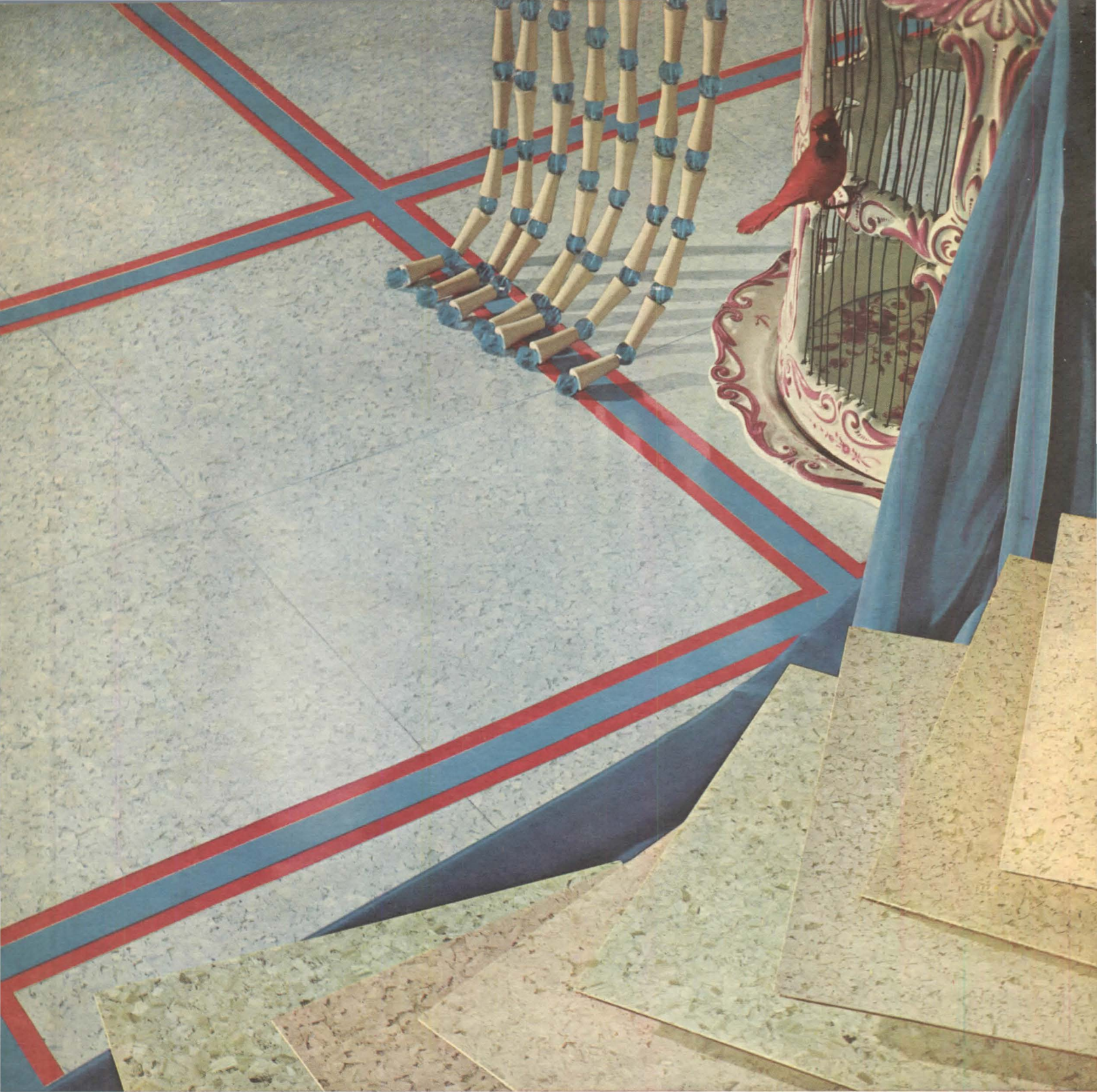


THE ARCHITECTURAL FORUM / MAY 1965

FORUM



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PUBLISHER'S NOTE

This month the editorial eye ranges from Osaka, Japan, to our own West Coast; then cross-country to New York and New England and off again to London. This issue's house is a sun-drenched mansion on the Costa Brava, and from Washington, D.C. comes our cover story on Egon Eiermann's German Embassy. We can't be forever certain about these things, but this is probably more foreign traveling than we will customarily do.

We report globally because in each instance the story relates to the American scene. Whether a scientific research facility is built in Japan or California, or on an Eastern university campus, we find that forms and indeed building costs, too, are principally shaped by unusual mechanical and electrical requirements.

And when a sincere and sophisticated attempt is made to create a respectful downtown building complex, it matters little whether the attempt occurs in St. James's Street, London or in Fountain Square, Cincinnati, Ohio. The lively British critical debate stirred by the Economist buildings has direct relevance to our own consideration of the urban crisis.

* * *

Our circulation department has a language of its own. But at times the things they talk about become clear even to the uninitiated. For instance, we now all know what is meant by "Insert Card Longevity."

Out of the many thousands of replies we got to our recent circulation announcements none was more remarkable than the order we got on a business reply card used as an insert in a Forum issue more than 20 years ago. A Mr. Jack O'Hara of Woonsocket, R. I., requested a one-year subscription at the rate of \$4.

I don't know what Circulation did about this order nor do I know how long we are honor-bound to stick to an offer made when a dollar was at least 50 cents, but I do hope the loyalty of reader Duncan has been properly recorded and that the Forum is on its way to Woonsocket. J.W.M.



Cover: Detail of German Chancery (pages 62-69). Photo by George Cserna.



HEATH

EDWARD DURELL STONE

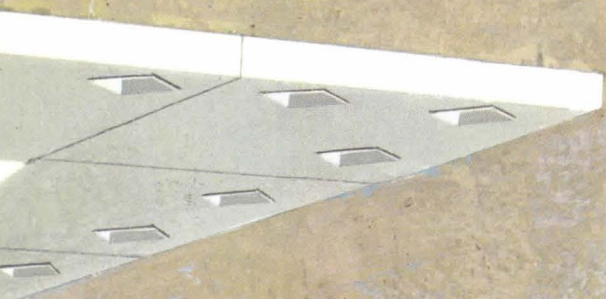
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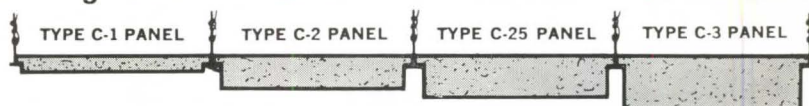


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FORUM

It seems an ideal month to suggest that the national honor awards program of the American Institute of Architects be either radically revised or terminated. It has been nearly a year since the last awards were made, and those for 1965 are a month away, so no one can accuse us of merely second-guessing a particular jury.

The entire architectural awards picture is something of a mess. An increasing number of producers' associations are conducting awards programs, and too often the basic criterion seems to be how much of a given material is used in a building. Another magazine in our field has taken to giving "citations" to buildings it publishes, which seems a particularly pretentious publicity gimmick.

All of this nonsense makes it especially important that the AIA's annual awards program be a valid measure of architectural excellence. Unfortunately, it is not.

We remember a conversation with a West Coast architect who had just won a national award for an apartment building. He was astounded (and, knowing the building, so were we). "We like to have something in every year," he said. "This year we didn't have much, so we dredged this one up—it wasn't our best work by a long shot, but the pictures were great."

We remember also a case where a building that had been passed over by a local AIA jury—which took the trouble to visit all the buildings it was seriously considering—was subsequently given a national award.

PHOTOGRAPHY CONTEST?

As these anecdotes indicate, we think the reason for the irregularity of AIA's judgment is simply this: the juries make their choices primarily on the basis of photographs, drawings, and written descriptions, and rarely see the buildings. (A few years ago the AIA did make it a rule that contenders for first honor awards be seen either by a member of the jury or an architect designated by the jury, a rather slipshod arrangement reportedly honored as much in breach as observance.)

Architecture is impossible to properly evaluate pictorially, which is why we make it a firm policy to see all buildings we publish in a major way. An awards program conducted mainly on the basis of photography is a photography contest.

We have a constructive and respectful suggestion: that the AIA undertake a thorough study of alternative methods of conducting its awards program to assure that all finalists, at least, be seen.

As a starter, we offer the following: The program might be conducted every two, three, or four years instead of annually. In the intervening years, regional juries could see all entries that pass a preliminary screening. The national jury could be made up of representatives of each regional jury, so that someone, at least, would be able to report on how each building looks, feels, and works on the basis of personal experience.

This thought may be full of bugs, but surely there are other alternatives. They are worth examining, for the present program is compromising to the profession and confusing to a public in search of reliable standards.

WASHINGTON

WARMING UP

If this issue seems overly Washington-oriented, the reason is that we are trying to get everybody in the right frame of mind for next month's Pan-American Congress of the AIA. To complete the picture of our nation's capital presented elsewhere in this issue we'd like to mention additional items here:

● There was a rumor, unconfirmed, a few weeks back that the AIA would hold its convention ball next month in the new House Office Building, but it seems that the idea was dropped (not good for professional image, or something). Instead, the Annual Ball will be held in the old Power House in Georgetown, which looks like this inside. A fine setting.



Meanwhile, Congressman Wright Patman (D., Texas) stoutly defended the new Rayburn Building against those who thought it wasn't quite up to expectations, and suggested that it be matched, starting right away, by another House Office Building to be named after

have rubbed oil on newbold.

However that may be, the Art Establishment in New York has

to let you know what's on your menu for any given month.

istrator, Dr. Robert C. Weaver. (That appointment was announced a couple of weeks ago—and, just



the present speaker, John W. McCormack. If this starts a trend, we can look forward to many prosperous years for US building.

ing of the Exhibition, ENVIRONMENT U.S.A., which was first on view in Los Angeles last summer. The photographs are by Julius



"bald-headed son of a bitch", an enraged visitor—female—threatened him with his own gavel and then with her shoe, the hooting galleries pelted the City Council floor with miscellaneous objects, and 30 cops finally had to restore order.)

UP WITH THE OLD!

Marylanders' concern with the past also has its good side. In lovely old Annapolis (where the legislature killed the Renewal Commission), a hard-working group of preservationists has gotten Interior Secretary Udall's Advisory Commission to recommend that Annapolis be named a National Registered Historic Landmark. If the Secretary so acts—and we certainly hope he does—the town will join such areas as Charleston, S.C., Boston's Beacon Hill and Brooklyn Heights, N.Y.

That legislature has its good moments, too: last month it passed one of the nation's first scenic easement laws, authorizing tax credits for landowners who offer open land along rivers and shores. As the new Chesapeake Bridge-Tunnel opens up the formerly isolated eastern section, the legislature has shown commendable foresight to protect its lovely sea- and countryside.

Finally, in Baltimore's Patterson Park, the city fathers have just completed a \$39,000 renovation—in clear plastic, indeed—of the 74-year-old observation tower, an orange and yellow Chinese pagoda (below) 60 feet high from where energetic citizens may view the progress of urban renewal—which is still respectable in the city, if not the county of Baltimore.



BAN THE WRECKER'S BALL!

The voracious wrecker's ball, which has been gobbling up New York landmarks at an ever-increasing rate, may have to settle for a blander diet from now on. On April 19 Mayor Wagner finally signed into law the Landmarks Preservation Bill that has been pending for so long that, warned the *New York Times*, it was "on the way to becoming an antique itself."

The mayor had appointed a temporary commission to draft the bill almost three years before, to the day, and they had put it on his desk last May. Almost a year of struggle with real estate interests (and some of their allies in the business community), left the bill scarred but still strong enough to raise the spirits of preservationists.

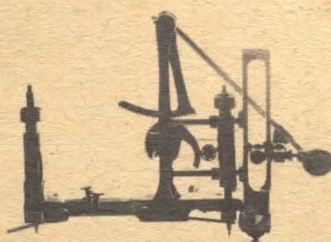
The 400-foot radius of protection around each designated landmark had been reduced to cover only "adjacent buildings" and a peculiar stop-and-go system for proposing new landmarks (only in six month periods every three years) had been introduced. But the bill's major strengths remained intact: protection of landmark exteriors down to the last dentil and a process of enforcement that starts with tax abatement and ends with fines and condemnation.

A big and crucial job remains, however. In a period of only 18 months all landmarks initially proposed must be made official (or not), through a process that involves public hearings. Hearings on the 750 individual buildings and three historical areas (including 3,500 other buildings) will have to be held in geographical groups. This is obviously no time for New York landmark-lovers to let down their guard.

BY-PRODUCTS

3DD

Please do not ask us to explain the machine illustrated below; ask its inventor, one Mr. Vladimir Faik Tamari, who (apparently) lives in-



side Post Office Box No. 43 in Ramallah, Jordan, and who has invented and built the little gadget, patented it and is willing to let anyone make it.

What it does is help you make drawings in space, which (the drawings) when looked at through a stereoscope, turn out to be three-dimensional. The designer operates this thing and draws, let's say, one view of a curvilinear structure; the machine, following the designer's lead, draws that view *plus* another view, just a little bit off to one side, with a slightly different perspective to it. The two drawings then sit side-by-side, and you inspect them through your stereoscope. And, Shazamm! it turns out that you have designed New York's TWA Terminal!

Mr. Tamari says that "3DD drawing (or stereoscopic drawing) is a system whereby lines can be precisely drafted in actual space. If the drawing handle of the 3DD is pushed down along the depth column the eyes will see a line generating in space away from one . . ." OK, Dietzgen, get to work on this!

"ROTEL GO HOME!"

What may well be the most ill-conceived product of the decade is something called a "Rotel" (short, but not short enough, for "Rolling



Hotel") and developed in Germany by an entrepreneur called Georg Höttl. The "Rotel" (above) is, in effect, a motel-on-wheels. It will take battalions of tourists on safaris just about anywhere—from the USA to India, and from the USSR to Canada. Each "Rotel" consists of a sort of Greyhound-type bus, to which is attached a 3-story-high trailer that will accommodate 39 tourists, in 27 single beds and 6 double beds. Last year, close to 36,000 tourist-nights were clocked by Herr Höttl. The purpose of this enterprise, according to its promoter, is "to broaden the horizons of tourists, and to make a modest contribution, in the Christian tradition, to the un-

derstanding and solidarity of different peoples."

We have news for Herr Höttl, and it isn't very good news: we have had stationary, land-locked Motels and Diners in the US for some years now, and they haven't broadened anybody's horizon or contributed to anybody's understanding of anything. We appreciate his sentiments, and we always thought there might be some dough in the "Peace Corps" concept; but we are afraid that his enterprise isn't going to do anything to relax international tensions, or us.

AWARDS



ABROAD

- British architects Stirling & Gowan will be presented with the 1965 R. S. Reynolds Memorial Award for their spectacular Engineering Labs at Leicester University (above). The prize is \$25,000 and a piece of sculpture and we, obviously, couldn't be more pleased (we published their stunning building in considerable detail last September). The reason S&G was eligible for the *Reynolds'* prize was that the cascading glass of their building was framed in aluminum.
- The AIA will award two of its 1965 Medals to Latin-Americans next month: The Fine Arts Medal will be presented to Roberto Burle-Marx, the Brazilian landscape architect (he also works as a painter, sculptor, and designer of jewelry), whose gardens for some of Oscar Niemeyer's buildings, especially, have long been admired; and the AIA's Allied Professions Medal will go to Dr. Leonardo Zeevaert, the Mexican structural engineer and expert on problems created by seismic shocks.

(continued on page 71)



The Establishment strides again!

In their London buildings for *The Economist*, Alison and Peter Smithson—once the *enfants terribles* of Brutalism in Britain—have chosen discretion.

About a dozen years ago, when Alison and Peter Smithson burst upon the architectural scene with their Hunstanton School (May 1955 issue), they seemed to exemplify all that was then taking welcome swipes at the British “Establishment”: they were the Angry Young Couple of British Architecture, and they seemed likely to liberate at least *one* of the British visual arts from that deadly politeness that had cursed most of those arts over the past couple of centuries.

In a way, the Smithsons succeeded beyond their own wildest expectations, and British architecture since Hunstanton has been much the better for the kicks-in-the-pants administered to it by these two Angries.

Now, however, comes the Smithson—designed Economist building (for that highly respected weekly magazine)—or, rather, The Economist Development (three buildings, a plaza and a bay window)—and, lo and behold, the job turns out to be the politest bow to the Establishment since the British Labour Party took up capitalism. In short, the Economist Development, to quote the critic Ian Nairn, is an “enigma”—at least to those who like their ideologies tidy and consistent. And being an enigma, the Economist buildings have been tackled by almost every architectural critic (or critical magazine) in the British Isles.

On these pages, we reprint some of the native comment in part, and add a few comments of our



The Economist: Statistics

own. But, first, here are some of the vital statistics of the project:

SITE: About a third of a block bounded by St. James's Street (that broad avenue heading south, and downhill, from Piccadilly, and lined with some of the most exclusive London clubs); Ryder Street (which branches off St. James's and heads east); and Bury Street (which parallels St. James's). Total area of site: just under 20,000 square feet.

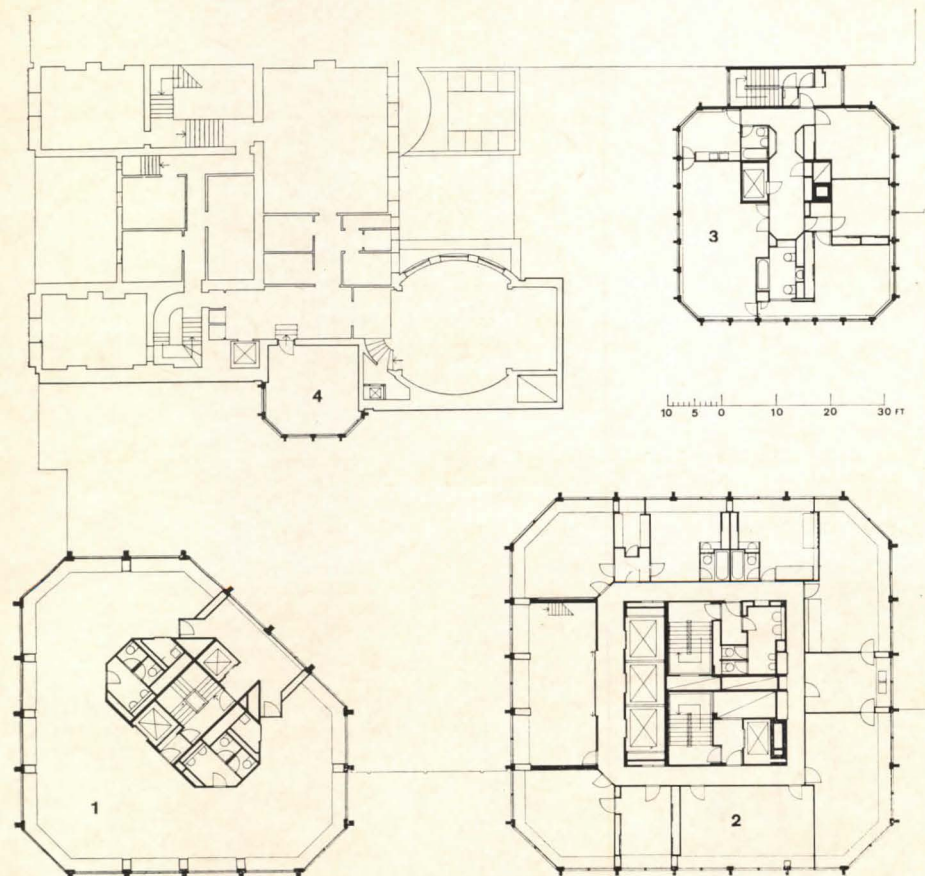
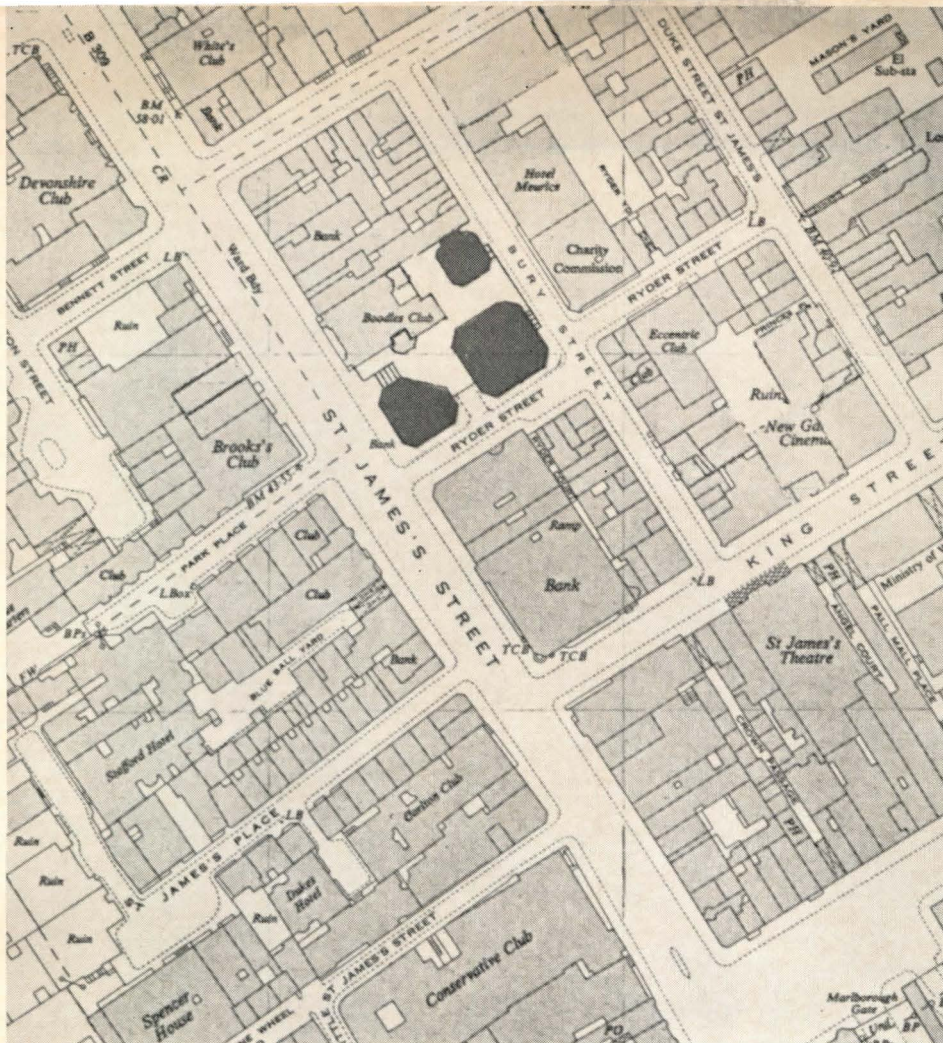
BUILDINGS: Set on an elevated plaza are a four-story high bank building facing St. James's and Ryder Streets; a 16-story tower (set back from St. James's, to the corner of Ryder and Bury Streets) housing The Economist's offices plus an apartment and an executive suite on top; a nine-story residential building (also set back, to face Bury Street) containing bedrooms and apartments most of which serve Boodles Club on St. James's; a two-story building containing parking garage, utility rooms, shops, etc., and whose roof forms the elevated plaza that occupies most of the site; and a small three-story annex to the existing building that contains Boodles Club. Some of the seeming complexity of planning—especially in the amounts of space occupied by the cores—is explained by the fantastic complexity of the building program.

STRUCTURE: Reinforced concrete; perimeter columns precast; bank and office tower on a 10-foot, 6-inch module; residential building on a 5-foot, 3-inch module. Concrete frame faced with Portland stone. Trim and windows of gray aluminum. Paving of plaza is Portland stone also.

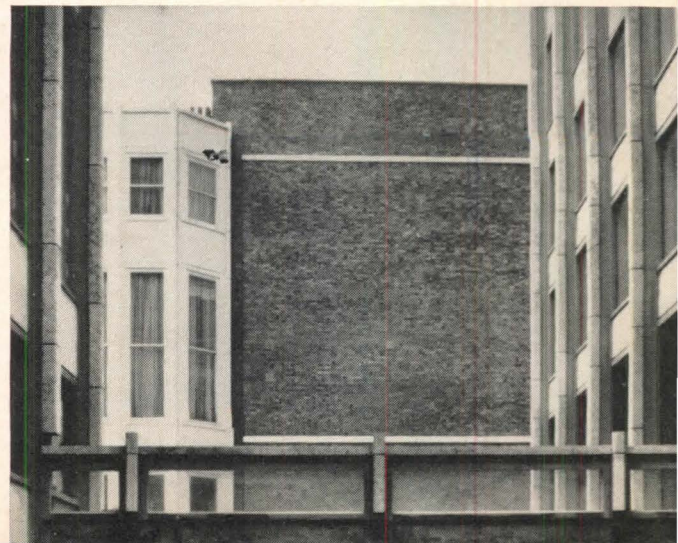
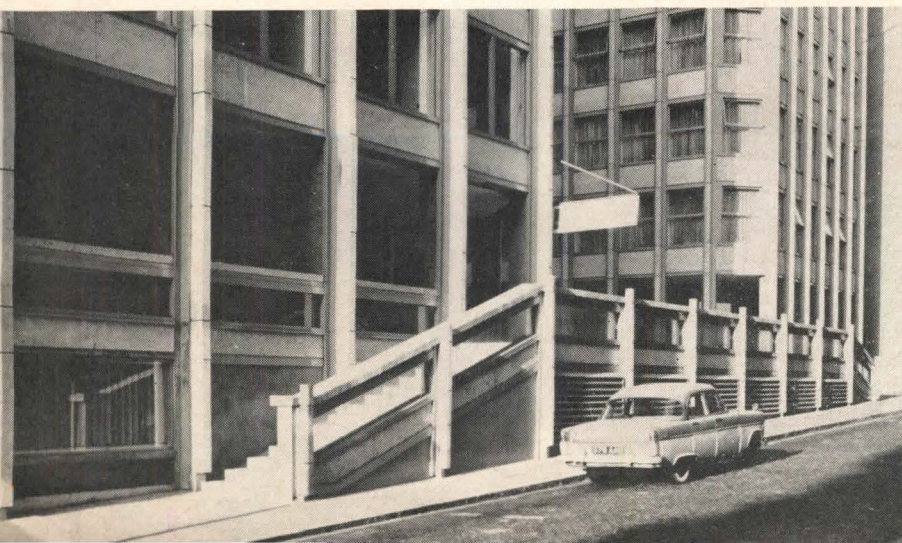
The Smithsons were also selected to design this development after a limited competition. Work on the design began in 1960, and work on the buildings two years later. The development was formally opened last December, and the comments reprinted below and on the next pages have appeared in various British publications since then.

IAN NAIRN (writing in *The Observer*):

Here, in an era of pedestrian precincts which nobody uses, is a space which people will crowd into naturally. It deserves all the kiosks and cafés that *The Economist* can bear to see on the plaza—and if it then made a lot of money, it would be a just reward



Top floor plans (above) reflect the complex functions served by the buildings: Offices in the bank structure (1); a flat and executive office suite in the tower (2); a three-bedroom flat in the residential building (3); and dining and card rooms in the Boodles Club annex (4). The project is situated amidst an area of posh clubs (site plan, top). View opposite is down Ryder from St. James's Street.



The Economist: Comment

for not having tried to cram the site with lettable area.

Six versus half a dozen: an architectural miss, a townscape hit.

DR. REYNER BANHAM (writing in the *New Statesman*):

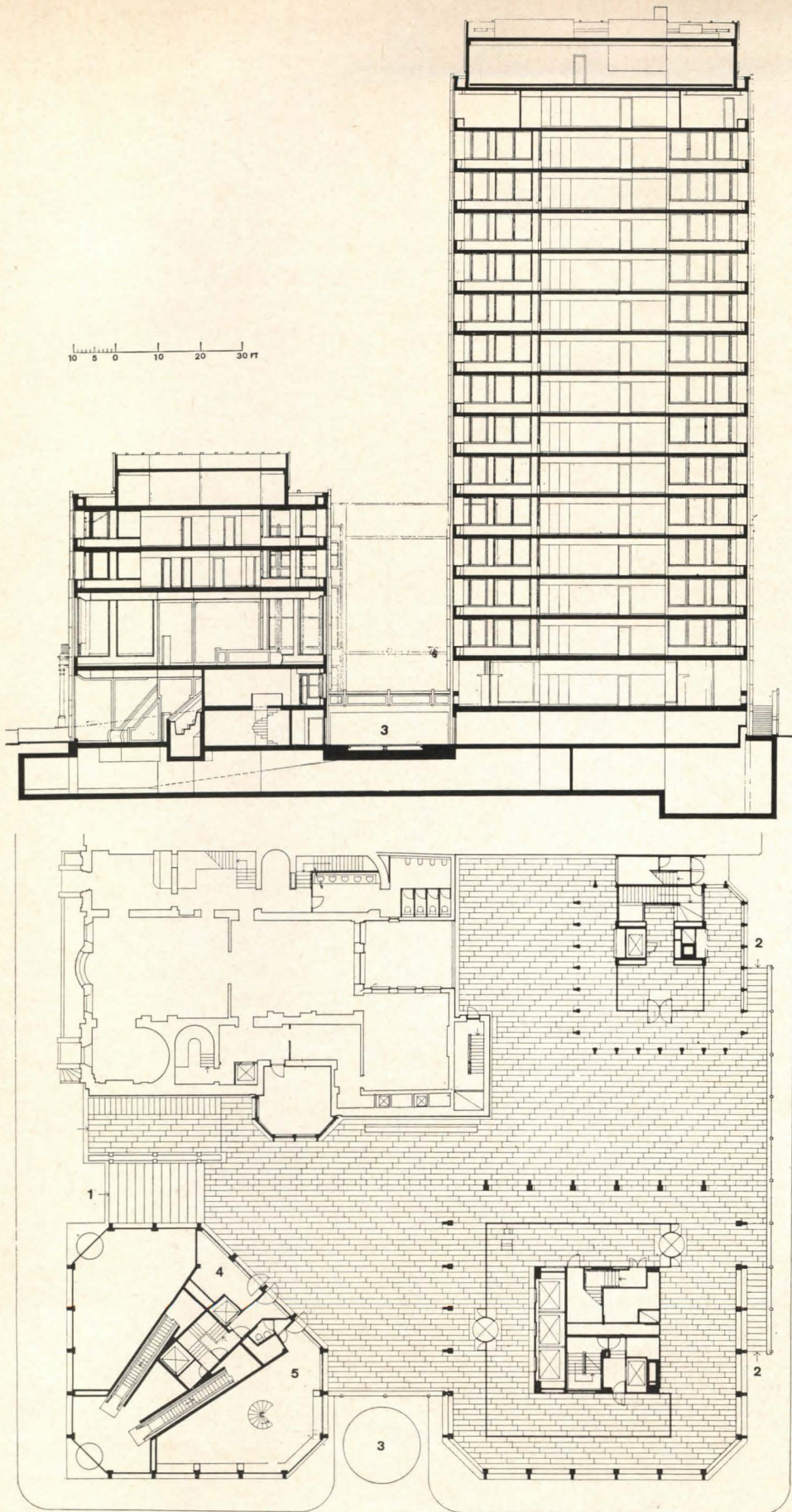
What bugs me—apart from being lumbered, still, with a West End where you have to go Greek to keep up with the 20th century, and the Smithsons having to fiddle about at it instead of being given a chance to design a decent city somewhere—is the response of Sunday-paper critics who voted the *Economist* a hit for town-planning and a miss for architecture (as if the two could be separated in a scheme as compact and coherent as this) and then went on to hope that the piazza would be filled up with stalls, kiosks and the like. That this routine sentimental craving to cram every public space with 'life,' spontaneity and all that medieval Merrie-Merrie should come from a sworn enemy of routine planning solution, Ian Nairn of all people, I find doubly worrying. You have only to step up onto the podium to realise that it is, above all else, a contemplative space (complete with meditation bench) set apart from the hubbub of the giant traffic-island that was once Clubland and Piccadilly.

DIANA ROWNTREE (writing in *The Guardian*):

The plan speaks in spaces rather than in solids, and harks back to the narrow, unexpected courts of the City of London. Buildings, like people, of character have their faults. Splayed corners, arising naturally from modular planning, are just as splayed as the ones on crude corner shops. And the strips of stone that adorn "The Economist's" tankroom wall are not a success, which is sad on a building that rescues stone from the dead convention it had become and presents it to us again as a natural material, designed to glow in the sun and gleam in the rain.

J. M. RICHARDS (as quoted in *The Listener*):

The conception is an admirable one. It is quite ravishing the way the Victorian buildings in Bury Street are glimpsed through the gap between the new buildings, providing a contrast in colour, style, and texture; and the way the buildings on the west side of



Pedestrian access to the elevated plaza is by stairs and a ramp from St. James's Street (top photo, opposite and 1 in plan) and by stairs from Bury Street (far left and 2). The parking garage is entered below the plaza on Ryder Street (left, and 3 in section and plan). The only public services at the plaza level are a kiosk and shop (4 and 5 in plan) in the eight-sided bank building.



RYDERS' ST

NO ENTRY

Opden



The Economist's office tower (opposite) forms a strong semiterminus to Ryder Street viewed from the east. Above, St. James's Street before and after. The broken lines in the top photo outline the boundaries of the photo beneath. The Boodles Club's facade on the St. James's Street side was left undisturbed; its height and proportions were deliberately repeated in the four-storey bank building.

The Economist: Comment

St. James's Street are similarly seen from the pedestrian platform, framed between the new buildings and between the colonnades at their foot. This is the real stuff of townscape, and visually it weaves the new development, as it were, into the fabric of St. James's.

THE ARCHITECTS' JOURNAL (commenting anonymously):

Views at a distance from higher up or lower down the street show clearly how well the spacing and modelling of the vertical ribs fit into the street perspective, but the chamfered corners of the building appear almost elevationally and tend to jar the flow. Proportions change abruptly because the greater plan length of the diagonal throws up a different façade dimension. It could be argued that these corners arrest and invite diversion from the street but, in their naked and simple statement of proportion—as in the remaining divisions of this block—they lack the human scale of detail . . . which provides the busy incident in the remainder of the street.

GORDON CULLEN (writing in the *Architectural Review*):

There are (several) ways in which a high building can be sited. First it can just happen—take down a five-storey building and put up one of fifteen. This results in an odd but typical street facade. The second type is the plot ratio tower isolated over its two-storey base. This often destroys the unity of the street by the gap and the alien tower. Third is the high building which has to observe the properties . . . in which a high building has been permitted in the garden behind the existing buildings provided it is not visible by the pedestrian from the other side of the square . . . It is granted that we must have these vast blocks which belong to another world, yet notice how the new development puts out a friendly hand right down into the busy, small-scale ground activity.

THE SMITHSONS (writing for *The Economist*):

The Economist Building is a didactic building, a dry building—deliberately so. And this seen from two hundred years time may seem an error, but in our situation there is no other course but 'to build' and 'to demonstrate'. Not only in what we have done, but in what we have not done lies the lesson.

The Economist: Summary

The most impressive aspect of the Economist buildings, to the occasional visitor to London, is that—from a certain distance—they blend beautifully into their particular part of the urban scene.

The second impression (close up) that one U.S. visitor had of the Economist buildings was, just possibly, colored by American experience: Alison Smithson herself pointed out, some years ago, that the trouble with Lever House was that it breached the uniform façade of Park Avenue—that it was the first building on that street to turn 90 degrees and thus start to rupture the street. Perhaps this very shrewd observation is pertinent only to an American situation, since the dominant, urban form of our country is the endless street, the "Open Road."

Still, St. James's is almost American in scale, almost the way Park Avenue used to be. Is not that romantic little passage in the Economist block a serious breach in the continuity of the street? Supposing it started a fad, the way Lever House did?

Third, one must say something about the detailing of the Economist buildings—the exterior detailing. It is, quite simply, not up to Smithson snuff. To find so sophisticated a couple of architects taking Mies van der Rohe's stepped-back column profiles, turning them into *papier maché* Portland stone, pasting that onto the structure with what appears to be "Miracle Glue", and snipping off the bottoms of those falsies just short of terra firma—well, for God's sake, A & P!

There is only one excuse for this highly critical comment, and that is that the Smithsons are really very, very good, so their work should be judged by the very highest standards. The Economist group of buildings produced by anyone else would have seemed like quite a feat.

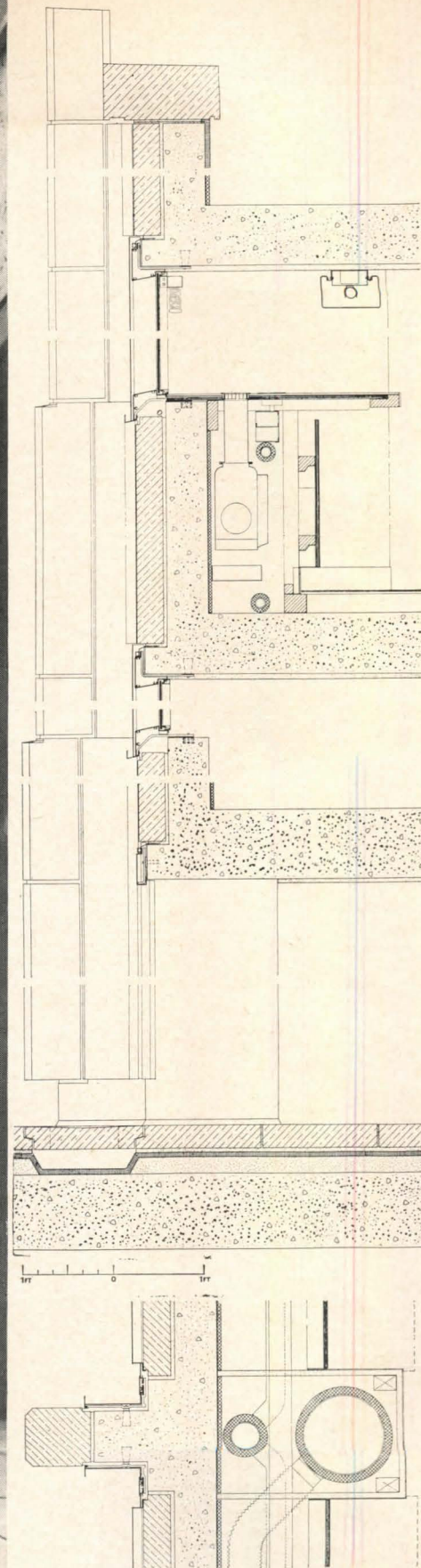
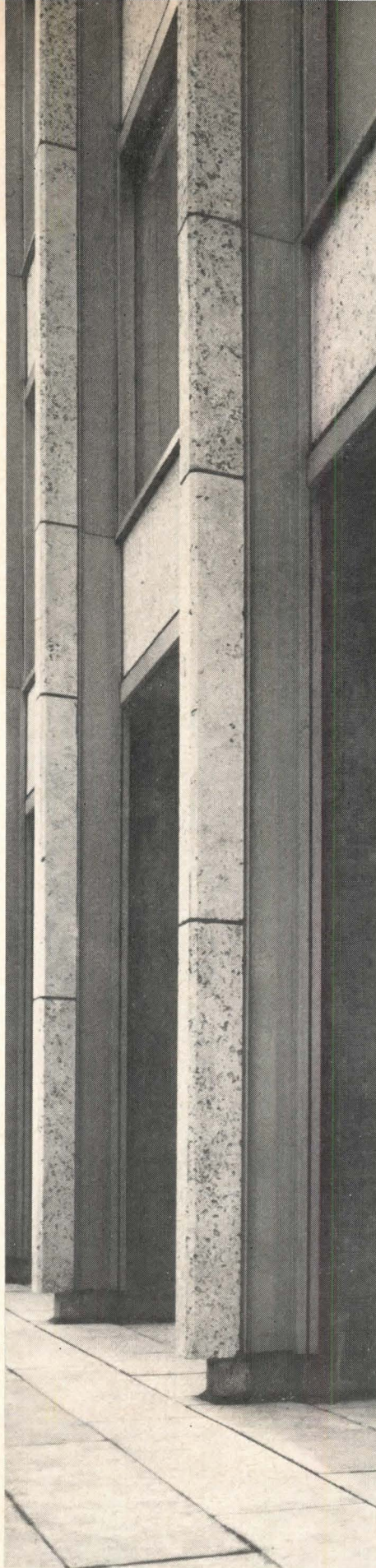
They may, indeed, have won the battle of St. James's—but this way they won't win their war.

—PETER BLAKE

FACTS AND FIGURES

Architects: Alison and Peter Smithson. Associate architect: Maurice H. J. Bebb. Structural Engineers and General Contractors: Sir Robert McAlpine & Sons Ltd. Acoustic Consultant: Arthur Aldersey-Williams of Associated Architects and Consultants.

PHOTOGRAPHS: M. Carpetian: page 11; William J. Toomey: pages 12, 14, 16, 17 and 18; Henk Snoek: page 19.



Portland stone facing on the buildings' columns (left) stops short of the ground. The buildings are of reinforced concrete flat slab construction on bored pile foundations (typical column below sill level at right, below). The stone is affixed to the concrete, and aluminum trim covers all junctions between stone and concrete (vertical section of tower's perimeter construction at right, above).



After the Bulldozer

**AN UNLIKELY BOOK
BY THE EARNEST
YOUNG MAN BELOW
HAS STIRRED A
WARM DEBATE OVER
URBAN RENEWAL**



Future historians of America's 16 year old urban renewal program may well choose November 18, 1964, as one of its milestones. That was the date that a book was published entitled *The Federal Bulldozer*, by Martin Anderson, advocating that the entire program be dropped.

It was not the first time the suggestion had been advanced. The president of the U.S. Chamber of Commerce toured the country last year damning urban renewal as a "billion-dollar boondoggle," a conspicuous item in the federal "supermarket of subsidies." The redoubtable *Reader's Digest* had advocated abandonment of renewal with a regularity rivalling its exploration of unforgettable characters.

But the Bulldozer book was something else again. Its author carried a Ph.D. behind his name and, more important, the book carried the notation that it was one of a series in which the Joint Center for Urban Studies of the Massachusetts Institute of Technology and Harvard University "presents some of its findings."

Despite this aura of authority, it is unlikely that *The Federal Bulldozer* will achieve its objective, at least in this session of Congress. What could make it a milestone is that it has added fuel to a significant debate on the direction of the urban renewal program (a debate considerably more significant, and more sophisticated, than the book itself). Before it runs its course, the debate could well help bring about some fundamental changes in the program's order of priorities.

The situation has its paradoxes. For one, most of the debate has concerned the relationship between renewal and the city's poor. It is a subject occupying only 18 of the book's 272 pages.

For another, the book is not really about urban renewal at all; it is about statistics about urban renewal. The author is wonderfully innocent of knowledge of the project-by-project history of the program, and completely unconcerned with anything that can't be

numerically measured. It is as if someone set out to do a book about sex based entirely on population statistics, without reference to direct experience. The conclusion that sex should be abandoned would be inescapable.

Author Anderson: "I had no interest in the federal urban renewal program itself; my objective then was to find out how private enterprise would be affected by the program . . ."

Dr. Martin Anderson is a 28-year old assistant professor in the Columbia University graduate school of business. In 1960, while working for a doctorate in industrial management at MIT, he learned of the Joint Center fellowships and applied for one. At that time, he states with disarming frankness in the book's preface, "I had no interest in the federal urban renewal program itself; my objective then was to find out more about how private enterprise would be affected by the program. . ."

Dr. Anderson's approach was "to assemble facts and estimates . . . and to weave them into a logical pattern." The basis of his study, says the preface, "is aggregate statistical data covering every urban renewal project in operation as of March 31, 1961. All relevant information was abstracted from publications of the Housing and Home Finance Agency and its constituents for each urban renewal project. This information was supplemented with previously unpublished material from the official files of the Urban Renewal Administration in Washington, D.C."

The data was put on 10,000 punch cards and fed into a computer. "To my knowledge," Dr. Anderson notes with pride, "this is the first time that data dealing with many parts of the federal urban renewal program from many sources have been correlated and woven to-

gether into a reasonably complete picture."

Dr. Anderson also wove into the picture some opinions of his own, which one reviewer has characterized as "business-school ideology" and another has placed "far to the Right." At one point, for example, he has this to say: "Many people will argue that the traditional rights of property must not stand in the way of broader social objectives or 'human rights.' The concept of broader social objectives has never been clearly defined, but it usually means that the rights of some will be sacrificed to the advantage of others. As for 'human rights,' it need only be noted that the right of property is probably the most important of all human rights."

Anderson: "It is recommended that the federal urban renewal program be repealed now. No new projects should be authorized. The program should be phased out . . ."

The application of these views to the computer's output produced some spectacular conclusions:

- In the study period (1949 to 1961), urban renewal eliminated 126,000 low-rent homes and replaced them with 28,000 new ones, most in a higher rent bracket; therefore, renewal has reduced the stock of low-cost housing.
- The time between planning and completion of a renewal project is approximately 12 years, and only 3 per cent of those started in the study period had been finished; therefore, renewal "is not a quick and easy cure for the supposedly ill city."
- It has been claimed that every dollar in federal grants and loans would bring four dollars of private funds into renewal areas, but the actual ratio has been one to one; therefore, renewal has failed to stimulate private investment.
- During the 1950's, with little

help from renewal, the percentage of housing rated standard by the Bureau of Census increased from 63 per cent to 81 per cent; therefore, private enterprise has proven itself capable of eliminating slum housing without federal help.

Some of the book's other conclusions depended less on the computer. Dr. Anderson states that renewal does not improve the city's tax situation, but bases his case largely on a single example; he contends that half the buildings in renewal areas would have been built anyway, but acknowledges this to be his own estimate; he challenges the constitutionality of renewal, the Supreme Court to the contrary.

All of this leads to the book's climactic passage. "It is recommended," recommends Anderson, "that the federal urban renewal program be repealed now. No new projects should be authorized; the program should be phased out by completing, as soon as possible, all current projects. The federal urban renewal program conceived in 1949 had admirable goals. Unfortunately, it has not and cannot achieve them. Only free enterprise can."

Journal of Housing: "The book is full of distortions about the purposes of the program and its actual operation; its data is obsolete; its citations are . . . out of context."

Dr. Anderson's charges, as blunt and broad-bladed as the machine of destruction on the book's cover, were bound to raise an outcry. This was obviously his intention: for all its trappings of scholarship, *The Federal Bulldozer* is a computerized polemic. The historians surely will not miss the point that it was published during the Goldwater campaign.

The MIT Press, moreover, ballyhooed the book in a way usually reserved for off-color novels which

a publisher hopes will be banned. Two months before publication, advance copies were sent to more than 1,000 senators, congressmen, Urban Renewal Administration officials, newspaper editors, and television and radio commentators. With the advance copies went a letter calling the book "provocative and controversial," and proclaiming that it "dares to pose the fundamental questions raised by 15 years of urban renewal."

Much of the post-publication reaction was predictable. *The Nation's Business*, the organ of the U. S. Chamber of Commerce, had as the lead article in its January issue an interview with Dr. Anderson entitled "The Truth About Urban Renewal." The article began with the statement that "a new exhaustive study has traced the extent of the failures of federal urban renewal since its inception," then led Anderson approvingly through his litany.

The book also has provided fresh ammunition, complete with academic seal of approval, for Right-wing groups such as the Anti-Metro organization, which regards planning and renewal as part and parcel of the Communist conspiracy. (Included in Anti-Metro's chart of conspirators are the League of Women Voters and the International Conference of Building Officials.)

Leading the rebuttal has been the National Association of Housing and Redevelopment Officials, whose *Journal of Housing* greeted the book by identifying Dr. Anderson as a "lone wolf 'scholar.'" The *Journal* huffed, "Since Anderson is a newcomer to the field, we are not surprised at the many errors throughout the book in its analysis of urban renewal philosophy and operations. We suspect a number of them to be intentional. . . . Close reading and analysis will show that the book is full of distortions about the purposes of the program and its actual operation; its data is largely obsolete; its citations are so badly taken out of context as to vitiate their validity." NAHRO subsequently sent all local renewal

agencies a lengthy analysis of the book which undertook point-by-point refutation of Dr. Anderson's major contentions.

Wallace Smith of University of California: "It would be unfortunate if the only thinking which this book stimulates among advocates of renewal is of a nit-picking nature."

A somewhat calmer view is taken by Wallace F. Smith of University of California's Center for Real Estate and Urban Economics in the current *American Institute of Planners Journal*. Smith credits Anderson with some "technical contributions" while at the same time deploring the book's "cavalier and occasionally shallow tone," its "often loose" analytical structure, and its "carping and weak" arguments. The book's treatment of the effectiveness of urban renewal, Smith says, "is rather obviously a by-product which may perhaps have gotten out of hand."

But it would be unfortunate, says Smith, "if the only thinking which this book stimulates among advocates of renewal is of (a) nit-picking nature. There is interminable opportunity for heaving statistical brickbats into the fragile structure of Anderson's anti-renewal argument, and some may be tempted to do this in the hope that by discrediting any little point the ultimate usefulness of renewal as currently practiced will be vindicated. This book may not be the most sophisticated guide to soul-searching on the subject of renewal, but one could hope that it would at least be seized upon as the occasion for soul-searching."

Smith's hope already has been realized, and it is here that *The Federal Bulldozer* has made a contribution beyond its scholarly size. Souls are still being searched as a result of the book's impact, many of them at Cambridge, where it all began.

After the Bulldozer

Wilson of the Joint Center for Urban Studies: "There is no urban problem in the United States . . ." Dr. Weaver of HHFA: "I am forced to ask what the Joint Center is studying."

The annual Godkin Lectures at Harvard were delivered this year by Dr. Robert C. Weaver, administrator of the Housing and Home Finance Agency. Dr. Weaver seemed to find Cambridge hostile ground.

"Anyone who has the temerity to speak favorably about urban renewal in this setting has his work cut out for him," Dr. Weaver said March 30 at the outset of the second lecture in the series. He pointed out the Joint Center's sponsorship of Dr. Anderson's research, then took aim at an article by the Joint Center's director, Professor James Q. Wilson, in the alumni magazine *Harvard Today*. Professor Wilson wrote, "There is no urban problem in the United States except, perhaps, for the problem of urban aesthetics." Dr. Weaver commented, "I am forced to ask what the Center is studying and why it should not be merged with the schools of fine arts and architecture."

The role of the Joint Center in the Bulldozer affair has been somewhat ambiguous. Before publication, when the advance copies already were causing something of a furor, the *Journal of Housing* quoted Wilson to the effect that "the Anderson book meets only the minimum standards of scholarship that the Center applies," and that "had a poll of Center personnel been taken on the book's conclusions, it would undoubtedly have revealed that the vast majority of the faculty of the two institutions concerned . . . and the battery of urban affairs 'outsiders' who counsel with the center would not have accepted them."

Be that as it may, Wilson's *Harvard Today* article only com-

pounds the ambiguity. For while Wilson starts from an entirely different premise than does Dr. Anderson—a concern with the "broader social objectives" and human rights which Dr. Anderson dismisses—he reaches precisely the same conclusion.

"What is often called the 'urban problem' in America today," the Wilson article begins, "is simply a restatement of a historical trend that represents a fundamental change in the functions of the city." This trend is the exodus to the suburbs. "If we consider the city as a collection of people rather than a mystical entity which has a conscience of its own," says Wilson, "the people are better off." The movement of "the best-educated, the wealthiest, the most ambitious, and the most community-regarding people" from the center of the city to its periphery "constitutes a problem only if you wish to substitute your judgment for theirs."

The housing problem "is also a fiction, or very nearly so . . . The housing supply has been getting better in part because the vacancy rate in the cities has been going up. Large cities have been losing population, and as they lose population, people formerly crowded into tight and confining ghettos have been able to take over larger

Wilson: "If urban renewal is accelerated before an institutional response has been devised to problems of poverty, race, and culture, they may be made worse . . ."

dwelling units. Because incomes have been rising in the United States, they have been able to pay more and more money for these dwelling units."

The "real problems" are problems of the people in our cities: "poor people, disadvantaged minority groups, and people who come from families which have for gen-

erations provided no support for education, for intellectual attainment, for ambition; no reinforcement, indeed, for anything but for duplicating the tragic pattern of the past. For these three kinds of problems urban renewal, as it has been practiced in the United States until recently, is either irrelevant or disadvantageous. In the name of improving cities, or in the name of improving housing—in short, in the name of dealing with fictions—urban renewal has bypassed the real problems, or, in some cases, made them worse."

To substantiate this contention, Wilson quotes the Anderson statistics to the effect that, from 1949 through 1962, "for every home built (under urban renewal) four were torn down," and that average monthly rental of the new dwelling units was \$158. "The costs of urban renewal, in terms of relocation, disruption of family and institutional life, and increased expenditures by people and businessmen, are direct and tangible," says Wilson. "The benefits of urban renewal . . . are for most communities symbolic, intangible, and deferred."

"I think," Wilson concludes, "that we are at a point now at which we have to make some kind of a fundamental reconciliation between what we are doing to the physical shells of our cities and what we hope to do with the people who live in those shells. It seems to me that if urban renewal is accelerated, before an institutional response has been devised to the problems of poverty, race, and culture, that these problems may be made worse or their solutions impeded . . . If we cannot do what ought to be done, perhaps we should at least avoid doing what ought not to be done," says Wilson, and by this he means urban renewal.

To add to the confusion at Cambridge, two Harvard colleagues of Wilson's came to the opposite conclusion on the basis of the Wilson premise in the course of a generally favorable review of the Anderson book. The review, by William W. Nash Jr. and Chester W.

Hartman of Harvard's city planning department, appeared in *The Reporter*.

More than half of it was concerned with urban renewal's impact on the poor, which Nash and Hartman deplore. They chide Anderson, however, for ignoring recent changes in direction of the renewal program, and for his contention that private enterprise will do better by the slum dwellers than will the government.

Nash and Hartman of Harvard: "The slum legacy still remaining in the 1960's is immense. The millions living in substandard housing . . . are caught in a poverty trap."

"The major improvements in the nation's housing supply since 1950 have come about largely because of the release of pent-up demands created by the population expansion after the depression and war and facilitated by government mortgage insurance and guarantees," Nash and Hartman point out. "But the slum legacy remaining in the 1960's is still immense. The millions living in substandard housing today are caught in a poverty trap . . . Not only are they unable to secure decent housing in the private market; unless means are developed to counteract the full range of their deprivations, they will benefit little from decent housing alone.

"It is hardly likely," they continue, "that in the 1960's free enterprise will be able to move even a small fraction of 6 million of today's ill-housed families into decent housing, as it was able to do in the 1950's. To compare the results of government programs with those of private enterprise when the two are designed for a wholly different segment of the population must inevitably lead to faulty conclusions. . . The answer is not to abandon the one program that has focused massive amounts of

money, public attention, and professional talent on our urban problems, but to reshape the aims of the program and some of its methods to meet today's priorities."

Dr. Weaver's Harvard lecture was largely a progress report on the reshaping of urban renewal according to "today's priorities," one in which his Cambridge critics could find reason for both hope and disappointment. Dr. Weaver took a frank and reflective tone. While no single federal program can solve the social problems of the nation, he said, in the past "urban renewal has too frequently complicated rather than eased these problems.

"In retrospect," he continued, "it seems obvious that urban renewal could never have been simultaneously the economic savior of the central city, an instrument for clearing all the slums, the means of attracting hordes of upper middle-income families back into the central cities, and a tool for rehousing former slum dwellers in decent, safe, and sanitary housing, while generating a volume of privately financed construction involving private investments four to six times as great as the public expenditure. It could, and did, in its various aspects do some or all of this. But the expectation that the total package would be realized through urban renewal was unrealistic from the start."

Dr. Weaver: "Current federal legislation and federal policy recognize that relocation can and does entail economic costs and psychological stress among those forced to move . . ."

The original champions of urban renewal, Dr. Weaver said, "seem to have assumed that the low and moderate income households would be able to upgrade their shelter through the filtering process. Thus, urban renewal sites would be developed primarily for

higher-income families and the less affluent would go into the vacancies occasioned by a series of moves incident to new construction. . . Of course, it did not work out this way. The two major impediments were the tightness of the housing market which inhibited the assumed chain of vacancies, and the various frictions in the housing market occasioned principally by racial bias and a paucity of good moderate-cost housing accessible to the less affluent.

"Recently the housing market has changed," he said. "In most cities of this nation, there are sufficient vacancies to ease the process of relocation. This economic fact, when combined with much more stringent federal relocation requirements, has upgraded the rehousing of displaced households, albeit at rents which often have absorbed a somewhat higher proportion of income. . .

"Perhaps even more important has been the change in attitude toward relocation. . . Current federal legislation and federal policy recognize that relocation can and does entail economic costs and psychological stress among those who are forced to move.

"This realization is in part responsible for the recent emphasis upon expansion of moderate and low income housing and the push for rehabilitation rather than demolition. It also accounts partially for the current policy of not expanding the ratio of downtown redevelopment in the program."

For all his willingness to admit urban renewal's past mistakes, Dr. Weaver probably did not entirely satisfy his Cambridge audience. In his listing of the functions of urban renewal, Dr. Weaver placed downtown redevelopment first. Providing sites for new residential construction "for a variety of income groups" came second, and the upgrading of existing housing through rehabilitation and code enforcement third. This is not precisely the order of priorities advocated by those whose central concern is improving the quality of life of the urban poor.

Gans of Columbia: "The solution is not to repeal urban renewal, but to transform it from a program of slum clearance and rehabilitation into a program of urban rehousing."

Perhaps the most telling of the post-Bulldozer analyses of renewal was written by Herbert J. Gans, Columbia University sociologist and planner, for the April issue of *Commentary*. Gans admits the validity of many of the Anderson statistics, but points out that "a less biased analysis of the figures and a less tendentious mode of evaluating them than Anderson's leads to a different conclusion."

That conclusion is "not to repeal urban renewal, but to transform it from a program of slum clearance and rehabilitation into a program of urban rehousing. This means, first, building low and moderate-cost housing on vacant land in cities, suburbs, and new towns beyond the suburbs, and also helping slum-dwellers to move into existing housing outside the slums; and then, after a portion of the urban low-income population has left the slums, clearing and rehabilitating them through urban renewal."

Gans admits the difficulties of such a transformation, but insists that it would be feasible. "The proposals," he says, "are radical only in demanding an end to our . . . entrenched practice of punishing the poor."

Gans makes a strong case against delay. "The evolution of federal policies can no longer proceed in the leisurely fashion to which politicians, bureaucrats, and middle-class voters have become accustomed," he says. "For unemployment, racial discrimination, and the condition of our cities are becoming ever more critical problems, and those who suffer from them are considerably less patient than they have been in the past."

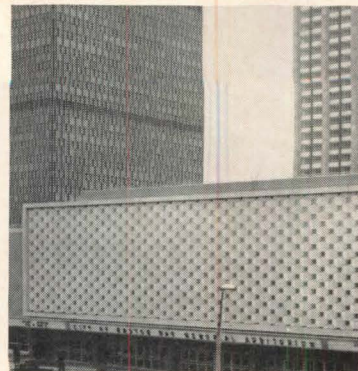
—DONALD CANTY

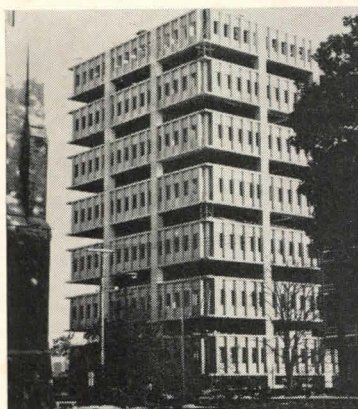
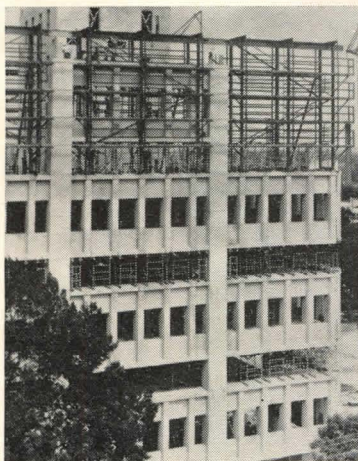
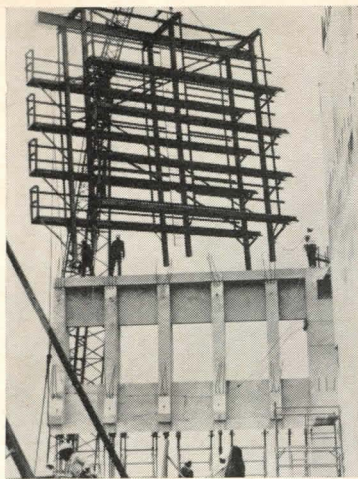


SIGNAL FROM OUTER SPACE

Boston's Prudential Center opened last month, and the fanfare accompanying its dedication outdid the Boston Tea Party. Even *Mariner 4* got into the act: from outer space it sent a signal touching off a laser beam which ignited a fuse which exploded a cannon. Object of all the revelry was a \$150 million, 31-acre complex on the site of a former car storage yard in Boston's Back Bay. The

center contains the 52-story Prudential Tower, regional home office of the Prudential Insurance Company of America; the 29-story, 1,012-room Sheraton-Boston Hotel (both by Charles Luckman Associates, architects); and the multi-purpose War Memorial Auditorium (Hoyle, Doran and Berry, architects), which is linked to the hotel by a covered bridge. Still under construction are two new apartment towers.





STACK OF TRUSSES

Seven Vierendeel trusses, each 20 feet high and spanning 119 feet, form the facade of the 12-story North Carolina Mutual Life Insurance Company headquarters in Raleigh. Trucked to the site, the truss sections were lifted to a monorail, which moved them into position. As each was completed, its steel frame was removed and placed atop it (top). Two duplicate sets of monorails were used in tandem on opposite sides of the building (center). Result (bottom): the nation's tallest precast, post-tensioned building. Architects and Engineers: Welton Becket and Associates.

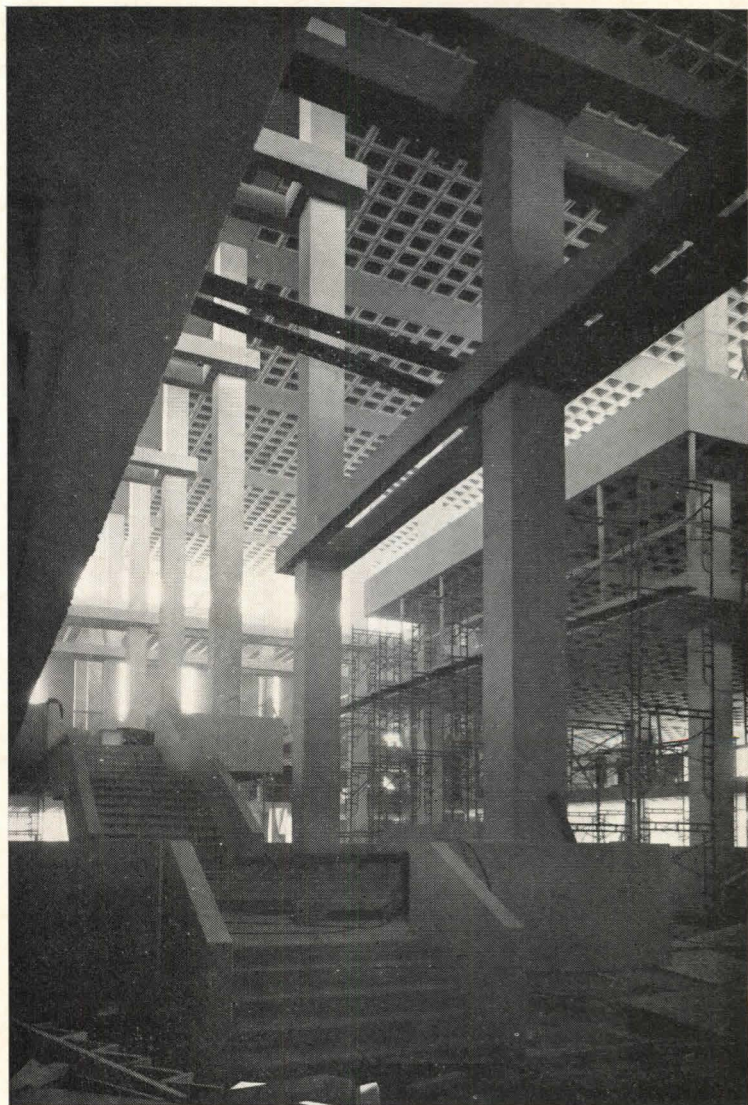


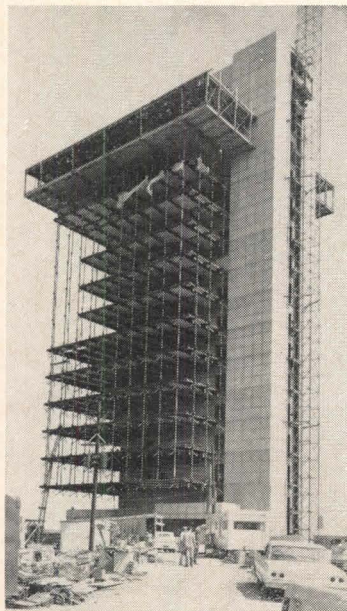
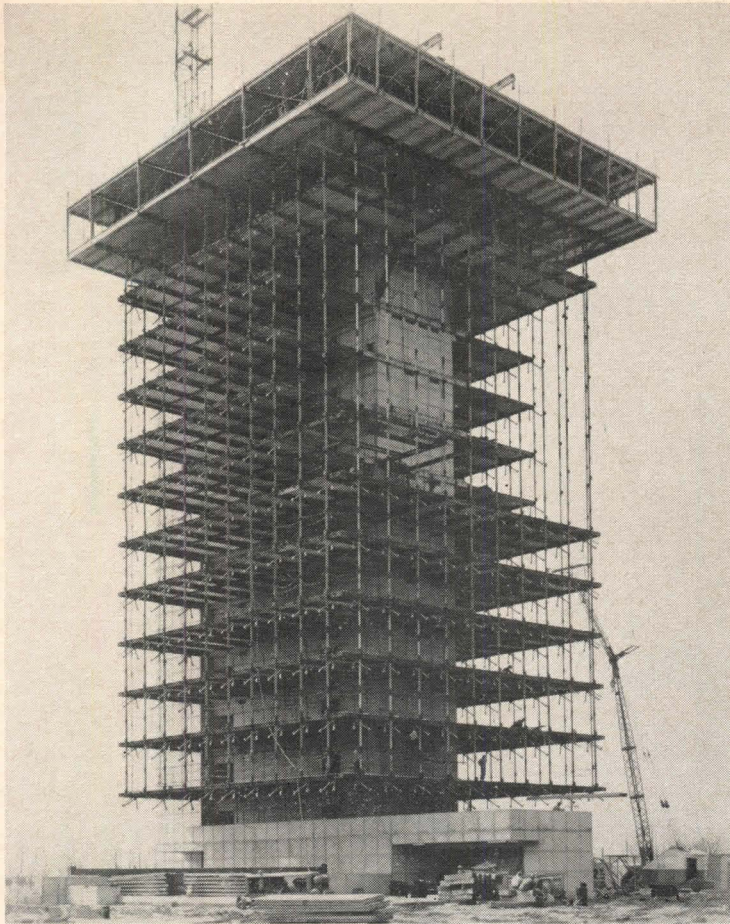
AFTER THE BALL

The interior photograph of the Harris County Domed Stadium in Houston (above) is out of date, but it illustrates the most controversial feature of the \$31.6 million structure: its skylit roof. Baseball players cried foul when they couldn't find fly balls in the glare of the 4,596 plastic windows, so the windows were painted off-white. This eliminated the glare, but reduced the light so much that night lights have to be turned on for day games. There is one happy note, however. Pitchers like the windless stadium fine because they have better control. Associated Architects: Lloyd & Morgan and Wilson, Morris, Crain & Anderson.

VOLUME IN THE RAW

In their present state, the columns, beams, and waffled ceilings of the Carl S. Ell Student Center at Northeastern University, Boston, make a startling composition of spaces and angles. Eventually, lounges, dining rooms, and student offices will be distributed on balconies floating within the five-story volume. The exterior, understated to harmonize with existing campus buildings, will offer little hint of the Piranesian drama inside. Architects: Shepley, Bulfinch, Richardson & Abbott.

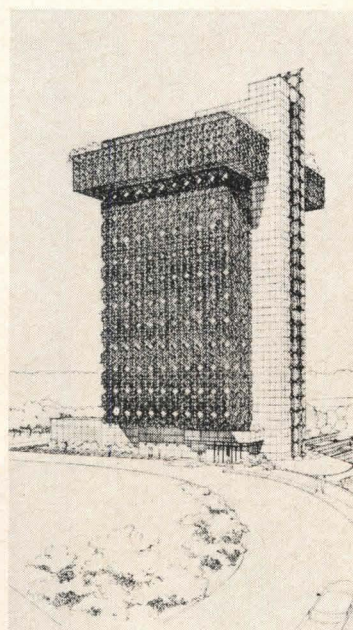




SUSPENDED FILIGREE

The Lincoln Income Life Insurance Company building in Louisville, Ky., has 11 of its 15 floors suspended from the core (above), thus eliminating all columns. When completed (rendering, right), the building's facade will be faced with filigreed precast concrete panels. Other features: an observation elevator overlooking Louisville, a domed

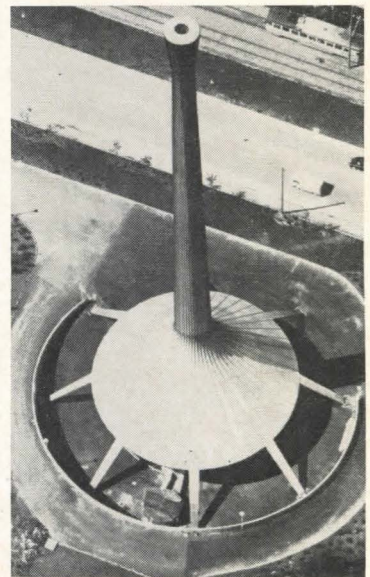
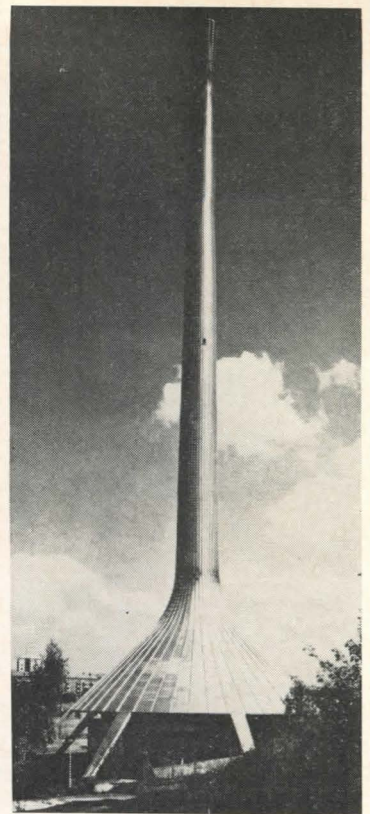
civic center overlooking a pond and cascades, and a dining room overlooking a roof terrace. Construction cost: \$3 million. Architects: Taliesin Associated Architects; William Wesley Peters, chief architect.



ANOTHER PLACE

The far-flung activities of Italians Pier Luigi Nervi and Luigi Moretti have found their way to Montreal, where the first half of a twin-tower office complex (above, viewed from the nearby Place Ville Marie) is nearing completion. Called Place Victoria, the project eventually will provide 2 million square feet of rentable space at an estimated cost of \$45 million. The first of the two 47-story towers, the sponsors claim,

is the world's tallest reinforced concrete office building. The Montreal firm of Greenspoon, Freedlander & Dunne are associating with Nervi and Moretti on the project. Jacques M. Morin is architectural consultant.



BURLY CO-OPS

Chatham Towers (above), a middle-income co-op housing project in New York's lower Manhattan redevelopment area, will contain 240 apartments in two 25-story towers. Concrete exterior walls, which form the structural support, will be left exposed. Strongly wrought balconies will be provided for 50 per cent of the units. Architects: Kelly & Gruzen.

POOL-SIDE ART

The delight-laden buildings and placid pools at left belong to the new Los Angeles County Museum of Art, the largest new U.S. art museum built since completion of the National Gallery in 1941. It has three wings, one of which is built around an 85-foot atrium. They are surrounded by concrete colonnades; joined by aluminum "promenades" with plastic bubble skylights in their roofs; and faced with hand-set Cippalino marble tiles which at a distance, look disturbingly like cardboard. Architects: William L. Pereira and Associates; James Langenheim, partner in charge.

UTILITY AND GRACE

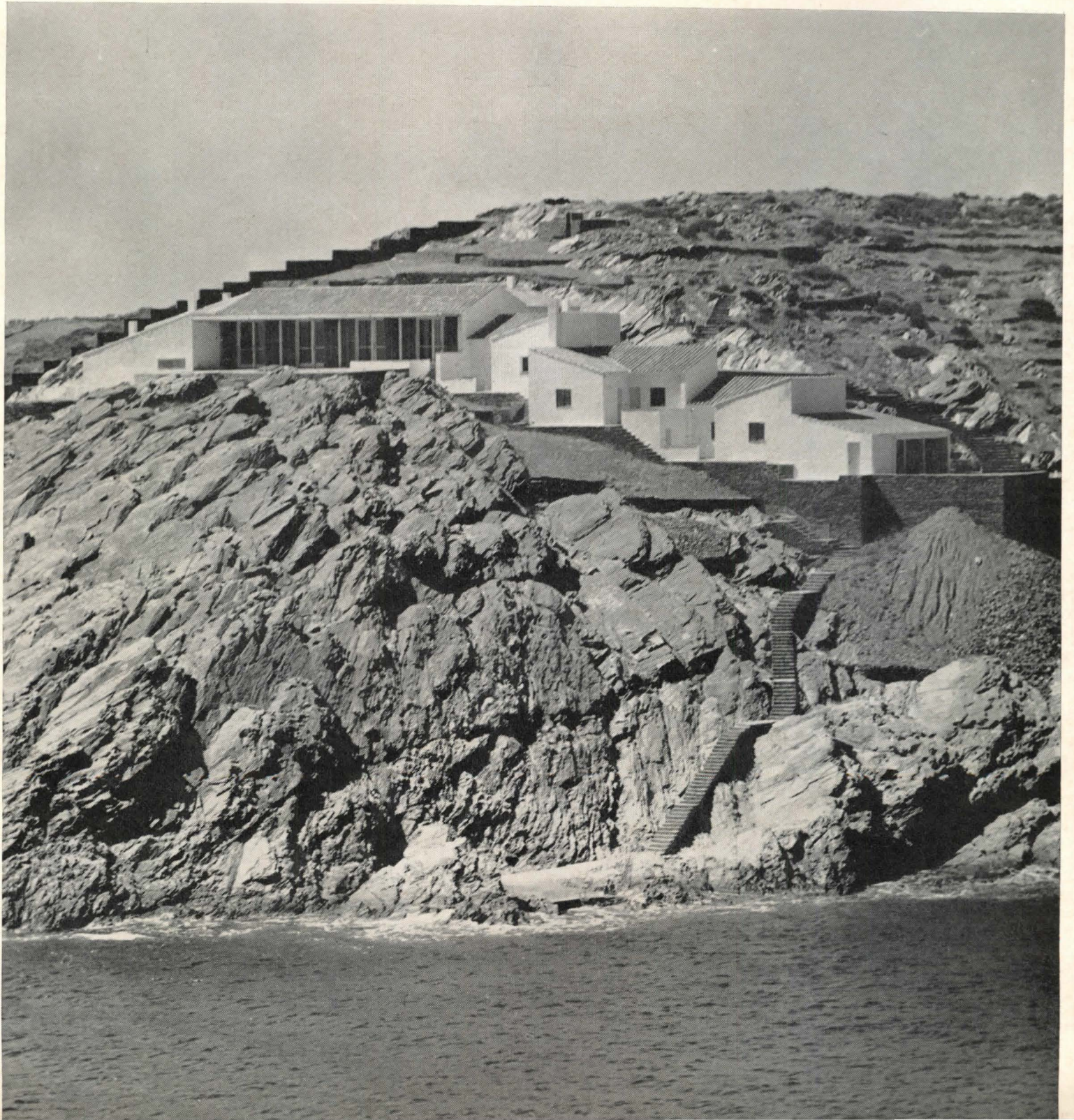
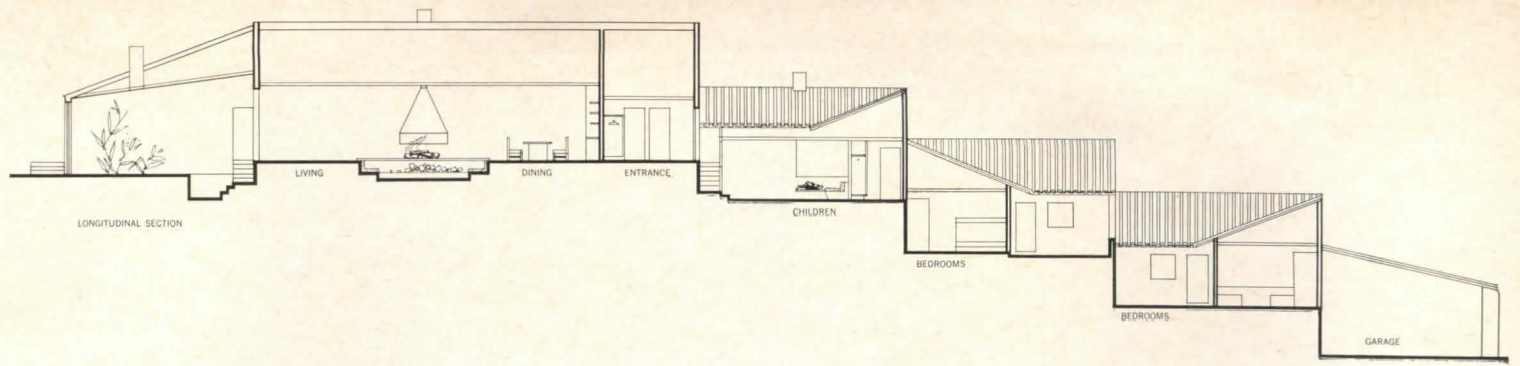
Swedish architects have a way about them, even when designing heating plants. The one above serves 1,600 apartments and the center of Vastra Frolunda. Its five furnaces are placed radially around the base of the towering exhaust chimney. The flaring roof is concrete, and the chimney is brick on a concrete foundation. The entire structure, however, has been sheathed in shiny aluminum to emphasize its graceful upward swoop. Architects: Sven Brolid, Nils Einar Eriksson, Stig Hanson, Walter Kiessling.

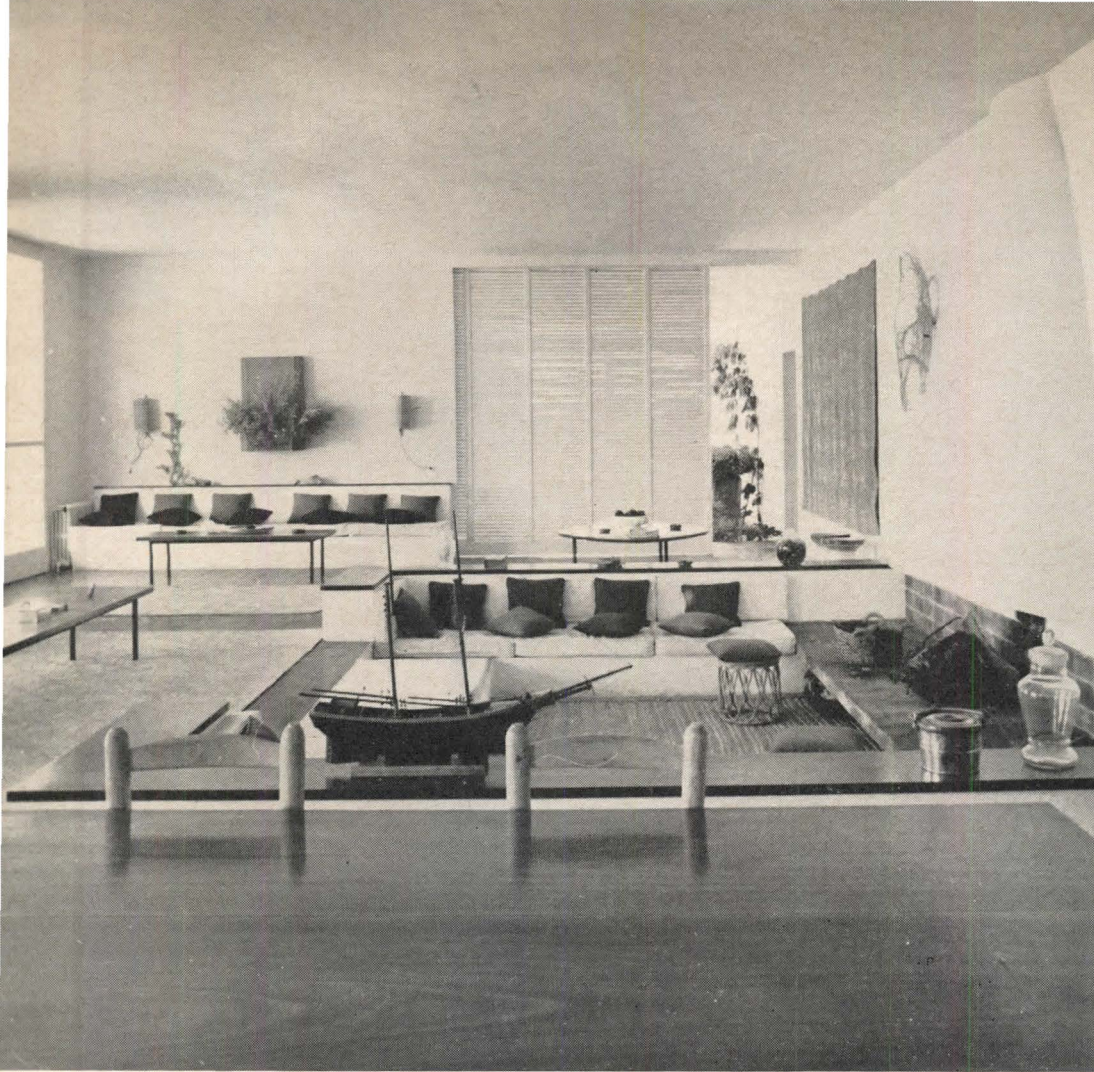
PHOTOGRAPHS: Page 24: Top, Aerial Photos of New England; lower, Fay Foto. Page 25: top right, Owen Johnson; lower right, Hutchins. Page 26: Lower left, Royal Photo. Page 27: Center and left, Julius Shulman.



VILLAGE HOUSE ON A PRECIPICE

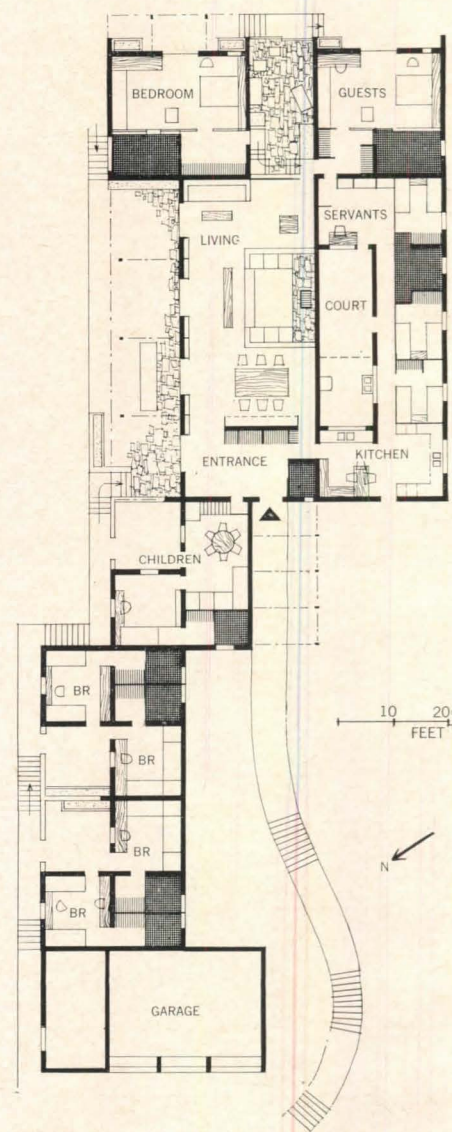
*American architect Peter Harnden
cascades a vacation retreat
down the spectacular cliffs
of the Spanish Mediterranean*





Around Cadaqués the Costa Brava crumbles into the Mediterranean in masses of weather-worn rock. The grotesqueness of their furrowed, perforated formations may have influenced Gaudí, who vacationed in these parts, and Dalí, who lives there today.

About a kilometer north of Cadaqués there is a place where the rocks reach up like hundreds of petrified hands to keep the scraggly hillside from sliding into



The great white space of the living room focuses on a room-sized conversation pit with a broad stone hearth (photo above left). The louvered sliding door in the background opens to a covered garden terrace (photo left). Photos by Casali.

the sea. Straddling a shoulder of the hill, and trailing off along its slopes is a rambling structure that looks at first glance like an old village that might have been there for centuries.

Actually it was built quite recently as a vacation retreat for a French-American family. The architect, Peter Harnden, an American citizen who has spent most of his life in Europe, has designed a number of houses along the

Costa Brava in which the local idiom is distilled to a cosmopolitan refinement. In this one the casual massing, the white stucco walls, the red tile roofs and square, shuttered windows conceal a well-ordered plan and some cool esthetic calculations.

The core of the house is a living room of manorial dimensions, placed squarely on the shoulder of the hill—a relatively level part of the site. French doors opening

onto this natural terrace face straight out to sea and directly away from the afternoon sun.

Cut into the slope behind this central room is a cluster of service and servants' spaces. To the southeast are guests' and master's suites, flanking a small covered court and sharing a distinct view along the coastline.

Running down the slope to the west in a staggered line is a colony of rooms for the numerous child-

ren. A series of stone walks and stairs links these rooms together and leads down to the motor court, from which more steps descend to a bathing platform and boat mooring at the base of the cliff. Along the blank, sun-bathed south walls of this wing is a walk leading up from the motor court to the front door—a walk that offers the arriving guest a single dramatic view over a tile rooftop to the sea below.





Does Washington need a skyline? An affirmative

Last summer, the National Capital Planning Commission engaged Architect Chloethiel Woodard Smith to study the city's skyline and offer suggestions on how it might be improved. In doing so, the Commission underscored its concern, as well as the concern of many other gadflies of Washington's esthetic appearance, with the city's lack of vertical variety.

The picture atop these four pages bears out the point: Washington's few existing landmarks, rather than dominating their surroundings as landmarks should, appear to be overwhelmed by the sheer bulk of the city's horizontal masses. Even the slender Washington Monument looks as though it is struggling mightily but vainly to carry the load of monumentality all by itself.

After looking at the city and photographing it from nearly all conceivable angles, Mrs. Smith and Charles Szczepanski, an associate of her office, came up with the suggestion that a system of selected vertical clusters be carefully placed at key points (3, opposite page). The clusters, said Mrs. Smith, could not only relieve the skyline of its flatness, but could frame and thus enhance the views to and from the city's monumental core, especially the Capital, the Washington Monument and the White House.

She proposed that Dupont and

Logan Circles, both within a few blocks of the core, be ringed with skyscrapers as high as 260 feet, and that 16th Street, by the addition of highrise structures, widening and formal landscaping, be transformed into a dramatic "gateway" to the White House. She also suggested the placement of towers at major entrances to serve as "city gates."

The change would be considerable, judging from Mrs. Smith's cross-section drawings showing the kind of variety possible in her proposal (2), and the uniformity of heights allowed under Washington's current zoning regulations (1). (Vertical dimensions in both drawings are twice the scale of the horizontal for better readability.)

In the far distant future (the year 2700), the change would be startling. Mrs. Smith has envisioned towering "vertical communities" at the perimeter of the city, designed to serve some 10 million people. Her report, however, expressed the hope that "we will have learned how to design our cities and control their environment and their growth" before these become necessary.

Monotony or harmony?

Reaction to Mrs. Smith's height proposals was strangely unanimous: all negative. Once her report was released last January, it suddenly became very unfashion-

able to describe Washington's silhouette as dull and monotonous. To be acceptable, one had to begin calling it not dull, but serene; not monotonous, but harmonious.

This latter-day veneration of Washington's non-profile has become so solidly entrenched that it is virtually impossible to find anyone in an official or quasi-official position in Washington who is willing to discuss even the hypothetical merits of adding vertically to the cityscape. The mere introduction of such speculation provokes an emotional response like that expressed by artist William Walton, chairman of the Fine Arts Commission: "We don't want Washington to look like Tulsa or Pittsburgh or Detroit."

Even the *Washington Post*, which as late as last September ran an article lamenting the city's flatness, quickly learned how to stop worrying and love the bland. After the Smith study was released, the *Post's* architectural critic, Wolf Von Eckardt, observed: "Washington's unique distinction rests on more than the Mall and that grand obelisk. It rests on the fact that the city has, on the whole, one harmonious scale; that there is a sound and pleasant relationship between the width of most of our avenues and streets and the height of the buildings that line them."

Architect-Planner Carl Feiss, who

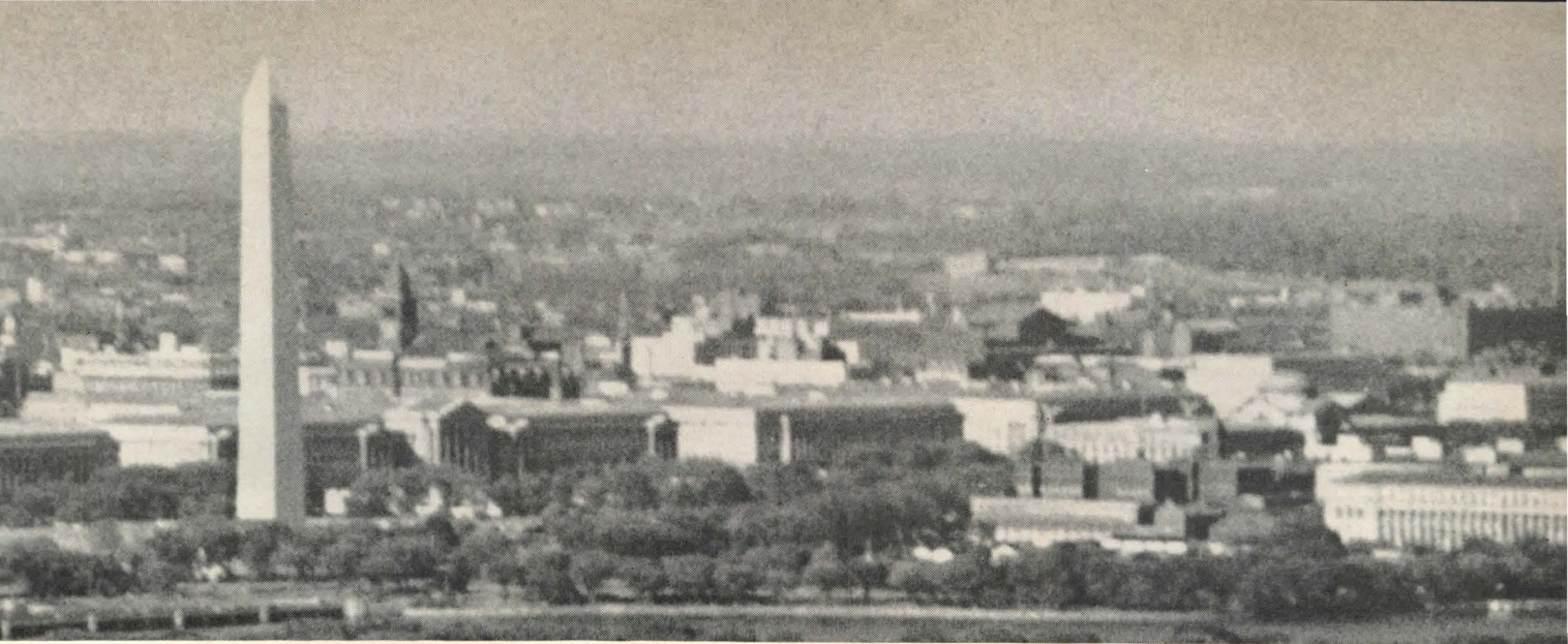
had participated with Stein & Marcou in an earlier study for the Planning Commission which laid the ground rules for the Smith study, commented: "Washington is the only city in the country with a semblance of an orderly skyline on its city streets. To call such order as there is architectural monotony is completely at variance with facts."

Distaste for the proposals was expressed as far away as Chicago, where Architect Harry Weese deplored "hired professionals...who would titillate the skyline for esthetic reasons." He claimed that "the beauty of Washington is in the very discipline and repose of its ordered avenues and squares given by its inexorable height limit."

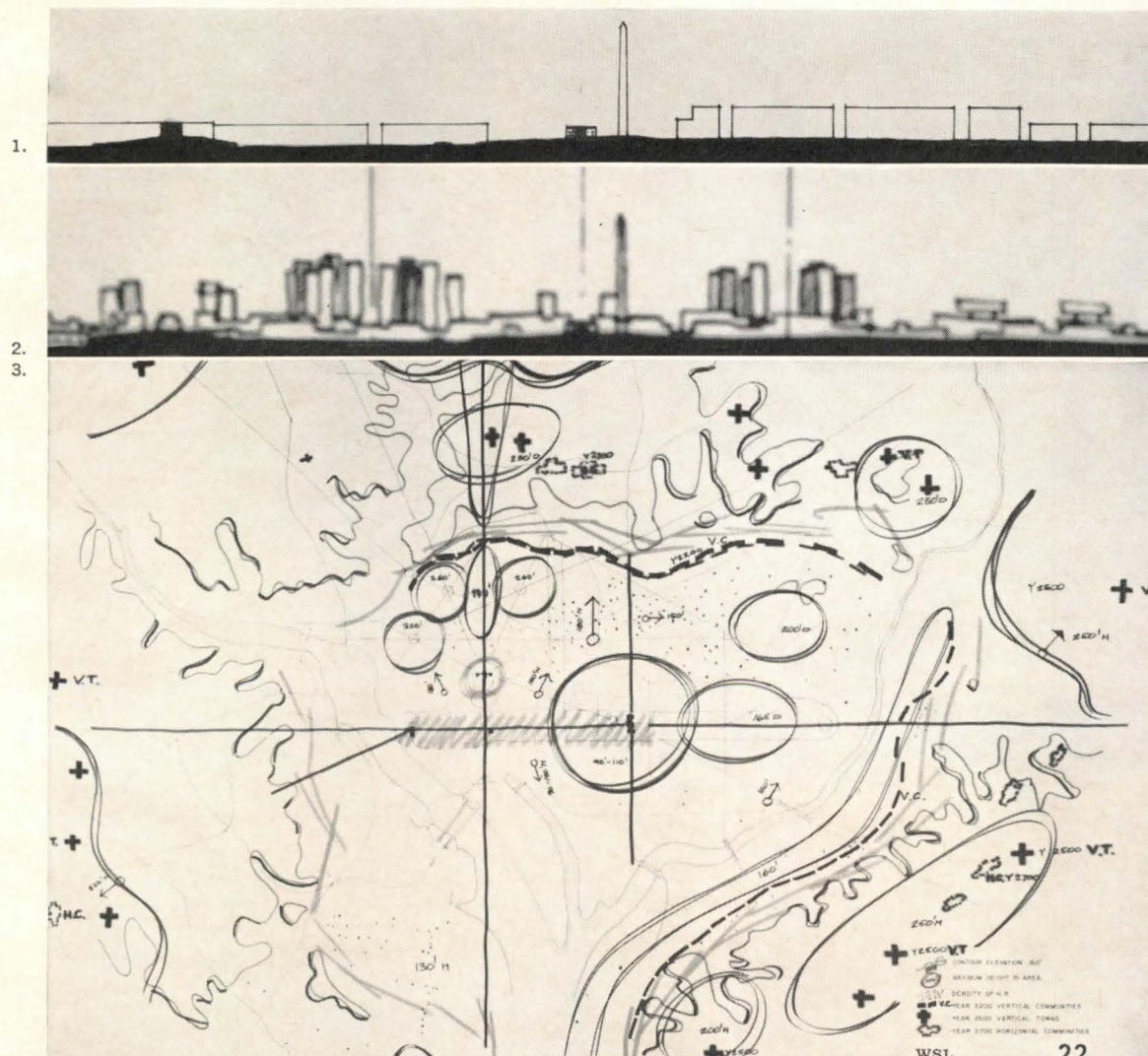
Official rejection

The Fine Arts Commission took one look at the report and promptly voted its unanimous opposition to highrise buildings in Washington, although it did feel that somewhere out on the perimeter it might be nice to have skyscrapers surrounding the city like a forest encircling a meadow. Just how far out this forest would be planted the Commission did not say.

But as for skyscrapers in the city, chairman Walton called the idea "horrible." "We deplore the whole thing," he said. "We happen to believe in the L'Enfant plan. It



study receives a unanimously negative reaction



is the finest example of urban planning in the Western Hemisphere, and we intend to keep it that way."

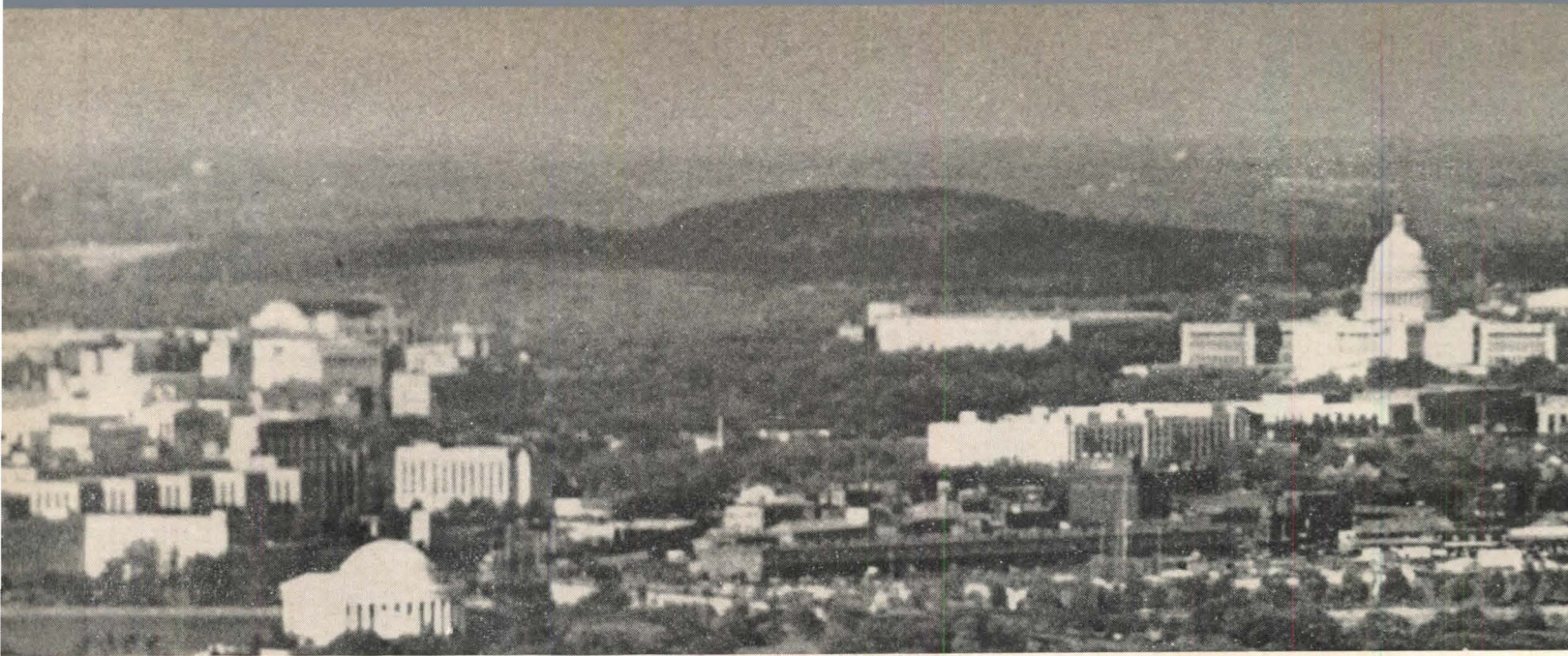
(L'Enfant's plan invariably is invoked to support all sides of planning arguments in Washington. Mrs. Smith's report also pays it homage. It is impossible, short of contacting L'Enfant in the spirit world, to know whether he would approve or disapprove of skyscrapers, which were inconceivable in his day.)

The death blow to the Smith proposals was dealt by the Planning Commission itself, which voted unanimously to keep the existing height limits right where they are. "We all seem to be convinced that Washington is a horizontal city and should stay that way," Commission Chairman Elizabeth Rowe said flatly.

Care and disorder

Since the purpose of Mrs. Smith's study was to give the Planning Commission source material for use in developing its 1985 Comprehensive Plan, the Commission's anti-height action put it in the unique position of smothering its own offspring before putting it in the cradle. In its haste to condemn verticality, the Commission forgot why it wanted the study in the first place.

The Federal core of Washington, the Smith report points out, has



In the anti-skyscraper furor, the problems – and

been designed "with all the tender loving care that we could command." As for the rest of the city, it has been left to "sprawl in increasingly ugly disorder."

Under current zoning regulations, the report continues, the commercial streets of the city are rapidly being solidly walled by 10 and 12-story buildings like those at right. Standing shoulder to shoulder, they differ in design, but are monotonously similar in bulk. If the lid is left on building heights, the report warns, it is only a matter of time before Washington fills up its zoning envelope with more of the same.

When that day arrives, central Washington will have preserved a horizontal look, but at a scale (90 to 110 feet) that hardly could be called human. In typical American fashion, Washington will be—in fact already is—the world's highest low city, a weird distinction comparable to that of being the tallest midget on earth. (The horizontality of such capitals as Paris, Rome and London, often cited as an argument for keeping Washington's height intact, is generally at a level of 40 to 60 feet.)

The report's diagnosis of the inevitable end results of Washington's present development pattern were passed over in the instant dismissal of skyscrapers. It is apparently a problem which Washington's planners, official and

otherwise, are not ready to face.

Another neglected virtue was pointed out by C. McKim Norton, president of New York's Regional Plan Association and a member of the National Capital Planning Commission. The study, he said, "is an important, pioneering effort" in its strong emphasis on three-dimensional design at the scale of the city.

City-scale design

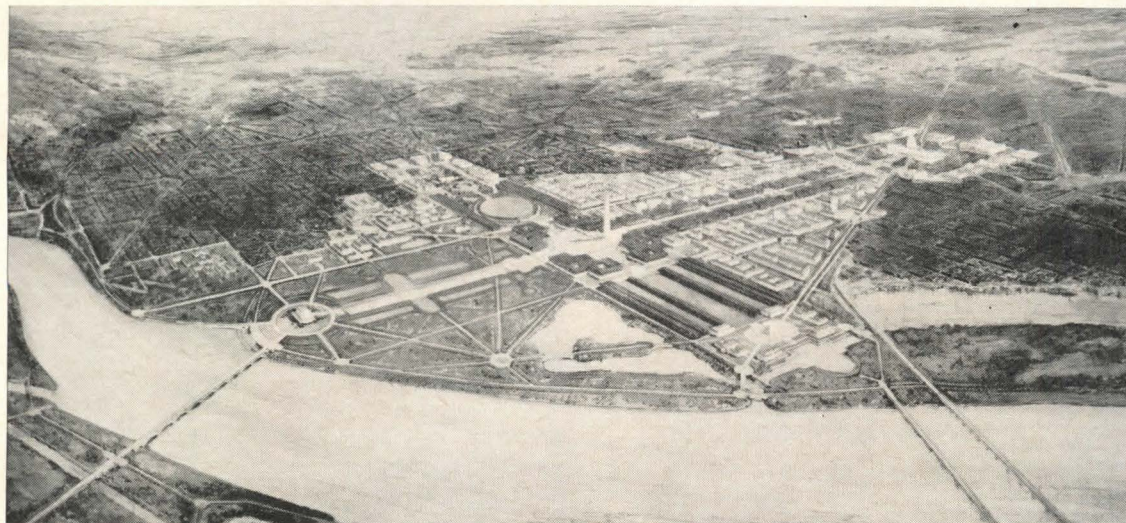
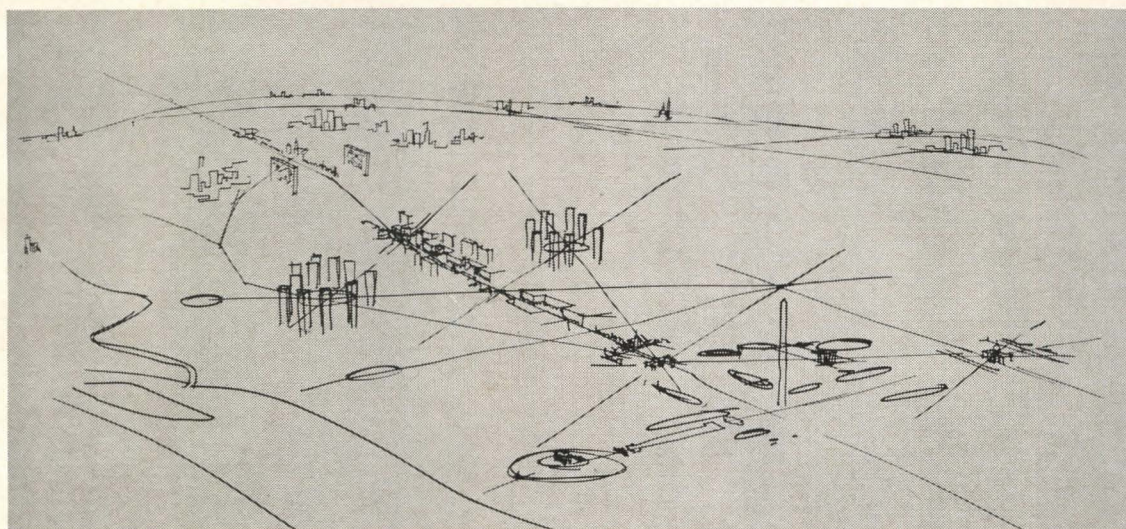
Mrs. Smith advocates that the same kind of overall design which produced the Federal core be applied to the non-Federal city as well. Her design concept for high-rise structures (opposite page, above) attempts to do this, encompassing the entire city as a single unit, with the Federal core as the major focal point. Past approaches, like the 1928 revision of the 1901 McMillan Plan (opposite page, below), concentrated on the Federal core, leaving the rest of the city to go its own way. The McMillan plan called for great density in the Federal core and presumed that the rest of Washington would develop at about the same height, if not with the same degree of orderliness.

If the Smith study breaks new ground as a city-wide visual survey, it also illustrates the perils of over-concentration on design. Mrs. Smith was instructed to limit her scope to esthetic considerations.





opportunities—outlined in the study were ignored



The result was to give her proposals an air of unreality. They are grandly unrelated to the social, political, and economic forces that shape Washington's development.

Lost opportunity

Mrs. Smith admits that many such problems would have to be worked out, but she argues that they are not insurmountable and, further, that the atmosphere in Washington has never been better for giving large-scale design a try. She may have a point: certainly no President and First Lady in modern history, not even the Kennedys, have devoted so much attention to improving the appearance of Washington as the Johnsons have, which makes the Planning Commission's hurried dismissal of the report unfortunate.

Since the Commission, through its 1985 Comprehensive Plan, hopes to apply urban design principles to the development of Washington, it is surprising the Commission hasn't taken advantage of the built-in opportunities for public education offered by the report. Had it stressed the importance of the report's three-dimensional approach, rather than sending it into limbo along with the height proposals, the Commission might have given a significant direction to the current upsurge of interest in revitalizing the capital.

—JAMES BAILEY

Laboratory 1: Procession of massive forms

Louis I. Kahn is a teacher, in his work no less than in his lectures. The Salk Institute for Biological Research, its massive shell nearing completion on the Pacific shore near La Jolla, California, is a case in point. In Salk, Kahn is teaching the power of simplicity, the form potential in mechanical systems, the beauty that care can draw from surfaces of exposed concrete. But most of all, in Salk, Kahn is teaching articulation.

Kahn has taken the complex program for the Institute, a national center for research in the most complex of modern sciences, and broken it down into its major elements. He has then given each of these elements its own clear expression in the building's form. Each is a separate architectural gesture: clear, definite, and consistently powerful.

The first stage of construction consists of two parallel laboratory buildings with a garden in between. Only one will be finished now; the other will remain a shell for an indeterminate time. The laboratories proper are in great glass-encased concrete boxes. In plan, they have the approximate shape, and very nearly the dimensions, of football fields: each is 65 feet wide and 245 feet long. They are laboratories and nothing more. Virtually every other element of the complex has been placed beyond their perimeter corridors.

Thus, along the laboratories' outer sides is the booming procession of service towers shown at right. Along the inner walls, facing the garden, is another series of towers housing individual "studies" for Institute scientists; these are jagged and angular, and are joined

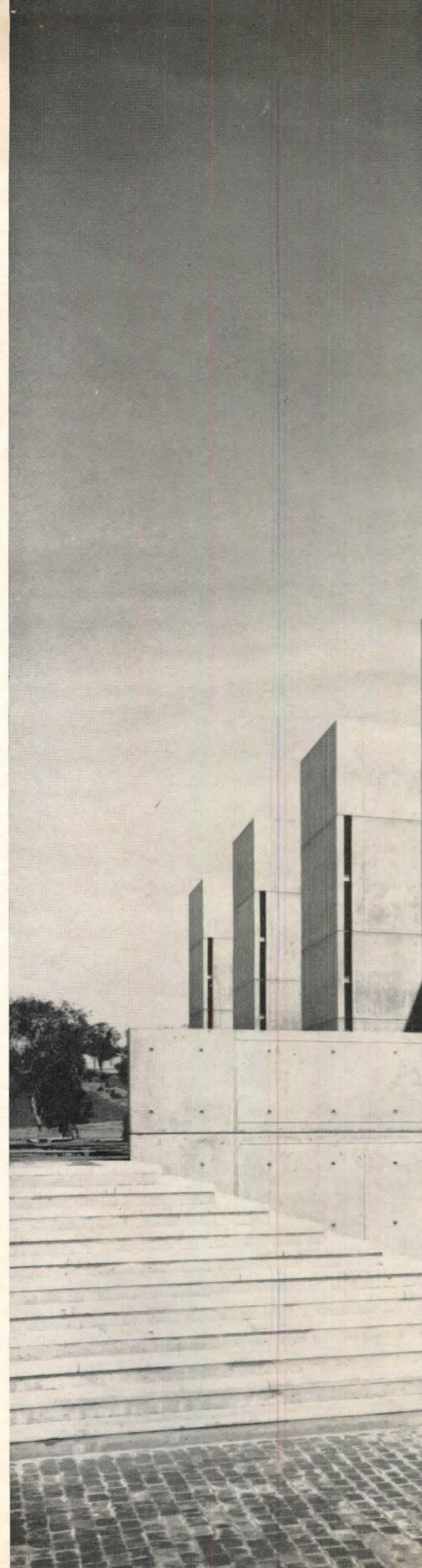
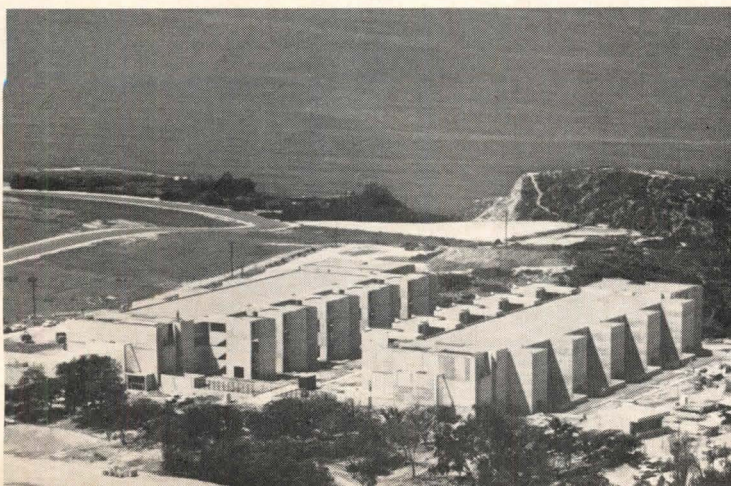
by bridges to the laboratory floors. The uphill ends of the laboratory buildings are mechanical rooms, and the ends facing the ocean, administrative offices; these wings, sizable buildings in themselves, also are structurally separate from the laboratories.

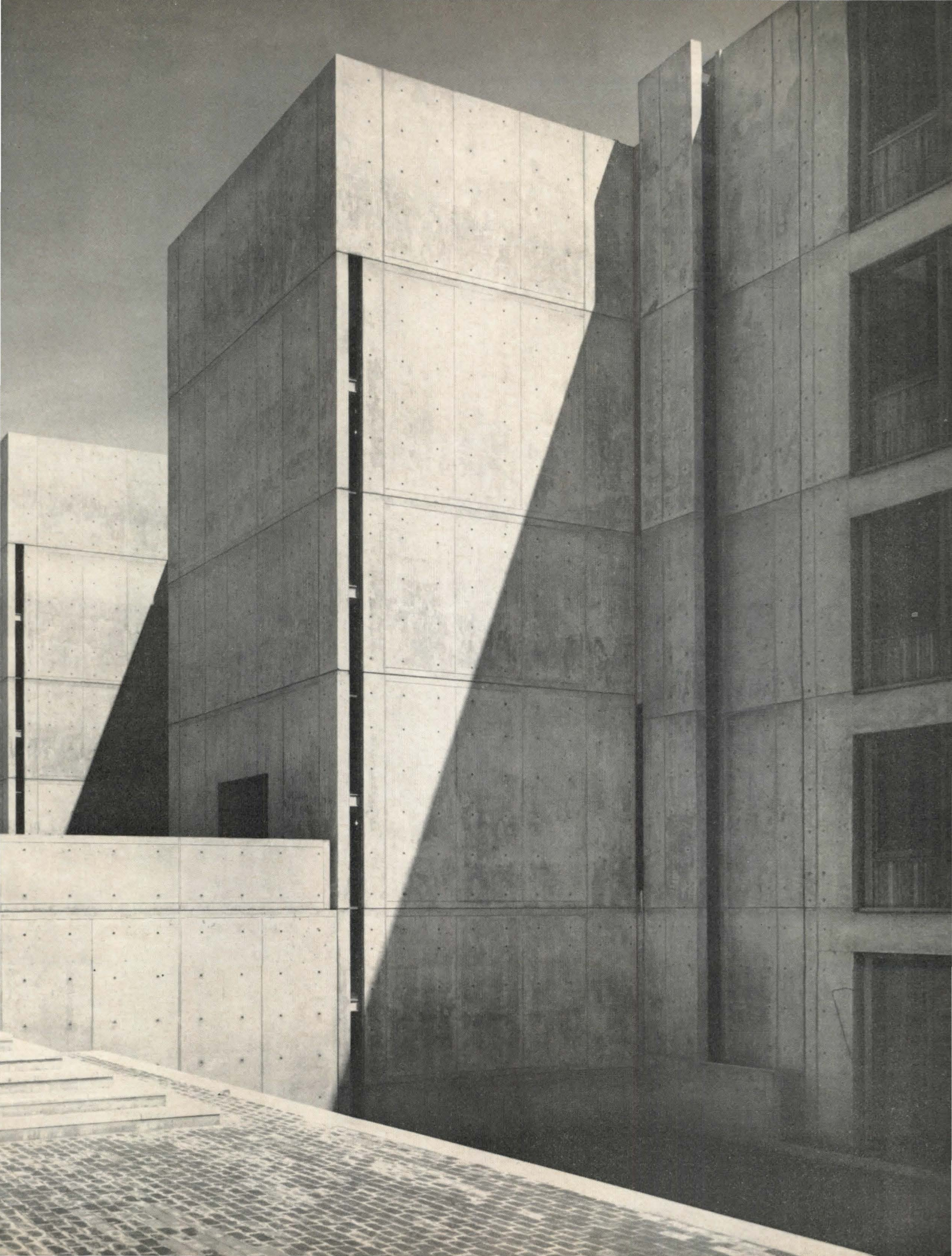
One way to describe the articulation of the Institute's first units, then, would be to say that they are a collection of 26 separate (if not entirely independent) structures. To do so, however, would be to understate the formal unity which, with their heroic scale, give the buildings such might.

The matter of scale relates directly to the workings of the buildings as research facilities, which, in turn, relates to the present state of the biological sciences. Jack McAllister, the Kahn project captain at La Jolla, calls biology "the hyphenated sciences": there are now bio-chemistry, bio-physics, bio-mathematics, bio-metrics, and it is impossible to forecast what the next offshoot might be. The Institute's own direction is almost equally unpredictable: it intends to deal in basic biological research, following wherever such research (and research grants) may lead it.

Biological research does have one consistent requirement, and that is an almost total environmental purity. Otherwise, it seemed to Kahn that the Institute's single most significant need was flexibility. He responded with an overwhelming generosity of both space and services.

The laboratories are the tallest three-story buildings in recent architectural memory. The vast, virtually uninterrupted research





spaces have ceiling heights of 11 feet. Above each, however, is a service space a full 9 feet in depth, containing the hefty Vierendeel trusses with which the laboratories are framed (see sections at right). The service spaces, mocking the term "crawl space," are big enough for such bulky equipment as gas compressors, supporting McAllister's claim of "more than 100 per cent efficiency" in use of the laboratory floors.

Their main function, of course, is to carry the service runs of the buildings' remarkably sophisticated mechanical and electrical systems. The laboratories employ a high-velocity dual-duct air conditioning system along with high-temperature hot water (which sounds, appropriately enough, like the way Cadillac might describe its latest model). Fresh air is sucked into sculptural "snorkels" in the buildings' mechanical wings (page 44), taken through room-size concrete ducts to giant fans below, then brought up to the conduits that go through the centers of the service spaces.

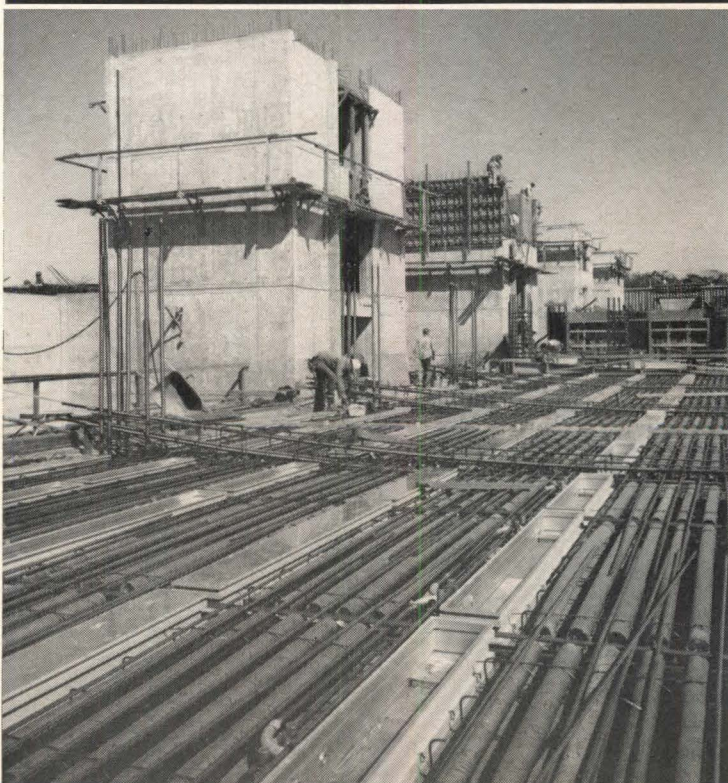
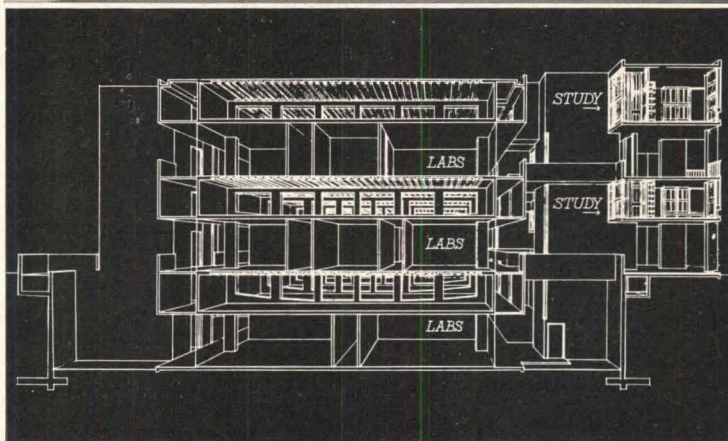
The air is fed down into the laboratories through aluminum slots slashing lengthwise through the ceiling at five-foot intervals (photos right). Through special hoses and quick couplings, the movable laboratory benches (especially designed for the Institute) can be plugged into service lines overhead almost at will.

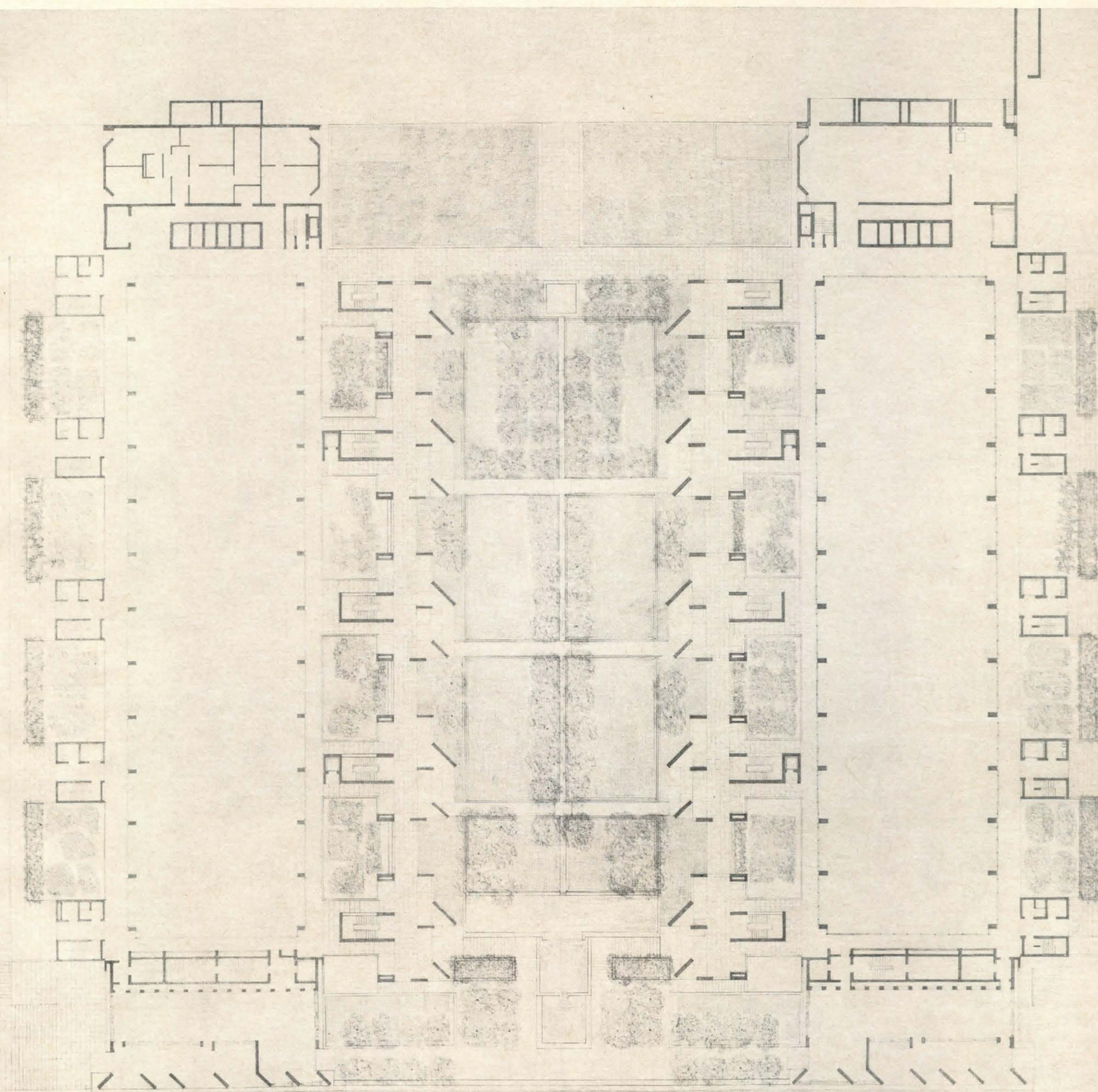
This kind of flexibility can be bought, but the laboratories have another kind which can only be built-in. The sheer size of the mechanical wings, boiler rooms, and service spaces means that the entire system can be replaced or supplemented without disturbing the shells of the buildings.

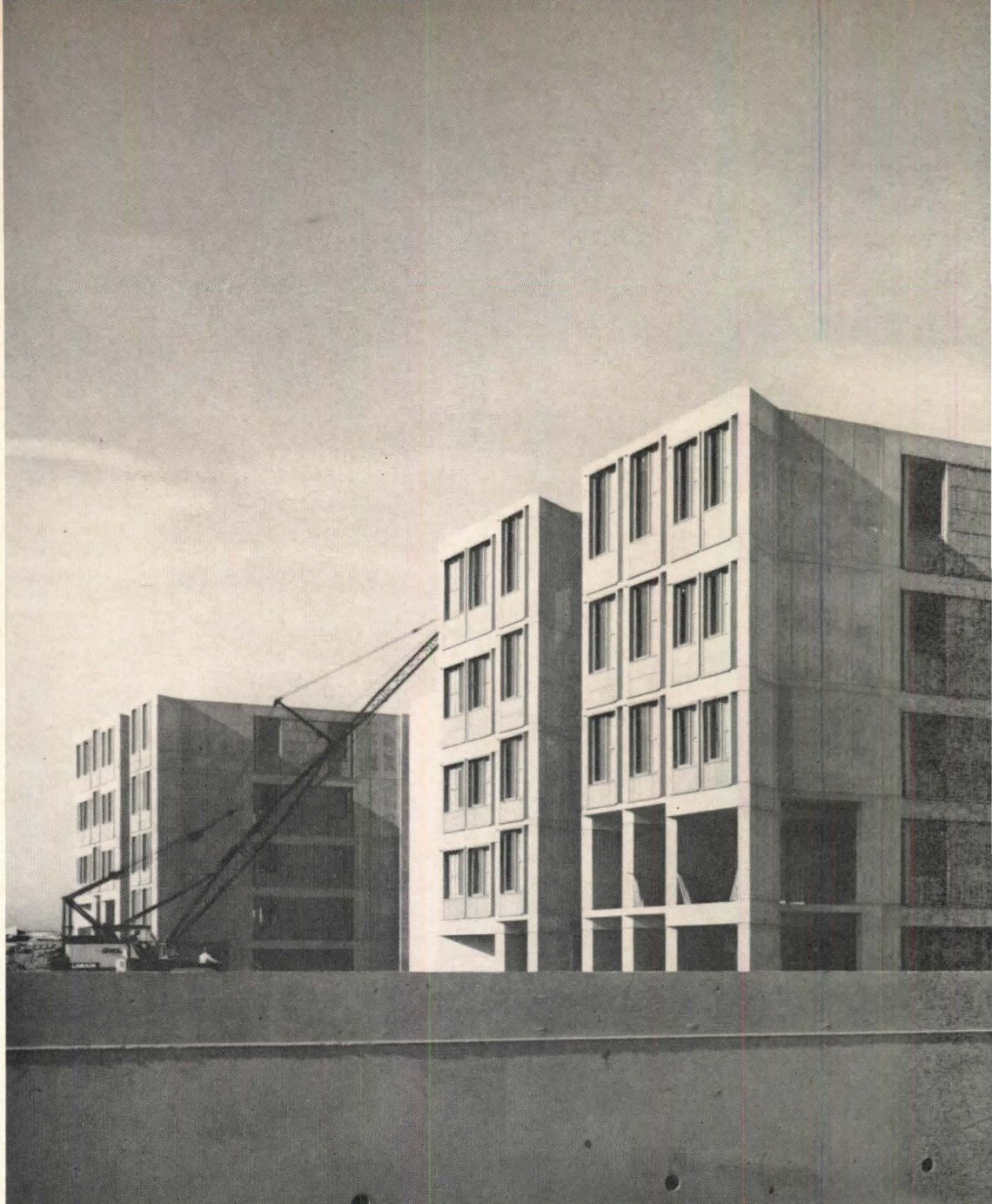
Initially, this is an expensive kind of flexibility to achieve, but it could well prove to be economically justified in the long run. Its significance, beyond cost and program is that the Salk Institute may be the only new research facility designed to meet the near certainty that service systems will change radically during the lifetime of the buildings.

FACT AND FIGURES:

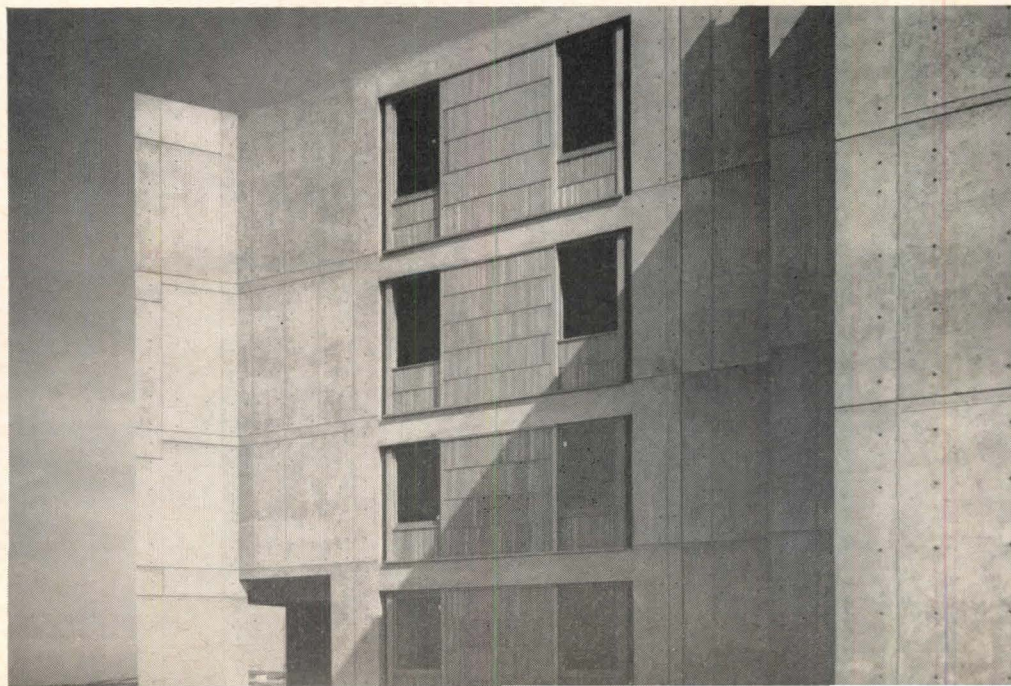
Architect: Louis I. Kahn; Structural Consultant: Dr. August E. Komendant; Associated Structural Engineers: Fervor-Dorland & Associates. Electrical-Mechanical Engineers: Fred F. Dubin Associates. Site Engineers: Rich Engineering Co. Landscape Architect: Roland S. Hoyt. Building area: 400,000 square feet. Cost: \$11,415,000. PHOTOGRAPHS: Marvin Rand.

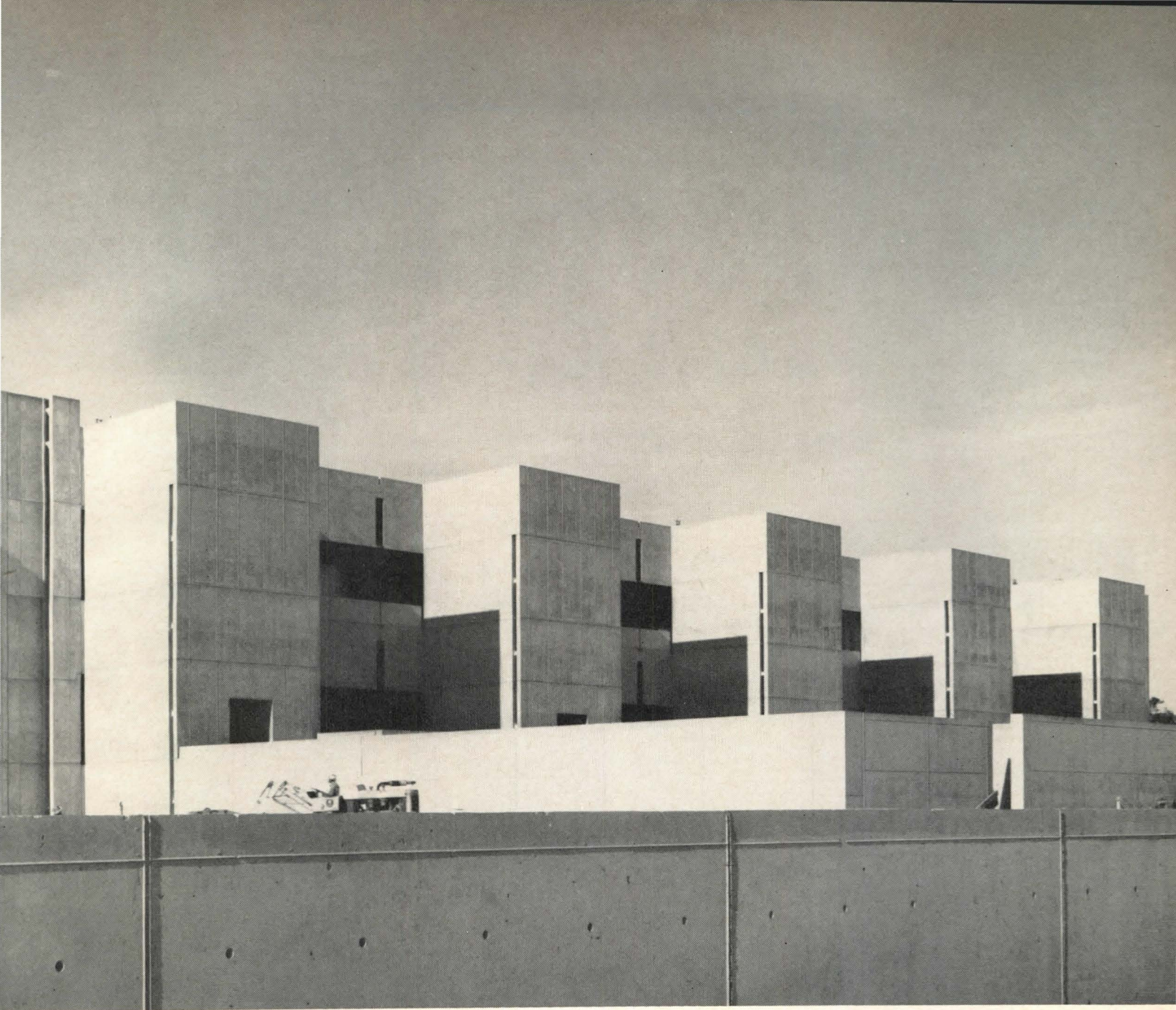




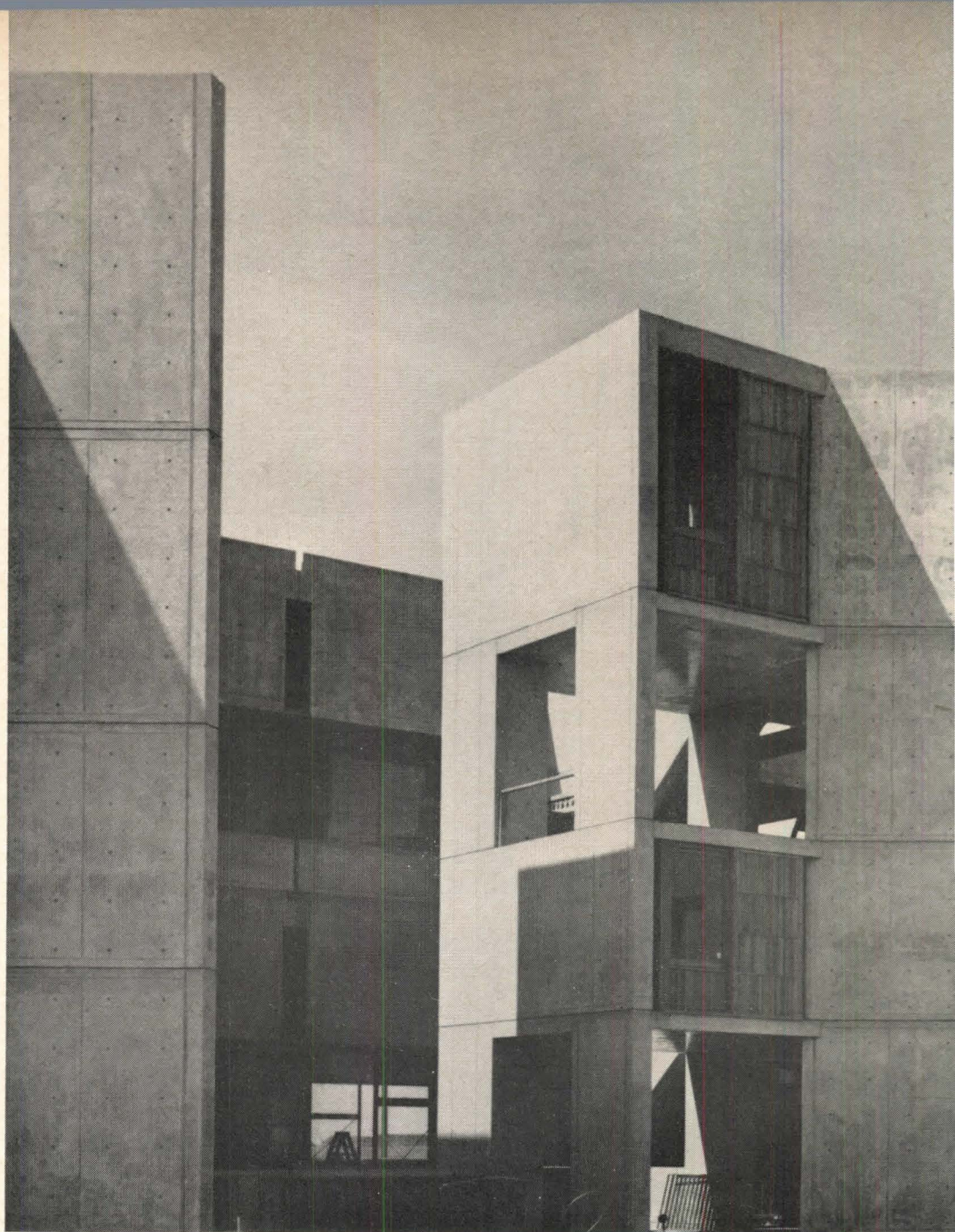


The administrative offices of the Salk Institute are contained in the flaring ends of the twin buildings (left in above photo), so that they look out over the Pacific Ocean. Behind them are the immense laboratories, their sides punctuated by projecting service towers containing stairways and rest-rooms. The offices themselves are faced in teak: narrow boards, tongue-and-grooved together and held in place by horizontal sills, were used to minimize expansion problems. The wood contrasts strikingly with the bald concrete of the buildings' walls. Kahn's lesson in articulation is continued even here: each of the offices is made a separate element in the rhythmic, irregular compositions which are the west facades (photo far right).

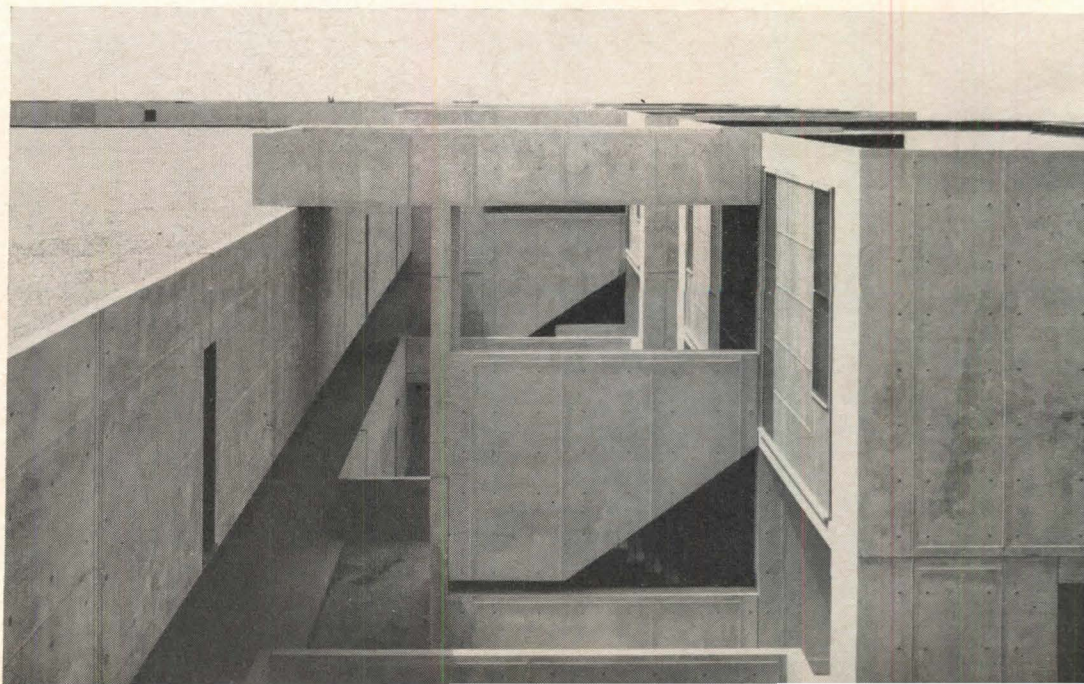


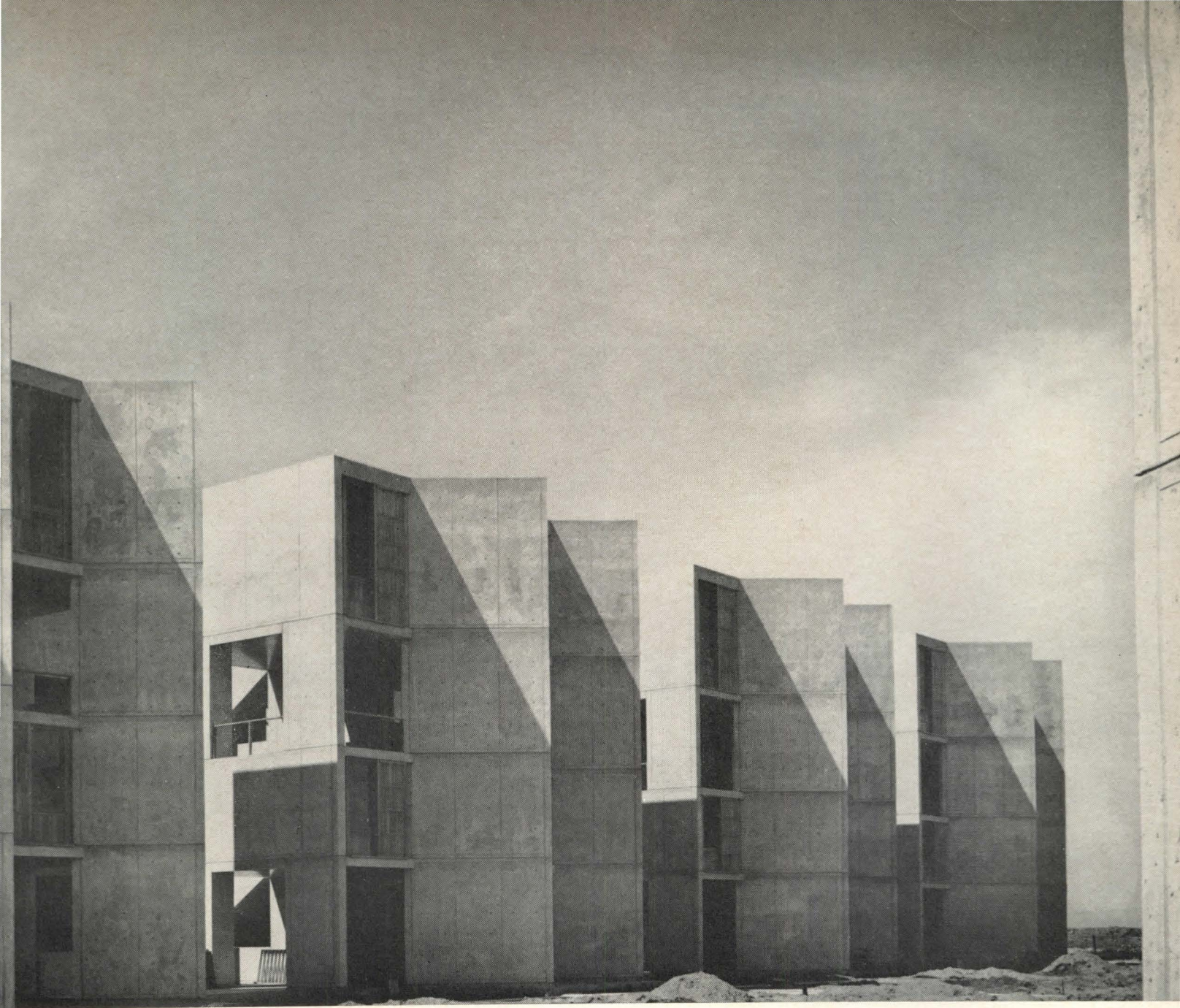


SALK LABORATORIES



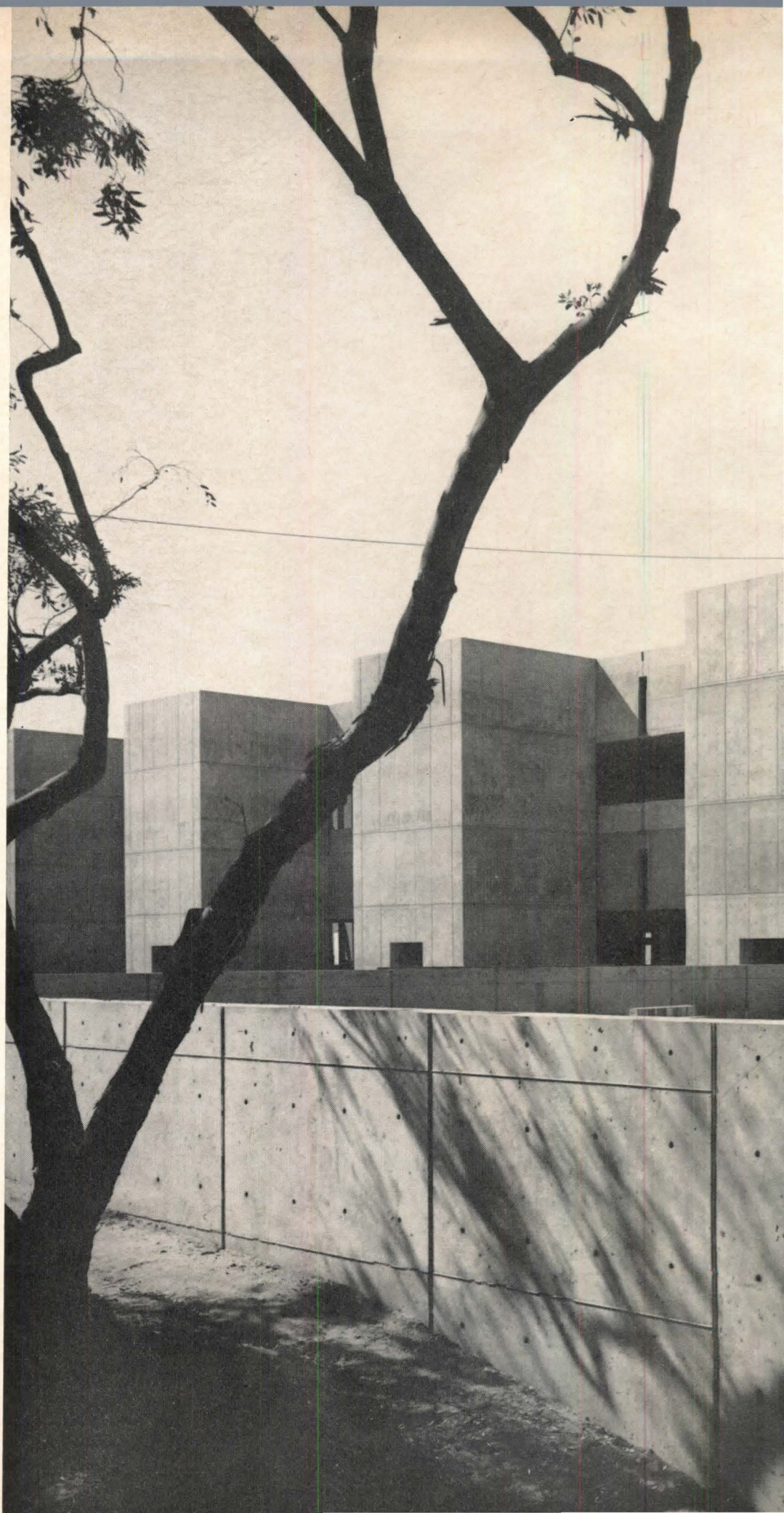
Individual "studies" for the Institute scientists are in towers along the central garden. Each has a triangular projection which reaches out to catch the ocean breezes (the scientists will have a choice of air conditioning or natural ventilation). The result is the knife-edged silhouette shown in the photo above. The studies, also faced in teak, alternate with open porticoes which will be used for open-air seminars. The towers are connected to the laboratories by concrete bridges of which Kahn has made a straight-forward kind of sculpture (photo right). The laboratories begin 20 feet below grade and garden, both to respect La Jolla's height limits and to keep the trip from the entry to the upper and lower floors to a single flight of stairs.

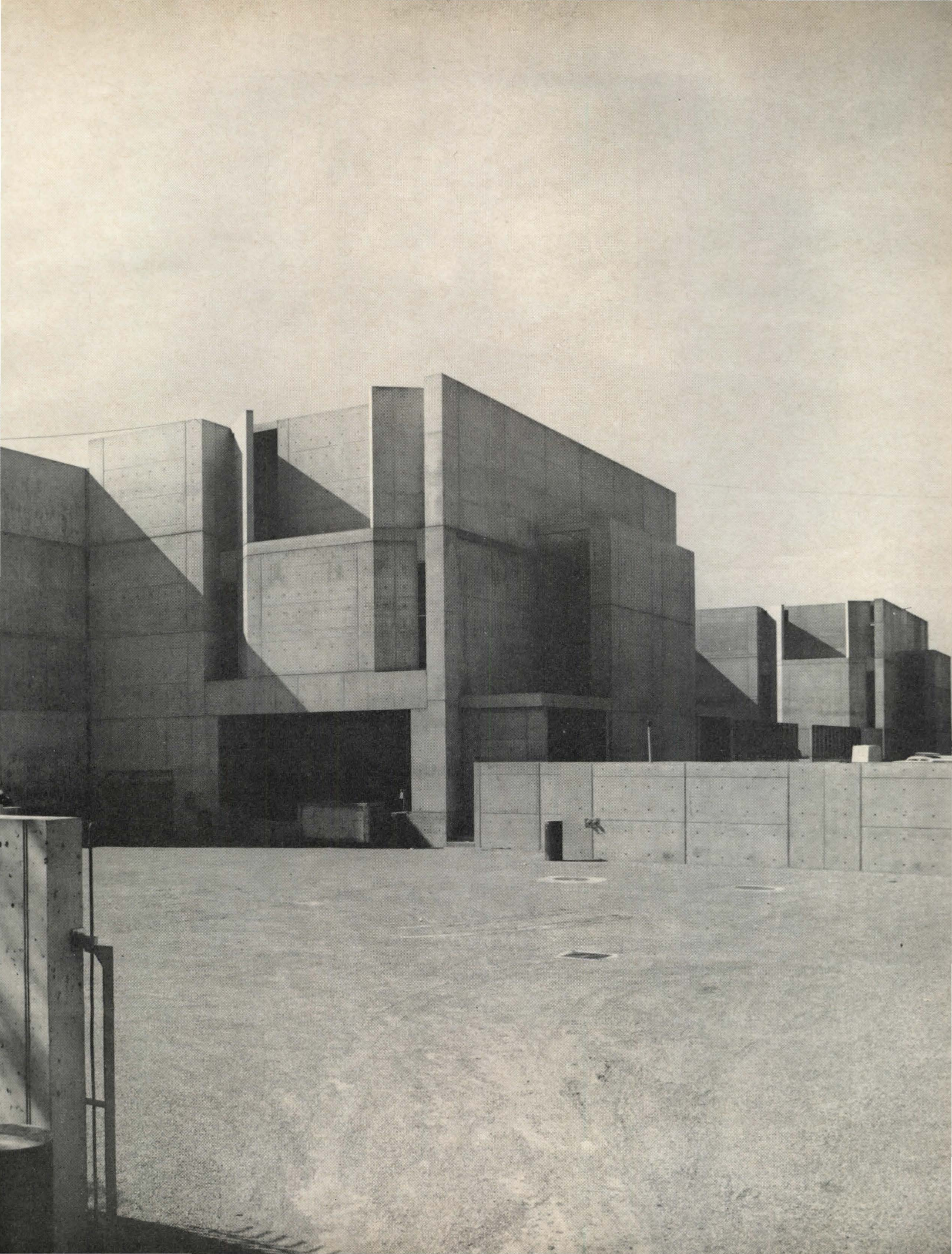




SALK LABORATORIES

The climactic pieces of sculpture are found on the buildings' east ends, in the elephantine masses of the mechanical rooms. It is here that the significance—and the size—of the laboratories' service appendages are given their primary expression. (Curiously, the vast boiler room was given no expression at all; it is buried beneath the garden.) It is here too that the splendid concrete surfaces achieved at Salk are displayed to greatest effect. A pozzolan additive was put in the bluish California cement to give the concrete a more volcanic color, and the finely crafted forms were of plastic-coated plywood. The final touch was the placement of small malleable lead plugs in the holes left by reinforcing rods.





Laboratory 2: Labyrinth sealed in limestone

Almost all laboratories demand some kind of environmental control, but the importance of human needs—as against technical ones—varies widely among them. Some are heavily populated and differ little from office buildings in their requirements. Others are only sparsely occupied, with environmental standards established mainly for the processes they house.

The Epidemiology Laboratory at Yale is designed for processes—the breeding of animals and their reaction to infective agents. The top six floors are inhabited by thousands of mice, scores of monkeys, even a flock of geese, but are rarely occupied by more than 30 people at a time. All of the spaces are air-conditioned to rigid specifications, but the result is not necessarily human comfort: some of the monkeys prefer a climate of 80 degrees Fahrenheit and 80 per cent relative humidity.

To make air-conditioning easier and more precise, windows have been limited to square portholes, which satisfy the curiosity of man (and perhaps a few monkeys, too) about the world outside. Most of the laboratory workers have office space on the lower floors.

The principal design problem was to give this air-conditioned menagerie an external form properly representing the university. The problem was made more acute by the prominence of the site, on the brink of a yawning traffic gulf recently cut through the heart of New Haven. To ensure an adequate solution, Yale assembled a fail-safe combination of talents: the acknowledged design virtuosity of Philip Johnson and the practical experience of Douglas Orr, architect of several earlier

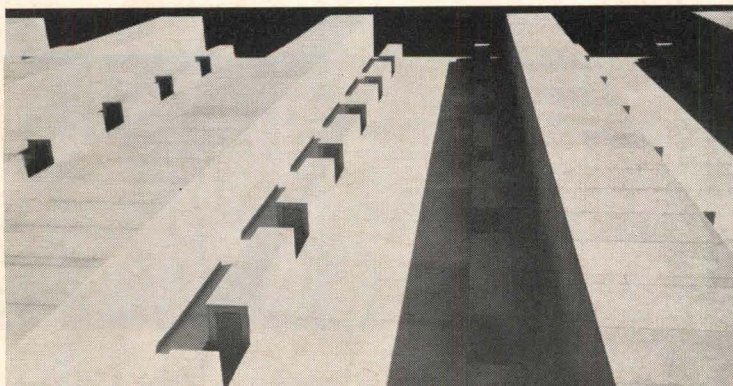
buildings at the medical school.

Orr and Johnson together persuaded medical school authorities not to make this building a mere appendage to an already overextended architectural assemblage. They pulled it out near the edge of the expressway, where it helps define the traffic corridor. (The opposite wall at this point is formed by the elephantine telephone building, an earlier Orr product, in the background of photo at right.) This siting also creates a secluded court between the new building and the old ones.

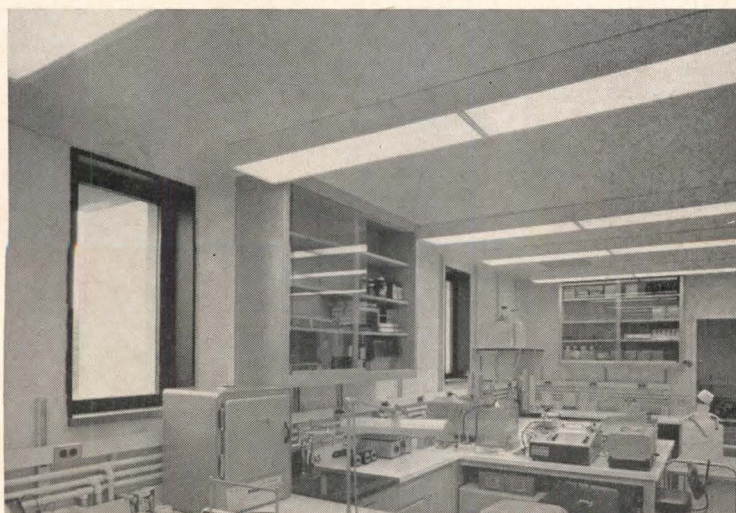
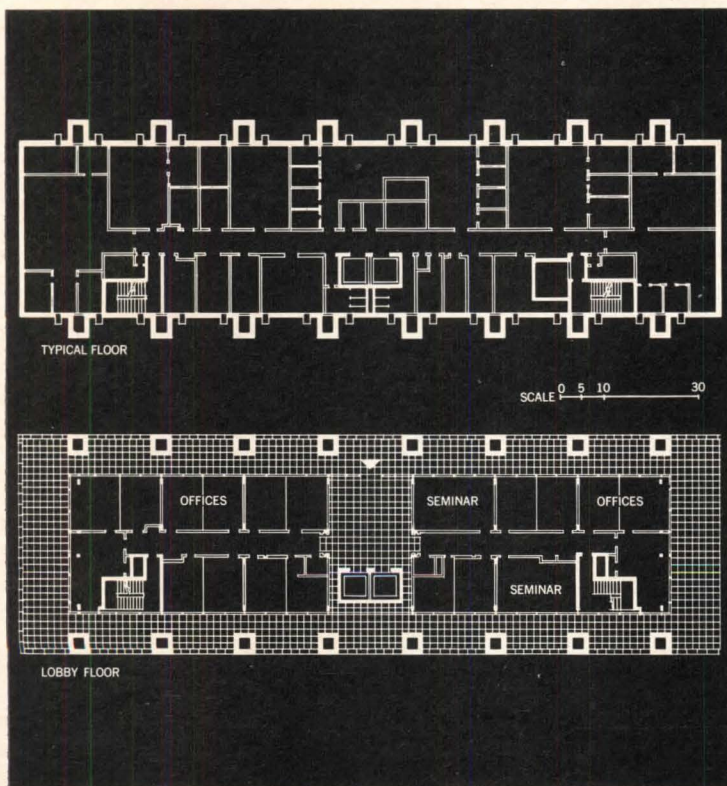
Their design of the six-story laboratory box relies on articulation of its only external elements: the massive hollow columns which support these floors and house all vertical ducts. Beside the columns, above and below the postage-stamp windows, wall surfaces have been broken up by vertical projections (photo below), whose sole function is visual. Limestone was chosen to surface it all because, says Johnson, it is an economical substitute for concrete.

The appropriateness of the whole stony envelope is questionable. The upper floors were clearly not meant for human life. Even so, the monumentality of the wall treatment gives the building the solemn aspect of a mausoleum.

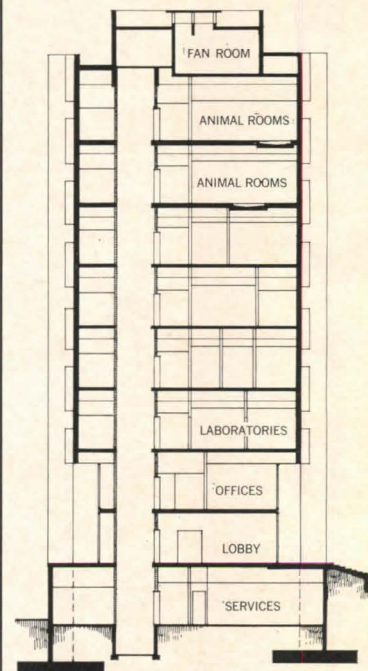
The two non-technical floors below the laboratories have a slimmer section and walls of bronze glass in black aluminum. Johnson would have liked a two-story entrance hall, but the square footage could not be spared. He finds consolation, however, in the two-story loggia—an architectural by-product perhaps, but a pleasant place from which to observe New Haven on the move.







The slab-like structure rises out of a windowless podium that acts as a rampart against the expressway (left). On the top floor, a mechanical room (identified on the exterior by its hooded air intakes, right) supplies processed air for the entire building. Ducts in the hollow structural piers carry it to chambers above hung ceilings at each floor (section below). Return ducts retrace the route to the top floor, where air from the three lower floors is recirculated, and air from the laboratories is exhausted to prevent contamination. Typical laboratory floors (plan left) have been cut up to meet the specifications of the staff. Problems of avoiding cross-contamination and keeping breeding areas germ-free have turned some of these floors into labyrinths.



FACTS AND FIGURES

Laboratory of Epidemiology and Public Health, Yale University, New Haven, Connecticut. Architects: Douglas Orr and Philip Johnson; Structural Engineer, Henry Pfisterer; Mechanical Engineers: van Zelm, Heywood & Shadford; Landscape Consultants: Robert Zion and Harold Breen; General Contractor: E & F Construction Company. Gross floor area: 92,000 square feet; Building cost: approximately \$3,500,000, including fixed equipment.

PHOTOGRAPHS: Robert Perron: pages 46-48. Bruce Cunningham-Werdnigg: page 49.



Laboratory 3: Research placed on a podium

Architect James Stewart Polshek of New York has done more than his share to restore the international balance of payments. His first two major commissions have been built in Japan for a Japanese client, Teijin Limited.

The Teijin executives were so pleased with Polshek's first effort—a chemistry research laboratory (August-September 1964 issue)—that they went ahead with a second before it was finished. This time they needed a place to iron out the production problems of the customers and potential customers for the company's synthetic fibers.

The second building is a laboratory too, but it is also a pilot plant where fibers are spun, woven, and dyed. Thus, while Polshek's first Teijin building was a slender five-story slab, this one is square and squat (1). The plant is on the first floor, the testing laboratories are on the second, and both are organized around a mechanical room which sits temple-like at the center.

The second Teijin commission also included workers' housing (2), visitors' quarters, a water tower (3), and utilities (4), on a 26-acre patch of the sprawl surrounding Osaka. The buildable area was further reduced by the existence of a 7th century tomb near the center of the site (5), a "national treasure" that could not be touched.

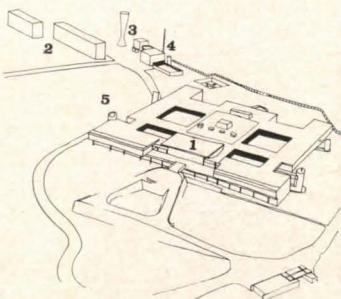
Polshek quickly discovered that the pilot plant alone would take up most of the available ground space. The plant had to simulate a wide variety of operating conditions: the market for Teijin's fibers covers much of Asia, Africa, and Latin America. This meant

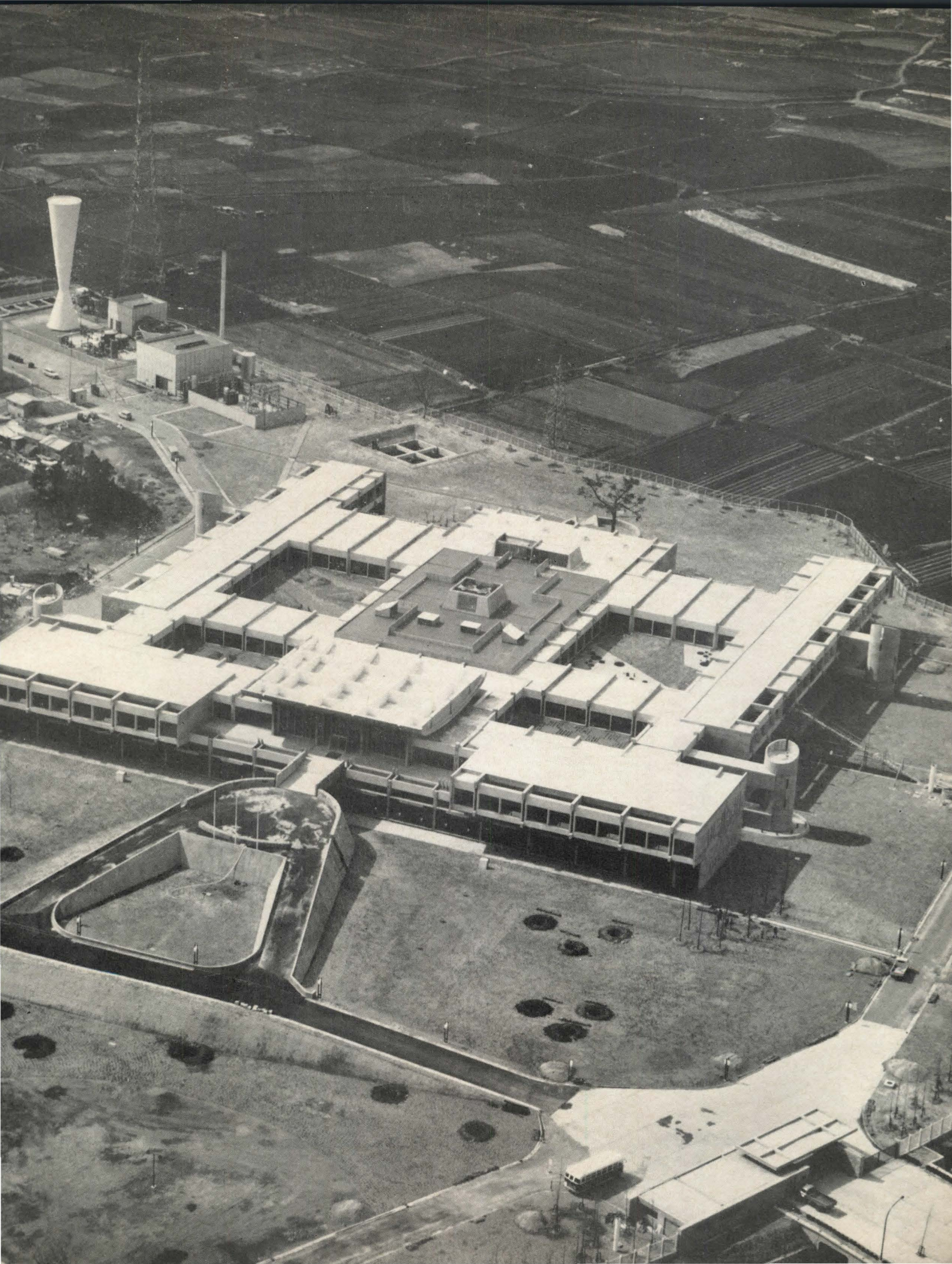
continual movement of heavy equipment into, out of, and around the plant, ruling out high-rise or decentralized buildings. What the plant needed, obviously, was uninterrupted horizontal space at ground level.

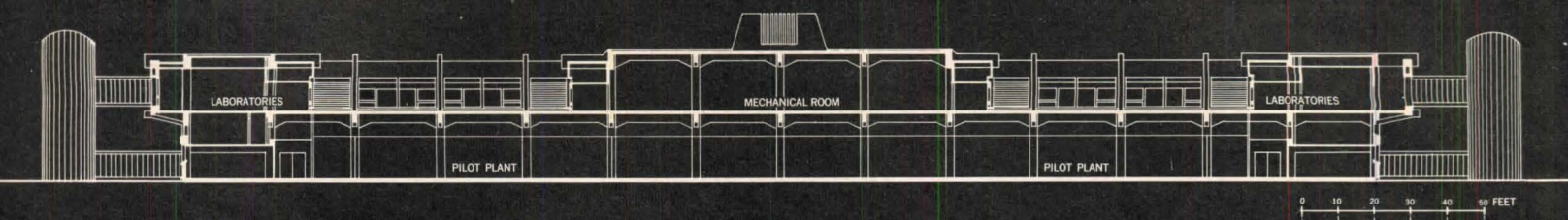
Polshek therefore made the plant a great, single-story plateau, unbroken except by a central service road, and built everything else on top of it. The most significant result was to facilitate contact between parts of the plant and their related testing laboratories overhead.

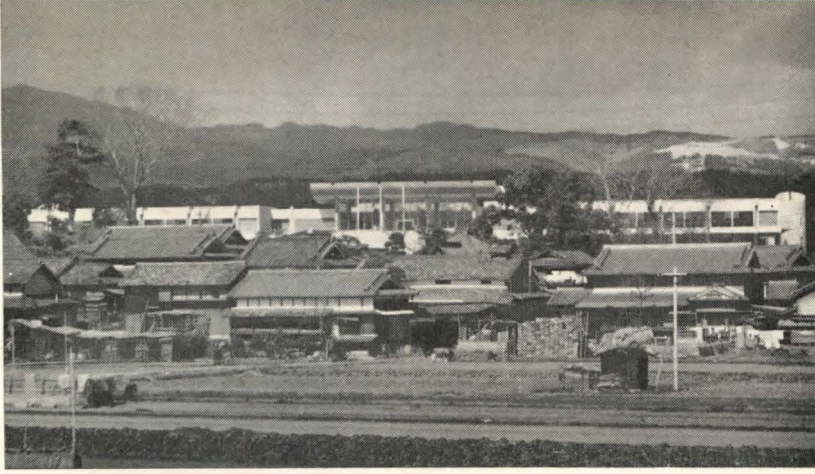
The upper level also had to provide space for a variety of other activities: design of equipment and fabrics, product display, administrative offices, a cafeteria, even something called "experimental sewing." All of these still added up to less floor area than the pilot plant, however, so Polshek was able to lay them out in narrow wings with bilateral lighting. The spaces between the wings were developed as roof gardens, and serve as hedges against future expansion.

Polshek also made something special of vertical circulation requirements. Partly to keep the plant space intact, all stair towers









Laboratory wings extend from a service core crowning the pilot plant

were banished outside the walls. They became sturdy concrete cylinders, adding to the building's sculptural character.

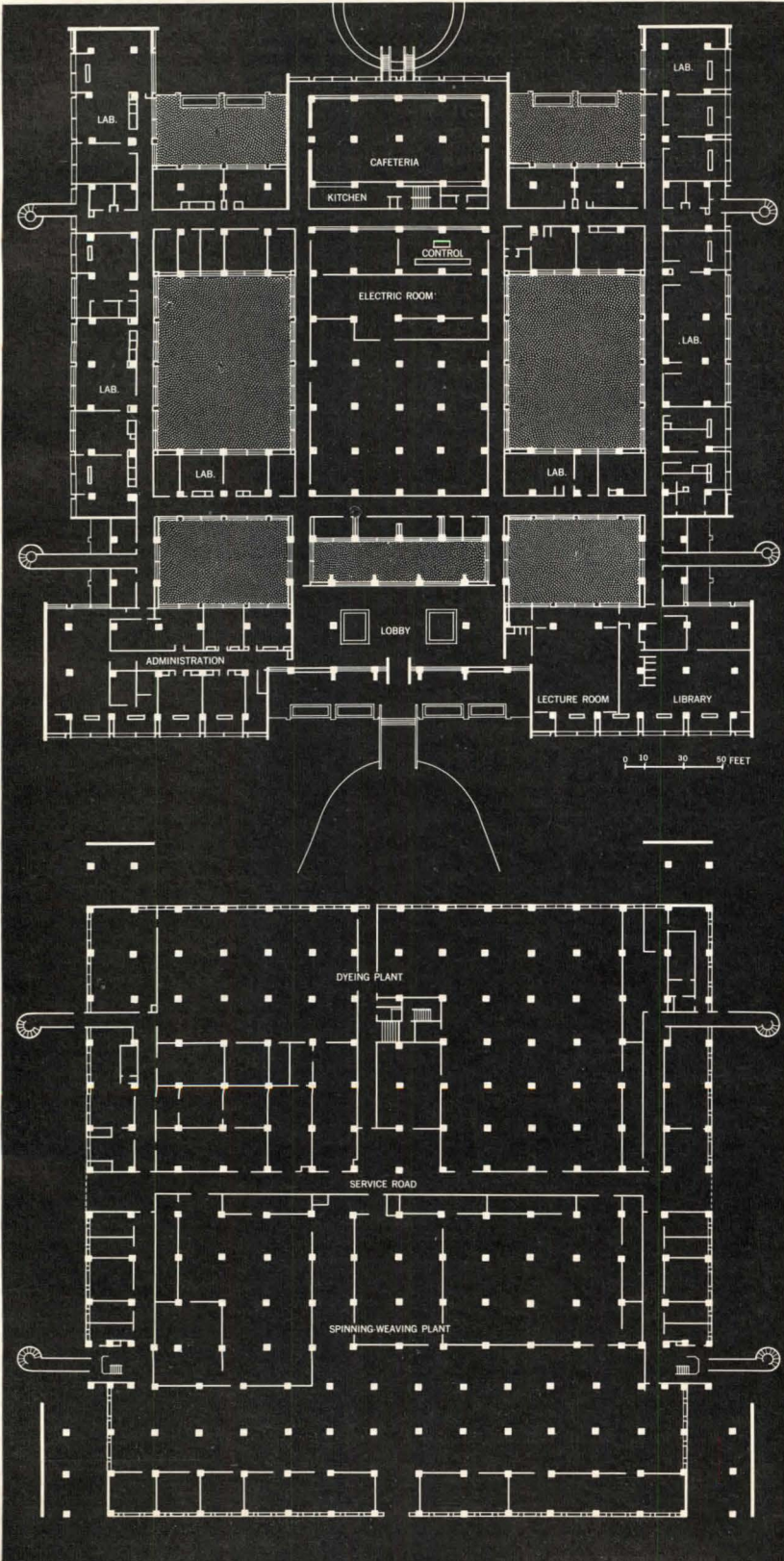
Air-conditioning requirements for the various parts of the building are as diverse as the functions it houses. Spinning and weaving areas have rigid humidity specifications with tolerances of less than 2 per cent and are kept free of lint and fuzz by continuous down-drafts; dyeing areas must be relieved of heat, moisture, and odors; and standards for the testing laboratories vary from room to room and from day to day.

To handle the massive and variable air-conditioning loads and the special services piped to all corners of the building, Polshek consolidated all mechanical processes in one big room at the center of the upper level. From here ducts and piping are fed directly down to the ceiling of the pilot plant, and distributed to upper-level spaces through a network of horizontal chases over the corridors.

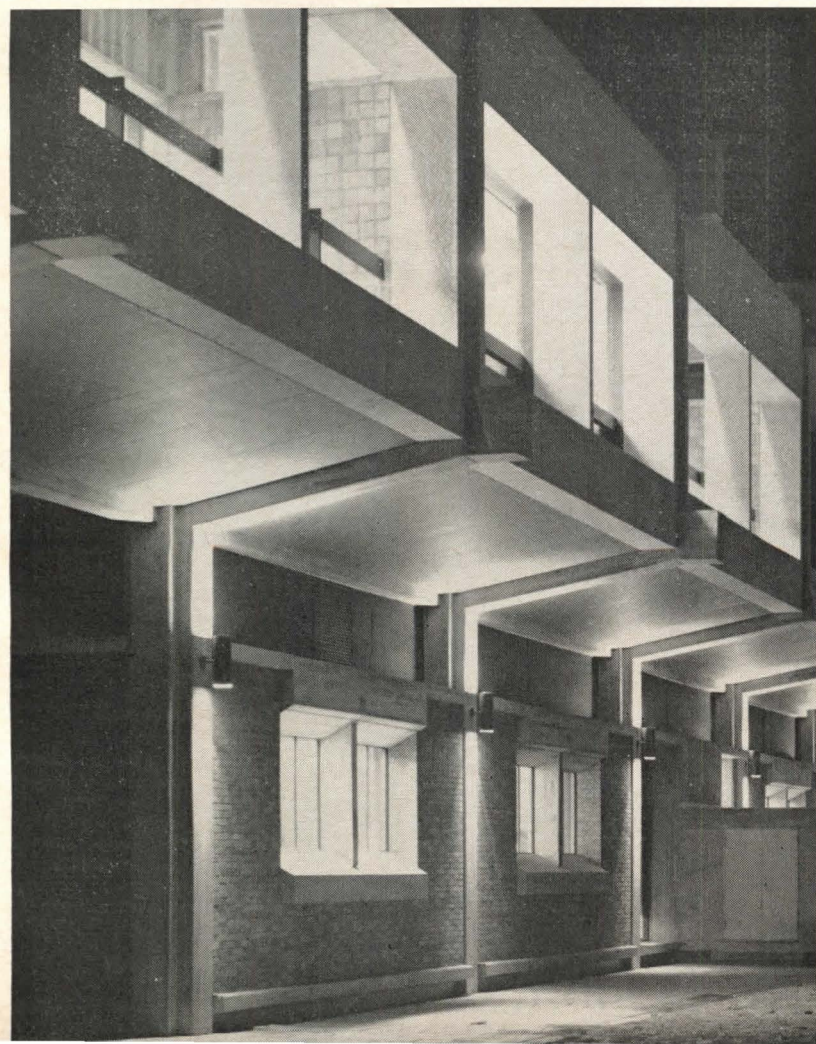
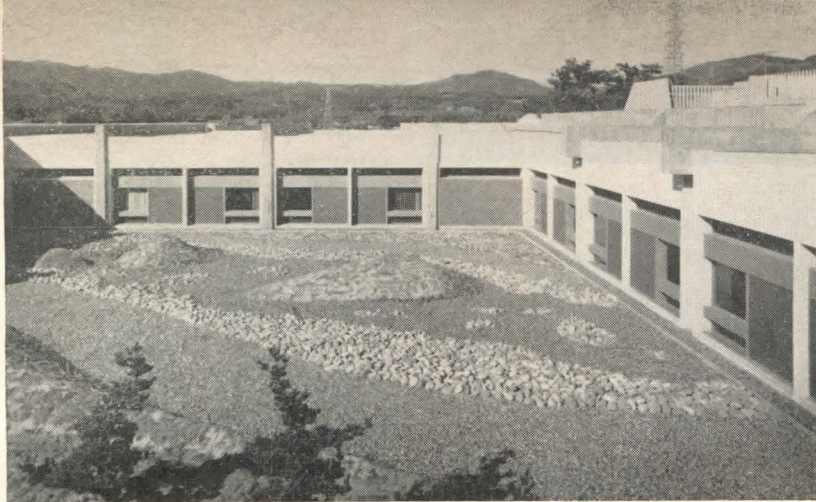
Structural framing for the vast undivided spaces of the lower level is simple: square concrete columns spaced 21 feet on center in both directions support a grid of haunched beams. An 18-foot clear height to the bottom of the structural slab leaves room for tall equipment and for a suspended mechanical jungle, which is concealed by a ceiling to control dust accumulation over spinning and weaving areas. The unusually high ceiling also allows study rooms for pilot plant researchers to be placed on mezzanines above blocks of lockers, workers' lounges, toilets, and "shoe rooms."

Framing of the upper level is more complex, but equally consistent. The vertical continuity of the 21-foot-square bays makes it possible to create taller spaces penetrating both floors; one bay of steel plate flooring installed for this purpose has already been removed to accommodate a special fiber-drawing machine.

The 21-foot center spans of the typical wing are flanked by 10-foot cantilevers. Along the perimeter of the building, this 10-foot space is used flexibly either for escape balconies or extension of laboratory space; on the interior side of the wings it is used for corridors.







The typical working spaces are formed by variations within a structural matrix

Polshek's concrete structural frame is a setting for unpredictable spatial and mechanical happenings—a setting that survived many program changes during the design and construction phases and will accommodate many more.

Exterior walls are divided into uniform panels with consistent details, but the materials plugged into them vary with interior needs. The lower story has narrow view slots in the brick walls of the spinning and weaving areas, where natural light is unwelcome. It has wider windows—under the same lintel—in the dyeing area (below, left), admitting north light.

Panels above the lintel are solid in most places, but glazed at the mezzanine study rooms and penetrated by exhaust louvers in the dyeing plant. At these points the cantilever deflects fumes away from upper-level work spaces.

Similar panels in the courtyard walls are filled in with brick, glass, and asbestos-cement board. Voids above the lintels are glazed at offices, solid at mechanical chases above the corridors, and louvered where fume hood exhaust is expelled over the corridors.

The exposed concrete members themselves have been differentiated by surface treatment. Main supporting beams have plain surfaces, marked only by form boards. The massive end walls have a checkerboard imprint. Spandrel beams and lintels have a smoother, whiter surface coat of marble chips in mortar, which has been bush-hammered.

Interior walls, too, are articulated by exposed structural columns with strong horizontal bands between them—guard rails and light baffles in the corridors, lintels supporting fixed concrete louvers in the laboratories. The menace of corridor monotony has been counteracted by alternately revealing and concealing views of the courtyards and by introducing indirect side lighting at intervals.

In the landscaping of courts, Polshek has introduced an American architect's approach to a land where Japanese gardens are commonplace. His goal was to give each court a distinctive image, with interesting changes in appearance as one moves along the surrounding corridors.

Elements that interrupt the regular pattern have been put to expressive use

Imposed upon the consistent fabric of laboratories and offices is a formal procession of special spaces—lobby, mechanical room, and cafeteria—along the central axis of the building.

The lobby acts as a symbolic focus for the sprawling structure. Its inverted shell roof, lifted above surrounding wings, creates a light-filled display area and presents a strong silhouette. Looming behind it is the mechanical room, which frees the roof (top right) of mechanical outcroppings.

Leading up to the lobby is a stone-walled vehicular ramp that also serves to conceal emergency water storage (center right). A similar ramp for pedestrians gives direct access to the cafeteria.

It is only the exceptional parts of the building—where his structural-mechanical rationale does not apply—that Polshek's architectural control seems unsure. The ramps show some uneasy intersections of geometrical forms and surface materials. The lobby roof appears inadequate for its focal role—too casually supported, too intentionally monumental.

Where his rational concept prevails, however, he has turned it to esthetic advantage. He has dramatized both the repetitive, controlling structural matrix and the bolder elements that interrupt the pattern—the monolithic, checkered end walls and the cylindrical stair towers. More remarkably, he has carried the articulation of framing and infilling panels throughout typical interior spaces.

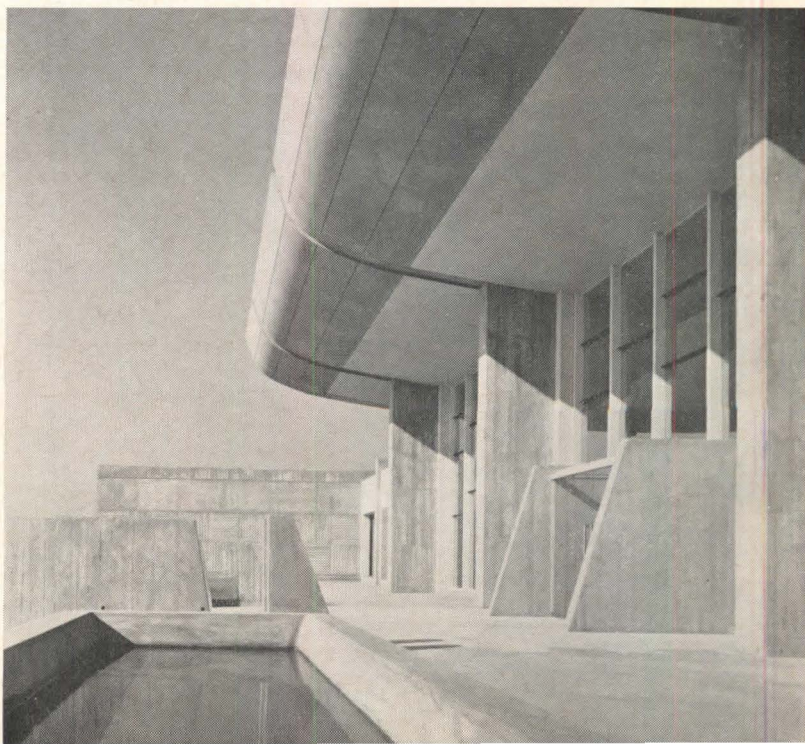
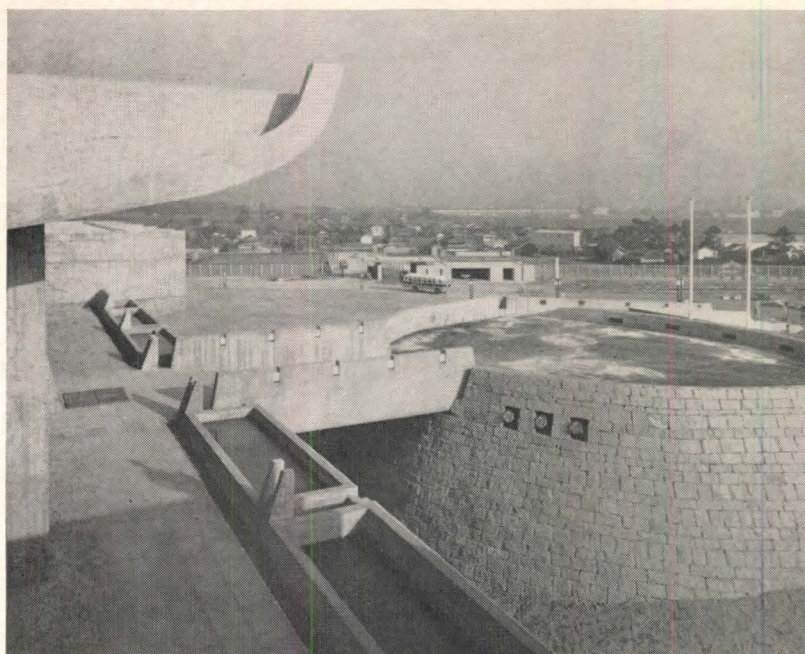
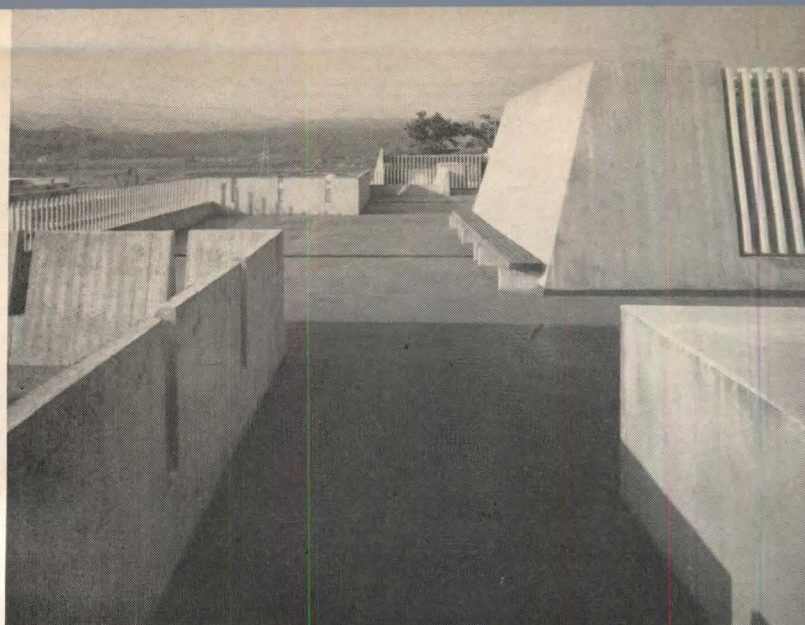
One might wonder why Teijin chose to commission a little-known American to design two major laboratories in a country well endowed with talented architects. But one must admit, with a touch of national pride, that they got two buildings of genuine character.

—JOHN MORRIS DIXON

FACTS AND FIGURES

Teijin Textile Processing Research Laboratory, Ibaraki, Japan. Architects: James Stewart Polshek, in association with the Ohbayashi-Gumi Construction Company Design Department. Building area: 185,000 square feet (gross interior area). Construction cost: approximately \$5,500,000.

PHOTOGRAPHS: Osamu Murai: pages 52 and 53, others by Yamamoto Photo Studio.





In the first part of this article, we saw that the units of which an artificial city is made up are organized to form a tree. So that we get a really clear understanding of what this means, and shall better see its implications, let us define a tree once again:

Whenever we have a tree structure, it means that within this structure no piece of any unit is ever connected to other units, except through the medium of that unit as a whole.

The enormity of this restriction is difficult to grasp. It is a little as though the members of a family were not free to make friends outside the family, except when the family as a whole made a friendship.

In simplicity of structure the tree is comparable to the compulsive desire for neatness and order that insists the candlesticks on a mantelpiece be perfectly straight and perfectly symmetrical about the center. The semi-lattice, by comparison, is the structure of a complex fabric; it is the structure of living things; of great paintings and symphonies.

It must be emphasized, lest the orderly mind shrink in horror from anything that is not clearly articulated and categorized in tree form, that the idea of overlap, ambiguity, multiplicity of aspect, and the semi-lattice, are not less orderly than the rigid tree, but more so. They represent a thicker, tougher, more subtle and more complex view of structure.

Let us now look at the ways in which the natural, when unconstrained by artificial conceptions, shows itself to be a semi-lattice.

A major aspect of the city's social structure which a tree can never mirror properly is illustrated by Ruth Glass's redevelopment plan for Middlesborough, a city of 200,000 which she recommends be broken down into 29 separate neighborhoods. After picking her 29 neighborhoods by determining where the sharpest discontinuities of building type, income, and job type occur, she asks herself the question: "If we examine some of the social systems which actually exist for the people in such a neighborhood, do the physical units defined by these various social systems all define the same spatial neighborhood?" Her own answer to this question is, *no*.

Each of the social systems she examines is a nodal system. It is made of some sort of central node, plus the people who use this cen-

A CITY IS NOT A TREE

PART 2

BY CHRISTOPHER ALEXANDER

ter. Specifically she takes elementary schools, secondary schools, youth clubs, adult clubs, post offices, greengrocers, and grocers selling sugar. Each of these centers draws its users from a certain spatial area or spatial unit. This spatial unit is the physical residue of the social system as a whole, and is therefore a unit in the terms of this paper. The units corresponding to different kinds of centers for the single neighborhood of Waterloo Road are shown in **Figure 1**.

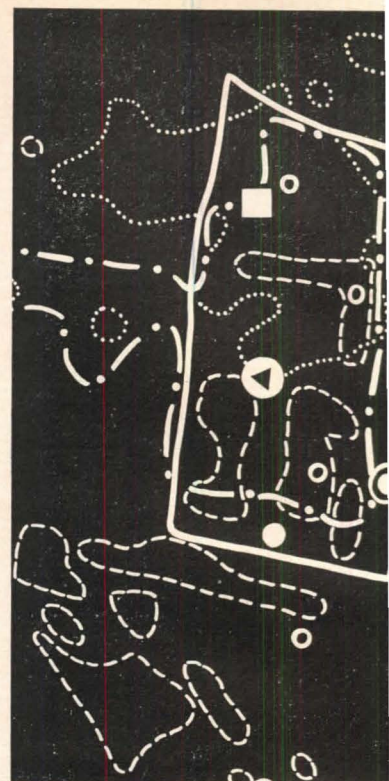
The hard outline is the boundary of the so-called neighborhood itself. The white circle stands for the youth club, and the small solid rings stand for areas where its members live. The ringed spot is the adult club, and the homes of its members form the unit marked by dashed boundaries. The white square is the post office and the dotted line marks the unit which contains its users. The secondary school is marked by the spot with a white triangle in it. Together with its pupils, it forms the system marked by the dot-dashed line.

As you can see at once, the different units do not coincide. Yet neither are they disjoint. They overlap.

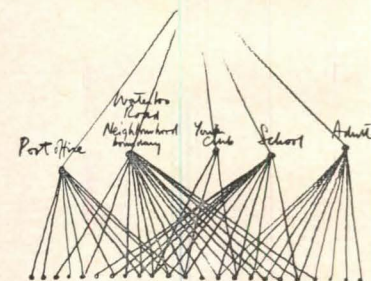
We cannot get an adequate picture of what Middlesborough is, or of what it ought to be, in terms of 29 large and conveniently integral chunks called neighborhoods. When we describe the city in terms of neighborhoods, we implicitly assume that the smaller elements within any one of these neighborhoods belong together so tightly that they only interact with elements in other neighborhoods through the medium of the neighborhood to which they themselves belong. Ruth Glass herself shows clearly that this is not the case.

Below are two pictures of the Waterloo neighborhood. For the sake of argument I have broken it into a number of small areas. **Figure 2** shows how these pieces stick together in fact, and **Figure 3** shows how the redevelopment plan pretends they stick together.

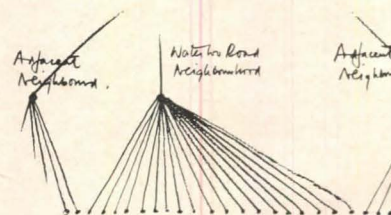
There is nothing in the nature of the various centers which says that their catchment areas should be the same. Their natures are different. Therefore the units they define are different. The natural city of Middlesborough was faithful to the semi-lattice structure they have. Only in the artificial tree conception of the city are their natural, proper, and necessary overlaps destroyed.



1.



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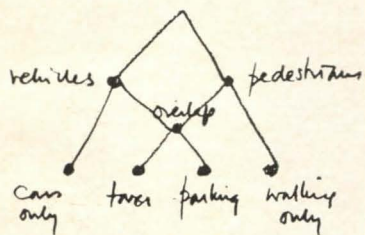


3.

Christopher Alexander, who holds degrees in architecture and mathematics from Cambridge University and a doctorate in architecture from Harvard University, is a member of the faculty of the University of California College of Environmental Design. He is author of *Notes on the Synthesis of Form* and co-author with Serge Chermayeff of *Community and Privacy*.

Take the separation of pedestrians from moving vehicles, a tree concept proposed by Le Corbusier, Louis Kahn, and many others. At a very crude level of thought this is obviously a good idea. It is dangerous to have 60-mile-an-hour cars in contact with little children toddling. But it is not *always* a good idea. There are times when the ecology of a situation actually demands the opposite. Imagine yourself coming out of a Fifth Avenue store; you have been shopping all afternoon; your arms are full of parcels; you need a drink; your wife is limping. Thank God for taxis.

Yet the urban taxi can function only because pedestrians and vehicles are not strictly separated. The prowling taxi needs a fast stream of traffic so that it can cover a large area to be sure of finding a passenger. The pedestrian needs to be able to hail the taxi from any point in the pedestrian world, and to be able to get out to any part of the pedestrian world to which he wants to go. The system which contains the taxicabs needs to overlap both the fast vehicular traffic system and the system of pedestrian circulation. In Manhattan pedestrians and vehicles do share certain parts of the city, and the necessary overlap is guaranteed (Figure 4).



4.

Another favorite concept of the CIAM theorists and others is the separation of recreation from everything else. This has crystallized in our real cities in the form of playgrounds. The playground, asphalted and fenced in, is nothing but a pictorial acknowledgment of the fact that "play" exists as an isolated concept in our minds. It has nothing to do with the life of play itself. Few self-respecting children will even play in a playground.

Play itself, the play that children practice, goes on somewhere different everyday. One day it may be indoors, another day in a friendly gas station, another day down by the river, another day in a derelict building, another day on a construction site which has been abandoned for the weekend. Each

of these play activities, and the objects it requires, forms a system. It is not true that these systems exist in isolation, cut off from the other systems in the city. The different systems overlap one another, and they overlap many other systems besides. The units, the physical places recognized as play places, must do the same.

In a natural city this is what happens. Play takes place in a thousand places—it fills the interstices of adult life. As they play, children become full of their surroundings. How can a child become filled with his surroundings in a fenced enclosure? He cannot.

The isolated campus

A similar kind of mistake occurs in trees like that of Goodman's Communitas, or Soleri's Mesa City, which separate the university from the rest of the city. Again, this has actually been realized in common American form of the isolated campus.

What is the reason for drawing a line in the city so that everything within the boundary is university, and everything outside is non-university? It is conceptually clear. But does it correspond to the realities of university life. Certainly it is not the structure which occurs in non-artificial university cities.

Take Cambridge University, for instance. At certain points Trinity street is physically almost indistinguishable from Trinity college. One pedestrian crossover in the street is literally part of the college. The buildings on the street, though they contain stores and coffee shops and banks at ground level, contain undergraduates' rooms in their upper stories. In many cases the actual fabric of the street buildings melts into the fabric of the old college buildings so that one cannot be altered without the other.

There will always be many systems of activity where university life and city life overlap: pub-crawling, coffee-drinking, the movies, walking from place to place. In some cases whole departments may be actively involved in the life of the city's inhabitants (the hospital-cum-medical school is an example). In Cambridge, a natural city where university and city have grown together gradually, the physical units overlap because they are the physical residues of city systems and university systems which overlap (Figure 5).

Let us look next at the hierarchy of urban cores, realized in Brazilia, Chandigarh, the MARS

plan for London, and, most recently, in the Manhattan Lincoln Center, where various performing arts serving the population of greater New York have been gathered together to form just one core.

Does a concert hall ask to be next to an Opera House? Can the two feed on one another? Will anybody ever visit them both, gluttonously, in a single evening, or even buy tickets from one after going to a concert in the other? In Vienna, London, Paris, each of the performing arts has found its own place, because all are not mixed randomly. Each has created its own familiar section of the city. In Manhattan itself, Carnegie Hall and the Metropolitan Opera House were not built side by side. Each found its own place, and now creates its own atmosphere. The influence of each overlaps the parts of the city which have been made unique to it.

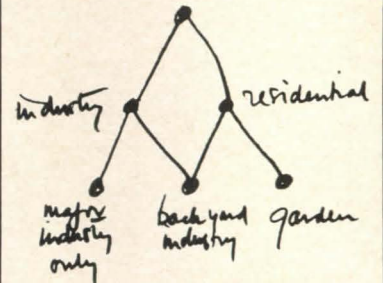
The only reason that these functions have all been brought together in the Lincoln Center is that the concept of performing art links them to one another.

But this tree, and the idea of a single hierarchy of urban cores which is its parent, do not illuminate the relations between art and city life. They are merely born of the mania every simple-minded person has for putting things with the same name into the same basket.

The total separation of work from housing, started by Tony Garnier in his industrial city, then incorporated in the 1929 Athens Charter, is now found in every artificial city and accepted everywhere where zoning is enforced. Is this a sound principle? It is easy to see how bad conditions at the beginning of the century prompted planners to try to get the dirty factories out of residential areas. But the separation misses a variety of systems which require, for their sustenance, little parts of both.

Jane Jacobs describes the growth of backyard industries in Brooklyn. A man who wants to start a small business needs space, which he is

very likely to have in his own backyard. He also needs to establish connections with larger going enterprises and with their customers. This means that the system of backyard industry needs to belong both to the residential zone, and to the industrial zone—these zones need to overlap. In Brooklyn they do (Figure 6). In a city which is a tree, they can't.



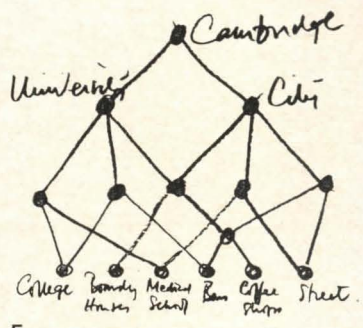
6.

Finally, let us examine the subdivision of the city into isolated communities. As we have seen in the Abercrombie plan for London, this is itself a tree structure. The individual community in a greater city has no reality as a functioning unit. In London, as in any great city, almost no one manages to find work which suits him near his home. People in one community work in a factory which is very likely to be in another community.

There are, therefore, many hundreds of thousands of worker-workplace systems, each consisting of a man plus the factory he works in, which cut across the boundaries defined by Abercrombie's tree. The existence of these units, and their overlapping nature, indicates that the living systems of London form a semi-lattice. Only in the planner's mind has it become a tree.

The fact that we have so far failed to give this any physical expression has a vital consequence. As things are, whenever the worker and his workplace belong to separately administered municipalities, the community which contains the workplace collects huge taxes and has relatively little on which to spend the tax revenue. The community where the worker lives, if it is mainly residential, collects only little in the way of taxes, and yet has great additional burdens on its purse in the shape of schools, hospitals, etc. Clearly, to resolve this inequity, the worker-workplace systems must be anchored in physically recognizable units of the city which can then be taxed.

It might be argued that, even though the individual communities of a great city have no functional



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significance in the lives of their inhabitants, they are still the most convenient administrative units, and should, therefore, be left in their present tree organization.

However, in the political complexity of a modern city, even this is suspect.

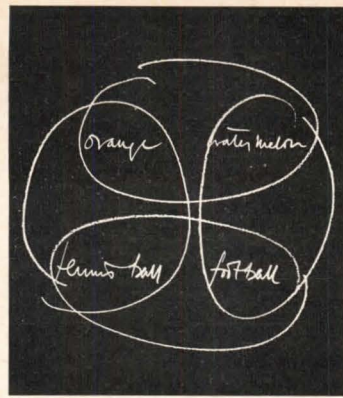
Edward Banfield, in a recent book called *Political Influence*, gives a detailed account of the patterns of influence and control that have actually led to decisions in Chicago. He shows that although the lines of administrative and executive control have a formal structure which is a tree, these formal chains of influence and authority are entirely overshadowed by the ad hoc lines of control which arise naturally as each new city problem presents itself. These ad hoc lines depend on who is interested in the matter, who has what at stake, who has what favors to trade with whom.

This second structure, which is informal, working within the framework of the first, is what really controls public action. It varies from week to week, even from hour to hour, as one problem replaces another. Nobody's sphere of influence is entirely under the control of any one superior; each person is under different influences as the problems change. Although the organization chart in the mayor's office is a tree, the actual control and exercise of authority is semi-lattice-like.

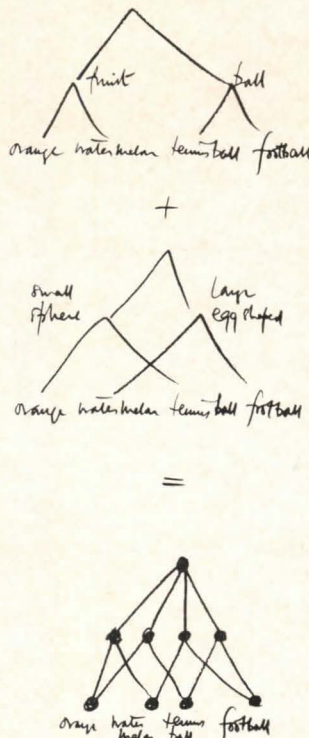
Trapped in a tree

Now, why is it that so many designers have conceived cities as trees when the natural structure is in every case a semi-lattice? Have they done so deliberately, in the belief that a tree structure will serve the people of the city better? Or have they done it because they cannot help it, because they are trapped by a mental habit, perhaps even trapped by the way the mind works; because they cannot encompass the complexity of a semi-lattice in any convenient mental form; because the mind has an overwhelming predisposition to see trees wherever it looks and cannot escape the tree conception?

I shall try to convince you that it is for this second reason that trees are being proposed and built as cities—that it is because designers, limited as they must be by the capacity of the mind to form intuitively accessible structures, cannot achieve the complexity of the semi-lattice in a single mental act.



7.



Let me begin with an example.

Suppose I ask you to remember the following four objects: an orange, a watermelon, a football, and a tennis ball. How will you keep them in your mind, in your mind's eyes? However you do it, you will do it by grouping them. Some of you will take the two fruits together, the orange and the watermelon, and the two sports balls together, the football and the tennis ball. Those of you who tend to think in terms of physical shape may group them differently, taking the two small spheres together—the orange and the tennis ball and the two larger and more egg-shaped objects—the watermelon and the football. Some of you will be aware of both.

Let us make a diagram of these groupings (Figure 7).

Either grouping taken by itself is a tree structure. The two to-

gether are a semi-lattice. Now let us try and visualize these groupings in the mind's eye. I think you will find that you cannot visualize all four sets simultaneously—because they overlap. You can visualize one pair of sets and then the other, and you can alternate between the two pairs extremely fast, so fast that you may deceive yourself into thinking you can visualize them all together. But in truth, you cannot conceive all four sets at once in a single mental act. In a single mental act you can only visualize a tree.

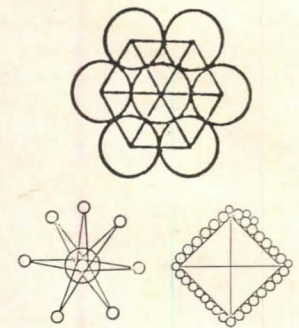
This is the problem we face as designers. While we are not, perhaps, necessarily occupied with the problem of total visualization in a single mental act, the principle is still the same. The tree is accessible mentally, and easy to deal with. The semi-lattice is hard to keep before the mind's eye, and therefore hard to deal with.

It is known today that grouping and categorization are among the most primitive psychological processes. Modern psychology treats thought as a process of fitting new situations into existing slots and pigeon holes in the mind. Just as you cannot put a physical thing into more than one physical pigeon hole at once, so, by analogy, the processes of thought prevent you from putting a mental construct into more than one mental category at once. Study of the origin of these processes suggests that they stem essentially from the organism's need to reduce the complexity of its environment by establishing barriers between the different events which it encounters.

It is for this reason—because the mind's first function is to reduce the ambiguity and overlap in a confusing situation, and because, to this end, it is endowed with a basic intolerance for ambiguity—that structures like the city, which do require overlapping sets within them, are nevertheless persistently conceived as trees.

The same rigidity dogs even the perception of physical patterns. In experiments by Huggins and myself at Harvard, we showed people patterns whose internal units overlapped, and found that they almost always invented a way of seeing the patterns as a tree—even when the semi-lattice view of the patterns would have helped them perform the task of experimentation which was before them.

The most startling proof that people tend to conceive even physical patterns as trees is found in some experiments of Sir Frederick Bartlett. He showed people a pattern for about $\frac{1}{4}$ second and then asked them to draw what they had seen. Many people, unable to grasp the full complexity of the pattern they had seen, simplified the patterns by cutting out the overlap. In Figure 8, the original



8.

is shown at the top, with two fairly typical redrawn versions below it. In the redrawn versions the circles are separated from the rest; the overlap between triangles and circles disappear.

These experiments suggest strongly that people have an underlying tendency, when faced by a complex organization, to reorganize it mentally in terms of non-overlapping units. The complexity of the semi-lattice is replaced by the simpler and more easily grasped tree form.

You are no doubt wondering, by now, what a city looks like which is a semi-lattice, but not a tree. I must confess that I cannot yet show you plans or sketches. It is not enough merely to make a demonstration of overlap—the overlap must be the right overlap. This is doubly important, because it is so tempting to make plans in which overlap occurs for its own sake. This is essentially what the high density "life-filled" city plans of recent years do. But overlap alone does not give structure. It can also give chaos. A garbage can is full of overlap. To have structure, you must have the right overlap, and this is for us almost certainly different from the old overlap which we observe in historic cities. As the relationships between functions change, so the systems which need to overlap in order to receive these relationships must also change. The recreation of old kinds of overlap will be inappropriate, and chaotic instead of structured.

The work of trying to under-

stand just what overlap the modern city requires, and trying to put this required overlap into physical and plastic terms, is still going on. Until the work is complete, there is no point in presenting facile sketches of ill thought out structure.

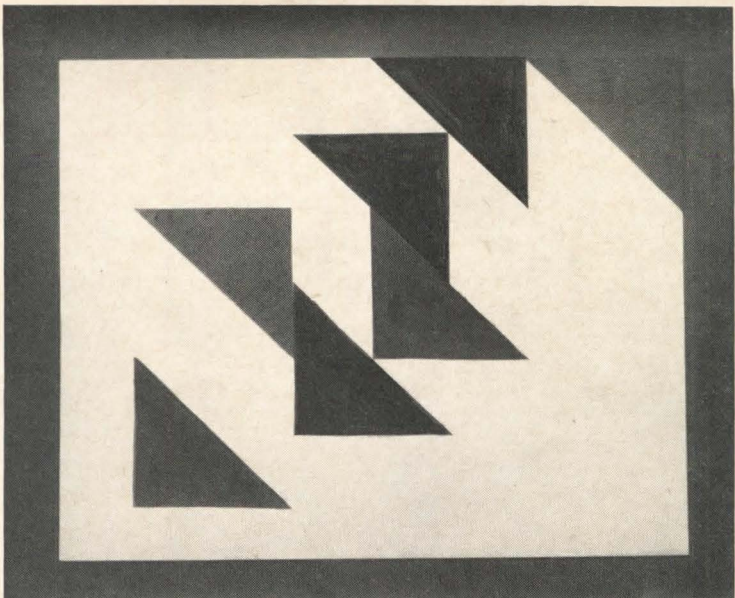
Overlapping triangles

However, I can perhaps make the physical consequences of overlap more comprehensible by means of an image. The painting illustrated is a recent work by Simon Nicholson (Figure 9). The fascination of this painting lies in the fact that although constructed of rather few simple triangular elements, these elements unite in many different ways to form the larger units of the painting—in such a way indeed, that if we make a complete inventory of the perceived units in the painting, we find that each triangle enters into four or five completely different kinds of unit, none contained in the others, yet all overlapping in that triangle.

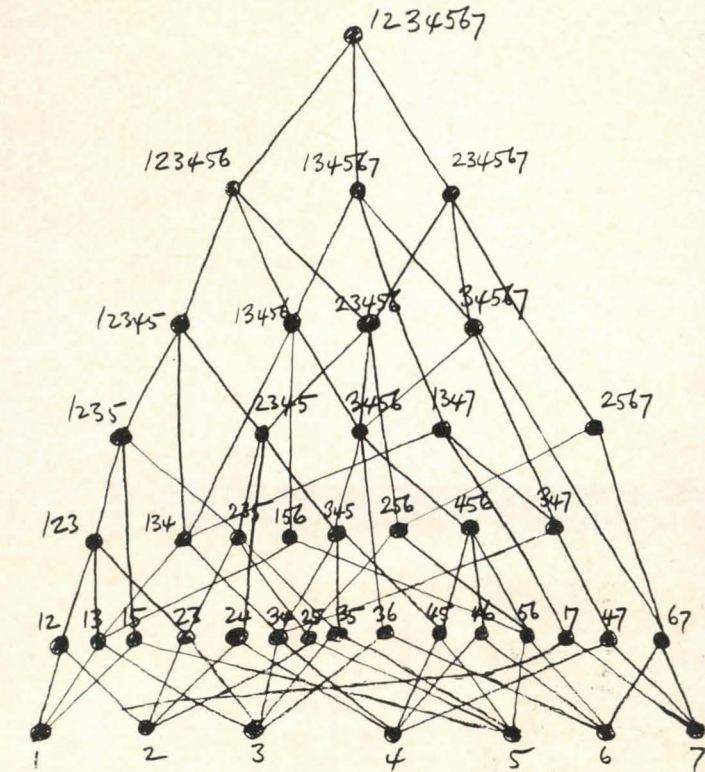
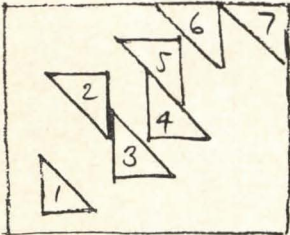
Thus, if we number the triangles and pick out the sets of triangles which appear as strong visual units, we get the semi-lattice shown in Figure 10.

Three and 5 form a unit because they work together as a rectangle; 2 and 4 because they form a parallelogram; 5 and 6 because they are both dark and pointing the same way; 6 and 7 because one is the ghost of the other shifted sideways; 4 and 7 because they are symmetrical with one another; 4 and 6 because they form another rectangle; 4 and 5 because they form a sort of Z; 2 and 3 because they form a rather thinner kind of Z; 1 and 7 because they are at opposite corners; 1 and 2 because they are a rectangle; 3 and 4 because they point the same way as 5 and 6, and form a sort of off-center reflection; 3 and 6 because they enclose 4 and 5; 1 and 5 because they enclose 2, 3, and 4. I have only listed the units of two triangles. The larger units are even more complex. The white is more complex still, and is not even included in the diagram because it is harder to be sure of its elementary pieces.

The painting is significant, not so much because it has overlap in it (many paintings have overlap in them), but rather because this painting has nothing else in it except overlap. It is only the fact of the overlap, and the resulting multiplicity of aspects which the forms present, that makes the



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10.

painting fascinating. It seems almost as though the painter had made an explicit attempt, as I have done, to single out overlap as a vital generator of structure.

All the artificial cities I have described have the structure of a tree rather than the semi-lattice structure of the Nicholson painting. Yet it is the painting, and other images like it, which must be our vehicles for thought. And when we wish to be precise, the semi-lattice, being part of a large branch of modern mathematics, is a powerful way of exploring the structure of these images. It is the semi-lattice we must look for, not the tree.

When we think in terms of trees we are trading the humanity and richness of the living city for a conceptual simplicity which benefits only designers, planners, administrators and developers. Every time a piece of a city is torn out, and a tree made to replace the semi-lattice that was there before, the city takes a further step toward dissociation.

In any organized object, extreme compartmentalization and the dissociation of internal elements are the first signs of coming destruction. In a society, dissociation is anarchy. In a person, dissociation is the mark of schizophrenia and impending suicide. An ominous example of city-wide dissociation is the separation of retired people from the rest of urban life, caused by the growth of desert cities for the old like Sun City, Arizona. This separation is only possible under the influence of tree-like thought.

It not only takes from the young the company of those who have lived long, but worse, it causes the same rift inside each individual life. As you will pass into Sun City, and into old age, your ties with your own past will be unacknowledged, lost, and therefore, broken. Your youth will no longer be alive in your old age—the two will be dissociated, your own life will be cut in two.

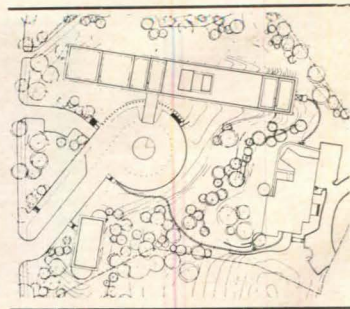
For the human mind, the tree is the easiest vehicle for complex thoughts. But the city is not, cannot, and must not be a tree. The city is a receptacle for life. If the receptacle severs the overlap of the strands of life within it, because it is a tree, it will be like a bowl full of razor blades on edge, ready to cut up whatever is entrusted to it. In such a receptacle life will be cut to pieces. If we make cities which are trees, they will cut our life within to pieces.

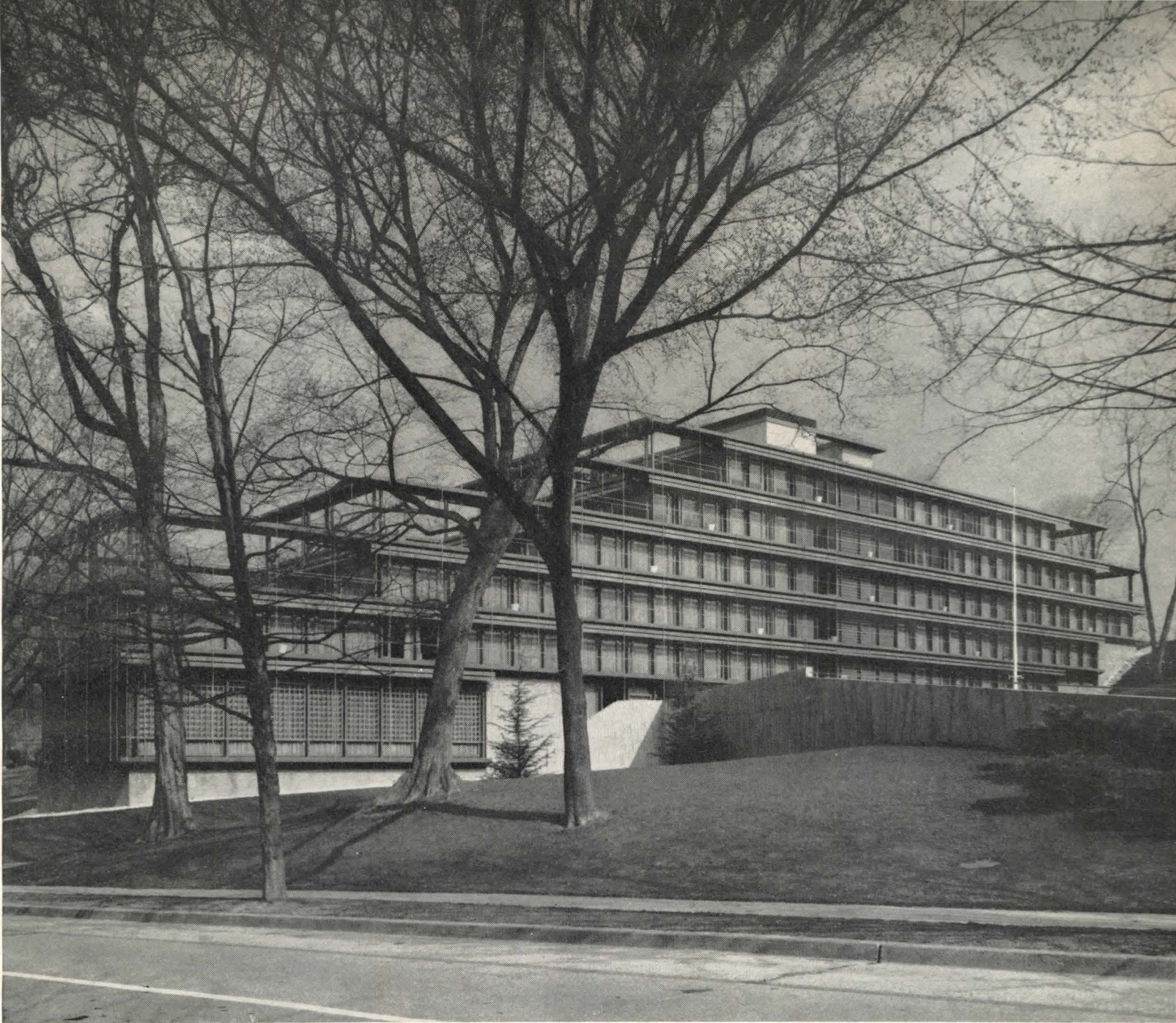


GERMANY PAYS ITS RESPECTS

After years of building handsome embassies abroad, Washington—at long last—has gotten a really good one back.

BY WARREN COX





WHILE Congress has been busy demolishing the State Department's program of building good embassies abroad, our lawmakers have been treated to a demonstration, right in their own backyard, of what an ambassador good architecture can be.

The demonstration is in the form of a new chancery, on quiet, residential Reservoir Road, and it is being offered by the German Government and its chosen architect, Professor Egon Eiermann. Now that the new chancery is completed, all Washingtonians can see for themselves why and how well it pays to put your best foot

forward, architecturally, abroad.

But Eiermann's building is not merely an exercise in diplomatic grace; it is also a highly successful exercise in the manipulation of scale, and a delicate balancing act in non-fireproofed steel.

Both of these unusual aspects of the new chancery are due to the fact that the building enjoyed diplomatic immunity from zoning ordinances and building codes. Its location in a quiet streetscape was made possible by a quirk (now eliminated) in the city's zoning ordinances, which permitted the building of foreign chanceries (i.e. offices) in areas otherwise zoned exclusively for residential use. And because Washington considers embassy property to be ex-

traterritorial, ordinary code requirements, including those for the fireproofing of steel, were waived.

When the German Government decided to build a new chancery in Washington, it chose Eiermann because his skill at architectural diplomacy had been well demonstrated in the German Pavilion at the Brussels' Fair of 1958.

Eiermann faced two fundamental problems inherent in the $3\frac{1}{2}$ acre site: the insertion of a large office building in a street otherwise limited to single family houses, and the relation of the building to the steeply sloping hill. He responded by placing a long (some 300 feet) and narrow building perpendicular to the street, and then stepping it down with the

hill. The chancery drops from six stories at its highest down to two and one-half stories at street level. At the top, where only three floors rise above grade, the building steps back again, allowing the existing, neo-colonial embassy residence to dominate.

However, the chancery still looks like a sizable structure, for it is the three-quarter side view that is most striking at first sight and remains the image of the building—a great visual barrier that stretches across the hillside. From the side, the chancery is a backdrop for all of the activity on the site; the embassy residence is the centerpiece. The gatehouse acts as a pivot point as one turns onto the circular drive.

Mr. Cox, a former Associate Editor of the Architectural Forum, is now practicing architecture in Washington.



"A building of lines and strips rather than mass . . . a hard, efficient and handsome machine."

The continuous balconies and exterior sun screens that characterize the chancery are Eiermann trademarks with a number of functional attributes: they provide emergency egress, ease of window cleaning, and sun shading.

Under more normal U.S. circumstances, Eiermann would have had to execute his balconies and screens in heavier, fire-rated materials. Here, however, he was able to combine wooden screens and trim with a naked steel structure. He exploited the possibilities fully. All the steel and wood members around the German Chancery are thinned down to the point where it becomes a building of lines and strips rather than mass. The strips are predominantly horizontal—and

thus reduce the apparent height of the building even further. It begins to dematerialize and, appropriately, blend into the site.

Eiermann has dramatized this cage effect by pulling the balconies out beyond the building volume, as open superstructures against the sky. When these combine with the stepping down of the building proper, the silhouette produced is spectacular—not unlike the silhouette of a landlocked ocean liner of the prestreamlining era.

But like a great ocean liner, the chancery is at once extraordinarily romantic and relentlessly mechanistic. This is a building with two façades—one superimposed upon the other—and the two façades seem to be saying two dif-

ferent things: the first impression is one of golden fir slats, thin pipes, yellow-tan brick; while a second look picks up the strong, cold, grey steel frame behind the trellis of wood and wire.

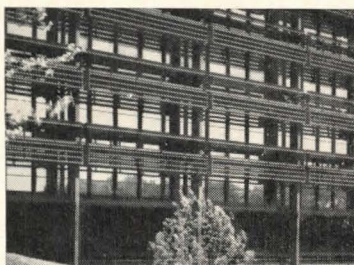
This apparent dichotomy carries over into the building's relation to its site: on the one hand, the warm colors of brick and wood, and the transparency of slats and wires, relate the building to the foliage of surrounding trees. But the steel machine in back stands simultaneously in dark opposition to the surroundings, all the stronger by virtue of this contrast. Neither impression dominates. The building is richer, if more complex, for any inherent contradictions.

A comparison of the German



Chancery with Saarinen's Deere & Company headquarters building (July 1964 issue) seems inevitable. Indeed, some architects have called the chancery an "upside-down Deere" (photos, right).

With their exposed exterior steel frames and sun shades, the two buildings are superficially very similar. But they are not so similar in detail. In the chancery the jointing and expression of the steel is handled in a direct and "industrial" fashion. Beams, columns, and plates frame into each other, and horizontal members are expressed at the expense of the vertical ones. In the Deere building, on the other hand, individual members tend to overlap or run through each other; vertical mem-



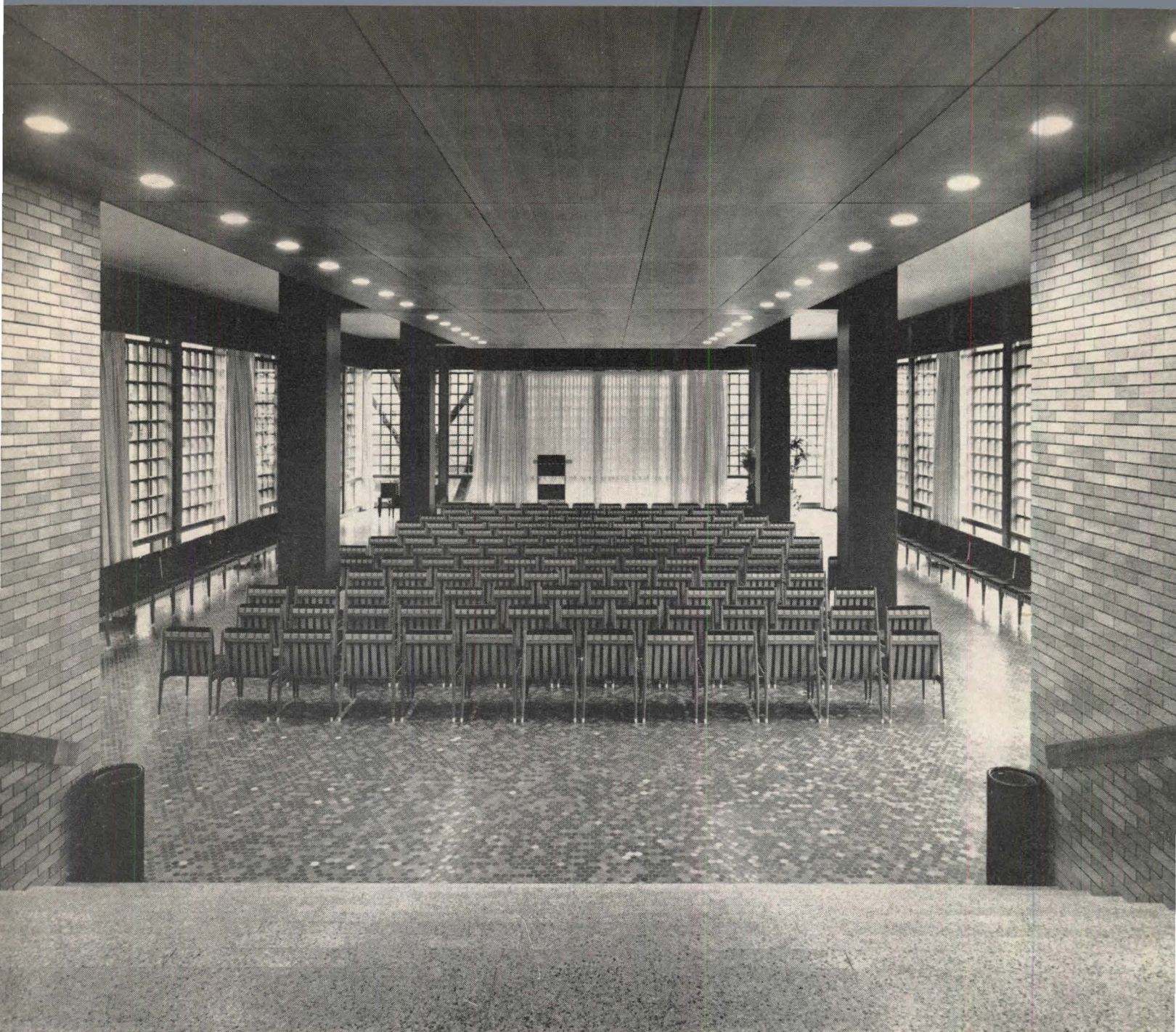
bers tend to run past horizontal members. Deere's steelwork is more willfully artistic, almost ritualistic, like the wood connections in a Japanese temple.

Where Saarinen atomized the structure into thousands of different individual pieces of varying size, Eiermann tended to work in the other direction. On the other hand, Eiermann did contrast his materials and colors, whereas Saarinen limited himself to as few changes of material and color as possible. The sunshades on the chancery are natural wood, light against the painted steel; Deere's are of a self-protecting steel which matches the building's structure.

Since these two buildings are eloquent dissertations on the rich

and unexplored possibilities inherent in the steel frame, it is particularly ironic that both buildings were first designed as concrete structures. Deere was changed to non-fireproofed steel at the client's request (there were no codes in Deere's rural setting). Preliminary cost estimates caused the chancery to be redesigned in steel, and diplomatic immunity allowed Eiermann to expose the material. He now says that he "won by losing."

One of the most striking aspects of the chancery is the rigor and precision throughout. Every brick and tile courses out; every joint and corner is resolved. The workmanship is flawless. Everywhere the building comes through as a hard, efficient and handsome machine.



"There are no interior offices . . . important ones open onto terraces with views across the river."

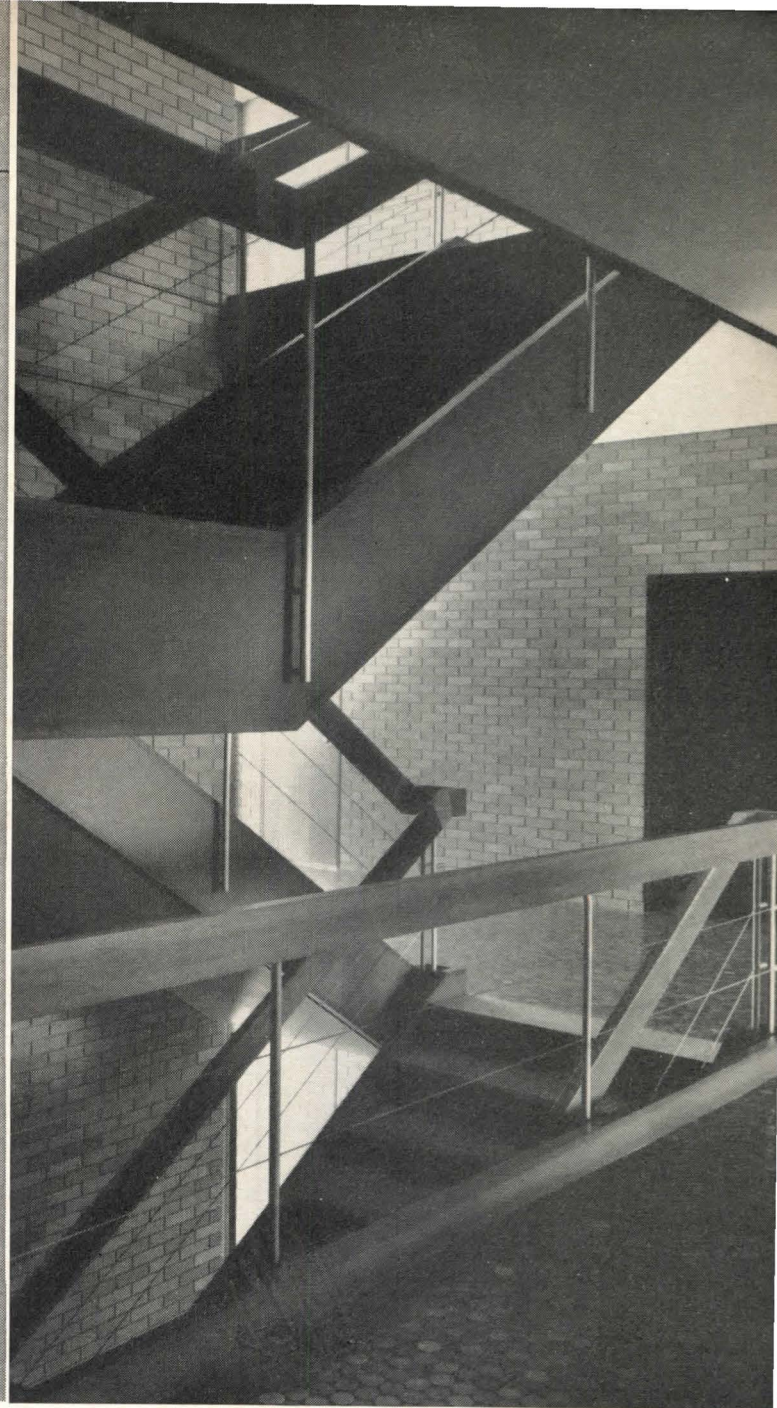
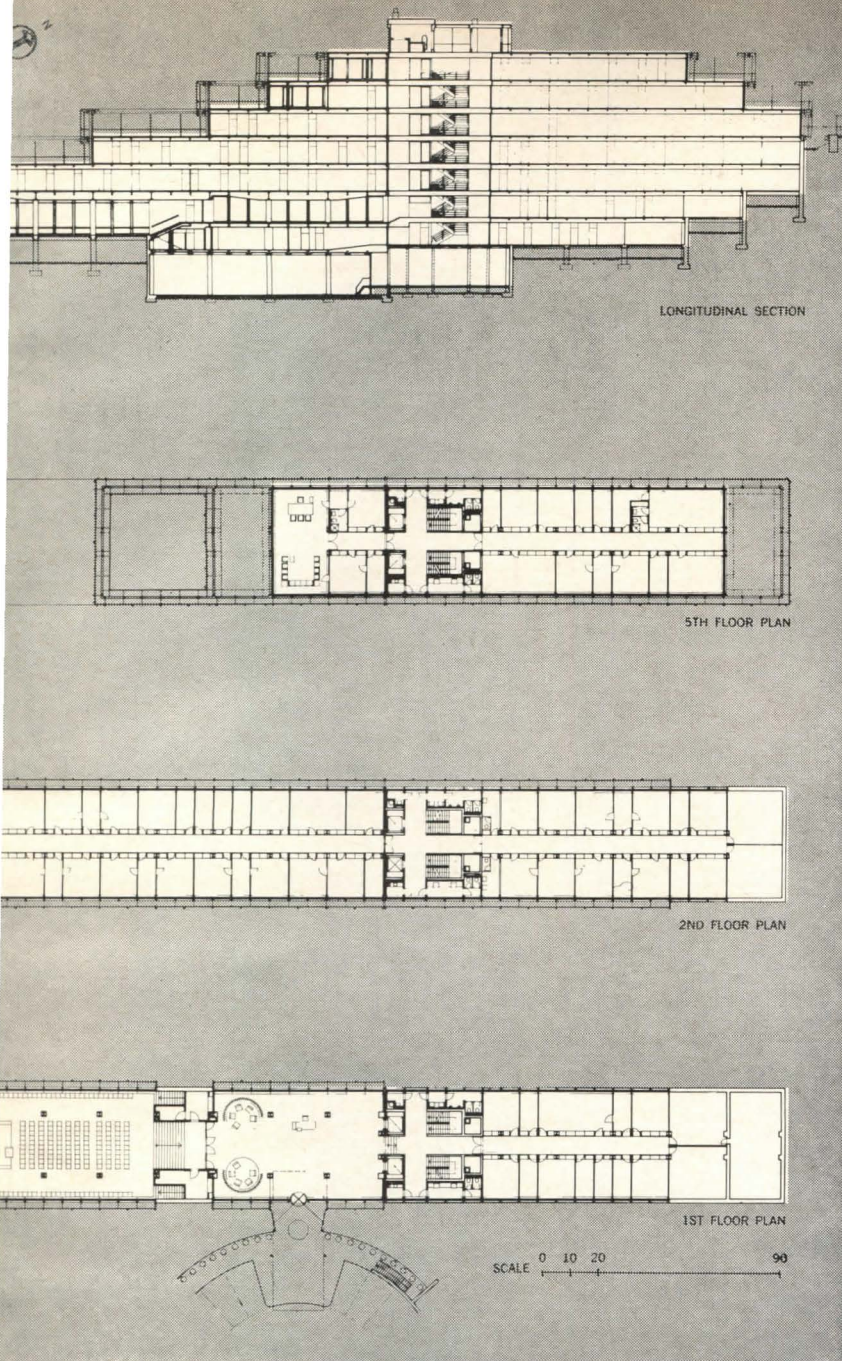
There are a number of tangible advantages to the stepping of the building profile. Important offices and conference rooms open onto terraces with steel-framed views across the river; and with the building cut in half by its core, a variety of different-sized office areas is available. This variety allows specific departments to be self-contained.

Contrary to American practice, there are no interior offices. The building module (7½ feet) corresponds to the close spacing of the steel columns around the exterior of the building. The smallest office is thus a single, minimal bay wide. Although the three-pipe induction system air conditioning is familiar, the use of incandescent

lighting throughout the building is not. Eiermann believes fluorescent lighting looks too flat. His lighting levels, however, are somewhat lower than the levels that fluorescent fixtures would have provided.

While the exterior columns are so closely spaced as to create what amounts to a "bearing wall" of steel mullions, the interior columns are spaced 22½ feet on centers. These interior columns are buried within the closets lining the corridors in the office areas, but they are spaced farther apart and become freestanding in the reception area and auditorium. As a result, the columns above these areas are offset and have to be picked up by transfer beams.

In the extensive cabinet work within the building, Eiermann has used the same natural Douglas fir that he used in his sun-screens and window trim. The color tones of the exterior are repeated as well in the circular quarry tile floorings of the lobbies, auditorium and restaurant. The tiles are lightened in areas without windows and darkened elsewhere. The circle is a recurring motif throughout the building. The entrance drive, door mat, light fixtures, and the large stone discs on the terraces are among the more noticeable and effective instances. However, some of Eiermann's details—for example, the introduction of contrasting terrazzo flooring, and the somewhat finicky stair rails—are not



entirely consistent with the impressive strength and simplicity of the rest of the building.

Unfortunately, the budget would not allow Eiermann to design special furniture for the building. The entrance hall, auditorium, and conference room do contain pieces he had designed earlier for other purposes, but the majority of desks, chairs, and lamps throughout were selected by the German Federal Building Board, and were designed by others. This is the first German Chancery for which the Board has been able to select the furniture, and the result lacks that consistency of interior design which one has come to expect in buildings of this importance, particularly in this country.

FACTS AND FIGURES

German Embassy, 4645 Reservoir Road, Washington, D. C. Architects: Egon Eiermann (Eberhard Brandl, Associate); Lublin, McGaughey & Associates, Architects & Engineers (American working drawings, etc.); Architectural and Engineering Consultants: Aram F. Normandin; Carl Hansen; James Eliopolo & Associates. General Contractor: Wm. P. Lipscomb Company, Inc.

Building area: 95,000 square feet; contains 140 offices, 200-seat auditorium, 40-seat conference room, and parking for 100 cars in underground garage and off-street parking.

PHOTOGRAPHS: George Cserna: pages 62, 63, 66, 67 and 69; J. Alexander: pages 64-65 top and 68; Ezra Stoller: page 65 bottom.





"One could hardly expect a building of this size to be more considerate of its surroundings."

This is probably the last new chancery to be built in a Washington area. Under pressure from such groups as the Kalorama Citizens' Association, whose neighborhood contains Washington's Embassy Row, Congress amended the District's zoning ordinances last October 13 to prohibit further erection of chanceries in single-family residential areas.

Prior to 1958, the properties or buildings of foreign governments were simply exempted from Washington's zoning regulations. From 1958 until last October, approval by the Board of Zoning Adjustment was required before a foreign government could build a chancery in a residential neighborhood—and most of the time

such approval was forthcoming.

The German government had purchased the Reservoir Road property in 1954 and had given the required notice of intent to build before 1958. But with the neighborhood already showing signs of unrest, the Germans shelved their project for six months and examined some 70 other sites—only to return to Reservoir Road.

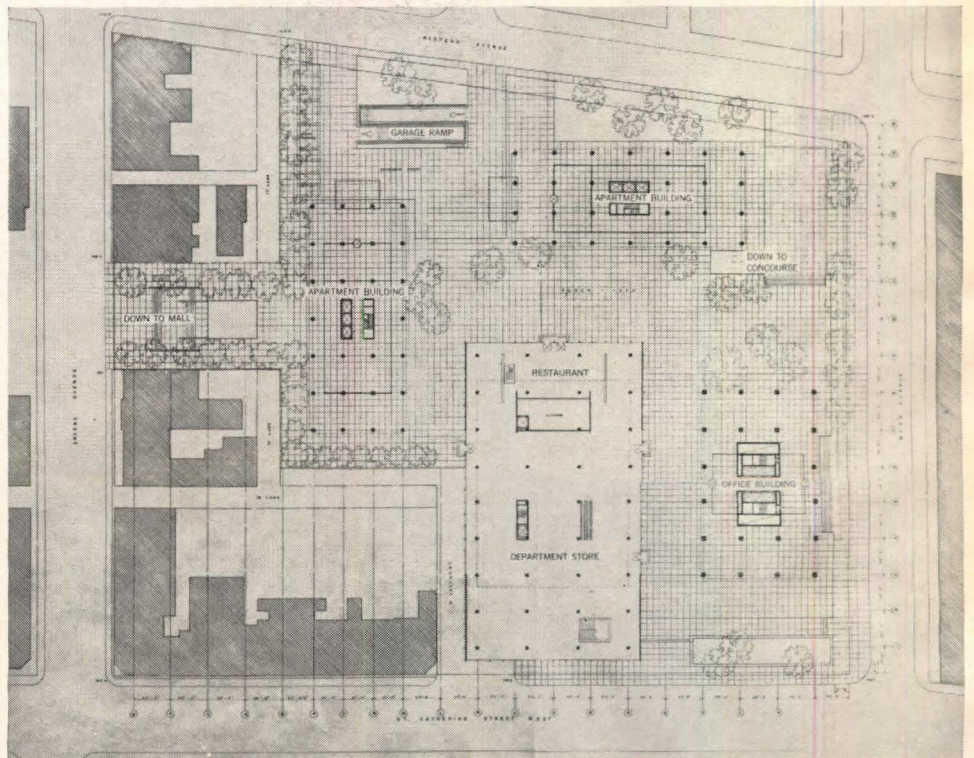
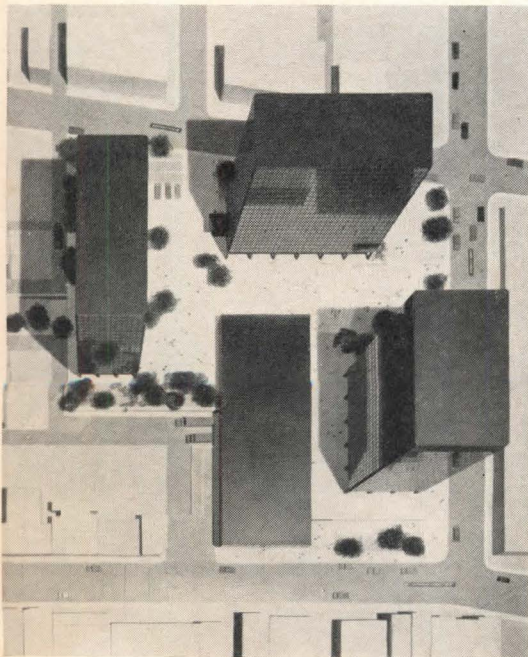
Before proceeding, however, the neighbors were called in for suggestions. The omission of a wall around the site and the provision of an underground parking garage are direct results of this consultation. Again, upon completion, diplomacy eased the way: a special opening for residents of the area.

The chancery has radically al-

tered its surroundings. It so dominates the neighborhood that the houses seem the intruders, not the chancery. The question is whether the neighborhood is better for the change.

Eiermann did all he could to assure that the answer would be yes. This is not only the best of the handful of modern chanceries in Washington, but quite probably the city's best new office building as well. It is appropriate as an embassy building through excellent and elegant design, rather than bombast and/or pretension. One could hardly expect a building of this size to be more considerate of its surroundings. The problems have been recognized and they have been faced and solved.





FORUM CONT'D

• A young German architect, Conrad Roland Lehmann, received his award of a Graham Foundation Fellowship some time ago (for the study of tension-structures), but the first result, now available, of his work under that grant is worth a special mention—and a special showing (right): it is a design for a huge exhibition hall, with suspended platforms on different levels.

• Le Corbusier, the greatest of them all, was invited to design a new structure for the hospital of San Giovanni and San Paolo, in Venice. His scheme, which covers 7½ acres of land and then extends for another 5 acres across the water, on *pilotis* (right) was unveiled last month—and promptly caused a local uproar. But (things *do* change for the better, now and then) this uproar was hardly more than a murmur compared to other uproars in earlier times. So Le Corbusier may yet get to build his \$11 million structure.

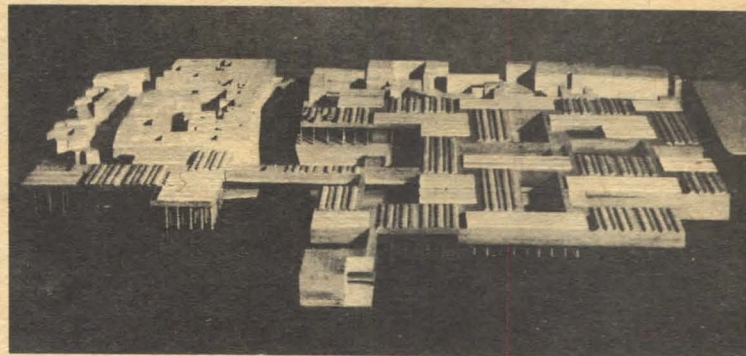
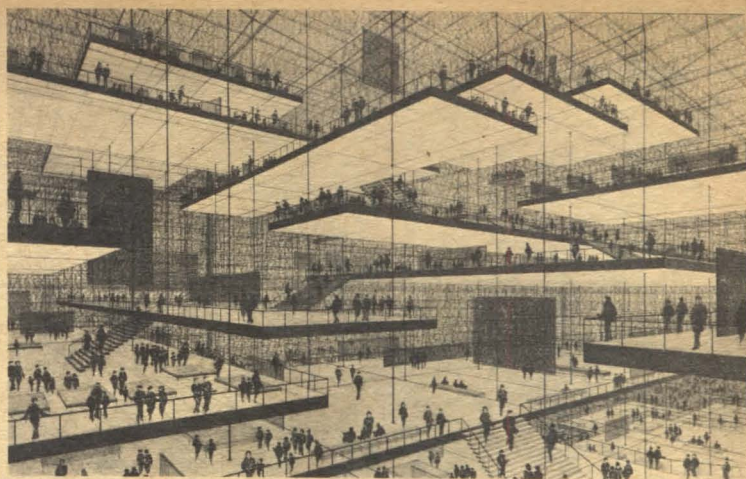
AT HOME

• The coveted \$1,000 Arnold W. Brunner Memorial Prize has again gone to a designer of distinction. Kevin Roche of Eero Saarinen Associates has been named the 1965 recipient. Roche thus joins the ranks of such past winners as Kahn, Pei, Weese, Rudolph, Bushaft and Barnes.

• The 1965 Edward C. Kemper Award for "significant contributions to the Institute and the profession" went to the *AIA Journal's* Editor Joseph Watterson, who has



since announced his resignation effective in June. The AIA Board's citation noted that Watterson has "served brilliantly" and that, under his guidance, the *Journal* has become one of the Institute's "greatest assets." Watterson's abrupt resignation makes the Board's praise sound more than a little ironic. Other AIA domestic citations: Eliot Noyes, Industrial Arts Medal; Robert Damora, Architectural



Photography Medal; Wurster, Bernardi & Emmons, Architectural Firm Award; and the Architectural League of New York, Citation of an Organization.

• The University of Tennessee will open a new school of architecture and apparently has decided that youth can best serve a newborn enterprise. Picked to be the school's first dean is Bill N. Lacy, now associate chairman of Rice University's Department of Architecture, who is all of 32 years old.

• The National Academy of Design has elected five architects to associate membership: Lawrence B. Anderson; Waldron Faulkner, Louis I. Kahn, Eldredge Snyder and Harry Weese.

• California's Governor "Pat" Brown, taking a cue from President and Mrs. Johnson, has set up a state Advisory Committee on Good Design with SOM's Nathaniel A. Owings as chairman. "Our goal," said the governor, "is to create an environment that will challenge and inspire the best that every Californian has to give; to identify the state with the best in contemporary design and with the use of design to increase human environment and understanding." The committee's membership includes the University of California's Acting Chancellor Martin Meyerson, Charles Eames and Robert E. Alexander.

• Appointments: L. Bancel La-

Farge and Edgar Tafel, to the Fine Arts Federation of New York; Charles Burchard, dean of Virginia Tech's College of Architecture, to the District of Columbia Architectural Review Panel; Robert W. Cutler, to the presidency of the New York Building Congress; and Konrad Wachsmann, to head the University of Southern California's new Building Research Institute.

URBAN HONOR AWARDS

The AIA's urban design program is gathering momentum. What began two years ago as a professionally directed activity is blossoming forth as a public education program which the Institute calls its "War on Community Ugliness."

Last month the AIA announced a new awards program for "excellence in community architecture" and presented its first two citations to the cities of Detroit and Shreveport, La.

The AIA praised Detroit's Mayor Jerome P. Cavanagh and the City Plan Commission, headed by Charles A. Blessing, "for their vision in implementing a comprehensive plan for the central 30 square miles of Detroit which will transform and revitalize this great metropolitan region."

Shreveport's Mayor Clyde E. Fant and Downtown Shreveport Unlimited (Arch R. Winter, plan-

(continued on page 73)

MONTREAL: AGAIN BIG SCALE

Montreal's current spurt of redevelopment seems to be setting a pattern different from that of any other city on the continent. Its new look is being shaped not so much by a collection of new individual, unrelated buildings, but by mammoth-scaled, multipurpose urban compositions.

The trend started with I. M. Pei's Place Ville Marie (February 1963 issue), continued with Nervi-Moretti's Place Victoria (page 26), and has now received a third big boost with the announcement of a large office-residential-retail complex to be called Westmount Centre. Montreal has imported top architects for the first two projects, and the third is no exception: Ludwig Mies van der Rohe.

Westmount, when it is completed in 1967, will contain a 21-story office tower, two separate 21-story apartment buildings, and a horizontal retail department store—all sited on a landscaped plaza above an underground shopping concourse and a two-level parking garage.

Mies's design approach offers no surprises. The exterior treatment of the towers above the plaza; the classic proportions of the department store structure; the broad expanses of the plaza—all are his hallmarks.

PHOTOGRAPHS: Hedrich-Blessing

Walter McQuade

THE TREE AS A TARGET OF PROGRESS

The boy was saying now:

"The tree . . . the great tree . . .
It darkens the windows . . ."

Mark said: "Aha!" to himself.
Groby Great Tree was the symbol
of Tietjens. For thirty miles round
Groby they made their marriage
vows by Groby Great Tree . . .

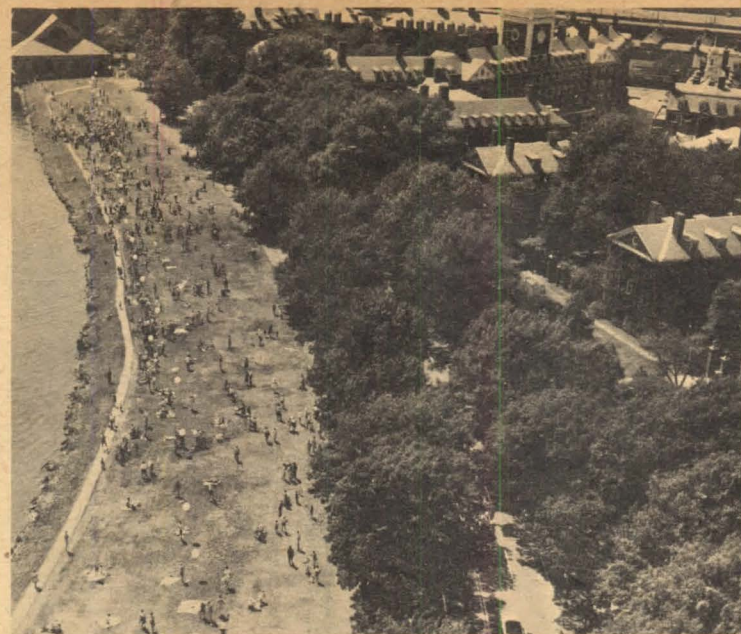
"You couldn't cut down Groby
Great Tree."

FORD MADOX FORD
The Last Post

They did, of course, cut down Groby Great Tree. They usually do, it seems. Here in America, vociferous support can be raised from freedom-loving Americans for dogs, Abraham Lincoln, parimutuels, the Marines, Mom, and water skiing. The right of each family to cook out is becoming precious too. But tree preservation, despite Joyce Kilmer, is less completely reputable. It is a fight left frequently to warmblooded intellectuals (of whom there are these days, fortunately, quite a few). The reason is that trees do keep getting in the way of automobiles, and the basic drive of this nation continues to be hydramatic. We are more concerned with motoring than with anything else in the world or in the mind.

Not that the cars themselves seem to be profiting from the attentions of their lovers lately, as evidenced, at any rate, by recent automobile design. There has been a relapse back into unreality there. The good compact sense, of the 1960 models seems gone again. The time of the Tempest (Pontiac's neat version) has passed; the emphasis is now on the inflated Grand Turismo-gurizmo. Those coldly lascivious Detroit stylists have even begun padding the brassiere of the modest little Corvair, a bad sign for nature lovers of any sort; and for tree-lovers.

The tree-savers remain pretty good battlers, however. In Cambridge, Mass. last winter, where a proposed interchange between Memorial Drive and the inner loop of Boston's road system would have meant sacrificing some fine old sycamores, the tree people fought at public hearings, in favor

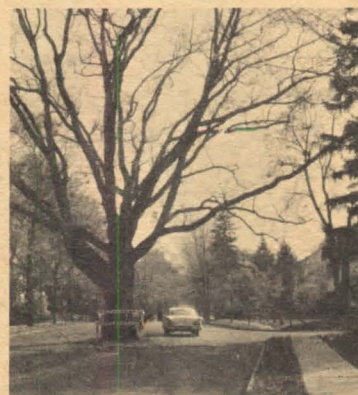


of an alternate route for the road. The tough Cambridge city councilmen growled back that the alternate route would push aside people not just trees, and unfortunately the councilmen were probably correct. But "minute-men" were mustered to patrol the trees in the winter, and at last report the sycamores (above) had come into leaf to greet another spring. The people too.

On the other edge of the continent the fate of some mighty redwoods is still in question. When the California Highway Department revealed it was going to cut a new section of the freeway from San Francisco to Oregon through Prarie Creek Redwoods State Park, public indignation was mustered. Still the highway department hardly grunted; the California highwaymen have a godlike right of eminent domain through even public parkland. Or perhaps it is a demoniac power; citizens who watched them hack through Humboldt Redwoods State Park several years ago think so. The alarmed California tree-fanciers went to court and sued to stay the mighty roadbuilders. Now the State Assembly has passed bills to outlaw the highway department's domain over parks and give veto power to the Park Commission.

Not all the trees are fated to fall. I'm told that in Carmel, Cal., the village council has to approve all tree-cutting, even on private property. Every month the councilmen take a tree-inspection walk, and rule on applications to fell trees or tree limbs. And in Madison, N. J., the great Tuttle Oak

stands in all its civic pride in the very middle of a road laid out in a subdivision 107 years ago. Traffic simply is split to go to either side, around the trunk (below).



More drearily typical of the trend for trees is the approaching fate of Manhattan's old Madison Square (below), as mentioned last month. New York's charming traffic commissioner wants to build a parking garage under the park—

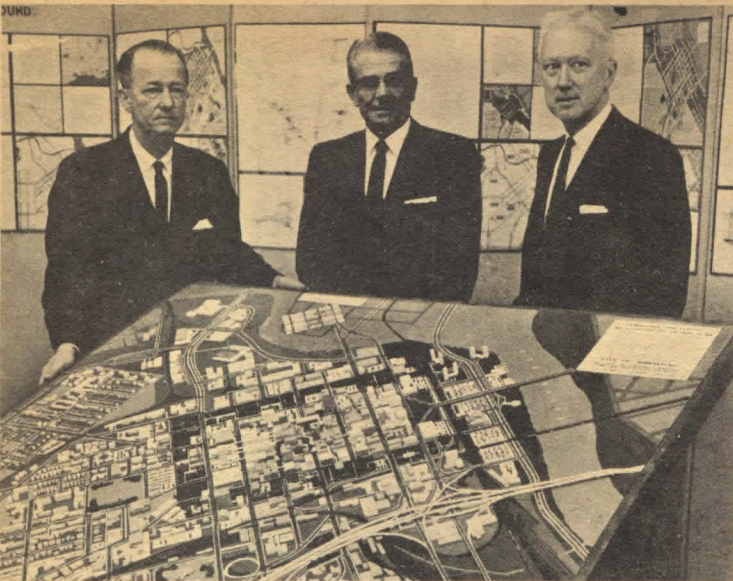


he is one of those traffic tycoons who counts cars like a jolly miser massaging his pennies. In opposition, the parks commissioner, the planning commissioner, and the Municipal Arts Society all have pointed out that excavating for the garage will kill the ancient trees there, among other evils. But the mayor of New York, a man who sometimes acts as if his veins were filled with Philadelphia cream cheese, slackly says go ahead with the garage—although, just the other day, he signed a landmarks preservation bill. A tree is not a landmark in Manhattan? It is a clear sign that, despite the new legislation, New York will probably continue to be a town for masochists in preservation matters.

Losing these trees will be particularly absurd. Madison Square is a relatively small park and rather a formal one, but used quite informally. It is a place where office workers sit and eat their sandwich lunches in element weather; nearby are several mammoth insurance company buildings. But with the tall trees gone (replaced in all likelihood with short ventilation exhausts from the car crypt beneath) Madison Square's formality will become formidable. The only verticals will be the street lamps. They might as well bring the telephones and the filing cabinets down from the vast open floors of the insurance companies.



Here is a suggestion for an appropriate rejuvenation of Madison Square after its approaching sack. Simply, when the tall trees have been cleared away, place concrete pots around the place with Bonsai trees in them, shrunk but perfect, living oaks and plane trees. Transistor-sized trees for the cybernetic age. Labelled, of course.



ning consultant, at right above) were cited for the 24-block Downtown Shreveport Plan, "an excellent example of the economic, social and esthetic value of an architectural plan encompassing buildings, structures, utilities and their total physical environment."

• The University of California has announced seven finalists in the national competition for design of its Arts Center at Berkeley. They are: Marvin Hatami of Denver; John W. McGough of Spokane; Louis J. Johnson, Chicago; Earl Swenson, Nashville; Sanford Pollack, Berkeley; and Mario Ciampi and Alfred Wasthuber, both from San Francisco. The winner will be announced July 17.

TRANSIT

Across the country, in the past month, there were stirrings of interest in modes of transportation that use rails instead of wings or rubber tires. It was an encouraging phenomenon in a nation that in postwar years has seemed to regard trains and subways with the same disdain an earlier automotive generation accorded the horse.

SIC TRANSIT GLORIA

While public-supported mass transportation has long been advocated by planners, architects and others, the business community has given only sporadic support to the idea. But now, one of the nation's most prestigious business groups has come out four-square for transit.

In a 99-page report released last month, the Committee for Economic Development, a nonprofit

research organization financed by major corporations, ominously predicted further deterioration of urban areas and growing Federal intervention unless cities meet their mass transportation needs. The report, based on a three-year study, further stated that rapid transit should be exempt from property taxation and regulated not by states, but by "metro governments" which overlap political boundaries. To help finance rapid transit, it said, states should rebate more gasoline tax revenues to the cities.

The report was issued as an official policy statement by CED's research and policy committee, but it was not unanimous. Nine members of the 50-man committee filed dissenting opinions. Theodore O. Yntema of Ford Motor Company, for example, charged not surprisingly that the report ignored "the fact that urban thoroughways are usually the lowest-cost streets per mile of travel."

But some dissented because they thought the report was too timid in its avoidance of the conclusion that "our cities simply cannot hold many more automobiles."

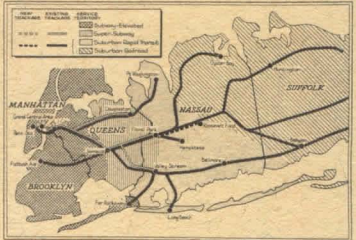
SUPERSUBWAYS

In New York, responsibilities for the various forms of transportation are as segmented and jealously guarded as the turfs of teenage gangs. Yet last month a progressive idea was born here, involving, of all things, the integration of two modes of travel.

The City Planning Commission proposed making the Long Island Railroad and the Transit Authority partners in running "super-subways" of the Railroad's cars on the Authority's tracks. The result

would be that Long Island commuters could ride their trains all the way into Manhattan, getting off at the regular subway stops (map below).

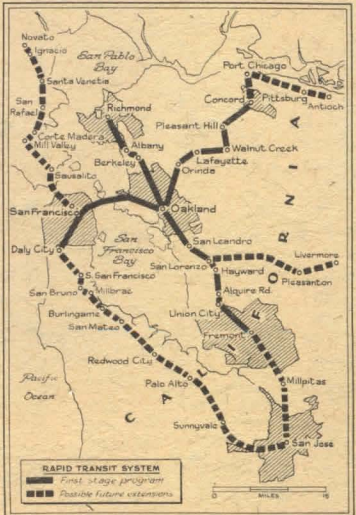
Commission Chairman William F. R. Ballard said similar tieups might well be arranged with the New York Central and New Haven railroads to serve Westchester County and Connecticut suburbs. "This is the kind of imaginative coordinated transportation system the metropolitan area needs," Ballard said, and we agree.



TEST TRACKS

Something even rarer than talk about rail transit — the actual building of a system—became reality in the San Francisco Bay area last month. In the suburb of Concord, the Bay Area Rapid Transit District put its first 2.5 miles of track to use. Rolling on this brief stretch (the system eventually will have 75 miles of rail lines; see map below) are laboratory models of the District's cars, filled with test equipment rather than people.

The testing program will cover such matters as reduction of noise and vibration, automatic fare collection, automatic train controls,



and roadbeds. "The point of the test track," said District General Manager Bill R. Stokes, "is to provide, for the first time, a coordinated, comprehensive effort to ad-

vance the art, state, and knowledge of rapid transit by the 21st Century so that we will have made it competitive with the modern automobile and freeway."

Mr. Stokes' rhetoric is matched by the scope of the District's efforts. It will spend something over \$1 billion to give commuters in three counties an alternative to their automobiles. When Mr. Stokes speaks of "art," moreover, he means it: the District has lined up a small army of architectural and esthetic consultants, including Donn Emmons, Ernest Born, and Lawrence Halprin, and John E. Burchard, who are now at work on the system's non-mobile elements.

DOWN WITH CHICAGO'S 'EL'

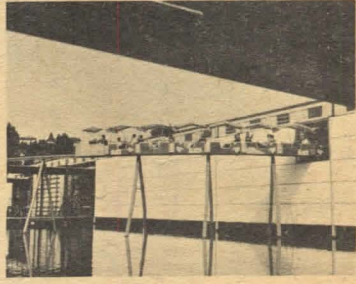
Chicago may replace the elevated rail lines that define—and deface—its Loop with a subway. The city plans to ask the federal government for \$1.25 million in transportation planning loans, with an eye toward undertaking a 10-year transit program costing \$300 million. In addition to the Loop subway, the program would include rail transit lines on the median strip of Kennedy expressway.

LaSalle Street bankers have advanced a plan for financing the subway through a combination of federal grants and assessments on downtown property owners. An old Illinois law which caught the canny bankers' collective eye permits special assessments for subways to be paid off over 40 years, instead of the 20 allowed for other public improvements.

EXPO 67

ARTIFICIAL LAND

International Fairs (present company excepted) often demonstrate some intriguing design solutions that prove to be applicable to much larger, urban problems. We don't believe the designers of last year's Swiss National Exposition, in Lausanne, knew that their delightful monorail train (below), which went over and under and



right through exhibition buildings, and was totally independent of every other traffic "grid" in the Exposition, would demonstrate how easy it might be to solve some of the traffic problems in modern U.S. cities. Nonetheless, it did.

Anyway, up in Montreal, where they are busy preparing for *Expo 67* (don't ever call it a "World's fair" up there), the exceedingly competent management has just completed the first stage of another, unintentional demonstration of significance to many U.S. cities: they have created about 440 new acres of land (islands and peninsulas) in the St. Lawrence River on which to put the *Expo* buildings (see "before" map, and "after" aerial, below). The cost of



this operation was about \$25 million, which makes it about \$130 per square foot! (Admittedly, much of the fill was available without cost, because they were building a subway under the St. Lawrence at the same time.)

The Chicago Architect, Harry Weese, has been trying to persuade his city for years that it would make eminently good sense to create artificial islands in Lake Michigan out from the Loop, and some distance away from the present lake shore, and connect them to the mainland by causeways. Such land might be created, causeways and all, for \$5 per square foot, and thus support reasonably priced housing and other facilities a few minutes' ride from Downtown. Nobody in Chicago has listened very carefully to Mr. Weese so far, but now that *Expo 67* is proving his point rather dramatically, Chicagoans may take him seriously after all.

PLANNING BIG



NO COMMENT

Picture of three men looking into something which turns out to be the third version of the new "Madison Square Garden" (designed by Charles Luckman), and which will replace McKim, Mead & White's almost-demolished Pennsylvania Station. The three men are, from left to right: Pennsy's Treasurer William R. Gerstnecke, the Garden's President, Irving Felt, and Mayor Robert F. Wagner.

BOOKS

Most run-of-the-mill books and magazines on architecture and related matters are reviewed in other publications—which gives us a chance to concentrate on some of the printed matter generally overlooked elsewhere:

- *Chicago's Famous Buildings* is a photographic guide to the great Chicago Schools, past and present, put out both as a hard-cover and as a paperback book, and edited by Arthur Siegel. Siegel took many



of the pictures, too, as did Richard Nickel and others. The list of credits includes such people as Carl Condit (who practically invented the Chicago School) and City Planning Commissioner Ira Bach, and is much too long to print here. The only question raised by this little gem is: "Why didn't anybody put it out before?" The answer, of course, is that there wasn't a Graham Foundation directed by John Entenza until recently, and you cannot do this sort of first-rate job without Foundation support. The Graham supported this one, and the result is a \$1 paperback—the best buy in architectural books these days.

- *La Tour Eiffel*, a stunning picture-and-word record of that glorious construction in the center of Paris, was published a few months ago by Robert Delpire, 278 Boulevard Raspail, Paris 14c. The book (text in French) is one of the hand-somest of this type that we have come across in years; and though

spectacle regardé et regardant
 12 édifice inutile et irremplaçable,
 témoin d'un siècle et monument
 toujours neuf 12 objet inimitable
 sans cesse reproduit 12 monde
 familier et symbole héroïque 12
 signe pur 12 métaphore sans frein

LA TOUR EIFFEL

you will probably have to write to the publisher himself to get a copy, the effort is well worth it. This book is not only a great documentation of its subject; it is also a first-rate piece of typography, layout, photography, and historical research.

QUOTES

"Paradoxically, it is the search for the universal rather than the particular that drives some architects toward the perfection of detail and method, while it is the fear of universal systems dogmatically imposed, that compels other American architects toward greater and greater individualization."—*Modern Museum Architecture Director Arthur Drexler, explaining U. S. architecture to the Soviets.*

"The way to solve New York's traffic problem is to make all the streets one-way, with the 'one-way' signs pointing away from New York." — *NYC Traffic Commissioner Henry Barnes.*



PHOTOGRAPHS: Page 8: Library of Congress; Julius Schulman; Washington Post photo by McNamee. Page 9: World Wide; Whitney Museum of American Art; Roy Flamm. Page 10: R. Richards. Page 71: AFI. Page 72: Arber-French; Delight Lewis; W. N. Seymour Jr. Page 73: Maps © The New York Times Co. Reprinted by permission. Page 74: Richard Arless; New York World-Telegram photo by Fred Palumbo.

Bare USS Cor-Ten Steel faces the music

From the top of the 100-ft. high tripod down to grade, this bandstand at Purdue University is unique. The tripod is made of bare, unpainted USS COR-TEN Steel that is weathering to a pleasing dark brown. From its apex, 60 stainless steel cables support a steel and concrete canopy over a bandshell that resembles a half circle of Stonehenge megaliths.

The architect specified bare USS COR-TEN Steel for exposed steelwork to eliminate painting and maintenance. COR-TEN steel has an unusual ability to protect itself against atmospheric corrosion. As it weathers, it forms a dense, tight oxide that protects the base metal against further attack. If scratched, or abraded, the oxide re-forms. The resulting color and texture have a natural, architecturally pleasant look. Unlike man-made coatings, this one improves with age and maintains itself.

USS COR-TEN High-Strength Low-Alloy Steel provides 40% more usable strength than structural carbon steel. The columns were fabricated from T-sections cut from COR-TEN steel WF beams. Stiffening diaphragms are welded between the T-sections. The canopy is made of precast concrete panels set in a steel grid, and is pinned to the tripod columns to prevent sideways.

A great many exciting things are being done with exposed steel these days, especially USS COR-TEN Steel. A word of caution: The use of bare COR-TEN steel is not appropriate for all applications. An understanding of its limitations is necessary for satisfactory use. While COR-TEN steel is available in practically all forms produced in carbon steel, the designer should avoid specifying it where the quantity will be less than one ton of a size. This will help minimize procurement problems. We suggest you send for our new booklet, "USS COR-TEN Steel for Exposed Architectural Applications," and consult with a USS Construction Representative through your nearest USS Sales Office. United States Steel, 525 William Penn Place, Room 8062, Pittsburgh, Pa. 15230. USS and COR-TEN are registered trademarks.

*Slater Center for the Performing Arts,
Purdue University, Lafayette, Ind.
Architect: Joseph Baker and Associates.*



LETTERS

VOL. 122, NO. 1

Forum: Delighted with Vol. 122 No. 1! All good wishes for your long life and good health.

WM. S. COWLES JR.
Shelburne, Vt. Architect

Forum: Congratulations on your coming-out issue. Its objectivity and high motivation make me feel that you will provide the profession and the public with a needed service long overdue.

ISADORE ROSENFELD
New York City Architect

Forum: Your first Renaissance issue was truly fine—truly the best architectural magazine I've seen. Perhaps your trauma was for the best.

HOWARD LEROY DAVIS
Architect

Forum: The April issue shows great scope. I like the broad strokes combined with the intimate detail.

Congratulations. And depend upon us to produce unsolicited comments and advice at frequent intervals.

NATHANIEL A. OWINGS
San Francisco Architect

Forum: As a former assistant editor of the Architectural Review, may I send you my most enthusiastic congratulations on your rebirth.

The first issue of the new Forum is splendid, and I hope it has a long, prosperous and influential future ahead of it.

MOIRA B. MATHIESON
Catalog of Original and Measured Drawings of Historic American Buildings
Philadelphia

Forum: The first issue of the Forum is a delight—fresh and invigorating and full of off-beat surprises, and yet retaining many of the things that made the old Forum so fine.

BRIAN R. GRAY
Batten, Barton, Durstine & Osborn, Inc.
New York City

Forum: The April issue was very much enjoyed and appreciated by me because of its text, format and design. In fact, because of these items, I feel it is superior to the old Forum and certainly hope you can continue the precedent of high standards set in this first reissue. I am looking forward to receiving the next and continued issues and encourage your very high standards.

THEODORE L. MULARZ
Aspen, Col. Architect

Forum: Communication is the spine in our thinking about urban America. It's fine to have the Forum back, and to have it back in such a healthy state. Thank you!

RICHARD SAUL WURMAN
Philadelphia Architect

Forum: Out with the old, in with the new. But can you possibly continue such quality? My congratulations for a superb first issue—and good luck.

A. L. AYDELOTT
Memphis Architect

Forum: Our heartiest congratulations on the first issue of the Architectural Forum. It looks as if you've picked up right where you left off, with barely a pause, with the exception that you've added residential architecture to your editorial outlook. We're delighted, of course, to see this addition.

JAMES W. PLUMB
American Plywood Association
Tacoma, Wash.

Forum: I have just read with pleasure the first edition of the new Forum. Welcome back! And congratulations on an extremely readable and thoughtful treatment of the state of contemporary American urbanism.

EUGENE A. PUHOPEK
Graduate Student
School of Art and Architecture
Yale University

Forum: This is far more than the usual "congratulations-on-a-new-edition" letter. I have just read the new Forum and cannot let it go without telling you how beautifully the whole publication hangs together.

If it is the job of the philosopher to "see the world steadily and see it as a whole," how much more incumbent upon each of us in our lines of activity to see them more steadily and more as a whole. A publication and its editor who can undertake this process for us deserve the greatest of praise, and in saying this I certainly do not exclude the managing editor or the make-up man.

Congratulations to all of you.

PHILIP T. FARNSWORTH
Executive Vice President
California Redwood Association
San Francisco

Forum: I am truly impressed and grateful for the quality and scope of your reborn Forum.

FLETCHER ASHELY
Cambridge, Mass. Architect

Forum: Congratulations! The new Forum seems truly liberated.

EDWARD D. GRAFTON
Miami Architect

Continued on page 81



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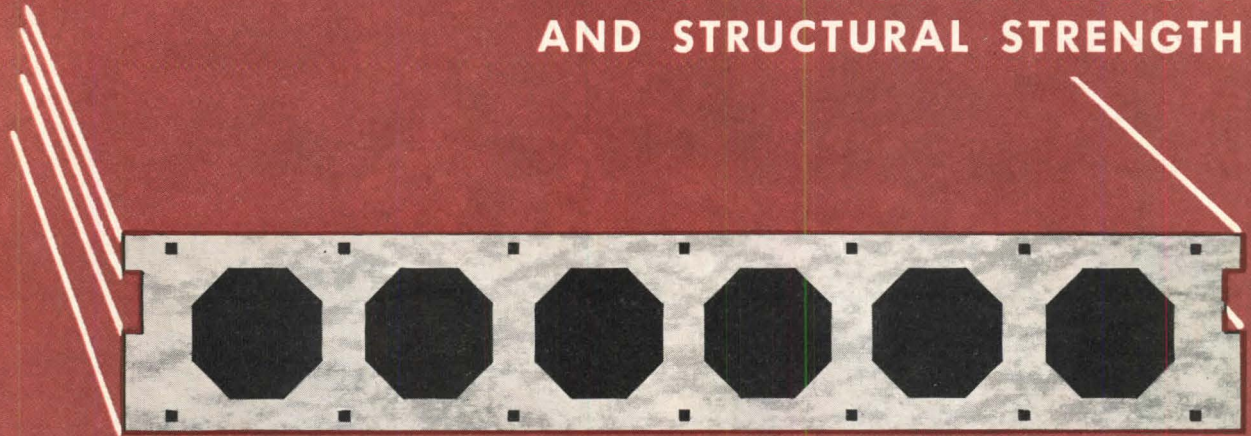
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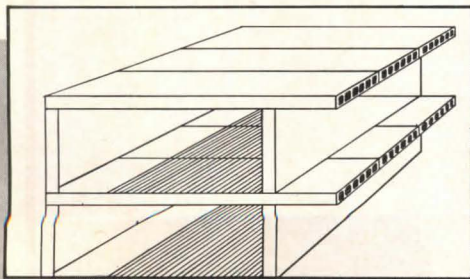


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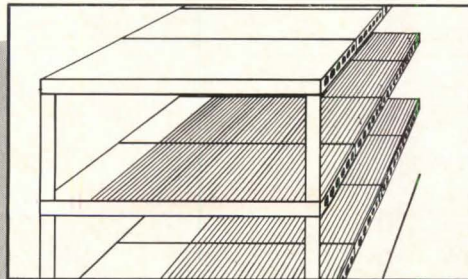
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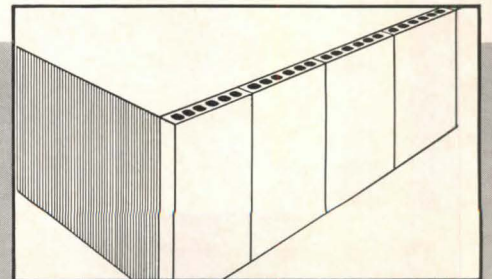
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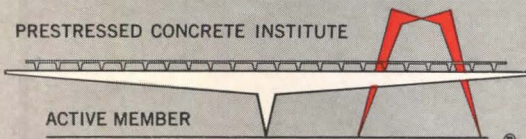


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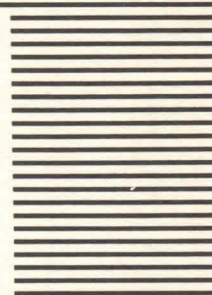
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LETTERS

Continued from page 76

Forum: If the superb first issue of the revived Forum is a portent of things to come, a brief but cleansing trip to the Elysian Fields, like that taken by Forum, might well be wished upon several other architectural publications I can think of.

Okay, now live up to the promise!

MARK T. JAROSZEWICZ
Bloomfield Hills, Mich. Architect

MIXED NOTICES

Forum: I am glad the hiatus was brief. It is wonderful having Forum back. We have missed it.

I cannot, of course, let go by two minor items in connection with your April issue. On page 42, you speak of an annual rate for urban renewal of \$675 million. This is complicated and technical, but the precise figure is \$700 million for fiscal '66.

On the same page you state that the Kennedy Administration tried to get Congress to pass a broader "land bank" program in 1961. This is not the case.

WILLIAM L. SLAYTON
*Commissioner
Urban Renewal Administration
Washington, D. C.*

Forum: I am in the process of reading the first issue of the Forum, and I like it very much, although I think the oatmeal paper part of it is too folksy.

EDMUND N. BACON
*Executive Director
City Planning Commission
Philadelphia*

PAYOLA

Forum: I think your article "JFK Forgotten" (April '65) is particularly significant. As the number and size of architectural commissions awarded by government increase, the relationship between architects and "practical politicians" becomes more disturbing to the conscience of the profession.

Few architects, it seems, care to discuss this subject publicly. To political fund-raisers, architects must appear as obvious subjects for the extraction of contributions. The architects' own code of ethics, by precluding competitive bids and most other typical choice-influencing factors, permits selection to be absurdly easy: the architects who pay sufficient tribute get the jobs.

But the same code of ethics prohibits architects from making

donations to gain competitive advantage over their fellows—and this is where the professional conscience becomes troublesome, for what other reason may an architect have for making a political contribution significant enough to be noticed at party headquarters? It should not be very difficult to distinguish between good citizenship and submission to political pressure.

Nearly four years ago in an editorial entitled "The High Cost of Payola" (August '61), Forum warned of "the deterioration of men's character in a climate of bureaucratic stagnation and corruption" and called for collective action by professional societies to rid architecture of the "system" whereby architects "stand accused in the public eye." Forum's call hasn't been answered effectively yet—and as the April '65 article suggests, the problem is still with us.

As architects, we may feel we are on the side of the angels in the "War Against Ugliness," and we are prone to speak of "integrity" and "discipline" in our work. Is it not time to remove the "ugliness" of payola in any form from the practice of architecture, and to apply principles of "integrity" and "discipline" to every area of the conduct of practice as decisively as to the design of buildings and the planning of communities?

You have always spoken clearly and with courage, Forum. It's good to have you back again.

RALPH T. ROWLAND
Hamden, Conn. Architect

SCSD CREDITS

Forum: The article on the School Construction Systems Development project, "Architecture by the Carload" (April '65), while accurate and informative, may leave some readers with an impression which we are sure was not intended, i.e., that the SCSD components were designed by the SCSD design team.

The SCSD project has been a major analysis and design effort involving the collaboration of a comparatively large number of people from government, industry, education, architecture, and engineering. For example, even within the SCSD staff, when working on the educational analysis which formed the basis for the performance standards later established, the team was led by Dr. James

Continued on page 84





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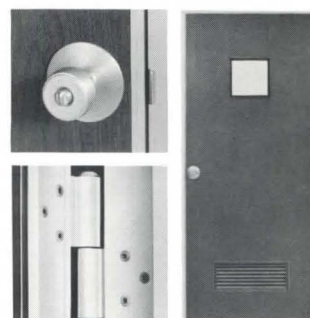
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FEATURES

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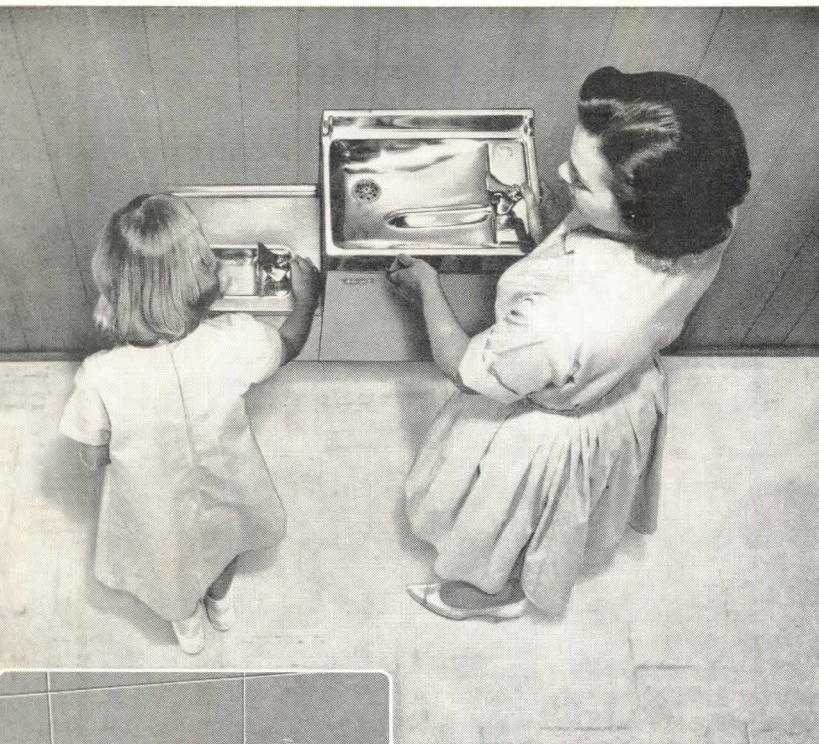
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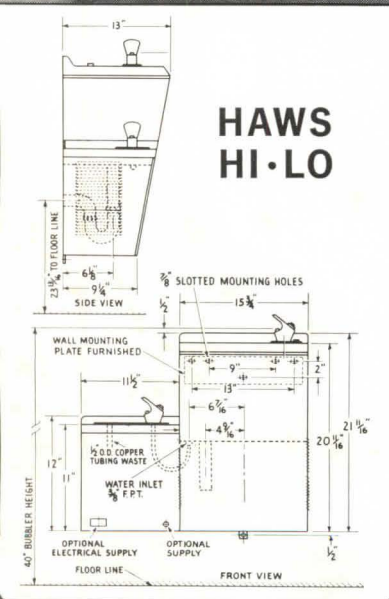




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LETTERS

Continued from page 81

Laurits, an educator, while in architectural matters Ezra Ehrenkrantz took the lead. But it was always a joint effort and the SCSD staff contributions of all were vital: Laurits and John R. Boice (the educators on the staff), Christopher W. Arnold, Visscher Boyd, Vernon C. Bryant Jr., Bert E. Ray, and Peter Kastl (the staff architects). All contributed to design analysis, to establishing criteria for component design, and also to the design of the mock-up building.

Because of the fact that component design was largely the responsibility of the bidders (within the limits of the SCSD performance specifications), much credit is due to Inland Steel Products, Lennox, Hauserman, Hough, Western Sky Industries, Worley and Educators Manufacturing Company and their in-shop designers. Special recognition, however, is due to Architect Robertson Ward and The Engineers Collaborative who worked together as consultants to the Inland Steel Products Company in the design, development and testing of the Inland structural and ceiling-lighting system and who made an immense contribution to the economic and architectural success of the project.

Whatever the ultimate judgment is regarding SCSD's contribution to education, architecture, and building science, those of us intimately involved see the project as an attempt to develop a rational design program in response to a serious analysis of a social activity, rather than a personal architectural response.

JONATHAN KING
*Educational Facilities
Laboratories, Inc.*

EZRA EHRENKRANTZ
*School Construction
Systems Development*
New York City

Forum: Your recent article covering the SCSD project clearly describes the basis upon which the program was organized to state the problem and its interim solution, the Palo Alto mock-up, but mysteriously omits mention of the equally important area of contribution—the development of the product.

As you must imagine, the translation of the performance specifications into an economical, functional and profitable product was an immense undertaking. It was accomplished through the efforts

of a dedicated staff of designers guided by Architectural Research Consultant Robertson Ward Jr., together with The Engineers Collaborative of Chicago. Mr. Ward's talents, well known in the architectural profession, often carried the product design far beyond the stated aims of the performance specifications.

We feel that this development period, comparable in many respects to the design and production of an architectural scheme, is too often ignored in favor of the more romantic conception of a completed building. Mr. Ward has given all of us, through his understanding of this important phase, an opportunity to utilize those high qualities established in the SCSD performance specifications.

JOSEPH C. WHITE
*Vice President, Engineering
and Product Development
Inland Steel Products Company
Milwaukee*

SCSD involved entirely new forms of collaboration between various groups of people, which makes it difficult to decide how credits should be stated and where credits should end. The Forum feels, on second thought, that the contributions Mr. Ward and the Engineers Collaborative should have been noted: the pivotal role of professional services in design of the components (covered in the February 1964 issue) deserves underscoring.—ED.

Forum: As one of the component suppliers for the SCSD program, I cannot let this opportunity pass by without commenting on the excellence of your article. The photographs are extremely good, and the content of the article is most interesting and timely in that it brings the reader up to date on what has transpired since your initial announcement of this program last year.

I believe I had a natural reaction to the article, being involved in the mechanical aspect, in that I would like to have seen more on the mechanical system... I believe there is a very interesting story in the development of the mechanical system from an architectural standpoint. To the best of my knowledge, there has never been a product which has been basically designed to heat, ventilate and air condition which has been so strongly influenced by architectural conceptions...

NORMAN L. RUTGERS
*Director of Education
Lennox Industries Inc.*
Marshalltown, Iowa



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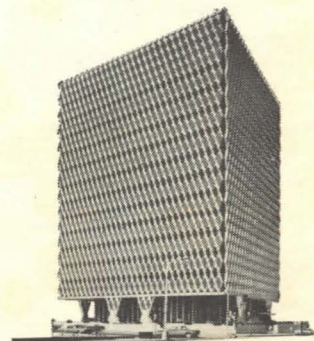
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Curtis & Davis, New Orleans, La.

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