THE ARCHITECTURAL FORUM / SEPTEMBER 1968

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FORUM

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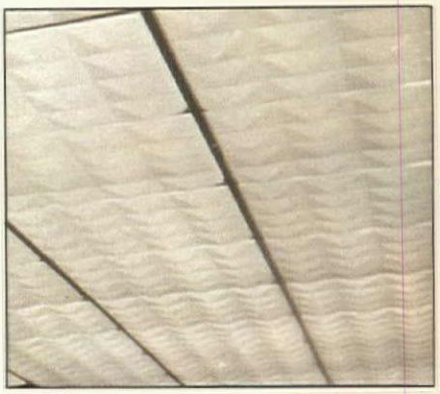

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Cover: Austrian Exhibit at Triennale (page 40). Photo by Hubmann

THE ARCHITECTURAL FORUM
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PUBLISHER'S NOTE

This is the season of polls and surveys, most of them taken by or for politicians to find out what people are thinking and what they are going to do. The results can often be deceptive, simply because people, being people, sometimes change their minds and do something else.

So when the FORUM takes a survey of architects, we steer clear of speculative questions and ask for facts: What are you *doing?* The results don't have to be "interpreted"—they speak for themselves.

When the FORUM recently surveyed some 3,000 registered architects about their reading habits with the professional press, all we asked was: What professional magazines do you get? Which ones do you read? How often? How much of each do you read?

We found out that, among five magazines with variations of the word "architect" in their names, more architects were reading the FORUM than any other; more were reading it more regularly than any other; and more were reading more of it than any other. To be more specific:

- 76.2 per cent read at least one of the last four issues of FORUM, whereas only 63.2 per cent read at least one issue of Magazine X, the least read of the five.
- 62.8 per cent read three or four of FORUM's last four issues, as against 49.2 per cent for X, with other scores ranging in between.
- 53.9 per cent of our regular readers (three or four of four issues) read more than a third of each FORUM on the average. The lowest score in the tally was 41.9 per cent—again for X.

As we said earlier, the results speak for themselves, but we can't help "interpreting" them to mean that we must be doing our job reasonably well. We conducted a comparable poll a year ago, and discovered that the "more" of 1967 became even more in 1968. That makes us feel all the more better!

—L.W.M.

30 year life for Kentile Vinyl Asbestos Tile floors—at 3¢ per square foot yearly maintenance cost!

Owner-conducted wear test at United Fuel Gas Company Headquarters proves so outstanding, vinyl asbestos tile now specified for over 50 branch offices.

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.014″ wear in 5 years! United Fuel Gas Company installed Kentile® Vinyl Asbestos Tile in its 11-story headquarters building in Charleston, West Virginia. Five heavy-wear years later, tiles were removed for testing from areas bearing the roughest, toughest, most abrasive wear—and compared with new, unused tiles by micrometer. The difference in thickness: an amazingly small .014″!

30-year life projected. According to Mr. Charles S. Knowles, maintenance supervisor of the UFG Headquarters Office Building: "Based on this test, we expect the majority of this tile to give service for a period of 30 years before replacement should be necessary."

Floor a perfect "Public Relations" image. In all twelve years this Kentile Vinyl Floor has been down, it has maintained the attractive appearance so consistent with the "clean fuel" image of this utility. Daily sweeping, twice-a-week damp mopping, and a buffing every two weeks are the only care required. Cost of upkeep: 3¢ per square foot per year!

Vinyl asbestos tile now specified. On the basis of this superb performance, UFG has specified the use of vinyl asbestos tile in over 50 branch offices. As one official noted: "It has performed well, even in heavy-traffic areas such as at counters where people pay their bills and in showrooms. You couldn't ask for a better floor tile."

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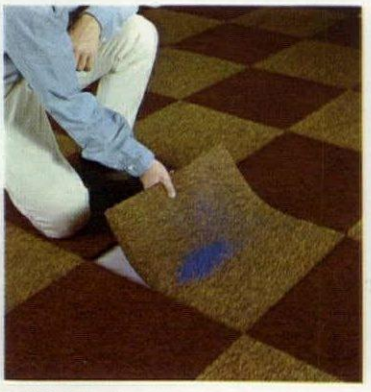
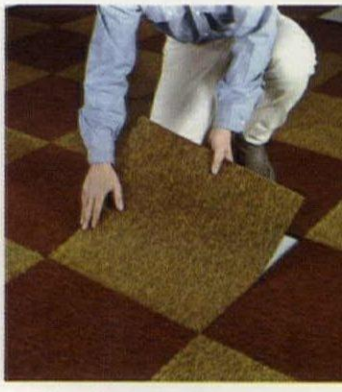


■ "Rotating" is exclusive with Heugafelt. When most conventional contract carpeting is worn beyond repair, tough durable Heugafelt carpet squares in high traffic areas can be simply rotated to any part of the room. Traffic paths are out!



■ Heugafelt shrugs off burns and stains that ruin conventional carpeting. When serious damage occurs, such as acid, a square is simply replaced—no patching, cutting or matching.

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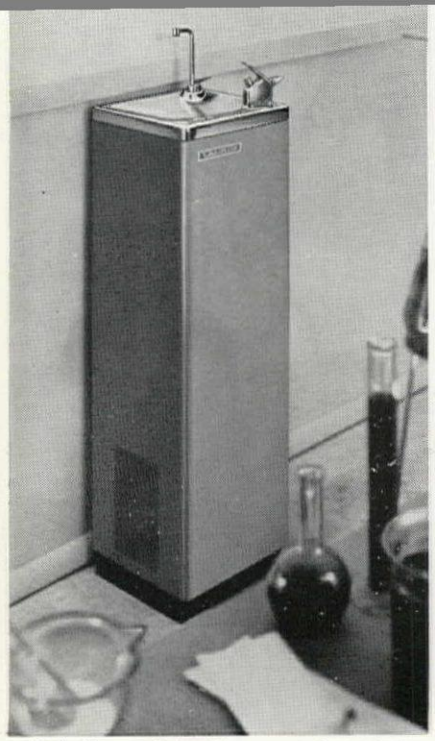

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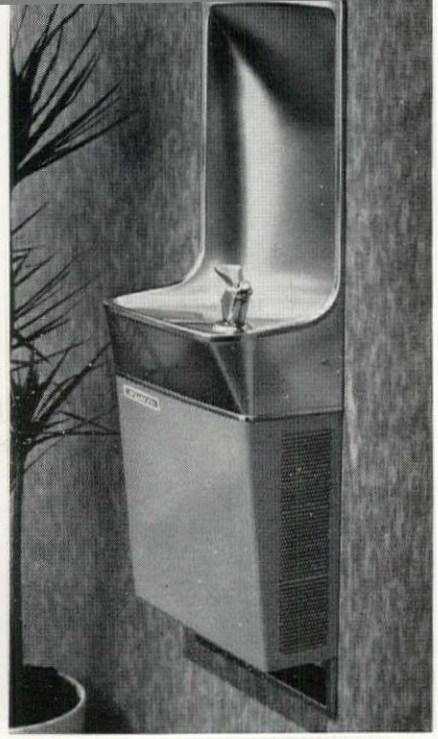

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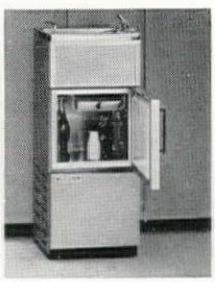

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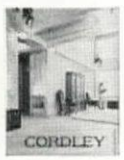

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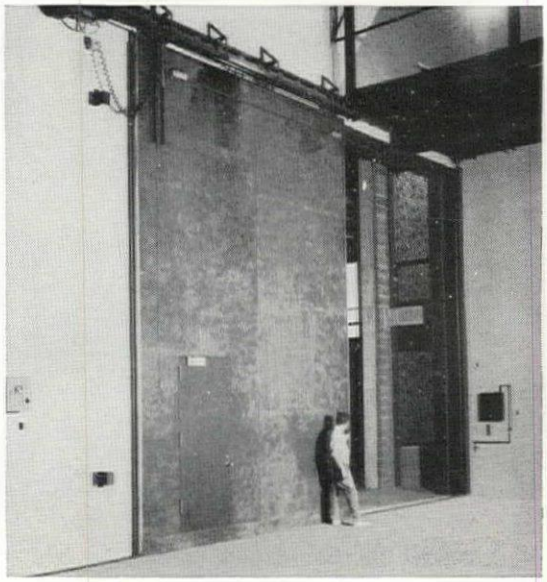

S.U.N.Y. at Cortland did and Overly made it.

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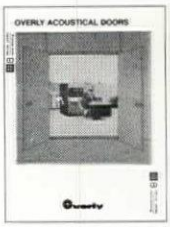

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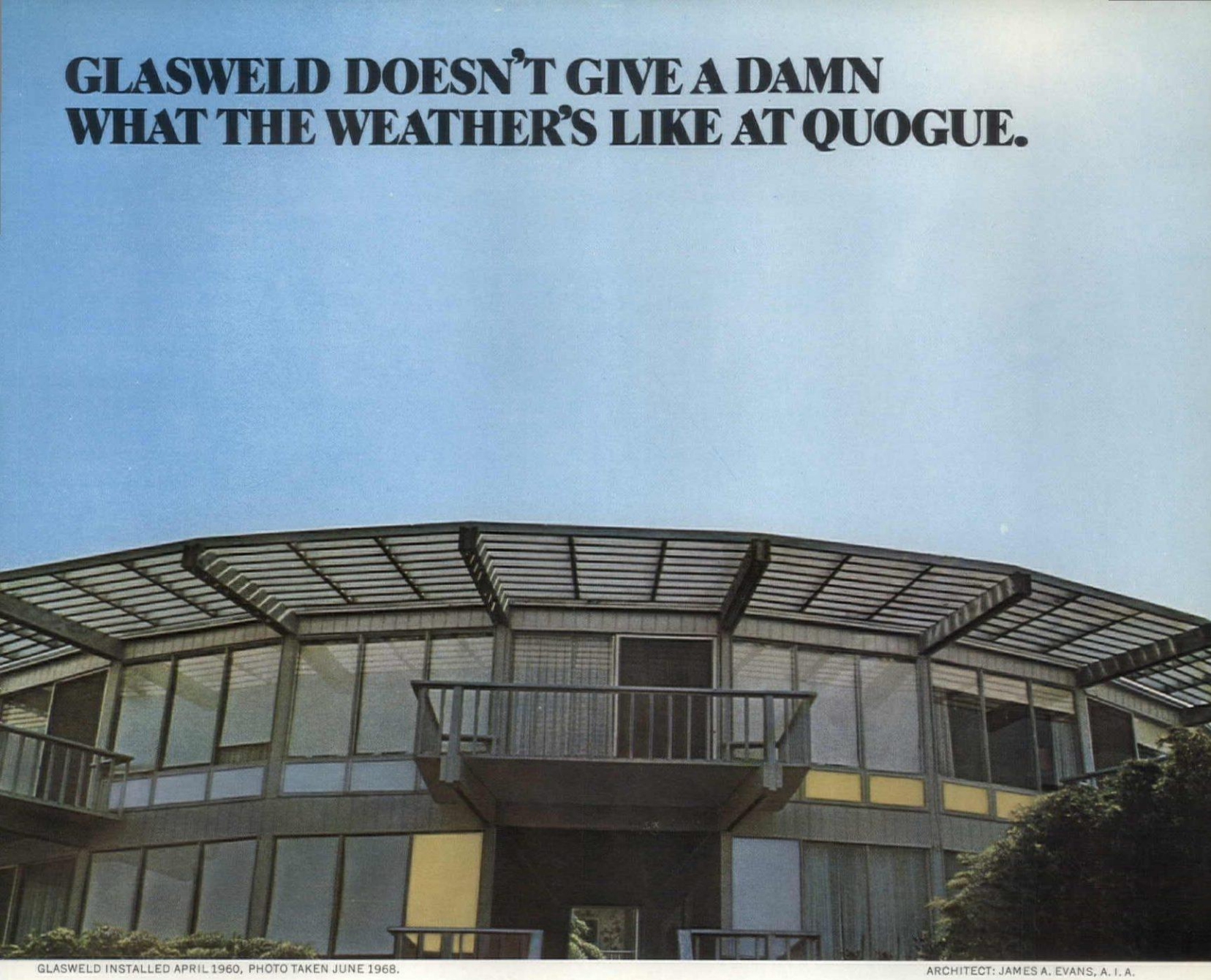

GLASWELD INSTALLED APRIL 1960, PHOTO TAKEN JUNE 1968.

ARCHITECT: JAMES A. EVANS, A. I. A.

In a delightful village on Long Island, New York, with the unlikely name of Quogue—there's a group of circular co-operative apartments called Round Dune. They were erected on a sandy spit of land bounded on one side by the Atlantic and Shinnecock Bay on the other.

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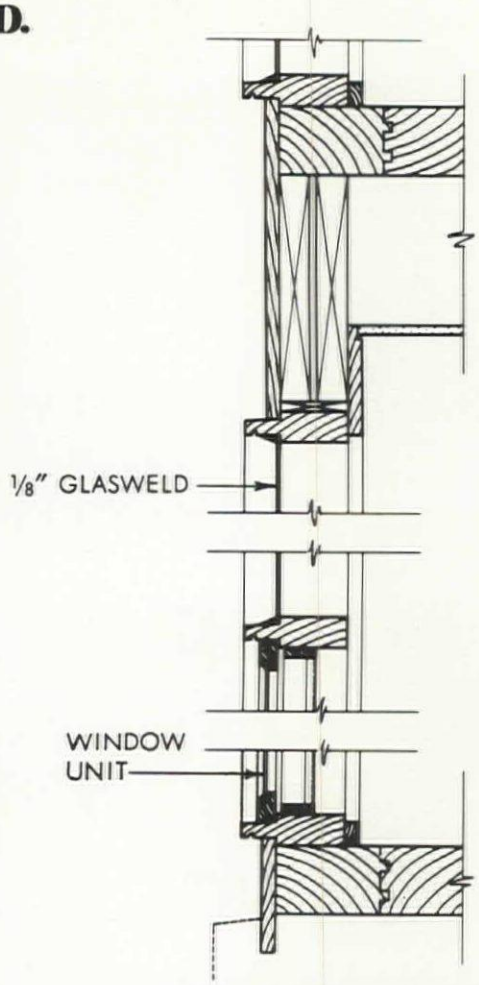
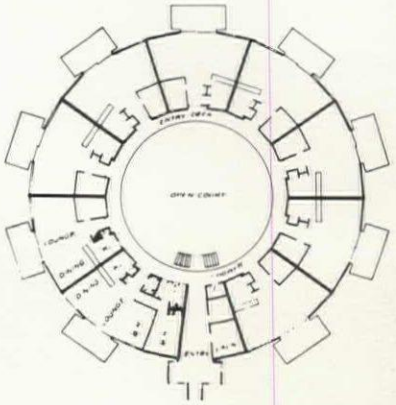
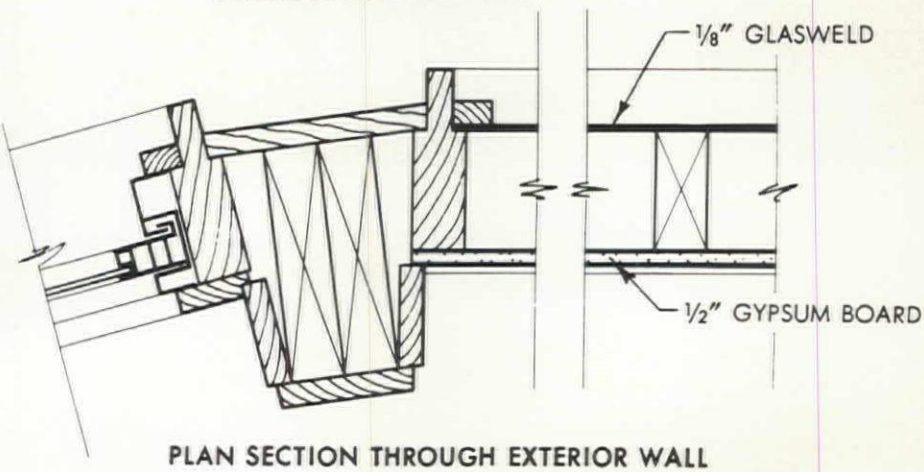


VERTICAL SECTION THROUGH EXTERIOR WALL





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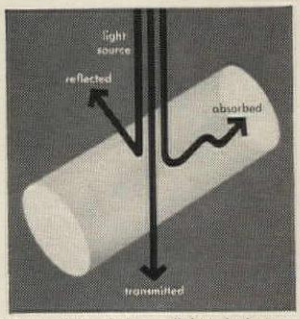

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LETTERS

EYE OF THE BEHOLDER

Forum: I was very impressed by the artiele and photographs of the Gateway Arch, by Hans Namuth, in your June issue. Not only were the photographs a beautiful example of the mechanics of photography but I think they were quite unique in their interpretation of what I consider one of the great pieces of sculpture in the United States.

STEWART C. WOODARD
Director of Architectural Planning
Larwin Company
Beverly Hills

Forum: Hans Namuth seems to have hovered over the reflecting pool of the Gateway Arch to take his first photograph. From then on his fisheye, as he fell back into the water, can only see the monument as a contorted trajectory of some Polaris missile.

I saw the construction of Jefferson Expansion Memorial at the 1964 AIA convention in St. Louis; it was up about two-thirds of its height then. The movies of the erection showed some unusual and ingenious tools that are absent now, of course, but they did reinforce the idea of this being the gateway to the West.

I don't think architecture is ever divorced from the earth as Mr. Namuth's rectilinear porthole views are in Forum. Can you show how much of the "groundwork" of this monument is layed out as Mr. Saarinen planned it?

JOSEPH F. MATCHEY
Uniontown, Pa. *Architect*

REALISTIC THINKING

Forum: Sibyl Moholy-Nagy's comments in the July/Aug. issue prompt me to say how much I appreciate her realistic thinking about architecture.

Apparently most students do not know that architecture is not diagrams of bright ideas and that it is a discipline and not a dialectic.

EUGENE HENRY KLABER
Housing and Town Planning
Uniontown, Pa. *Consultant*

CRITIC'S CHOICE

Forum: For the first time in many months I have had a chance to read most of one of your issues, that of July/Aug. If you are interested, here is what I think:

"Revolts": It doesn't seem to be in keeping with the aims of the Peace Corps to send dissidents abroad to spread hatred of their own society, but then again, maybe they won't come back. In general, revolts are staged to gain attention in the news media, and such attention as they get only encourages more. How about publicizing the "cause" less, and give more information on the aftermath; how the violence hurts the rioters and society in general, rather than helps.

"What's Wrong with Architectural Education?": Three beautiful examples of attitudes which are themselves a demonstration of "what's wrong," and one beautiful exposition of how wrong they are. Cheers for Sibyl Moholy-Nagy.

"Cool but not Costly": Very nice. I wish magazines would devote more space to architecture which is very nice and less to the ones that are obviously predicated on sensationalism.

"Mass Housing": Absurd. Putting the cart before the horse, as it were. Man is the most adaptable thing there is. How do the authors think social attitudes come about? The problem of involving sociology with architecture is that sociology like psychology, is a comparatively new field, and about as developed as medicine was several hundred years ago. We should apply its concepts experimentally on a small scale until more is learned. The indiscriminate application of unproven sociological and psychological theory has to be blamed for worsening rather than relieving our problems in recent years.

"Grand Central City": With all due respect to Breuer for past accomplishments, it is ludicrous.

The balance of the material in this issue I did not consider noteworthy.

JAMES T. DARROUGH
Columbia, Mo. *Architect*

MORE THOUGHTS ON ADVOCACY

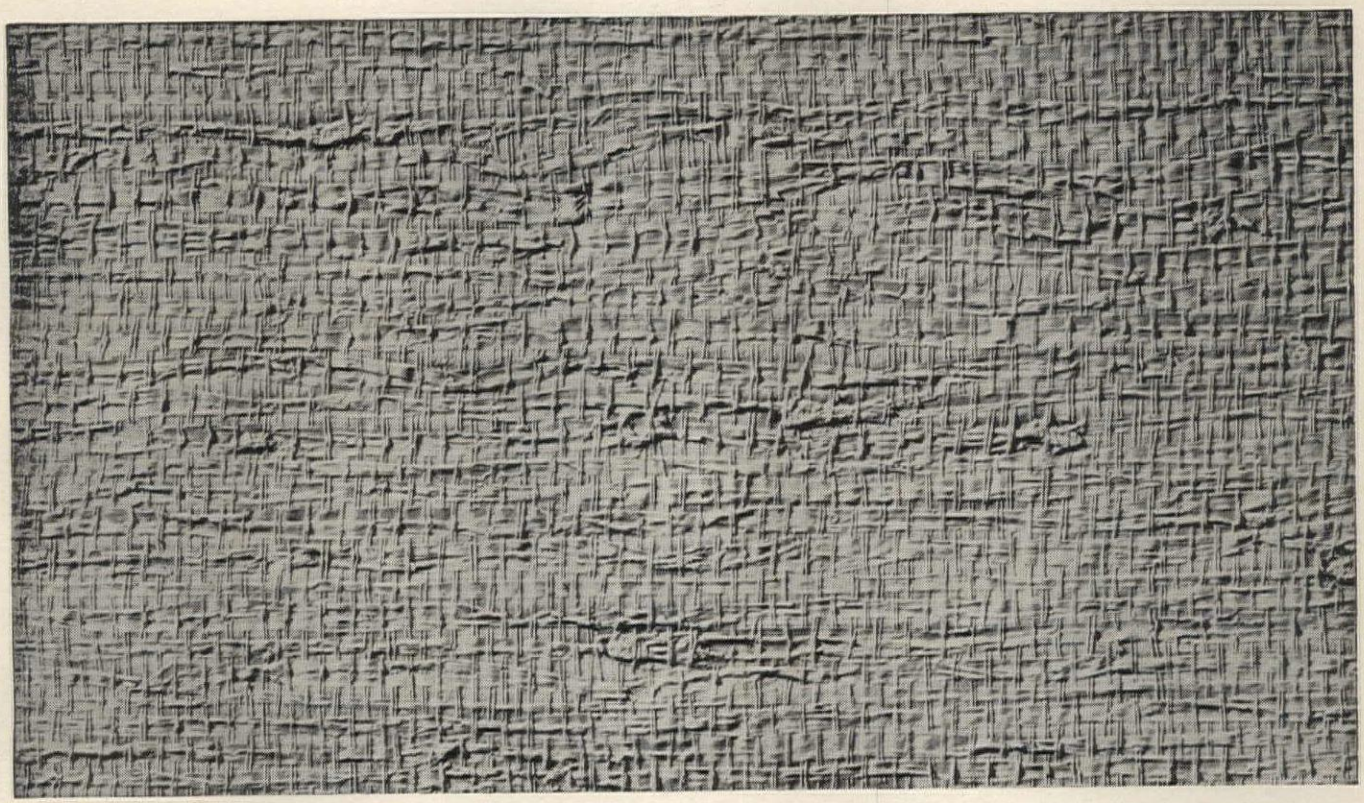
Forum: Richard Hatch is to be congratulated on his enlightening article on advocacy planning [June issue]. Being involved in advocating for the poor for several months now, I would certainly make some of the same observations that he made in his article. . . .

I have observed that the problems of community organization and participation are difficult for the reasons Mr. Hatch stated, mainly *no immediate action*. Planning is not action to the people in the ghetto.

I also have observed a great

(continued on page 20)

We've improved grass cloth.



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LETTERS

(continued from page 18)

deal of mistrust, not only between the community and the "power structure" but within the community itself. Most ghetto residents have been "used" by fellow community residents for personal gains. This does not aid in organizing the community.

Besides wanting better material items (housing, parks, schools) the community wants an active voice in the decision-making process that shapes their environment. As one citizen puts it, "We don't want you planning for us without our participation."

One of the problems that I have run into is how to involve the people in planning. These are people who don't know what the "planning process" is. What is a CRP? What is a Generalized Land Use Plan? What is 221d3? Environment?

The architect and planner are caught up with a group of phrases that have very little meaning to the ghetto resident. Yet we want them to sit down and plan with us! To correct this problem in Tulsa, we are considering a series of workshops explaining the various words, phrases, and symbols that are a part of physical planning.

At meetings where an agency is presenting a program or plan to the residents, I have found the most useful contribution that the advocate can make is to ask questions to clarify positions and to bring out information that the citizens may not be aware of.

I had a chance to meet Mr. Hatch while I was attending Washington University, and I was completely turned off to what he was saying. But after being out here where the action is, I have seen a lot of areas where the architect, planner, or urban designer (did I leave anyone out?) can make a real contribution to the problems that face America's poor.

JOE EHARDT JR.
V.I.S.T.A.
Tulsa Model Cities Program

PHYSICIAN HEAL THYSELF

Forum: Walter McQuade's "Dissenting Opinion on Grand Central" (July/Aug. issue) is a clear and concise position statement which most certainly needed to be made.

It is particularly to the point at a time when the AIA has increased the dues of members to provide funds with which to embark upon a program of public education to teach the value of the architect and architecture in solving the problems of man's environment.

To add to the classic quote of "My God, I shot the wrong architect," we should create a corollary to the medical dictum "Physician heal thyself."

Not only do we not fool the public, we really do not fool ourselves if we are completely honest.

ARTHUR F. SIDELLS
Warren, Ohio *Architect*

PRESERVING AT THE CANNERY

Forum: After reading the report on San Francisco's Cannery project [June issue] and hearing more about it in the Preservation Workshop at the Portland AIA convention, I decided I'd better go down and take a look for myself.

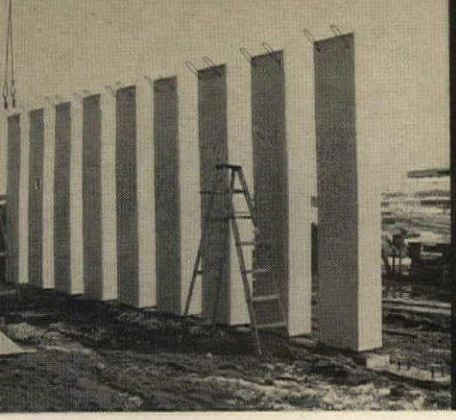
I boarded an old friend, the Hyde Street cable car (now a National Mobile Landmark) and got off at the end of the line. Checking in at the old Ghirardelli chocolate factory, I could see again that the Fun-cum-Sales face-lifting has produced lively, successful results. It certainly has inspired architects and builders everywhere to see possibilities in saving old buildings for imaginative and profitable reuses, and we are grateful. William Mooser's fine clock tower (4½ stories, red brick in Flemish bond, light terra cotta trim, dated 1916—not 1906—time of day 9:15) is being maintained on what seems to be its original lines.

Across the street an old brick warehouse signed "Wharfside" is being fitted with offices, shops, and a "market place" without change to the outside. So far, so good.

Next east on Beach Street is the Cannery, a project which truly reflects the Age of Violence in which we live. The business of Preservation there seems to have ended some time ago with the last can of Del Monte produce crated and trucked away.

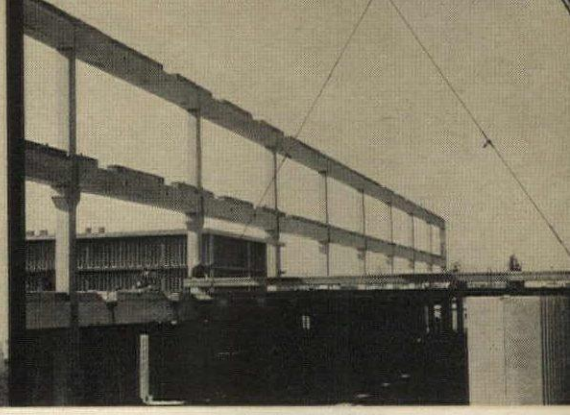
Big holes were made in the old walls where none had ever been. Original windows were walled shut, making a sort of ruin that Piranesi could have savored. Escalators, odd corners, and guess-what sculpture are tucked in everywhere. In the excitement an assortment of rooftop bulges have been pushed well above the striking row of old gables that borders the street. All this to house a potpourri of

(continued on page 24)



March 21, 1968

March 28, 1968



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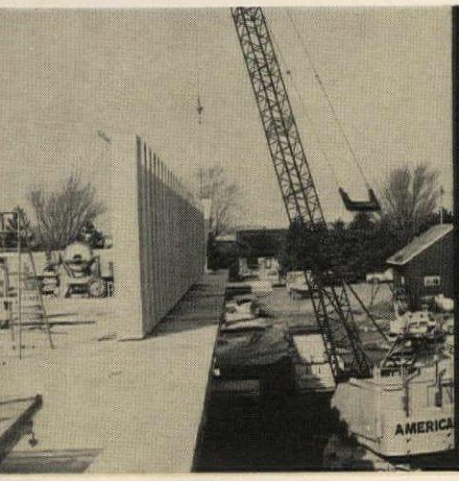

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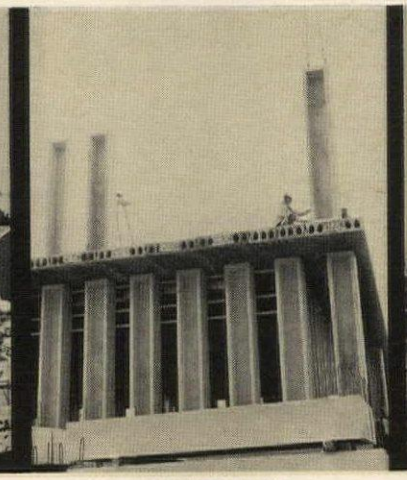

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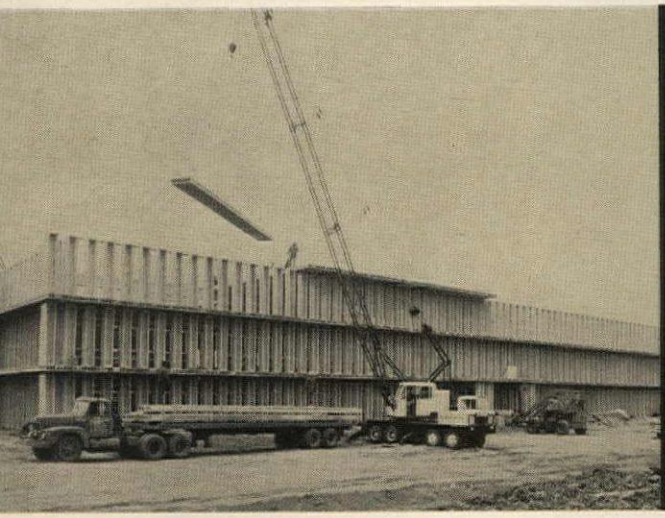

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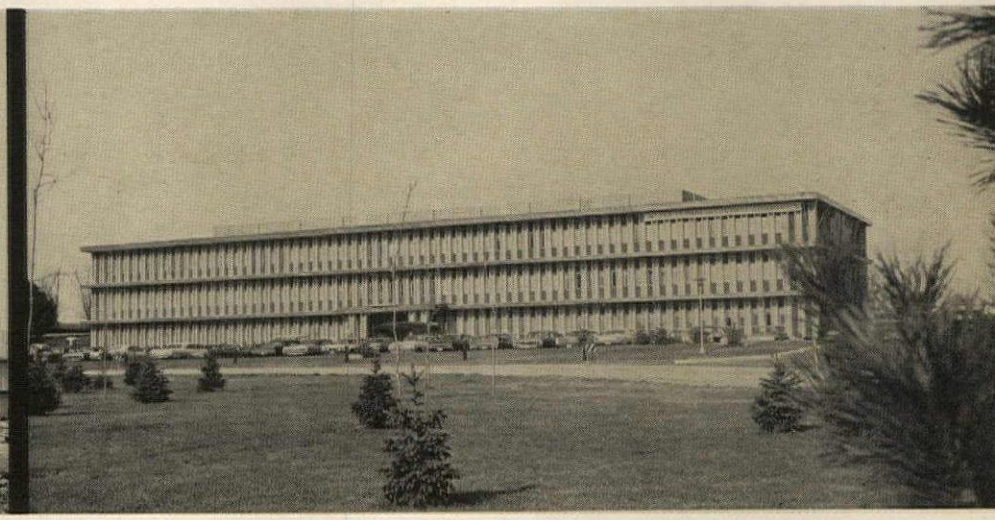

May 22, 1968

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LETTERS

(continued from page 20)

Hickey-Freeman suits, African masks, eccentric candles, and such goods.

Imagination is fine (*vide* the Blue Print Cafe with walls papered with the remodeling plans for the Cannery itself), but should this be referred to as Historic Preservation? It is Dynamic, all right. But the planners might have tried going a step further and turning the whole building upside down so a wonder-struck public could walk on the underside of the roof. That would have been Very Exciting.

The point I wish to make is that if this kind of adventure is going to be called Preservation, then we had better sit down together and redefine the word. Some serious people, given the problem, might have decided to hire a couple of bulldozers and give the old cannery a decent and economical burial.

CHARLES E. PETERSON
Architectural Historian, Restorationist, and Planner
Philadelphia

FORUM'S FORUM

Forum: I'd like to take this opportunity to comment on your column "Forum." With a subtle wit you superbly perform what I consider some of the more important functions of the communication media—you inform and enlighten. Hats off to you for that.

GORDON BINDER
Architecture Student
University of Michigan

MORNINGSIDE DEFENSE

Forum: On page 40 of your July/Aug. issue, you quote Victor Crichton on the complicated subjects of the Columbia-Community athletic field and the proposed Columbia - Community gymnasiums in Morningside Park. Your brevity, or perhaps Mr. Crichton's, may be responsible for some confusion about the facts of a lawsuit which is at present *sub judice*.

For example, you quote Mr. Crichton as saying: "Columbia has exclusive use of eight acres of parkland from 8 a.m. to 6 p.m. and from October 1 to May 30." This statement is partly wrong and partly misleading. The Columbia-Community Athletic Field, in joint use since Columbia built it in 1958, covers not eight but five acres. Between October 1 and May 31, Columbia students do enjoy exclusive use of this athletic field, but only on *weekdays*. The community has exclusive use of it throughout the same months on Saturdays, Sundays, university holidays, and every day during Christmas and spring university vacations. The community has exclusive use of the field every day from May 31 to October 1.

As to the proposed joint gymnasiums, which would occupy 2.1 acres, the community gymnasium would at no time be open to Columbia; the university would have the use of the Columbia gymnasium to be erected above the community gymnasium.

You quote Mr. Crichton as saying: "When the land is not in use by Columbia, Columbia 'opens' it to organized play by male teenagers, only under Columbia supervision." This statement also is partly wrong and partly misleading. The Park Department, not Columbia, determines how and when its special facilities like baseball fields are to be used. . . .

You quote Mr. Crichton as saying: "This business is nothing less than the giveaway of millions of dollars in public land." This is the statement of an opinion. In fact, the five acres comprising the open athletic field have not been given away nor even leased. The Park Department will continue to maintain its right to evoke Columbia's permit to use the field, irrespective of whether the gymnasiums are ultimately built. Neither land appraisal—not Columbia's nor the city's—found that the land under the proposed gymnasiums is worth as much as half a million dollars. The Department of Real Estate found its value to be $300,000. The appraisers concluded that the fair rental value of the community gymnasium (which the city will get free) would be greater than the fair rental value of the land on which it will stand. In any case, after the expiration of the community gymnasium lease, both the community and the Columbia gymnasiums would become city property.

Nothing can compel you to like this use of Morningside Park, nor constrain Mr. Crichton from suing to stop it, but those who have not made up their minds are entitled to a precise statement of these elements of the case.

ROGER STARR
Executive Director
Citizens' Housing and Planning Council
New York City

One of the newest uses of one of the oldest building materials is the sandwich panel, made by bonding a thin slab of marble to an insulating core and adding a hardboard backing. Such a panel is only half the weight of a 2″ slab of marble but has four times the insulating value.

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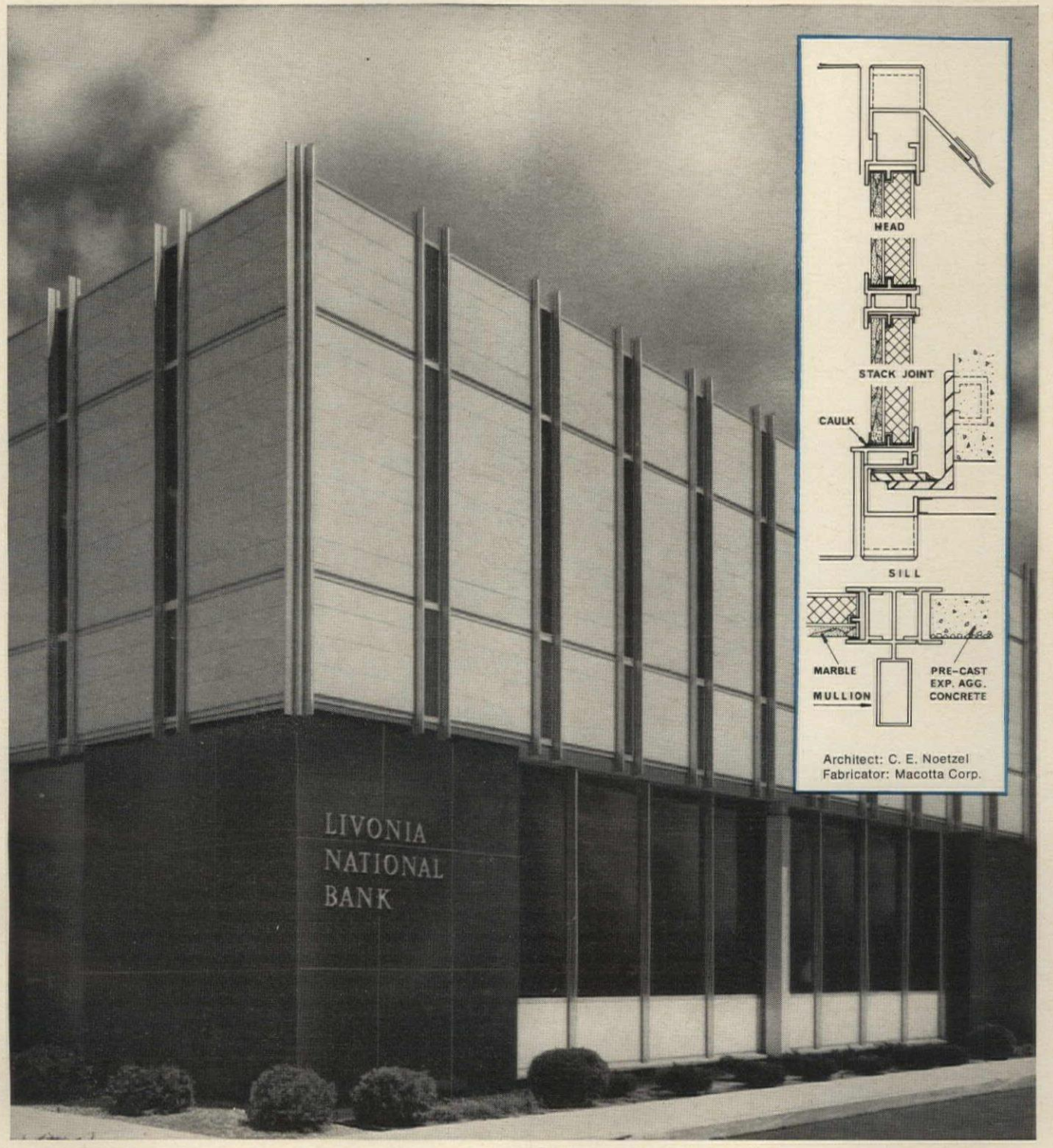

Architect: C. E. Noetzel
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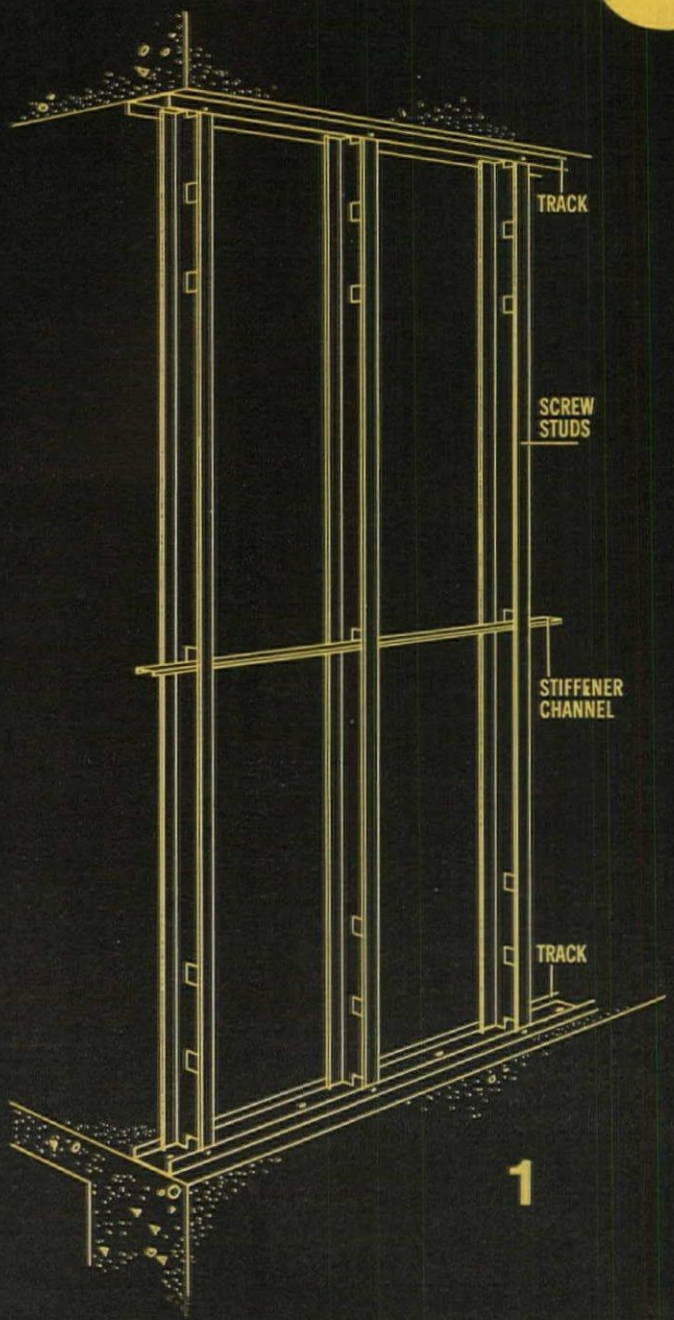

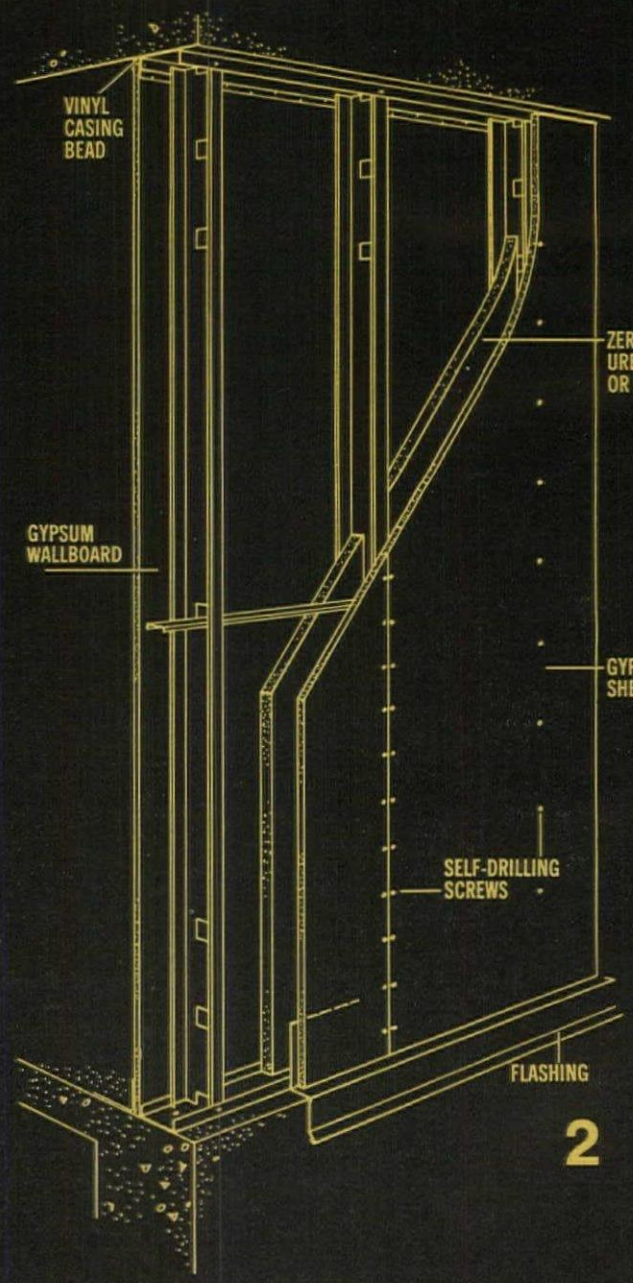

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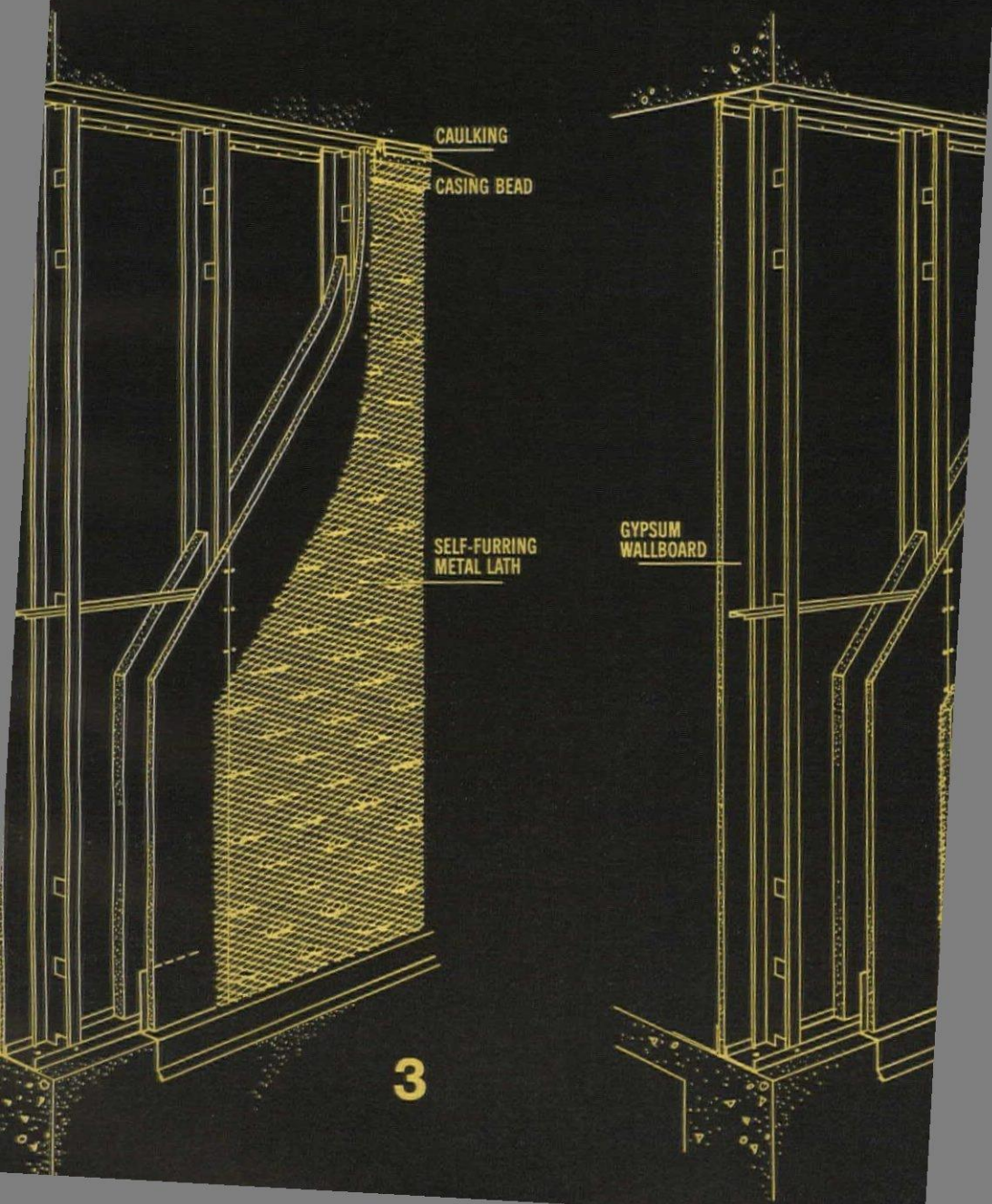

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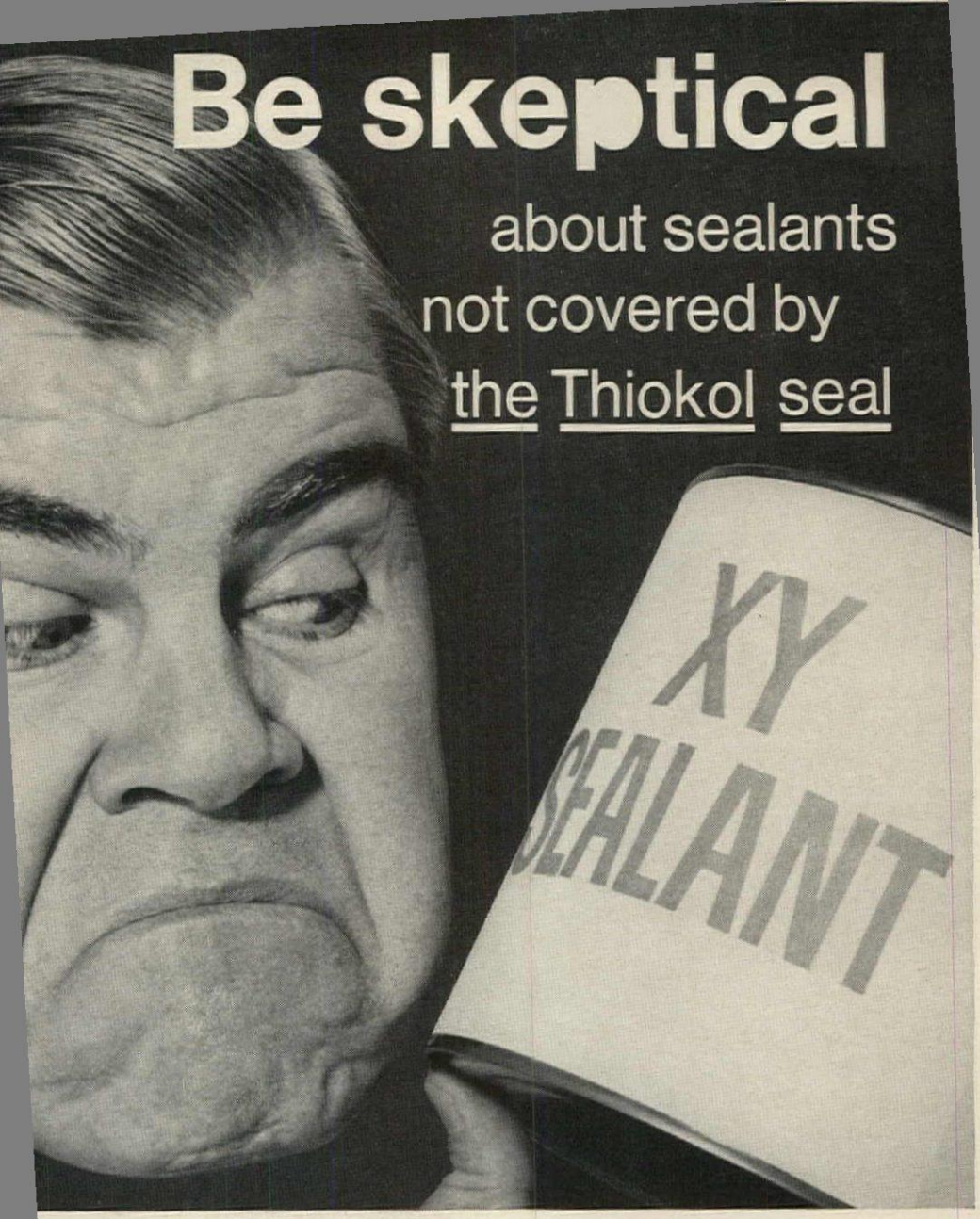

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THE ARCHITECTURAL FORUM

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FORUM

The Federal-Aid Highway Act of 1968, recently reported out of Congress and shoveled along to President Johnson, is a schizophrenic package of good and evil. Regardless of whether it becomes law this time around or at some future time, the act is an important document: it embodies, in one convenient reference source, all of the confused thinking that Congress is applying to highways.

As originally reported out of the House, the act was a monstrous sellout to the highway lobby. A more circumspect Senate committee trimmed off the more flagrant sops. The Senate voted 66 to 6 for the final compromise bill, and the House passed it by voice vote.

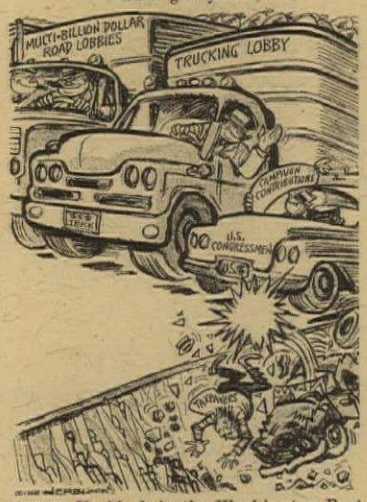
Here are its most significant provisions:

- An additional $11.4 billion was added to the present $56-billion highway construction program. The present 1972 deadline was extended to 1974.
- An additional 1,500 miles were authorized to construct "missing link highways—those segments which have gotten increased defense use, or connect two interstate highways or segments of urban beltways.
- Private wildlife sanctuaries and land trusts lost their protection from highway intrusion. This could affect landholdings of such organizations as the Audubon Society and the Nature Conservancy. The House had called for even greater weakening of protection by asking that *only* federally owned parks be exempt from highways unless no feasible or prudent alternative existed, thus leaving state and municipal parks at the mercies of highway planners. The somewhat fuzzy rationale for such a backward step, according to the House committee, is this:

In cities where highways can cause their severest disruptions, first consideration must be given to businesses, homeowners, and tenant families who might be uprooted by a new road. While open space is surely important, the House felt that the highway law gave preferential protection to parkland at the expense of people. (This is about as silly as saying that it is OK to take away a man's garden, just so long as you leave his house intact.)

- A $300-million revolving right-of-way acquisition fund was established. This means that states can buy land as much as seven years in advance of construction (present lead time is one to two years). This increased lead time is a boon to cities, which can then involve community agencies, HUD, federal and state agencies, schools, etc., in planning a total environment around a highway, such as Brooklyn's proposed linear city (see page 92).
- The annual budget for Lady Bird's Highway Beautification Program was slashed from $85 million to $25 million. This leaves $2 million annually for billboard removal, $3 million for junkyard control, and $20 million for landscaping and scenic enhancement. The 10 per cent penalty levied against a state's landscape funds for failure to comply with junkyard and billboard control, which was to have gone into effect January 1, 1969, was put off until January 1, 1970.
- The bill authorizes demonstration parking lots to be built on the periphery of a city's central business district. Costs would be split 50-50 between city and state (90 per cent of the state's share, however, comes from federal highway funds). Only cities with populations of 50,000 or more are

The Highwaymen



© 1968 Herblock in the Washington Post

eligible, and adequate public transit must be provided by the city at the transfer point from parking lot into town. While the amount of money is pathetically small, the amendment is the first tender swat at private parking lot interests.

- A homeowner, business, or individual can now receive up to $5,000 for relocation costs (in addition to the market price for his condemned property), and up to $200 in moving costs. (The Department of Transportation estimates that in the next three years

168,000 families and businesses will be uprooted by highways.

While $5,000 is peanuts to any sizable corporation, it benefits the man who needs it most: the small, marginal businessman to whom $5,000 could spell the difference between reopening his business or not. And it establishes the crucial precedent that the federal government indeed bears responsibility to pay for the social costs of a highway, as well as for its concrete physical costs.

• As a safety factor for edgy highwaymen, the bill reiterated the sanctity of the Highway Trust Fund, which enjoys a unique position in the annals of Congressional funding. The fund is self perpetuating, automatically refueled year after year by a 4-cent tax on every gallon of gasoline sold in the U.S.

The fund is exclusively earmarked for highway construction, and by law cannot be diverted to financing other forms of transportation, such as mass transit.

• The most potentially dangerous portion of the 1968 highway act involves highways in the District of Columbia. Congress directed the District to begin construction immediately on the long and bitterly contested Three Sisters Bridge and the eight-lane Potomac River Freeway. The bridge will cross the river at the beginning of the Potomac Gorge and seriously impair the scenic values of the palisades on both sides of the river.

Moreover, the insistence on the part of Congress to dictate specific highway locations effectively nullifies local and state control over highway planning. As Senator John Sherman Cooper (Rep., Ky.) contended, "The location and planning of highways is not within the competence of this committee or the Congress." Obviously, congressmen, in desperation to get home from work at night, have sacrificed principle for expediency. But if "planning by legislation" were to become S.O.P. in Congress, everybody else concerned with the design of our environment might as well take a vacation, too—permanently.

REJECTS

BURST BUBBLE

The United States will not put up the four-bubble air structure (below) designed by a team of talented architects and designers for the 1970 World's Fair in Osaka —the world's fourth First Category Exhibition, under the International Bureau of Exhibitions' rulings, and the first to be held in Asia. The reason: the world's richest nation can't afford it.

After the design team (Davis, Brody & Associates, architects, and Chermayeff & Geismar Associates and Rudolph de Harak Inc., designers) had revised its first design for a single super-bubble, the USIA made its request for appropriations: $17,750,000, of which about half would have been used for construction of the pavilion, exhibits, and landscaping.

For those interested in the intricacies of federal maneuvers in money matters, here they are: The Bureau of the Budget approved $15,993,000 in March. The House Appropriations Committee cut this sum to $10 million in June. Ten days later, the Senate Appropriations Committee requested restoration of $4 million. And on July 1, after a House-Senate conference, the House won: it was $10 million.

Of this, $4,800,000 was allocated for actual construction of the pavilion and exhibits, and for landscaping. The rest—which is to be spent in blocked yen—is to cover maintenance, operation, insurance, travel, and housing for the staff.

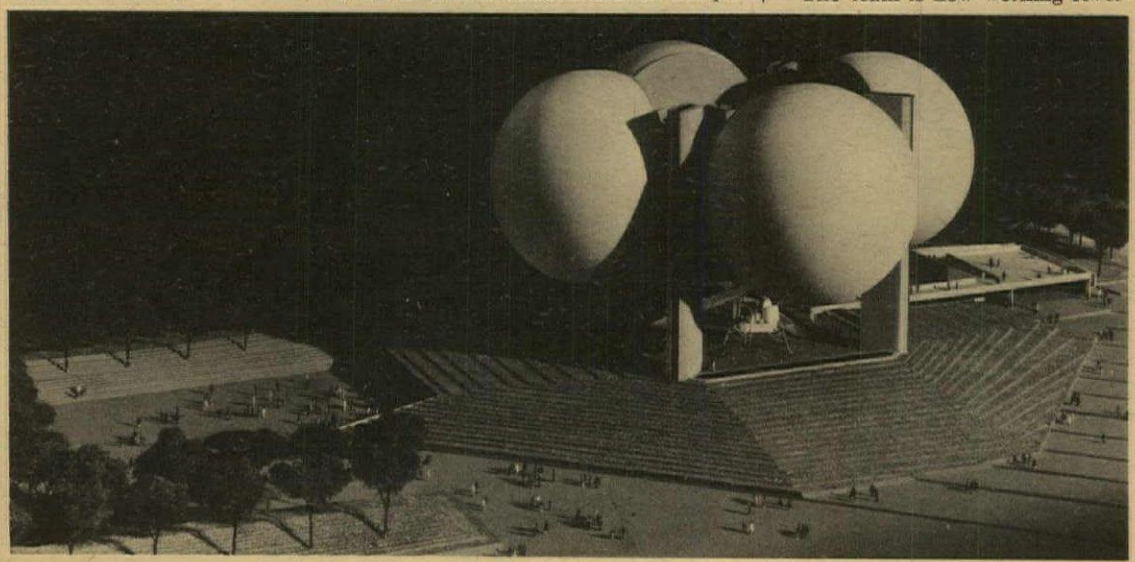
But the budget cut isn't the saddest part of the story. After all, mediocrities can be created with more: the New York World's Fair U.S. pavilion cost $12 million and the USSR pavilion for Osaka —below—will be built with a $20-million appropriation. And as Ada Louise Huxtable, *The New York Times* architecture critic, has pointed out, "It is hard to protest the cut with passionate conviction

when cuts are being made in all poverty and social programs . . ."

The worst part is that the designers have spent a year working with no clue as to what the available funds might be; that their design must now be scrapped; and that there isn't really enough time to come up with a new one. (Several other countries have already bid for contractors.)

Another fact to ponder is Congress' total outlay of $17 million for the New York World's Fair of 1964—apparently to polish the U.S. image at home.

The team is now working feverishly on a new design, which might be for a smaller air structure, or one in plastics or even of paper. Fuller details are to be released this month.



FRONTIERS

GOING FOR BROKE

HUD is spending $4.9 million—nearly half of its current research budget—on one big, far-flung, experimental "in-city" low-cost housing project. Kaiser Engineers, a division of Kaiser Industries Corp., has been selected to carry it out, with Building Systems Development Inc.

Under the contract, Kaiser Engineers will recommend the specific housing experiments to be conducted and the cities in which they will be developed; and Ezra Ehrenkrantz, president of BSDI, will direct the experiments. "The program," said HUD, "will be carried out only in those cities that indicate a willingness to build a large volume of housing for lower-income families, using flexible and innovative methods suggested by the contractors." And only in model cities areas.

This is the second phase of the project. The first, completed in June, was conducted by three teams (including Kaiser-BSDI) selected from among 19 firms that submitted bids for the new HUD program in April. Proposals from the three teams contained criteria for selecting the cities; identification of new techniques and systems to be used; descriptions of local needs and constraints; and suggestions of cities to be chosen.

Kaiser has prepared a report, soon to be released, making its recommendations to HUD. After HUD makes the final selection of the cities, Kaiser and BSDI will begin detailed planning for new construction and rehabilitation to be carried out by local sponsors in each of the selected sites, using a variety of HUD-assisted programs.

TENANT POWER

Negro management of slum buildings, a demand increasingly made by black-power advocates, has become a reality for a group of ghetto residents in Detroit: the United Tenants for Collective Management.

The group, directed by Fred Lyles Jr., was initially a tenants' union, formed a year ago for the purpose of organizing a rent strike against one of the city's biggest

landlords, Goodman Bros. & Co.

The strike bore fruit, and Goodman decided to turn over management of 17 buildings to the tenants' union. (The strike has also taken its toll: Fred Lyles was seriously wounded a few weeks ago by a still-unidentified sniper. He is still in the hospital and his full recovery is not assured.)

Under the contract, the United Tenants has full power to manage the buildings, collect rents, evict tenants, pay expenses, and make improvements or repairs.

The Goodman group will receive 25 per cent of the net income and 75 per cent will be used by the Lyles group for maintenance and repairs. The income split is made after deducting operating, managerial, supervisory, and supply costs, mortgage, insurance, taxes, and all costs resulting from the breakdown of a major item such as a boiler.

United Tenants has a second option to buy eight of the 17 buildings, which it would like to turn into cooperative units. A first option on all 17 buildings was given by Goodman to the Housing Federation of Michigan (a state agency set up about a year ago to assist in housing rehabilitation), with the understanding that United Tenants gets second option.

The state agency is now negotiating with the FHA for an insured loan under the Federal 221d3 nonprofit housing program, naming United Tenants as potential sponsor of the nonprofit corporation.

If the HFM is successful, United Tenants will purchase and rehabilitate the buildings. Membership in the cooperative could then be purchased with $200 down payments and monthly payments of between $80 and $100. Tenants on public assistance could apply for welfare grants or other rent supplement programs, to assist them.

CONSERVATION

STORM OVER STORM KING

The recent recommendation to permit construction of Consolidated Edison's power plant at Storm King Mountain on the Hudson River augurs another setback in the fight to save our scenic and natural resources. The recommendation was made by Ewing C. Simpson, hearing examiner for the Federal Power Commission.

When Con Ed announced its plans in 1963 for a $184-million, pumped-storage hydroelectric generating plant on the flanks of the mountain, the Scenic Hudson Preservation Conference was formed to fight the project. Not only would the plant desecrate one of the most beautiful areas in the state, said the organization, but the side effects would endanger the ecological balance of the river and the adjoining land.

The conservationists won a major victory in December 1965, when their successful court suit caused Con Ed's license to be set aside and a new hearing to be held.

Independently of the court action, Con Ed proposed to move the plant underground and to landscape the area.

But putting the plant underground answered only a small part of the Scenic Hudson's objections. Below are some of the others, which in examiner Simpson's opinion are unfounded:

- Water seepage from Con Ed's proposed reservoir would contain saline and polluted Hudson River water that would contaminate existing groundwater.
- The screen Con Ed proposes to use (which it claims is the best available) would not suffice to prevent major destruction of the river's fish and fish eggs.
- The dams and dikes of the 240-acre reservoir (left) would blemish the terrain of the Highlands (Con Ed has answered with an offer of a scenic overlook).

Scenic Hudson has proposed an alternative plan (declared by Simpson as not feasible)—a nuclear plant with five gas turbine units, with the latter to be installed in New York City. This plan would work as efficiently but would remove the harmful side effects of Con Ed's proposed plant, they say.

They also claim that it would be cheaper for two reasons (Con Ed disputes this):

- By eliminating the need for a reservoir and dams, the reduced complex could be installed on land Con Ed already owns.
- It would not require the 20-mile overhead transmission lines, an additional cost, which independent experts have estimated at between $60 and $90 million.

And an added advantage of the alternate plant is that it would decentralize power distribution, thus eliminating one of the factors responsible for the 1965 blackout.

Simpson's recommendation is subject to approval or modification by the five-man Federal Power Commission. The Hudson River Scenic Conference is still hopeful.

UPS & DOWNS

APPLIED ARCHAEOLOGY

The threatened construction of a highrise office tower in downtown St. Louis, which would block the view to the Gateway Arch, has engendered a pretty farfetched counterproposal.

Local businessmen, educators, and civic groups propose, instead, a reconstruction of the Revolutionary War fort of San Carlos—with its stone tower, barracks, palisades, and Spanish sentries (foreground in bottom photo).

The fort, or the skyscraper (for Equitable Life) would grace a present parking lot near the Old Courthouse, just east of the Spanish Pavilion (a transplant from the 1964 New York World's Fair).

The site, the Fort San Carlos Committee maintains, has historic value, because *near* it stood the fort of the early French settlement. Atop the fort's tower, in March 1804, the American flag was first raised over the land of the Louisiana Purchase, signifying the transfer of Upper Louisiana from France (a ceremony the committee wants to see reenacted daily.)

Also proposed is an underground museum, beneath the fortress, which would display "a panorama of St. Louis' progress, culture, commerce, spiritual, physical, and managerial development." Not only would the project be "a kind of living history," says the committee, but the local economy would be vastly stimulated by the tourist trade attracted to it.

A PORT COMES HOME

Back in 1863, San Francisco's port was so corrupt and mismanaged that the state took it over—making it the only port in California not locally owned. Last month, thanks to a yeoman effort led by the city's dynamic mayor, Joseph L. Alioto, the state legislature agreed to give it back.

The city had long since purged itself, after all, and it was willing to take over the $50.5 million indebtedness of the state-owned

Port Authority of San Francisco. More important, the port's business has been declining in recent years, and the city thinks it is better able to bring it back to life.

To get the port back, Alioto conducted a vigorous campaign to drum up interest in the state legislature. He rallied support from the city's business, labor, and civic leaders, and he got the backing of the San Francisco Planning and Urban Renewal Association, an influential citizens organization which produced a detailed report on why the port would be better off in San Francisco's hands.

Nearly every mayor since 1898 has made a gesture to get the port back, but Alioto's frontal attack finally paid off. The legislature did not strike an easy bargain, however. Before the port can become San Francisco's property, the city must submit the transfer agreement to the voters on November 5 for their approval; issue bonds worth $50 million within ten years, for improvements along the 12-mile waterfront; and float another $50 million in general improvements bonds 15 years later.

If it fails to comply with these stipulations the port will revert back to the state. In which case, it may take another 105 years, and another Alioto, to get it back.

[redacted] DECOR

LARGER THAN LIFE

Last month, I.M. Pei's handsome apartment towers for New York University got something else to look at besides each other: a 36-ft.-high reproduction (right) of a 2-ft.-high sheetmetal sculpture by Pablo Picasso.

The deeply etched "Bust of Sylvette" was executed on site by Norwegian Artist Carl Nesjar, and made possible through the generous gift of Mr. and Mrs. Allan Emil (Dec. '67 issue).

Nesjar, who has collaborated with Picasso on over a dozen similar projects, used a concrete pouring technique developed in Norway. An aggregate of black basalt pebbles was packed tightly inside the wooden form. A liquid cement grout was then injected into the form, and distributed evenly inside it. When the mixture hardened, the form was stripped off to reveal the smooth surfaced concrete sculpture. The lines or variations of surface, to match those of the original, were reproduced by

(continued on page 91)

HOUSING YES CITIES NO

The Housing and Urban Development Act of 1968 sets out to provide "a decent home" for all—well, almost all—within ten years; but our cities' other critical problems will have to wait

"Today we are going to put on the books of American law what I genuinely believe is the most farsighted, the most comprehensive, the most massive housing program in all American history." So said the President, standing in front of the brand-new HUD Building, on July 31.

This time he was not talking Texan: the $5.3-billion Housing and Urban Development Act of 1968 provides for an unprecedented 1.7 million units of new or rehabilitated housing for lower-income families in the next three years—as the first installment of a ten-year program to replace all of the nation's six million substandard units.

This feature alone justifies all the adjectives Johnson has lavished on the act—but it is not, as his words seem to imply, a total solution to our nation's housing problem. Neither is it an answer to our national urban crisis. The "urban development" sections of the act are almost completely devoid of new ideas, and their scale, by comparison with the enormity of our cities' problems, is pitifully small.

Still, the act represents a considerable breakthrough in the housing field. It combines in one package more new, fresh (and untried) housing devices than have appeared in all the previous housing acts since 1949, when Congress first promised "a decent home and a suitable living environment for every American family."

The largest, and most novel, of these devices are two new programs designed (1) to give lower-income families a piece of the same action—homeownership—that the middle class has enjoyed since World War II and (2) to produce a vastly increased supply of new or rehabilitated rental units for lower-income families. If the two programs live up to their intentions (and if Congress reverses its habit of allocating far less money than it promises), they will produce a grand total of 1.2 million units in three years—500,000 for homeowners, 700,000 for renters.

The two new programs are almost identical in substance: both employ the tried-and-true method of federal subsidies on mortgage interest rates. But they break new ground by extending the subsidies to private lenders for financing projects developed by private builders (thus unleashing vast new sources of money and construction know-how), and by increasing the subsidy to all but 1 per cent of the interest (thereby benefiting families of much smaller means).

The homeownership program covers new and rehabilitated houses, condominium units, and memberships in cooperatives — plus a small number of existing houses. Under a decreasing schedule aimed at launching the program quickly, existing housing can be used for 25 per cent of the program's funds in fiscal 1969, 15 per cent in fiscal 1970, and 10 per cent in fiscal 1971. Here's how the homeownership program works, using a hypothetical case:

A family of four earning $4,800 a year buys a $14,000 house on a 35-year, 6¾ per cent mortgage with a ½ per cent premium for mortgage insurance.

First the family deducts a $300 allowance for each of its two minor children, giving it an "adjusted" income of $4,200. Then the family takes 20 per cent of its adjusted income as the amount it is required to pay on the mortgage (including principal, interest, taxes, insurance, and the mortgage insurance premium): $840 a year, or $70 a month.

But, since the total required monthly mortgage payment is $116.52, and the family pays only $70, HUD pays the balance ($46.52), directly to the lender.

The family also must make a down payment of at least $200.

The scheme's built-in flexibility gives HUD the freedom to accommodate almost any family situation. HUD subsidizes only that part of the mortgage payment which, if borne by the family, would force it to spend more than 20 per cent of its income for shelter. Thus if the same $14,000 house were bought by a family earning an adjusted $6,000, for example, that family would put up $100 of the monthly payment. (It also could buy a more expensive house, and receive a larger subsidy.

If the homeowner's income rises, he will have to start paying a larger share of the mortgage. HUD will recertify the family's income every two years, and make appropriate adjustments. The hope is that many families will eventually be able to take on the whole payment.

But the program's flexibility has its limits—at both ends of the scale. At the bottom end, it will accommodate families earning about $3,000 a year — thus excluding most of the nation's 5.3 million families whose incomes are below the "poverty level" of $3,300. Even a family earning $3,000 does not qualify for a $12,000 house under the formula, because the maximum HUD subsidy would not quite make up the difference between 20 per cent of the family's income and the required mortgage payments. Theoretically, however, a $3,000 family can purchase a house costing just under $12,000—if it can find one.

At the upper end of the scale, the limitations get a little more complicated. Basically, to qual-

ify for the program, a family's income cannot be more than 35 per cent higher than the local ceiling for families in public housing (which varies widely from area to area); and mortgages subsidized under the program cannot exceed $15,000. But there are exceptions:

- Twenty per cent of the program's funds can be used by HUD to aid more affluent families, as long as their incomes don't exceed 90 per cent of the ceiling for the federal 221d3 middle-income housing program (which also varies widely). These families will have to make a down payment of at least 3 per cent of the acquisition cost.
- And, in high-cost areas, or for families having more than five children in normal areas, the $15,000 maximum mortgage can be increased to $17,500; and these large families can buy houses priced as high as $20,000 in high-cost areas.

More room at the top

Generally speaking, the program will aid families in the $3,000 to $8,000 income category. But, for a while at least, those near the top of this range are likely to benefit the most. One reason is that their incomes are usually more stable, making them better credit risks. Another, more important, reason is that most of the housing produced in the program's initial stages will be priced above the reach of most lower-income families.

The first of these problems is somewhat alleviated by a "special mortgage insurance assistance" scheme contained in the act. It permits HUD to bend FHA's regulations that deny mortgage insurance to those whose credit ratings leave something to be desired. If, after an investigation, HUD decides that such a family's record meets the spirit, if not the letter, of FHA's standards, it can waive the rules. For these special cases, HUD also can raise the family's share of the mortgage payments to 25 per cent of its income.

There is one catch, however: at the most, FHA can insure only $200 million worth of mortgages for high-risk families. Assuming a conservative average of $12,000 per mortgage, the special-assistance fund would benefit fewer than 17,000 of these families.

The second problem—producing low-cost housing for families near the bottom of the program's income scale — is also acknowledged in the act, but neither of its two approaches is likely to produce immediate results. The more promising of them is designed to encourage new housing technologies and their testing on a large scale. It permits HUD to accept plans for large-scale experimental housing projects put forth by public or private organizations that are capable of carrying them out. HUD will evaluate all the submitted plans, pick five that it considers most promising, and order them built—either on surplus federal land, or in areas where building regulations permit experimental housing.

Five such projects will not, of course, produce a significant stock of low-cost housing, but they might lead to new, tested technologies that can be applied on a national scale. The act requires HUD to submit a report ("at the earliest practicable date") recommending legislation that will produce this result.

The second approach sets up a new 21-member National Advisory Commission on Low-Income Housing to find new ways of producing decent housing for the poor. It will conduct a comprehensive study of the problem, including an evaluation of existing housing programs, and make a final report to the President by July 1, 1970.

There is also the problem of producing enough houses — at any price—to fulfill the unprecedented quota established by Congress. The act contains a number of provisions designed to boost both the quantity and the quality of housing built under the program:

- A federally chartered, nonprofit National Homeownership Foundation to encourage greater participation by local, private, and public organizations. It will offer technical, educational, and limited financial assistance to builders and other groups.
- Transfer of the secondary market functions of the Federal National Mortgage Association (Fanny May) to a private agency, and continuation of its special assistance programs under a new federal agency, the Government National Mortgage Association (Ginny May).
- The sale of Ginny May-guaranteed securities by savings and loan associations and banks to raise new investment funds for the mortgage market.
- Relaxation of mortgage insurance requirements for housing and other facilities in declining urban neighborhoods.
- Interest-free loans to cover preconstruction expenses of nonprofit housing sponsors.
- The recognition that "improved architectural standards . . . require high priority if federal aid is to make its full community-wide contribution toward improving our urban environment," and the stipulation that "emphasis should be given to encouraging good design as an essential component" of housing.

Virtually all the strengths and weaknesses of the homeownership program have their counterparts in the rental program. Both are based on a flexible formula of interest subsidies; both affect families in roughly the same $3,000 to $8,000 income range, with the cards stacked in favor of those near the top limit; and both depend on the participation of private enterprise to meet their goals. The rental program is different in only three important details:

- To avoid complex federal bookkeeping, HUD pays a fixed subsidy on each project, and the owner periodically turns back any amount that exceeds the program's limits.
- The new or rehabilitated rental housing must be in multifamily projects of at least five units.
- Twenty per cent of the tenants can be low-income families and receive rent supplements so that they can afford the rents.
- And tenants are required to pay 25 per cent of their adjusted incomes for rent.

The two new programs are not only the most far-reaching housing schemes ever put on the books, they are also the most expensive. Congress has authorized (though not appropriated) $300 million for each of the programs over the next three years — but that's only the beginning. The cost to the government over the life of the mortgages insured during the first three-year stage alone will eventually reach an estimated $50 billion. Beyond that, if Congress comes through on its stated promise of six million units within the next ten years, the ultimate cost could exceed $200 billion.

This is a big order, but not big enough to solve the housing problems of the nation's poorest families. Their special needs are not entirely ignored in the act: it does provide for 425,000 new public housing units and 155,000 new rent-supplement units over the next three years. But even though both figures represent substantial increases over previous levels, they don't come close to accommodating the vast majority of the 5.3 million impoverished families who are left out of the new homeownership and rental programs.

Taken as a whole, the 1968 housing package is something of a contradiction. It purports to be the beginning of a ten-year program to replace six million units of dilapidated housing, yet it excludes most of the families who now live in these units. Presumably, Congress expects some of these families to move into decent housing vacated by families that qualify for the new programs. But, as the results of our middle-class housing programs have shown, the trickle-down process works far better in theory than in practice.

Decent homes for whom?

Obviously, new programs to meet the needs of the rock-bottom poor (such as housing allowances, guaranteed incomes, and the like) will have to be included in the package—and soon. Otherwise, in ten years Congress will discover that it has produced six million "decent homes and suitable living environments" for people who are

not allowed to occupy them.

Moreover, the housing problem cannot be solved simply by building more houses. It is an inextricable part of the social, economic, and environmental ills of our cities. The 1968 act hardly even acknowledges that fact. For the most part, its "urban development" sections are either stale or underfunded (or both). It contains only four new urban programs worthy of being called innovative:

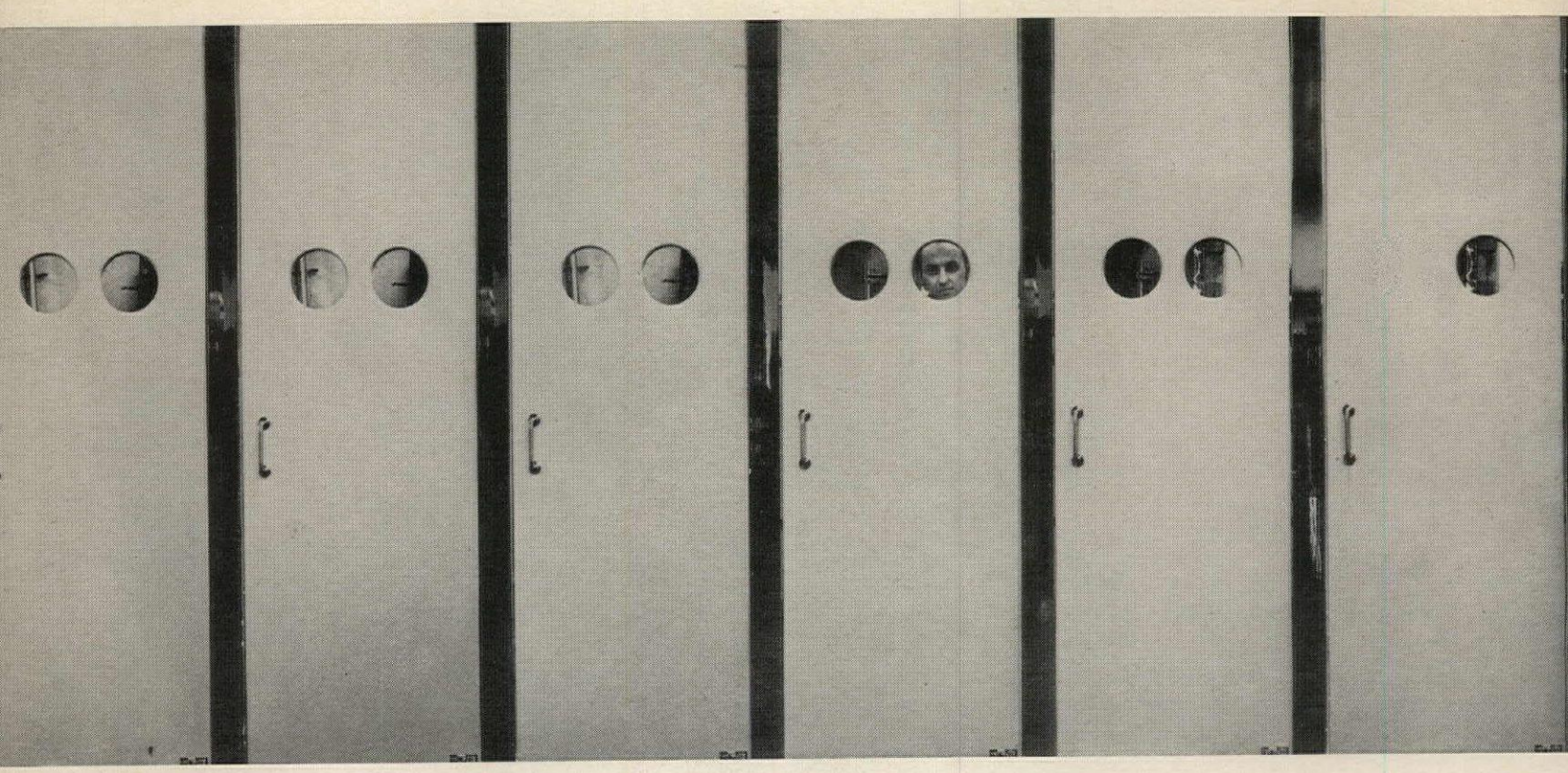
- A New Communities Act under which HUD guarantees bonds, debentures, notes, and other obligations of private developers of new towns. The guarantees cannot exceed $50 million for any single new town, and HUD's total guarantees for the program are limited to $250 million.
- A change in the urban renewal process permitting planning and execution to proceed segment by segment, rather than waiting until an entire urban renewal plan is approved.
- A federal-private insurance program for slums and riot-torn areas, under which insurance companies and the states put up most of the money, with HUD providing reinsurance against their losses.
- Federal flood insurance for lower-priced homes and small business properties. Losses are absorbed by insurance company pools, with federal backing, and the firms share profits from premiums in good years.

Aside from these provisions, the act merely extends and enlarges existing urban programs: $1.4 billion for urban renewal in fiscal 1970; $1 billion for model cities; increased home-improvement loans (from $3,500 to $5,000 each) and rehabilitation grants (from $1,500 to $3,000); and extension of mass transit programs.

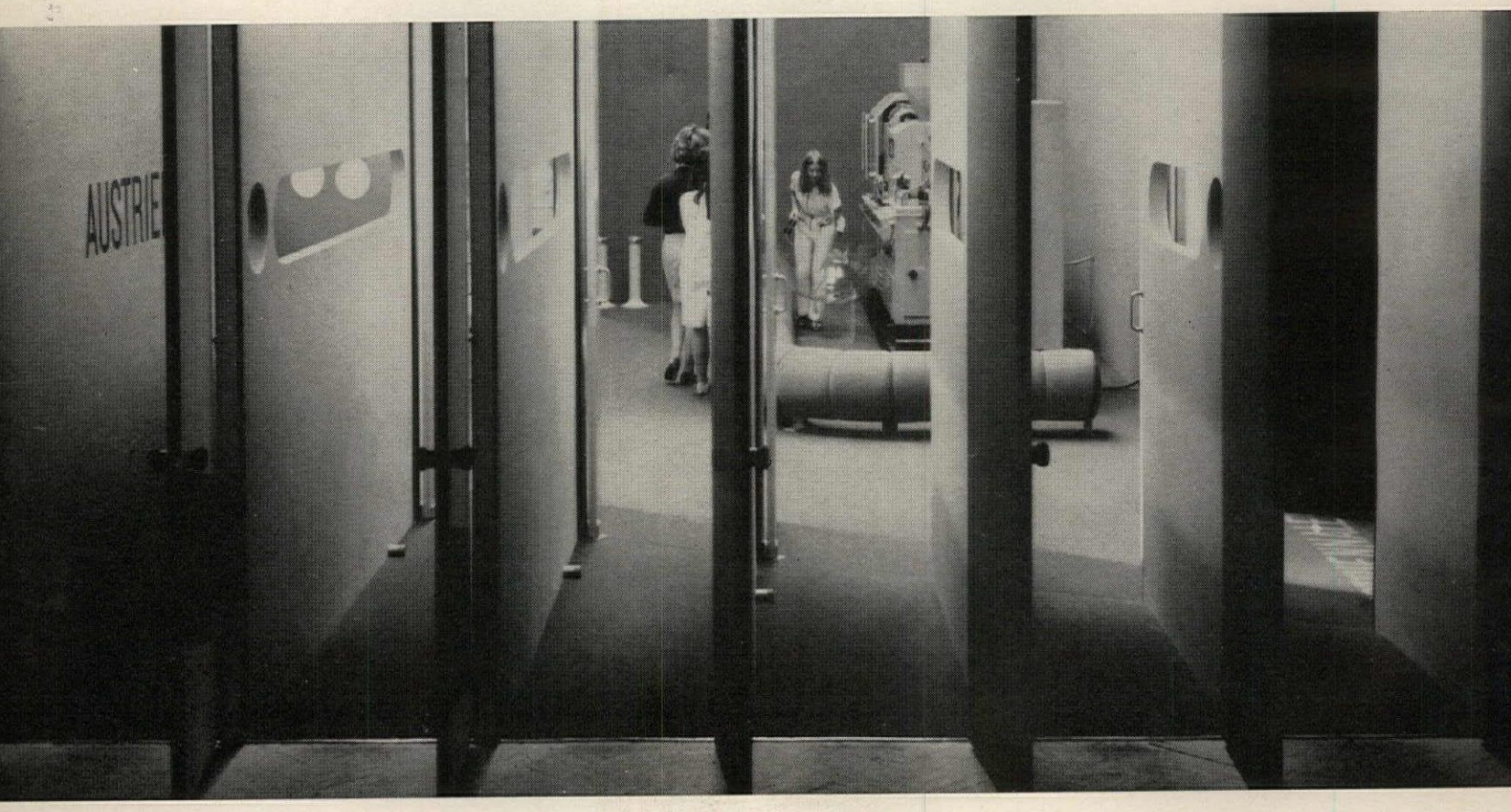
Just before he signed the act on July 31, President Johnson said it "can be a Magna Carta to liberate our cities." Our cities desperately need a Magna Carta, or a Marshall Plan, or whatever one chooses to call a program that matches the scale and complexity of the urban crisis, but the 1968 act is not it.

—James Bailey.

WIDE WORLD



AUSTRIENNALE



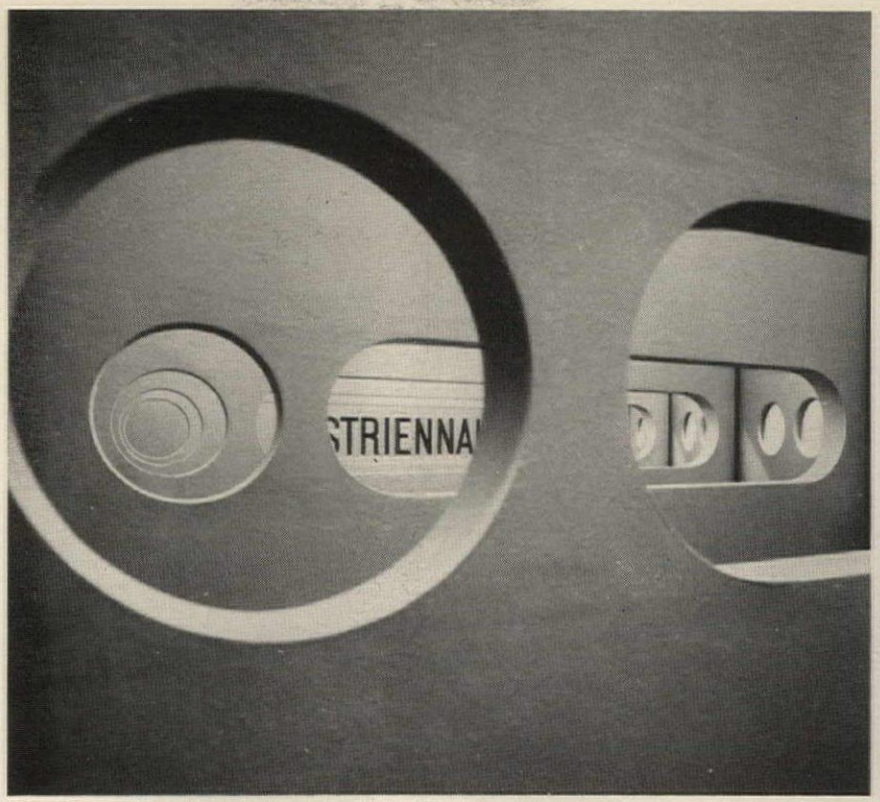
One of the most effective exhibits at this year's *Triennale* in Milan was the show staged by the Austrian architect Hans Hollein. Named the "Austriennale," Hollein's exhibit was the official contribution made by his country's government.*

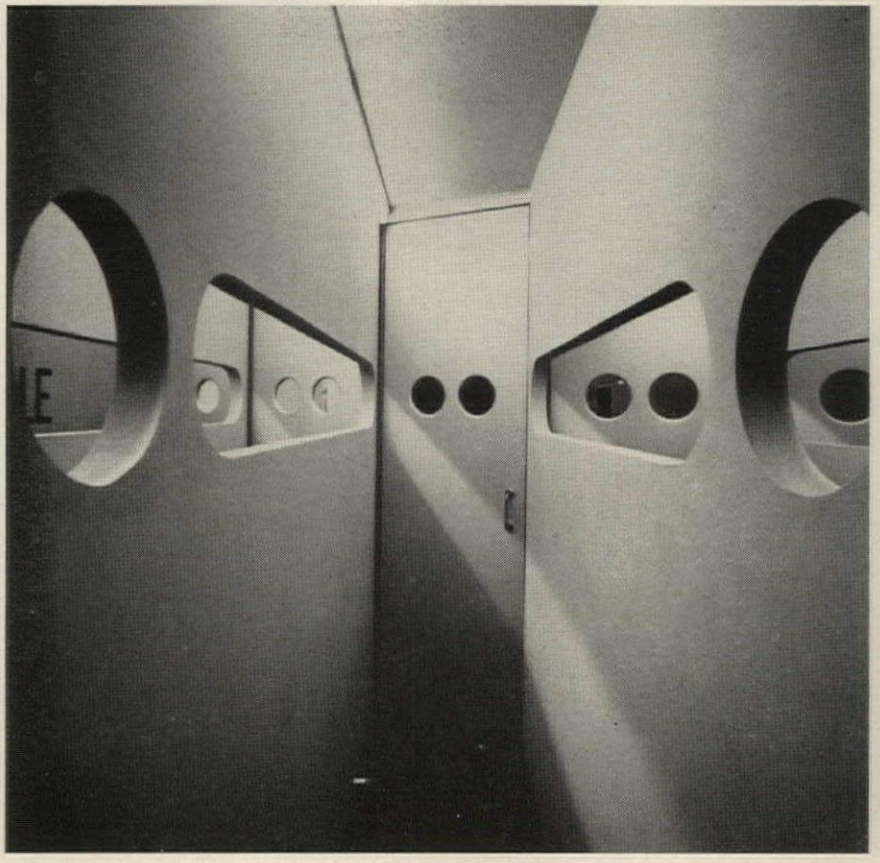
The theme established by this year's *Triennale* was "The Great Number," a rather obscure way of saying "Population Explosion." In any event, the numerous official and unofficial exhibits all dealt with problems that have arisen as a result of the galloping increase in population, with possible solutions to these problems, or with physical phenomena characteristic of a mass society.

Hollein describes his exhibit as follows: "A casual glance reveals a series of identical precision-made aluminum doors . . . the identical doors open into parallel corridors [see plan, next page] that provide a variety of experiences—demonstrating aspects and phenomena of 'The Great Number' either as direct statements in a physical way, or through psychological situations and associations.

"The visitors may pass through a shiny supermarket and end up in an area of garbage and waste. He may enjoy the refreshing coolness of the Austrian Alps and pass through a snowstorm. [Snow—an Austrian mass product.] He may experience a particular sensation in a 20-ft.-high and 20-ft.-long corridor crammed on both sides, from top to bottom, with files on shelves. . . He physically experiences the population increase by passing

**The U.S. Government was either too stingy or too philistine (or both) to send an official exhibit to this remarkable international fair. The Austrian exhibit by Hollein, incidentally, cost less than $40,000 in all.*



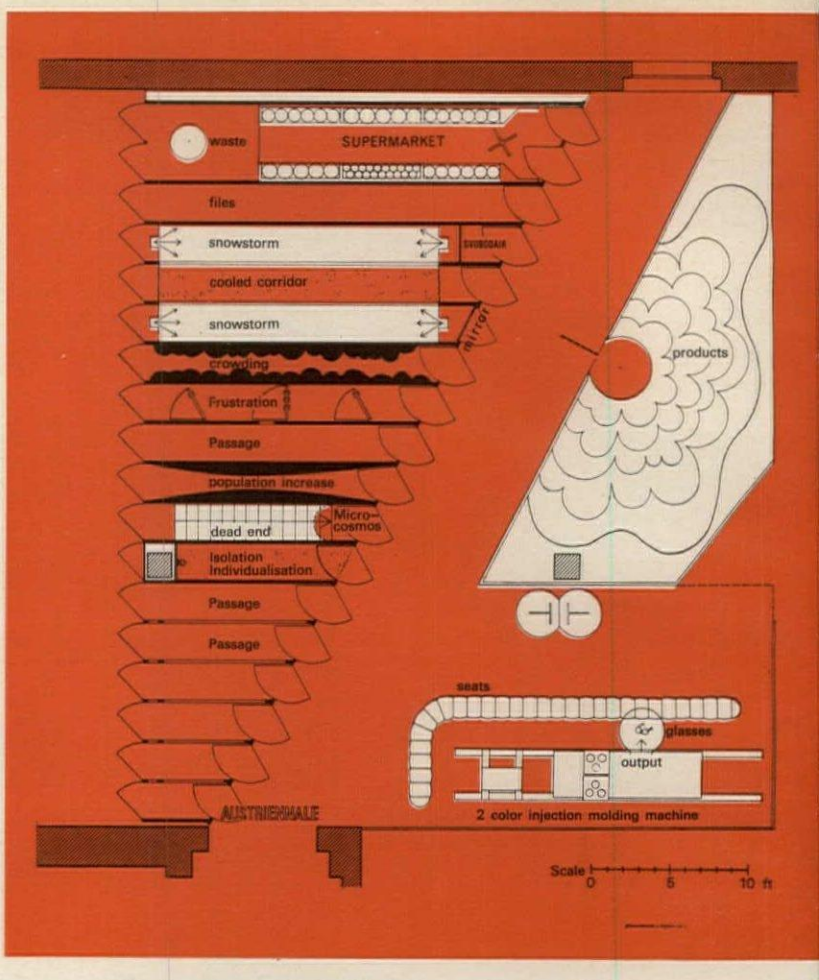


Left: some of the precision-made aluminum doors that lead into corridors which provide a variety of physical and psychological experiences. Right: some corridors afford occasional glimpses of people passing through other, parallel passages. Bottom right: lady visitor squeezed by population curve.

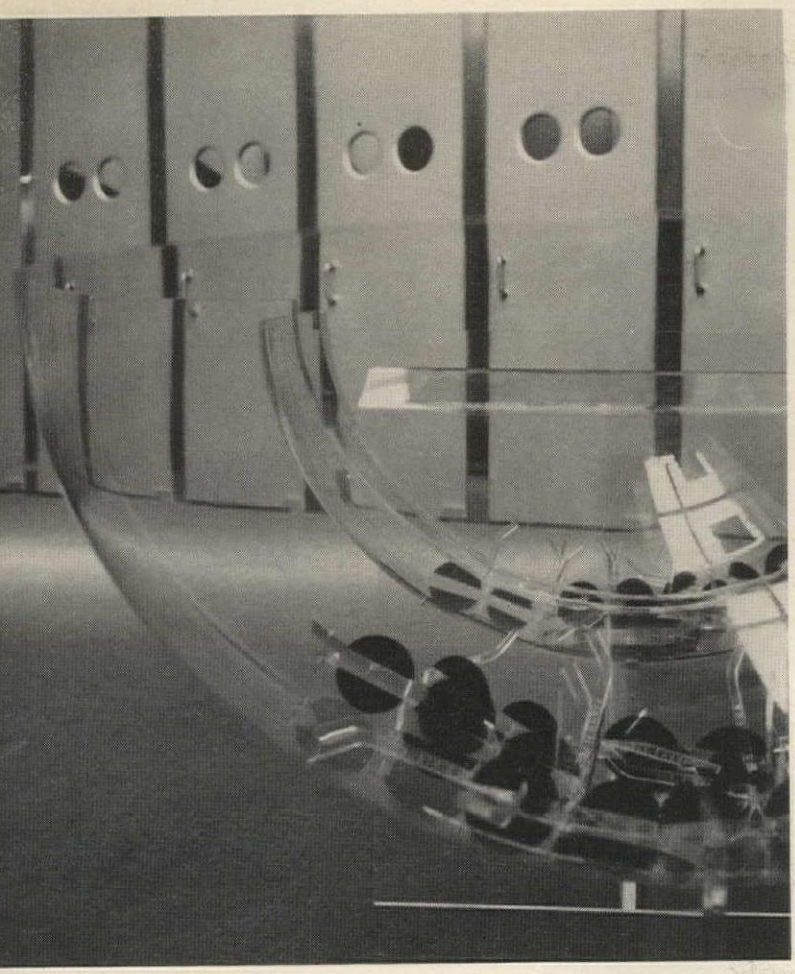
through a corridor that edges in on him in a curve corresponding to that of the increase between now and 2,000 A.D. He experiences isolation and individualization—as well as the effect of crowding—as he has to squeeze through a corridor lined with 'crowds'. . . He is frustrated in front of a door covered with door handles only one of which will open the latch. . . And, finally, he may confront his own self —in a mirror."

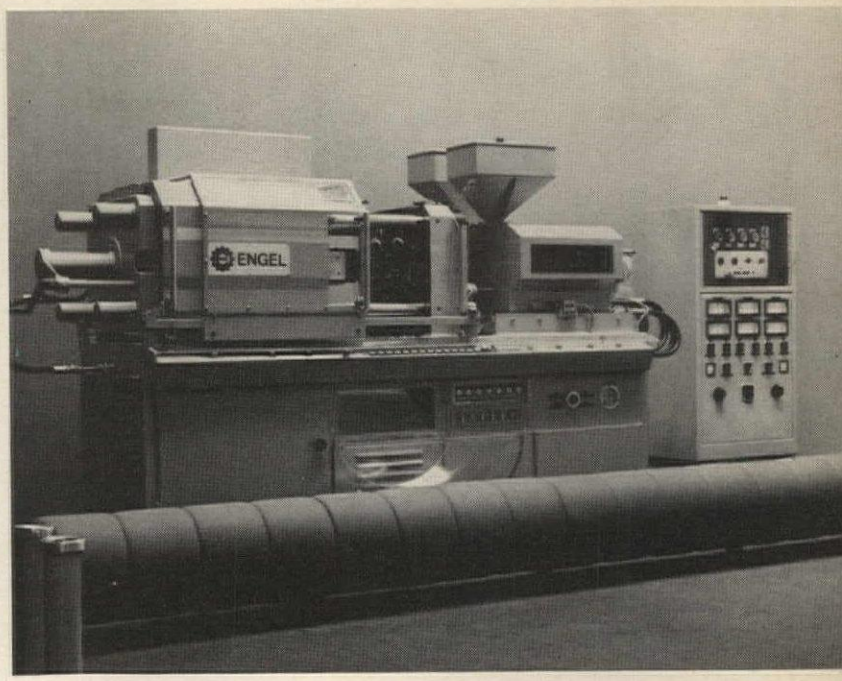
Some of this may suggest a highly refined psychological torture chamber; but the effect is actually great fun: with 36 doors, some partitions, and a great deal of imagination, Hollein has dramatized many of the irritations, as well as the opportunities, of a mass society.

The doors and corridors take up most of the exhibit, but there is also a display of Austrian products, and a two-color injection-molding machine which turns out a pair of Hollein-designed sunglasses every 15 seconds, for the visitors to wear and take along. At this year's International Design Conference in Aspen, Hollein said that, to him, architecture was "everything. . . especially communication." He explains that these strikingly handsome and distinctive sunglasses become a communications medium which extends the exhibition into the city as a whole —and to wherever people go around wearing them. Another extension of the exhibit is a beautiful, Hollein-designed brochure which contains, among other things, a perforated and gummed sheet of "Austriennale" stickers for affixing to letters, walls or lamp posts. . . "This exhibition is precise but improvised as well," Hollein explains. "It is Kafkaesque and Freudian. It is ambivalent, contradictory as is life. In this way, the exhibition is Austrian."



Left: door with many handles, only one of which works; and passage through files on steel shelving. Right: plan of exhibit, details of doors, injection-molding machine, and distinctive, Hollein-designed sunglasses manufactured by the machine.
PHOTOGRAPHS: Hubmann, except center, page 41, Rotophoto.

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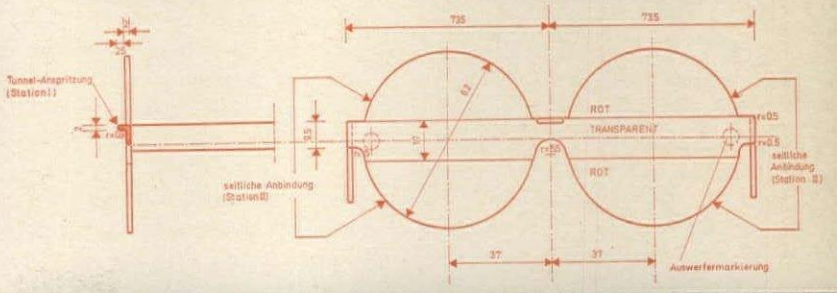
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Auswerfermarkierung

NEW DIMENSION IN URBAN RENEWAL

The streets and shops of the city will be part of the vast structure proposed for the Tufts-New England Medical Center, which will eventually span several acres of Boston's South Cove area.

For the first time in any U.S. renewal project, functions over a large area will be separated into horizontal layers, rather than "parcels" outlined on a map. The activities of a dense urban neighborhood will go on at ground level while medical treatment, teaching, and research take place above.

The design for this multipurpose urban structure—shown in detail on the following pages—is the work of The Architects Collaborative in close association with the medical center's own planning office. Construction is to begin this fall, after a seven-year process that has yielded reams of research data and consumed countless hours in negotiations.

The client institution is a federation of three long-established hospitals with the Tufts University Schools of Medicine and Dental Medicine. These institutions had been working together in the South Cove for decades; it was only when they faced critical questions of survival and expansion in the early 1960s that they centralized their administration and planning.

The physical planning effort began back in 1961, when Hermann Field was commissioned to make a three-month study of alternatives: whether to rebuild in the old location or seek a roomier site outside the city. Field concluded that abandoning the existing plant would be economically difficult and would block emerging programs of community health care. Besides, recent highway construction had made the South Cove uniquely accessible from all parts of New England.

But, Field warned, in order to build rationally and maintain its professional eminence, the medical center would have to base its expansion plans on thorough research into long-range needs, rather than on the accidents of available funds or internal politics. At the same time, the center would have to become involved in renewal of the South Cove.

"Very commonly," Field observed, "the hospital is in the ambivalent position of treating the community's sick while acting as if the community itself did not exist." The possible consequences of such an attitude were later demonstrated in the Newark riots of 1967, set off mainly by unwise plans for a medical center.

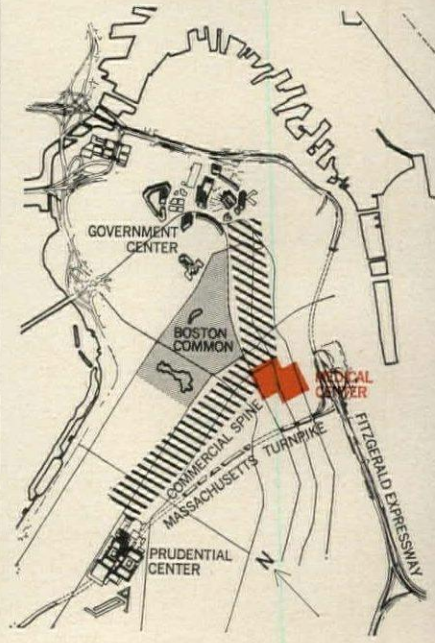
Field made it plain that the kinds of planning research and community action he had in mind could not be done "episodically" by "one-shot consultants." Only a permanent, in-house professional staff could reconcile the competing needs of the center's component institutions and maintain constructive contact with government agencies.

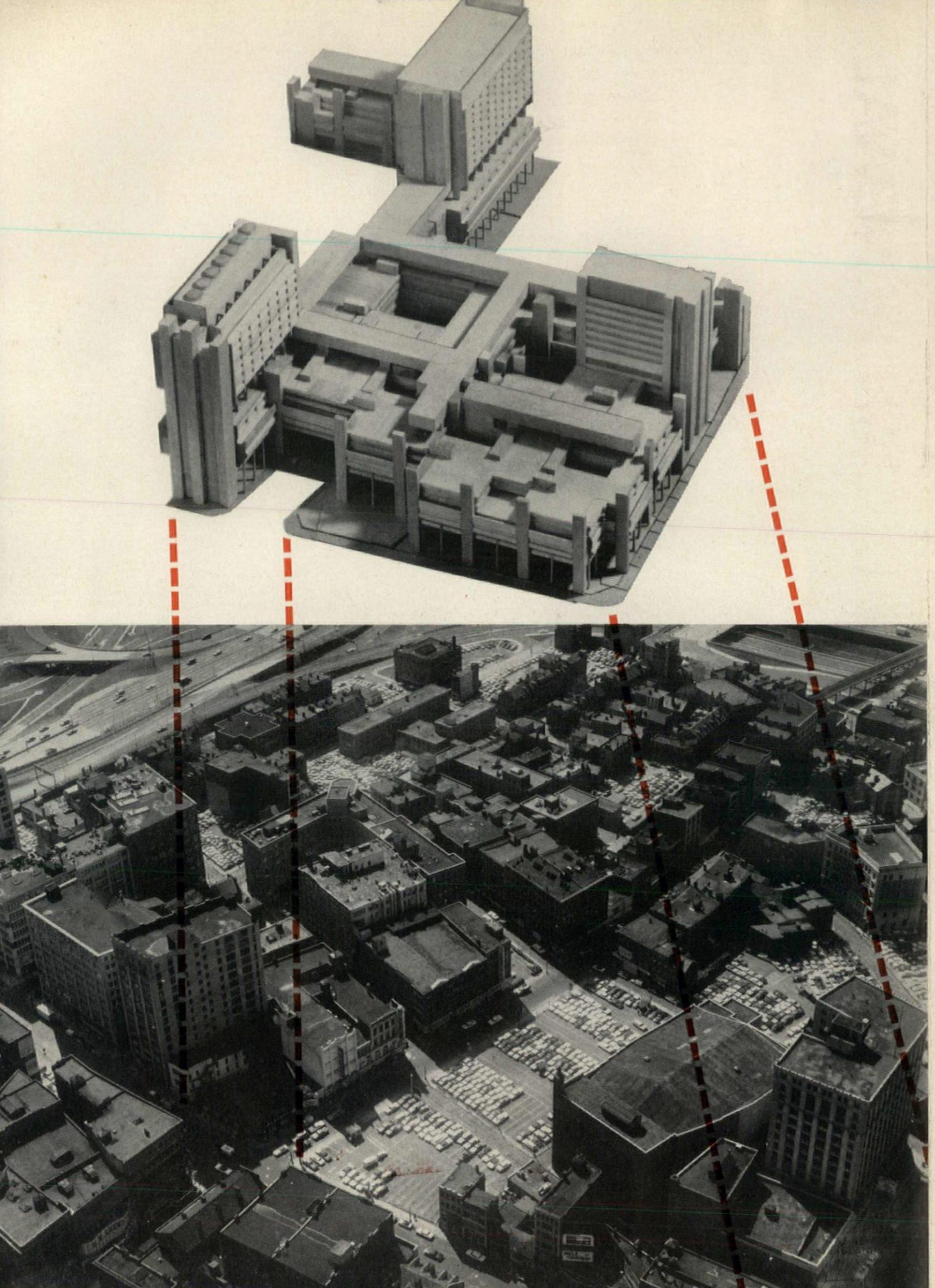
To start with, he proposed a three-year planning program with a budget of $50,000 per year, half of which could be met with foundation grants. At that time, the eventual scope of the planning effort could not have been imagined; last year, Field headed a professional staff of 28, with an annual budget of $400,000.

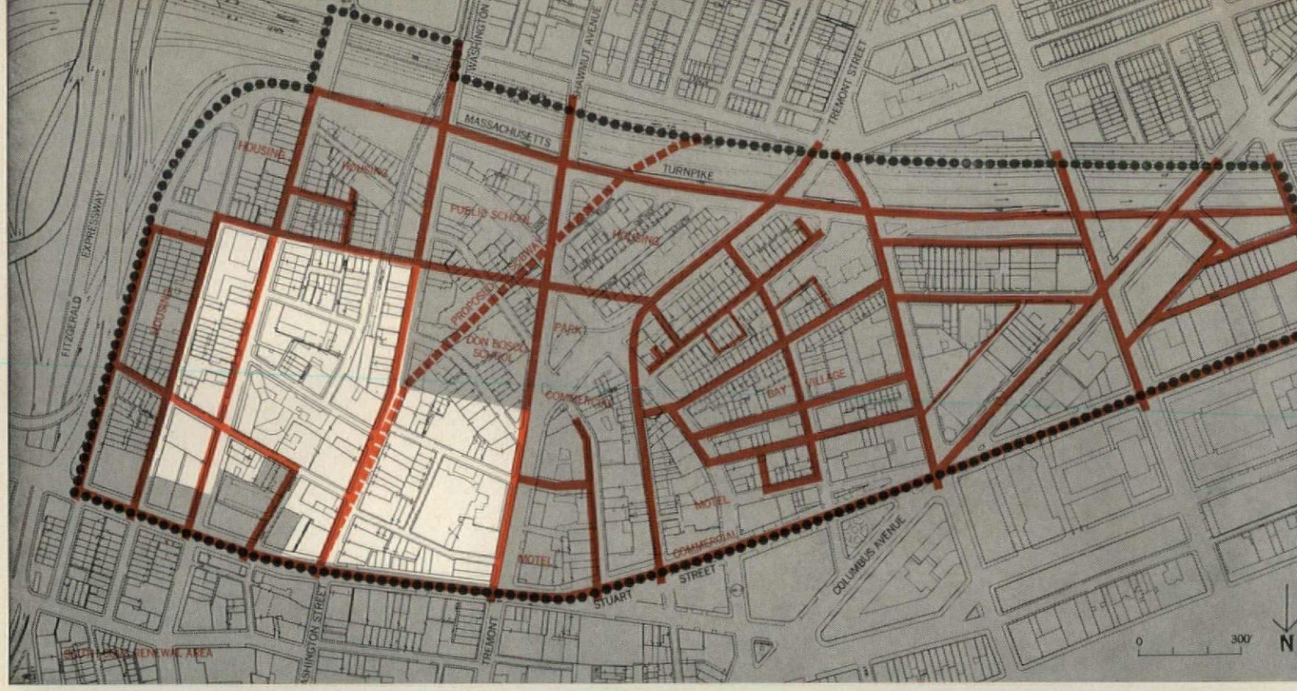
The first, indispensable step toward intelligent planning and neighborhood improvement was establishment of an urban renewal program for the South Cove. Up to then, the Boston Redevelopment Authority had not placed a high priority on the area, which was not yet critically blighted. BRA was aware, however, that the South Cove was strategically located and that no large-scale rebuilding could take place there without government intervention.

The medical center planning office was ready to cooperate in collecting data for a federal renewal application. It could also offer the city, indirectly, more than $2 million in federal renewal credits, based on the center's recent land acquisitions in the area (under the terms of Section 112, Housing Act of 1962). The BRA drew up a renewal program—approved by Washington in 1964—which included firm assurances to local residents that the medical center would not expand at their expense.

The single, multipurpose structure of the medical center (top right) will replace a patchwork of parking lots and buildings (bottom right) in Boston's South Cove. An aerial photo of downtown Boston (inside fold) shows the extent of the medical center (solid outline) and the renewal area (broken outline). Renewal will permit large-scale development in keeping with the area's strategic location (below).



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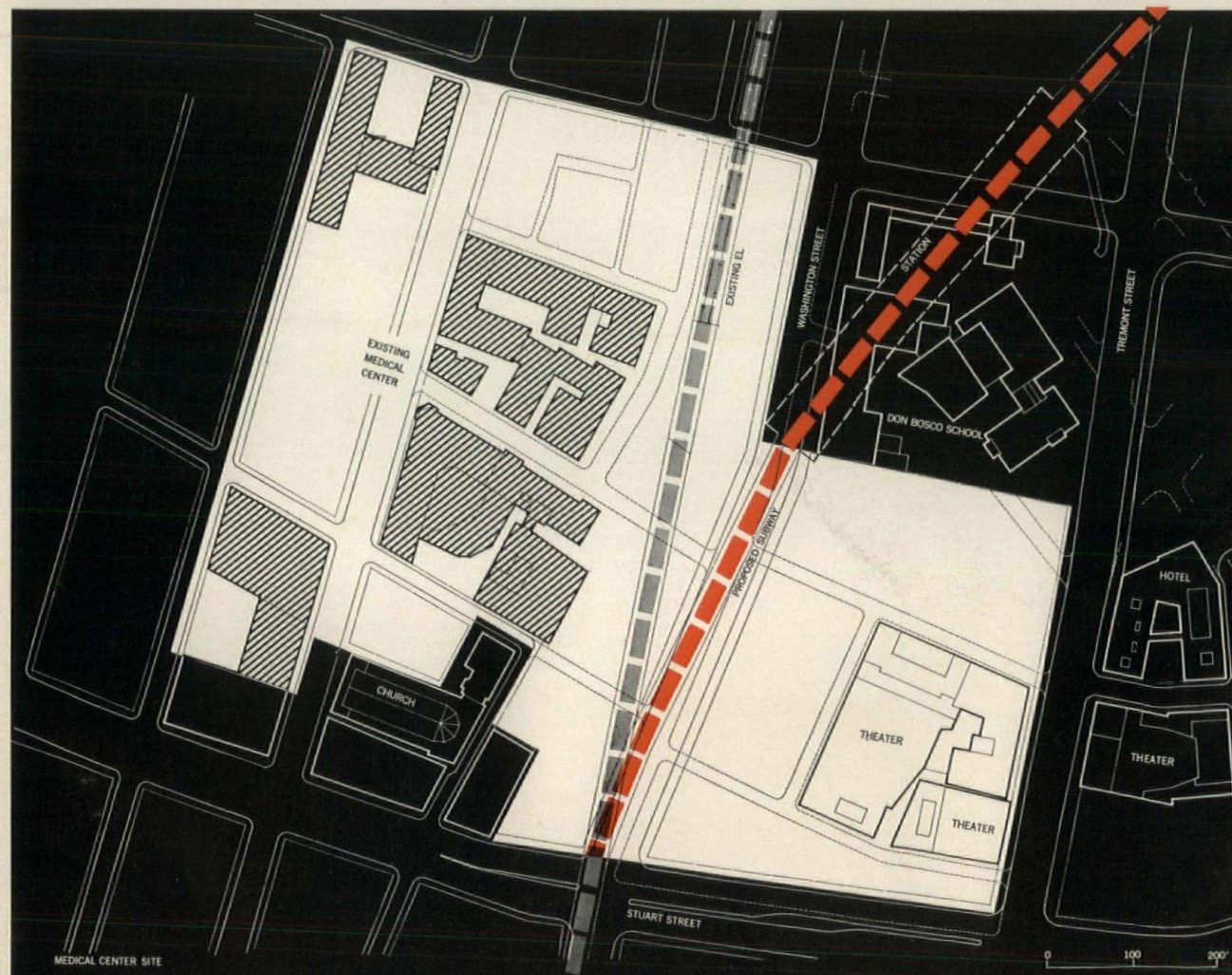
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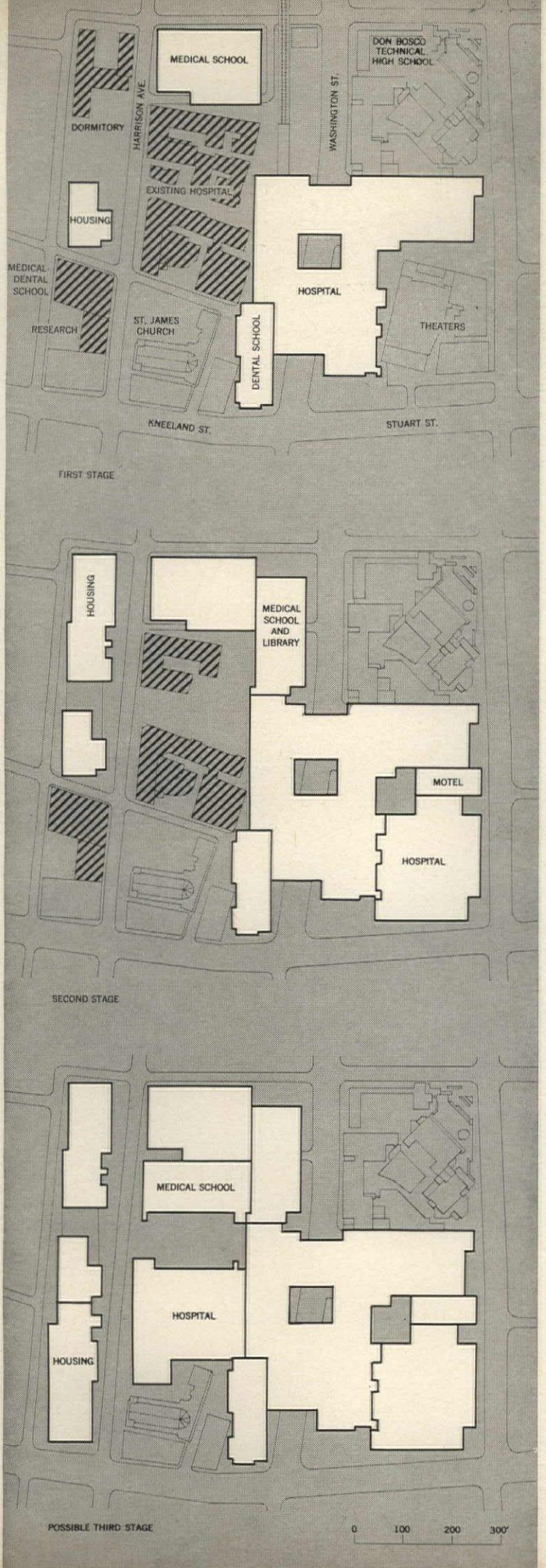


The medical center scheme is part of a larger design for the South Cove

The renewal plan for the South Cove (top, opposite) calls for drastic revisions in street layout, but little change in overall land use. Most of the area will remain residential, with new middle-income apartments to the south and rehabilitated row houses to the east and in Bay Village. The medical center's 12.9-acre tract (bottom, opposite) will be only 2.9 acres larger than its present holdings, but vastly superior in layout and accessibility. The sequence of construction (left) is tied to demolition of the elevated transit line and the theaters. In stage 1, the medical center will retain all usable existing buildings; a few will be removed in stage 2; in the possible third stage, all existing facilities would be replaced.

The Boston Redevelopment Authority and the medical center planning office agreed on the South Cove's needs: the crazy-quilt street pattern had to be reshaped; the elevated transit line through the area had to be replaced by a subway—with a South Cove station.

Another major goal that the BRA could not ignore was increasing the area's tax base. A city in which 40 per cent of all land was already tax-exempt could not afford to give up potential revenue from this strategic downtown neighborhood.

Despite expansion of institutions (the Don Bosco technical high school as well as the medical center), the BRA plan is expected to double tax collections from the South Cove. One reason is that fully 40 per cent of the area is now given over to public streets. Another reason is that the plan adds only 2.9 acres—plus 0.6 acre of air-rights space—to the ten acres the medical center already held, and requires that part of the complex be devoted to taxable commercial uses.

Quite aside from their tax potential, these commercial facilities will be valuable in keeping the medical center from becoming a "dead spot" in the neighborhood. The two existing theaters at one corner of the medical center precinct—both already owned by the center—were considered vital parts of the downtown entertainment district; the renewal plan requires that they remain in use until 1980 and that efforts be made to replace one of them (a legitimate theater) within the medical complex.

With the BRA's encouragement, other developments in the South Cove will follow the pattern of mixed use established by the medical center. Plans for the Don Bosco school (by Halasz & Halasz) include public plazas at street level above underground parking and athletic facilities. A public school project, for which the medical center planning office is carrying out preliminary studies, will include offices for medical center health programs and other community services, and apartment blocks will rise from its rooftop playground.

Once the urban renewal plan was approved, the architects were brought into the design process. After a painstaking selection procedure, The Architects Collaborative was chosen in 1965.

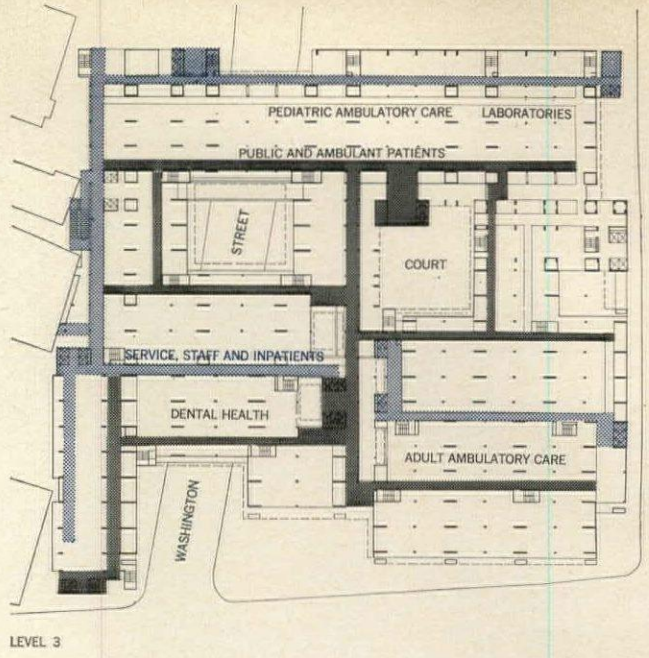
With the medical center planning office, TAC developed the overall concept of continuous layers of activity covering most of the 13-acre site. The scheme was based in large part on a study of pediatric planning completed in 1965 under a federal grant to the center's planning office.* This study showed that patient-care spaces extending horizontally over several acres have distinct advantages over the more common nursing tower scheme. While the tower divides patient-care space into one or more separate floors of fixed size for each medical specialty, the horizontal scheme allows for flexible assignment of space and encourages informal contact among specialties (a special advantage for a teaching hospital). The large nursing floors can be linked vertically to treatment floors, and both can be expanded at the same time in small increments.

The whole concept of horizontal layers depended on approval of air-rights construction over Washington Street by Boston's virtually autonomous Public Improvements Commission. Without that approval, years of preliminary planning would have had to be scrapped.

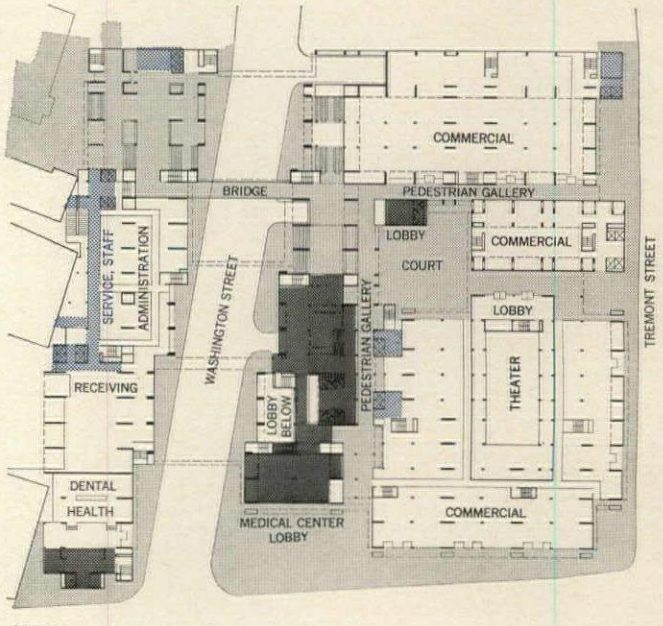
The variety of functions in the many-layered complex—each of them subject to its own set of regulations—created a tangle of administrative problems. Government support for medical and dental schools, for instance, does not apply to hospitals—much less to shops or theaters. The cost of any portion of the complex eligible for grants could be established only by estimating its share of structural and mechanical systems, elevators, site work, etc. The sharing of land, structure, and services may yield overall economies, but it complicates governmental bookkeeping.

* *USPHS Grant HM00235, "Study for New Design Concept for a Children's Hospital." Marshall Kreidberg, M.D., principal investigator; Hermann H. Field, AIA, co-principal investigator; Donald A. Kennedy, Ph.D., Delbert Highlands, M.Arch., and Elliot P. Rothman, M.C.P., staff members.*

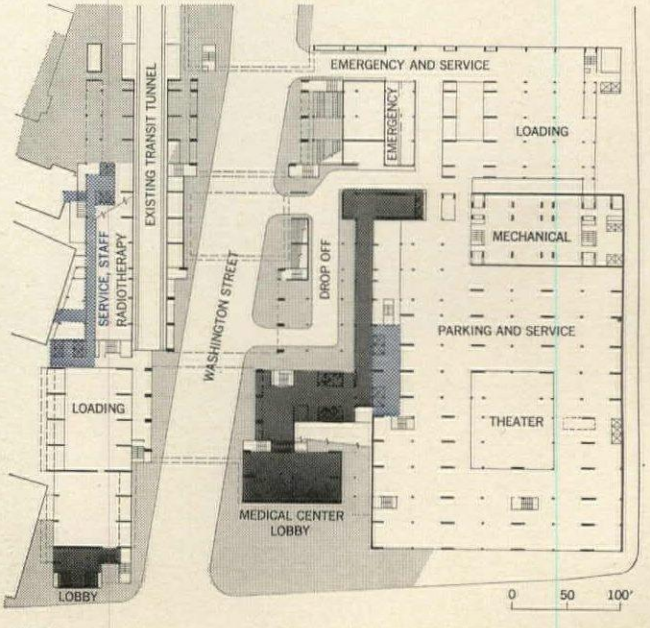
The center's functions are arranged in layers that vary widely in layout



LEVEL 3

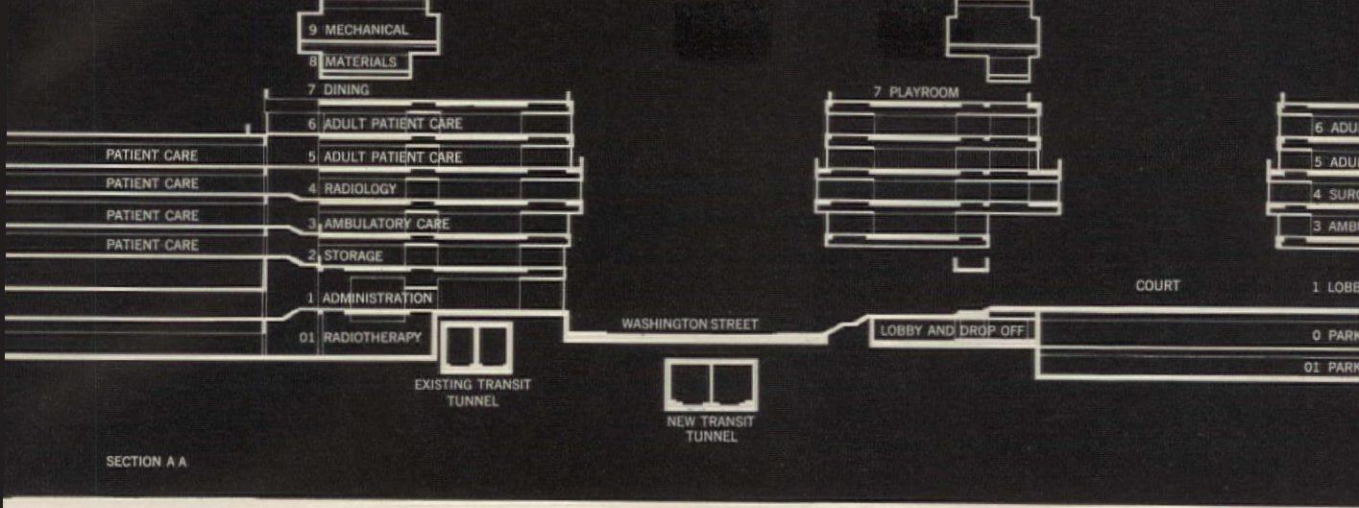


LEVEL 1

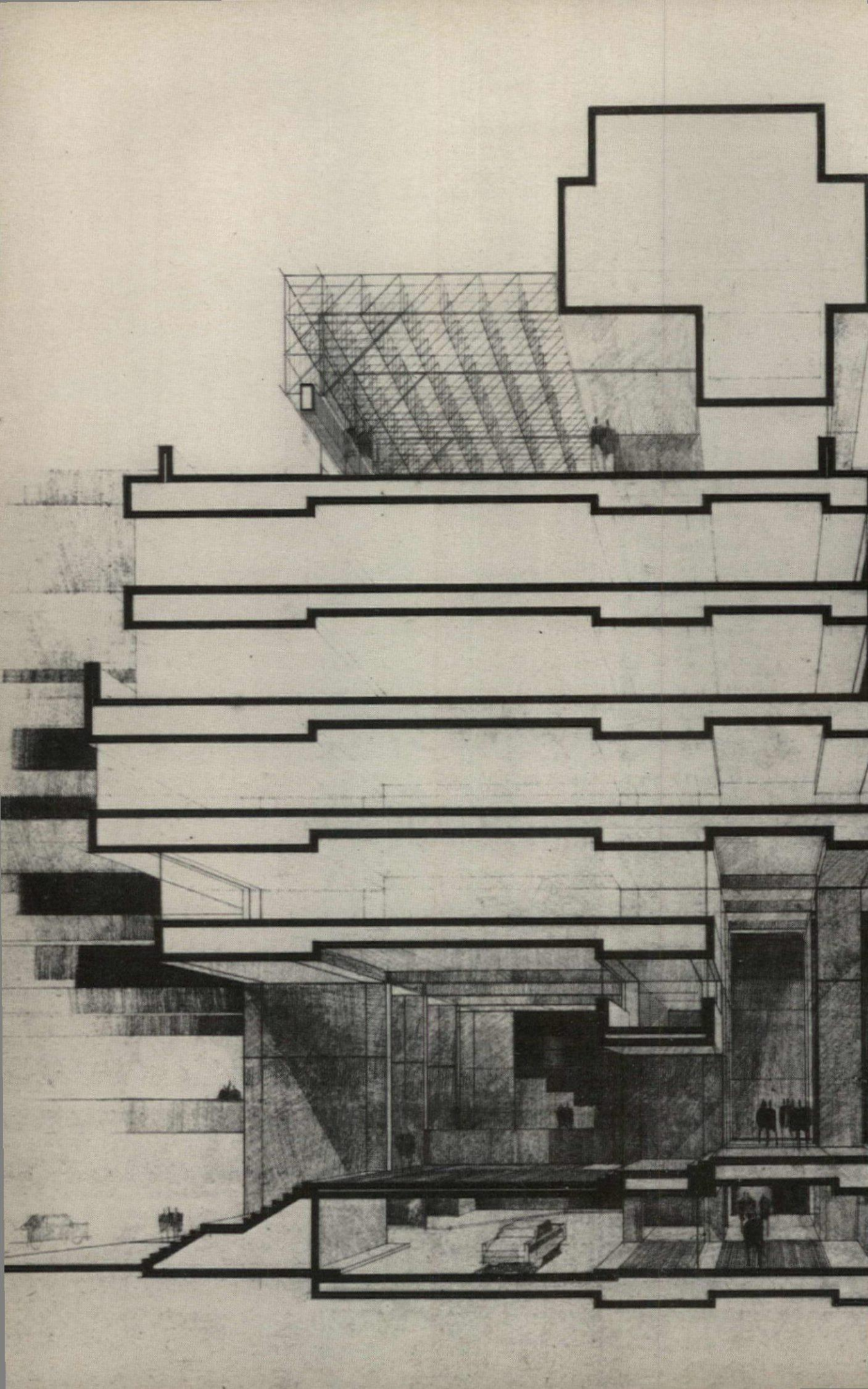


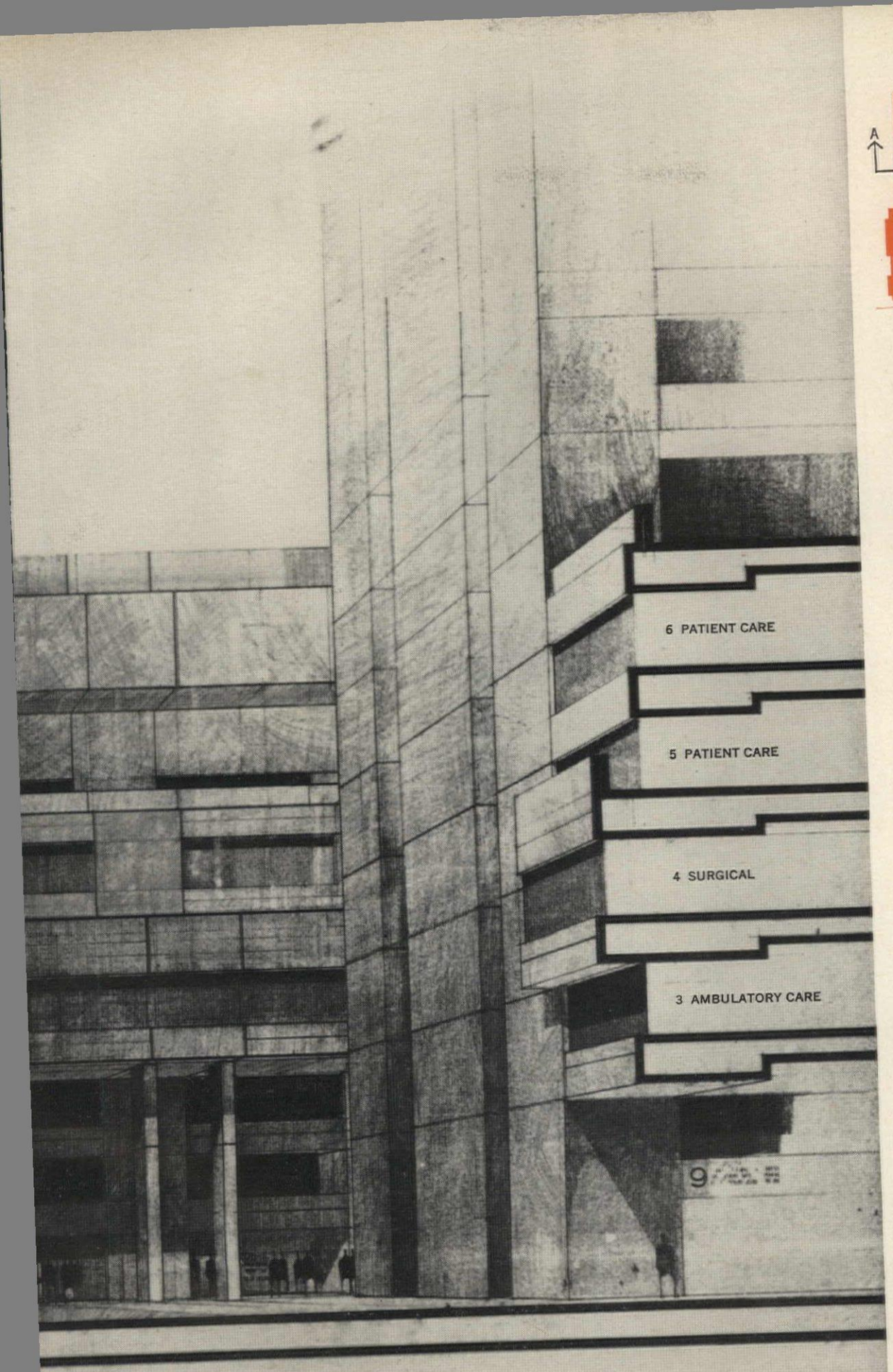
LEVEL 0

The lower levels of the medical center (plans, right) will be split by Washington Street, off of which will be entrances to lower lobby and garages. The pedestrian level (level 1) is at the elevation of Tremont Street, one story higher. The partial second floor will be used mainly for storage and distribution. The third level, used for ambulant patient care, will be the first continuous layer of the structure. Above it will be three more floors devoted to medical care (section, opposite), topped by linear penthouses housing materials handling systems and mechanical equipment.

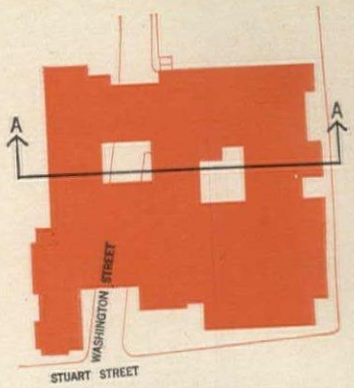

9 MECHANICAL
8 MATERIALS
7 DINING
6 ADULT PATIENT CARE
5 ADULT PATIENT CARE
4 RADIOLOGY
3 AMBULATORY CARE
2 STORAGE
1 ADMINISTRATION
01 RADIOTHERAPY
PATIENT CARE
PATIENT CARE
PATIENT CARE
PATIENT CARE
7 PLAYROOM
COURT
WASHINGTON STREET
LOBBY AND DROP OFF
EXISTING TRANSIT TUNNEL
NEW TRANSIT TUNNEL

SECTION A A





SECTION A–A



People passing through the medical center, by car or on foot, will be more aware of its voids than its masses. Shop-lined arcades will converge on a central pedestrian court (left). An opening of equal size will let sunlight down onto Washington Street and the walkways along it (far left). Above the four layers of treatment facilities will be acres of open roof deck for patients and staff. Two portions will be enclosed to serve as dining and play rooms (upper left) for pediatric patients.

The pediatrics hospital study, which helped to shape the overall design concept, also suggested a new way to arrange the patient's rooms. The traditional layout of rooms along corridors was abandoned for a "cluster" layout (facing page), with nurses, examination rooms, supplies, etc. located at the center.

The nurse needs no corridor to get to the individual rooms, but enters directly from this central space. To link the clusters together, there are two networks of corridors—a primarily public one for visitors and a more internal one for staff and supplies.

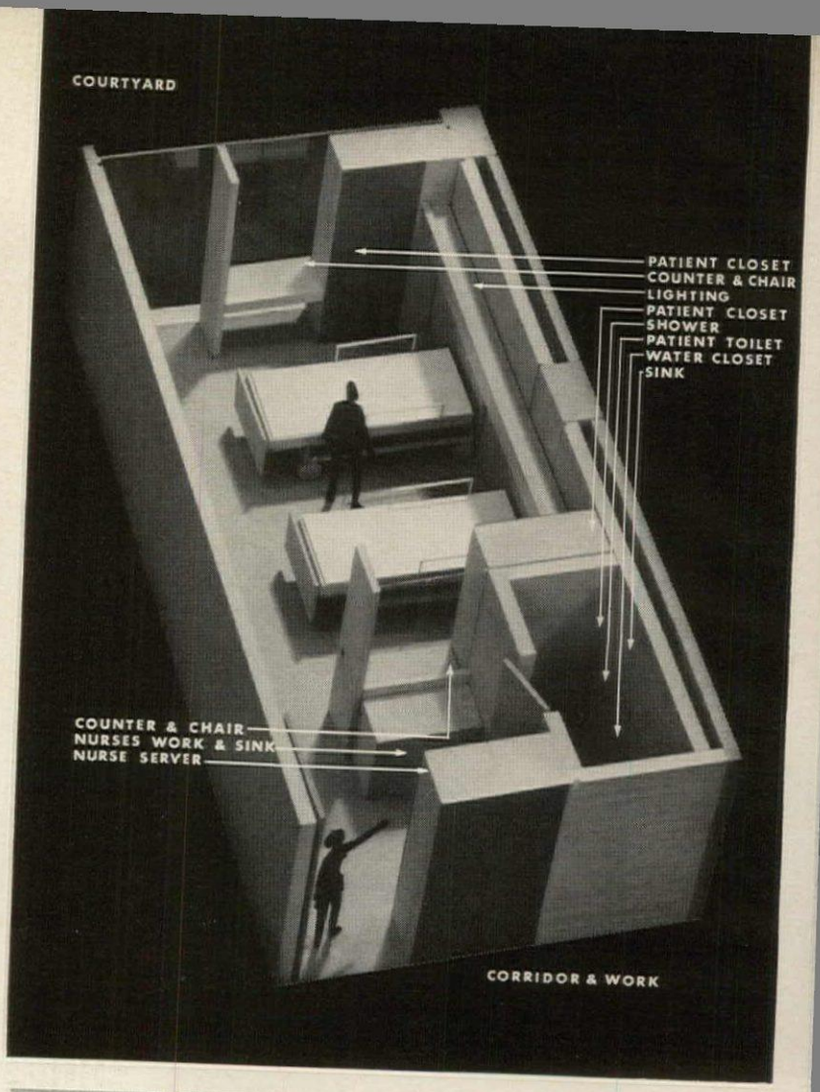
The design of the typical adult room has also been reconsidered. The principal new feature is a nurse's work alcove at the entrance to the room. This area has a supply cabinet (filled from outside the room) and a work counter, with a glass panel above it through which the nurse can observe her patients.

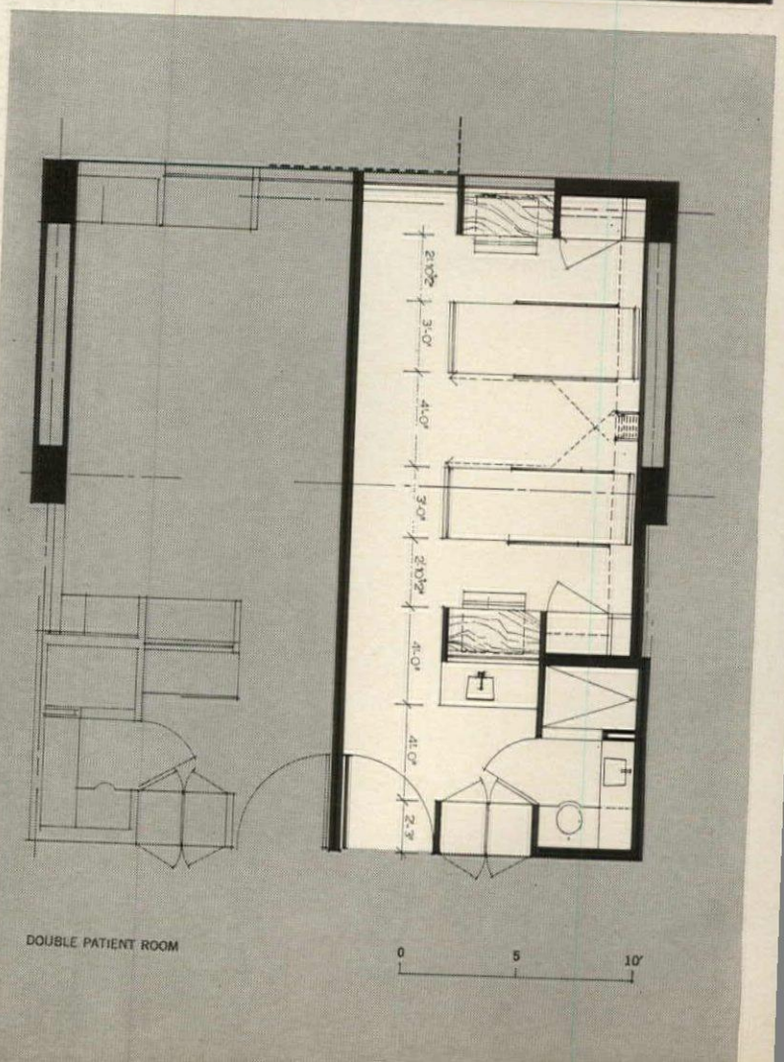
One essential feature of the patient's room, as confirmed by the pediatric study, is a view to the outdoors. The location of the inpatient rooms on the top two floors of the center's main horizontal mass allowed for courts to penetrate these floors, giving every room a view of the sky.

Children, the study showed, are not especially interested in broad views, but prefer short-range views that include other children; hence the small courts in the pediatric area, which offer clear views of other patients on the opposite side. The young patients may also be able to see other children playing in the courts—perhaps under transparent roofs.

Adults, on the other hand, seem to prefer a broader outlook and a sense of privacy, so courts in the adult areas are larger, with lines of sight between patients on opposite sides deliberately baffled. Some of the patient's rooms on the perimeter of the complex will have limited views of the city; others will face courts that penetrate to pedestrian or street level. For the more active patients, there will be roof decks just above the patient floors which will offer more extensive outlooks.

The nursing floor plan is a mosaic of patient-care clusters





Design of the patient-care floor is based on thorough reexamination of how a hospital works. The adult room (right) has a nurse's work area, a fully equipped bathroom, and identical closet and counter arrangements for each patient. Vertical fins next to the counters baffle views into the room without completely blocking the patients' view out. The typical adult care cluster (top, opposite) can be combined with two other clusters (bottom of plan, opposite) for night supervision. The pediatric area has smaller clusters (top of plan).

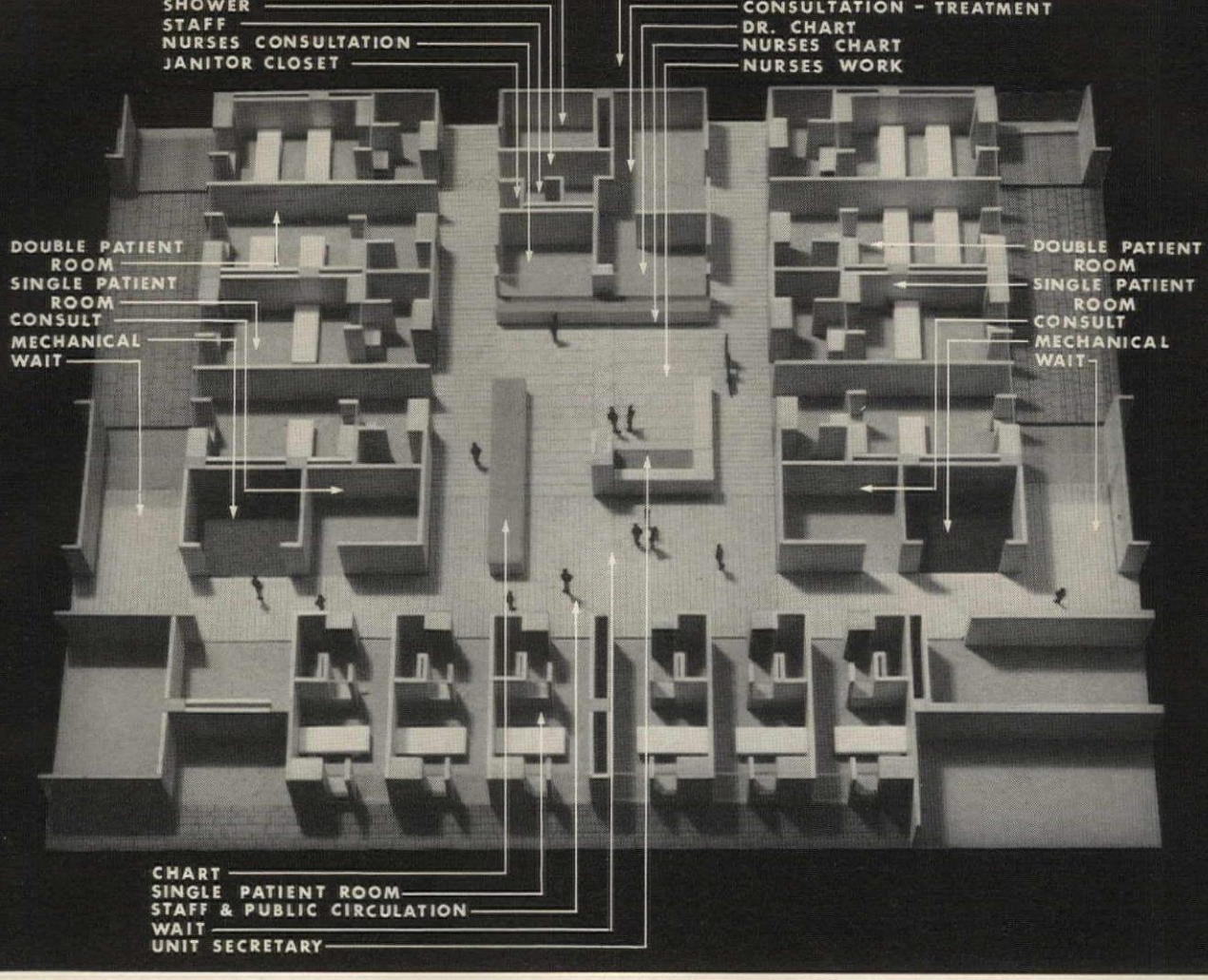

SHOWER
STAFF
NURSES CONSULTATION
JANITOR CLOSET
CONSULTATION - TREATMENT
DR. CHART
NURSES CHART
NURSES WORK
DOUBLE PATIENT ROOM
SINGLE PATIENT ROOM
CONSULT
MECHANICAL
WAIT
DOUBLE PATIENT ROOM
SINGLE PATIENT ROOM
CONSULT
MECHANICAL
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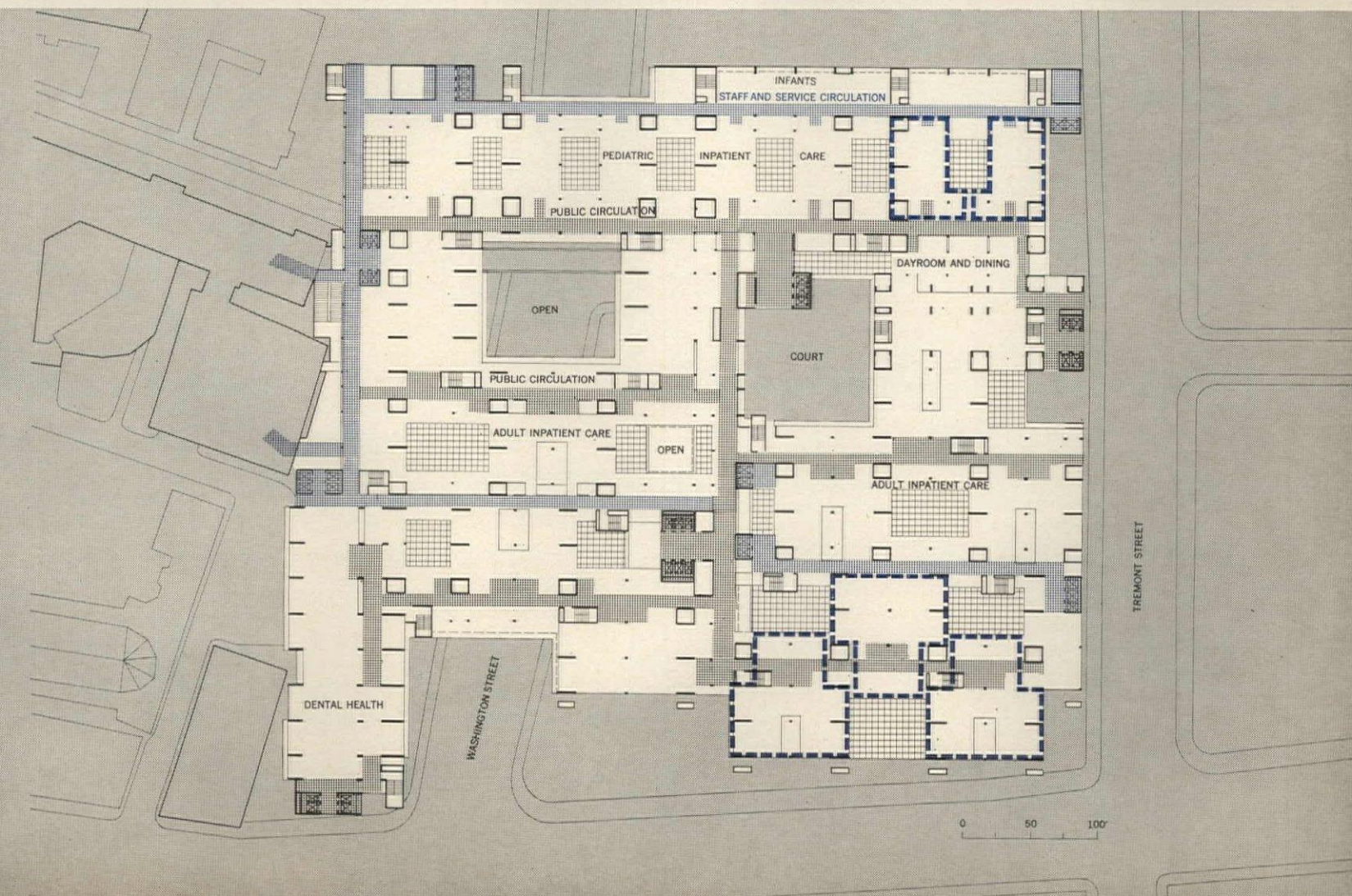
CHART
SINGLE PATIENT ROOM
STAFF & PUBLIC CIRCULATION
WAIT
UNIT SECRETARY


INFANTS
STAFF AND SERVICE CIRCULATION
PEDIATRIC
INPATIENT
CARE
PUBLIC CIRCULATION
DAYROOM AND DINING
OPEN
COURT
PUBLIC CIRCULATION
ADULT INPATIENT CARE
OPEN
ADULT INPATIENT CARE
DENTAL HEALTH
WASHINGTON STREET
TREMONT STREET
0
50
100'

The many functions of the complex called for a wide variety of mechanical services, some of them quite complicated. A structural skeleton had to be devised that would leave passages for a great volume of pipes and duets—and fit the layout requirements of everything from garages to surgical suites.

A structural-mechanical system (right) has been designed to meet these intricate needs within a floor-to-floor height of 13 ft. It is this framework that makes it possible to combine so many diverse functions in one complex —and allows the complex to grow in stages and change internally to meet new demands.

Now that the overall design is established, TAC is working out the fine points of the first increment of Stage 1 construction, which is scheduled to get started this fall. The timetable for the later stages will depend heavily on availability of federal funds.

As more and more of the project proceeds into actual construction, the work of the medical center planning office will shift gradually to broader research. Field hopes to conduct studies of the patient-care clusters in use, of mental health care as part of total community service, and, eventually, of new health care systems in relation to new environmental design strategies —a study of national scope.

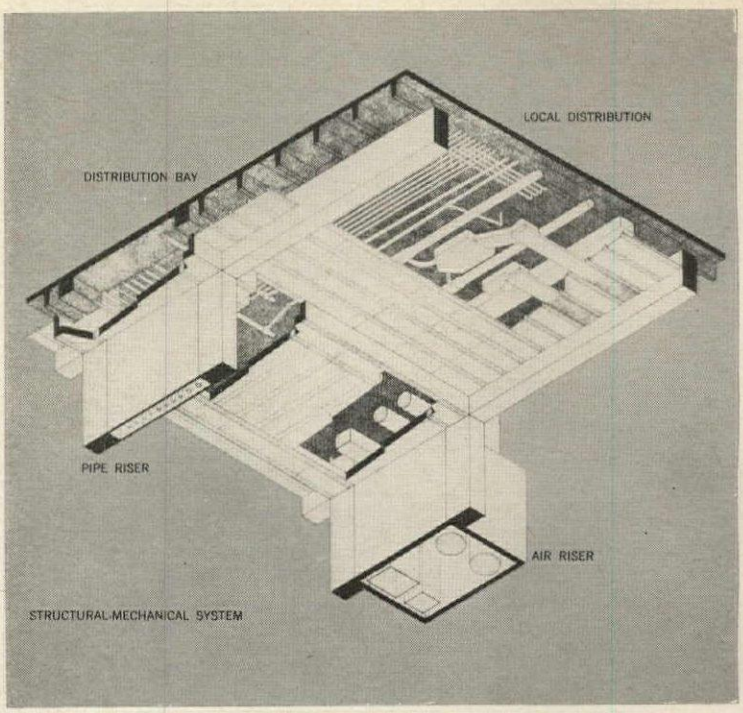
It may take 20 years, in any case, before the planning office overcomes the last hurdle, and the last piece of the medical center is put into place. At every stage along the way, the complex will become a more effective working part of the city.

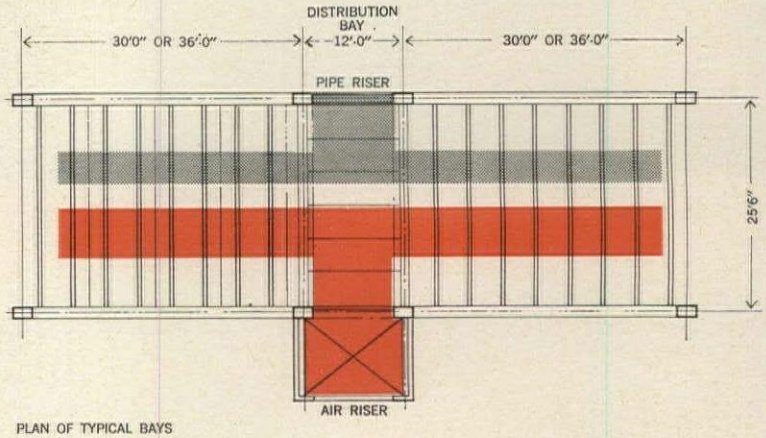
—JOHN MORRIS DIXON

FACTS AND FIGURES

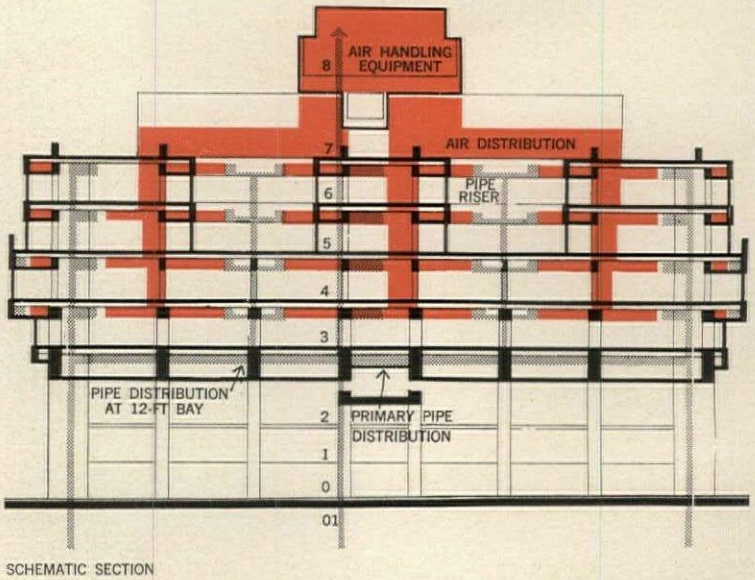
Tufts-New England Medical Center, Boston, Mass. Building design and master planning: The Architects Collaborative, Inc. Principal in charge: Herbert K. Gallagher. Design team: Qazi Ahmed, Alice Coggins, Ralph Montgomery, Martin Sokoloff. Development and concept planning, programming and research: Tufts-New England Medical Center Planning Office. Director: Hermann H. Field. Planning team: Maria Rupp, Douglas Ogilvie, James Fadal, Richard Ruggiero. Engineers: LeMessurier Assocs., Inc.

The whole complex depends on a highly adaptable structural-mechanical grid





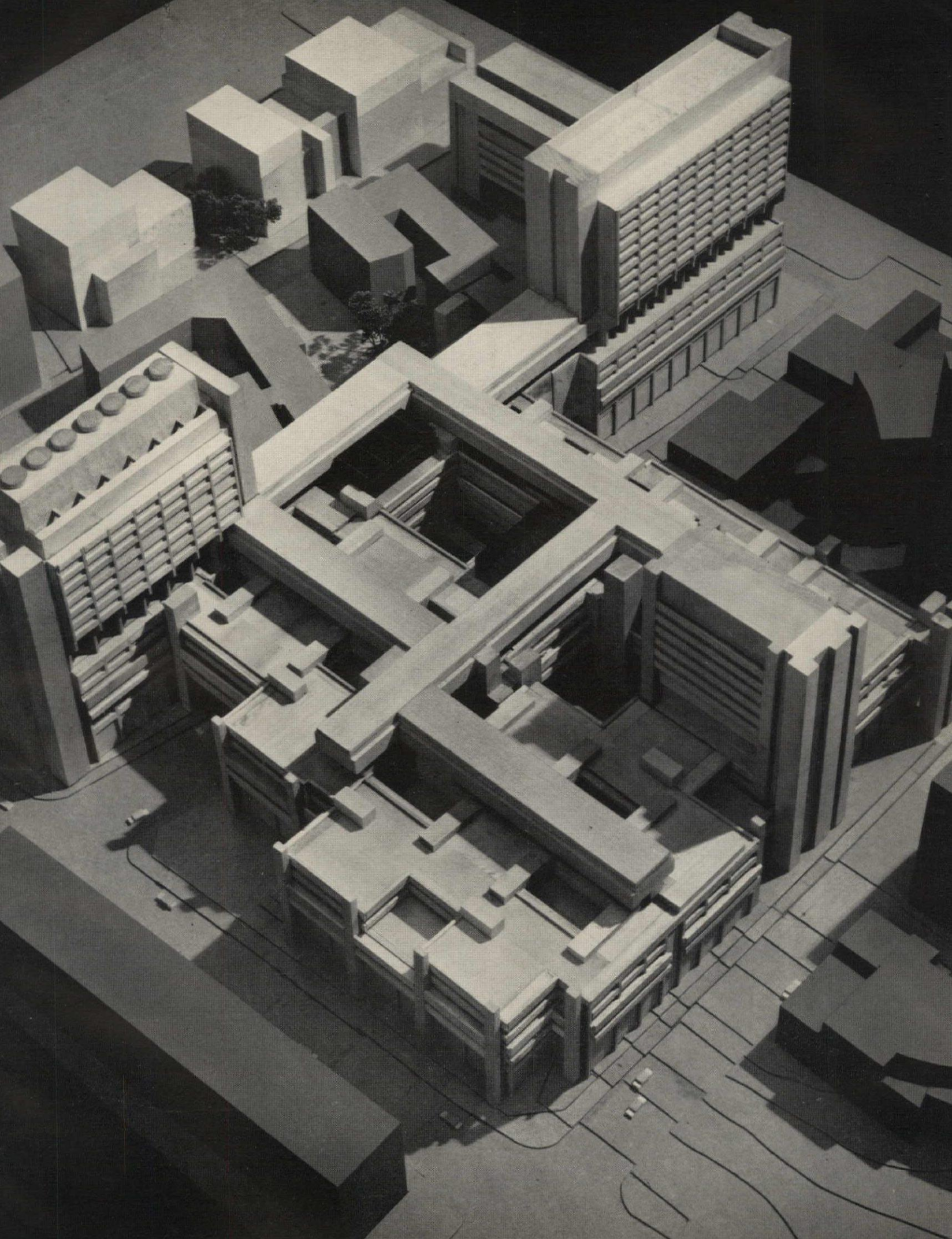
PLAN OF TYPICAL BAYS



SCHEMATIC SECTION

The concrete structural system will accommodate all horizontal utility runs within the 3 ft. 3 in. depth between the ceiling and the bottom of the floor structure (isometric, top). The key to the system is the 12-ft.-wide "distribution bay" (plan, above) at which the main beams will be interrupted. Ducts and pipes will reach the distribution bay at each floor through plumbing risers supplied from above (section, right). The mechanical penthouses and their lower branches will form a three-dimensional diagram on the roof of the medical center (model photo).

Airviews by Aerial Photos of New England. Model photos: pages 47, 51, 57, Phokion Karas; pages 54, 55, John van Schalkwyk.



An analysis of why the profession is not utilizing computer technology; and a description of one new program in the advancing technology

BY ERIC D. TEICHOLZ

ARCHITECTURE AND THE COMPUTER

There is an interesting paradox today in computer-aided building design. On the one hand, we are bombarded with magazine articles and conferences illustrating esoteric programs with computer graphics and telling us "we have arrived" at a stage where we can and should be using computers for design.

On the other hand, a recent survey by the American Institute of Architects, "Survey of Computer Use by Architects," reveals that *no* firms are using computers during the subjective ("gray") stage of a design project, and where computers are being used (in large architectural-and-engineering firms, for the most part), it is for routine "bookkeeping" chores. (This survey, prepared for the AIA by the North Carolina Research Group, Inc., will be released shortly.)

The paradox is heightened by our awareness that even in the present state of technology, which is advancing rapidly but is still at an early stage, the profession could take far greater advantage of computer technology than it currently does.

This article analyzes the present situation in computer-aided design—the reasons for the profession's not taking advantage of computer technology, and the possible ways for bringing about a change in the designer's attitude. The article also describes a new computer program dealing with the "gray" area of design.

In my Jekyll and Hyde existence—teaching and doing research at Harvard's Laboratory for Computer Graphics, and running a small consulting firm—I am in a position to know not only what research is being conducted but also what types of programs the design profession would find useful. I am aware of many programs that could be of value to designers but are not now used outside the university.

The vanguard of research into new computer techniques is developing within the universities; only a few firms are involved in computer-aided research (SOM; Caudill, Rowlett & Scott; Perry, Dean & Stewart, for instance). Yet at Harvard, MIT, Carnegie-Mellon, Yale, and the Universities of Pennsylvania, Texas, California (Berkeley), Illinois, and Utah, to name only the most active, there is a fantastic breadth of computer-aided research into all aspects of the design process.

Most research conducted by "behavioral" people is called "open-ended" or "blue-sky" research; the researcher is not sure how his project is going to end up when he starts out. At present, almost all this open-ended research *must* be conducted within the university. Even the largest design firms do not have the funds for equipment and staff, and clients are unwilling to allow architects the time and resources for research. It is true, however, that almost no architects *ask* clients for the time and resources. And even if architects had the means to conduct computer research, they would not have the people for it; the personnel do not now exist nor are they being trained in the design schools.

I am not, in any way, advocating that the designer become a "technocrat." He must, however, learn to use computer technology in the same way he uses perspective drawings, thumbnail sketches, or any of the other tools at his disposal. I am convinced that the architect will never completely design a building with a computer. There are too many other aspects playing a vital role in the design process. My criticism of the design profession on this score, however, is that the architect is unwilling to be explicit about the tools he has at his disposal and what they do for him (for reasons that will be analyzed below). When architects are explicit about how they design, researchers will be better able to evaluate which processes are adaptable to computerized solutions and which are not.

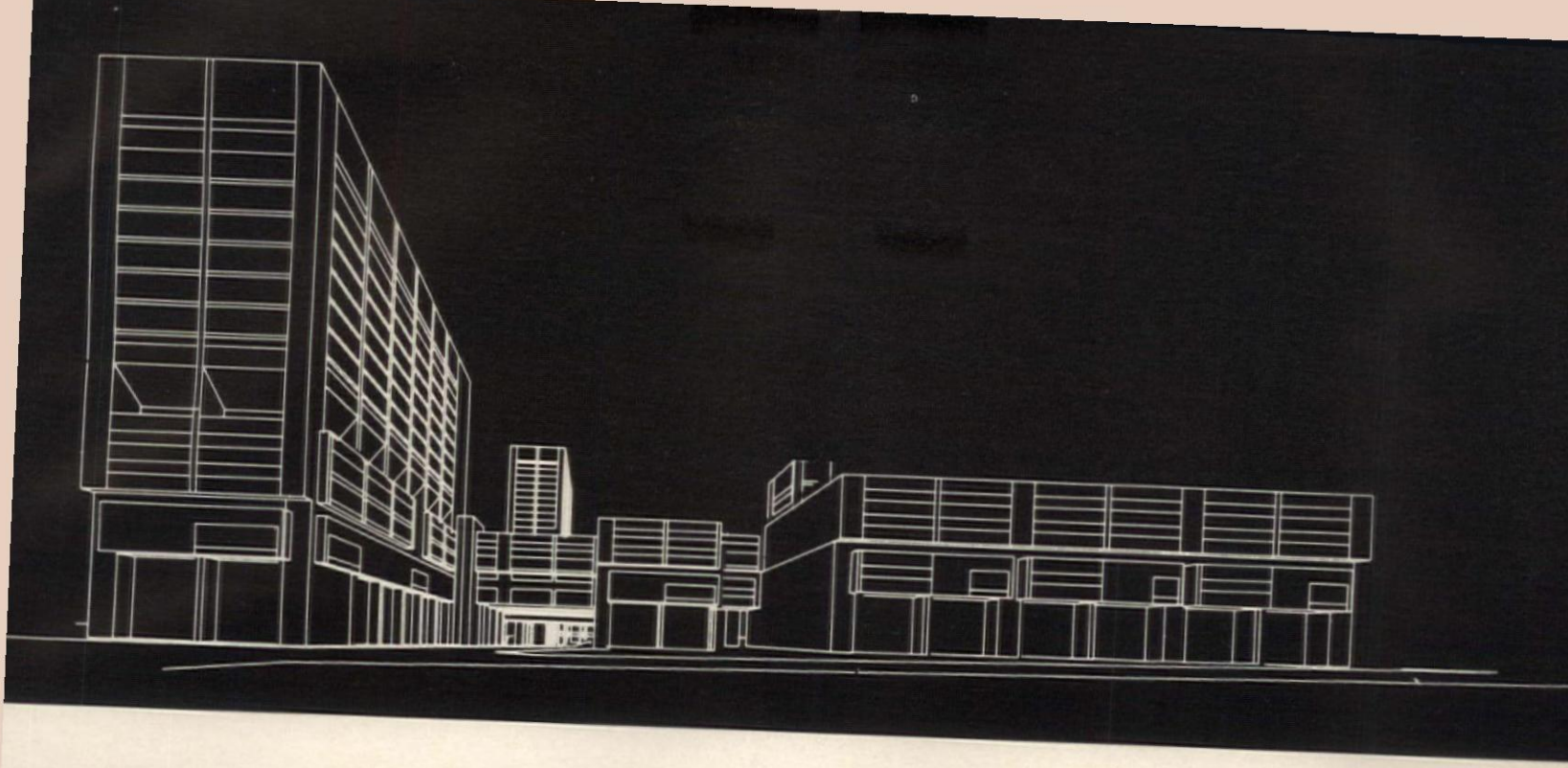
Technology is traditionally neglected by the architect. The architect is, in 20th-century terms, a technological anachronism. Yet if the architect is to be the master builder, the overseer and interpreter, he must understand and harmonize the humanistic *and* technological facets of his environment—using 20th-century tools.

Applications programs

"Applications" programs (or "ritual" or "bookkeeping" programs) are those computer programs having definite mathematical solutions. Applications programs such as perspective drawing (above) and engineering calculations are usually easiest to write and most efficient for the computer to solve. Yet even most of the applications programs (almost exclusively produced in the universities) are not being used by practicing architects.

One reason for this is that the schools don't place much emphasis on training students in these aspects of an architect's actual work: working drawings, cost accounting, spec writing, and drafting. While this is not necessarily bad, it does contribute to the later lack of interest by

Mr. Teicholz is Director of Graphic Services for the Laboratory for Computer Graphics, Harvard Graduate School of Design. In 1966 he founded Design Systems, Inc., which provides computer graphics services to architects; it is a profit-making corporation that grew out of the nonprofit Center for Environmental Research in Boston. Mr. Teicholz is currently completing his M. Arch. at Harvard.



architects in the computer programs written for these tasks.

Also holding back the use of applications programs is the designer's innate distrust of anything technological. I meet as much resistance inside the university as I do outside. But when I started my consulting practice two years ago, I was almost literally thrown out of several architectural firms in Boston, being reminded by the architects of the sorcerer's apprentice who nearly drowned the world.

One notable exception to the imprisonment of programs written at universities is the MIT-developed ICES program (Integrated Civil Engineering Systems). ICES is a series of computer programs for civil engineering applications. Its "machine-dependent" parts were financed primarily by IBM, and are distributed by IBM for their '360' line of computers.

The advantage of such industry-financed research is that an efficient series of general-purpose programs is developed and made widely available. The disadvantage, in this case, is that industry distributes the material on its own terms. A user has access only to the "machine language" and not to the original program; thus the program cannot be changed or applied to any computer other than the machine it was written for. But despite this limitation, ICES *is* an integrated package of programs; I know of no manufacturer who is planning to develop and offer such a package of architectural programs.

Partly because of the recent attention to computer-aided design in the journals and through conferences, there is now a definite change in the designer's attitude. The technology revolution, new emphasis on complicated urban problems, and many-sided projects like Model Cities, have resulted in a new scale and new complexity of thought and action.

As the various disciplines of design, analysis, and construction become merged in a computer, however, the architect will be doing less designing of the single building as a series of components and will turn more towards the design of complete systems of structures. How to get architects to accept evolutionary processes, give up traditional ways of building, and accept the social and technological changes going on around him is the question that must be answered.

I believe—and many people will disagree with me—that the way to get architects to use computers and develop a more analytical approach to design is by making programs initially available on a piecemeal basis. The fear of the "black box" must be overcome by satisfying bookkeeping needs before more comprehensive programming on the subjective aspects of design can be developed and utilized. Applications programs, developed either in school or in firms, should be made widely available immediately. This is a "short-term" approach.

The AIA report on computer usage states that firms are using computers (either their own or those of a service bureau) for the following applications: accounting, project scheduling and manpower control, cost estimating, specification writing, and engineering—in that order. There are difficulties, however, preventing even these "bookkeeping" applications from being more widely used.

For one thing, there is not a standard identification coding system for materials that is generally accepted throughout the industry. Other disadvantages: these programs are often written in noncompatible computer languages; they are developed in-house and are therefore proprietary, and they are specifically tailored to the individual firm writing the program. In addition, many of these programs require access files containing accurate job-cost information that must be constantly updated. The costs of creating and maintaining such a file would be very high—and, in any case, the most accurate cost information is determined by contractors and is not readily available to architects.

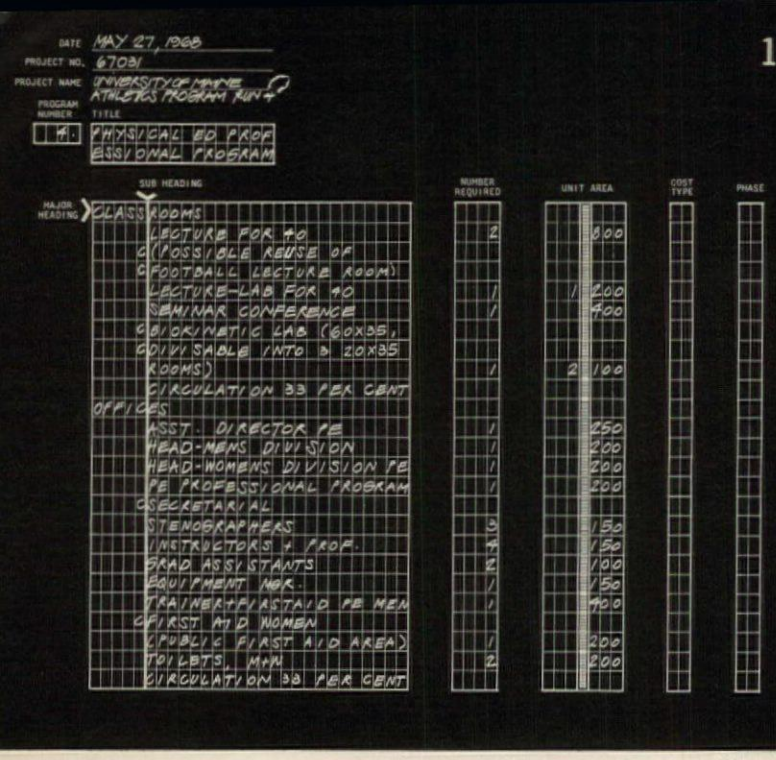
I am currently working with Ecodesign, a design firm in Cambridge, on the formulation of a data bank of information on low-cost building systems. We are convinced that this data must be coded, kept up-to-date, and made available to cities, developers, and designers. But the vehicle for disseminating this data does not yet exist.

Many obstacles must be overcome before even a short-term approach can be implemented. It is my thesis, however, that once architects are using computers for their office chores, researchers can start to come to grips with the more subjective areas of the design process. Researchers will do so, at that time, with the input of practicing architects, a situation not now the case.

The Comprograph program

Before making too many negative generalizations about architects, I should say that I have found many individuals who are receptive to technology, even when it encroaches on the subjective area of design. One example of such a program is Comprograph, which was written by Design Systems for Perry, Dean & Stewart, an architectural firm in Boston.

The input for Comprograph is a sheet on which the designer



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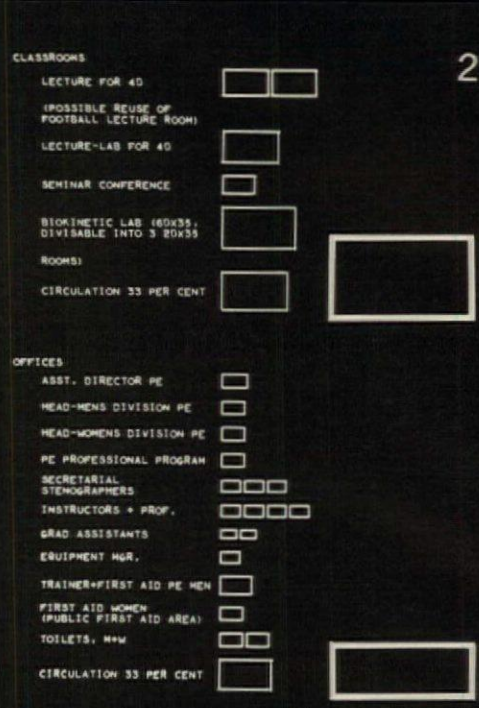

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(perhaps with his client) lists the elements that make up the particular design project (1). He can include anything he knows about these elements: their areas, numbers required, rough costs, phases of construction; he can add nonquantifiable elements in the form of general comments. This information is key-punched and the computer generates output (2) of the subroutines that are called for. (In this case, both cost types and phase were suppressed; the data can be added in a later run if the information is available.)

The computer program then takes a scale factor (specified by the designer) and generates for each of the subheadings (rooms) a rectangle related to its unit area. The designer can specify the ratio of the sides of the rectangle or generate rectangles based on a module.

In addition to translating numeric spaces into graphic areas, the computer output also multiplies the unit areas by the number required, to produce net areas. When the computer reads a new major heading, it stops, calculates a total area, and translates this into a rectangle. When a new program number is read (for a new building, or new wing), the program assigns a new scale factor to the major headings, and translates these areas into graphic areas. At a glance, the designer can see relative space requirements of different elements of the project.

Space-allocation diagrams

The values of this first part of the program are many. To begin with, it performs a simple operation that most designers must do anyway. In this capacity, it is a simple bookkeeping program. The designer can then cut out the rectangles and start moving them around a site plan. More important, it permits the client, as well as the designer, to visualize the relative space requirements of the project. When we first used the program, the architects ran it only once or twice for a job. Now, it is used half a dozen times, with changing areas and facilities, before designer and client are satisfied.

When the final space requirements meet with everyone's approval, a matrix is printed out (3) that includes the major headings or subheadings. Now the designer and client "weight" the matrix, placing values on the elements to show their relationship to each other. In this example, the designer decided that element No. 2, offices, doesn't relate to element No. 6, the gymnasium, but relates very strongly to element No. 8, administration. (Relationships are not just a product of physical adjacency, but also include subjective aspects like acoustical isolation.)

It doesn't matter what values are used in the matrix because the computer simply looks at the highest number (indicating nonadjacency) and lowest number, and sets up a scale between them. This computer program (originally worked out by Frank Rens at Harvard) determines the optimal solution of the matrix—or the five best, or ten best solutions—according to different circulation patterns, in this case, linear and circular (4). The computer is generating optimized solutions of relationships between different elements; in language more familiar to architectural designers, it is turning out crude "bubble" diagrams. It can also generate ellipses relative to square footage of elements.

We are now working on additional subroutines that translate the elements into rectangles and put them into geometric envelopes, on the basis of the values of the matrix. Finally, by applying additional constraints to the matrix, it will be possible to develop three-dimensional space-allocation diagrams. It is interesting that the closer these computers come to turning out floor plans and three-dimensional diagrams, the greater the hostility they incur from the architectural profession. Yet even these programs, unprecedented as they are, do not begin to challenge the traditional ways of building, or even the traditional ways of setting up a design problem. (Comprograph is not unique in its mathematics. Its uniqueness is in the "off-line" availability to the profession of a series of architectural programs relating to design.)

Most of these programs can be used by the architect without special knowledge of mathematics or computer programming. He gives the data sheets to a service bureau, which translates the material into "machine-readable" form, and delivers the computer output back to him.

These programs can, however, be operated under direct man-machine communication ("on-line"). In this way, the architect can assess the cost implications, for example, of changing one material to another as he uses a cost-estimating program. Or he can see the effect of changing the "weight" of a building element as he uses the Comprograph program. Developments in the use of computers in the subjective area of design will only be possible when architects have direct access to a computer.

As an alternative to buying a computer, an architect can rent one, having a data terminal in his office (plus a plotter and any piece of peripheral equipment he will need), and "dial" into a large computer as required. By using

BIGGEST OUTHOUSE

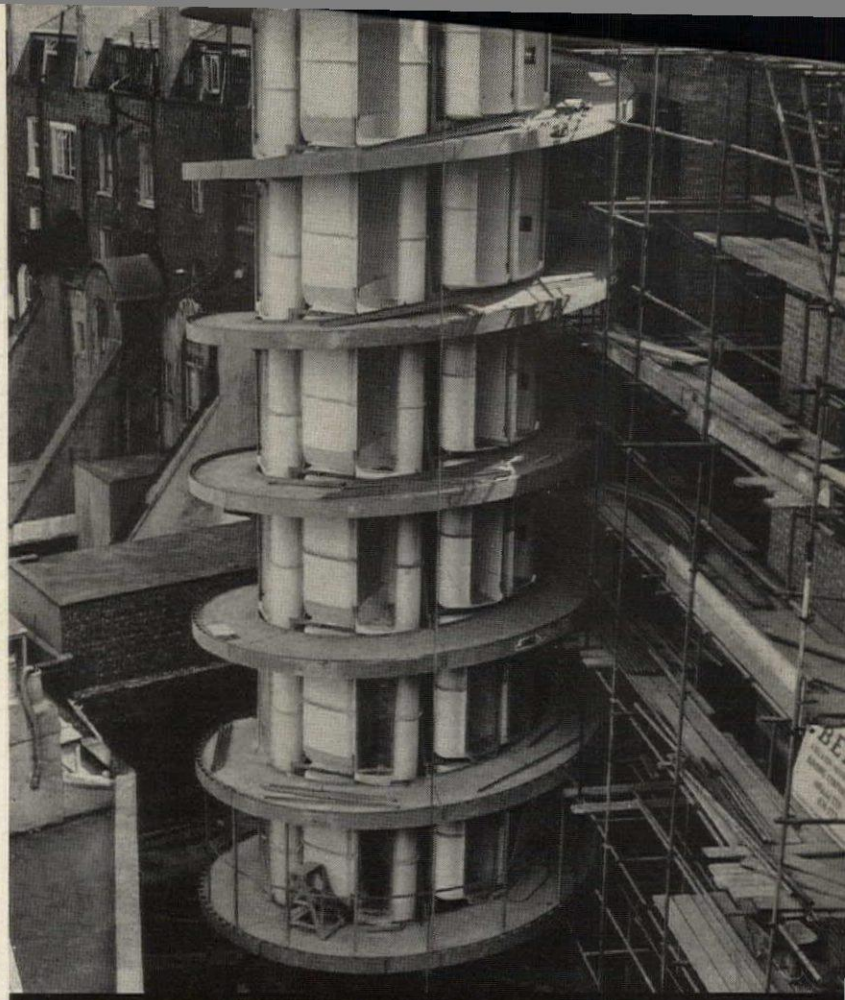
The six-story high, glass-enclosed spiral ramp shown on these pages wraps around a stack of 42 prefabricated bathroom and laundry units. The whole thing measures 21 ft. across and 85 ft. in height, and it stands outside a student hostel in the Paddington district of London.

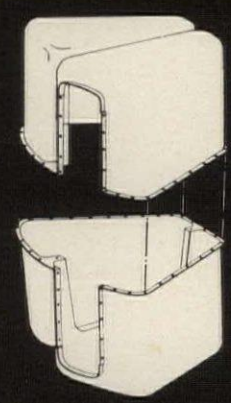
It is, without doubt, the biggest outhouse ever built. But the Paddington bathroom tower is by no means a prank: it is a remarkable feat of technology.

The problem was this: six old row houses were to be remodeled into a hostel for 175 students. As in all such remodeling operations, a major part of the work had to do with new plumbing facilities. In U.S. rehabilitation experiments, prefab bathroom-and-kitchen cores have been dropped into the centers of brownstones, through a hole cut into the roof. Since most older buildings have uneven floor levels and floor heights, such "solutions" create problems of adjustment; also, dropping a core into the center of a building means displacing the occupants for some time.

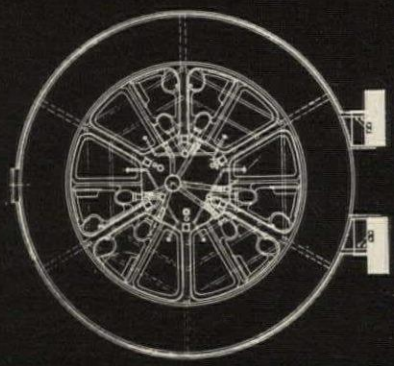
The architects of the Paddington tower—Farrell/Grimshaw Partnership—sought to avoid ripping apart the old buildings and displacing the occupants for longer than necessary. So they erected a steel spiral, with a core containing all necessary pipes, ducts, and wires (right); next, they attached to this core 42 prefab, glass-reinforced plastic units containing combinations of tubs, toilets, and lavatories. (They also plugged into their core one service area at each level, with a sink and a washing machine.) Finally, they built links to the ramp from each of the six floors of the hostel. The ramp provides access to all the bathroom units at times of peak demand.

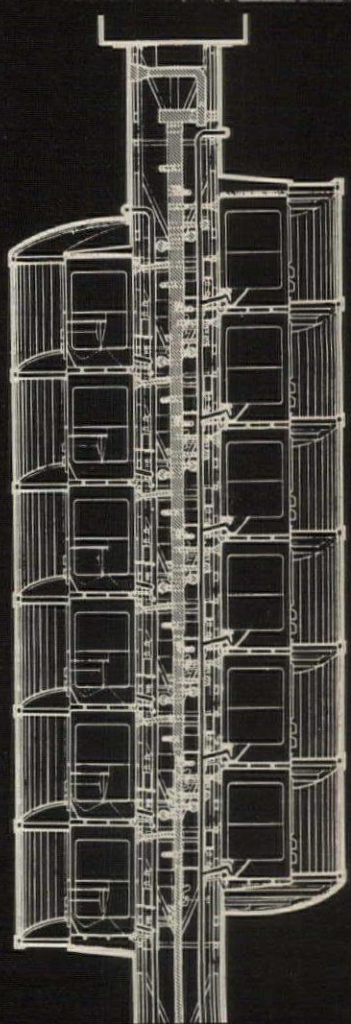
The cost was $70,000, or about $1,700 per unit—hardly excessive for an experiment. Similar free-standing towers, with prefabricated kitchen-bathroom-laundry units on each floor, might well be considered for U.S. rehab efforts. Such structures would cause no dislocation, and their links to existing floor levels could easily bridge dimensional variations in old buildings.





TWO PIECE BATHROOM SHELL

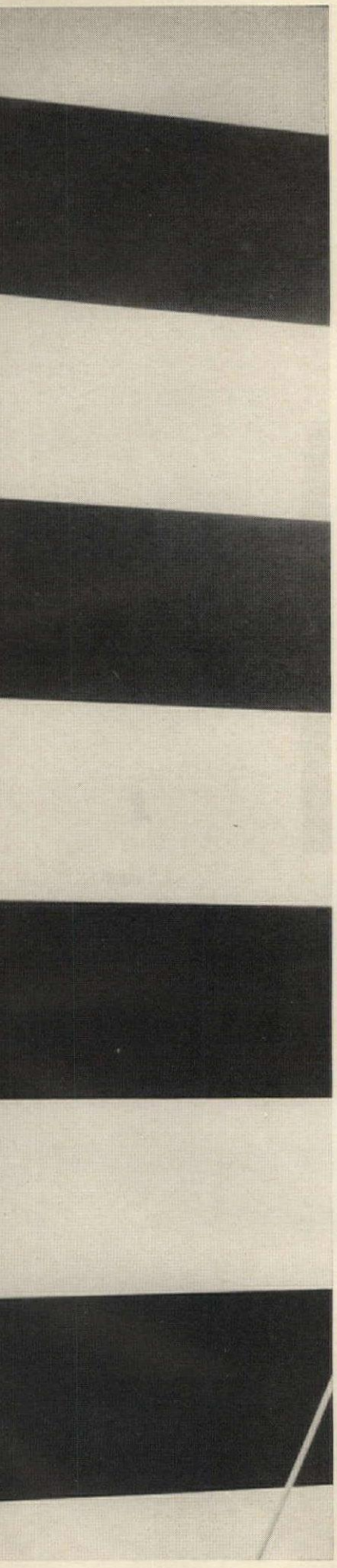




TYPICAL FLOOR AND SECTION (RIGHT)

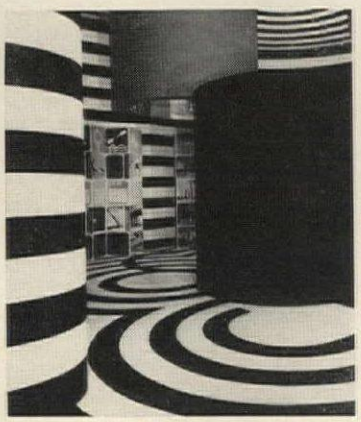
FACTS AND FIGURES

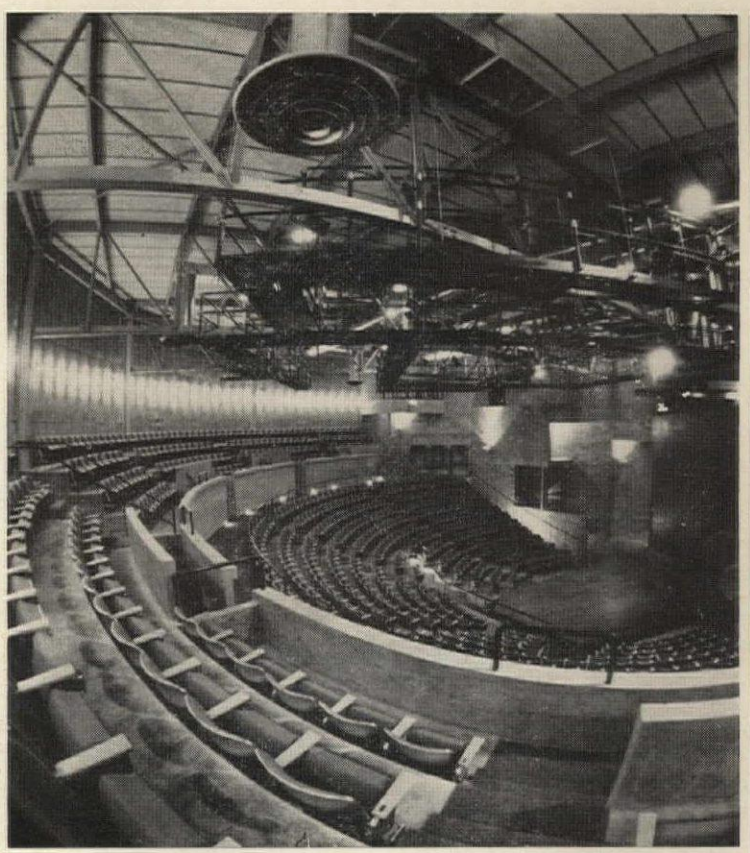
Service Tower, International Students Club, Sussex Gardens, London. Architects: Farrell/Grimshaw Partnership. Quantity Surveyors: G. A. Hanscomb Partnership. Engineers: Ove Arup & Partners. Contractor: A. Bell & Sons. PHOTOGRAPHS: Nicholas Grimshaw

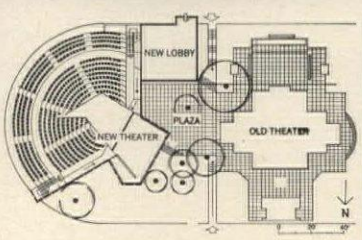


OP & THE OLYMPICS

Mexico's exhibit at the recent *Triennale* in Milan—devoted to the general theme of "The Great Number"—was a presentation of the comprehensive design program developed for this fall's international Olympiad in Mexico City. The striking black and white felt-lined interiors (left and below) provided a dramatic background for the display (the circles are the Olympiad's main motif, a series of interlocking rings). Within the space were exhibited posters, souvenirs, symbols, publications, designs, and directional devices—everything visual connected with the games and the extensive cultural events program that will accompany them. The exhibit was put together by the same design team that is working on the Olympiad itself: Architects Pedro Ramírez Vázques (chairman), Eduardo Terrazas (coordination), and Francisco Carbajal de la Cruz (construction); and Graphic Designer Lance Wyman.

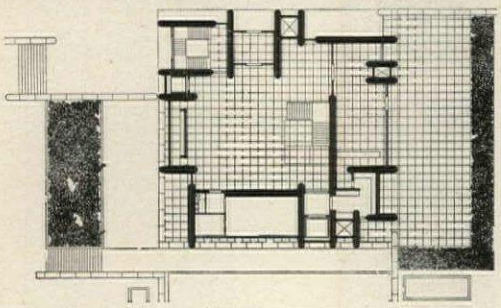






PLAYHOUSE IN THE PARK

A piece of pie plus appurtenances is one way to describe Hardy Holzman Pfeiffer Associates' new Robert S. Marx Theater in Cincinnati's Eden Park. Amphitheater seating on two levels, surrounding a tilted "seating bowl," offers 672 theatergoers completely unimpeded views of the asymmetrically-placed, trapezodial-shaped "acting platter." The building is three times as large as the nine-year-old theater (a converted park shelterhouse) to the west, which will continue to be used for certain productions. Given the character of the older structure, no attempt was made to harmonize the two buildings architecturally, although they are linked by a common plaza dotted with a random pattern of blue airport landing lights. The new building instead reflects the surrounding park—via its stainless steel sloping roofs and a 40-ft.-high stainless steel wall at the entrance.



JOHNSON KUNSTHALLE

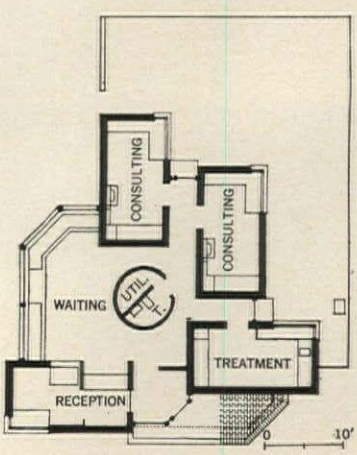
The roster of Philip Johnson's museums and galleries will be added to this month with the opening of the municipally owned Bielefeld Art Gallery, set in a small park in the German city of the same name. The red sandstone structure, three stories high on the park side and four on the street (above), is characterized by its solidity and the use of rounded-end walls both inside and out. Each floor plan (main floor, above) is basically the same, with strong overtones of the de Stijl era: a large central room, off which open subsidiary galleries and services. Contrary to the mainstream of today's museum planning—an emphasis on maximum flexibility of interior spaces—the architect here provides an interplay of varied but predetermined spaces.

LUNAR LANDING LAB

The rocket-powered lunar landing research facility, 250 ft. high and 400 ft. long, pictured below, is used at NASA's Langley Research Center, Hampton, Virginia, to explore and develop techniques for landing the Apollo Lunar Module on the moon. In research operations, as shown here, a vertical lifting force equal to five-sixths of the flight vehicle's weight is applied by two vertical supporting cables to oppose the pull of the earth's gravity and simulate the moon's low gravitational force (only one-sixth as strong as on the earth). The stand-up compartment for a single pilot provides controls for the thrust of the main rockets and a system of smaller maneuvering rockets.

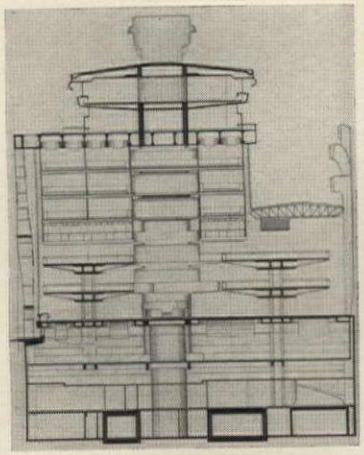
MEDI-CORE

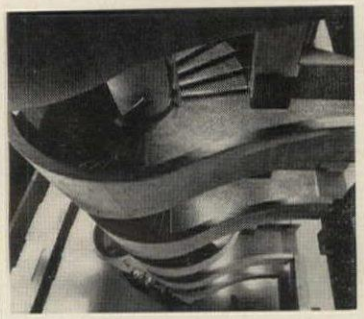
English architect Peter J. Aldington's National Health Service clinic in Oxfordshire is composed of four double-walled "boxes" (for individual patient privacy) connected by a communal waiting room. The latter area is wrapped around a service core. Protruding from the roof, the building's most prominent feature, the core, not only lets in light for the area below, but also houses the building's water tank.



BRAZILIAN BANK

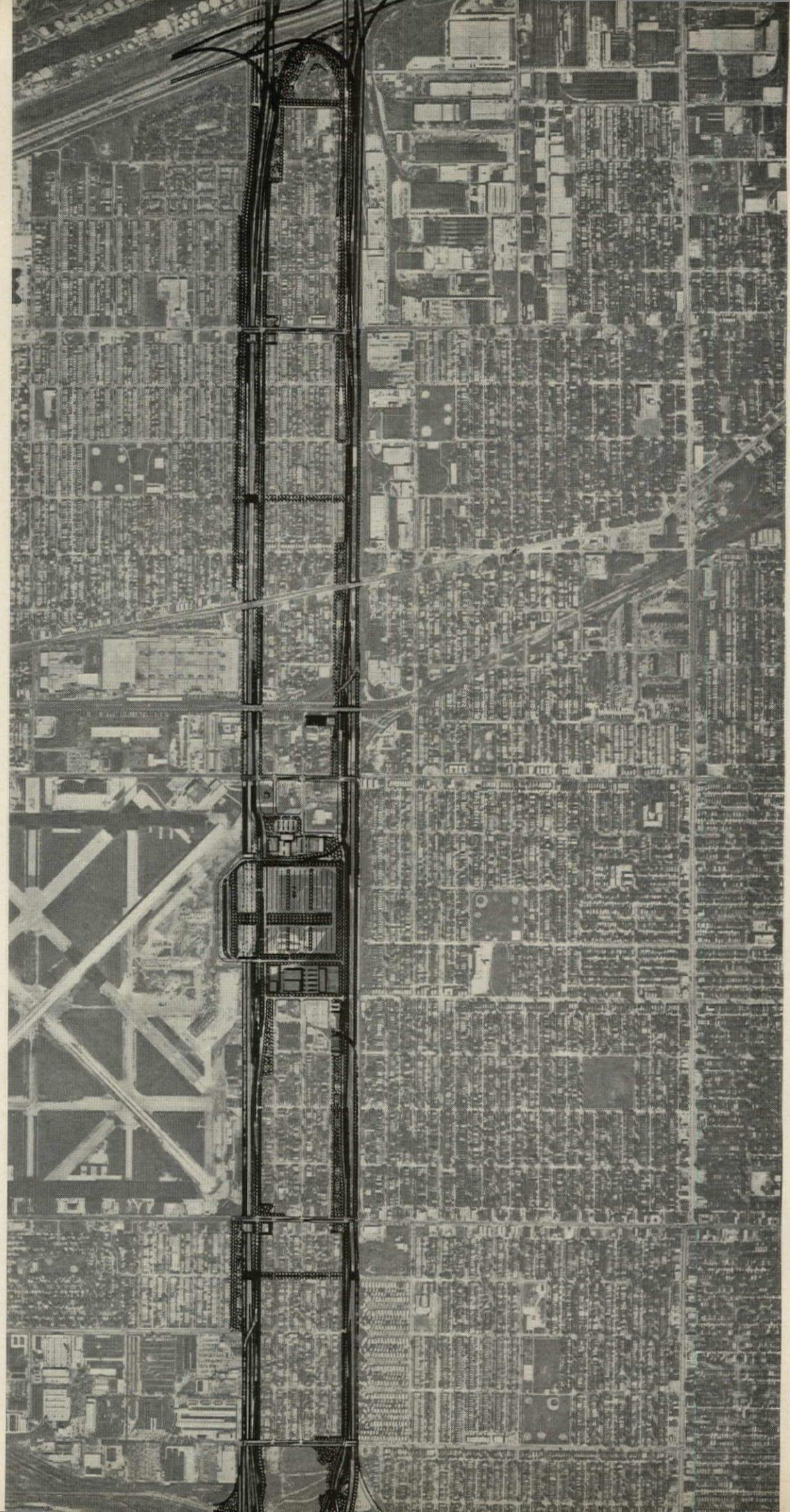
The structure that lies behind the punctured concrete sunscreens (right) of the new Bank of London & S. A. Ltd., in Buenos Aires, matches the exterior in spatial complexity. The main roof slab is supported on the exterior columns, on the party walls, and on the centralized vertical circulation core (below). The first and second levels above ground are cantilevered slabs supported on pedestals—allowing large open spaces in keeping with their use by the public. The upper floor slabs are suspended on steel hangers from the roof, permitting a flexible modular arrangement of office space. Atop the roof slab two massive beams span the large open central section and support staff areas above.The architects are the firm of Sanchez Elía, Peralta Ramos, Agostini, with Olorinda Testa.





PHOTOGRAPHS: Page 64, 65 (center), Arminio Bottura. Page 66 (bottom), Richard Einzig.

URBANE FREEWAY



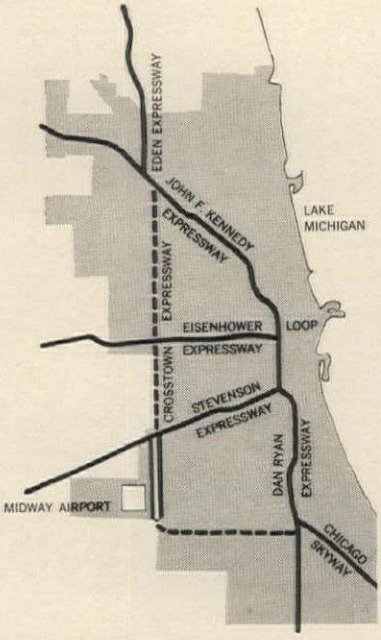
The black lines traversing the aerial view at left represent the first really significant breakthrough in the design of urban freeways since the Federal Interstate Highway Program was launched 12 years ago.

The area is part of Chicago's sprawling, amorphous South Side, and the freeway plan superimposed on it is the initial 3½-mile segment of the 22-mile Crosstown Expressway. For the first time in the history of the interstate program, the Crosstown has been conceived not just as a transportation artery, but as a tool for the immediate enhancement of the neighborhoods through which it will pass and as a framework for the rational development of an entire urban corridor in the future.

As one might suspect, a plan as enlightened as the Crosstown's could hardly have come out of the same highway engineer's bag that has brought forth scores of brutal urban freeways in the past. The Crosstown plan—again for the first time in the history of the interstate program—was produced by a multidisciplinary design team composed of architects, landscape architects, urban designers, city planners, civil and structural engineers, traffic analysts, sociologists, urban geographers, economists, applied mathematicians, lawyers, and marketing analysts.

The nucleus of this coalition, officially called the Crosstown Design Team, is composed of two architectural firms—Skidmore, Owings & Merrill and C. F. Murphy Associates—and two engineering firms—Westenhoff & Novick Inc. and Howard, Needles, Tammen & Bergendoff. The project director is a "disinterested outsider" with no direct ties to any of the four firms: Joseph R. Passoneau, former dean of the Washington University (St. Louis) School of Architecture. He answers to an executive committee composed of principals in the four firms.

The design team's plan incorporates a number of built-in, immediate benefits to the neighborhoods that lie along the freeway's path (see page 71):



Chicago's proposed Crosstown Expressway will run lengthwise, not across the city, thus adding a badly needed north-south supplement to Chicago's diagonal system of freeways radiating from the Loop (above). For the first 3½-mile segment (left), a multidisciplinary design team has proposed splitting the alignment into two one-way strips, and providing new parks, playgrounds, and greenways for the adjacent neighborhoods. The large parking lot in the center serves Midway Airport.

- Elimination of the area's two most conspicuously objectionable elements: the notoriously sleazy commercial strip along Cicero Avenue, and the largely vacant no-man's-land alongside the elevated Belt Line Railroad. This double-duty chore is accomplished by splitting the eight-lane freeway into two depressed, four-lane legs—one replacing Cicero Avenue (left on plan), the other replacing the no-man's-land (right).
- Preservation of the area's existing residential communities, most of which are made up of well-kept, detached houses occupied by middle-class families. (The 69 residential units displaced by the plan are scattered along the Cicero strip.)
- The strengthening of these neighborhoods through the addition of generous parks, playgrounds, recreation areas, greenbelts, and other amenities which they lack now.
- The unclogging of traffic on local streets and the restructuring of the circulation pattern to eliminate through traffic on residential streets.

The plan's long-range benefits are equally impressive. The scheme encompasses a corridor that extends a mile or more from both sides of the Crosstown (see page 73), and the freeway has been planned so that its existence will not hamper, but encourage, orderly development of the entire corridor. Among the possibilities:

- The consolidation of the former commercial strips along Cicero Avenue and other streets into clusters of convenient, neighborhood shopping centers.
- The introduction of mass transit facilities (a reserved right-of-way is provided alongside one leg of the freeway).
- The development of industrial parks between the two alignments, which will serve as buffer zones separating the industry from the residential areas.
- The creation of pedestrian greenways linking major commercial, recreational, and cultural centers.
- The addition of new housing, schools, community centers, and other facilities.

The Crosstown Design Team was brought into existence last October in the wake of a furious public outcry over a previous Crosstown scheme proposed by the city, county, and state. That scheme called for an elevated, eight-lane freeway structure—a giant behemoth 120 ft. wide and as high as 83 ft. in some sections—rising above the already elevated Belt Line Railroad tracks.

Not since San Franciscans rose up in arms over the double-decked hulk along their waterfront had a freeway aroused such public scorn. Fortunately for Chicago, however, the outcry came before, not after, the freeway was built. Virtually every civic organization, professional group, neighborhood club, newspaper (the *Tribune* excepted), and television and radio station in the city denounced the elevated as a potential Chinese wall that would blight the neighborhoods along its path.

What's in a name?

The American Institute of Architect's Chicago chapter, one of the leaders of the anti-elevated movement, issued a statement charging that the scheme would result in "a costly, ugly, and inefficient blot on the cityscape—a monument to poor planning and gross insensitivity to urban values." Paul D. McCurry, the chapter's president at the time, dubbed the proposed structure "The Stiltway," a name that quickly became everybody's standard term of derision and probably did more, psychologically, to solidify public opposition than all the carefully reasoned arguments put forth against the elevated.

The avalanche of public wrath did not go unheeded at City Hall, where Mayor Richard J. Daley's powerful political machine depends on the oil of voter contentment to keep it going. In an attempt to counter opposition to the stiltway, the Daley-controlled Chicago Plan Commission decided to restudy the scheme.

The commission came up with several major revisions. It dropped the maximum height of the stiltway from 83 ft. to 43 ft.,

and it got rid of six of the 22 miles of elevated structure altogether—by depressing six miles of it and by placing another three miles on an embankment. The commission also recommended that the "best possible designers" be retained "to consider esthetics from the viewpoint of the user as well as the residents of the communities involved."

But the commission's revisions, and its concern for esthetics, didn't produce the desired effect. The new scheme was just as badly received as the first, setting off a new wave of opposition. This time, however, the city, county, and state (in other words, Mayor Daley) stood firm, and the revised plan was sent off to the Bureau of Public Roads (BPR) for approval.

Stirrings from on high

BPR received the proposal at a time when it was undergoing some rather dramatic changes in its attitudes toward urban highways. The bureau had recently become a part of the brand-new Department of Transportation, headed by Secretary Alan S. Boyd; and BPR itself had recently taken on a new head: Federal Highway Administrator Lowell K. Bridwell. Both men were unhappy about the damage that federal highways had done to cities in the past—and concerned that increasing urban hostility to freeways was endangering completion of the interstate system.

Looking around for ways to improve the situation, Bridwell had come up with two approaches that had never been tried before: "joint development" and the "urban design concept team." Joint development had been knocking around BPR for several months under Bridwell's predecessor, Rex M. Whitton, but had never been used. In effect, it gives BPR the right to acquire wider corridors of land than are necessary for a highway and sell them to a city at cost. The city in turn can use the corridors, plus air rights over the highway, for parks, schools, and housing developments.

The use of an urban design team on highways had first been proposed by Baltimore Architect Archibald Rogers, who saw the approach as a means of resolving that city's 20-year battle against proposals to run a 21-mile section of Interstate 95 along its harbor. BPR had been assembling a team for Baltimore when Chicago's Crosstown plan came in for approval.

What happened after that depends on who is telling the story. Federal officials claim that BPR rejected the Crosstown's modified stiltway scheme and urged the city to try again—this time using BPR's two new tools. City officials claim that when they heard that the tools might be available, they asked BPR if they could use them on the Crosstown.

At any rate, a restudy was agreed upon, and the city began assembling a design team to work as consultants to a newly formed, interagency Crosstown Study Team composed of high-level representatives from the city's departments of public works, development and planning, urban renewal, streets and sanitation, and its Committee for Economic and Cultural Development, plus a number of county, state, and federal agencies. The idea was that the study team would supply the design team with the data and criteria needed to arrive at a solution.

SOM and C. F. Murphy had been two of the three architectural firms involved in the design of Chicago's new Civic Center (Oct. '66 issue), a handsome steel-and-glass structure that quickly became a source of great pride to Chicagoans. So the city asked the three architects to become members of the new Crosstown Design Team. The third firm—Loebl, Schlossman, Bennett & Dart—declined the invitation, but the other two agreed to take it on. (Coincidentally, SOM's San Francisco office was selected to head Baltimore's urban design concept team.)

SOM and Murphy, together with the two engineering firms on the team, jointly recommended that Passoneau be named project director and the city concurred. "His credentials were impressive," says Milton Pikarsky, the city's commissioner of public works, who has coordinated the entire Crosstown effort. "He had both an engineering and an architectural degree, and we felt he would not be partial to any one discipline."

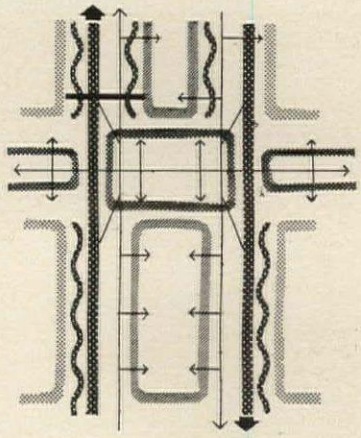
"We wanted innovation and creativeness," Pikarsky said. "The Crosstown Design Team was told that it had no limitations, but that it must justify every innovation in detail."

Constructive legacy

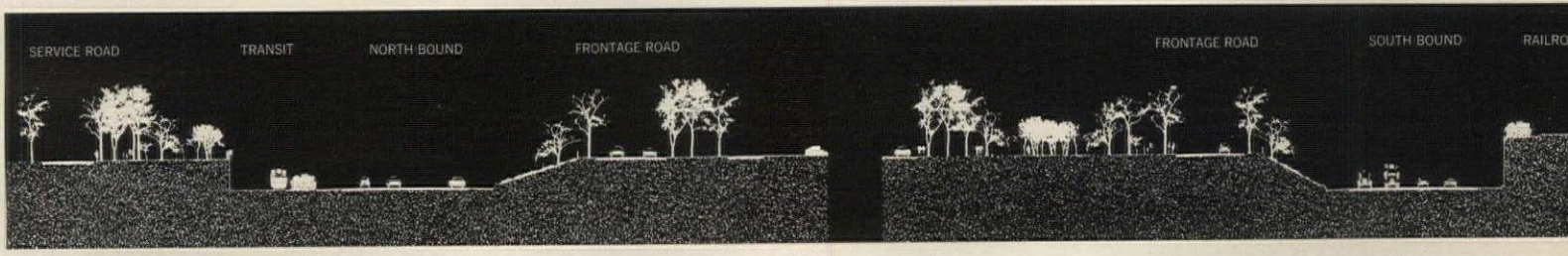
Ironically, the ill-fated stiltway scheme had also been based on some rather innovative ideas, and it too was the product of an interdisciplinary team—a Crosstown Expressway Task Force composed of professional planners and engineers from the city, county, and state. Working without benefit of joint development, that task force had conducted exhaustive studies, first to determine whether a Crosstown expressway was really needed (its conclusion that it was has never been seriously disputed by even the most violent critics of the stiltway); then to select an alignment that would best meet three basic goals: traffic and engineering, the impact on existing communities, and the potential land-use improvement.

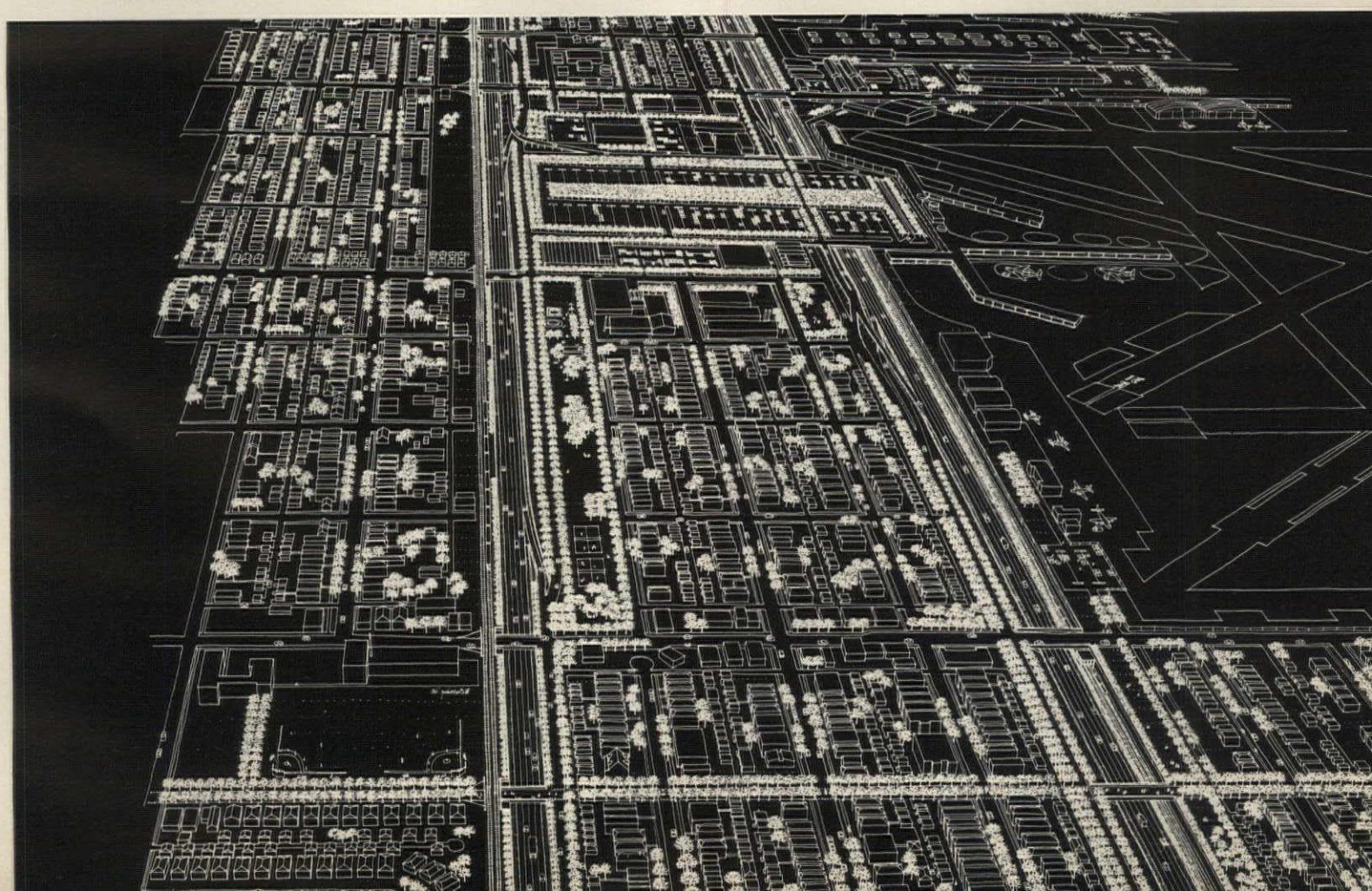
After comparing every possible route alignment against the three goals, the task force had selected two as the most promising: one an eight-lane depressed roadway replacing Cicero Avenue, the other an eight-lane elevated structure over the Belt Line Railroad.

If it had taken the conventional approach to highway planning, the task force would have picked the Cicero route automatically: its construction cost would have been almost $200 million less than the Belt Line route's, and it would have been much cheaper to maintain. Instead, the task force picked the Belt Line route, for two good but highly unorthodox reasons: it would have replaced far fewer homes, businesses, and industries; and, unlike the Cicero route, it would have disrupted none of



A comparison of the aerial photo and rendering at right shows how the Crosstown Expressway is conceived as a catalyst for uplifting the neighborhoods along its path. The northbound lanes (left in rendering) will replace a blighted commercial strip, and the southbound lanes (right) will utilize a largely vacant corridor alongside a railroad track. Between the photo and rendering are two examples of the many different cross-sections designed for the freeway. Depending on conditions at specific points, they will vary from narrow cuts bounded by vertical walls to gently graded, landscaped slopes. Above: a conceptual diagram of the plan. The expressway and its adjacent frontage roads and greenbelts act as a buffer zone between the residential, commercial, and industrial areas. For better accessibility, the traffic flow is reversed: northbound lanes on the left, southbound on the right.


SERVICE ROAD
TRANSIT
NORTH BOUND
FRONTAGE ROAD
FRONTAGE ROAD
SOUTH BOUND
RAILRO



the 20 well-defined communities along its path.

Milton Pikarsky and other city officials who worked on the stiltway proposal are still extremely touchy about criticism of it. Their reaction is understandable: the stiltway scheme was motivated by a genuine concern for human values—a fact that its critics rarely acknowledged.

But the new design team's Crosstown proposal shows what can be accomplished when comprehensive studies and good intentions are matched by "innovation and creativeness" (in Pikarsky's words) in the detailed planning and design stage. The design team has ingeniously solved its predecessor's dilemma—Cicero vs. Belt Line—by taking advantage of the opportunities inherent in both routes. By splitting the expressway into two one-way, four-lane sections, the design team has eliminated the area's two most destructive forces without upsetting the stable neighborhoods nearby—and without resorting to an elevated structure that would have introduced still another blighting force. (It is worth noting that the city is now spending a million dollars on studies to eliminate the elevated Loop.)

The design team's proposal also deals handsomely with the knotty problem of meshing local and through traffic and minimizing disruption of the adjacent neighborhoods. The key to the solution is two frontage roads paralleling the freeway strips along the inside of the center corridor (see conceptual diagram, page 70). Besides their obvious function as access and egress channels for the freeway, the frontage roads serve as:

- Overflow valves when freeway traffic is clogged (computerized signs will tell motorists to stay on the frontage road);
- Relatively high-speed thoroughfares for local traffic (thus unclogging existing streets);
- A means of channeling traffic to the major boulevards (which occur at one-mile intervals) and away from narrow residential streets (most of which would not be accessible from the frontage roads);
- Buffers between the freeway and the neighborhoods (the frontage roads will be bordered by trees, and their slower moving traffic will be less noisy).

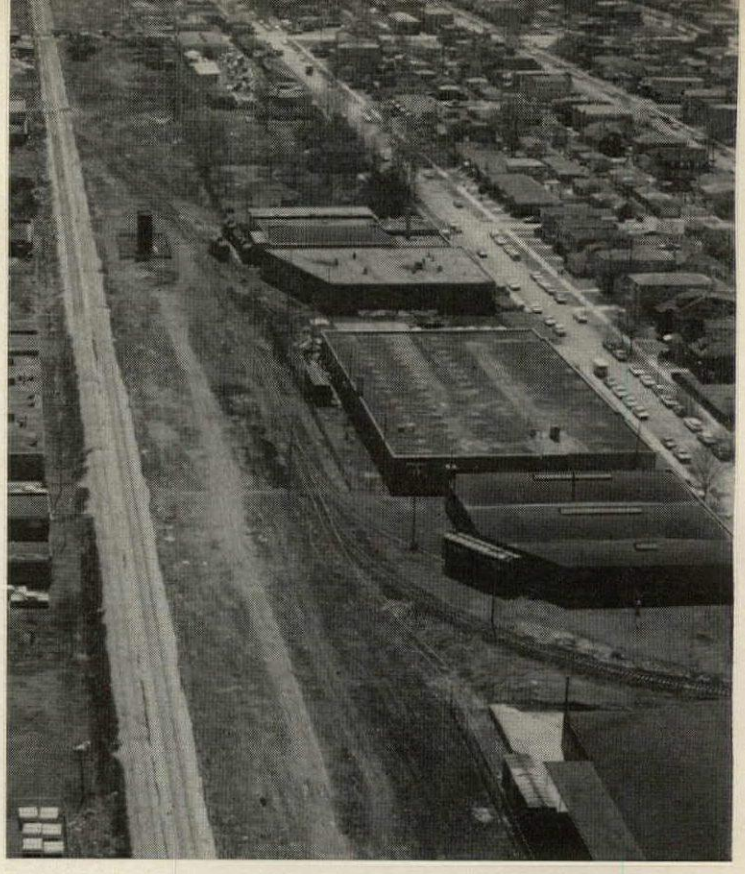
When the design team's proposal was unveiled in June, Chicagoans greeted it with open arms—a complete reversal of their reaction to the stiltway. At overflow public hearings conducted by the city, representatives of the various professional and civic groups, as well as individuals from the neighborhoods affected, heaped praise on it.

Remarkably, there has been virtually no opposition from those whose homes and shops lie within the corridor bounded by the freeway's two alignments. Apparently they feel that the plan's generous parklands and playgrounds, its pedestrian walkways extending across the freeway, and its handling of the local traffic problem, more than compensate them for their state of semi-isolation.

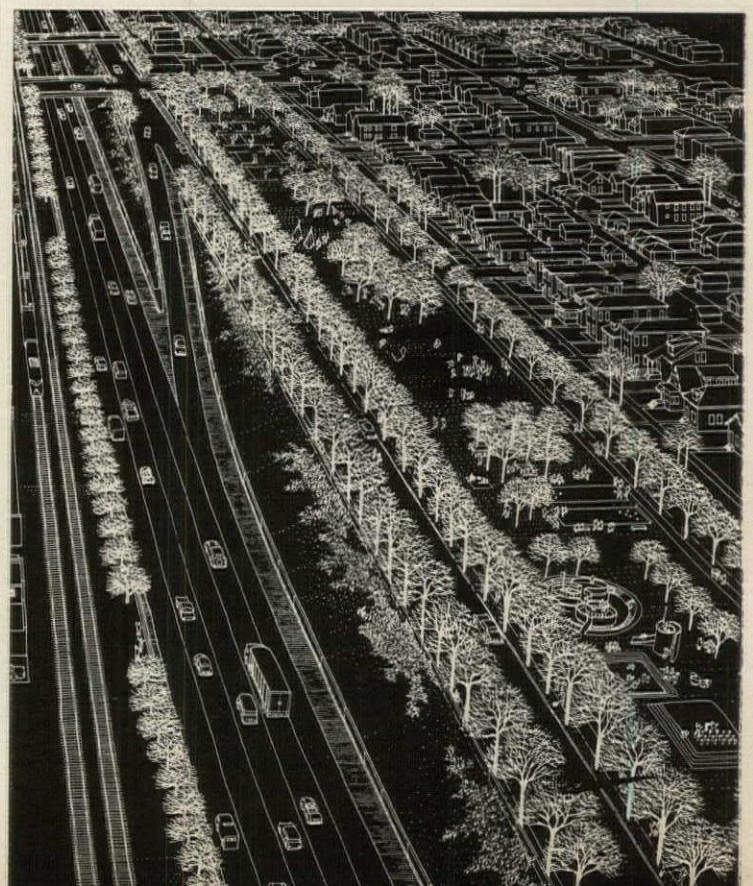
Since the plan has not yet been submitted to BPR for its approval, Bridwell is guarded in his comments about it. But his enthusiasm for the design team approach to urban highways seems all the greater now that the first results are in. "This concept," he said at the Crosstown's unveiling, "holds great potential for urban highway construction in other cities throughout the country."

Other cities are already climbing aboard. Design teams are being formed for the "linear city" development above an expressway in Brooklyn (see page 92); for the controversial Inner Belt through Boston (May '66 issue); for the equally controversial Riverfront Expressway in New Orleans (Mar. '67), "on a very modest scale," says Bridwell; and for the R. H. Thomson parkway in Seattle.

In Chicago, the design team is now putting the finishing touches on the Crosstown's first 3½-mile segment and laying plans for future segments. It is too early to say what's in store for the neighborhoods along the remaining 18½ miles, but the first results offer plenty of cause for optimism.



The "Planning Framework" on the opposite page makes the freeway a positive force in the long-range development of a corridor extending a mile in each direction: (1) new residential units for those displaced by the freeway; (2) mass transit right-of-way; (3) a "hill park" using land excavated for the freeway; (4) parking for Midway Airport; (5) development of expressway edges, such as the park-playground in the rendering below, which will replace the blighted strip pictured above; (6) industrial areas; (7) pedestrian bridges; (8) airport commercial development; (9) improvement of arterial streets; (10) de-emphasis of Archer Avenue; (11) local street improvements; (12) pedestrian greenways; (13) park and school improvements; (14) new housing opportunities; (15) consolidation of commercial development; (16) neighborhood convenience centers; (17) redevelopment project; (18) major educational facility.



MIDWAY AIRPORT
MASS TRANSIT
NORTHBOUND EXPRESSWAY
SOUTHBOUND EXPRESSWAY

BOOKS

toinette F. Downing and Vincent J. Scully, Jr. Second edition, revised. Published by Clarkson N. Potter, Inc., New York, N.Y. 526 pp. Illustrated. 8½ by 11 in. $22.50.

REVIEWED BY ALAN PRYCE-JONES

The first edition of this book was published in 1952. It has now been reissued with a new introduction and a number of corrections. With over 500 illustrations, and scholarly chapters on the background out of which Newport architecture has emerged—in particular, on 19th-century resort architecture—it offers a most valuable survey, covering nearly three centuries.

Newport is both a remarkable, and a saddening case. Not only is it unique in America as a conspectus of esthetic taste, it has no counterpart in Europe. It is as though one of the Cinque Ports had been allied to Deauville, and at the same time had attracted, generation after generation, builders of distinction to adorn the amalgam. Some 300 pre-revolutionary houses survive, grouped in two main areas; and on the perimeter of both, spread along the cliffs, extend the so-called cottages which spring to mind as examples of 19th-century flamboyance whenever Newport is named.

So far, so good. But Newport has not been lucky in its development, during recent years. First, nobody troubled much over the fate of the colonial houses, and they were allowed to sink into slum conditions when not actually torn down. Then after the Depression, the cottages became unwieldy. Fashion began to ebb away from Newport, and its external signs of grandeur were dismissed as eccentric monstrosities, ripe for destruction. By the time the tide turned, it was late. Such signs the conservative but gave the city fathers a taste for the quick buck, regardless of long-term planning. As elsewhere, relations between the city and the "summer people" have been less than ideal. In sum, it has not been possible to demonstrate that the way to rejuvenate this —fortunately almost indestructible—community is to take what is there, preserve the best without regard for fashion, and, in building for the future, maintain only the highest standards of the past.

There is thus a double need for a book like *The Architectural Heritage*. It both records what is fast disappearing, and it stimulates interest in what remains. The most hopeful sign of continuing interest is that the early houses, which even five years ago were almost totally neglected, are gradually being brought back into commission. A handful of public-spirited residents have banded together to take options on those which remain, so that buyers can have the chance of buying them at a fair price for restoration. This activity is transforming the older part of the city.

At the same time, the later cottages have returned to fashion, largely through the zeal of the Newport Preservation Society, which, having taken over the administration of two Vanderbilt houses, The Breakers and The Marble House, now attracts annually nearly 100,000 visitors to the former alone. Contrary to the implication of their name, the cottages are far from small; and it might be thought that in the modern world to equip and run one of them might deter all but the most determined. Yet they continue from season to season, often inhabited by one generation of owners after another, and standing as memorials to such names as McKim, Mead & White, Richard Morris Hunt, and Ogden Codman. Then the roll of names stops abruptly. Since the late 1920s nothing of distinction has been built in Newport; year by year the heritage becomes more nostalgic. antly gimcrack, too—the best to be expected of the modern houseowner is a more or less friendly brick box with a picture window. What is needed is an example: a building of real distinction to take its place beside work which began in the days of the African trade.

The illustrations selected by Antoinette Downing show something of what we have lost. Even in the few months since the publication of this second edition more has been sacrificed to road and renewal programs set in motion with the minimum of imagination. If some 50 of the houses built before 1830 have been saved in recent years, at least as many of those listed in the first edition of this book have been torn down. The 18th-century wharves and wharf buildings are threatened by current renewal schemes, and although of the more important cottages all have been adequately preserved in recent years, there is some uncertainty about the eventual fate of one of the more sensational: the Fall River granite Château-sur-Mer, built in the 1850s by the Wetmore family, a massive house which has at present no obvious future.

To admire such houses requires a difficult adjustment of sensibility. We do not nowadays take kindly to the thought of Newport life as it was led some 80 years ago, when—to cite an extreme and no doubt apocryphal case—the horses in Oliver H. P. Belmont's stables at Belcourt were said to be put to sleep on Irish linen. To contemporary eyes today many of the cottages seem fussy and pretentious to a degree. Yet they are an element in the history of taste at least as important as, say, the *fin-de-siècle* objects of every kind assembled last summer in a memorable exhibition in Ostende under the general title "1900." Our children may be unwilling to face the problems of actually living in a Stanford White house, but they will not thank us for withholding from them the possibility of doing so by forcing on them in-

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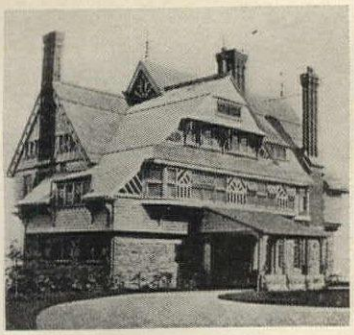
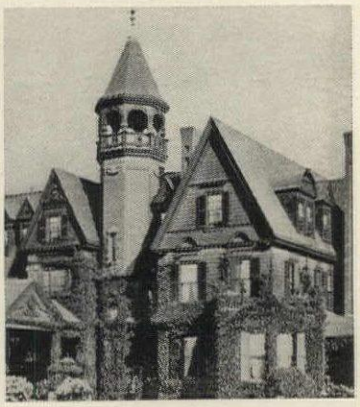
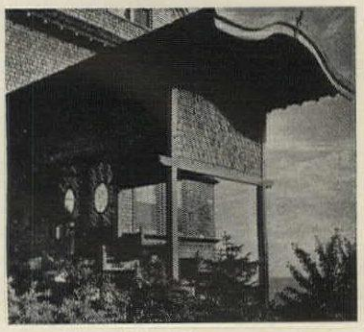
Mr. Pryce-Jones, a part-time resident of Newport, has served as editor of the *London Times Literary Supplement,* as drama critic for the *London Observer* and for *Theater Arts,* and also as book critic for the *New York Herald Tribune.*







The shingle-style, only a part of Newport's multifaceted architectural history, is represented in the above examples (from top): Richardson & White, 1874; Potter & Robinson, 1877; Peabody & Stearns, 1877; McKim . . ., 1882; unknown, 1893.

stead a squat apartment block built round a blue-tiled pool.

The most attractive feature of *The Architectural Heritage* is that it is so visibly a labor of love. The notes, the detailed street plan giving some account of almost every ancient building, the portfolio of measured drawings, the occasional photographs of significant detail, the rescue here and there of a doorcase or a mantel which otherwise might have been forgotten, make this a most companionable book for the Newport lover. And if the authors are understandably shocked by the disintegration which threatens the city, there is also hope in the fact that a noticeable shift has taken place in the demand now made for new accommodations. The pre-1830 houses no longer simply disappear. Time and again someone is willing to take them in hand. Good doors and good paneling can be brought into the restored houses with the help of the Preservation Society. And if the city itself still succumbs to the temptation of presuming that to preserve and restore is a tiresome antiquarian folly which is holding Newport back from a desirable future dotted with marinas, motels, gas stations, and hot dog stands galore, there is a growing and anxious understanding that if the past is jettisoned now it can never be recovered.

This past, mainly in terms of architecture, but inevitably straying towards a historical perspective, is here broken down into ten chapters, detailing what took place in the colonial period, and giving special notice to such distinguished Newport builders as Peter Harrison; moving on to the Greek Revival; and ending with Vincent Scully's pages on the stick style and the shingle style, which have been accorded a brief new introduction.

This second edition is better organized than the first, with one exception: the numbering of the illustrations in the index does not accord with the numbers on the plates. No pagination is given in the part of the book devoted to illustrations, so that these are hard to turn up—a defect from which the first edition was free.

CITY OF FOOLS. By Michel Bataille. Translated from the French by Arthur Train Jr. Published by Crown Publishers Inc., New York, N. Y. 313 pp. 5½ by 8¼ in. $5.95.

REVIEWED BY A. S. BROOK MASON

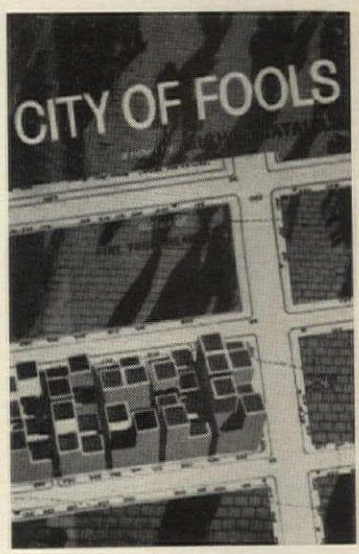
This is the harvest in the autumn of one's life—to be abused more than necessary, particularly by the Gentlemen of Art.
LE CORBUSIER, *Paris, September, 1956*

In September 1965 André Malraux said in official homage to the late architect, Le Corbusier, that no one "had ever been so long, so patiently insulted." Now, three years later, Michel Bataille, a Parisian architect and devotee of Le Corbusier, takes his vengeance against the persecutors and maligners. He attempts to re-establish Le Corbusier posthumously in a *roman à clef, City of Fools.*

For vengeance, unbalanced though it may be, Bataille mixes an incongruous assortment of obstacles in the path of the world's greatest living architect. There are administrative obstacles for the cool Victorien Sauvage (Le Corbusier) and, duplicated on a younger level, are those for Georges Amyot (Sauvage's protégé). For the narrator, Amyot, the author specifies growing deafness, rigorous and perverse atelier training, and a noncommittal mistress.

The thick taste is an acid denunciation of Sauvage, Bataille's personification of genius in general. The unprincipled denunciation of genius becomes obsessive. And with this nagging comes redundancy. With the third operation on Amyot's deaf ear and the inclusion of at least the twentieth official to "blow imaginary dust off his rosette of the Legion of Honour," we are in a mire of stock characters, constant repetitions, and pretentious punch lines. After Ayn Rand's *The Fountainhead* this is not new; it is tiresome. But now at the expense of Le Corbusier, it is sad

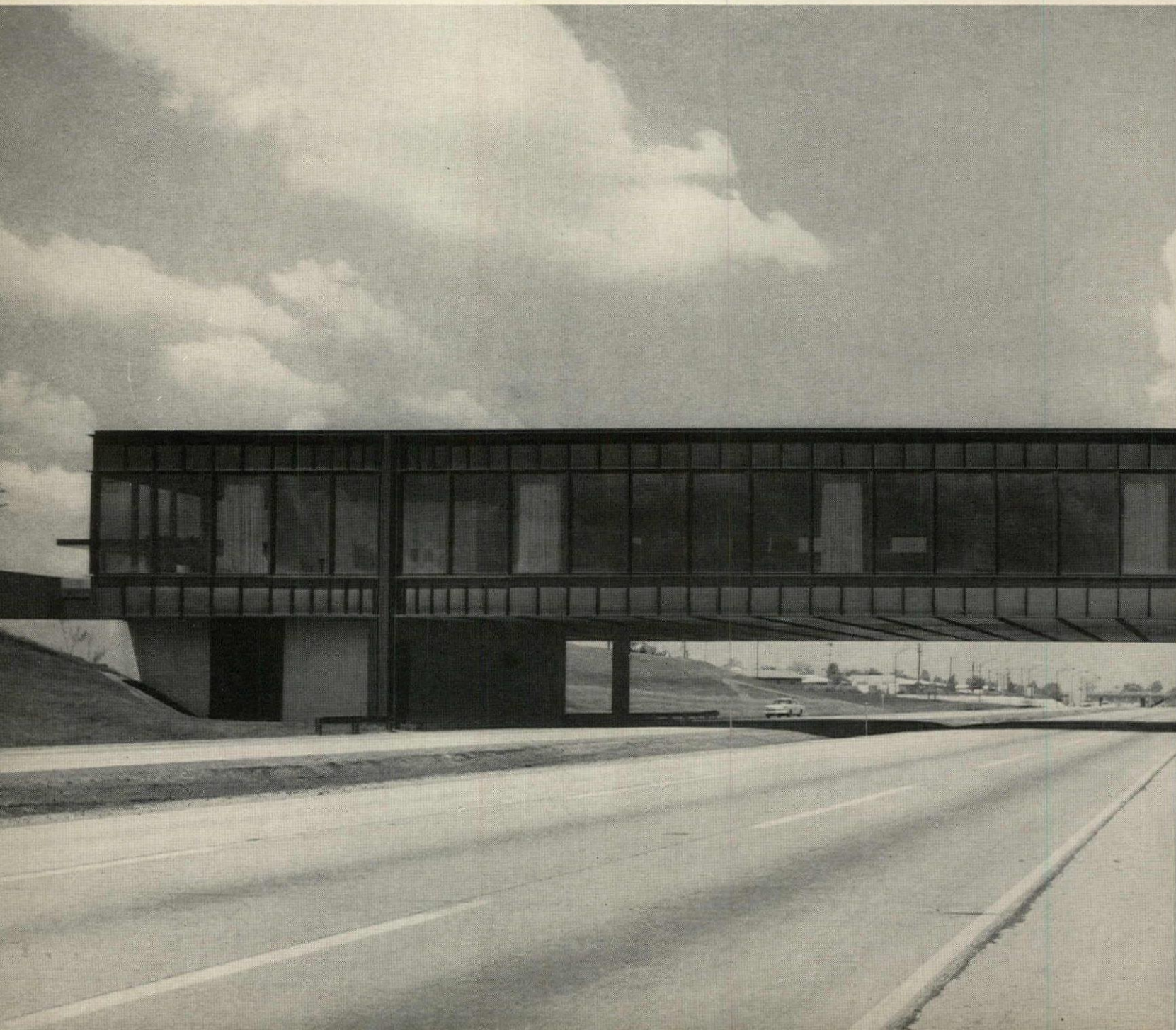
Miss Mason has been a student of art and architecture in Germany, Britain, and the United States.



—sadder than the fulsome press flattery at his death.

Michel Bataille asserts (I suppose for the sake of Le Corbusier) that the product of genius is the result of untempered travail, unjustified failure, and unknowing judges. Intersliced with the dictum that failure proves worth are Corbu's failures disguised—the League of Nations, the Radiant City, and others. But the foundation of the book is not the actual failures per se. Bataille attempts to focus on the tragic baseness of daily life. He then brings his bit of remorse to conclusion by Sauvage's self-perpetrated death (incidentally the second Agony and Crucifixion to take place in the book). And so Sauvage, the greatest architect in the world, seeing himself in the autumn of his life as a symbol of the world's remorse, chooses suicide as noble and conclusive. But is Sauvage a symbol of the world's remorse or of Bataille's? Either way, ex-voto or tract, this act is hardly *une victoire sauvage.*

REST STOP
1,000 feet ahead–in quality

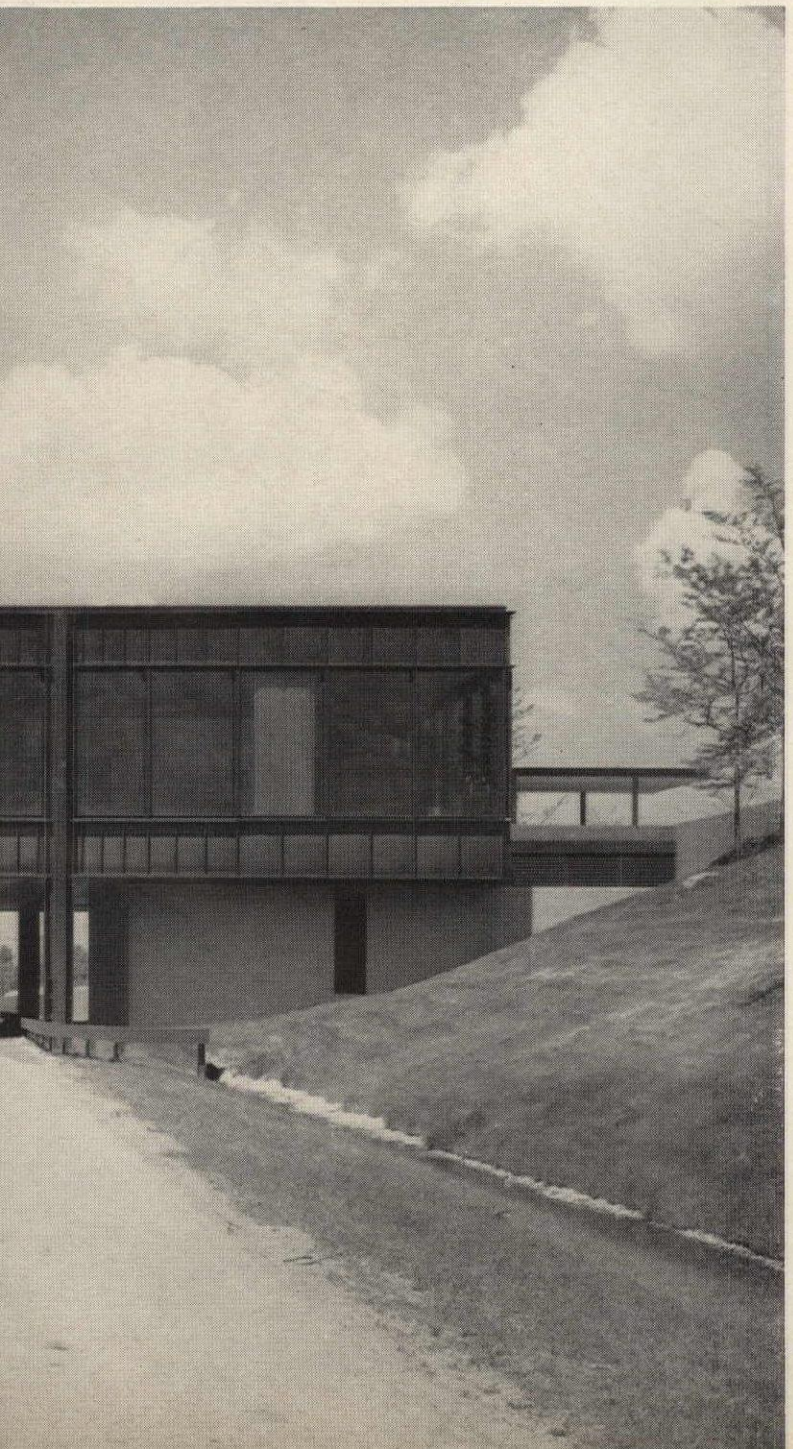


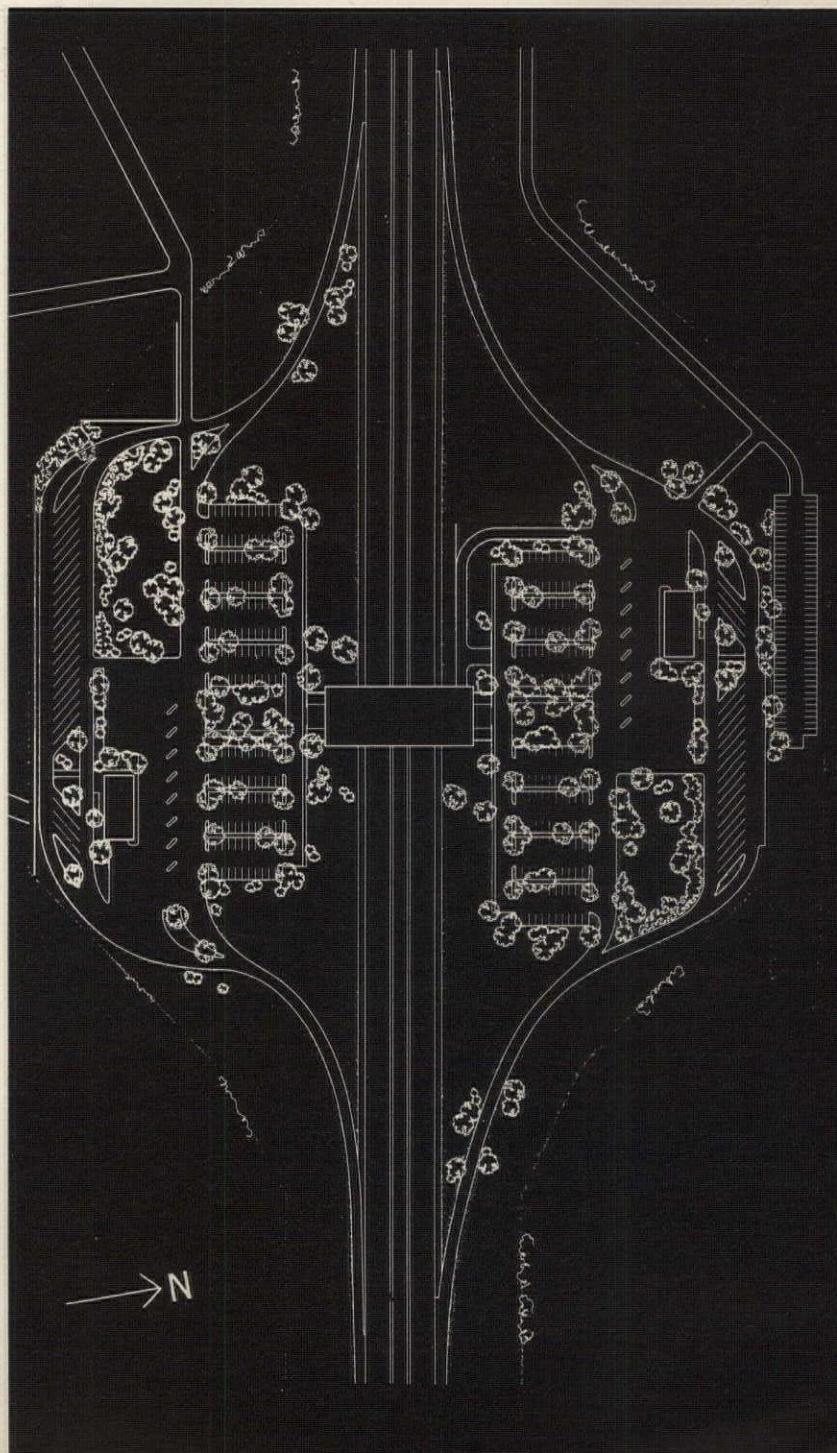
Whizzing along at 60 miles an hour on the Tri-State Toll Road at South Holland, Ill., near Chicago, the motorist in his streamlined glass and steel automobile passes under another sleek glass and steel enclosure.

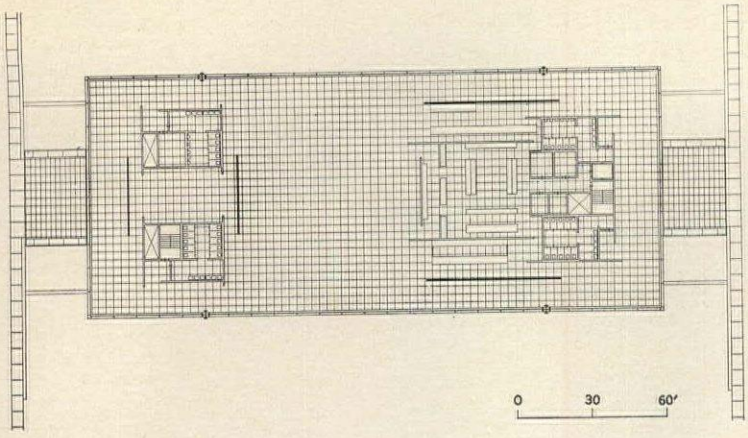
The bridge-like structure is a restaurant that connects with vehicle service areas on each side of the road, thus serving travelers in both directions. The project, dubbed the "Abraham Lincoln Oasis," is the work of Chicago Architect David Haid for the Illinois State Toll Highway Commission. The commission, which a decade ago retained Pace Associates to design a number of similar structures for the same area, is to be commended for its policy, which here resulted in a clean, even sophisticated, rest stop, unadorned by neon lights and other schmaltz. It is certainly a great improvement over what most other states have attempted; it is only in Europe that one can easily find examples of similar quality.

The structure of the restaurant building—a 135-ft. clear span plus a 45-ft. cantilever at each end—is a welded plate girder and truss system for floor and roof, both of which are carried on four cruciform-shaped columns. Vertical wide-flange window mullions work as hangers to stabilize the structure. The design eliminates a center support which could have been a traffic hazard. The substructures (equipment and storage rooms) are distinguished from the steel cantilevered structure above by the use of buff-colored brick, but a greater delineation in the area where the two meet would have emphasized the substructures' nonsupporting role.

The architect, who was once associated with the Mies office in Chicago, has sought to give the traveler a rest from the monotony of the superhighway

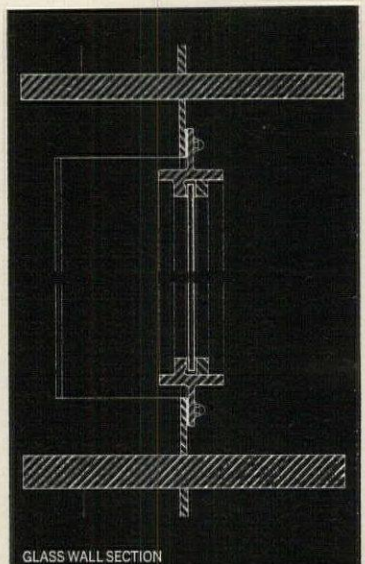




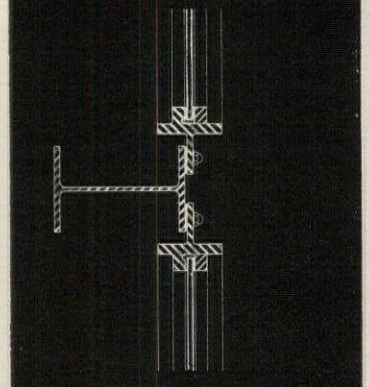


experience by using austere (self-oxidizing steel, granite, tinted glass) and rich (silk drapery) materials in a calm, restrained manner. Haid's solution is an architecture to soothe the tired eye and mind. American garishness is forgotten for a while in the meticulous crisp modularity and peaceful equipoise of the rest-stop surroundings.

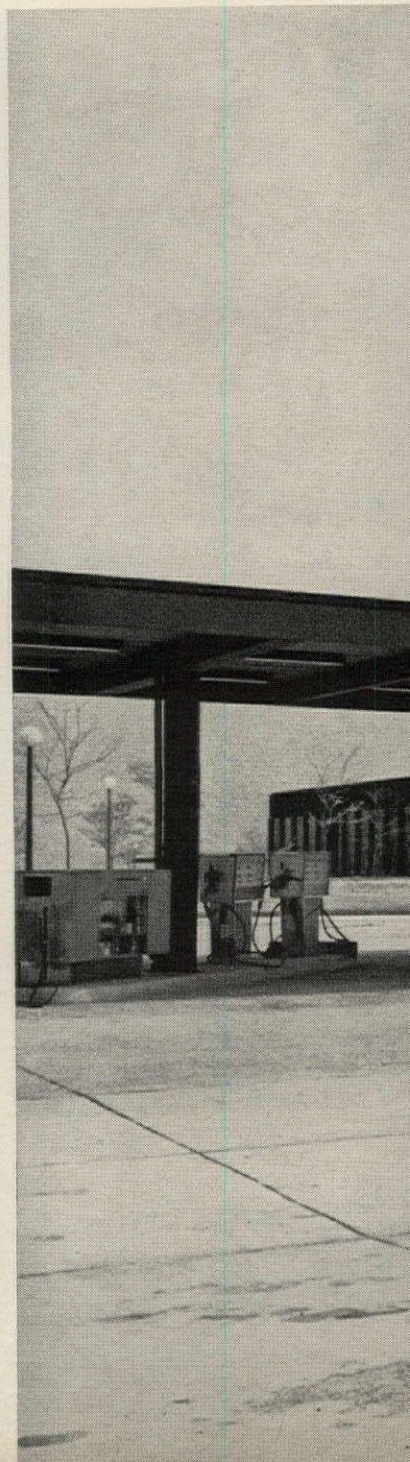
By placing the building above the highway, easily accessible from the service areas on either side, only one restaurant was needed. Critics who say that to sit astride the highway is no way to escape from the pressures of fighting the traffic are reminded that from within the restaurant the noise generated by the highway is greatly diminished because the building is sealed and air conditioned. Moreover, the dining area is centered in the interior, away from the window walls which are, in addition, curtained and bronze-



GLASS WALL SECTION



GLASS WALL PLAN



tinted. Watching the traffic can also have a certain fascination, when one is not involved in it. Witness the pedestrians peering over highway overpasses on any Sunday afternoon.

Elsewhere within, the essentially open, single space is divided at each end by cores containing restrooms, stairs to the areas below, a kitchen in the north core, and a gift shop in the south. The dining area may be subdivided by ceiling-to-floor draperies. They serve two functions: to close off areas during the nonpeak hours; and to permit changing combinations of snack bar, cafeteria, and waitress service.

Function is combined with a careful attention to details that gives to the interiors the same controlled, dispassionate character found outside. The art work, good graphics, and the standard plants in their white pots, all push the project further in this same direction.

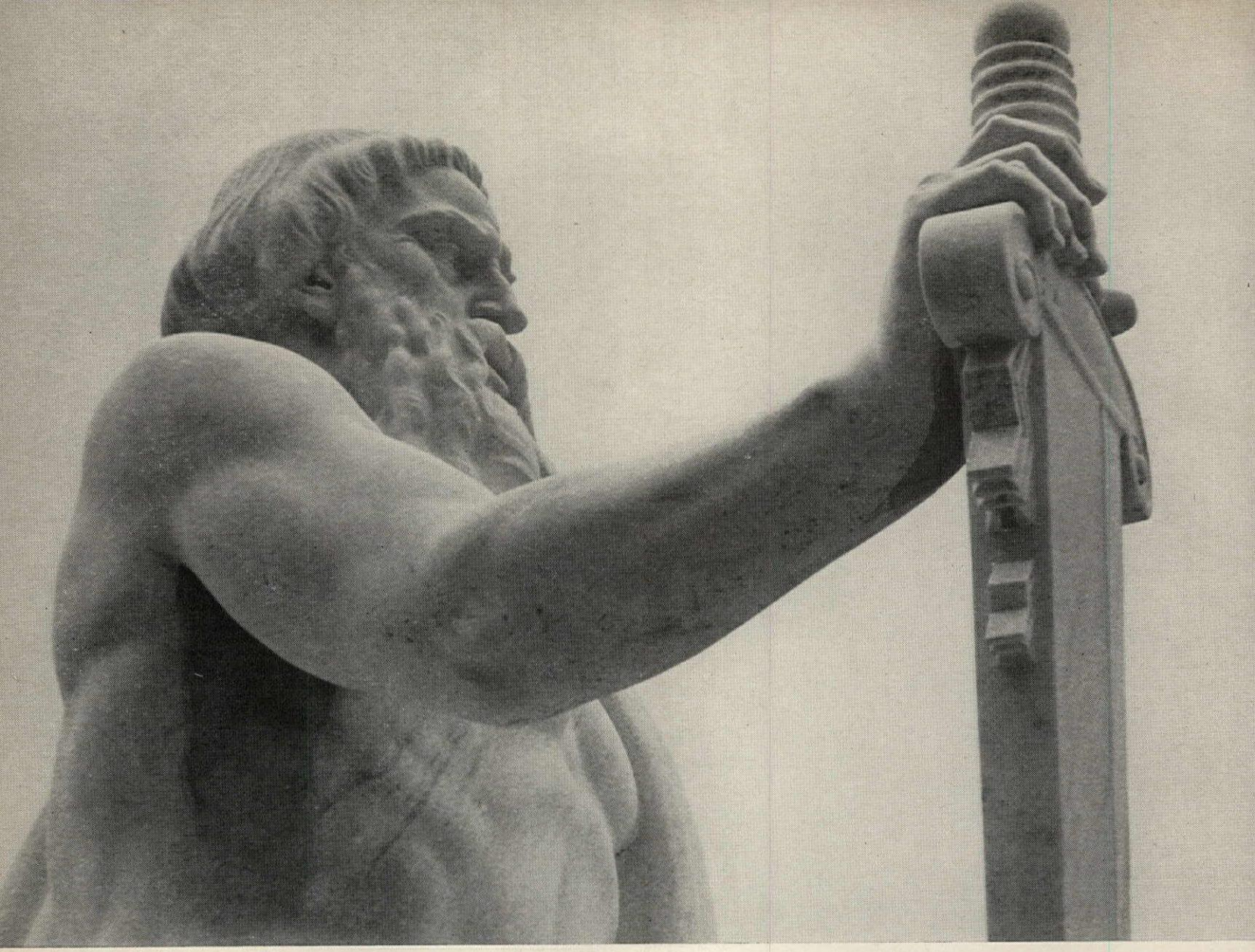
It is precisely this character which makes the rest stop outstanding in its particular field—but, paradoxically, causes the greatest concern to those who can praise it only with certain reservations. A certain cool anonymity is the result of so much control. This, say advocates of the Miesian tradition, is fine. Others, with an understandable prejudice against the tradition itself, will rate the Oasis less highly.

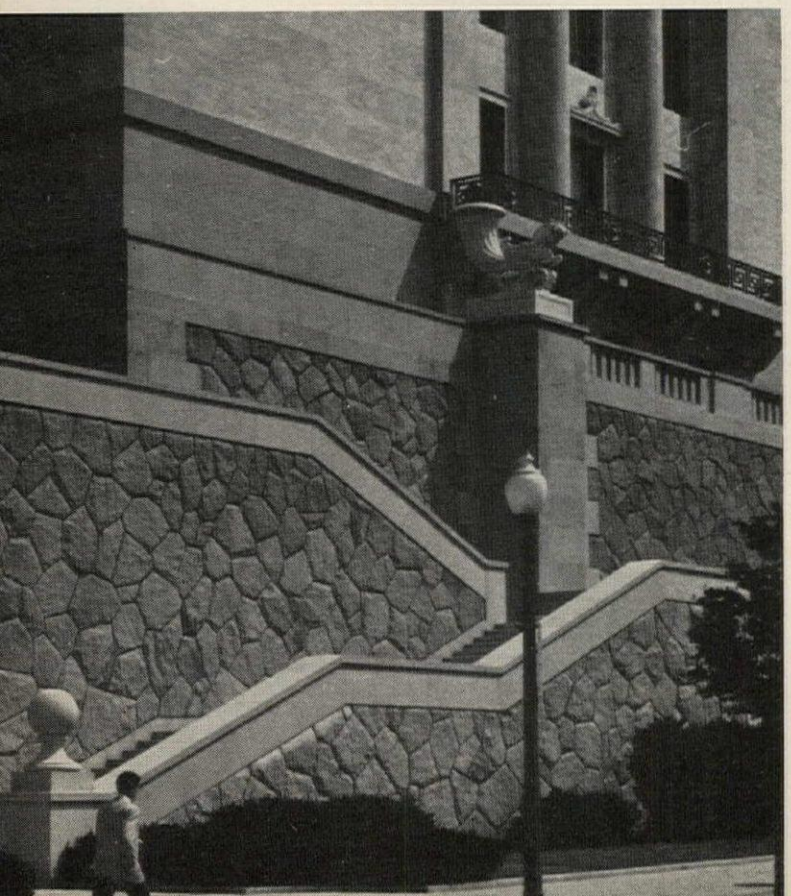
—Donald-David Logan

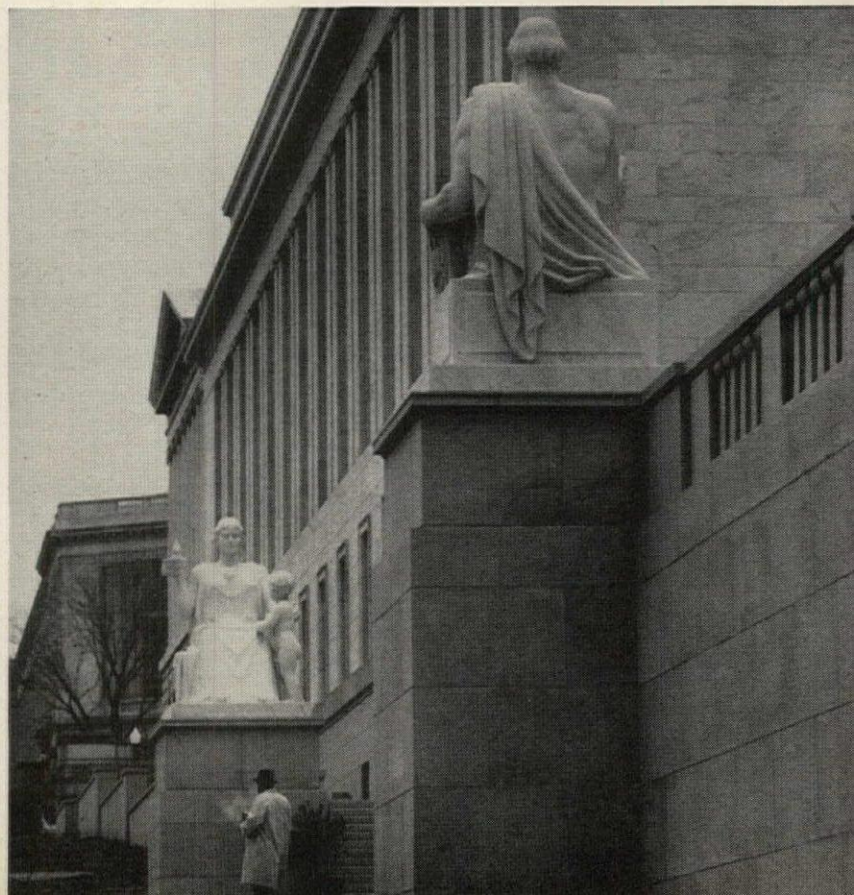
FACTS AND FIGURES

The Abraham Lincoln Oasis, South Holland, Ill. Owner: The Illinois State Toll Highway Commission. Architect: David Haid. Engineers: Wiesinger-Holland (structural); Wallace-Migdal (mechanical & electrical). Graphics consultants: Larry Klein & Associates, and the Center for Advanced Research in Design. Kitchen consultants: Fred Schmid Associates. Contractor: Leo Michuda & Son Co. Building area: 30,000 sq. ft. in restaurant; 4,500 sq. ft. in each service station. Construction costs: $4,037,000 including all site work and landscaping; $360,000 for furnishings and equipment.

PHOTOGRAPHS: George Cserna







On July 19th, the normally calm *New York Times* was editorially outraged. "If all goes according to schedule," *The Times* predicted, "the current Senate-passed resolution before the House Public Works Committee that would authorize proper selection of architects for construction on Capitol Hill will never see the light of day. . . . If the bill quietly dies, it will be the way a lot of people on Capitol Hill want it, for the obvious reason that they like things exactly as they are. . . . The man who likes (them) most of all is J. George Stewart, the 78-year old Architect of the Capitol. . . . No one can blame him for not wanting to give up his kingdom. . . . But absolutism has never been . . . in the public interest and neither is what has been constructed on Capitol Hill."

We don't want to compare the Architect of the Capitol to a dead horse; but we had felt that retelling the story of J. George Stewart and the Rayburn Building might seem a bit like flogging one.

Still, while everybody had talked about that building at one time or another, not many people, it seemed, had ever taken a conducted tour. And so, earlier this year, we asked Rasa Gustaitis, a one-time reporter for the *Washington Post* and the now defunct *New York Herald Tribune*, to sum it all up. The following story is the result. The title is that of the *New York Times* editorial:

"THE EMPEROR OF CAPITOL HILL"

Some months ago a scaffold of gray shoring was propped against the crumbling old west front of the U.S. Capitol. The heavy beams, placed crosswise between columns as well as diagonally against the sandstone wall, suggested that the entire edifice was in imminent danger of collapse.

There were those who suggested, however, that the shoring was there, not so much to support the old building, as to bolster a project J. George Stewart, the Capitol architect, had in mind. If members of Congress first grew alarmed at the sorry state of the historic building's last remaining original exterior wall, these cynics reasoned, they would be more likely to accept Stewart's forthcoming proposal, along with its $34-million price tag. Stewart wants to buttress permanently the west facade and extend the building on this side, in marble, to provide 4.5 acres of additional floor space. The east front received similar treatment in the late '50s, to the dismay of preservationists.

If the 78-year-old Stewart was outraged by the hint that he was being Machiavellian, he did not show it in public. More likely, he merely enjoyed a chuckle at the expense of his angry critics. For architects, preservationists, and a few members of Congress have been flying into futile rages over his work for years, yet that rarely interferes with its progress. Sometimes, to be sure, Stewart must wait a little (right now, for example, because of the Vietnam war, it would be impolitic for Congress to vote more money for its own expansion). But sooner or later the Capitol's architect's plans tend to become reality. The west front will probably be extended, destroying in the process some of Frederick Law Olmsted's landscaping and terracing of the Capitol grounds. Eventually also, a $75-million Madison Memorial Library will probably be built, as an annex to the Libraries of Congress, according to a design that the AIA has attacked as "inhuman and overpowering."

"Esthetics are often matters of opinion," Stewart's office once explained in a statement. "What one person thinks is beautiful, another finds repulsive, and both could be sincere." Therefore, while he waits for a propitious time to begin the two new projects, Stewart can look back on his past ventures with satisfaction. He can look especially to the Rayburn House Office Building, his latest and biggest accomplishment, one that has received national attention and is certain to stand for many years as a monument to the Stewart era on the Hill and to the system of which he is a part.

Critics have described the R. O. B. in colorful language. They have called it the "Edifice Rex," "King Hottentot's Temple," and "the ten-year pyramid" (it took almost that long to build). Some have referred to its style, which is officially labeled "simplified classic," as "Texas penitentiary" and "Mussolini modern." For those who might assume from such labels that the building is not a roaring success with the public, the office of the Capitol architect has a reply:

"We don't agree that we've created architectural monstrosities," Stewart's aide, Philip L. Reefe, said at a recent hearing after Rep. James G. Scheuer (Dem., N.Y.) had fulminated against the quality of Capitol Hill construction. "The public doesn't think so. . . . We've heard nothing but praise."

Harold B. Meyers, in the March, 1965, issue of *Fortune*, has written: "The worst thing about the Rayburn Building is the very thing it symbolizes best: the power system that created it." Why is that "the worst"? Surely Mr. Meyers is offering a backhanded compliment. For it is proper that an office for Congressmen should symbolize the way our democratic system works. And this white marble fortress, looming H-shaped upon a granite base along the Independence Avenue hillside, is a perfect symbol in many ways. For example, about half of it is invisible to the casual passerby. Five of its ten levels are underground. Likewise, much of what transpires in Congress is not apparent to the citizen looking on from the gallery.

At the main entrance, two gigantic white Cherokee marble statues by C. Paul Jennewein reveal the legislature's attachment to its version of traditional values despite a lot of ruckus in the land. Nobody could accuse

"At the main entrance, two gigantic white Cherokee marble statues reveal the legislature's attachment to its version of traditional values despite a lot of ruckus in the land." Also shown: monumental stair that leads to practically nowhere.

the sculptor of being modern. The statue at the right, "The Spirit of Justice," is a stern, bearded, half-nude, seated man who holds a sword and a book. One thinks of Moses or some old German warrior-chieftain. He is staring across at a huge mother and child, "The Majesty of the Law." She is more like a Brunhilde sculptured in the heroic style of the Hitler era than anything by Picasso, Lipchitz, or Mark di Suvero. Looking at this gigantic couple, one experiences a sense of bewilderment, just as one does when listening to certain Congressmen's rhetoric.

A bewilderment as to significance is also conveyed by other sculptures about the building. Bear's heads growl down from some of the balconies. "They were chosen as a form used in classical architecture," one of the Capitol architect's aides explained. From atop the granite base, weird goat-like animals with cornucopia tails loom above the street. These are "rhytons," it is officially stated. They symbolize wisdom, power, strength of purpose, and abundance—qualities presumably attributed to Congress. Again, the visiting citizen would not necessarily understand.

Even more symbolically fitting, however, are the grand exterior stairways that lead nowhere. On the side of the building facing the city, one can climb to the top of the granite base and arrive at a plaza with a fountain. One side affords a view of the city. The other three offer glimpses into offices and a cafeteria within. There are doors on these three sides, but they are usually locked. The excursion up that grand staircase becomes an architectural lesson: form does not mean what it seems to imply in the House of Representatives.

The perceptive visitor will notice that he can walk around the building atop the granite base and thus arrive at the main entrance with its three sets of glass doors. Here he might be able to enter. However, on certain occasions, as recently, for instance, as the Poor People's March on Washington, these main doors were also locked. Peering in toward modified Grecian doorways within the lobby, the visitor may notice a relief portrait of Sam Rayburn framed in several kinds of marble on the lobby's left wall. He may reflect upon the importance of image-building in politics. Then, chastened, he can descend one of two other grand flights of stairs and arrive at street level, between Moses and Brunhilde, and finally find an open door into the basement.

Inside, one gets the double impression of opulence and parsimony. Back stairs are broad and built of white marble. They remain spotless because almost nobody uses them. Marble is everywhere. Booth partitions in the public restrooms are of Napoleon granite. "We tried to have as many states represented with different kinds of stone as we could, without making a Jacob's coat out of the building," one of the Capitol architect's aides explained. The high-ceilinged marble halls, with their squares of stark overhead lighting, are barren. Yet some of the plush carpeted offices are overcrowded. This double impression of extravagance and parsimony, however, is symbolically excellent. For in Congress it is important to convey an image of frugality no matter what it costs.

The design of the 169 members' suites offers further lessons about the nature of Congress. Instead of the typical, flexible design one finds in the interior of a modern office building, here one sees thick walls dividing rooms within suites. When the need for more space for each member arises, as it will if the staffs are enlarged, remodeling will be a massive, costly, and complex job. There are parallels here with the way Congress draws up some of its legislation, and the House's conservative attitude toward social change.

Some things about the Rayburn Building infuriate critics because they refuse to accept the ways in which our democratic system works. For example, many attacks have been aimed at the choice of Matthew H. McCloskey as principal contractor because he is a big fund-raiser for the Democrats, former treasurer of the Democratic National Committee, and former ambassador to Ireland. But because of this very background, McCloskey may have been the perfect choice. Building a House for Congress requires political acumen.

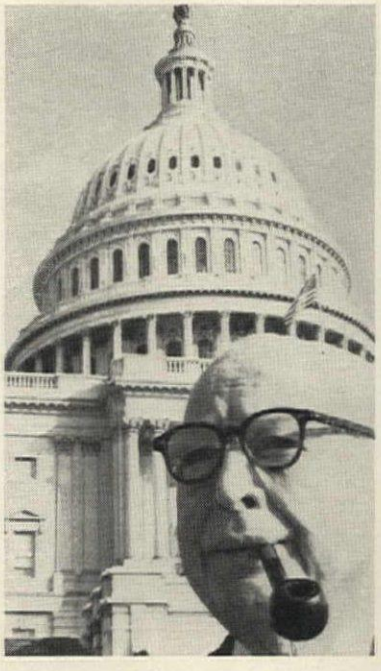
This is apparent in a perusal of the R. O. B.'s history. The project got underway in 1955, when $25,000 for survey and planning for a third House office building was inserted in a supplemental appropriations bill in committee, at the personal request of Sam Rayburn, then Speaker of the House. When the bill reached the floor, Rayburn offered an amendment striking out that sum and instead authorizing the expenditure of $2 million and "such additional sums as may be necessary" for construction of such a building. The amendment was accepted by voice vote even though this violated a House rule that appropriations bills be limited to financing projects authorized by previous legislation. No such legislation existed. However, this procedure was irregular only to those who view Congress from the perspective of high school civics books. It was accepted as proper by all but a few Congressmen.

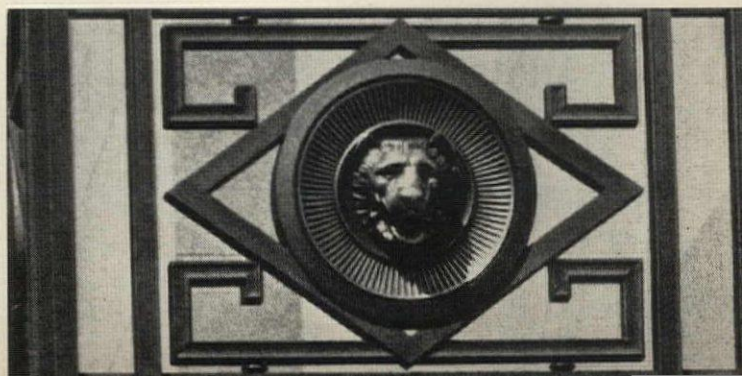
From then on, the entire project was in the hands of the three-man House Office Building Commission, chaired by Rayburn, and of the Capitol architect. The commission meets regularly in executive session (which means that not only the press but also other interested Congressmen and Senators are excluded) and is not bound to reveal much of its doings. By choice, it reveals little.

The firm selected to design the structure was Harbeson, Hough, Livingston & Larson of Philadelphia. Architect John Harbeson was a friend of the Capitol architect and of Matthew McCloskey. McCloskey became the principal contractor by submitting the low bid of $6.66 million for excavation and construction of the foundation. His

"Bear's heads growl down from some of the balconies . . . From atop the granite base, weird goat-like animals with cornucopia tails loom above the street . . . They symbolize wisdom, power, strength of purpose." Seen here are assorted works of plastic art and Mr. Stewart.


E PLURIBUS UNUM





firm also won the bid for building the superstructure with a low bid of $50.8 million. Partly because of extensive later change orders, the cost of which does not seem to be fully documented, the actual cost of both items was far above these bids.

From the beginning, the architects had only limited jurisdiction over the design. Any decision of consequence had to be referred to the House Office Building Commission. Between the time the superstructure specifications were drawn up and bids were submitted, at least seven expensive modifications were made in the plans. For example, a swimming pool and two gyms were added after the original design was completed. This procedure made good sense politically for voters tend to look askance at Representatives who openly spend tax money on what appear to be luxuries for themselves.

The Capitol architect supervised the entire job. His critics like to dwell on the fact that, despite his title, Stewart is not an architect, but rather a civil engineer. They point out that he dropped out of the University of Delaware, where he played halfback on the football team, and worked for his father's engineering firm. In 1944 he was elected to Congress, became a friend of Sam Rayburn's, and, with Rayburn's approval, was appointed to his job by President Eisenhower in 1954. However, in building for Congress, a practical knowledge of politics may be more important than an architectural license, if the purpose is to build what Congressmen want.

After innumerable delays, the building was finished and occupied in the spring of 1965. Most of the legislators who complained about it were not among the lucky ones to be alloted space in it. But, because of the committee-style method of design, a few things had been overlooked.

Inspecting their plush suites, some Congressmen were dismayed to find that there was no way they could go from their own offices into their main staff office without passing through the reception room where, likely as not, some persistent constituent might be waiting to buttonhole them. This brought forth discussions about the possibility of cutting an extra door, but most members eventually became adjusted to the situation.

Some staff members were also dismayed. The suites, though larger than those in the other two House Office Buildings, still allowed very little working space. Desks abut one another and privacy was impossible. Some secretaries wished they could have some of the nearly 14-ft.-high ceiling height as mezzanine space.

Then there was the matter of the sinks. Though each suite had two bathrooms, a safe, a refrigerator, and a small stove, there were no sinks. One Congressman, with a lot of press attention, installed his own. Then the amiable J. George Stewart came forth to explain that Sam Rayburn had said no to sinks, but had okayed the plumbing that would make their addition simple, should that be demanded by the legislators. Sinks were provided for all.

The pool, it turned out, was in a room too low-ceilinged to allow for a diving board. One was installed but then was quickly removed when it became a clear and omnipresent danger to Congressional crania.

All this spread the fame of the Rayburn building and of J. George Stewart throughout the land. There was also a lot of publicity about the project's cost. It is the most expensive government building in U.S. history. Its precise price tag will probably never be established, but estimates range from $98 million to $122 million. Some count the subway from the R. O. B. to the Capitol as part of the total; others also include two huge blocks of underground garages that were built later at one side of the building at a cost of $13.5 million. (They are now known as Fort Rayburn because, though landscaped on top, they have a forbidding military appearance and could easily be used as helicopter landing pads.) The General Accounting Office, reporting on the building's costs, estimated the total in 1965 as $98.5 million, including $7.9 million for the subway but not including Fort Rayburn.

The G. A. O. noted costly irregularities in the design and construction of the building. It found that contract changes totaled more than $8 million and included some items that the commission had considered during the planning of the building but had rejected as too expensive. These included the pool, cafeteria, and gyms. Other changes seemed to the G. A. O. to be the result of oversights during the design stage.

The architects' fees seemed high to the G. A. O. compared to other government projects. However, the report pointed out, there, as on other matters, the Capitol architect's office provided inadequate documentation for any full evaluation.

The G. A. O. report, published in April, 1967, was probably the last occasion for major critical comment about the R. O. B. Now, more than three years after completion, the fortress seems on its way to becoming a landmark. J. George Stewart can look back in satisfaction and plan ahead.

In the crypt of the Capitol, Stewart has arranged an exhibit in praise of himself and his predecessors. In the space allotted to himself, he has had written: "Mr. Stewart is a native of Delaware and had a varied career as surveyor, builder, licensed civil engineer, engineering consultant to the Lands Division of the Department of Justice and the U.S. Corps of Engineers and members of Congress before assuming his present position. . . ."

In the rest of the exhibit, one can find an indirect reply to those who charge that he is unqualified for his job.

The very first architect of the Capitol, William Thornton, who held the job from 1793 to 1794, was an amateur, one learns. Yet he won a contest for the Capitol's design and was praised by George Washington. Then, in 1923, there was David Lynne, the seventh man on the job and Stewart's immediate predecessor. His qualifications, one reads, were these: "He was well fitted for the task, coming from a distinguished Maryland family long influential in the judicial, business, and social life of the state."

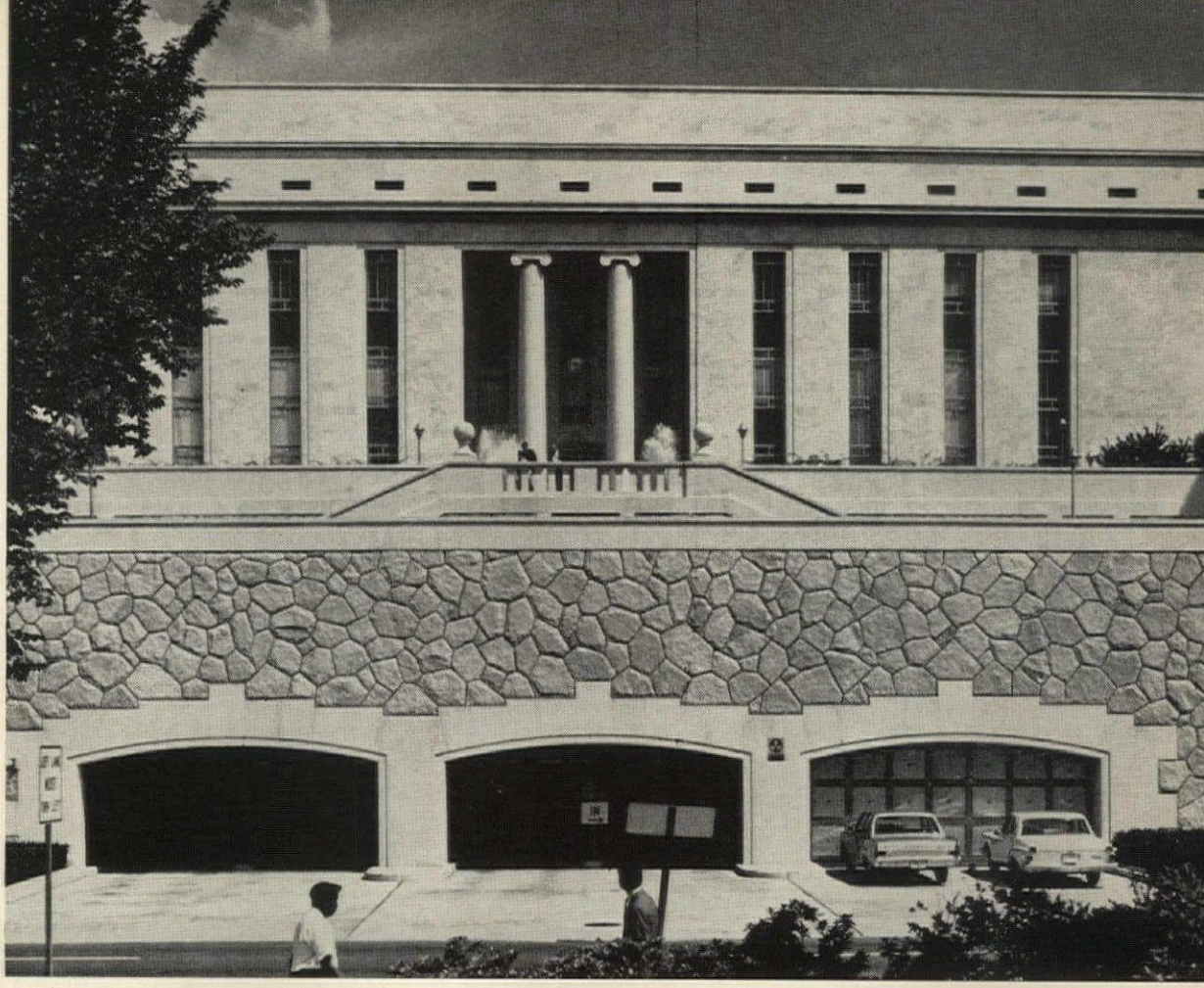
Despite these precedents, however, Stewart's critics persist. The AIA and others have been critical not only of the design and cost of new Congressional buildings, but also of the lack of a master plan for the Hill. "We move from crisis to crisis under present procedures for approval and construction of Capitol Hill buildings," the AIA stated in one report. "The cost of creating an excellent plan would be far less than the amount which will be spent unnecessarily without one."

Rep. Scheuer, himself a builder, has introduced a bill that would authorize Congress to retain consultants to develop a 20-year master plan for the whole 131-acre Capitol Hill; would create a commission on architecture and planning, composed of architects, artists, and preservationists, who would advise on design problems; and would set up a committee to hire architects for future projects. The bill, however, has little chance of passage.

"It's amazing to watch sometimes," said one old hand on the Hill. "Some Congressmen will actually go into fits of rage about this stuff. But that has no effect whatsoever on what happens."

And so it is likely that one day soon, as inevitably and colossally as the R. O. B. rose, the Madison Memorial Library will begin to rise a couple of blocks away. The design has been dubbed a "cake of Ivory soap" by one critic. And one day soon, the shoring will disappear from the Capitol and will probably be replaced by more marble.

By that time, the Rayburn building may face remodeling to accommodate extended staffs. And perhaps the legislators will follow the suggestion of Rep. Wright Patman (Dem., Texas) and order the building of yet another House office building, to be named for Speaker John McCormack. Of course Stewart is likely to be retired by that time, but unless the system of which he is a part is transformed, the next Emperor of the Capitol may build more of the same.



"Two huge blocks of underground garages . . . are now known as Fort Rayburn . . . because of their forbidding military appearance. They cost $13.5 million." Above: entrances to Fort Rayburn; below: west court.
PHOTOGRAPHS: Robert Lautman, except bottom right, page 80, by Fred Ward, Black Star; and photo of Stewart, page 83, by Wide World.

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muse...

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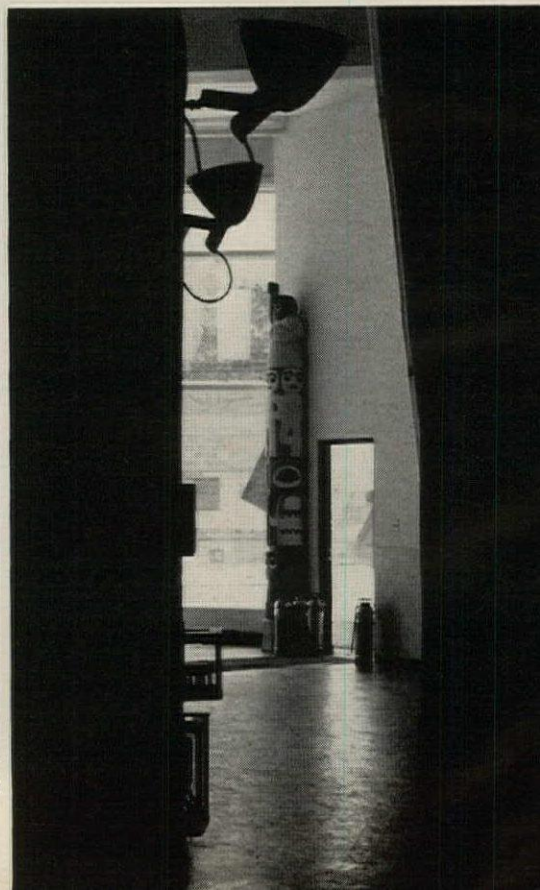

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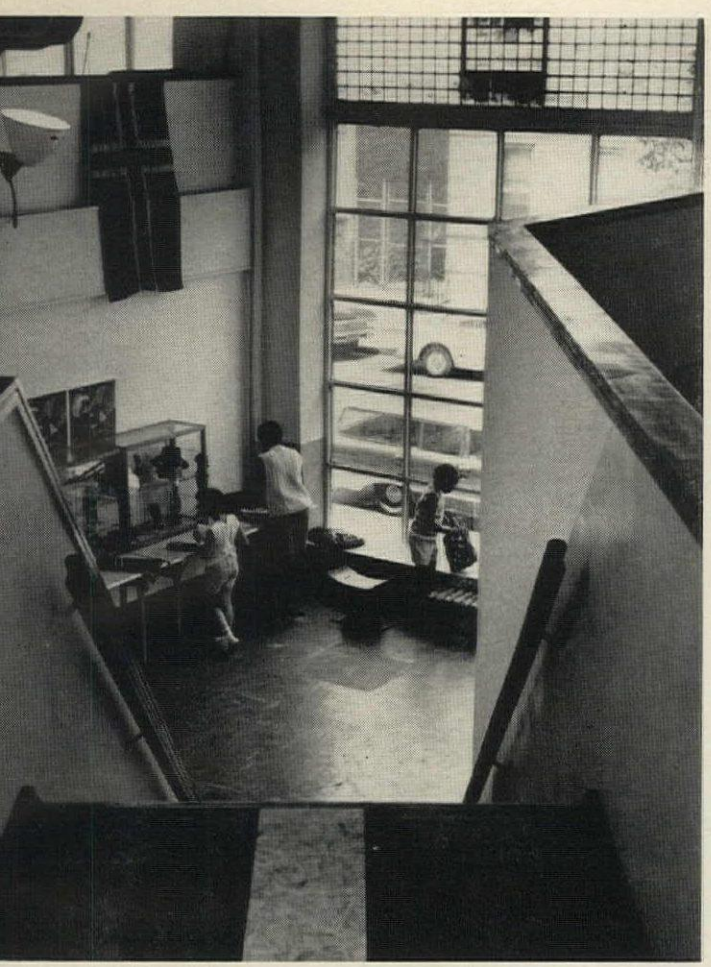

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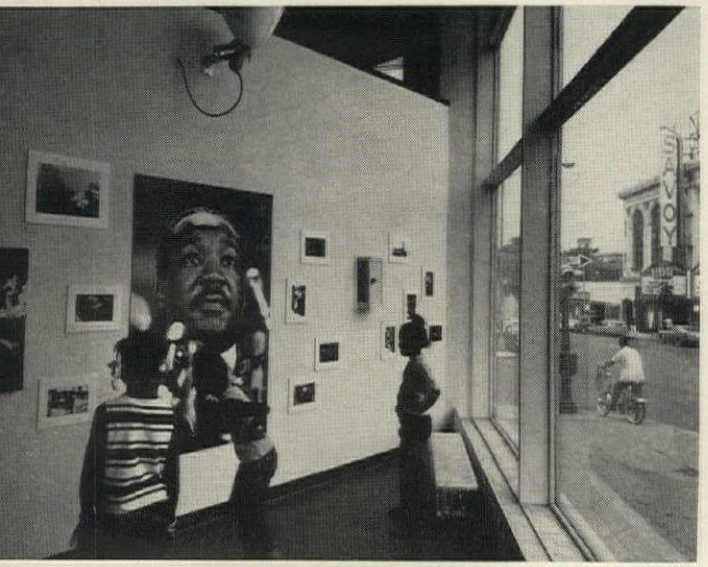

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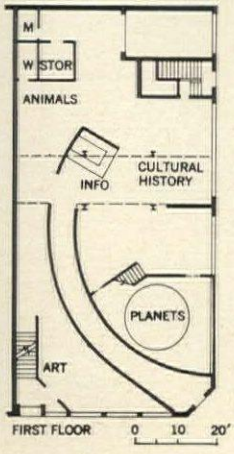
1. One-time poolhall and auto showroom, and now a one-of-its-kind children's museum, MUSE is at the corner of Bedford Avenue and Lincoln Place in Brooklyn. Entry is by a tunnel that opens from the corner. 2. The view back toward Bedford Avenue. 3. Outer wall of the entry tunnel. 4. Inside the tunnel. 5. From the information desk, looking back in the direction of the street, around the convex wall of the tunnel. Totem pole guards a second entrance along Bedford Avenue. 6. Cultural history area viewed from the mezzanine. 7. Art exhibit visible from Bedford Avenue.



The bright yellow letters that write MUSE across the facade of a former automobile showroom and poolhall in Brooklyn's Bedford-Stuyvesant announce more than a change of tenant. In this four-letter word is written a whole new story in rehabilitation, a whole new attitude toward what museums and children are all about, and what architecture has to do with them both.

Designed by Architects Hardy Holzman Pfeiffer Associates to a small budget of $40,000, and built by a local contractor who had never before done such a *large* job, MUSE is a new kind of place; it can be expected to have nationwide impact.

MUSE is, first of all, an attempt to bring an educational and cultural facility of excellence into a depressed area, encouraging the young people to pursue their own interests, develop new ones, and participate actively in setting the program. Each visit involves active participation, too —learning to play a trumpet, going on a safari for geologic specimens, trying on costumes from around the world, and so on. The program is as permissive as it is varied (the children can borrow stuffed animals; they can explore "see and touch" exhibits; they can learn about live animals with the animals themselves). "We are doing all this because no one else is," says Richard Madigan, new 34-year-old director of the Brooklyn Children's Museum, which operates MUSE.

"We're doing what the Smithsonian is doing in Anacostia—going into the neighborhood," says Madigan. "These are the only two in the U.S. But while they have the resources of the Smithsonian to fall back on, we have only private funds (although the Parks Department has picked up our $1,500 a month lease). And our program includes art, poetry, theater, music."

MUSE is also a pilot project to test the feasibility of putting a small neighborhood museum into an abandoned building. Madigan hopes to see 14 more MUSES in Brooklyn—some no larger than storefronts, some only temporary. Madigan sees a series of neighborhood museums as the way to bring costs down, by using modular traveling exhibits, and sharing staff.

Not least, MUSE is an experiment in fast action, and by the statistics, it may be something of a four-minute mile; programming took three weeks; design and working drawings, four weeks; Building Department approval and bidding, three weeks; and construction, six weeks.

Something else in the ghetto

MUSE is all this—and more —to the architects. It is an attempt to involve people, drawing them into the building and into experiences inside.

"We were concerned about how to put something new into an old building," says Malcolm Holzman—how to make a strong addition without overwhelming the original space and details. "We wondered," Hugh Hardy says, "whether we should impose this kind of formal design on people, but from every indication it seems perfectly OK to make something unlike the ghetto. The practice of asking the community what it wants is not really helpful to the architect—except politically, or to clarify the program. The community can only think of what it knows. It can't help the architect in his *architectural* problems."

Architecturally, MUSE is an unusual (even spectacular) experience for children. From Bedford Avenue, the building seems fully open through the glass facade, but the eye cannot penetrate the convexity of wall that curves deep into the building. The curved wall encloses an entry tunnel, which is mysterious and exciting from inside, punctuated regularly by bright fluorescent tubes and irregularly by stuffed animals in removable cases. The tunnel deposits a youngster directly in the middle of the building, dispensing with the dull reception area that usually blocks a museum entrance.

At MUSE's information desk, the view opens outward to the

familiar terrain of Lincoln Place. But it isn't familiar space inside; everything is open, beckoning. To the right is the wing-shaped "skywall" (mirrored on one face, for extra fun) that goes up 40 ft. to the original skylights, making the whole interior completely open yet still unrevealed. To the right, too, poking up through a mezzanine, is the silo-roofed planetarium. Angled spaces are everywhere, as are bright lights and bright colors—a broad band of yellow as a wainscot, a bright orange on the underside of the front stairs or on a beam.

Wallboard is everywhere, too, in great white expanse. Here, perhaps, is the only disagreement in an otherwise exuberant collaboration between client and architect—Holzman wants the fingerprints to show the involvement that the building sustains; Madigan wants the building to keep its sparkle. They agree on almost everything else, including the lack of lavish details. "We really got everything we wanted," says Madigan. "The offices could be quieter, and we could use more storage, but that can always be added."

"The money wasn't a limitation," says Norman Pfeiffer. "It just told us how to do it. We couldn't have improved on this idea with more money."

New name for a new thing

With so little money to spend, it is disturbing to see any of it wasted. Stairs already existed between MUSE and its neighbor along Bedford Avenue (where MUSE occupies space at the second floor), yet a duplicate stair was required. "These projects that are so important now," say the architects, "are just not geared to the way the Building Department operates. They are not bad guys, they are just doing their job in the only way they know how. There are enough loopholes in the code, however, to change the situation simply by changing the attitudes of those who administer it."

To get around the zoning law, the architects filed plans for a "community center." And when Madigan discovered he couldn't have a museum in this building, he changed its name to MUSE. "Museum originally meant the dwelling place of the muses."

After several months in operation MUSE is exceeding all expectations. The children's response is obvious; they are interested and alive with the adventure of learning. "The building sets the tone," says Madigan, "and the programs follow; this is one of the few happy partnerships between museum program and architecture."

The architects, pleased with the response to the building's freshness and its sense of incompleteness, say, "Yes, it *is* incomplete. They will do what they want with it. In the usual museum the exhibits are part of the architect's job, but we can't know the best space for writing poetry or studying rocks. All the labels on the plan are misleading." MUSE's flexibility lies in its variety of spaces, which can be adapted to needs as they arise. MUSE will grow into its building. It is already open 12 hours a day, with evenings set aside for dancing, jam sessions, concerts. Madigan is thinking of setting up an African house, or a tepee, complete with cooking.

Would the architects be sorry if it should prove to be only temporary? "It's their choice, the neighborhood's," they reply. "But if it disappears," says Pfeiffer, "that means its use for those people has also disappeared." When the Brooklyn Dodgers were down the street, there was reason for an auto showroom; now, there is reason for something else.

There are many reasons for this rehabilitation, and many reasons to rejoice in how it was done. The muses were guiding the creators of this MUSE.

—Ellen Perry Berkeley

FACTS AND FIGURES
Bedford-Lincoln Neighborhood Museum (MUSE), 1530 Bedford Avenue Brooklyn, N.Y. (one block from Franklin Avenue subway station). Owner: Brooklyn Children's Museum. Architects: Hardy Holzman Pfeiffer Associates. General contractor. King's Home Service. Building area: 15,000 sq. ft. Construction cost: $33,150.
PHOTOGRAPHS: Roy Berkeley

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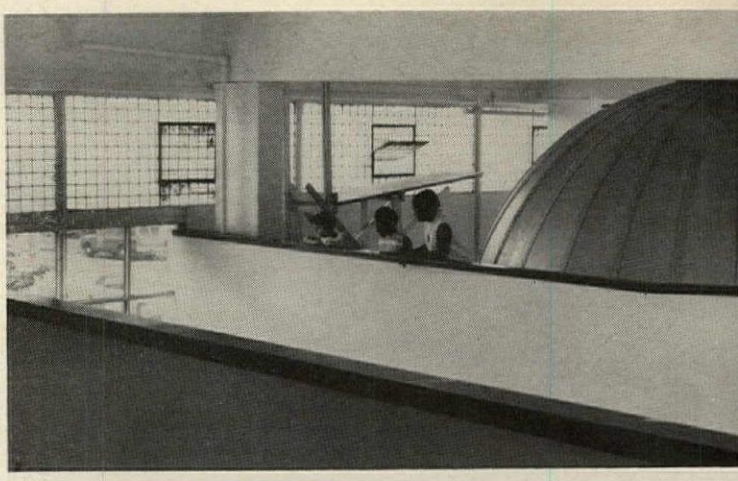

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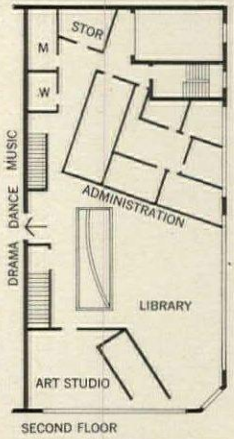

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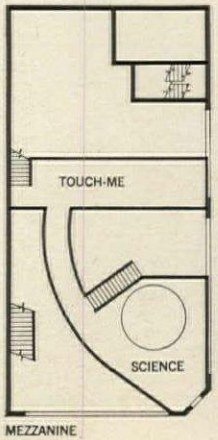

MEZZANINE

8. The silo roof of the planetarium, as seen from the mezzanine bridge. 9. Mezzanine level, on the walkway that follows the curved form of the floor-to-ceiling "skywall." 10. The 40-ft. skywall at its top, where shadows from the existing skylights make changing patterns on the white wallboard. 11. The curved skywall at ground level, as seen from the mezzanine near the planetarium. 12. In the cultural history area, trying on hats from around the world. "Rough finishes and low budget haven't made the slightest difference in what we're trying to do at MUSE," says the director of the Brooklyn Children's Museum. 13. An exhibit in the entry tunnel, in a WPA-built case.

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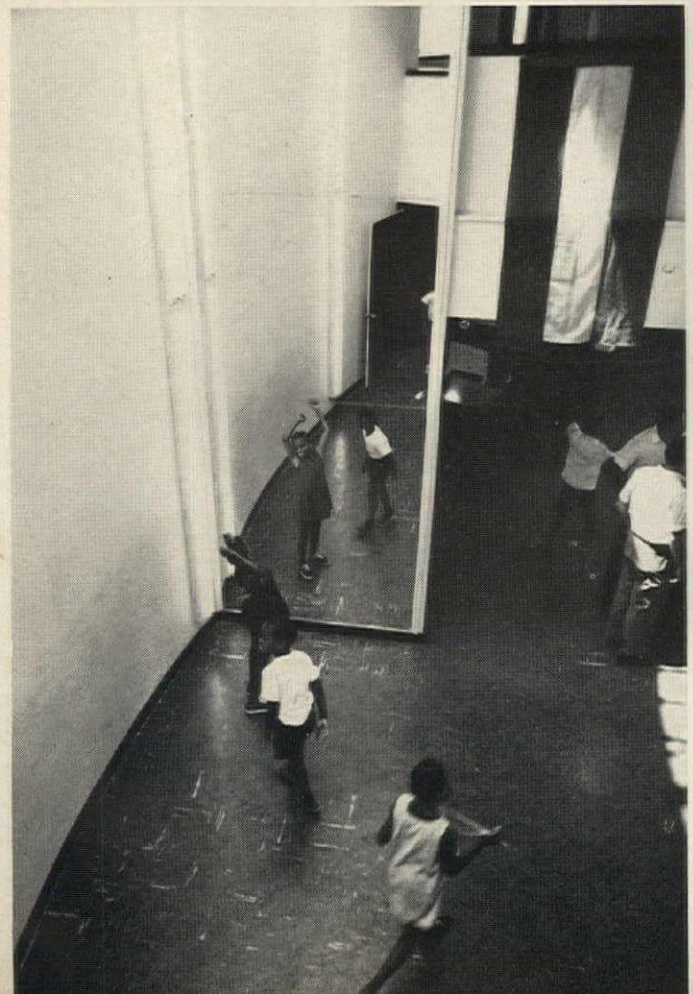

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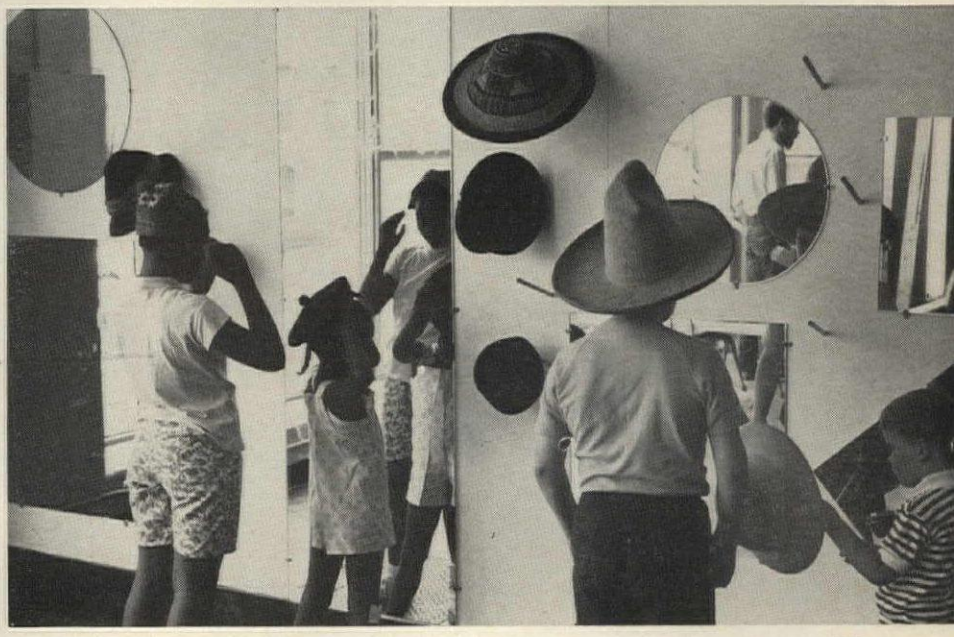

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FORUM CONT'D

means of sandblasting. The areas that were sandblasted turned black (revealing the aggregate); the remaining areas were left as they emerged from the formwork.

This is the nation's second large-

scale al fresco Picasso: the first being, of course, the rusted-steel giant in Chicago's Civic Center (above, and Sept. '67 issue).

HASSLES

A QUESTION OF DETAIL

Mitchell/Giurgola's revised design (below) for the proposed AIA headquarters in Washington, D. C., was released last June and approved by the AIA. The Fine Arts Commission, however, has expressed a final reservation: it does not like the "notch." The notch is a two-story-high, glass-enclosed lobby (detail, right).

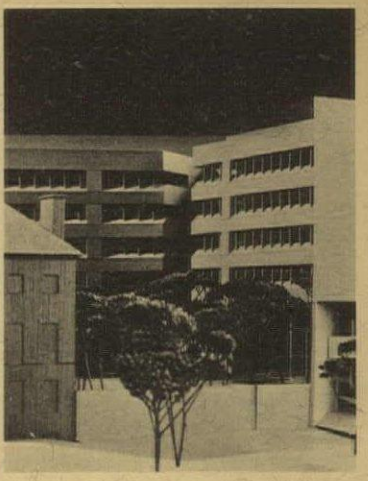
This is the last in a long series of obstacles the architects have encountered since they presented their competition-winning design in 1964: a seven-story brick building with a concave, circular glass facade, which the AIA welcomed as "a unique approach to a difficult and unusual problem."

But the problem—achieving a harmonious relationship between the new building and the small, 18th-century Octagon House that will be preserved on the site—apparently had not been resolved to everyone's satisfaction. Soon after its publication, objections to the scheme were raised by preservationists, among them Secretary of the Interior Stewart L. Udall. And plans to implement the design were temporarily dropped.

About two years later, when it became apparent that the growing profession would require much larger headquarters to accommodate present and future needs, the AIA acquired the adjacent land, occupied by the Lemon Building, and asked the architects to revise their design accordingly.

That revised design doubled the floor space (to about 130,000 sq. ft.) and the cost (to $4 million). Its stepped-out glass facade created a maximum-sized garden.

The AIA enthusiastically hailed the design; the Fine Arts Commission vetoed it. Gordon Bunshaft, spokesman for the commission, declared: "We think that the concept is totally out of scale... the

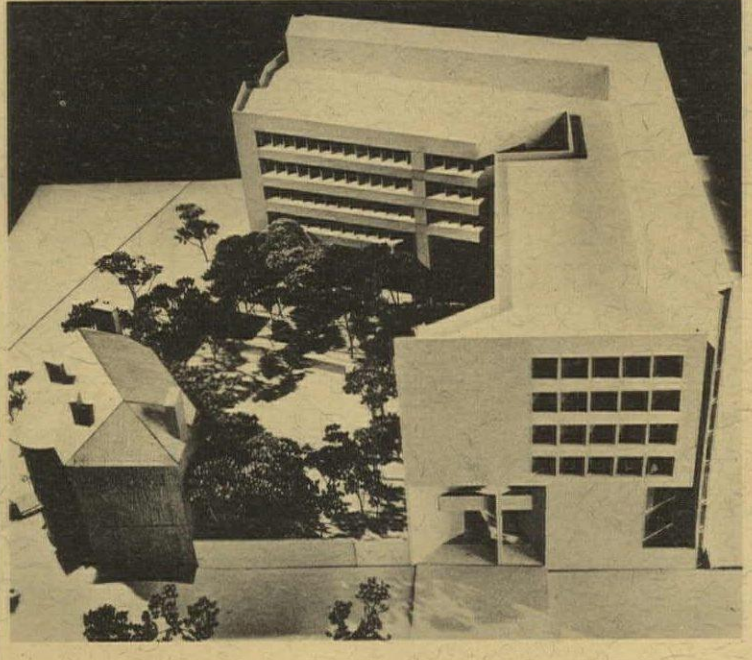


existing building and gardens look like a toy..." Mitchell/Giurgola returned to the drawing boards.

The revised design now under consideration has reduced the height of the building from 90 ft. to 70 ft., and the floor area by about 15 per cent—from 130,000 sq. ft. to roughly 110,000 sq. ft.

The building—two wings set at an obtuse angle—would sit further back on the site, allowing preservation of the Octagon's garden, to which would be added a raised, planted terrace. A horizontal window treatment above the first two floors has replaced the sloping glass facade.

The AIA Board of Directors feels that this last difference between the architects and the commission is a question of detail, which can be satisfactorily resolved—provided, of course, that the architects also feel it is only a question of detail.



FOOTNOTE

POP-UP WREN—The curious assembly of prefab components being completed in the picture at left is one of the most technologically advanced operations of its kind to date: a 60-ft.-tall church spire, prefabricated in four sections out of glass fiber-reinforced plastic. The designer, of course, was Sir Christopher Wren, who worked up the drawings in 1683 A.D. His original maquette, on top of St. James's, Piccadilly, was knocked down during World War II, and this prefab replacement was hoisted into position by crane on June 2, 1968. PHOTO: Keystone Press.

WAYS & MEANS

MEMPHIS MANGLE

Despite a ten-year struggle by conservationists, Overton Park in Mempis will get its freeway.

A six-lane combo of elevated and surface highway will destroy magnificent stands of hickory, oak, and maple trees located in one corner of the park. The highway will then proceed to bisect the rest of the park and drop an access intersection into its center. An elevated crossroad will soar overhead.

The ancient history of the highway follows the classic pattern for the Bureau of Public Roads. Original traffic studies and population predictions were completed between 1950 and 1955. The highway's routing was established in 1957, and the sole public hearing was held in 1961. Details as to de-

sign, size, and time schedules were virtually impossible to get.

In the mid-'60s the project squirmed to life again. At this point, the highway's history becomes far less predictable and peculiarly inconsistent.

In March of 1968, a newly elected city council rejected the park freeway route. Seven weeks later, following a visit by Federal Highway Administrator Lowell K. Bridwell, who was accompanied by ten highway officials and two engineers, the council reversed itself, declaring the park route to be the most "prudent and feasible," thus fulfilling Bridwell's statutory responsibilities.

But what happened at that meeting? Minutes were never made public, but in effect Bridwell promised his classic promise to stricken cities: the best damn highway in the world, which will be landscaped, buried, and cosmetically obscured in a dozen ways, *if* the engineers' route is accepted.

Bridwell is personable, persuasive, and honest. The council bought his promises, and the park prize now goes to the Bureau of Public Roads.

TAKE THAT THING DOWN

With its usual ebullience which so affronts the California Highway Commission, San Francisco has asked for the removal of its infamous Embarcadero Freeway (above), including the unfinished stub which hangs in midair.

There is no reason, claims Mayor Joseph L. Alioto, that San Franciscans, who just approved a $24-million bond issue "to convert Market Street into a Champs Elysées," cannot convince the California Highway Commission "to consider spending a few million to take that thing down and put it underground."

Ridiculous, retorted Alan S. Hart, assistant district state highway engineer. That would cost $60 million, and besides, the Embarcadero Freeway is a showcase.

Replied Alioto: "If that's a showcase, then I don't want any more showcases."

RAISING ITS SIGHTS

New York City's recently announced proposal for a "linear city" through Brooklyn represents a major breakthrough in both highway planning and urban redevelopment.

It will be the first time that the concept of building a community on air rights over an expressway will be implemented. It will be one of the rare occasions, in the U. S., for the design of an expressway to have been subordinated to the needs of a city. And it will be the first time that three federal departments (HUD, DOT, and HEW) have helped plan and finance such a project.

The key factor in making the linear city possible was approval of the proposed Cross-Brooklyn and Queens-Interborough Expressways, as links in the interstate highway system. Of the total of 17 miles of expressways, 14 miles will be built over existing rights-of-way, of little-used railroad lines (photo above). This will eliminate the need for sweeping dislocation of families or businesses. About three miles will be built along a new right-of-way, through a thinly populated area.

These new routes were approved by federal authorities as substitutes for interstate links that had been proposed earlier. The deleted routes would have directed traffic through the center of Manhattan. Under the new plan, traffic between Long Island and points to the south and west would bypass Manhattan by way of the Verrazano Narrows Bridge.

Because the expressway will be part of the interstate system, the federal government will pay 90 per cent of the estimated $400 million cost of the highways.

The Department of Housing and Urban Development will make a $250,000 grant to help plan community facilities. The Department of Health, Education and Welfare will provide $259,000 to study educational needs. Planners will have to consider the following problems:

- One segment of the city will pass through the Bedford-Stuyvesant Model Cities Area and will have to be coordinated with plans for that area.
- Education: Prior commitments made to the Board of Education for an "educational park," which would consolidate public school facilities for an estimated 20,000 pupils in eastern Brooklyn, must be adjusted to more recent community demands for decentralization. The Ford Foundation's Educational Facilities Laboratory will study this question.
- Transportation: The City Planning Commission will apply for a grant from the Metropolitan Transit Authority to study the feasibility of a rapid transit system for the development.

A Linear City Development Corporation will be formed to bring the project into reality. And the Baltimore firm of Rogers, Taliaferro, Kostritsky & Lamb will be responsible for architecture and engineering of the linear city.

TOURISM

NEW YORK PROMENADE

Pneu Michelin has come to the rescue of foreign—and native—tourists to New York City, with an elongated, green paperbound guide familiar to travelers abroad. It is in English, and it has many other virtues:

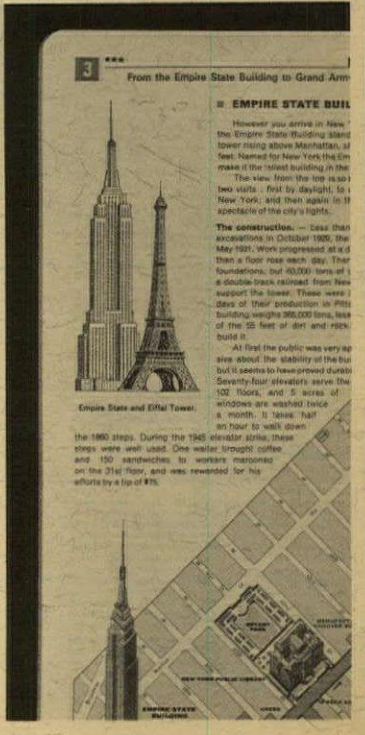
Its many maps and diagrams, and its separate bus and subway maps, are fine and easy to follow.

An introduction to New York architecture is well handled for a brief statement aimed at laymen. The guide makes appropriate suggestions for specific tours and gives a comprehensive coverage of the city's features, rating them according to Michelin's system:

*** Very highly recommended
** Recommended
* Interesting

For the tourist with only two days to see New York, a guided bus tour*** through Manhattan is recommended for the first morning, followed by a boat trip*** around Manhattan Island in the afternoon.

On the second day, the visitor is led at a fast clip from Rockefeller Center*** to the top*** of the Empire State Building (below) to the Financial District*** (in



time for lunch). Then by subway to Grand Central; and on foot to the United Nations***.

The four-day sojourn is far less strenuous, and if the visitor stays longer he can even begin to enjoy himself.

There are, however, a few strange lapses: a whole page is devoted to the Chase Manhattan Bank Building***, with many obscure details, but never a mention of the architects (SOM); the landscaped court, by sculptor Isamu Noguchi, is referred to as "the Japanese water garden", and the sculptor's name is not given. Yet in the passage on the Guggenheim Museum**, Frank Lloyd Wright even gets a brief—though sadly inaccurate—biographical note.

Comments on the New York School of painting are somewhat naive and reflect a definite French bias: in a discussion of Op Art, only Agam, Vasarely, and Schoffer are mentioned—all artists working in Paris!

And why is there no mention of Paley Park, the citys first and finest vest-pocket park containing—surely—a***waterfall?

BIG PLANS

PICCADILLY FUTURAMA

Piccadilly Circus (below), the hub of London, a landmark to the world at large, will be the city's most way-out piazza by 1980, if

the Greater London Council has its way.

The GLC has proposed replacing the traffic-clogged circus with a two-level, elevated pedestrian deck slightly larger than the present circus—leaving the ground level for cars and buses. Arrayed around the deck would be four major new structures:

A slim, 435-ft.-tall glass office tower (right in photo at top); a pyramid-shaped London Pavilion;

either an office or hotel in the shape of a square donut (all designed by Architect Dennis Lennon); and a 500-room hotel in the form of an inverted pyramid (designed by Fitzroy Robinson and Sidney Kaye). Alfred Gilbert's fountain-statue of Eros would be elevated to a central position atop the new deck.

The proposal is the result of two studies: one made by the Ministry of Housing; the other, an earlier one, by Lord Holford and Ove Arup. The final plan was coordinated and developed by City Architect Frank West.

This is the latest of many such schemes, but the first to attempt a comprehensive plan for the whole circus, with the cooperation of landowners and developers. In addition, it would tie in with these other redevelopment schemes:

- An upper-level, glass-enclosed shopping arcade (lower portion of photo) by Sir Hugh Wilson and Lewis Womersley, replacing the Quadrant, an ensemble of Edwardian structures which line the Piccadilly section of Regent Street;
- A multilevel traffic and circulation system for the adjoining area;
- And a long-range plan for the redevelopment of the entire West End of London.

The Royal Fine Arts Commission (whose opinion was sought by the GLC) and the general public have taken a dim view of the scheme, objecting particularly to the height of the tower and the scale of the other buildings. "The views of the commission are just one of the many considerations the GLC will take into account before it arrives at a final decision on the Piccadilly scheme," said a GLC spokesman.

STRATEGY

FAMILIES THAT ARM TOGETHER

A campaign of reason has been launched by a group of business and professional men against the alarming arms-buying spree of Detroit's citizens (April issue).

Ads running in Detroit's newspapers, radio, and television networks warn of the dangers of inflammatory rumors and loaded guns. The images are deliberately grotesque (example below), the messages to the point. A short story beneath each caption depicts the sordid possibilities when

suburban homes are filled with lethal weapons.

Responsible for the saturation ad campaign is an organization called MUST (Men United for Sane Thought), which was formed last January.

PROGRESS

ALPHABET SOUP

For anybody wishing to master the intricacies and subtleties of current affairs in cities, architecture, urban design, and related matters, it is essential first to master a steadily growing glossary of acronyms.

Among the more mystifying, selected in fairly arbitrary fashion are: AASHO, American Association of State Highway Officials; ARCH, Architects Renewal Committee in Harlem; BART, Bay Area Rapid Transit (District); BPR, Bureau of Public Roads; EJC, Engineers Joint Council; FAIR, Fair Access to Insurance Requirements; FHLBB, Federal Home Loan Bank Board; FSLIC, Federal Savings and Loan Insurance Corp.; FNMA, Federal National Mortgage Association (Fanny May); GNMA, Government National Mortgage Association (Ginny May)—just recently established; IBEW, International Brotherhood of Electrical Workers; ICBO, International Conference of Building Officials; IDCA, International Design Conference in Aspen; IEEE, Institute of Electrical and Electronics Engineers; MARTA, Metropolitan Atlanta Rapid Transit Authority; MOBIDIC, Mobile Digital Computer, a branch of the National Bureau of Operations; NAHRO, National Association of Housing and Redevelopment Officials; NAREB, National Association of Real Estate Boards; NCPC, National Capital Planning Commission; NCPFB, National Clean-up Paint-up Fix-up Bureau; NFAH, National Foundation on the Arts and Humanities; NIDC, National Insurance Developers Corp. (as yet only proposed); NLC, National League of Cities; NSPE, National Society of Professional Engineers; PEO, Planners for Equal Opportunity; PFLP, Public Facility Loan Program; SAFO, Self Adhesive Foreign Object pad, a branch of the Royal Aircraft Establishment in Farnborough, England, which is researching means of trapping the debris of nuts, bolts, washers, etc. and bits of personal property which fall under the floors of airplanes before they drift into posi-

tions endangering the control systems; SEPTA, Southeastern Pennsylvania Transportation Authority; SMSA, Standard Metropolitan Statistical Area; UIA, Union Internationale des Architects; WSSC, Washington Suburban Sanitary Commission; WPCI, Workable Program for Community Improvement. Any questions?

YOU KNOW I CAN'T HEAR YOU . . .

If the proposals of HUD Assistant Secretary Charles M. Haar ever see the light of legislation, the nation's airlines would have to lease air noise rights from neighboring property owners for specific periods of time, as well as pay residents for personal and property damages. Limited periods of time for leases, Haar feels, would make it easier to keep track of daily changes in number of flights and noise levels. Thus leasing rates and damage awards could be determined more accurately.

For Haar, a lawyer, the proposal is primarily a method for getting the airlines to face up to their liability, but the implication is that the cash outlay would induce them to undertake more noise elimination research.

GIFTS

POPE NOW, PEI LATER

The National Gallery in Washington, John Russell Pope's Beaux-Arts temple, has become too small to house the fabulous Mellon art collection and the expanding functions of a contemporary museum. An addition to the museum must be built—and the architect picked to do the job is I. M. Pei.

The new building will stand on a five-acre site east of the Gallery, between Fourth and Third Streets, at the junction of Washington's two major axes, Pennsylvania Avenue and the Mall (left). It will accommodate a study center, exhibition facilities, offices, and the museum's extension service.

Mr. Paul Mellon and Mrs. Ailsa Mellon Bruce have donated $20 million for the cost of construction, staff, and operations; Congress authorized the construction in July; and the scheme for the new museum will be in accordance with the long-range redevelopment plans for the Avenue.

PEOPLE

DEATHS

• Louise Myers Shields died in New York on July 28. Best known among FORUM readers as the widow of the magazine's great erstwhile editor and publisher, Howard Myers, Louise married Dr. Nelson T. Shields some years after Howard Myers' death in 1947. During the 21 years since then and even before, Louise was closely associated with Knoll Associates and with Knoll International Ltd.—first as head of the estimating department, and more recently as secretary of the corporation.

• René d'Harnoncourt, who directed the Museum of Modern Art for 19 remarkably creative years, was struck by a car and killed on August 13. He was 67 years old. (He is pictured above, at left, with Governor Rockefeller.)

Mr. d'Harnoncourt became MOMA's director in 1949, and quickly gained an international reputation for his exhibition showmanship, his ability to attract new trustees and donors, and his zeal for promoting new memberships, which rose from 8,500 to 36,000 during his term.

"I participated in the development of a phenomenal institution," he once said. But others who knew and worked with him credit him with more than just participation. As one MOMA colleague has noted, he was "the moving spirit" in the museum's spectacular development.

Mr. d'Harnoncourt retired from MOMA on June 30, intending to write several books, continue his association with MOMA as an honorary trustee, and carry out his duties as a member of the National Council of the Arts and vice president of the Museum of Primitive Art. His first book, a treatise on museum installation, was unfinished when he was struck down last month while walking along a road near his summer place on Long Island.

• Louis Justement, architect and senior partner of Justement & Callmer, died in Washington, D.C., on July 26, at the age of 76. He helped draft the original plans for the redevelopment of Southwest Washington, and played a significant part in planning the redevelopment of Pennsylvania Avenue.

• Eugene J. Mackey Jr., architect, died on July 28 in St. Louis, at the age of 56. His firm, Murphy & Mackey, received the 1961 R. S. Reynolds Memorial Award for distinguished achievement in architecture. The award was given for the design of the Climatron, an aluminum and glass geodesic-domed greenhouse in St. Louis' Shaw's Garden.

• Erwin A. Gutkind, architect and urban planner, died on August 7 in Philadelphia, at the age of 72. Last March, Dr. Gutkind had received the annual Art Prize from the City of Berlin (May issue) for his contributions in the field of architecture and city planning.

For the past 12 years, he had been preparing a ten-volume study entitled *International History of City Development*, one of the major contributions to the history of urban design. Three of the volumes have appeared; two others are awaiting publication. His daughter, Gabriele Gutkind, collaborator on the international history, is preparing three further volumes.

Dr. Gutkind left Germany for England in 1933, and came to the U. S. in 1956. He was a Fellow of the Royal Geographic Society; a member of Great Britain's Town Planning Institute; a member of CIAM; and, at the time of his death, a Senior Fellow of the Institute of Environmental Studies at the University of Pennsylvania.

PHOTOGRAPHS: Page 33, © 1968, Herblock in The Washington Post. *Page 34, Louis Checkman. Page 35, rendering by Bruno Junker (top); Arteaga Photos, (bottom). Page 36, George Cserna. Page 91, Time, Inc. (top); William Watkins (bottom and right). Page 92, Rondal Partridge (left). Page 93, The British Travel Association (left); Tom Law (top). Page 94, George Cserna (center).*

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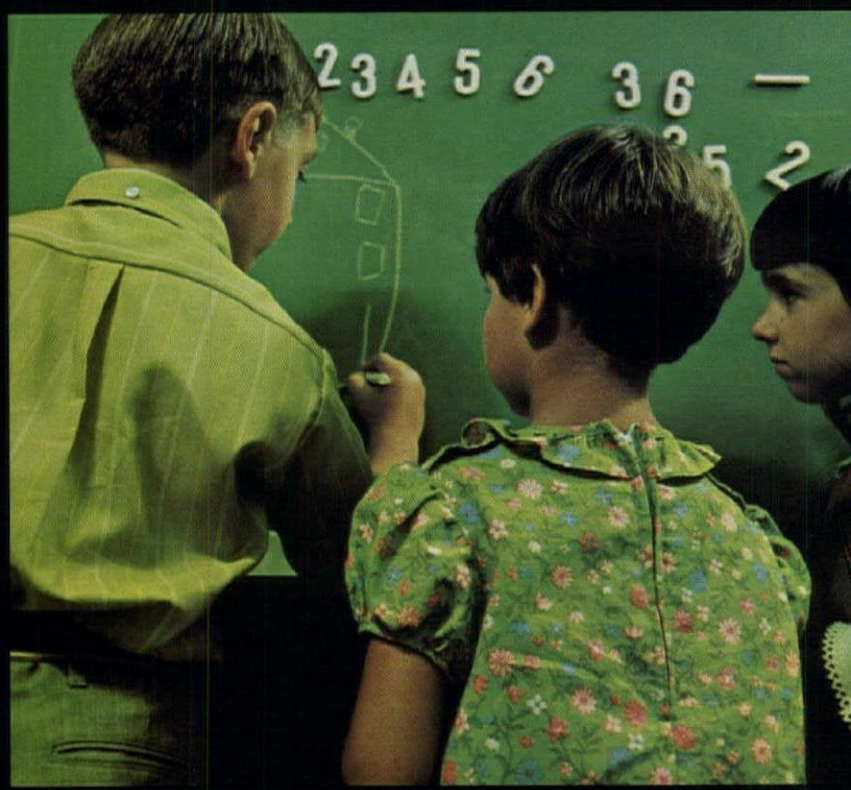

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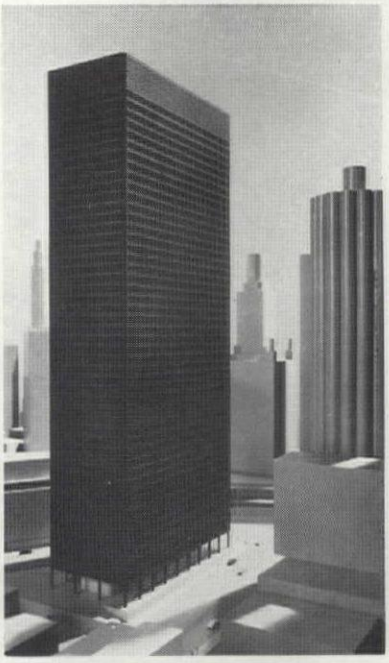
PREVIEW

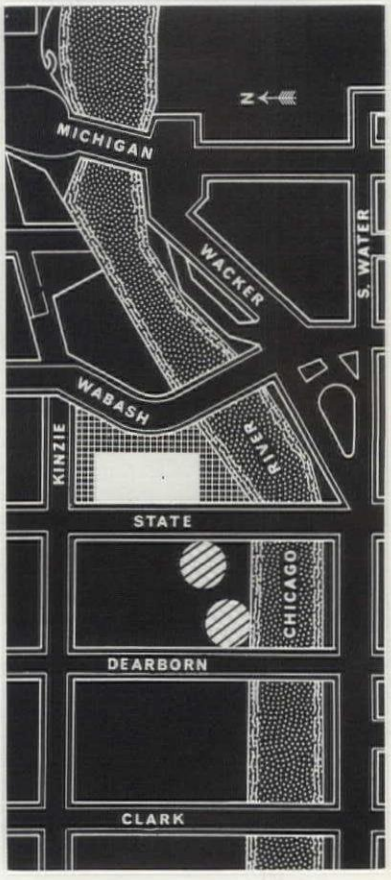
THINK MIES

Architect-client marriages are rarely made in heaven, but when the International Business Machines Corp. has Ludwig Mies van der Rohe design its new Chicago headquarters, special congratulations are in order.

Together with C. F. Murphy Associates (also of Chicago), Mies was asked to design an office tower for a 1.6-acre site on the north bank of the Chicago River, just to the east of Bertrand Goldberg's Marina Towers (April '65 issue). The building's 51 stories are raised on columns that stand free around a glass-enclosed lobby; 46 floors will house offices, the remainder mechanical equipment. Construction is to begin this fall, with occupancy scheduled for Spring, 1971. Initially, IBM, with 4,500 employees in Chicago, will occupy about 50 per cent of the building.

Much like the most famous of its predecessors, the Seagram building in New York, the tower will be rectangular, steel-framed, and have bronze-tinted windows. Measuring 125 ft. by 275 ft. in plan, it will occupy only one half of the site; the remainder will be a plaza. In addition to the usual banks of elevators, escalators will link the plaza level and a second-floor cafeteria. The floors above are composed of 30 ft. by 40 ft. unobstructed bays, further divided into 5-ft. modules.





(continued on page 99)

This library is "painting" itself

Owner: Board of Trustees, Milwaukee Public Library System. Architects: Burroughs & Van Lanen, Milwaukee, Wisconsin.

Here's another one for the books: a library whose exposed steelwork will require no paint and negligible maintenance. The building is the Forest Home Library in Milwaukee, and the steel is bare USS Cor-Ten High-Strength Low-Alloy Steel. Bare Cor-Ten Steel "paints" itself with an attractive oxide coating as it weathers. The dense, tight coating virtually eliminates further atmospheric corrosion. If the coating is scratched or marred, it heals itself.

Burroughs & Van Lanen Architects, Inc., selected bare Cor-Ten Steel to reflect the building's functional practicality. The exposed structural shapes express an honesty of function that invites users in, unlike the forbidding monumentality of much library design.

Bare USS Cor-Ten Steel is a natural for economical good looks as well as for structural use. Members can be lighter, more graceful, because Cor-Ten Steel is about 40% stronger than structural carbon steel. It is available in a full range of structural shapes, plates, bars, and sheets. For full information on its use in architecture, contact a USS Construction Marketing Representative through our nearest sales office, or write U. S. Steel, P. O. Box 86 (USS 5485), Pittsburgh, Pa. 15230 for our booklet.

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USS Cor-Ten Steel

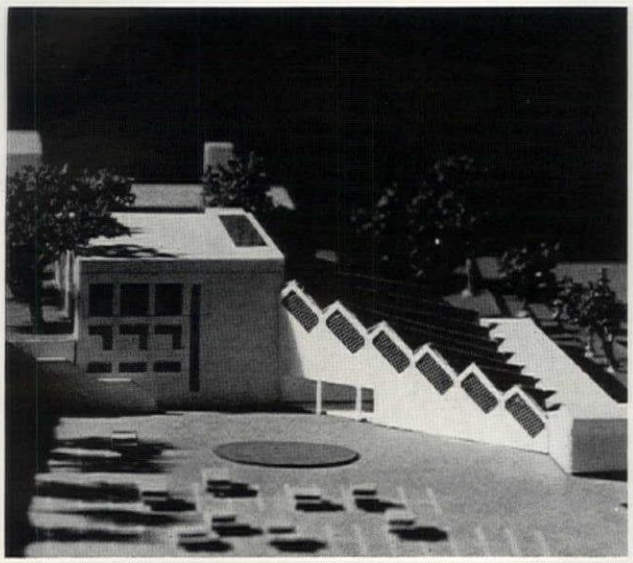
PREVIEW

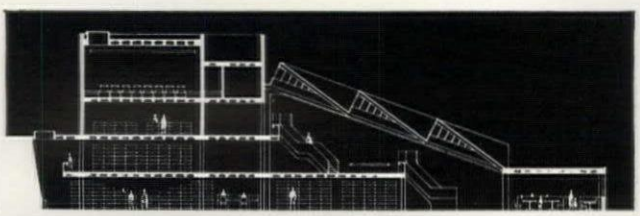
INNER-ORIENTED LIBRARY

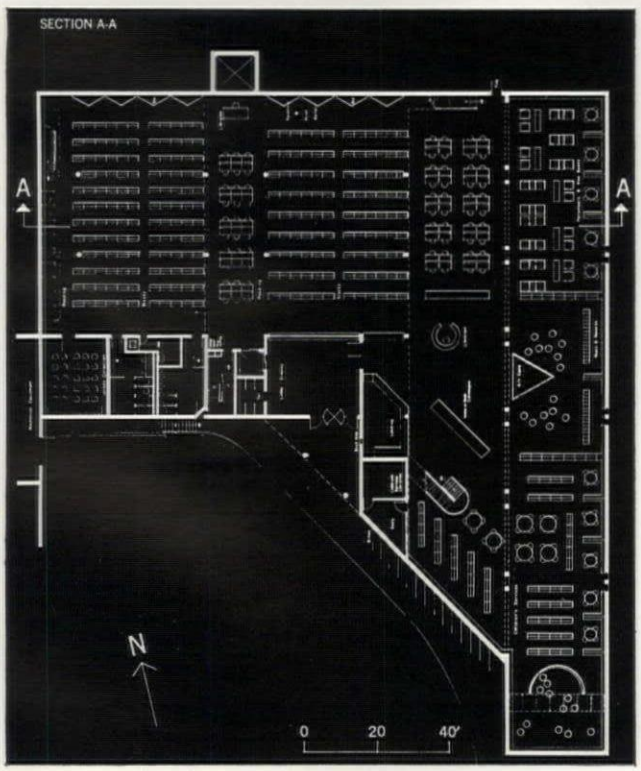
In planning a library for the "municipal green" of Teaneck, N. J., the young New York firm of Prentice & Chan was faced with an unusually difficult site. The steeply sloping property is bordered on one side by heavily trafficked Teaneck Road. The necessary excavation will place part of the building (mainly stack space) below grade. In addition, an existing parking lot to the south had to be enlarged. Because of these factors an introverted building, with a minimum of window space, evolved. Light is brought in through north-oriented skylights in long-span trusses over the main reading areas.

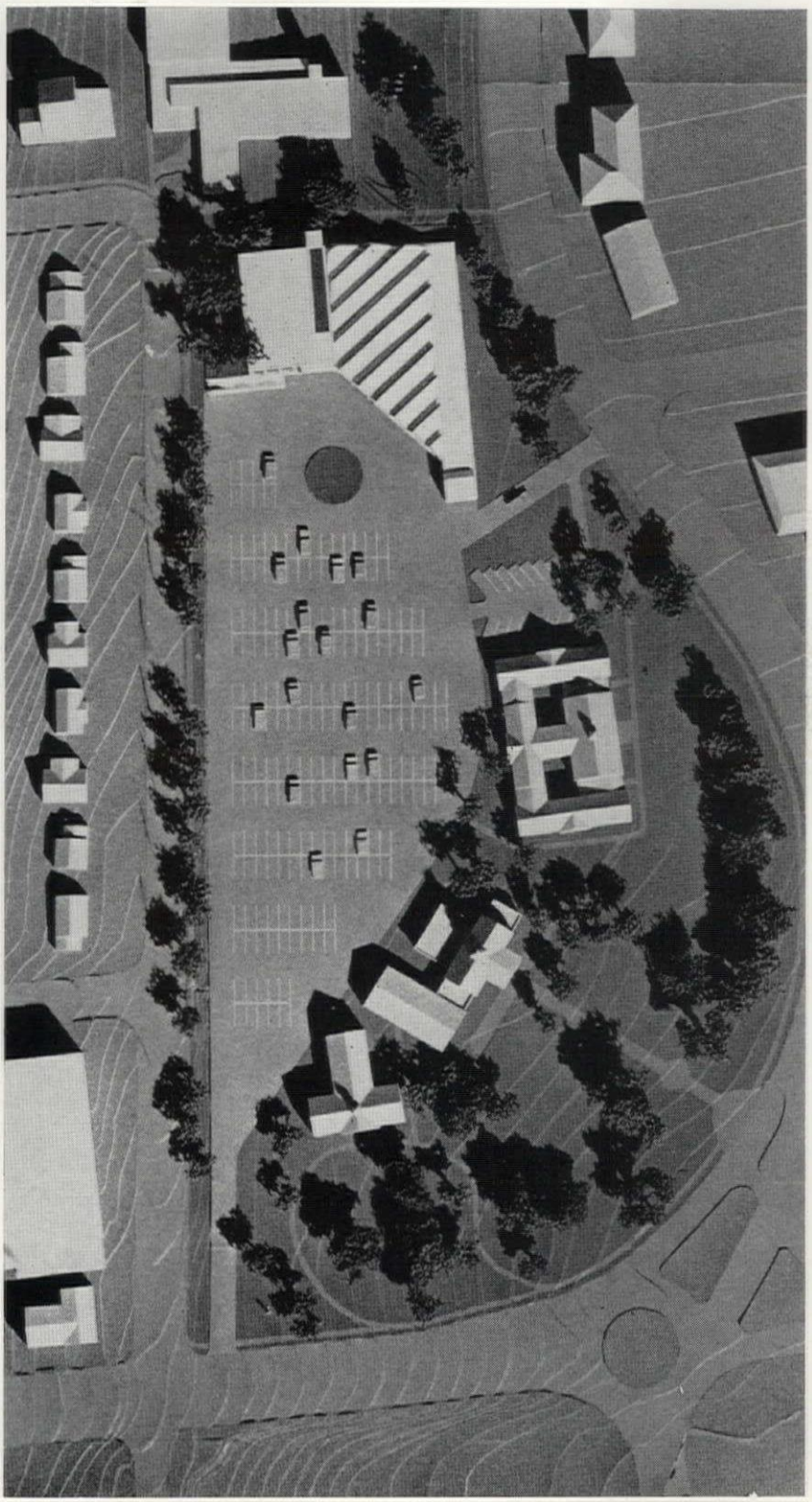
The 41,000 ft. of interior space are divided among four floors, with the first (and most used, especially by the youngest readers) being the largest. The second floor overlooks this one, and is in turn topped by an administrative floor (with windows on to the skylighted area) and one devoted to a library program center. The first and second floors, besides open stack space, contain a number of reading areas, differentiated for various age groups via ceiling heights and furniture.

No attempt was made to make the building blend in with other municipal buildings to the south, the style of which Prentice describes as "uptight colonial."

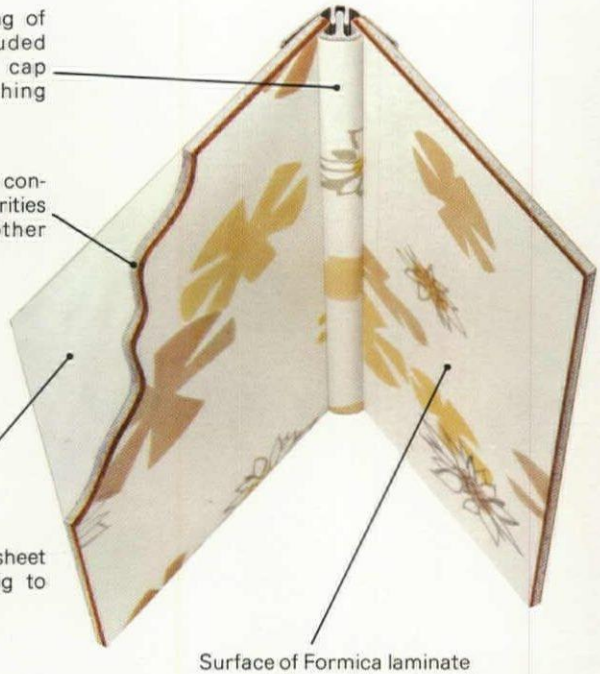








New moisture



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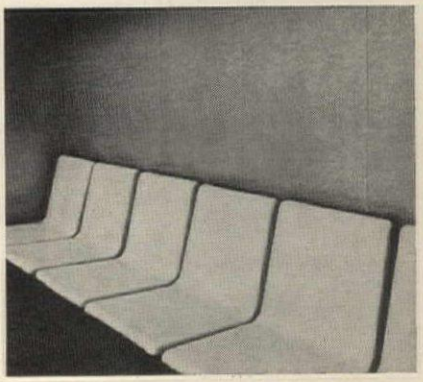

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3. Exclusive 4-D 6000 line Auto-Slide® automatic door operators. 6-pg folder offers specs and use info. The Stanley Works Door Operating Equipment. Request **F-3.**

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L. LIGHTING: SYSTEMS

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N. METALS IN BUILDINGS

1. Pattern chart, file-size with complete info on availability, sizes of Rigid-tex® Duo-tex® Frostone®. Rigidized Metals Corp. Request **N-1.**

P. OPERABLE WALLS

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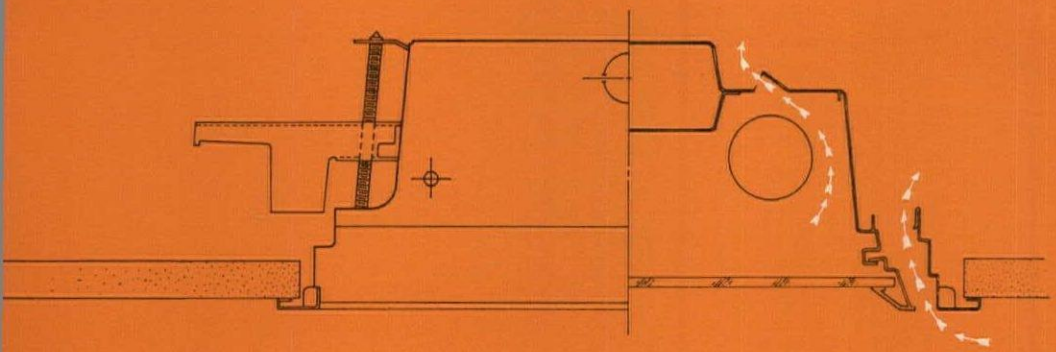

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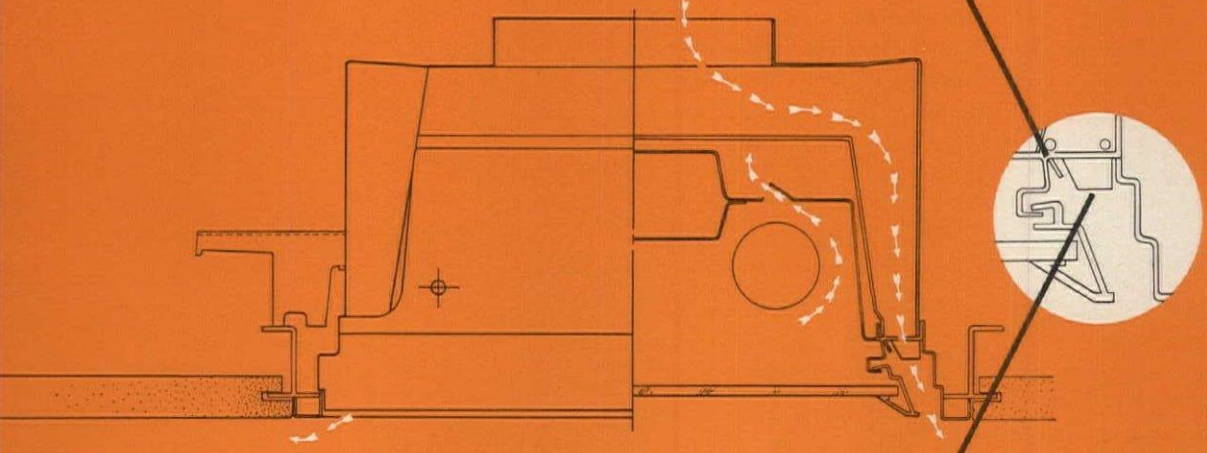

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