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URBAN AMERICA INC., including its National Action Council, is a nationwide non-profit educational organization combining the programs and resources of two national organizations with the common goal of improving cities—Urban America (formerly American Planning and Clvic Association) and the ACTION Council for Better Cities.

LETTERS 11 FORUM 35 A monthly review of events and ideas. LOUIS KAHN IN INDIA 39 The brooding brick forms of the Institute of Management at Ahmedabad comprise his largest work to date. STRATEGIC PLAN 48 A set of sound yet sweeping proposals for the tangled tip of Manhattan. THE BELLS OF DIXWELL 54 New Haven shows how urban renewal, applied with human concern, transforms a ghetto. By Mary Hommann. THE SOUTHWEST 60 Washington's giant, pioneering renewal project, three-fourths complete, as viewed by Percy Johnson-Marshall. LIFE FOR A MALL 68 A dead three-acre space in a New York housing project is made into an imaginative "mosaic" of active recreation. CONCRETE CASCADE Focal point of a Portland, Oregon, renewal project is an artful, but very real, waterfall. By Donlyn Lyndon. FOCUS 80 A monthly review of notable buildings. SNAIL HOUSE 84 A guesthouse in the Berkshires is made of curling connected spaces. BOOKS 88

Richard Neutra writes of Adolf Loos.

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SYSTEM BUILDING

A British laboratory complex combines structure and services in a way that could have wide applicability.

PREVIEW

A sampling of projected buildings.



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That long-time, constantly recurring, subject of ours, the urban environment, gets steadily more editorial and oratorical attention. First Look, then Scientific American, then Life, then Esquire, then Saturday Review and now Progressive Architecture and, we are promised, the Architectural Record: where will it all end?

It will end, we hope, in better cities, brought about by more widespread public and professional concern about matters that, not long ago, occupied the attention of a relative few. We welcome every word.

Our role, as the editors see it, is not to join in the generalized problem stating, but to dig out and examine the still all-too-rare instances in which the problems are being solved—or botched, as the case may be. Month after month, our editorial attention is focused where the action is, in the cities. This month, for instance, the editors find it in Manhattan, New Haven, Washington, D.C., and Portland, Oregon.

* * *

Things are happening fast at Urban America Inc., publisher of the FORUM, which has grown from an idea into a fully functioning organization in less than two years. The most recent developments have been the appointment of William L. Slayton as executive vice president (replacing Jim Lash, who resigned the post) and announcement of a move in headquarters to 1717 Massachusetts Ave. N. W. in Washington.

Bill Slayton, the former Federal urban renewal commissioner, is a name familiar to the FORUM's pages, and a man as well qualified as anyone we can think of to lead an organization whose preoccupation, like ours, is the urban environment. L.W.M. The city that takes shape in your imagination today, can be real, beautiful, alive tomorrow.

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Architects: Victor Hornbein and Edward D. White, Jr., Denver, Colo.

LETTERS

DISENCHANTING BART

Forum: I think James Bailey did a splendid job of diagnosing the faults of the Bay Area Rapid Transit system [June issue]. We will have some trains running in the Bay Area, and I trust they will be fast and comfortable, but much else that we had expected when we decided to invest a billion dollars in what was promised as the world's finest transit system will not be realized.

I differ with Mr. Bailey on only one point. He concluded that while the architects working for the system are disappointed, the engineers are not. There is, I found, as much discontentment among BART's engineers as there is among the architects. Only the public relations department and the administrators seem truly pleased.

There are basic engineering faults in the system. Perhaps the most severe is that poor track layout in Oakland makes it impossible for BART to send most Berkeley trains to San Francisco. Instead, BART's own timetables show two Berkeley trains out of three are to go to Hayward, a community south of Oakland. And if Hayward is unfamiliar to many readers of the Forum, I must add regretfully that it is almost equally unfamiliar to the average resident of Berkeley.

I spent six months studying BART on assignment from the San Francisco Chronicle, and it was my series that your Publisher's Note quoted architects as calling "on the whole factual but . . . negative." I started my assignment with great enthusiasm for everything about the system except its outrageous plan of running elevated lines down the middle of city streets in Berkeley and Oakland. . . . By the end of six months I came to the conclusion that much of the control of the system had gone into the hands of mediocrities and, occasionally, incompetents. There is hope that some of the damage can be repaired now that David G. Hammond has been appointed director of development and operations. But the basic decisions were made, unfortunately, in the days when Keneth M. Hoover joined the system as chief engineer. His title was changed when it was pointed out in a court

hearing that he was not and never had been a licensed engineer.

I hope other cities have not been discouraged by San Francisco's example. The city's disappointment in Candlestick Park did not prevent other communities from building better stadiums, and we have the sins of the Embarcadero Freeway, the Civic Center Plaza and our new underground garages to live with. Rapid transit is necessary, but as the unnamed architect quoted by Mr. Bailey declared, "I would get the best man in the world."

San Francisco Chronicle MICHAEL HARRIS Staff Writer

Forum: The excellent story on BART has much significance for the City of Richmond and its citizens still struggling with the Rapid Transit District relative to the design of its facilities here.

Many persons—in and out of city government—have been frustrated and nonplused by the plans being produced by BART for our local facilities. This is why the City employed the firm of Okamoto and Liskamm to prepare the urban design study of the Richmond station. Your story strips away the mystery and helps to make the situation comprehendible.

Richmond, Calif. ERNEST W. HENDERSON Planning Director

RETURN OF THE MAYANS

Forum: In view of all the smoke and shrapnel that has been blown about Cambridge by the Inner Belt affair [May issue], I thought your evaluation and presentation were balanced, perceptive, and eminently readable. I also liked the context of the increasing attention being given nationally to the need for and location of urban expressways.

With an admittedly unprofessional eye, I also looked at the piece on "The New Campus" (hadn't the Mayans done all this a millenium ago?). It seems to me that the worst excesses of the Gothic are being resurrected in a new guise. Perhaps this provides the appropriate setting for the new priesthood of beards, hallucinogens, and denunciatory placards. Makes one brood somberly on that old cliche of the Forum (Caesar's, not yours), omnia mutantur, nos et mutamur in illis; I'm resigned to the first thought, but numbed at its implications for the second. NELSON C. LEES Cambridge, Mass.

(continued on page 12)





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HAUSERMAN



(continued from page 11)

INTERRUPTED STROLL

Forum: One year, to the day, prior to receiving the May Forum, I was strolling along Via Campania when I came upon a rather simple glass facade—until I looked upward.

Not being the camera-carrying type, *viaggiatore* my first reaction was, "Nobody will believe me." How in the world was Mr. Wright able to get all that on top of the little glass box from Fannin Street in Houston?

Giving it the opportunity every building is entitled to before judgment, I carefully examined it and found that, in spite of its almost grotesque urge to speak, it is a very pleasant place in which to work, relax and enjoy life.

St. Louis HARI VAN HOEFEN Architect

TEAMWORK

Forum: As the landscape architect in the design team involved in the development of Scarborough College [May issue] from its inception, I cannot but regret that no mention was made of its significant contribution to the planning of large-scale projects.

The development of the master plan was the work of a team and involved the integration of architecture, landscape architecture, and planning to produce a comprehensive and unified design concept. The planning study analyzed the interaction between the college and the surrounding community, problems of transportation, roads, services and related factors. The landscape analysis included a detailed survey of the site, including topography, drainage, soils, ecology and climate. From these studies, a diagrammatic land-use plan was developed which largely determined the use to which various parts of the site should be put, including such facilities as parking areas, athletic facilities, research areas for the natural sciences and so on. The subsequent detailed development of the concept again became the responsibility of the group; the architect in the development of the concept of the buildings and the landscape architect in the development of the site....

It is my firm belief that major projects such as Scarborough College cannot be the work of one individual, but of a professional team, each contributing to ultimate solution. The significa of this development is that a collaboration was made poss and its success as a planning of cept was the close integration teaching philosophy, build and site.

> MICHAEL HO Landscape Arci

ARCHITECTURE AND PEOPLE

Toronto

Forum: . . . To support the p tion taken by George Nemery his letter in the May issue: I have found city planning measurably complicated by the parent failure of the architect profession to enunciate a com hensible statement (verbally visually) as to what architect is supposed to do for the pertual sensibilities of people.

ROBERT K. MIDDLE Supervisor of Planni University City, Mo.

ON COMPETITIONS

Forum: Having been a for staff member of ACTION, a dra man of Baltimore's regional p ning legislation and an urban developer, I have had an alm unique opportunity to look at design competition concept as plied to urban renewal [May sue]. As a believer in cities and one who urgently seeks ur beauty, I am sad to hold the o ion that design competitions not work, if the resultant st ture is to be economically via

The architect who gives ser thought to a project's economic rare enough. Put him in a c petition and, in order to win must ignore the economics. A if, lo and behold, he does cons the economics, the judges we (And I ignore, in this argum the excessive cost borne by losers, which must be cranked rent scales.)

There have been valiant eff at "limited" design competiti but these, too, have failed. finished structure rarely reff the limited submission. And does, this is largely luck, for t is no such assurance.

I do not doubt that design c petitions have resulted in g institutional buildings, city h churches, etc. But the build that can be justified by rent sc do not come out of design cor tition.

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(continued from page 12)

INSIDE THE BUBBLE

Forum: How unfortunate for America and for architecture that, the Cambride Seven are so insensitive to the nature, beauty and botential of Buckminster Fuller's dome for Expo '67 [June issue]. The dome may indeed be "designed to act like the skin of some sort of animal," but the whole is rather like a four-barreled carburetor stuffed down the throat of a jellyfish. Come, come gentlemen, we can do better than this. DAVID L. HAWKINS Detroit Designer

T HAD TO GO

Forum: In your May issue you pictured the end of the Fresno County Courthouse Dome, "So Much For Beauty". The inference here is obvious.

Rather than expressing contempt for the destruction of the Courtnouse (with which destruction we the architectural profession in the area] agreed) I think credit for the saving of Courthouse Park should be extended. This has been a long fight with certain lost rounds (Jail and Hall of Records), and it is continuing today. We, he architects, can count on a great deal of support in this effort in our community today that was not there in the past. Your cut is of no aid in this.

Editorial care must be taken in these matters so as not to dilute our efforts or alienate our support. RICHARD R. MOORE Fresno, Calif.

AST AND WEST

Forum: Your Footnote on page 7 [June issue] is very interestng. I would like to know on what base you can call that fake pajoda telephone booth "one of the nore thoughtful contributions to he gracious street furniture." Folumbus, Ohio CHUENG CHU

Forum: It is hard to understand what point you are trying to nake in the Footnote about Chaham Towers. Is your tongue in 'our cheek when you describe hose ludicrous telephone booth 'agodas as "gracious"? Surely you nust be kidding—and surely you re kidding when you imply that here is no "continuity" (in quoation marks for some unfathomble editorial reason) between hat bit of oriental kitsch and 'hatham Towers? And you must be kidding when you seriously suggest some sort of continuity within Chinatown. It has as much to do with China as Allen Street has to do with Tel Aviv. Chinatown, like most of the ghetto areas of New York, has only a superficial veneer of decoration over very typical New York buildings and streets.

From one who has worked on the building, what was considered by the architects was the building's relationship to the City Hall area—and ultimately to the whole city, which is much more to the point. But perhaps the editors of the Forum would have preferred a 26-story pagoda, for continuity's sake?

> MELVIN H. SMITH Architect

We'd like to think that readers Chu and Smith were the only ones to take our "Footnote" seriously. Ever since we first published Chatham Towers in our May 1965 issue we have admired them greatly, and this should have been obvious to readers of this magazine. By the same token, the ludicrous Bell Telephone pagoda . . . well, let's not belabor the point!—ED.

CORRECTIONS

Brooklyn

Forum: In the Focus section of the June issue, you have incorrectly credited Mr. Arthur Lau with being the architect for the Administration and News Building at Expo '67.

I am the architect for this building and my office has been fully responsible for the design, working drawings and supervision of work in progress. Mr. Lau is an Expo '67 employee responsible for administrative coordination of this and many other buildings into the whole Expo program.

IRVING GROSSMAN Architect

Forum: We did not expect the Forum would publish the John Fitzgerald Kennedy Federal Office Building in Boston [June issue] before it is finished. . . . The building was not dedicated last month. The ceremony will take place early in the fall. The correct credit line of this joint venture is the following: The Architects Collaborative and Samuel Glazer Associates. For TAC: partners in charge: Walter Gropius and Norman Fletcher; senior associate: Roland Kluver. For Samuel Glaser Associates: Samuel Glaser and Clifford Towne.

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This beautiful convent was set into the hillside and blends naturally with its surroundings. Much of the stone used in the construction of the chapel was moved from the hillside to make room for this lovely building. Construction of a new education center was to be complete with dining areas, living quarters, schoolrooms and a new chapel. The architecture had to tie in with existing buildings and blend into the hillside. The new Dominican Education Center at Sinsinawa, Wisconsin, meets all these requirements in a quiet, beautiful setting unique only to a religious community.

To follow through with this quiet beauty, Norton Door Closers were used throughout. There was no problem in providing adequate door control and in complementing the architectural decor. Norton closers are designed and built to give the very best in positive door control. In addition, they have been styled to give the architect complete freedom in realizing the decor and interior decorating feel he desires. Norton closers truly control doors, not design.

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LIBRARY DOORS

Exit doors to the courtyard from the enclosed corridors are controlled by Norton Series 7000 narrow projection closers with covers of anodized aluminum. The closers have been selected to match the aluminum door and triangular window frames.

Main dining room doors also feature Norton Series 7000 narrow projection closers. Here the aluminum cover matches perfectly with other hardware to give a striking contrast with the dark finish of the door.

Entrance doors to the chapel area are controlled by Series 7000 closers with covers. Again, these closers blend in naturally with the modern design of the doors.

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In early June, the secretary of the army, three generals, and an assistant secretary of defense assembled outside the Pentagon to take turns planting gladiolas as an army band played "America the Beautiful." The 1,500 bulbs were donated by Kelly Services Inc., suppliers of Kelly girls for temporary secretarial help, which hopes to do the same for 200 cities.



In the picture above, Army Secretary Stanley H. Resor beams as William Russell Kelly, founder of the firm, and Mrs. Katie Loucheim of The First Lady's Committee for a More Beautiful Capital do some planting. The photographers in the background later spoiled the scene somewhat by tramping on the flowers.

FOR THE 98TH TIME

Altitude is a great tranquilizer, and architects gathered in Denver, the Mile-High City, for the 98th annual convention of the American Institute of Architects seemed to take things even easier than they had in past years.

There were few fireworks at the sessions (held in the Centre Theater, right, where "Stagecoach" was being shown during off hours), but lots of serious speeches on the convention theme, "Technology, Environment, and Man"-most of them by visiting scientists (physical, social, and political). John Kenneth Galbraith, once ambassador to India and now professor of economics at Harvard, gave a rousing address urging a small but profound social revolution. He proposed to cure personal and municipal poverty with the simple device of a Federally guaranteed minimum income for all.

"It would cost about \$20 billion to bring everyone up to what HEW considers a reasonable minimum," he estimated. "This is a third less than personal income rose last year. It is not so much more than we will spend next fiscal year to rescue Marshal Ky's version of freedom and democracy in Vietnam" (applause). "And nothing is so certain an antidote for poverty as income" (laughter).

Dr. Robert C. Wood, once a political scientist and now undersecretary of HUD, struck a more somber note, putting greater responsibility on the architect's shoulders: "He cannot concentrate on his own little projects and let the rest of the country worry about Watts, or long, hot summers, or urban sprawl." He sounded a most disturbing warning (considering how much architects may come to depend on HUD): "The one thing the architect cannot do in the modern world is play the role of the hero."

NEW FACES OF 1966

The AIA is one of the few national organizations that still let their members choose officers from among competing candidates. This year there were no less than nine candidates vying for five of the Institute's key positions. Only one post, that of president, was a foregone conclusion : the first vice president, in this case Charles M. Nes Jr. of Baltimore, automatically steps up to the presidency at the end of his one-year term.

There were two candidates for first vice president (and presidentelect). Seattle Architect Robert L. Durham won out over Llewellyn W. Pitts of Beaumont, Texas, Five candidates vied for the three offices of vice president. The winners were Samuel E. Homsey of Wil-



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WH UWEN THE SUITE SUIT TOULCU

to him like "a collection of cereal boxes." Owen said that the model photos showed only "the massing and location of buildings, not their architectural form." Detailed design will take another two years, he said.

The Metro Council, in settling the matter, asked Eaton's to produce a firm site plan soon, and to guarantee that phase one, including the abbreviated tower and a new department store, will start within five years. Editorialized *The Toronto Daily Star*, "The way is now clear for Eaton's design team to sit down at their drawing boards and convince us that the final architecture and planning justify the great public responsibility they have undertaken."

PROGRESS IN AUTOLAND

In Los Angeles, a partial victory has been achieved over the automobile. The city has dedicated the first segments of a vast mall that will eventually stretch four blocks from the Music Center to City Hall, with landscaped pedestrian spaces roofing an underground garage. A pedestrian, in Los



Angeles, is a driver between trips. Upper terminus of the mall is the Department of Water and Power Building by Albert C. Martin Associates (background in photo and top of rendering below). Next comes the Music Center and its lively plaza, flanked by the Center's Pavilion and two theaters by Welton Becket and Associates (left and right in photo). From there on to City Hall, it is all downhill past a motley collection of public buildings.

The Music Center provides 3,000 auto spaces, and the newly dedicated mall block, with its bubbling fountain, another 1,300. The architects for this block were the Martin firm, Adrian Wilson & Associates, J. E. Stanton, and William F. Stockwell. Future sections, requiring the demolition of some existing buildings, will add another 1,167 underground stalls.

The pedestrian victory is not quite total, however. On its way, the mall will be interrupted four times by heavily traveled streets.

HUL

ACTION ON DEMONSTRATIONS

The power of Presidential persuasion has gotten the Demonstration Cities Program through its first Congressional hurdle. The program was approved by the House Banking Committee with only a few changes, and some of the changes actually could be called improvements.

The committee, for one thing, voted an extra \$600 million in urban renewal assistance to participating cities, reducing fears that the demonstration program would be a drain on normal urban renewal assistance. It also changed the provision for 80 per cent aid in



professional ethics for the AIA to interfere with members' work in progress; (2) that the AIA had This was an appointment almost as whimsical as the Emperor Caligula's famous nomination of his

paying the local shares of city-Federal programs to "up to" 80 per cent.

In a semantic setback, however, the committee changed the title of the Federal coordinator who would oversee demonstration efforts in each city to "metropolitan expediter."

In all, the committee did about everything the Administration wanted—except commit itself to future expenditures. The bill, as reported, provides the \$12 million requested to begin planning the program in this fiscal year, but makes no mention of the \$2.3 billion to carry it out in the five years following.

MARIE TO STAY

The energetic Marie McGuire, public housing commissioner until HUD's reorganization eliminated the title, will remain in the department. Secretary Weaver has appointed her—pause for a deep breath—Acting Deputy Assistant Secretary for Housing Assistance.

Mrs. McGuire will have responsibility for all of the old PHA programs, plus the college housing and housing for the elderly formerly under the Community Facilities Administration. She will work under Don Hummell, assistant secretary for renewal and housing assistance.

Appointed Hummel's acting deputy for renewal, and also for the Office of Urban Neighborhood Services, was Howard J. Wharton, who had been acting urban renewal commissioner pending completion of the reorganization.

TWO FOR DESIGN

"I am pleased to announce two appointments to help the Department in our drive to bring about higher standards of design and beauty in urban America," said HUD Secretary Robert C. Weaver at a June 20 ceremony in the AIA's Octagon House. Weaver named San Francisco Architect George T. Rockrise as his new advise, on design, and Estelle Dodge, New York art dealer, as a HUD consultant on "the use of works of art to beautify buildings and community areas."

Rockrise, said Weaver, will "coordinate and spearhead efforts in all HUD programs to improve the urban environment," including liaison with local agencies, professonal organizations, builders' groups, universities and private groups. Mrs. Dodge will conduct a study of urban renewal projects and recom-(continued on page 99)



Louis Kahn in India: An old order at a new scale The circular window in the brick wall pictured above opens into the central hall of one of 18 dormitory buildings that form part of the Indian Institute of Management in the textile center of Ahmedabad. This business college, now under construction on a 66-acre site, has given Louis Kahn his first opportunity to apply his architectural concepts to a large grouping of buildings serving a variety of functions. Only the first few units are up, but already Kahn's design, of ancient brick and modern concrete, presents a powerful image on the Indian landscape (over).

"These buildings may look old-fashioned. An ancient material, brick, is being used, and its order respected. Concrete, a modern material, and its order, is being combined with the brick, formulating a composite order."







Is the site plan for the Institute (left), Kahn has employed the same kind of disciplined geometry that one has come to expect from his single-building floor plans. On the highest mound of the gently rolling site is the largest and most important structure, the education building (not yet under construction). Immediately surrounding it on two sides are the dormitory buildings,

which Kahn has distributed in a staggered pattern around a series of outdoor courtyards.

Together, the education building and dorms form the studentclassroom core of the campus. Kahn has defined the core by putting an L-shaped, man-made lake around it, separating it from the residential-commercial section of the campus. As shown in Kahn's sketch, above, the dorms along the edge of the lake will be reflected in the water, which also will have practical use in cooling the breezes that blow over it.

Across the lake is housing for faculty, servants and their families. There are five different types of units, grouped diagonally in rows of varying length around brick-paved courtyards. At the northeast corner of the site is the marketplace, a hollow square, pierced at two points, surrounding an open courtyard reminiscent of ancient bazaars.

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Kahn has oriented all of the buildings on the site to take full advantage of prevailing breezes from the southwest. The breezes will not only penetrate into the buildings, but also flow between and around every enclosure and open space on the campus.



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PHOTOGRAPHS: DASHARATH PATEL



FIRST FLOOR

SECOND FLOOR

THIRD/FOURTH FLOORS

In designing the Institute's dorms, Kahn cut three wedges into his square, creating two residential wings, a triangular hall, and a square service block—and bringing light and breezes through round wall openings and corner slots. The first level of each residential wing is a two-story social hall (left).

Kahn used concrete sparingly --for foundations, floor slabs, and as restraining members for the arched openings to the sleeping porches (above). Walls, beams, and columns are all of brick. The "composite order" permitted larger spaces and wider openings with a minimum of brick. Kahn has lessened the thickness of the brick end walls by using filled-in arches to transfer loads down the sides to brick buttresses below.



THE Institute's education building is a further refinement and extension of Kahn's concept of a "building within a building —one given over to the sun, the other to living." Instead of wrapping one around the other, Kahn has pushed some of the spaces —the amphitheater-type classrooms and faculty offices—outward beyond the main wall of the building. Light enters deep

into the structure through arched openings in the main wall directly into corridors and indirectly into the core of the structure, around which Kahn has placed arches, offset from those of the outside walls.

To Kahn, design is a "continuous process." He works and refines his schemes until the last possible moment before construction begins. The drawings above and on the cover represent an earlier stage of Kahn's design for the education building; those at right are the latest, perhaps the final, stage. In the process, Kahn has greatly strengthened the spaces and clarified their relationships. The classrooms and the offices now are cohesively grouped; the library, once set diagonally within the central area, is now at the perimeter, freeing space in the courtyard, which contains a stage open to the sky except for cloth canopies draped across it. Kahn has placed the kitchen within a 50ft. exhaust tower to keep the smells of spicy Indian food from permeating the building.

Kahn's latest scheme eloquently testifies to the value of his view that design is a continuous process. —JAMES BAILEY









The Lower Manhattan plan proposes that the circulation system (left) be sorted into arterial and service streets and pedestrian ways, on which the only vehicles would be slow-moving, open-sided minibuses. Perimeter expressways and parking would be sunk in fill replacing the present piers, and on the fill would be built new residential developments and continuous open spaces. Except for the addition of these residential areas, the plan proposes few major changes in land use (see diagram of present pattern, above, and the one proposed for the future, below). AERIAL PHOTO: M. D. Morris.



FRAMEWORK FOR LOWER MANHATTAN

The much-anticipated Lower Manhattan Plan, put together by a blue-ribbon group of consultants for the New York City Planning Commission, offers a tacit but significant message: If you can't control the chaotic results of private development, at least put them in an ordering framework and surround them with an environment designed in the public interest.

The framework devised by the consultants - Wallace, McHarg, Roberts & Todd; Whittlesey, Conklin & Rossant; Alan M. Voorhees & Associates-consists of a new pattern of circulation in the area, which extends from Canal Street to the island's downtown tip. They call for reclassification of Lower Manhattan's unlikely tangle of streets, planned by the Dutch in the 17th century, so that some would serve as arterials, some as service streets-and some as pedestrian ways (see diagram opposite). They also call for the submersion of Manhattan's perimeter expressways, presently elevated, so that pedestrian paths could extend to the water's edge.

The surrounding of the core would be accomplished by strips of residential development along the Hudson and East Rivers, partially on fill replacing the piers that now form the island's serrate edges. Its components would be six new "neighborhoods" of 10,000 to 15,000 residents, each centered on notched waterfront plazas at the ends of the major pedestrian ways. A continuous waterfront esplanade would link the plazas. The expressways would be buried in the fill, and feeder roads would lead from them to parking garages and service streets at each neighborhood.

This is not primarily a landuse plan; except for the additional residential areas, the present pattern would be allowed to prevail (see diagrams at left). Nor is this a "design plan," in the sense of offering guidelines for the maintenance of certain architectural values in the core of downtown Manhattan.

These values, the plan report says, are two in number: the





In the rendering above, ships and sailboats glide by a waterfront that has been restored to public use and enjoyment. The skyline builds up asymmetrically to the twin towers of the World Trade Center (at left).

Before and after sections across the island (left), looking north at Wall Street, show the extent of the proposed perimeter fill. The expressways would be within the fill, and each of the six residential developments above would have a "connecting point" containing parking and several service levels, with service roads leading to the streets above. At these points, the pedestrian spaces in the developments would be pushed upward, creating a series of multi-level terraces. Maintaining a skyline that is "the very image of the modern city"

skyline, and a "street form" of dense and twisting canyons. Lower Manhattan presents "a sharply defined mass of buildings and activity by which the very image of the modern city was fixed in the boom years of the 1920's," the report says, and terms its form "pyramidal . . . with great towers in the center and lower buildings at the edge." The mass is broken by "deep cleavages" where streets wind through the closely packed downtown towers.

The report points out that the random plazas encouraged by New York's 1962 zoning revisions are threatening the old canyons and "loosening the grain of buildings." Its only suggestion, however, is that perhaps the zoning regulations could be revised "to allow tighter construction in the downtown area."

The report is curiously accepting of current changes in the skyline. It defends the World Trade Center against charges that the twin towers will be overpowering, occuring as they do in one corner of the pyramid. "The Lower Manhattan skyline was created, to some extent, by corporate egos," say the consultants. "These new towers can be considered no more out of scale than were the Woolworth Building and Empire State Building in their day." They suggest that the balance may be restored by construction of other towers of similar height (see section).

They offer neither inducements to such strategic construction, nor controls to see that the next wave of higher-rise building will make a positive contribution to the downtown streets and skyline. Their report, as sound and imaginative as it is, thus stands as evidence of the powerlessness of specific design before the forces of private development that shape the cores of cities.

It is a different story at the edges. The consultants amass considerable evidence to prove that renewal of the island's perimeter, including the expensive work of landfill and expressway construction, could virtually pay for itself. They offer a set of intriguing suggestions for the mechanics of its accomplishment.

All involve the establishment of a public-private development foundation which would see to the building of the new residential communities. Under one suggested procedure, the existing fringe waterfront land would be designated an urban renewal area, even though Federal assistance would not be required, and an urban renewal plan would be prepared containing "architectural and planning controls and restrictions."

Instead of taking the land, the eity or the foundation would acquire "development rights" to see that the plan was followed. If the development rights reduced the value of the property, the owner would be compensated; if the plan proposed a more profitable use of the land, it would be acquired and deeded back to him with a "betterment charge" allowing for the increase.

The money for acquisition of development rights would come from sale or lease of the filled land. The foundation would be deeded the right to offshore development for a nominal sum. Either the foundation or individual developers would carry out the land fill, and perhaps even build the portion of the underground expressway running through it.

It is this attention to the means of execution that makes the Lower Manhattan Plan something quite different from the typical general plans that sit, unheeded, in the dusty archives of most cities. From beginning to end, the consultants have shown a healthy respect for the uncontrollable complexities of the city building process.

The Lower Manhattan Plan, the consultants point out, is "not merely a project, or even a series of projects, but a system of development, on an area-wide scale, in which every phase of downtown life is related in an overall process of planning and change." It is "a general strategy for the redevelopment and growth of an area; an approach, a process and an organizing concept." It is, in short, just what New York so desperately needs.

-DONALD CANTY

Controlled development through a new form of public-private agency



While a general strategy, the plan also goes into fine grain in terms of both land use and community facilities. As the quilt above shows, the perimeter development, while primarily residential, also would contain shops and some commercial buildings. The plan expresses the hope that the new commercial development will be more diversified than the old: "The relative purity of the functions of the area," it says, "is at once its elegance and its weakness." Below, a rendering of one of the indented pedestrian plazas, called "windows to the water," that are the plan's most striking architectural proposals.







SYMBOLIC BELLS IN DIXWELL

BY MARY HOMMANN

Miss Hommann was formerly assistant director of planning for the New Haven Redevelopment Agency, and project director for its widely known Wooster Square renewal area. She is now assistant chairman of the Pratt Institute department of planning. In New Haven's Dixwell renewal area, there are two quite different symbols of the events that are bringing about its transformation from a depressed Negro ghetto to a lively, racially integrated neighborhood.

One is the bell tower at left, part of the new Helene W. Grant School that John M. Johansen designed for Dixwell. The bell tower is symbolic of the importance given in the New Haven program to above-minimum features that are handsomely designed and widely enjoyed. The school board could not include the \$7,000 for the bell tower in its construction budget, so the Redevelopment Agency paid the bill.

The second symbol is the window box at lower right. This spring Grant School had a coloring contest involving pictures of flowered window boxes. With the encouragement of the Redevelopment Agency's project office staff, Dixwell teenagers got the idea of building and selling the window boxes themselves. The University of Connecticut Extension Service agreed to donate flowers. A total of 250 window boxes were sold, at \$2.50 each, and they are brightening houses all over Dixwell.

The window boxes symbolize the approach that has been taken in all neighborhood renewal in Mayor Richard Lee's rejuvenated New Haven. The transformation of Dixwell has been achieved, not by wholesale clearance and high-rise reconstruction, but by a variety of small improvements, scaled to the human being in both design and procedure.

The Dixwell area comprises 256 acres, its lower extremity touching the Yale campus and downtown New Haven (map, upper left). In 1961, when the renewal project got underway, the area contained about 880 private residential buildings, most housing one to three families each. Its major landmark was the huge Elm Haven public housing complex of 855 lowincome apartments: 40 buildings of from 2 to 9 stories.

Dixwell's population, by the 1960 census, was 10,220, of which 73 per cent were nonwhite. Its residents were preponderantly young families with several small children. Incomes averaged about \$3,100 per year.

Before renewal, Dixwell was both a ghetto and a slum, but there was a solid foundation of hope and determination to build upon. It was a gregarious community, containing 12 churches and a variety of civic, fraternal, and social organizations. From them a Dixwell Community Council was formed, with 150 members, which actively promoted renewal and met constantly with city representatives in preparing the plan. At the final city hearing, attended by 600, the only criticism of the plan by residents was that it did not go far enough in taking slum buildings.

Citizens as directors

As renewal began, block organizations, which soon came to be called "Betterment Councils," were formed by the Agency throughout the area to find out what the residents needed most from the city. A 40-member Dixwell Renewal Committee was organized as the project's board of citizen-directors.

The project office, strategically located in the heart of Dixwell, opened in 1961 with a staff of six to provide rehabilitation help. The staff now numbers 18, skillfully directed by Donald Kirk, who started as the project architect. Most of the staff members have technical training, but all, from planners to secretaries, have something else as well: an almost instinctive sense of social service. The office has become the informal and decidedly non-bureaucratic hub of neighborhood activity in Dixwell.



The renewal of Dixwell has taken the form of a series of separate events, which together make for a greatly changed community. Some of these are shown, reading counterclockwise, on the map at right:

Responding to a Betterment Council request that busy County Street be closed to traffic, the project office designed a cul-de-sac, taking only one of the fine old trees, creating as well a new playlot for the adjacent Baldwin School.

Half the dwellings in Dix-L well, including this specimen, were scheduled for rehabilitation rather than demolition. Before renewal, because of their race, Dixwell homeowners were denied equitable financing and often carried two mortgages at 12 per cent each. Now they can get 25-year mortgages at 53/4 per cent, cutting payments in half even after the principal is increased for renovations. Dixwell is also using the new Federal rehabilitation grants of up to \$1,500 for low-income owners and 3 per cent mortgages.

Each owner is given rehabilitation advice of all kinds, from architectural to financial, by the project staff.

3-4 Grant School (4) is surrounded by the Florence Virtue Town Houses, designed by Johansen (July-August 1965 issue) and sponsored by the Dixwell Congregational Church. The 129-unit development is a 221d3 moderate-income cooperative, requiring only a \$325 deposit and from \$91 to \$131 per month on one- to fourbedroom row houses.

The Florence Virtue Town Houses were named for one of the community's most beloved citizens, who actually lives in one of them. With 58 white and 71 Negro occupants (45:55 per cent), and 12 white families on the waiting list, the racial integration of Virtue houses is the highlight of the program.

5 Because Dixwell had no real center, a civic and shopping plaza is a major part of the plan. On one side will be new stores, offices, and restaurants built cooperatively by present Dixwell firms, with parking in the rear (a solution not easily achieved). Development is slowed by the musical chairs the firms must play to stay in business during construction.

On the civic center side, across a glass-enclosed bridge, a moderate-cost apartment building, designed by Gilbert Switzer, is under construction. Joining it will be a new Dixwell Congregational Church (right foreground in rendering), designed by Johansen, and a new Dixwell Community House. The plaza will neatly front an existing elementary school.

6 Yale's Morse and Stiles Colleges form a gateway at the tip of Dixwell.

7 Plans are being made for the rehabilitation and landscaping of the huge Elm Haven public housing project. Last year, rather than wait, the project office staff came to work one morning in dungarees and installed play equipment offered by the Parks Department, in what had been an empty dirt yard, surrounded by a chainlink fence.

This playlot on Henry O Street replaced a derelict building at the request of the Betterment Council-a good idea. swiftly executed by the city. The councils are concerned with everything that affects their neighborhoods: recreation, unsanitary conditions, litter, parking, streets, sewers. One block had been bothered by drag-racing and drinking in cars, but residents were reluctant to call the police in fear of reprisals. When they could call in the name of their council, it was a different story.

Much of the new building in Dixwell has been sponsored by nonprofit groups with ties to the neighborhood. The Human Relations Council of Greater New Haven built the 34-unit Winter Garden Town Houses (10) designed by Edward E. Cherry. Two other nonprofit projects, totaling 188 housing units, are about to start. Two new churches have been built in Dixwell (including the Beulah Heights Church, 9, by William Petchler), and the Elks Club is planning a new lodge.

The ingredients of change in Dixwell range in scale from a playlot to a central civic plaza







Not only are new buildings carefully blended into the existing Dixwell neighborhood, the blending of physical and social renewal is taking place as well. Human concern is part of every act of physical change.

Grant School, for example, is as advanced in program as in design. Its principal, Miss Sylvia Olinsky, was a first-year principal when the school opened last fall, and the entire school has an atmosphere of experimentation.

Miss Olinsky instituted a unique kind of daytime PTA at Grant School: parents and teachers join after school in giving French and Spanish instruction, in supervising Scout troops, and producing a children's newspaper and children's plays. Miss Olinsky, by December, also had visited the home of every child attending the school. At first many of the white families that moved into the Virtue houses talked about sending their children to private schools, but now all are enrolled at Grant for next fall.

A special effort has been made to involve children and teenagers in Dixwell's renewal. Early in the program, some of them created a cartoon character called "Freddy Fixer," at the suggestion of the project office. Spring comes with a great flurry: the teenage Freddy Fixers join an area-wide cleanup campaign, and there is an epidemic of groundbreaking ceremonies, complete with speeches.

Climax of the springtime campaign is the Freddy Fixer parade, which this year involved 16 bands and a wide variety of floats and marching groups, and a Freddy Fixer Ball, at which a king and queen are elected. The



ball is financed through the sale of basket dinners.

The social side of Dixwell's renewal is by no means all fun and marching bands. New Haven has been pressing the war on poverty since 1963 through Community Progress Inc., financed by the Ford Foundation, the Office of Economic Opportunity, and other Federal agencies. A neighborhood employment center has placed an estimated 1,150 Dixwell residents in job training and employment. A neighborhood social services office sponsors more than 50 varied activities a week at the Dixwell Community Center. There is a Dixwell social case work unit, and a concerted services program for the Elm Haven public housing project.

Forty men prone to alcoholism, most of them elderly, have joined a pioneering organization called the Union of Indigent People. Financed by OEO, the Union has prepared many of these men for the first jobs they have held in many years.

Citizens as customers

But Dixwell's success in human terms is as much a matter of attitudes as programs. From the mayor down, the city's approach has been one of helpfulness to Dixwell's residents, and determination that renewal should be something done with them rather than to them. In the project office, Dixwell citizens are regarded as customers. When one comes in with a request-for help in planning a roofing job, or making a poster, or typing a press release other work is put aside.

The extent of Dixwell's transformation was indicated a few weeks ago when a white family chose a lot in the neighborhood on which to build a home. "Through sensitive planning in which the community really participates, you can make a former ghetto attractive enough to integrate it," says Mel Adams, New Haven's development administrator. If Dixwell proves him right, it could turn out to be an ideal prototype for urban renewal all over America. A battery of educational and social programs have been built into the renewal of Dixwell



PHOTOGRAPHS: George Cserna.









THE SHAPES OF THE NEW SOUTHWEST

BY PERCY JOHNSON-MARSHALL

Washington's sprawling Southwest urban renewal project, an effort to turn 552 acres of slums in the shadows of the nation's capitol into a model "residential community," is now approximately three-fourths complete. On the following six pages is an appraisal of the results to date by a prominent British planner.

A Capitol Park, completed 1959-1965. Architects: Chloethiel Woodard Smith & Associates (except first apartment building, Satterlee & Smith). 1,339 units in five elevator apartment buildings, 399 in row houses.

B Town Center, 1961-62, I. M. Pei & Associates. 512 units in four elevator apartment buildings.

C Tiber Island, 1965, Keyes, Lethbridge & Condon. 368 units in four elevator apartments, 134 row houses.

D Carrollsburg Square, to be completed 1966-67, Keyes, Lethbridge & Condon. 387 units in three elevator apartment buildings, 140 row houses.

E Harbour Square, to be completed 1966. Chloethiel Woodard Smith & Associates. 420 units in one elevator apartment building, 27 row houses.

F River Park, 1963, Charles M. Goodman Associates. 384 units in one elevator apartment building, 134 row houses.

G Chalk House West, 1966, Morris Lapidus Associates. 280 units in two elevator apartment buildings, 44 row houses.

Mr. Johnson-Marshall is a professor of urban design and regional planning at the University of Edinburgh, a former group planning officer of the London County Council, and author of the recent book *Rebuilding Cities*. He visited the Southwest this spring on our behalf while a visiting lecturer at Yale.





RBAN renewal in the United States and comprehensive development in Britain represent phenomena in which the language is divided but the problem is common. Both countries have large cities where the urban core has been continuously renewed but the inner ring of building immediately surrounding it has decayed. This ring usually represents one of the most intractable problems in planning the built environment that our urban communities have to face.

Such areas are usually a muddle of different uses, often in multiple ownership; with large numbers of shoddy and wornout buildings that once may have had character but are usually beyond redemption. Because of their inner location, and the fact that they contain a stock of habitable space, they are subjected to waves of occupation by ever lower income groups, until the lowest finally fills every room to total capacity.

Washington's Southwest renewal project was a large-scale attempt to solve such problems in an area whose locational significance is almost unique. It is in the capital city of the world's wealthiest and industrially most advanced country; it is in a city that was intended to be planned and controlled from the outset (perhaps, therefore, the slum problem should never have arisen at all), and is within walking distance of Congress and the White House. Perhaps the key fact is that, because of its location, it cannot escape being in the nation's public eye.

The Southwest renewal site has an area of 552 acres. In 1957, when planning of the present redevelopment began, it had a population of 23,220. More than three quarters of its structures were considered blighted. There was a public housing project of 933 units, with a population of 5,000 (3,000 of them children); a primary school; and a number of isolated historic buildings.

The plan for the area proposed what the Redevelopment Land Agency of the District of Columbia called a "residential community," consisting of 6,187 dwellings, schools, churches, parks, a library, municipal service buildings, a hotel, a shopping center, restaurants, offices, and gasoline stations. Only seven dwellings, six of which dated from 1795, were to be kept and restored. The population after redevelopment was to be between 17,000 and 18,000.

The planning report was, all in all, a comprehensive and invaluable document, the general provisions of which might well be circulated for comparison with reports prepared by urban authorities in other countries. It contained regulations and controls over almost every aspect of development (including one that play space for children should be provided equal to 40 square feet per dwelling, and another that surface parking lots should be limited to not more than 15 per cent of the number of spaces provided in the town center).

The land price was fixed, and the development blocks were awarded on the basis of design competitions judged by independent juries. In addition, the RLA engaged an architectural advisory panel to guide developers and architects so that their works would be in harmony.

Architectural variety among unrelated islands of development

In 1960, when I first visited the area, there were only a few buildings scattered about in an urban desert. It is now possible to see the Southwest over 75 per cent complete. As of January 1966, some 3,882 dwellings had been completed, 1,132 were under construction, and 1,173 remained to be built. Two schools, five churches, a third of the shopping center, a hotel, a library, police and fire buildings, and several gasoline stations had been put in use, in addition to the new Arena Stage Theater.

Casual conversations with a number of residents in different parts of the Southwest elicited pleasure and satisfaction with both dwellings and layout, but a low-income passerby expressed considerable concern at the al-



Above, the original I. M. Pei plan for the Southwest, with its regular composition of apartment slabs and town houses, and the current plan, with the layout of individual parcels determined by their architects (A is Capitol Park; B, Town Center; C, Tiber Island; D, Carrollsburg Square; E, Harbour Square; F, River Park; G, Chalk House West). Tiber Island (below and right), most recently completed, last month won an AIA First Honor Award. It consists of four burly slabs arranged, in pinwheel fashion, around a center court. The fifth slab, in the foreground at right, belongs to the partly finished Carrollsburg Square.





leged failure to relocate families within the area. I noted similar concern expressed in a recent article in *The Washington Post*. I mention these facts because comprehensive urban redevelopment must be judged in a comprehensive way.

Walking through the area, one is conscious of a number of impressions both favorable and less so. It is immediately apparent that there are too many isolated and variegated pieces of development (or architecture). The architects mostly designed too hard on their own islands, and although attachment and enclosure is almost overdone in some islets, it is lacking over the whole area. This defect is, of course, unfairly emphasized at this stage owing to the fact that the trees, walls, and other integumental tissue are not yet developed, and that the key town center is still only one third complete. (This last problem caused a great feeling of emptiness in the early stages of the British Mark I New Towns.)

I was somewhat surprised to read in the excellent Guide to the Architecture of Washington that one of the rather funereally black-framed apartment blocks (1) "serves as a boundary wall to separate the adjoining town houses from public housing beyond." This seems somewhat reminiscent of 18th century London. Incidentally, the guide also contains a rather shattering remark on the area to the effect that, "perhaps it will in the future constitute an outdoor museum of architectural clichés of the two decades following World War II." In fairness, some of the clichés antedate this period very considerably.

There is little sign of contemporary building technology in the area. Internally, the dwellings I have seen have all the usual high American standards of heating fitments, and general equipment; these, one assumes, ensure a good standard of internal comfort and livability. But today, land assembly problems permitting, a scheme such as this might well have been carried out under one contract, using the most advanced techniques of industrial prefabrication as a prototype.

In all, there seems to the innocent abroad to be a Tweedledum-Tweedledee battle taking place between the folksy, the whimsy, and the brutal (2). Some of the external materials for such an expensive development are below acceptable standards; and some of the dull brick and duller concrete, especially when time has had its way, will probably look very dull indeed, unless a crash program of townscaping is undertaken by some future President.

As the first buildings settle down, the newer ones strive for attention

The northeast part of the area was the first to be developed, and is settling down very well. The architecture generally is quiet and undistinguished externally; the two apartment blocks on the northwest have a good prospect, although the others have overlooking problems (that bane of mixed development at high density).

I can well imagine very favorable public comment in the Capitol Park town house area (3). The idiom is eclectic, but there is considerable variety with a real feeling of enclosed spaces, and there is already almost an arcadian quality. The children I met there were playing a kind of hopscotch, and they thought it was a good place to live.

Walking across the busily trafficked street, to the town center (4), there was still a strong impression of incompleteness, although the first shopping block has a broad, covered pedestrian terrace which should be excellent when the center is completed. The cars, incidentally, might well be garaged underground (as they are in another development nearby, 5), and the buses could be provided with a small covered station to make public transport more attractive.

On either side of the town center are two simply and cleanly designed apartment blocks. Two questions arose, however, in my mind. First, the all-glass







1. The apartment wall and the vaulted town houses of River Park separate the new Southwest from the preexisting public housing beyond. 2. The newest precinct: right foreground, Tiber Island; center, Harbour Square, with its U-shaped high-rise and mix of new and historic town houses; left background, one of the twin slabs of Chalk House West. **3.** The Capitol Park town houses sit in a park-like site between apartments which grows steadily more attractive as the landscaping matures. **4.** The shopping cluster in Town Center is surrounded by open parking. **5.** In Tiber Island, by contrast, cars are kept under the plaza.





walls (6) must need acres of curtains of the correct colors, and privacy, too, might be difficult. Second, why not have located them right over the shopping center so as to use the shop roofs as extra terrace space, and also help to pay for garaging?

Crossing M Street—and who allowed such an important and heavily trafficked street to carve a residential community in two? —one comes to a congested and rather forbidding layout, which also suffers from the overlooking problem (7). It has, however, one excellent solution in the underground garaging. Car sanity at last!

Over the garage is a pleasant terrace which one hopes will develop a "town" atmosphere of cafes and sitting in the shade. The town houses in this scheme (7) are roomy and well designed, but some cost approximately \$67,000, which is not cheap. South of this scheme are still more separate projects, one of which has had fun with barrel vaults, although it has good pedestrian spaces (8).

Continuing the walk, one realizes how excellent the recreational river front park is going to be, and also how varied is the quality of the architecture of the individual community buildings —schools rather dull, and not over supplied with playgrounds; the theater a fine design; churehes trying to stand out in an urban scene where nearly everything is trying to stand out (9).

Lessons of the Southwest: a need for cohesion, and for control of cars

It is somewhat early to judge and to assess the Southwest as a contribution to urban renewal. In such large scale redevelopment schemes so much of the iceberg is under water—the weeks of negotiations, the efforts to circumvent needlessly restrictive legal provisions, even the problems of closing a street at the right time; hundreds of political, social, economic, and technical difficulties have to be met and battled through.

The visiting designer wanders through in a euphoria of semiignorance, cheerfully criticizing mistakes that may have been the scene of a technical blood-bath. Nevertheless, with the benefit of hindsight, there are lessons to be learned:

First, in regard to the resettlement of the existing inhabitants, justice must not only be done, but must manifestly be seen to be done.

Second, once the decision has been taken to create a residential community containing both small children and old people, the whole area must be considered vulnerable and in need of protection against personal mechanical means of communication. At all costs important roads should not be routed through the area, but around it. M Street, with its heavy two-way traffic at ground level, creates more problems for the Southwest than the nearby raised expressway.

Third, such an area should not be broken down into too many separate blocks of development. To misquote John Donne, "no building is an island." Large scale redevelopment need not involve monotony, and the day of each building as a prototype of the new architecture was, at the very latest, sometime during the nineteen thirties.

More advantage, too, might be taken in such high density schemes of multi-level use. How much better it would have been if all the auto storage had been underground, and if the considerable spaces of roofs on low buildings could have been put to use in some manner.

As regards detailed architectural design, a final word might be said about apartment balconies. The wind and the rain can blow, even in the capital, and still one observes small balconies cantilevered out; even battleship balustrades (10) do not protect the resident from the heavens above. I have already commented favorably on the landscaping in the earlier stages of development-one longs to see really large leafy trees growing throughout the area. A joy in winter and a boon in summer, they will, I hope, make a satisfying consummation of a great capital improvement.







6. Another contrast: the brick and concrete exterior walls of Tiber Island (left), and the glazed—and draped—facades of Town Center. 7. This set of Tiber Island town houses opens from the main plaza and surrounds a grassy court. The private outdoor spaces, however, are in view from apartments above. 8. The vaulted world of River Park is penetrated by several interior courts. 9. St. Matthew's Lutheran is one of five new churches built or planned in the Southwest. 10. Hefty balconies project from the high-rise buildings of Tiber Island.

PHOTOGRAPHS: George Cserna; except pp.60 63, J. Alexander.







RIIS PLAZA: THREE ACRES FILLED WITH LIFE

Searcely a year ago, a view of the central mall at Jacob Riis Houses on Manhattan's Lower East Side was a vista of grass and trees. It was a pleasant prospect from above, but at ground level the scene was dominated by the chain-link fences that kept about 8,000 residents confined to their bench-bordered walks and off the grass.

Today the same three-acre space is ready for all of the outdoor activity of 8,000 lively people, plus thousands of visitors who now come in from surrounding areas. The mall is now a mosaic of things on which to sit, jump, walk, run, and climb; where there was once chain-link fence there is spraving and tumbling water, live and electronic music-all of these environmental riches thanks to the adventurous sponsorship of the Vincent Astor Foundation and the adventurous design of Architects Pomerance & Breines and Landscape Architect M. Paul Friedberg.

In 1949, when Riis Houses was added to the long line of projects along the Lower East Side riverfront, it was the pride of the New York City Housing Authority. Its 14-story buildings (and a few six-story ones) covered less than 20 per cent of the site and were laid out to preserve vistas of the East River. The rest was what the poor had always yearned for, open space, filled with what the planners thought they wanted, greenery. If the lucky poor who lived there wanted a little exercise, they were supposed to go to playgrounds along the river, which could be reached only by infrequent footbridges over busy East River Drive. In the end, their excess energy was directed against the fences and benches of home. After 16 years of this, the Housing Authority was happy to accept \$900,000 of foundation money to build the new Riis Houses Plaza.

The same sponsors and the same design team had just completed the redeveloped plaza at Carver Houses in Harlem, which had won wide recognition (including awards from the American Society of Landscape Architects and the New York State Association of Architects, and a visit by Lady Bird). The same kind of thing was to be done at Riis, only with three times as much money and the invaluable experience gained at Carver.

At Carver Houses the designers had tested out some ideas about how people act in outdoor spaces that were unheard-of in New York. They ruled out fences and "keep-off" signs and showed that they could make people *want* to go where they were supposed to. They countered vandalism in two ways: by providing alternate outlets (if the kids can climb on it, they don't bother to deface it) and by making everything either





indestructible or, like the beds of bristling hawthorne, capable of defending itself. Personal safety was insured by attracting lots of people and using lots of virtually indestructible night lighting. Children were guarded against accidents by making dangerous places reachable only by those who could handle themselves there.

Most of these ideas worked out so well at Carver that they were applied again, on a larger scale, at Riis. But here they were given a much stronger spatial framework. The first thing the designers did with the vast space at Riis was to divide it into "outdoor rooms" small enough to be seen as a whole by a person on the ground and bounded by room-height walls and colonnades. The desolate flatness of the site was broken by raising some areas a few steps, using the fill dug out in forming an amphitheater.

The rows of mature sycamores were retained. The new grading demanded tree wells in a few cases, but most of it was worked out to meet the trees at their original level. The rows of trees were lined up with the drive to the east, but the new "rooms" were aligned with surrounding streets, generating a subtle interplay between the two grids.

Land banks

If there is anything wrong with the Riis plaza it is that too many ideas, too many shapes, too many activities have been packed into its three acres. But this is less a fault of the plaza's design than a result of the fact that New York has too few places like it. The sponsors and designers realized that people would come from all over Lower Manhattan to use it.

There are opportunities for ereating other recreational nodes like this one throughout New York. The forbidden malls of public housing, in fact, may turn out to be an unexpected asset: they have served as land banks, saving spaces that could and should be developed with the kind of imagination and compassion that Riis represents.

-JOHN MORRIS DIXON





BEFORE

AFTER





THE DIVISION of the Riis Houses mall into four peoplescaled "outdoor rooms" is shown at left in plan and before-after photos. Active and quiet spaces alternate: at the entry (bottom of plan), a garden for the elderly, then a multi-use amphitheater, then a large plaza, and finally a busy playground. So far the plan has presented two practical problems: the spaces meet the old walkways with flights of steps, forcing the housing authority to put in bypass walks for carriages and carts; and the brick paving in the central plaza blocks the management's snowplows in winter.

THE ELDERLY so far have shunned the walled south garden intended for them, preferring the busier spaces, but teenagers like its cozy alcoves (1). At the center of this garden is a sculptural fountain (2) that is the source of a stream running through a covered channel and into the amphitheater. The broad central plaza (3 and 4) is adorned with four concrete pylons by Sculptor William Tarr that invite climbing. It is bounded by raised beds of hawthorne (and flowers in season), and edged with brick coping and concrete seats. Divisions between the four "rooms" are marked by pergolas (right) of massive Douglas fir timbers on cruciform brick columns. The use of rounded bricks in column and planting beds, and chamfered edges on timbers and concrete, reduces the danger of injury to children.















THE AMPHITHEATER is sized to serve a large area of the Lower East Side, accommodating 1,000 people on its concrete tiers and more under the surrounding pergola. With a two-level stage (1), complete lighting and sound systems, and dressing and rehearsal rooms in one of the apartment basements, it is equipped for almost any kind of performance or ceremony. When not booked, it becomes a place for family picnics, games, jumping, sliding (2), or just sitting. On warm afternoons, spray jets among the steps (3) are turned on, filling a moat. The high jets at the top, however, are seldom turned on-they can be too easily deflected to soak nearby adults or wash out soil beneath the trees.

VIEWED FROM ABOVE, the amphitheater is every bit as handsome as at ground level, whatever is going on there. The view at right was taken from the top of an apartment tower on the day of the Riis plaza's dedication. On the lower stage are chairs and a lectern for the speakers (including Lady Bird Johnson); on the upper platform, facilities for other participants (including a steel drum band); and on the tiers to the left, press tables. It has proved to be a very flexible place.








THE PLAYGROUND at the north end of the plaza is, all day long, the center of the most frenzied activity-the children play as if the whole thing might disappear tomorrow. No piece of equipment is an isolated event. "It's important to tie the pieces together," says Friedberg, "if only with a string." Instead of strings, Friedberg has used sequences of experiences to unify the playground. Depending on his age and agility, a child can walk through the maze (1 and 2), climb through the slabs that line it, jump from one to the other, or use them to reach the pergola above. Or, in another part of the playground (right), he can run through sand, follow the ups and downs of wood blocks and plank bridges, climb the sides of granite platforms, then swoop down on slides or swing across the gulf on arched climbers. There is also a stone igloo to crawl through or over, a shallow wading pool for tots, and a tree house to climb to (3) up a real tree trunk.

FACTS AND FIGURES

Riis Houses Plaza, Avenue D, East 6th to East 10th Streets, New York, N. Y. Owner: New York City Housing Authority. Donor: Vincent Astor Foundation.

Architects: Pomerance & Breines. Landscape Architect: M. Paul Friedberg & Associates. Engineers: Ames & Selnick (structural); I. M. Robbins & Associates (mechanical). Theater consultants: staff of Joseph Papp. General contractor: W. J. Barney.

Project area: 122,000 sq. ft. (gross). Cost: \$900,000, including fees, furnishings, and equipment.

PHOTOGRAPHS: David Hirsch, except page 70, top right, by Barton Silverman, The New York Times.





CONCRETE CASCADE IN PORTLAND

BY DONLYN LYNDON

The landmarks of Portland, Oregon's, first urban renewal project are three apartment towers which stand as firm and respectable objects against the hills south of downtown. Its focal point, however, is an extraordinarily evocative concrete plaza cleft by a roaring and bubbling cascade.

The project, called Portland Center, eventually will encompass 83.5 acres, and was planned by the local office of Skidmore, Owings & Merrill. The plan calls for the transformation of the existing street pattern into a "green grid" of malls and spaces dividing the area into a series of superblocks, two of which comprise the initial stage (plan right).

There are two parks in the laps of the first towers: to the north, a tilted mix of earth forms and asphalt; and to the south, the paved plaza with its cascading fountain.

The effect of the fountain is instantaneously engaging: "When I first saw it I came on like a seven year old," reported one young lady. Its compelling impact is neither circumstantial nor simple; it is the result of long-term observations of natural water forms by Lawrence Halprin, responsible for all of the center's open spaces, and by Charles Moore and William Turnbull, his consultants on the plaza. Halprin has an imposing collection of photos and sketches he has made of cascades in the Sierras. Moore, for his part, did his PhD dissertation on the uses of water in architecture.

Mr. Lyndon is the Forum's West Coast correspondent and chairman of the University of Oregon's department of architecture.



The first phase of Portland Center consists of the cascade-sprouting plaza (1 and photo opposite); three apartment towers (2 and above), two surrounded by townhouses (3) and a third sitting on a parking podium; a garage (4); and two office buildings (5 and 6). All buildings except the lower office block were designed by SOM.









HOVERING above the widest pool, where water surges up to start its turbulent descent, is a writhing shelter of truss, lattice, and copper shingle (designed by Moore and Turnbull under contract to Halprin). The shelter's perplexing, active form is, like the fountain's, a potent contrast to the static forms of the adjacent buildings (left). Teasing the observer into spurious analogies, it remains an enigmatic shape, and thus evades the cuteness of most gazebo architecture.

THE PLAZA is constructed, like a contour model, in stepped increments to create a varied series of terrace and pools; the photo at left, taken from the closest apartment tower, diagrams their disposition around the main mass of tumbling water. The layers grow just gradually enough to suggest the erosive patterns of a natural landscape, yet their willful shapes pull just back from representation.











THE CASCADE, like Trevi Fountain, is carefully designed to exploit the many shapes that water can assume as it spills, falls, bounces, and swirls over a variety of forms. The water's turbulent descent takes it rushing over steps and around blocks piled up to obstruct the flow. becoming a torrent that has a small physical size but vast associative dimensions. It is finally guided into a pool dammed by giant stepping-stones, passing between them into another calmer pool before exiting in a whirl at the outlet. The most compelling evidence of the fountain's success is the gleeful participation that it provokes: few can resist the path to its pinnacle, and on a hot day there is usually someone to be found in a state of ecstatic immersion. No one will be very surprised by the first accident; indeed, a precipitous sense of possible danger is part of its extraordinary hold on the imagination. The fountain's presence offers hope that urban renewal in Portland can provide exhilaration as well as simple physical improvement.

FACTS AND FIGURES

Portland Center, Portland, Oregon. Owner: Portland Center Development Co. Architects: Skidmore, Owings & Merrill, Portland; David A. Pugh, partner in charge. Structural engineers: Cooper, Rose & Associates (residential buildings); Moffatt, NIchol & Taylor (commercial). General contractor: Portland Center Building Co. Building area, first phase: residential, 660,000 sq. ft.; service, commercial, and offices 40,000 sq. ft. Construction cost: \$12,200,000.

Portland Center parks and malls: Landscape architects and urban designers: Lawrence Halprin & Associates; Satoru Nishita, partner in charge; David Thompson, resident landscape architect. Architectural consultants: Charles Moore and William Turnbull. Engineers: Gilbert, Forsberg, Deikman & Schmidt (structural); Yanow & Bauer (mechanical). General contractor: Shrader Construction Co., Inc. PHOTOGRAPHS: Morley Baer.











POST-TENSIONING A TERMINAL

Horizontally curved beams on tapering cruciform columns (left) support the five concrete roof panels of Smith, Hinchman & Grylls's new main terminal for the Detroit Metropolitan Airport. The roof, sliced by skylights, cantilevers 35 ft. over the road to shield vehicles from the weather (above). The main terminal, the architects say, is the world's largest post-tensioned concrete structure, with clear spans of 150 ft. Smith, Hinchman & Grylls also have designed satellite terminals for American, Northwest Orient, and United Airlines as part of the airport's expansion program.

INTEGRATING A TOWER

The round columns that are the dominant feature of the monumental Kline Science Center tower at Yale (left), designed by Philip Johnson and Richard Foster, combine structure and services. They are of reinforced concrete, with vitreous tile exhaust ducts inside, a cladding of dark brick out, and spandrels of light sandstone between them. Laboratories and offices are arranged around the tower's perimeter; interior spaces are devoted to such things as fish tanks and plant rooms which require a thoroughly controlled environment. The deep colonnade at the top of the building surrounds vast mechanical rooms containing cooling equipment for the entire center, including two earlier Johnson laboratories and some 19th century buildings with which the somber tower blends exceedingly well.





PRECASTING APARTMENTS

A dramatic assemblage of boxes, Moshe Safdie's Habitat 67, continues to grow on Montreal's waterfront with some of the precast apartment units seeming to hang precariously in space (above). An on-site precasting plant is mass producing 160 units with identical exterior dimensions; their outer walls serve as the structural membrane of the 12-story configuration.





CENTERPIECE IN CENTURY CITYmaticReplacing the false-fronts ofteredthe 20th Century-Fox "back lot"shopin Los Angeles are the residen-waytial and commercial buildings ofin adCentury City, ALCOA's cine-Association

matic urban vision. Widely scattered on the 260-acre site are a shopping center and two gateway office buildings (foreground in aerial) by Welton Becket & Associates, who did the master plan; twin 20-story apartments by Charles Luckman Associates (left center); I.M. Pei's Century Tower Apartments (upper right and top photo); and the complex's centerpiece, Minoru Yama-

(center and photo above). The arc-shaped, 20-story hotel has shopping, convention, ballroom and parking facilities below ground, separately entered.

saki's Century Plaza Hotel



PITCHED ROOFS IN RESTON

Louis Sauer's seven model town houses for Reston's second village, Golf Course Island, fall somewhere between the domesticity of the Chloethiel Woodard Smith clusters in the first village and the sculptural forms of the Whittlesey & Conklin contributions. The Sauer structures have walls of rugged brick and stained cedar beneath their playfully pitched roofs. The models are the first of 400 dwellings to be built on the "island," which is nearly surrounded by the Reston North Golf Course. Their names: The Eagle, The Birdie, The Driver, The Links, The Green, The Fairway, and The Nassau.

PORTHOLES IN MANHATTAN

Polka-dotted with porthole windows, the white tile facade of the National Maritime Union's new Joseph Curran Annex slants inward at an 81/2 degree slope to comply with New York City's zoning law. Architect Albert C. Ledner devised this solution to avoid the tiered effect of the required 20-ft. setback 85 ft. above the street. Only the exterior columns of the steelframed structure slope (from the second floor up); interior members frame perpendicularly. The 11-story, \$5-million annex, on the former site of the NMU's national headquarters, is Ledner's eighth building for the union, and his second NMU building in New York City. It houses a 1,000-seat auditorium, a gymnasium and swimming pool, a cafeteria, a two-floor medical unit, two floors of workshops, classrooms and offices, and living quarters for the 200 seaman trainees who moved into the building in June.



PHOTOGRAPHS: Page 80, Bruce Cunningham-Werdnigg. Page 82, E.L. Pearson (top left), Julius Shulman [lower right), William A. Graham (botom). Page 83, Merkle Press.





SNAIL HOUSE

A guesthouse on the country estate of a wealthy art collector is one of those uninhibiting commissions that sound like Beaux Arts studio problems. True, even a guesthouse has its complications: This one in the Berkshires by Ulrich Franzen had to accommodate either a family or assorted guests, as well as skating parties and other gatherings, and house part of the owner's art collection; yet it had to be small enough to tuck into a corner of the property, sharing the view from the main house without intruding on it.

But Franzen was largely free to express his latest ideas, which can be summed up roughly in a sentence: every element in a building must be a response to the particular place and problem and must interact positively (almost agressively) with every other element. No abstract, universal solutions or passive relationships allowed.

He has applied these ideas by making every room a separate volume, shaped by its own furniture and circulation plan and sheltered by its own sloping roof. The rooms spin off from a tall cylindrical shaft, or "silo," wrapping around each other like the whorls of a snail's shell.

Their interaction approaches outright conflict where the tall silo bites into the main living area, almost nipping it in two. This tense relationship dominates the space from every point of view, except of course from the silo's serene interior.

Every one of the spaces re-



The long, low living space is squeezed at the middle by a tall "silo" alcove that turns inward, away from the view. Whether seen from the living area (above) or the dining area (below), the serrated edges of the silo seem about to engage the stepped-back brickwork of the chimney to cut the space in half. The white plaster interior of the silo, lighted by a clerestory and furnished with a built-in crescent sofa, has the unreal look of a cyclorama seen through a proscenium.





A bedroom (above) is enclosed by two intersecting curved walls. Its sloping ceiling continues over a glass clerestory into the gallery-corridor. The floor-to-ceiling lighting fixture is made of boiler flue. The projecting kitchen window (below) gives no view out at all unless one leans out like an old-fashioned locomotive engineer. On the outside, the window hood adds a turn-of-the-century flourish to the shingled walls, which curl protectively away from the projecting entry stairs. sponds to its situation with a different kind of window. The silo has only a high elerestory to trap the afternoon sun; others have wide, prosceniumframed views of pond and hills, narrow views into nearby trees, or sidelong views out of hooded oriels (below, left).

There are places where the response of the house to the particular seems less direct. Many of the paintings appear cramped by the small rooms, especially since most of the walls are curved or canted and the ceilings low and sloping. The interaction with the site is impeded by a too-visible concrete underskirt, which sprouts massive concrete steps at the entrance.

Seen as a whole (right), the house is an off-beat but interesting response to the Berkshire landscape. Its sharply intersecting eurves are played against the gentler outlines of hills, trees, and pond. No one would think that it had grown there it is obviously a man-made object, fashioned to sophisticated tastes—but it is nonetheless at home in its quiet setting.



FACTS AND FIGURES

House in Berkshire County, Mass. Architect: Ulrich Franzen; Associate in charge: Allen S. Anderson. General contractor: David McNab Deans. Building area: 2,000 sq. ft. PHOTOGRAPHS: exteriors, Joseph W. Molitor; interiors, Ernest Le Claire and Whitney S. Stoddard.







BOOKS

ADOLF LOOS: Pioneer of modern architecture. By Ludwig Munz and Gustav Kunstler. Published by Frederick A. Praeger Inc., New York, N.Y. 234 pp. Illustrated. 8¹/₄ by 9¹/₂ in. \$20.00.

REVIEWED BY RICHARD NEUTRA

The truly magnificent introduction to this book by Nikolaus Pevsner says of Loos: "His personal character is still unknown. Those who have been his friends and his pupils and are still alive ought to speak before it is too late. I have never spoken to him nor seen him."

The more I read Dr. Pevsner's pages and looked through the illustrations, and above all, the more I read the three articles reproduced from Adolf Loos's own writings, the more I was stirred in my innermost soul. It was like sitting opposite Adolph Loos again, and seeing his face which Oskar Kokoschka has so wonderfully portrayed (1).

Loos had exactly the expression which Kokoschka has made immortal in his line drawing. He would sit, a very far-distant-reaching look in his eyes, in the old restaurant behind St. Stephan's Cathedral, where we used to meet; or in the Schwarzwald Schule, where he taught when he was 40 and I a student. He would speak in a very low voice and sometimes accentuate a humorous turn —and there were many humorous turns—with a very slight smile.

One had to listen attentively over the noise in the restaurant to hear him, or over the noise on the marble top of the bar counter in the Kärntner Bar (2). Loos himself would not drink anything alcoholic; he would drink "ein Glas Obers"-a tumbler of raw cream, which had been prescribed for his ailing stomach. His face was wrinkled and at the same time young. His hair was slightly curly and blond, hardly tinged with gray when I first knew him, but not very plentiful. He was at that time married to a very pleasant young Scottish woman, who was, like he, a quiet person. All the wives that Loos had seem, according to my memory, to have remained very much attached to

Mr. Neutra, one of the world's leading pioneers in modern architecture, was a pupil and friend of Adolf Loos before coming to the U.S. His article is as much a series of fascinating reminiscences of his days with Loos as a review of the present book.



Kokoschka, 1910. 2. The Kärntner

Bar, Vienna, 1907. 3. Proposal for

Chicago Tribune Tower, 1922. 4.

Scheu House, Vienna, 1912.

him. He never had any quarrel, it seems, at least not in my presence. He was the most soft spoken person I have ever met.

I still hear him tell the "story of the saddle maker"—much more extensively than Dr. Pevsner tells it—in his own excellent words. The story as Adolf Loos told it was as gripping as it was tragic, as sad as it was humorous. It had the mood of the one which I told in my autobiographical sketch, "Life and Shape," about his experiences in lower Manhattan, near Orchard Street.

I said that I remember all this, but I must also admit that going through this book, with a great many emotions, I found the enigmatic character of this unusual man revived in such a way that I almost felt that I was a true plagiarist of Loos—as he is revealed in his words, rather than in his work—and that personality impacts, integrated and fused, are more important than any kind of formal borrowings and loanings.

When in 1923 The Chicago Tribune competition was announced by that great newspaper of the Middle West, it had a motto written in a panegyric style by Louis Sullivan. It was the year before I, standing side by side with Frank Lloyd Wright, saw Sullivan buried in a graceless cemetery called Graceland. We were standing and listening to funeral orations which in no way reflected Sullivan's personality. Frank Lloyd Wright listened, deeply sad, as was I. Wright had imbibed so much from Sullivan without ever in the least becoming an imitator.

Sullivan had written enthusiastically about ambitions of *The Chicago Tribune*, in a spirit similar to that of Adolf Loos's words in a pamphlet Loos had attached to his submission of "the great column" (3). Loos wanted to erect it in Chicago, a city he had visited when Sullivan's Transportation Building, amidst "Colonnades of Antiquity," adorned the Chicago Fair during 1892-1893.

This Chicago Tribune competition was the only point of contact of the two men who, perhaps, impressed me most in my life, as persons, and as thinkers in my profession. Sullivan was, when I knew him, a down-and-outer, a relic, or considered as such by all except a few friends who bought him some dinners in the Cliff Dwellers Club.

Adolf Loos was not a crier in

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the wilderness, but a crier in the midst of a cultural scene which he denied. Both Loos and Sullivan used the word "functional" on some occasions, but in their two minds the word did not mean the same thing at all.

Dr. Pevsner is right. Loos was, and has remained, an enigma. If I should first indicate what has stayed with me most, it was his faith in, and almost cult of "lastingness," as compared with passing fashion. He was reaching out for some contact with history, to produce this "lastingness" despite the fashions of the day. They were to him as obnoxious as were the fashions of the parvenue, the upstart, who demanded a cultural adherence from his architect, who, in turn, had dispossessed the craftsman. Loos was sometimes full of admiration for the craft, whether he spoke of a hatter, a shoemaker, a saddler, a plumber or a cabinet maker.

He was full of admiration, too, for the machine, which had produced the bicycle—a true equivalent, according to him, to Hellenic shape—perfection of "lastingness." But it was so obvious to me, even then, that bicycles were purely technical objects and, for utilitarian reasons, would soon become much more dated than Doric temples—as dated as single columns standing on an old newspaper plant. I was very much perturbed by a design like this.

His story of how a client sent Loos a check after Loos had almost forgotten him, 25 years later, moved me deeply. This was a second fee, a second honorarium, with a touching letter, that Adolf Loos quoted from memory in his inimitable sort of narration:

"Dear Mr. Loos: Other people also got a house 25 years ago, but they have since had to employ other architects, because the house they got went out of style. They are not as lucky as I, who got a house from you, and it is still good. I think it is only fair that I should send you another check, because I don't need another architect. Forgive me that the check is so small. It is for the same amount which I paid you once, 25 years ago, but now the currency has greatly shrunk in value . . . the check is small but the house is wonderful."

Perhaps Loos was not just, and not even right, in criticizing some of his contemporaries. He hated the "secession," the group of artists who had entrusted Olbrich with their building on the Karlplatz. Loos referred to these people as "pathological cases. This sort of artist rejects even his own products within three years. To cultivated people they are immediately unbearable; others are aware of their unbearableness only after some years. Where will Olbrich's work be in ten years time? Modern ornament has no forbears and no descendants, no past and no future. It is joyfully welcomed by uncultivated people, to whom the true greatness of our time is a closed book-and after a short period it is rejected. Mankind today is healthier than ever, only a few people are sick. But these few tyrannize the worker who is so healthy that he cannot invent ornament."

Those "few people" seemed to make the ornaments, they invented things in the greatest variety of materials. Loos could improvise in the wittiest way about "purple fish which looked, until recently, red," about embryology, about economics, about all the things which also interest me. I almost feel as if I had stolen things from him. I think of my times with Loos and the loving words with which he sent me a book, as a gift, about minerals and stones. It was an award, and a distinction, because he felt I was a good pupil.

And without doubts in my own heart, I believe that I took him much more seriously than one or two of my friends who imitated his beamed ceilings or his taste for mixing interior "styles". Loos had practically everybody against him in Vienna, except for Karl Kraus, Peter Altenberg and Arnold Schönberg, whose concert premieres we protected by the muscular strength of young men assigned to throwing hecklers out of the Musik Vereinssaal.

I cannot help being full of reminiscenses just as Dr. Pevsner suggests I should be. Gustav Künstler, the coauthor of this book, says in his preface that the question is: "How does it concern us today?" Can a person answer with tears in his eyes? How can I be an objective reviewer, when I am so deeply touched by events, long past, including the memory of the last postcard which Loos wrote to me from the hospital.

I courted my wife in the Loos house for Robert Scheu (4), built in 1912, in which she lived in 1919. I have talked with Le Corbusier about the Thonet bentwood chair, which Loos much admired in our presence. So many different people



5. Project for a store in Alexandria, 1910. 6. Kärntner Bar. 7. Khuner Villa, Austria, 1930. 8. Karma Villa, Switzerland, 1904-1906. 9. Steiner House, Vienna, 1910. have learned and imbibed something when Loos quietly spoke. As I mention Le Corbusier, I suddenly remember how in Brussels, in 1930, I walked with him alone through the Stoclet House by Joseph Hoffman, perhaps 20 years or more after it was built.

Hoffman was "the professor" whom Loos demolished in my eyes, or had tried to demolish in the eyes of his generation. Strangely, Schinkel and the classicism of Vitruvius in a way also impressed Otto Wagner and Joseph Hoffman, as it had impressed Adolf Loos! It impressed me very adversely when I finally came to see with my own eyes, the real, original Greek architecture-appealing, with such subtly evolving normalization, and with ever greater sensitivity, to the responsiveness of human eyes, nerves and brains-all things quite beyond the understanding of Vitruvius, that pedantic maker of rules for classical architecture. The Roman standardization from Syria to Sussex was praised by Loos! And the British, who were overwhelmed by the Romans, "but never hesitated to make their hands dirty and then wash them in a wall-plumbed washbowl," were as much praised by him as was clean-handed classic aristocracv!

Dr. Pevsner is right, Loos was an enigma; enigmas and geniuses do not contradict themselves. It is their combination of antithetics and of consistency which makes them so impressive (5). Loos was a violent but quiet-spoken attacker, a reformer of ruthlessness and at the same time a most calm, almost whispering, mildly smiling philosopher of wrath. He lived in a capital city of undoubted historical tradition that had absorbed a world-wide culture. Yet he formed "a society to introduce culture into Vienna," which as a center of Europe, had been besieged by the Ottomans in practically the same year William Penn founded his out-of-the-way city of brotherly love.

"The confidence tricks those who borrow from past styles; they should be told an energetic 'hands off'." Thus spoke Adolf Loos; and this is the same man who himself designed "the Chicago Tribune Column,"—slightly smiling about the ambiguity of this expression, suggesting that newspaper people want to build "an eternal structure."

It is amazing how the pictures (continued on page 116)



A BUILDING AS A SYSTEM

BY TONY ALEXANDER

The new laboratory buildings at Birmingham University, in England, represent an approach to completely integrated building systems that may be applicable to other structures as well.

The designers tried to mesh the structure, and all the necessary mechanical and electrical services, in a single organism. Further, they employed thoroughly industrialized building methods. And, finally, they applied this approach and these methods to one of the most difficult of building types: the flexible research and teaching laboratory.

Philip Dowson, the senior partner in the Ove Arup office in London, put it this way: "A laboratory building is 'packaged services' and structure becomes subordinate. . . [We tried to build] a continuous horizontal and vertical network of spaces, a network of structural discontinuity."

This "discontinuity" was achieved by building the labs out of precast, 20-ft.-square, storyhigh concrete "tables" (1), stacked one on the other. Threeft.-wide spaces were left between these stacks of "tables," and these spaces then formed an uninterrupted network of vertical and horizontal ducts (1 & 2). Details of the system are described on the next six pages.

Opposite: Close-up view of precast column-ducts topped by ventilation caps that cover exhausts or vents. Right: (1) diagrammatic explanation of structural system using concrete "tables"; (2) ground floor plan of labs, with grid of horizontal ducts; (3) overall view of labs, showing two of the four completed blocks.

Mr. Alexander, a British architect now working in New York, was a designer in the office of Ove Arup & Partners, and worked on the development of the Birmingham labs described on these pages.







Structural system of precast "tables" was assembled on the building site

The structure of the Birmingham labs was assembled like an erector set: each "table" has four, story-high, precast "legs"; and the "table top" is a 2-ft.-deep, precast waffle slab, measuring 20 ft. square (with ribs 5 ft. on centers), and weighing 17 tons.

The slabs have little "ears" that extend from each corner, and these "ears" fit directly on top of the precast "legs" (see 4 & 5). The "legs" were erected first. As the "table tops" were placed on the "legs," horizontal slots, about 3 ft. wide and 2 ft. deep, were created between adjacent "tables," and these slots, together with vertical ducts formed by the clusters of four legs supporting the adjacent tables, make up the three-dimensional network that services the labs.

Precision precasting enabled the designers to notch out the structural components in several places to simplify detailing: the "legs," nominally square in cross-section, have notched-out corners to receive removable, plastic-faced panels that enclose the duct space within each cluster; the ribs under each slab were cast with grooves in their thin edges, and the grooves carry electric conduit to lighting fixtures; finally, the tops of the slabs were also cast with 5-ft -on-center grooves, deep and wide enough to receive distributors from the principal service network to any island benches in the middle of the labs (see cutaway drawing (6) for complete explanation of the integrated building system).

Opposite: (4) 17-ton waffle slab being hoisted into position over precast legs (5) that will support it. Note 3ft.-wide slot created between adjacent floor slabs. This serves to distribute services horizontally. Right: (6) Cutaway drawing explains assembly of including structural components. fascia panels on exterior walls, and precast ventilation caps that sit on top of column clusters. (7) At ground floor level, lab blocks are recessed to create arcaded pedestrian walks through the 420-ft.-long building.









Space within the structural system contains the utilities and the circulation system

The flexibility of the building system used at Birmingham is revealed in the partial floor plan (8) at far left. The column-ducts, 23 ft. on centers, together with the floor and ceiling ducts, permit the location of lab benches almost anywhere. (The secondary distributors in the grooves cast into the slabs are rarely used, since most lab benches are long enough to intersect the principal network at some point.) The basic planning module is 5 ft., but the 3-ft.-square column-ducts introduce a useful variant that produces minimal offices 8 ft. wide; still there is no limit to the maximum size of the labs. While the vertical columnducts were enclosed with removable, plastic-faced panels, the horizontal ducts were covered with precast slabs on top, and with wood access panels underneath (9). The ribs in the slabs

carry lighting fixtures as well as overhead service booms (10). A further advantage of the building system is shown in the stairwell (13). This well was created, quite simply, by omitting one set of 20-ft.-square slabs in the center of each floor. Within the well, the stair was then erected as a free-standing precast structure. Its elements are a cross-shaped center support (11), shown here during construction, with its notchedout edges that were later fitted with lights; and a series of posttensioned stair elements that were attached to corbels cast nto the center support (12). The completed stairwell is framed by edge beams, modified from those used on the exterior walls, to ake the place of the omitted loor slabs (13).

Opposite: (8) Plan of typical floor in one of the laboratory blocks. Most abs use perimeter space; darkrooms tc. use interior cubicles. Central tairwell is skylit through the roof. 9) Diagram of service distribution to abs. (10) Typical corner lab, with verhead service booms. Right: (11) enter support of stair, during asembly, and (13) the completed stair.



Integrated building system was produced through the teamwork of experts

The buildings contain teaching and research labs, and various workshops. The disciplines range from Mineral Sciences to Physical Metallurgy. Very late in the planning stage, a department dealing with animal behavior was added. Yet the flexibility of the system served all these disciplines equally well.

This flexibility, or universality, is the result of a high degree of teamwork practiced in the Arup office. There are architects as well as mechanical, structural and electrical engineers involved in the creation of each building, and the close, personal relationship among all the various experts, at the drawing board level, resulted in a closely integrated building. This sort of teamwork helped eliminate such elements as suspended ceilings and furredout walls, with obvious reductions in cost. Finally, though the "structure becomes totally subordinate," it does, in fact, become the enclosure and articulation of the services-and gives a great visual unity to the many types of spaces contained within.



Right: (14) Parade of ventilation caps above roofline. Plastic skylights, set into 5-ft. squares of precast slabs, illuminate stairwell below. (15) Variation of an old English glazing detail, using steel muntins covered with lead, was used to hold the glass (see drawing, above). Continuous gutters cast into the edge beams carry rainwater to precast "gargoyles" to prevent stains on fascias.

FACTS AND FIGURES

Laboratories for the Department of Mining and Metallurgy, Birmingham University, England. Architects and Engineers: Ove Arup & Partners. P.M. Dowson, partner in charge. General contractor: John Laings Construction Co. Building area: 156,350 sq. ft. Cost (including furniture): \$3,053,568. PHOTOGRAPHS: Pages 90, 91, 93, 96 (bottom), John Donat. Page 95 (bottom), Colin Westwood. Page 96 (top), Harry Sowden.











mend guidelines for stimulating the use of more art.

The two will try to encourage, but not dictate, quality, according to Weaver, who said he is "dead set against any bureaucratic agency dictating good design."

UPS & DOWNS

OUR (CENSORED) AIR

Efforts to get rid of air pollution have been cloaked in the same kind of secrecy that made another social disease, syphilis, a taboo subject a decade ago, says Donald Green, head of the U. S. Public Health Service's health statistics publications center in Washington. Speaking before the convention of the Air Pollution Control Association, held in San Francisco in late June, Green charged that experts who know the causes of air pollution keep the facts from the public.

"The secrecy which prevented frank discussion of the communicable social diseases some years ago, sprang from a misguided moralism," Green observed. "The secrecy which prevents frank discussion of the environmental social diseases today rests on equally misguided economic considerations." Green charged that "well-meaning control officials, public-spirited industrialists" and labor leaders are taking a "notnow" attitude toward pollution control on the ground that it is too costly.

His charge seemed to be born out by another convention speaker, John H. Fairweather, president of the industry-dominated association. "Industry-wide we have developed in America the greatest competitive force for the production of goods and services in man's history," Fairweather said. "That competitive force cannot now be stifled in our quest for protection of our environment, and we must not sacrifice vital rights in the protection of our economic competitive integrity."

While the convention was in progress, *The Los Angeles Times* reported that a special Federal grand jury had begun secret hearings into allegations that major automobile manufacturers had conspired to obstruct and delay development and installation of smog devices on automobiles.



LOST: AN UMBRELLA

Paul Rudolph's 1954 "Umbrella House" in Sarasota, Fla., has lost its umbrella. In June, Hurricane Alma tore away the latticework canopy that extended over a pool (see before and after photos, above), and broke some of the jalousie windows that comprise the front elevation.

The house had survived an earlier hurricane, and the neglect of absentee owners. It was being put back in original condition by its current owner, Architect Tom Kincaid, when Alma struck.

SHARING THE POVERTY

The U. S. Conference of Mayors, meeting in Dallas in June, served notice that it is time the suburbs shouldered a "reasonable share" of the burden of housing and schooling low-income residents of the cities. Over opposition from suburban mayors, the big-city mayors passed a resolution by Mayor Henry W. Maier of Milwaukee that urged the Federal government to cut off financial aid to suburbs that do not encourage broader distribution of the poor.

Specifically, the resolution calls for Federal legislation that would make suburbs agree to provide a reasonable share of the low- and middle-income housing in the area as a qualification for such Federal grants as water and sewer systems, open spaces, and parks; make Federal education funds contingent upon an agreement to accept pupils from poor districts to "reduce the social and economic stratification" between city and suburban school systems; revise Federal policies "to encourage the building of low- and middle-income housing in all municipalities of metropolitan areas."

Suburban mayors reacted loudly with charges of reverse bigotry, big-city domination, community disruption and, of course, unconstitutionality. The Wall Street Journal joined in by editorializing that the mayors' demands were unfair "to those who have fled the city chaos seeking to better themselves." Besides, said the Journal, "the cities have brought their troubles on themselves" through "years of profligate management by political machines."

COUNT ME OUT

In one of his last official acts as president of the AIA, Morris Ketchum Jr. dropped a small bombshell by indignantly resigning as a member of the Department of Commerce's National Advisory Committee on Highway Beautification.

Charging that the committee had been called upon only for "theoretical discussion," Ketchum said his continuation as a member would make it appear that the AIA was "tolerating, or even approving, policies of which it disapproves—policies which are in direct opposition to those of President Lyndon B. Johnson." He cited the department-approved elevated expressway to be located along the waterfront of the French Quarter in New Orleans (March issue) as one prime example.

How much practical effect Ketchum's action will have on the department's approach to urban freeways remains to be seen. Commerce Secretary John T. Connor would only say that he was "very sorry" about the resignation.

RED TAPE

DAY OF THE RAPE

On paper, at least, the nation's capital now has a formally approved plan for construction of freeways, tunnels and bridges, all to be completed by 1972, when Federal interstate highway funds run out.

The plan was put down on paper with all the subtlety of a 35ton truck and trailer tail-gating down a turnpike. After years of controversy, the issue was brought to a head at a meeting of the National Capital Planning Commission by Brig. Gen. Charles M. Duke, a member of the commission by virtue of his post as one

Eulogy-In 1959, when the town of Poissy decided to tear down Le Corbusier's famous Villa Savoye (built in 1930) and replace it with a public school, people from all over the world protested to Andre Malraux, the French Minister of Culture. Malraux intervened and announced that the building would be saved. Unhappily, this promise has not been fulfilled: the Villa, which was damaged during the war, has suffered even more seriously since, as these photos (now on exhibit at the Museum of Modern Art) indicate. Moreover, the town did build its curtain-walled school right next to the neglected and defaced Villa (see below). M. Malraux will be remembered for-among many fine things-his ringing eulogy at Le Corbusier's state funeral in the court of the Louvre last September. The walls of the Louvre, by the way, are currently being cleaned and polished by agents of the Ministry of Culture.





of the three commissioners of the District of Columbia.

For the better—or worse—part of one afternoon, the commission voted on 21 separate portions of the freeway plan. On 16 votes, there was unanimity. But on the remaining five—the key issues that have caused all the controversy the vote was 6-to-5. On each of the critical votes, the split was the same, lining up the public officials who serve on the commission ex officio along with Duke against the five public members appointed by the President—including the chairman, Mrs. Elizabeth Rowe.

Probably the most critical of the votes was one approving a new crossing of the Potomac in the vicinity of the Three Sisters Islands, near Georgetown University. But there were also differences of opinion over other key links in the inner loop freeway that will, according to the plan, eventually encircle downtown Washington.

When the five-hour round of votes was over, no one seemed really to know what had been accomplished.

Each item in the freeway plan is subject to review by a variety of agencies, including the NCPC and, it was noted, the delicate balance of votes on the commission could change at any time.

But John R. Immer, president of the D.C. Federation of Citizens Associations, had no doubt what had happened. "This," he said, "will be remembered as the day of the rape of Washington."

EQUAL FRUSTRATION

One thing can be said of Washington's cumbersome, many-headed planning setup: it applies itself with democratic equality to individual buildings as effectively as to vast undertakings like the freeway system (see above). A case in point is the proposed \$6-million library for Georgetown University, which has been knocking around Washington's planning bodies for more than six months.

In the course of its run through the planning mill, the library's design and location have been pondered by the National Capital Planning Commission four times, the Fine Arts Commission three times, and the Board of Zoning Adjustments three times. The Planning Commission doesn't like its location in a residential section of Georgetown, which is clogged with autos but otherwise has remained immune to the 20th century. The Fine Arts Commission doesn't like its design (above), by commission member John Carl Warnecke. Only the Zoning Board has acted favorably: it approved both the location and design after the university agreed to chop 41/2 feet off the penthouse and reduce the height of a parapet wall.

This leaves the university with two choices: change the library's location to please the Planning Commission, and its design to please the Fine Arts Commission, or go over their heads and appeal to the District Commissioners. The latter course would be highly risky, since the District Commissioners have never overruled the Fine Arts Commission on a major Georgetown project.

WOULD YOU BELIEVE . . .

If the library caper isn't evidence enough, there's always the case of Woodson Senior High School and Community Center.

Designed by McLeod, Ferrara and Ensign for a tight, 15-acre site, the proposed complex (right) would focus on a 10-story building housing sorely needed community facilities on the first two levels, and elassrooms above.

The Fine Arts Commission gave the design its immediate and enthusiastic approval, but the Zoning Advisory Council, without even waiting for an explanation, turned thumbs down on the project because, it said, it didn't like the "visual effect."

The Zoning Advisory Council advises the Zoning Commission on what the National Capital Planning Commission and the District Engineer Commissioner want. It should not be confused with the Citizens Zoning Advisory Committee, which advises the Zoning Commission on behalf of the citizens.

The Board of Education can now appeal to the Zoning Commission and, if that fails, to the Board of Zoning Adjustment, which should not be confused with the other zoning bodies. Even if the Board wins these rounds, though, it still has to get money from Congress to build the project.

IPROGRAMS

CHURCHES AND HOUSING

Urban Amercia Inc. has planted the seeds of substantial growth in the number of low-income housing units sponsored by religious groups.

The organization, publisher of the FORUM, is joining with several major Protestant denominations in a program of financial, technical, and legal assistance to church-related housing sponsors. The participants are United Church of Christ, the United Presbyterian Church, the Protestant Episcopal Church, and the Methodist Church; and the American Baptist Convention is considering joining in.

The effort will be focused on opportunities for non-profit sponsorship of housing offered by the 221d3 and rent supplement programs. Urban America will administer the aids under its Local Development Services Division, with an annual operating budget of some \$1 million.



SECOND CHANCE

The newly formed Chicago School of Architecture Foundation has taken an option to buy, and thereby save, H. H. Richardson's massive Glessner House. Architects Harry and Ben Weese are heading a campaign to raise \$35,000 to buy the house and \$100,000 to renovate it as a museum of Chicago architecture.

The house was built in 1886 for John J. Glessner, an International Harvester Co. executive. Eight-



inch Wellesley granite walls (detail above) face the street, and major rooms open to an interior court.

Glessner gave the house to the Chicago AIA chapter, but the chapter could not afford the maintenance costs. Its next owner was the Illinois Institute of Technology, who sold it in 1958 to the Graphic Arts Technical Foundation. The foundation last year moved to Pittsburgh.

Philip Johnson, who calls it "Richardson's best house," tried to save it single-handedly last November: he was willing to buy it, but could find no non-profit organization able to meet the \$40,000 annual maintenance bill.





IPLANNING

HOW TO SAVE AN ISLAND

The New York City Planning Commission has issued a 66-page report on the saving of Staten Island. It contains even fewer images than the commission-sponsored Lower Manhattan Plan (page 46), and an even stronger emphasis on strategies and procedures.

Its main recommendations are the establishment of a development coordinator for the whole of Staten Island by the mayor, and the formation of a development corporation to control the disposition of land in its relatively unspoiled, 15,000-acre South Richmond sector. The corporation, a quasi-public agency, would acquire either land or development rights, plan its use, then resell it to developers, presumably under appropriate controls.

The development coordinator would seek to bring some order to the city's role in Staten Island's headlong growth, which in the past has amounted to the abetment of rape. The report asks for a return to city control over mapping of new streets, which was cheerfully given away by the city council in 1963 at the behest of Staten Island's wealthy home building industry. It also calls for an end to the indiscriminate sales of cityowned land, most acquired by tax foreclosure after a brief 1921 boom, to pay today's bills at the expense of tomorrow's environment.

The report contains few design proposals, except for substitution of cluster development for conventional subdivisions (sample above) and the creation of a series of connected greenbelts.

GIFTS

FROM UNCLE, WITH LOVE

Thanks to Uncle Sam, things are looking up for at least four of the 17 cities that lie along the 75-mile Bay area Rapid Transit system (see June issue).

HUD has awarded a series of grants to BART for (1) burying most of the line through densely populated Berkeley, (2) creating the nation's first "rapid transit parkway" along 2.7 miles of elevated right-of-way through Albany and El Cerrito, and (3) extending the mezzanines of the four subway stations along San Francisco's Market Street across busy intersections to lessen pedestrian-auto conflicts on the surface.

Federal funds also will help pay for a new station at the foot of Market Street, near an area slated for a \$100 million commercial development. All told, BART may receive as much as \$80 million in Federal aid over the next five years, HUD Secretary Robert C. Weaver announced, depending upon how much money Congress appropriates for mass transit in the coming years.

PEOPLE

MONUMENTAL MUDDLE

The FDR Memorial Commission has chosen Marcel Breuer as its architect. While the choice of is a good one, the manner in which the commission went about it set some unfortunate precedents.

Breuer himself said of the winning design by Pedersen, Tilney, Hoberman, Wasserman & Beer that he "rather liked it, and was sorry that it was dropped. It was an interesting design." So did a good many other architects and critics. No matter how successful Breuer's solution turns out to be, the history of the FDR Memorial Competition is bound to be an obstacle to the holding of such contests for important public projects in the future.

The manner in which Breuer was selected was more than a bit unorthodox: once the competition winner had been dropped, the remaining 14 members of the commission (mostly members of Congress) first collected lists of suitable architects from the AIA and others, then "narrowed down" those lists to 55 names, then to 11, and finally to five—all without benefit of professional advice.

The five were Breuer, Philip Johnson, Paul Rudolph, E. Lawrence Bellante (of Bellante & Clauss), and Andrew Euston (associated with Andrew Euston Jr. and Cooper & Auerbach). After they were called in for brief interviews concerning "philosophy and intent," Breuer was selected.

Competitions may not be an ideal way of selecting an architect, but few competitions in recent years were as well planned and judged as the one for the FDR Memorial. Certainly, a hit-andmiss committee session is no way to select *any* professional. One must be grateful, under the circumstances, that the choice, somehow, turned out to be just fine.

ELOQUENT SILENCE

"Mies van der Rohe has accomplished so much so quietly that one wonders why other men have had to be so noisy," said Graham Foundation Director John D. Entenza, in tribute on the occasion of Mies's receiving the Gold Medal of the AIA's Chicago Chapter in June. "In my experience I have never known silence to be so overwhelmingly monumental and charged with meaning."

Mies, who was bedecked with the medal by Chapter President



Paul D. McCurry (above, Entenza looking on), offered a simple "thank you" and said he was particularly pleased that the honor had come from his "Chicago colleagues." The medal is inscribed "to Mies van der Rohe, who, in the greatest tradition of Chicago's architects, has maintained design, order, clarity, and the essential verities."

Entenza himself was honored June 17 when the Yale Arts Association presented him with its Medal, the highest award of Yale's art and architecture school. Entenza was cited "for discovering, selecting, and helping those who have come to be leaders in the creative development of our time."

ESTABLISHED REBEL

Sculptor Jean Arp gained fame in the first decade of the century as one of the founders of the Dada movement, that zany rebellion against pomposity and convention. At the time of his death on June 7, the movement as such had long since subsided, but Arp was universally recognized as a great sculptor and important influence on modern art.



Arp (above, with some of his works) was profoundly influenced by nature. "I tried to make forms grow," he once said. "I put my trust in the example of seeds, stars, clouds, plants, animals, men and finally in my innermost being."

HISTORIC MODERNIST

Emil Fahrenkamp, whose radical Shell Office Building (below)



in West Berlin looks as modern today as it did when it was built in 1931, died on May 27 in Düsseldorf at the age of 80. The building is now receiving a new addition, designed by competition.

Wolter MiQuade

SOME PLAY GOLF AND SOME DO NOT

The hot weather arrives and the scene shifts from the paved pleasures of Manhattan to the rural calm of outer Long Island's farming area. Yes, Virginia, there still are Long Island potatoes—yes, Maine, yes Idaho-thousands of acres of spuds flowering neatly under the heavy pressure of a big sun in clear sky over them. Miles of aluminum pipe are laid down the furrows, carrying ice cold well water under 100 pounds pressure to be released in brilliant spray by the irrigation spinners. The potatoes couldn't have it much better, could they, with rain and sunshine simultaneously?

Nor could we. The potato fields roll up to a wooded bluff and give way to shadiness, and beyond, below, Long Island Sound glitters lazily. There are but few people -instead mostly beech trees, mourning doves, children and animals. Before dinner a little Tanqueray gin and Bombay vermouth, with a dried apricot in it, helps save a lot of kerosene in the lamps after dinner. The early morning, soaked with dew, is too rare to miss. Yet the mind goes on in its usual patterns, and for anyone who spent formative years at an architectural school, it must be admitted the patterns are rather set.

The faculty put the problems down for us on paper, in mimeographed design assignments, and we solved them, also on paper: one-day sketch problems, twoweek, six-week, term-team problems, finally the thesis problem, self-administered. The world didn't turn out to be exactly like that,

of course, nor did even architecture. Somehow people kept inching in with their unmimeographed intricacies, obscuring the splendid cause and effect of a clear, logical design solution, wanting the wrong things. Modern architecture was a profession with a religious certainty to it, until recently. A generation of architects fought forward with the zeal and confidence of knights templars, the sure faith that good design ameliorates all: down with eclecticism, up with tasteful rationalism. But now is heard the sigh of the sociologists: "Architects don't understand people." Sometimes they even sneer.

But then, I don't even understand goats, and I've been giving them quite a lot of time recently -or one little maiden goat named Kitzel. Tell me, who would ever program a design problem that would produce a goat as the solution? Granted they are strangely beautiful animals; Picasso is right again. They have that Aalto-barny quality so current in the magazines, but are at home with industrialism as well. The goat is a four-legged creature of nature with split hooves who likes nothing better than to sit on the tops of automobiles, rising now and then to nibble solemnly at the leaves of the trees. For no particular reason ours has no horns. (Sam Hoffenstein described people, "Some play golf, some do not." Likewise, perhaps, with goats and horns.) Certainly Kitzel's design program didn't call for her to sit on the top of cars. It's dangerous. Before you know it people will be taking it up—the children already have.

Another peculiar design detail of all goats, including Kitzel, is wattles, little pouches of skin suspended from the neck, dainty little amulets. Nobody seems to know what they are for. Perhaps all the copies of the program got lost somewhere. The only good guess I've had was from a business friend out for a weekend who suggested that possibly after the goat creature was completely designed, but not quite into production, a management consultant was called in, and added them. My friend continued: "so why do you put apricots in martinis?'

It's very complicated. What does Kitzel think about, sitting gravely up on top of that station wagon looking down at us? James Thurber said his poodle thought she was a human. Thurber never let a mirror be hung where the poodle might suddenly come upon her reflection. But that's no problem here. Kitzel thinks we are all goats. Do architects look into mirrors? Do sociologists?



PHOTOGRAPHS: Page 37: Ezra Stoller Assoc. Page 38: Los Angeles Times. Page 99: Lionel Freedman, Philip H. Hiss. Page 100: Allen Photographic Service, James R. Dunlop Inc., Historic American Buildings Survey. Page 101: Vic Gorecki, Alexander Liberman.



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Owner Remodels 70-Year-Old Manhattan Hotel Into Modern All-Electric **Apartment and Saves Money** In the Doing

NEW YORK CITY, NEW YORK — Take a 70-year-old hotel, rip out the old oil-fired boiler, radiators, lobby, etc., add an electric baseboard heating system, through-the-wall electric cooling units, insulation, new ceilings, lobby and facade, and what do you have? You have a modern all-electric apartment building and you have three professional suites in the space formerly taken up by the boiler room. You also have a building that is easier to maintain and more economical to own and operate, says builder-developer Herbert R. Mandel, president of Okman, Inc., who remodeled the building he and his associates own at 46 West 73rd Street in New York City into Wellington House apartments in 1964.

Mr. Mandel says that he was able to include the electric heating system at a price he estimates to be about 8 percent below what it would have cost to modernize with oil heat. Renovation of the sevenstory building came to about \$250,000, he says, and included the cost of tearing out the old radiators, wiring, boiler, piping, gas stoves, refrigerators, floors, partitions, etc., and replacing these items with modern living units containing new wiring, electric baseboard heaters, electric cooling units and electric ranges and refrigerators.

Architect Stanley Rapaport designed the building to contain a total of 36 studio and one-bedroom apartments. Each room is equipped with a thermostat so that tenants can dial the exact degree of heating wanted, as required, without regard to other rooms or apartments. This eliminates one of the major discomforts of apartment living, Mr. Mandel says, which is overheating and underheating resulting from such things as: landlords who try to economize on fuel, janitors who don't know how to operate the equipment, faulty maintenance, mechanical and boiler breakdowns, nondelivery of fuel, or trying to please tenants who are cold while other tenants complain of being too hot.

None of these drawbacks applies to electric heat with individual room controls, Mr. Mandel states, because each tenant has what amounts to his own heating and cooling system. This naturally results in greater tenant satisfaction, he says, and is a major selling point in renting apartments.

CATEGORY OF STRUCTURE: Apartment Building

GENERAL DESCRIPTION: Area: 24,532 sq ft

Volume: 249,200 cu ft Number of floors: six and a basement Types of apts: 3 professional suites, 36 studio and one-BR apts

CONSTRUCTION DETAILS:

Glass: double

Exterior walls: front wall: 4" brick, 8" cinder block, 2x3 wood furring, blanket insulation (R/9). U-factor: .08; other walls: 8" brick, 2x3 wood furring, blanket insulation (R/11). Ufactor: .07

Roof or ceilings: flat built-up, blanket insulation (R/19). U-factor: .05

Floors: 2" wood, lath & plaster below Gross exposed wall area: 14,900 sq ft Glass area: 2,500 sq ft

ENVIRONMENTAL DESIGN CONDITIONS: Heating:

Heat loss Btuh: 605,000 Normal degree days: 4,871 Ventilation requirements: none Design conditions: 0°F outdoors; 70F indoors Cooling: Heat gain Btuh: 600,000 (approximately) Ventilation requirements: none Design conditions: 95F dbt, 76F wbt outdoors; 80F, 50% rh indoors

LIGHTING:

Levels in footcandles: 10-50 Levels in watts/sq ft: 1-3 Type: fluorescent and incandescent

HEATING AND COOLING SYSTEM: h

Heating by electric baseboard resistance units; cooling by through-the-wall electric units installed beneath windows; individual room controls.

ELECTRICAL SERVICE

Type: underground Voltage: 120/208v Metering: secondary

CONNECTED LOADS:

Heating & Cooling (51 tons)	192 kw
Lighting	36 kw
Water Heating	324 kw
Cooking	432 kw
Other	63 kw
TOTAL	1047 kw

INSTALLED COST:

This 70-year-old building was remodeled from a hotel into an apartment building in 1964. Including the installation of new ceilings, insulation, a new lobby, a new facade, new electric wiring and electric heating and cooling units, electric ranges and refrigerators, the cost of the renovation came to about \$250,000. Details are given on page one.

NOTICE: This is one of a series of case histories of buildings in all structural categories. If you are an architect or consulting engineer; an architectural or engineering student; an educator; a government employee in the struc-

HOURS AND METHODS OF OPERATION:

24 hours a day, seven days a week

OPERATING COST:

10

11

Period: 3/24/65 through 3/24/66 Actual degree days: 4,626 Actual kwh: 505,680* Actual cost: \$10,855.67* Avg. cost per kwh: 2.14 cents* *For total electrical usage

Billing Date	Demand	kwh	Amount
4/22/65	128	47,040	\$ 952.31
5/21/65	86	27,720	621.41
6/22/65	79	25,920	613.74
7/22/65	76	27,120	591.40
8/20/65	91	27,840	650.02
9/21/65	78	26,640	625.13
10/21/65	107	30,480	747.80
11/22/65	161	44,760	1,132.75
12/21/65	132	53,400	1,033.59
1/21/66	156	62,880	1,253.27
2/21/66	166	73,320	1,387.88
3/24/66	164	58,560	1,246.37
TOTAL		505,680	\$10,855.67

UNUSUAL FEATURES:

Partitions between the apartments have R/7 insulation for sound attenuation.

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PERSONNEL: 14

Owner: Okman, Inc. (Herbert R. Mandel, President)

Architect: Stanley Rapaport Consulting Engineers: Kimel Associates General Contractor: Lu-Ral Construction Corp., Pelt Building Construction Corp. Electrical Contractor: County Lighting Corp. Utility: Consolidated Edison Company

PREPARED BY: 15

L. J. Wagner, Manager, Sales Engineering, Consolidated Edison Company

VERIFIED BY: 16

Tarley Japapat.

Stanley Rapaport, Architect

The Consulting Engineers Council USA, has confirmed the above categories of information as being adequate to provide a comprehensive evaluation of the building project reviewed.

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James Stirling (his Leicester labs were published in our August 1964 issue) is currently working on a new Headquarters and Research Center to be built near Middlesborough for Dorman Long, the largest English manufacturer of rolled steel sections. The project consists of a 14-story office block, 825 ft. long; and, behind this block, a single-story, glass-roofed research lab (see bird's eye view, below). Exposed steel supports and braces the sloping front of the office block. Three bridges provide access to labs and offices from the rear.

The steel structure was left exposed (see section and detail) to dramatize the owner's product—as well as to take advantage of the results of recent fire tests which indicate that steel located at least 2 ft. beyond the building surface need not be fireproofed.

The access bridges in the rear are used by employees who arrive

by bus. The bridges serve the labs (from above) and the offices (through service towers that also help buttress the 14-story block). Parking for 900 cars will be in a two-level basement garage.

The sloping section of the office block reflects varying requirements on different floors: large public and semipublic spaces on lower floors; small offices along a central corridor above. The buildings will be completely air conditioned.



⁽continued on page 113) 111

STRUCTURE AS ARCHITECTURE



(in its new 15/8" NF Hi-Bond Celluflor")



One million square feet of Inland 15/8" NF Hi-Bond Celluflor will be erected in the new 60-story First National Bank Building, Chicago.

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EP-55



PLUMBING AS ARCHITECTURE

The drawings reproduced below are details of a "service tower" that will be constructed shortly behind six large Victorian houses in Paddington, London. The houses are being converted to form a hostel for 170 students; and rather than try to fit new plumbing lines into the old construction, the designers —Farrell & Grimshaw—decided to build a cylindrical steel tower containing all required bathrooms *outside* the walls of the old houses. The English student publication, *Clip Kit*, describes this astonishing structure as follows:

"The Tower is in the form of a tubular steel-framed prefabricated core with beams radiating from it and supporting a continuous spiral ramp which provides access to 37 Glass Reinforced Plastic (G.R.P.) bathroom pods [sic!]. The ramp joins back to the building at each floor level.... Each pod is made from 2 shells which are flanged and joined with a P.V.C. gasket at 3 ft 6 in. from floor level.... The tower will start building in November this year. The steel structure will take approximately three weeks to erect and will use no crane or scaffold. Ramp units will then be laid onto radiating beams. ... The G.R.P. shells will then be carried up the ramp...." The latest progress report came by wire as we went to press. "All systems go," the telegram said.



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(continued from page 89)

of the Kärntner Bar (6), truly a magnificent monument of progressiveness in design concept, have to be supplemented by an actual visit to this place, characteristically named "American Bar." Here Loos was not tricked, and did not trick, although I still see him smiling at me in the illumination from beneath the small white onyx table tops.

Only a few times did Loos really place a building into the open landscape, as he did the Khuner Villa (7). Strangely, I had never seen it, nor had I seen the Karma Villa near Montreux, Switzerland, 1904-1906 (8). Nevertheless, here I feel much more like a plagiarist then in the case of the famous Steiner house (9), which Dr. Pevsner considers a pioneer in the International Style, which really developed in northern Europe. It has never interested me at all.

The Scheu House in Vienna, which I know so well from the inside and out, was built for very progressively minded members of the bourgeoisie; both husband and wife belonged to an intellectual avant-garde and yet followed an unassuming Viennese tradition of informality at the same time. It was here that I came to see and often visit my later bride. Its year of design, 1912, I believe, was the year in which Bert Brecht wrote his first play "Baal," and about the time when Karl Kraus conceived his "last days of mankind," or Wedekind became popular with the advanced group in Vienna, while Altenberg wrote his best short sketches.

I am grateful for this book devoted to Adolf Loos, a man who still fascinates me two generations later. A profound compliment has to be paid to Ludwig Münz and his widow for having collected all there is now to be seen in this little volume, or almost all. I am impressed, when I read what Ludwig Münz wrote: "Adolf Loos introduced to the world a new and essentially higher conception of space: free thinking in space, the planning of rooms situated on different levels and not tied into a continuous story

level (10), the juxtaposition of rooms with one another to form a harmonious, indivisible whole and a spatially economical structure. . . . Loos can therefore create more living space within the same confines, since the same cubic capacity on the same foundations and under the same roof can now contain more Both material and building-cube are exploited to the utmost. . . . An architect who thinks only in terms of two dimensions needs a larger building site to create the same amount of living area." Such ideas have stayed with me also.

When my Research House, facing Silverlake in Los Angeles tragically burnt down after a third of a century, I again had to reenact it in exactly this same spirit, with an endeavour to make space psychosomatically count doubly and trebly. It is wonderful and mysterious how much one human being can owe and thank another over generations and beyond graves.

To complete this review, I felt I again must see a building by Loos in the flesh, and traveled to Montreux on Lake Geneva, 1 found on its eastern bank the Karma House, its Greek name was given it by its present owner, Vermikos Eugenides Nikos. It has magnificent gardens, which project into the lake and stretch along its shore, with 40-foot-high trees, framing formal rondelles and galleries. Its tall solid front facing the walled entrance court contrasts with an almost "open" fenestration toward the lake views, south and westward.

As the car passed all the heartrending variety built during the past two generations since 1906, along this lake, which mirrors the white glaciers, free from human scale, I pondered whether Loos and "lastingness" had really won.







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Monarch Bay Mall community is a beach-front section of California's widely noted new town, Laguna Niguel. Designed to keep the best of its 7,100-acre rolling Pacific shore location, Laguna Niguel will be a complete living center with parks, industry, golf course, beaches, shopping, and homes from almost every price range...everything a varied and vigorous community of 35,000 people needs. Knowlton Ferland, Jr., A.I.A., Ricardo A. Nicol, A.I.A., and Arthur Schiffer, A.I.A. direct the planning and architecture for the project.

The 44 houses of Monarch Bay Mall surround a park-like, gas-lit mall lead-



ing to the beach. According to Ferland, Laguna Niguel Corporation wanted to create a strong sense of community within this cluster of \$46,000 to \$58,000 homes—to make them harmonize with one another, and with their seaside setting.

"Olympic Stains have been an integral part of our design," Ferland says, "in that the houses have all roughsawn, stained wood exteriors, ceilings and decks. The excellent range of colors provided by Olympic Stains has helped make it possible to provide an excellent community design feeling." A good deal of care was taken with the Monarch Bay Mall homes to plan for their ease of maintenance and durability. Because of the extensive use of wood in all the houses, and their proximity to the shore, a completely trustworthy wood finish was



imperative. The choice? Olympic. In Ferland's opinion, "the use of stain on resawn wood will provide the owners with a house of very low maintenance for such a severe climatic location."

He adds, "At Laguna Niguel, we had previously used another stain. The Olympic Stains have been a definite improvement both from the standpoint of color range and durability. We are very pleased with the results."

For color samples on wood and new A.I.A. Information Manual, write Olympic Stained Products Company, 1118 N.W. Leary Way, Seattle, Wash.





Northbridge Park, Fort Lee, N. J.; Lejo Construction Co., Leo Goodman, John Guidera, Co-Owners; Englewood, N. J.; Architects: Erwin Gerber & A. Pancani, Newark, N. J.



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Jefferson lever handle shown with Yale Mono-Lock.



QUESTION:

is there a ceiling lighting-concept designed to answer this modular building's changing needs?

"Providing flexibility for future interior needs is a big problem with any commercial structure, as it was here," advises Harry J. Devine, architect of Sacramento's Wells Fargo Bank building. "The building was under construction before there was any determination of partition layout for the upper floors. This meant that both lighting and air handling be versatile enough to anticipate any kind of interior arrangement. Day-Brite's Clymatron with Barber-Colman air handling components supplied the perfect answer. A Clymatron in each basic $5' \times 5'$ module provides complete flexibility of interior layout and control of environmental comfort (lighting, ventilation, heating, air conditioning). Thanks to Clymatron's pretested record of performance, the installation has received the highest praise . . . from building custodians right on up to top management."

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