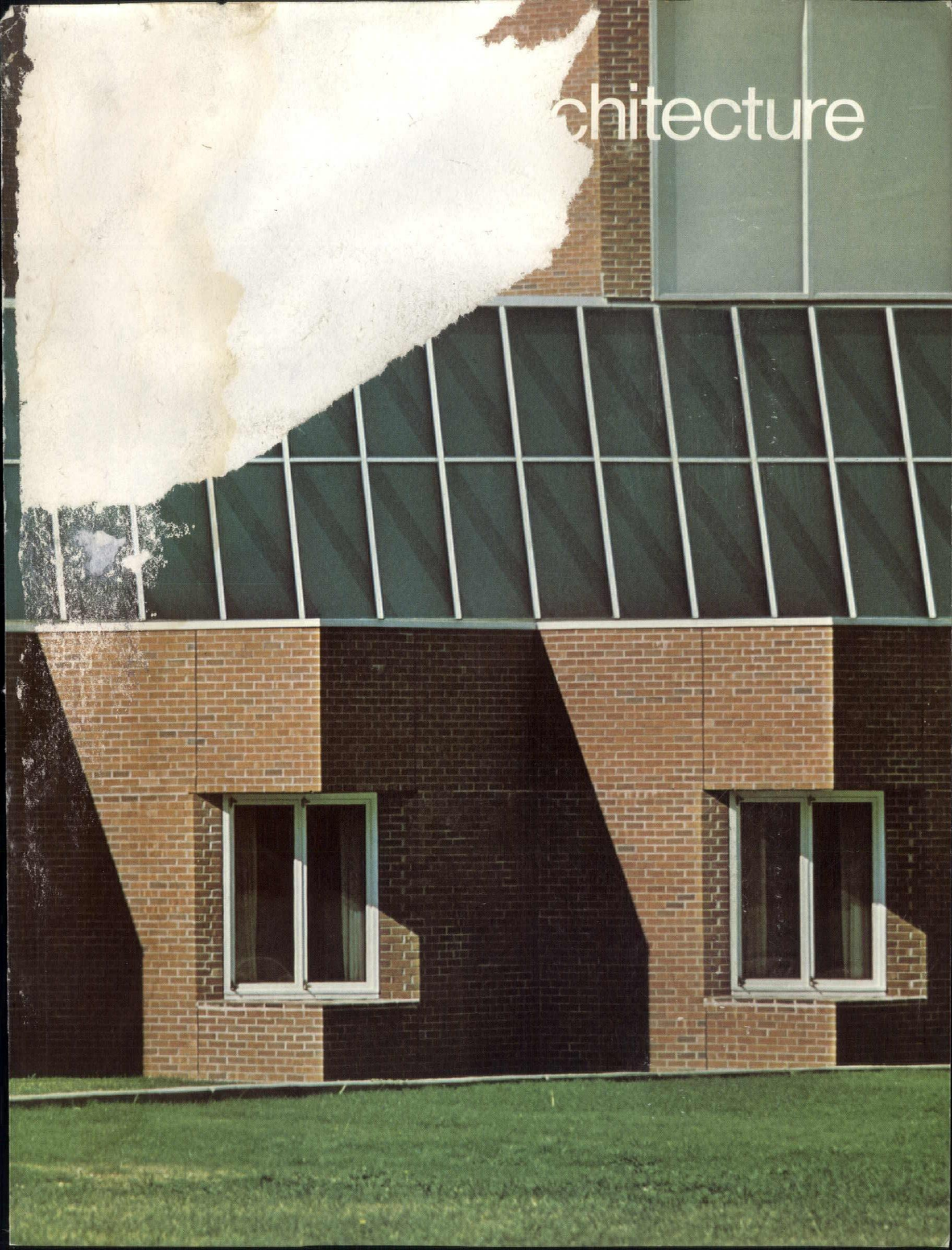
chitecture

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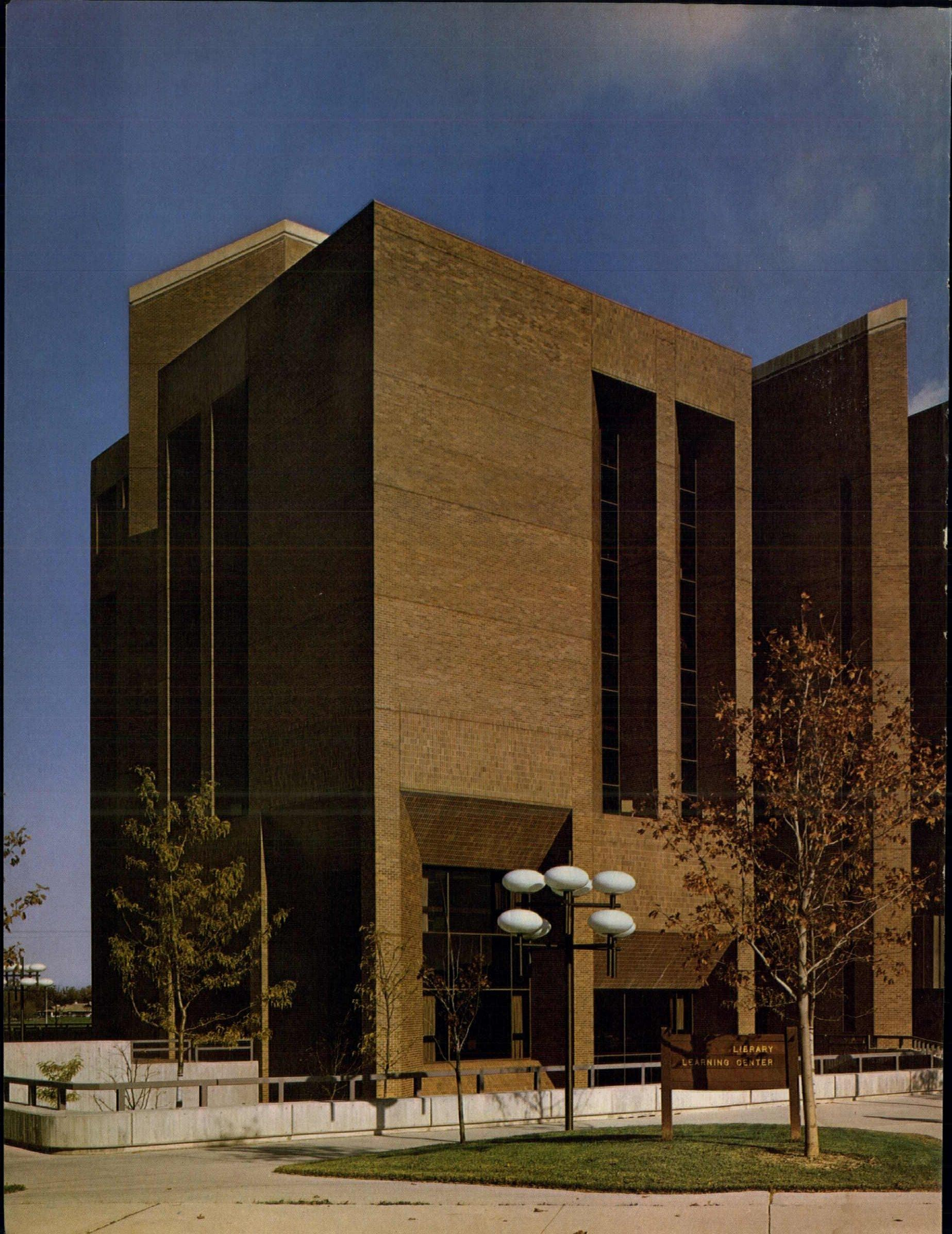
ABP ABC

December 1974

Progressive Architecture

Cover: detail view, southeast elevation of St. Bede's Abbey Worship Assembly building in Peru, Ill. by Mitchell/Giurgola Associates (p.56). Photo: René Burri.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Views

Jumbo brick

The "Bravado with brick" article in the September issue is a most interesting one, for it would be difficult to find an architect who is more of a master with masonry than Ulrich Franzen. P/A has done a highly professional job in capturing in text and photos some of the fantastic contemporary design activity involving masonry that is increasingly noted throughout North America.

Unfortunately this fine article is tarnished with a recurring myth that dismays the masonry union, contractors, manufacturers, and others in the industry, for it simply isn't true. I refer to the statement: "The only nominal change in the use of the material followed labor union agreements to limit the number of bricks laid per day; in order to maintain the construction tempo, someone invented the all-American answer—the jumbo brick."

In taking a close look at this statement, I think you'll agree that it's like saying, "The school teacher decided to write her own slimmer textbooks so she and the students would get through them before the term ended, and that's why there are now so many thin books."

In regard to the productivity statement concerning masonry, the Bricklayers, Masons and Plasterers International Union has a standing offer of a $1000 reward to anyone providing proof that the International Union or any of its affiliated unions restricts bricklayer productivity. Incidentally, no one has ever come forward to claim the payment.

As far as IMI has been able to determine, if there is a single reason for jumbo bricks, it's because architects and others wanted them and the brick industry produced them to meet the demand for a larger scale product and to remain competitive with other products. If the assumption in the P/A article is correct, why then has the concrete masonry industry, which has long produced big scale units in 8"x8"x16" sizes now moved deeply into production of small brick-size units of concrete masonry?

While IMI's objection to the statement may seem like a minor thing, its publication in a magzine as prestigious and widely read as *Progressive Architecture* creates serious problems for the masonry industry. Apart from this it strikes us as not only inappropriate in P/A, but especially so when included in an article, which otherwise is of such high quality.

Neal English, Executive Director
International Masonry Institute
Washington, D.C.

[*P/A welcomes the opportunity to print Mr. English's clarification of a prevalent rumor—Editor*]

Credits due

The American Forest Pavilion in Spokane, shown on p. 77 of the August issue of P/A, should have been credited to Miles Yanick & Company, PSC, not solely to Miles Yanick. The firm is composed of Miles Yanich, Rolf Schlosser, and Robert Kovalenko. [*Ed.*]

To Tim Prentice of Prentice and Chan, Ohlhausen for the design of Lowell Nesbitt's loft (P/A Oct. 1974, p. 93). Unfortunately, the credit was omitted from information given our staff. [*Ed.*]

Pianissimo

Subtle criticism is best. Ms. Doveton (P/A, Aug. 1974, p. 23) omits a functioning piano from within her project Liberace. How elegant!

Thomas J. Gilheany
Nutley, N.J.

Editorial

You end your October editorial ". . . when it comes to the formal qualities most of us are committed to, we are not at all sure how they affect residents. And we still have no accepted way of finding out." Accepted ways are visible directly and indirectly in the behavior of residents, that is the case with all living forms. Architects have simply not been committed to looking at their product in use over time and relating the result of such systemic observation creatively to future design. Commitment will precede acceptance.

G.V. Trieschmann, Ph.D., architect
New Orleans, La.

Concrete omission

I was most disappointed to see that the September *Progressive Architecture* completely left out concrete masonry in its discussion on building materials. While clay brick was discussed with an excellent article on Ulrich Franzen, the clay brick market in the U.S. is one-half the size of the concrete masonry market in the U.S.

The concrete block industry in the U.S. is the largest in the world. As a matter of fact, it is larger than all masonry products put together and lays four times the amount of wall area. It is used in back-up walls, exterior walls, interior walls, engineered loadbearing walls, floor and roof systems, and basement walls. It is a versatile material which now has over $1 billion in sales annually in the U.S. I am bewildered to understand how it can be overlooked in a magazine such as yours, particularly since it is growing in importance as a structural material every year.

There are many well-known architects who use concrete masonry with great skill—both aesthetically and structurally. Paul Rudolph has not only done so, but personally designed concrete masonry faces on the units he has used in many government, institutional, and private investor structures.

The advent of customized concrete masonry provides the architect with a rare opportunity to exert his individual design imagination to a locally produced and readily available product—concrete masonry. This is one of the things you lament as disappearing in today's mass production and material short economy. Yet there are 1300 block plants in the U.S. with just this capability. How unfortunate that you devote your theme to decrying what is disappearing from the architect's market basket, omitting all reference to an industry and product that can still provide him with availability of product and customized design.

I hope your future issues will pay more attention to concrete masonry since many of the world's leading architects and engineers are using this product in new and innovative ways. Ulrich Franzen has used it and Fazlur Khan is involved in a project with the Illinois Institute of Technology which will result in 50-story, all concrete masonry structures.

Concrete masonry in the U.S. is the largest masonry industry in the world. It should not be ignored!

Paul Lenchuk, President
National Concrete Masonry Association
Arlington, Va.

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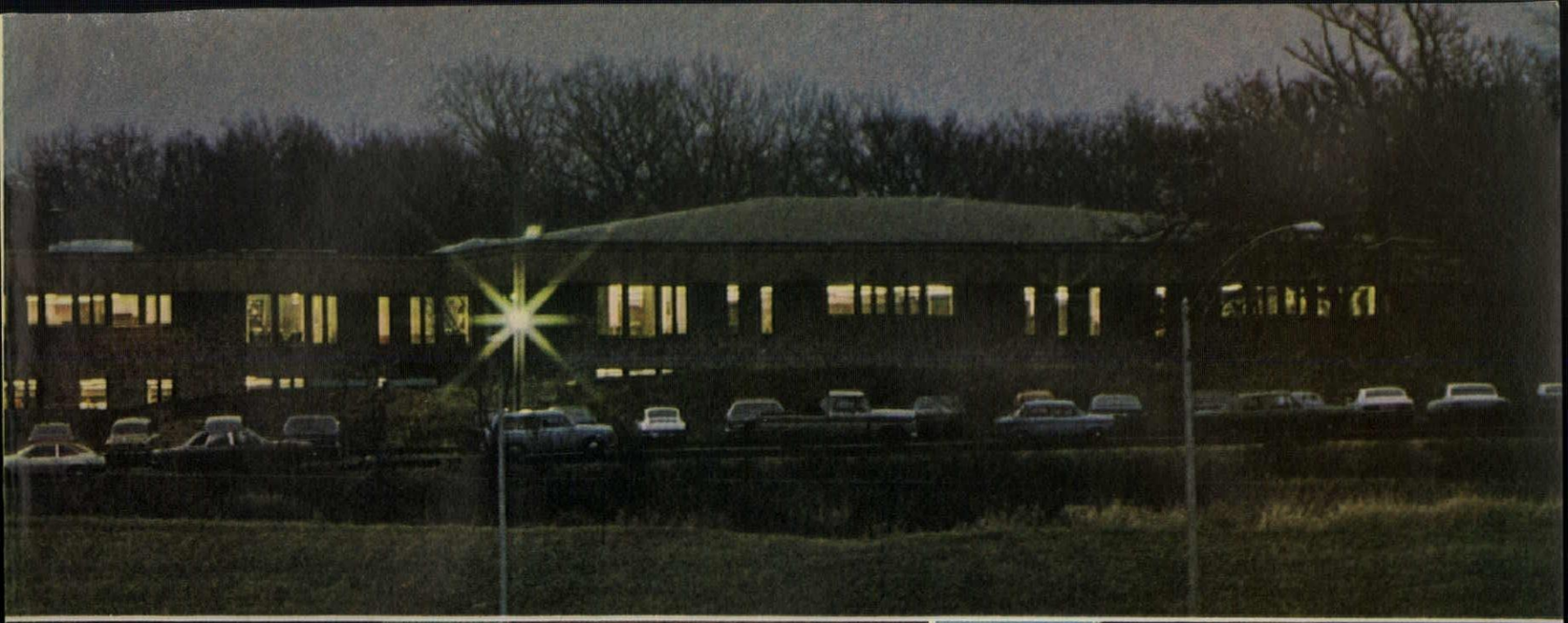

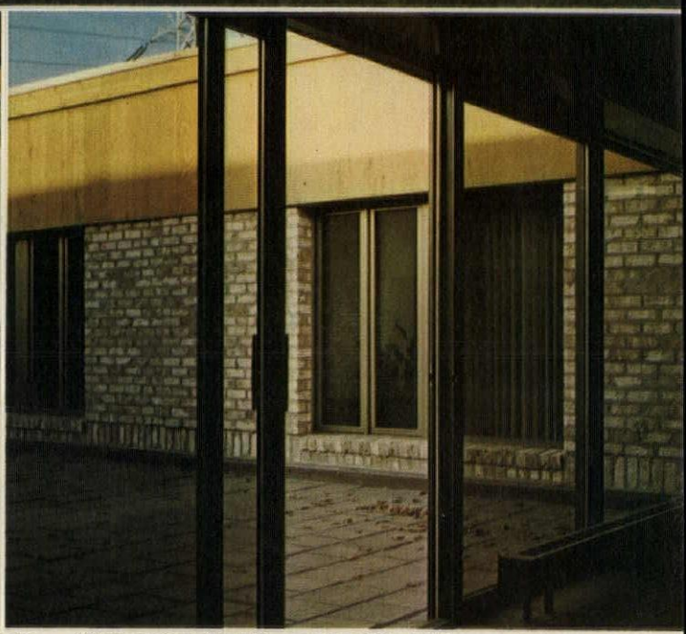

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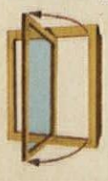

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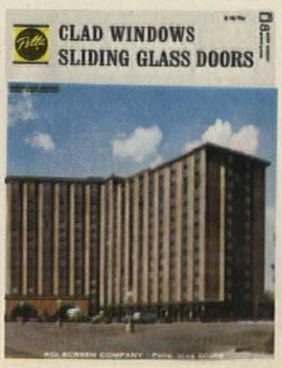

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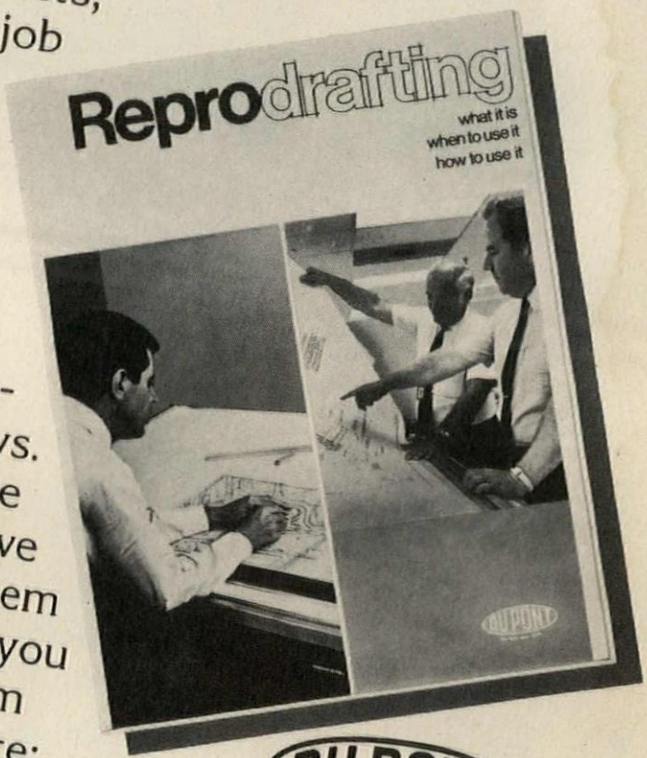

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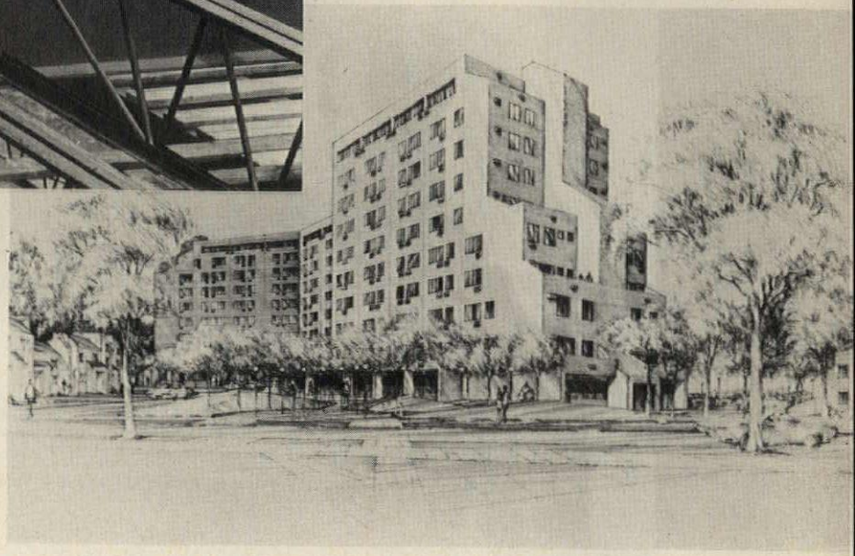

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—Gilbert Switzer, AIA
Gilbert Switzer & Associates, Architects

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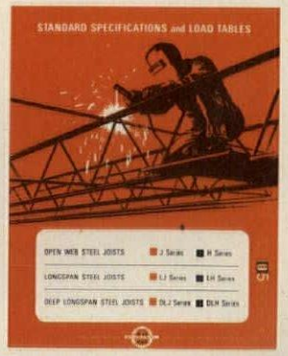

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News report

Contents

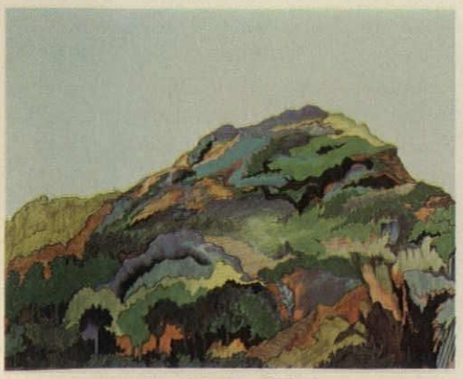
Photos: Courtesy Peter Cook

Lump (fourth from left) in contrast to more traditional row houses

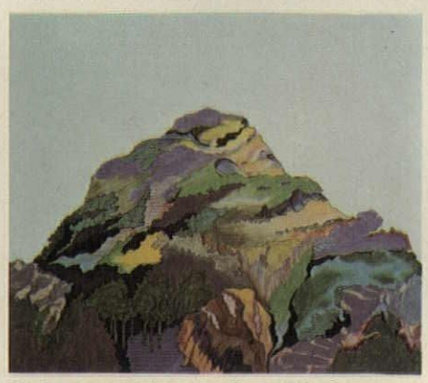
Lumps—bypassing art and architecture

"We are out of love with certain all-purpose megastructures, like the Plug-in-City of 10 years ago," announced Archigram founder Peter Cook of London during a recent, brief, lecture-tour this side of the Atlantic. Continuing the metamorphosis of high technology, he has evolved the "Lump," an architectural type intended to retain "the symbol of rural calm."

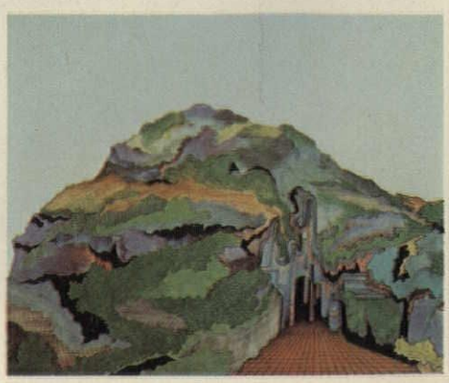
Strictly defined, a Lump is "almost any a-formal aggregate of matter that does not display its hierarchy or any other accentuated feature." Thus a Lump may be a heap of coal, a hillock,



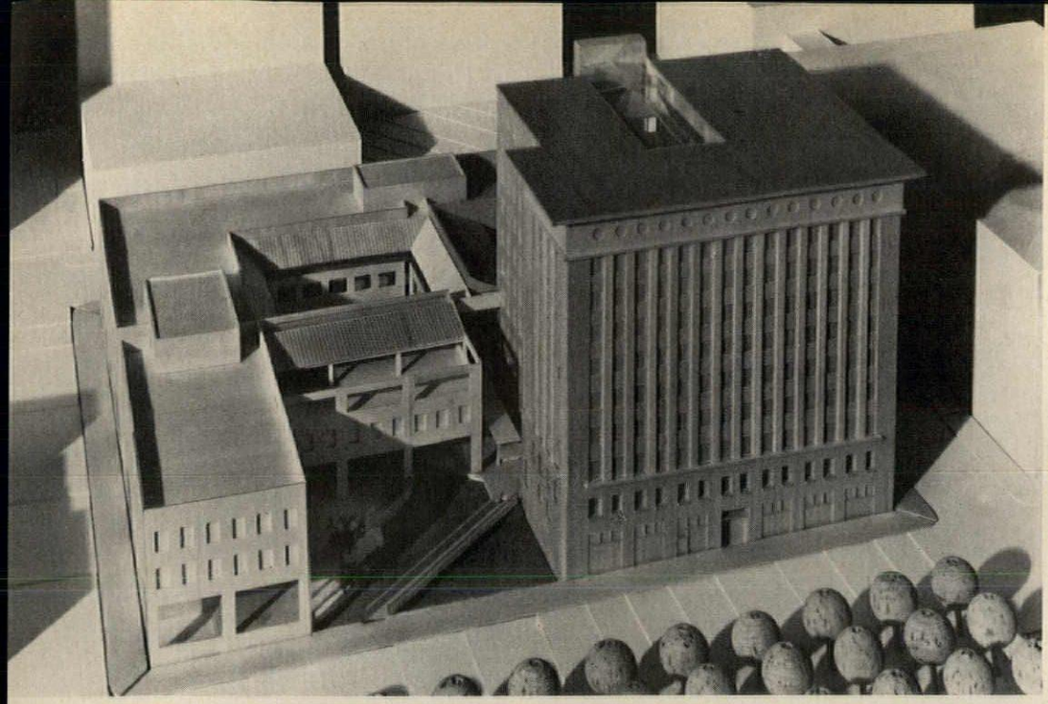
Lump as part of landscape—Side 1



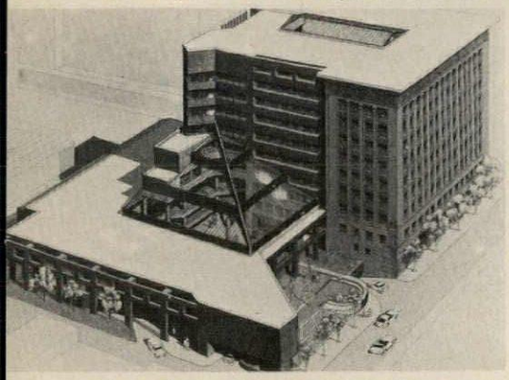
Surface reveals human effort—Side 2



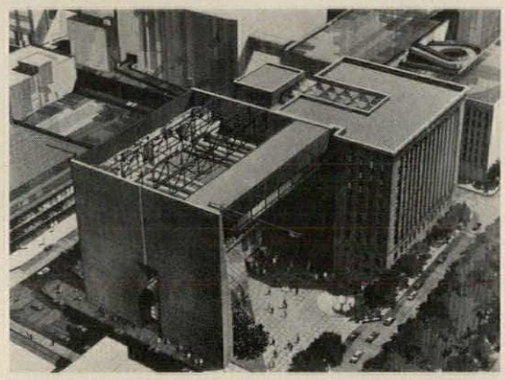
Entrance condition—Side 3



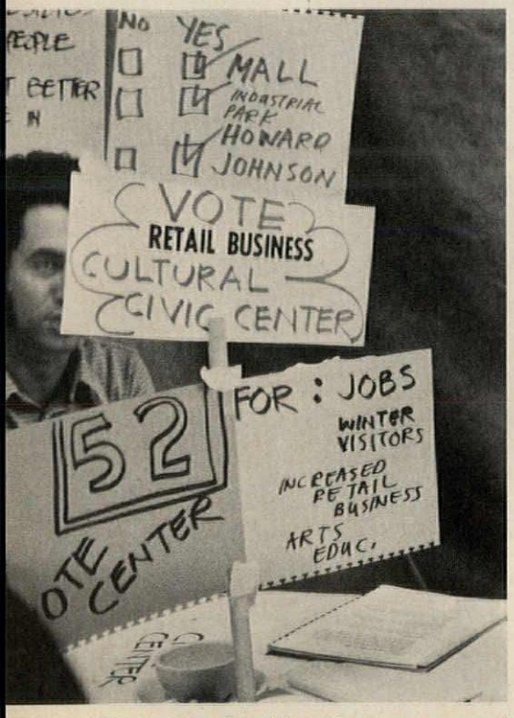
Wainwright winner: Hastings & Chivetta and Mitchell/Giurgola



Second prize: Urban Architects, Kansas City



Third prize: Perkins & Will, Chicago, and William B. Ittner, St. Louis



Scenes from Poughkeepsie game sponsored by N.Y. State Council on Architecture and the National Endowment for the Arts. Poughkeepsie Mayor Art Weinberg (top, right).

Photos: Ann Carter

or a mound of garbage (as long as the particular parts of garbage aren't clearly recognizable).

Writing about Lumps in the September issue of *Architectural Design*, Cook said as he began to actually design Lumps (more than a year after the idea presented itself) he was surprised to discover how much more architectural they are than he first expected.

One of the notable features of the Lumps is their ambiguity—an entry is no longer a door but an "entrance condition." To Cook, the challenge of designing an architecture without formalism is irresistible. He says architects may try to design a totally free-form situation only to arrive at a looser thing (perhaps), but one still hierarchical. "I am determined to design a 'Lump' building. If the first attempt fails I will try again," he said.

The Lump is neither technology nor anti-technology. "It is much more a porridge." It could be a house or an office block. In the line of its evolution came Cook's proposal for "A Quietly Technologised Folk-Suburbia" published two years ago in AD.

Why the Lump? Aside from symbolizing rural calm, which in reality is a state of mind, declared Cook, the Lump evokes childlike fantasies—dreams of the secret garden—"beautiful but indescribable."

Wainwright competition winners announced

Mitchell/Giurgola of Philadelphia and New York and Hastings & Chivetta of St. Louis have won the competition to renovate Louis Sullivan's Wainwright Building in St. Louis and develop the remainder of the block for a State of Missouri administrative complex. Missouri Governor Christopher S. Bond announced the winners of the $8.5 million development contest at a dinner early last month. He would not comment on when the project will be built since financing is not completed and the state still is acquiring the property. The seven-man jury in selecting the winning team from among five finalists (P/A Oct. 1974 p. 29) had strong rec-

ommendations for changing the winning solution and indicated a statement would be issued within 30 days.

Games people play to make cities better

War games are well known as a training tool, and in the 1950s industry adopted gaming simulation to season young executives. Now gaming has entered the planning process, but one wonders whether the results are any different from traditional methods.

After a recent trial run of gaming—this one known as "Actionplan"—in Poughkeepsie, N.Y., one participant complained that the amount learned didn't equal the time spent. "I would have liked it more if they had valued my time," she said after spending all morning on one round of the game. Actionplan, like Policyplan and CLUG (Cornell Land Use Game), is played by groups of 40, 50, or more people—many or all unschooled in planning.

When Actionplan was applied this fall in Traverse City, Mich., "people said it was the first chance they had where anybody evaluated the consequences of what they would do," reported local planner Gordon Hayward.

Ironically, the Traverse City participants, like those in Poughkeepsie who used Traverse City as their test model, at first formulated development plans no less rapacious than would an unconcerned speculative developer.

Hirshhorn Mon Amour:

P/A recently received the following letter from an irate Washingtonian:

Dear Architects: I am sick to death of reading all the snide criticism leveled at our lovable little ol' Hirshhorn Museum. Not only do I think the 231-foot-in-diameter museum is almost *tiny* (look at it in comparison with the Federal Aviation building behind it, or the Air and Space Museum next door), I don't think it was inspired by a donut or bagle at all. Any one of your know-it-all New Yorkers should be able to see the design came right from Macy's in Queens. I mean, don't you ever go there? Your magazine even referred to it as the "Queens Coliseum" when SOM built it in 1965. True, the Macy's building has parking on its outer walls instead of paintings, but the shape, detailing, handling of materials (precast aggregate panels on poured concrete), escalators at the entrance, are *very* similar. (Actually if there is one thing I object to with the Hirshhorn, it's the fact that SOM's Gordon Bunshaft didn't wrap parking around the perimeter here. The other day it took hours to park, with all the millions of people coming here in name of art.)

Hirshhorn Museum.

Speaking of art, who needs these New Yorkers coming down here to say "So what? Another museum?" Out-of-towners always think we have a lot of museums down here, like the Smithsonian, the National Gallery, Corcoran, Freer, and so on. But who goes to them? What we want is *modern* art (but not *too* modern like the Corcoran's temporary exhibits, please). And we wanted a building that stood out and said "Museum." (Who can tell whether all those other museum buildings aren't just more government offices?)

And just look at the coverage our new museum got in the *New York Times.* Even if it wasn't all that good. But as nice as I thought the *Times* was in devoting so much room to art and architecture and Joseph Hirshhorn, it could have concentrated more on our opening celebrations at the beginning of October. I mean, our Washington papers *only* reported on the parties. (Thank God for Sally Quinn!) At any rate, the *Times* forgot to say how clever we were in getting the people (the government types the first night, the artists the second) to *look* at the art. We know at New York openings everyone goes to look at the people—not the art. Well, we made sure that there was no one to look at, and if there were, he or she was well hidden. And best of all, all drinking, smoking, eating, and general merrymaking was held outdoors. Now the marvelous thing about it was that the temperature was 40 F those two nights, so that when people went outside they just *froze.* So they would gulp down their champagne, puff quickly on cigarettes, eat a cookie and dash back inside to—look at the art. Wasn't that a stroke? And do you know some of those jaded "sophisticates" who came both nights actually expected that the second night, knowing how cold it was, we would move the party inside to the two lobby levels. Not a chance. We made certain that they saw all of Joe's 800 paintings.

Speaking of Joe, naturally I've been to his home *hundreds* of times, and I think the "Burghers of Calais" looks much better in the Hirshhorn Sculpture Garden, than among those trees and plants in Greenwich. Really, imagine I heard someone call the new garden a "gravel pit." Don't they know what a sculpture garden should look like?

Oh well, this is what the people like, and the rest of you can rot. *Mrs. Lespree Delenfant*

ASID elects first national officers

Officers of the American Society of Interior Designers—the group formed when the American Institute of Interior Designers and the National Society of

Interior Designers merged earlier this year—have been elected and will assume office in January. They are Norman DeHaan of Chicago, current president of AID, president; Richard Jones of Des Moines, current president of NSID, first vice president and president-elect; Boyd Loendorf of Mercer Island, Wash., treasurer; H. Albert Phibbs of Denver, Colo., secretary; and Dede Draper of New York City, past president.

Deck the halls . . . but where are they?

"The word is survival," said Los Angeles architect-turned-job recruiter David Travers. He left a large architectural office to open his own consulting firm for architects and engineers. Business is good for him now that a substantial number of architects are looking for work. "You see anything from long faces to anger," he said.

In New York, former AIA chapter president Tim Prentice took down his shingle as architect and announced himself a sculptor, while another declared bankruptcy—reportedly $600,000 in debt.

The circumstances these days look bleak for the architect, though most individuals are optimistic, and some say the gloom is more psychological than actual. But a bellwether of the construction industry, the U.S. Department of Commerce's monthly total of the value of construction put in place, took a sudden plunge in August. It dipped $3 billion from its steady $137.2 to $134.4 billion. With few exceptions—notably 1969 and now this year—this indicator has steadily increased since World War II.

"I suppose it could be worse, but not much," said Wilbert Hasbrouck, executive director of the AIA's Chicago chapter. There, as is generally the case, the smaller offices are the hardest hit. Even the *Chicago Tribune,* which normally runs up to 35 ads for architects in its classifieds, was down to one or two on a recent Sunday. The *New York Times* is down to eight inches of want ads, whereas a year ago job ads would have filled two columns. Perkins & Will, with its own development arm, is one of the few Chicago firms undaunted by the slump.

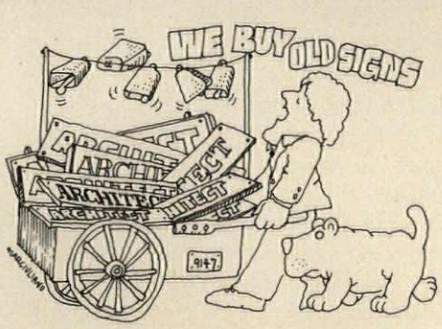
The picture in Los Angeles is similar where small, 1-to-10-man offices are the real "casualties" because their source of work, primarily housing, has dried up. Offices of up to 50 people have greater flexibility but also are in a precarious position. The firms doing best are those with engineerings sections, like Daniel, Mann, Johnson & Mendenhall. Welton Beckett's L.A. office also is secure since it received a big commission in Orange County. But the only firm hiring is Albert C. Martin, and even it had to reduce its force at one point. A. Quincy Jones has plenty of work. However, another office once 500 strong is down to 93.

St. Louis seems not as sharply affected as other parts of the country—jobs keep appearing although architects are looking a little more aggressively for new work.

An established Boston firm once had six associates and now has four—and no draftsmen where once it had 12. The Architects Collaborative (TAC) seems to be Boston's bright spot having grown from 240 to 300 employees this year.

Down South, Knoxville appears more active than sister cities due to government work, such as a $150 million vocational school. The firms Lindsey-Maple and McCarty, Bullock, Holsaple are working together on the twin tower TVA headquarters. Atlanta firms have suffered one round of cutbacks, and some offices are going around for the second "purge." Florida has suffered even more reported Garland Reynolds of Welton Beckett's Atlanta office after a trip there. From his travels he feels it will be spring before there's any change.

In Houston, architecture students at Rice University had trouble finding summer work. One took a job for $2.50 an hour after calling 80 offices. James



Sink, who a year ago left as senior vice president of William L. Pereira Associates to set up his own office in Houston, said he's suffering like everybody else but is "glad I'm in Houston and not on the West Coast." Texas is another relatively prosperous area with office construction and industrial expansion holding steady. There's a lot of work building energy facilities, too, Sink reported.

In New York everyone, including principals, is on the boards—if the firm is successful enough to have work to do. An AIA survey seven months ago showed work in New York down 55 percent from that of 1969. "And we're probably down another 10 percent," Herbert Oppenheimer, president of the New York AIA, said recently. "We're out flat." One New York architect hopes to earn most of his income from lecturing and teaching.

AIA president Arch Rogers said the construction "boom" is in heavy engineering, and that a flow of money exists in small cities where conservative banks, formerly reluctant to lend, are now advancing loans—at 8 percent interest.

Few will predict what the future will be. Wilbert Hasbrouck ventured a forecast, saying that Europe and the British Isles have been operating for some time with high interest rates the United States is now experiencing. Rather than see rates drop, the U.S. will become adjusted to them, he said. Developers then will begin to loosen up. "We'll gradually readjust to a whole new economic picture."

Matching grant offer for Unity Temple

A matching grant of $250,000 for restoration of Frank Lloyd Wright's Unity Temple in Oak Park, Ill., has been offered by the Edgar J. Kaufmann Charitable Foundation of Pittsburgh. In the [continued on page 28]

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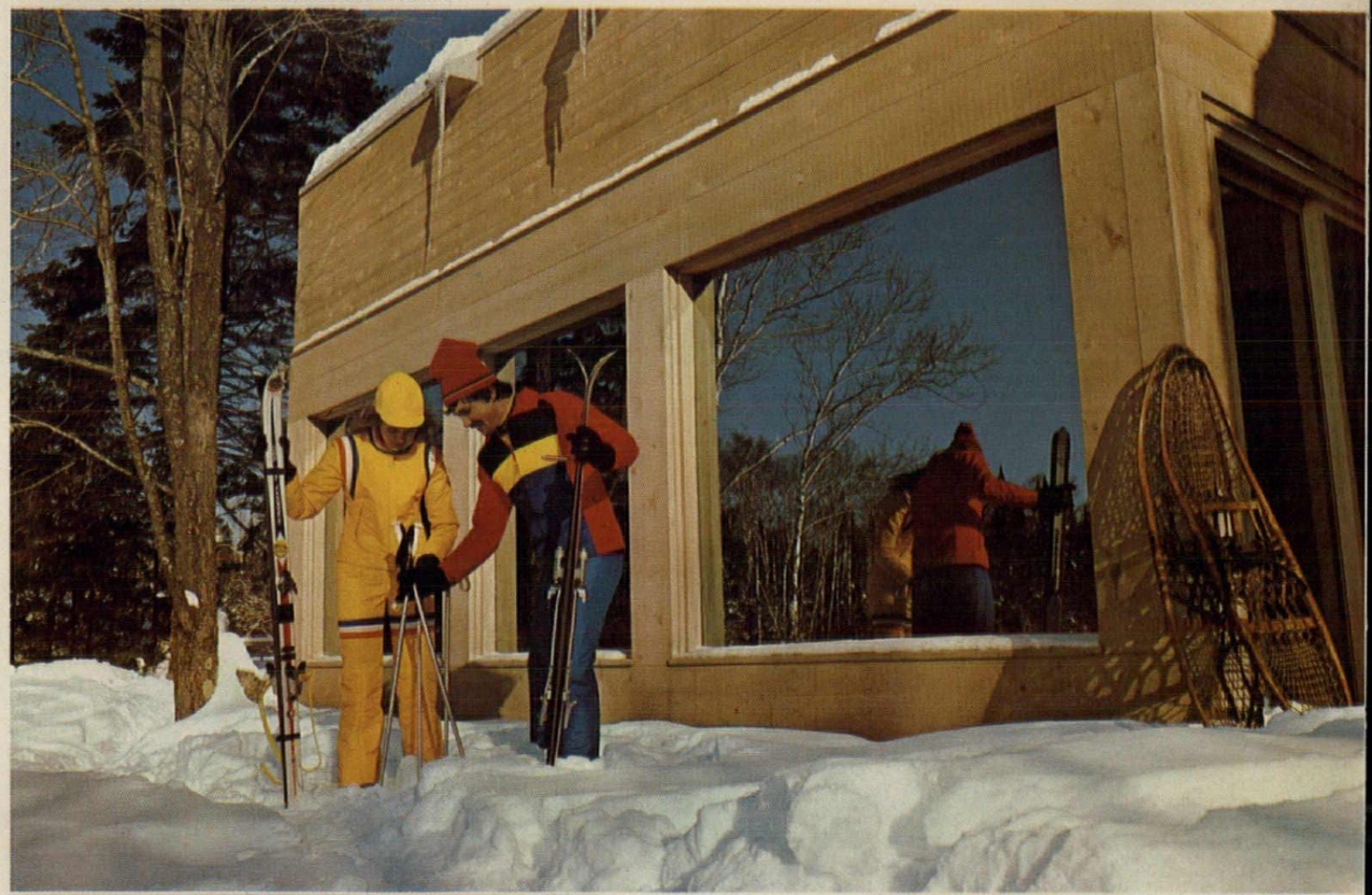
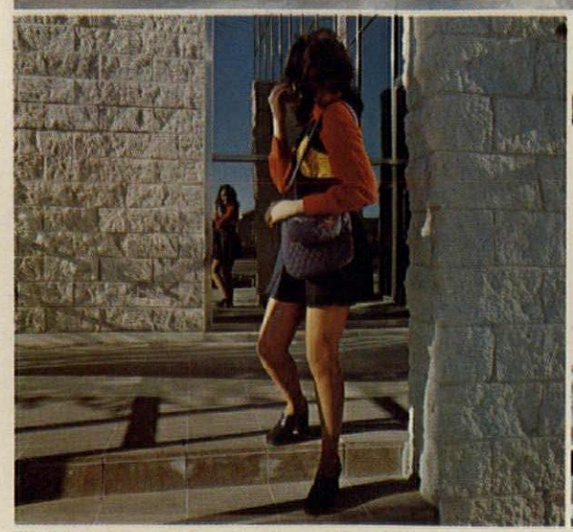
Minnesota residence. Architect: Martin F. Gould, Duluth





The Silver State Building, Las Vegas, Nev. Architect: Leo F. Borns. Owner: Disposal Investments, Inc.

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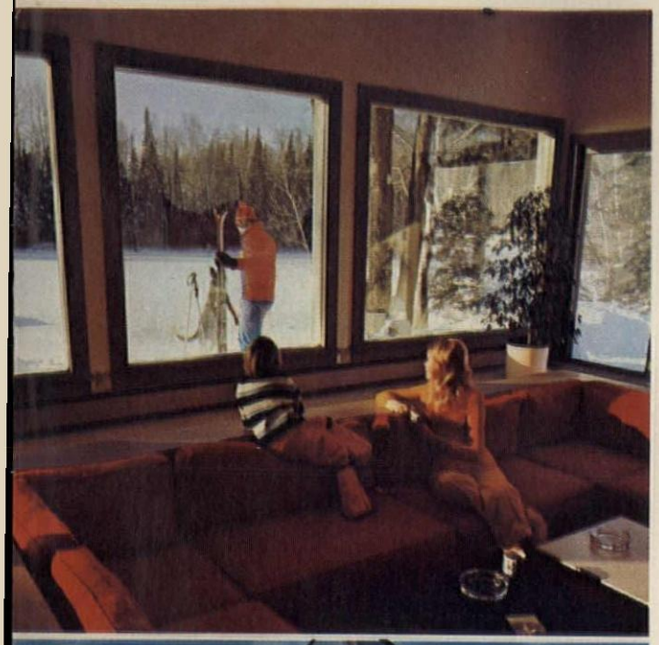

HOW THE RIGHT GLASS CAN SAVE ENERGY DOLLARS

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The proper choice of glass is well illustrated by the Minnesota residence and the Las Vegas office building pictured. Both use LOF's Thermopane® insulating units made with reflective Vari-Tran® coated glass.

It was a −13° day in Duluth when the residence, 15 miles away, was photographed. One might have anticipated an uncomfortable room, window fogging and excessive heat loss; however, aesthetics, as well as heat and comfort, were retained by LOF high-performance glass.

In the Las Vegas building, reduction of cooling load is the most impressive energy and dollar savings story, though Thermopane units have reduced baseboard heating requirements in winter months. Peak solar radiation was reduced by 264,000 Btu's per hour. This reduction of solar heat gain by silvery-coated Vari-Tran effected an initial savings of $28,600 in construction costs because of a twenty-two-ton reduction in air-conditioning needs compared to ¼"-tinted glass. It also made possible continuing savings in lower electrical costs for operation.

And in both cases, the unobstructed view and the natural light available were bonuses that continue to pay dividends.

For more information, contact Libbey-Owens-Ford Company, 811 Madison Avenue, Toledo, Ohio 43695. One of our architectural representatives will be glad to work with you on your particular design/energy problem.

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News report continued from page 24

past five years, $230,000 has been spent restoring the building's exterior, to which the Kaufmann Foundation contributed $115,000. Another sum of $350,000 is needed to restore the interior. Architect John Michiels of Oak Park, president of the Unity Temple Restoration Foundation, said a $500,000 endowment would insure maintenance of the edifice "for generations to come."

AIP faces new frontiers

As with most conventions, the American Institute of Planners 57th annual conference in Denver (Oct. 27–Oct. 30) raised a lot of interesting questions. But it didn't answer them. Still, judging from the high level of attendance at the events—2500 planners and public officials—at least the right questions were being asked, and information, discussion panels, conference papers, and films, saturated each day.

In discussing shared governmental powers, the Mayor of San Diego, Pete Wilson, urged that roles of various levels of government be spelled out.

Wilbur Thompson, professor of economics at Wayne State University, argued for strong "urban-regional" organization, so that growth could be managed at the regional level. One of the stickiest questions raised at the conference was the right of a local government to determine whether it should grow or not, particularly if accepting growth makes sense regionally. The number of court cases still pending about exclusionary zoning and other side effects of a town's no-growth policy make this area problematic. [SS]

Federal design session

"Last year, we had two hours for architecture. This year we have a whole day," observed Bill Lacy of the National Endowment for the Arts, as he introduced the architecture portion of the Second Federal Design Assembly. This gathering, held in Washington in September, was a celebration of the government's expanding commitment to upgrading federal design.

A fraction of the time was given over to reporting on the Endowment's progress in the 18 months since the first assembly. Principal accomplishments claimed to date: a federal graphics review procedure, revised civil service policies for hiring design personnel, and a set of interim recommendations by a task force on architecture.

As the most ambitious meeting of its kind to date, the Second Federal Design Assembly ended in an appropriately congratulatory mood. Yet, in terms of its objectives and the audience it reached, it was still a modest effort. [JMD]

James Biddle and Oregon Governor Tom McCall. Photo: David Morton

National Trust gets budget increase

Interior Secretary Rogers Morton recently announced the federal government approval of a $2.7 million budget for the National Trust for Historic Preservation for 1975—a 59 percent increase over 1974. The news came at the closing session of the National Trust's 25th annual meeting, held in October in Portland, Ore.

Secretary Morton said that the increase represents a growing importance of the preservation movement in this country. To support his point, the Secretary noted that in 1948 the U.S. had 500 house museums; today there are 2500. Twenty-five years ago only 5 municipal ordinances protected historic sites; today there are 200. But it is perhaps more impressive, as Trust president James Biddle noted in his opening remarks, that membership in the organization has grown from 165 in 1949 to an enormous 63,000 today.

Throughout the five days of the meeting there was a strong and very real sense of progress and growth within the preservation movement. If the 600 who attended the meeting, are representative of all of those involved, then one may conclude that preservation is in very good hands. [DM]

Bahama conference shows Miami plans

Considerable discussion at the recent "Spirit of the City" workshop, Berry Islands, Bahamas, centered around the recently completed plan for Miami's Bayfront Park by Edward D. Stone, Jr. of Ft. Lauderdale and the plan for downtown Miami, 1985, by the firm of Wallace, McHarg, Roberts, & Todd of Philadelphia.

The closing session featured a spirited debate between Mayor Maurice Ferre of Miami and Commissioner Rose Gordon on the best method of dealing with the Florida East Coast Railroad land rights in order to extend Bayfront Park 2000 ft north.

Several points were developed at the conference—the Fifth Annual Urban Workshop sponsored by the Florida South Chapter, AIA, the Greater Miami Chamber of Commerce, and the University of Miami—which might well have application to many downtown areas at this time:

They included the recommendations that bayfront and riverfront parks should be tied to inland needs through pedestrian ways perpendicular to the water and that mass transportation should be provided in advance of demonstrated need. [Ralph Warburton]

Ralph Warburton is head of architecture, University of Miami.

NAHRO casts critical eye at '74 Housing Act

Unquestionably the topic which dominated the 35th annual conference of the National Association of Housing and Redevelopment Officials (NAHRO) recently in Boston was the then month-old Housing and Community Development Act of 1974. After nearly two years of an anti-inflationary "freeze" on federal money for housing officials wondered if the new law (authorizing $11 billion) would uplift an economically and spiritually depressed residential construction market.

Essentially, the greatest boon of the Act, its flexibility, could be its downfall. The very lack of federal control which the Act promises might be all the op-

[continued on page 30]

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

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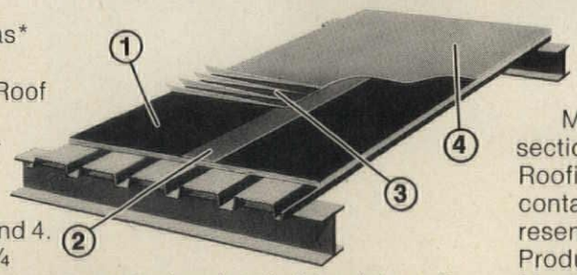

4. Fiberglas PermaCap (where available) tops everything off. It's surfaced with inert, noncombustible ceramic granules that help beautify the roof.

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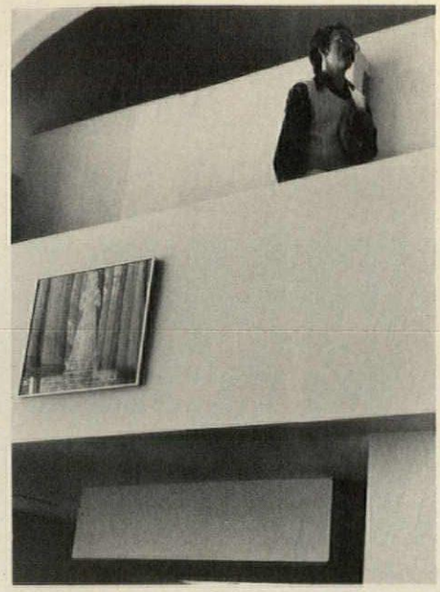

Brownstone home (left) of architect Charles Brewer; Interior of the adjacent brownstone (above) by architect Caswell Cooke.

News report continued from page 28

portunity local and state politicians need to misuse the funds. For example, there's nothing in the Act which says allocations must be spent on housing, and "community development," for which the Act provides, could be construed as putting in gold-plated fireplugs. One official feared cities might use this federal money to pay for normal operations and not for development or rehabilitation. [AC]

Wooster Square: townhouse heaven

Fortunately for New Haven's historic Wooster Square, the peril of neglect or destruction has never been imminent. But a new interest in upgrading the magnificent 19th-Century structures has made this special tiny neighborhood a showcase of how contemporary design can blend with the old. A well-attended tour of the district in early fall displayed all its charms. In almost every case the exteriors of the stately brownstones were left as originally designed, and the interiors were remodeled into the familiar stark white, multilevel spaces with exposed brick and polished hardwood floors.

The square was developed between 1830–1880, and was inhabited by industrial moguls whose factories, some still visible, formed an encircling belt several blocks away. From about 1915 the neighborhood became settled by Italian families who acted as a stabilizing influence maintaining the homes, churches, and the park. The present restoration movement began in the 1960s, and was high-lighted in 1970 when Wooster Square was declared an historic district, New Haven's first.

Bostonians interviewed for "trail" data; Recordings help visitors discover city. Visuals: Courtesy Michael & Susan Southworth

Boston 200 discovery network

Architects Michael & Susan Southworth of Boston (P/A Jan. 1974, p 56) have prepared 12 "trails" of discovery—past and present—in the city of Boston for the upcoming Bicentennial. Painstaking interviews with more than 100 neighborhood groups were

[continued on page 32]

Which couple works in a sprinklered building?

It's hard to believe, but most mannequins are better protected against fire than man. Department stores are sprinkler protected. So are warehouse and manufacturing facilities. But most high rise buildings—where more and more of our population work and live—are not.

But tough new building codes are beginning to change all that. Right now, Connecticut, Maryland, Massachusetts, Ohio and scores of cities, towns and municipalities have passed tough new building codes banning new construction of unsprinklered high rise buildings.

Whether you're a building owner or developer, an architect or specifying engineer, you should be aware of this growing trend toward life safety. Facing the future *now* and learning all you can about sprinklering properly could save you money in the future when you come face to face with one of these tough new codes.

Save you money? That's right. Permissive clauses in building codes vary from city to city, but sprinklering your next high rise will make it safer and could save you money in many or all of the following ways: *Flame spread ratings of surface finishing materials can be increased. Fire ratings of walls, doors, roofs, floors, beams, trusses and columns can be reduced. The distance between fire exits can be increased, leading to fewer stairways. Larger non-compartmented areas are permissible, and fire barrier requirements can be eliminated. Smokeproof entrance closures to exit stairs can be eliminated if stairways are pressurized. The requirement for "areas of refuge" can be waived. Manual fire alarm systems may be eliminated. Fire hoses and cabinets can be eliminated. Riser piping is permitted to serve as combined sprinkler riser and fire department standpipe.*

Sprinklers cost, it's true. But sprinklers save money, too. The average high rise can be sprinklered for approximately $1 per square foot. Investigate the construction cost savings involved in your next high rise. The results may surprise you.

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News report continued from page 30

conducted, 3000 sites examined, and every inch of the trails walked, biked, photographed, and diagrammed.

The data collected also will go into portable tape recordings which the 18 to 20 million visitors expected for the 1976 celebration can carry on the trails. Items of architectural interest are pointed out, as well as historical facts and activities currently of interest and fun to do. Care has been taken to show locations of restaurants and restrooms, and where these aren't normally available to the public, arrangements have been made with local establishments to provide them.

Barnett Gruzen dead at 71

Barnett Sumner Gruzen, founder and senior partner in the firm Gruzen & Partners, New York, died Sept. 27 at the age of 71. His firm is noted for its substantial contributions to the development of New York's Civic Center in downtown Manhattan, and for a current project, the U.S. Embassy in Moscow, which is being designed in conjunction with Skidmore, Owings & Merrill's San Francisco office (P/A p. 45).

Gruzen was born in Latvia and came to this country as an infant becoming a naturalized citizen in 1925. He studied architecture at the Massachusetts Institute of Technology receiving his bachelor's degree in 1926 and his master's in 1928. After graduate study in 1930 at the Paris Ecole des Beaux Arts he stayed abroad two years as a Rotch Traveling Scholar. Upon return to the United States he established a practice with Hugh A. Kelly which lasted until 1967 after Kelly's death when Gruzen & Partners became its successor. Survivors include his widow, the former Ethel Brof, and two sons, Jordan Lee, chief executive of the firm, and Maxson Stewart, a photographer.

Barnett Sumner Gruzen
Photo: Quesada-Burke & Burke

Calendar

Through Jan. 15. "New Architecture in New England" exhibit, DeCordova Museum, Lincoln, Mass.
Dec. 10–12. International Building Exposition (INBEX), Chicago.
Dec. 17–20. International conference, Tel Aviv, Israel, on housing for the emerging nations, sponsored by the International Technical Cooperation Centre and the Association of Engineers and Architects in Israel.
Dec. 26. Deadline for nomination forms for the 19th R.S. Reynolds Memorial Award for Distinguished Architecture Using Aluminum, American Institute of Architects, Washington, D.C.
Jan. 1–31. Walter Gropius, 1883–1969, photographic retrospective exhibition, University of Southern California, Los Angeles.
Jan. 19–23. Thirty-first annual convention and exposition of the National Association of Home Builders, Dallas.
Jan. 26–29. Conference on tall buildings and the growth of cities, Honolulu, Hawaii. Conference is sponsored by the Joint Committee on Tall Buildings.
Feb. 1. Deadline for applications for
[continued on page 37]

News report continued from page 32

the James Stewardson Traveling Scholarship, sponsored by the New York Chapter, the American Institute of Architects.

Apr. 23–28. Twenty-eighth annual meeting of the Society of Architectural Historians, Copley Plaza Hotel, Boston.

May 18–22. Annual convention of the American Institute of Architects, Atlanta, Ga.

Personalities

Robert C. Einsweiler, AIP has been reelected president of the American Institute of Planners. **Diana C. Donald, AIP** is first vice president and **Leon S. Eplan, AIP** is second vice president.

George Nelson, FIDSA, New York City, has received an award from the Industrial Designers Society of America for distinguished contribution to the profession of industrial design.

Nikolaas John Habraken has been named head of the Massachusetts Institute of Technology Department of Architecture effective August, 1975.

Anthony James Catanese, AIP has been named associate dean for architecture and planning of the School of Engineering and Environmental Design, University of Miami, Coral Gables, Fla.

Bett Marriott has been installed as president of the Association of Women in Architecture of the Los Angeles metropolitan area.

John Macsai of Campbell & Macsai Architects, Inc., has been appointed professor in the Department of Architecture at the University of Illinois, Chicago Circle.

National competition

The New York State Urban Development Corporation will hold a two-stage competition for 1000 mixed-income residential units on New York's Roosevelt Island. (P/A Oct. 74, p. 22) Eight finalists, receiving $5000, will be picked in the first stage with a $10,000 first prize awarded in the final stage. It is the intention of the Urban Development Corporation to employ the winner to prepare contract drawings of the winning design.

Second prize in the final stage will be $7500, and third prize, $5000. The competition has been designated as Primary Class A by the American Institute of Architects. Deadlines are: Feb. 15, registration; April 15, first submissions; May 15, finalists announced; Aug. 15, final submissions; Sept. 15, winner announced. Any architect registered in the United States is eligible.

Requests for announcements are free; requests for competition programs, accompanied by a $25 check or money order, should be sent to professional advisor Theodore Liebman at the UDC, 1345 Avenue of the Americas, New York, N.Y. 10019. There is an additional $25 charge for registration.

The site is 9.2 acres on the west side of the island just north of the first development phase which now is nearing completion. It will consist of housing and a full range of support services, such as retail and community spaces, and decentralized schools. Child supervision, security, and livability must be of equal importance with design.

Jurors will include Franklin Becker, Ph.D., Cornell University; Alex Cooper, AIA; Frederick Rose, president, Rose Associates Inc., Builders & Owners; Paul Rudolph, FAIA; Jose Luis Sert, FAIA, jury chairman; Joseph Wasserman, AIA, and P/A Interiors Editor Sharon Lee Ryder.

[News continued on page 40]

This beach has the 3 essentials Owens-Corning has the system

1. An acoustically non-reflective ceiling is a *must*—to keep sound from bouncing to other areas. An independent acoustical testing laboratory examined eight ceilings, including expensive coffered and baffled systems. Their verdict: Owens-Corning's Nubby II Fiberglas* Ceiling Board (left) in any standard exposed grid suspension system is *best* for achieving speech privacy at economical installed cost.

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3. A barrier or the proper acoustical *screen* is necessary to keep unwanted speech from going *directly* between work areas.

All three essential elements should be "tuned" to work together with the help of an acoustical consultant.

For further information and our free 16-page guide, "Achieving Speech Privacy in the Open Office," write: N. M. Meeks, Architectural Products Division, Owens-Corning Fiberglas Corp., Fiberglas Tower, Toledo, Ohio 43659.

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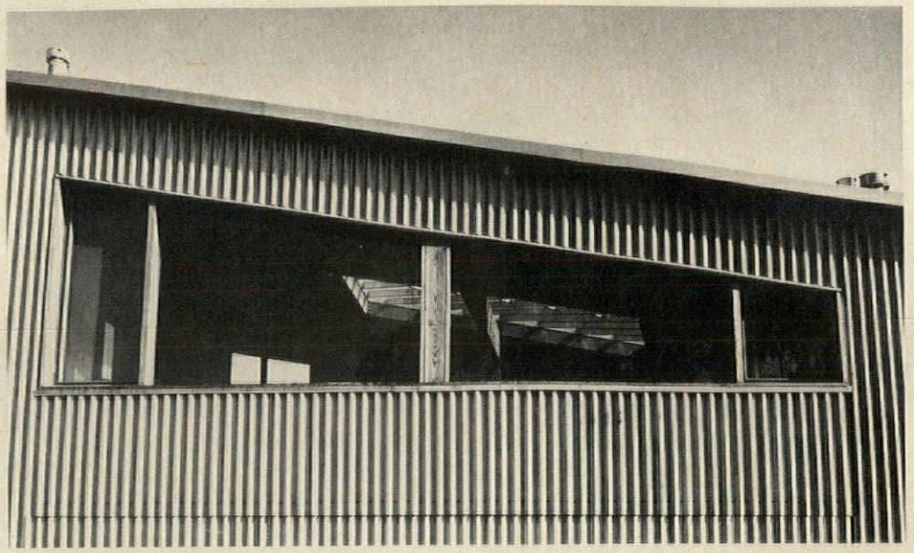
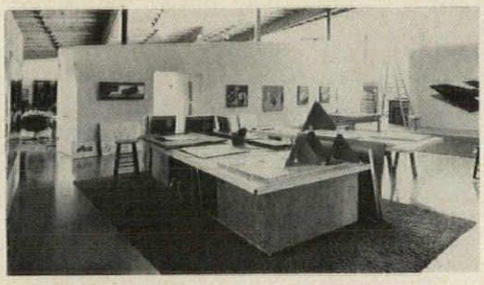
Report from Malibu Hills





Artist's studio takes industrialized approach. Rhomboidal roof rises from 9 ft to 29 ft. Photo (above) Marvin Rand; (left and below) Tim Street-Porter

Frank Gehry & Associates' studio house for artist Ron Davis has the image of industrialized building so appealing now to artist as well as architect. The ideal of the L.A. School of successful artists is an 8000-sq-ft mechanic's garage with an oversize drive-in door and 18-ft ceilings. Here work, living, eating, sleeping, and car storage coexist. (In one such conversion a grease pit was scraped out and turned into a huge bathtub.) All interior wood and concrete are sandblasted until immaculate, and then a minimum number of partitions are erected. The Davis house is based on this ideal.

Davis wanted a simple industrial space, but when he bought the land he was involved with three-dimensional studies dealing with perspectives that met, so he stretched string from the assumed site to find vanishing points. The Gehry office took it from there.

A clue to the rapport of the Gehry firm with artists are the various art works within the unpartitioned industrial space of the architect's office: a Larry Bell glass enclosure that shifts before the eyes; Tony Berlant's 8-ft assemblage of forms evoking ancient Athens and modern New York; huge paintings by Ed Moses.

The architect and client were equally concerned about views through windows and the proportion of solids to voids. The latter is apparent in the studio's resemblance to a burnt-out shell of an early International Style building.

The house is a 5000-sq-ft neutral shell, wood framed, with exterior walls and roof of steel decking. The rhomboidal roof, evolved from Davis' studies, rises from 9 ft at one corner to 29 ft.

"What we were after was a simple industrial space that would look beautiful," Gehry said.

Greg Walsh of the Gehry office said that four years ago they would have worried about ways to conceal the exhaust fan on the roof and covering the electrical panel. "But given the nature of the building industry today it is better to accommodate them," he added.

On the sloping site, the garage and woodworking shop are one-half level below grade, and the studio-living space above has no ceiling height partitions. Work areas were defined by Davis within the clear space, and other functions fitted to them.

A narrow, blocky form dividing work from living contains two narrow bathrooms and two deep storage cabinets for paintings. A sitting area is a corridor turning a corner to the kitchen.

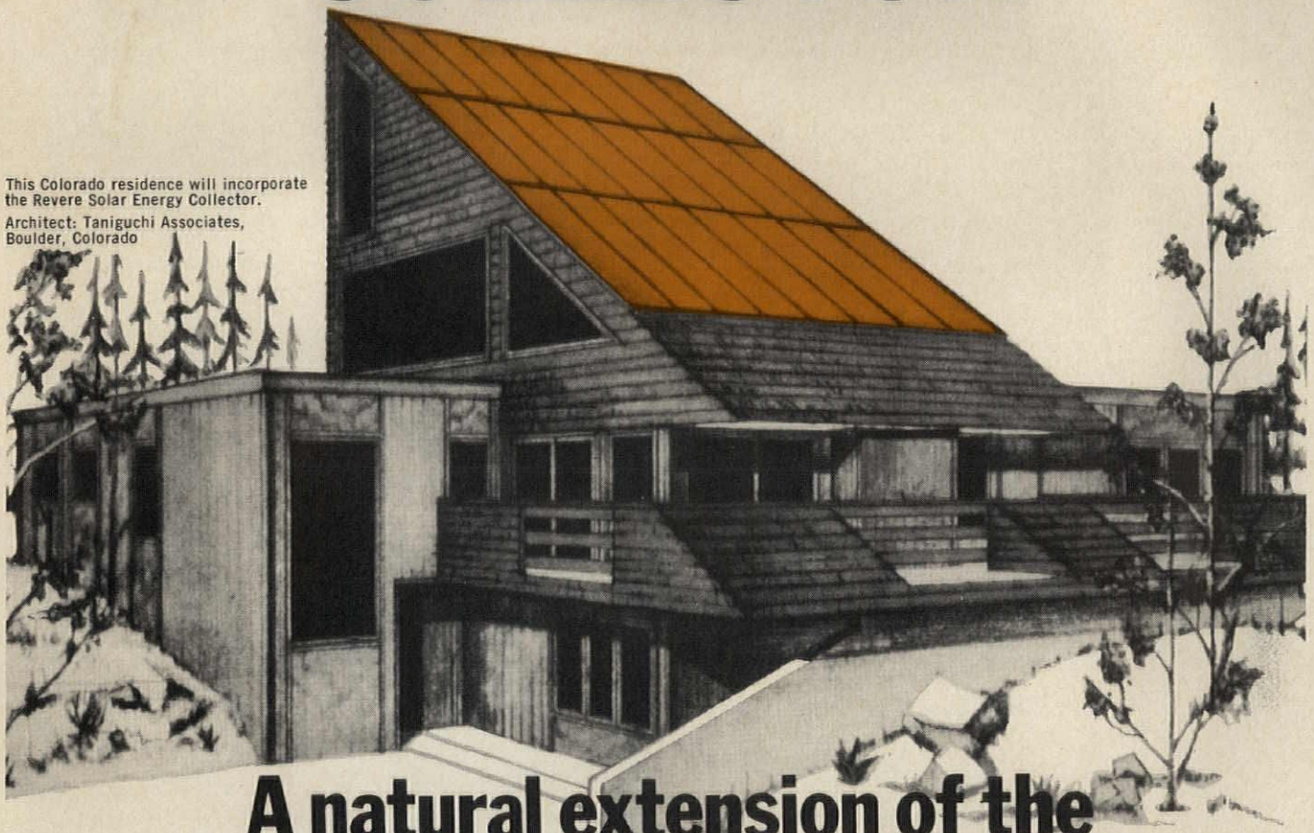
Stairs lead to a low-railed platform used for sleeping and for the electronic instrument, similar to a Moog synthesizer, which allows Davis to produce music of any pitch or tonal quality.

Davis recently added an open wooden stair and catwalk from the bedroom level to a higher level on the opposite side of the studio.

When the shell was completed it was many months before Davis could bring himself to move in. Not an uncommon reluctance; Nick Wilder advises Wilder Gallery artists: Always keep your old studio for at least six months after you rent or buy a new one. Davis, with Gehry's help, continues to shape the universal space to his own ideal. What always will be lacking, and that which replenishes artists to varying degrees, is an opportunity to walk out of privacy onto commonplace streets and brush against everyday people. All of the other characteristics of a mechanics' space are there. [Esther McCoy]

[News continued on page 44]

REVERE SOLAR ENERGY COLLECTOR



This Colorado residence will incorporate the Revere Solar Energy Collector.
Architect: Taniguchi Associates, Boulder, Colorado

A natural extension of the Revere Copper Laminated Panel System

Revere has applied its years of experience with copper building products to the development of a practical solar energy collector. It features:

- *Significant fuel savings*—in some areas of the U.S., up to 75% of the cost of heating and air conditioning both residential and commercial buildings.
- *Easy installation*—2 foot by 8 foot panels are quickly assembled as supporting deck, copper roofing and collector for new buildings . . . or they may be installed as modular units for existing structures. Revere supplies all necessary components.
- *Long life*—All parts are made of quality copper which is corrosion resistant, durable and maintenance free.

Get the facts. For a new brochure on the Revere Solar Energy Collector write: Revere Copper and Brass Incorporated, 605 Third Avenue, New York, New York 10016.

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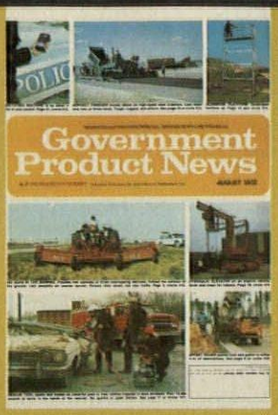
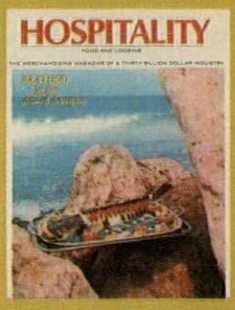
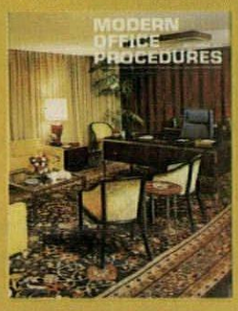
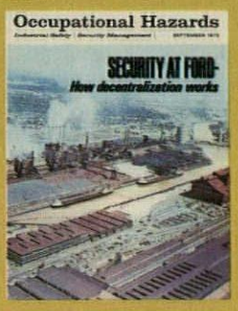
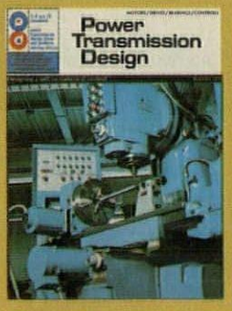
Something New Has Been Added to IRD

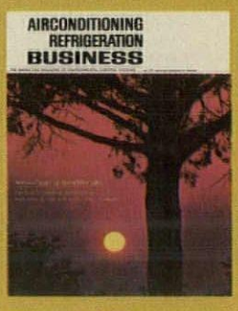


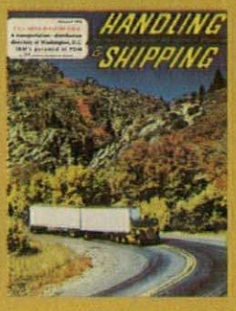


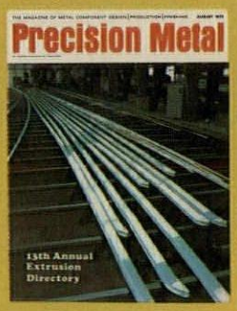


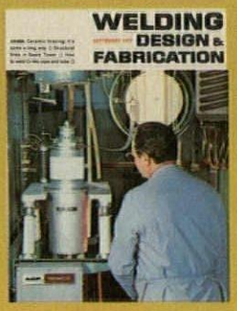


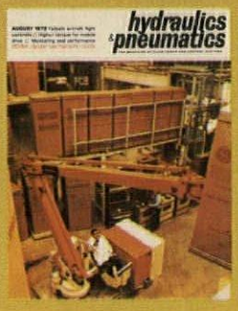


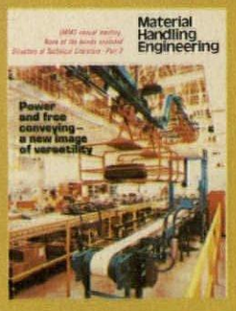


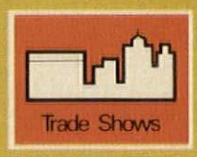






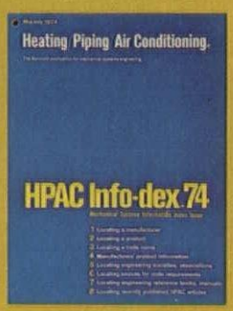






IRD Marketing Communication Services

Reinhold Publishing Co. is now IPC Reinhold



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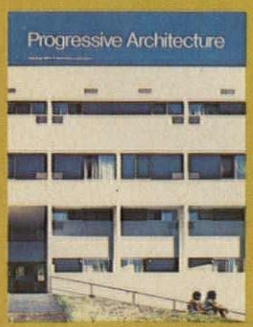

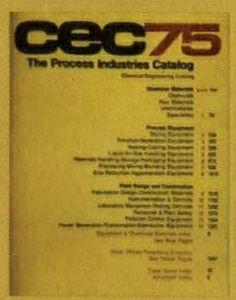

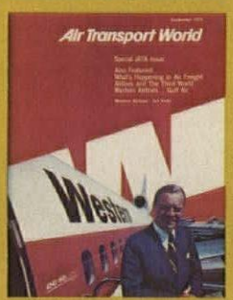

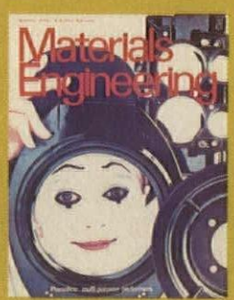

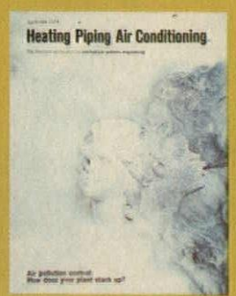

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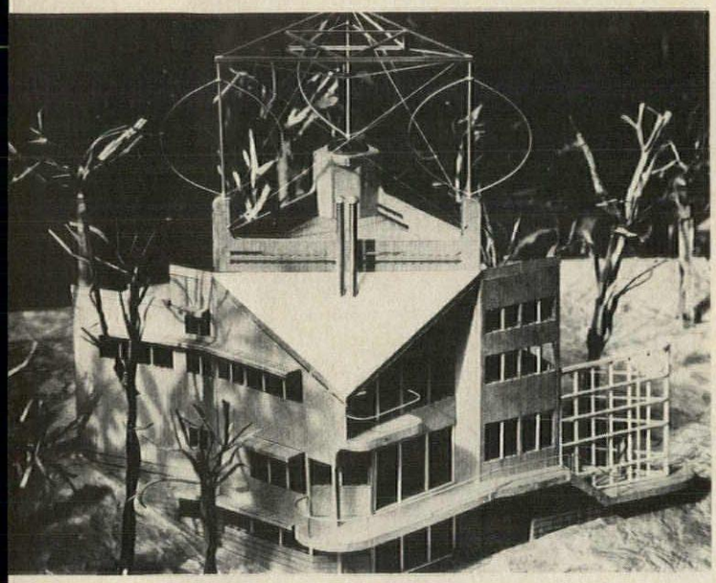
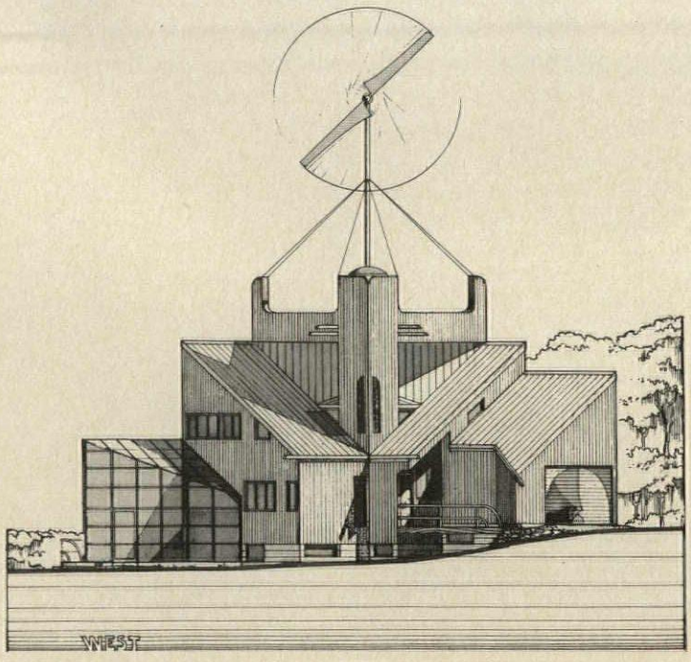
In progress

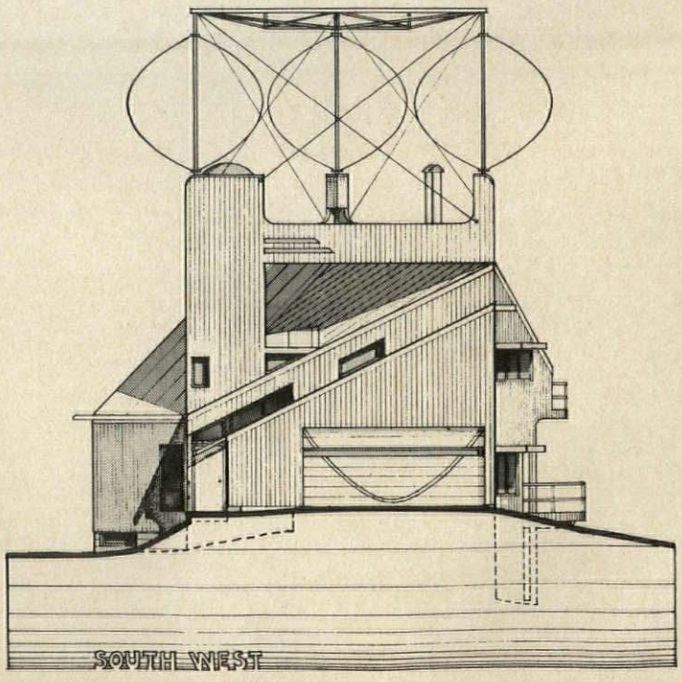
1



2 Model showing east side

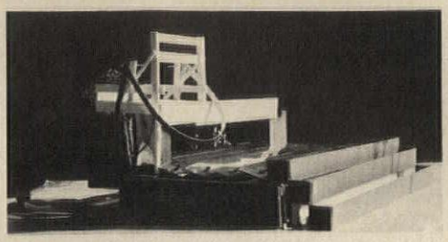


Sail wing version

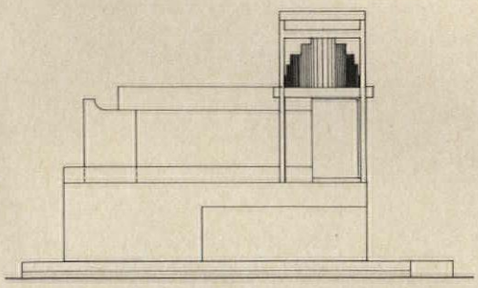


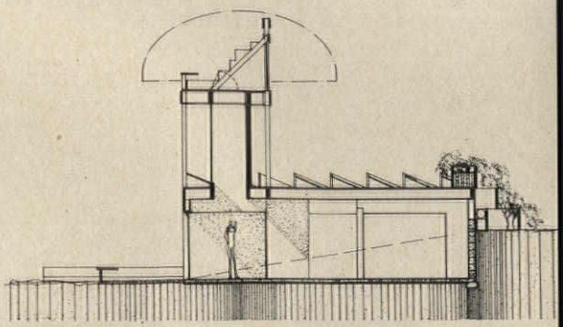
Vertical shaft windmill installation

1 Furness building—The Pennsylvania Academy of the Fine Arts in Philadelphia by Frank Furness will be completely restored to original condition in time for its 100th birthday in 1976. The massive undertaking will cost $7.4 million raised in a special fund drive. Work will include climate control, security, lighting, administrative offices, and expanded public spaces. Day & Zimmermann of Philadelphia are architects for the project.



2 Wind power—Construction has begun on a family residence for Charles R. Evans on a windblown ridge south of Syracuse, N.Y. Although a conventional electrical system will be installed, architect Tristram Metcalfe of Syracuse plans to use wind energy converters to provide for all the power needs. He prefers to use the vertical shaft windmill (P/A July, 1974, p. 20) developed by NASA and the Canadian Research Council, but he may choose instead the sail wing windmill being developed by Princeton University.

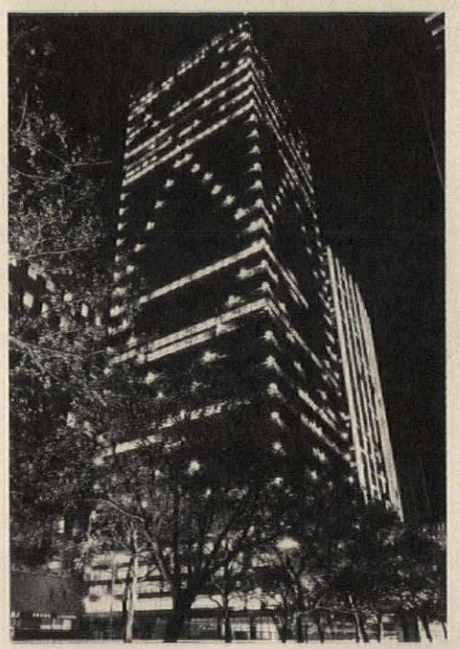


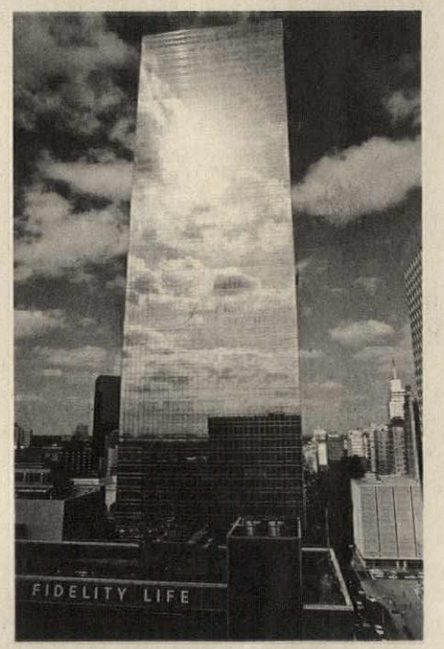


3 Model shows proposed loop for movable awning

3 Solar power—When machinery importer Horst Biernath engaged architect James Mount of Atlanta to design a family retreat near Georgia's Lake Lanier, he wanted to use the cabin as an experiment for solar panels which he hopes to manufacture and sell to do-it-yourself builders. Thus the structure's sun-oriented roof is composed of wood-frame, glass-covered panels which could be assembled by home craftsmen. The walls are concrete block covered with a black waterproof membrane. Above the family area is a special retreat with a retractable rope ladder to ensure privacy. Completion will be this winter.

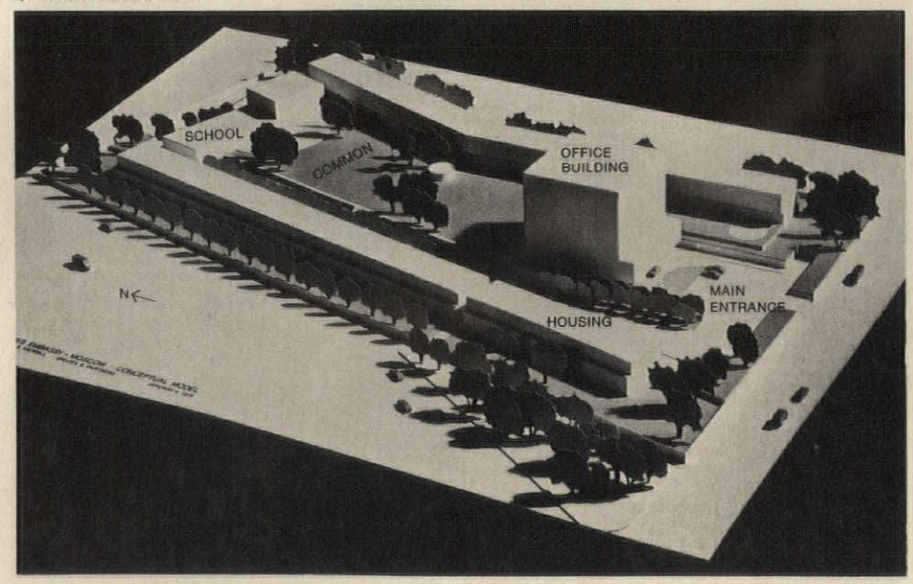
4 Cross "X" in Texas—The tallest building in Dallas, the 56-story First International Building by Hellmuth, Obata & Kassabaum, St. Louis, and Harwood K. Smith & Partners, Dallas, bears the first application of the exterior X-bracing system for a high-rise in the Southwest. Unlike the John Hancock Center, Chicago, where the Xs are visible, the Dallas tower is glazed with mirror glass which conceals the bracing, except at night when the trussed tube system, developed by Ellisor & Tanner, engineers, is revealed by light within. A grand opening is set for January.





4 Photo: Barbara Martin

5 Little America near the Kremlin—The new United States Embassy complex in Moscow will be built on a 10.5-acre site one mile from the Kremlin and, according to a special agreement, must be finished the same time the Soviet Embassy in Washington is completed several years hence. The compound of homes, school, shops, and offices is by Skidmore, Owings & Merrill of San Francisco and Gruzen & Partners, New York. The approximately 633,000 total square footage will be broken into 150,000 sq ft for offices, 100,000 for service facilities including the school, and 383,000 for 146 terraced rowhouses for embassy personnel. Underneath the enclosed common are spaces for parking, cafeteria, commissary, and dispensary. An eight-story office building and forecourt will form the public entry.



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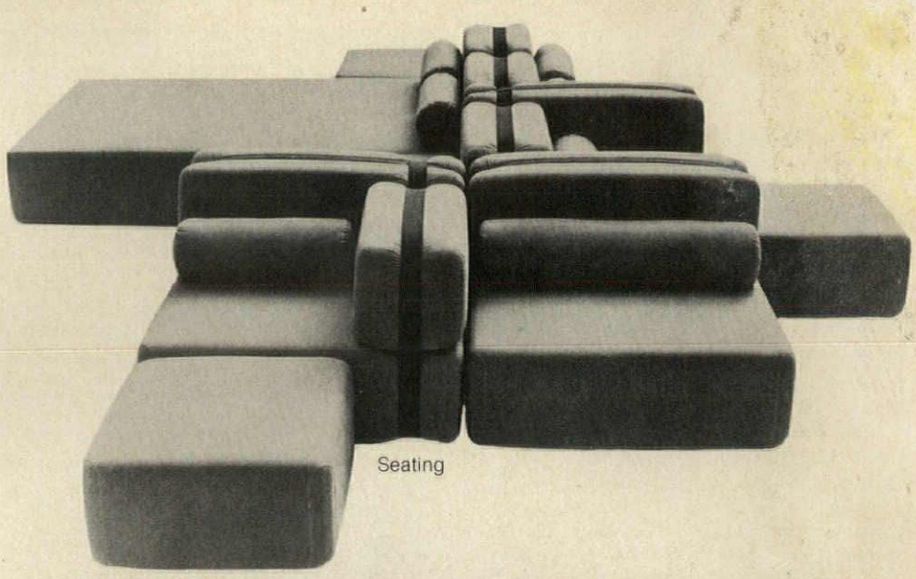
Products and literature



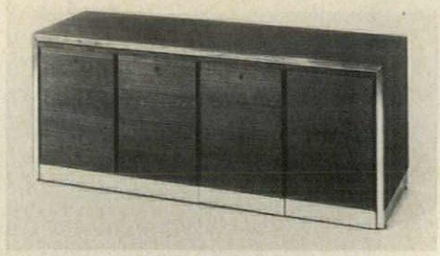
Seating

Seating made up of two basic foam components, set one on another as a back or an arm, built up with another block, or stretched for a long seating area is called Pollorama. A 2½" belt holds the foam blocks together. Zapf or Knoll tweed or Orly fabric upholstery in a range of colors slip over the foam blocks, can be removed for cleaning or replacement. Knoll International.
Circle 101 on reader service card

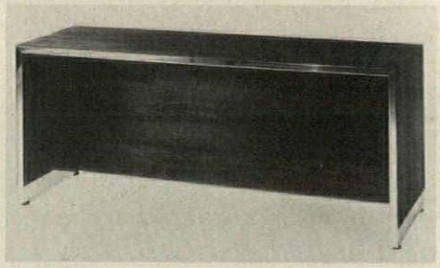
Desks and credenzas. "Envelope" enclosures into which free-standing storage components or pedestals can be inserted by sliding them into position form basis of grouping. Offered in grained walnut and a variety of finishes. All envelopes are available with a polished chrome edge and base trim or with polished base trim only. Base trim is repeated on all storage units. Jens Risom Design, Inc.
Circle 102 on reader service card

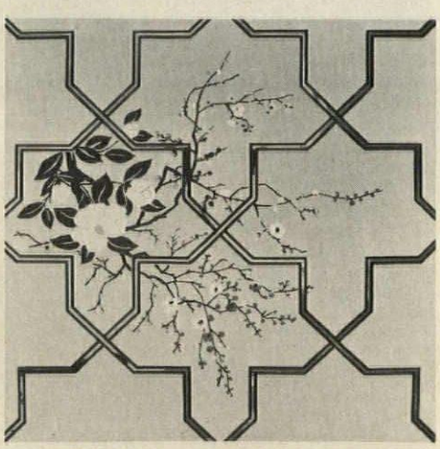
Wallcoverings. Shown is "Cho Chu San," a still life on mylar. Pattern is also available on a plain background, both come in 28-in. widths and a range of custom colors. Original design also comes in a 48 in. fabric. The House of Verde, Inc.
Circle 103 on reader service card

Educational carpet. Made of nylon it incorporates graphic learning symbols—circles, number and letter grids, mazes—printed on the carpet, and can be used to teach numbers and letters, spatial relationships, problem solving, mathematics, states maker. Fibers Division/Allied Chemical Corp.
Circle 104 on reader service card



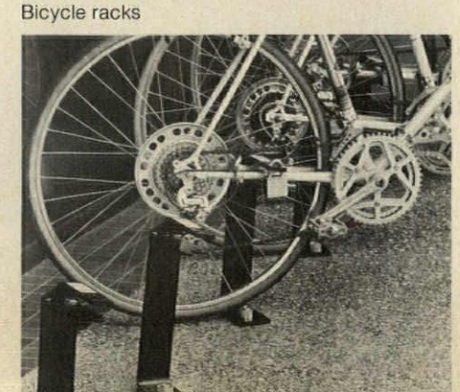
Desks and credenzas





Wallcoverings

Bicycle racks

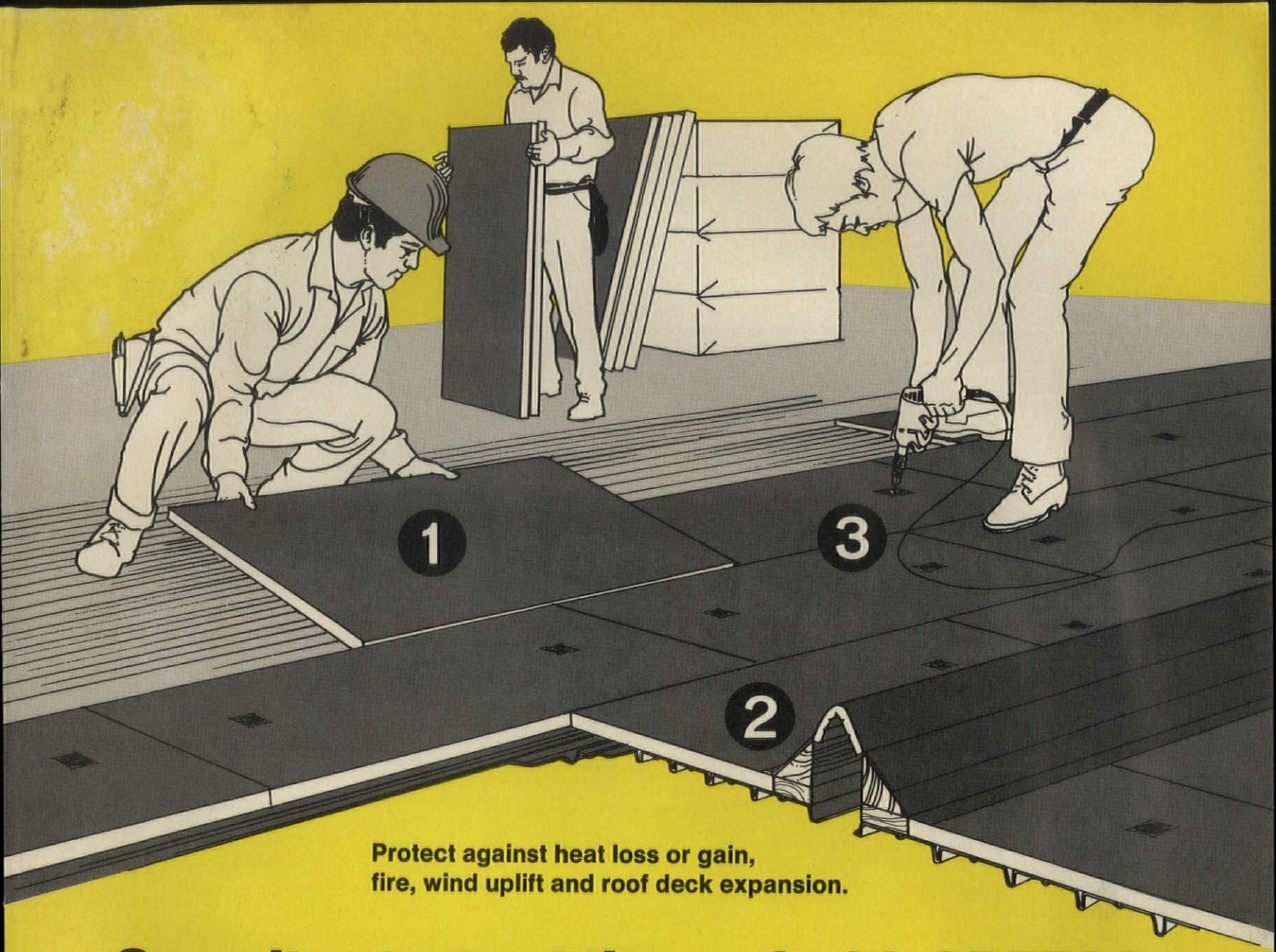


Modular outdoor lighting. Components are 67 different modes of luminaires, and two basic types of laminated wood standards. High intensity discharge units offer wide choice of diffusers and may be mounted to posts in various ways. Standards are straight or curved, single or double, in heights up to 40 ft above ground (straight type), and 20'-10" (curved type). McPhilben Lighting.
Circle 105 on reader service card

Air hinge provides a means for carrying air into a door so that the latching devices can perform various functions as an alternative to electricity. Compressed air provides the force. ECO Security Division, Hager Hinge Co.
Circle 106 on reader service card

Electric fireplace. It requires no structural changes in a room, fits any ceiling height, and hangs on the wall supported by a cantilevered base which is secured to the wall by several screw fasteners. Can be painted, covered with vinyl or wallpaper, and has thermostatically controlled heating element and circulating fan. Heatilator.
Circle 107 on reader service card

Bicycle racks. Constructed of ⅜ in. steel plate coated with Nylabond finish, racks accept most padlocks and protect lock shackles from tampering. Anchored with a vandalproof bolt and breakaway nut, units can be arranged to suit space. Five models are available, two of which are coin operated. Rally Enterprises, Inc.
Circle 108 on reader service card
[continued on page 48]



Protect against heat loss or gain, fire, wind uplift and roof deck expansion.

Security starts at the roof with GREFCO

1 Permalite® Sealskin® Rigid Roof Insulation

provides a better insulated roof for a longer time with less trouble. Composed of feather-light, non-combustible perlite, waterproofing agents and binder. Integral Sealskin surface treatment provides both resistance to bitumen soak-up and a superior bond of roofing felts to insulation. Resistant to vermin, mildew and rot. Easy to lay and fit. Non-irritating. FM and UL listed.

2 Metalastic® Expansion Joint Cover

is the only expansion joint cover that has a seamless extrusion. Perforated 2″-wide tempered steel nailing strip in each flexible vinyl flange provides positive fastening and avoids concern of use with dissimilar metals. Flexible at temperatures down to −50°F. and resistant to aging, cracking and atmospheric pollutants. Will not loosen, shrink or corrode. Splicing takes only seconds regardless of temperature.

3 Perma-Fastner™ Roof Insulation Attachment System

holds better — saves bitumen. One specially designed, patented Perma-Fastner every four square feet holds board tightly to deck without adhesive — hot or cold — and provides positive protection against wind uplift, vibration and construction movement. Strong 3″ x 3″ steel distribution plates — not tin tabs — secure boards firmly without damage to insulation or felts. Self-drilling, self-tapping screws completely fill holes they make in deck. Perma-Fastner is FM and UL approved for use with GREFCO and other insulations.

Circle No. 331, on Reader Service Card

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Products continued from page 46

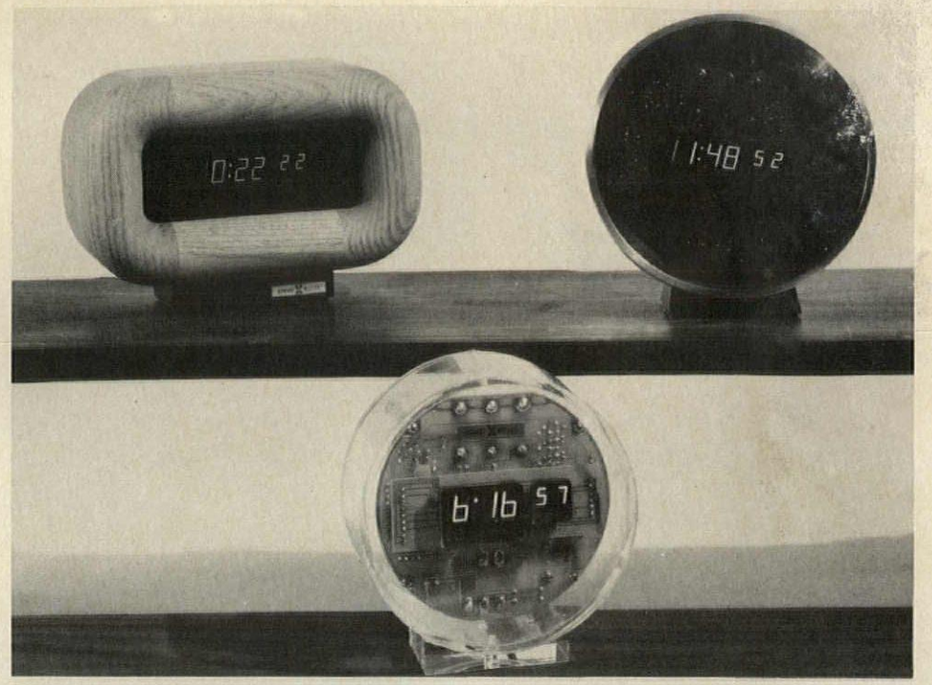
Digital desk clocks have large, illuminated numerals, wide 130-degree viewing angle and electronic digital movements. Designs include one with a rounded molding in natural oak; another with convex, smoked bronze acrylic dial surrounded by a thin brass band; and a third has a clear acrylic case and base with visible electronic movement and digital readout. Howard Miller Clock Co.
Circle 109 on reader service card

Strain gauge. Device is said to produce a record of all stresses and strains. Suitable for stress analysis in large structures, buildings, bridges, and marine applications, for unattended record keeping or field projects. Recording disc can be stored for permanent record. Unit is only 3″x1″x⅛″, operates in temperatures of −223 C to 594 C, underwater, under pressure, or in vacuum. Prewitt Instrument Div., Impact-O-Graph Corp.
Circle 110 on reader service card

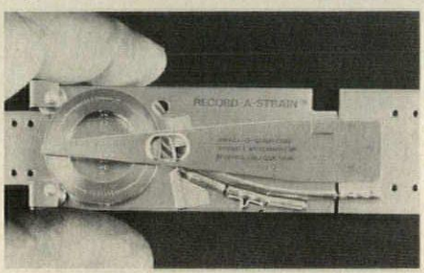
Electronic estimating. Two pencil-like probes electronically and automatically accumulate both lineal footage and count quantity, and user may extend measurements or counts by cost or labor factors, states maker. Scales of ⅛″ = 1 ft and ¼″ = 1 ft are direct reading and extension by factors can convert any scale. Counsel Corp.
Circle 111 on reader service card

Dual outdoor area light combines two different lamps and optical systems into a single luminaire: one throws illumination out over an area; the other spreads illumination to the sides, according to maker. Fixture has one-piece aluminum housing, cast aluminum ballast housing and pole fitter; sliding door frame for servicing. Guth Lighting.
Circle 112 on reader service card

Interior paneling. Prefinished 3/32 in. veneer of Portugese cork is factory laminated to a substrate of 15/32 in. structural insulation board. Tackable surface can be used either as an entire wall area or as accent panels. Available in 4′x8′ size. Homasote Company.
Circle 113 on reader service card



Digital desk clocks


Strain gauge

Electronic estimating

Exit device. Pressure bar permits easy exit in emergencies, deadlocking latch provides security, state maker. Bar comes in silver aluminum lacquer or dull bronze lacquer finishes, may be installed to operate outside by key and pull, key only, or not at all. Horizontal push bar of wrought steel channels, bolts and lever of brass extrusion, nylon bearings, stainless steel springs. Emhart Corp.
Circle 114 on reader service card

Textured paint. Acrylic based, it is available in coarse and fine textures, and can be applied by brush, roller, or spray to all types of concrete and masonry surfaces. Comes in 16 colors. Standard Dry Wall Products.
Circle 115 on reader service card

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Microform viewer. Hand-held unit is an adjunct to all major retrieval systems, permitting viewing aperture cards and 18x through 48x reduction microfiche. Operates on three double "A" batteries and has an optional combined recharging and AC/DC converter accessory. Of high impact plastic, it measures 5″x1¾″x 2⅝″ and weighs 13 oz. C.M.I.
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[continued on page 117]

Federal Reserve Bank of Minneapolis. Architect: Gunnar Birkerts & Associates, Birmingham, Michigan

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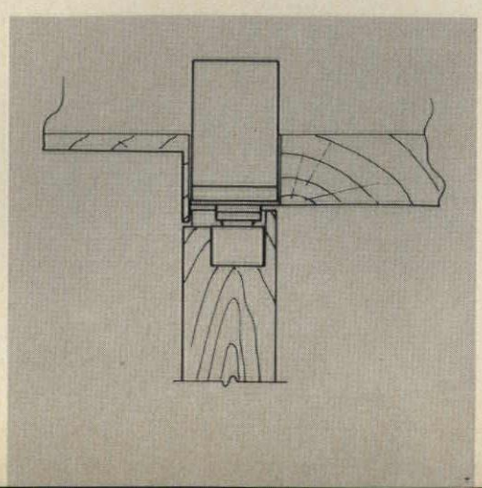

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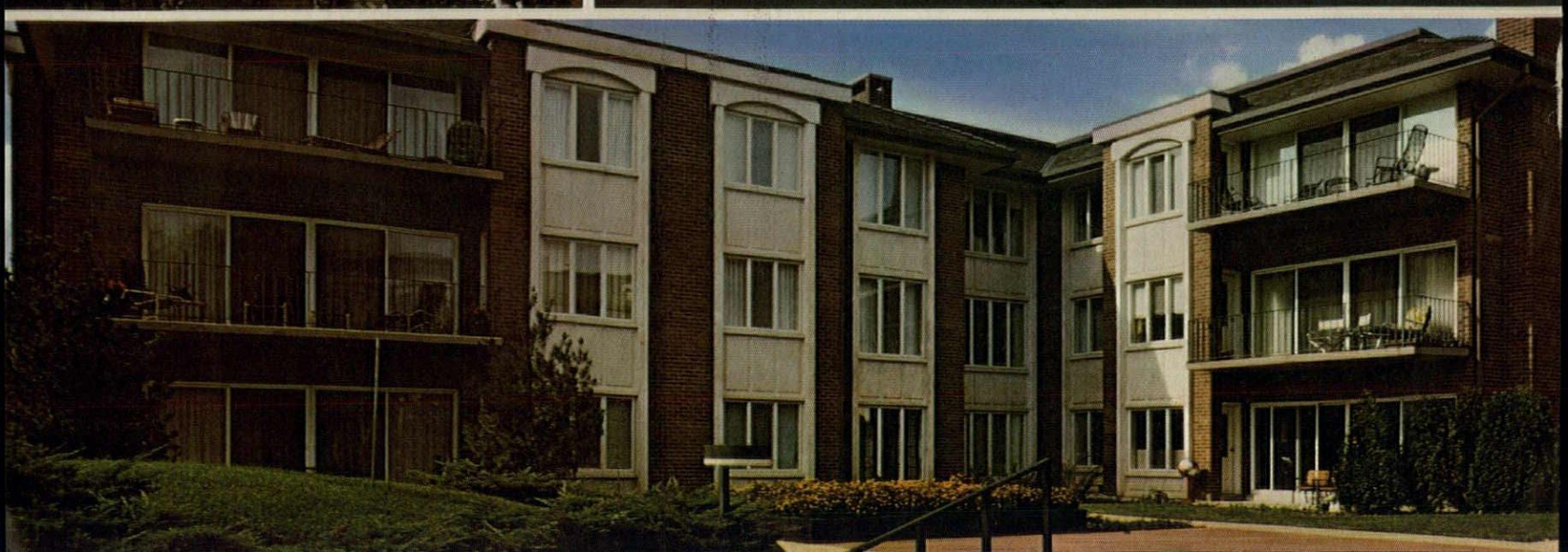

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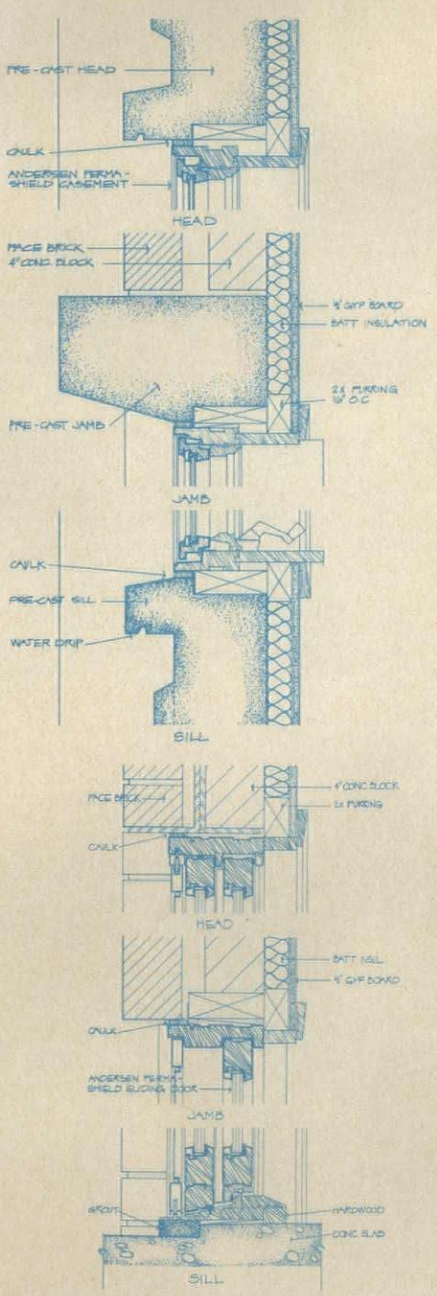

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Architecture for export

December 1974

Hot items for the 1975 drafting room: mini-calculators that can translate feet and inches into the metric units of the oil-exporting nations. As the U.S. construction slump stretches on towards an uncertain recovery (see News report), more and more enterprising architectural firms are looking eastward toward lands where the money now flows. Right now, demand for new construction and money to back it seems to be concentrated in the Middle East oil-producing states, in countries such as Egypt where oil money is invested, and in those flourishing trade centers of the Far East, Hong Kong and Singapore.

Once again, we are forcibly reminded that building activity responds less to the *pull* of demand than to the *push* of resources at hand—a principle as old as the pyramids. (Consider the Interstate Highway System.) These resources need not be wealth; they can take the form of human skills, as in the "miraculous" rebuilding of Europe and Japan after World War II or in the development of Israel. In their swelling oil income, the Arab nations finally see an opportunity to catch up to industrialized nations in housing, in facilities for education and health, and in training of government and professional cadres; other nations, such as Iran, see a means for accelerating programs already under way.

Suddenly these countries, which have been judiciously tapping Western architectural talent for decades, are ready to import design and planning skills on an enlarged scale. The Mecca Conference Center presented in this issue (p. 78) promises to be a forerunner of volumes of work to come; we can only hope it sets a standard for sensitivity to local conditions.

In the search for architectural services, these nations are now looking towards the U.S., Latin America, Europe, and Japan—areas where design skill and technical control are most convincingly demonstrated. In the past few weeks, I have talked with U.S. architects with commissions in Arabia, Algeria, Iran, Egypt, and in several places where Kuwaiti interests are building.

Obviously, the Middle East can offer opportunities for only a few U.S. firms—those with staff and resources to pursue such remote commissions. Of course, the few firms with experience in that part of the world have a special advantage. Jewish American architects are generally given little chance of being admitted to Arab countries; this limitation apparently covers only individuals seeking visas, placing no conditions on membership in the firm as a whole. In the non-Arab Moslem world, all Americans seem to be considered equal. Also affecting commissions in this now active professional marketplace are lingering resentments between neighboring countries and toward former colonial masters—all tending to give Americans an advantage.

One irony in the situation is that architects from the developing nations of Asia—most of them suffering economically because of the oil trade—are not sharing significantly in the Middle East prosperity. In India, for instance, construction has reportedly ground to a virtual standstill as the nation trades all of its steel and concrete production for Middle Eastern oil. Although architects of the Indian subcontinent and Southeast Asia have won respect in the West for resourcefulness under dire conditions, the very austerity of their circumstances seems to put them at a disadvantage in international competition.

For the time being, American architectural know-how, nurtured by years of prosperity at home, seems to be particularly prized abroad. We can only be thankful that our vast accumulation of knowledge in the field has found an export outlet among these now affluent nations.

John Morris Dixon

Two buildings by Mitchell/Giurgola Associates

Between culture and context

Rear elevation, Swarthmore College music building (opposite). Courtyard elevation, St. Bede's Worship Assembly building (right). Weathering steel sculptures were executed by Father Joseph Heyd of the Benedictine order to visually tie in with the architecture.

Two recent buildings by Mitchell/Giurgola illustrate a pair of widely divergent design solutions stemming from essentially the same architectural considerations.

At a glance, the pairing of the following two buildings designed by Mitchell/Giurgola may seem haphazard. In terms of form or function, the two don't quickly connect. Yet this abbey church for a monastery in Peru, Ill. and the music building for a college on the outskirts of Philadelphia are linked by analogous situations regarding program, meaning, and context. Despite the broad parallels, the two distinct design solutions express surprisingly diverse manifestations of an approach that looks to the *specific* situation for the determinants of the architectural form.

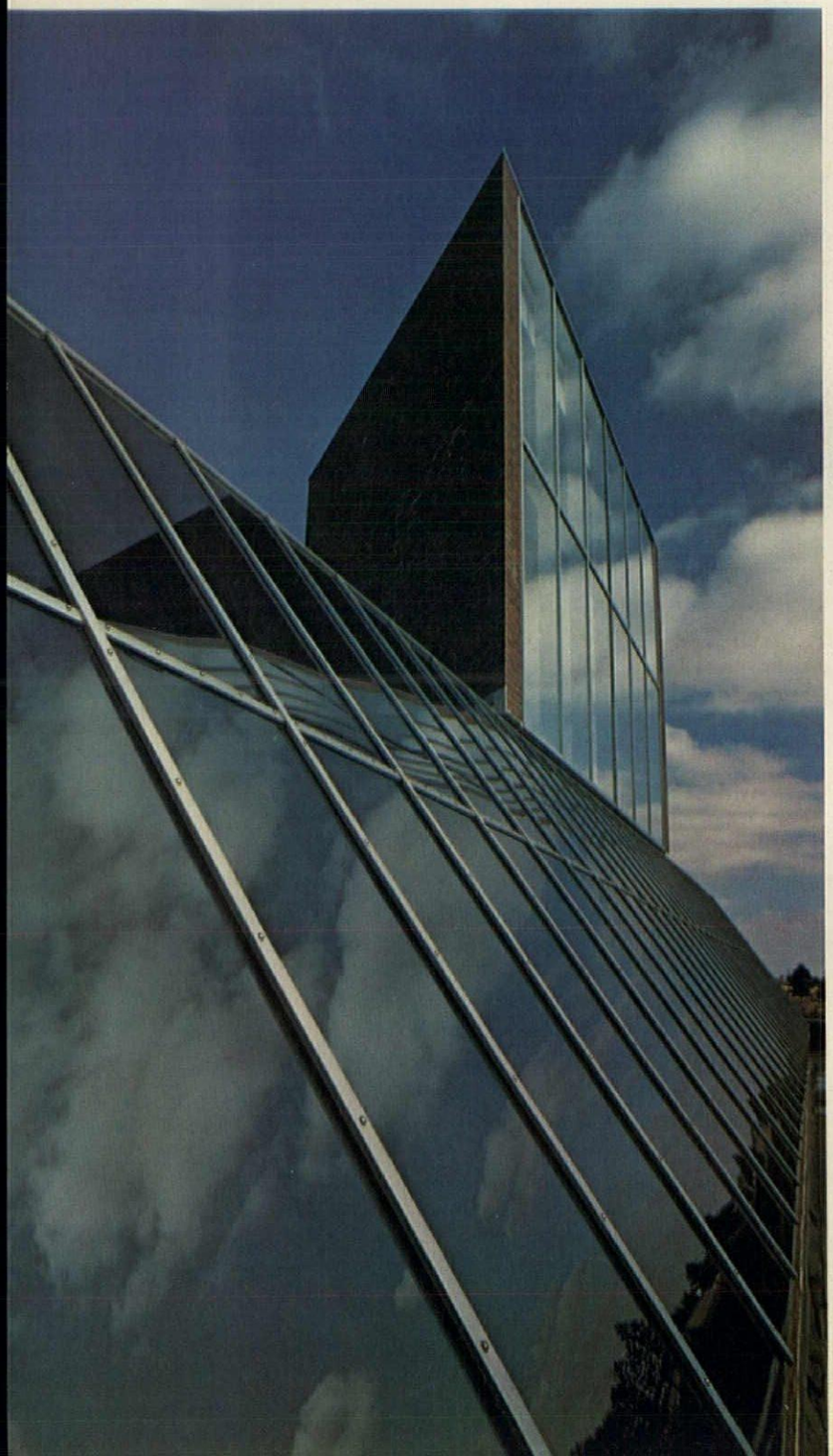
The buildings correlate in that they both serve cultural uses—one in pursuit of spiritual fulfillment, the other artistic accomplishment. The buildings' users, for the most part, comprise special interest groups, committed to their particular pursuits through private and communal rituals and performances. Frequently however, the buildings do have to expand to accommodate a larger spectator public. In addition, both structures were designed to fit into a cohesive context of older buildings: albeit one complex in a cornfield; the other on a wooded campus.

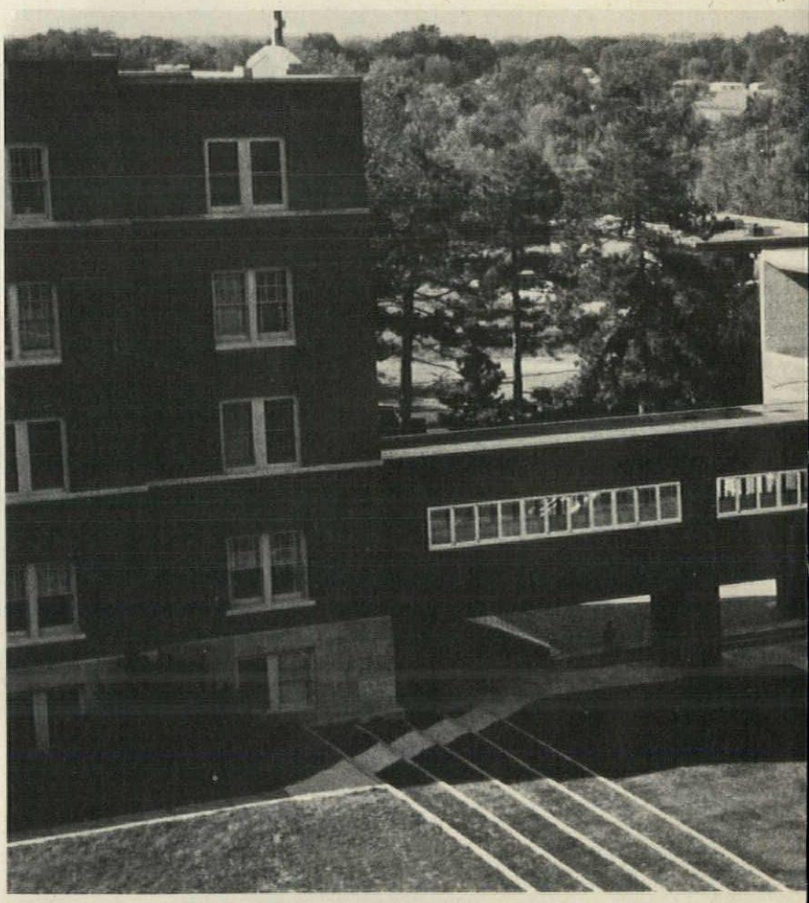
While each building exhibits distinctly different architectural expressions in terms of site orientation, materials, massing, forms, and spatial relationships, both result from the same design philosophy. That philosophy, which characterizes most of Mitchell/Giurgola's work, is essentially pragmatic: The specific subtleties of a situation determine the architectural treatment, instead of each building being masked within one particular style, or adhering to one kind of vocabulary. This is an architecture of accommodation, where subtleties of program, meaning, and existing context act as the generators of form.

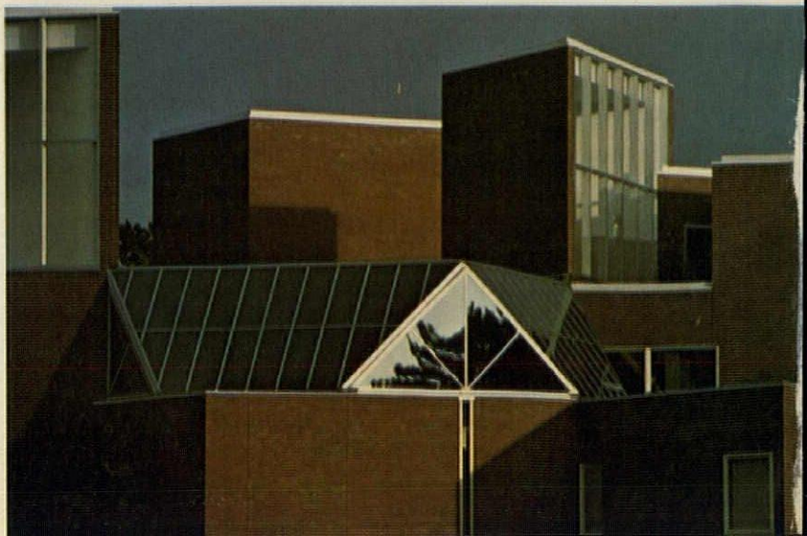
Yet in accommodating the building to its particular milieu, Mitchell/Giurgola does not demonstrate the overt desire to relate its work to a "context" of forms, styles, and imagery. The response to context, as it is to meaning (the building's signifying role) is executed through less *allusive* means; accomplished through site planning, building configuration, scale, and choice of materials. Therefore their forms might remain a little tough, a trifle hard. But that aspect too stems from their particular philosophy. According to Romaldo Giurgola, architecture should depend on new attitudes towards the dynamics of life: "Expressions may be harsh and difficult to take, they bring however . . . a sense of a new and valuable presence which is the true aspect of any great architecture."

Two buildings by Mitchell/Giurgola Associates

St. Bede's Worship Assembly Building



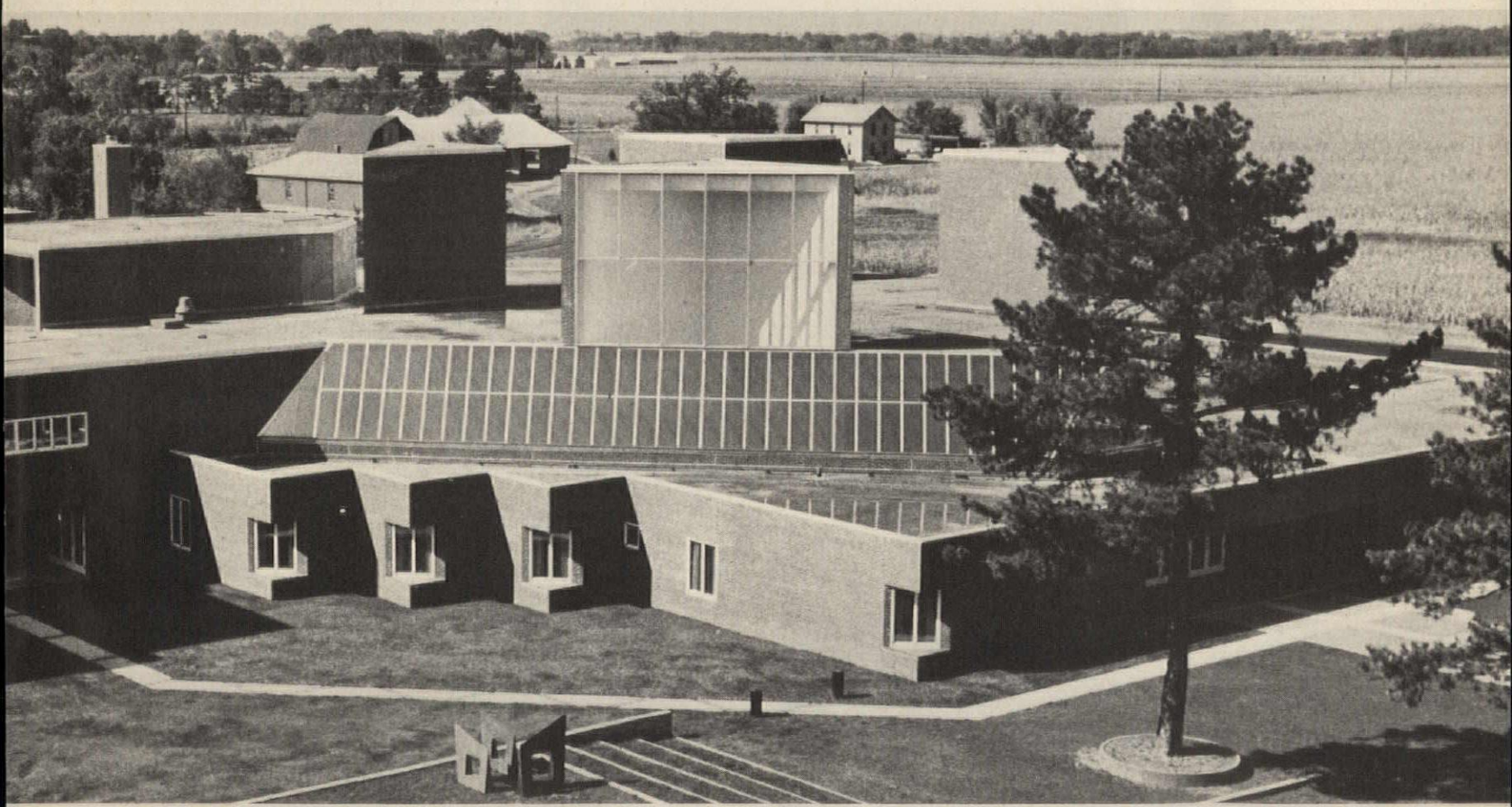




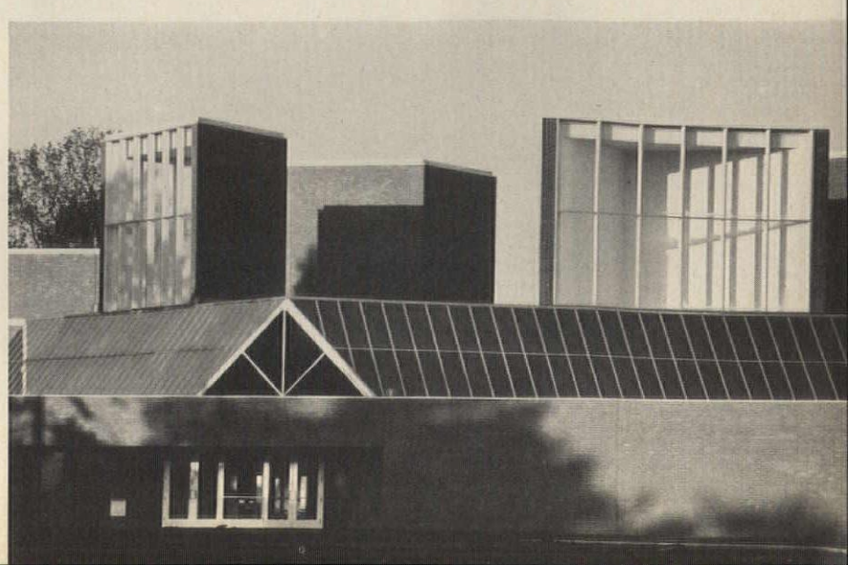
A one-story church building sitting in an Illinois cornfield may not sound like much. Often, the best examples of architecture, plopped in the midst of this vast American landscape look like unsettling apparitions severely detached from their specific milieus. Strangely enough the abbey church for St. Bede's in Peru Ill. avoids this pitfall, despite its isolated setting 100 miles southwest of Chicago. It attains the rarified status of an integrated architectural work because the solution effectively confronts the definition of architecture on three distinct levels.

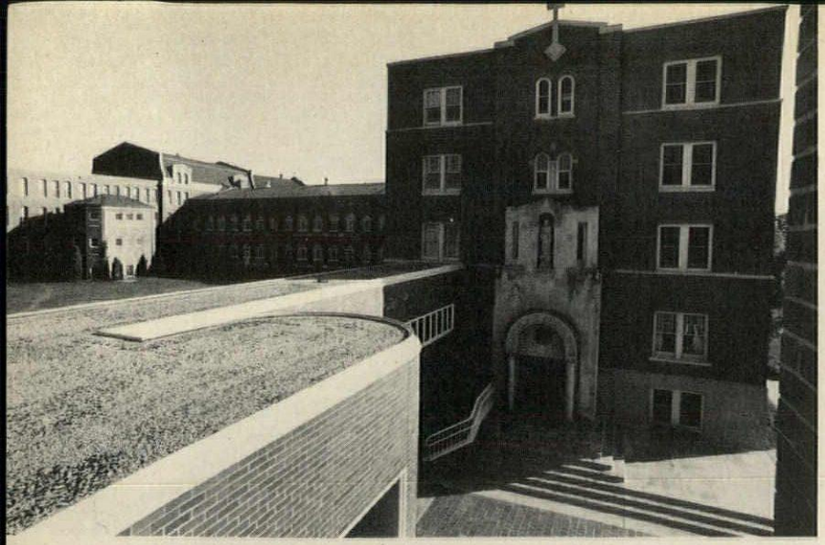
First, the 26,152-sq-ft building functions imaginatively in providing 60 monks with special places of worship, while at the same time allowing the possible assemblage of 600 people. Second, on a symbolic level, the brick and glass building reads as a new structure, sculptural, significant, somewhat mysterious, which by its presence has imparted the monastic brotherhood with a renewed feeling of pride and sense of community. The interior, simple in its finishes but complex in its spaces and quality of light, provides a fitting backdrop against which ceremonies and rituals take place. And third, while performing these functions of program and signification, the building still acknowledges the existing context of brick monastery buildings through its site planning and building configuration.

While the monastery community primarily needed a church to serve itself and the secondary school it administers, it recognized the need to have a sanctuary large enough to accommodate the public on occasion. At the same time, the monks required two separate kinds of spaces for the services they conducted: the mass on one hand, performed around an altar; and the responsory "Divine Office," where two groups would face each other. Besides these liturgical services, a number of secondary functions had to be included in the new building, both for the

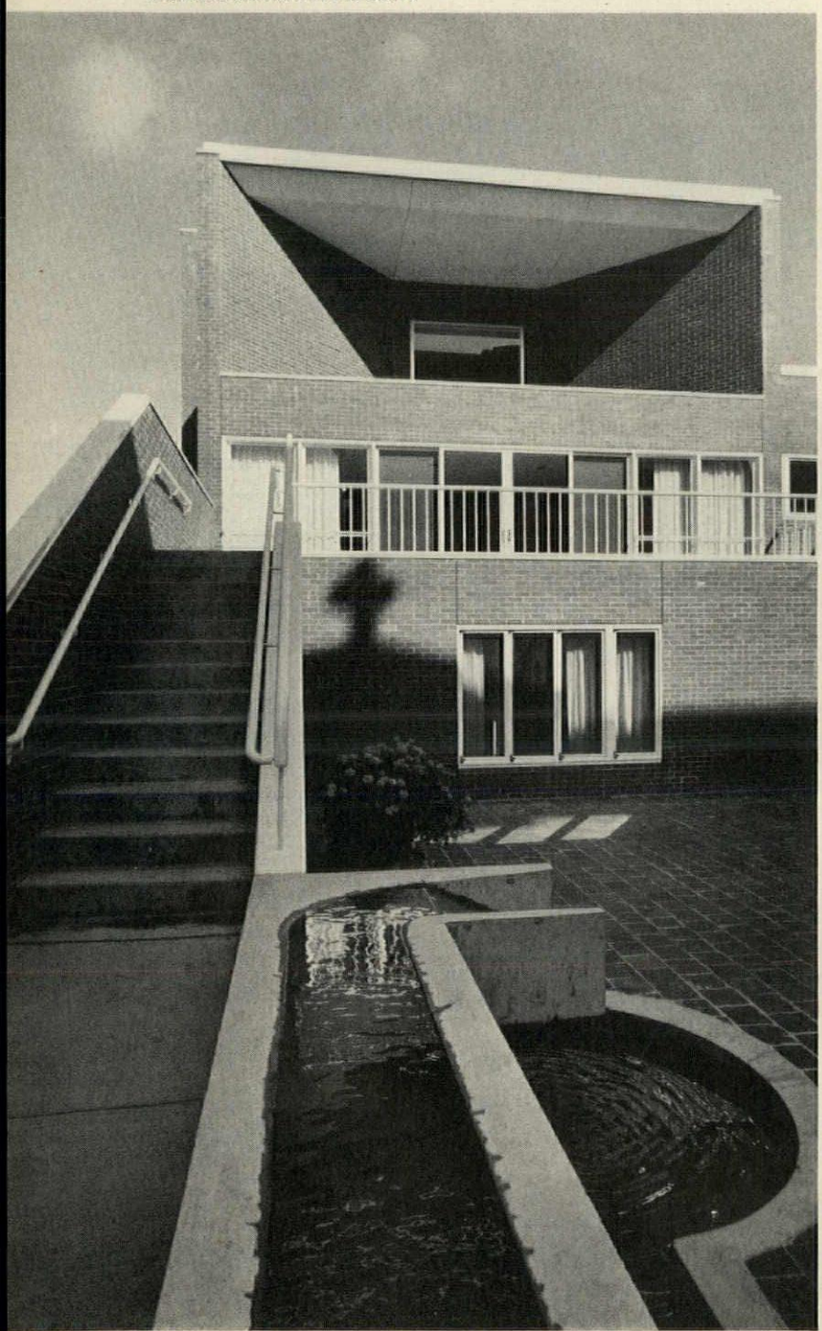


The one-story-high worship assembly building for St. Bede Abbey and Academy has been designed to respond to a context of existing 19th and 20th Century monastery buildings, to which it is linked by a second level bridge (above). At the same time, however, the building's placement and exterior treatment, with its sculptural light monitors, shifting planes, combination of highly polished reflective glass and textured brick assure the building's distinctiveness, even when seen from the rear (photo, left). The entrance (photo, right), itself is rather anonymous, etched out of the wall mass, yet its placement between two monitors, and directly under the glazed pedimentlike termination of the two skylights, creates a symmetry evocative of the church's more classical predecessors. The skylights (photo, left and far left) are mirror glass, while the glass windows for the light monitors are clear plate.





The space created by the second level bridge leading to the monastery building (above) and the outside stair from the balcony of the choir chapel provides a semi-private open court for the monks (below). Mitchell-Giurgola insisted on retaining the carved stone portal at the end of the monastery, which now with the stairs widened, has become a key dramatic element in the court.



public (lecture and conference halls), and for the abbey.

In dealing with these programmatic considerations, Mitchell/Giurgola devised a plan that could distinctly separate the functions by establishing a progression of zones of different hierarchies—from private to semi-private, public to semi-public. The two converge in the sanctuary, the core of the plan. Here the architects rotated a square on a 45-degree angle to create a main assembly space where one standing at the top corner could communicate in all directions. The main entrance lies opposite, etched out of the bottom corner, with the various secondary spaces attached to the edges of the square. Thus, on the right, a skylit corridor leads to the ancillary public spaces; on the left to the semi-public and semi-private ones, and beyond that to the very private functions. Here, in the rear, the sacristy is located. In this area, where the monks enter the building from the monastery and don their vestments, a second level choir chapel has been specially designed for conducting the "Divine Office." Here too, a semi-private court appears, defined by an outside stair from the choir chapel's balcony and the second level bridge connecting the church with the monks' living quarters.

The main assembly space posed the problem of a large hall that could adjust to small intimate services. Rather than partitioning off spaces "like you would slice a salami," Mitchell/Giurgola began experimenting. With a rotated square, the room allowed three divisions of space to occur: the mass area at the top of the corner (40′ x 40′) which seats 60 persons around the circular altar; an assembly area (40′ x 80′ to 120′) in the center of the building which seats 500; and the reception area (also 40′ x 40′) inside the main entrance. Full height partitions mounted on tracks move across these division lines for flexibility.

Four triangular light monitors (43 feet high and 20′ x 20′ x 28′ on each side) projecting inward from the sides of the square bathe the interior in a refulgent light. The space carved out by the monitors now takes the form of a Greek cross—which surprised the architects (according to Romaldo Giurgola), and pleased the monks. It is this articulation of spaces combined with the various forms of light—through skylit corridors, light monitors, or the clerestory type fenestration behind the altar—that imbues the building with a sense of mystery and order.

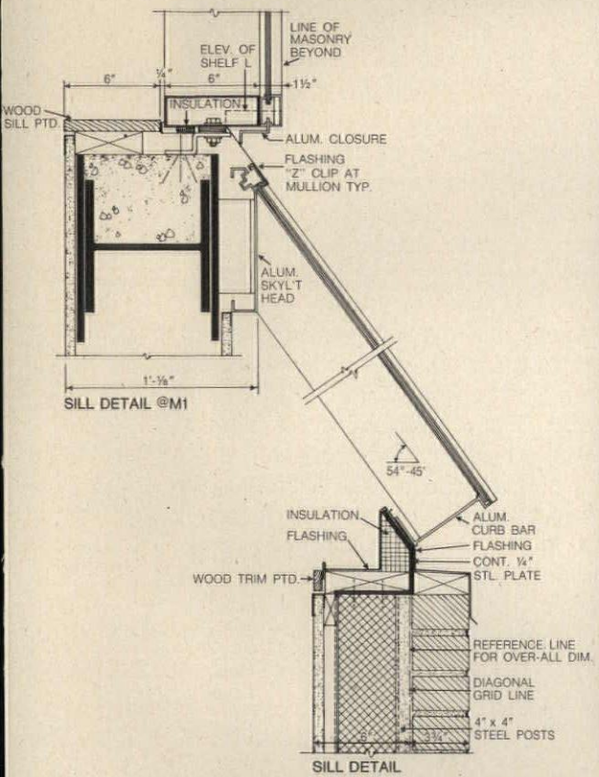
The interiors themselves are almost void of ornament, even liturgical symbols; walls are painted white (though tinged with red to deepen as the sun fades); seating is stackable; and floors are carpeted in beige. As in Louis Kahn's First Unitarian Church in Rochester, (1963), Mitchell/Giurgola has manipulated space and light not only to create a work of art, but also an appropriate container for the ceremonies conducted within. The ritual itself is rather simple, explains Giurgola, although each movement, gesture, and location is informed with symbolic content. Thus the architects sought to divorce ritual from the background. Noting that the highly detailed visually active baroque churches absorb the ceremonial participants into tapestries of patterns, Giurgola attempted to do the opposite. Since the Benedictines, he felt, had reduced ritual to its essences, the design was stripped accordingly. However it still retains

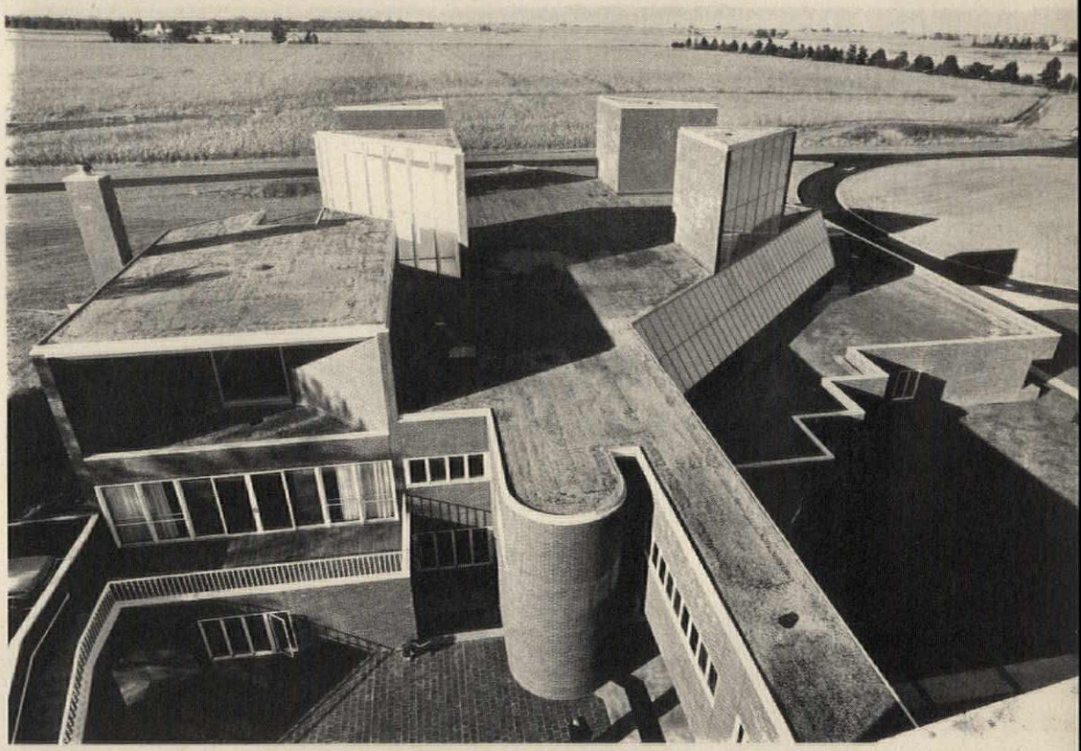
a luminosity characteristic of the baroque churches in Southern Germany. Other architectural elements refer, by association, to the decorative motifs of earlier Christian churches, thus acting as signs: just as early Byzantine churches installed mosaics behind the altar, Mitchell/Giurgola placed a clerestory window there. The sky and light create the mosaic. In the same sense, the four double-height light monitors, make an allusion to the four piers supporting the dome of Renaissance churches, but on a reverse order: where they were once solid masses, now they are voids.

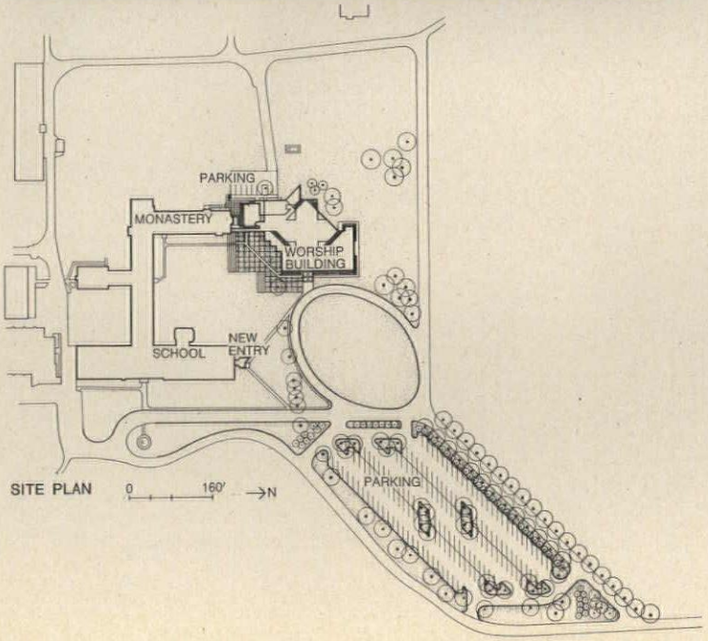
On the exterior no domes or spires indicate the building's purpose. Only light monitors projecting above the roofline identify the church. In turn, the double-height forms relate the building's scale to the existing medium-rise buildings.

If the building so far has seemed to be designed from the inside out, the relation of its exterior to physical context reverses that strategy; the organization of the secondary spaces at the edges of the building take their cues from site conditions. The various elements are arranged to enhance and fill out certain propensities already apparent in the arrangement of the existing buildings.

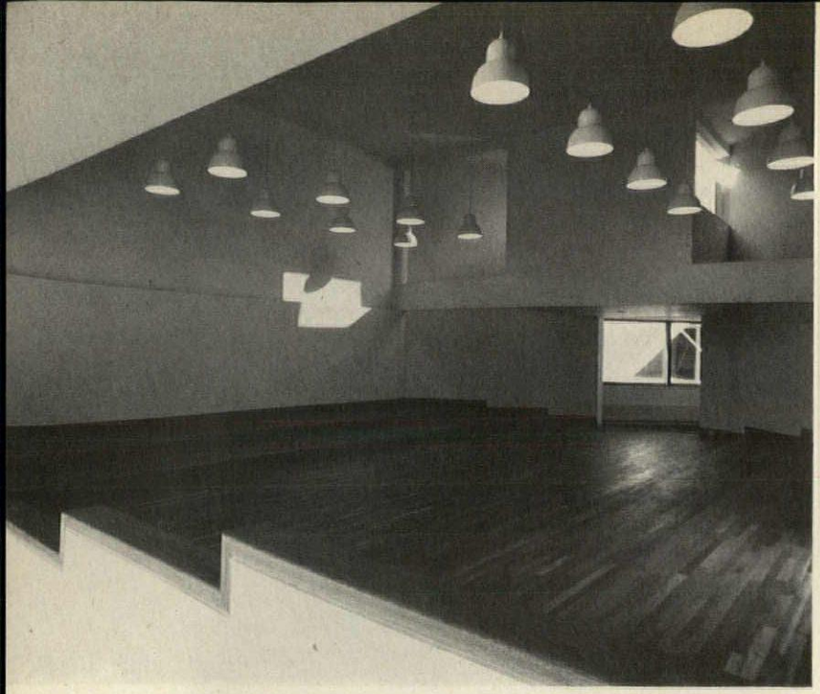
This accommodation to the existing context occurs through certain devices. The older 19th- and 20th-Century brick monastery and school buildings, linear in plan, partially enclose a grassy courtyard space on three sides. By positioning the new building and manipulating its massing to terminate a wing as well as turn a corner, Mitchell/



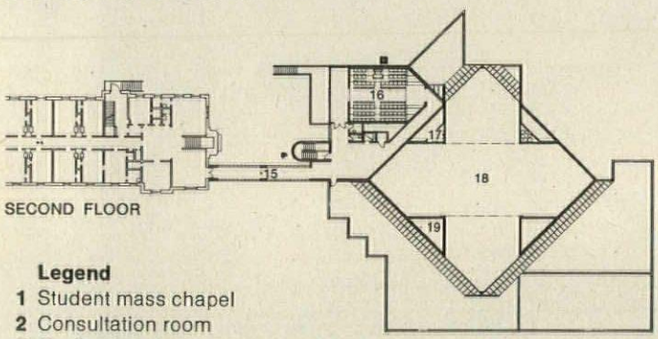




The worship assembly building, for the most part is only one-story high, although the light monitors and the two-story-high choir chapel on the second level increases the sense of scale (top, right). Brick and masonry block clad the steel frame and concrete floor slab structure, while the flashing and the wood casement window frames are painted white to match the trim of the existing buildings. As indicated in the site plan (right) parking area and the elliptical drive reinforce the building's prominence. An intersecting grid of diagonal lines created by the building's configuration relates back to the existing school wing opposite, where a new entry and pathway is being designed by the architects. Details show how skylights join light monitors and brick walls (above).

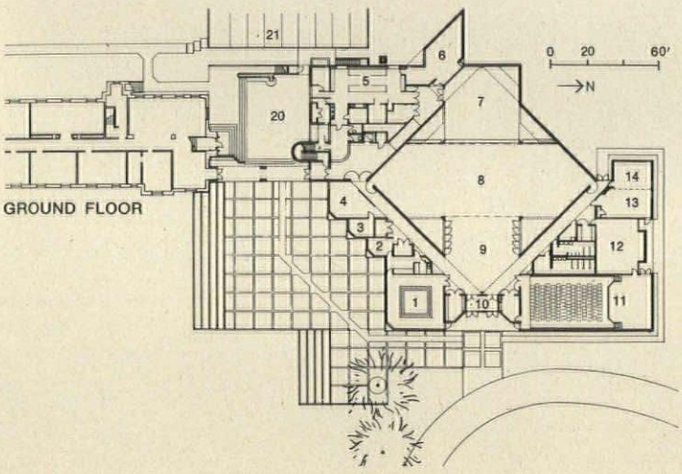


The Divine Office, a responsory ceremony performed four times daily, takes place in the upstairs choir chapel (above). Here monks will sit in three rows of specially designed seats facing each other. The design of the light fixtures was patterned after the fixtures in the Collegio di St. Anselmo, Rome. Plenum ducts on the outside wall supply the room with heat, while ducts on the interior wall opposite are designated for return air.



Legend

1 Student mass chapel
2 Consultation room
3 Confessional
4 Meditation/wake area
5 Sacristy
6 Blessed Sacrament chapel
7 Main mass chapel/sanctuary
8 Worship/assembly hall
9 Reception areas
10 Entry
11 Lecture hall
12 Lounge
13 Conference room
14 Seminar room
15 Bridge to existing monastery
16 Choir chapel
17 Organ speaker chamber
18 Open to below
19 Light monitor
20 Courtyard
21 Parking area



Two buildings by Mitchell/Giurgola Associates

Giurgola creates a much more defined sense of enclosure. The angled walls of the ground floor and repeated terrace contours outside establish a diagonal axis to the opposite corner of the older complex. The elliptical drop-off road leading from the parking lot to the entrance, in a sense emphasizes a cross diagonal direction. (Yet the building's "Greek cross" plan still maintains the orthogonal grid of the older buildings).

If this larger court and entry make a very public gesture, the "piazzetta" between the new chapel and the old monastery offers a rather private semi-enclosed open space. The small paved court is oriented around two elements again held in diagonal opposition: one a second level balcony and stair of the new building; the other, an older carved stone portal, and new second-level bridge, which links the new building symbolically and physically to the older monastery.

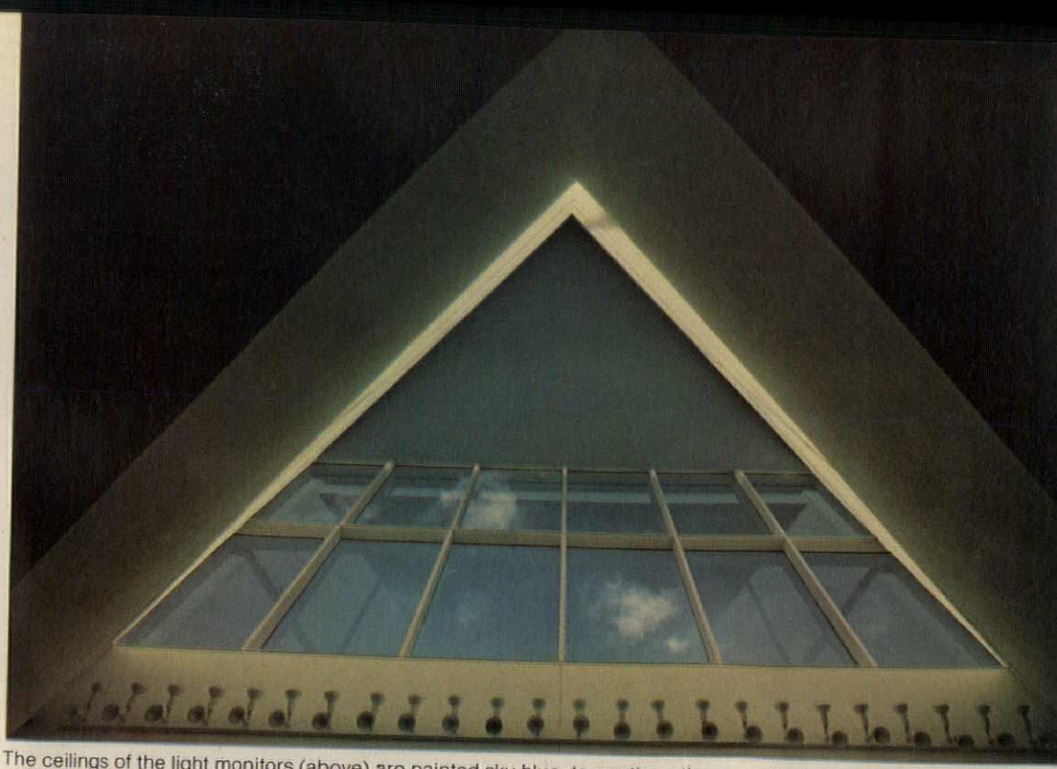
Besides scale and organization of space, the choice of materials—brick cladding on the steel frame and the white trim—refer in direct visual terms to the older buildings. Originally Mitchell/Giurgola planned to paint the building white, to signify its newness. Paint was favored over white brick because of its softer texture and lower cost, with a close match of red brick chosen in case of peeling. But the brick, made by the same local company that manufactured the bricks for most of the other buildings, matched so completely, and was so well laid, that the architects left it.

The monks too liked the brick left unpainted—having had only this reservation about the design. Today, the St. Bede community is clearly enthusiastic about the worship hall. Mitchell/Giurgola praises the concern and care with which the monks followed the process, proving the old adage that a good client makes a successful building. Considering that the brotherhood at St. Bede has little experience in architect selection or programming, except for the extensive consultation with architect Patrick Quinn, they were fortunate. They found a firm that was sensitive to their very special needs, and the unique environment in which these needs would be fulfilled. Giurgola had originally told them "we will make you something very special"—and they did. [Suzanne Stephens]

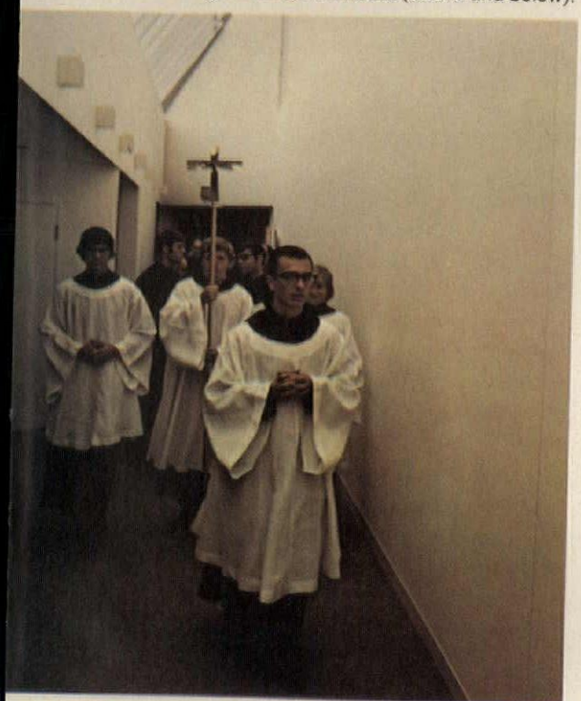
Data

Project: St. Bede Abbey Worship Assembly building, Peru, Ill.
Architect: Mitchell/Giurgola, Assoc.; Steven Goldberg, project architect.
Photographs: Rene Burri, Magnum Photos.
Client: Benedictine Society of St. Bede; Father Marion Balsavitch.
Program: to house religious and secular assembly activities for 60 to 600 people.
Site: rural farmland with existing monastery.
Structural system: steel frame, brick and block cladding.
Major materials: rust brick on exterior; gypsum wall board on interior surfaces; carpeting.
Mechanical system: forced air HVAC.
Consultants: Johnson & Dee, landscape architects; Benjamin Silberstein Associates, mechanical; Skilling, Helle, Christiansen & Robertson, structural; Howard Brandston Lighting Design, lighting; Charles H. Eichelkraut & Son, Inc., general contractor.
Photographs: Rene Burri, Magnum Photos.

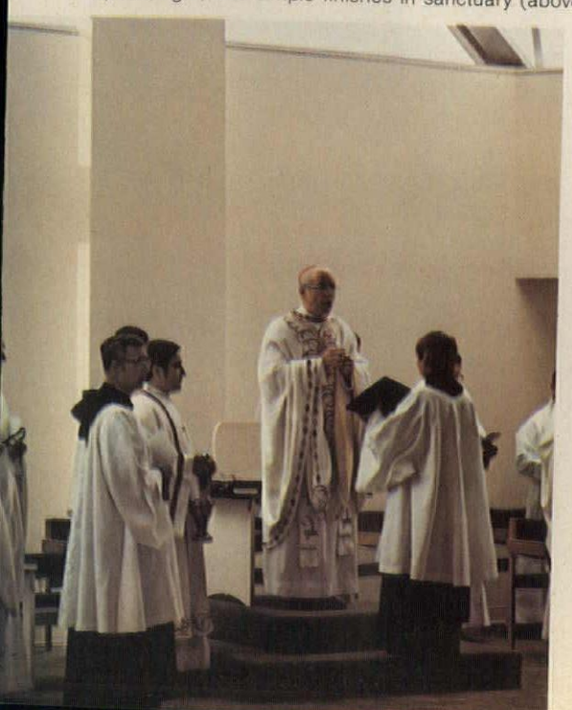
Direct sunlight washes corridors (above and below).



The ceilings of the light monitors (above) are painted sky blue, to continue the association with the outdoors.



Space, light, and simple finishes in sanctuary (above right) and mass area (below), provide dramatic setting for ceremonies.



Two buildings by Mitchell/Giurgola Associates

Swarthmore College music building

Interior spaces within the music building are oriented out towards the woods (above), entry (below) faces the road and the rest of the campus.

According to Romaldo Giurgola, a building is only a fragment of reality; as such it must respond to its existing physical context, reinforce it, and suggest future situations that can be generated from it. Mitchell/Giurgola's music building on a college campus in Swarthmore, Pa. expresses that notion in an altogether different manner from St. Bedes Abbey worship hall (p. 56).

To begin with, the 36,500-sq-ft music building was conceived programmatically as a fragment of a new arts complex for the 1200-student campus. Formulated in 1970, the architects' plan called for the design of three arts buildings, one for the dramatic arts, one for the visual, and the third for music. The master plan represented a major shift in the thinking of this Quaker college, which had long had a bias against the performing and plastic arts as a central preoccupation for college study. (In fact, it is said that the reason the music building was approved first was because of music's affinity to mathematics.) At present, music is still the only arts subject offering a full departmental major.

Despite the original intentions, calling for dispersing the arts in separate buildings rather than one center, the other two buildings have been put in limbo, as other projects take large chunks out of the budget. Still, the architects have sited the building with reference to anticipated completion of the complex on the upper campus of the college. While the music building looks into the woods, the main entrance fronts toward the rest of the campus; outside stairs at either end of this elevation form points of connection for possible bridges over the road to the projected drama building. (site plan, p. 64).

As a formal exercise, the building probably won't make architectural history. In comparison with St. Bede's, the music building is rather plain and straightforward. No secrets are suggested by its unprepossessing exposed poured-in-place concrete forms. Nor does the building occupy the same important position, symbolically or physically, as does St. Bede. It simply is tucked out of sight behind other buildings. Easy to get to if you need to find it, but as a cultural statement, modest. The geometry of the parti within, as without, remains easily apprehensible. Basically two large rectangular spaces divide the volume: one for a concert hall; the other an exhibition, circulation, and reception space. They are separated by the service core. Instead

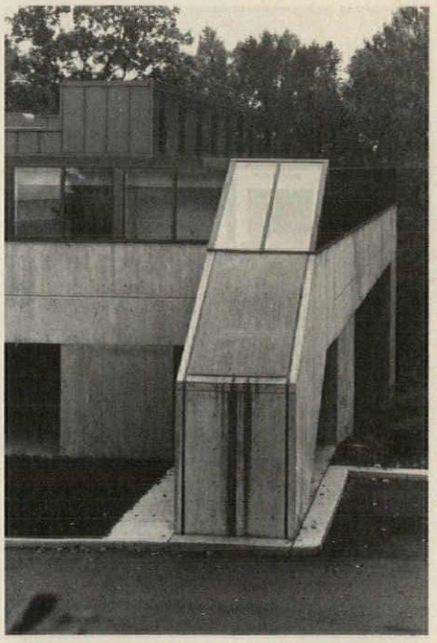
The 420-seat auditorium used for concerts and classes (above) overlooks the college woods, where a 20-foot-high reflective double-glazed wall set in steel projecting sash drops from the ceiling down behind the stage. A folding wood panel wall closes off the view when desirable. The wood floor raised on wood sleepers above the concrete slab gives a resilience to the stage so that it can accommodate dance performances as well as concerts. Theatrical productions can also be held there, although no fly space exists and the stage is on same level as first row. The steeply raked seating (left) extends to the top floor so that students may enter the auditorium from their practice rooms. The auditorium entrance is at the rear of the low-raked seating. Borderlights are inserted in ceiling to illuminate stage; wall-mounted units with mirror reflectors and satin opal glass light hall.

of a complex form and interaction of space and natural light seen in St. Bede's, simplicity of mass and void dominate.

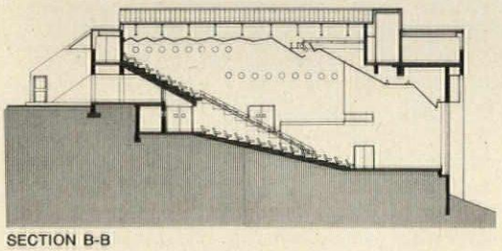
But if the building itself lacks excitement, it is because Mitchell/Giurgola recognized what was visually the most exciting thing about the place—the woods outside. History, beauty, and serenity lurk in those woods and the architects knew it. Positioned at the crest of the wooded slope, the building constantly opens up the view to practice rooms, study carrels, offices, conference rooms—and even the auditorium. This orientation shows clearly in plan. Service and public entrances occur at roadside, so that all spaces facing into the woods form the last stop in an itinerary crossing back or around to the periphery of the building. The pull heightens in the auditorium, where the narrowly contained seats hurtling toward the stage overlook a 20-ft-high glazed window wall and the trees beyond.

If the building has obviously been geared to the drama implicit in the natural setting, and to its inclusion within the architectural domain, it has equally addressed itself to the functions that take place there. The acoustics of the auditorium, for example, resulting in part from programmatic considerations, have already gained the building an excellent reputation. In order to accommodate small as well as large-sized groups cozily in the 420 seats, the architects pulled the balcony level into the auditorium, so that the hall would be split bilaterally. In addition, the now steeply raked seating was extended from the balcony to allow students to gain access to stage front seats from their practice rooms

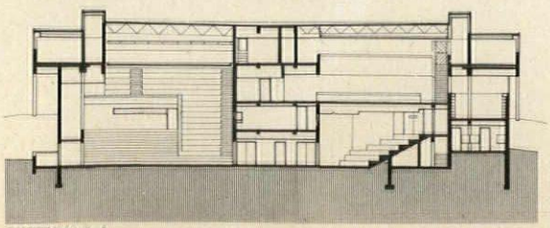
Stairs leading from the top practice rooms to ground level enable the rest of the building to be closed off when only classrooms are in use. The main entrance is slightly depressed below grade.



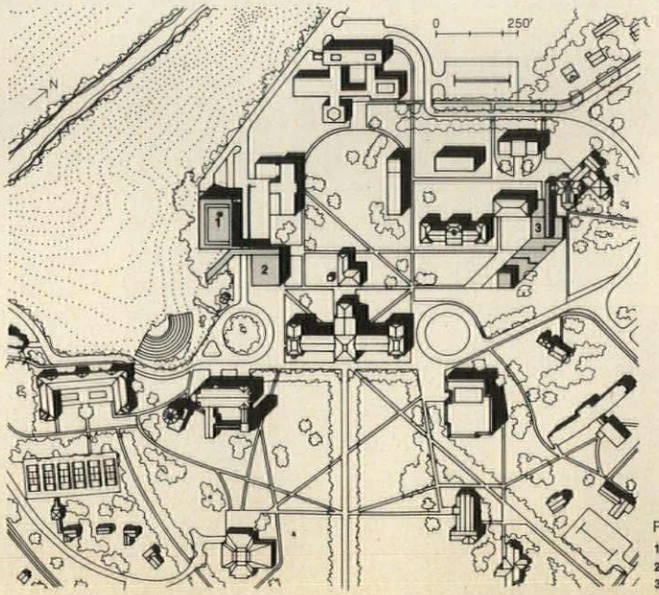
The terne metal roof and band of reflective glass on the top level (above) make clear the differentiation between the public spaces and the classrooms and corridors organized around them.



SECTION B-B



SECTION A-A



PROJECTED MASTER PLAN
1 MUSIC BUILDING
2 DRAMA BUILDING
3 VISUAL ARTS BUILDING

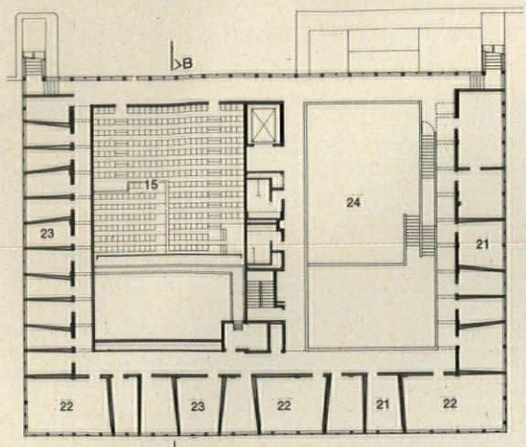
The large reception/exhibition hall (above), treated with simple natural finishes is reminiscent of the work of Alvar Aalto as is much of the formal handling of the architectural elements. Karpawood from Thailand surfaces concrete slab floor and caps parapet walls. A louvered baffle conceals the exposed ceiling above, which is painted black and acoustically treated. The mezzanine contains exhibit space and library stacks (rear).

on the top floor. (The bilateral shearing of steep-rake and low-rake seating means poor sight lines for some of the lower level seats near the main auditorium entrance. But the mezzanine on stage left can hold additional temporary seats, or instruments, when needed.)

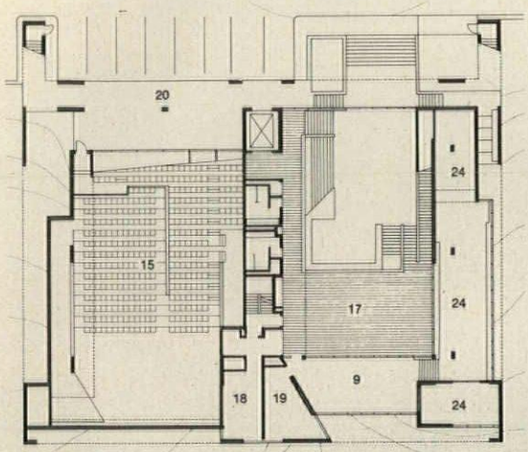
Acoustical consultant Robert Hansen was delighted with the long narrow hall and steeply raked seating because of known acoustical benefits stemming from both configurations. Since people act as sound absorbers, much of the energy propagated by sound waves gets lost over the heads of those in low-rake seating. The long narrow hall also channels sound transmission. Other design features aid acoustics: the hard surface of the glass window wall behind the stage, for example, helps reflect sound to the audience. When the glass wall is covered, in fact, wood panels are used instead of curtains. A red curtain, however, lines the stage left side wall to alter the acoustical character of the space for specific instrumental performances. Other than that, the prime acoustical absorption is provided only by the upholstered seating—and of course, the spectators. Although Hansen approved carpeting for the aisles to muffle steps of latecomers, he vetoed it under the seating, since it would soak up too much high frequency sound.

Obviously the hung ceiling also augments sound quality: accordion-pleated, the slightly concave ceiling is designed to reinforce sound energy nearest the stage, where splays are large and sharp, and break up or scatter the notes toward the rear of the hall, where the contours are closely serrated. As a result, sound doesn't travel in both directions: notes can be heard distinctly at the top of the seats, but whispers from the back are inaudible.

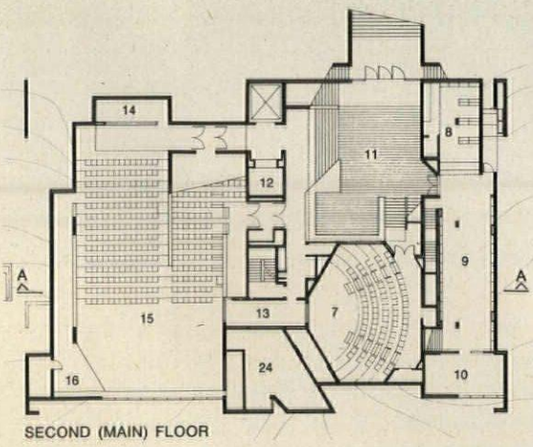
The practice rooms were given equal consideration. Concrete block walls are angled slightly in consideration of the standing waves generated, and the lack of absorptive



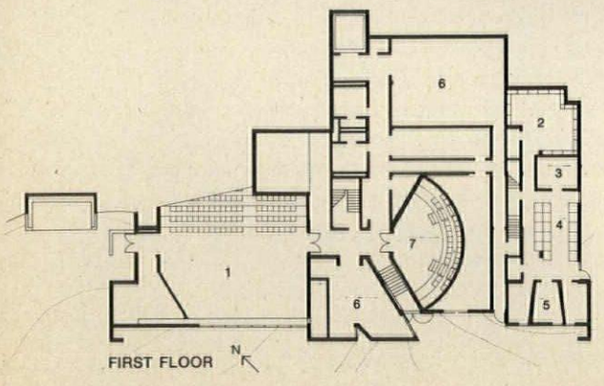
FOURTH FLOOR



THIRD FLOOR



SECOND (MAIN) FLOOR



FIRST FLOOR

Legend

1 Stage
2 Choral/orchestral stacks
3 Microfilm room
4 Listening carrels
5 Listening room
6 Mechanical area
7 Choral rehearsal room
8 Circulation desk
9 Library
10 Librarian's office
11 Lobby
12 Check room
13 Recording booth
14 Projection booth
15 Concert hall
16 Organ loft
17 Exhibition gallery
18 Green room
19 Seminar room
20 Loading dock
21 Office
22 Classroom
23 Practice room
24 Open to below

materials on the walls (the music faculty expressed a desire for "live" practice rooms). The double concrete slab flooring is separated by isolators—neoprene gaskets on jacks so that the finished floor slab will vibrate separately from the structural slab. Each window is double glazed and every third window in the room made operable. Even the doors have been fitted with aluminum gaskets to further muffle sound—but not completely since there was a willingness to have some slight sounds of music issue forth.

Similarly the choral rehearsal room, located a half-level below grade has been designed with high-level acoustical qualities. The fan-shaped seating is again steeply raked, the ceiling dropped slightly, and the only absorption provided by slotted wood panels on the rear wall of the room. Since gypsum board covers concrete block walls Hansen suggested that the gypsum be stiffened by spacing the furring strips very closely, so that the walls wouldn't absorb low-frequency sounds. Thus again the room is "live."

The poured concrete exterior walls, frame, and floors of the structure create a dense acoustic mass. (Interior walls, either concrete block or gypsum, are less desirable acoustically than concrete, but budgetary considerations precluded poured concrete throughout.) The solid gray concrete forms also firmly anchor the building to the edge of the slope, and visually tie it to the rest of the campus' gray stone 19th- and 20th-Century buildings.

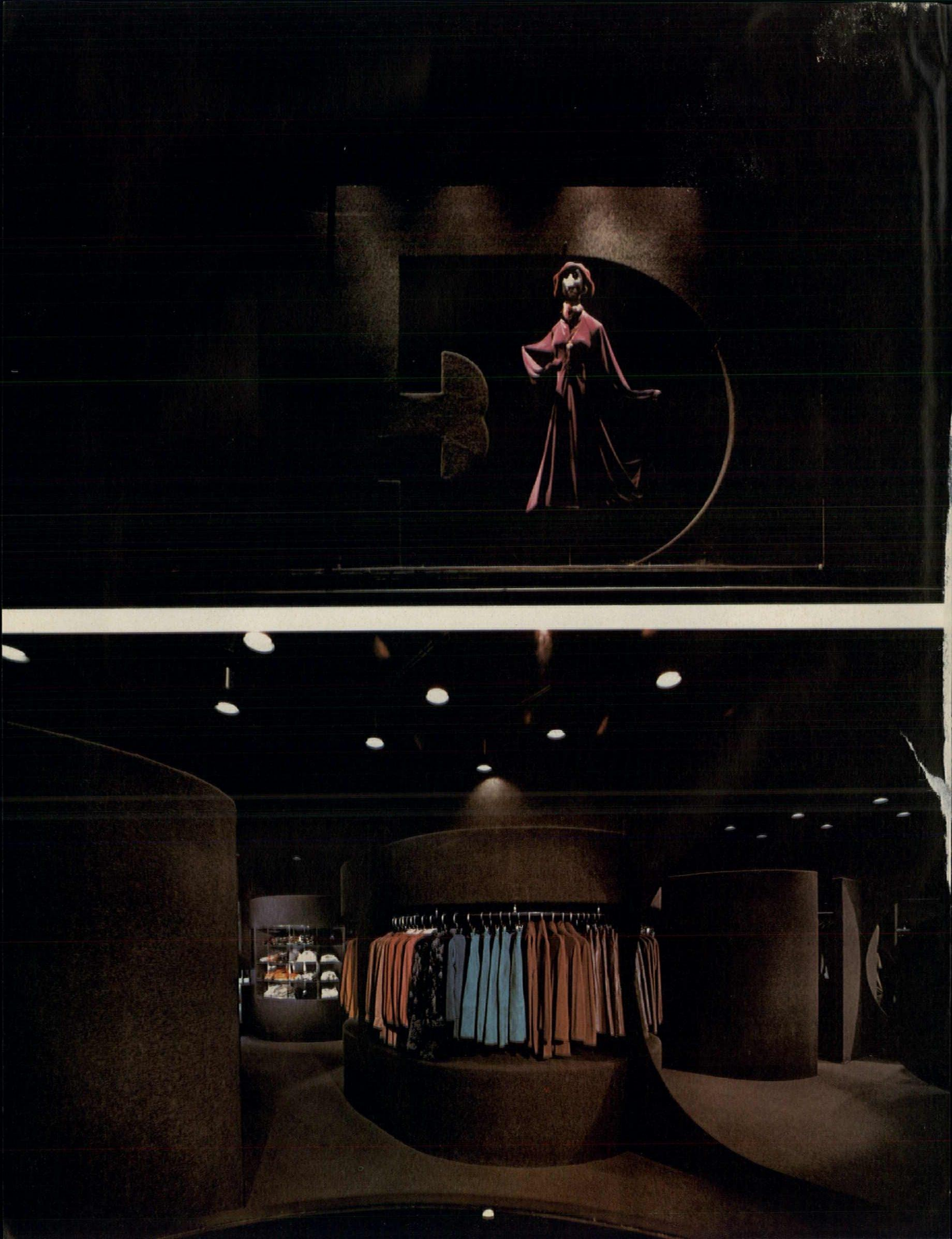
While the concrete composes the major portion of the building structure, the architects wanted the lightweight roof framing to be expressed on top. Long span joists stretch 52 ft over the exhibition hall and 52 ft over the auditorium, terminating at the corridor separating these halls from the upper-level classrooms. The joists have been expressed and skylights placed above them so that natural light illuminates circulation, enhancing movement toward practice rooms, toward the revealed outdoors.

If space and light serve to reinforce the spiritual enactments that take place in the worship assembly building at St. Bede's, then the views of the outdoors and acoustical excellence offer the appropriate correlations in the Swarthmore music building. Music, to be heard, merges with the outdoors, to be seen. This achievement is what architecture in this case is all about. [Suzanne Stephens]

Data

Project: Lang Music Building, Swarthmore College, Swarthmore, Pa.
Architect: Mitchell/Giurgola, assoc.; John Lawson, partner in charge; Robert T. Crane, assistant project architect.
Client: Swarthmore College; Joseph Spafford, planning engineer.
Program: 36,000-sq-ft classroom building with 420-seat concert hall, special acoustical considerations throughout.
Site: top of steeply wooded slope (16,352 sq ft) at edge of upper campus.
Structural system: exposed poured concrete, frame, floors, walls; lightweight structural steel roof framing.
Mechanical system: forced air HVAC in assembly area with combination variable volume and reheat a/c. Practice rooms have fan-type hot and cold water induction units for HVAC; system provides temperature and humidity control without large ducts for acoustical reasons.
Major materials: poured concrete, concrete block, gypsum wallboard; structural steel roof framing members, Karpawood flooring.
Consultants: Sharpless & Whiting, Bryn Mawr, Pa., mechanical; Harry Palmbaum, N.Y., structural; Robert A. Hansen, N.Y., acoustical; David A. Mintz, N.Y., lighting; Turner Construction, general contractor.
Photography: Rollin La France.

A skylight placed on top of expressed joists admits light into side corridors on the top level (photo, top). A band of clerestory windows facing west and a band of fenestration facing east (rear in top photo) open up light and view. Steeply raked seating in choral rehearsal room (right, top) provides acoustically reverberent atmosphere, supplemented by hard surfaces such as maple floor. Slotted natural ash back wall offers only sound absorption. The practice rooms (above) with acoustically "live" angled concrete block walls look into woods. The librarian's offices have floor-to-ceiling windows oriented to the woods (photo right) adjoining library reading area on main level.



Fashion with style

From matchbooks to dress labels, a totally designed boutique creates a unified image and allows the merchandise to be the most important visual statement.

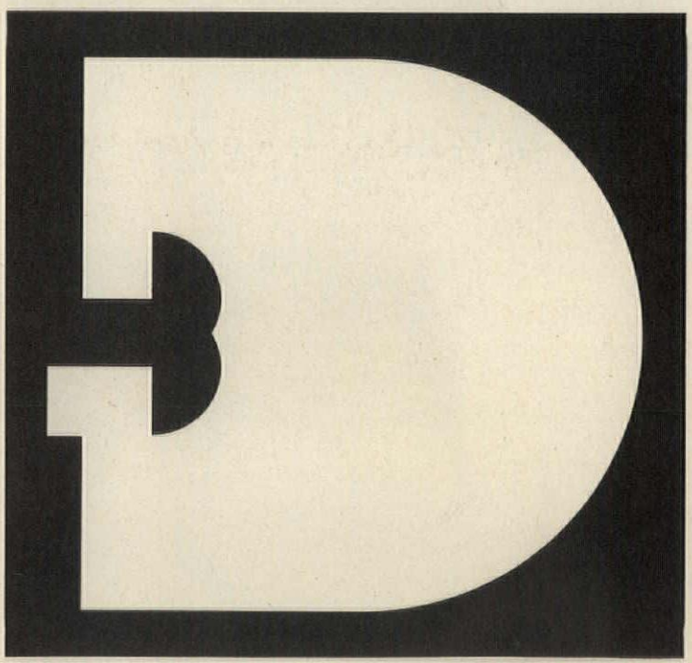
With the "anything goes" attitude of the fashion industry, boutiques have become a lively and regular part of the street scene in most major cities in the last five years. As an outlet for the individual expression and for the creativity of the owners toward modes of dress, most specialize in a "look," offering a small, but complete and comprehensible selection of clothes and accessories—plus more personal attention than any department store.

Whatever the predilection of the store's owners toward clothing, the specialty line of most boutiques is reflected in the image of the store itself, in its signage and in its displays. The Bottega Glaseia is no exception. Beginning with the logo as the image of identity, architect Stanley Tigerman designed the dress labels, price tags, matchbooks, stationery, and signage as well as the interior of the store. In many ways, the most memorable visual cue is not the design of the store's interior, but the style of the logo. And this, in itself, provides an interesting solution to the problem of the interior being less important than the things which it contains. Most merchandising suffers from a confusion of foreground and background: in an effort to seduce the customer, the merchandise competes with the decor and the retailer succeeds in creating a visual chaos where nothing and everything stands out at once.

The major concern of Bottega Glaseia's owner focused on this one problem. In a sense, she wanted the store to be a nonarchitectural, unifying element which could act out a passive role in the figure/ground relationship of sales items and display container.

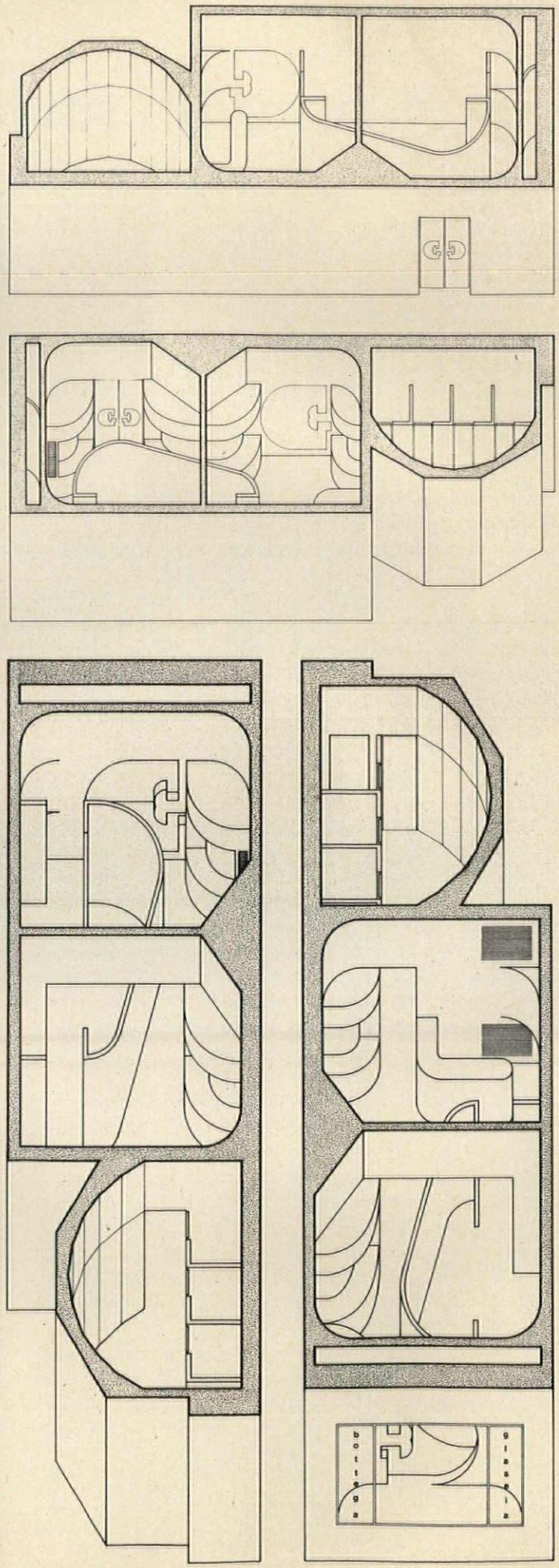
A neutral background was created by cladding all the surfaces of the boutique in dark gray carpet over gypsum board and metal stud construction. In addition, the impact of the merchandise was strengthened through grouping of the items by color rather than by size.

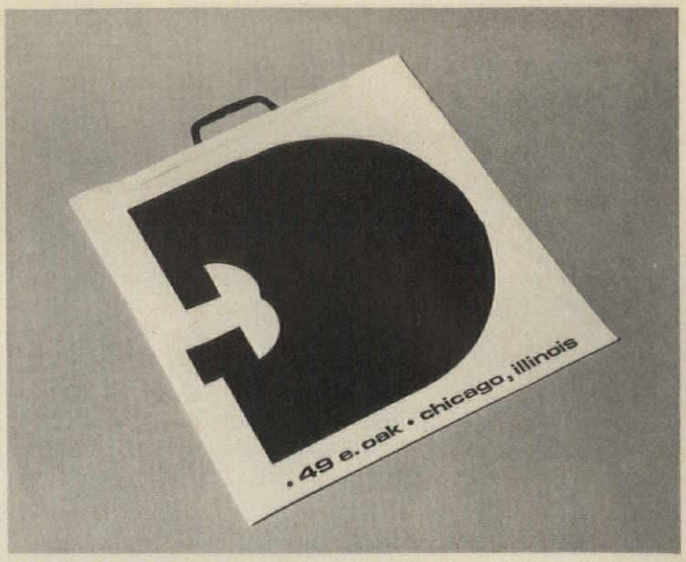
The façade of the store reflects the same concern for a simple and direct statement. The backdrop for the glazed opening is the logo carpeted in gray with a single piece of merchandise displayed at any one time. While the design is a simple, direct statement, it is nothing new, either in idea or execution. But in its modest way, it does what most architecture has not yet learned to do: It solves the problem without adding to the confusion. [Sharon Lee Ryder]



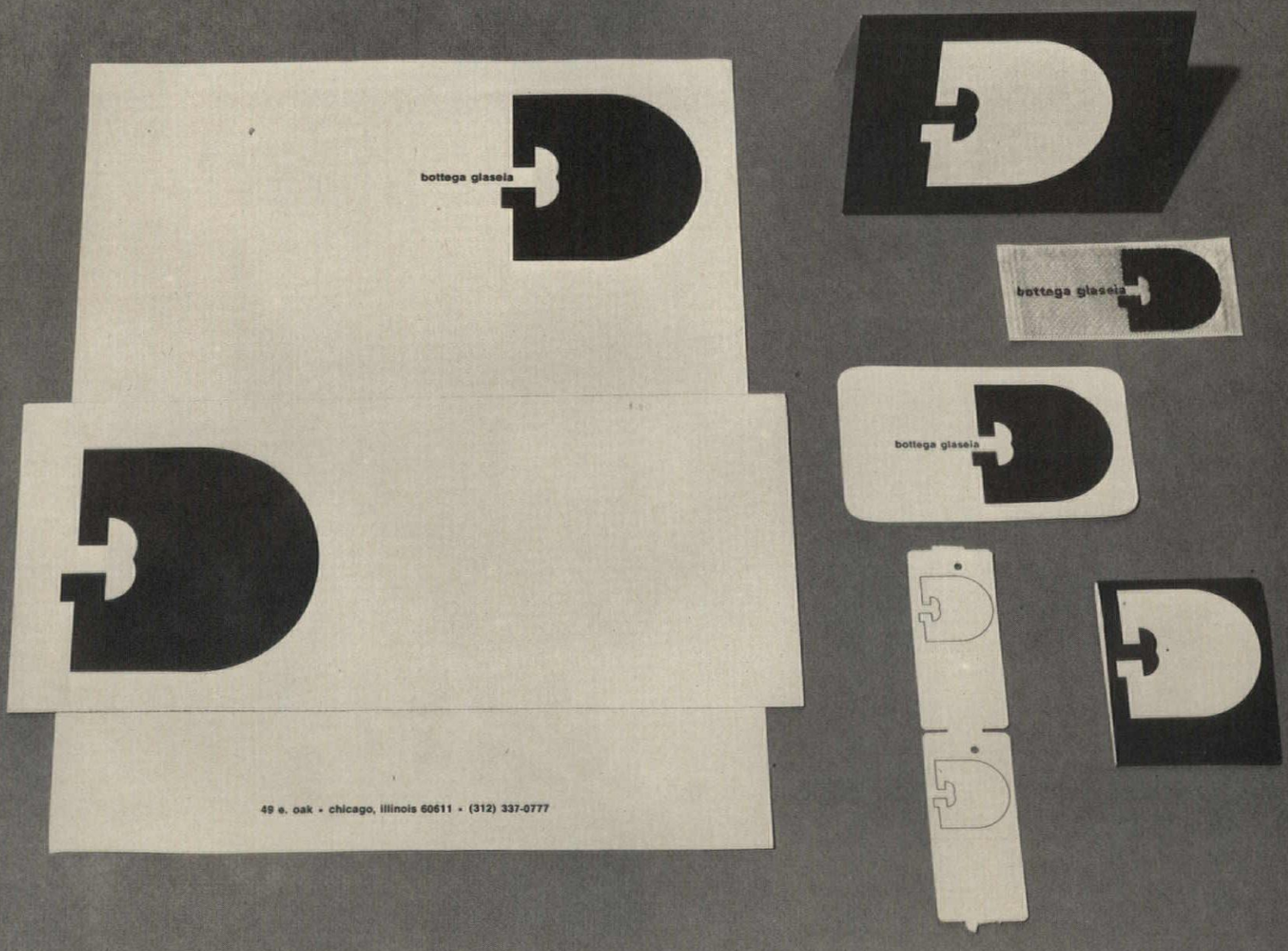
The two initials of the name, B/G, were abstracted and combined to form the logo for the store which reflects the same ambiguity of figure/ground relationship inherent in the design of the interior.


EXIT





On the left, the dressing rooms and faceted mirror wall catch the reflections of customers in as many flattering postures as possible. The plans show the general organization of the boutique into three parts—two for selling and display, one for dressing. Accessories for the store, incorporating the logo, are shown on this page.

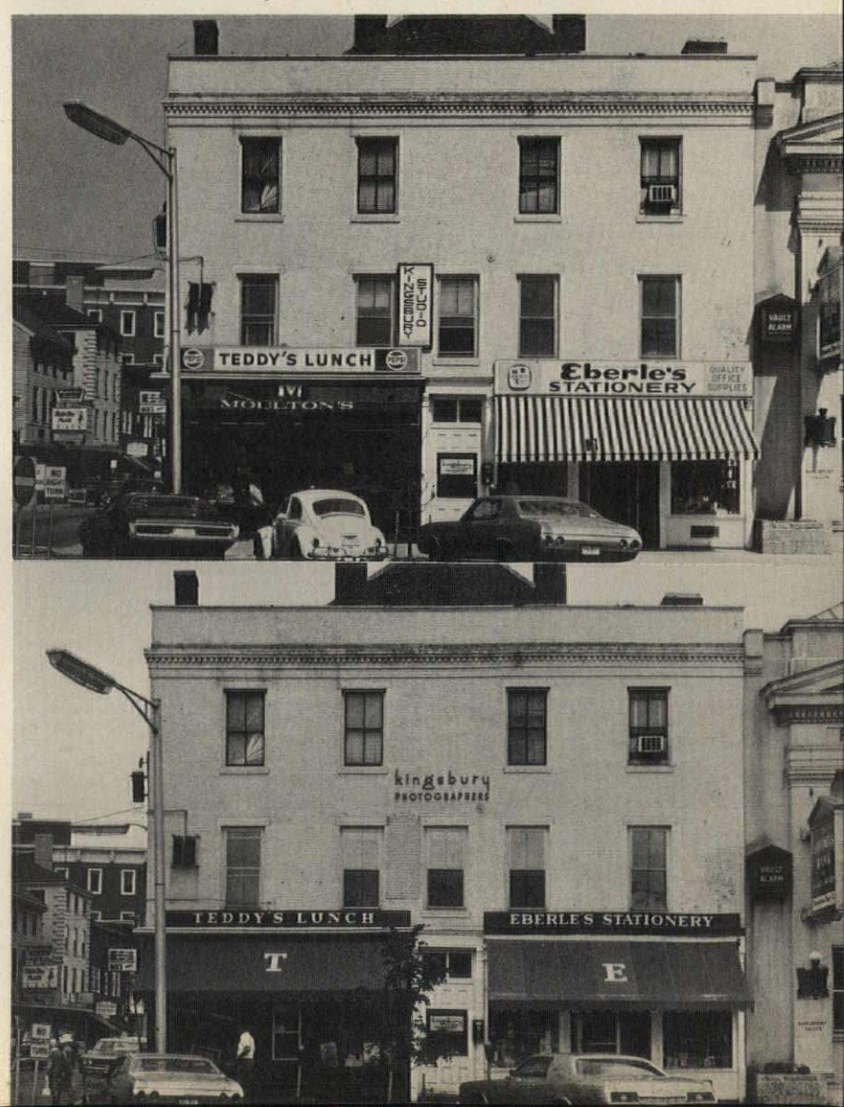


19th and 20th Centuries in Portsmouth's forum, Market Square, facing west. Space is nearly intact. But south building line is ravaged.

Visual conservation in Portsmouth, N.H.

Pilgrims with painted faces

Ceres St. Port, 19th Century and now. Below: quiet victory for conservation.



The neon signs proclaim apocalypse and the historic downtown promises renaissance: an old New England port city ponders its destiny. Is beauty feasible?

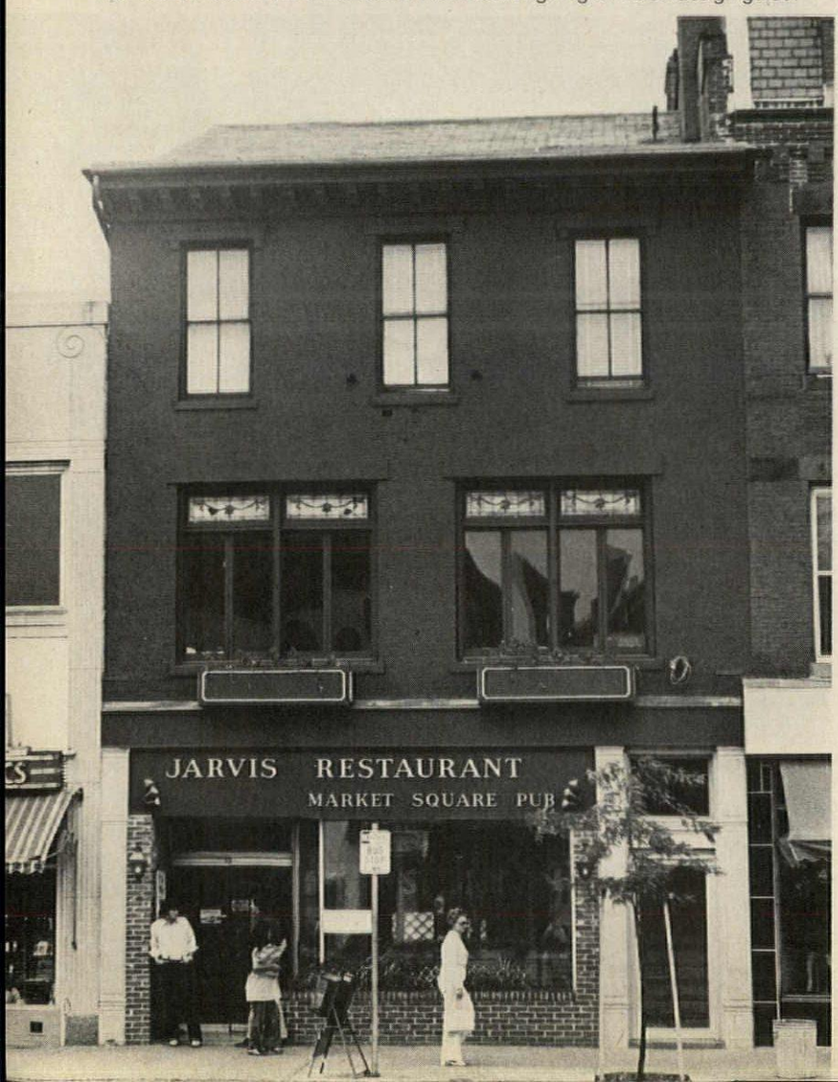
It's tough being Queen these days. Portsmouth, "Queen of the Piscataqua," "Old Town by the Sea," and New Hampshire's oldest settlement, first capital, and only seaport has had its Pilgrim face remodeled by three busy centuries. It was founded in 1624 on the Piscataqua River as Piscataqua, later Strawbery Banke, and finally Portsmouth in 1653. Like other comparable New England towns, it has known lean, then fat, then lean years. All the while the layering of human sediment pursued its tireless nourishing course. So that Portsmouth entered the 20th Century enriched by winding, narrow tree-lined streets with prerevolutionary saltbox homes and stately 18th-Century mansions side by side.

Enter the 20th Century, motoring into town. Like Gertrude Stein's Lost Generation, the new era has been reckless with its health. Older buildings were indiscriminately knocked out for gas stations and parking lots to give street façades jagged toothless smiles, and neon signs and decorative siding were applied like so much mascara. An international trend, to be sure. And an age of darkness.

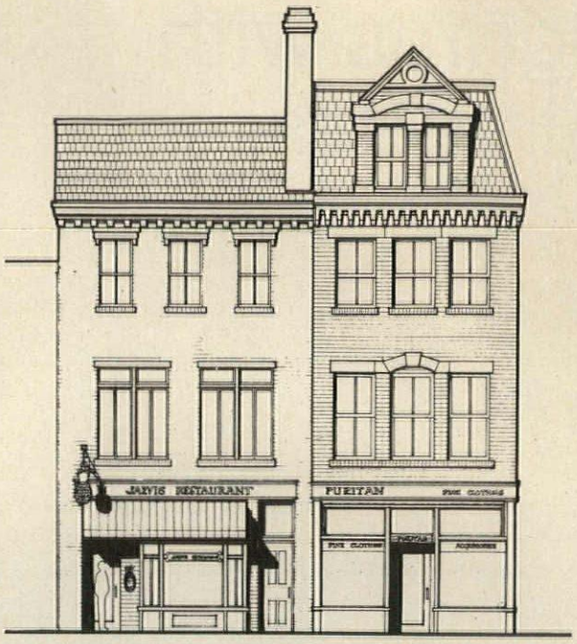
The first harbinger of Portsmouth's renaissance appeared in 1960. Strawbery Banke, Inc., a privately managed urban renewal project, restored and maintained a preservation district of structures spanning the years 1680–1820. When an urban renewal study designated old structures in a neighboring ward as "substandard," the alarm was sounded. SBI brought Vision, Inc. of Cambridge, Mass. to the restoration forces as a consultant. This nonprofit public interest corporation, organized in 1972 to "improve the visual environmental and combat visual pollution," was asked to summon historical evidence before Portsmouth. It is premature to report the final outcome, but the city's clocks are ticking again. Portsmouth is recovering its temporal and spatial senses.

Much of the credit is due to Ronald Lee Fleming, executive director of Vision, and his small dedicated staff of designers headed by Thomas Blurock, project manager, and Garland Okerlund, Jr., (Hornbeck/Okerlund, Cambridge).

Remodeled restaurant enhances self and building. Right: Vision design guide.



Visual conservation in Portsmouth, N.H.



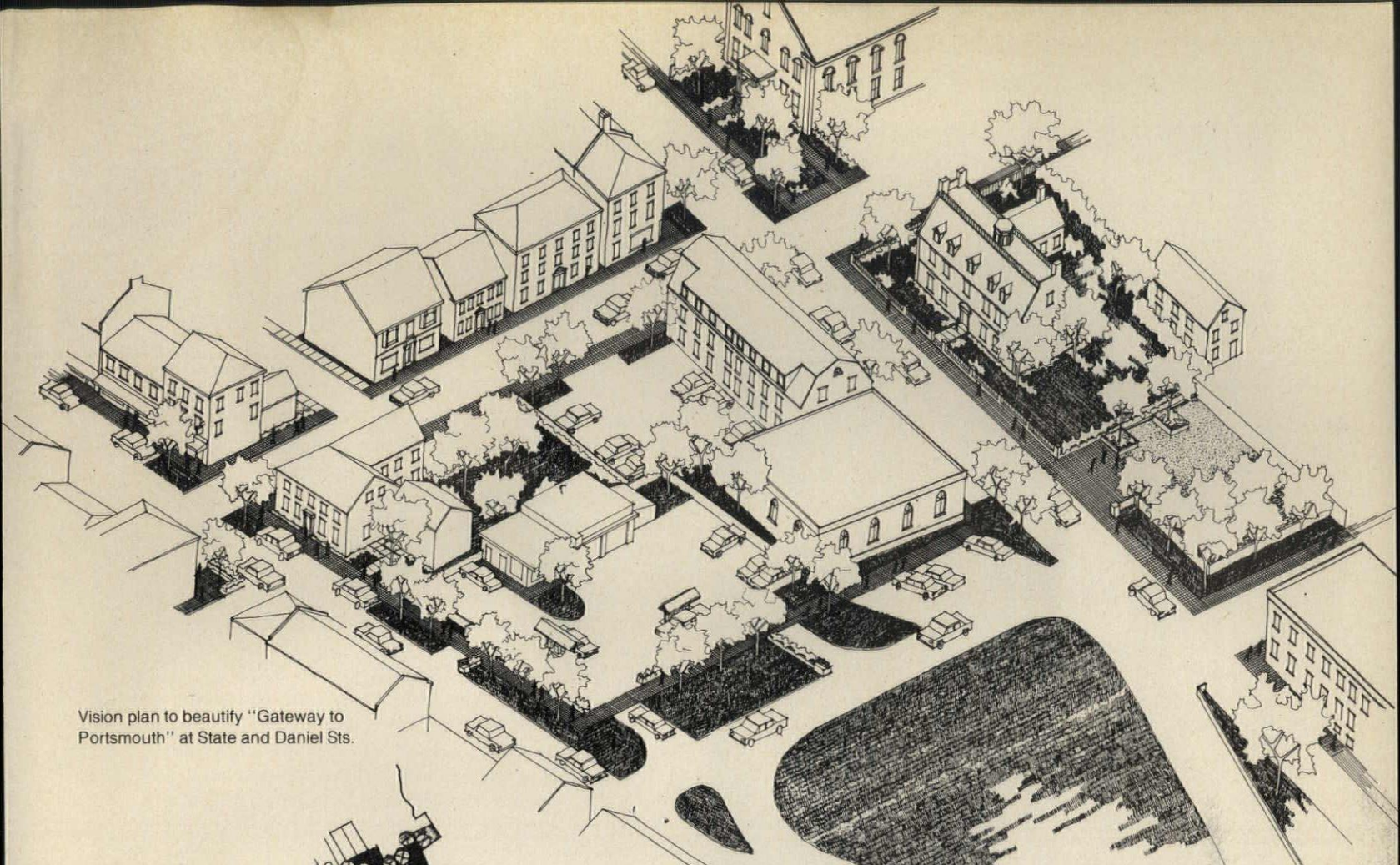
Working on a shoestring budget but writing and speaking like a man afire, Fleming has expanded the program into a novel plan for visual conservation of the town.

SBI's request, supported in part by a grant from the America the Beautiful Fund, placed 45 visual markers in the endangered ward. These acrylic-covered aluminum plates, later reinforced by a continuous slide show in a downtown shop window, restored a historical framework to the working-class neighborhood and to Portsmouth at large. How it was built, who were the founders and their successors, changing architecture and development, and "where are they now" photos of vanished buildings. "I've never seen the town look like this before," is often heard.

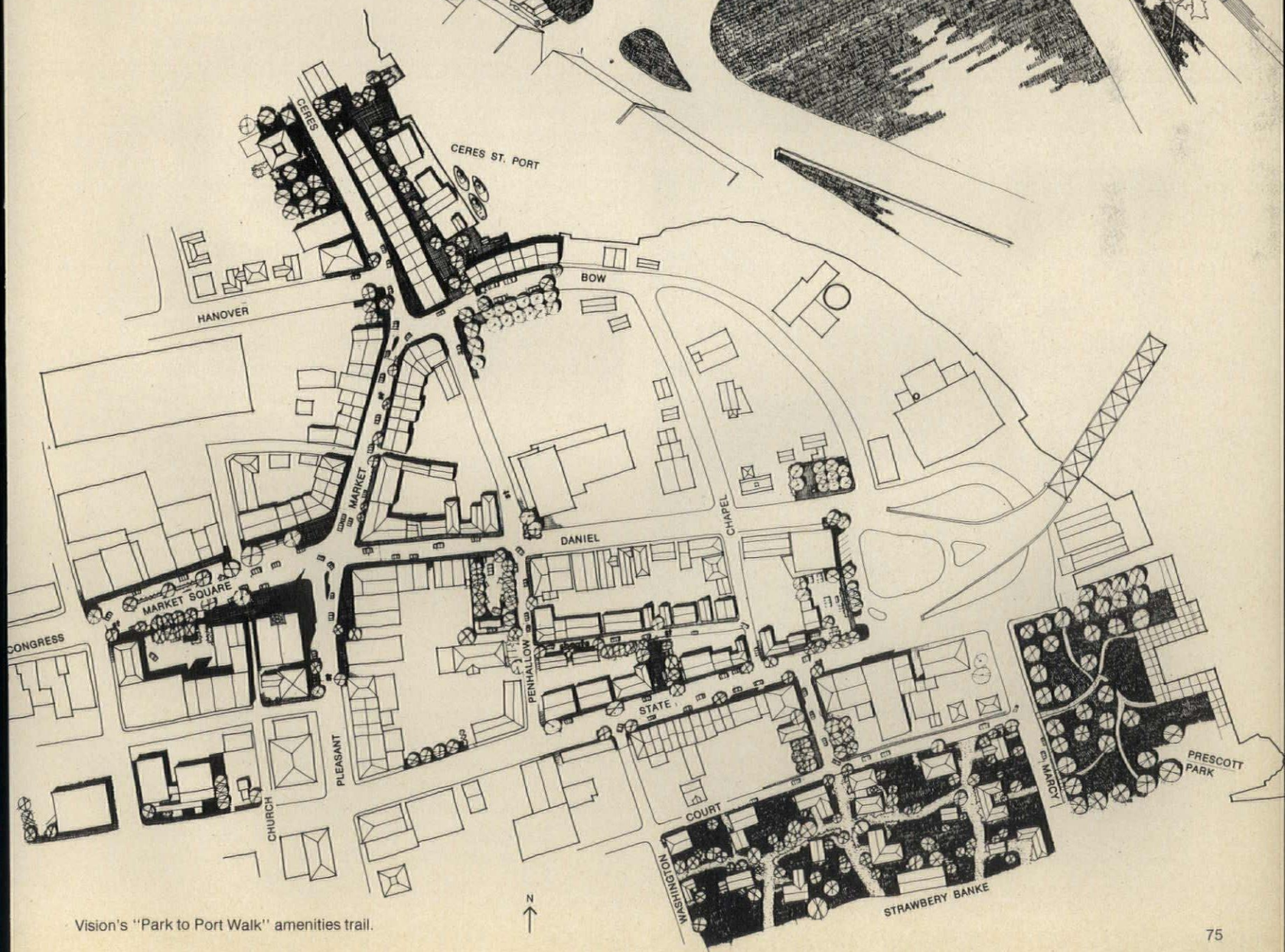
Vision and SBI won a grant from the National Endowment for the Arts. Together with help from the N.H. Bicentennial Commission, local merchants, Chamber of Commerce, Gebhard Gourgard Foundation, N.H. Charitable Trust, and National Trust for Historic Preservation, they produced the Visual Environment Project for downtown Portsmouth. It is a city plan like few city plans. It seeks to establish a sense of place to a home of 25,717 citizens (1970) with least disruption of city life, least cost, and largely private initiative.

There are five components: a qualitative review and analysis of the man-made environment, a proposal of alternate design schemes for townscape at large and specific sites, visual guidelines for lighting, signs, and façade treatment, a design clinic.

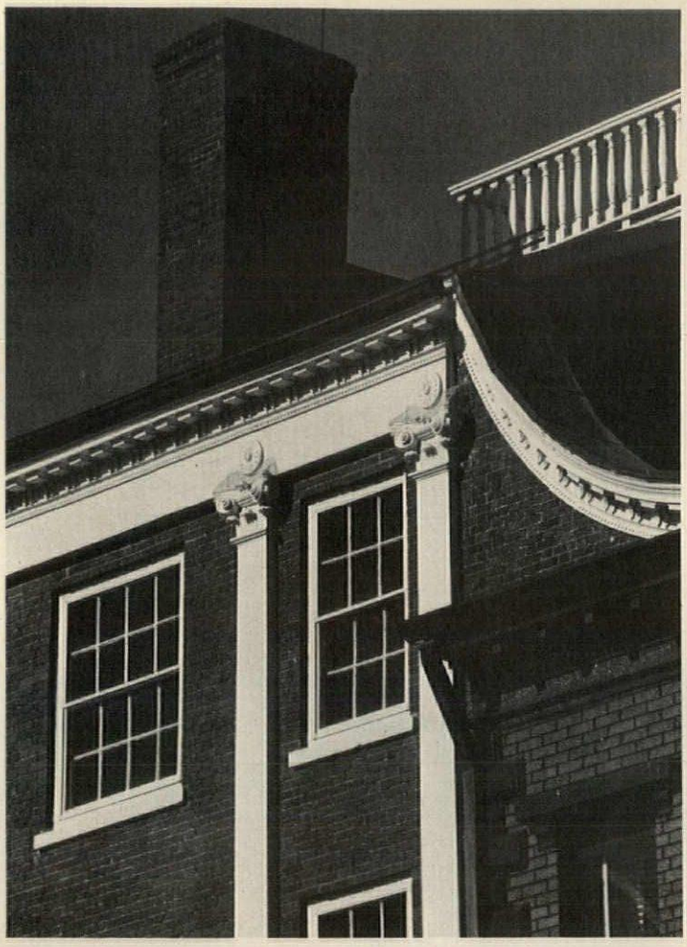
A "Park to Port Walk" materialized early in review and analysis. This is an "amenity trail" which focuses downtown's orientation along a strong zigzag spine connecting most of the historic, commercial, and recreational attractions between Prescott Park and Ceres Street Port. As a first priority development it is regarded as a magnet to inspire adjacent spinoff projects. As an architectural experience, it is quite inspiring; the splendid 18th- and 19th-Century buildings sing Portsmouth's triumph as a shipbuilder



Vision plan to beautify "Gateway to Portsmouth" at State and Daniel Sts.



Vision's "Park to Port Walk" amenities trail.



Details: (left to right, top to bottom), Portsmouth Athenaeum, 1805; Gov. Langdon House, 1784; Market St. warehouse to residence conversion; Samuel Beck House; Shortridge-Hart House; Moffait-Ladd House, 1763; Gov. Goodwin Mansion, 1811; Hart-Rice House. Photos: Strawbery Banke, Patch Collection (19th Century Market Square) and Staples-Herald Collection (19th Century Ceres St. Port); Roger Hawk (all remaining photographs shown).

and seaport. Says A. Robert Thoresen, City Planning Director, "I see Portsmouth really as a walking city."

The "Walk" looks ragged today. Parking lots, gas stations, and inappropriate uses riddle it like grapeshot. Vision proposes alternative design schemes to plug these holes with landscaping, street furniture, and other relatively inexpensive transplants. Vision's style of city planning is: civilize the status quo in Portsmouth.

Vision also yearns to arouse the "big uglies," i.e., the corporations littering America with standardized and notoriously insensitive construction. Portsmouth rallied to petition the petroleum industry for design modifications to downtown's stations. Using an entertaining "dog and pony" tandem slide projector show which contrasts "good" gas stations in Aspen, Colo., Lexington, Mass., and Carmel, Calif. (aesthetically sensitive to surroundings) against "bad" ones (almost everywhere else), Fleming prevailed. ARCO and Exxon upgraded their stations with trees, planters, brick walls, and modest advertising.

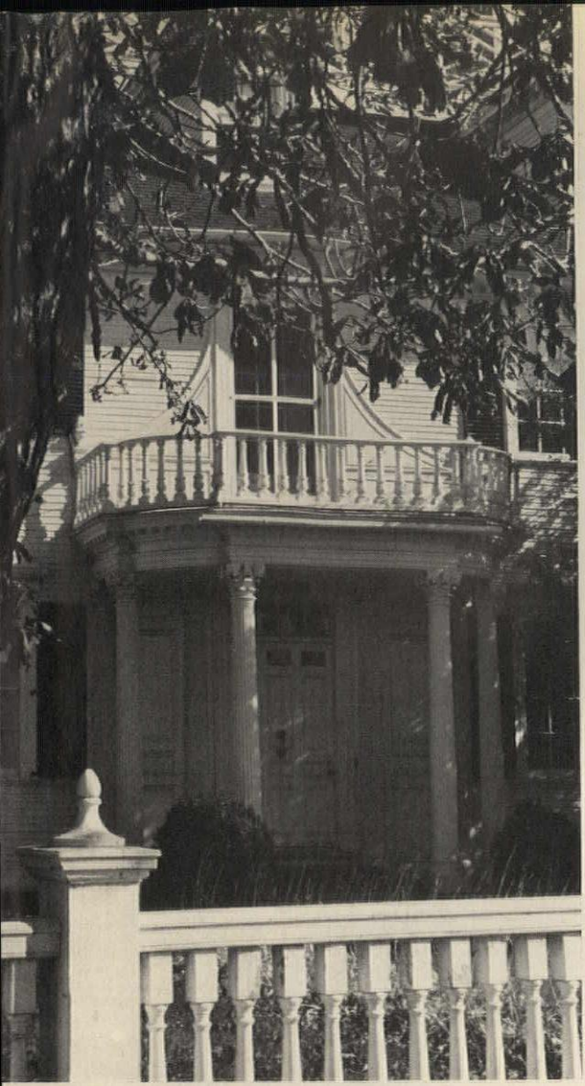
Visual guidelines propose to correct less egregious breaches of what Fleming calls "town rhythm." This is a rhythm of related cornice lines, window opening, exterior finishes, signs, and other architectural and functional elements that bestows visual coherence and civility to a community. Fleming insists that the magic of Boston's Beacon Hill, New York's Greenwich Village, and San Francisco can thrive in Portsmouth.

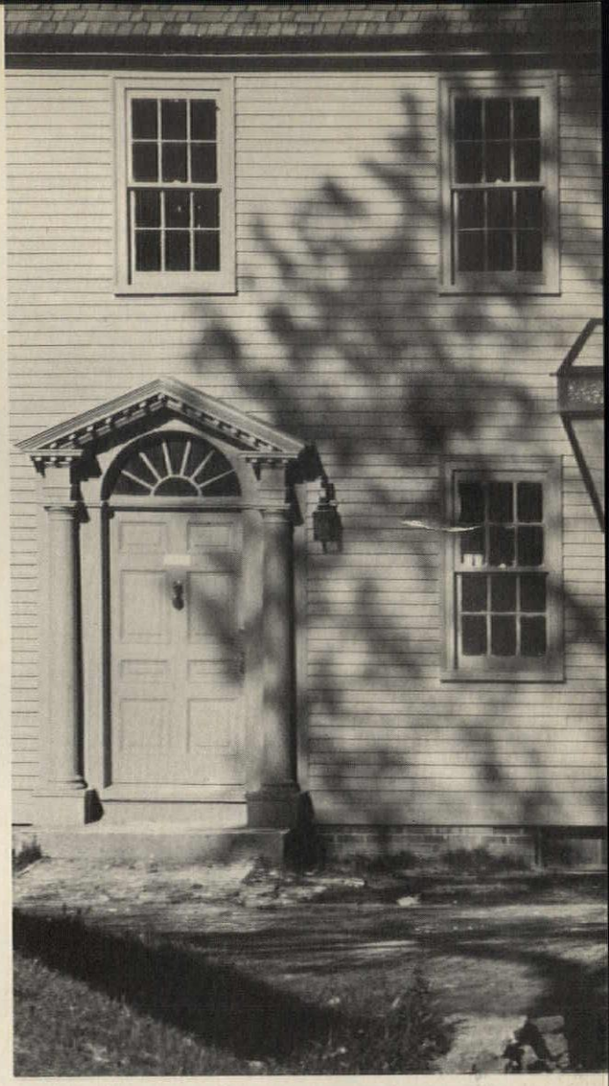
Luckily for Portsmouth, this may entail merely removing "modernized" façades, out-of-scale signs, and garish lighting obscuring fine brick work, stone lintels, capped chimneys, and arched doorways. Special design clinics were conducted from March through May this year to allow merchants and property owners to discuss changes with Vision's design team. Often Vision's suggestions were more economical than the flashing time-and-temperature extravaganzas that cause Fleming particular pain. A complete visual survey of all downtown buildings provided design counsel for nearly everyone. Some merchants have already made corrective contributions to the city's Visual Environment Program, and local bankers have been cooperative.

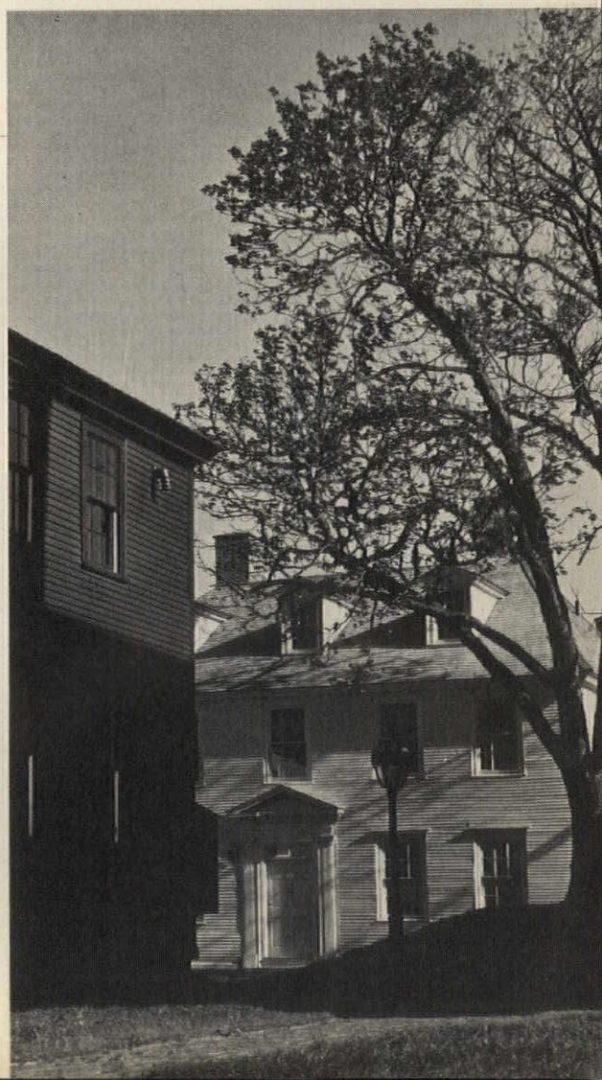
Portsmouth certainly will be more beautiful for its endeavors. Tourism will very likely increase. And though Vision's role in Portsmouth has been officially completed, its legacy lives on. Portsmouth has a new perception of its townscape. Remarks Roger Hawk, Associate City Planner, "Citizens report new visual offenses to the Department saying, 'Aren't you able to stop this sort of thing now?' "

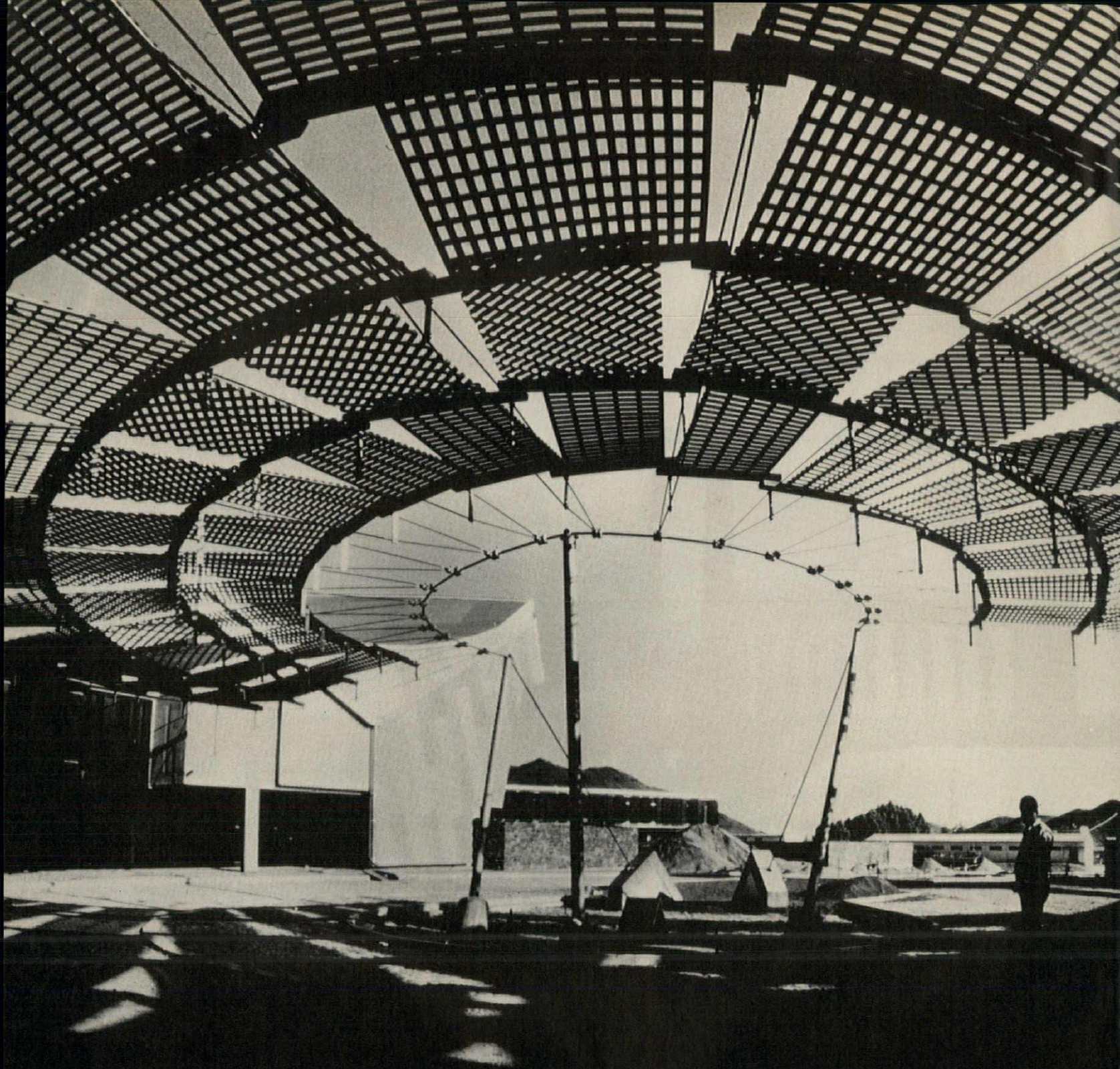
Vision is carrying its crusade to other historic and not-so-historic towns, guided by three major goals. It will continue to aid historic townscape conservation. It will provide community advocacy and "visual awareness" programs to towns which invite it (a booklet, *Community Action for Corporate Design Change* is available at $3.75 from Vision, Inc., 2 Hubbard Park, Cambridge, Mass. 02138). And it offers design counsel to major corporations.

"You *can* improve the visual environment in Levittown," Fleming believes. "Las Vegas make-believe is fine—in Las Vegas. At home, we want a sense of time and space, a richer *urban* experience." [Roger Yee]







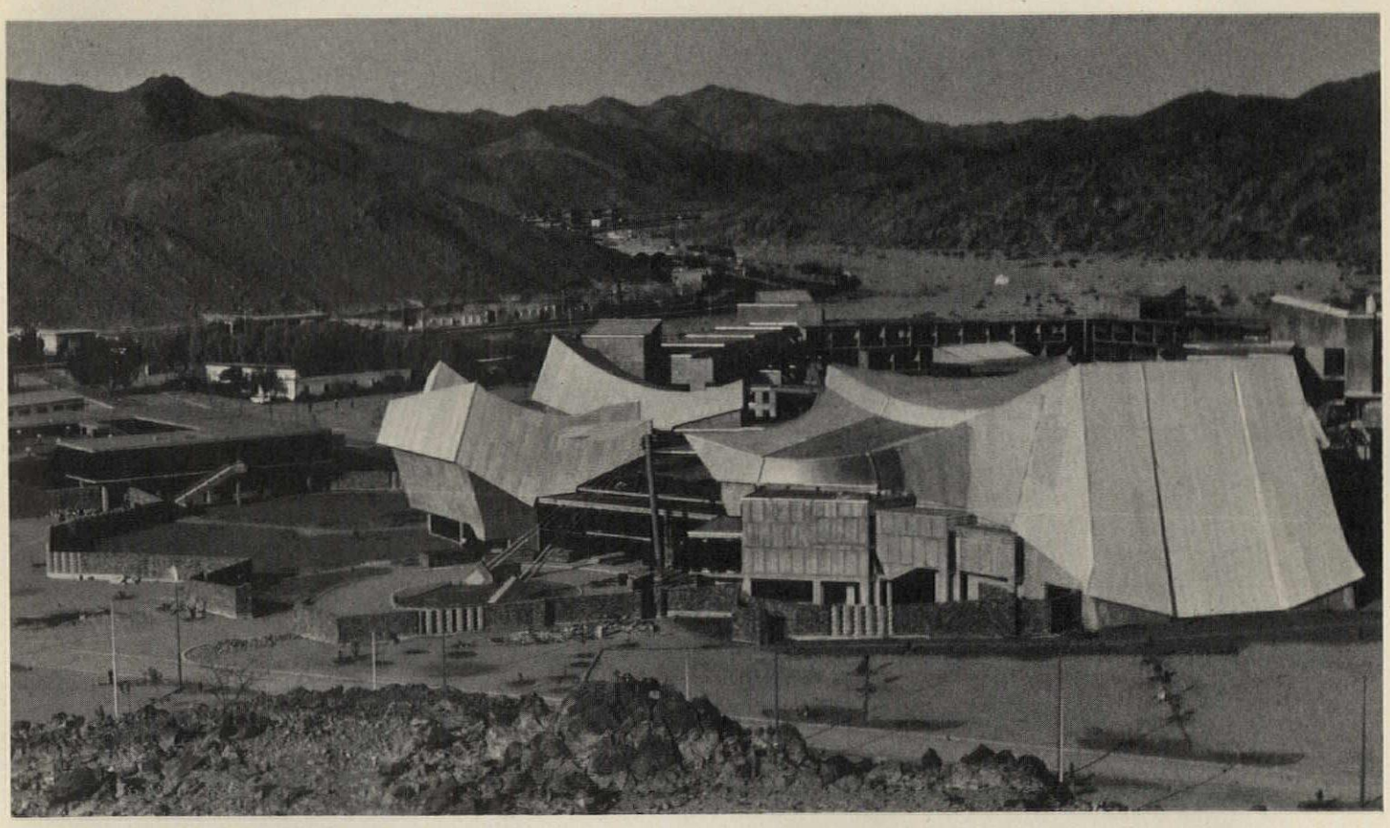


A web of kafess screen panels shades the entrance to the hotel.

Mecca Conference Center

On the road to Jedda

Walter R. Thiem

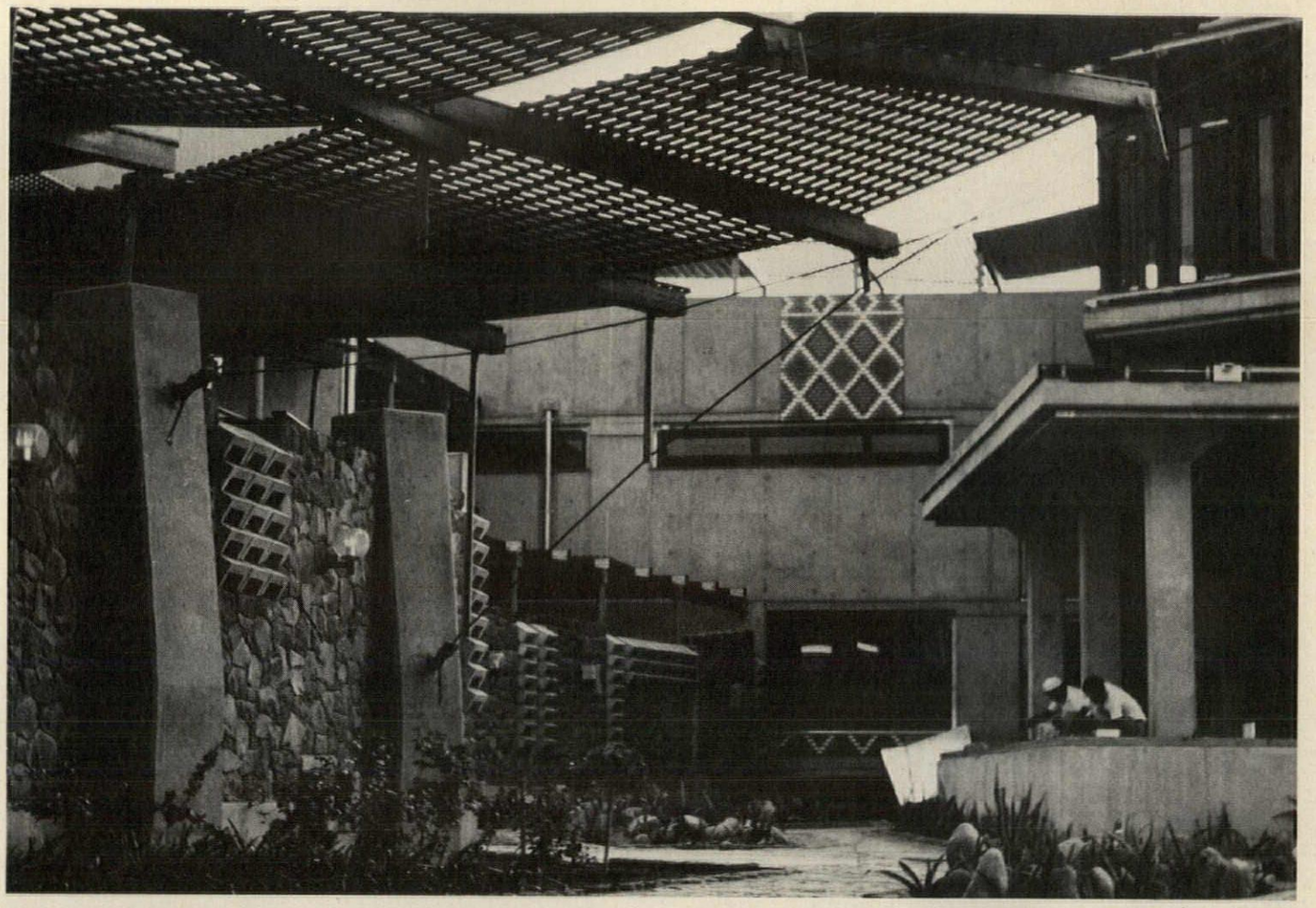


A response to severe climate and programming problems, the new conference center outside Mecca includes first suspension structure in Middle East.

Along the pilgrimage route between Mecca and Jedda, a new form has appeared, which represents nearly seven years of design and construction. When, in 1967, Saudi Arabia sponsored a limited international design competition for a hotel, conference center, and mosque in Riyadh, Professor Frei Otto was invited to participate. He, in turn, asked Professor Rolf Gutbrod, a Moslem, and Mr. H. Kendel to become his partner and associate, respectively.

Winning the competition, Otto and Gutbrod were only then advised that *two* of these centers were to be built, one in Riyadh and one in Mecca, and that they had been selected to design the Mecca project. This was unexpected, and brought about several problems. The original site in Riyadh was flat, and therefore able to accommodate the large tent which had sheltered all facilities under one roof. At Mecca, there was not enough level terrain, and the size of the tent structure was rejected on religious bases, because it threatened to dominate the other buildings. Concern over

Author: Walter Thiem is a registered architect working with the Architectural Department of the North Atlantic Division, Corps of Engineers, U.S. Army.



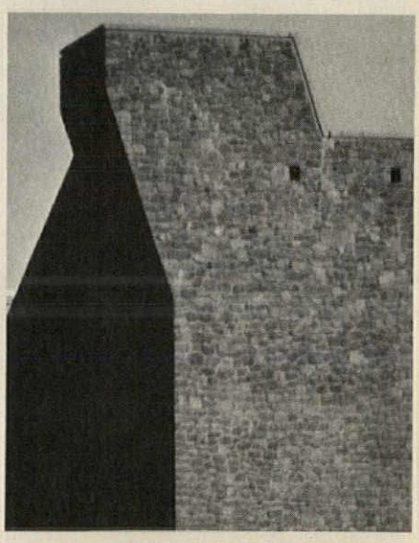
available specialists for the construction of lightweight roofs was yet another factor to be dealt with.

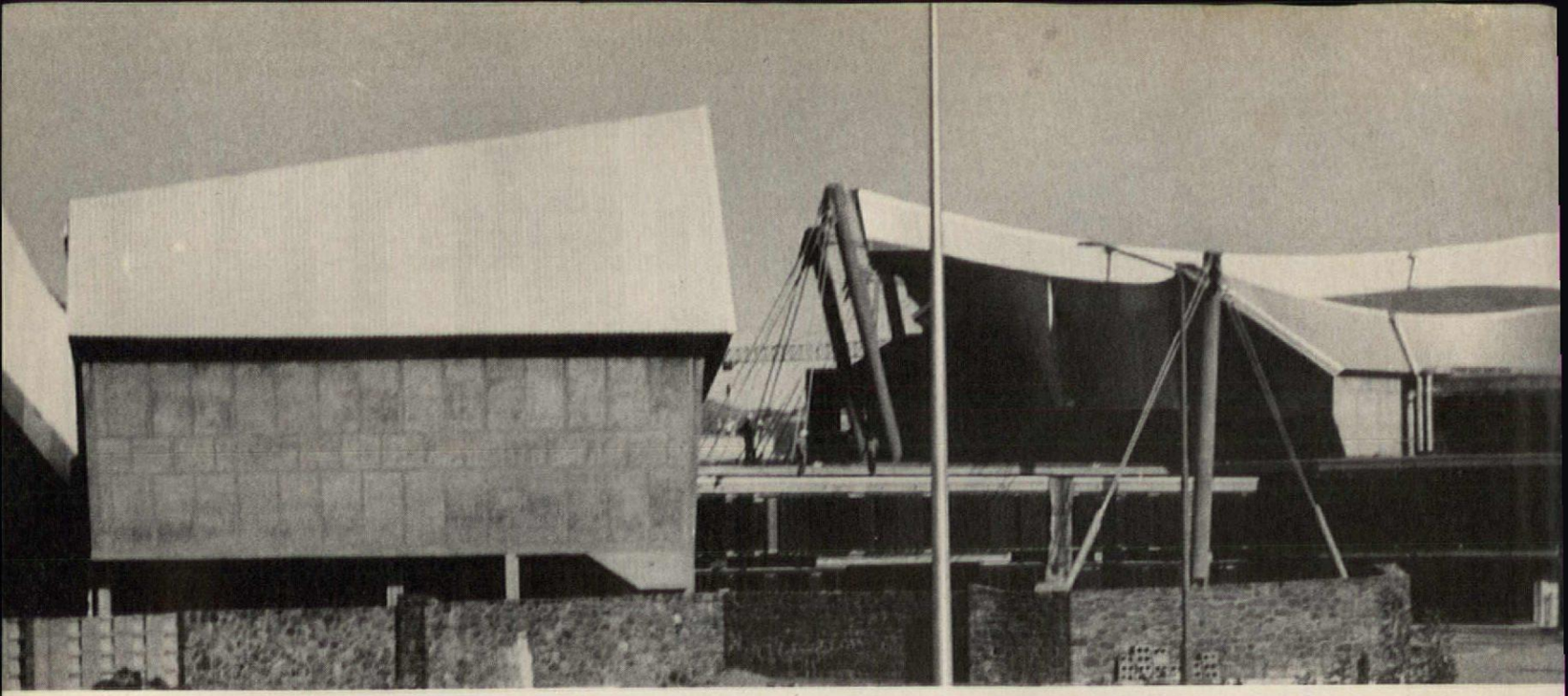
Because of these considerations, the team proceeded to redesign their center into a series of clusters or focal points. The hotel and conference center were to have separate entrances. The mosque, which supports both, straddles these functions. Supporting facilities, such as the service yard and staff quarters, have their own entrances. During this redesign, the Saudi Arabian government evaluated several sites, finally designating the present acreage on the perimeter of Mecca in relatively rolling terrain along the main road to Jedda.

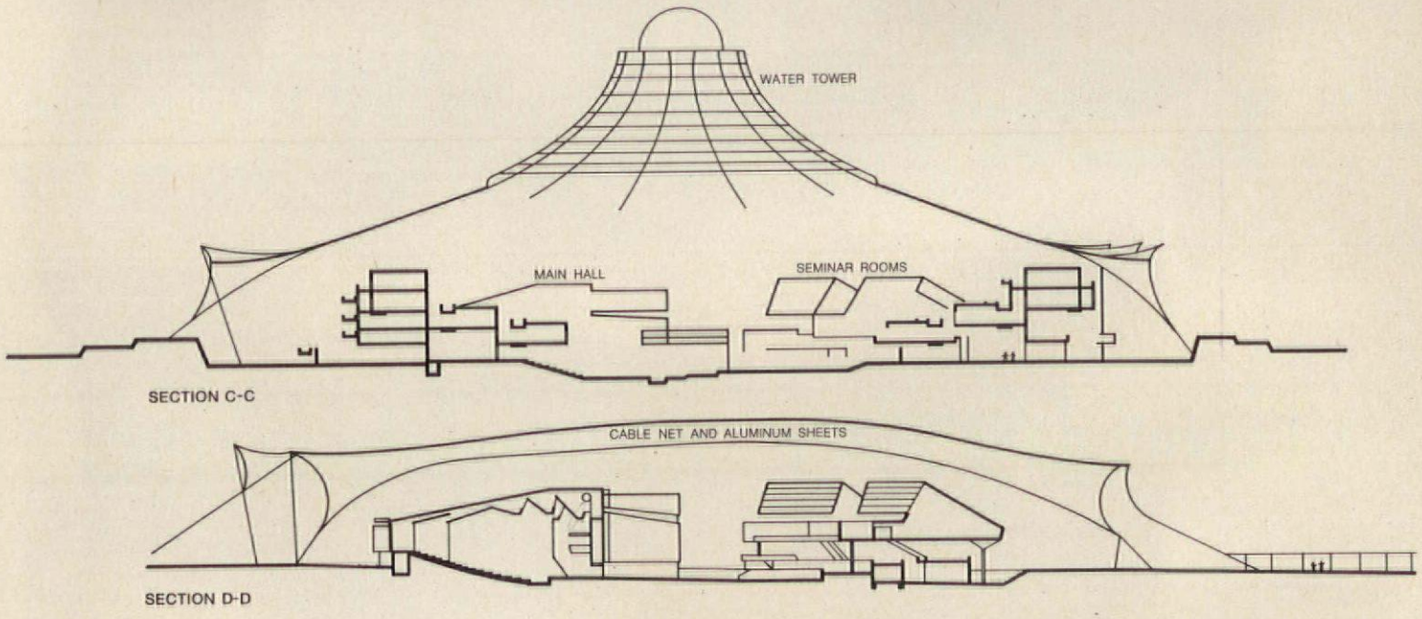
Several unique features have been incorporated into the design of this center. The designers have made extensive use of the "kafess," a slotted shade roof or shade panel, as a fixed or adjustable shelter from solar radiation. Because of the dry climate, the wooden slats which make up the kafess will last 50 to 100 years. This is also the first use of a hung roof in the Middle East, which is, after all, the home of the Arabian nomads, with their traditional tents.

All of the site visits and personal supervision was the responsibility of Rolf Gutbrod because visits to the Holy City are restricted to Moslems. Extensive photographs by native inspectors and Prof. Gutbrod were the only means of supervising an otherwise inaccessible project. In the early stages the architects considered using TV cameras for remote inspection, but costs were prohibitive. Even without their use this unusual project completed in August 1973 blends modern technology and native materials into a cohesive whole. □

Hotel courtyard and oasis (above) will contain plants and water. Striking forms of the Mosque (right) and the seminar rooms (below) declare the separate functions within the larger complex.



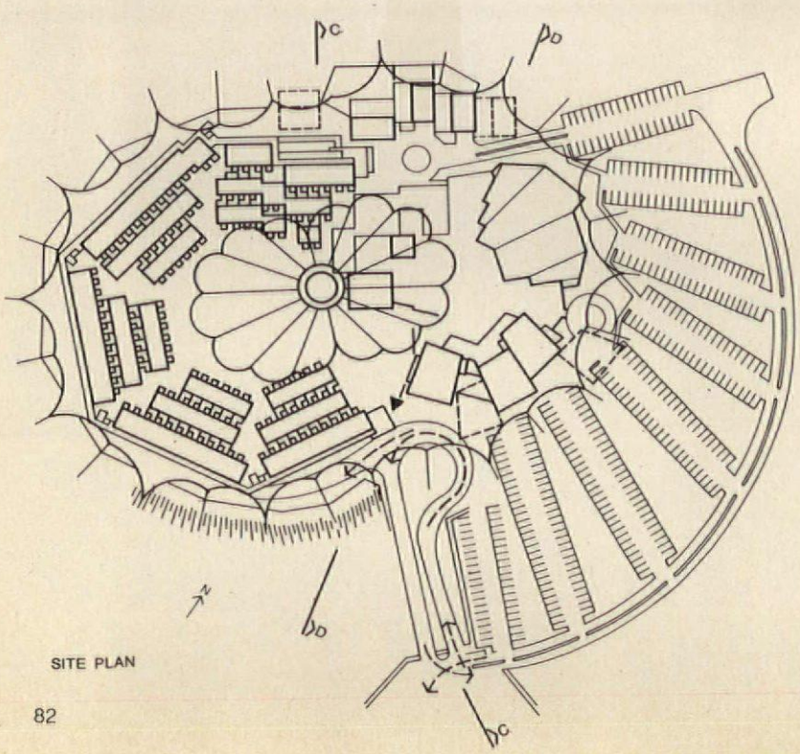




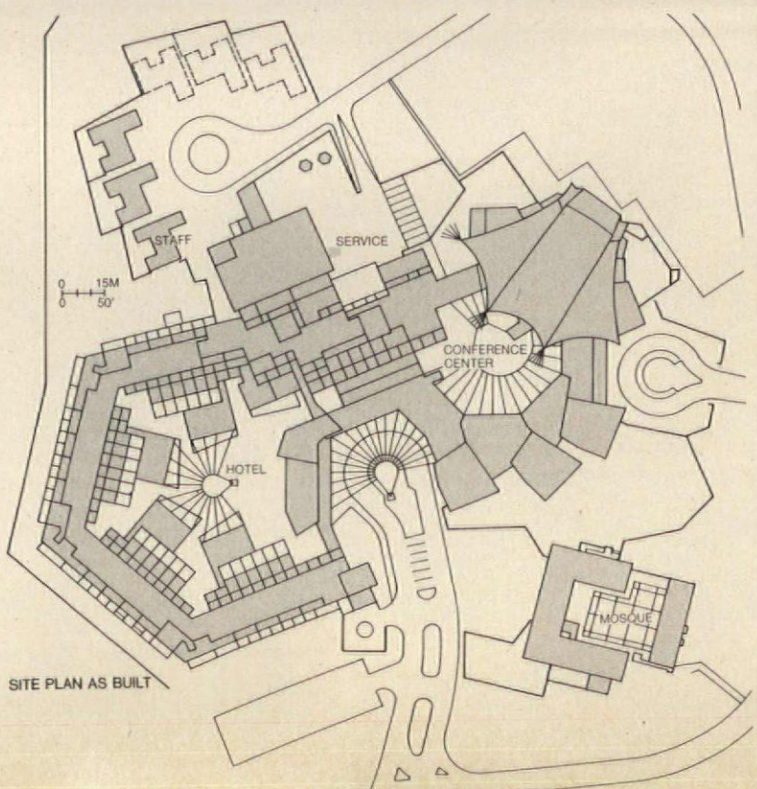
SECTION C-C

SECTION D-D

WINNING COMPETITION SCHEME FOR RIYADH

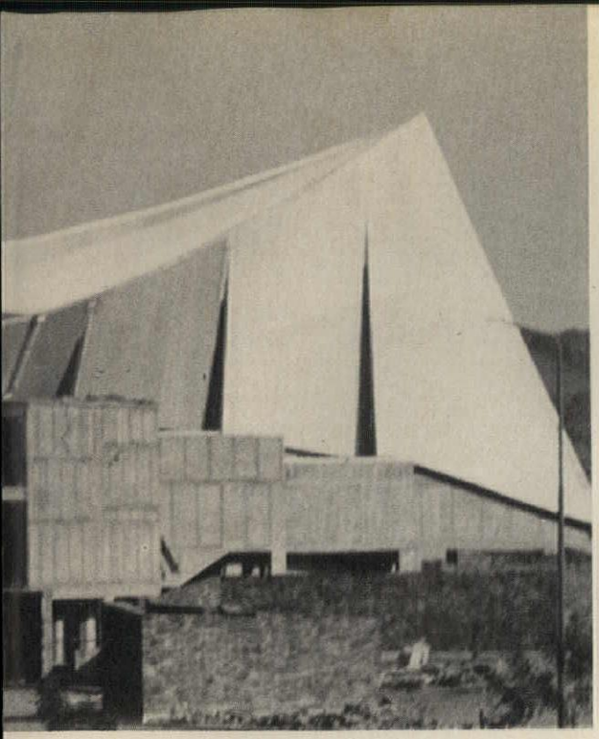


SITE PLAN

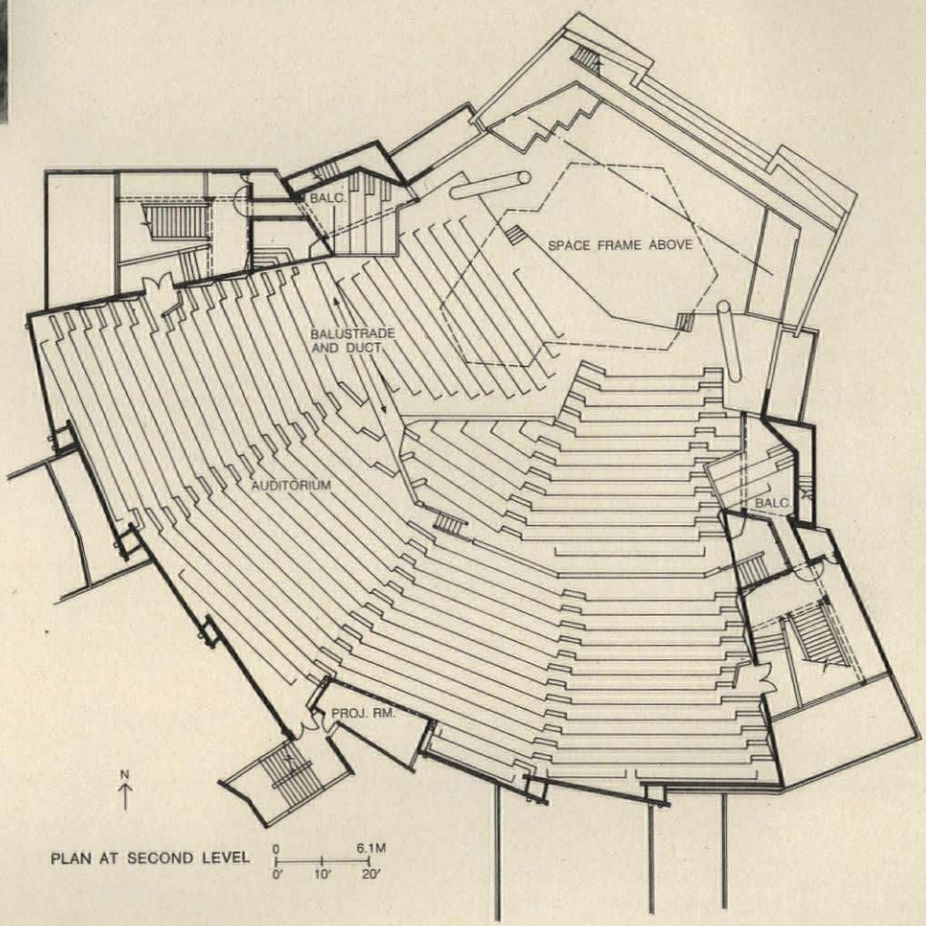


SITE PLAN AS BUILT

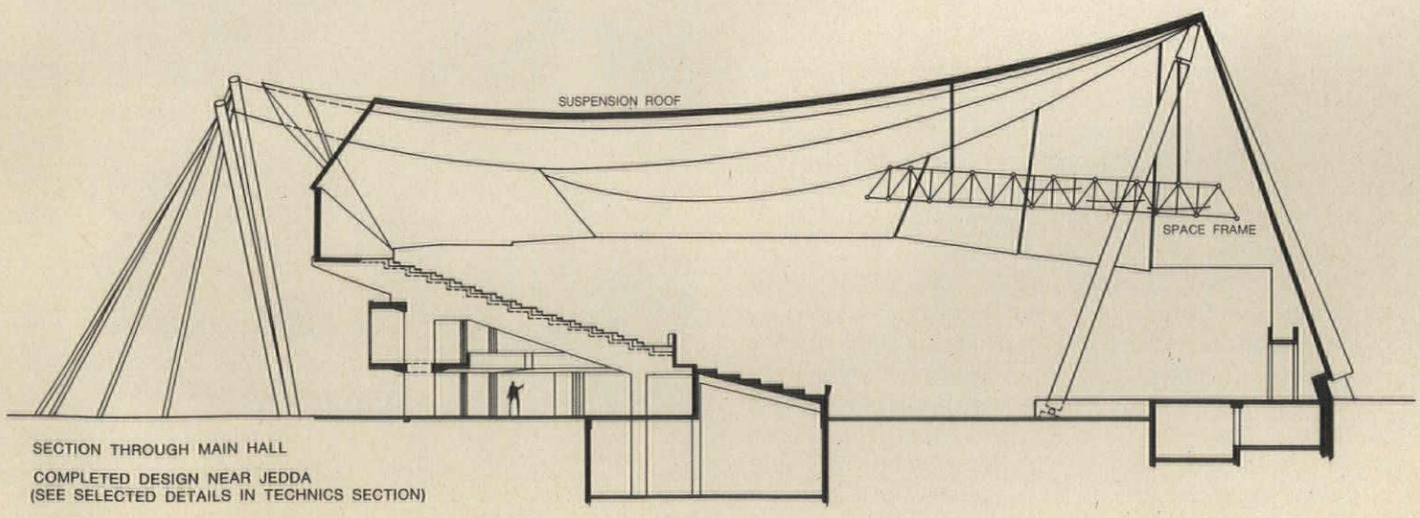
Mecca conference center



Although the original scheme for Riyadh was the original basis for the architects' selection, that concept (site plan, opposite page, left, and sections above it) was altered extensively when the site was later changed to one near Mecca.



PLAN AT SECOND LEVEL 0 6.1M 0' 10' 20'

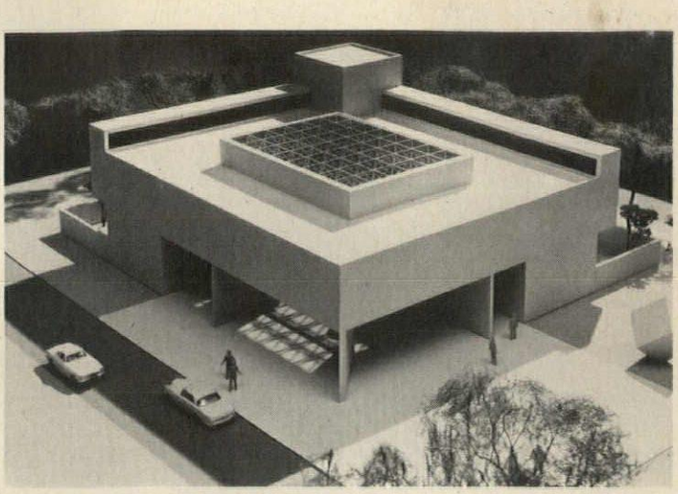


SECTION THROUGH MAIN HALL

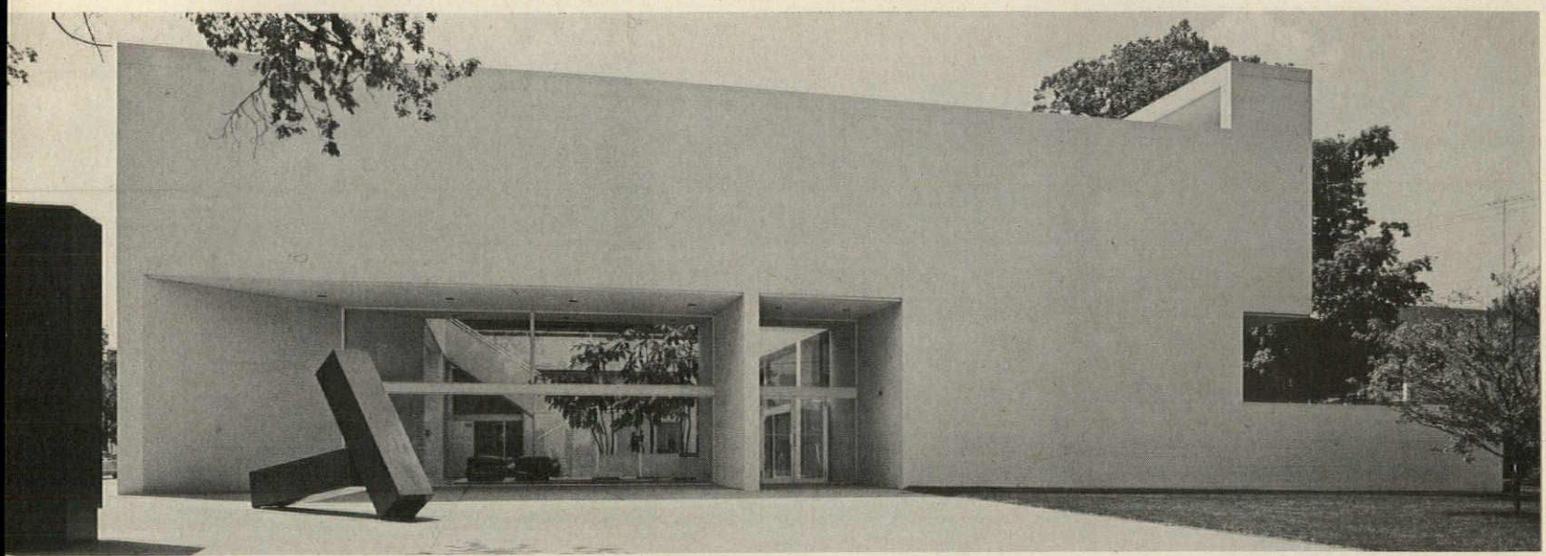
COMPLETED DESIGN NEAR JEDDA
(SEE SELECTED DETAILS IN TECHNICS SECTION)

Howard Swink Advertising Inc., Office Building, Marion, Ohio.

In the Swink

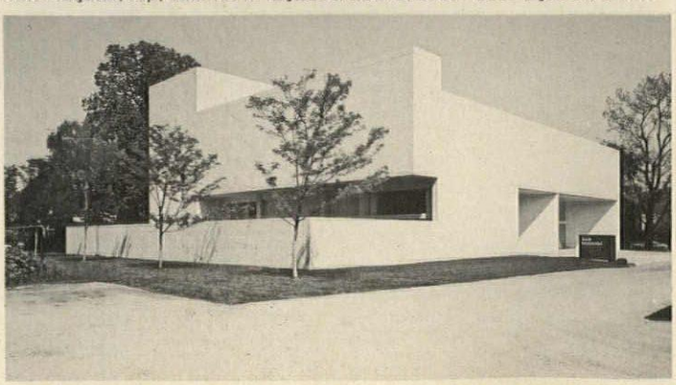


Model



In a small Ohio town, Architects Don M. Hisaka & Associates have added a piece of minimal architecture whose form emerged directly from the program.

North façade, top; east-north façades, above; south-east façades, below.



In recent years, few architects have been singled out consistently for recognition in the P/A Awards program. One whose work has been acknowledged as much as, if not more than that of anyone is Don Hisaka. Lately, it seems that hardly a year passes that some project of his has not been premiated. If this happened once or twice it might pass unnoticed, but since it occurred in 1969, 1971, 1972, and twice in 1974—indicating the esteem for his work by diverse juries—it seems reasonable to suspect that there must be something in Hisaka's work that is very appealing to other architects.

That "something" has been called clean, direct, straightforward, uncomplicated, and even good, but the word that probably expresses it best is "simplicity." It is that that many architects find so appealing; they find it refreshing to see a program intelligently, efficiently, sensitively, and simply fulfilled. They find it commendable to see a building of which they can say "There is no obsession here with form for form's sake," as John C. Parkin said of the Swink build-

ing when it won a P/A citation in 1972. It is gratifying to be able to say, "Talk about the simplicity of handling a building—this building is good—it is very simple and direct," as Richard Bender said during the awards jury.

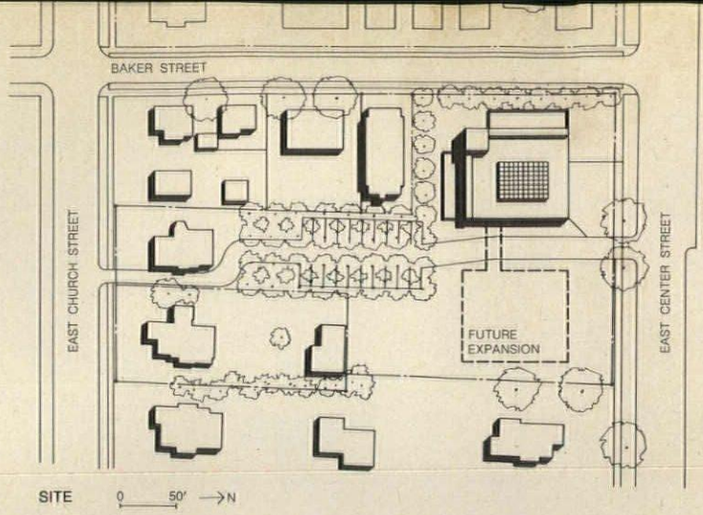
Hisaka's buildings have always been restrained, almost minimal structures (even minimal sculptures). But, unlike so many other buildings of this type, the restraint or minimal quality of the architecture never becomes forced or obvious, it never becomes a thing in itself; it emerges as, and remains, the consequence of the logical fulfillment of programmatic demands. Consequently, unlike some "reductive" architecture, Hisaka's work never becomes sterile or cold; in its directness and simplicity it never shows the kind of austerity that many people react to with anxiety, antagonism, or even hostility. It remains appealing and approachable—the kind of architecture about which one could say, as John Parkin did during the Awards program, "I think it's a very nice building."

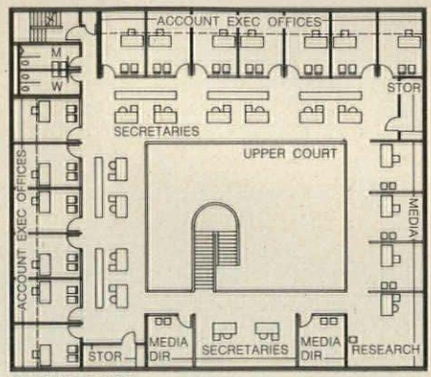
The program for the Swink office building outlined 10,000 sq ft of space to house an advertising firm's administrative facilities. In addition to the usual offices and reception area needed, the building was to include a large display area, and was to be designed to accommodate an additional 10,000 sq ft for future expansion. While these requirements did not present particularly difficult problems, the site did. The way Hisaka has sited the building, organized its inner spaces, and articulated its overall form all bear witness to the reasons his work has been found so appealing by his peers.

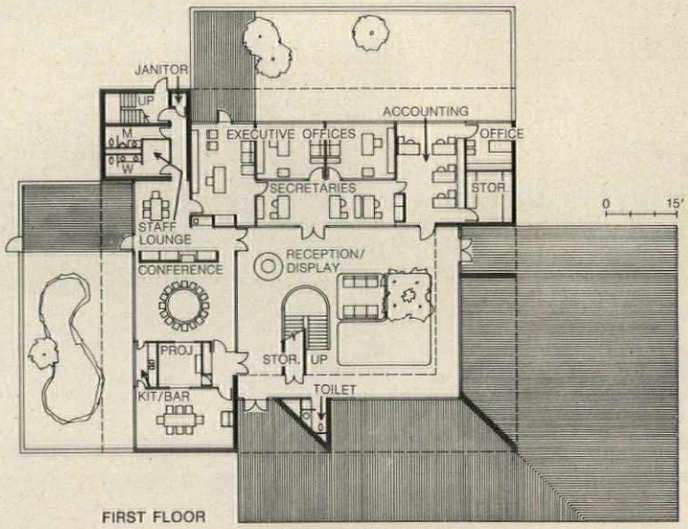
The site is located a few blocks from the center of town, in a relatively flat area surrounded by a variety of existing two-story structures. "Since the semi-urban character of the surroundings did not provide an especially attractive vista," Hisaka notes, "an essentially inward-turning building was developed." The two-story structure is unified internally by a spacious, full-height skylit reception and display area. The more important functions, such as the executive offices and the conference rooms, are located around this space on the ground floor. The working offices, such as the spaces for account executives, secretaries, research and media personnel, surround the open space on the second level. The ground floor spaces either face the inner court or are oriented toward enclosed, private gardens for their primary exterior views. Upstairs, the account executive's offices are further enhanced by a clerestory that brings in additional natural light and provides a welcome change in ceiling height.

The building's primary access is from a one-way street, and expansive areas of glass enclose the lobby in order to generate a receptive vista into the building. To help minimize air conditioning loads, these large, glazed areas have been deeply set into the building, and the clerestories have been oriented to the north and east.

In what otherwise could have been an ordinary concrete block and steel frame structure, Hisaka has made architecture. It is an architecture that is appealing in its simplicity and clarity, and ultimately in its refinement. But more importantly, it is an architecture that is highly sensitive to those who will be using it. [David Morton]







Data

Project: Swink office building, Marion, Ohio.
Architect: Don M. Hisaka & Associates, Architects, Inc.
Program: a 10,000-sq-ft office building for an advertising firm, to include a display area, and an additional 10,000 sq ft for future expansion.
Site: A relatively flat area surrounded by a variety of two-story structures a few blocks from the center of town.
Structural system: brick and concrete block bearing walls, concrete slab second floor on steel framing.
Mechanical system: six single-zone gas-fired forced-air heating/cooling units, with related underfloor and overhead ductwork.
Major materials: concrete foundation and floors, steel frame, brick and concrete block, metal roof deck, carpet and quarry tile on floors, acoustical tile ceiling.
Consultants: William A. Behnke Associates, landscape; Scheezer & Buckley, mechanical; Gensert-Peller Associates, structural; William B. Ferguson, electrical.
Client: James W. McNoldy, President, Howard Swink Advertising, Inc.
Costs: $422,000, $33.80 per sq ft, excluding furnishings and landscaping.
Photography: George Cserna.

In Marion, Ohio, the Swink Office Building is designed almost as a piece of minimal sculpture. On two levels, executive and administrative offices surround a large, skylit court. Vertical glazing is recessed for sun control.

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Architect: Alfred N. Beadle, AIA. Project: Mountain Bell Plaza. Owner: The Third and Catalina Construction Partnership, a Joint Venture.

PPG: a Concern for the Future


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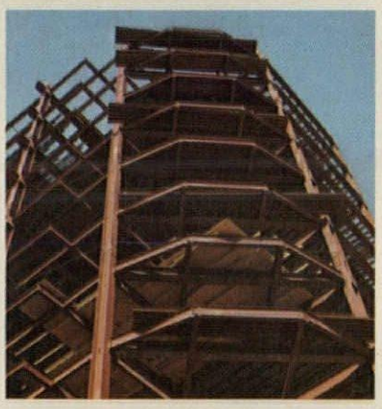
For new Hilton Hotel of Philadelphia:

Steel framing proves more economical than concrete



The new 20-level Hilton Hotel of Philadelphia, on the University of Pennsylvania Campus, was conceived to meet a variety of needs: accommodation of nearby hospital out patients; hospital and university visitors, visitors to exhibitions and meetings at the Trade and Convention Center, spectators for sports events at Franklin Field, and for families attending commencement ceremonies. An integral parking facility also serves several needs.

Tower Located over Service Area

To provide the required 400 guest rooms, the architects determined that a high-rise tower would be needed in the congested site. It became apparent during the design stage that the tower structure would have to be located over the service area of the hotel, which includes the motor entrance, lobby, ballroom and meeting rooms, restaurant, and housekeeping facilities.

After various design considerations, structural steel was chosen for the tower framing because it provided vertical and horizontal flexibility, while at the same time offering substantial economies. E. Fred Brecher, chief structural engineer for Geddes Brecher Qualls Cunningham, explains the reasoning that led to steel's selection:

"A cast-in-place concrete structural system would have required 18-inch by 48-inch columns in the lower story—resulting in a transverse column bay of 27 feet center line of column to center line of column. In the hotel tower, the room layouts suggested a column spacing of 27 feet in the longitudinal direction. The resultant 27-foot by 27-foot bays would have been heavy concrete slabs (flat plate or waffle) or expensively formed beam and slab, or slab bands in the tower area.

Eliminate Heavy Transfer Slab

"To avoid this big bay in the tower, a transfer slab would have had to be inserted at the fourth level to cut down the column spacing to a more economical size for a concrete structure. Concrete contractors in the area advised that a full transfer slab might add as much as $.75 per gross square foot to the cost of the structure. This cost and the additional time required for the construction of such a slab stimulated a search for another answer to our structural problem.

"With the help of Bethlehem Steel's Philadelphia District Sales Engineer, a scheme utilizing composite structural steel framing in the high live load levels of the base and simple joist and girder framing in the tower area was developed. This allowed straight-through framing from foundation to roof."

Steel Weight Held to 12.2 psf

The final design of the structure resulted in a steel weight of approximately 12.2 pounds per square foot, including joists. The use of a steel frame structure simplified the connection details for the attachment of a precast facade.

Want more information on steel framing for buildings? Call or write the Bethlehem sales office nearest you. Bethlehem Steel Corporation, Bethlehem, PA 18016.

Owner: Frankel Enterprises—Developer, Philadelphia; *Architects and Engineers:* Geddes Brecher Qualls Cunningham, Philadelphia—Architect in Charge: Alan Fishman; *Fabricator:* Bethlehem Contracting Co., Bath, Pa.; *Erector:* Valley Erection Co., Broomall, Pa.; *General Contractor:* Frankel Enterprises.

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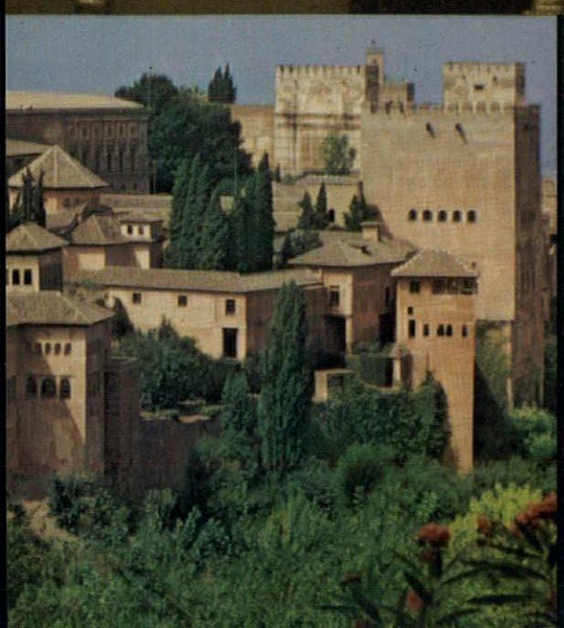

Alhambra (The Red Citadel), Granada, Spain. Built by Muhammad I (1230) and Yusuf I (1350).

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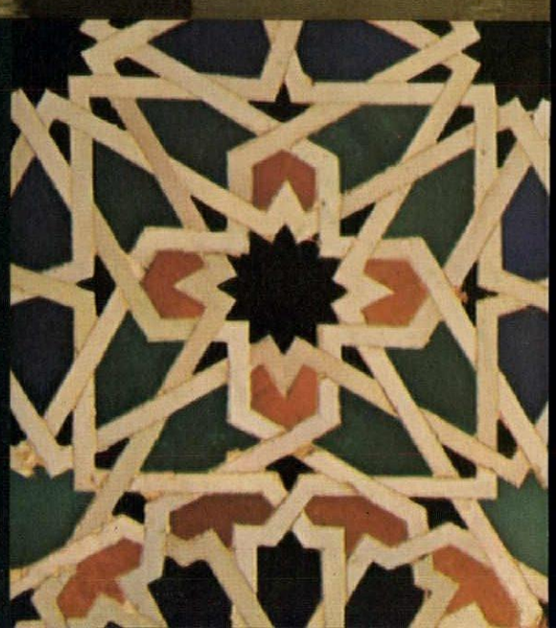
Tile Council of America, Inc.

Photographs courtesy of Photo Researchers, Inc.



Sealants, part I

John P. Cook

This is a brief response to architects' requests for more information on sealants. As the reader will soon discover, specifying sealants is a precise art.

Most architects want more information about building sealants. Their comments are many and varied, but three main areas of concern stand out: 1) selecting the proper material, 2) field application problems, 3) new methods for solving sealant problems.

Let's look first at both traditional and new methods of sealing the building to help us select the proper materials. There are two basic methods of weatherproofing the exterior wall of a building: 1) one-stage weatherproofing seals joints at the exterior face of the wall section with a sealant material which acts both as rain seal and air seal, 2) two-stage weatherproofing treats rain seal and air seal as separate functions; the rain seal, a deflector, is used to keep water out of the joint, and the air seal occupies an interior, protected location. Since the functions of the seals are different in these two systems, the performance requirements of the sealant materials also vary.

One-stage sealing is traditional in American building. Also, many sealant applications such as copings and traffic bearing joints in slabs admit of no other solution. A typical one-stage seal in a precast concrete wall panel is shown.

One-stage sealing simply closes all openings which could admit water past the exterior wall line of the building. The contractor installs the seal using standard caulking methods. Consequently the one-stage seal has the advantages of familiarity, ease of access, and lower cost. The disadvantage of the one-stage seal is that placing the sealant at the exterior face of the building exposes it to wetting and drying, freeze-thaw, solar UV action, and the extremes of movement. Consequently, the one-stage seal usually requires a high-performance sealant such as polysulfide, silicone, urethane, or in some cases a solvent-based acrylic.

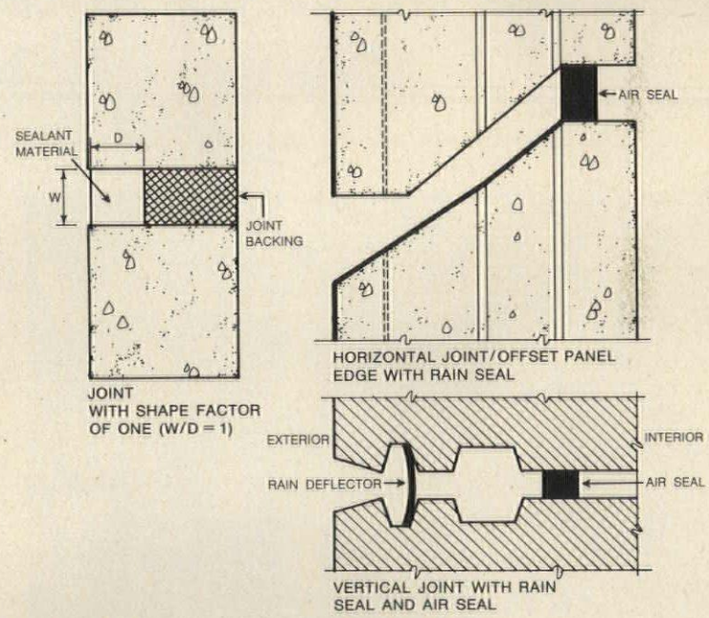
Two-stage sealing is widely accepted in Europe and much of Canada, but is still rare in America. Two-stage sealing treats rain seal and air seal as separate functions. In horizontal joints, the rain seal may be a deflector or simply an offset in the panel edge. In vertical joints, the rain seal is often a tube or strip of rubber placed in a recess in the panel edge. The possibilities for forming the rain seal are endless, once the designer realizes that the rain shield should *not* be air tight.

Two-stage weatherproofing depends for its effectiveness not on completely *preventing* water penetration but rather on *controlling* the forces that drive water inward. Therefore, an important feature of the two-stage seal is the enlarged area behind the rain deflector. This pressure equalizing chamber is vented to the outside, so that any wind-driven rain which does pass the exterior seal is trapped here and drained harmlessly back outside. The examples illustrated here include a two-stage seal in a horizontal joint with an offset panel edge and a vertical joint with rain and air seals.

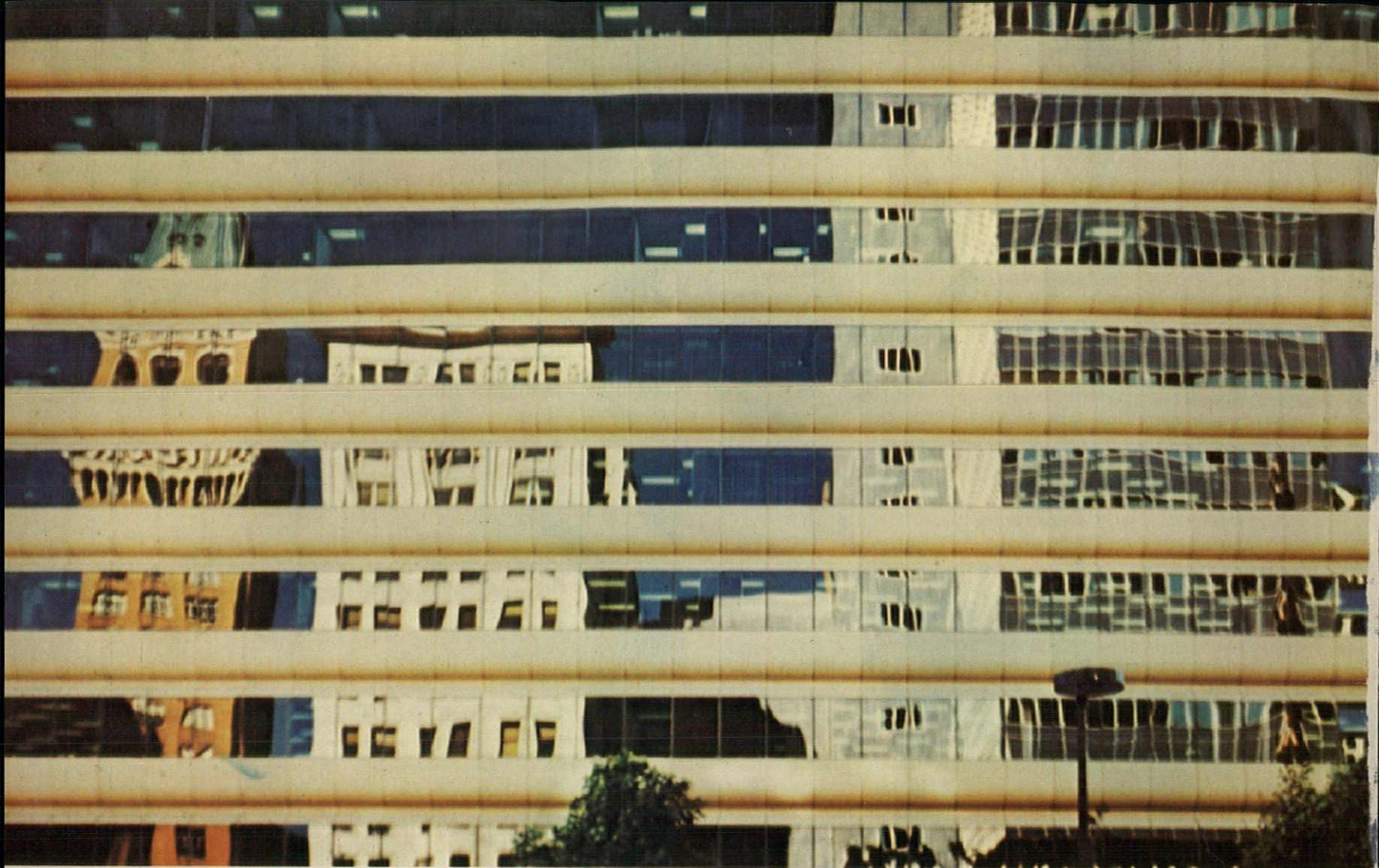
The air seal in two-stage weatherproofing is placed in a protected location. This indicates that lower performance—and price—materials are suitable. Butyls, solvent-based acrylics, latex caulks, or compression seals can be used.

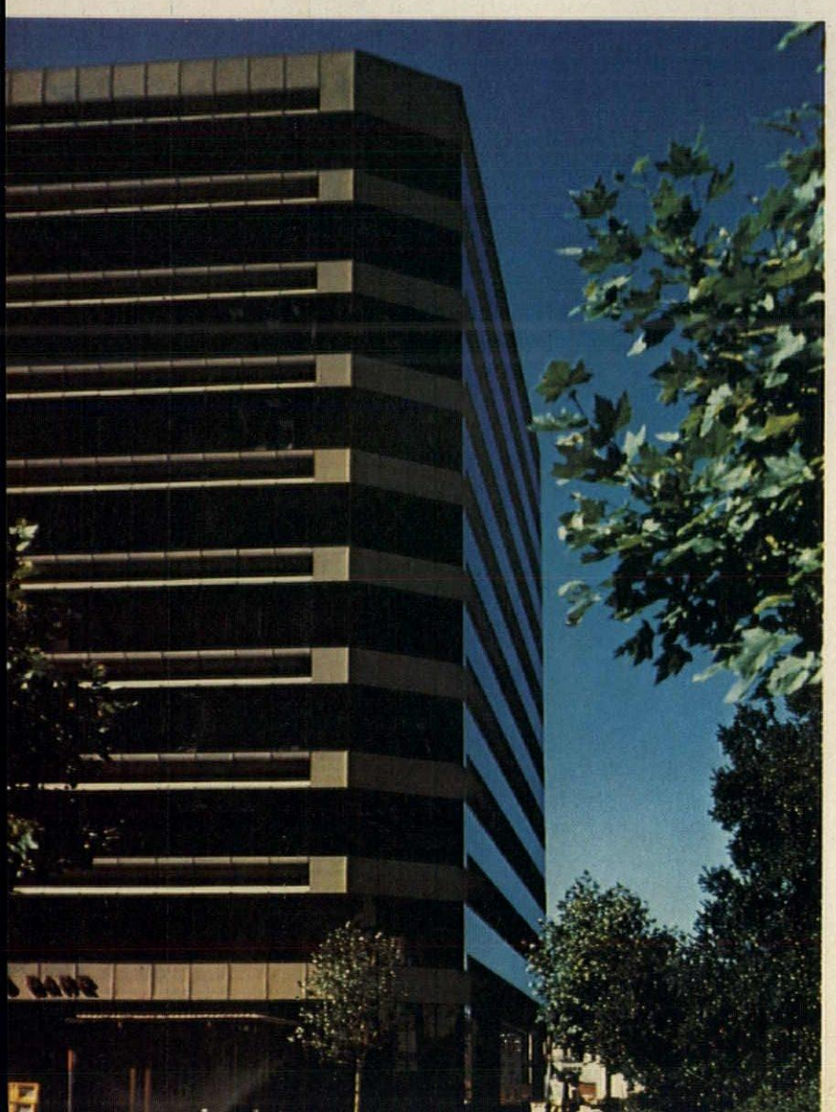
The two-stage seal has two obvious advantages. First, it provides two lines of defense in sealing the building. Second, it permits the use of lower cost sealing materials. Disadvantages of the two-stage seal include the difficulty of applying the air seal and the high cost of resealing and design and construction time in forming the joints.

This discussion will be continued in February.



Author: John P. Cook is Prof. of Engineering, University of Cincinnati and author of *Construction Sealants and Adhesives*, 1970 New York: John Wiley & Sons. This article appears at the invitation of Harold Rosen, PE, FCSI regular contributor to P/A Specifications clinic.





The capture of the sun in California

A new office building in Oakland by Gruen Associates combines sensitive design and a high performance fluorocarbon metal coating to tame the California sun.

Even as the California sun soars overhead flashing its treacherous smile, a new 10-story office building rules a major intersection in Oakland with such effortless grace and assurance that it is difficult to imagine anything else on its site. The Wells Fargo Bank by Gruen Associates, Cesar Pelli as Partner in Charge of Project and Design, exemplifies what architecture can accomplish when an architect, his client, and contractor resolve to create a work of aesthetic and technical distinction—at a reasonable cost of $26.30 per sq ft including tenant allowances. From its superb siting to the details of its corrugated steel sheet spandrel panels, Wells Fargo also continues its designers' aesthetic explorations of light and shadow, and opacity and reflection.

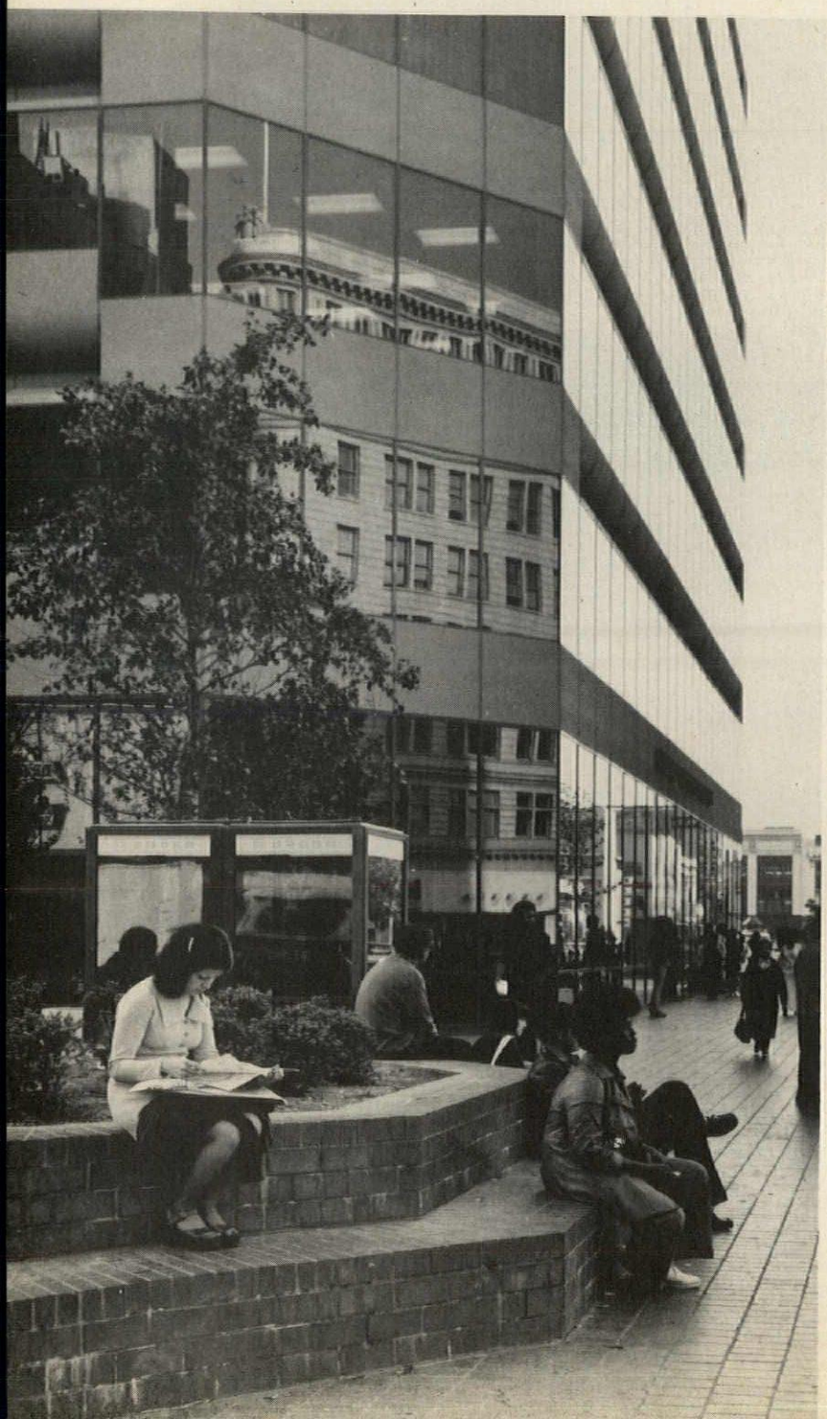
The curtain wall is particularly striking. This playful *pas de deux* engages a bronze-tinted glass and fluorocarbon-coated corrugated steel sheet in an intricate interplay with

Above: Wells Fargo reinforces definition of major Oakland crossroad in north view. Opposite: east, northwest, north elevations play glass reflectivity and transparency against metal opacity in varied readings.

Technics: Wells Fargo Bank Building

the sun and the building's surroundings. The main elevations typically run a horizontal glass band flush with the leading panel edge (to facilitate reflections). Below the glass, the panel continues downward and curves behind the windowsill to intersect the floor beam and anchor assembly in a brief vertical passage. A straight beveled surface slopes downward and forward to the window head and glass to repeat the sequence. At the corners of this rectangular building are 45 degree curtain walls of floor-to-ceiling glass flush with spandrel panels.

The properties of vision glass and opaque sill and head are dictated by solar loading so that light and heat intake are maximized where most needed. Because the north elevation is barely glanced by the rising sun, north glass assumes the full 8′-6″ floor-to-ceiling finished height in the typical 12′-6″ floor. This permits the north window head to be flush with the suspended acoustical tile ceiling, and the north sill to be a nominal 6 in. from the finished floor.



On east and west walls, the sun's increasing presence is acknowledged by lifting the sill 2′-8″ above the floor. The south wall fully experiences California's fabled sun. The 2′-8″ sill is repeated as the head drops 1′-6″ below the finished ceiling level.

Corners assume an unusually strong position in the building. As the most prestigious loci on typical floor plans, they retain the north wall window condition to open generous views for one and sometime two executive offices or conference rooms placed there. Equally important, they establish the building as *volume*, in which the curving spandrel panels cut deep, shadow-throwing slots like the lateral gill clefts of a shark during periods of strong direct light. In a curious manner, the corners also function as sluices for the bands of glass which broaden or narrow as they flow from the 45 degree turns.

In keeping with its affinity for new technology, Gruen has specified a relatively new architectural metal panel for the building's curtain wall. This is Warnel, a stamped sheet metal coated with PPG Duranar, a fluorocarbon finish (q.v.). Warnel panels have received widespread West Coast use in numerous projects sometimes involving questionable imitiations of brick, stone, and wood. However, Gruen wished to use sheet metal for its own sake. Its panel has simple ½ in. wide and 3/16 in. deep corrugations. Although discrete corrugations are not visible from afar, their ability to stand out in relief creates soft, battered forms, reinforced by the gray-brown coloration, which bear a surprising resemblance to stone.

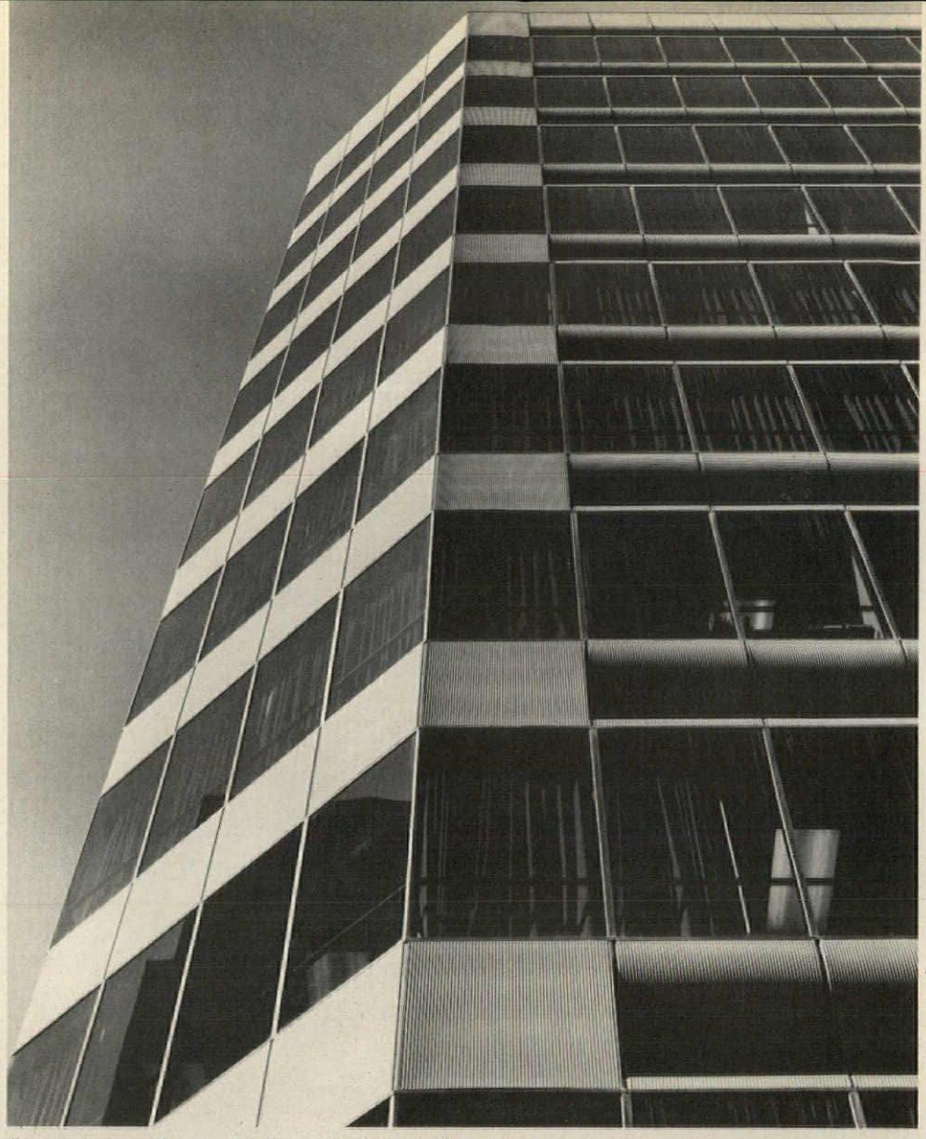
Wells Fargo is the first installation for Oakland's $176 million City Center, a 15-block assemblage bounded by 11th, 14th, Grove, and Broadway and the terminus of San Pablo, a major diagonal which inspired the building's 45 degree corners. Gruen Associates and Avner Naggar are archiects for the Center, and the landscaped plaza surrounding Wells Fargo is the work of Sasaki-Walker Associates, landscape architects for the Center. The completed Center will contain five office buildings, a 500-room Hyatt Regency hotel, a regional shopping center with three department stores, and full road and rail connections (it is adjacent to the BART 12th St. Station).

Already the 25-story Clorox Building, designed by Gruen using the Wells Fargo curtain wall system modified for a tower configuration, is rising to the south. Its façade is essentially the same. However, mullions slice Clorox's panels into articulated bays to provide window washing tracks, and the corners, meeting closer than they do on the lower Wells Fargo, will be more strongly emphasized. Pelli is understandably anxious to see its completion and the effect of these two structures on each other, the site, and the city.

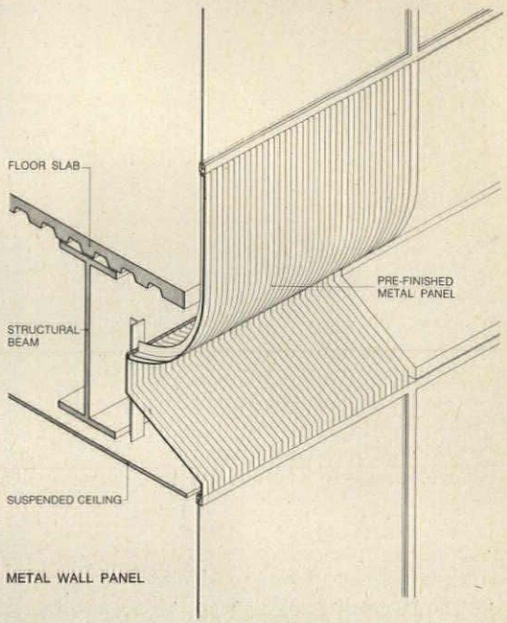
Meanwhile, Wells Fargo stands ably alone. Its existence was made possible by an architecture office blessed with a knowledgeable and sophisticated client, Grubb & Ellis, co-developer of the Center, and a talented builder, Turner Construction, which functioned also as construction manager. This is nevertheless only another pause in the architect's search for new forms and new technology. Wells Fargo is not so much a statement in time as a study in process. Building as *process*—probably even California cannot say how this will end. [Roger Yee]

Entrance lobby meshes hard glossy surfaces of glass, acrylic, aluminum with softer natural finishes of paving brick and travertine. Cold cathode lighting in plaster soffit flows like convolutions of the brain. Office of developers Grubb & Ellis uses demountable partitions as foil for bold wood forms. Opposite: plaza planting and seating on building's northeast edge. Photos: Fred Clarke (east elevation in color), Arthur Golding (north elevation in color), Jeremiah O. Bragstad (office), Balthazar Korab (remainder).

Technics: Wells Fargo Bank Building

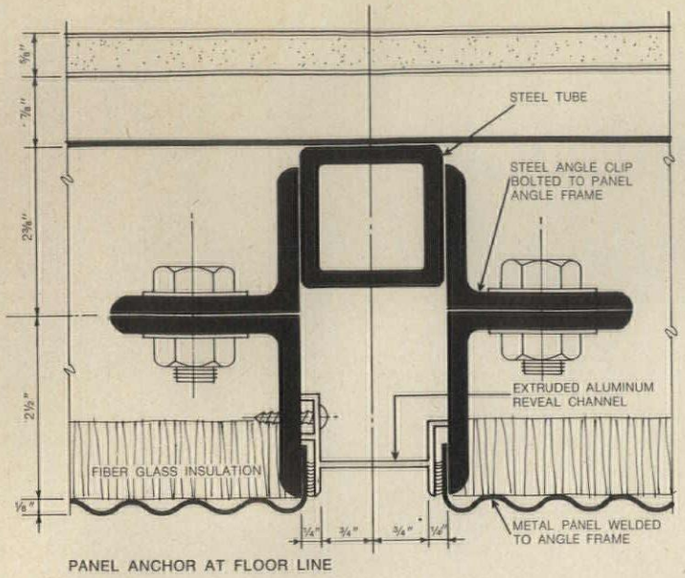


Corrugated panels vary relief and orientation with moving sun.

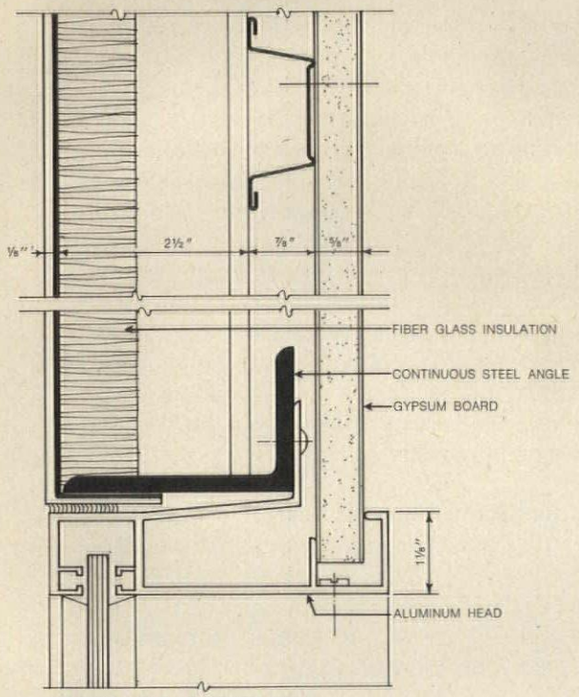


Data

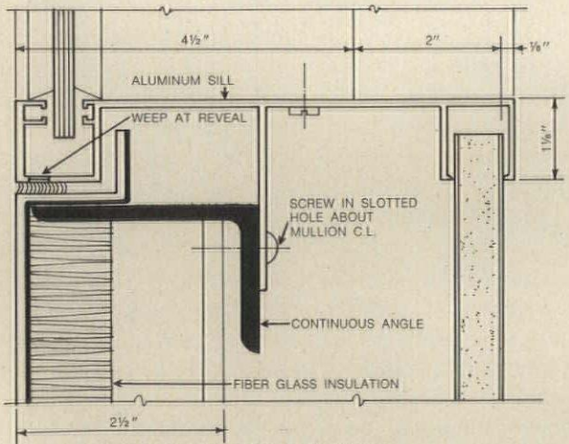
Project: Wells Fargo Bank Building, Oakland, Calif.
Architect: Gruen Associates, Los Angeles, New York, Washington, D.C. Cesar Pelli, Partner in Charge of Project and Design; Roylance Bird, Jr. and Victor Schumacher, Designers; James B. Lim, Project Coordinator.
Program: ten-story office building with penthouse and basement, 242,000-sq-ft gross area.
Site: 1333 Broadway at 14 St. in downtown Oakland.
Structural system: fireproof steel frame, metal deck, concrete floors.
Mechanical system: roof-top water chiller and boiler feeding decentralized per floor HVAC distribution system with multizonal control.
Major materials: exterior, embossed steel sheet spandrel panels with bronze tinted glass set in extruded aluminum frames; interior, public lobby of brick paving, bronze mirror glass and acrylic walls, plaster ceiling with recessed cold cathode tube lighting, travertine on elevator core walls, typical floor of carpeted floor, suspended acoustical tile ceiling, demountable partitions, automatic fire-sprinkler system.
Consultants: M. Arthur Gensler, Jr. & Assoc., San Francisco, Interior designers, Edward C. Friedrichs, Project Director; Sasaki-Walker & Assoc., Sausalito, Calif., Landscape Architects; Turner Construction and Transbay Engineers & Builders, Contractors.
Costs: $9.2 million, including interiors and landscaping.



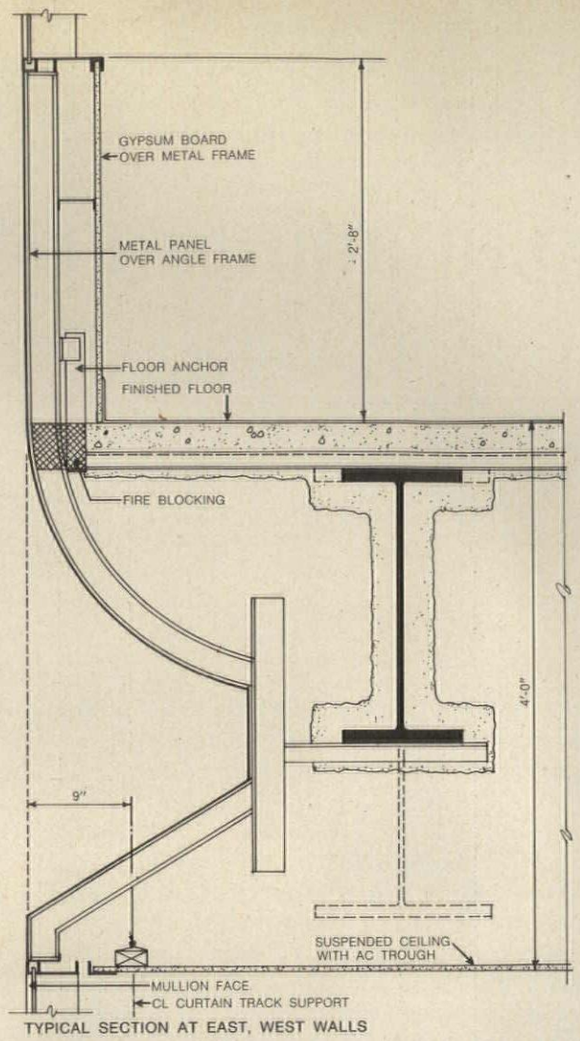
PANEL ANCHOR AT FLOOR LINE



WINDOW HEAD AT SOUTH WALL

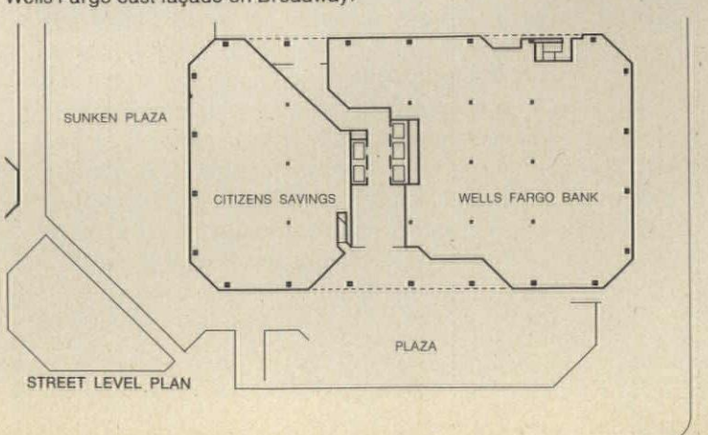


WINDOW SILL AT SOUTH, EAST, WEST WALLS



TYPICAL SECTION AT EAST, WEST WALLS

Wells Fargo east façade on Broadway.



STREET LEVEL PLAN

The aluminum peacock

Architectural aluminum's legendary distaste for organic coatings appears to be overcome. The new high performance coatings promise it a long colorful life.

Aluminum is flirtatious. For years this soft, conductive, low strength, lightweight metal evaded man's desire for isolation and control because it so readily reacts with a host of eligible reagents. Man-made aluminum alloys, which dramatically improve aluminum's mechanical properties, were once so rare that Napoleon III, emperor of France (1852–1870), reserved a special set of aluminum cutlery for his most honored guests. Less fortunate guests resorted to gold and silverware.

Aluminum promptly forms a protective surface coating of aluminum oxide (Al_2O_3) when exposed to oxygen. This renders it highly impervious to further change in the atmosphere even at moderately high temperatures. Not only does it retard corrosion; it quickly heals when breached.

For many exterior applications unfinished aluminum wears an acceptable face. But its "skin" is only 0.0004 mil (one mil equals 0.001 in.) thick. Weathering penetrates selective areas of the oxide film and roughens it, sometimes producing a motley and chalky aspect which is unsightly on architectural elements. Users of architectural aluminum have had recourse to two traditional remedies. The oxide coating could be thickened by an electrolytic process called anodizing. Or the surface could be stabilized and covered with a protective layer of porcelain enamel or organic (carbon containing) formulation.

Anodized aluminum and porcelain enameled aluminum appeared late in architectural history (1927, 1947). They have given excellent service within certain technical and economic bounds. Anodized finishes perform best as earth colors like bronze, black, gray, pale gold, and clear (natural aluminum). Porcelain enamel offers a wide range of colors. However, it necessitates a costly and demanding processing. The burden has fallen to organic formulations to provide color and protection at a price most users could afford. Quite frankly, early organic coatings for aluminum failed. Many bituminous coatings, paints, and shellacs could not stay bonded to aluminum.

Thanks to an enormous surge in polymer chemistry research and development, architects now have organic coatings whose matrices of resinous polymers give pigments long-term protection from ultraviolet radiation degradation, weathering, and abrasion. These are the organic polymer coating systems, complex blends of organic polymers, pigments, solvents, and other additives. Unlike their reluctant predecessors, they have a useful life of 20 years or better. Four high performance organic formulations for architectural aluminum exist: fluorocarbons, siliconized acrylics, siliconized polyesters, and plastisols.

These coatings are now considered a fair match for porcelain enamel—hardest of all finishes when applied to steel—and anodizing. To appreciate what the organics have achieved requires a closer look at their alternatives, still very much in evidence.

The monochrome rainbow

Anodizing is not unlike nurturing a callous. It exploits aluminum's tendency to oxidize. The aluminum to be anodized functions as the anode in an electrolytic acid solution through which passes a direct electric current. Anions migrate to the anode and yield oxygen for chemical reaction with aluminum, forming aluminum oxide. The coating grows more *inward* as long as current is applied. Since the electrolyte partially dissolves this oxide film, a microscopic cellular structure of billions of pores oriented perpendicular to the surface penetrates the surface and allows current to continuously renew a nonporous oxide barrier layer within. Eventually the anodized aluminum accumulates an oxide coat 0.4 to 1.2 mils thick, stronger than natural oxide.

Like all other aluminum finishes, anodizing requires pretreated surfaces. Aluminum tends to acquire surface impurities such as rolling and drawing oils and lubricants, fingerprints, coolants, shop dirt, metal oxides, and corrosion products. Pretreatment may begin with organic or chlorinated solvent degreasing or more involved inhibited chemical cleaning.

Following cleaning, the surface is conditioned to facilitate uniform oxide formation and to establish specific light reflection characteristics and appearance. If a textured finish such as matte is sought, the aluminum is etched in a heated sodium hydroxide solution; a bright specular finish is attained in a costlier chemical bright dip, perhaps using a

Roy Lichtenstein, *Little Big Painting,* 1965 Whitney Mus. of American Art.

dilute nitric acid-fluoride mixture. Mechanical pretreatments pass over aluminum surfaces with buffing wheels, polishing belts, and air-and-water blast carrying abrasion agents which are expensive and harder to control, particularly on large flat areas.

There are numerous ways to color the anodic rainbow with earth colors. A *clear* coating is available through sulfuric acid anodizing. Specific alloys impart characteristic *integral* colors to oxide films. Organic dyes or inorganic pigments *impregnate* coating pores. *Electrolytically deposited* colors are stable metallic compounds electrolytically overlaid on previously formed oxide pores. *Integral color architectural hardcoat anodizing* employs special patented mixed acid electrolytes needing high current densities, higher voltages, and finer regulation of the electrolytic process than conventional anodizing to yield denser, harder, more abrasion-resistant coatings. Any of these methods is followed by an appropriate bath to seal the porous oxide.

The crystal spectrum

Despite good evidence of the mastery of porcelain enameling in Classic times, fusing enamel on aluminum has been no simple task even for 20th-Century technicians. Standard enamels fuse at temperatures above 1220 F, the melting point of aluminum. For porcelain enamel is essentially glass. It is an alumina-borosilicate glass which contributes to the famed durability and hardness, and abrasion, heat, and corrosion resistance of enamel finishes.

A specially formulated glass is quenched in molten state to form small flakes called "frit." This is ground with water, coloring oxides, clay, and other additives into "slip." The creamy textured substance is then sprayed on pretreated (cleaned, deoxidized, and conditioned) aluminum surfaces and fired above 980 F in an enameling furnace. The melted slip fuses to the base metal as porcelain enamel.

Porcelain enamel comes in a profusion of colors and a good range of surfaces from matte to gloss. However, its

role in aluminum finishing is limited. Besides its high cost, special problems accompany its use: the melting point of the alloy must be higher than the enamel firing temperature; alloy and enamel compositions must be compatible; the mechanical properties of the aluminum will inevitably suffer during firing because the enamel firing temperature exceeds the annealing temperature of aluminum alloys. Furthermore, the composition of porcelain enamel for aluminum, in its numerous variations, cannot deliver the performance of vitreous porcelain enamel whose firing temperature is about 2000 F.

So marriages of this tenor are frequently avoided. Porcelain enamel is primarily applied in architectural work to steel and aluminized steel, where it performs superbly. Architects have specific enameled aluminum for a number of prestigious applications (e.g., Eero Saarinen, Dulles International Airport, 1962 Chantilly, Va.). Nevertheless, porcelain enamel has not enlarged its modest share of the architectural aluminum market in recent years.

Joseph's coat of many polymers

The plastics industry has matured and diversified so swiftly that the public retains a healthy suspicion of its doings. Perhaps aware that "plastic" still harbors pejorative connotations, the manufacturers of resinous polymers have subjected their products to rigorous professional testing. Among the mundane and exotic punishments have been cross-hatching to base metal, impacting to point of metal rupture, falling sand, weatherometer exposure (accelerated laboratory simulated weathering), humidity exposure, salt fog exposure, and long-term outdoor exposure at the Subtropical Testing Service near Miami, Fla. To complement these stable high molecular weight polymers, researchers have developed pigments of commensurate endurance which resist chalking (running due to erosion of resin matrix) and chalk in their own colors (rather than lightening).

Again, the base metal's frenetic chemical activities must be subdued prior to coating. Residual organic and inorganic surface soils must be removed along with the residual active aluminum oxide film. The surface must be chemically converted, often with an amorphous chrome phosphate, to provide a continuous inert film which promotes paint-bonding adhesion and undercoating corrosion protection. Industry spokesmen emphasize that diligent pretreatment immediately prior to coating application is more telling on the ultimate success of a coating than the coating application itself.

Across-the-board comparisons of the four high-performance coatings can be drawn with reservations. The properties of the four differ in ways which suit specific situations. The table included here is excerpted by the Architectural Aluminum Manufacturers Association from charts drawn up by the National Coil Coaters Association. The finishes are applied at 1.0 mil dry film thickness (plastisols may be thicker) by the coil coating process (q.v.) under optimum conditions of pigmentation, pretreatment, and application. AAMA believes this is at best a generalized comparison, valid for other coating procedures but only useful as a preliminary investigation for specifications writing.

Application methods currently include spraying and roller coating followed by curing at 450 F or higher. Spraying by air or hydraulic (airless) pressure or centrifugal force is an old technique for creating uniform coatings. As electrostatic spraying it offers faster and more efficient production. The coating material is exposed to a strong potential which atomizes and repels coating droplets from each other and attracts them to the grounded conveyor line carrying aluminum parts to be coated.

Roller coating is usually applied to pre-cut stock. Coil coating integrates roller coating into a continuous line operation which uncoils, cleans, pretreats, applies, bakes, and recoils the aluminum stock. Quality control is high, and production of the up to 60-in.-wide, 0.05-in.-thick sheet can proceed at a velocity of 400 ft/min. The minimum order of sheet feasible for coil coating is 20,000 lbs.

Fluorocarbons

Fluorocarbon coatings made their first massive assault on the public via the kitchen as a nonstick utensil lining. Acknowledged to be among the stablest resins known, fluorocarbons generally outperform other organic polymer resins in overall coating performance. The resin developed for architectural aluminum coatings is polyvinylidene fluoride, PVF_2. PVF_2 is formulated into dispersion coatings which display outstanding resistance to ultraviolet radiation, weathering, and abrasion in the laboratory and on industrial buildings worldwide. It endures chemical solvents better than other organic coatings and its color retention is very impressive.

The stability of the resin is improved in an interesting manner during bake-off. As the coating solvent evaporates and the resin bonds to the metal, the resin also coheres internally to form a surface which is virtually nonporous. This "closed cell" finish shows both a degree and number of pore formations which are far less than those of other coatings. Dirt, water, grease and oil, and other eroding forces have much less surface area to invade and break down the resin matrix.

A major fabricator of siding panels likes to illustrate another strength of this coating by crumpling a fluorocarbon coated aluminum foil sheet into a ball and rolling it out flat some 60 to 90 times with no break or fracture in the finish. This is due to the high degree of flexibility of PVF_2 (estimated by the fabricator to approach 100 percent elongation). Since thermal and wind loaded expansion and contraction of exterior aluminum components are inevitable, and because certain members are also subjected to bending in the field, this predilection for stretching enables fluorocarbons to survive where brittle anodizing, porcelain enamel, and siliconized polymers might crack. In addition, fluorocarbon coated aluminum can be fabricated and embossed *after* the coating is cured.

PVF_2 is offered to coatings manufacturers as "Kynar 500" resin only by Pennwalt Corporation. As "Fluropon" by DeSoto, "Nubelar" by Glidden-Durkee, "Duranar" by PPG, or "Mobilfluor" by Mobil Chemical, the ready-to-use coatings offer designers many colors in low- to medium-gloss finishes. The industry recommends a two-coat application using a corrosion-resistant epoxy primer 0.2 mil thick followed by a fluorocarbon topcoat 0.8 mil thick. A "Kynar" based air dry touch-up is available.

Siliconized acrylics and siliconized polyesters

Adding silicone intermediates to polymers can upgrade the polymers' endurance of weathering, resistance to pigment degradation, and retention of gloss. Of the two methods of modifying organic polymers with silicone, cold blending silicone with base resin is not as effective as co-polymerizing it during resin synthesis. There are numerous formulations of siliconized polymers available which vary considerably in performance. Only siliconized acrylics, which appear as "Duracron Super 800" or "850" by PPG, and siliconized polyesters, marketed as "Dexstar 500" by Midland/Dexter and "Permaclad 1800" by Sherwin-Williams are deemed fit for architectural exterior work. Color range and low- to high-gloss finishes are possible in either one- or two-coat formulations. There are air-dry touch-up systems.

Users of these siliconized polymers are cautioned to determine the percentage of silicone in their formulations. This varies with the manufacturer (the above is not necessarily an all-inclusive listing). The percentage may be as low as one percent, considered poor by industry users.

Plastisols

High molecular weight polyvinylchloride homopolymer resins are dispersed in a plasticizer with stabilizers and diluents to form plastisols. High in solid content and free of highly volatile solvents, plastisols are low-to medium-gloss two-part coatings of considerable thickness—even exceeding 4 mils for topcoats. This film thickness affords embossing, fabrication after film aging, and abrasion resistance. Though it does not equal other organic coatings for exterior durability and color retention, most of its other characteristics are good. "Superclad 1100" by Sherwin-Williams is one of a number of available ready-to-use formulations.

Polymers for the people

If the high performance organic coatings are not as well known as porcelain enamel or anodic coatings, they are noticeably more adaptable to aluminums of various alloys and tempers. In contrast to their alternatives, high-performance organic coatings are generally unaffected by the metallurgical composition of the base metal. Anodized finishes are particularly distinguished by frequent color variations, however slight, between finished pieces supposedly similar in alloy and temper. Formation by casting, rolling, or extrusion also affects this.

Some reservations are necessary when specifying organic coatings. Sizes and shapes of parts and assemblies to be coated must conform to coating apparatus and application technique specified. Deep recesses, sharp internal and external corners and rough surface imperfections can create irregularities in coating distribution. Color variations may be unavoidable and should be designed to fall within a tight predetermined range. Sealants must be studied for chemical compatibility and physical adhesion to coated surfaces. Air-dry touch-up coverings will not weather as would factory cured finishes, nor will they always match original color and gloss. Architects are urged to describe their preferred coatings by performance specifications.

This discussion should not suggest that architects race each other to erect the first chartreuse skyscraper. However, where colored architectural aluminum is desired, organic polymer coatings should be considered. [Roger Yee]

Comparative properties of high performance coil coatings[1]

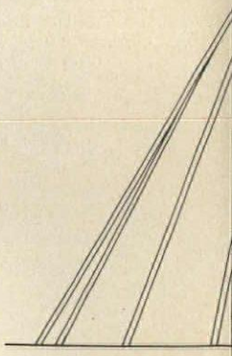
Key: 1 excellent 3 fair
2 good 4 poor

	Siliconized Polymers			
	Fluoro-carbon	Acrylic	Poly-ester	Plastisol
Thermoplastic[2]	yes	no	no	yes
Thermosetting	no	yes	yes	no
Ease of application	2	2	2	2
Average cure rate (based on 60 seconds)	3	3	3	1
Min. metal temp. for efficient curing	450	450	450	350
Film hardness	2	2	2	2-3
Film adhesion	1-2	2	2	1-2
Film flexibility	1	3	2-3	1
Color and gloss retention (dble. time in oven)	2	1	1	3
Color retention on aging film	1	1	1	2
Mar resistance (fingernail test)	3	2	2	3
Ability to fabricate after aging	1	3	2-3	1
Adaptability to embossing	1	4	3	1
Humidity resistance	1	2	1	1
Grease and oil resistance	1	2	2	1
Solvent resistance, aliphatic hydrocarbon	1	2	1-2	1
Solvent resistance, aromatic hydrocarbon	1	2	1-2	3
Solvent resistance, ketone or oxygenated	1	2	2	4
General chemical resistance (spot test)	1	2	2	1
Exterior durability, pigmented	1	1	1	2
Exterior durability, clear film	1	2	2	3
Fade resistance of color	1	1	1	2
Metal marking resistance	3	2	2	3
Abrasion resistance	1	2	2	1
Salt spray resistance	1	2	1-2	1
Chalk resistance	1	1	1	1
Mildew resistance	1	2	2	2
Erosion resistance	1	1	1	2
Resistance to dirt pickup	2	3	3	2
General corrosion resistance (Ind'l. atmos.)	1	2	2	1
Ease of maintenance	2	2	2	1
Unit finishing cost range	Very high	High	High	Low

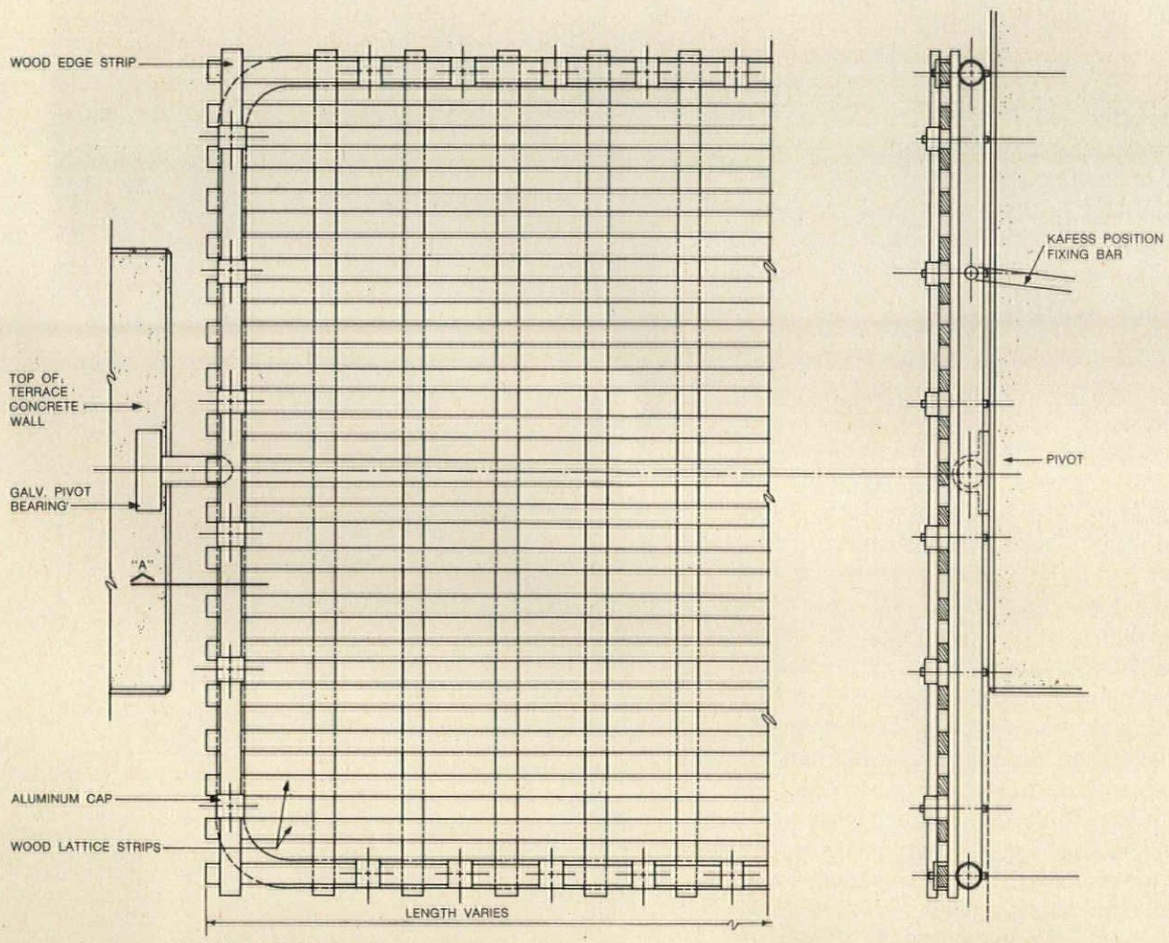
1 Courtesy of Architectural Aluminum Manufacturers Association 410 N. Michigan Ave., Chicago, Ill. 60611.

2 Thermoplastic materials soften on heating; thermosetting materials "set" or harden on heating.

Conference center near Jedda

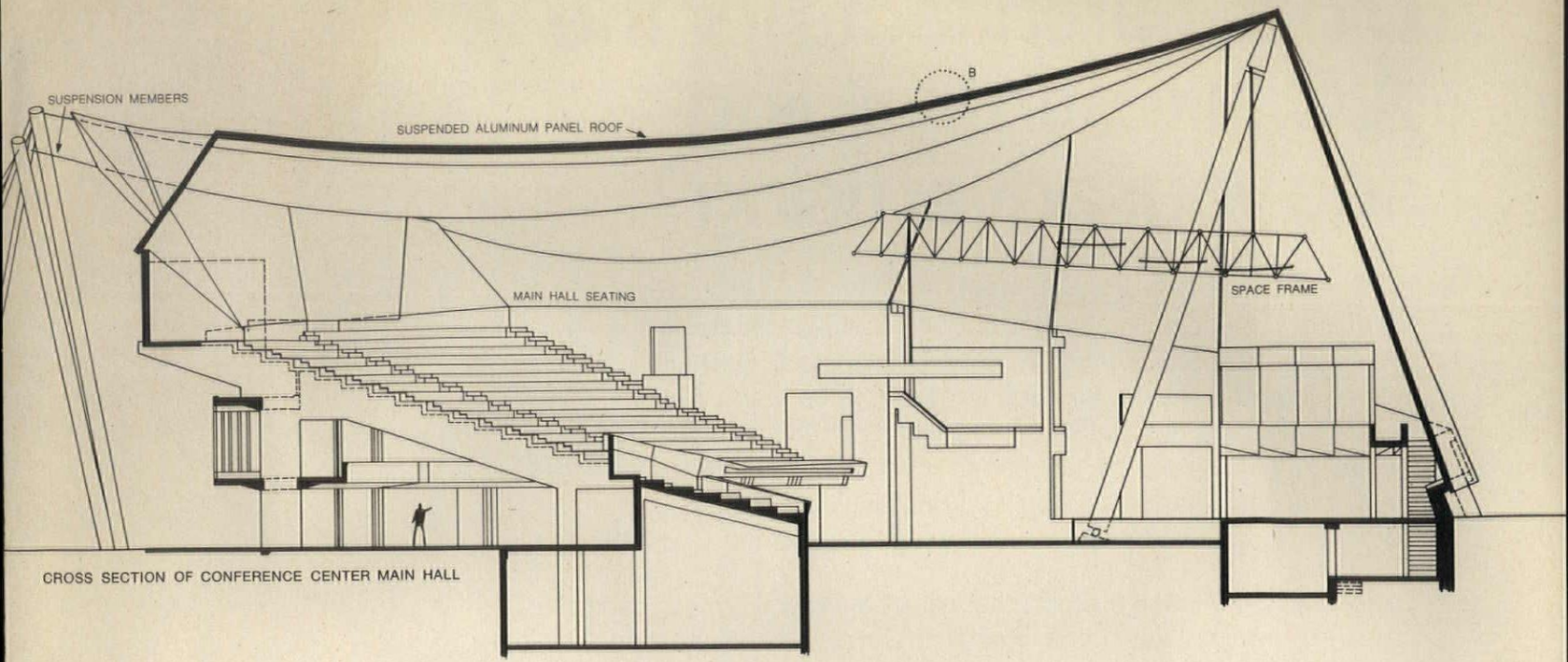


Extremes in climate call for ingenious detailing, and the climate in Saudi Arabia has brought about several considerations in this conference center near Jedda, and near the pilgrimage route from Mecca. Every effort is aimed at controlling the merciless sun and allowing air to circulate freely throughout the complex. From the suspended, but reflective, surfaces of the main hall (above right) to the "kafess" shown in detail here, prohibition of sun and circulation of air were the prime considerations. The kafess is a slatted screen, either fixed or pivoting, which allows light to penetrate while cutting down on the severe heat of the sun. The adjustable panels shown have been used by architects Dr. Frei Otto and Professor Rolf Gutbrod to shade the hotel rooms of the facility.

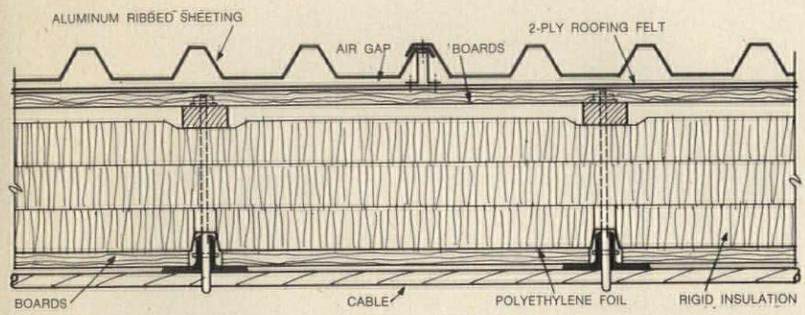


PARTIAL PLAN

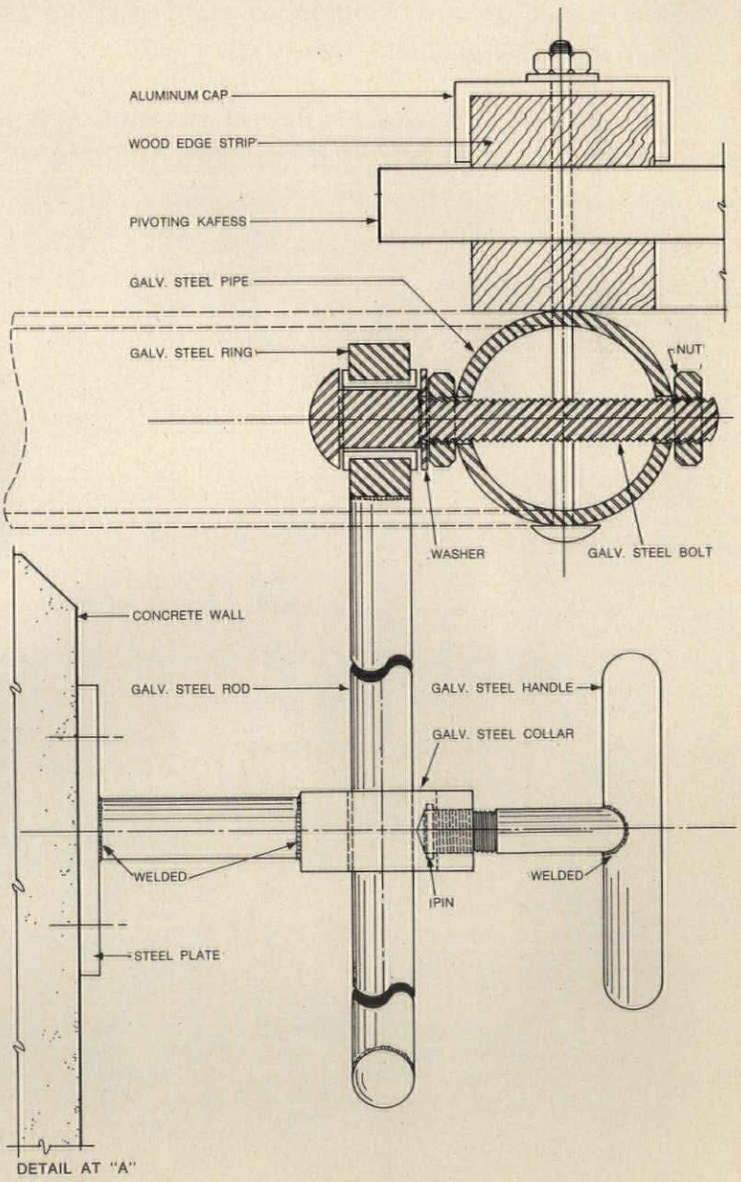
CROSS SECTION



CROSS SECTION OF CONFERENCE CENTER MAIN HALL



TYP. DETAIL OF ROOF SKIN AT "B"



DETAIL AT "A"

Did the architects for the A.C. Nielsen Building see your advertising?

This is the new A.C. Nielsen Headquarters Building located at Northfield Township, Illinois. It was a $13 million project designed by the Chicago office of Welton Becket and Associates Architects. Like their counterparts in architectural firms everywhere, the Welton Becket team specified both type and brand of building products for the building envelope, the mechanical systems and landscapes (with the help of consultants) and the interiors. And in over 95% of the instances, their specifications held through to purchase and construction.

Design and production professionals in architectural firms continue to be the most important influences in the selection and eventual purchase of building products. If you are an advertiser in P/A, you are reaching more of these professionals than you could reach in any other magazine in the world.

The Welton Becket Design and Production team for the A.C. Nielsen Headquarters Building*

Charles R. Kuglin
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Director, Chicago office

Stanley E. Pochron, A.I.A.
Vice President
Project Director

Arthur M. Love, A.I.A.
Senior Vice President
Director of Design

Vytautas Rubas
Senior Designer

Donald H. Baran
Senior Interior Designer

Frank J. Papp, CSI
Chief — Specifications

Leonard J. Bauer
Project Captain

Christian C. Polkow
Senior Draftsman

Walter G. Goebert
Director of Engineering — Structural

Daniel C. Bolda
Assistant Director of Engineering — Structural

Wayne R. Gaerlan
Senior Electrical Designer

Gilbert A. Dehnert
Director of Field Services

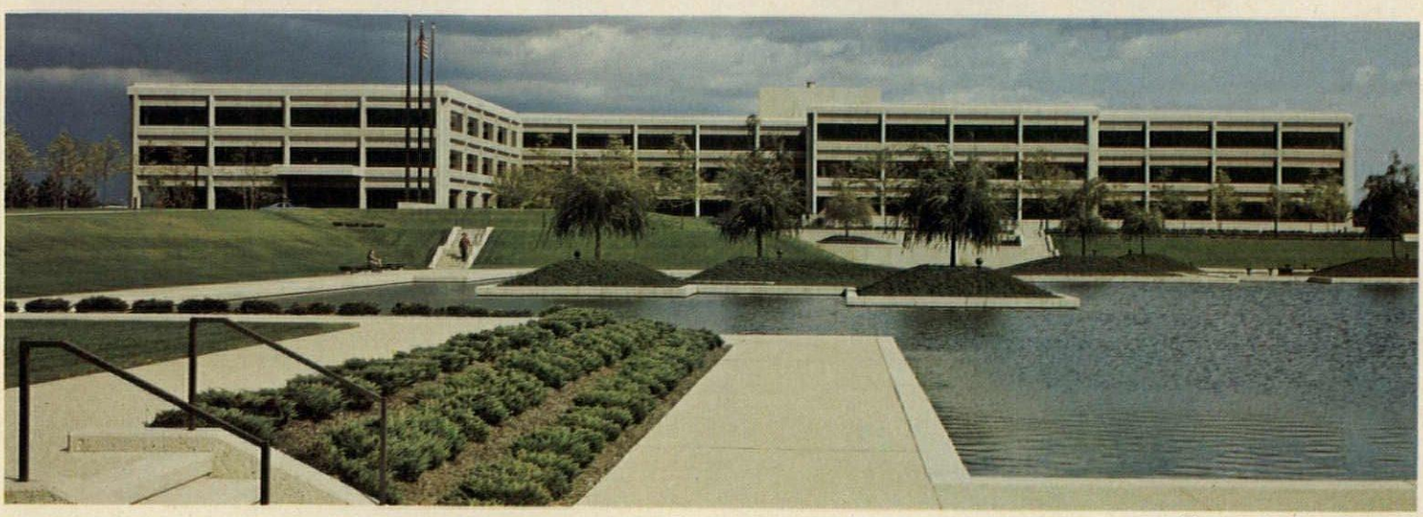
Consultants:

A & T Engineering Inc.
Mechanical & Electrical Engineering

M. Paul Friedberg & Associates
Landscape Architect

Davis-Siska & Associates
Associate Landscape Architect

* In addition to the individuals listed, WB estimates that 15 other professionals were involved in some phase of the A.C. Nielsen project.



Photograph: Steve Grubman

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Changing lifestyles: Part II

Bernard Tomson and Norman Coplan

The U.S. Supreme Court upholds a city zoning ordinance which prohibits six student-tenants from occupying a single-family house. The second of a two-part article.

In last month's column we discussed the lawfulness of zoning regulation which has aesthetic objectives. We pointed out that the United States Supreme Court in 1954, in a landmark decision (*Berman* v. *Parker*), opened the door for zoning which had aesthetic related objectives by upholding a statute which permitted the acquisition of land by a municipality for a housing project which would result in a more attractive community. Following that determination, the Supreme Court has both upheld and rejected municipal ordinances which presumably had aesthetic purposes.

The Court has stated that the line "which in this field separates the legitimate from the illegitimate assumption of power is incapable of precise delimitation and that it varies with circumstances and conditions. For example," said the Court, "a nuisance may be merely a right thing in the wrong place—like a pig in the parlor instead of the barnyard." As a general principle, the Supreme Court has held that if the validity of the legislative classification for zoning purposes is fairly debatable, the legislative judgment must be allowed to control.

If, however, a zoning regulation, which is presumably aesthetically oriented, is arbitrary, the Court will reject it as unconstitutional. An ordinance, for example, which segregated one area for residential occupancy by members of only one race was declared invalid. A zoning ordinance that permitted a philanthropic home for children or for elderly people in a particular district only after written consent of the owners of two-thirds of the property within 400 ft of the proposed building had been obtained was declared unconstitutional on the ground that existing owners could withhold consent for arbitrary or selfish reasons.

As we pointed out in last month's column, the latest decision of the United States Supreme Court relating to this subject matter is *Village of Belle Terre v. Boraas* (42 L.W. 4475) which involved the constitutionality of a village zoning ordinance which limited land use in the entire municipality to one-family dwellings. The village involved consisted of about 220 homes inhabited by 700 people in a land area of less than one square mile. The ordinance was challenged by a group of six college students who had leased a residence in that community and who contended that the limitation of occupancy of a residence to a "family" unit, as defined in the ordinance, was unlawful.

Family was defined in the statute as including not only one or more persons related by blood or marriage living together as a single housekeeping unit, but also included in the definition was not more than two persons "living and cooking together as a single housekeeping unit though not related by blood or marriage." The students challenging the ordinance argued that if two unmarried people can constitute a "family," there is no reason why three, four, or more may not. They contended that the ordinance was an invasion of the right of privacy.

In respect to the specific ordinance under attack, the United States Supreme Court concluded that no fundamental right guaranteed by the constitution was involved, such as the right of association or the right to privacy. The Court further concluded that the ordinance bore a "rational relationship to a permissible state objective." In response to the argument that if two unmarried people can constitute a "family," there is no reason that three or four may not, the Court said:

"Every line drawn by a legislature leaves some out that might well have been included. That exercise of discretion, however, is a legislative not a judicial function. . . . The ordinance places no ban on other forms of association, for a 'family' may, so far as the ordinance is concerned, entertain whomever they like. . . .

"A quiet place where yards are wide, people few, and motor vehicles restricted are legitimate guidelines in a land use project addressed to family needs. This goal is a permissible one within Berman v. Parker, supra. *The police power is not confined to elimination of filth, stench, and unhealthy places. It is ample to lay out zones where family values, youth values, and the blessings of quiet seclusion, and clean air make the area a sanctuary for people."*

In a strong dissent, one of the justices of the Court concluded that the ordinance in question unnecessarily burdens the constitutional rights of the students challenging the ordinance in their freedom of association and right to privacy. The dissent states:

"I see no constitutional infirmity in a town limiting the density of use in residential areas. . . . This ordinance, however, limits the density of occupancy of only those homes occupied by unrelated persons. It thus . . . undertakes to regulate the way people choose to associate with each other within the privacy of their own homes. . . . I would not ask the village to abandon its goal of providing quiet streets, little traffic, and a pleasant and reasonably priced environment in which families might raise their children. Rather, I would commend the town to continue to pursue those purposes but by means of more carefully drawn and even-handed legislation."

Authors: Bernard Tomson, Hon. AIA, is a County Court Judge, Nassau County, N.Y. Norman Coplan, attorney, is Counsel to The New York State Association of Architects, Inc., AIA.

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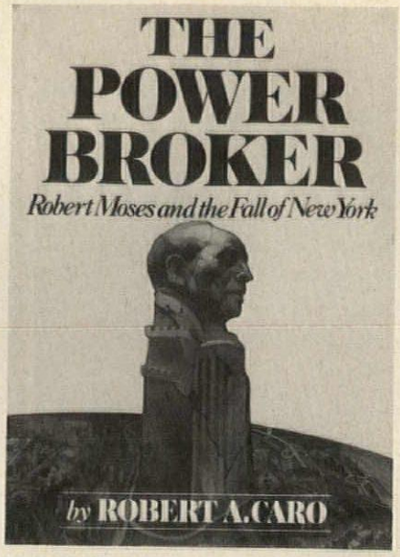

The Power Broker: Robert Moses and the Fall of New York *by Robert A. Caro. New York, Alfred A. Knopf, 1974. 1296 pp., 111 photographs, 8 maps. $17.95*

Reviewed by J.S. Fuerst, asst. director, Graduate Program in Urban Studies, Loyola University of Chicago.

Most people who read Robert Caro's book on Robert Moses will probably conclude that Moses was a ruthless, arrogant empire builder who managed by clever machinations and a considerable amount of bullying to change the face of New York City and New York State.

Caro, an investigative reporter par excellence, has spent seven years interviewing, researching, and painstakingly working over every detail to write an eminently readable book (with 63 pages of documented notes) that provides an enormous amount of current and economic history about New York City and mid-20th Century America. He agrees that Moses was "America's greatest builder" and that he "may be blessed by future generations"; however, Caro has done all in his power to "set the record straight" so that this will not happen.

The main objective of the book is to subtly and gradually lead you from Moses the idealist and reformer to Moses the vain, impossible autocrat, lover, and user of power in its rawest sense.

In terms of specific objections, Robert Caro has three. The first and most basic is that Caro seems to be a devoted believer in decentralization of cities, in citizen participation, and specifically in Jane Jacobs, about whose remedies Lewis Mumford once entitled an article "Mother Jacob's Home Remedies for Urban Cancer." It is the massive attack on urban problems, which so characterized Moses, that seems to get in the craw of Caro. As James Harvey Robinson used to say, these seem the real reasons [for Caro's opposition], as contrasted with the "good reasons."

Second, of course, were the methods and associations of Moses. Specifically, Caro details his dictatorial qualities, his flaunting of due process and conventional legal moralities. While Caro agrees that Moses usually stayed within the legal limits of the law, being, according to Caro a legal draftsman and schemer par excellence, he believes that Moses certainly stretched the law to the breaking point, even evading when necessary the electoral will.

Third, he suggests that Moses' overemphasis on highway and bridge development, park development, housing development, and urban renewal has driven New York City to the brink of bankruptcy. There is, says Caro, far too much concentration on these aspects of city operation because of Moses' bias toward public works. Furthermore, the developments themselves were inadequately built to serve the people because of Moses' misconceptions and autocratic decisions.

It is a tall order to strike down these allegations in a short review, particularly since many of them require different explanations. Let us begin with the first which is essentially unanswerable. It may well be that Moses did think in large, overall terms, and that in so doing small neighborhoods were destroyed, and many of the qualities that people wanted to preserve got lost. But this is a subject on which reasonable men can differ, particularly in remaking big cities. The most usual alternative of most big cities is to do nothing and let the city wither away through the action of FHA and inroads of the suburbs until the city is little more than a shell, incidentally with the same basic result. There is no question that in large-scale planning some of the great advantages of neighborhood living are overridden, and this is tragic for those groups who experience it, but it certainly seems like an inevitable result of urban change.

There can be little question that during his whole career Moses used whatever legal methods, and perhaps some extra legal, he could to achieve his goals. In his later years he may have developed a belief in his own infallibility as well as an insatiable demand for the trappings of his office. Worse, he seems to have resorted to dossiers and "polite" blackmail. Certainly payoffs and deals with bankers, big contractors, real estate interests, and big labor seem to have been part of his kit of tools; and he was vindictive towards those he disagreed with. Moses' methods, which would certainly be condemned in lesser men, are even in a Moses difficult to accept.

To counterbalance this, however, it can never be forgotten that he developed in his immediate circle not a group of Haldemen, Erlichmen, and Mitchellmen, but an accomplished group of planners who almost rivalled the architectural and engineering offices of the Greater London Council. Further, these planners and engineers stuck with [continued on page 112]

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Books continued from page 110

him. Very few of the sources quoted by Caro were from long-term employees of Moses, in contradistinction to the defections usually suffered by despots after their eclipse.

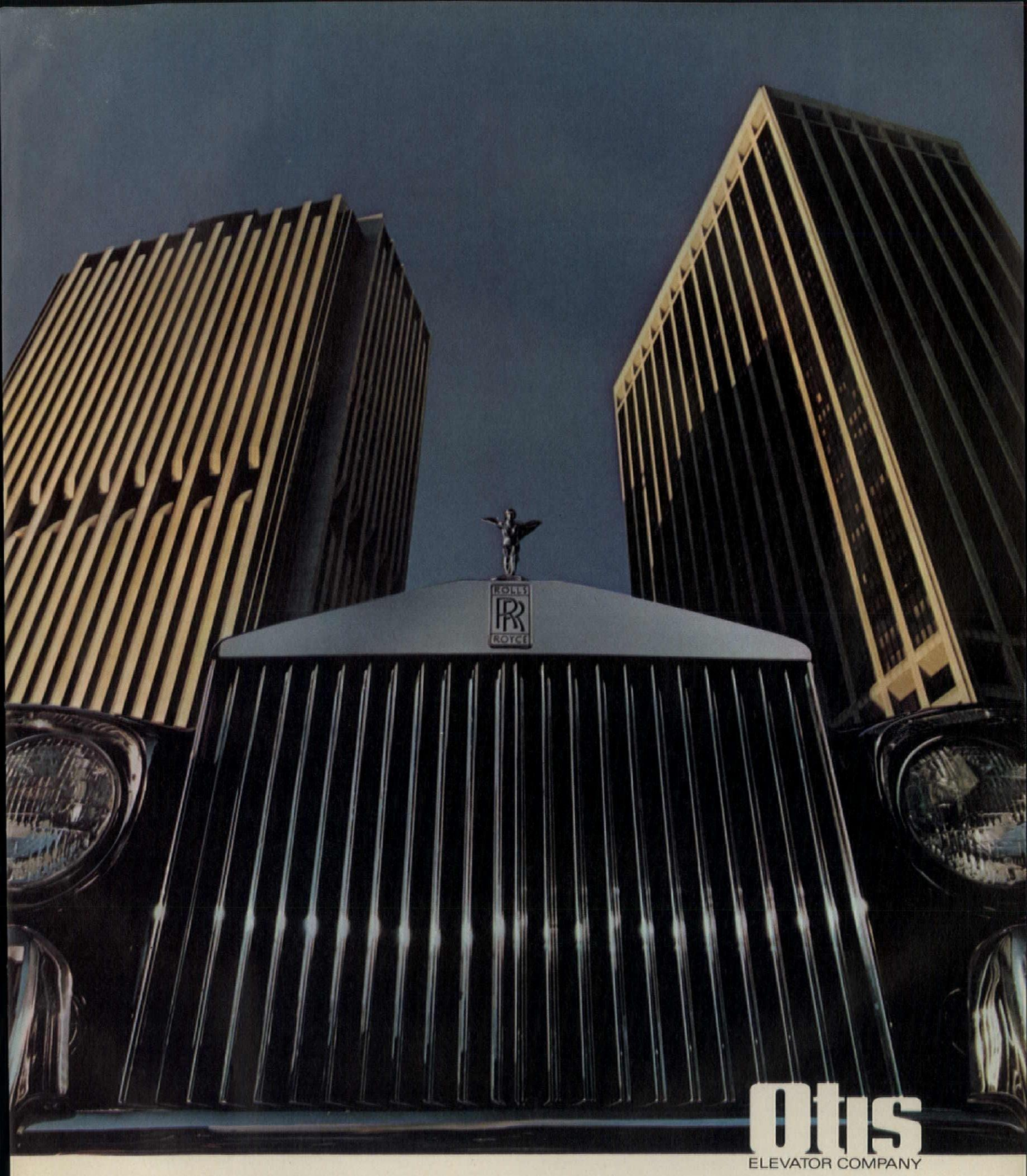
Furthermore, Caro suggests that it would have been better to have gained nothing nobly than to have accomplished what Moses did ignobly. Caro may not be the one to make this judgment. Ask Elizabeth Wood of Chicago, Al Tronzo of Pittsburgh, Irv Kriegfield of Cleveland, to mention only three who in the public housing field have lived with high ideals within the framework of all the laws, only to be ultimately tossed out without any significant results. There is a degree of comfort in seeing someone who is essentially on the side of significant urban progress getting a great deal of architecturally well done public works accomplished in our democratic society.

It is true that there are those reasonable people who believe strongly that welfare, education, health, and a variety of other meaningful services should have had a higher priority than was accorded to them under the Moses' regime. And they may be right. But Moses was fighting for what he was responsible for, and had there been administrators of equal strength, ability, and power in the other fields, the picture might have been altered.

It is Caro's denigration of the specific accomplishments of Moses and his co-workers, in the light of the 1930s through the 1960s, in the area of parks, beaches, highways, bridges, housing projects, and urban renewal that is hardest to take.

New York City has one of the finest park and beach systems in the country, and certainly the Long Island park system is a tribute to Moses' ingenuity. Caro's own description of the tender, loving care lavished by Moses in Jones Beach is a fine example, illustrated by his sketches of the plazas, the boardwalks, cafes, grandstands, roller-skating rinks, golf putting greens, softball fields, chess tables, and even a place for changing diapers. One experience alone in the Jones operation, which Caro describes in virtual horror, is the kind of thing many planners and public builders dream about but have neither the power nor the chutzpah to do. It seems that the sum of about $150,000 had been allotted to provide a large part of the Jones Beach structure. Moses in his master plan wanted to build not a secondary or second class structure, typical of the shabby public bathhouses and beachhouses that dot the coasts of the United States, but an imposing, truly aesthetic and pleasurable pavilion. He ordered his engineers to spend the entire $150,000 on the foundation and substructure, saying that, "the legislators and the other members of the power structure will bitch like hell, but they will be in the box of either having to appropriate more money or to leave an unbuilt foundation." A violation of law and trust few public servants would dare even if they so desired? Yes. But a structure we can all appreciate, particularly in the light of its aesthetic qualities and how little it actually cost in the light of today's monumental costs for such a structure.

Caro makes a number of accusations against Moses in the field of public housing. It is true that many "public housers" in New York were opposed to Moses because of
[continued on page 114]



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Books continued from page 112

his high-handedness in dealing with New York City public housing. On the other hand, high-rise buildings were not built in New York because of Moses, but because New York City is a city of high rises and eight million people. In point of fact, Caro seems unaware that New York City has probably had until recently the best and largest public housing program per capita in the country. That housing was not built in all sections of the city is part of the problem of public housing in the nation. It is no reflection on Moses; in fact, New York had far more geographical, social, and economic integration than elsewhere, it avoided many problems of other cities and had good integrated housing with stable families and long waiting lists. Only within the last five years have the New York City housing authority projects followed the line of public housing elsewhere. But Moses wasn't around during this recent demise.

To blame the problems of urban renewal, such as displacement of thousands of families, on Moses is to ignore the problems that inevitably occur with massive changes in highway, bridge, park, and housing development. In most cases in the United States it has been the politician and business men who have benefited. But in New York, at least, if Moses paid off and if he disregarded the citizens groups, the beneficiary was the total citizenry of New York as Moses saw it, and not Robert Moses or his henchmen.

Caro claims (even with his subtitle) that the fall of New York was brought on by Moses, who by his financial manipulations brought New York City to its present precarious financial position. This type of logic is patently unfair, when the total expenditures for the past 40 years are taken into consideration. As Caro points out, Moses built or was in charge of building more than anyone before or since. In all probability he built more than was needed, and he certainly built differently from the way future generations will build. He wasted money and put projects in less than optimum places. However, many cities are facing bankruptcy today, yet virtually none has the public works of New York.

The ecological, housing, and traffic congestion some feel is choking New York to death can hardly be placed at the feet of Moses. Caro says not only did Moses unabashedly build highways and bridges, but that he completely neglected the problems of mass transportation. Caro is voicing a half truth. Let us remember we are talking about Moses, a man limited by the deeply ingrained habits of his time and place. The last 40 years have been dominated by the automobile, and while Moses was a highly intelligent and creative planner, he was not able to recognize or put into effect what nobody else in the nation was able to. In fact, had he tilted at this windmill at that time he might have been tossed out on his ear.

It is true we are a government of laws, not men. Nevertheless it is a bold man indeed, liberal or conservative, who can look at the enormous public works sponsored, developed, and in a sense created by Moses and, on balance, criticize him. This is probably the price we have to pay for outstanding administrators who are then retained only because their like is not easily found. And even such administrators demand constant vigilance least they prove to be "fools gold."

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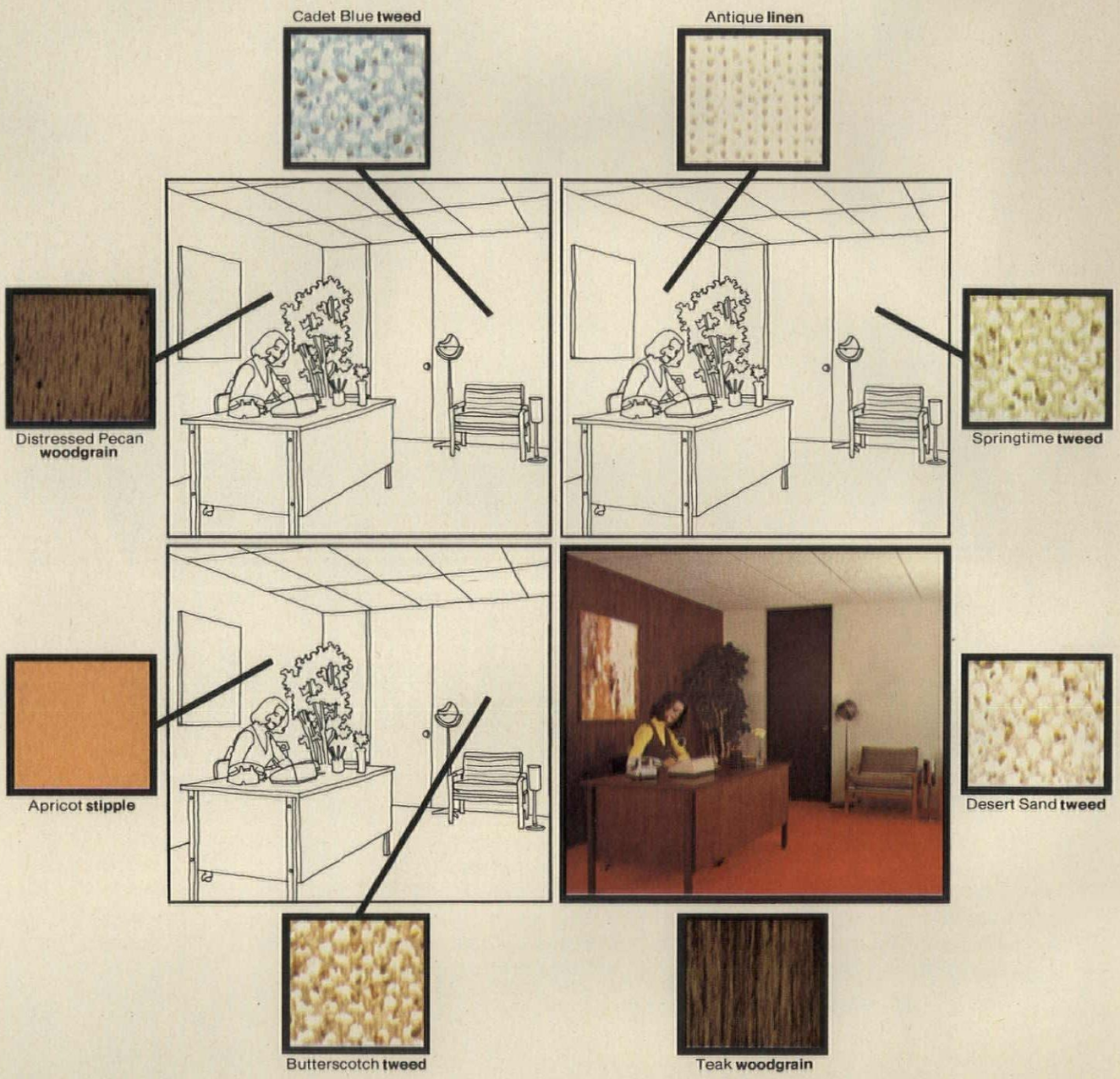

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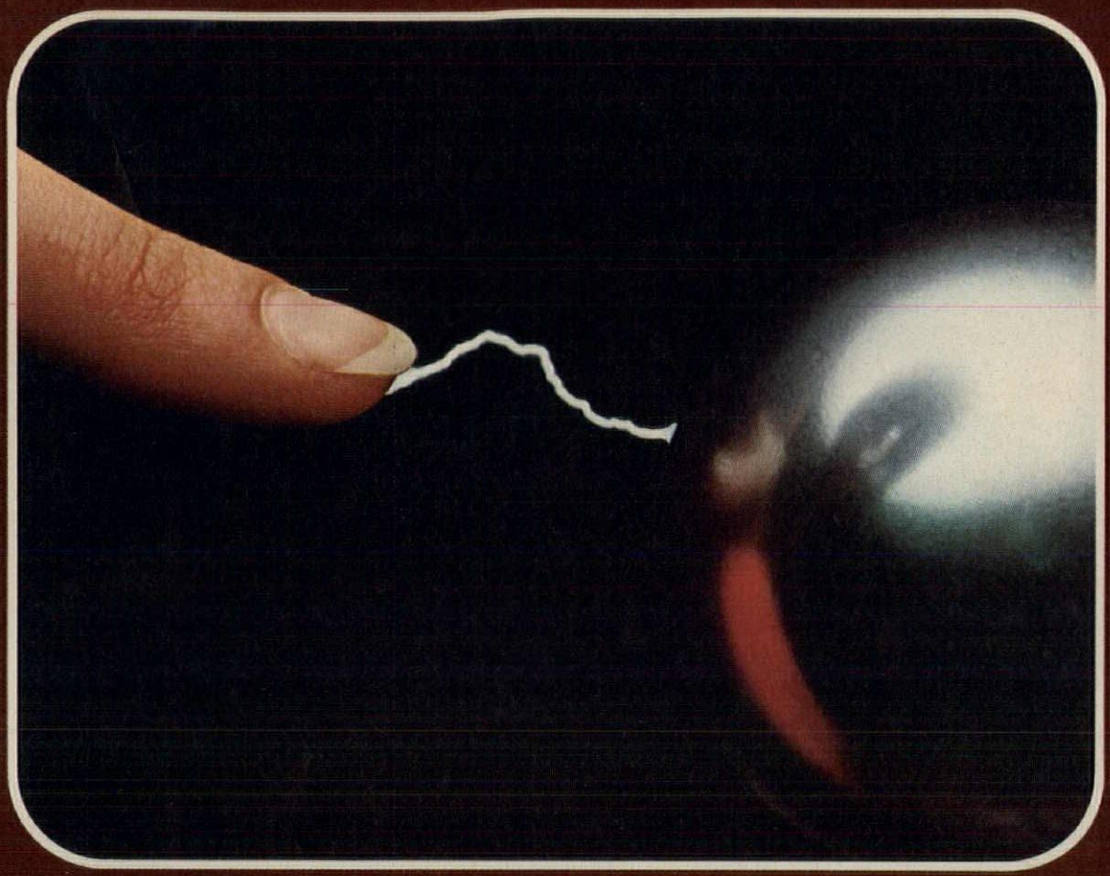

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Products continued from page 48

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Metal furniture

Wall system consisting of 60-, 30-, and 15-in. modules is available with many storage options; fabric-covered panels attach to modules to divide space. All units are 20 in. deep, 57 in. high and come in oak veneer. Continuous telephone and electrical conduit are in either the base or the top cap of the units. Double pedestal and secretarial cube desks are offered to complete system. Stow Davis Furniture Co.
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Wall system

Sofas designed for residential use are offered in a choice of smooth or suede leathers in a wide range of sizes, styles, and colors. The Gunlocke Co.
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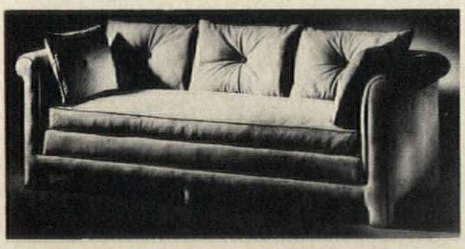

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Outdoor bulletin boards. Available in sizes to 20 ft wide by 6 ft high, boards have sliding glass doors and are framed in satin anodized or Duranodic finish extruded aluminum. Doors are furnished with adjustable locks. Vinyl covered cork tackboard backing in colors. A-1 School Equipment, Inc.
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Cordless erasing machine for erasing engineering/drafting drawings. It weighs only 8½ oz and comes with charging stand. A kit is available for mounting it to drafting boards, tables, or desks. Pierce Division, Kroy Industries, Inc.
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Double-deck parking device which converts a single parking space into a two-decker lifts car into the air and locks it into place in 15 seconds, according to manufacturer. Unit is portable and can be used indoors or out, can be installed on any level surface with no excavation. Space-Maker Parking Products, Inc.
Circle 124 on reader service card

Temperature controller. Unit attaches to existing conventional thermostat and automatically turns down the temperature to 40 F at the end of the working day and rewarms the building and its contents before the start of the next working day. It can be programmed for the whole week to exclude days the building is unoccupied. Controller measures 8" x 4" x 3", comes in 24v and 110v models. Energy Misers, Inc.
Circle 125 on reader service card

Electronic access control. Every person allowed access has a separate memorized four-digit code and a matching encoded key. In order to gain access the key must first be inserted into the Key Code reader and the matching memorized code must be entered on the keyboard. If combination entered matches the coded key, door will unlock for a preset time. Key must be removed before door will open to prevent leaving key in reader. Continental Instruments Corp.
Circle 126 on reader service card
[continued on page 118]

Literature

Lumber products buyers' guide. An up-to-date source directory covering member mills in 12 western states lists lumber products offered, species processed, shipping services, addresses, and telephone numbers along with plant facilities and capacities, sources of millwork and cut-up, timber laminating and fabricating, pressure treating and wood pipe, data on freight rates and weights. Western Wood Products Association.
Circle 201 on reader service card

Playground equipment. Color catalog describes and illustrates playground equipment for all ages including special equipment for helping rehabilitate handicapped children, gives methods for permanent or portable ground-level or rooftop installation and describes company's above-ground pools for community, school and institutional use. Includes specifications. Playground Corporation of America.
Circle 202 on reader service card

Resilient flooring. Sixteen-page color catalog illustrates all available colors and patterns of vinyl asbestos and asphalt floor tile, feature strip, and cove base. Includes uses, data, and brief specifications. Azrock Floor Products.
Circle 203 on reader service card

Fireproof fabrics are exterior-colored gray, bronze, or other colors to blend with glass or building exteriors with interior color that can range from pure white to some deep tone of the exterior colors or they may be striped. Booklet containing samples is covered with tinted transparent plastic to help users visualize how draperies will look from the outside. Thortel Fireproof Fabrics, Inc.
Circle 204 on reader service card

Outdoor lighting. Booklet describes Skyscape series of architectural, designer-oriented, large-area lighting systems, provides scaled-grid sketching space and dimensional information for creating custom luminaire housing; also describes and illustrates variety of complementary pole types. Holophane Company, Inc.
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[continued on page 120]

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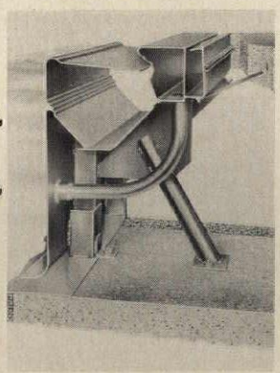

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Literature continued from page 118

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Circle 206 on reader service card

Gypsum in the Age of Man, is a 58-page booklet containing 30 articles dealing with fire resistance, sound control, adhesives, and others; gives background of the gypsum industry in the U.S. Gypsum Association.
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Carpet cushion. A kit containing samples and complete specification of four types of carpet cushion is available from Dayco Corporation.
Circle 208 on reader service card

Textured Indiana Limestone. Brochure illustrates textured floor-to-floor panels, gives performance data and short specifications. Harding & Cogswell Corp.
Circle 209 on reader service card

Lighting systems. Catalog describes industrial and commercial lighting systems. Entitled "Indoor Lighting Systems—Designer's and Buyer's Guide," it refers to high intensity discharge lighting systems. Includes coefficient of utilization, temperature, room classifications, indoor illumination levels and sample lighting problems. General Electric Company.
Circle 210 on reader service card

Granite. Bulletin gives information on the application of Module Pavers and Durax Blocks for landscaping malls, plazas, courts, and accent areas in buildings. Pavers are available in Rockville, Charcoal, and Carnelian granite in four different sizes. Blocks have a flame finish on top, sawed bottom and split sides and come in wide range of colors. Cold Spring Granite Co.
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Speaker mounting components. Twelve-page brochure gives selection information, dimensional data, and installation instructions. Touch-Plate Electro Systems, Inc.
Circle 212 on reader service card

Seating catalogs. Described in a series of brochures are four lines of office seating: traditional; contemporary; contour shell chairs; grouping of contemporary lounge furniture. Includes secretarial, clerical, executive, guest, stool, and bench models. GF Business Equipment, Inc.
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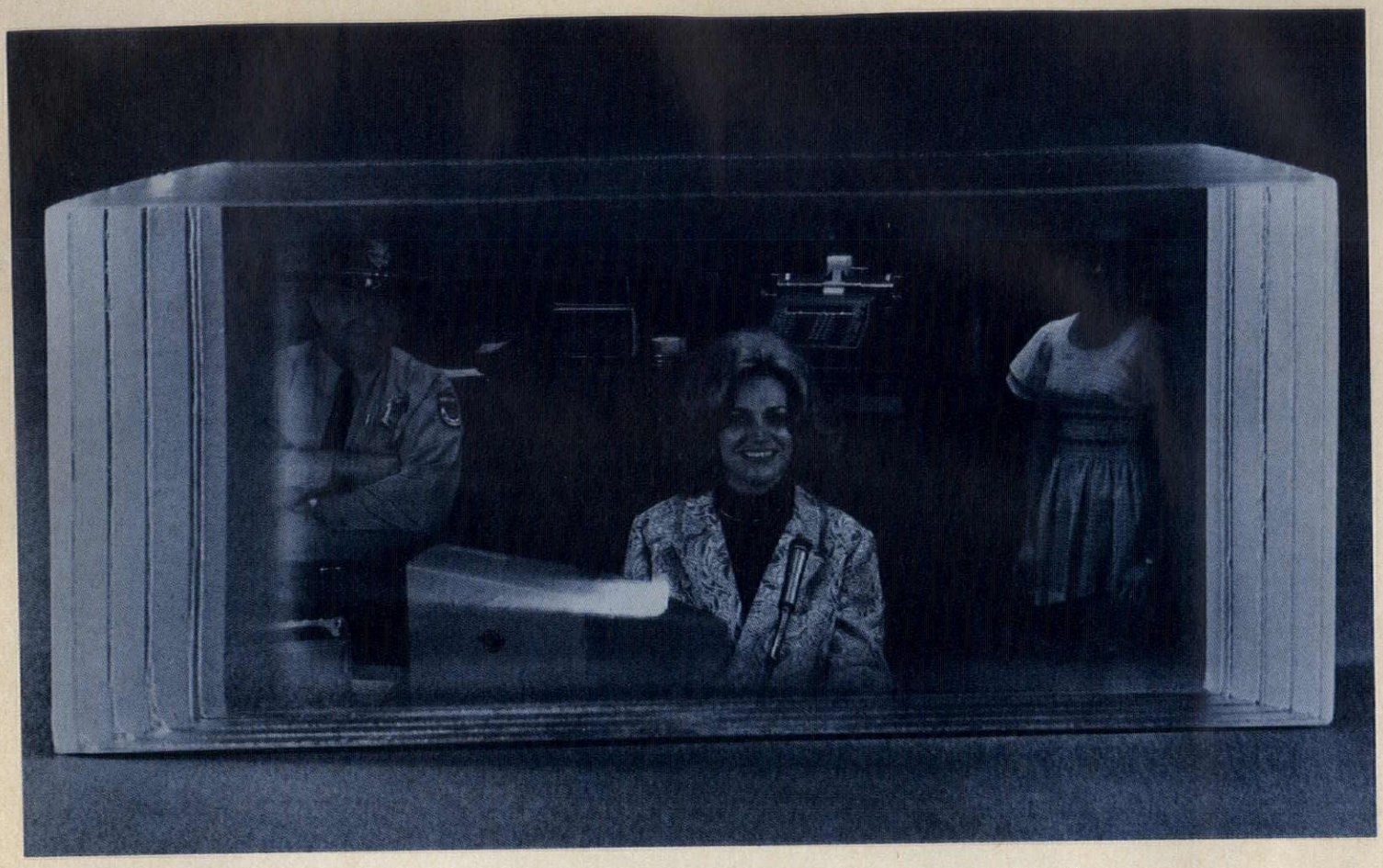

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New Year

P/A in the New Year

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In January

a special issue will bring you results of the 22nd annual **P/A Awards Program.** Jury discussion of winning entries in the categories of architectural design, urban design and planning, and architectural research will indicate **promising directions** for American architecture in 1975 and beyond, as seen by eight leading professionals.

In February

P/A will cover a **diversity** of design and technical subjects.

The lively, innovative architecture of **Hardy Holzman Pfeiffer Associates** will be the subject of a critical analysis, accompanied by presentations of **three major** newly completed works for the arts: a symphony hall, an adaptable college theater, and structures for a unique state-sponsored "artpark."

Adaptation of **industrial buildings for residential use** will be the subject of P/A's interior architecture feature.

Technics for February will take up the structure and comfort characteristics of **classic chairs** and review an interesting new technique for the use of **projected images** as a design tool.

Photos and commentary on **1920's Art Deco** commercial buildings will help to establish standards for evaluating a style that is only now being taken seriously — standards with implications for judging other buildings as well.

And in March

a special issue on **museums** will range from big news-makers like SOM's Hirshhorn in **Washington** to key smaller buildings such as Birkerts' Contemporary Arts Museum in **Houston,** along with other examples from the U.S. and abroad. Museum **security and detection systems** will be discussed in Technics.

Notices

Appointments

A. Eugene Kohn, AIA has been named president of John Carl Warnecke & Associates, New York City.

Michael H. Trower, AIA has joined Naramore Bain Brady & Johanson, Seattle, as general manager.

Richard C. Rowland has joined Vaughn Hickman Perspective, Indianapolis, Ind., as division director.

George Rainer has been appointed an associate in charge of the Environmental Impact and Solar Energy Studies division of Flack & Kurtz Consulting Engineers, New York City.

Shirley Vernon, AIA has been named architectural design manager at Ballinger, Philadelphia.

Jerry A. McLellan, PE has joined the Kalamazoo, Mich. office of Carl Walker & Associates, Inc., Consulting Engineers.

James H. Howell has been elected president of Alden B. Dow Associates Inc., Midland, Mich.

Jon D. Hollman, AIA and **Donald G. Corey, PE** have joined Merrill A. Jones & Associates, Inc., Architects-Engineers-Planners, Greenwood, Ind.

Richard E. Nevara, AIA has been named an associate of Walter Richardson Associates, Costa Mesa, Calif.

Curtis H. Green has been elected president of Hammel Green & Abrahamson, Inc. Architects and Engineers, St. Paul, Minn.

New addresses

Kann & Ammon, Inc., Suite 109, One Investment Pl., Towson, Md. 21204.

Wallace Holm, Architects, Inc., Hacienda Saucito, 2999 Monterey/Salinas Hghwy., Monterey, Calif. 93940.

Liebman Liebman & Associates Architects, 641 Lexington Ave., New York City 10022.

Lester Wertheimer AIA Architect, 924 Westwood Blvd., Los Angeles, Calif. 90024.

Archimedia, 117 E. Cary St., Richmond, Va.

Interspace Incorporated, Congressional Quarterly Bldg., 1414 22 St. N.W., Washington, D.C.

Gilbert Switzer & Associates, 19 Edwards St., New Haven, Conn. 06511.

New firms

Donald D. Smith, AIA and Joseph W. Lapicki, AIA have formed **LSI Lapicki/Smith, Architects/Planners**, 1800 N. Charles St., Baltimore, Md. 21201.

Gregory P. Matherne AIA Architect, Inc., 218 Napoleon St., Baton Rouge, La. 70802.

The firms of Architectonics, Al Feinstein/Architect, and Herald R. Holding & Associates have merged to form **Architects & Planners International, Inc.**, 612 S. Tejon St., P.O. Box 1147, Colorado Springs, Colo. 80901.

Stuart Baesel, FAIA, Robert Mason Houvener, AIA and Jack T. Matteson, AIA have organized **Design Group/La Jolla**, 7760 Herschel Ave., La Jolla, Calif. 92037.

Gary L. Michael & Associates, James B. Mann and Richard E. Lakeman have formed **Michael, Mann & Lakeman**, 430 S.W. Morrison St., Portland, Ore. 97204.

The Crane Design Group, 3501 W. Alabama, Houston, Tex. 77027 and 710 N. Saint Paul, Dallas, Tex. 75201.

Don Halamka and Harry Patterson have formed **Halamka/Patterson & Associates Inc.**, 53 W. Jackson Blvd., Chicago, Ill. 60604.

Lewis N. Kremer, AIA has organized **Kremer Affiliates**, Main St., Old Chatham, N.Y. 12136.

Building materials

Major materials suppliers for buildings featured this month, as they were furnished to P/A by the architects.

St. Bede Abbey Worship Assembly building, Peru, Ill. (p. 56). *Architect: Mitchell/Giurgola, New York and Philadelphia.* Steel framing: Federal Steel and Supply Co. Steel deck and concrete slab: Reeves Bowman. Brick: Streator Brick. Gypsum wallboard: National Gypsum Co. Acoustical tile: Celotex. Pitch and gravel roof: Celotex/Carey. Membrane waterproofing: Celotex/Carey. Elastomeric waterproofing: 3M. Metal oxide waterproofing: Ironite Co. Fiberglass insulation: Owens Corning. Cast Iron drainspouts: Josam Mfg. Co. Wood casement windows: Anderson. Mirror glass: LOF (Veritran). Plate glass: PPG Industries. Aluminum storefronts: PPG Industries. Aluminum skylights: Supersky. Metal doors: Kewanee. Metal elevator: Otis. Lever lock set: General Lock. Overhead and floor door closers: LCN, Rixson-Firemark. Crank casements: Anderson. Push-pull panic exit: Von Duprin. Latex paint: Glidden. Kitchenette: Dwyer. Auditorium seating: American Seating. Movable Partitions: Modernfold. Audito-

rium lighting: Lightolier. Stage lighting: Century Strand. Plumbing equipment: Kohler. Water heater: Lochinar. Electric switches: Pringle. Circuit breaker: Westinghouse Electric Co. Wires, cable: Porter. Wiring devices: Bryant. Heating convectors: Weil-McCain; Fin tubes: Trane. Sheet metal: Fritch. Pneumatic controls: Johnson. Air conditioning units: Trane. Cooling tower: Titus.

Lang Music Building, Swarthmore College, Swarthmore, Pa. (p. 62). *Architect: Mitchell/Giurgola, New York and Philadelphia.* Reinforced concrete: Universal Atlas. Structural steel: Bethlehem Steel. Joists, long span: Standard Building Systems. Roof decking: Inland Ryerson Construction Products Co. Wallboard: U.S. Gypsum and Kaiser Gypsum. Karpawood: Bangkok Industries. Carpeting: Lees Division of Burlington Industries; Laurelcrest, Division of Fieldcrest. Maple flooring: Robbins Flooring Co. Luxalon screen: Hunter Douglas. Acoustical tile: Armstrong. Asbestos felt roofing: Barrett Celotex Built-up, Div. of Allied Chemical. Monitor siding: Follansbee Steel Co. Silicone roof coating: General Electric. Aluminum roof coating and membrane waterproofing: Barrett Celotex. Below-grade dampproofing: Karnak Co. Thermal insulation (urethane): Barrett Celotex. Drain spouts: Josam Mfg. Co. Concrete masonry units for partitions: Nyce Crete. Steel projecting plate window units: William Bayley. Tempered glass: ASG Industries. Aluminum window frames: (Alcoa) George B. Habgood Co. Metal doors: American Steel Products Corp. Elevator doors: The Peelle Co. Entrance doors: (Alcoa) George B. Habgood Co. Lock sets: Best Lock Co. Door closers and hinges: Rixson-Firemark. Panic exit: Von Duprin. Door pulls: Baldwin. Paint: Glidden, Div. of SCM. Kitchen equipment: Dwyer Products Corp. Auditorium seating: Irwin Seating Co. Projection screens: Da-Lite Screen Co. Inc. Elevators (hydraulic): Corbett Electric Co. Downlight lighting fixtures: Omega. Recessed, fluorescent fixtures: Columbia. Stage lighting: Century Strand. Service switch: G&W. Panelboards: General Electric Co. Toilets: American Standard. Vertical storage tank waterheater: Patterson Kelley Co. Flush valves: Sloan Valve Co. Sprinklers: Automatic Sprinkler Corp. of America. Shower controls: Speakman Co. Heating elements: Trane Co. Air conditioning: Trane Co. Cooling tower: Marley Co. Grills and diffusers: Barber Colman Co. Blowers and cooling coils: Trane Co. Pneumatic controls: Powers Electric Co.

Swink office building, Marion, Ohio (p. 84). *Architect: Don M. Hisaka & Assoc., Inc.* Brick: Marion Brick Co. Wall fabric: Columbus Coated Fabric. Carpet: Dellinger, Phillips-Crawford Co. Quarry tile: American-Olean Tile Co. Acoustic tile: Armstrong Cork Co. Skylight: Bohem Mfg. Co. Sealants: Tremco, Master Mechanics. Drywall and wood studs: Mills Metal Co., Inc. Aluminum windows: Kawneer Co. Plastic laminate doors: Marlite. Aluminum narrowstile doors: Kawneer Co. Paint: Standard Drywall Products, Pratt & Lambert. Kitchenette unit: Dwyer Products Corp. Refrigerator: Douglas Crestlyn International. Public seating: Atelier International. Lighting fixtures: Prescolite, McPhilben, Marvin Elec. Mfg. Co. Plumbing fixtures: Kohler. Heating and air conditioning: Bryant, Titus Mfg. Corp.; Singer Co., U.S. Register, Thermador.

Job mart

Situations open

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. Reply to Box #1361-770, *Progressive Architecture.*

Architect: Midwestern based Engineering, Planning and Architectural firm has challenging position available for a creative architect. The applicant should be design-oriented, have promotional experience and capability and have experience in producing a set of plans from beginning to end. Excellent opportunity for advancement to top level in rapidly expanding firm. NCARB Certification and minimum eight years experience with some at supervisor level required. Salary commensurate with background and experience. An equal opportunity employer. Reply to Box #1361-771, *Progressive Architecture.*

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 Architecture, Sandburg Hall W1340 A, University of Wisconsin-Milwaukee, Milwaukee, Wisconsin 53201, by January 20, 1975. An Equal Opportunity/Affirmative Action Employer.

Faculty Position: 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 ability. 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.

Faculty Positions: The Department of Architecture, Graduate School of Design, Harvard University, Cambridge, Mass., 02138 has three openings for full-time position in the AY 1975-76: 1) Professor of Architecture to teach in design studios; interested in design theory-methodology. Requires extensive achievements in building design. 2) Associate Professor in Architecture to teach in the area of building processes, principles-methods of construction, and use of materials. 3) Assistant Professor in Architecture to teach in the design studio. Special interest in history and theory. Deadline for applications: January 1, 1975. Harvard is an equal opportunity employer. For more detailed requirements contact the Chairman, George Anselevicius, in care of the Department.

Position Available: Instructor, Department of Interior Design. Subjects: design, delineation, design theory, professional practice, contract. Masters degree and professional experience in interior design or related field desirable. Salary and rank commensurate with background. Equal Opportunity Employer. Contact: Paul J. Lougeay, Chairman, Department of Interior Design, Southern Illinois University, Carbondale, Illinois, 62901.

Teaching Position Available: Required: Thorough undstanding of analog and digital computer systems for information storage, retrieval, and analysis. Experience in computer informations systems management. Working knowledge of state and local governmental systems. Experience in research and development projects evidenced by grant awards highly desirable. Teaching experience required and academic administrative experience desirable. Teaching duties to include two courses in research methods for graduate students in architecture and planning and undergraduate teaching in architectural technology-structural design, and/or environmental technology. Area of research in architecture and/or planning to be determined. Send letter of interest with resume to Arnold Butt, Chairman, Department of Architecture, University of Florida, Gainesville, FL 32611. University of Florida is an equal opportunity employer.

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-2, Washington, D.C. 20525.

Situations wanted

Architect: 33, B.S. Civil Engineering, M. Architecture NCARB, Multiple Licenses, 10 years diversified experience. Presently top designer industrial-medical-commercial. Familiar with process work, production techniques, cost control, client contact, design management, job management. Desire Director Design for A/E firm or Industrial Corporation. Resume, awards, brochures axailable. Reply to Box #1361-772, *Progressive Architecture.*

Architect: With national certification, multi-state licenses, versatile experience working as principal and also for government agencies, architectural and construction firms seeks position with corporate entity, hospital group, and/or government body. Currently located in Southwest Ohio. Interested parties reply stating salary range. Reply to Box #1361-773, *Progressive Architecture.*

Architect: AIA, NCARB, registered in several states, seventeen years experience including five years in Europe. Strong architectural/engineering/construction management background; interested in administration client relations, consulting, coordination and of complex projects. Prefer New York, New Jersey or Pennsylvania area. Reply to Box #1361-760, *Progressive Architecture.*

Architect/Planner: 35, family, multiple degrees, NCARB, principal of firm. Comprehensive experience in top-level management, marketing, conceptual design, client relations

for large-scale hospital/commercial projects and arranging project financing. Seek partnership/equity position with architectural, consulting or real estate firm. Consider part-time consulting arrangement. Reply to Box #1361-774, *Progessive Architecture.*

Landscape Architect: B. Arch., MLA; family; 12 years private practice experience including principal level in site, urban and regional planning. Registered in 4 southeastern states. Desires challenging, responsible position with AIA, A/E or PE. Relocation acceptable. Reply to: Resume, 19 Hilton Head Terrace, Hilton Head Island, South Carolina 29928.

Professional Engineer: Proficient in heating, ventilating, air conditioning, plumbing and drainage systems. Will affiliate or represent contractor, engineer or architect. Geographical area no barrier. Reply to Box #1361-775, *Progressive Architecture.*

Registered Architect/Planner: 36, seeks responsible and challenging design-coordinator position with progressive A/E or design-build firm. Ten years of diversified experience including urban mass transportation with high quality architectural and engineering offices in New York City, NYC or lower Connecticut location preferred. Reply to Box #1361-776, *Progressive Architecture.*

Architectural services

Affiliation: Nationally known New York architectural firm, with 50 year record in multi-story commercial buildings, and industrial, research and educational projects seeks local, national or international affiliation in joint venture or consulting relationship. Outstanding reputation for design and technical capabilities. Confidential. Reply to Box #1361-777, *Progressive Architecture.*

Affiliation: Interested in joint venture/association with A/E firms having projects in California and Arizona. Firm resume on request. Reply to Box #1361-778, *Progressive Architecture.*

Career Builders, Inc., Agency: Ruth Hirsch has specialized in Architectural placement for fifteen years, serving architects, corporations, planners, developers and interior firms. She reviews portfolios, professionally interviews designers, project architects, managers and juniors for available openings. Executive searches and personnel consultations are available to employers. Career Builders, Inc. (Agency), 501 Madison Ave., N.Y., N.Y. 10022. (212) 752-7640.

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RitaSue Siegel Agency: Ms. Woody Gibson introduces people with superior skills in architecture, interior, landscape, urban design, planning, programming and management to our consultant and corporate clients seeking genuine problem solvers throughout the U. S. A. RitaSue Siegel identifies and evaluates industrial and graphic designers. You are invited to submit resumes in confidence. Our clients pay all fees. 60 W. 55th St., N. Y. C. 10019, (212) 586-4750.

O'Shea Employment System: Architectural Designers for midwest firms. (Ohio - Mo.) Example: Expanding A/E/P firm with 60 personnel branch office needs Department Head to design all commercial, light industrial projects. Full benefits plus overtime, profit bonus. Please write William Engle—Specialist in Consulting Engineers—O'Shea System, 107 N. Pennsylvania, Indianapolis, Indiana 46204.

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P/A Book Store

Described on the following pages are architectural books that are now available to you from leading publishers. Each has been selected for its use to you in the various aspects of your professional practice.

Book orders will be forwarded to the publishers who will bill you direct, including all required state and local taxes. As purchases of professional and business publications are tax deductible, we suggest that you retain a copy of the publishers invoices.

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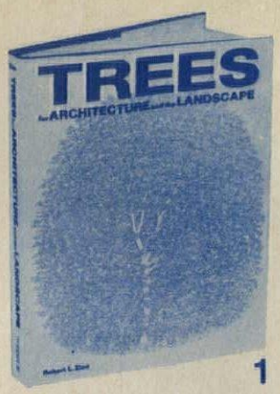

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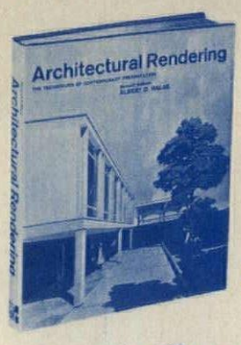

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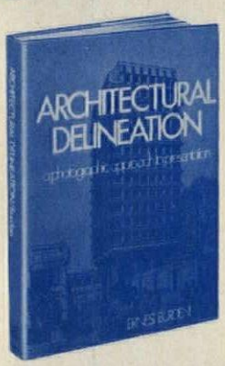

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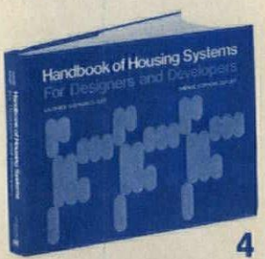

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Technical/ Design

1 Trees: For Architecture and Landscape

By Robert L. Zion,
168 pp., illus., . . . $25.00

Everything an architect should know about using trees to complement the buildings he designs. Includes aesthetic factors such as leaf and bark texture, height, spread, density and coloration — practical considerations such as cost, planting, maintenance, and rate of growth.

Circle B601 under Books.

2 Architectural Rendering The Techniques of Contemporary Presentation

By Albert O. Halse, 326 pp., illus.,
2nd edition, 1972 . . . $24.50

This completely up-dated revision of the most widely used guide to architectural rendering covers all working phases from pencil strokes to finished product — and shows you how to obtain the desired mood, perspective, light and color effects, select the proper equipment and work in different media.

Circle B602 under Books.

3 Architectural Delineation A Photographic Approach to Presentation

By Ernest Burden, 288 pp.,
illus., 1971 . . . $21.95

In this illustrated book, the author demonstrates a simple, flexible method of using photography to depict architectural projects in true perspective. How to create models for photography and how to put together an effective slide presentation.

Circle B603 under Books.

4 Handbook of Housing Systems for Designers and Developers

By Laurence Stephan Cutler
and Sherrie Stephens Cutler
234 pp., . . . $17.50

Enables today's builders, developers, architects to meet the critical housing need by performing more efficiently; achieving new design, building, and management techniques; vastly increasing scope and productivity of their efforts. Graphics, plans provide a "kit of parts," reader can participate in systems design and building process.

Circle B604 under Books.

5 Loss Control: A Safety Guidebook for Trades and Services

By George J. Matwes
and Helen Matwes
341 pp., . . . $16.50

Handy reference manual, written in narrative style. It covers almost every type of business establishment, from department stores and supermarkets to hospitals, theaters, race tracks and golf courses. A primer for those new to the trades and services field of safety. Refresher and source of new ideas for experienced professionals.

Circle B605 under Books.

6 Alvar Aalto

248 pp., . . . $29.50

Alvar Aalto, among the most important living architects, has evolved a language entirely his own, quite unconcerned with current cliches, yet its vigorous display of curved walls and single-pitched roofs, in its play with brick and timber, entirely in harmony with the international trend towards plastically more expressive ensembles. Contains complete works from 1963-'70. Including detailed plans and sections.

Circle B606 under Books.

7 A Bucket of Oil
By Caudill, Lawyer and Bullock
90 pp.,...$10.95

This book features practical techniques for energy and resource conservation. Covers: architecture, climate codes, comfort, day lighting, geometry and orientation, heat flow, human needs, lighting, mechanical systems, natural ventilation, outdoor spaces, programming, planning, and more.

Circle B607 under Books.

8 A Guide to Site and Environmental Planning
By Harvey M. Rubenstein
Illus. 300 photos, diagrams and maps, some in full color...$17.50

An up-to-date reference on all phases in the development of a site plan — land use, pedestrian and vehicular circulation, visual design and natural elements in site organization, calculations for contours, grading and earthwork, drainage, alignment of horizontal and vertical curves.

Circle B608 under Books.

9 Vandalism
Edited by Colin Ward
327 pp.,...$13.95

A major function of this book is to discuss the varied and many responsibilities of the designer and provide an illustrated design guide to alert him to ways in which vandalism can be minimized and the opportunities for it reduced. It also serves as a manual to help the designer avoid the selection of materials and equipment which are most vulnerable to attack.

Circle B609 under Books.

10 Restaurant Planning & Design
By Fred Lawson
180 pp.,...$24.95

Develops in detail the elements that go into successful restaurant planning. Not only provides a step-by-step guide in design procedure for the architect and designer, but presents essential technical information in convenient form which will be of value to all catering administrators.

Circle B610 under Books.

11 Young Designs in Color
By Barbara Plumb
168 pp., Illus., Color...$15.95

Pictures and descriptions of all kinds of dwellings, from one-room apartments to country estates, show how color, design, and construction are being used by imaginative people to create exciting personal settings.

Circle B611 under Books

12 Residential Designs
Edited by David E. Link
192 pp.,...$14.50

Hi-rise or low cost, condo, multi-family, custom or townhouse, here's a design book that shows you the very best in every class. Complete collection of designs with over 200 illustrations featuring techniques used by some of the nation's leading builders, planners and designers.

Circle B612 under Books.

13 For Everyone a Garden
By Moshe Safdie
Edited by Judith Wolin
256 pp.,...$25.00

Provides detail and technical specificity of architect Moshe Safdie's (Habitat Expo '67) experience with industrialized building methods for architects and engineers. Presents new ideas about people building, planning, sites and their interactions.

Circle B613 under Books.

14 Housing Demand Mobile, Modular or Conventional?
By Harold A. Davidson,
442 pp.,...$17.50

Covers the supply and quality of mobile home parks; taxation policies and zoning regulation concerning mobile homes; financing of mobile home purchases; mobile homes as a factor in solving low-income housing problems; the competitive relationship between sales of mobile and modular housing units.

Circle B614 under Books.

15 Urban Design As Public Policy
By Jonathan Barnett,
208 pp., illus.,...$15.00

Drawing on his extensive experience as former director of NYC's Urban Design Group, he shows how architects, planners, designers, wherever they are, can use the NY experience to achieve successful methods for working with political, real estate interests, commercial, community groups and fellow planners.

Circle B615 under Books.

16 Step-By-Step Perspective Drawing: For Architects, Draftsman, and Designers
By Claudius Coulin,
112 pp., illus.,...$13.95

Beginning with an explanation of drawing instruments and materials, this book proceeds into details of descriptive geometry, from simple isometric projections through perspective renderings of complicated inclined planes and rounded forms. Fully indexed for quick reference.

Circle B616 under Books.

17 Contemporary Concrete Structures
By August E. Komendant,
640 pp., illus., 1972...$27.50

The entire spectrum of poured-in-place and prefabricated concrete structure is covered in this practical guide. It treats essential structural theories; material characteristics; behavior of structural elements and systems; and appropriate construction methods, and provides data on solving concrete design problems.

Circle B617 under Books.

History/Arts

18 Ludwig Mies van der Rohe: Drawings in the Collection of the Museum of Modern Art
Introduction and notes by
Ludwig Glaeser
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Each of the drawings in this portfolio-sized, spiral-bound book is a germinal act of architectural creation. The sketches represent projects that for one reason or another were never constructed, and so for those interested in the full range of Mies's architectural concepts, the book serves as a necessary supplement to those that are based largely on his built projects.

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