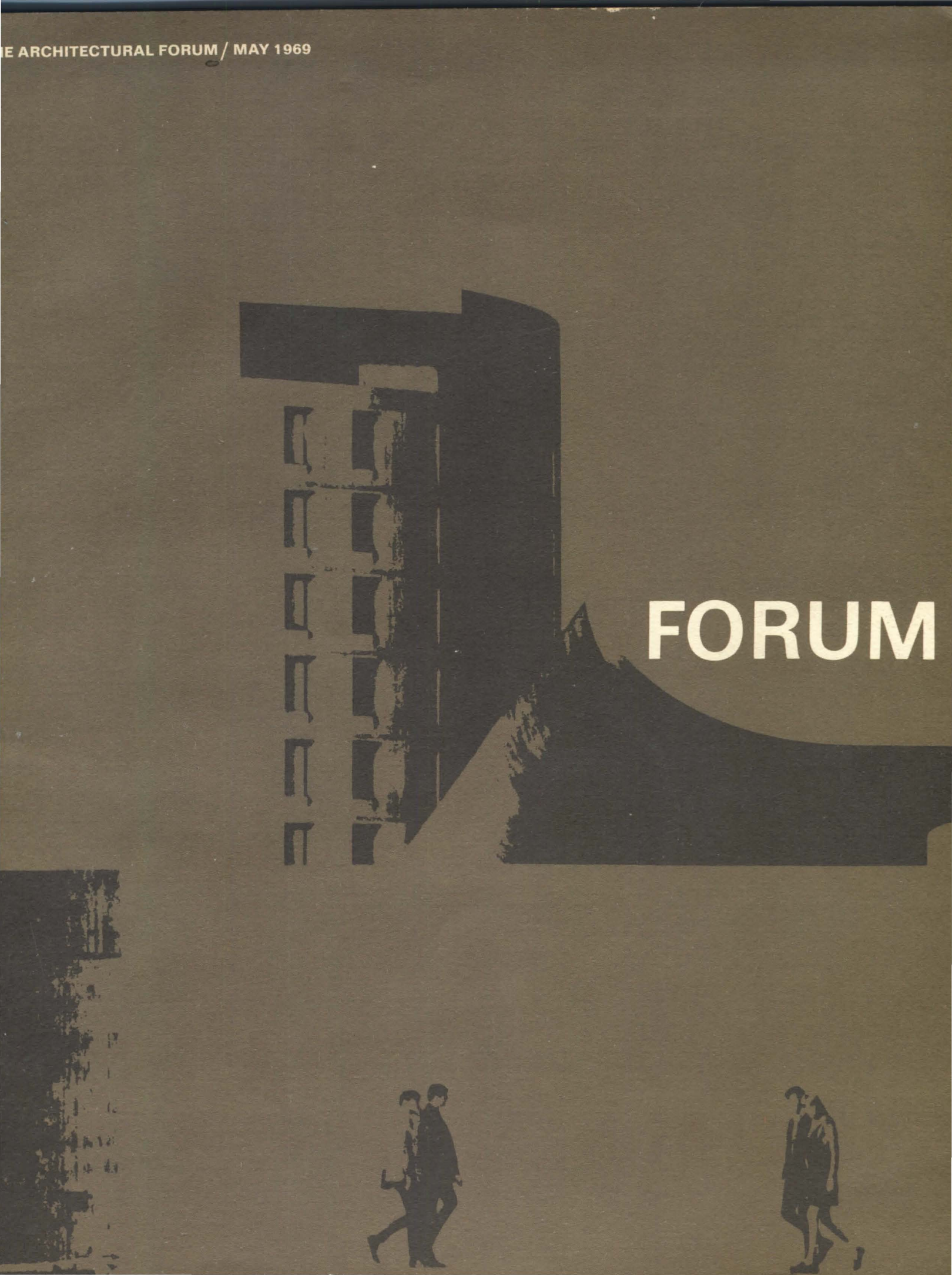
E ARCHITECTURAL FORUM / MAY 1969



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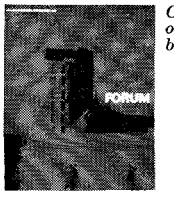

Cover: From a photograph of Fredonia's Academic Center by George Cserna (p. 37).

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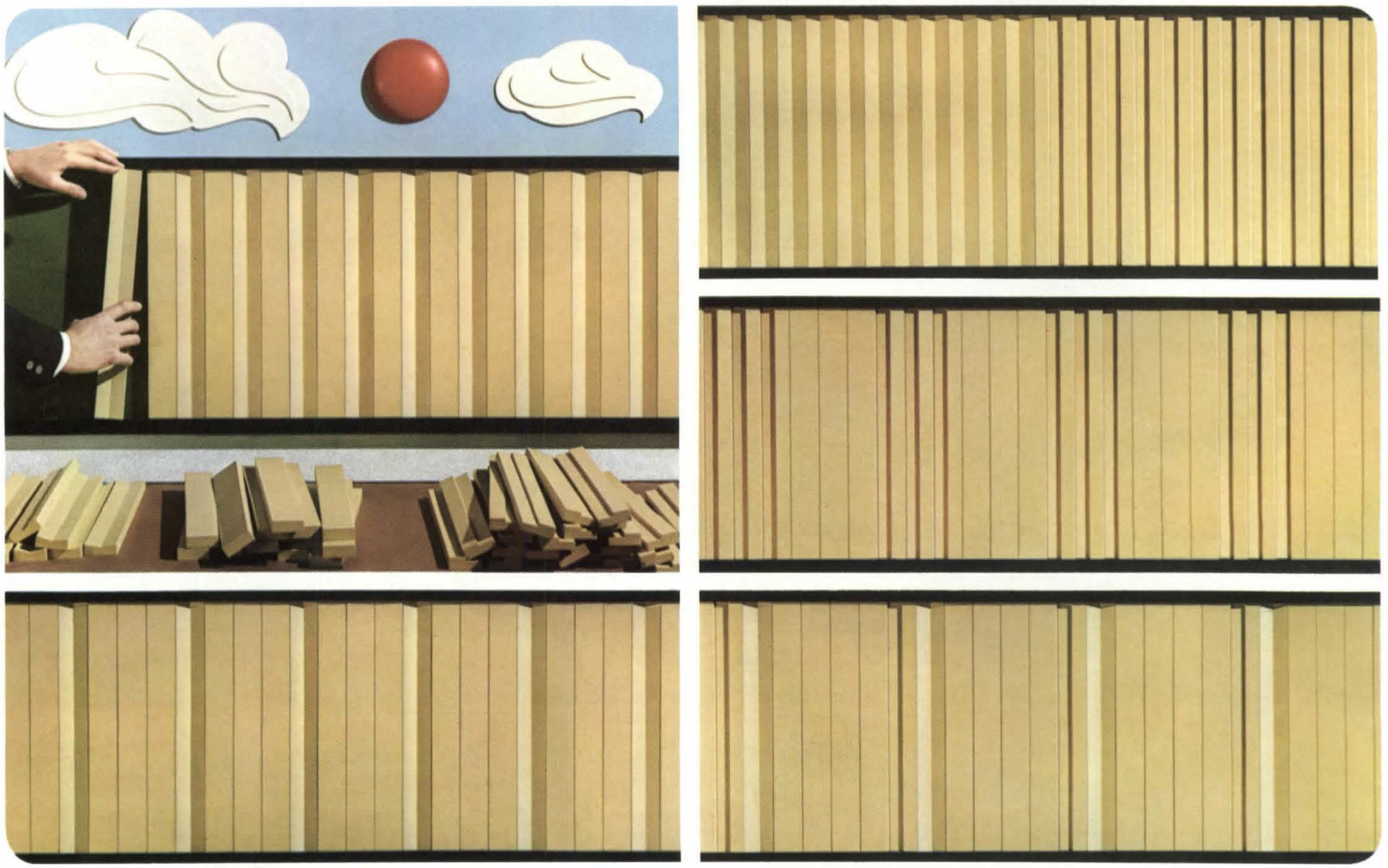
say goodbye to the bland exterior wall.

say hello to the blend exterior wall.

Inland-Ryerson introduces six new wall panels with a common lock arrangement that permits you to blend them in a wide variety of textures, colors and shadow patterns.



Only three of the six new IW panels were used to achieve this variety of sculptured patterns. Many other effects can be obtained.

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General Offices: Chicago, Illinois

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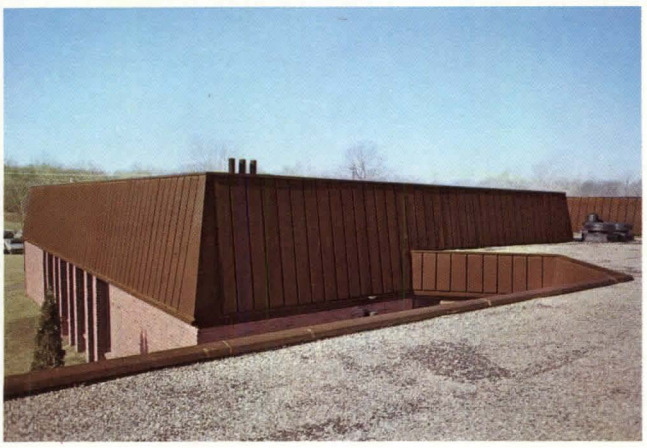

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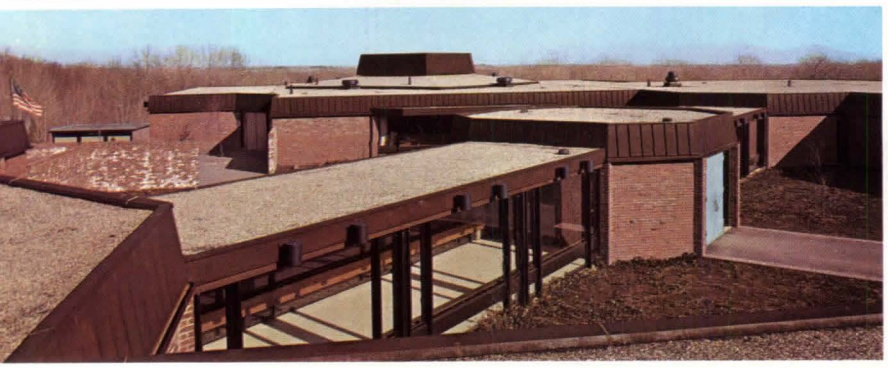

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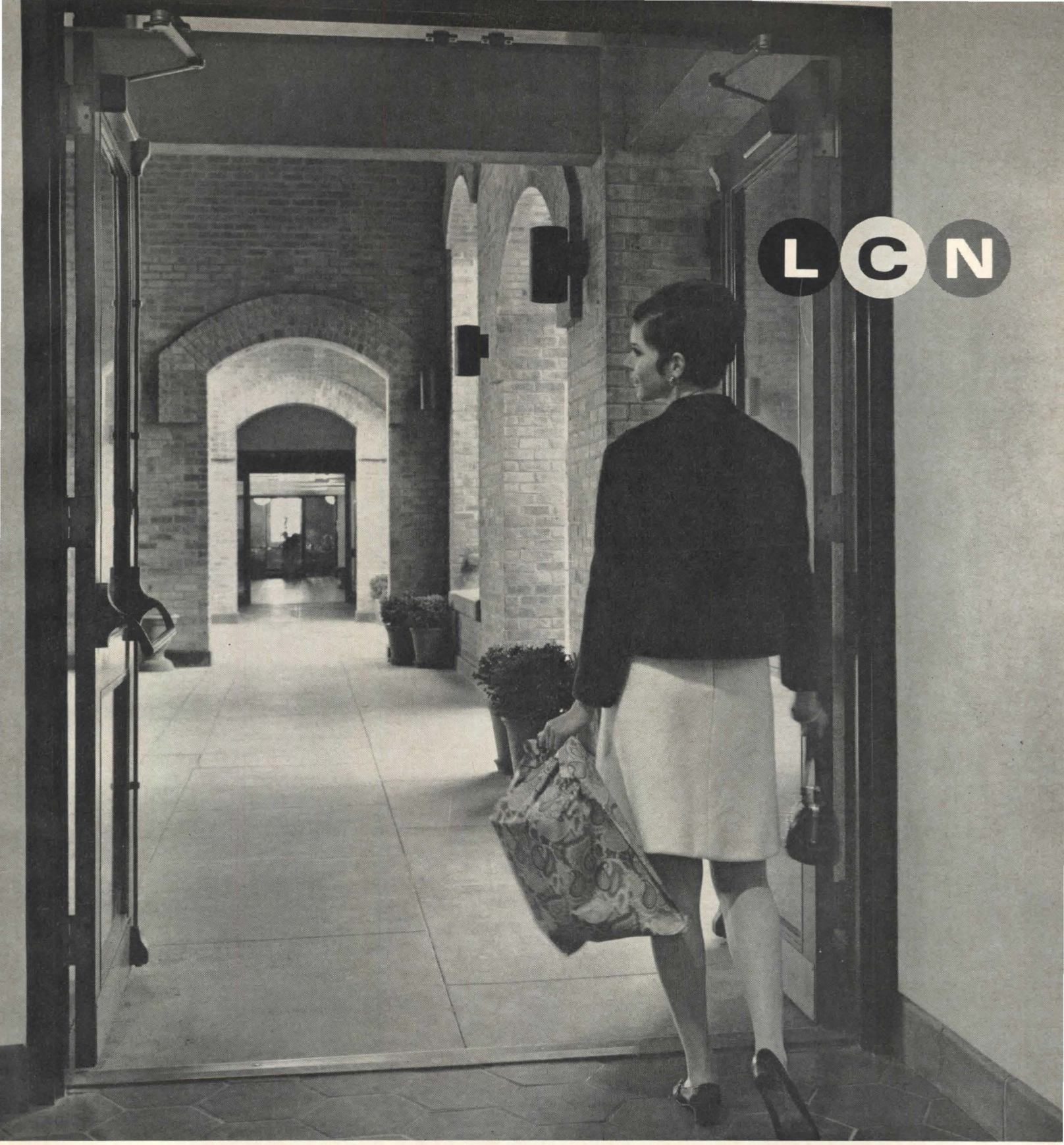

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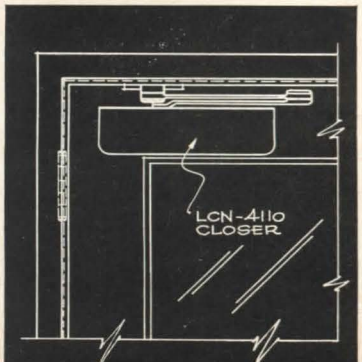
meet every requirement for door control in public buildings. They look great. They perform flawlessly. They require virtually no care. Perhaps best of all, they're from LCN . . . the company that has made nothing but door closers for over 40 years. See catalog in Sweet's, or write: LCN Closers, Princeton, Ill. 61356.



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The name is now Inmont. It's the company you used to know as Interchem. But it's not really the same company.

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INMONT

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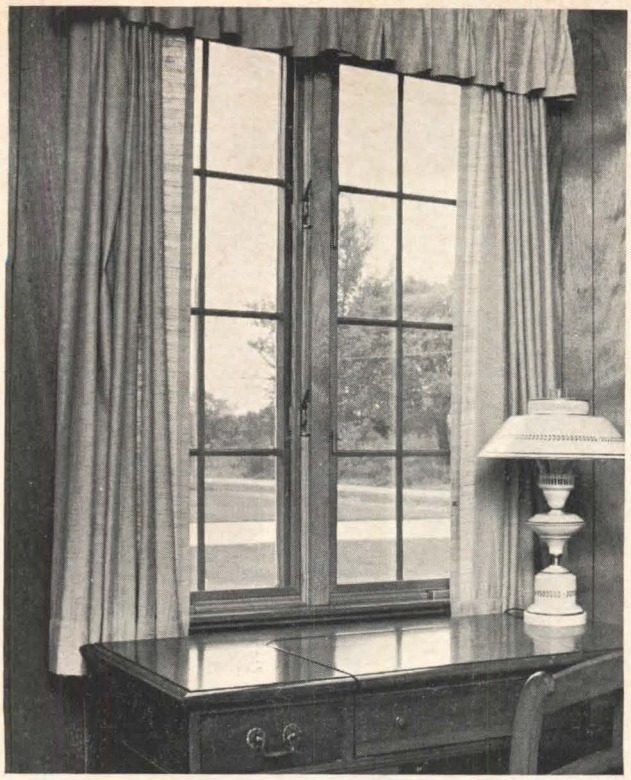
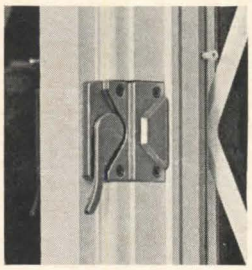


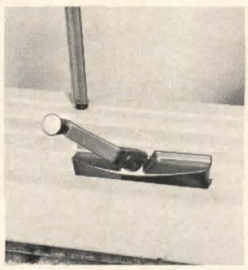
Compare this Malta Wood Casement Window ...with anyone's

Then check the competitive price tag

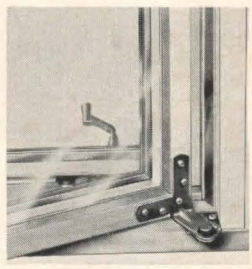
EXTENSION HINGES. Malta Casements swing wide for easy cleaning outside and in — from the inside; coax breezes into the room from both sides of the sash. Hinges are sturdy steel with popular Goldtone coloring. Metal bushings give smooth movement.



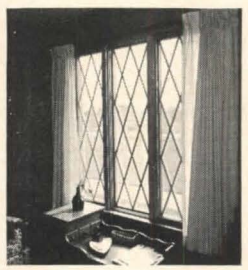
SASH LOCK. Smooth cam action snaps weatherstripped sash firmly against jamb when closed. Ejects sash positively for opening. Attractive Goldtone finish matches other hardware. Also available in chrome finish.



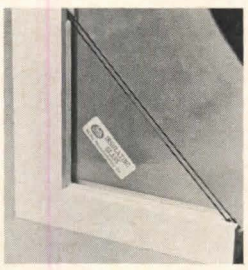
ROTO-OPERATOR opens and closes sash smoothly and effortlessly; holds sash firmly in any position. Goldtone coloring. The roto-operator casement is especially appreciated over kitchen sink or other hard-to-reach locations.



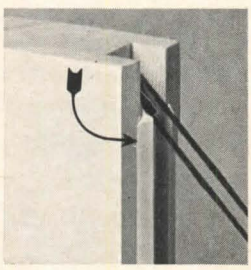
SCREENS. Goldtone heavy-gauge aluminum frames with attractive 18x14 mesh cloth. Light in weight, fit on inside of windows, easily removed for cleaning or storage. Plungers factory applied.



GRIDS. Attractive small light, divided pane effects may be achieved with either rectangular or diamond pattern wood grids. They snap into the sash and are easily removed for cleaning or painting.



INSULATING GLASS. All casement windows are available with popular insulating glass — two panes of glass hermetically sealed with dead-air space between. Minimizes heat and air-conditioning loss; eliminates need for storm windows; reduces noise infiltration.



VINYL BOOT GLAZING. All Malta windows and patio doors, with insulating glass, are vinyl boot glazed. No putty to crack or peel. Tough, durable vinyl seals out drafts, stays white, lasts a lifetime.

OPTIONAL STORM PANELS. Neat, self-locking storm panels, swing with the sash. No tools needed; no screws or clips. Friction clips hold panel firmly; snap out with little effort when you want them removed.

This popular wood window competes on every point. Women love it; the way it opens, locks, swings wide for cleaning both sides; dresses up any room in the home. Construction features are flawless. Warm wood, fully weatherstripped, available with insulating glass with vinyl boot glazing. It's a quality window for the quality home, competitively priced. Compare it. You can't buy better — anywhere. Malta Manufacturing Company, 261 Johnstown Road, Gahanna (Columbus) Ohio, 43230

Malta

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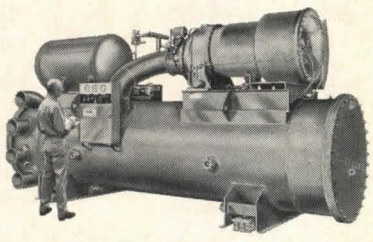

The York Turbopak is the first factory-packaged centrifugal liquid chiller that goes up to the 1,000-ton range. Yet this modern system takes less than half the space required by comparable competitive units!

Eight new models—from 670 to 1,030 tons—are factory assembled, piped, wired, evacuated . . . shipped with a holding charge of refrigerant.

Precise design by York has made possible a chilling system that gives you greater freedom of design. A system that takes half the space, in floor area or in cubic feet, required by comparable machines.

Size alone is not the entire York Turbopak story, of course. An electronic control center and interconnecting control and auxiliary power is factory-assembled. And, with the addition of these new, larger machines, York now offers hermetic and open Turbopaks in capacities from 90 through 1,030 tons. Ask your nearby York Sales Office for specification data on York's new centrifugal liquid chilling packages. Or write York Division of Borg-Warner Corporation, York, Penna. 17405.

YORK

DIVISION OF BORG-WARNER CORPORATION

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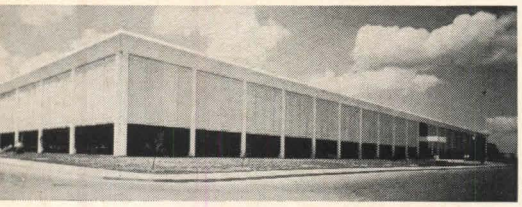
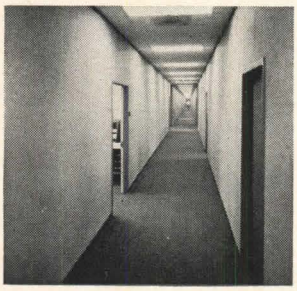
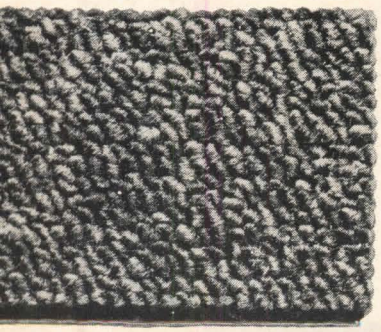
Antron® copes with each day's dirt.

General Dynamics knew that even 6,000 people wouldn't faze "Antron".



So they installed 58,000 square yards of "Spearhead" by Aldon in their new engineering and office building in Fort Worth.





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When a carpet has to look good despite both wear and dirt, it had better be made of Antron* nylon by Du Pont.

Consider these requirements: Thousands of people would be crisscrossing the carpet each day. And the dirt and grime of a big city would accompany them each time. But the carpet would have to keep its top-notch looks, because this is one of America's biggest and most prestigious companies.

General Dynamics researched all types of flooring materials before they made their decision: an 11,000 sq. ft. wear test in an area where traffic was 4,000 people a day; maintenance, spectrographic soil analysis, light absorption tests, and a noise reduction test requiring a 35% decrease vs. existing flooring material.

The solution simply had to be "Antron". The study showed a sizeable advantage in the soil-hiding capabilities of "Antron". It further predicted a wear-life of at least 7 years in the main corridor and up to 15 years in offices, at a better appearance level with less maintenance than anything else considered.

"Spearhead" was installed in October, 1967, and since then, one particular corridor has withstood 20,000 traffics a day—the equivalent of 10 years normal wear. Despite this abuse, the carpet looks great, its colors remain bright and they're very pleased with its performance. All this with a minimum of maintenance problems: nightly spot vacuuming, weekly overall vacuuming and a reduced schedule of commercial cleaning with dry foam shampoo. In fact, the general offices look so good, there's been no need to shampoo them to date, and the main lobby requires only monthly shampooing.

The complete "Antron" story, and information on other Du Pont fibers, is available from Contract Carpet Specialist, Room 16A5, 308 E. Lancaster Ave., Wynnewood, Penna. 19096.

*Du Pont registered trademark.
Du Pont makes fibers, not carpets.

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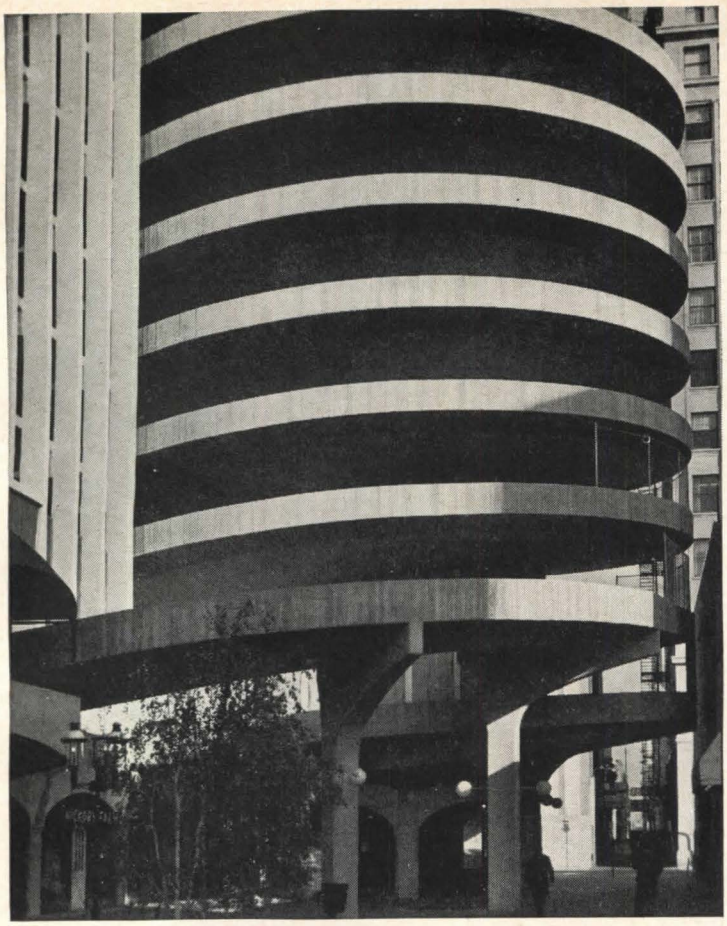

The spiral exit ramp features a rough-board textured railing and inner core. Its curves provide a pleasing contrast to the rectangular lines of the main structure.

Ground level of spiral ramp section shows the blending of concrete finishes that lend interest and variety to the design.

Parkade.

Washington's prize-winning concrete design.

Parkade Parking Garage in Spokane was selected as the outstanding concrete design in the State of Washington by the Washington Aggregate and Concrete Association. The interesting structure consists of two floors of shopping and office area topped with an eight-floor parking facility. Built almost entirely of reinforced cast-in-place concrete, a variety of finishes are employed for accent: exposed rough-form texture, bushhammered surfaces and both rough-board and dimpled surfaces on the precast units. Lehigh Cements were used for the majority of the concrete supplied including precast units. Lehigh Portland Cement Company, Allentown, Pa.

This beautiful facility provides off-the-street parking for 936 cars in the heart of downtown Spokane. Dimpled, textured precast facia panels were used on the second floor of the structure as well as on the skywalk leading to an adjacent store.

Owner: Parkade, Inc., Spokane
Architect: Warren Cummings Heylman and Associates, Spokane
Structural Engineer: Esvelt and Saxton, Consulting Engineers, Spokane
General Contractor: Sceva Construction Co., Spokane
Ready-Mixed Concrete: Acme Concrete Co., Spokane
Precast Concrete On Parkade: Ace Concrete Company, Spokane
Precast Concrete On Skywalk: Central PreMix Concrete Co., Spokane

LEHIGH CEMENTS

LETTERS

BALTIMORE FREEWAY

Forum: I'd like to commend you on your very telling and accurate account of the Baltimore freeway imbroglio in the March issue. I was, of course, also delighted to see mention of my small contribution.

The roles played by Norm Klein and Stew Bryant were truly heroic. But their reward will have to come from somewhere else then SOM. I'd suggest a statue, to be erected by the people of Baltimore, smack in the middle of the Rosemont corridor that would have been ruined by the freeway without their efforts.

Again, congratulations on a remarkably perceptive piece of writing about a complex and perplexing set of forces and events. It's such reportage that dignifies the image of the American press.

GEORGE W. GRIER
Senior Associate
The Washington Center for Metropolitan Studies
Washington, D.C.

GRAND CENTRAL CONTROVERSY

Forum: As one who has been closely following the problem of Grand Central Terminal preservation since 1954, may I offer a brief resume of my testimony before the Landmarks Preservation Commission, because I raised constructively two issues beyond those commonly discussed.

I submit that the most important decision will not be whether to adopt either the scheme called Breuer I or Breuer II, or even a Breuer III which I ardently hope he will come to eventually and we will accept.

The two crucial questions are first, whether the preservation of great landmarks of culture *can continue* as effective public policy or not, and second, what the railroad *should* be doing with the land which the public so strongly helped it to get.

As for the first point, the preservation of landmarks is deeply educational in purpose, and not dilettante. It is, as I said long ago, concerned with the preservation of architectural memory in the only way it can really be preserved. As a landmark in this full sense Grand Central would be half-destroyed by either of Breuer's schemes—once physically and the other time by being made ridiculous—and we are expected to accept one of these destructions on threat that otherwise we lose the great concourse too.

No Landmarks Commission can administer a landmarks procedure where the first act has to be an individual ad hoc negotiation whether *this* "preservation" is to be preceded by the amputation of two legs and an arm of the building, or maybe half the torso too. And that's really what is at issue here. It's what both Breuer schemes have to do, and, sad to say, the concourse itself is half destroyed under I, and its future under II is ambiguous. But once our industry is allowed to play at ducks and drakes, what happens next? What if the owners of Schermerhorn Row decide that *this* preservation could use a few stubbed-up junior skyscrapers? What if someone decided to expand the classical library in Bryant Park with a pyramid swaying above? The rule has to be: keep landmarks very substantially intact.

I do not go into immediate planning issues, but the transfer of unused zoning volumes was graphically proposed as a device by Jacquelin Robertson of the city's Urban Design Group. This could give a start to Breuer III.

But it would be bootless to discuss the whole issue in a vacuum apart from railroad land policies as a whole. First, the terminal is the head of that Grand Central City which was built (starting in 1902) by Vanderbilt and Wilgus as the greatest single urban design achievement of this century anywhere. (I pointed this out in Forum as early as November 1963.) It knit all transportation media in with city building with phenomenal success, actually carrying out the multilevel, "clip-on," "button-up," etc. ideas of today, and *invented* the futurist city. At its height it brought in close to 400,000 daily passengers on 600 trains without even ruffling the surface of the streets. Thus was developed what is described in last May's *Harper's* by realtor Daniel Friedenberg as the greatest "gold mine" in urban real estate; but this mine is in fact only a fraction of the railroads' vast intercity realty wealth. Think of Penn Center in Philadelphia and the central-city yards and terminals everywhere: *all acquired with vast help from the public in the form of franchises, easements, condemnations, etc., because there was a public transportation need.* All over the U.S. there

(*Continued on page* 18)

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LETTERS

(Continued from page 16)

is now going forward a large-scale diversion of this property from railroad use to real-estate profit-making by lease or sale. It evades the railroads' manifest public service responsibility and enriches the railroad companies on land while the railroads' service is widely regarded as going all but completely to pot. Saadi's proposal is a case in point.

In New York the special scandal is that at midpoint of the new expanding supermetropolis reaching through New York from Boston to Washington there is a cesura, a complete transportation break. You transfer from one terminal to another with the greatest inefficiency that could be conceived. Even given Breuer's new Grand Central parking bays you would have to fight for a cab, and fight your way over to Penn Station through the Garment District right in the middle of your trip. Considering this pre-Balkan state of affairs the expansion of Grand Central City to effect a real connection is the first duty of railroad and government together, and those who concentrate instead on the sausage-machine operation of creating big office buildings are of no help. To leave the Central Station substantially intact, and expand Grand Central City to a juncture with the Pennsylvania system is the manifest job which would give the Breuers a real Pegasus to ride instead of this backward-facing ride on a sorry nag.

But as I said, those who can't look at their landmarks, can't leave them stand long enough for us to study *what they meant,* can't realize what past greatness their loss wipes out, *do lose their memory* which landmarks are meant to keep alive and vivid for future use. They sit like juvenile Visigoths on the ruins of a Rome they have destroyed and allow to sweep over us a new Dark Age, while new railroading opportunities are ignored at their height.

DOUGLAS HASKELL
New York City *Architect*

For a report on the hearings attended by Mr. Haskell, see p. 35
—ED.

RE: REGISTRATION

Forum: In "The Case for Specialized Registration" [March], a plea is made with a view to registering "a new generation of architects."

Plaintiffs Donnellson, Balis Sparkman and McCurdy shoul ask themselves to take Architec tural Registration Board exams s that they may truthfully ca themselves 'Architects'. From th synopsis of their experience as out lined, none of these "new genera tion" practitioners is a fully quali fied, bona-fide 'Architect'. None o these gentlemen should be permit ted license to perform total archi tectural design services no matte how else they may contribute t the whole. The development of th finest architectural concepts de mands a total body functionin under present building codes an registration acts in the interests o life, liberty and happiness, ye thoroughly cognizant of the nee to protect life, limb and propert as well.

These several plaintiffs shoul become licensed general practition ers first (proving their genera competence), then their preroga tive to apply themselves in thei special fields of application will b acceptable to the overall idealogi cal concept of the Architect an his function, which in their cas is a corporate identity.

BERJ TASHJIA
Detroit *Architec*

Forum: In "The Case for Special ized Registration":

Granting a license to practic architecture based upon special ex amination, applicable to an indi vidual's specialty, does not, in m opinion, reflect the ability of tha person to fully satisfy the require ments to save the public harmles in the total context of the licens statutes and intent. However, th issuance of a limited license, base upon the competence of a particu lar specialty may be considered possible solution.

SAMUEL Z. MOSKOWIT
Wilkes-Barre, Pa. *Architec*

SPEAKING THE LANGUAGE

Forum: There is a problem o basic communications today be tween architects and the world a large. In my view this is but on minor part of the entire problen of people understanding the fin arts in total. Not too long ago w all heard mutterings that paintin had completely deteriorated as fine art, because a monkey coul paint an abstraction as well a Picasso or Jackson Pollock. Toda the public is faced with nud drama, and again the public reject it as an art form.

In the face of such happening

(Continued on page 28

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Harold R. Roe, A.I.A., of
Howard Associates, specifies

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Proposed location: a water resort area in Michigan.

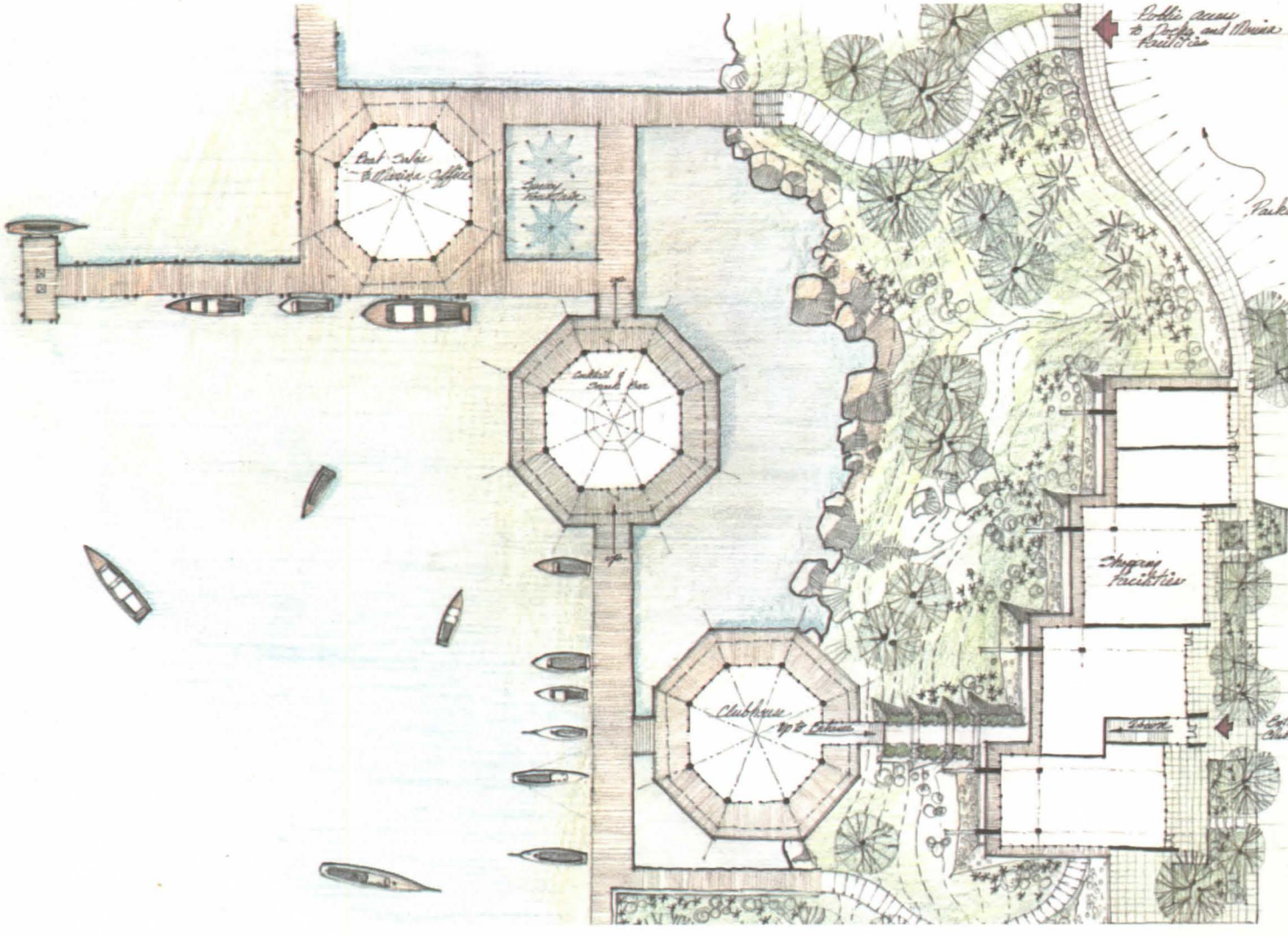
Problem: (1) design buildings that give vacationers a complete feeling of freedom, (2) protect them from reflected glare from the water, (3) provide economical heating and air conditioning.

On a hill overlooking the lake is a public shopping facility. For glazing this building, the architect would specify Thermopane® insulating glass with Vari-Tran(™) chromium alloy on the inside surface of the outboard light. Vari-Tran is the metallic coating applied to the glass in a vacuum equivalent to that found by astronauts 125 miles straight up. It controls transmission of light and heat to almost any extent you want to reduce glare and make air conditioning more efficient.

Renderings by Howard Associates, Architectural Illustrators, Sylvania, Ohio.

Mr. Roe has designed three octagon-shaped structures—a boat sales and marina office, a cocktail lounge and snack bar, a club house. Each affords 360° view of the scenery and activity surrounding it. For glazing, the architect proposes Thermopane fabricated with Parallel-O-Bronze. This hi-performance unit controls reflected glare from the water, reduces solar heat gain to keep interiors more comfortable, and helps air-conditioning equipment function more economically.

L-O-F makes a particular kind of glass for every purpose in building design. Refer to Sweet's Architectural File. Or call your L-O-F Glass Distributor or Dealer listed under "Glass" in the Yellow Pages. Libbey-Owens-Ford Company, 811 Madison Avenue, Toledo, Ohio 43624.



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14 Doctor/Owners Enjoy Year-Round Electric Space Conditioning In New Medical Office Building

West End Medical Center, Lancaster, Pa., is situated across from St. Joseph's Hospital.

THE CASE—St. Joseph's Hospital in Lancaster, Pennsylvania, has been serving that community for more than 100 years and is one of the most important medical facilities in the county. For the busy doctors practicing in the area, the time consumed in shuttling back and forth between their offices and the hospital, coupled with a serious shortage of parking space, has become an increasing problem. Thus, when Dr. Frank Mears approached five other doctors to suggest that they pool their resources and build an office building on an available site across from St. Joseph's, the response was understandably enthusiastic.

Architect David Lynch of Lancaster, who was retained to design the new building, recalls that he originally planned the West End Medical Center for the six co-owners only to learn after the building was under construction that he had 14 clients to please. Eight more doctors had joined the group. "Actually," Mr. Lynch says, "this didn't pose any serious problems as we had designed for easy, economical expansion anticipating that additional doctors would want space once the building was underway."

THE HISTORY—Completed in May, 1967, the West End Medical Center is just what the doctors ordered. Constructed of a reddish brown brick and precast concrete, the three-story structure has 17,600 sq ft of floor space and 14 medical suites ranging in size from 700 to 2,000 sq ft. A popular feature of the building is its electric space conditioning system, designed by Boyd C. Wagner, Inc., consulting engineers of Reading, Pa., after a feasibility study indicated that individual electric heating/cooling systems would cost less to buy, install, and operate than equivalent systems using flame fuels for heating. The 14 suites are equipped with individual packaged split-system air conditioning units of 3 to 5 hp, depending on the size of the suite. Compressors and condensers are roof-mounted. The air handling units are located within the suites and feed into duct systems with separate interior and perimeter zones each equipped with independently controlled duct heaters.

"It's an ideal system for this building," Mr. Lynch explains, "because by using the duct heaters in the perimeter zone for reheat, this zone can be on heating even when the interior zone of that suite requires cooling. All 14 doctors are delighted with the system."

SEE REVERSE SIDE FOR DETAIL INFORMATION

1 CATEGORY OF STRUCTURE:
Medical Center

2 GENERAL DESCRIPTION:
Area: 17,600 sq ft
Volume: 184,376 cu ft
Number of floors: three
Types of rooms: 14 medical suites

3 CONSTRUCTION DETAILS:
Glass: single
Exterior walls: Brick and block, 2″ polystyrene (R=7); U-factor: 0.10
Roof and ceilings: built-up roof on 1½″ mineral fiber board (R=6) on metal deck, 4″ mineral wool batts (R=13) on suspended acoustical ceilings; U-factor: 0.05
Floors: concrete
Gross exposed wall area: 9,974 sq ft
Glass area: 1,900 sq ft

4 ENVIRONMENTAL DESIGN CONDITIONS:
Heating:
Heat loss Btuh: 660,000
Normal degree days: 5060
Ventilation requirements:1700cfm
Design conditions: 0°F outdoors; 72F indoors
Cooling:
Heat gain Btuh: 618,000
Ventilation requirements:1700cfm
Design conditions: 95F dbt, 75F wbt outdoors; 75F, 50% rh indoors

5 LIGHTING:
Levels in footcandles: 20-70
Levels in watts/sq ft: 1-3
Type: fluorescent and incandescent

6 HEATING AND COOLING SYSTEM:
The 14 medical suites are equipped with individual packaged split-system air conditioning units in ratings ranging from 3 to 5 hp. Compressors and condensers are mounted on the roof. The air handling units are located within the suites and feed into duct systems with separate interior and perimeter zones, each equipped with independently controlled duct heaters. By using the duct heaters in the perimeter zone for reheat, this zone can be on heating even when the interior zone of that suite requires cooling.

7 ELECTRICAL SERVICE:
Type: underground
Voltage: 120/208v, 3 phase, 4 wire, wye
Metering: secondary and individual

8 CONNECTED LOADS:

Heating & Cooling (64 tons)	316 kw
Ventilation	10 kw
Lighting	80 kw
Water Heating	18 kw
X-ray, Etc.	60 kw
Other	40 kw
TOTAL	524 kw

9 INSTALLED COST:*

General Work	$287,573	$15.90/sq ft
Plumbing	67,878	3.75/sq ft
Mechanical	59,442	3.30/sq ft
Electrical	75,107	4.15/sq ft
TOTALS	$490,000	$27.10/sq ft

*Building was completed May, 1967

10 HOURS AND METHODS OF OPERATION:
9 a.m. to 10 p.m., Monday through Friday, and 9 a.m. to 3 p.m. on Saturday.

11 OPERATING COST:
Period: 2/21/67 to 2/20/68
Actual degree days: 5725
Actual kwh: 453,320*
Actual cost: $5,463.84*
Avg. cost per kwh: 1.2 cents*
*For total electrical service

Billing Date	Degree Days	Demand	kwh	Amount
3/22/67	847	134	52,090	$ 627.08
4/21/67	418	97	33,370	402.44
5/23/67	377	107	31,170	376.04
6/22/67	48	113	29,360	354.32
7/24/67		107	26,800	323.60
8/23/67		139	26,990	325.88
9/22/67	29	105	24,520	296.24
10/23/67	259	95	29,040	350.48
11/21/67	672	107	38,390	462.68
12/21/67	817	107	46,360	558.32
1/23/68	1296	141	64,750	779.00
2/20/68	962	139	50,480	607.76
TOTALS	5725		453,320	$5,463.84

12 FEATURES:
The electric heating and cooling systems give tenants complete control of comfort conditions within their own suites. The basic mode of operation of any given system is determined by a master thermostat which is located in the interior zone and which includes a selector switch for "heat, cool and fan only." Even when this thermostat is set for cooling, a secondary thermostat installed in the perimeter zone permits energizing the duct heaters for reheat should temperature conditions in that zone so require.

13 REASONS FOR INSTALLING ELECTRIC HEAT:
All parties concerned with the planning of the West End Medical Center—the owners, architect, and consulting engineer—felt that providing each of the 14 medical suites with its own heating/cooling system would be the most desirable means of space conditioning the building. Electric heating/cooling systems were found to cost less to buy and install and to design for individual zone control.

14 PERSONNEL:
Owners: West End Medical Center, Inc.
Architects: David Lynch & Associates
Consulting Engineers: Boyd C. Wagner, Inc.
General Contractor: Diller Plank, Inc.
Electrical Contractor: Nikolaus Electric Const., Inc.
Mechanical Contractor: Harry A. Ressler, Inc.
Utility: Pennsylvania Power & Light Company

15 PREPARED BY:
Benjamin A. Herr, Commercial Sales Representative, Pennsylvania Power & Light Company.

16 VERIFIED BY:
David Lynch, AIA
W. J. O'Connell, P. E.

Gentlemen:
Please send the complete series of Electric Heating Case Histories as they become available to me at the following address:

Name and Profession:
Firm, University or other affiliation:
Address:
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The Pearson chairs are so sensitively designed that they appear to be a study in pure form, but actually solve the dual problem of office seating: function and comfort. To preserve the lines of these designs Knoll has developed a new compact control unit which eliminates the mechanical clutter underneath. Another contribution by Knoll to the total office. Designed by Max Pearson of the Knoll Design Development Group. **Knoll Associates,** Furniture and Textiles, 320 Park Avenue, New York, New York 10022. Knoll International operates in 29 countries.

LETTERS

(*Continued from page* 18)

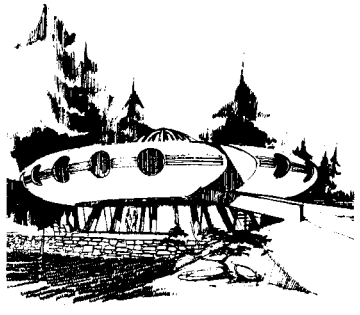
as nude drama, music composed by IBM computers, and abstract sculpture, the communications between architects and the public is indeed a minor issue. After all a building basically looks and functions as a building, even if the public does not at once identify with and appreciate its appearance.

History passes judgment on the arts. After a generation passes some works of art become greatly appreciated by the public, and others which had been accepted by the avant garde of their day fall into deserved obscurity.

In my own field of Architecture, there is only your publication which has assembled the editorial staff to serve the architect with a highly respected journal of architectural development and criticism. I believe I speak for the majority of architects in this country with such a statement.

Forum is the only magazine in architecture which keeps us aware of what is developing in European architecture as well as American developments. Forum's editors speak the language of architecture; they are fully informed on the history of contemporary architecture, and they are as interested in architecture as we architects. Therefore, it follows that they feel able and free to criticize architecture, and we architects read their criticism with respect.

TEVIS C. FREEMAN
Moline, Ill. *Architect*



SAUCER'S DOUBLE

Forum: To see a project of mine (drawing above) completed by another mind [March Footnote, p. 86], saddens me greatly, but to know of another man with thoughts such as mine insures me of my convictions.

MICHAEL P. JOHNSON
Colgate, Wisc.

GETTING IT

Forum: Congratulations for including in your March issue the Charles Moore/William Turnbull Faculty Club at Santa Barbara, reviewed excellently by Professor Gebhard.

Fortunately, Professor Gebhard is the *first to dismiss the issue of* "style," thereby degrading to poppycock the apparent war raging in sister journals over the orthodoxy of buildings of this stylistic genre, and perhaps explaining its presence in Forum.

The building is, in fact, for all its cuteness, subversive. Behind the witty allusions and beneath the designers' obvious concern for that very traditional role of architects, place-making, are issues that challenge the gut of today's professionalism. In fact, even the gaudy Technicolor with its marvelously awful reds and blues is consistent with the ironic attitude taken by the designers.

In their irony they recognize the real condition of the status of architecture in our culture. Our budgets, programs, and methods (of construction as well as formal) are antiquated: the "high-tech" expressionism of many recent projects are simply further examples of architectural Pollyannaic denial. Industry and the Defense Budget are putting the big money elsewhere, and perhaps the combiners of vivid banalities, such as the designers of this project, are more valid by expressing ironically our society's inverted scale of values.

Yet, one problem remains with "architects' architecture." Much like the inflated and ridiculous monuments of Claes Oldenburg, where no chance of their being built makes them no threat to monumentality, architecture of this sort, with its appealing picturesqueness, borders on the threshold of being not fully understood.

It is obvious that Governor Reagan and the Board of Regents don't "get it." Yet, perhaps I'm being caught in my own trap: maybe the virtue of spoof *cum* comment lies in getting it built full-size, before realization of its subversive stance sets in.

PETER C. PAPADEMETRIOU
Assistant Professor,
Rice University *School of Architecture*

ADDENDUM

In our March story on the Faculty Club at the University of California at Santa Barbara, we neglected to mention Richard Peters who was responsible for the lighting, and Richard Whitaker who was associated with the firm at its beginning.

Unified with white. MEDUSA WHITE.

Precast units in the low rise shopping complex include 14,000 lb. arches, 7,000 lb. parapets, 2-piece columns. In the high rise office complex; 610 window units (5′ x 12′).

All are precast in Medusa White, the aristocrat of white portland cements, for design unity in color. Use Medusa White to bring faithful reality to any color theme in any concrete structure. Write for White Precast Bulletin, Medusa Portland Cement Company, P.O. Box 5668, Cleveland, Ohio 44101.

VILLAGE PLAZA, Dearborn, Michigan. *Architect: Harley, Ellington, Cowan & Stirton, Detroit, Mich. Gen. Contractor: A. Z. Shmina & Sons Co., Dearborn, Mich. Precast Producer: Precast/Shokbeton, Inc., Kalamazoo, Mich.*

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Chicago's First National Bank built PPG Performance Glass into its HVAC system

And took a big chunk out of heating and cooling costs.

PPG's *Solarbronze*® *Twindow*® not only saved money on original equipment—it has a major role in reducing annual operating costs for Chicago's One First National Plaza. The extraordinary insulating properties of *Twindow* glass greatly increase the cost efficiency of the building's unusual all-electric heat-recovery HVAC system.

The complex cooling system recovers heat from the building's interior lighting system by drawing warm air from occupied spaces and cooling it with chilled-water equipment to produce the desired temperature level. Because *Solarbronze* Plate Glass tends to minimize solar radiant heat energy and the double thickness of *Twindow* glass reduces the conducted heat gain, the amount of chilled water required by the HVAC system is reduced. This efficiency results in important annual operating cost savings to the bank.

Other factors influenced the selection of *Solarbronze Twindow.* Its double thickness of glass permitted desired humidity levels (30-40%) to be maintained without condensation on interior glass surfaces. Heat-strengthened *Solarbronze Twindow* also met strength requirements—50-psf wind loadings in this case—and its color harmonized with the bronze tone of exterior metals.

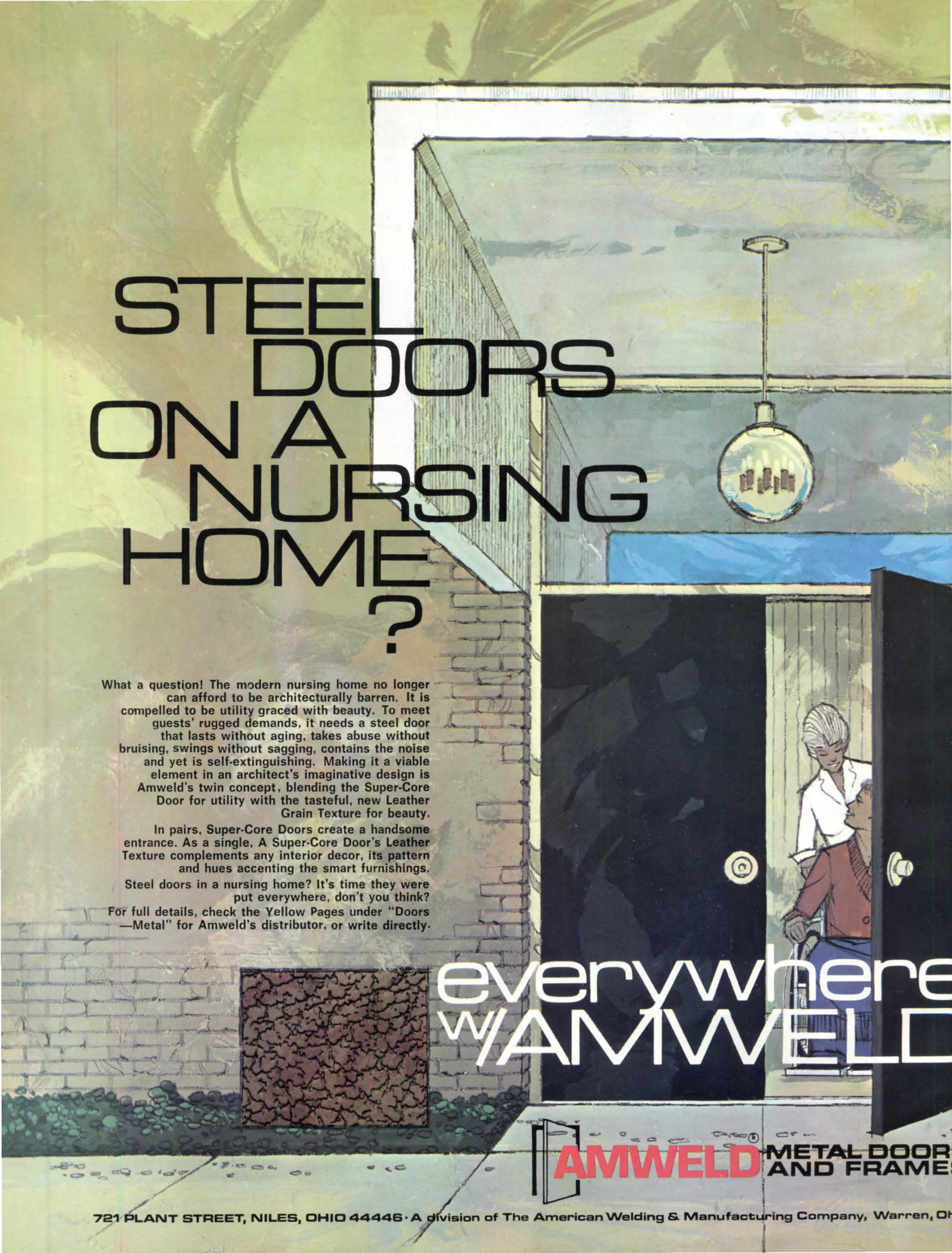
The various PPG Performance Glasses help realize significant savings in original mechanical equipment costs, reduce brightness, aid in temperature control or reflect like a mirror to enhance exterior design.

Contact a PPG architectural rep for technical data or write: PPG Industries, One Gateway Center, Pittsburgh, Pa.

Architects and Engineers:
The First National Bank Architects (C. F. Murphy Associates and the Perkins and Will Partnership, a joint venture).

PPG is Chemicals, Minerals, Fiber Glass, Paints and Glass. So far.

PPG
INDUSTRIES



STEEL DOORS ON A NURSING HOME?

What a question! The modern nursing home no longer can afford to be architecturally barren. It is compelled to be utility graced with beauty. To meet guests' rugged demands, it needs a steel door that lasts without aging, takes abuse without bruising, swings without sagging, contains the noise and yet is self-extinguishing. Making it a viable element in an architect's imaginative design is Amweld's twin concept, blending the Super-Core Door for utility with the tasteful, new Leather Grain Texture for beauty.

In pairs, Super-Core Doors create a handsome entrance. As a single, A Super-Core Door's Leather Texture complements any interior decor, its pattern and hues accenting the smart furnishings.

Steel doors in a nursing home? It's time they were put everywhere, don't you think?

For full details, check the Yellow Pages under "Doors —Metal" for Amweld's distributor, or write directly.

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THE ARCHITECTURAL FORUM

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FORUM

The following ad-libbed remarks, by Ian McHarg, ecologist and landscape architect (below), are from a recent Public Broadcast Laboratory program entitled "Multiply and Subdue the Earth," aired on Channel 13 in New York:

"The natural instinct is to stamp upon palpitating hearts. If you want not only to be able to say don't, you also want to be able to stand up to any developer and say, friend, I know about the last time. . . . The houses slid down the hill, and somebody sued you, and you don't want that to happen again. And the man says, I certainly don't. And you say, just come to me, I'll tell you where . . . [but] the only one we can ask is nature. . . .

"If you know about climate, historical geology and physiography, and surficial geology, you know about physiography because that is the current state of the world's surfaces as a result of these ongoing processes. If you know about [physiography], then you know about hydrology and if you know about the movements of water, then you know about soils. If you know soils, then you can understand the distribution of plants.

"And if you know where plants are, then you know where animals are, because squirrels eat acorns and robins eat worms. And when we get to that point, we can introduce man and man responds to these things in a causal way, too. . . . But it's not enough simply to identify this. We must integrate it.

"For urbanization we select favorable conditions of slope and aspect and orientation and foundation conditions and soil drainage and amenity. And we avoid detrimental conditions like flood plains and aquifer recharge areas.

"For agriculture, we select conditions of soils, intrinsic productivity, physical properties, soil drainage slopes, and so on, which represent primary agriculture in a range of values.

"And we do the same thing for recreation by types. Here we identify all the lands where development would be a hazard to life or limb and the unique natural resources.

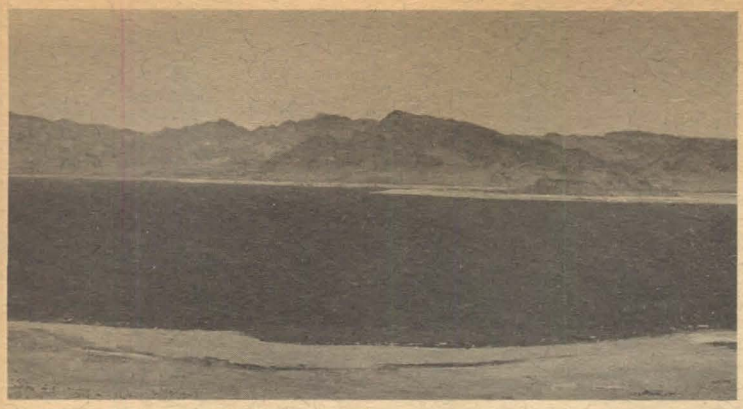
"Now, having identified these individual suitabilities, we arrange them in a hierarchy of importance and we say, the category of *protection* preempts all other land uses. Now this is a judgment. Of course, society doesn't do this in a moment. . . . Men say, where is this most valuable resource, where is this process which is absolutely essential to life, let us screw it up with all joy."

ECOLOGY

ALLIGATORS AND INDIANS

Interior Secretary Walter J. Hickel is giving every indication that his preconfirmation critics were, at least, premature. His commendable handling of the Santa Barbara oil-slick disaster has since been matched by sensitive policy decisions involving vanishing species, migratory waterfowl, and Indian affairs.

- A much-publicized overnight camp-out in the Florida Everglades brought the announcement that he would "skin on the spot" any poachers he found. The blend of conservationist fervor and tough talk, reminiscent of Teddy Roosevelt, was in behalf of the alligator, whose numbers have dwindled from a million to 20,000. The means: additional National Park Service Rangers, tougher punishments, and the recruiting of a "citizens' posse."
- On April 9, Hickel reversed his predecessor's approval of plans to fill in a Potomac River marsh for a highrise apartment development. In a letter to Army Secretary Stanley Resor asking him to block the Army Corps of Engineers' scheduled landfill of Hunting Creek near Alexandria, Va., he said the marsh provides "a feeding and resting ground for migratory waterfowl, a vista across the Potomac from the George Washington Parkway, and a natural boundary for Jones Point National Park."
- Most salutary of all, he has declared his opposition to the California-Nevada interstate water compact. That scheme would divert, for irrigation purposes, waters of the Truckee River, which flows into Nevada from its origin in Lake Tahoe on the two-state



border. While providing benefits for white farmers, it would spell ruin for the Northern Piute Indians, since the Truckee is the sole water source for Pyramid Lake (above), and Pyramid Lake is the Piute's sole source of livelihood. (The Piutes use the lake as a fishery, but hope to begin developing it for tourism and recreation.)

Hydrologists say that the terms of the compact will dry up the lake within 25 years. Nevada has approved the compact, California is expected to, and the U.S. Senate must confirm it.

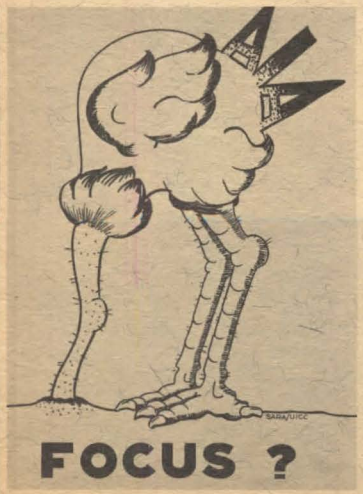
To have given Pyramid Lake to the Piutes in 1859 only to take away the water in 1969, is what the White Man, of course, calls Indian giving.

STUDENTS

SARA AND TAR MEET THE AIA

Two activist student groups have "organized" recently, though that may be too structured a word.

SARA (Students Associated for Responsible Architecture), at the University of Illinois' Chicago Circle—"only a chairman and a secretary; no membership roster"—is pressing for student involvement in the ghettos, for intercollegiate courses, and for "optimum communication" by confrontation — this last at the June convention of the AIA. That gathering's theme, "Focus Now," was the subject for a SARA satirist (bottom left).



TAR (The Architects' Resistance), on the other hand, goes after racism and the military-industrial complex with zap. Its first position paper, "Architecture and Racism," demanded that Skidmore, Owings & Merrill renounce their association with the Carlton Center project in Johannesburg, South Africa, and called for demonstrators to picket SOM's offices in New York on the anniversary of the Sharpeville Massacre (when South African police opened fire on peaceful black demonstrators).

TAR's manifesto, larded with "the exploitation of oppressed masses," was not without a few

pungent slogans for the pickets who turned out from Pratt Institute, Cooper Union, and other schools (above)—"Somewhere an SOM architect is drawing two sets of bathrooms — white and black."

On March 28, the Boston chapter of TAR, 175 strong, overwhelmed a workshop being held at the Boston Architectural Center by the AIA and the Office of Civil Defense on nuclear protection design, attended by about 25 architects and engineers. TAR was primed to ask some sharp questions, having come from its own workshop where speakers had denounced the shelter program. The speakers were Philip Morrison, professor of theoretical physics at MIT; Arthur Waskow, Institute for Policy Studies, Washington, and author of *America is Hiding;* and Architect Shadrach Woods.

And what does TAR have planned for the AIA convention in Chicago? Henry Stone, who may very well *be* the New Haven branch, and who is circulating an anti-shelter petition to "architects, planners, students, and related environmentalists," said: "Just say we'll be there."

AWARDS

ISSUES AND ARCHITECTURE

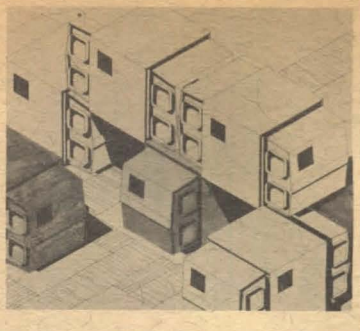
A musical fountain, suitable for urban parks, a one-room shelter for vagrants, and a mobile school for migrants—the top three winners in the Reynolds Metals Co. annual design awards program for architecture students—are a good indication of "where it's at" with many young designers these days. (Fourteen of the 21 entries dealt with environmental and social problems, including community facilities and recreational needs.)

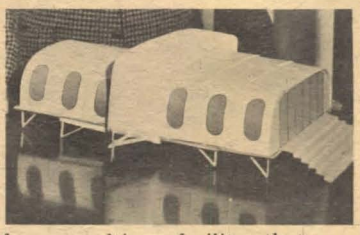
Top prize of $5,000, shared between student and school, went to

Gerald D. Runkle of Ohio State University for his "Soundfountain" (above), an urban tranquilizer made of water pipes, aluminum paddle-wheels and musically tuned vibrator arms.

A $1,000 honorable mention prize was awarded to Hal M. Mosely Jr., of the Cranbrook Academy of Art, Bloomfield Hills, Mich. His "Living Unit for One" (top right), made of aluminum extrusions, could be trucked to any location, plugged into existing utilities, and clustered for use by vagrants, migrants, etc.

MIT's Mark W. Vande—honorable mention, $1,000—was cited





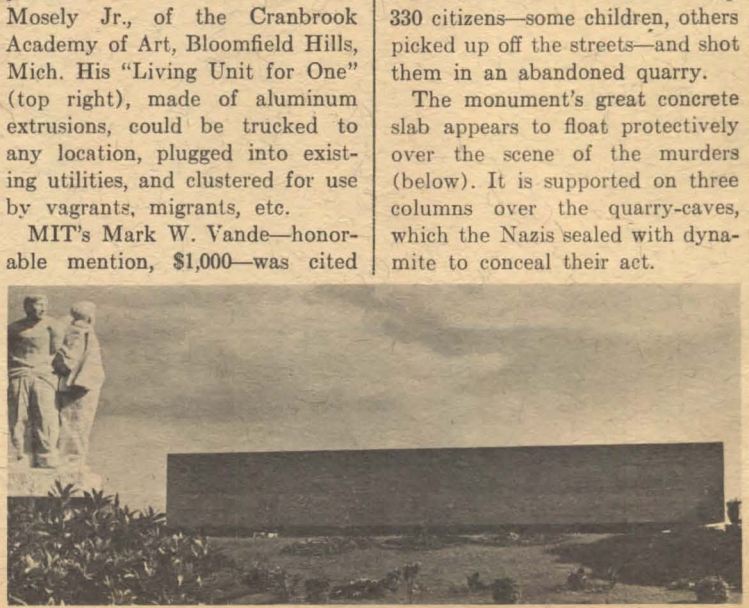
for a multiuse facility that expands like an accordian from both sides of a trailer (above). Intended primarily for use as a school, the mobile unit, says Vande, could be set up and made operational by two people.

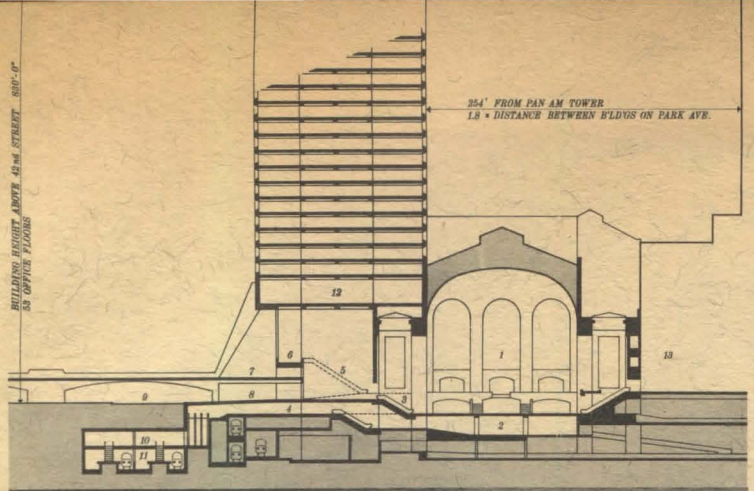
MASSACRE MEMORIAL

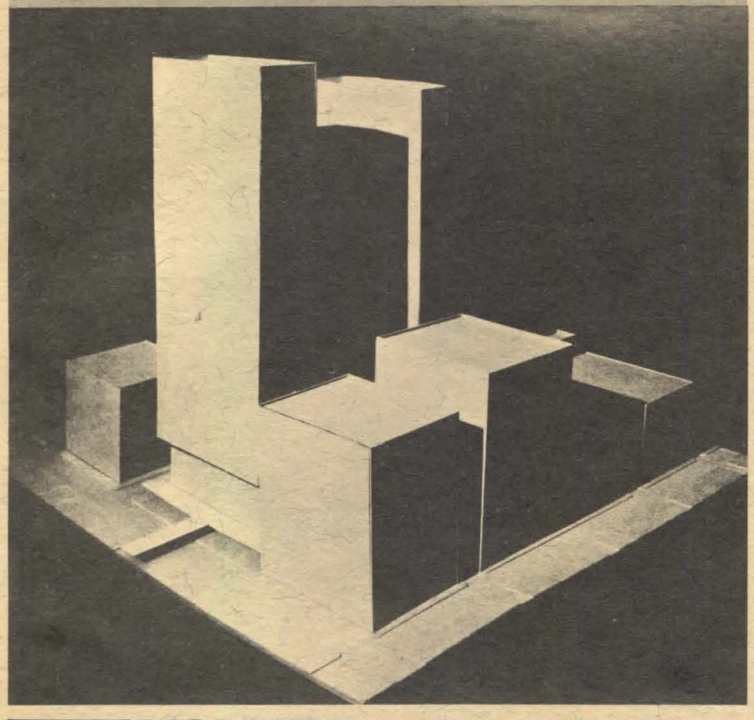
The AIA's Henry Bacon Medal for Memorial Architecture will be awarded this year for the first time since it was given posthumously in 1966 to the late Eero Saarinen for his St. Louis Memorial Arch. Five Italian architects—Nello Aprile, Gino Calcaprina, Aldo Cardelli, Mario Fiorentino, and Giuseppe Perugini—will be honored at the AIA convention for a mausoleum completed in 1950, which commemorates the Fosse Ardeatine Massacre of 1944.

As Italy was being liberated, some Roman underground fighters hurled a bomb at marching Nazi troops, killing 33. In retaliation, the German command rounded up 330 citizens—some children, others picked up off the streets—and shot them in an abandoned quarry.

The monument's great concrete slab appears to float protectively over the scene of the murders (below). It is supported on three columns over the quarry-caves, which the Nazis sealed with dynamite to conceal their act.







DISPUTES

BREUER TWO

The battle over the future of Manhattan's Grand Central Terminal continued unabated last month, with no major changes in positions.

Marcel Breuer, whose first design for developer Morris Saady had consisted of an astonishing office slab growing out of the roof of the neoclassical landmark (see July/Aug. '68 issue) has now come up with an alternative: in response to a suggestion from the city's Urban Design Council, Breuer now proposes to demolish the exterior of the present terminal, retain the great interior concourse, and erect a no-nonsense modern tower to its south (see above). Breuer Two would be a lower building, much more efficient in terms of interior and exterior circulation, and less expensive to construct. The money thus saved, according to Breuer and Saady, would be used to restore the currently defaced concourse, and to face the new tower with suitably impressive granite.

The opposition was, of course, predictable. At a hearing before the Landmarks Preservation Commission, numerous architects, historians, and critics argued that the terminal should be preserved in its present state—or, if anything, restored—and that no tower of any sort was acceptable in this location.

Other architects, historians, critics, and planners pointed out that there simply was no way of keeping the Penn-Central railroad from leasing the air rights over the terminal to *any* developer willing to pay the price.

The argument is confused and confusing, but essentially it seems to come down to this:

(1) Judged solely in terms of circulation and tie-ins to subway lines, suburban trains, trucks, taxis and buses, the Grand Central area is probably the best conceivable location for a tall office building. Those who argued that the building would overcrowd the area have failed to make a very persuasive case; the improvements in access to subways and trains contained in Breuer One and, especially, Breuer Two may, actually, help untangle local traffic.

(2) Although the terminal has been designated a "landmark," New York's rather feeble Landmarks Law protects only the exterior of the building (which most historians consider to be of limited value), but not the great concourse inside (which most historians consider to be invaluable).

(3) This means that a developer could, quite legally, retain the indifferent exterior of the terminal, and fill up the considerable volume of the concourse with offices, say, or a department store—thus destroying the one feature of the terminal admired by all.

If the Landmarks Preservation Commission rules against Breuer Two, the developer or the railroad (or both) could go to court to have the landmarks designation removed. This may take time, but the courts are almost certain to do just that, since the city can't afford to reimburse Penn-Central for loss of revenues.

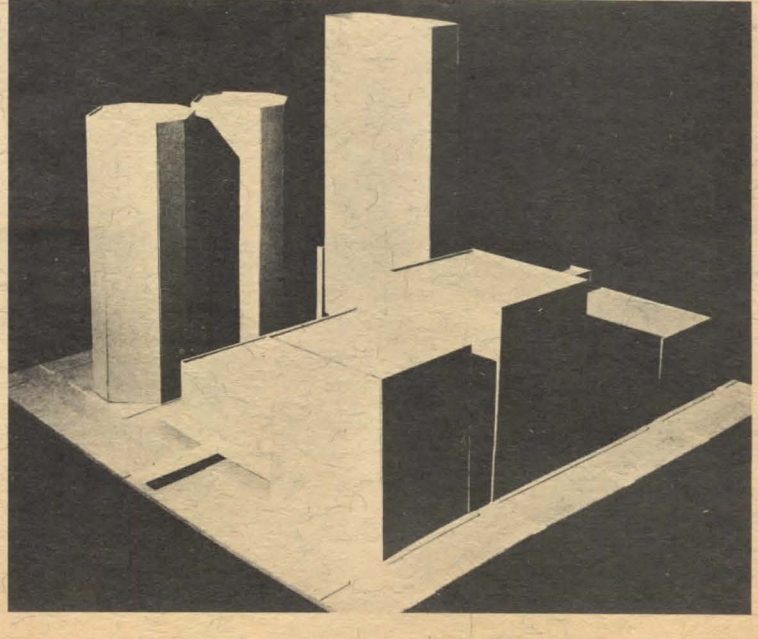
At this point, unless Saady has bowed out, Breuer Two (or something like it) will probably be built, and the interior concourse will then be saved. But if Saady loses interest along the way—a distinct possibility—a less sensitive developer will be entitled to move in, with a less sensitive architect, and the *entire* terminal, exterior, concourse, and all, may be lost.

The only practical alternative to a tower over Grand Central was suggested by Architect Jacquelin Robertson, head of the City Planning Commission's Urban Design Group. "Our analysis of Penn-Central holdings in the area shows that the railroad has potential income-producing alternatives to the Breuer proposal on a number of nearby sites," Robertson said. "By amending the Zoning Resolution to allow greater flexibility in bulk transfers . . . we could assure that most, if not all, of the allowable floor area could be transferred to any combination of adjacent blocks" (see one possible alternative, below). Assuming that the City Planning Commission can effect such bulk transfers, and assuming that Saady (or any other developer) would be satisfied with the alternative sites, then the old terminal may yet be saved.

HOUSING

BEACHHEAD FOR THE POOR . . .

The Chevy Chase section of Washington, D.C., is wedged between the Potomac River and Rock Creek Park, which snakes northward into Maryland. Rock Creek, until recently, had served as a natural barrier between an expanding black community on the east and white Chevy Chase on the west. Establishing a beachhead for blacks in Chevy Chase is the National Capital Housing Authority. With the approval of Mayor Walter E. Washington, they are purchasing Regency House, a privately built "luxury" highrise apartment building, for use as public housing. Not only will the new tenants be 90 per cent black and, of course, poor—maximum annual income: $3,300—they will be elderly as well—62 and over.



NCHA is following HUD guidelines to spread public housing throughout the city and to avoid impacted low-income areas. The purchase differs from Turnkey projects in that Regency House has been rented for some time and NCHA will have to provide moving expenses and relocation assistance to tenants who are currently paying $110 per month for an efficiency apartment and $150 per month for a one-bedroom unit. Once converted to public housing, those rents will be reduced to $50 and $55.

The fourth such purchase in this pioneer NCHA program, Regency House is the first to so clearly breach color and income lines—and the opposition has been great, though not overtly racial.

In fact, to Dr. Robert N. Butler, gerontologist and psychologist who lives one block from Regency House, citizen opposition stems less from the fact that the community is middle-class white than from the fact that it is middle-*aged*. "They don't want all those ugly old people around . . . who may sit on the curb and clutter up the neighborhood with canes."

. . . FORTRESS FOR THE RICH

If white homeowners in the Washington suburb of Chevy Chase feel any further threatened (see above), they may soon be able to retreat eight miles up the Potomac to a proposed "maximum-security" subdivision. Here property owners will have plunked down a minimum of $200,000 for the comfort of knowing they have been properly "screened."

Protection for the 167-acre community will begin with a perimeter post-and-rail fence. Inside this will be wire mesh screening, then shrubbery, in which electronic sensors will be concealed. Only two entrances will give access to the castle keep, and both will be flanked by guardhouses, where all nonresidents will be stopped until guards have checked by phone with the homeowner being visited. Even residents will be required to carry identification cards. Children will be picked up by a private minibus and brought to the entrance guardhouse where they will transfer to a regular school bus. Streets, incidentally, will be called circles and named after American authors, whose positions are already secure. So as not to seem *altogether* humorless, two of these will be Thurber and Thoreau.

"It's no reflection on the Montgomery County Police," says C. Edward Nicholson, lawyer for the developers. "Your wife will be able to visit next door at 1 a.m., and you won't have to worry."

"A wife going next door at 1 a.m. should be a worry in any neighborhood," said an editorial writer in the *Washington Post*. He then concluded: "People who can afford to pay $200,000 for a house surely ought not balk at buying an ABM installation from the nearby Pentagon."

NORTHERN RACISM

In February, Federal Judge Richard B. Austin ruled in a suit against the Chicago Housing Authority that it had practiced racial segregation by site selection and tenant assignment—in effect, building black projects for blacks, and white projects for whites.

Now the Department of Justice has joined, as "friend of the court," a case brought against a group of Chicago real-estate agents and lending institutions. The department's brief urges the federal court to rule that Negroes have a legal right to recover overcharges exacted from them in the selling practice known as "blockbusting."

The plaintiffs, black homeowners in Chicago's Lawndale area organized as the Contract Buyers League, charge that agents have introduced one Negro family into white neighborhoods in order to "panic" whites into selling for below-market value. They then resell to blacks for much more than actual value.

Lawndale homes, according to Assistant Attorney General Jerris Leonard, were purchased in this manner for as little as $12,500 and resold for as much as $25,000.

Called the "first effort to break massive Northern housing segregation" by Attorney General John N. Mitchell, the Chicago case will not be the last. Seven other cities are currently being studied. Next most likely target: Detroit.

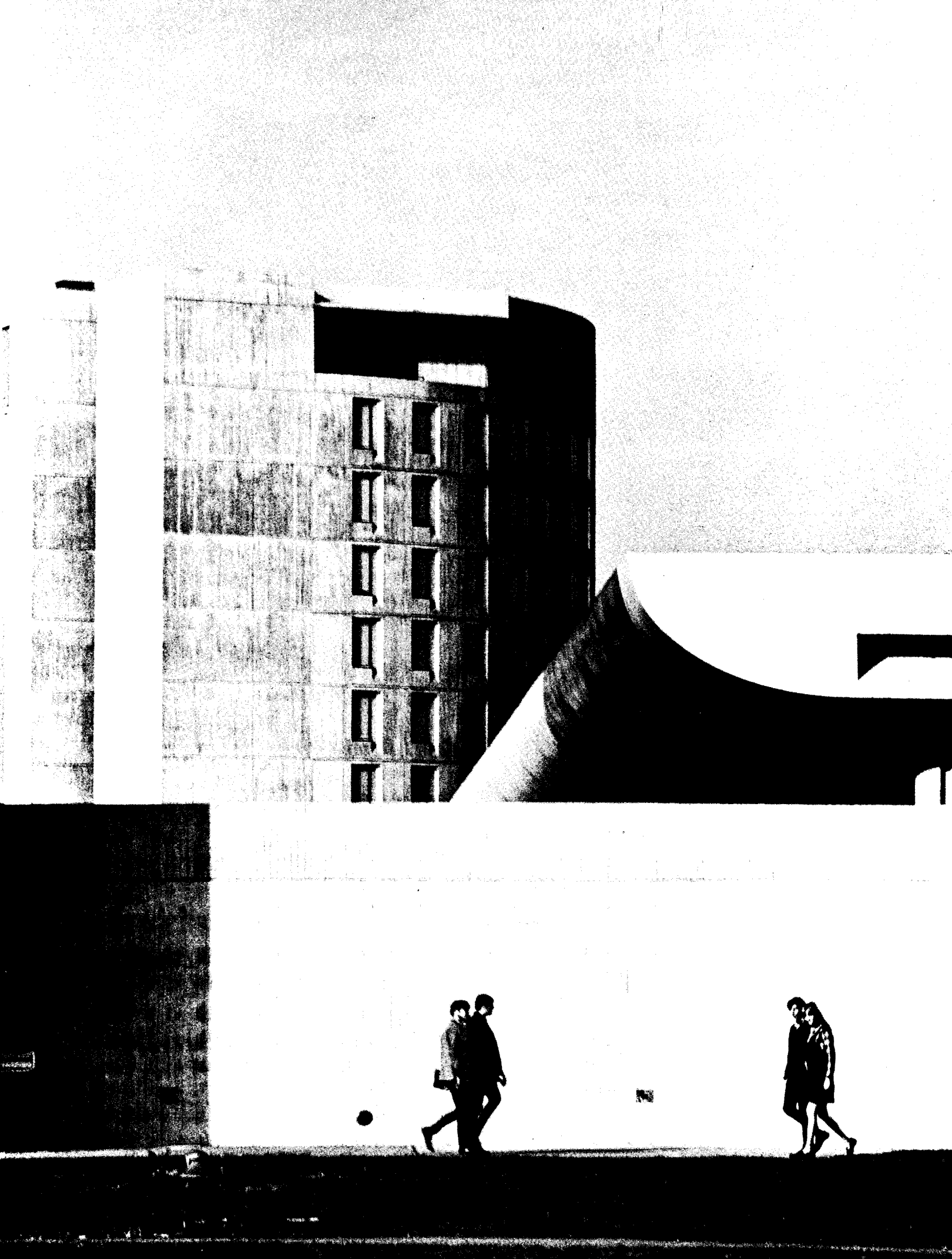
TRANSPORT

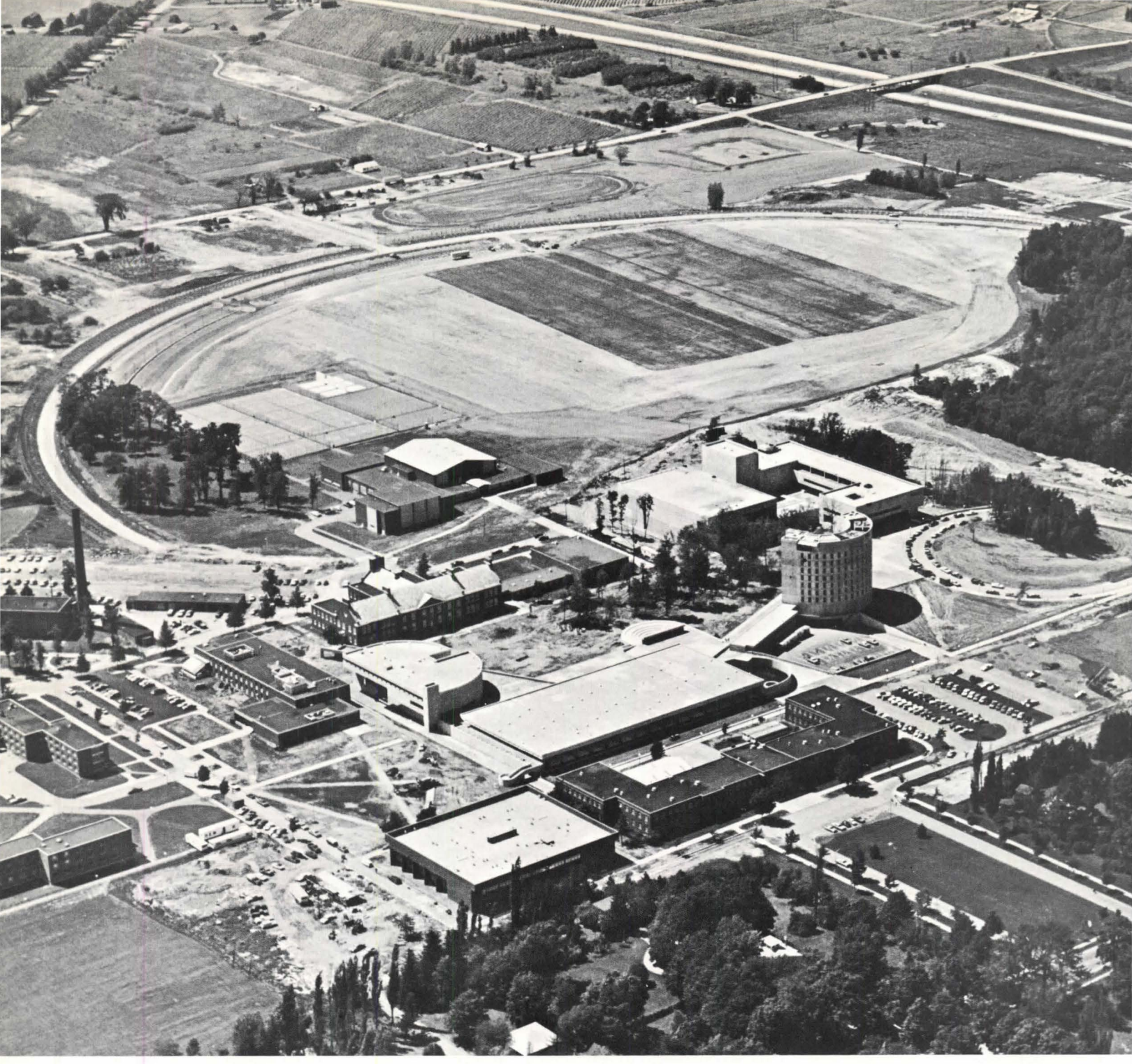
VIEW FROM THE TREETOPS

Ribbon-cutting ceremonies last month in Philadelphia involving civic dignitaries and a lady elephant—who held the ribbon in her teeth—transformed the country's oldest zoo (1859) into the hippest.

A 1.1-mile-long, open-car monorail—said to be the first for any major zoo in the world—made its

(*continued on page* 93)





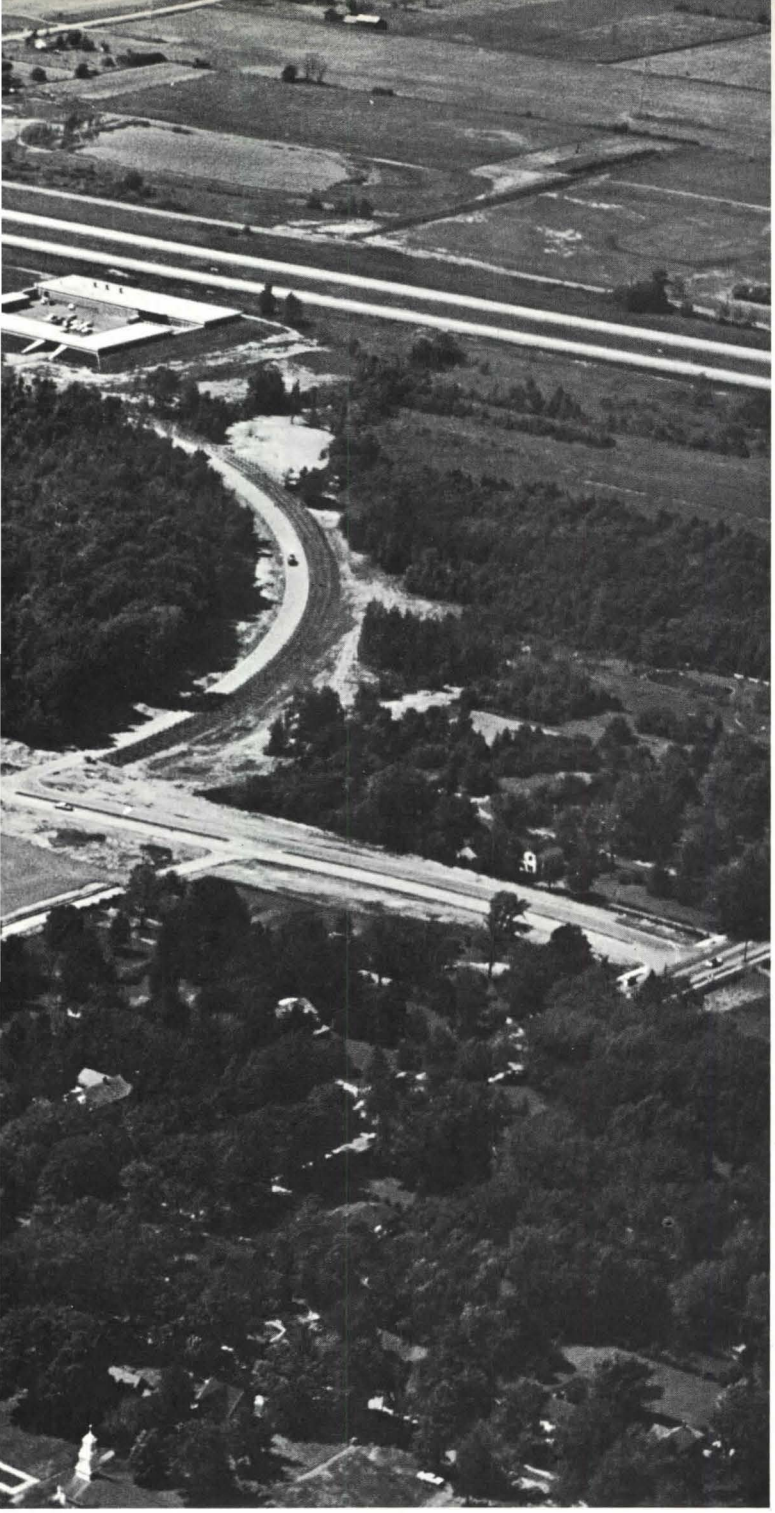
Until this year, it looked for all the world like an army camp, with its barracks-style buildings scattered aimlessly over a flat, monotonous site. But now, the State University College at Fredonia, N. Y., is unmistakably a campus community.

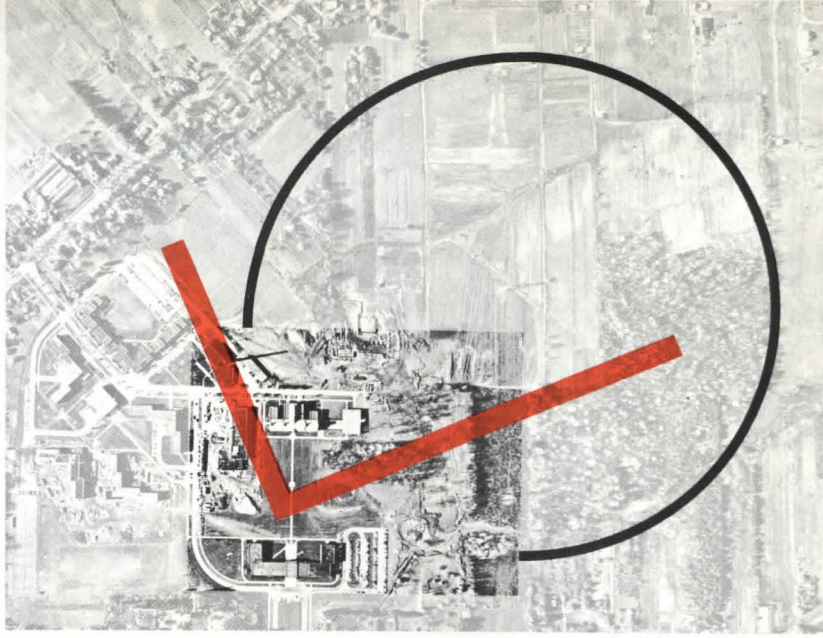
Architects I. M. Pei & Partners have transfigured Fredonia by introducing two powerful new visual elements onto the site. One is an Academic Center composed of five major buildings and a highly versatile pedestrian spine that joins these buildings together at the heart of the campus. The other element is a circular drive that rings the perimeter of the campus and connects with the core at its two terminal points.

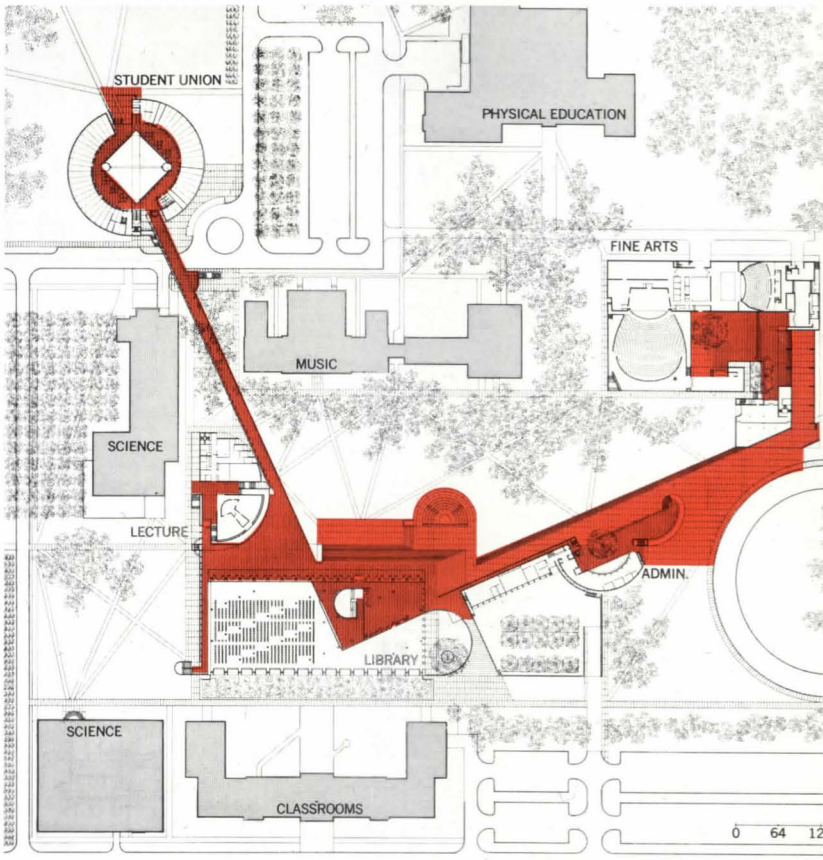
Neither the pedestrian spine nor the vehicular drive were part of the design program given to the Pei office by the State University Construction Fund. "But the site was lacking in interest topographically, and the original lack of personality had been made into a positive dreariness by the way in which the campus had been developed," says Architect Henry N. Cobb, the firm's partner in charge of design for the Fredonia project. "We felt compelled to make a gesture of a kind and of a scale which would get some quality of community into this very uninteresting place."

That was the genesis of the conceptual plan shown at the top of the opposite page. Its forms reflect both the functional needs established by the client and the visual goals set by the architects.

Thus the circular drive, around







The five buildings of Fredonia's new Academic Center are positioned along a diagonal pedestrian circulation spine that penetrates the heart of the campus (plan above). It is linked to the old campus buildings by a network of radiating pathways. A double row of soaring poplars has been planted around the circular drive to relieve the monotony of the flat site near Lake Erie in New York.

which has been planted a double row of lombardy poplars, not only serves as a single means of vehicular access for both the residential and educational zones of the campus, but will (when the fast-growing, indigenous poplars reach their full height of 100 ft.), provide a positive enclosure for what is now a seemingly endless site. And the diagonal spine not only serves as a pedestrian movement system between the communal buildings that compose the Academic Center (student union, lecture center, library, administration, and fine arts center), but provides a vital, visually stimulating focus that the campus never had before.

It is the spine, and not the individual buildings along it, that gives a new sense of identity to Fredonia. Its diagonal form, which penetrates the core of the campus from two sides and converges at the library (above), is superimposed on a grid system to which all of the campus buildings conform—including those on the spine itself. "We selected the diagonal form," says Cobb, "because we wanted to make the spine not only a part of the buildings but a part of the landscape. We wanted to create a confrontation and involvement between the two systems."

The "confrontation" is further heightened by the architects' choice of materials. The spine and the buildings that form the Academic Center are of board-formed reinforced concrete, while the departmental classroom buildings and dormitories, both old and new, are of brick. (The Pei office has also designed a new

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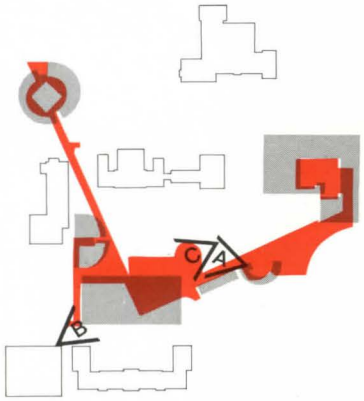
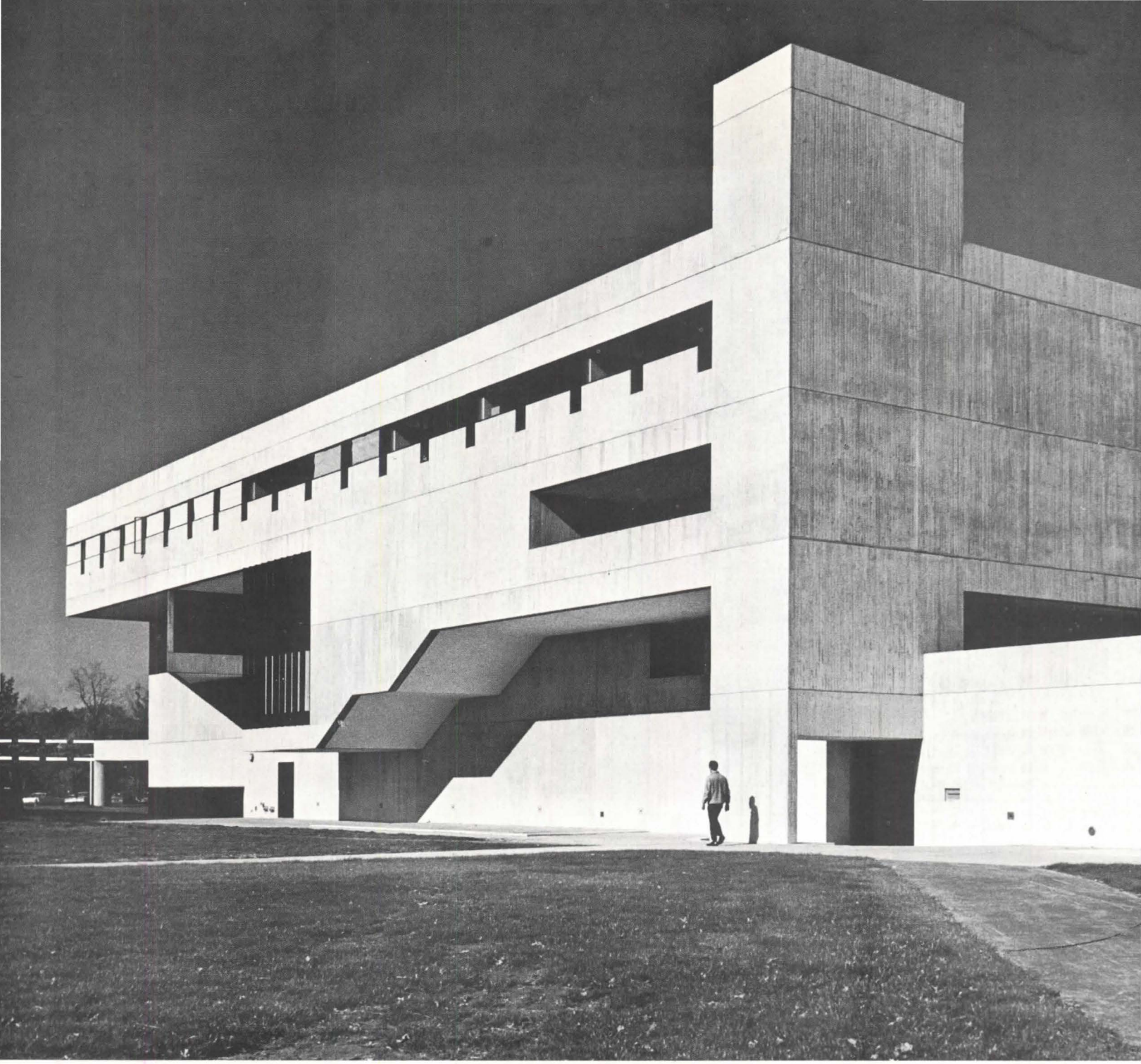


The library rises above a monumental, stepped platform at the center of the campus. Its main entrance from atop the platform leads to a mezzanine above the ground floor, which extends under the steps. A series of precast concrete sunshades form the library's rear elevation (top).

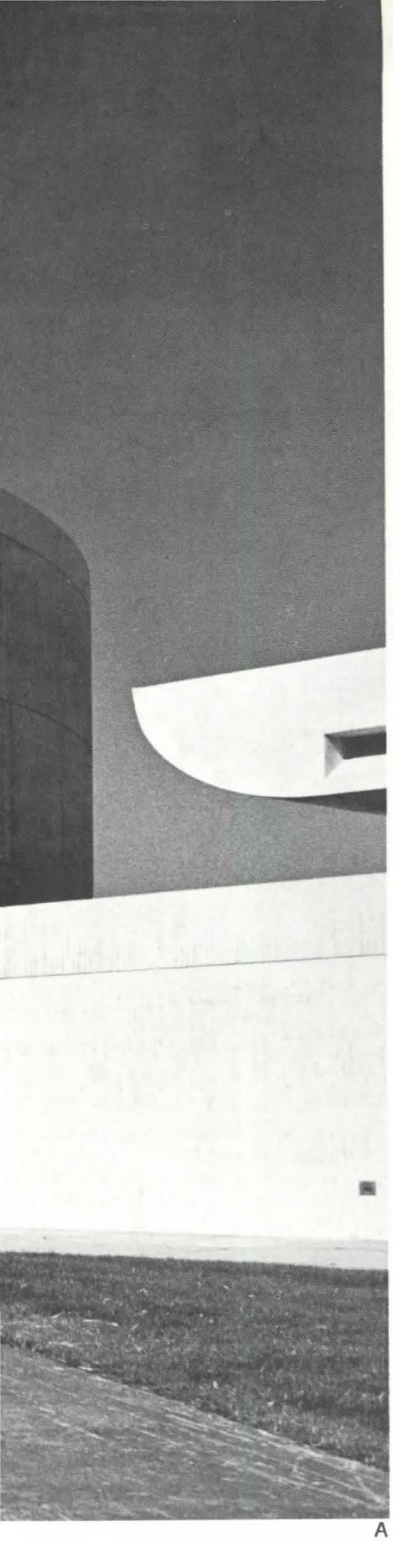


science building, social sciences building, and dormitory complex —all of them in brick.)

The spine's diagonal form and its execution in concrete only partly account for its strong impact on the campus. Equally important are the many and varied metamorphoses that the spine goes through along its 400-ft. length. These dramatic changes in *shape and function* give the spine a life of its own, making it much more than a mere circulation corridor.

From one of its two terminal points, the student union (now under construction), the spine begins as a simple, elevated pedestrian bridge that passes through a narrow opening between two existing classroom buildings. Its next point of contact is the half-circular lecture center (photos above), which contains two large lecture theaters flanking the deep notch in the facade of the upper level, and a variety of smaller halls at ground level.

But rather than penetrate into the lecture center at its point of contact, the bridge bypasses it and transforms itself into a broad plaza that wraps around the curve of the lecture hall to meet its main entrance, and spreads out to engage the library. Here the spine becomes many things: a two-level circulation system joining the library and lecture center both above and below grade; a prow-shaped mezzanine, formed by the vertex of the spine (see plan), at the upper level of the library; a monumental mound spilling down a series of broad steps to meet the



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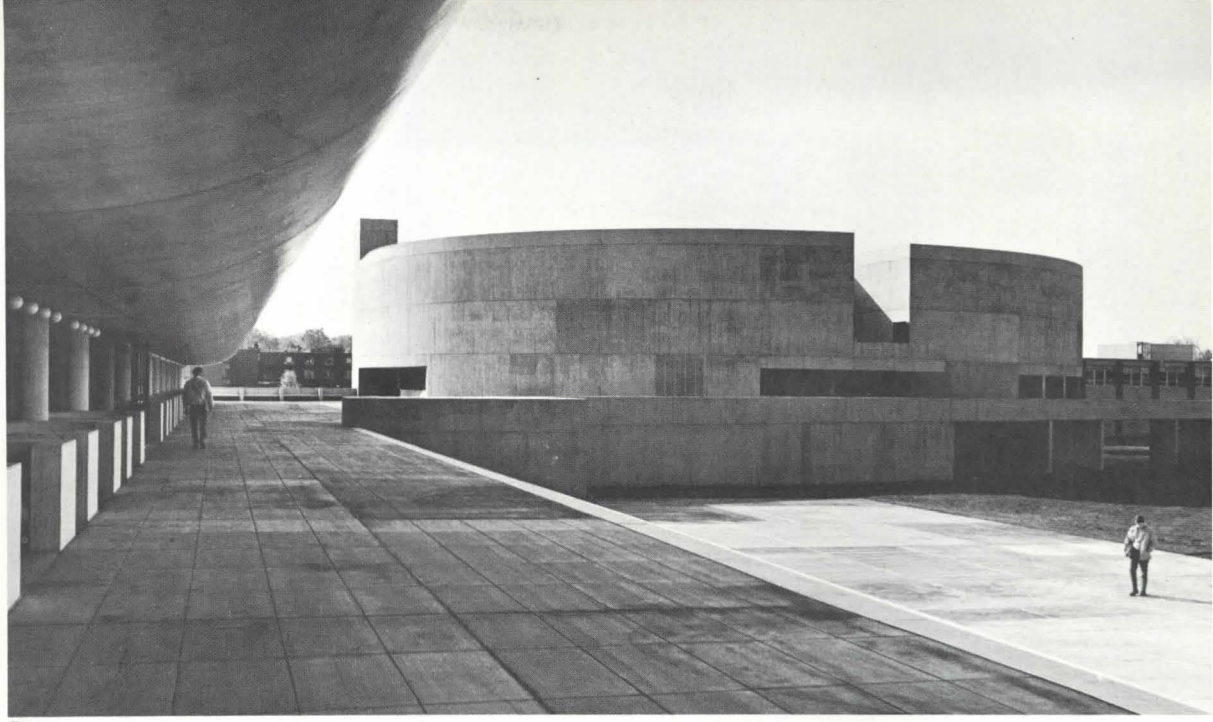

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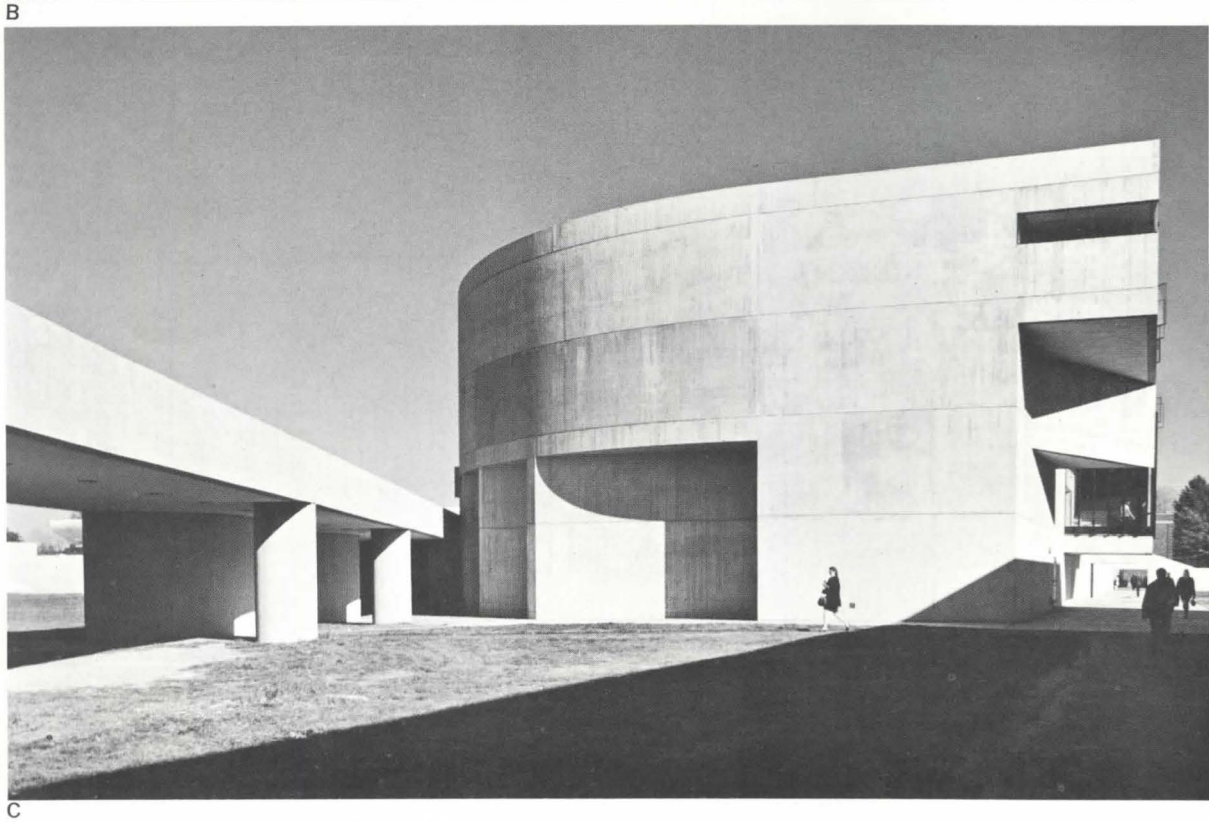

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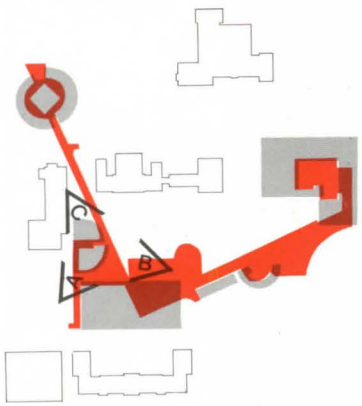
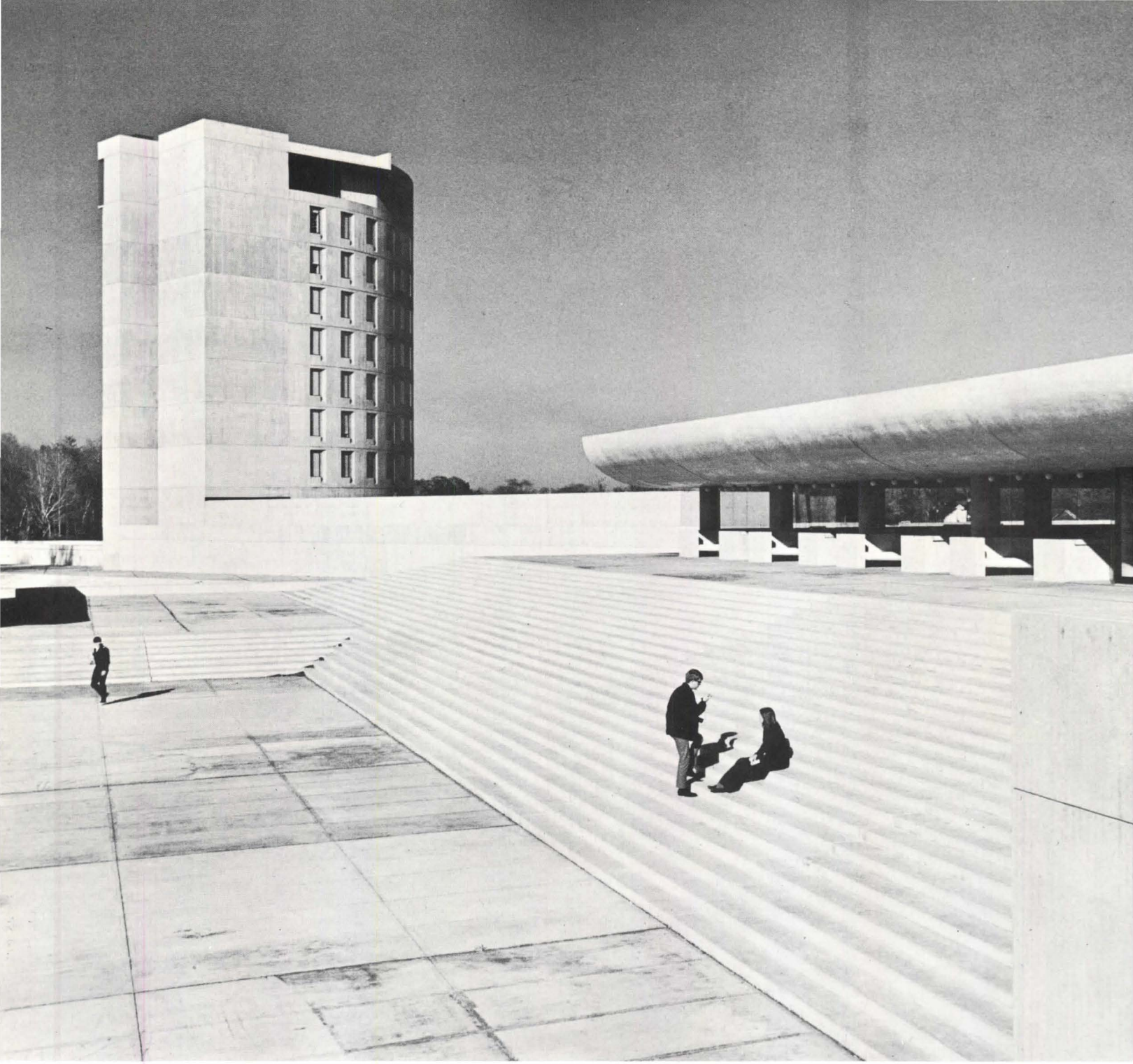


The lecture center, in the shape of a half circle, contains two large lecture theaters on its upper level and a variety of smaller spaces below. The pedestrian bridge from the student union (immediately above) opens out to form a broad plaza as it meets the lecture hall (top). The sculpted rear facade (opposite) faces an existing campus building.

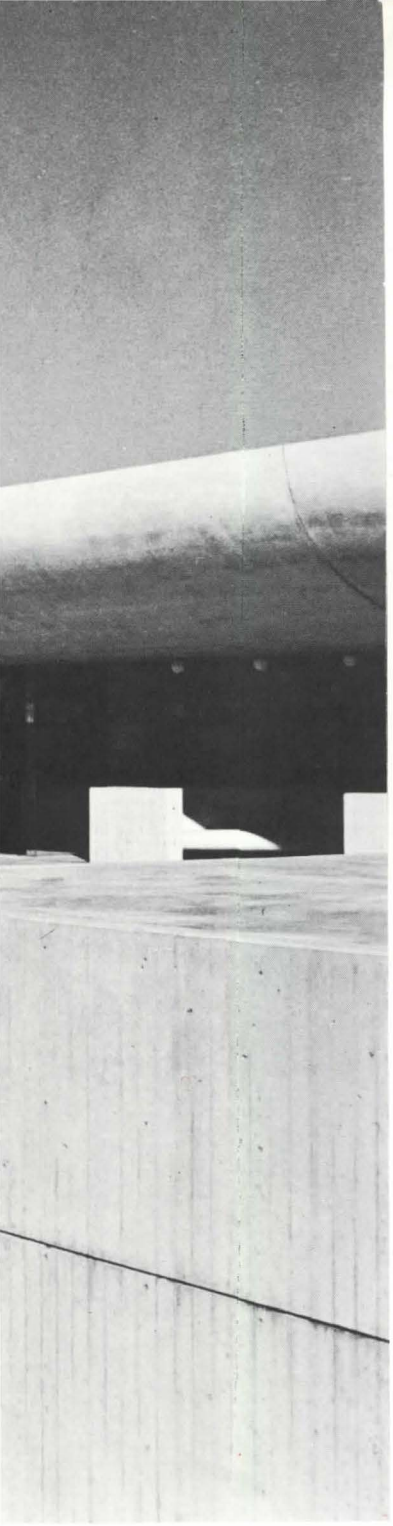


ground; and a small amphitheater for informal student gatherings (see page 40).

At the opposite end of the library, the spine becomes a two-level walkway extending to the arc-shaped, nine-story administration building (above). Its lower path begins at ground level at the bottom of the steps, and its upper path, which is offset *from the one below*, leads from the plaza level at the library entrance. Again, the spine does not penetrate into the administration building, but opens out to become a semi-enclosed entrance courtyard within the center of the arc.

Then the spine opens further into a broad, grade-level plaza which joins the administration building with the fine arts center and also serves as the entrance point to the entire Academic Center. As it reaches the fine arts center (see page 46), the plaza-spine narrows, passes through a notch cut out of the building's first level, ascends a flight of stairs, and culminates in a "public square" whose sides are almost totally enclosed by the wings of the fine arts center.

Obviously, the architects have not taken a simplistic view of what a pedestrian spine should be. "Originally," says Cobb, "we started by creating it as a separate kind of bar. We soon found what a shallow notion that was. What that does is simply give you a bar form with a lot of isolated elements attached to it. We have used the spine system to marry buildings and landscape. At one point it's a bridge, at another it's a mountain, if you



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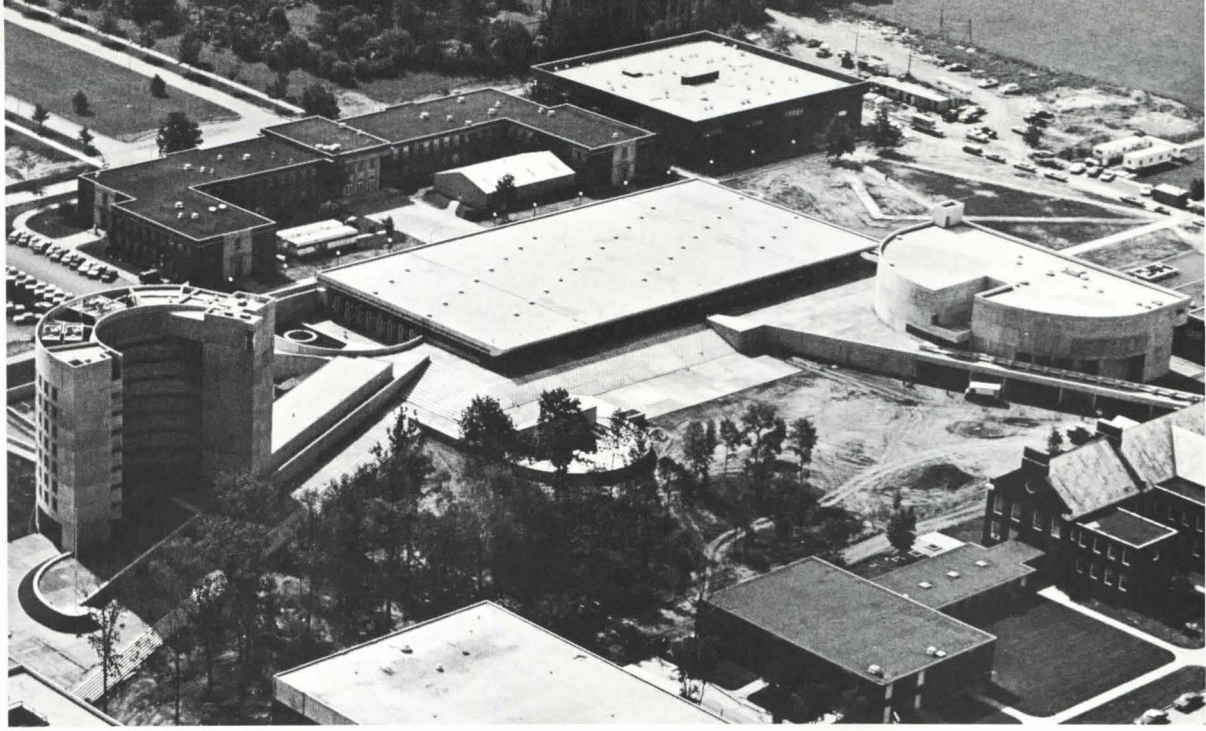

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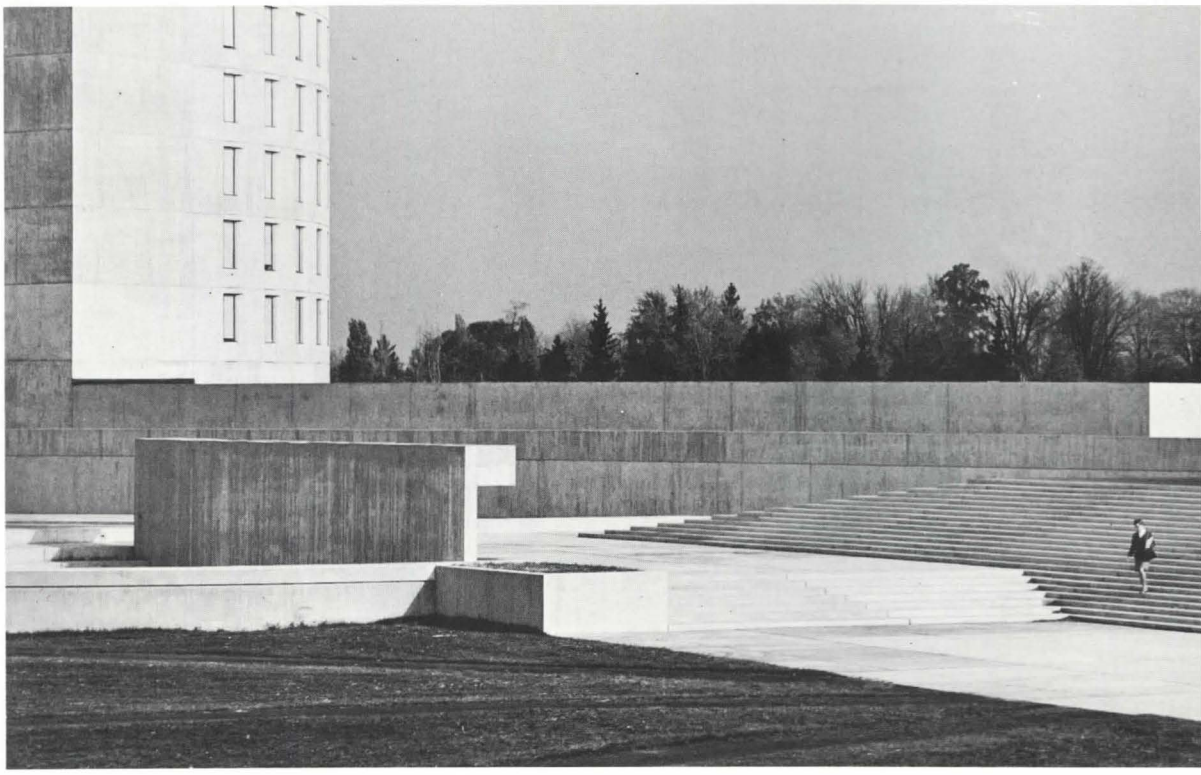

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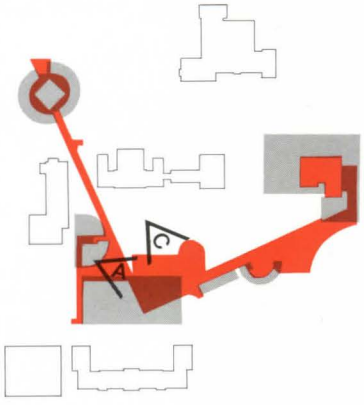
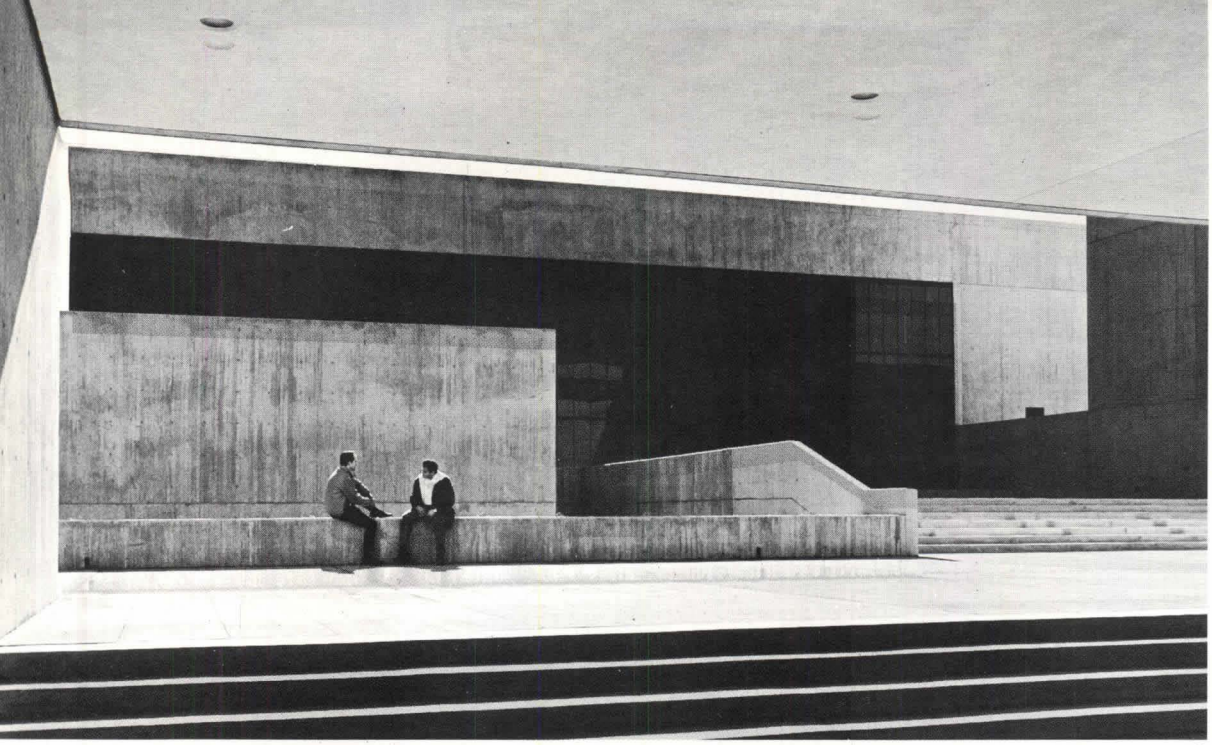


The nine-story, arc-shaped administration building, located adjacent to the main public entrance, is the gateway to the campus, as well as its faculty center. Administrative and faculty offices are distributed around the perimeter of the arc behind small, rectangular windows. On the opposite side are corridors behind narrow window strips. The low structure between the administration building and library (top photo) contains the central air-conditioning plant.



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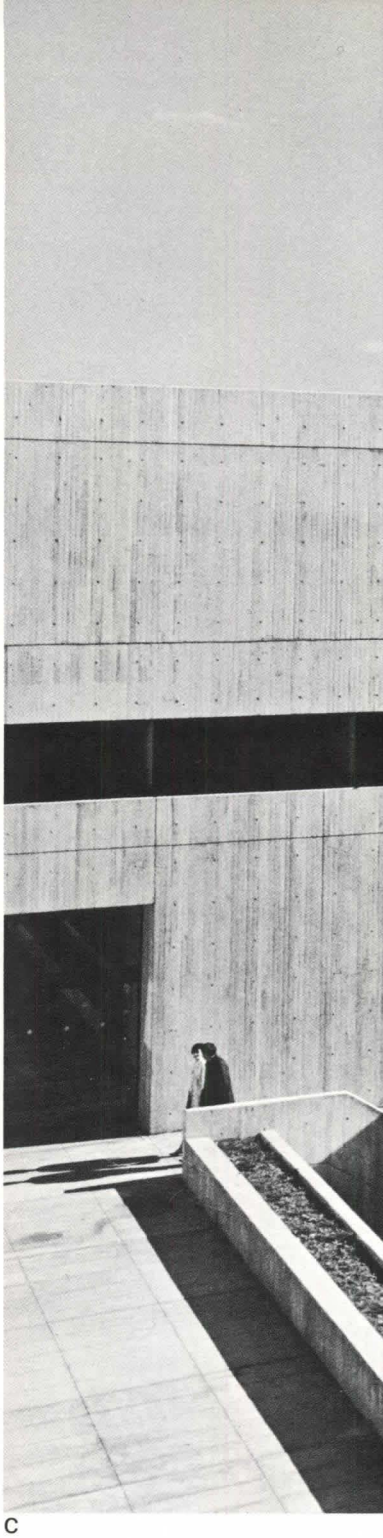


C

will, and at another it's a kind of rift in the landscape."

"The notion that a building can be plugged into a line is not very valid," says Theodore J. Musho, the Pei firm's senior associate for design on the project. "We found, for instance, that when this spine plunged into the library, it wanted to be recognized. If it isn't recognized, it becomes like getting a knife in the heart, which is not a very friendly gesture. What it should be is more like the attachment of an arm."

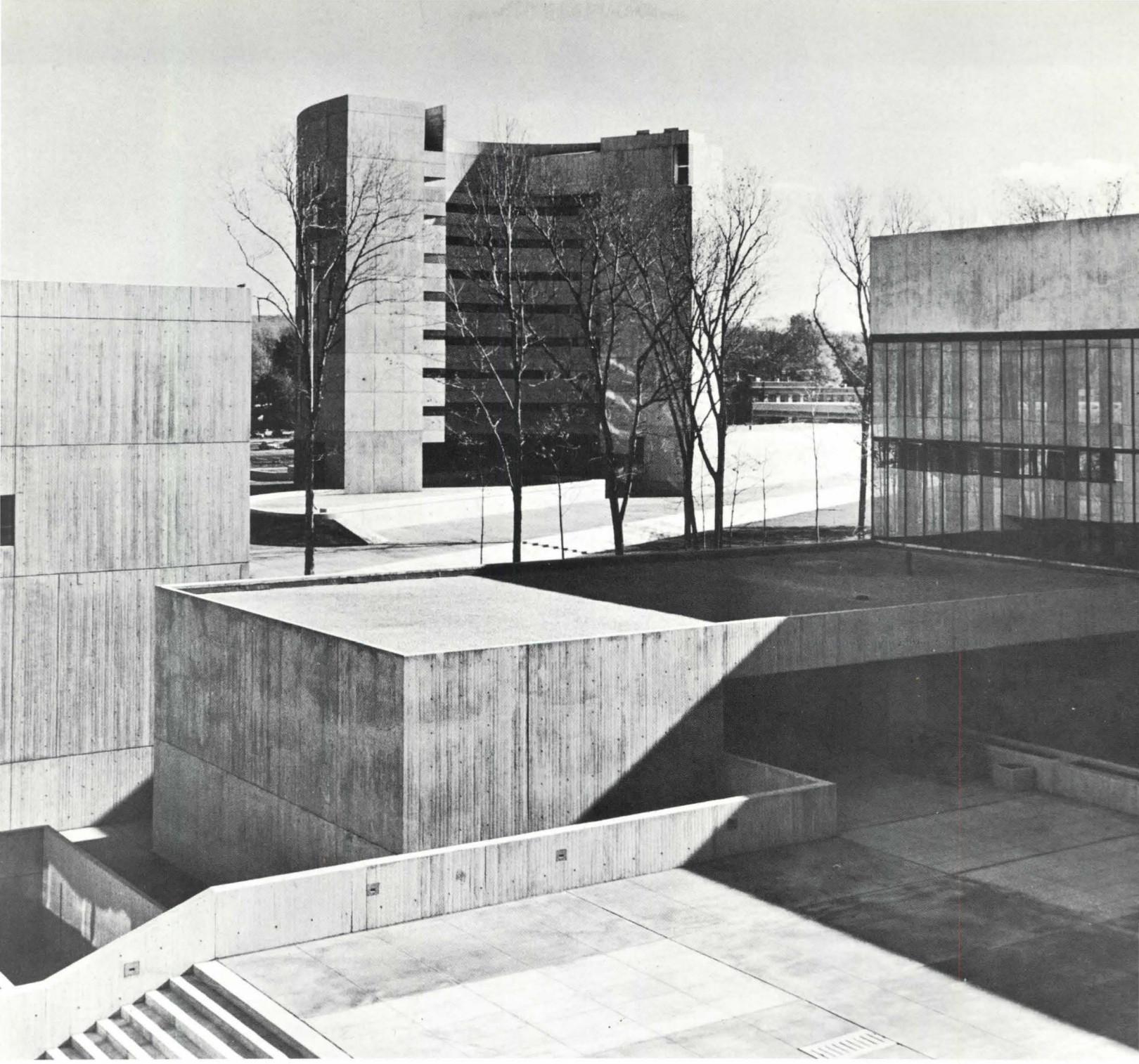
Fredonia's Academic Center is at once a group of buildings, a pedestrian circulation system, and a shaper of the landscape. That is considerably more than the client asked for, but Fredonia is the richer for it.

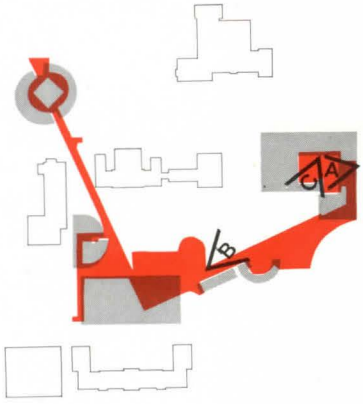
—JAMES BAILEY

FACTS AND FIGURES

Academic Center, State University College at Fredonia, N. Y. Owner: State University Construction Fund. Architects: I.M. Pei & Partners—Henry N. Cobb, partner in charge (design); Werner Wandelmaier, associate partner (management); Theodore J. Musho, senior associate (design); Robert Bates, resident architect. Engineers: Garfinkel & Marenberg (structural); Segner & Dalton (mechanical). Landscape consultants: Office of Dan Kiley, Joseph R. Gangemi. Acoustical consultants: Bolt, Beranek & Newman *Inc.* General contractors: John W. Cowper Co. Inc. (library, lecture hall center, administration building); Paul Tishman Co. (fine arts center); C.E. Knowles (site work). Building area: 299,943 sq. ft. (fine arts center, 119,687 sq. ft.; library, 73,510 sq. ft.; lecture hall center, 55,504 sq. ft.; administration building 53,242 sq. ft.). Construction cost: $11,689,279 (library, lecture hall center, and administration building, $5,951,900; fine arts center, $4,194,489; site work, $1,542,890).

PHOTOGRAPHS: George Cserna





The fine arts center is organized around an elevated "public square" which forms one terminus of the pedestrian spine. It contains studios and classrooms for art students, a small gallery, a theater and drama workshop, and a 1,200-seat concert hall (far right in photo opposite). The center is the major public gathering place on the campus.

CHARLES CENTER

Baltimore's new core serves cars and people by keeping them apart.

Since the mid 1950's, urban cores all across the U.S. have been torn apart in a feverish effort to "revitalize downtown"—to keep city business, government, and cultural facilities from dispersing into the suburbs. Baltimore's Charles Center is one of the few downtown renewal projects that promises to be a success—economically, socially, and architecturally.

Charles Center is a tract of 33 acres at the very heart of Baltimore. It is no mere symbolic shot in the arm for downtown—no travertine-coated cultural center or monumental government center. It is a working center—devoted largely to commerce and intended to revive the economy of a commercial city.

After ten years of construction, Charles Center is only about 80 per cent completed. But it is already firmly established as the urban "center" it was meant to be — both a center of activity, and a center from which continued redevelopment can proceed.

Within Charles Center, two long-standing visions of urban planners have been realized: a mixture of uses, and a separation of pedestrians from automobile traffic. The project already includes offices, apartments, shops, theaters, hotels, and restaurants. Its elevated pedestrian system makes it possible to walk between any two points in the 33 acres without crossing a street; and the walkways will soon extend further, bridging heavily traveled streets to connect Charles Center to areas around it. Parking garages for 4,000 cars, underlying the center's buildings and plazas, are linked both to buildings and to walkways.

There is nothing monumental about Charles Center's urban design. It relies instead on seemingly casual relationships between diverse buildings — new and old—and on "accidental" vistas (such as the glimpse of Latrobe's early 19th-century cathedral dome in the view opposite). The open spaces threaded together along its walkway system are formal and informal, expansive and intimate, but none of them has sharp boundaries.

Two of Charles Center's new buildings—One Charles Center by Mies van der Rohe (Sept. '63 issue) and the Mechanic Theater by John Johansen (May '67 issue)—are among the outstanding U.S. architectural works of the 1960s. The rest of the structures range from very good to mediocre architecturally, but virtually all of them fill their *urban design* roles effectively.

This 33-acre precinct—at the center of a metropolitan area of two million people—is an almost infinitesimal addition to Baltimore, measured in terms of building volume or capital investment. Yet it has already dramatically redirected the economic development of the city.

Collaborative strategy

Charles Center has not only demonstrated that effective physical renewal is possible in Baltimore, but it has demonstrated a strategy for renewal in manageable increments, through the intelligent collaboration of businessmen, government leaders, an informed public, and designers.

Charles Center was initiated by a group of businessmen who enlisted the support of the Greater Baltimore Committee back in 1954 to fight what was then considered the inevitable decline of downtown Baltimore. With the encouragement of city officials, the committee decided—instead of turning to an outside planning firm—to establish its own in-house planning team. The team turned out to be an all-star one, headed by David Wallace (now of Wallace, McHarg, Roberts & Todd), with George Kostritsky (now of Rogers, Taliaferro, Kostritsky & Lamb) and William Potts as staff designers.

These planners came up with a Charles Center plan that was practical enough, economically, to get the support of the business community. Its potential tax revenues and employment opportunities—not to mention the change it could make in the atmosphere of downtown—appealed to the city administration. And the voters of Baltimore were sufficiently impressed with the proposal to support a $25-million bond issue covering the city's share of development costs.

A view through the heart of Charles Center shows a walkway bridging Baltimore Street (foreground) and running north toward Fayette Street, where it climbs one story by means of stairs and an up-bound escalator, both sheltered by a glass and aluminum hood. The short segment of Hanover Street remaining within the project (right in photo) is used mainly by taxicabs and airport limousines serving the hotels on either side.


NO
PARKING
ANY
TIME

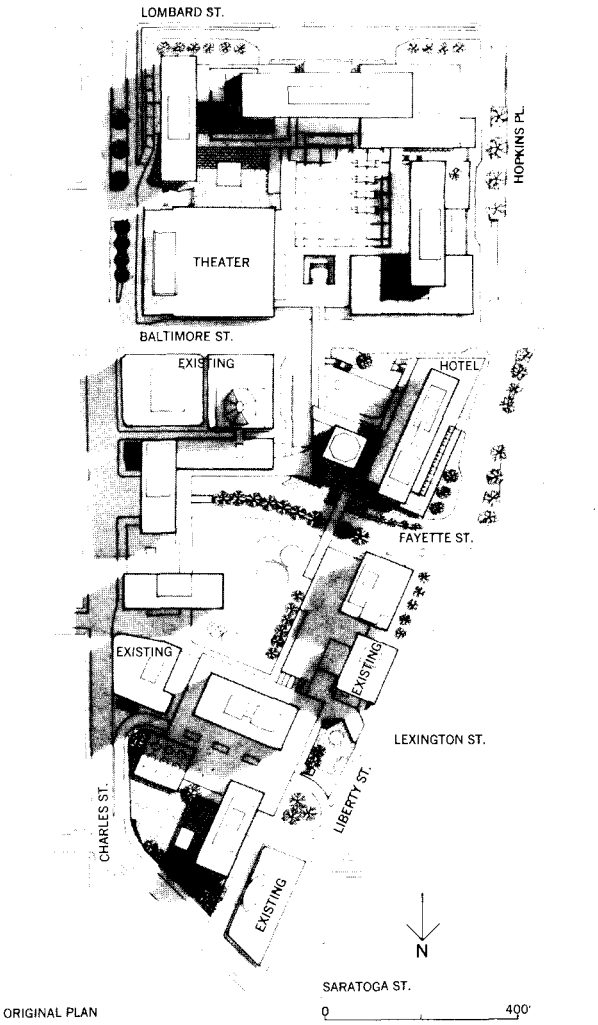
The development proposed by the Greater Baltimore Committee's design team (top right) was revolutionary for 1958, when downtown renewal still meant pristine towers on carpets of greenery. It called for intensive, multilevel, mixed use of the 33-acre tract. Individual sponsors were required to contribute not only open space to the development, but underground parking and pedestrian-level retail space as well. The fact that retail space can be an amenity comparable to open space is a lesson that other cities—notably New York—are only now learning.

In the decade since its approval, the plan has undergone steady evolution. As each parcel has come up for development, design controls for it have been established—at first by the original design team, later by the design staff of the Charles Center Inner Harbor Management (a nonprofit corporation working under contract for the city). Responses to these design guidelines by individual developers (in many cases *competing* developers) have been evaluated by an Architectural Review Board, which now includes Pietro Belluschi, G. Holmes Perkins, and David Wallace.

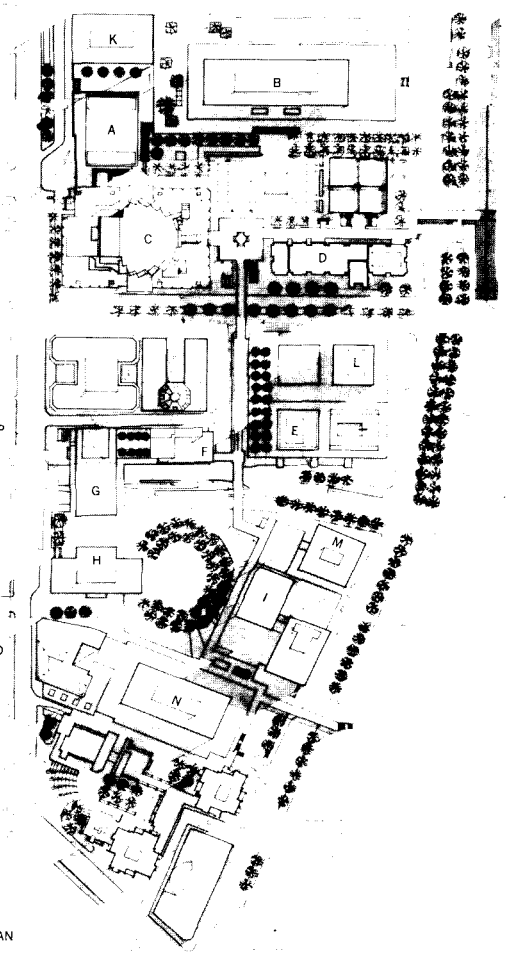
As the plan has evolved, the overall volume of construction has been redistributed into buildings of smaller scale, with more variety of form, siting, and function than originally envisioned. One office building site has been divided into two parcels more suited to the Baltimore office market. The new hotel is not a single slab, but twin towers being built one at a time. An apartment complex (including shops and a cinema) was substituted for office buildings at the north end of the project.

The proposed pedestrian circulation system has lost many of its spacious decks, becoming largely a series of bridges. The largest area eliminated—the deck that surrounded the southern plaza—was not really necessary, however, since it bridged no vehicular traffic. Proposed extensions of the walkway system to the west, beyond Charles Center, more than make up for that loss.

The plan matured as the center developed



ORIGINAL PLAN



CURRENT PLAN

The 1958 plan (top) retained five existing buildings and proposed a series of new buildings around the edge of the 33-acre tract—all but two of them office buildings. An updated plan (bottom) shows smaller-scaled, more varied structures. Buildings constructed to date (aerial photo opposite) include: **A.** Sun Life Building (Warren Peterson, architect); **B.** Federal Building (Fisher, Nes & Campbell); **C.** Mechanic Theater (John Johansen); **D.** Mercantile Trust Building (Peterson & Brickbauer), now nearing completion; **E.** Statler Hilton Hotel (William Tabler); **F.** Vermont Federal Bank (Edward Q. Rogers); **G.** Hamburger's clothing store (Tyler, Ketcham & Myers); **H.** One Charles Center (Mies van der Rohe); **I.** Gas & Electric Building Addition (Fisher, Nes & Campbell); **J.** Apartment complex (Conklin & Rossant). Future projects already designed include: **K.** office building (Rogers, Taliaferro, Kostritsky, Lamb); **L.** second half of hotel. Two other future structures (**M.** and **N.**) are subject to change. Since Charles Center was started, three major buildings have gone up around its perimeter: **O.** Arlington-Federal Building (Vlastimil Koubek); **P.** Blaustein Building (Vincent Kling); **Q.** Civic Center Arena (A. G. Odell). Aerial photograph by M. E. Warren.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Walkways over streets and plazas over garages

View looking west on Fayette Street (top left) shows several levels of circulation; special bus lanes now under construction will reduce traffic congestion. Just south of Fayette Street (bottom left) the walkway system climbs one story to catch up with rising terrain; under the glass canopy, pedestrians can travel up by escalator, walk down by stairs. At the south end of the same walkway (near left), a broad deck leads directly to the lobby level of the Mechanic Theater (top right), which faces the formally laid out Hopkins Plaza. The approach to this plaza from Charles Street (middle right) passes between the opposing cantilevers of the theater and the Sun Life Building. The elliptical layout of Center Plaza (bottom right) is just emerging from construction debris. The two truncated walkways on the far side of the space will soon be joined, and linked to an elevator tower (center of photo) serving the underground garage.

Circulation in Charles Center goes on at several levels. Pedestrians move at street level and on a level above it; cars pass through at street level and are stored below ground. These levels cannot, however, extend continuously over the site, since the grade drops 68 ft. from the north end to the south end.

It is precisely this change of grade that makes the system work so well. The elevated walkway system has to descend the slope in steps, and each step down is an opportunity for it to reestablish contact with the street level. Since pedestrians can generally enter or leave the walkways without a deliberate climb, the walks are attractive locations for retail establishments, which would have shunned isolated "second-story" walkways.

The streets within and around Charles Center have been redesigned to accommodate heavier traffic and allow for garage access. The two streets that cross the center double as elongated stations for buses (the only means of public transportation).

Pedestrians above

The decision to put parking below street level and pedestrians above it leaves the pedestrian exposed to the weather. The alternative, of course, would have been to put the pedestrian in underground, climate-controlled concourses like the ones in Montreal (Sept. '66 issue). In Baltimore, which is 15 F. degrees warmer than Montreal in midwinter (and only 5 F. degrees hotter in mid-summer) the satisfaction of surveying the urban scene from above seemed worth the exposure to wind and rain.

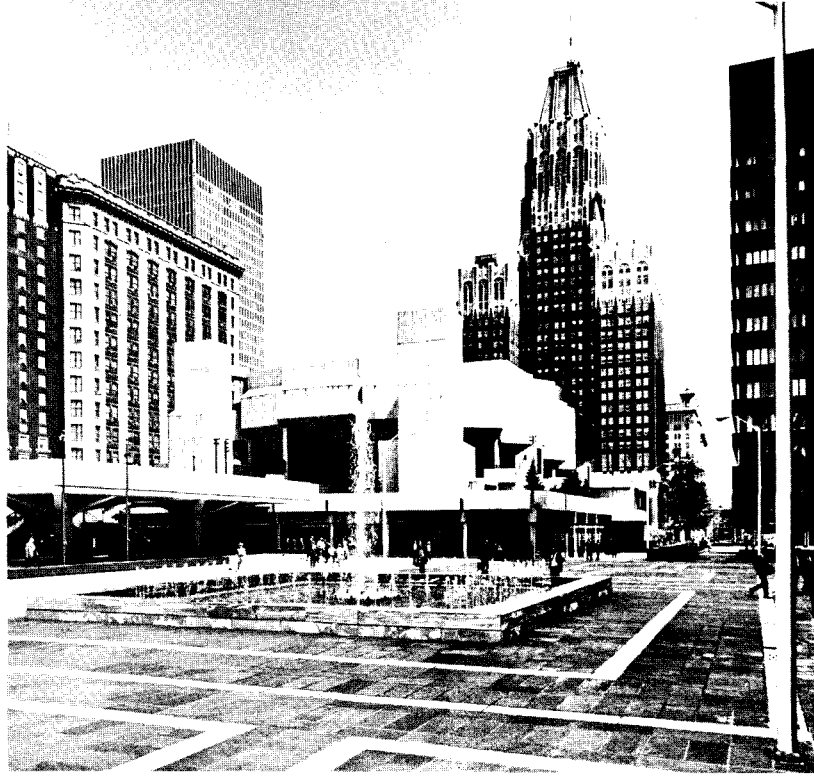
Here and there, of course, the elevated walks produce sheltered areas below as a by-product. The large deck outside the Mechanic Theater, for instance, serves as an entrance terrace in good weather and provides a king-sized marquee for bad weather.

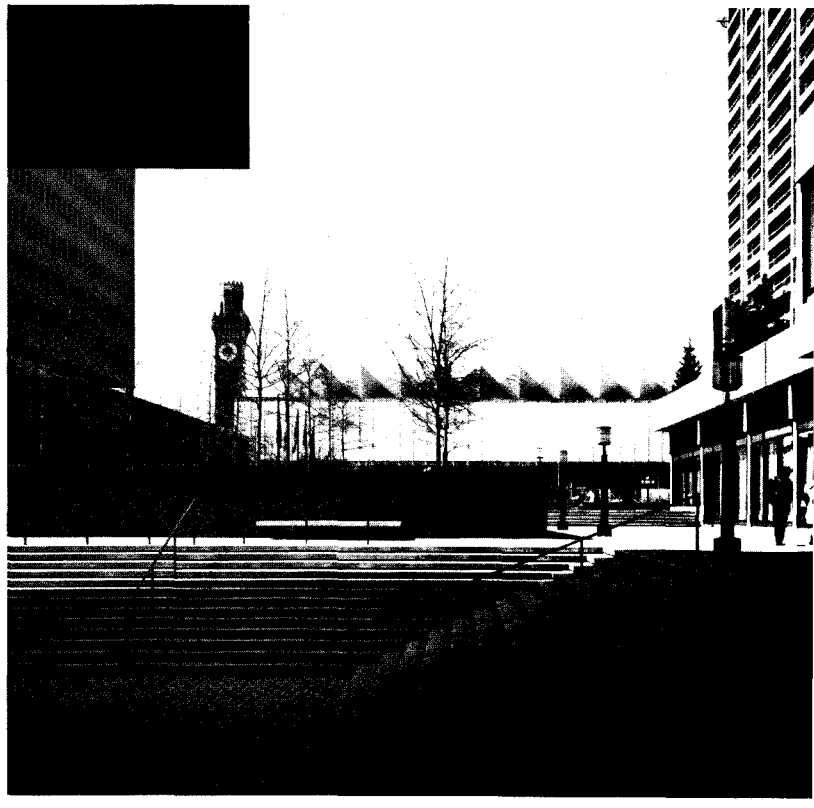
The pedestrian spaces of Charles Center are organized around two city-owned plazas: Hopkins Plaza (Oct. '67 issue) in the south block of the project and Center Plaza, just now being completed in the north block. Both plazas produce some income for the city since, between them, they conceal 2,500 underground parking spaces.

The rectangular shape of Hopkins Plaza is neatly defined by severely straight facades, except at one corner (top right), where the exuberant forms of the Mechanic Theater, by John Johansen, break the enclosure. The theater seems to stand free in its own niche, which is bounded by older Beaux Arts facades to the north and the cantilevered mass of the Sun Life Building to the south. The theater is unexpectedly sympathetic in form and color with the Mathieson Tower, which rises on the same axis one block behind it.

The view across the plaza in the opposite direction (middle right) was originally to have been closed by a large office slab. But before final plans were made for the structure on this parcel (the nearly completed Mercantile Trust Building) Charles Center's planners and review board decided the slab should be turned 90 degrees. A pavilion-like wing soon to be added to the south side of the office slab will interrupt the space at plaza level, but the visual boundary of Hopkins Plaza will remain the jagged roof line of the Civic Center arena, constructed just outside the project in 1962. The decision not to block the view outward toward this functionally important (if visually disappointing) structure shows an increasing realization that the project should not be isolated from the city.

Center Plaza, now nearing completion (bottom right), has been shaped in part by irregular street layout around the north block of the project. Inside the lopsided quadrilateral open space, the planners have laid out a paved ellipse, which will be emphasized by concentric banks and planting. This formal centerpiece has been lined up axially with the tall colonnade at the west end of Mies's One Charles Center tower (Sept. '63 issue), which meets one side of the ellipse. When the plaza is completed, the handsome stair behind these columns will finally have a destination.





Old and new structures define the open spaces

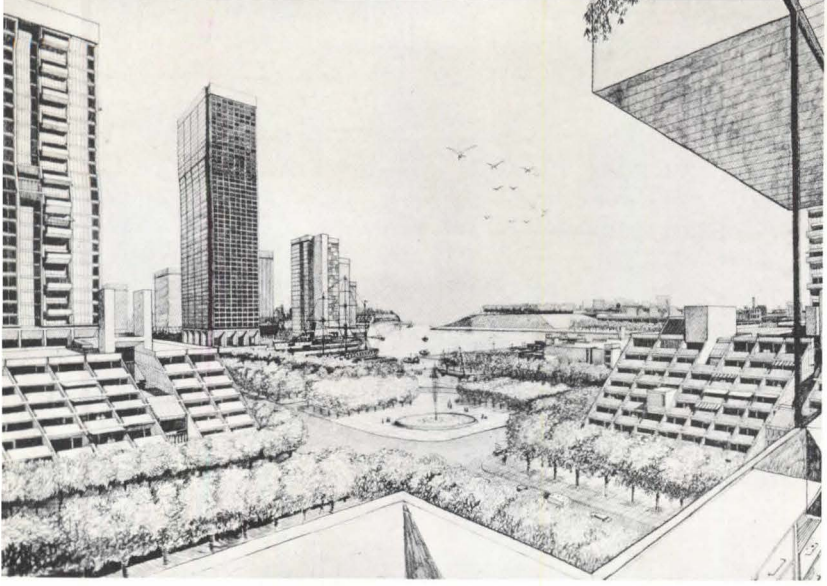
Some of the most satisfying open spaces in Charles Center are the smaller ones within private development parcels, such as the plaza in the apartment-shopping complex at the north end of the center (left) and the pedestrian street north of One Charles Center (right). Both of these spaces are bounded in part by old buildings—either inside or outside the center—which have been enhanced by the new spaces and structures around them.

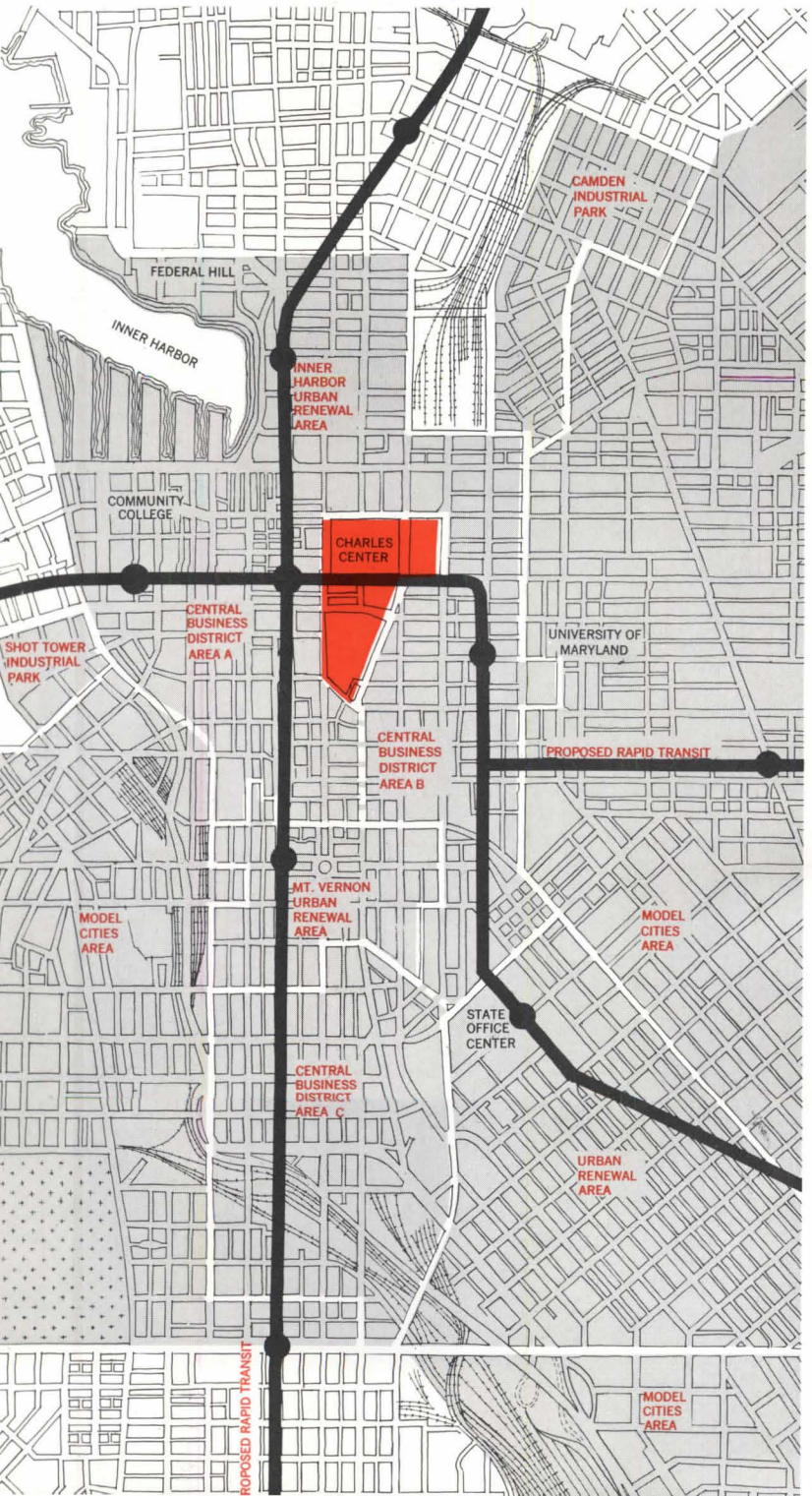
The design of all pedestrian open spaces and walkways throughout the project, whether on city land or on private parcels, was entrusted to Architects Rogers, Taliaferro, Kostritsky, Lamb. The firm has worked (with various consultants and designers) on fountains, planting, and sculpture, and it has designed lighting fixtures (with box-like plastic "globes") which have been installed in several areas.

In many places, RTKL's work is so closely related to other architects' work that the line between them is hardly noticeable —as, for instance, at a point where a public pedestrian deck adjoins Johansen's Mechanic Theater (preceding page, top right). Another remarkable example of coordination is the open space in the apartment-shopping cluster at the north end of the project (left), where RTKL designed a plaza that meanders around — even passes through—buildings designed by Conklin & Rossant. There is no indication in the completed plaza that floor planes and wall planes are by different architects.

This apartment complex, on a parcel originally earmarked for more office space, has been a surprising economic success, with all 400 units in its twin towers rented by the time construction was completed. Now that this development has demonstrated a demand for small-unit housing downtown, and has provided some resident-oriented commercial facilities—cinema, delicatessen, professional offices, and health club, for instance—there may be further residential construction in the area just to the north, which contains some fine 19th-century houses.

The small plaza at the northeast corner of Charles Center (top left) is bounded by two-story commercial-professional buildings and, at least visually, by the delicate facade of St. Paul's Church (Richard Upjohn, 1854) on the opposite side of Charles Street. A view into the plaza from the opposite direction shows the change in level that isolates it somewhat from the busy thoroughfare. Another small-scaled pedestrian space—partly public right-of-way and partly private plaza—is the passage (facing page) between Mies's One Charles Center and the burly turn-of-the-century Fidelity Building.





Charles Center will soon be linked to the waterfront by the Inner Harbor renewal project (top left). Planners Wallace, McHarg, Roberts & Todd visualize it as an area of offices, housing, parks, and cultural facilities, with towers interspersed among low buildings that will define an open space around the harbor. Inner Harbor will be the next downtown renewal project to be executed, but proposals—both long-range and immediate-action—have been made for all of downtown (map left and detailed plan at right). Urban renewal is under way in several districts at the edges of downtown, and detailed studies are being made for the Model Cities area, which wraps around these districts. Preliminary designs have been completed for a rapid transit system that will link Charles Center and other employment centers with these areas and extend beyond them to the city's airport and its distant suburbs. PHOTOGRAPHS: Cervin Robinson except top of page 53, Nat Lipsetts.

Renewing Baltimore from Charles Center outward

Charles Center was conceived in the first place as an agent of change. It was meant to rescue downtown Baltimore economically, and it seems to have worked.

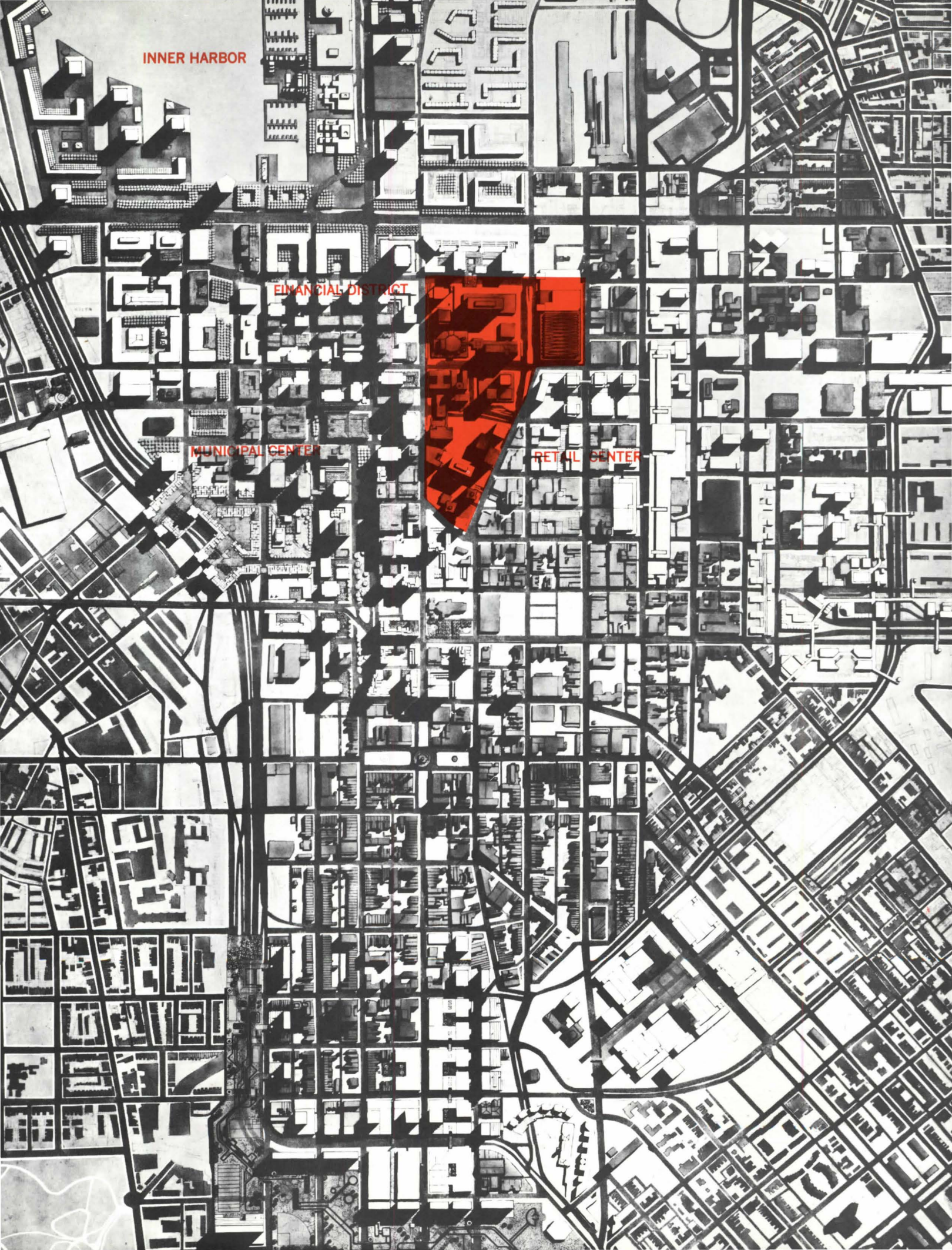
But there were never any illusions that one grand gesture would restore the city to economic and physical health. Baltimore's critical problems all along have been in vast tracts of slum housing and obsolete factories that form a ring around downtown. Charles Center helped inner-city neighborhoods by reversing the decline of job opportunities and tax revenues in the city core, while the city took more direct action to improve the living conditions for low-income families.

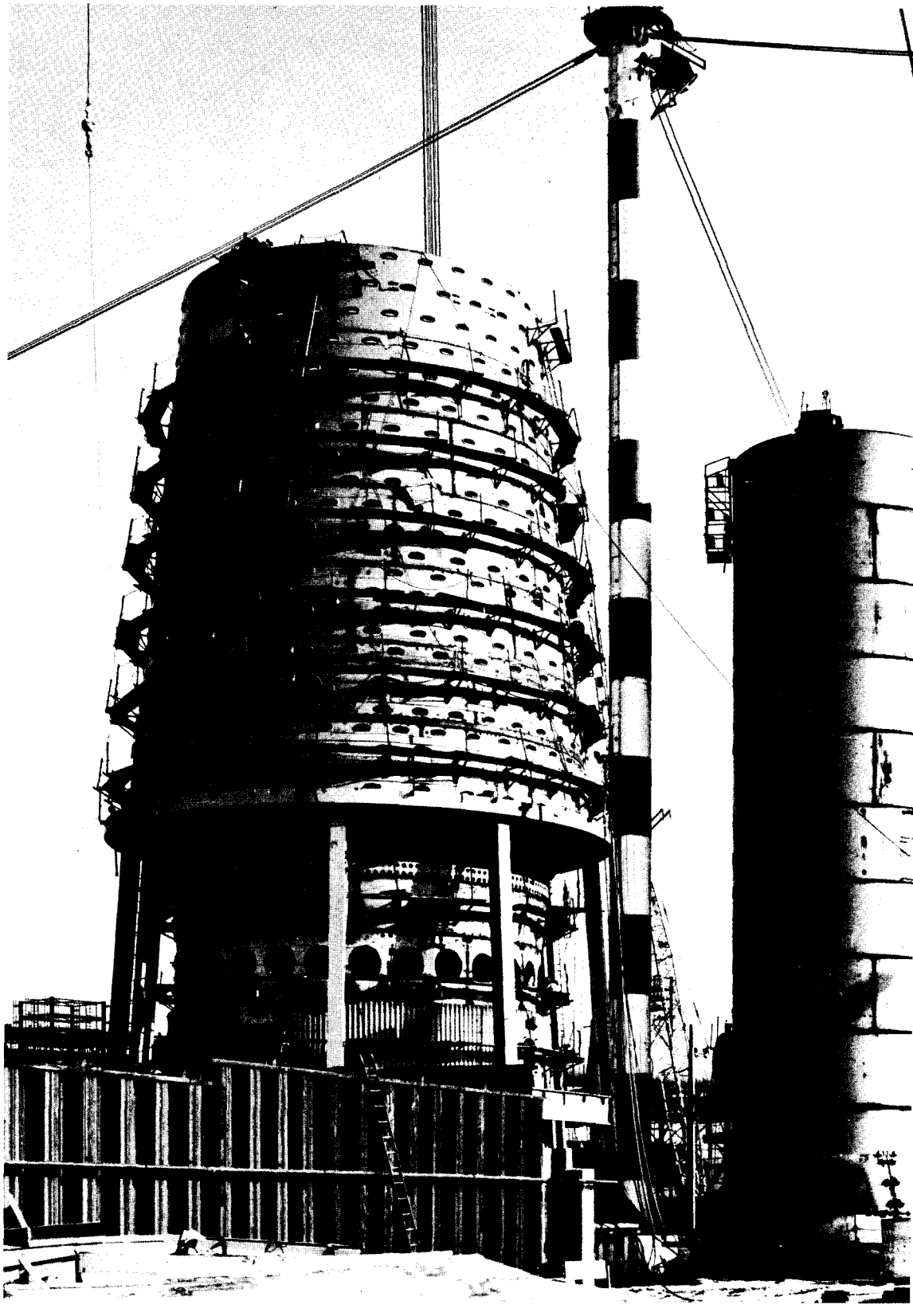
Meanwhile, the city can continue to benefit from intensive, piece-by-piece redevelopment of downtown. There is no official "master plan" for downtown, but rather a series of continually up-dated studies. The current working plan (right) is an assemblage of proposals included in recent "Central Business District" studies by Wallace, McHarg, Roberts & Todd (area **A** on map at left), Rogers, Taliaferro, Kostritsky, Lamb (area **B**), and Conklin & Rossant (area **C**).

The next area where rebuilding will actually get underway is the Inner Harbor (top left), a district that has been almost abandoned as shipping, wholesale, and manufacturing activities have moved outward. This area can accommodate expansion of the government center and the financial district, more downtown housing, and waterfront parks.

One major proposal that will strongly affect the growth of downtown is the plan for a regional transit system. Preliminary plans for the system, by Daniel, Mann, Johnson & Mendenhall, have closely followed the findings of the recent Central Business District studies (thus illustrating the usefulness of unofficial proposals as guidelines). Not surprisingly, the transit lines converge on Charles Center. For a transit system requires an active, central destination, and Charles Center has given Baltimore a genuine core.

—JOHN MORRIS DIXON

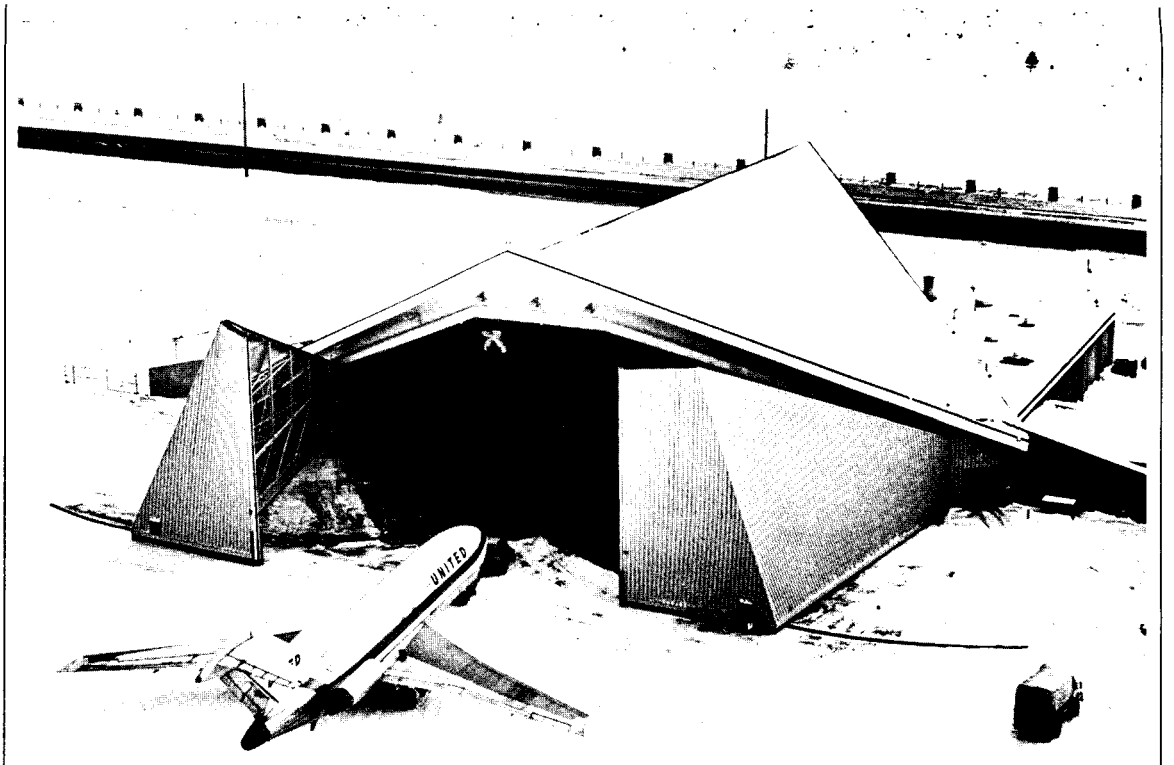

INNER HARBOR
FINANCIAL DISTRICT
MUNICIPAL CENTER
RETAIL CENTER



BLASTING OFF

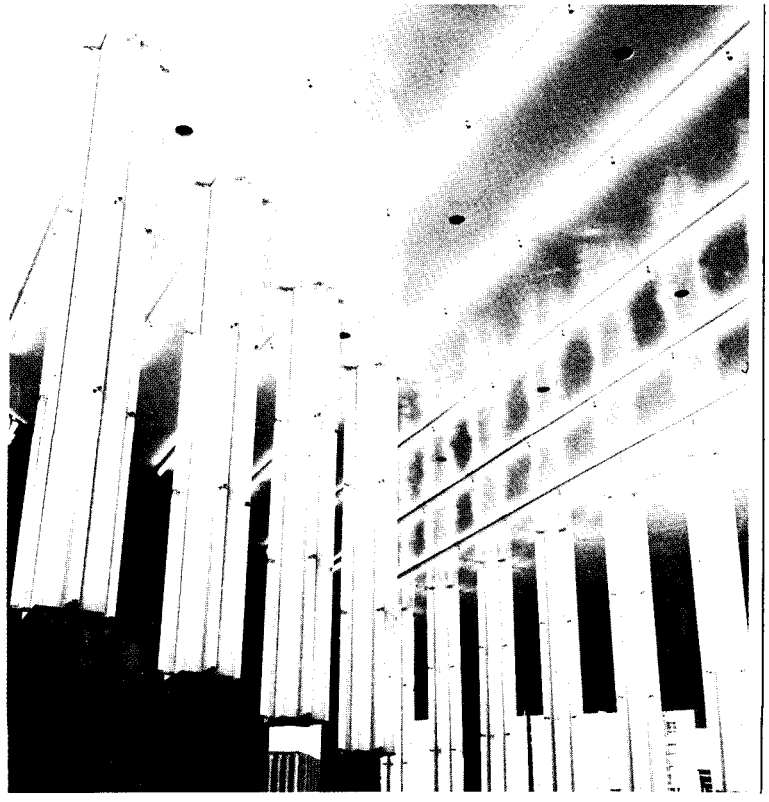
The space-age "ziggurat" at left in the photo above is a huge blast furnace that is to be part of a $900-million steelmaking complex being developed by the Bethlehem Steel Corp. at Burns Harbor, near the Indiana Dunes Lakeshore. Phase I completed, the furnace is being built as part of Phase II in a five-year expansion program. It will be the largest furnace in the Western Hemisphere, standing 275 ft. high, and will have a 35-ft.-diameter hearth; it will produce over 4,000 tons of iron a day. Heated air for the blast will be supplied by the four stoves pictured above right. Steelwork for the project is hoisted by a striped derrick, center in photo ("the tallest barber pole in the world"). Other structures will include coke ovens, a slabbing

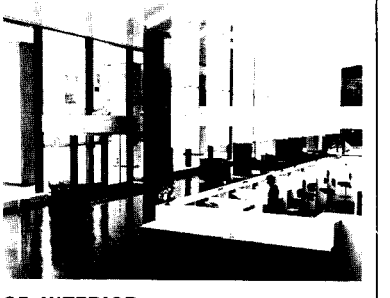
mill, a power house, docking facilities, etc. Bethlehem Steel has also allotted $8 million to a pollution control system, to protect the lake and dunes area. The plant expects to be fully operational by 1969, producing over 1.5 millon ingot tons per year.



THE HUGGER

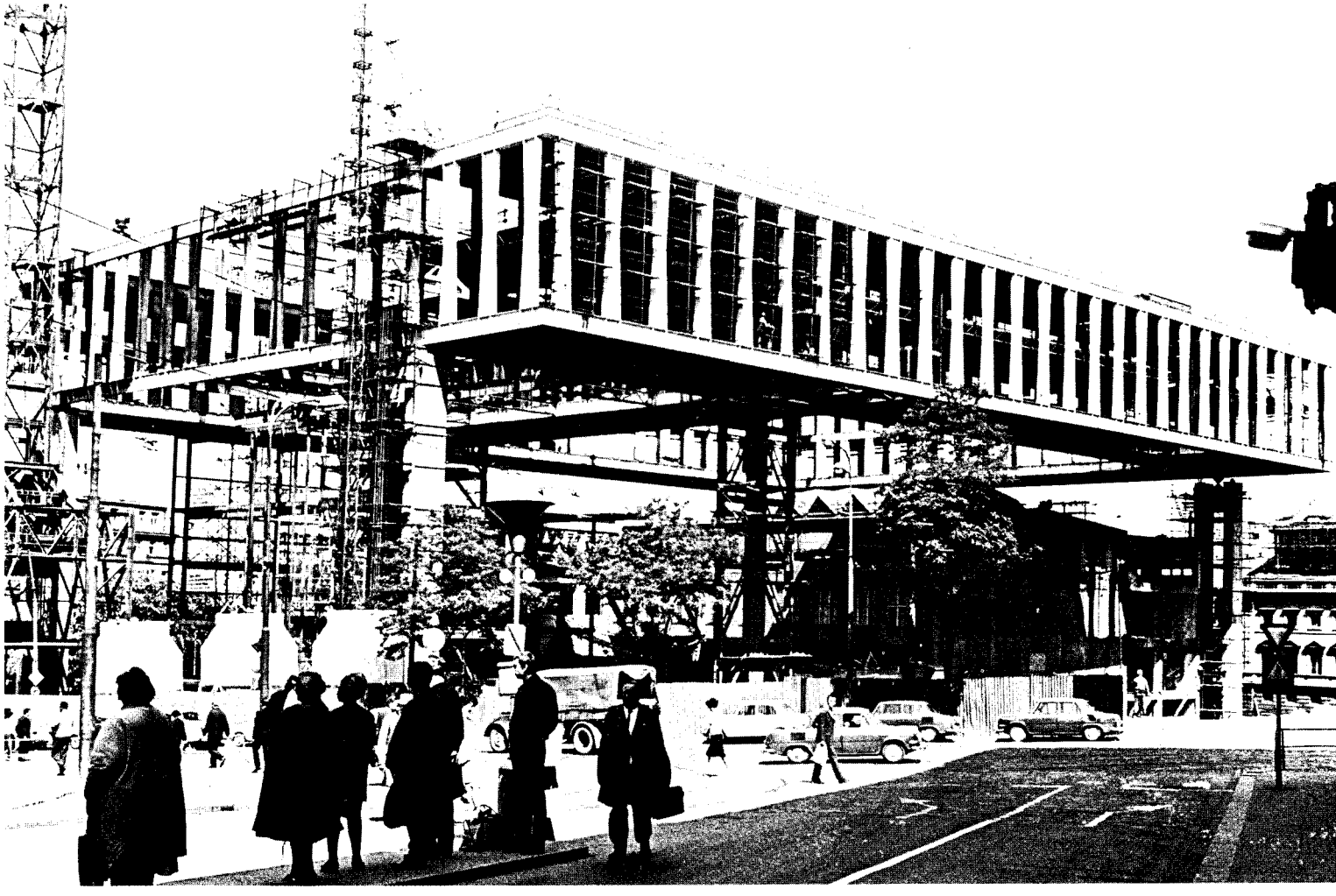
A new design in airplane hangars, originally conceived by Charles R. Hutton, professor of construction technology at Purdue University (Ind.), and then designed by Architects Miller-Dunwiddie Inc. of Minneapolis, became operational in January for United Air Lines at Wold-Chamberlain Field in Minneapolis. The hangar (above), of a grid-type (steel) hyperbolic paraboloid design, conforms to the shape of the Boeing 727 and McDonnell-Douglas DC-8 aircraft. Although it is 65 ft. high, the structure encloses only 18,000 sq. ft., or about one-third the area of a conventional hangar. The total construction cost of this first HP hangar was about $2 million. Although it has been built as a single shell here, it may be constructed in combinations based on the same HP principle, to house aircraft in airports all across the United States.

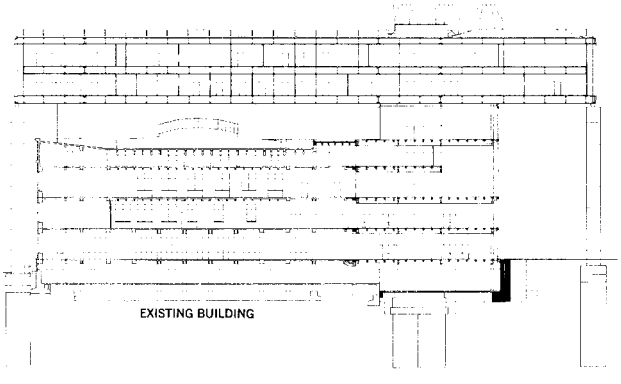




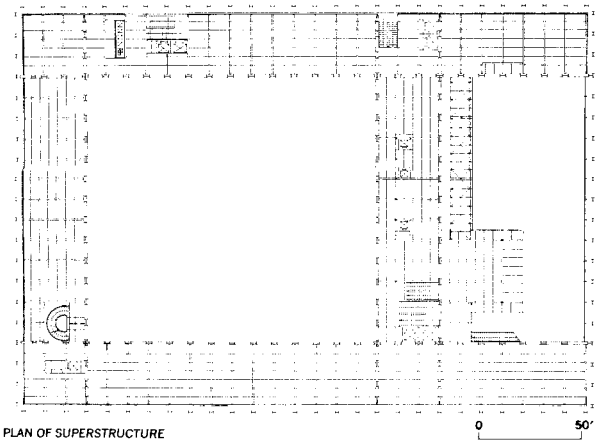
OP INTERIOR

The blaze of florescent lights at left and above is part of the new image of the Industrial Valley Bank in Philadelphia, Pa. Architect Richard Saul Wurman designed the interior of IVB's 32nd branch (in its own new headquarters building) as a maze of reflections. Tube-lined columns suspended from a glossy ceiling (itself striped with tubing), reflect light onto a textured silver vinyl wall behind the tellers' booths, off the shiny floor, and onto floor-to-ceiling windows.





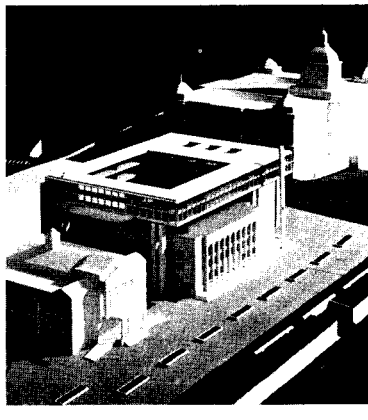
LONGITUDINAL SECTION



PLAN OF SUPERSTRUCTURE

PRAGUE'S UPS . . .

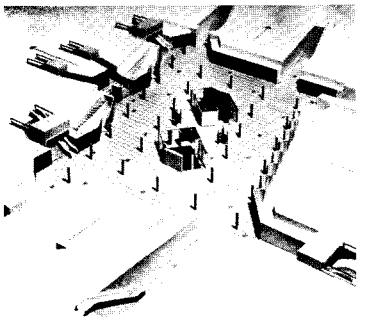
When the Czechoslovak government realized that its existing office space in the Parliament building in Prague would not be sufficient, it held a competition for a design for additional space. There were three requisites: first, the Parliament, a landmark on Wenceslaus Square, had to be preserved; second, a minimum of 307,000 sq. ft. was needed; and third, the roof could not rise higher than that of the nearby National Museum. A Prague civil engineering firm, GAMA, came up with the solution pictured above. They designed a two-story elevated structure of 87,000 sq. ft. to straddle the Parliament on four pairs of 72-ft.-high columns parallel to this building on two sides. The Vierendeel truss frame of the open-court structure was hoisted into place by tower cranes and was then welded together. The rest of the office space will be available in two other buildings to be built adjacent to the Parliament.



PHOTOGRAPHS: Page 59 (top), Henry A. Schaefer; page 60, Engineering News-Record, Feb. 27, 1969, © McGraw-Hill, all rights reserved; page 61, Czechoslovak News Agency Photo Service.

. . . AND DOWNS

Also in Wenceslaus Square, beneath the equestrian statue of St. Wenceslaus, scene of conflict between Soviet soldiers and Czech youths last year, is a brand-new underpass system for pedestrians. The underground gallery with shops, phones, and other services, slices under the square, diverting most of the 32,000 people per hour who try to traverse this busy intersection. The underground gallery is served by five escalators, and stairways (see plan below). Above ground are simple tunnel openings. Round-the-clock construction (see work in progress right), with participation by over 40 organizations, had this subway completed by early December of last year. Thousands of Prague citizens flooded into the gallery for a pre-season Christmas (photo below right), buying from a novelty shop (a cosmetics shop is slated for a later opening).



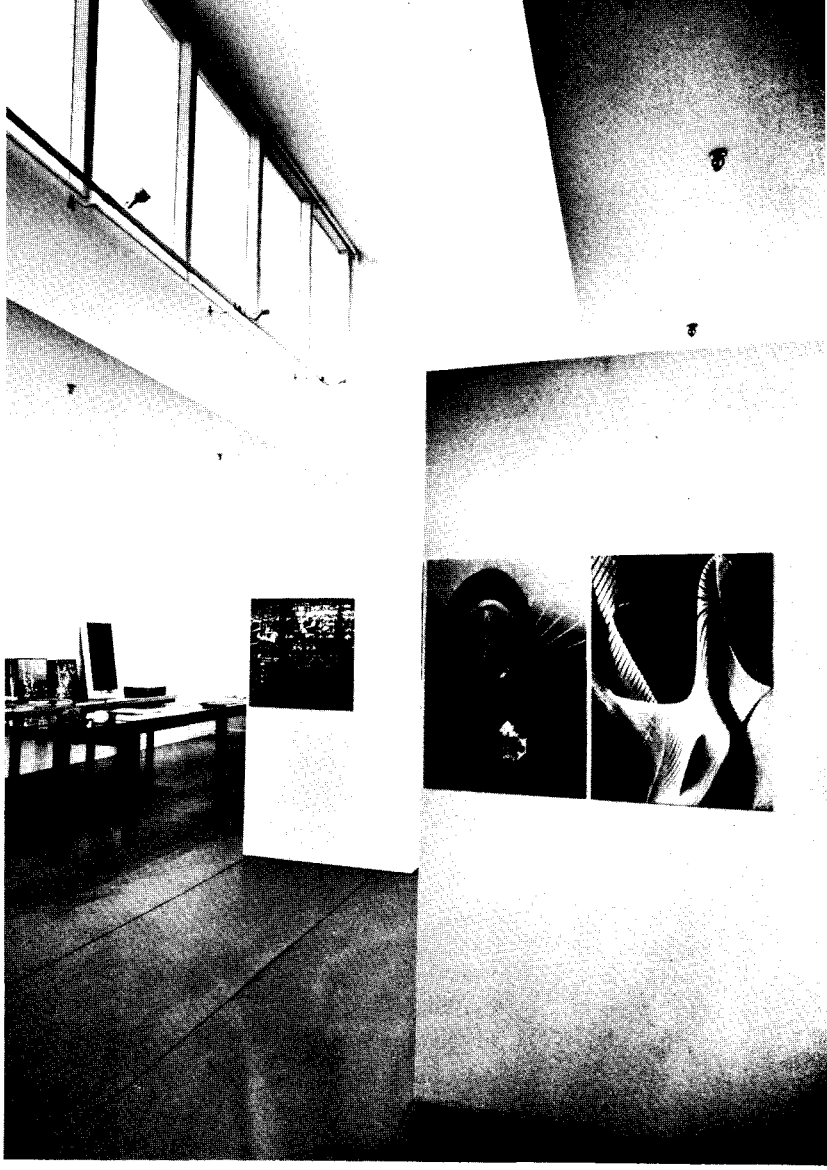
LAB FOR LIGHT

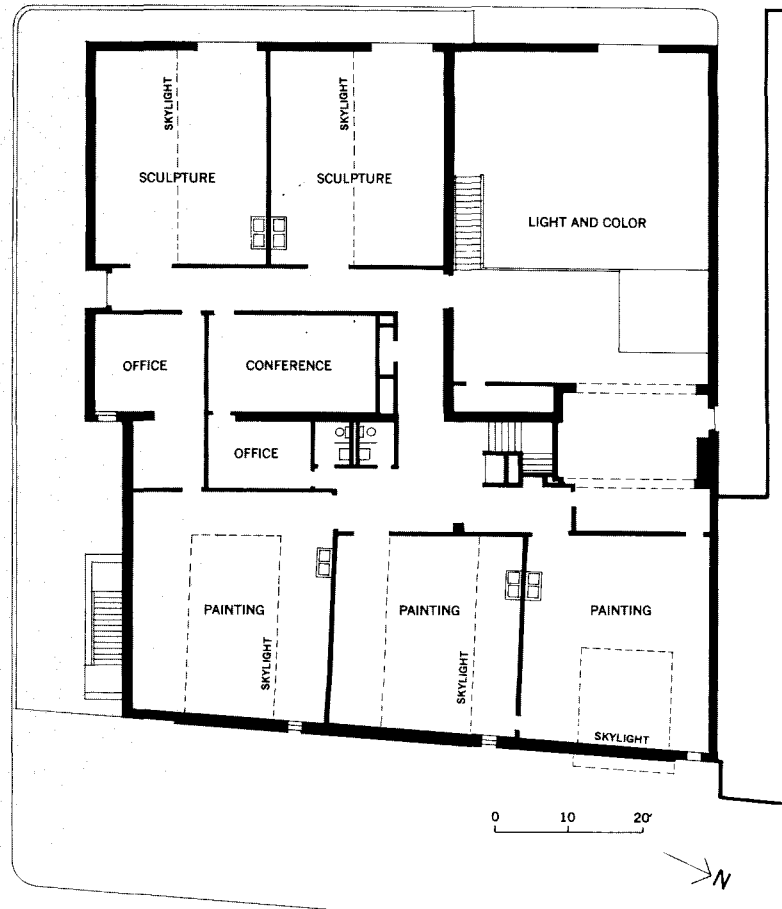
Those who groove with the current mania for psychedelia, exploding light, and color refractions can be turned on in the Center for Advanced Visual Studies at the Massachusetts Institute of Technology.

Conceived by Professor Gyorgy Kepes (the Center's director, and himself a pioneer "explorer" in the field of light), the Center has been created as a laboratory for collaborative research in science and art: towards a mutual "complementation" of the two. Selected Fellows and post-doctoral apprentices are working with Kepes on a variety of projects dealing mainly with light—kinetics, refraction, color projection, computerized film-making, etc. The Center is not a place where subjects are taught, but seminars, informal "colloquia" and exhibits are held to make MIT and the public aware of the Center's activities.

The 13,500-sq.-ft. Center was remodeled in the shell of the former Technology Cooperative store (photo below left), across the street from the monumental main academic building. It retains the original exterior walls, but the old openings have been filled, and only long slits remain. The walls, to prevent a patchwork look of the old surface and new fill, were painted brown. This brown paint also covers the boarded surfaces of the "saltbox"-roofed monitors which are the light source for the building's six studios. All the monitors but one face north; this one faces east as the studio it lights backs up against an apartment building. The inside hoods of the monitors are painted white, matching the interior wall surfaces, for maximum diffusion of light. There are no permanent lighting fixtures in the studios.

The largest studio (plan right) is a two-story room reserved for light and color experimentation. It has a pit, dropping one story below grade, and the main floor level serves as a balcony overlooking this area. The basement level also contains darkrooms, workshops and storage areas which may be shared by everyone in the Center.





Former Technology Cooperative store (above) served as shell for the center, which houses six studios for use by Fellows and apprentices. Exhibits of light-art (top right) indicate Center's focal interest. Plan, right, shows layout of studios, offices, storage areas.

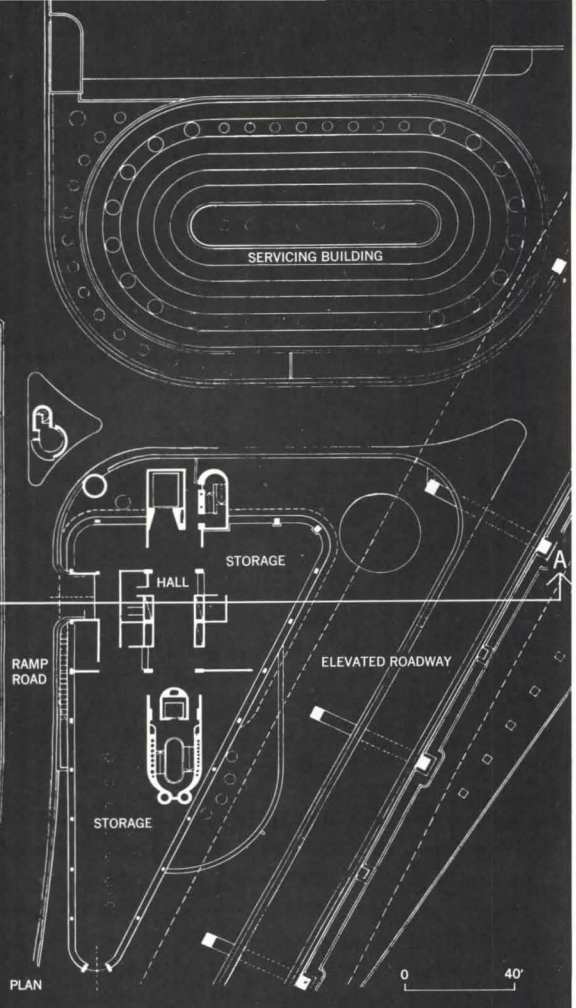
FACTS & FIGURES
Center for Advanced Visual Studies, Cambridge, Mass. Owner: MIT. Architects: Marvin E. Goody & John M. Clancy Inc. Consultant: Gyorgy Kepes, director of the program. Engineers: Erwin Harsch (structural); Francis Associates (mechanical). General contractor: Sawyer Construction Co. PHOTOGRAPHS: Phokion Karas.

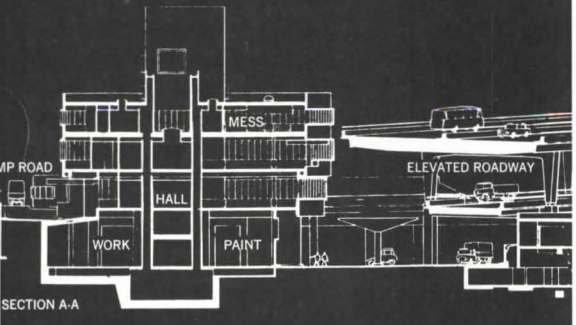
LANDLOCKED SHIP

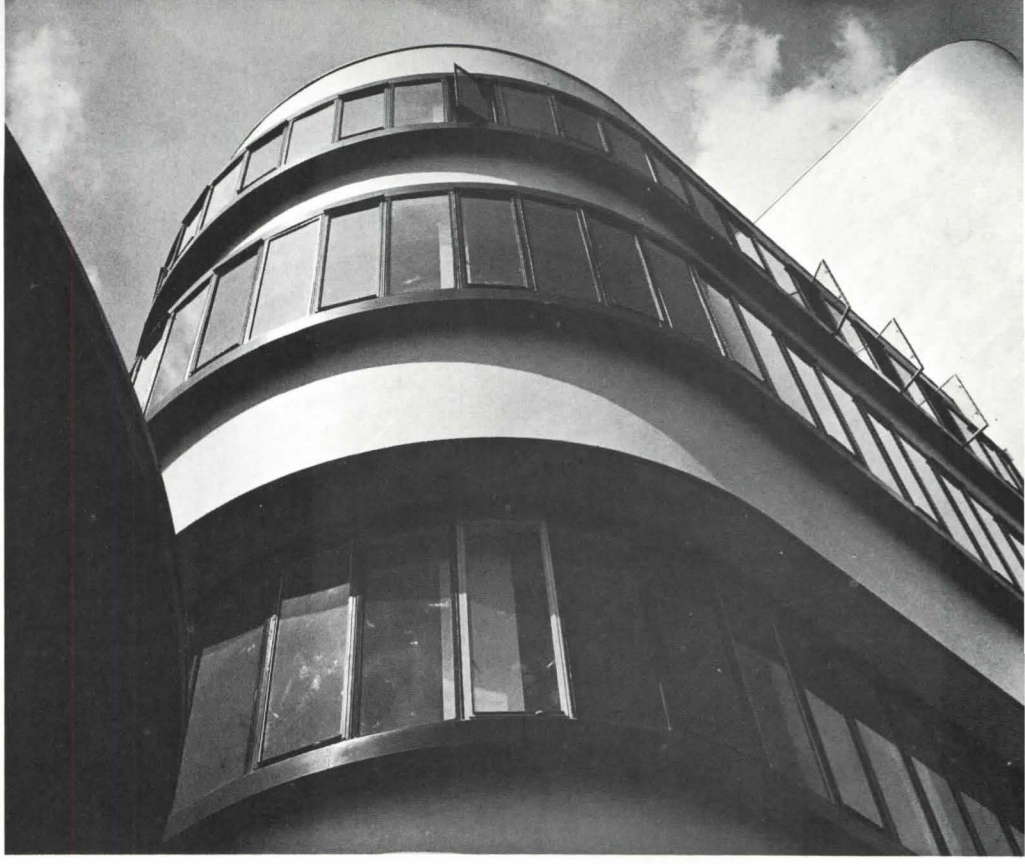
Maintenance depot near London's Paddington Station was shaped by its site and its function

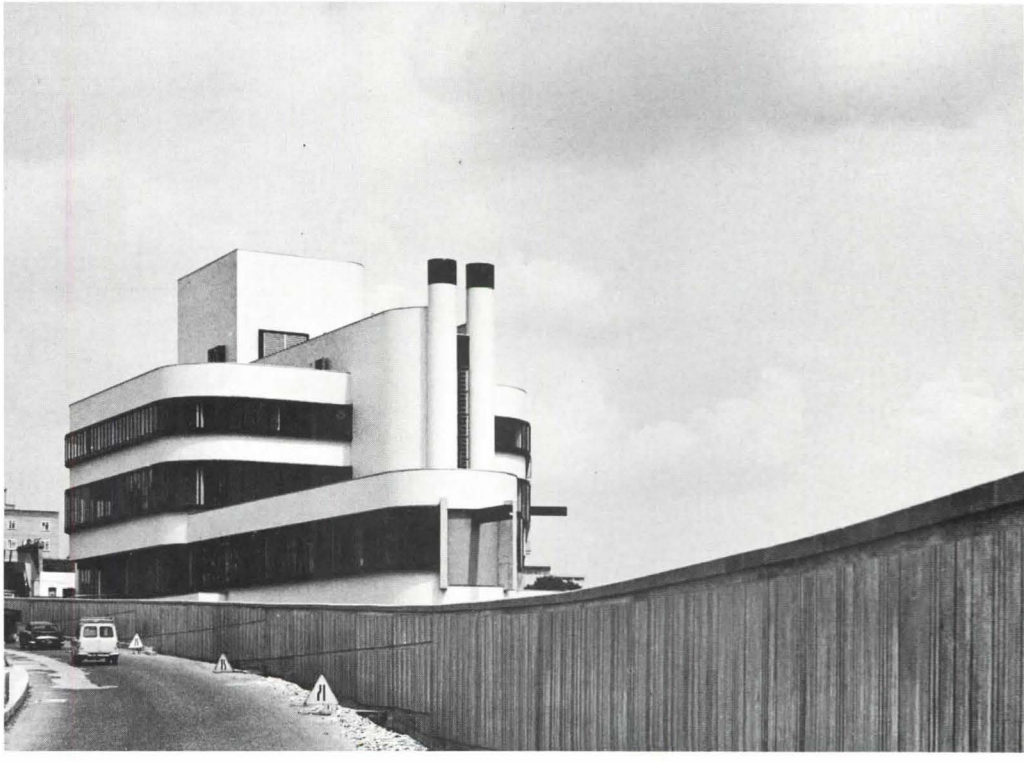
The nautical-looking object shown on these pages is, in fact, a complex of two buildings (connected at basement level) that services vehicles operated by the British Railways. The site, near one of London's principal stations, is highly unusual: not only is it triangular (and split by a short street), but it is also, in small part, covered by a new double-decked elevated highway, which produces a sort of reverse-air-rights condition: a highway occupying air-rights above a building.

The rounded, triangular forms were largely generated by the shape of this site. But the architects are much too sophisticated







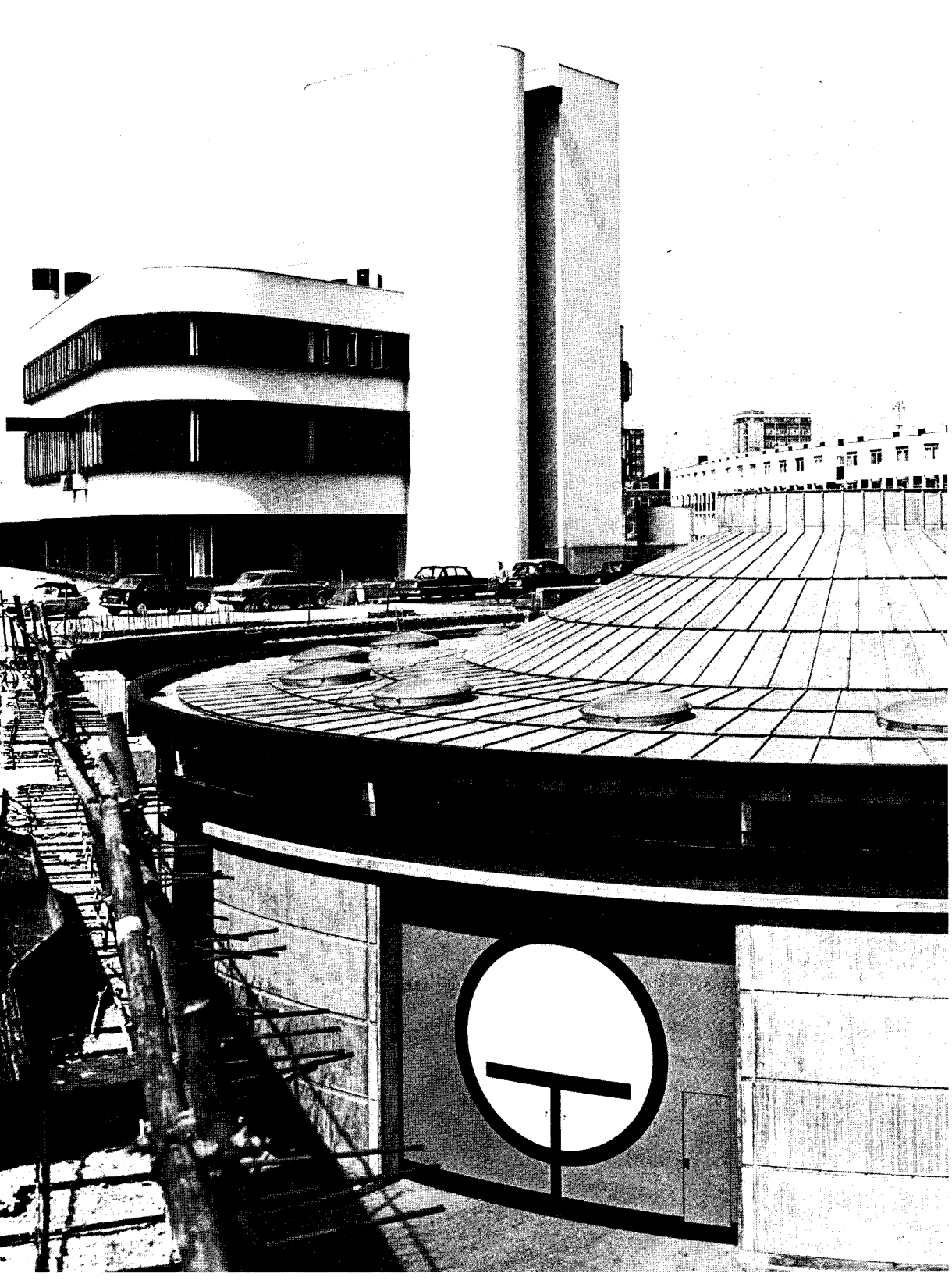


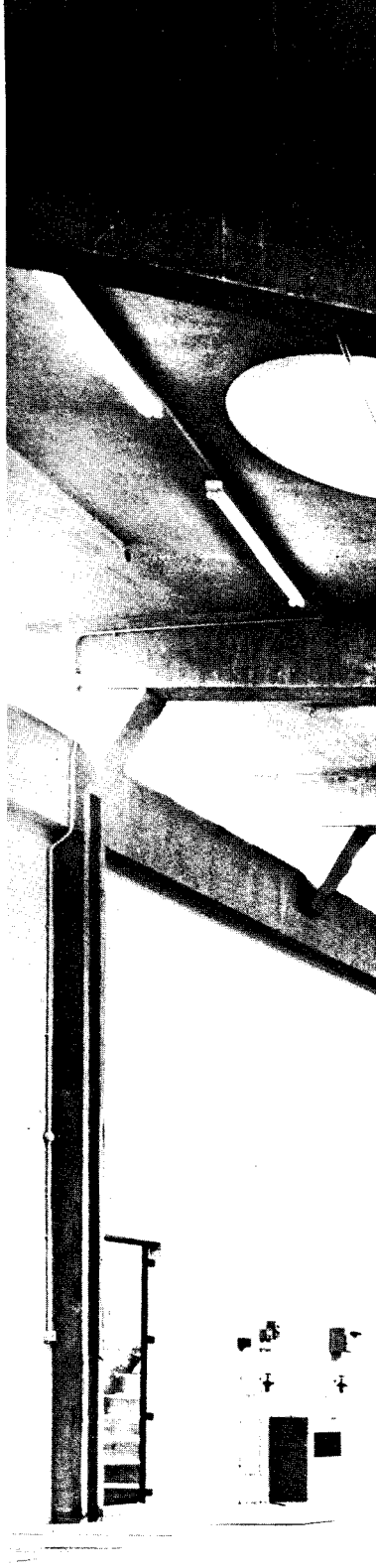
Left: View of West Block, with twin smokestacks rising from the basement boiler room. Elevated highway is under construction at near right. Above: Principal floor plan and section of two structures. They are linked below grade. Right: Detail of curved ribbon windows which pivot vertically. Below: A view of West Block from a secondary street that bounds the site.

not to have been strongly affected by the affinity of these buildings with transportation systems: railroad tracks and highways obviously suggested streamlining.

The so-called East Block, lozenge-shaped in plan, is only one story high (plus basement), and lit through skylights and clerestories. It contains the vehicle maintenance facilities. The West Block, the one that looks like the superstructure of an ocean liner, is four stories tall (plus basement), and contains workshops, storage areas, offices, and utilities for the entire complex. The two blocks, as stated earlier, are linked below the level of the street that bisects the site.

The structure called for large spans and floor loads of 200 lbs. per sq. ft.; this fact, combined with the irregular shape of the site, seemed to rule out precast concrete, except for the roof beams in the lozenge-shaped East Block. So the building is of poured-in-place concrete, with the imprint of wooden formwork left on the first floor walls and retaining walls (opposite page), and with ceramic tile (dark cream in color) used to finish the upper floors. The unusual ribbon windows are of steel, applied to the exterior face of the building, and vertically pivoted. They can be cleaned from the inside. The





curved, steel sliding doors (above) are 20 ft. tall; the great big STOP sign painted on their faces successfully keeps trucks from denting the steel.

What makes these buildings so successful is their apparent "undesigned" quality. They look like natural, industrial objects of the 20th-century scene, happily unfettered by styling. Like the 1931 Starrett-Lehigh Building in New York City, these structures are part of the modern, industrial vernacular.

"Elevated roads are becoming a feature of urban developments," the architects have said. "If steps are taken to utilize adjacent areas to the full, such

Exterior and interior of West Block: A one-story structure, lozenge-shaped in plan, and lit from above. It houses the vehicle maintenance facilities.

roads could serve as generators of urban renewal, provided the form and scale of the buildings is made to relate to the highways.

"It is obvious that such buildings will have to be of a type not very sensitive to external noise, and that industrial and service buildings are eminently suitable for such locations." This is, of course, a significant point: It would be infinitely more expensive and infinitely more difficult to insulate residential structures (and other buildings designed, primarily, for human occupancy) from the noises and fumes generated by superhighways. Buildings like these—impervious to such nuisances, and closely related, in function, to transportation systems—seem ideally suited for such sites. The architects have demonstrated that such buildings can, in fact, considerably enhance the urban scene as well.

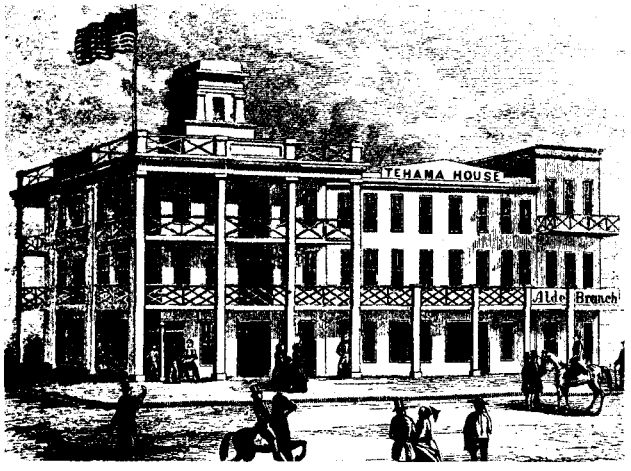
FACT AND FIGURES

Paddington Maintenance Depot (for British Railways), London, England. Architects: Bicknell and Hamilton (Paul A. Hamilton, partner in charge) in collaboration with Hubert Bennett, architect to the Greater London Council. Structural consultant: G. Maunsell & Partners. Service consultants: Oscar Faber & Partners. Quantity surveyors: C. John Mann and Yeoman & Edwards. Contractors: Sir Robert McAlpine & Sons Ltd.

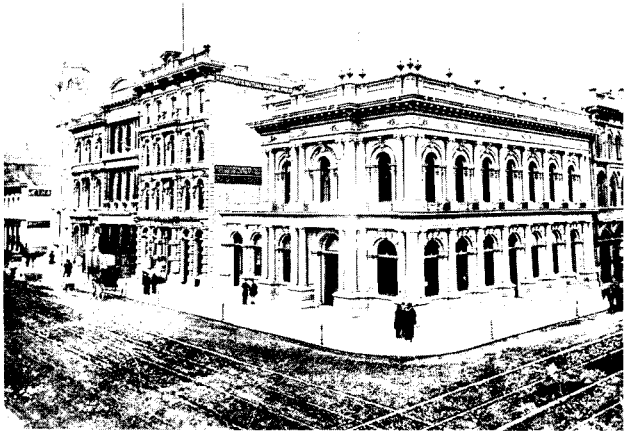
PHOTOGRAPHS: Page 64, Tim Street-Porter; others, Robert Einzig (Brecht-Einzig Ltd.)

A BANK WITH A PAST IN ITS FUTURE

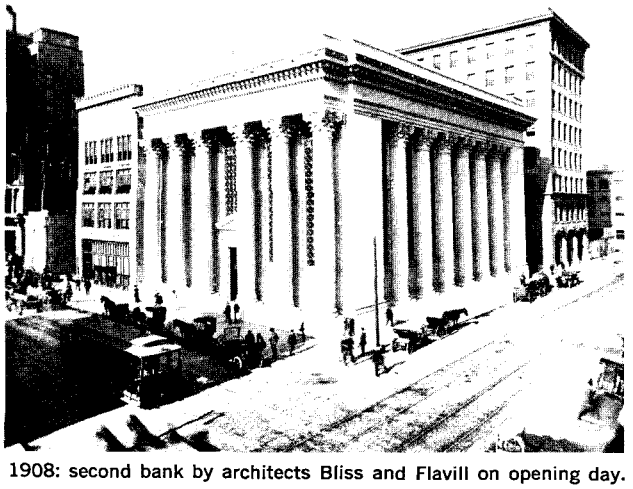
BY JAMES MARSTON FITCH



1850: a posh hotel occupied the site at Sansome and California.



1868: first banking hall by architects Kenitzer and Farquharson.



1908: second bank by architects Bliss and Flavill on opening day.

In a day when old buildings are vanishing right and left before the advance of "progress," real or putative, the fate of the old banking hall of the giant Bank of California offers a heartening alternative. For this 60-year-old landmark in the center of San Francisco's financial district has not only been preserved for the future; it has been incorporated into a new complex which will surely upgrade, enrich, and stabilize its entire neighborhood.

What makes an old building all at once appear as an historic landmark to its owners? The expansion plans of the Bank of California raised this question in its most specific terms; and the Bank's decision to preserve its 1908 home provides a response of more than local significance.

For what has been recognized here is that, in matters like this, there are three scales of history: international, national, and local. They are not necessarily interchangeable or commensurate. The old temples at Uxmal or Pergamon are probably a more vital part of the culture of the archaeologists who dig there than the local peasants whom they employ. Moreover, each scale of history has its own time-span: in Athens, a purist may well consider any building later than the Fifth Century B.C. an intrusion; in Florence, the great art historian Bernard Berenson considered that anything after the Quattrocento belonged already to a period of esthetic decline.

According to such scales, the architectural past of San Francisco is bracketed between two almost comically recent dates—the great Gold Rush of 1849 and the great earthquake of 1906. Nevertheless, for San Franciscans, the 6th of April, 1906, is quite as important a date in their past as 79 A.D. would be for Pompeiians. Thus, when they fondly refer to this granite Corinthian banking hall as an important landmark, "the oldest building in this part of town," they are justified.

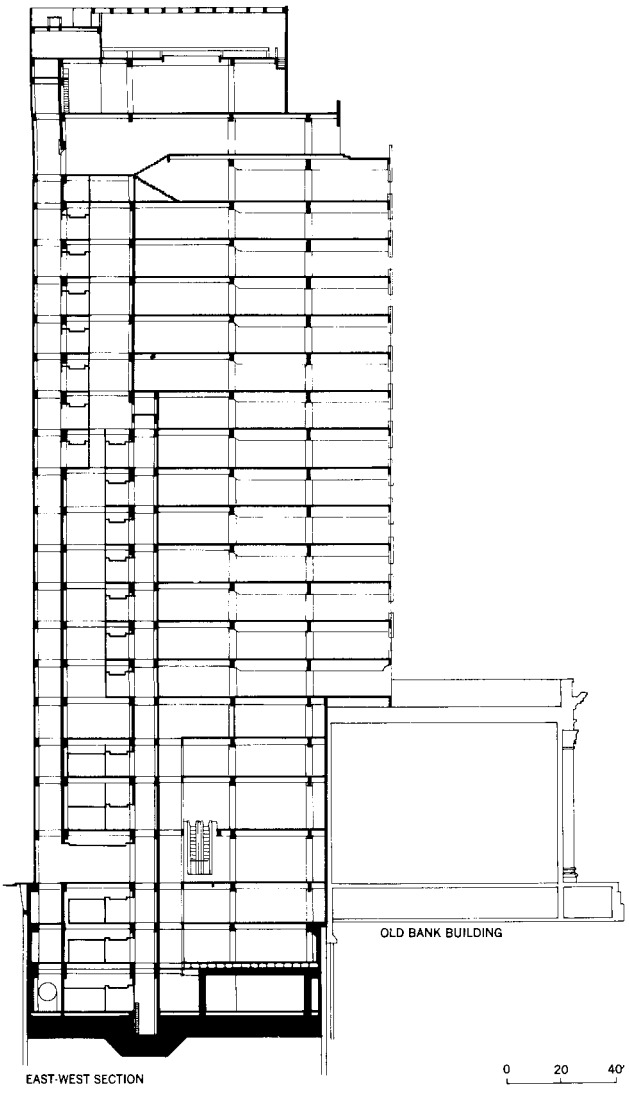
Phoenix from the ashes

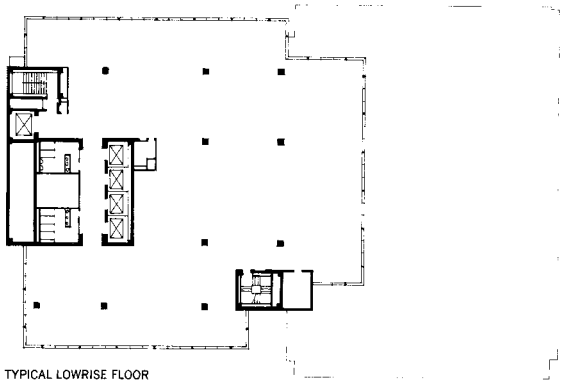
That this building is so old, by the local time scale, is itself due to an accident of history. For by that April day, the earlier 1868 building (center left) had already been razed and plans for the new one completed. Thus the Bank could begin construction when the ashes had hardly cooled, and reopen for business in 1908.

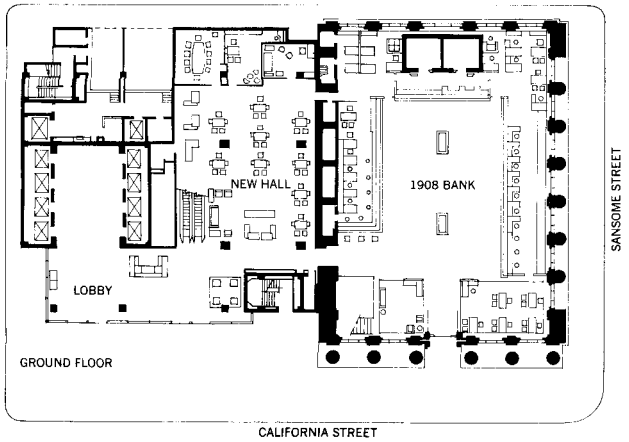
In this specific landscape, therefore, the old building was both historically and esthetically significant. And it would have been as absurd for the Board of Directors to abandon it because it was "only" six decades old as it would be to dismiss downtown Pompeii as old-fashioned because it had no steel-framed skyscrapers. Each place must make do with its own history and need not feel it necessary to apologize.

Fortunately, the Board of Directors of the Bank of California confronted their own corporate past in just this light. They voted to preserve and restore the 1908 banking hall and erect a new headquarters building nearby. This new complex by architect William Stephen Allen and his long-time partner, the late S. Robert Anshen, is the result.

Professor Fitch, who founded and directs Columbia University's program of graduate studies in Restoration and Preservation of Historic Architecture, was the historic preservation consultant for this project.




TYPICAL LOWRISE FLOOR



Having seen—like most commercial banks since World War II—a vast increase in business volume, the Bank of California faced the need of greatly expanded space. An owner-occupied headquarters tower seemed the obvious answer; and—since their old building was strategically located at Sansome and California Streets, in the very center of San Francisco's financial district—the obvious solution would have seemed to be: "tear it down and start over." Fortunately, the Board of Directors did not accept the obvious as the inevitable. Civilized misgivings about wrecking the old palazzina led them to a decision to preserve it, and build the highrise on land immediately adjacent.

Economics and earthquakes

Aside from acquiring the property at a substantial cost, this decision involved relocation of numerous tenants and the razing of the existing structures. In volumetric and structural terms, the new tower posed no specially difficult problems. The spatial requirements of the new headquarters had been clearly programmed; and Bay Region engineers are not at all dismayed at building tall structures on filled land in one of the country's most active earthquake areas. Spatial analysis showed that a 19-story tower with a 30-ft. cantilever over the old building would yield a very high ratio of net to gross floor area (82%). The steel frame, sheathed in a pre-cast concrete curtain wall, would stand on a pad foundation resting on sandy strata 45 ft. below street level. The steel frame of the old banking room would be beefed-up to meet seismic contingencies.

But in formal, esthetic terms, the linking of two such disparate forms called for both tact and imagination. The decision having been made to accept the old banking hall on its own terms—i.e., as a multimillion dollar landmark—the key question became: how could it best be displayed to the public? And—having decided to link it physically with a modern skyscraper—how could this connection be made visually satisfactory? Obviously, there could be no question of replicating the eclectic ornament of the old pavilion in the new tower; but also there could be no evading the need for visual congruity between old and new.

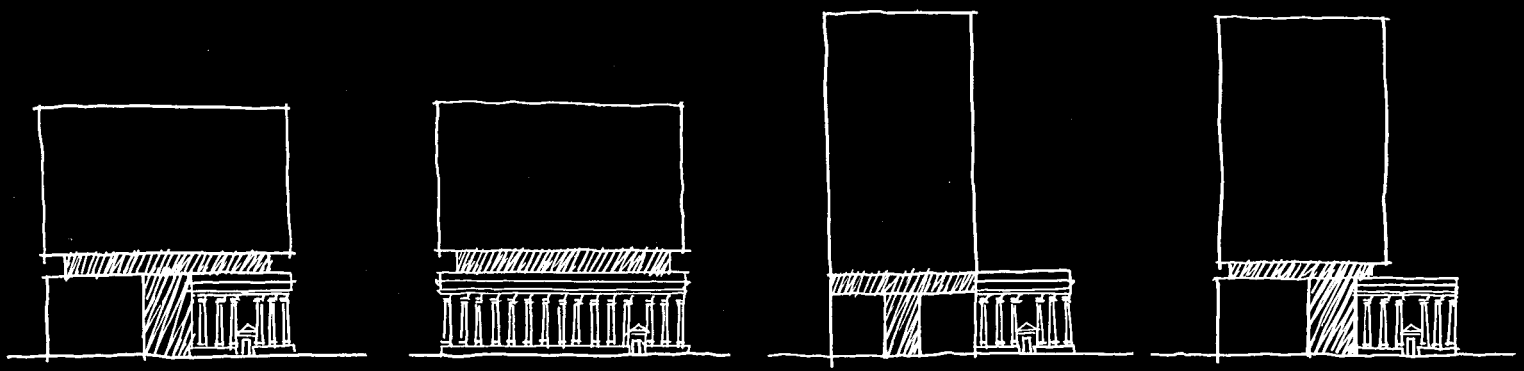
Pedestrian habitat

The basic characteristics of the final design stem from a recognition of a basic principle: only pedestrians actually experience a building; and the habitat of the pedestrian lies in a zone 6 ft. above the pavement. If the building is also a landmark, then it shares many of the properties of an object in a museum and should be just as accessible visually as a museum display. The consequences of this decision are apparent in both plan and elevation (left).

But this final solution was arrived at only by a process of trial and error. Various schemes were studied (top, facing page). All of them were clearly unsatisfactory. They either involved exposing the inner flank of the old hall—which was nothing but a rough party wall—(**A**, **D**); or extending a copy of the Corinthian colonnade across the face of the new tower (**B**); or ignoring the colonnade altogether with a symmetrical tower (**C**).

Clearly, only an asymmetric connection—asymmetric in both vertical and horizontal planes—could resolve the formal problem. Thus the face of the new tower was set back from the building line along the California Street front. This permitted the appreciation of the 1908 building as a free-standing vessel but also revealed the unfinished flank of that vessel. Thus it would be necessary to return stylobate and

The connection between the old banking hall and the new tower was, visually, a central problem of the whole design. To make this connection convincing, it was essential to provide a large opaque wall plane against which the Corinthian colonnade could be returned. Such a surface was quite logically derived from the placement of one of the required fire towers at this junction of old and new buildings.

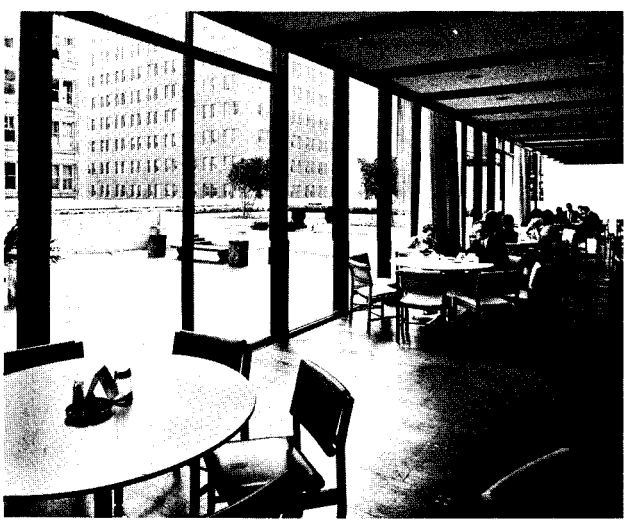


A. Old bank remains freestanding; tower covers entire block.

B. New street floor extended as copy of old Corinthian colonnade.

C. New building abuts old bank as a symmetrical tower.

D. New building is freestanding; tower is partially cantilevered.



entablature around the newly exposed exterior angle. This, in turn, implied a solid opaque plane to receive it. But from what, in a steel-framed curtain-walled structure, could such a surface be derived? Analysis of the plan showed that one of the required fire towers could quite logically be placed at this juncture of old and new, and this offered the required "solid" wall to effect an illusion of interpenetration.

The vigorously modelled classic facades of these old banks had, of course, a definite ideological function. Not only did they borrow the idiom of that paragon of power, Imperial Rome, in their stone work, but their sheer lithic bulk was also designed to imprint on the passerby a sense of solidity, stability, security. To dramatize this archaic formulation of fiscal reliability, the entrance to the new premises are exactly reversed: low-keyed, transparent, accessible. In purely visual terms, the resulting tension is highly satisfactory.

A piazza in the sky

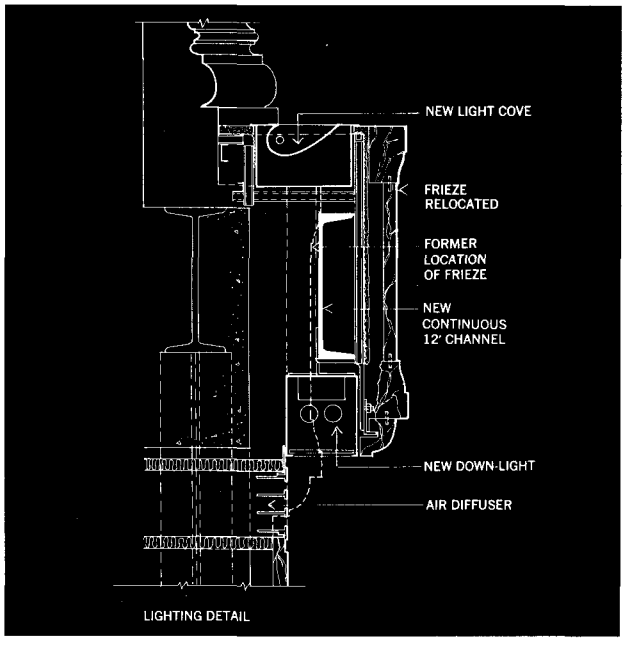
The sidewalk, as the habitat of the pedestrian, is the principal vantage point from which the streetscape is experienced in real life. (In this sense the large-sized small-scaled models and aerial perspectives so popular today are dangerous for designer and client alike in that they may lead to decisions made as if from a helicopter or captive balloon—attractive from afar but filled with booby traps for the actual occupants of the space.) Nevertheless, in densely built-up urban areas there is a second vantage point from which the streetscape is experienced—the windows of adjacent tall buildings.

The presumed impact of the new complex on both these zones of experience was carefully considered in the design process. To guarantee that they were not ignored, the old building was photographed (both movies and stills) from all critical vantage points. Photographs of all these view-points were enlarged to drawing-board size and all preliminary studies were done on tracing paper atop them. For all its simplicity, this proved to be an extremely revealing technique for rapidly checking out the visual consequences of various assumptions of mass and volume.

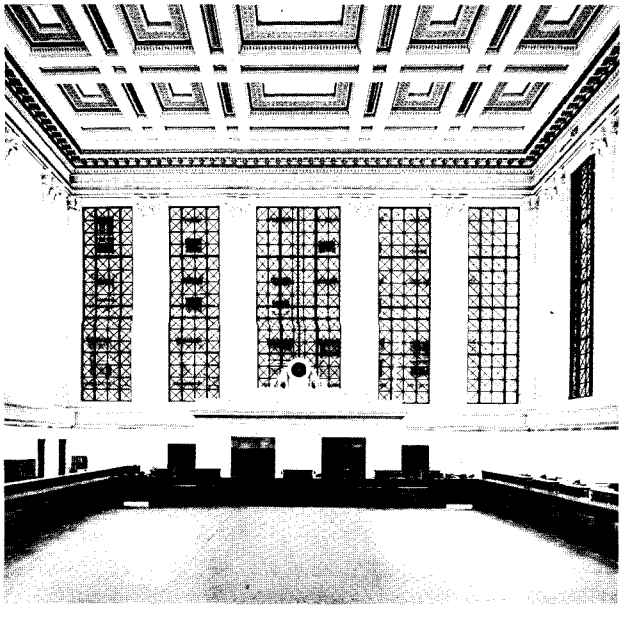
It proved to be especially valuable in decisions regarding the esthetic development of the roof of the old palazzina. Originally a simple asphalt-and-gravel deck, screened from pedestrian view by its granite parapet, this roof had acquired a congeries of mechanical rooms, fan-housings, ventilating ducts and the like. These had all been set back from the parapet so as to be invisible from the street. But they constituted a kind of visual slum for all the taller neighbors, including, of course, the proposed new tower.

Thus, early on, the decision had been made to clear the roof of its slum and convert it into a landscaped terrace. Here again cosmetic and functional requirements were made to coincide without much difficulty. A restaurant for bank employees had been an integral part of the building program since moderate-priced meals seem to be one of the first casualties of a booming financial district. Very little study was required to show that the restaurant could logically be placed on the fifth floor of the new tower, overlooking and opening onto the new roof garden. Given the city's mild climate and the terrace's southerly exposure, it will make a very pleasant place for noontime sun and air—another serious problem for white collar workers in districts like this.

Over the years, the roof of the old bank, with an accumulation of fan and ventilating housings, gradually became a kind of visual slum (top left). Although it was screened from the street, it was an eyesore for the tall buildings which rose around it. By converting this roof into a landscaped terrace, the architects have given the owners a valuable new asset and have furnished the neighborhood with a new "piazza in the sky."



LIGHTING DETAIL



Restoration of the 1908 banking hall itself was comparatively simple. Well-built to begin with, it had always been well-maintained. Externally, it was steam cleaned; dramatic new night-lighting was installed; the bronze window grilles were repaired and new window washing devices installed. Internally, the problem was a bit more complex. While it was desirable to return the great room to something approaching its original visual splendor, it was also necessary to up-date furnishings and equipment in line with modern banking practices.

Thus the old accumulation of grilled tellers' cages and railed-off offices was removed and a single range of low marble counters was installed around the perimeter: this enlarged the banking floor, both actually and visually (photos, left). The polychromy of the coffered ceiling—cream, coral and gold leaf—was restored, the pilastered walls were cleaned, the rusticated marble dado was sandblasted for a matte finish, and new marble floors were installed.

Light and air

Two environmental problems (illumination and atmospheric control) had never been satisfactorily solved in the old building. The only general illumination had been from down-lights inserted in the coffered ceiling, while heating, ventilating, and airconditioning grilles had been located in the walls below the level of the tellers' counters.

The architects' solution to this is as simple as it is effective. A decorative belt molding had topped the marble dado at a height of about 12 ft. This molding was detached from the wall and moved out about 6 in. (detail, left). Behind it were concealed two continuous bands of lamps (quartz up-lights and florescent down-lights) and a continuous air-supply.

The restoration of this 60-year-old bank is a landmark in a double sense, for it reflects a new level of understanding of and respect for a period of the past which has not received much attention up to date. It also demonstrates another principle of some importance—i.e., that on an urbanistic scale, where the integration of old and new buildings may be mandatory, the contemporary architect must be prepared to accept suprapersonal esthetic parameters.

Architecturally, the bank which Bliss and Flavill completed in 1908 conformed quite closely to a then-popular type. It was the "Roman Classic" style against which Louis Sullivan protested so vehemently in *Kindergarten Chats*. It was described at the opening as being "a modified and improved design of the Knickerbocker Trust Co. on Fifth Avenue in New York [whose] colonnades are a faithful reproduction of the Temple De Jupiter Stator A Rome [sic!]." Of such eclectic banks Sullivan had demanded "that the banker wear a toga and sandals and conduct his business in the venerated Latin tongue."

It is thus an irony that the Bank of California has been restored with the same care that Harwell Hamilton Harris expended some years ago on the restoration of the lovely little bank which Sullivan built for the Bennett family in Owatonna (Oct. '56 issue). It is nevertheless entirely proper that both buildings have been preserved, even though—in formal esthetic terms—the Owatonna building is incomparably the more significant. Nothing better demonstrates the final "localness" of history.

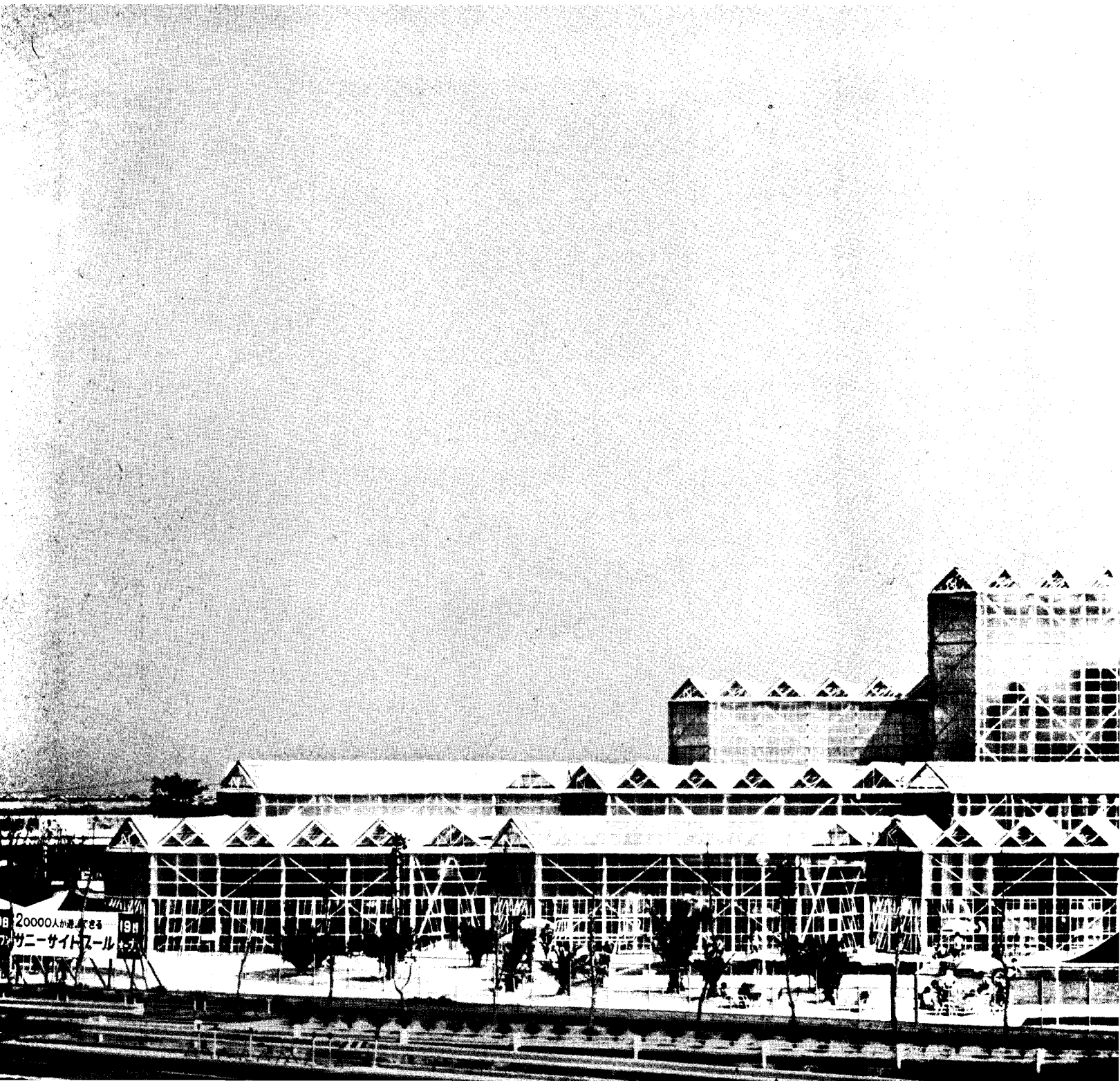
FACTS AND FIGURES

The Bank of California Building, San Francisco, Calif. Architects: Anshen and Allen. Landscape architects: Royston, Hanamoto, Beck & Abey. Interior design: Maria Bergson Associates. Engineers: H.J. Degenkolb & Associates (structural); Bayha, Weir & Finato Inc. (mechanical and electrical); Kenward Oliphant (acoustical); Dames & Moore (foundation). General contractor: Cahill Construction Co. Building area: new building, 290,000 sq. ft. Contract construction cost: new building, $16,000,000; renovation of old building, $2,000,000.

PHOTOGRAPHS: Jeremiah O. Bragstad, except page 68 (bottom), Moulin Studios, and page 72 (top), William J. Rader.

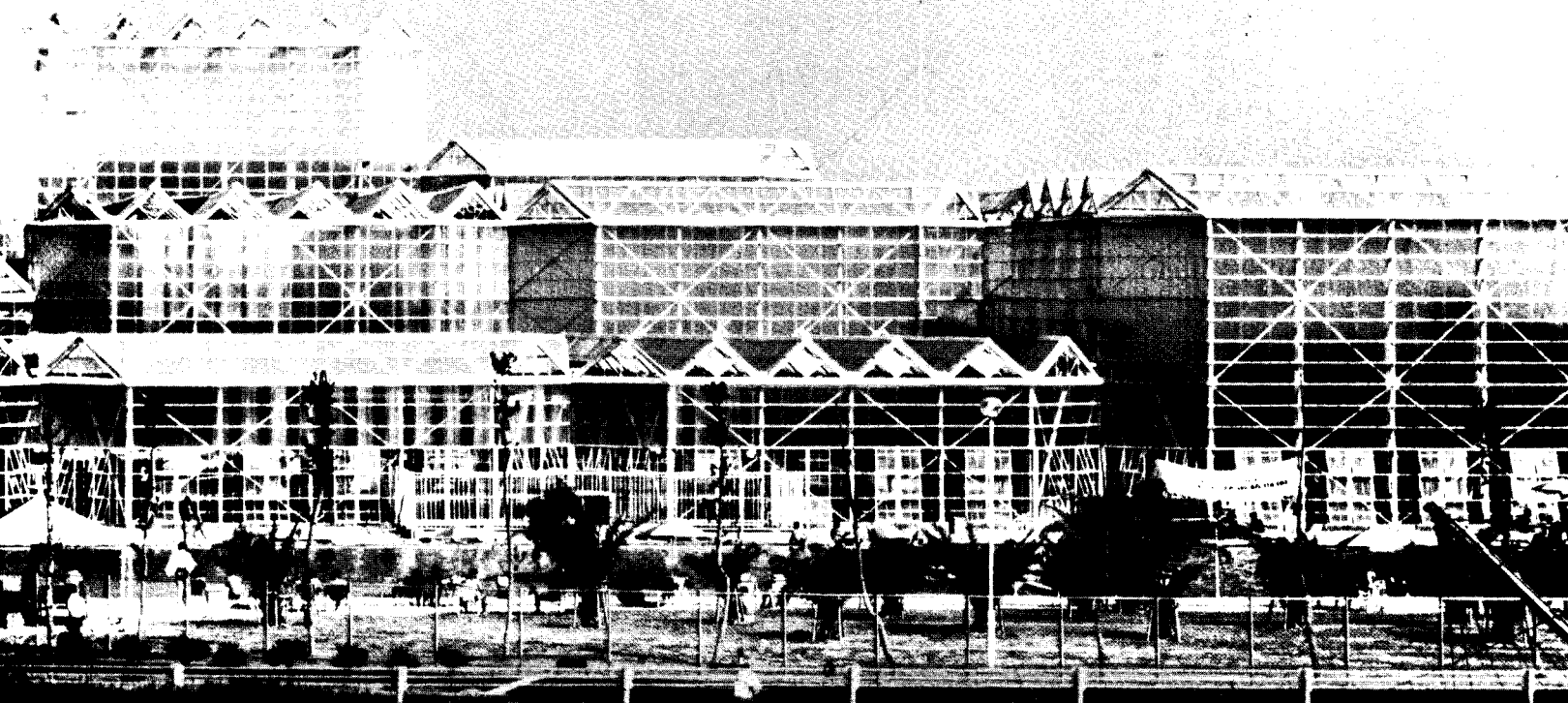
JAPAN'S CRYSTAL PALACE

More than a hundred years ago, Joseph Paxton, a landscape architect, patterned his huge, 770,000-sq.-ft. Crystal Palace in London after the iron-and-glass greenhouses he had designed and built earlier. Now there exists another huge greenhouse—this



one covering about 150,000 sq. ft.—and it was completed last summer near Nagoya, Japan. This remarkable structure was prefabricated (like the original Crystal Palace), but this time of steel and corrugated, glass-fiber reinforced plastics. It houses the plants of Nagashima's Tropical Garden, and represents the first structure in an ambitious plan that will, finally, encompass an aquarium, an aviary, and a zoo.

The Nagashima Tropical Garden was designed by the anonymous architects of the Takenaka Komuten Co., which also built it. It is a modular structure, made up of 18-meter squares of differing but related heights: 6 meters, 9 meters, 12 meters, 15 meters and 21 meters high, to accommodate different kinds of plants, including tall trees. Most of this framework is covered with corrugated and translucent sheets of reinforced plastic; only the steel operating sash is glazed. (This sash is contained in the lower portions of exterior walls, and in the gable ends of the sawtooth roofs.) Eventually,

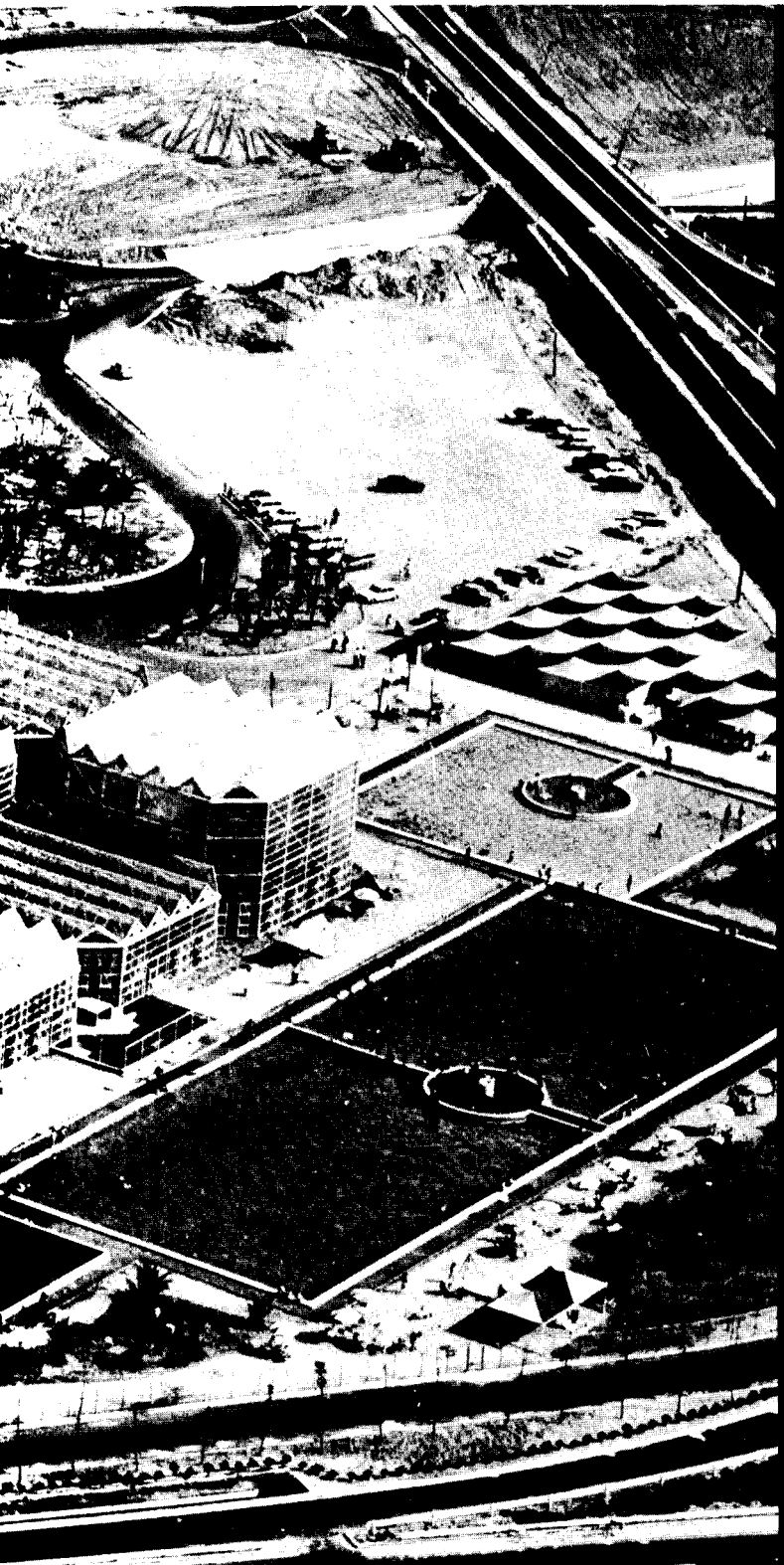


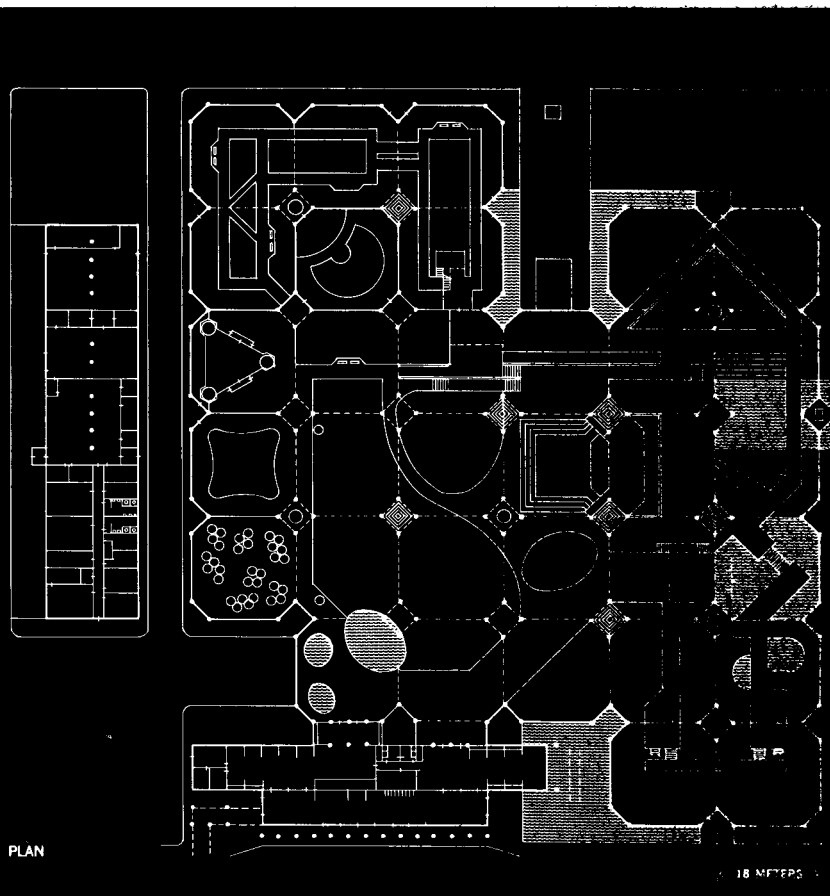
the Tropical Garden will house 30,000 plants of 3,000 varieties.

The Japanese systems engineer, Zenji Katagata, recently wrote this about the Nagashima Tropical Garden: "My first glimpse of the translucent white mass was a thrilling experience. The building complex came into view as we crossed the red bridge of the Kiso River. . . . It is a futuristic sight, and I found myself transplanted into a world of fantasy . . .

"The fiber glass reinforced plastic was chosen to withstand frequent typhoons. It also serves to diffuse light. But was the designer aware of the dramatic effect at night? I do not know; but the white botanical garden building is a 'palace of light' at night, with mercury and incandescent electric lamps giving out purple and orange light. It is a magnificent spectacle against the long line of headlight beams and tall lamps on the highway along the beach."

Although the module is 18 meters square, the bays are, in fact, octagonal, with the shorter sides



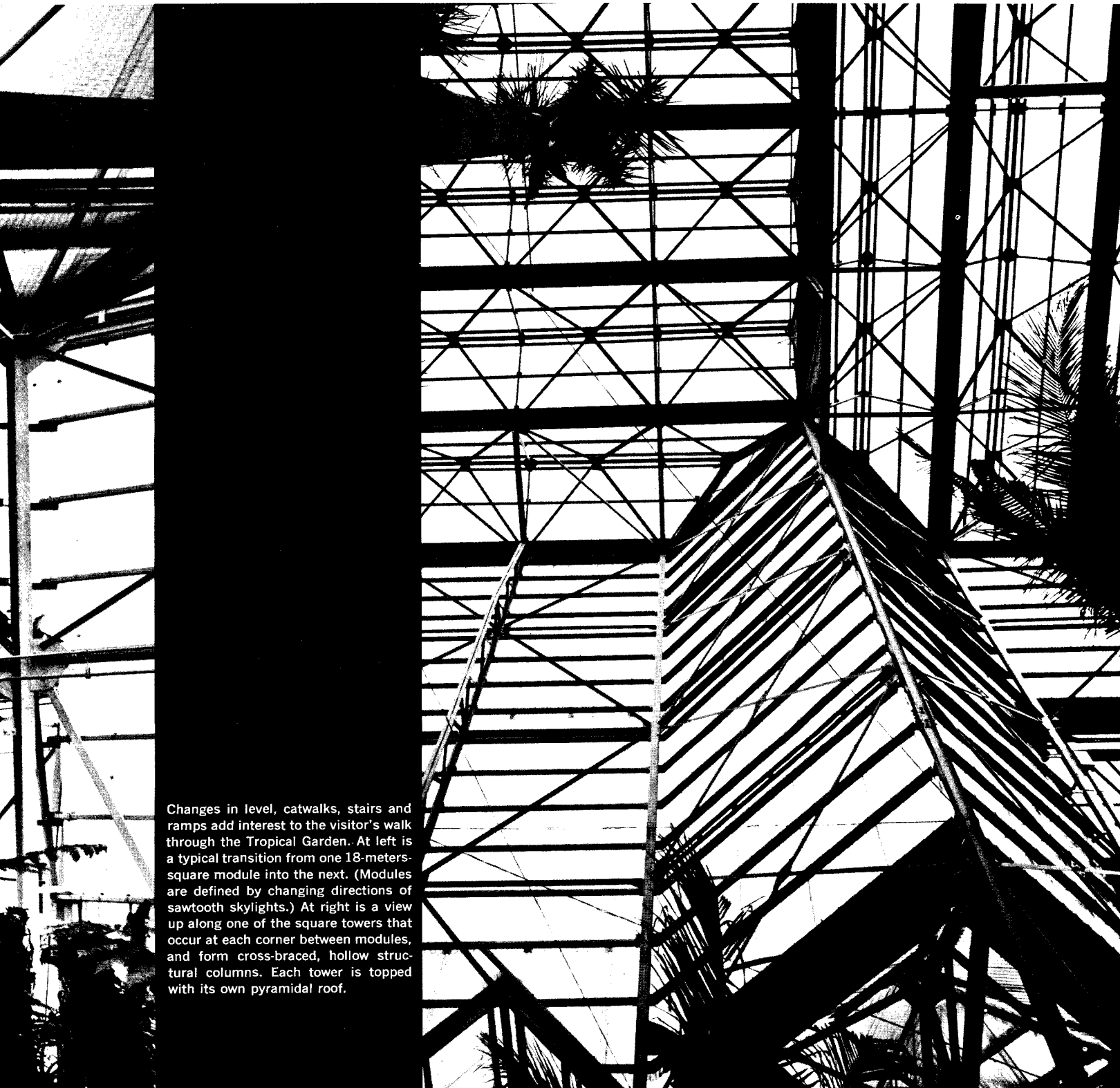


Bird's-eye view of the Nagashima Tropical Garden, and plan (above). The building consists of a series of 18-meters-square blocks of varying heights. Corners of each "square" are, in fact, cut off, making the module an octagon. The resulting towers at each corner between modules are hollow and form cross-braced columns that support and stiffen the structure. Modules vary in height from 9 to 21 meters. The tallest of these houses palm trees.

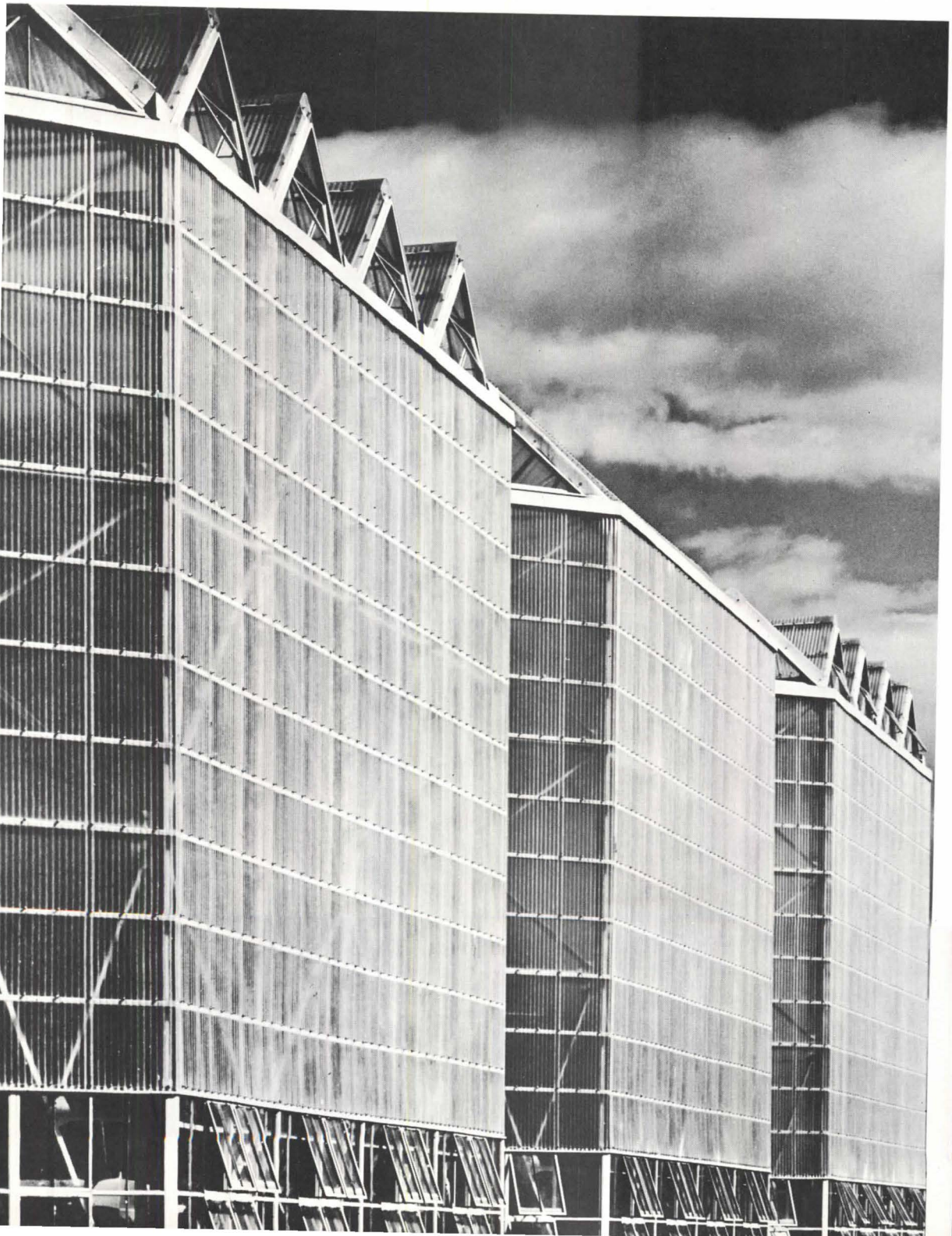
of each octagon forming a square shaft, 6 meters across, at the corner of each bay (see plan, below). These shafts act as hollow, cross-braced columns, topped with pyramidal roofs. This unusual detail simplifies the juncture, at corners, of the sawtooth roofing over each bay. The roofing system is, in effect, a series of space frames, and by running the sawtooth patterns at right angles to each other in adjoining bays, the roof is further braced. The hollow columns, too, make for much greater resistance to buckling than would be offered by a single H-section of anything but excessive cross-section. As it is, the Nagashima structure is extremely light and lacy, in the best tradition of greenhouse design.

As indicated earlier, this structure was prefabricated; and it is one of the many astonishing facts surrounding it that the building went up in 5½ months, complete.

To those familiar with recent developments in European architecture in particular, this build-



Changes in level, catwalks, stairs and ramps add interest to the visitor's walk through the Tropical Garden. At left is a typical transition from one 18-meters-square module into the next. (Modules are defined by changing directions of sawtooth skylights.) At right is a view up along one of the square towers that occur at each corner between modules, and form cross-braced, hollow structural columns. Each tower is topped with its own pyramidal roof.




熱帯植物

ing clearly recalls the work of the British architect, James Stirling (Sept. '64 and Nov. '68 issues). What is so surprising about the Nagashima building is its appearance, completely assured and mature, in a country best known until recently for its achievements in reinforced concrete. For this, of course, is the biggest "Stirling-type" structure built anywhere to date—and one of the best; for it to have been constructed by an anonymous contracting firm in so highly industrialized a nation as Japan, and without fanfare, suggests that the modern vernacular which has interested men like Stirling for so many years is an entirely practical reality, a natural and available vocabulary, rather than an esoteric style based solely upon theory.

FACTS AND FIGURES

Nagashima Tropical Garden, Nagashima-cho, Kuwana-gun, Mie Prefecture, near Nagoya, Japan. Owner: Nagashima Tropical Garden Co. Ltd. Architects and constructors: Takenaka Komuten Co. Ltd. Building area: 147,000 sq. ft.

PHOTOGRAPHS: Pages 80 through 83, Yasuhiro Ishimoto.

BOOKS

THE MATRIX OF MAN. By Sibyl Moholy-Nagy. Published by Frederick A. Praeger, New York, N.Y. 318 pp. 9 by 10¾ ins. Illustrated. $15.00.

REVIEWED BY JOHN M. JOHANSEN

The Matrix of Man is a history of cities. It is an earnest attempt to classify cities by prototype; but it reveals itself also as an intensely personal interpretation of what the author sees and feels about cities. Sibyl Moholy-Nagy's premise, as she states it, is a "faith in the historic city." This faith is not a faith in cities of the future, with which this book does not concern itself, but faith in historic continuity, the "eternal return," and a faith in the historic city as a guide to the shaping of our cities present and future. Her premise holds that the character of cities reveals the character of the populations that shaped them. Evolution is slow. Past, present, and future are a slowly geared continuum with no evidence of rapid change, neither in man's needs, nor in the technological means by which these needs are to be satisfied.

Throughout history, the author sees certain repeated basic determinants in the creation of urban environments which have resulted in prototypes. The reason for the book, the author states, is "to influence, through the meaning of history, the present and future reality." This meaning which the author finds, was "derived from documentation as well as by intuitive and visual recognition"; and in the search for this meaning she adds, "only an heuristic instinct for the human image in the environment can serve." Quoting Nietzsche: "life is action, if we insist on proof, we shall come to no action, to act you must assume and assumption is faith." This book, then, does not offer proof so much as discovery. Here in her own words she reveals herself as a creative romantic, rather than one of the scholarly tradition. This book is an act, a personal independent assertion; and this is its strength. It was the observation of William Hallatt Carr that history is not pure fact but is to each period what that period and particular author saw of history, and in history. Mr. Carr's observation surely applies here. To me, the most revealing and significant word she uses is "heuristic," which, derived from the Greek, means to invent or discover—also a method of education by which one finds for ones self. Readers of the younger generation who distrust sequence and category may resist the idea of prototypes. However, these readers will, I'm sure, understand this heuristic approach. At the risk of offending both authors, I would compare her with Vincent Scully, both of whom might be called "passionate scholars," or "scholarly romantics." These are very valuable, creative people. We must understand, enjoy, and honor them. And now with this honest self-revelation of Sibyl Moholy-Nagy, and her premise, the reader can settle back and enjoy her observations, discoveries, inventions, and how in history she "finds for herself."

The prototypes the author singles out are termed: geomorphic, concentric, orthogonal—connective, orthogonal-modular, and clustered. Geomorphic is a vivid term, illustrating an urban pattern most strongly determined by the natural condition of site. Man, although arrogantly opposed to nature, is still a part of nature, and often is obliged to follow her ways; in marginal existence by necessity, or when able to dominate nature, he chooses, out of some psychological need for relatedness with nature, to rejoin her. The citadel, as early as the 4th millenium, B.C., and the star-shaped cannon-equipped fortress of the 17th century, A.D., illustrate this joining with nature, once the site for defense purposes was determined.

Concentric cities are those which take their form from determinants varying from necessities of defense to power obsession, pride in wealth, awareness of destiny, relatedness to the cosmos, to a magic geometry, and other ideational concerns. Fortifications with maximum inclusion to the minimum of circumference are found in early Celtic and medieval strongholds, while religious precincts and sanctuaries of the protective God are found in the ziggurat or "world mountain." Later Newtonian concepts of the universal order as machine, Ledoux in France, Wolf in Germany, Ebenezer Howard in England continue the concentric tradition. The author offers a current example in the kibbutz in Israel, then amusingly tops off the list with a rendering of "Moon City."

The orthogonal prototypes refer to movement-oriented plans. Starting in the Old Kingdom of Egypt with the religious processional, following through Babylon into the Hellenistic period, we are introduced to a new concept—that of traveled ways, which connect the major elements of city function. The "sacred way" at Delphi, the buildings "fitted into the street pattern" in rebuilt Babylon are pure orthogonal; and, incidentally, differ little in organization from the Archigram "plug-in," which the author for some reason finds so painful to accept.

Skipping the formative and mature of Periclean age in Greece, the "Greek wave" in the Hellenistic age continues the orthogonal development. References to the logical, controlled legalistic mind of Aristotle, the teacher of Alexander, as an indirect influence of city planning is indeed good background material. In describing Hellenistic cities, phrases such as: "road systems as generators of plan" or "the city as node in an international network" not only reveal a kinship of the orthogonal cities of history with the concept of advanced thinking in urban design today, but use almost the same terminology. If the author would acknowledge Archigram, she would greatly further strengthen her thesis.

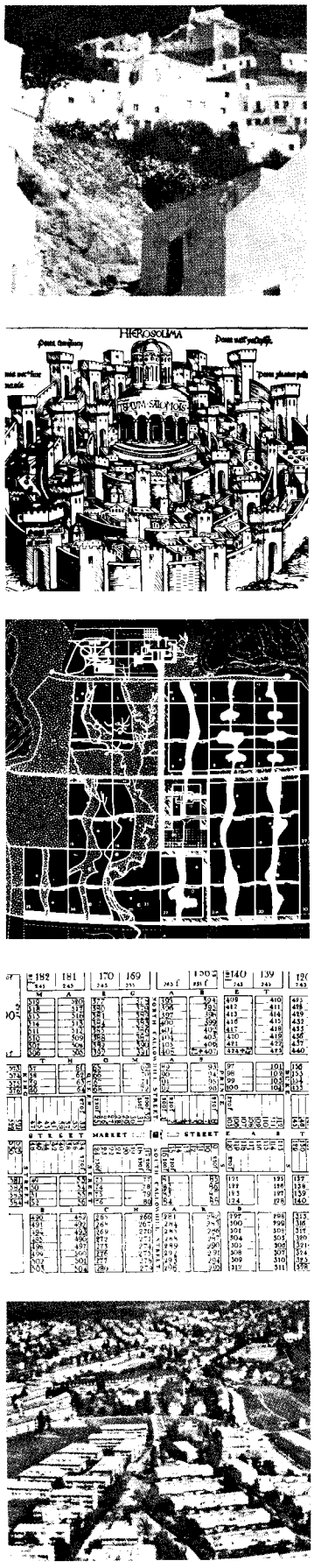
"The Orbit of Rome" is a chapter which takes the reader through non-orthogonal Rome as quickly as possible, into Vitruvian interpretations of what he believed Rome once was. Aside from the great highways, Rome had little concern for circulation.

Mr. Johansen is an architect whose buildings, and articles, have been published frequently in the Forum.

It did, however, have building ordinances of which the author gives an amusing account. During the Renaissance, rediscovery of the Hellenistic traditions by Hermogenes re-established the element of circulation in city planning. However, another historian, Hyram Haydn, in *The Counter Renaissance,* finds in the Renaissance not only the humanist academic attitude, revealed in imitation of classical forms, but a pragmatic, or "that's how it is" acceptance of what is the natural condition. This latter attitude with its love for the organic, for natural processes and life-generated form, was, it would seem, quite capable of reintroducing movement and functional processes into an orthogonal city design. Another controversial point might be whether the Counter Reformation church of Rome influenced baroque art as the author claims, or whether the church did not take the already established baroque style as a useful propaganda medium. However, the orthogonal trend continues convincingly into Napoleonic Paris under the hand of Haussmann with its great connecting boulevards, onward into L'Enfant's Washington, D.C.—"the plan without a city"—and comes to a grinding halt with Brasilia, and the new capital buildings in Albany, still shamefully within the "Orbit of Rome."

The "modular grid", a variation of the orthogonal prototype, *is* a compromise between static order and organic kinetic circulation. Its origins are found in Egypt, Persia, Hellenic Greece, and its determinants vary from mystic concepts and numerology, to military encampments and outright land speculation. Most enlightening is the contributive material describing the Land Ordinance of 1785 by which the entire United States was surveyed into uniform townships of 6 sq. mi. each, and the City Commissioner's plan for New York City in 1811, which unleased a relentless grid pattern, ignoring either esthetics or topography.

"Linear Merchant Cities", orthogonal, are typified by Ostia (Rome's seaport), medieval Bern, Zurich and the Hanseatic cities—



Examples (top to bottom) of the five city prototypes: geomorphic, concentric, orthogonal-connective, orthogonal-modular, and clustered.

and also remodeled Paris of the 17th century, canal cities like Amsterdam and New Amsterdam. Here the motivation was commerce, often disregarding the cathedral, palace, and city hall.

The "cluster plan" is another distinctive prototype. Satellites, for example, are "clusters of buildings that belong neither to the city nor to the village . . . partaking of the open land, but dependent on an imitation of city for survival." Early garden cities by the London County Council produced Letchworth; Le Corbusier's Ville Radieuse outlying Paris, Baldwin Hills Village upon Los Angeles, Greenbelt upon Baltimore, illustrate the relationship of the satellite to its central city. Then cities within cities, such as Stuyvesant Town in Manhattan, follow the prototype, not as satellites, but as ingrown clusters.

"Options and Conclusions" offers an outlet into current history. Here all the prototypes are again found: the orthogonal-linear appears in the subterranean circulation of Montreal, the modular (cluster?) in Safdie's Habitat, and the geomorphic in projects for Malta's sea cliffs. One wishes there had been inclusion of the New York's Regional Plan subway-elevator network, a comprehensive analysis of "Plug-in City" by Peter Cook, Smithson's studies for London, the floating city by Tange, to enforce more strongly the validity of these prototypes today. In passing, Sibyl Moholy-Nagy mentions the idea of Social Myth as influence upon city design, adding that "the 20-century city represents the technological image, unaware that the mechanical age is already obsolete." Here I can't resist a reference to the "rear view mirror" of McLuhan, and accepting her subtle admission that, replacing the obsolete mechanical age, there just might be "an architecture for the Electronic Age" [see Jan. '66 issue].

Classification is always somewhat hazardous, but I believe in this case convincingly made. The reader does find, in studying cities, so many superimposed conditions and forms, that reference to prototype may occur several times. Delphi is mentioned once as geomorphic, later as concentric, and could be orthogonal as well. But this simply is how cities are. The organization and functions of New York City are not simply explained by the orthogonal grid prototype, although I do not doubt that the author's classification would help. For instance, little mention is made of air transportation and airports, subways, interchanges, power and electric distribution, sewage, land values, zoning, political and commercial interests today—or, in fact, "who designs America". The rapid acceleration of events and the intensity of urban problems, is history. Also a part of history will be the immediate, full use of mechanical and electronic technology, new planning methods and new concepts, which will be necessary to the solution of these problems. Sibyl Moholy-Nagy fights science, technology, new concepts and specifically the computer, with an intense fear; whereas, the profession knows, these are neutral devices in the service of man. The computer is no more evil nor good than the human mind that states to it the problem, nor the mind that makes the value judgments when the comparative analyses are presented.

The weak aspect of this book is the author's limited technical knowledge of the modern city and its problems. The reader is still not convinced that the historic city can help very much in solving the problems of our time; that we will find our way by independent and more timely means. *The Matrix of Man* as a personal observation of past history is none the less a convincing book, a rewarding book, and a beautiful book. The strong aspects are not only in the useful classifications with their rich assembly of supporting documentation; but above all in the observations, the passionate love and interest in cities, the persistent energy of her search, the perception and discovery in which we as readers are allowed to take part. This is Sibyl Moholy-Nagy, and this is her work. They are both of real value.

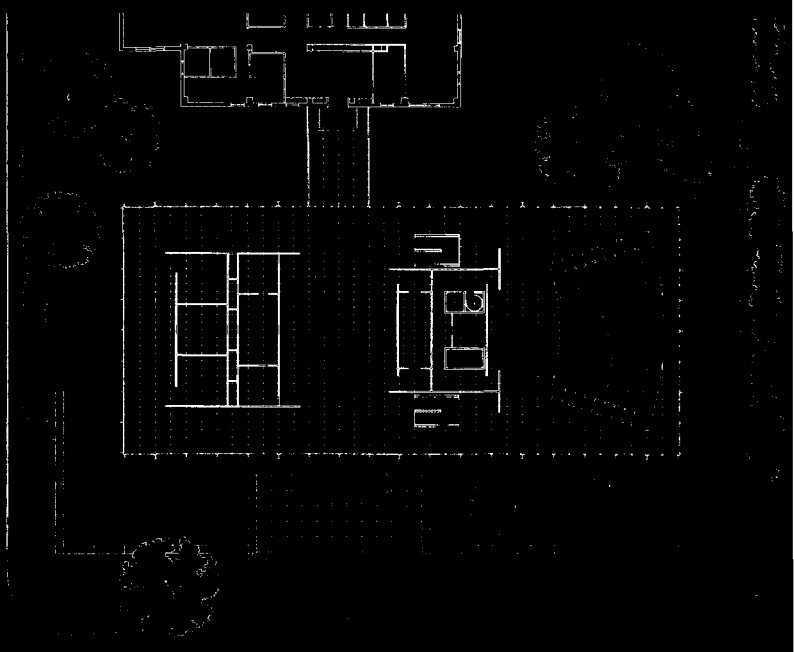
NEAT SHOWCASE FOR THE ARTS

Back in 1954, when Phyllis Lambert persuaded her father, Samuel Bronfman, to retain Mies van der Rohe to design Manhattan's Seagram Building, she became so deeply involved in problems of modern architecture —and so deeply devoted to the solutions offered by Mies—that she decided to become an architect herself. Now, 15 years later, she has completed her first building—the Saidye Bronfman Cultural Centre—and that building shows her to have become a faithful and perfectionist student of the Miesian idiom.

The Centre is a two-story building somewhat in the manner of Mies' Crown Hall at IIT: the lower story is two-thirds below grade, but brightly lit through continuous clerestories; the upper story is glass-and-steel from floor to ceiling, and subdivided by modular, oak-faced partitions 7 ft. 6½ in. high around offices, and full height around the core. The night view of the Centre at left clearly describes the spatial organization of the building.

The size and scale of the Centre are difficult to grasp; it is really bigger than it seems at first glance: a rectangular block 171 ft. long, 76 ft. deep, with an interior ceiling height, upstairs, of 19 ft. Unlike Crown Hall, the Centre is asymmetrical in plan and elevations: the main entrance from the street leads into the second of four 38 ft. wide structural bays—and this bay (which forms the entrance hall), in turn, divides the plan into offices on the left, and a 250-seat theater to the right. The entrance hall doubles as a generous exhibition space for paintings and sculpture. Two stairs lead from this space to the floor below—and this floor contains painting and sculpture studios and workshops, as well as shops and other facilities relating to the theater above. Finally, a glazed bridge leads from the entrance hall to the next-door YMHA-YWHA complex.

The other, major difference between the Saidye Bronfman Centre and Crown Hall, of course, is the manner in which the structure has been expressed: at

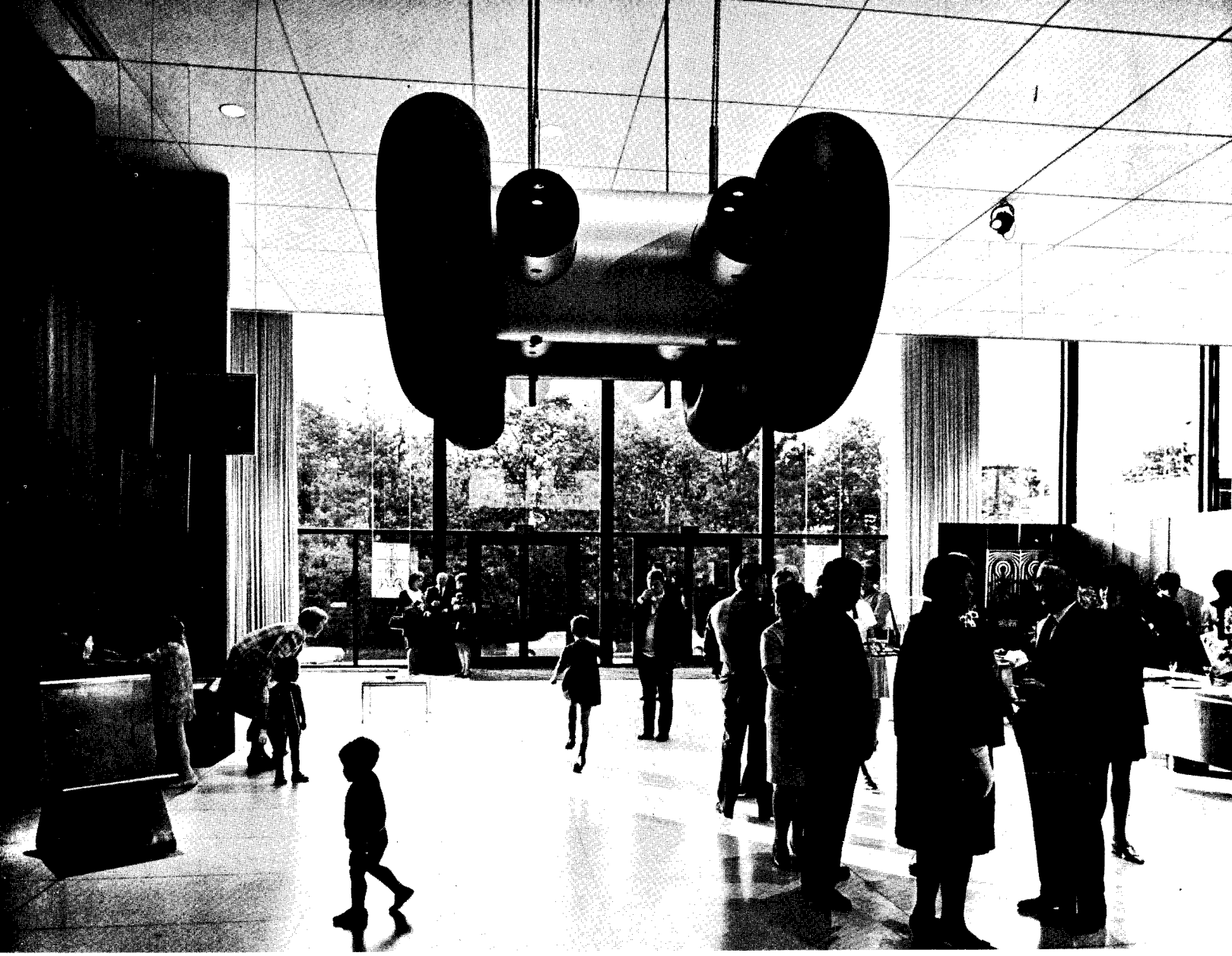


MAIN FLOOR PLAN

LOWER FLOOR PLAN

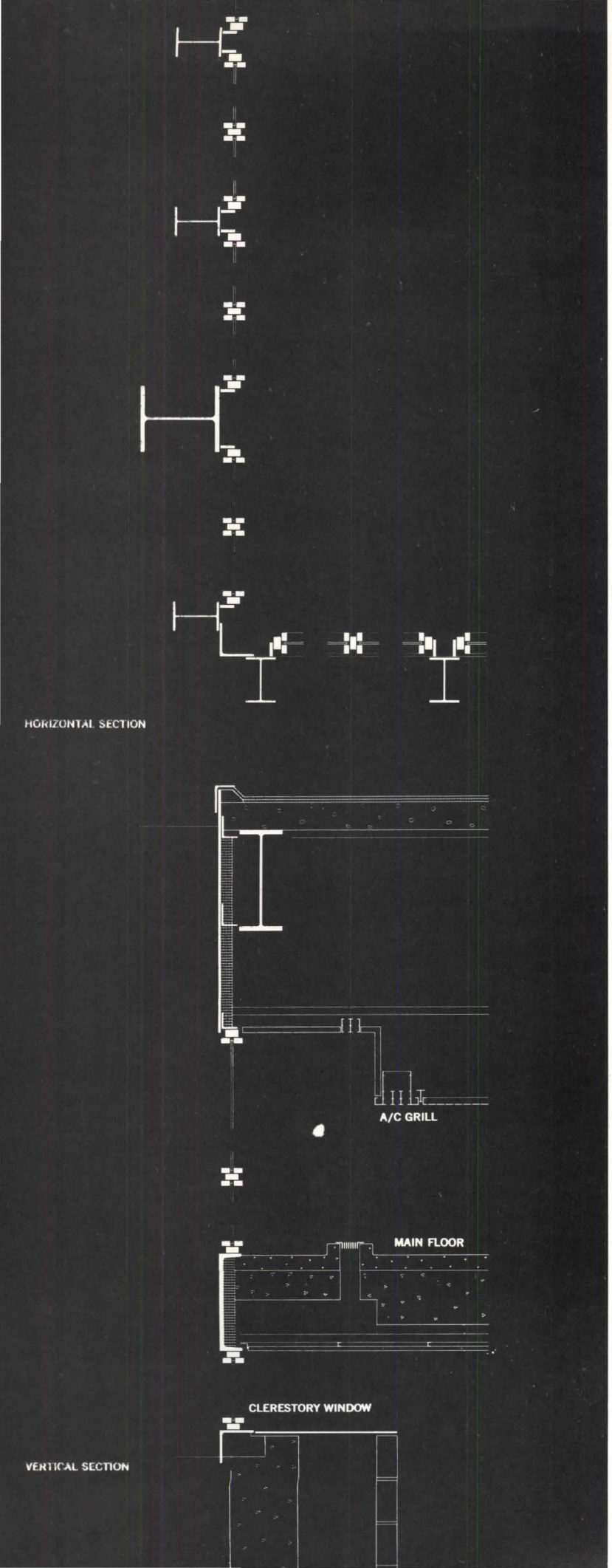
0 20'

Opposite page: Night view of Centre, showing low partitions to left of entrance hall used to display paintings. Theater is at right, shops and studios are on lower floor. Close-up of main entrance suggests scale of building and neatness of its detailing. Above: Floor plans further explain clear organization of the Centre. Module (of window mullions) is 9 ft. 6 in. Most mechanical equipment is housed in cellar space beneath lawns surrounding the building.



Left: Entrance hall (shown here with an exhibit of the work of François Dallegret) has a ceiling height of 19 ft. A system of 4 ft. 9 in. square modular, perforated metal panels was developed for the ceilings of all upstairs spaces by Edison Price in collaboration with Mrs. Lambert. In the exhibit space (and above adjoining offices) these panels are backed with sound-absorbing material; above the theater space (right), the panels are backed with a metal sheet to reflect sound. Joints between panels were designed to double as tracks from which exhibits can be suspended on stainless steel wires. In some instances, joints serve as continuous outlets for exhibit or theater lighting.

Right: 250-seat theater consists of a cantilevered, stepped-up concrete shell; continuous, upholstered benches are mounted on alternate steps. The stage is equipped with a 10 ft. by 10 ft., two-level hoist that transports sets from workshops downstairs. Double-level of elevator permits creation of platforms of varying heights in the stage area. Access to theater from shops and dressing rooms downstairs is by means of several spiral stairs like the one shown at top right. Floor-to-ceiling curtains can be used to keep out or control natural light in this area as well as in the exhibition spaces.



Left: Horizontal and vertical sections through the exterior wall of the Centre show differentiation in sizes and proportions between load-bearing, 14-in. deep H-columns, and window mullions that are relatively light, 8-in. I-beams. The module is 9 ft. 6 in. Vertical section shows a/c grille-strips used along the edge of the specially designed ceiling system described on previous page. The clear height to the hung ceiling is 19 ft., and the ceiling height downstairs is 10 ft. 6 in. (7 ft. of wall, plus 3 ft. 6 in. of clerestory windows of translucent glass). Opposite: Typical corner.

Crown Hall, Mies used eight free-standing steel columns supporting four overhead steel trusses from which he suspended the roof plane; Mrs. Lambert's structural expression is less dramatic—ten 14-in.-deep H-columns contiguous with the skin of the building, and no particular articulation of the roof frame.

The detailing of the Saidye Bronfman Centre is extremely neat and the workmanship is excellent. As noted earlier, Mrs. Lambert's details are similar to those employed by Mies at Crown Hall, except for the manner in which she has expressed structural columns—and chosen not to express roof girders.

To those who study Miesian detailing, these differences are significant. In both Crown Hall and at the Bronfman Centre the load-bearing columns are 14 in. deep, whereas the mullions are only 8 in. I-beams. But because, at Crown Hall, the entire structure—columns as well as roof trusses—is clearly expressed outside the skin of the building, what is structure and what is the apparent difference between mullion is dramatic. If the Bronfman Centre has any flaw at all, then it is, perhaps, that the difference in expression between structure and mullion is too slight, and the articulation not quite clear enough.

But such a rather finicky criticism merely emphasizes what is obvious from these photographs —i.e., that this is an extremely polished and mature building, and one that never once suggests the hand of a beginner.

—Peter Blake.

FACTS AND FIGURES

Saidye Bronfman Centre of the YM-YWHA, 5170 Cote St. Catherine Road, Montreal, Canada. Owner: YM-YWHA of Montreal. Architects: Webb, Zerafa, Menkes; Phyllis Lambert, designer in charge. Engineers: M.S. Yolles and Associates (structural); G. Granek and Associates (mechanical); Lyle F. Yerges (acoustical). Theater consultant: James Hull Miller. General contractor: J.G. Fitzpatrick Ltd. Building area: 30,300 sq. ft. (mechanical plant—1/10 area). Cost: $40 per sq. ft. (including fees and equipment; excluding land and financing).

PHOTOGRAPHS: Richard Nickel, except page 89 (bottom right), George Cserna.

FOOTNOTE

"Roman Classic Tub"—that's what its manufacturer calls it. "The design [was] derived from the conch shell," says a public announcement. "It is big, roomy, glamorous, and belongs in the center of a large bath salon" [for parties?]. The tub, weighing 400 pounds, the announcement continues, is "available in an immense variety and combination of colors." Still, the 400-pound tub will never be mass-produced, alas! "It must, of necessity, be reserved for those customers of discrimination and means who wish the exclusivity of this unit." Not being especially desirous of exclusivity in bathtubs, we are ordering some, to give away next Christmas. P.S. It's made of marbelized plastic, in case anybody cares.

FORUM CONT'D

maiden run on a 15-ft.-high track around the perimeter of the zoo, winding over walkways, deer paddocks, camel pens, sea lion and otter pools, a monkey island where exotic birds make flying stops, and exercise areas for lions, hippos, and zebras (below).

The trip takes 20 minutes at 5 miles per hour and includes a timed, taped commentary. Two canopied stations permit embarkation and debarkation at both the main north entrance and the south parking lot. The "Safari Monorail" was designed and built by Universal Design Ltd. of Wildwood, N. J., and cost $1.2 million.

BAILING OUT BART

On April 8, California's Governor Reagan signed the "Save BART bill" which will provide the Bay Area Rapid Transit District with $150 million from a sales tax increase to 5½ cents on the dollar. This, in addition to a $792-million bond issue, being paid through property taxes by residents of the three-county district, should enable BART to complete its system and purchase rolling stock by 1972—with, of course, federal assistance from DOT and HUD.

The AFL-CIO, San Francisco's Mayor Joseph L. Alioto, that city's Board of Supervisors, most Democrats, and a 5 to 3 majority of citizens as determined by an area-wide poll, were opposed to the sales tax method. They favored taxing motorists with higher Bay Bridge tolls, but a bill to that effect was killed by Reagan's threatened veto. Even Senator Lewis F. Sherman, author of the sales-tax bill, acknowledged that he was "not too happy with it" and had termed it "regressive and non-user oriented." But, he said, "we must either save BART, or bury it."

Meanwhile, workers were, indeed, burying a 3.6-mile segment of it at the bottom of the Bay. And, on April 3, the 57th, and last, steel-and-concrete section was laid in place, connecting San Francisco and Oakland, thus forming the longest underwater rapid transit tunnel in the world. Launched like a ship from the Bethlehem Steel Co. yards (below) and towed to position, the section was sunk to the bay floor between the twin hulls of a catamaran barge—as were all its predecessors. Thick concrete collars were then poured around the joints and allowed to harden before workmen broke through the sealed ends of the double-barreled tube.

When fully operational, passengers will travel downtown to downtown in less than ten minutes.

BOAT-ROCKING AT DOT

Two appointments by Secretary of Transportation John A. Volpe tend to confirm his recent promise to "rock the boat" in an effort to keep the future safe from the automobile. In a search for urban mass transit systems to counter the car ("I would not reject the flying carpet"), Volpe has named as Under Secretary and number two man, James M. Beggs, who comes to DOT from the Office of Advanced Research and Technology at NASA. Most encouraging is Volpe's creation of a new post—assistant secretary for urban systems and environment—and his selection of James D'Orma Braman to fill it.

As mayor of Seattle, Braman's insistence on broad-based participation in major projects and his talent for refereeing a consensus had impressed the former administration as well. He received the largest mass-transit planning grant ever awarded for his team-designed subway system (Jan./Feb. '68 issue), which failed to receive voter approval, but will be resubmitted next February; and his was the first city to receive a Model Cities planning grant, and the first to have its plans approved and initially funded.

THE LEGACY LINGERS ON

As Seattle's ex-mayor James D. Braman took up his duties at DOT (see above), it was announced that Okamoto/Liskamm Inc. of San Francisco had been awarded a $589,000 contract for another of Braman's pet projects back home: an 18-month, design-team study of 10 miles of the R. H. Thomson highway corridor through Seattle's Model Cities neighborhood.

O/L, planners and urban designers, will work with an interdisciplinary team (as yet unnamed) of architects and landscape architects; traffic, civil, and acoustical engineers.

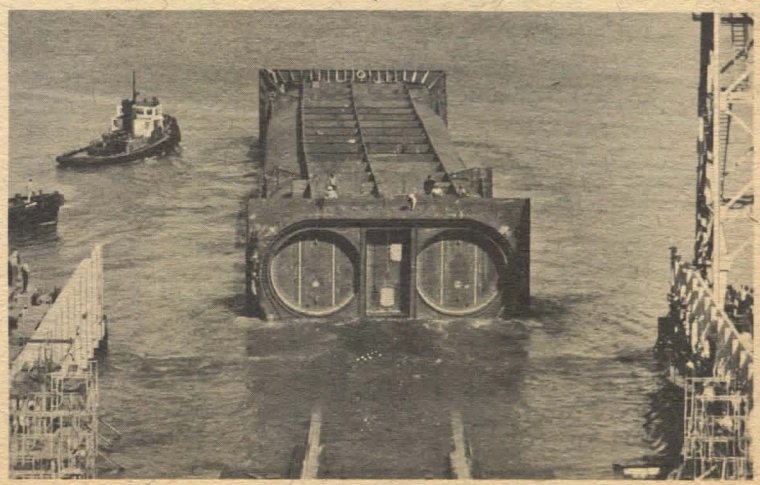
O/L will also be responsible for social, economic, and behavioral considerations; consultants in these areas are: Development Research Associates, Los Angeles; Irwin Mussen, planning consultant; Lawrence K. Northwood, professor of sociology, University of Washington; and Opinion Research Laboratories, Seattle.

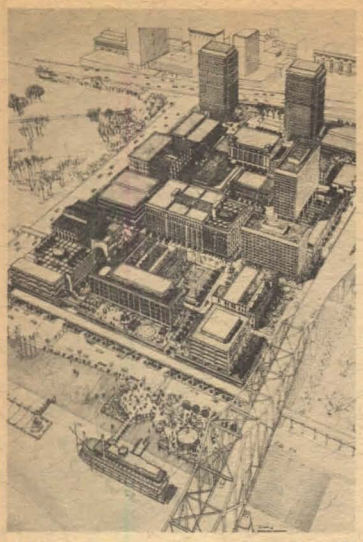
"All feasible and workable forms of citizen participation are being explored," say O/L, "to assure direct communication of residents' goals and objectives."

PROGRESS

LEVEE LANDS LACLEDE

A three-year dispute over disposition of a nine-block, 22½-acre site known as Laclede's Landing on St. Louis' blighted Mississippi riverfront (May '68 issue) has been decided in favor of the Levee Redevelopment Corp. Their scheme, by Architects Hellmuth,





Obata & Kassabaum (above) will preserve 50 percent of the existing buildings, including some important cast-iron architecture of the period 1865-75.

The defeated River Center scheme was designed by Schwarz & Van Hoefen (the firm retains Hari Van Hoefen's name, even though he is no longer associated and was not involved in this design). River Center would have demolished all buildings, developing the site for high-density residential and commercial uses.

HOK's plan concentrates on tourism, recreation, and entertainment as best suited to the area, which the Landmarks Association of St. Louis has called "the last major connecting link with our city's heritage as a river port and pioneer gateway."

Approval from the Board of Alderman by a vote of 27-1 was a stunning victory. Mayor Alfonso J. Cervantes signed the official agreement on April 17, and Fred M. Switzer Jr., head of the Levee Corp., began immediate negotiations for the acquisition of the Laclede properties.

RIGS

UNDERWATER ARCHITECTURE

The vessel pictured at right has not sunk bow-first into the deep—or at least not in the same way the Titanic did. Called FLIP (Floating Instrument Platform), this vessel is a steel cylinder with an oceanographic and meteorological research "cabin" at one end, much like the space capsule atop a rocket, which it resembles (see plan above photo, right).

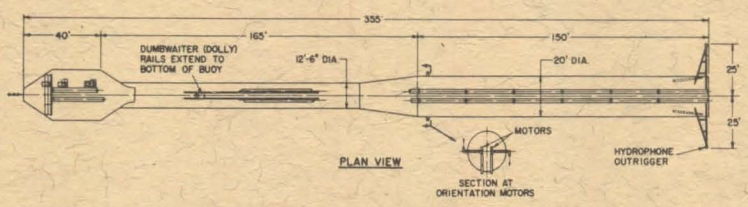
In the horizontal position, it is towed by tugboats on the ocean surface to the desired location. There, ballast tanks in the end opposite the cabin are flooded and the vessel flips. To return to the horizontal, high-pressure air is used to blow the water out of the tanks.

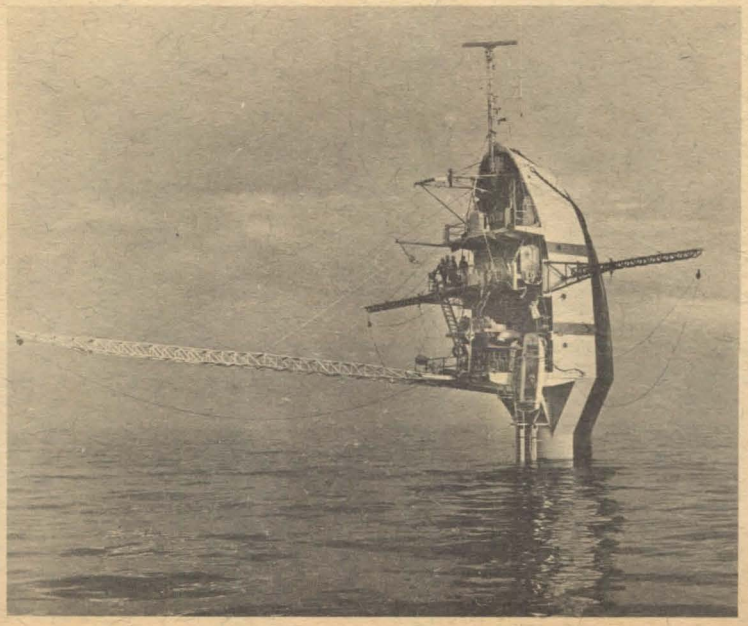
Equipment can be lowered the entire length of the cylinder through a 2-ft.-diameter trunk tube, and crew members can descend to 150 ft. below the surface through tubes within the cylinder itself. Below that level the cylinder broadens to 20 ft. in diameter, where two orientation motors, one on each side, turn the cylinder to face in any direction. From there on, the ballast section continues to a depth of 300 ft.

Above water, the cabin has four levels. The lowest houses diesel-driven generators. Above this are the living quarters, and the top two levels are laboratories. Machinery and living equipment are swing-mounted or "gimbaled," like a ship's compass, so they always remain horizontal, regardless of FLIP's attitude.

Although the flipping operation can be accomplished by a single man, the crew consists of six, including a cook, plus nine scientists.

Designed by Navy architects and used in the Pacific by the Scripps Institute of Oceanography in San Diego, FLIP was towed last month through the Panama Canal to Barbados in the Caribbean. There it will participate in a multi-agency government experiment this summer.

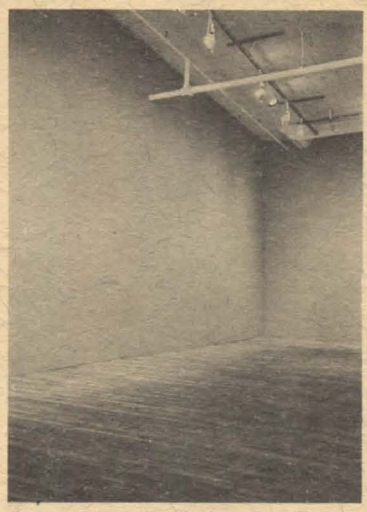




ARTS

LESS THAN MINIMAL

The photograph below is of an exhibition by Artist Robert Huot at Paula Cooper's, 96/100 Prince Street, New York City, which closed on April 23, when, presumably, something else was moved in to replace it. Not that this isn't



"something else" in the Lower Manhattan art world.

Huot's work has a description rather than a name: "TWO BLUE WALLS (PRATT & LAMBERT #5020 ALKYD); SANDED FLOOR COATED WITH POLYURETHANE; SHADOWS CAST BY ARCHITECTURAL DETAIL AND FIXTURES USING AVAILABLE LIGHT."

The nicely printed 16-page catalog that accompanies the show rather fully documents, with photos, the artist's other recent works in this vein in the apartments of various "collectors" around town. These include two narrow bands of aluminum-coated fabric tape running up a wall and a 10-ft. length of ¼-round, pine baseboard strip—New York landlords call it "cockroach molding"—in Huot's private collection.

We think Mr. Huot's career is worth watching. From here on in it's all uphill.

LEGACIES

CAUSE WITHIN A CAUSE

At 4575 S. Lake Park in Chicago's Kenwood community — a black ghetto—stands a house designed by Louis Sullivan (seen below as it appears in most of the books on Sullivan's art). Sullivan, who lived in the house at one time, built it for his brother Albert.

In 1964, the house, abandoned and too costly to tear down, was *given* by its owners to what Norman Mark in the *Chicago Daily News* calls "a mixed group of churchmen, pacifists, and idealists." One of the latter, Douglas B. Dillon, then a penniless chemistry student at IIT, moved in. There was no heating, no electricity, no plumbing, and no windows.

Together with Mrs. Janice Greer, mother of three and fortunately married to an electrical contractor, Dillon, with a $23,000 poverty

grant—since withdrawn—and other finances that included begging on the street, began to make "Sullivan House" attractive to a distrustful neighborhood. ("We were *cleaning windows* and rocks were coming through them"). Object: a youth clubhouse and arts-and-crafts studio.

Now sometimes called the "Ghetto Bauhaus," the program includes pottery-making, leatherworking, photography, and film-making (sample: "Who's Super Tuna?" a take-off on Superman).

Governed by a board of directors

composed of neighborhood youths, Sullivan House operates on a yearly budget of about $16,000, raised from anyone who will help.

"If this wasn't a Sullivan building," says Mrs. Greer, "it wouldn't have been worth saving . . . and if we had known how much it would cost to repair it, we probably wouldn't have started." A group of Chicago architects, at least, are glad they did. Serving as an advisory board, they are helping to keep *both* causes alive.

HAPPY BIRTHDAY U.S.A.

Late last month Boston and Philadelphia submitted to the American Revolution Bicentennial Commission their respective plans to celebrate our 200th anniversary, thus submitting to arbitration their spirited, often abrasive competition.

First Philadelphia produced its plan (Jan./Feb. '68 issue) to build a fair in the inner city. Then, in January of this year, Boston Expo 76 and its planning arm, the Boston Redevelopment Authority, issued their scheme, somewhat more elaborately presented, but no more detailed. Philadelphia then revised its plan to build a stacked-deck exposition on air rights; its one location became three, forming the points of a three-mile triangle.

Both plans—though it is the last thing either one would want to hear—have much in common. Boston wants to build in its harbor on rigid and floating platforms and a minimum of landfill (plan superimposed on aerial, below). (One rebel South Bostonian, State Senator John J. Moakley, is very much opposed, saying it would cost from $40 million to $400 million to clean up the pollution, which began, of course, with a lot of tea in 1773.)

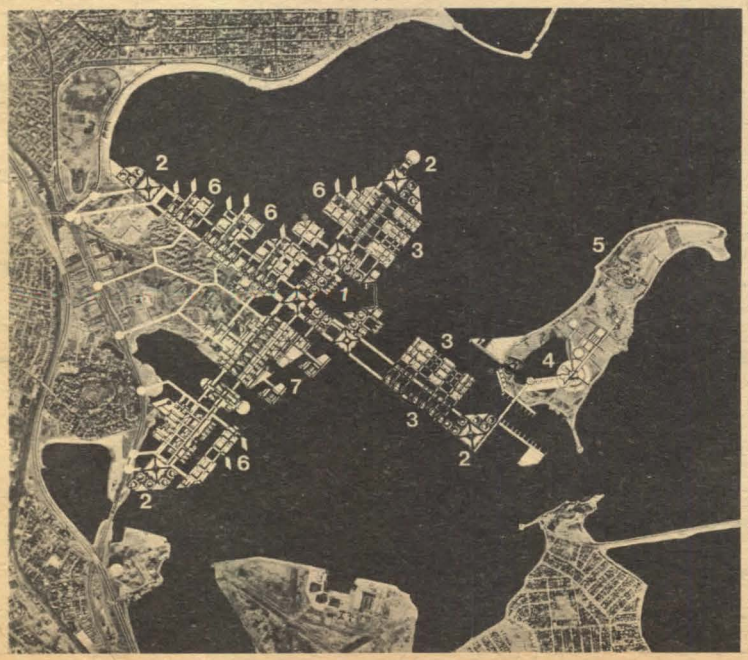
Philadelphia wants to build over the tracks of the Penn Central. Neither proposal would displace any families. Both would remain after the exposition to serve as catalysts for the upgrading of (a) a blighted neighborhood (Philadelphia) and (b) a decaying waterfront (Boston). Both envision new methods of urban transportation: moving sidewalks and minirails (Philadelphia) and mass water transit (Boston). Each would cost $800 million. One obvious difference is that Boston says it would need at least $250 million from the federal government and Philadelphia "is not asking for one nickel," but no one, least of all Philadelphians, believes that.

The arbitrators are expected to reach a decision by June and President Nixon may announce a winner on the Fourth of July. He could, of course, pick Washington.

CASE OF THE LOST LANDMARK

While Philadelphia was championing itself as the greatest repository of U.S. history in order to win the right to celebrate our 200th birthday, it was demolishing one of its oldest historical landmarks: the Dr. Benjamin Rush house (1690), originally deeded to the Rush family by William Penn himself and Philadelphia's only surviving birthplace of a signer of the Declaration of Independence.

"An act of incredible stupidity," said the *Philadelphia Inquirer*. An "accident," said the Department of Licenses and Inspections.



The house (below), endangered since 1956 when the owner agreed to set it and four acres aside for landmark use but could not agree with the state on a price, had become the pet project of Dr. Daniel Blain, director of the Philadelphia State (mental) Hospital at Byberry, four miles away. He was given permission to move it to the hospital grounds for use as a psychiatric museum, since Benjamin Rush was otherwise notable for having established the first free dispensary in America (1786) and is called "the father of American psychiatry." Blain had trouble raising the money.

Meanwhile, two new roads were

constructed near the house, altering its address, and no one thought to inform the Historical Commission of the change. So down it came. But where did it go? No one knew, and the demolition company that hauled it away would not tell unless the city paid it $100. It was rumored that the building's parts resided in a dump in New Jersey, which is plowed over every 24 hours.

Undaunted, Dr. Blain found them on his own but refused to say where or how. The salvaged materials were trucked to the hospital grounds, and Blain, once more, is searching for money to build his monument.

EX-FORUM EDITOR MAKES GOOD

The advertisement above appeared on two full pages of the *New York Times* on April 8. It speaks for itself. We only regret the obvious omission of the subject's former association with this magazine.

PEOPLE

SPEAK-OUT AT IDCA

Ivan Chermayeff and Henry Wolf, co-chairmen for the 1969 International Design Conference at Aspen—June 15-20—have assembled a roster of speakers who are a good deal more provocative than the conference's theme, "The Rest Of Our Lives"—a soap-opera sobriquet if ever we have heard one—might suggest.

Among them are: Rev. William Sloan Coffin, chaplain at Yale University who, with Dr. Benjamin Spock and others, is appealing a conviction for encouraging young men to evade the draft; Architect B. V. Doshi (see our Dec. '65 issue); George Nelson, jack of all arts and master of most (see above); Robert Lowell, poet, and Dwight Macdonald, critic, both grand old men of the anti-war movement; Pop Artist James Rosenquist; and Tom Wolfe, author of *The Kandy-Kolored Tangerine-Flake Streamline Baby*.

Others include: Artist R. O. Blechman; Designers Leo Lionni and Peter Knapp; Robert Osborn, cartoonist and artist; Melvin Sokolsky, photographer; Dr. Frank Stanton, president of CBS; Herman Kahn, director, Hudson Institute; Dr. Adrian Kantrowitz, heart-transplant pioneer; William Klein, cinematographer; and Scientist René Dubois.

WALTER McQUADE

"I VOTE YES"

Editor's note: On his way to writing his usual page this month, Contributing Editor Walter McQuade got caught at a formal meeting of the New York City Planning Commission, of which he is a member. This meeting was a public deliberation about whether or not to install rules of a special zoning district in the area of Lincoln Center, under which developers would be allowed to put up larger buildings in return for constructing certain amenities such as pedestrian arcades. There was, however, a court reporter on hand to record the arguments, among them Commissioner McQuade's:

I vote yes. Mr. Chairman, if you will, I too have a short dissertation on why I'm voting for the Lincoln Square District. To my mind, it demonstrates one of the reasons I serve on the Commission. I believe, like all city bodies, our main concern is with social justice, which so often in our case narrows into economic justice in the matter of the use of real estate. But, once in a while, we get a chance to do justice to the city as a place, and Lincoln Square is such an opportunity.

Broadway is quite a street. It slants across the efficient gridiron of New York like a genuine eccentric. Like the best of eccentrics, it pays human dividends. Out of collisions with the gridiron arise opportunities such as Union Square, Madison Square, Herald Square, Times Square, Columbus Circle, Lincoln Square, Sherman Square, Verdi Square, Montefiore Park and Mitchell Square.

Several years ago, Broadway became a pleased but uncertain link between Columbus Circle and that glorious new rich cultural event—Lincoln Center. She was like a mother without a high-school diploma, whose daughter had just married a Rockefeller.

Nice things promised. Slightly more important buildings began to occur in the area. A philanthropist announced he would donate a linear park on the west side of Broadway, all the way from Columbus Circle up to Lincoln Center—a 15-ft.-wide walkway with trees and benches. This amenity promises to be even better than the center strip of Park Avenue. It will be something to be used, not just looked at.

Then, as development began to stir on the other side of Broadway, to the east, the Planning Commission got a chance to intervene. The idea proposed was for us to establish a common cornice height on the east side of Broadway, similar to the orderly grandeur of the old Park Avenue; also to bring about a pedestrian arcade on the sidewalk level (see model below) where people could walk comfortably when it rained or when it was hot and sunny in summer, across the street from the linear park. If we could persuade the developers who wanted to develop here to build in this pattern by granting them certain exceptions in zoning, there are other amenities we could urge on them.

Behind the bulk of their buildings, courtyards could be carved out in the inner blocks—areas open to the public, with restaurants and small shops, sort of informal anterooms to the Lincoln Center plaza across Broadway.

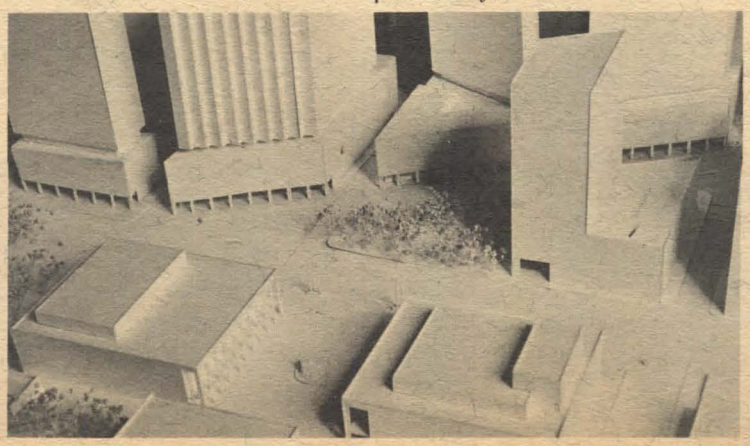
So we began to confer with real-estate operators and the community, and from that came the legislation we are recommending to the Board of Estimate, to make the arcades and uniform cornice lines mandatory and the other amenities, such as plazas, profitable. If it works, this part of Broadway may become one of the world's pleasantest and best-looking avenues. It could be the kind of place that still gives reassurance to people many years from now, when the world otherwise has changed, when our present social problems have solved themselves, God willing, and new problems are preoccupying.

The old European cities we admire seem sometimes simply to have accrued such pleasures, but I doubt that the Spanish Steps, or the Galleria in Milan, simply happened. Someone made it possible for them to happen. Perhaps in our form of government it is one of the responsibilities of the Planning Commission to keep an eye out, and, when such an opportunity arises, to seize it without delay. Otherwise, conventional development forecloses the opportunity.

As proposed, this pattern of change will cost the city no money, but it will cost the developers more than the minimal investments now possible on these sites. I'm satisfied that the concessions to be granted them are not exorbitant, but reasonable. Of course, if the idea works, their properties will in time increase immensely in value. I wish them well. I wish Broadway well.

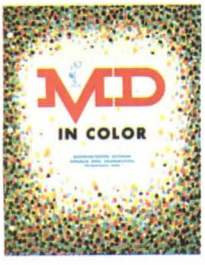
Finally, in closing, there is the matter of the possible watering down of the zoning ordinance to consider. Are we doing this? I doubt it. Instead, I think, we are focusing the good intent and ideas of the zoning ordinance more clearly on this small area. City-wide zoning resolutions have, by necessity, to be rather general. If zoning can be more clearly defined in one special design district, it not only becomes more useful but more positive — it doesn't just forbid certain practices. As we have interpreted it, zoning can be used to coax, induce, or even bargain for more positive pleasures to happen.

I hope for more special design districts, not only in Manhattan, but in all the boroughs—to give pleasure and variety to our people and to their great-grandchildren. Thank you for this opportunity to clear my throat and my mind, and give my regards to Broadway.



PHOTOGRAPHS: Page 84 (center left), Roy Berkeley; Page 93 (left), Alan D. Hewitt; Page 94 (bottom), Official U.S. Navy Photograph, (right) Richard Nickel; Page 95 (center right), City of Philadelphia Records Dept.

The 18 standard colors of Republic CRYLCOAT* windows, and 329 ways of blending them with the rest of your building.



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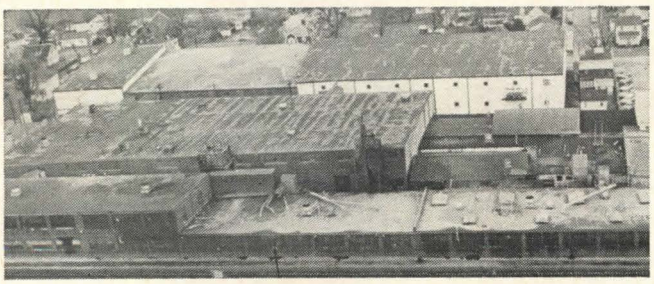

John M. Browning, president of Browning Mfg. Co., saw gray on one of the roofs of his Maysville, Ky., plant. Since it was 40 years old, he feared the worst.

But the discoloration proved to be merely oxidation of the asphalt coating, which revealed the color of the asbestos fiber. The roof was recoated and now, 17 years later, it's still wearing strong.

Customer satisfaction like this leads to repeat business. (Right now Browning Manufacturing is finishing a large new plant addition. It's being topped off by J-M asbestos smooth surface built-up roofing.)

But long roof-life is just part of the story. Johns-Manville asbestos smooth surface built-up roofing needs less bitumen than organic felts. Organic roofs require about 300 to 400 lbs. per square of gravel or slag. Asbestos roofs need none. Results: big savings in time, labor, and money. And a much lighter roof.

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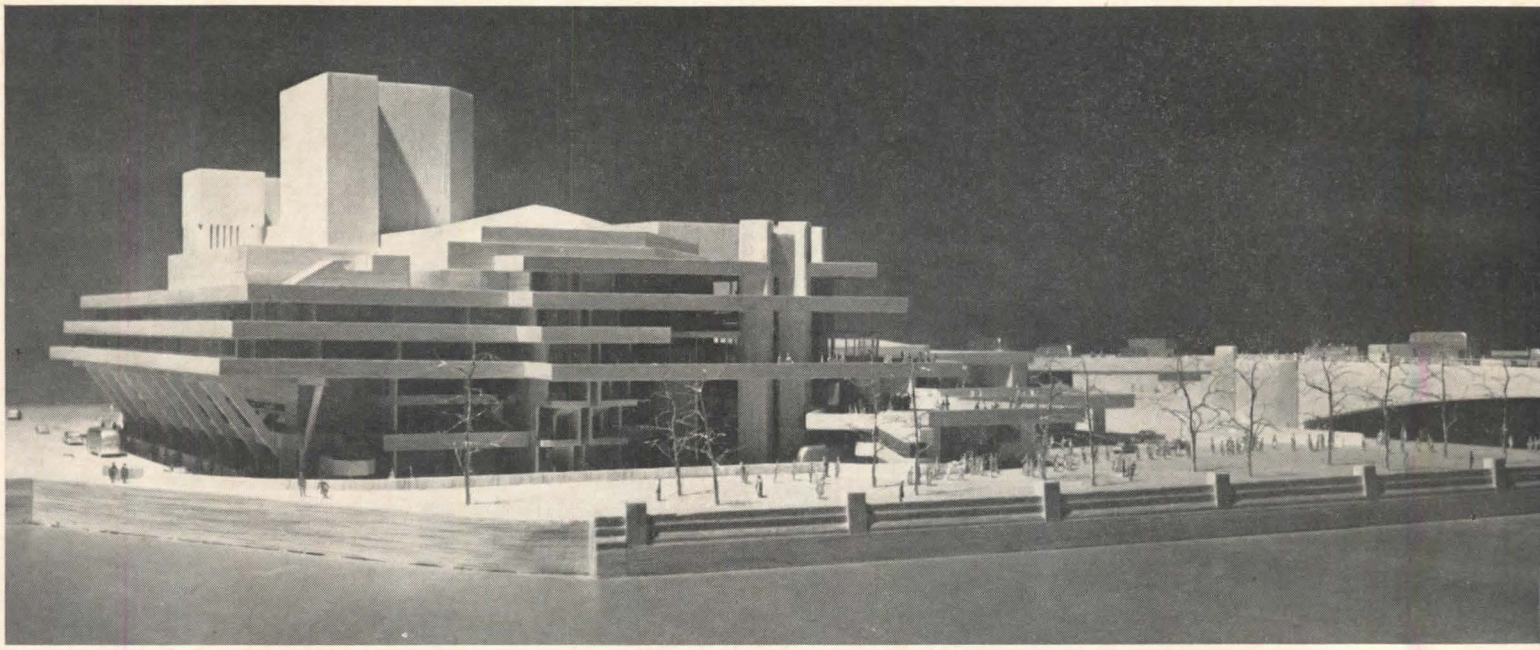
PREVIEW

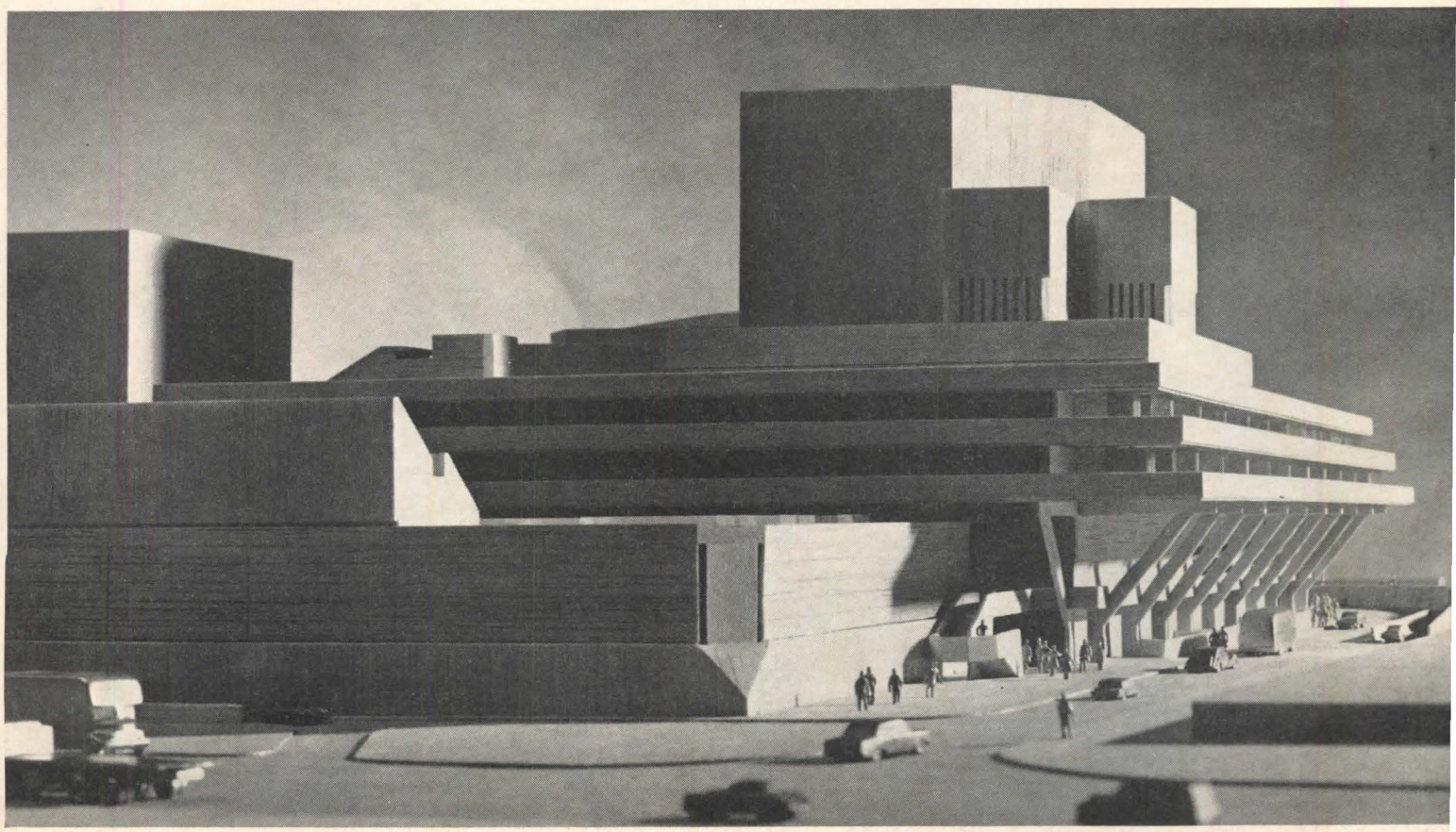
THEATERS ON THE THAMES

Britain's National Theater company, which has been performing in the historic but grossly inadequate Old Vic theater, will soon have, not one, but two new theaters to call its own. Both will be contained in a multifaceted concrete structure to be built on the south bank of the Thames next to Waterloo Bridge.

According to Architect Denys Lasdun, designer of the building, the two-theater scheme was arrived at because 2,000 seats were needed and "visibility and audibility suffer when even an open stage theater has more than 1,200 seats." He added: "A single auditorium, in any case, would have to be physically adaptable in order to house everything from Greek tragedy to the plays of Coward and Osborne, and a theater that can be adapted to house everything is never properly suited to anything. A vast single auditorium would be a hopeless compromise."

There is nothing compromising about the two distinctively different theaters which Lasdun has designed. The smaller of the two (capacity 895) will have a proscenium stage with the seating arranged in two stepped tiers (top photo, far right). And the larger theater (capacity 1,165) will have an open stage bounded on three sides by two main stepped tiers of seats linked visually by interme-



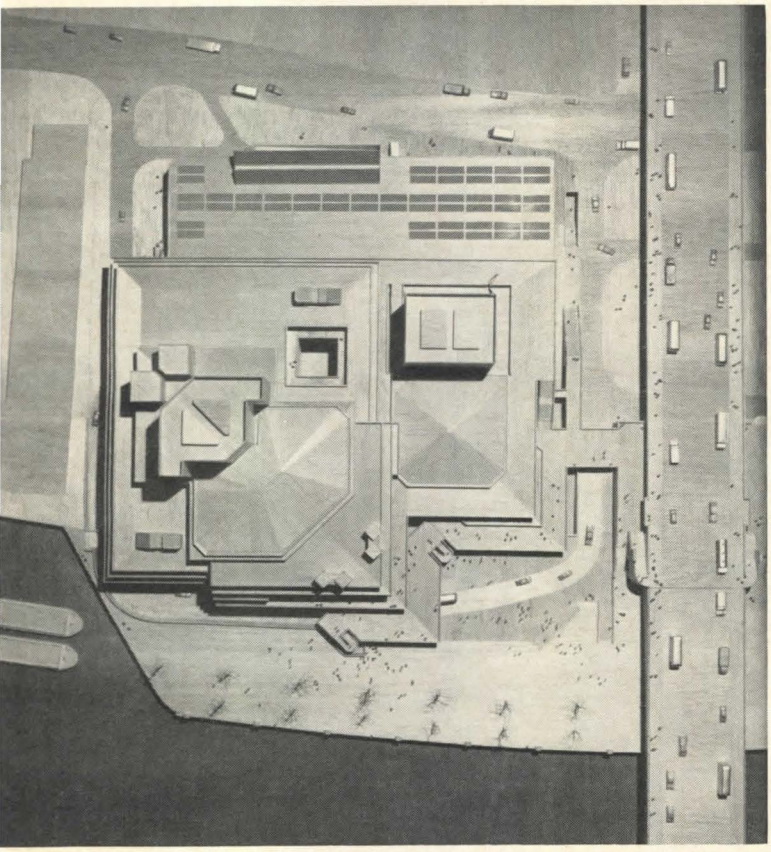


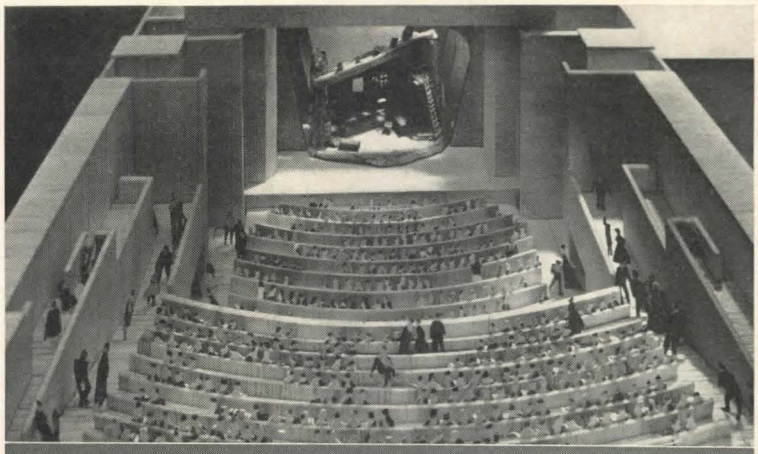
diate tiers on each side to form a bowl (bottom photo, far right). Thus, says Lasdun, the two theaters will be able to accommodate "the two great traditional styles which constitute the mainstream of European drama."

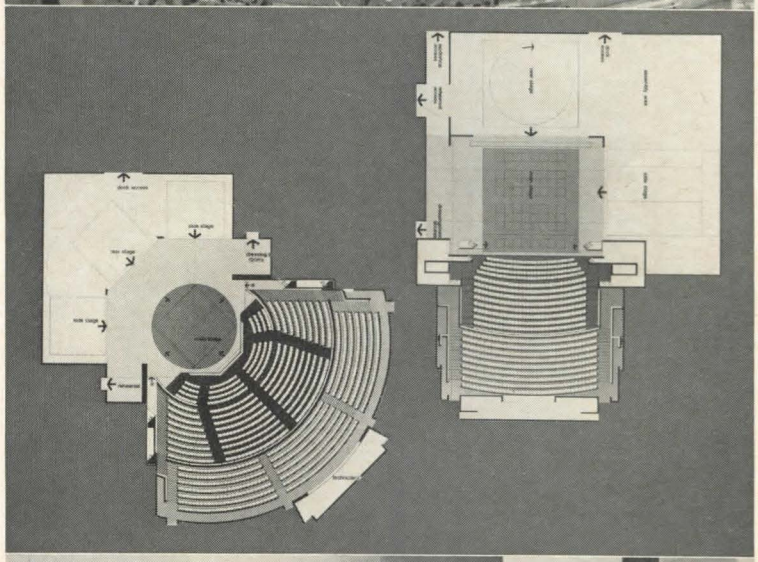
Wrapped around the two theaters and their thrusting fly towers are a series of terraces extending out over the river. The terraces continue into the building to form the main foyers. Those at the lower levels tie in with Waterloo Bridge and the existing system of walkways around the neighboring Queen Elizabeth and Royal Festival Halls. On the upper levels, the terraces provide pedestrian promenades offering spectacular views of the river and the city. In cold weather, they will be heated by infrared units. The basement contains a 165-car parking garage. (Arrows on the site plan indicate vehicular circulation, dotted lines indicate pedestrian circulation.)

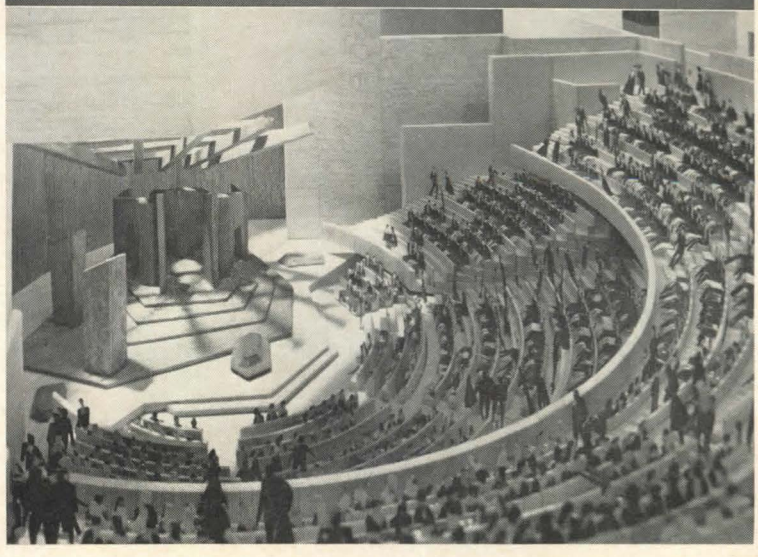
The combined entrance to the two theaters faces the river and is accessible from garage level, road level, and terrace level, all of which are interconnected by elevators and staircases. Each theater has its own foyers with cloakroom and refreshment bars. The lower (proscenium) theater is alongside the entrance hall at ground level, and the upper (open) theater is above the entrance hall. A box office is situated on a mezzanine floor between them.

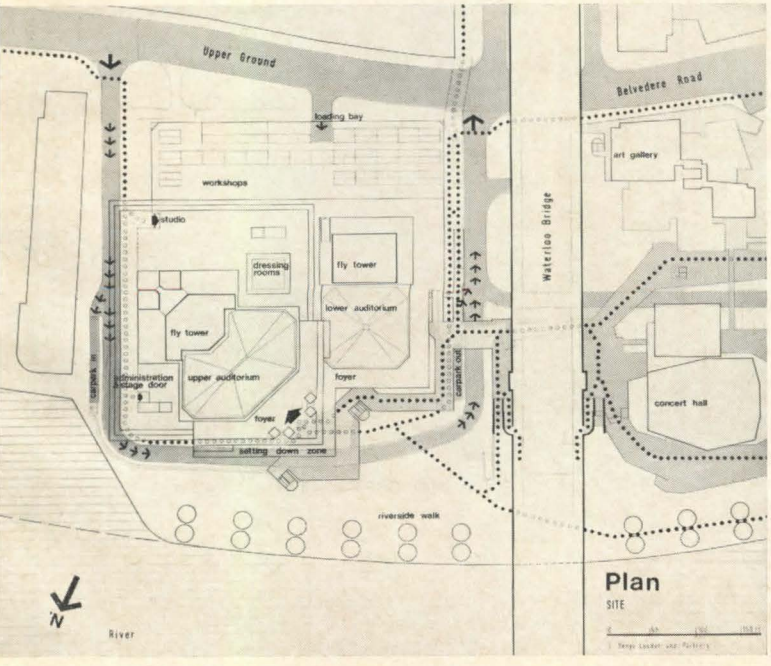
The dressing rooms are located around a small, open court in the center of the building. A small, 200-seat studio theater, intended for research and experimental productions, is entered separately from the approach road. Wardrobe workrooms are immediately above the dressing rooms, and administrative offices encircle the upper part of the building.











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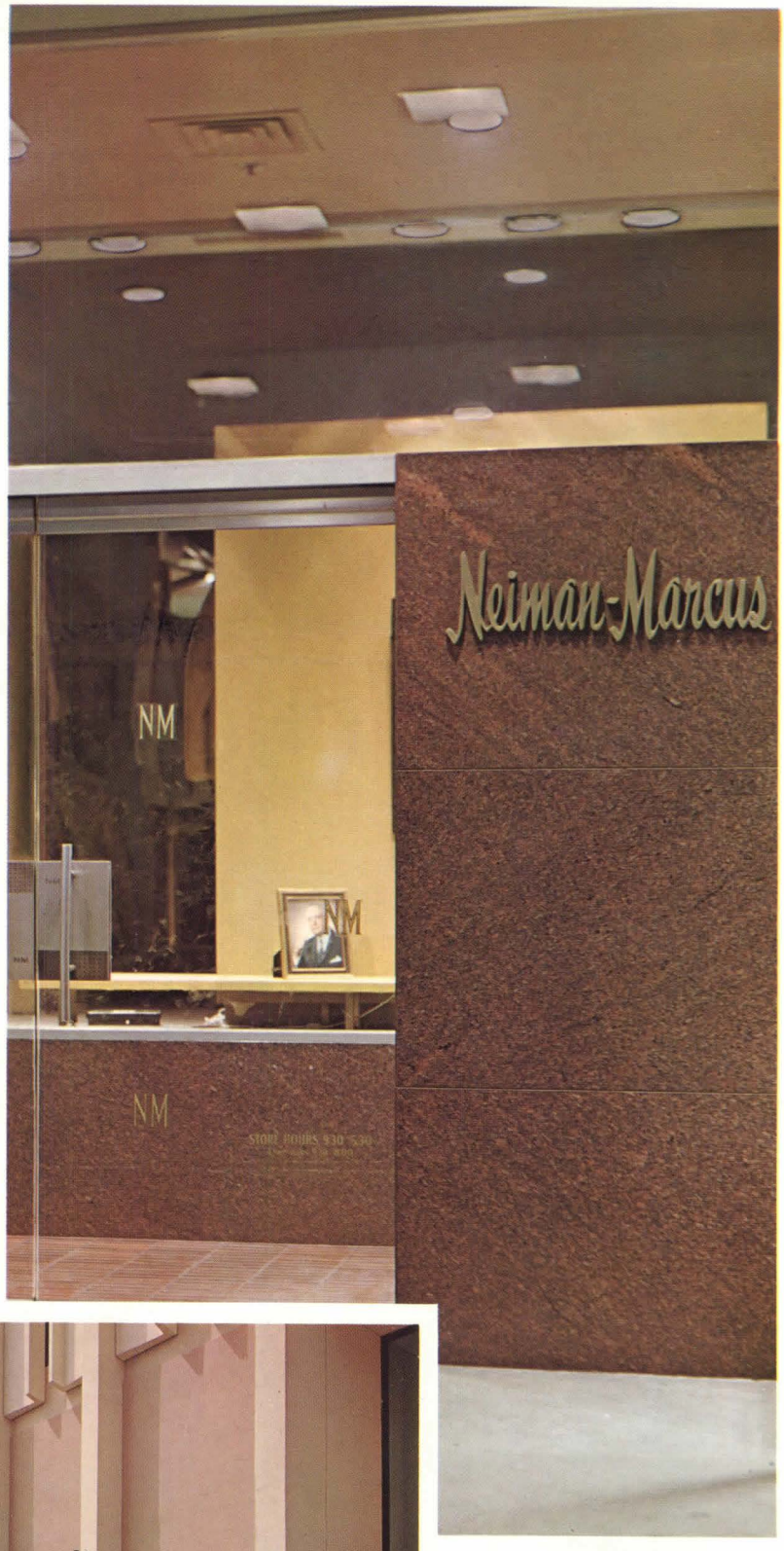
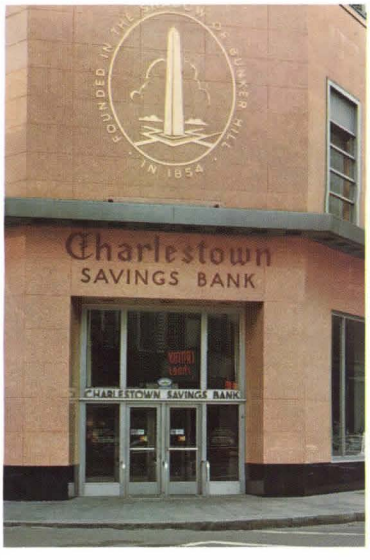




Above:
Entrance to **NEIMAN-MARCUS**
Men's Store, Dallas, Texas
Granite: Dakora

Left:
KRON-TV, San Francisco, California
Granite: Belmont Rose

Far Left:
CHARLESTOWN SAVINGS BANK,
Boston, Massachusetts
Granite: Carolina Rose and Andes Black

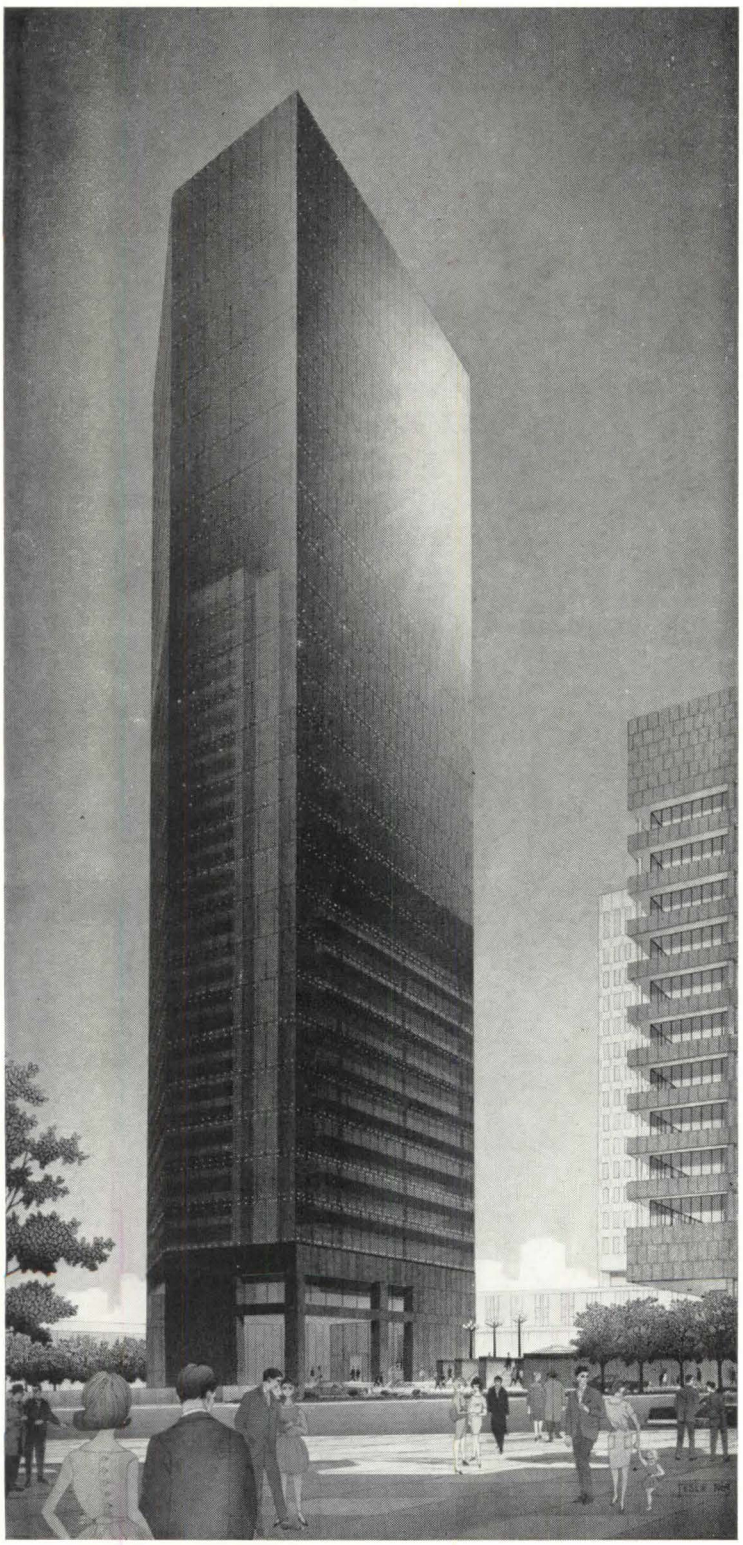
PREVIEW

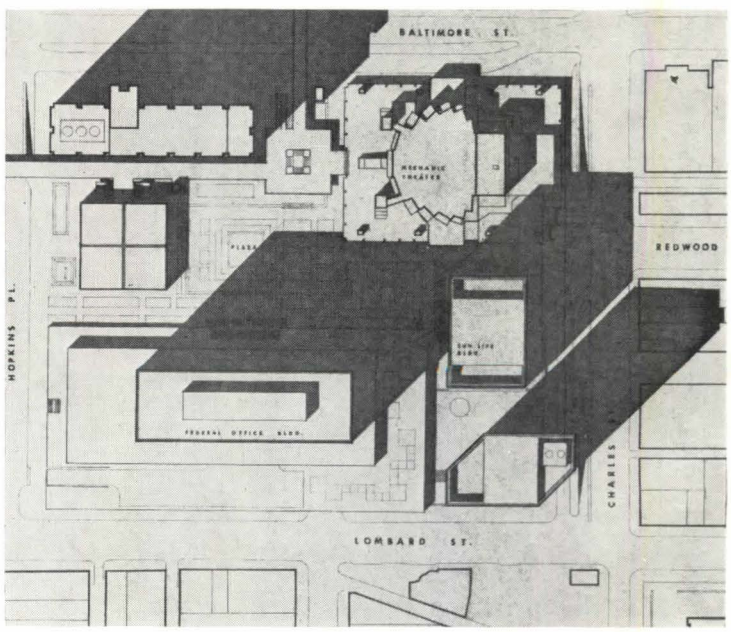
BREAKTHROUGH IN BALTIMORE

If less is more, can least be most? Architects Rogers, Taliaferro, Kostritsky, Lamb seem bent on answering that question with their competition-winning design of a 23-story office tower to be built in Baltimore's Charles Center. The six-sided shaft will be sheathed in nothing but glass; no spandrels or mullions will be visible—just narrow seams where the solar-gray laminated glass panels will meet, and horizontal rows of star-shaped stainless steel buttons that will fasten the panels to the frame.

A few technical details, such as the design of expansion devices between the glass panels, have yet to be resolved, but several glass manufacturers, engineers, and other experts have declared the concept feasible, and one firm has agreed to produce a mock-up for testing. The final result will inevitably invite comparison with Mies's elegant One Charles Center Building (upper corner of aerial view).

The glass walls of the building will rise from a two-level, granite-clad base resting on a pedestrian plaza at one corner of the Charles Center complex (see plan). The base will contain 10,000 sq. ft. of commercial space at lobby and mezzanine levels. A 76-car parking garage will be located beneath the plaza. The site is one of the last three available for development in the complex (see page 48).





Incline High School, Washoe County School District, Washoe County, Nevada Architect: Edward S. Parsons, A.I.A., Reno, Nevada

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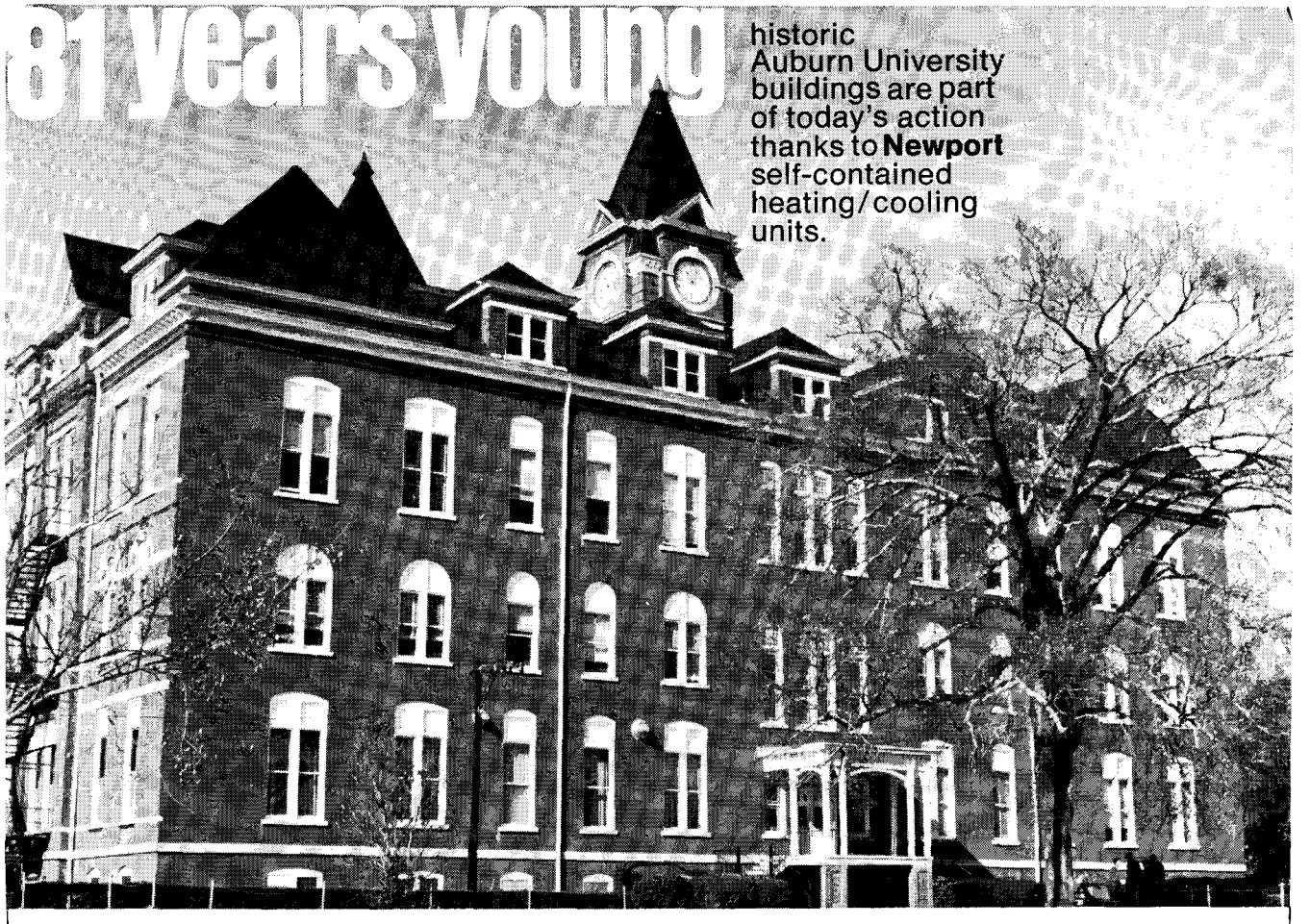

Auburn University's handsome old Administration Building, built in 1888, is livelier than ever since Newport heating/cooling put waste space to work. When Auburn's rapid expansion required more space than new construction would provide, the obvious answer was to modernize available space. But 80 year old buildings don't readily lend themselves to change. William F. Peak, Auburn's Mechanical Engineer, found a way to do the job without expensive installation or inconvenient delay.

Installation of Newport self-contained heating/cooling units began in 1965. In the Administration Building, a basement room housing computers that produced a stifling 25,000 btu's of heat an hour was cooled with Newport units. Converted classrooms under two old Engineering buildings were made comfortable with Newport heating/cooling. In the old but usable Animal Husbandry Building, Newport units comfort-condition offices, classrooms, lecture rooms and laboratories.

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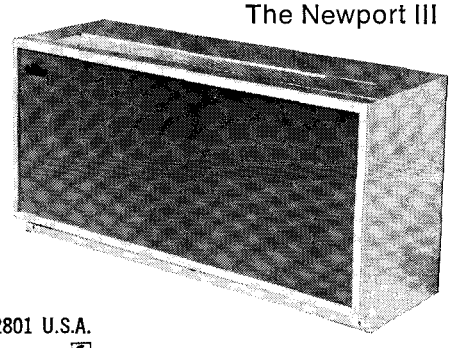

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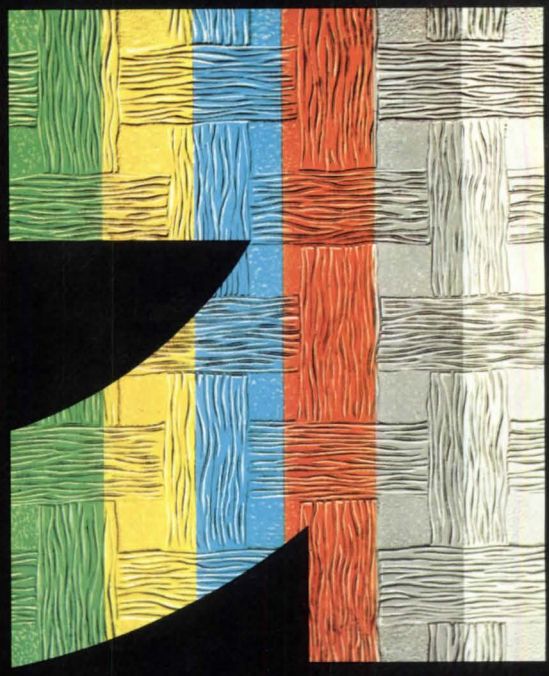

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Mod Patterns, Glaverbel's exciting new line of figured rolled glass that says NOW in every elegant line. TWIST (upper right) ...a weave as fresh as today's fabrics. BOTTLE (lower left)... fluid full relief for complete privacy. MANHATTAN (upper left)...light and rhythmic sophistication. Like all Glaverbel glass, Mod Patterns come in a wide range of decorative colors, and...**an exclusive with Glaverbel**...in widths up to 57 inches.

Mod Patterns by Glaverbel combine practicality and beauty to give any room—in home or office—the look of TODAY. Create a new dimension in all surroundings...with glass by Glaverbel.

Ask your distributor for TWIST, BOTTLE, or MANHATTAN...or any of the other sixty distinctive patterns...by Glaverbel.

Glaverbel

For further information, contact:

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See Sweet's Architectural File 4a/GL

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. . . a beautiful drinking fountain shouldn't be too obvious. Agreed? Carefully-sculpted to enhance your ideas . . . clad in the native splendor of cast stone (five colors, two finishes). The Haws Model 30 outdoor drinking fountain stands exquisitely in harmony with its setting . . . any setting. A fountain? It could almost pass for a work of sculpture. Yet this sly harmonizer is incomparably rugged—a fountain for all seasons, kid-proof, weather-proof, freeze-proof! Write **Haws Drinking Faucet Co., 1441 Fourth St., Berkeley, Calif. 94710.**

The drinking fountain that looks better than a drinking fountain—Haws Model 30 in vivid stone.

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Hopefully a series of explorations into what concerns us most selfishly, therefore most passionately: the background that history and technology have in store for us for the rest of our lives—meaning the next few decades. The aim will be to look forward—and backward—and try to envision the progress of the designer as he will and must be influenced by the forces of economics, politics, science and philosophy; and to come away with a picture of a future design environment that is clearer and possibly less frightening for the fact having been looked at and evaluated.

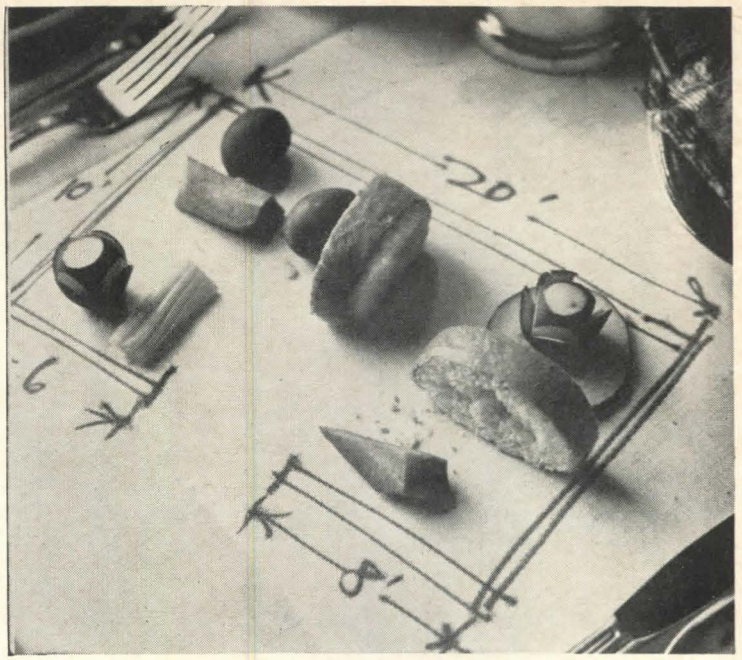
IVAN CHERMAYEFF
HENRY WOLF
Co-Chairmen

SPEAKERS:

R. O. Blechman, Artist
Rev. William Sloan Coffin, Chaplain Yale Univ.
B. V. Doshi, Architect
René Dubos, Scientist
Dr. Adrian Kantrowitz, Surgeon
William Klein, Cinematographer
Peter Knapp, Designer
Leo Lionni, Designer
Robert Lowell, Poet
Dwight Macdonald, Author/Critic
George Nelson, Designer
Robert Osborn, Cartoonist/Artist
James Rosenquist, Artist
Melvin Sokolsky, Photographer
Dr. Frank Stanton, President, CBS
Stewart Udall, Former Sec'y of the Interior

International Design Conference in Aspen

June 15-20, 1969
For details about the conference, contact:
International Design Conference in Aspen, Box 664B, Aspen, Colorado 81611



If your next project requires a laundry... why not plan and equip it on your lunch hour?

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Why coat stainless steel?

. . . because proper soldering of stainless steel requires an extra step of pretinning or use of corrosive fluxes. These fluxes must be removed after soldering to prevent attack on the stainless.

TCS solders perfectly using a non-corrosive rosin flux. Pretinning is unnecessary.

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. . . because the reflective surface of stainless steel may sometimes be undesirable in architectural applications.

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TCS, Terne-Coated Stainless Steel, is 304 nickel-chrome stainless steel covered on both sides with terne alloy (80% lead, 20% tin). It is a product of Follansbee Steel Corporation, Follansbee, West Virginia.

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For classroom applications, where extra protection against deliberate abuse is desirable, Halsey Taylor offers several counter-type receptors. Single and double basin designs, in stainless steel or porcelain enamel. Choice of vandal-resistant fittings includes hot and cold gooseneck faucet; two-stream, mound-building drinking projectors; or a combination of a faucet and a drinking projector on a single receptor. For more information about these receptors, or the new space-saver, counter-top designs, write for 1969 catalog. Or look us up in Sweet's or the Yellow Pages.

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HEAVY GAUGE STAINLESS STEEL SINK will not chip, dent, stain, or wear thin.

REMOVABLE DRAIN STRAINER IS SECURED WITH SET SCREW.

SET SCREW LOCKS GOOSENECK IN PLACE ... prevents unscrewing.

SET SCREW SECURES AERATOR to gooseneck faucet

SET SCREW SECURES FAUCET HANDLES ... can not be removed without special screwdriver.

SOLID FORGED BRASS FAUCET HANDLES are heavy chrome plated.

SQUARE NIPPLE FITS INTO SQUARE HOLE to prevent twisting.

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VANDAL PROTECTION IS ALSO AVAILABLE ON HALSEY TAYLOR WATER COOLERS

WALL-MOUNTED WATER COOLER TUCKS INTO A 10″ RECESS

Self-contained unit extends just 10 inches from finish wall. Receptor and back splash are gleaming stainless steel. Cabinet in choice of colors, stainless steel, or vinyl-laminated steel.

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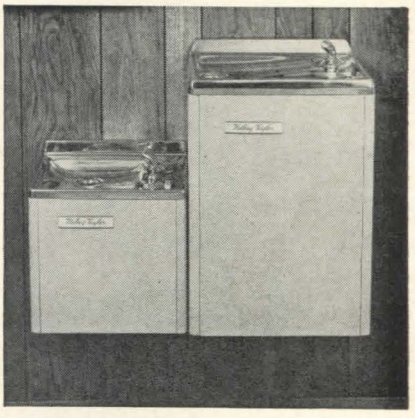

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Safe, practical way to serve drinking water to adults and children. Designed for left side mounting on any WM Series water cooler. Gray baked enamel, stainless or vinyl-clad steel cabinets to match adjoining WM cooler. Waste outlet and water supply are integral with electric water cooler.

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A. DOORS AND WINDOWS

1. Pre-cured, expanded Foam Core Door. Available in both full-flush and seamless styles. Limitless variety hardware applications. Complete details 8-pg. brochure. Amweld Building Products. Request **A-1**

2. Catalog includes technical information on LOF glass; includes Vari-Tran (TM) and Vigilpane (TM) SA 68. Libbey-Owens-Ford Co. Please request **A-2**

3. 32-pg. catalog "Malta Wood Windows", casement, vent, double hung, glide, basement types. Wood patio door with insulating glass. Malta Mfg. Co. Please request **A-3**

4. Plexiglas (R) Safety Glazing-16pg. Booklet gives property data and installation details for clear and solar control safety glazing. Rohm and Haas Company. Please request **A-4**

C. FLOORING

1. New 1969 Romany-Spartan full line 20-pg. color catalog contains ideas and applications for ceramic tile; includes range of special glazes expressly for architect and designer. Technical data, specs. U.S. Ceramic Tile Co. Please request **C-1**

D. FLOOR COVERING

1. Successful Contract Carpeting with DuPont Fibers (A-56202). This new book is addressed to the specifier in the important and growing contract market. Extremely helpful to you in going after those big sales. DuPont Co. Please request **D-1**

E. FURNISHINGS

1. "Colors for the Classroom". Brochure by expert Faber Birren on unique handling of colors in the school. Write American Seating Co., Grand Rapids, Mich. 49502 Please request **E-1**

F. HARDWARE

1. 16pgs. of catalog and special information on LCN Door Closers, includes surface mounted, overhead concealed, and floor models. LCN Closers. Please request **F-1**

2. Reversible door closer. 8-page manual T-5 illustrates versatile 3-arm application. Regular, parallel or top jamb. Cover available. Norton door closer division. Please request **F-2**

3. "Rixson Closers' X-5" gives complete information on new line of interior floor closers for use with butt or pivital hung doors; removable without door removal. Rixson Closers. Please request **F-3**

4. 1969 Condensed Catalog. 16-pg. catalog describes full line of advanced architectural hardware including specifications and function charts. Sargent & Co. Please request **F-4**

K. LIGHTING FIXTURES

1. ORB LIGHT CATALOG Beautiful aluminum spheres for mercury, quartz, incandescent lighting. Stonco Electric, Kenilworth, N.J. Please request **K-1**

M. MASONRY

1. Precast Concrete Exterior Units Brochure, 24-pg., color, shows 41 precast panel instructions. Medusa Portland Cement Company Request **M-1**

P. OPERABLE WALLS

1. 4-pg. brochure on space dividers "What Can You Do With Hauserman's New Schoolmates". E. F. Hauserman Co. Please request **P-1**

R. PAINTS, COATINGS, SEALANTS

1. 4-pg., 2-color folder on "Weather Chamber Windows" weatherproofing system combining Neoprene stripping with pressure equalization. Republic Steel Corp. Mfg. Div. Please request **R-1**

2. New Thoroseal brochure explains how to waterproof basements, foundations, concrete and block buildings; how to eliminate rubbing concrete. Strandard Dry Wall Products, Inc. Please request **R-2**

S. PLUMBING EQUIPMENT

1. 12-pg., 2-color catalog showing American's complete line of laundry machinery. American Laundry Machinery Industries; Cincinnati, Ohio 45212 Please request **S-1**

2. Form C 150. 12 pg. color catalog of water coolers. Architect illustrations. Cordley & Hayes Please request **S-2**

3. "The faucet that turns people on, with style. Moen." 12-pg. catalog full line single lever kitchen bath valves. Moen Div. of Standard Screw Co. Please request **S-3**

4. New 1969 32-pg. color catalog illustrates electric water coolers, drinking fountains, fountain accessories; incorporates drawings, specs and rough-in dimensions for units. The Halsey W. Taylor Co. Please request **S-4**

T. ROOFING, SIDING & FLASHING

1. 8-pg. 2-color brochure on seamless Terne roofing contains standard and seam specs. Illustrated. Follansbee Steel Corp. Please request **T-1**

V. WALLS, PARTITIONS & MATERIALS

1. 1968 laminated plastic solid color series. Easily filed product sampler features '68 solid shades. Formica Corp. Please request **V-1**

2. "Cultivated Glass by Glaverbel." 8-pg. color catalog of drawn sheet, tinted, solar, floated plate, enamelled, figured, figured glass lines. Glaverbel (U.S.A.), Inc. Glaverbel Co. Please request **V-2**

3. Exterior wall systems employing lightweight framing members and cementitious membranes. 8-pg., 4-color brochure. Inland-Ryerson Construction Products Co. Please request **V-3**

4. New 1969 Romany-Spartan full line 20-pg. color catalog contains ideas and applications for ceramic tile; includes range of special glazes expressly for architect and designer. Technical data, specs. Please request **V-4**

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By Product

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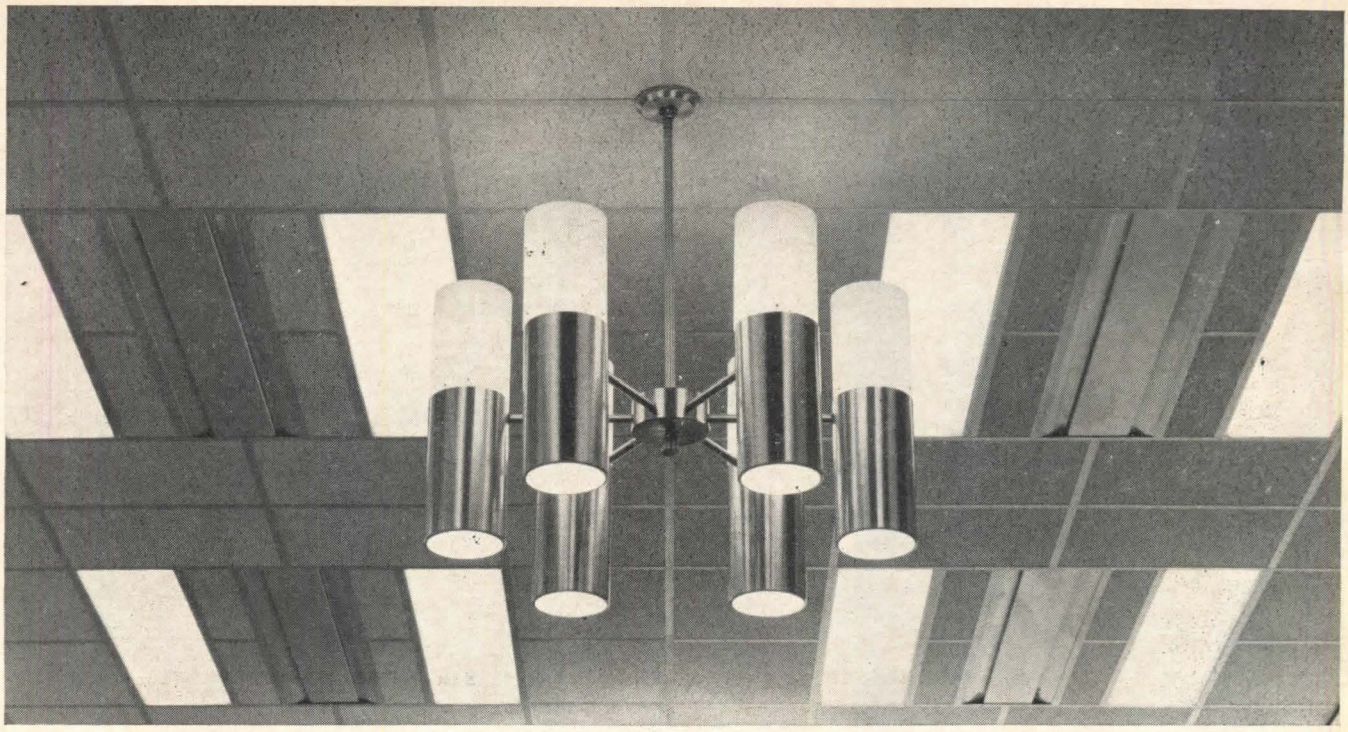
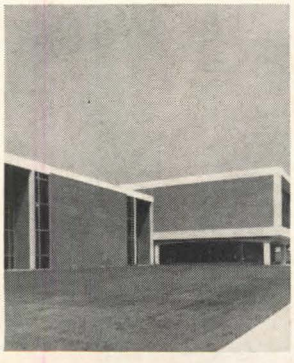
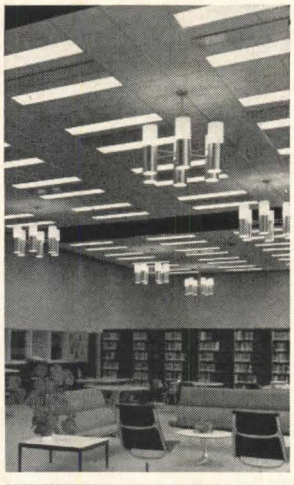
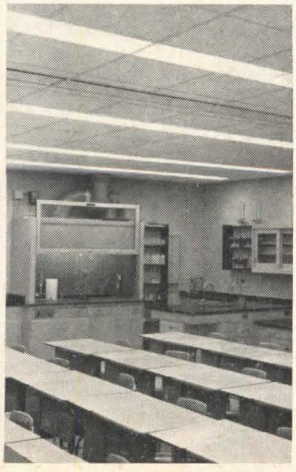


Air conditioning that lets you do your own thing.







Example: Coatesville, Pa., High School

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The ceilings at the new Coatesville, Pa., High School make the point. Design did *not* have to be modified or compromised because of air conditioning requirements.

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A showcase of what architects have accomplished in ceiling design with the Carrier Moduline is now available in a new portfolio entitled "Great Ceilings."

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Registered architects in the U.S. and Canada who write in on their letterheads will receive a copy of the "Great Ceilings" portfolio. A viewing of the film may be scheduled through your local Carrier office.

Write to William Heck, Product Manager, Carrier Air Conditioning Company, Carrier Parkway, Syracuse, N.Y. 13201.

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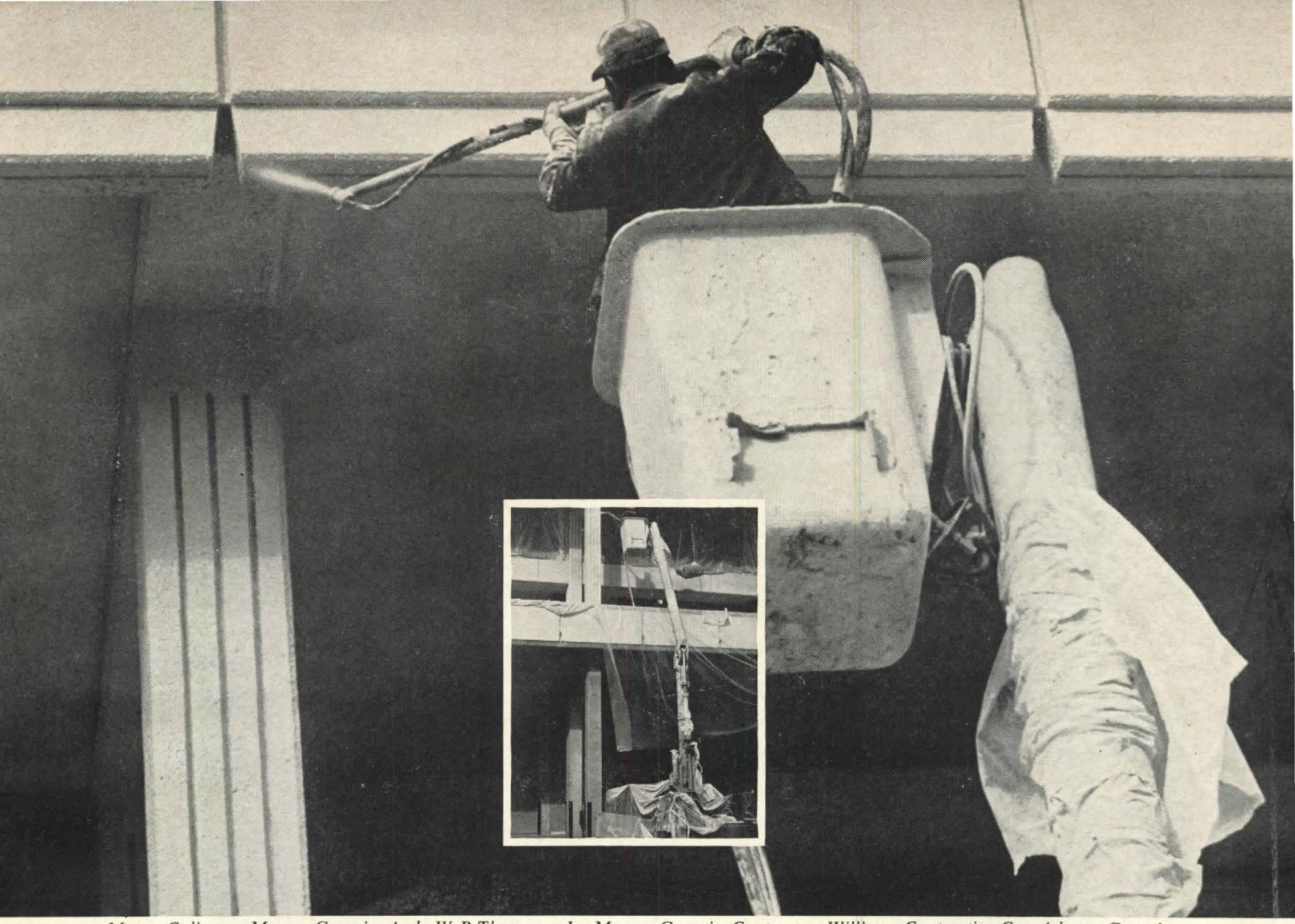

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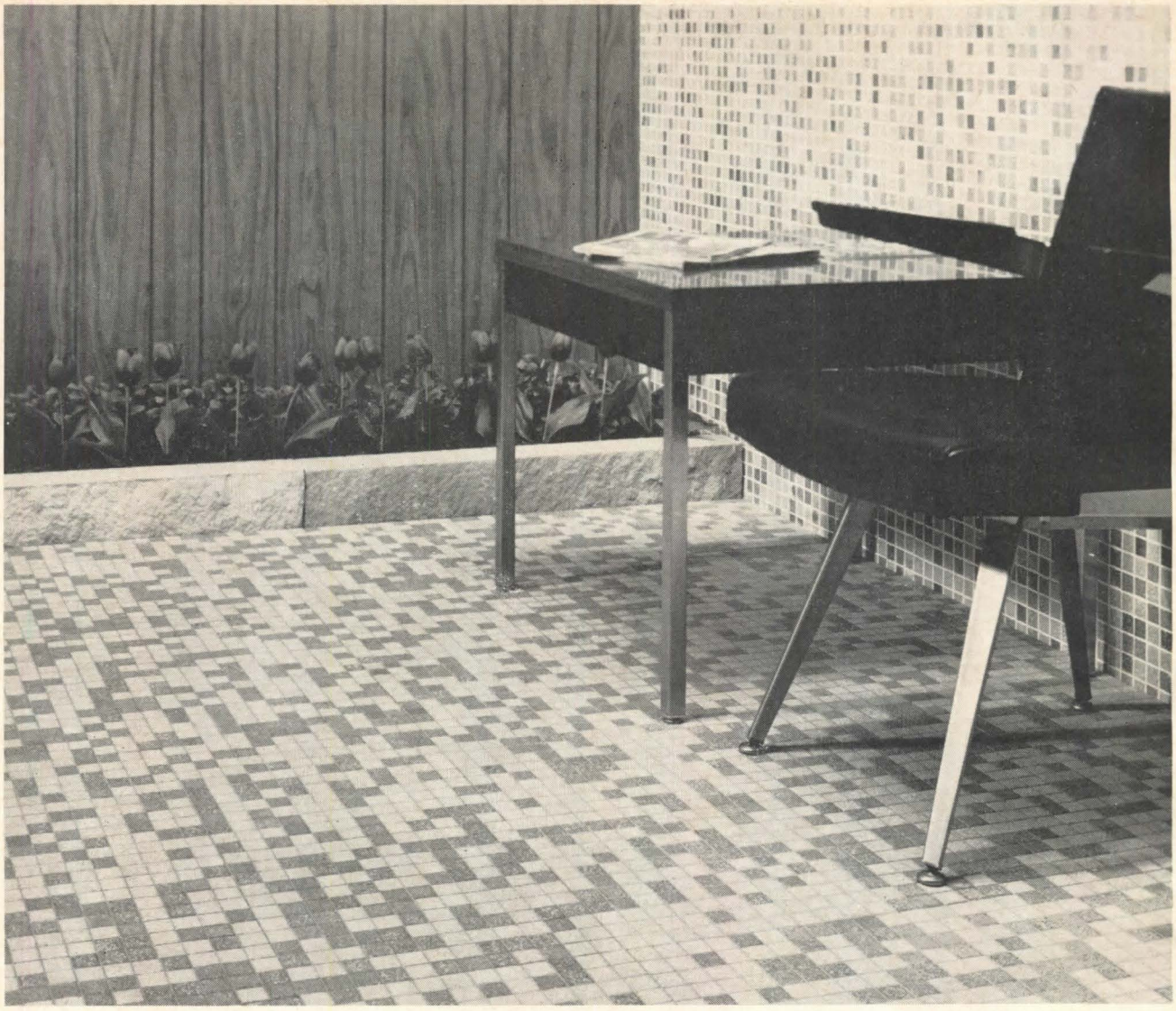

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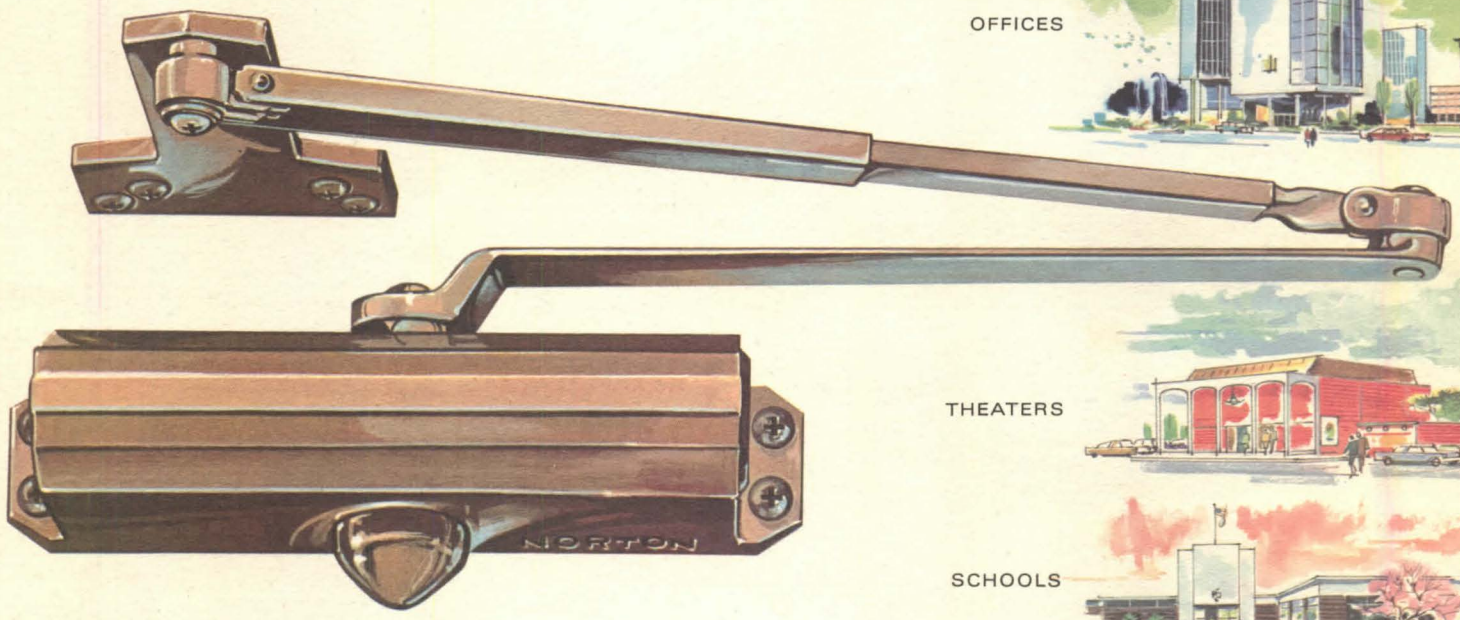

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with matching covers.

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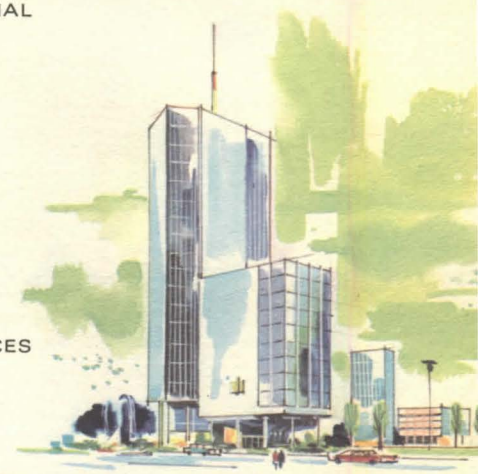

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