

AIA JOURNAL

AUGUST 1971





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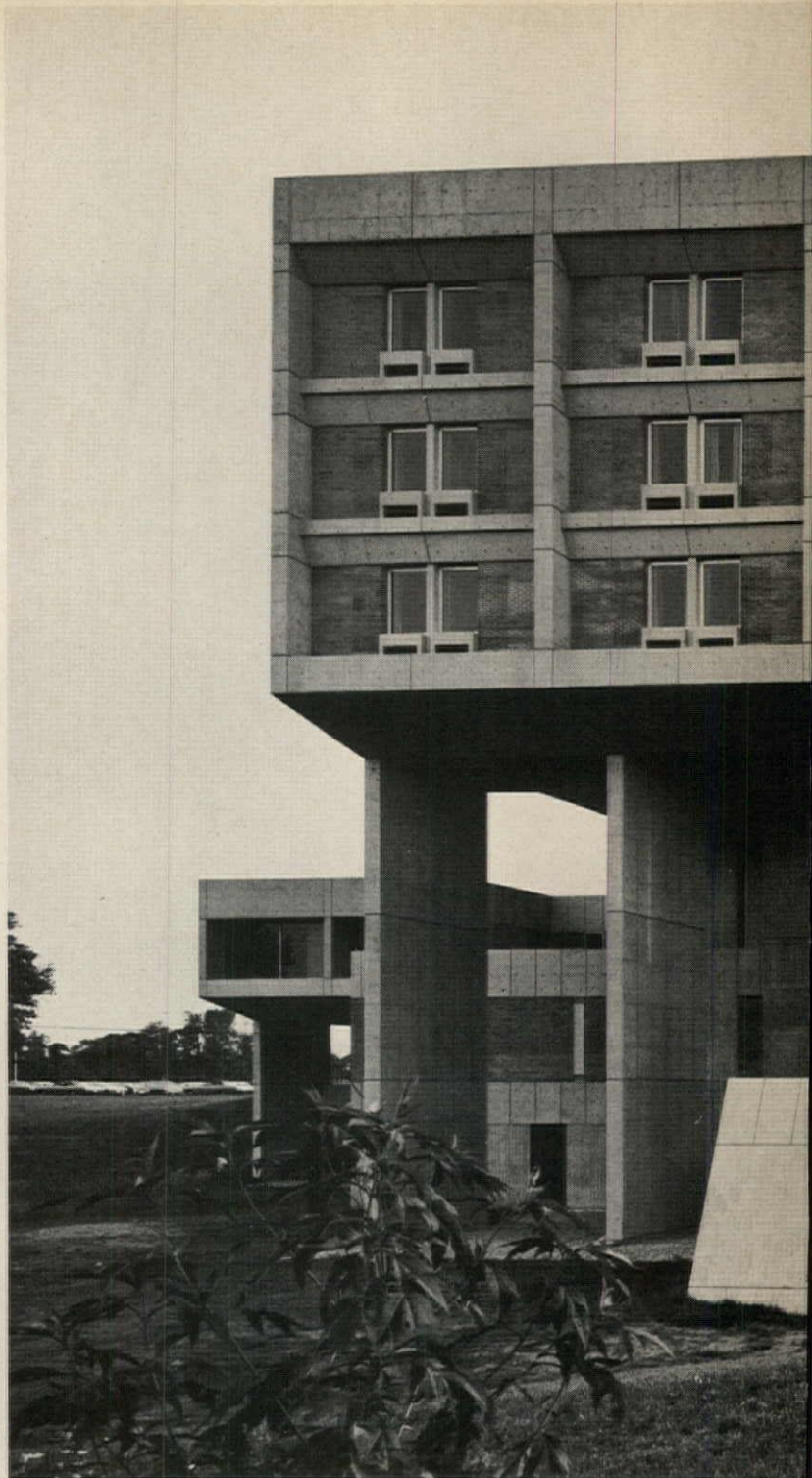
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Right: OCCIDENTAL SAVINGS & LOAN ASSOCIATION, Omaha, Neb. ARCHITECTS: Leo A. Daly Co. GENERAL CONTRACTOR: Lueder Construction Company, Omaha. Dover pre-engineered Oildraulic Elevator installed by O'Keefe Elevator Company, Inc., Omaha.





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AIA JOURNAL

AUGUST 1971

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"Milestones" created by Norman Warsinske to help handicapped children find their way about at the Child Development and Mental Retardation Center, University of Washington, Seattle. Architects: Arnold G. Gangnes & Associates. Photo by Art Hupy.

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comment and opinion

A STORY WITH A HAPPY ENDING: In these confused and troublesome days, it is a pleasure indeed to have the chance to report good news in this column—and good news it is for the entire profession that the Puerto Rico Chapter of The American Institute of Architects has seen the fruition of a concentrated, well-coordinated program in terms of the passage of a bill affecting metropolitan San Juan.

The *San Juan Star* was moved to editorialize that it is “a historical piece of legislation: the bill to create a public corporation to administer the growth and planning of the New San Juan Center. In authorizing this corporation, the legislature has given Puerto Rico the opportunity to develop a new city core, or downtown, in Hato Rey that can make San Juan an example for cities of the world to emulate. The entire character of the blossoming Hato Rey business area can now be changed for the better, and growth and construction shaped to meet the multineeds of a city center of the 21st century.”

Also to be congratulated are the members of the Puerto Rico Chapter, whose action which started nearly five years ago culminated in the passage of this measure. The urban design committee's involvement was told in the May 1970 *AIA JOURNAL* in an article entitled “New San Juan: An Unparalleled Opportunity.” One of its co-authors, William V. Reed, FAIA (the other: Frank A. Molther, AIA), has just brought us up to date, and what he writes is pertinent regarding the profession's role in the political arena. He comments in part:

“The signing took place in the Casa del Arquitecto, the newly acquired headquarters for the Puerto Rico Chapter and the Institute of Architects of Puerto Rico. Present for the event were the heads of many agencies of government and among them two who are members of the chapter: Enrique Soler Cloquell, president of the Planning Board of Puerto Rico, and Antonio Miró Mantilla, administrator of the Public Buildings Authority. Robert B. Goldman of the Ford Foundation, which had made a contingent grant of \$125,000 toward the program, came from New York City as a guest of Governor Luis A. Ferré, HON. AIA.

“Perhaps the most important single accomplishment in a series of activities was the creation of the ‘Committee for the New Center for San Juan,’ a citizens' non-profit corporation organized to promote the development of the new center until the government could and would take over the responsibility. A group composed of representative leaders of government and business was established in December 1967. Its purpose was to do the groundwork necessary to launch the plan as a viable and realizable concept. Its able chairman, Teodoro Moscoso, former US Ambassador to Venezuela, and committee members managed to raise more than \$300,000 to fund the technical studies required to advance the plan from the status of basic ideas to a realistic working document.

“Thus a foundation has been laid for a New Center for the second oldest city in the Americas. The chapter's work has been steadfast and dedicated. It will continue to serve the public after the actual formation of the New Center Corporation; it will act as technical adviser and serve as a sounding board and watchdog on public policy. And so the chapter has become a vital part in the democratic process in this dynamic community.”

The San Juan story not only has a lesson for architects in general and AIA chapters in particular but should also serve as a real inspiration.

ROBERT E. KOEHLER

ACKNOWLEDGEMENTS

8—below, Ray Wertheim
18—George A. Hinds, AIA
21—right, Jonas Dovydenas
22, 24, 25, 26—Art Hupy
27, 28 above—State of California, Department of Water Resources
30—above right, Pete Kinch

30—below, W. MacFarland
33, 34, 36—Lynn M. F. Harriss
37—Osamu Murai
38—above, courtesy Embassy of Japan
38—below, Osamu Murai
39—above, Teiji Itoh
39—below, Osamu Murai

NEXT MONTH

The federal government is trying a new approach to its penal system which hopefully will set a pattern for state and local reform: treating offenders not as outcasts but as human beings. And architects are in a good position to help toward attainment of this goal.

“The architectural style can be a key element in correcting the ills of our present penal system,” says Norman A. Carlson, director of the US Bureau of Prisons. “For far too long, prison architecture has consisted primarily of revising old designs to reduce escape risks. What has really happened, and what correctional administrators and architects are beginning to recognize, is that disguising security with cosmetic techniques has done little to reduce the chance that an inmate will commit a new crime upon release.”

An in-depth study of the new approach is presented through interviews with top correctional officials and a look at some institutions recently completed or now underway.

September also includes coverage of the AIA convention in Detroit, with a summary of the highlights to be found in this issue on page 10.

ASIDES

The publication of two of our articles in the current *AIA JOURNAL* suggests two news items we should like to report.

First of all, author Arnold G. Gangnes, AIA, as chairman of the Committee on Architectural Planning, International League of Societies for the Mentally Handicapped, has listed the objectives of that organization, following its meeting in Dublin. They are:

1. To edit a newsletter (eventually triannual-ly) for all interested persons and/or agencies, the first issue of which is planned for late summer, with publication in English, French and Spanish.
2. To arrange a major exhibit of facilities to be shown at the ILSMH congress in Montreal in October 1972 in consort with annual meetings of the National Association for Retarded Children and the Canadian Association for the Mentally Retarded.
3. To hold a symposium of workshop sessions at the 1972 congress in two parts: a presentation open to the general assemblage and a special one oriented primarily toward architects and program planners.
4. To set up a system of data exchange, recognizing logistical problems of international mail.
5. To establish an exchange of technical information to architects, based on experiences of others.

For further details about dues, etc., contact Gangnes at 718 Seaboard Building, Seattle, Wash. 98101.

Second, the article on Title VII of the 1970 Housing and Urban Development Act reminds us that the AIA will sponsor a three-day course on new community development in Washington, D.C., November 3-6. Attendance will be limited to a maximum of 300 persons. Inquiries should be sent to Michael B. Barker, conference director, at the Institute headquarters. □

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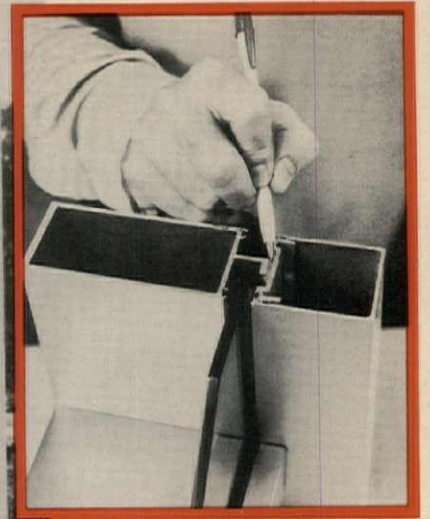
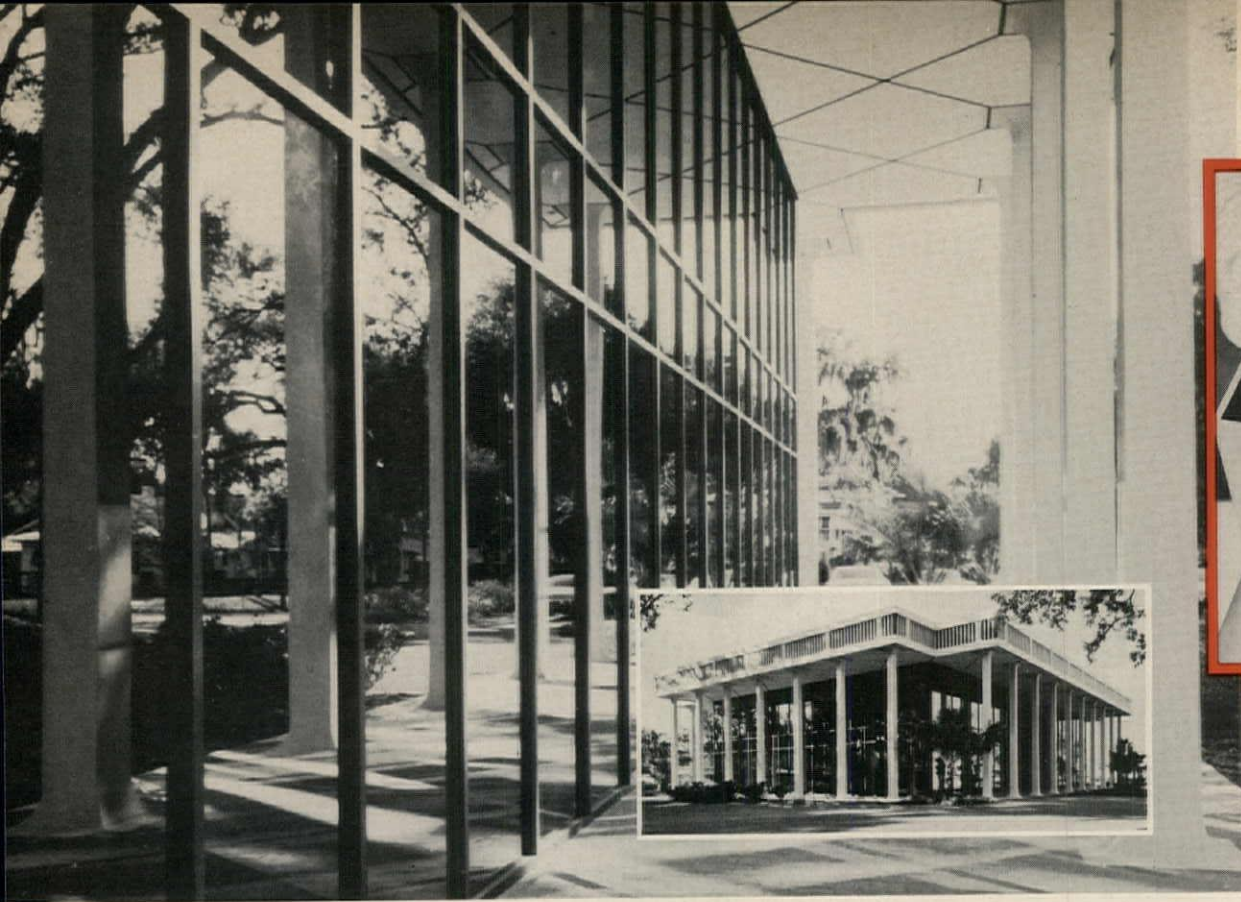
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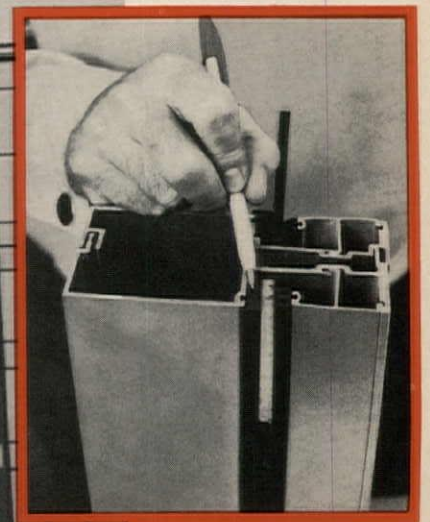
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Proposed New Structure for Institute Is Defeated at Orderly Convention in Detroit

"You now see what I never expected to show you: Bob Hastings, a short-haired, middle-aged, conservative member of the establishment, using the same terms as the long-haired militant students and rebels who have given us such a hard time. Five years ago I would not have talked this way. But things have changed and I have changed. The results of what we have been doing have finally become apparent, and therefore we and the things that are wrong must change."

Thus President Robert F. Hastings, FAIA, set a tone of moderation in addressing the

The September AIA JOURNAL will carry a recap of all proposed bylaw changes and resolutions, along with highlights of the reports, theme sessions and "The Building Team" conference.

103rd annual convention of The American Institute of Architects in his home town, June 20-24.

There were no student demonstrations, and while a number of issues evoked spirited debate during the business sessions, a sense of decorum—and even a bit of humor on occasion—prevailed.

Virginia's Wolf Trap Farm Is Cultural Landmark for National Park Service

America's first national park for the performing arts encompasses about 117 acres of virgin land within 30 minutes' driving time from Washington, D.C. The Wolf Trap Farm Park for the Performing Arts was off to a flying start on July 1 when thousands of people heard the National Symphony play the appropriate "Jubilant Overture" by American composer John LaMontaine.

It was an occasion to be joyous because the auditorium building, the Filene Center, opened on time in spite of a destructive \$650,000 fire in March. But such devastation did not dampen the spirits of Mrs. Jouett Shouse, who donated \$2.4 million and the land for the park. "I believe it will open on time," the 75-year old arts patron said then, and happily she was correct. As a local paper stated, "It was a kind of special birthday celebration, a day when our national holiday had a new meaning because of the new emphasis given to the arts at Wolf Trap."

When the Virginia park is filled to capacity for a cultural event, there are 3,500 people seated in the auditorium with another 3,000 on the grassy bowl that surrounds the theater.

The delegates decided against change on the convention's major issue—the proposed new structure of the Institute—defeating it by a vote of 1,102.98 approving to 546.52 against. Since two-thirds of all accredited votes were needed, i.e., 1,134, the vote lost.

They did, however, establish an associate membership at the national level and gave the president of the Association of Student Chapters/AIA a vote on the AIA Board of Directors.

In the two contested races for Institute offices, the delegates elected these three vice presidents: Louis de Moll, FAIA, Philadelphia; Robert J. Nash, Washington, D.C. (re-elected); and Archibald C. Rogers, FAIA, Baltimore; and for treasurer, Elmer E. Botsai, San Francisco, who was nominated from the floor.

Others who will take office at the December board meeting are Max O. Urbahn, FAIA, New York City, president; S. Scott Ferebee Jr., FAIA, Charlotte, N.C., first vice president; and Preston M. Bolton, FAIA, Houston, continuing in the second year of his term as secretary.

As everyone expected, attendance was down, with a total of 3,267 registrants, of whom 1,105 were corporate members.



Unfinished wood roof of Center, springing out of hillside, covers 23,000 square feet.

The center, designed by the New York City firm of MacFadyen & Knowles, was 19 months in the making. The stage has a proscenium arch 70 feet wide and 28 feet high; the stage measures 100x64 feet. The orchestra pit has a 116-musician capacity. Future plans call for a secondary outdoor shell for dances and informal concerts as well as cottages for writers and composers.

Wolf Trap, an example of cooperation between public and private funds for the promotion of the performing arts, will be maintained and operated by the National Park Services which has \$600,000 invested in it.



New town area is outlined in view looking northwest from City Hall (left foreground).

New Town-in-Town on the Boards for Old Philadelphia, All Privately Financed

One of the largest privately financed center city developments in the nation is planned for downtown Philadelphia. The \$400-million "new community" will cover 22 blocks just north of the Benjamin Franklin Parkway and will be known as Franklin Town.

The master plan has been created by Philip Johnson, FAIA, partner in the New York City firm of Philip Johnson & John Burgee. "The main street of Franklin Town," says Johnson, "will be the boulevard, a wide tree-lined thoroughfare along which will be built theaters, shops and restaurants with residential apartments above." The boulevard, a spine from which will radiate the variety of activities necessary for a complete community, will extend northwest from the commercial/retail southeast portion of Franklin Town to a handsome town square of more than two acres in the heart of the residential area.

Franklin Town will rise in an area now occupied mainly by obsolete factories and parking lots. There are plans also for a separate nonprofit program to assist disadvantaged neighborhoods near the new community.

The sponsoring companies—Smith Kline & French Laboratories, I-T-E Imperial Corporation, the Korman Corporation, Butcher & Sherrerd and the Philadelphia Electric Co.—were joined in the announcement about the proposed development by the Girard Bank. Other financial institutions will participate. Franklin Town will privately finance all land and building purchases as well as relocation and demolition costs.

Jason R. Nathan, formerly administrator of Housing and Development Administration of the City of New York, will serve as president and chief executive officer of the Franklin Town Corporation.

Former Practitioner and Dean Heads Endowment's Architectural Program

The newly named director of architecture and environmental arts programs of the National Endowment for the Arts, Bill N. Lacy, AIA, says that research fellowships to individuals and institutions and travel study fellowships will continue to be of importance.

"In addition, however, we plan to become

continued on page 52

Since

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CUSTOM MADE STEEL WINDOWS



Photo by Ezra Stoller (ESTO)

Inland Steel Company Research & Development Laboratories, East Chicago, Indiana
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The large fixed windows comprising the window walls in this extensive laboratory complex were carefully engineered in close cooperation with the architectural designers. Special attention was given to windload, glazing and installation. All window frame components (head, jamb and sill members) were machined from light structural steel beams and hot-dip galvanized before assembly. From the outset all Hope's efforts in engineering, fabrication and erection were directed towards producing an installation of custom steel windows which would require minimal future maintenance.

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Publishing's Year of Growth

The coordination of all publishing activities of the Institute came into being a year ago when the Board of Directors created the Publishing Department with Dudley Hunt Jr., FAIA, as publishing director in addition to his role as publisher of the AIA JOURNAL. His philosophy of improving the image of the AIA through the upgrading of all its publications—be they for administrative or public relations purposes or for sale—is as important to the department's staff as is the striving for better services to the Institute membership.

As one indication of a move in this direction, the department made an agreement early in 1971 with Peter Bradford of New York City to act as its continuing graphic design consultant. At the same time, because this is the only self-supporting department, there is emphasis upon a more efficient operation in order to provide income for use on other AIA programs.

There are five distinct divisions of activity planned for the department at this time, three of which are in operation with at least a skeletal staff. These three are Publishing Services, the JOURNAL and Contracts and Forms. The fourth, Books and Lists, is developing through the joint efforts of several members of the professional staff of other divisions within the Publishing Department; the fifth, Business Services, is in the research and development stage.

1. Publishing Services: Headed by Frederick H. Goldbecker, this division is responsible for the coordination of all printing, not only that done in the recently enlarged and improved AIA print shop but also all that performed under outside contracts. The work spans the breadth of the Institute. Every printed item, except the JOURNAL, is coordinated through this department, be it the *AIA Memo*, contracts or administrative and public relations items such as the annual report and convention brochures. Its staff assists other AIA departmental personnel in the production of suitable materials within the budget and on time.

2. AIA JOURNAL: Edited by Robert E. Koehler, Hon. AIA, this monthly magazine's philosophy really needs no discussion here. Similar to other such periodicals, its three main separate functions are editorial, circulation and advertising. For the first time in its history, the JOURNAL now has an advertising sales manager, Richard J. Satola, who is di-

recting and coordinating the efforts of the field sales personnel.

3. Contracts and Forms: Still thought of by many as the "Documents Division," and long a substantial money-producer for the Institute, this division is responsible for the printing, marketing and distribution of AIA contracts and forms and other salable publications developed by the Documents Board and the various AIA task forces. Expedient processing of all orders, customer services, sales promotion and the distributor marketing program is handled by this division under the direction of its manager, Mary E. Fenelon. Perhaps the most dramatic change has been in the marketing approach with a more structured distribution system through local outlets. Thirty AIA component offices and some 60 commercial firms who are official distributors provide fast service for those who use AIA contracts and forms. Emphasis on sales promotion will certainly increase the awareness of the availability of the standard contracts and related publications.

The department has put into effect a new pricing schedule that allows Institute members a discount on all purchases as a further advantage of their membership.

4. Books and Lists. A manager has not yet been named for this division. Presently the responsibilities are divided among several members of the department. By working with freelance writers and with government agencies and through cooperative agreement with other publishers, several new titles are in production. Arrangements with several publishing houses to retail their titles to AIA members has increased the list of available publications from a dozen a year ago to 25 today. Members receive a discount off retail prices on such books. This is an area of the greatest growth potential.

5. Business Services: When studies are completed to determine the type of accounting, shipping and order processing systems needed to most efficiently serve the members and to provide the information necessary for effective planning, this division will be put into operation. This is an important key to the long-range effectiveness and success of the department.

The staff of the Publishing Department is encouraged by the progress that has been made, in spite of difficult moments, and it anticipates its continuing growth as an effective force for the Institute. THE EDITORS

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From Asylums to Homes for Children

The philosophy of child care is undergoing a minor, though slow revolution. As a consequence, the orphan asylums—those grim institutions from the Dark Ages—are giving way to warm and friendly yet treatment-oriented centers for small fry and youth. The implications for programming and design are profound.

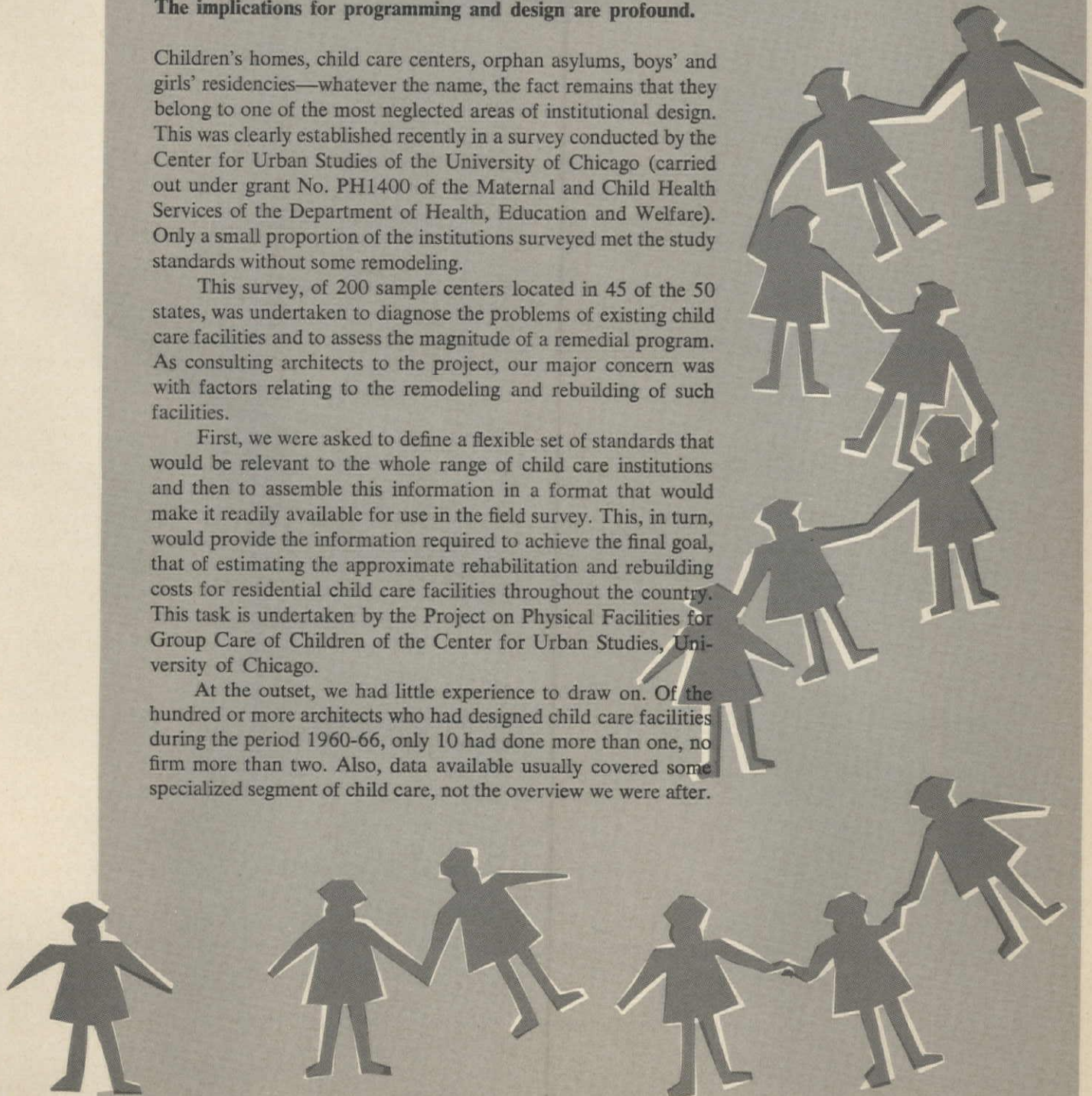
by GEORGE A. HINDS, AIA

Children's homes, child care centers, orphan asylums, boys' and girls' residencies—whatever the name, the fact remains that they belong to one of the most neglected areas of institutional design. This was clearly established recently in a survey conducted by the Center for Urban Studies of the University of Chicago (carried out under grant No. PH1400 of the Maternal and Child Health Services of the Department of Health, Education and Welfare). Only a small proportion of the institutions surveyed met the study standards without some remodeling.

This survey, of 200 sample centers located in 45 of the 50 states, was undertaken to diagnose the problems of existing child care facilities and to assess the magnitude of a remedial program. As consulting architects to the project, our major concern was with factors relating to the remodeling and rebuilding of such facilities.

First, we were asked to define a flexible set of standards that would be relevant to the whole range of child care institutions and then to assemble this information in a format that would make it readily available for use in the field survey. This, in turn, would provide the information required to achieve the final goal, that of estimating the approximate rehabilitation and rebuilding costs for residential child care facilities throughout the country. This task is undertaken by the Project on Physical Facilities for Group Care of Children of the Center for Urban Studies, University of Chicago.

At the outset, we had little experience to draw on. Of the hundred or more architects who had designed child care facilities during the period 1960-66, only 10 had done more than one, no firm more than two. Also, data available usually covered some specialized segment of child care, not the overview we were after.





Remodel Old Buildings: An originally semirural Catholic Home in Michigan has become an urban institution. Well maintained, it made remodeling warranted. Most institutions housed in this type of building — and there are many of them — need to add casework offices, informal lounge areas for children and their visitors, rooms for crafts and indoor recreation and additional administrative offices. Flexibility is desirable

However, by the time we had completed our study we had gained a wealth of experience through cooperative child care experts and had a comprehensive view of the state of affairs.

At present there are more than 2,300 homes for children in the United States, Puerto Rico and the Virgin Islands. These provide homes for and, to varying degrees, therapeutic environments for some 155,000 youngsters whose parents are unable to give them adequate care, who are emotionally disturbed, predelinquent or delinquent, psychiatric inpatients who need temporary care or who are unmarried mothers.*

Unfortunately most administrators of these institutions are saddled with buildings designed for standards and requirements as their board of directors happened to see them years ago, when distinction was not likely to be made between professional consensus and controversial or unknown factors of child care and when future trends probably in no way were considered, at least not to the point where all these factors were reflected in the facilities. Had they been, administrators might not be in the present fix and the problem of updating or changing existing institutions to meet present needs and standards would not be so common. New institutions must be built with the future in mind, providing flexibility enough so that anticipated or possible needs and changes may be undertaken.

The institutions we visited fell into two basic categories: the congregate or centralized; and the living unit system. In the former, all the children share the same facilities; in the latter, each unit contains—or should contain—everything to meet all needs of children and staff. Imagine caring for a family of 50 as opposed to one with only eight—or being one of eight rather than one of 50 “brothers” or “sisters.” Needless to say, the living unit system is now the accepted concept.

The functions in an institution, of course, are the basis for design. A pattern generally accepted by child care professionals for living unit institutions is separation of living unit, clinical service, school, administration and common recreation areas; and also of private clinical interview, waiting and visiting rooms, etc.; and for the living unit themselves, the younger the children, the fewer per unit; sanitary storage and preparation of food; outdoor play area exclusive to the unit; private and semiprivate

for remodeled sleeping areas. A system of relocatable wall partitions which could be moved by a maintenance man satisfies this requirement. All lighting should be included in these partitions and a perimeter heating system should be used, thereby eliminating the necessity of relocating lighting as size and arrangement of rooms are changed. The ceiling height is usually very high, making necessary a false ceiling.

rooms, etc. In addition to the general rules, there are points which are controversial but significant in the success of the treatment of the young. Among these, for living unit institutions, there's the question of location: urban, suburban or rural; and within the living unit, optimum size of the units, number of beds in one room; live-in house parents or shift system.

A major conflict in philosophy is visual supervision versus a locked door policy. It is questionable whether this can be solved through flexibility in the design concept. One institution that advocates an open door policy has proposed the use of closed circuit TV in free expression play areas to eliminate direct adult supervision.

Finally, there are questions which are controversial but do not have any effect on the operations. These are mostly influenced by local conditions such as board preference, site, etc.

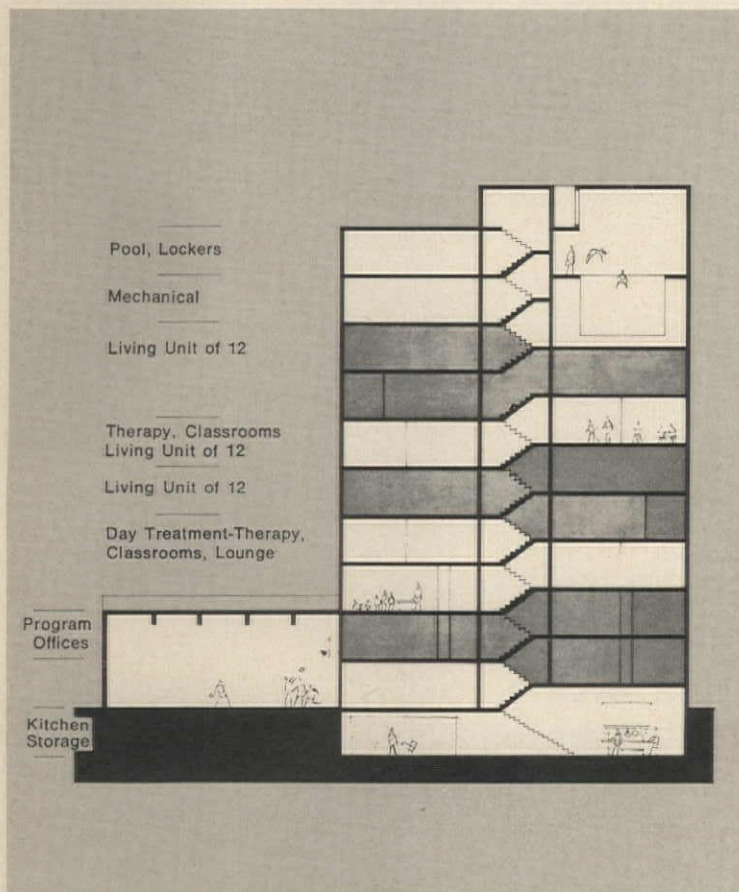
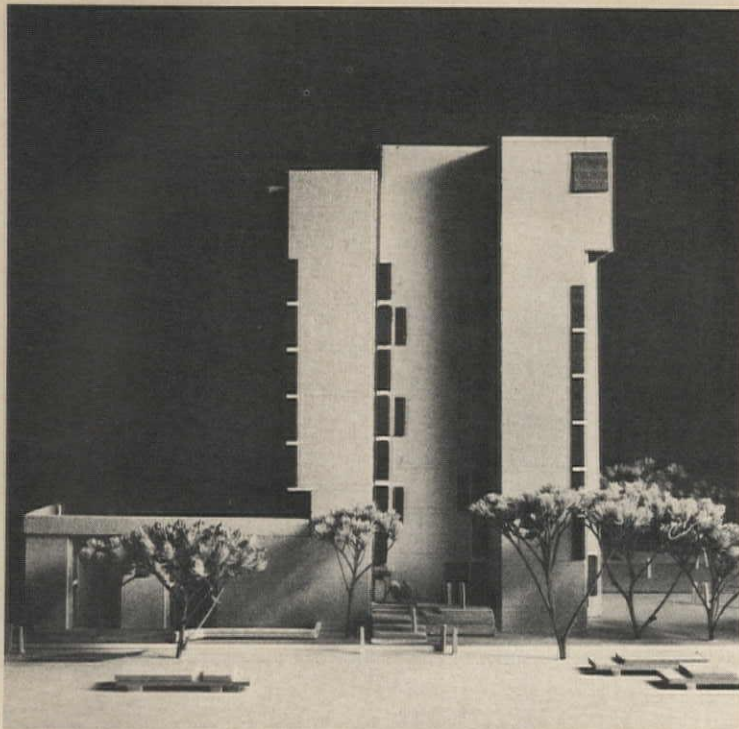
Among trends for the future are: more school facilities at the institution (schools on grounds), day-living arrangements for day care and after care (counseling service after a child has left an institution); use of clinical program by outsiders; expansion of vocational training; increase in halfway houses; more clinical services to resident children; fewer younger children; more schools on grounds; smaller institutions, etc. (All identifications were made by Donnell M. Pappenfort and Sister Mary Emmanuel, RGS, director and associate director of the Project on Physical Facilities for Group Care for Children.)

Thus we have a general statement of the architectural problems as the forces of change define it for us. However, some aspects of change are far-reaching in their potential effects. The more important of these are:

More integration with the community, more city locations. Of possible sites (rural, suburban or city), there are several reasons for excluding the rural. Among them: difficulty of recruiting staff and of obtaining the necessary services; lack of community companionship for the children; poor accessibility for visitors. Suburban sites would not include exclusive residential areas since these often lack comprehensive school programs and real community companionship for the children. City sites would make it easier for staff to work with the families of those under care. These sites need not be large if there are some community

* Donnell M. Pappenfort and Dee Morgan Kilpatrick, “Child Caring Institutions, 1966: Selected Findings from the First National Survey of Children’s Residential Institutions.” *Social Service Review*, December 1969.

Mr. Hinds, a member of the American Institute of Planners, is a principal of George A. Hinds & Associates Ltd. and a professor of architecture at the University of Illinois, Chicago Circle.



Relocate and Rebuild: Lake Bluff/Chicago Homes for Children has closed its suburban operation and plans to move to Chicago's North Side near other group homes owned and planned by the same organization. Area rapid transit makes staff recruiting and visiting easier. The 10-story building is on two-third acres and has 24 resident children — six to a living unit — plus outpatient and day-care children. The concept allows either closed or open care to include children of one sex or a mix, with girls on one floor and boys on another, sharing recreation and eating areas. The split-level characteristic of the building allows easy access to several adjacent floors from any one area without resorting to the elevator. It is planned with an open door policy (no locked doors for spaces which are available to the children or to the outdoors, except in cases of children who need a closed setting for a short time). The structure, with recreation facilities on the ground and top floors, has a lobby not unlike the entrance of any nearby apartment house, avoiding the stigma of an institution.

facilities for recreation available. City facilities should not, however, be the sole recreation sources.

More emphasis on the group home or halfway house concept. The group home (a regular house in a community, for six to eight children with house parents) serves the function of easing the transition from institution to normal community life. It should be located within a two- or three-mile range of the parent institution for efficient use of staff. In most major cities there are presently zoning restraints against such homes.

Diversification. This means more single institutions offering a wider range of services and will require remodeling of existing spaces or the addition of new ones to accommodate new programs.

Some of the implications of these trends are obvious. Many institutions would have to be relocated in order to integrate. Others would have to be less isolated and more neighborly. This can be mutually beneficial if the institution offers services or use of facilities in exchange for help from the community.

There are three possible solutions for the institution wishing to update its physical plant. These depend on the combination of financial resources, present physical condition and location of existing plant. They are:

Remodel old buildings. If older institutions were to change their programs to comprehensive ones including closed, semiopen and open care, then the usefulness of the existing buildings in many cases would be nil. An important factor in salvaging present facilities is their location. Many that we visited were in areas of the city which before were rural or semirural. However, the city has grown around them, giving an urban character to the site.

If an institution has followed a good maintenance and repair program, if its construction qualifies from the standpoint of life safety, if it is well located from the standpoint of recreation, public transportation and community rapport, then remodeling should be considered.

However, this harbors potential hazards: higher maintenance costs and the possibility of a less satisfactory solution to the building program needs.

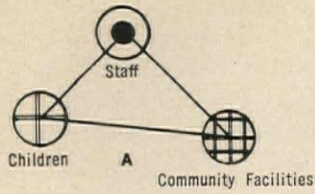
Some of the classic problems in existing facilities which require the greatest ingenuity on the part of the architect are the congregate institution and the large dormitory living unit. Both must be remodeled to include flexible, small living units. This often calls for the addition of stairways to provide adequate exits without violating the privacy of the living unit.

The area for the house parents is controversial and also demands flexibility. Actually, the decision whether to have house parents or shift personnel usually must be made according to what the market can provide. Even if live-in house parents are available, flexibility should still be incorporated so that their quarters may be used either as apartments or facilities for shift personnel.

Relocate and rebuild. When access is difficult and it is not possible to secure the types of services and community atmosphere needed in child care, a home would do well to relocate to an urban setting.

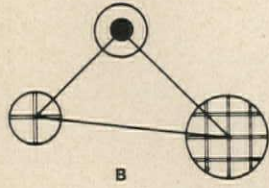
To build a conventional facility to meet the needs of emotionally disturbed children in the city will usually require from 2½ to 3½ acres of land which, of course, are both difficult and costly to acquire. The problem then is to build a multistory building on a small site, incorporating recreation facilities, avoiding the stigma of an institution, providing for flexibility throughout.

A combination approach. If an institution is well located from the standpoint of community rapport, facilities and public transportation, it should consider the possibility of salvaging some of its buildings and embarking on a new construction program more compatible with comprehensive care. The success of this

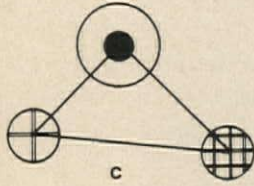


SMALL INSTITUTIONS

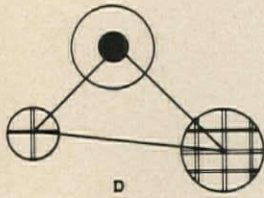
Minimum Community Facilities
Minimum Staff
Minimum Children



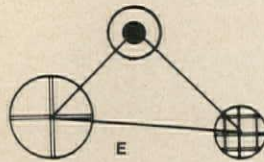
Maximum Community Facilities
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Minimum Community Facilities
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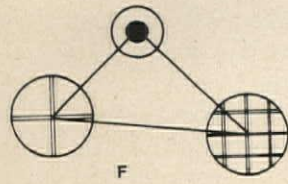


Maximum Community Facilities
Maximum Staff
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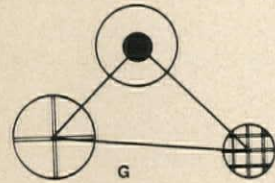


LARGE INSTITUTIONS

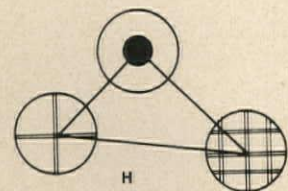
Minimum Community Facilities
Minimum Staff
Maximum Children



Maximum Community Facilities
Minimum Staff
Maximum Children



Minimum Community Facilities
Maximum Staff
Maximum Children



Maximum Community Facilities
Maximum Staff
Maximum Children

I. Institutions without special emphasis on treatment.

	Quality of Physical Environment	Program Facilities	Intensive Recreation	Efficiency For Staff Operation	Protection and Safety for Children
A.	1	4	2	3	5
B.	1	4	4	3	5
C.	1	4	2	4	5
D.	1	4	4	4	5
E.	1	4	2	2	5
F.	1	4	4	2	5
G.	1	4	2	3	5
H.	1	4	4	3	5

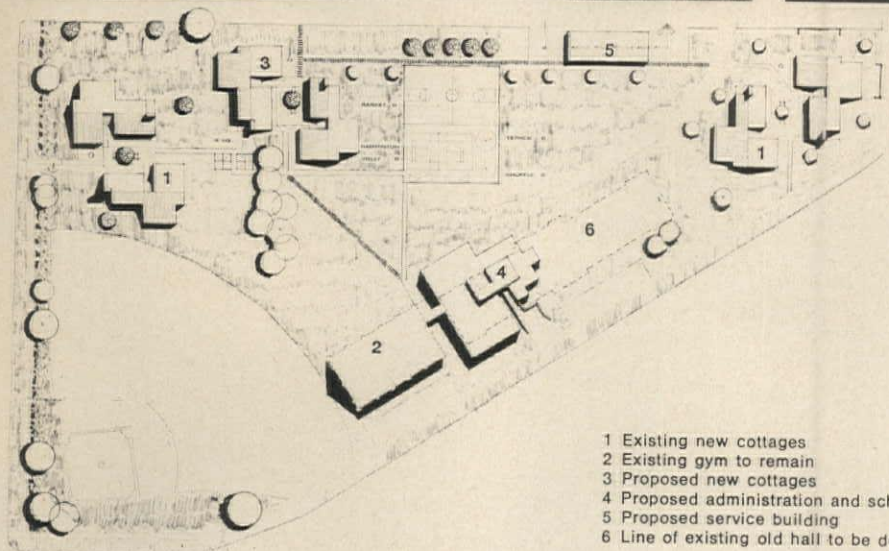
II. Institutions with some (moderate) emphasis on treatment.

A.	1	2	3	3	4
B.	1	2	4	3	5
C.	1	1	3	4	4
D.	1	1	4	4	5
E.	1	2	3	2	4
F.	1	2	4	2	5
G.	1	1	3	3	4
H.	1	1	4	3	5

III. Institutions providing intensive treatment.

A.	2	1	4	3	3
B.	2	1	4	3	4
C.	2	1	4	4	3
D.	2	1	4	4	4
E.	2	1	4	2	3
F.	2	1	4	2	4
G.	2	1	4	3	3
H.	2	1	4	3	4

For interpretation of this chart, see across page.

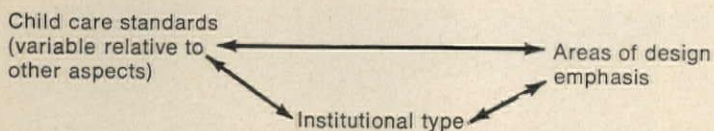


- 1 Existing new cottages
- 2 Existing gym to remain
- 3 Proposed new cottages
- 4 Proposed administration and school building
- 5 Proposed service building
- 6 Line of existing old hall to be demolished

Combination Approach: The 100-year-old Lawrence Hall/Randall House in Chicago, originally a home for newsboys, has become more treatment oriented over the years. It has a good location: many of its tutors live in the adjacent area; some of its residents go to school, play or work in the neighborhood; its gymnasium building is well located and maintained. Therefore, remodeling and new construction both were called for. While the old "Hall" had a definite stamp of asylum, the residential scale and quality of the new buildings has earned the home approval from the neighbors. The master plan is complementary to the residential scale and is open in character. The principle of built-in flexibility used in new construction has been incorporated in the design. Interior flexibility is obtained through the use of optimum structural spans and knock-out walls; provisions for future additions have been made.

approach would depend on the quality of the past maintenance and the ingenuity of the architect.

Existing child care standards often make the basis for a rigid framework within which the architect must work. Our studies indicate a relationship somewhat like the following:



This relationship is worth further study, for the design of an institution must be a reflection of its specific needs, not just a fulfillment of general, inflexible standards.

The interrelationships can be most easily understood by first categorizing the institutions by relevant parameters and then by analyzing how the design emphasis changes from one institution to another. Basically, institutions may be classified according to:

- number of children housed
- size of staff
- surrounding area (availability of off-campus services—doctors, dentists, hospitals; schools; recreation; safe environment, etc.)

The chart at left shows that within each of three subdivisions of these categories, there are eight possible combinations, making a total of 24 institution types. The variables have been quantified as maximum and minimum so that a profile of hypothetical institutions based on a combination of extremes is established, making the models easier to understand.

The relative importance of the parts of each type will differ. To ascertain just how this variation might take place, one must first identify the important areas of design emphasis. Our analysis suggested the following breakdown into:

1. Quality of physical environment for less disturbed children: privacy and friendly homelike surroundings to foster a sense of individual worth; for more seriously disturbed children: privacy

with visual supervision in a friendly homelike atmosphere to instill a sense of security; for all children: quality and durability of materials most appropriate for the activities to be carried out.

2. Program facilities for guidance of the children: therapy and interview rooms, classrooms, vocational shops.

3. Recreation for less disturbed children: competitive and non-competitive, related to socializing experiences; for more disturbed children: competitive and noncompetitive, related to healthy ego development.

4. Efficiency for staff operation through organization of spaces and provision of needed facilities used by staff.

5. Protection and safety for all children: physical and visual control by means of site development.

All these facets are important in any institutional design. The design should conform to them, at least within the limitations of minimum standards. However, their ranks above the minimum is described by the above chart correlating institutional type with priority of design emphasis, as set by child care specialists.

The priority for design emphasis is expressed in terms of absolute numbers, ranging from 1 to 5. The final step in describing the relationship between the three institution categories involves grouping the standards for child care under the five areas of design emphasis. In this way, the relationship of the standards to both design emphasis and institutional type is expressed by the previous chart. It is now theoretically possible to identify and rate hierarchically the standards and the areas of design emphasis for a particular institution.

We have been talking primarily about standards which might be called operational. However, although we have not here covered them, we did study performance and visual standards as well. These represent neglected areas which need to be given much more thought if the renovation or rebuilding of child care institutions is to achieve its ultimate goal, that of improving the quality of life for the children within. □



From Indifference to Concern for the Retarded Child

by ARNOLD G. GANGNES, AIA

A significant breakthrough for mental retardation programs resulted from a report issued in 1962 by the President's Panel on Retardation. Subsequently, an act was passed by Congress in 1963 which authorized project grants to assist in the construction of public and nonprofit clinical facilities associated with a college or university which would provide for inpatient and outpatient services; aid in the provision of specialized services for diagnosis, treatment, training or care; and assist in the clinical training of personnel. The Child Development and Mental Retardation Center at the University of Washington in Seattle is the first such facility to be constructed. The architect of the teacher-training and research center reviews the purposes of the center and relates the manner in which they are reflected in the physical facilities.

"Once considered a threat to the social order, those today known as retarded are now seen less as liabilities and more as potential assets, calling upon society not so much for control as for skilled help," said Dr. Stanley P. Davies in his book *The Mentally Retarded in Society* (New York: Columbia University Press, 1959).

"The mentally retarded are children and adults who, as a result of inadequately developed intelligence, are significantly impaired in their ability to learn and to adapt to the demands of society. The Department of Health, Education and Welfare should assess its capabilities to stimulate and support the various relevant components of a comprehensive national program related to mental retardation," stated a 1962 report to the President on National Action to Combat Mental Retardation.

These comments made about a decade ago coincided with a study made by the Governor's Inter-Agency Committee on Health, Education and Welfare programs in the state of Washington (*Everybody's Child*, 1961). The investigation summarized five major areas of concern about mental retardation and the mentally retarded: 1) research; 2) prevention; 3) diagnosis; 4) services; 5) professional training. The major recommendation agreed upon by the task forces for each of these concerns was the creation of a state mental retardation center to carry on research and professional education as well as to provide diagnostic and consultation services to state residents.

The center relates esthetically to its site (top). Parts are linked by courts: the Clinical Training Unit with the Research Residence (left) and with the Experimental Education Unit (right). Architects: Arnold G. Gangnes & Associates; structural engineers: Skilling, Helle, Christenson & Robertson; mechanical and electrical engineers: Valentine, Fisher & Tomlinson; landscape architects: Richard Haag & Associates; food service consultants: James Lambert and Craig Weisman.

At virtually the same time, legislation was sponsored by President John F. Kennedy to accomplish the same goals. The Mental Retardation Facilities and Community Mental Health Centers Construction Act (P.L. 88-164) was passed in 1963. Part B, Title I, of this act provided for the federal government to join in partnership with colleges and universities to establish a program for the construction of university affiliated facilities for the mentally retarded.

At this writing, 20 such projects of varying sizes have been constructed, are under construction or are in the design stages. The first such project is the Child Development and Mental Retardation Center at the University of Washington in Seattle which was officially opened in May 1969.

The center has four separate buildings: 1) the Medical Research Unit (MRU); 2) the Clinic Training Unit (CTU); 3) the Experimental Education Unit (EEU); and 4) the Research Residence (RR). Inasmuch as the Medical Research Unit has the need for a direct physical relationship to the existing University Hospital, whereas the other three units do not, it was designed as an extension of the existing hospital under the guidance of the hospital's architects.

The latter three units are the subject of this presentation in that they comprise the public related teaching element and were designed as a separate entity. The design objectives were to:

- Provide housing for, and much needed expansion of, existing programs in the field of mental retardation, now sponsored by the University of Washington.
- Establish a Center in Mental Retardation and Child Development at the university, with services available to students and to retarded children from all parts of the state.
- Provide in this center the opportunity for extensive interdisciplinary exchange of views through the proximity of the different programs to each other.
- Provide a model center for training and education of future workers in the field of mental retardation.

The program requirements are based on the housing of and the provision of laboratory and training space for three essential subdivisions: 1) Diagnostic Clinic, formerly known as the Clinic for Child Study; 2) Behavioral Sciences Research; 3) Experimental School, formerly known as the Pilot School.

Each of these separate programs has its own requirements, yet each has an interrelationship with the other. The diagnostic unit is basically a series of clinics which provide examination and treatment of patients in the areas of pediatrics, nursing, psychology, sociology, dentistry, occupational therapy, psychiatry, edu-



cation and other related medical problems. The behavioral sciences research unit is concerned with research on basic psychological processes and learning studies in the handicapped. The experimental school is concerned with the training of teaching personnel in all aspects of education and training of the retarded and otherwise handicapped children from preschool through secondary school.

The varied nature of the client's needs was among the complications of the project. It all began with a contribution from a private individual to begin a program for brain-damaged children. This was followed by university and state money and matching grants from the federal government.

The site selected offered serious considerations. It was, on the one hand, conveniently located near the hospital with respect to ancillary services for the diagnostic aspects of the program; at the same time, it was in an area of high land use priority because of needed hospital and medical school expansion requirements. We were concerned that the site have sufficient space for the indoor/outdoor relationships desirable in elementary school training, particularly in view of the variety and age of the children to be served and the advisability of maintaining control of distractive influences. The problems of traffic, proximity of water (which

Classrooms have a direct relationship with the outdoors and indeed some of them are outside altogether, weather permitting, so that the child can enjoy sunshine, fresh air and cheerful, intimate surroundings.





From observation booths, a child's behavior may be noted without his being aware of it. The observer learns a code for various actions so that they can be quickly and accurately recorded on tape for study.

could pose a hazard), land density and overall site environment posed difficulties.

Our aim was to accomplish the following:

- Provide the best possible vehicle in which the expressed functions of the stated program could be performed.
- Supply input and innovation as professional architects for analysis, both in enhancing the written program and accomplishing its objectives.
- Adapt the framework of structures arising out of these objectives into the extremely complex system of existing buildings, services and traffic patterns.
- Satisfy a multiheaded client (the university, the state, the community and the federal government) in achievement in planning and in appropriate use of the client's resources.
- Prepare an environment or environments for the many and varied prospective tenants and users of the facilities which would appeal to their needs and delight, individually and collectively.
- Attain a high degree of esthetic satisfaction, both internally and externally, all under the watchful eye and scrutiny of the client through the medium of design commissions and architectural review bodies.

We approached our problem with many fears about the needs of the program and about the availability of resources to accomplish it. We felt that we would make mistakes, but we hoped that they would be minor. We have learned much in the design process and in subsequent evaluation.

We explored every reasonable problem in the design process, using our collective knowledge of various types of facilities for children, especially those relating to the retarded and the handicapped. We experimented with space and concepts, ruling out most of the built-in deterrents to active and inquisitive children and hoping to control problems by training and attitude. Because of the site, we jokingly said that teachers would have to have two additional attributes: the ability to run fast and to swim. So far, only the former has been tested, and only on rare occasions. Problems are ever present, however, and the staff works hard to maintain child control without having to resort to building fences for protection.

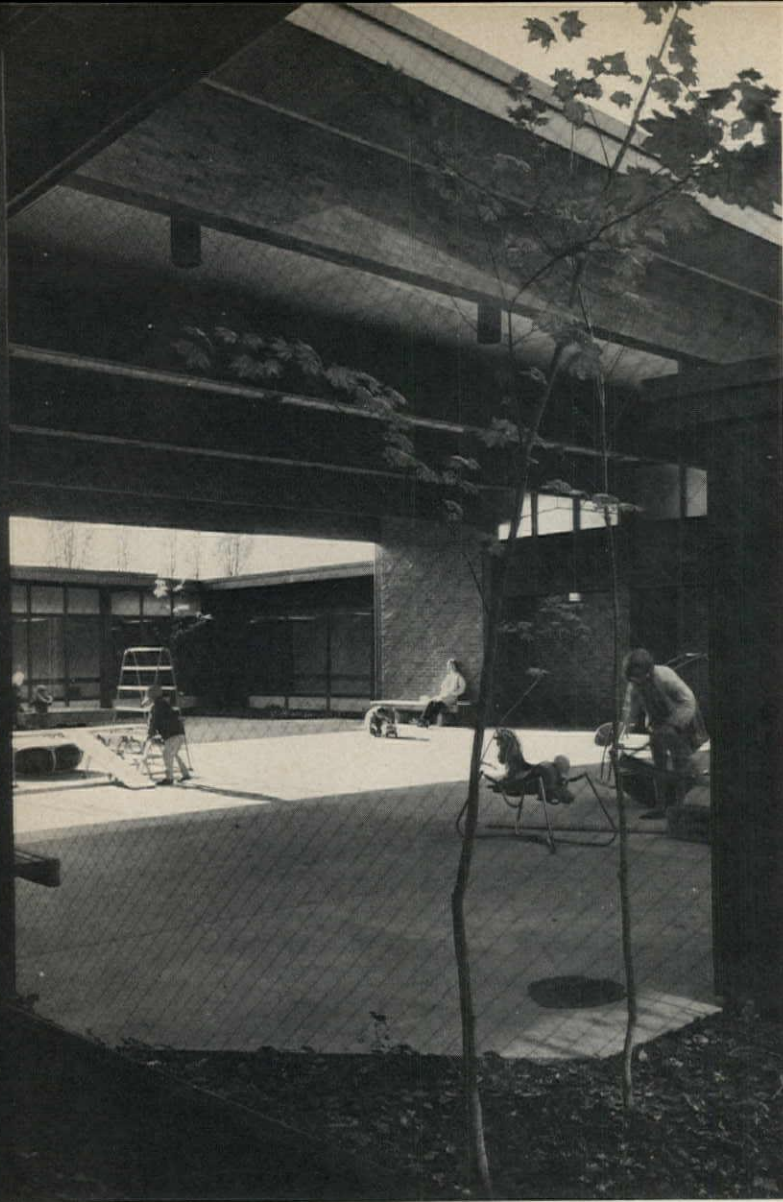
Mr. Gangnes, who heads the Seattle architectural firm of Arnold G. Gangnes & Associates, is recognized internationally for his contributions to retarded children. Chairman of the architectural planning committees of the National Association of Retarded Children and the International League of Societies for the Mentally Handicapped, he has served as consultant to many federal agencies and institutions.

We were vitally concerned with the impact of environment: the working surroundings of the staff, the accommodations and milieu of the teacher or medical trainee and the total effect on the child of each of the various programs into which he would be inserted. Our dialogues with the staff about planning revealed the concern that the training setting should produce the kinds of conditions and reactions for the college trainee that he would find in the field so that he would not have to be retrained at each new place of work. We were convinced that child reaction—and thereby trainee reaction—would be most natural and best served in normal surroundings.

The site, despite its magnificent setting, was only marginally adequate for our purposes. It was deeply involved in vehicular traffic problems and highly coveted by other disciplines within the hospital complex as a site for future expansion. We were constantly urged to compress the solution into the smallest space in order to use as little land as possible. In spite of all this, we had the enthusiastic support of the university architect's office, the design commissions and the university administration.

In the early design stages we decided that the clinical services, examination, diagnosis and prognosis as well as the treatment services could be served appropriately in a variety of multi-storied building types similar to those where such commodities are usually found. We concluded also that if we were to achieve the best results in an experimental or demonstration school program, we could better realize our aim if these programs were housed in an elementary school setting. Because the training functions could operate independently of each other, we elected to design the clinical diagnostic and treatment facilities in a multi-storied building, allowing for future expansion vertically. We designed the educational unit in the image of an elementary school. We wanted direct relationship of classroom to the outdoors. For reasons of supervision and child-related scale and in consideration of the mobility problems of the handicapped, we wished this unit to remain a one-story structure.

One of the design problems involved the provision of short-term housing for children who might come from out of the city for diagnosis and treatment. At the same time, the program called for apartment settings wherein behavioral research studies on the interaction between parents and children could be carried out. These two requirements, plus the aforementioned theories on the appropriate environment for the task involved, led us to separate the housing into an apartmentlike structure physically related but totally independent of the other two buildings. Separation of this



At the center, professionals from many disciplines learn how children grow and learn and then share the results of their own learning with the community that made the center possible. Supervised play is important as a teaching/learning experience, helping teacher and child to relate to one another and to the world beyond the enclosing fence.



program was logical in that the apartment building had to function 24 hours a day, seven days a week.

The net result of our design efforts produced three buildings: a multistoried office building, a one-story school structure and a two-story apartment house. These three, although of different construction, have been fused into a triumvirate of services that are separate but have links of connection and interplay of functional space. Programs which are based and/or originate in the multistoried building (Clinical Training Unit) are partly conducted in spaces in either of the other two buildings and vice versa.

Spaces between buildings are used as common areas, some primarily for adult activities and some for children. Carefully studied circulation patterns help to maintain separation among adults, visitors, staff, trainees and children. This aids the daily routine by helping to eliminate distraction but at the same time allowing free access to almost all parts of the complex. To date, over 10,000 persons have visited the center.

The food service recently won an Award for Superlative Achievement in Food Service Design given by the magazine *Institutions*. The facility allows for normal cafeteria operation but provides also for food service to the classrooms for school lunches and, if required, to the apartment building via hot cart.

The brick sculptures are panels carved in unfired bricks. The artistic creation of Norman Warsinske, the bird, fish and insect panels serve as "cues" or "milestones" for the handicapped children, helping them to find their way about. They are as well permanent works of art.

This unique collection of training settings has a complex system of audio and video capabilities, allowing the sharing of training sequences and experiences with unlimited observers through the electronic system.

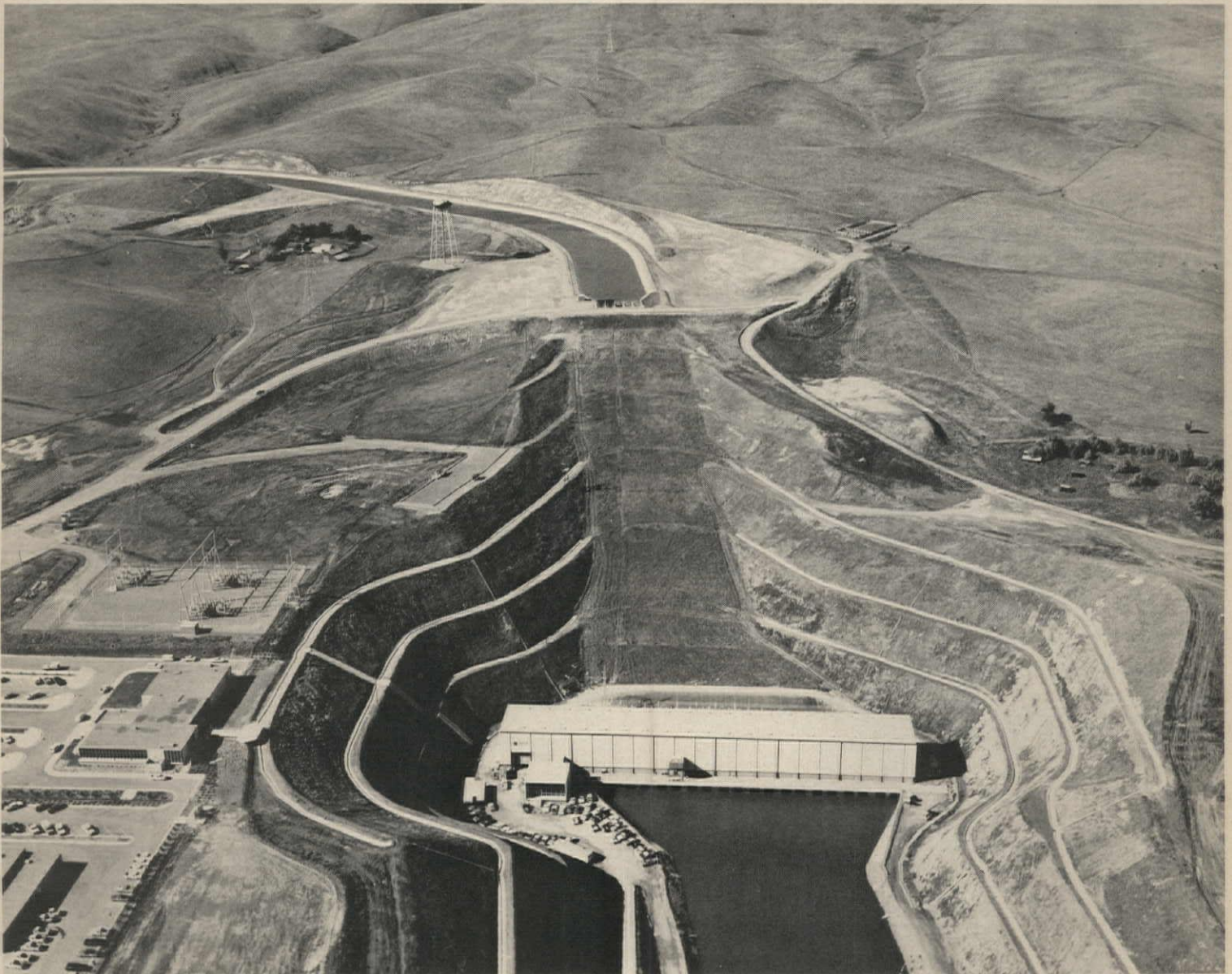
The *University of Washington Magazine* in its Spring/Summer issue of 1969 commented: "Few units of the university reach so immediately and poignantly into the family life of our state and region. Each day, here, children with problems once thought hopeless—and the parents and teachers of these children—are finding hope. Research at the center, the nation's largest, has had and will have application in schools and homes near and far. . . . The Child Development and Mental Retardation Center has a fine new physical plant. But its special quality is something else—professionals from a dozen different fields finding out more about how children grow and learn, using this research to help thousands of children do things they couldn't do before, training students of all kinds to help handicapped children, and then sharing these results with the community that made the center possible." □

1971 AWARDS PROGRAM FOR UTILITY DESIGN

The American Public Power Association in 1967 initiated a biennial Awards Program for Utility Design with the objectives "of stimulating esthetic consideration by local, publicly owned electric utilities and focusing attention on projects of APPA members which have achieved excellence of utility design." Co-sponsors include The American Institute of Architects, the American Institute of Planners, the American Society of Civil Engineers and the American Society of Landscape Architects.

Top winner in the 1971 program is the Delta Pumping Plant, a key part of the California Water Project. Certificates recognizing the achievements of this utility design and 11 others were given recently at the annual convention of the APPA.

Each of the co-sponsoring organizations selects one member of the awards jury. This year's judges were David N. Yerkes, FAIA, Washington, D.C.; Charles Blessing, FAIA, Detroit; William Swain, Pittsburgh; and Samuel S. Baxter, Philadelphia. □



First Honor Award

Delta Pumping Station, Tracy, California.
Utility: Department of Water Resources, State of California. **Architect:** Frank V. Lee, AIA. **Civil Design:** Arthur J. Bunas. **Mechanical and Electrical Design:** Theodore W. Troost.

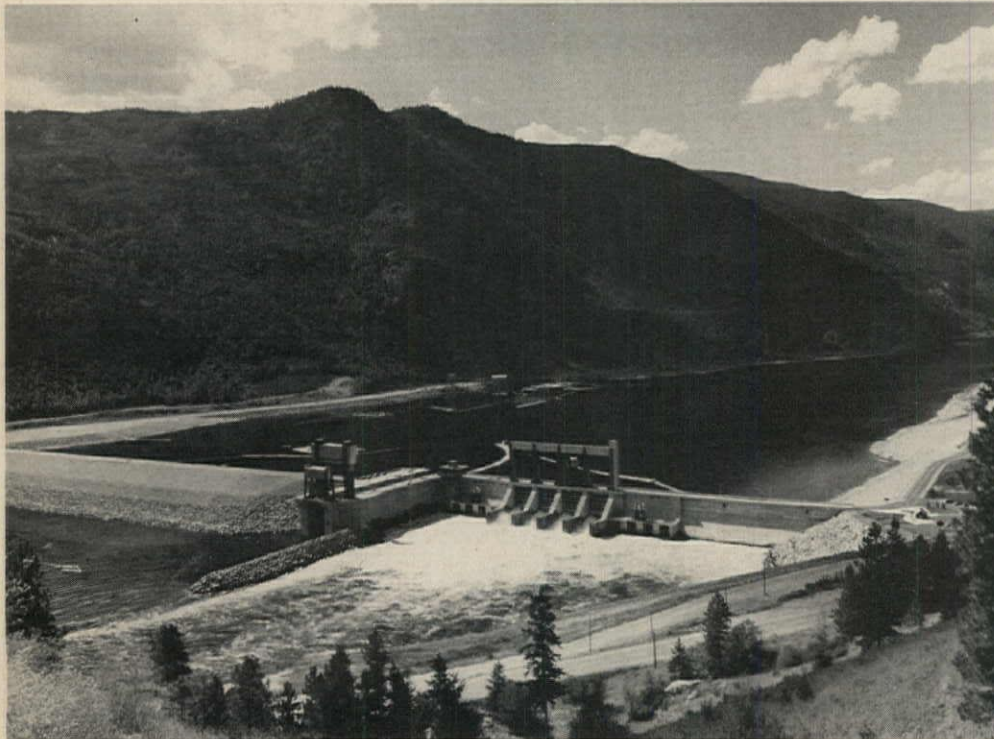
Jury Comment: "It shows an unusual perception and awareness of the potential of the site. If you are going to reshape Mother Earth, it's nice to do it in an ordered way. The design of the individual buildings is well above the standard. They are distinguished and businesslike and look like buildings designed to fulfill the functions they serve."



Honor Award

Oroville-Thermalito Hydroelectric Complex, Oroville, California. **Utility:** Department of Water Resources, State of California. **Architect:** Frank V. Lee, AIA. **Civil Design:** Arthur J. Bunas. **Mechanical and Electrical Design:** Theodore W. Troost.

Jury Comment: "This represents a strong structural form as a man-made contribution to the area. Clearly recognized in the natural landscape, it is a clear and powerful expression of the functions it serves. The use of color is highly commendable."



Honor Award

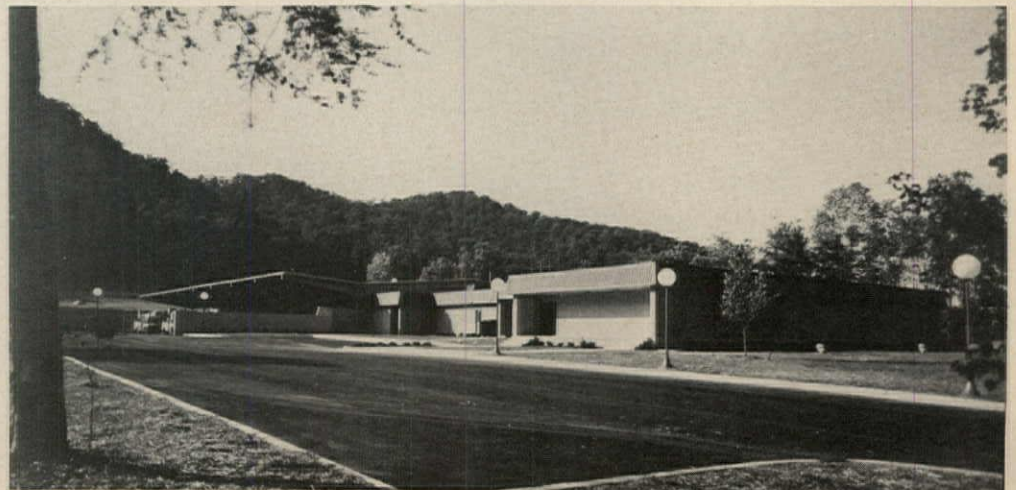
Arrow Project and Keenleyside Dam, Castlegar, British Columbia. **Utility:** British Columbia Hydroelectric and Power Authority. **Architects:** Duncan McNabb & Partners. **Landscape Architects:** John Lantzius & Associates. **Planner:** James W. Wilson. **Electrical Engineers:** M. A. Thomas & Associates, Ltd. **Architectural Consultant:** Kenneth H. Candy.

Jury Comment: "Not only is this a handsome engineering and sound functional solution, but it also has contributed greatly to the entire region surrounding the artificial lake. The engineering of the dam and lock and other facilities is of high order. It has created a regional recreation facility on the lake and has brought back life into small communities along its shores."

Honor Award

Power Service Center, Bristol, Tennessee. **Utility:** Bristol, Tennessee, Electric System. **Architects:** Anderson & Gilliam. **Landscape Architect:** Ridgley K. Robinson Jr. **Civil Engineer:** Hal T. Spoden. **Mechanical Engineer:** Walter L. Montgomery. **Electrical Engineer:** Fred S. Vreeland.

Jury Comment: "This is a highly sensitive response to a beautiful setting. We like what they did in putting the building on the flat plain surrounded by hills and then echoing the flatness of the site in the lines of the building."





Honor Award

Administration Building, Memphis, Tennessee. **Utility:** Memphis, Tennessee, Light, Gas and Water Division. **Architects:** Thorn, Howe, Stratton & Strong. **Landscape Architects:** Robert Green & Associates, Inc. **Structural Engineers:** Ellers, Reaves, Fanning & Oakley. **Mechanical and Electrical Engineers:** Allen Hoshall. **General Contractor:** Allen & O'Hara, Inc.

Jury Comment: "Not only is the architecture pleasing, but the building is located in an area where parking is convenient. Utility consumers have an auditorium for meetings and a model kitchen in the building. This contrasts with the old downtown offices owned by many utilities and is an outstanding example of potential contributions by modern ones."

Award of Merit

Gordon M. Shrum Generating Station, Hudson Hope, British Columbia. **Utility:** British Columbia Hydroelectric and Power Authority. **Architects:** Rhone & Iredale. **Landscape Architects:** John Lantzuis & Associates. **Planners:** International Power and Engineering Consultants, Ltd. **Civil Engineers:** International Power and Engineering Consultants, Ltd. **Electrical Engineers:** International Power and Engineering Consultants, Ltd.

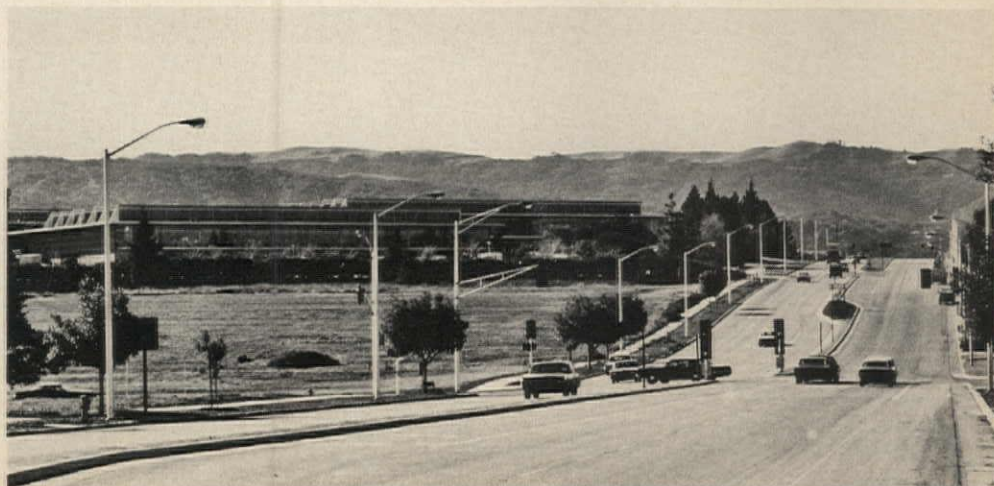
Jury Comment: "This facility is good in terms of visitor orientation. It brings people closely in contact with really dramatic and exciting parts of the operation, illustrating recognition of the landscape and the determination to leave it, to the extent possible, unaffected by man-made disturbances. The concept of the whole project and the way it fits into the landscape is superior."

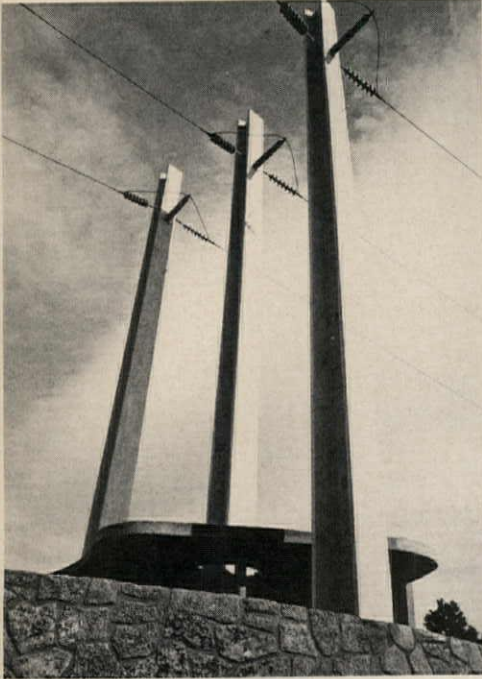


Award of Merit

Page Mill Road Industrial Park, Palo Alto, California. **Utility:** Palo Alto, California, Department of Light and Power. **Planner:** L. J. Fourcroy. **Civil Engineers:** H. M. Witbeck and L. G. Brian & Associates. **Electrical Engineer:** J. J. Bosza.

Jury Comment: "It deserves special commendation because an industrial park has been singled out as a highly important visual contribution to the community. The road underground project stimulated conversion of the entire industrial park area. It is a nearly perfect example of setting an example."





Honorable Mention

Panorama Point Vista House and Transmission Structure, Hood River County, Oregon. **Utility:** Bonneville Power Administration. **Joint Sponsor:** Hood River County, Oregon. **Architects:** Stanton, Boles, Maguire & Church. **Structural Engineers:** Rose & Breedlove Morse Brothers. **Electrical Engineers:** Grant, Kelley & Associates. **General Contractor:** Mann Contractors.

Jury Comment: "It succeeds in turning what was clearly an environmental deficit into a positive contribution. It is an ingenious marriage of a whole host of dissimilar things. The design of the structure around the base of the towers is integrated into the road plan. It is a good use of prestressed forms and therefore probably suggests an economical solution as well."

Honorable Mention

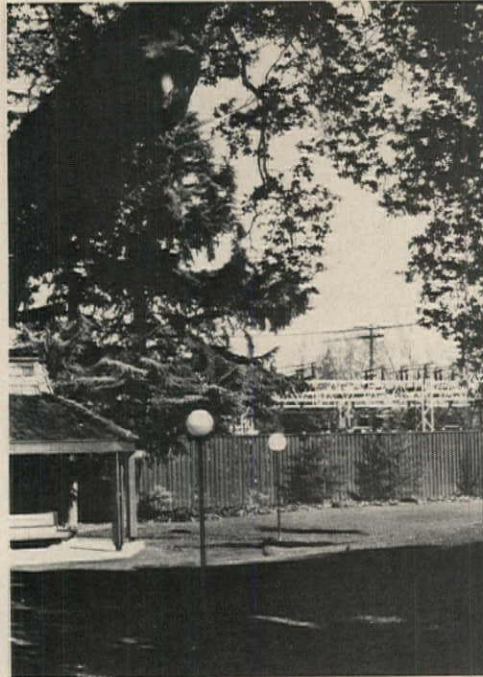
Brookside Substation, Pasadena, California. **Utility:** Pasadena, California, Water and Power Department. **Architects:** Bertil H. Hedlund and Leo W. Johnson, AIA. **Landscape Architect:** Kaz Omura. **Civil Engineer:** Leo W. Johnson, AIA. **Artist:** Richmond Kelsey.

Jury Comment: "This project illustrates excellent blending with existing terrain, vegetation and compatible materials, particularly the parking lot paving."

Honorable Mention

Distribution Station No. 76, Los Angeles, California. **Utility:** Los Angeles, California, Department of Water and Power. **Architect:** William W. Gossy, AIA. **Landscape Architect:** Charles L. Mathias. **Civil Engineer:** Daniel W. Waters Jr. **Structural Engineer:** John A. Hoffman. **Electrical Engineer:** John S. Jayne.

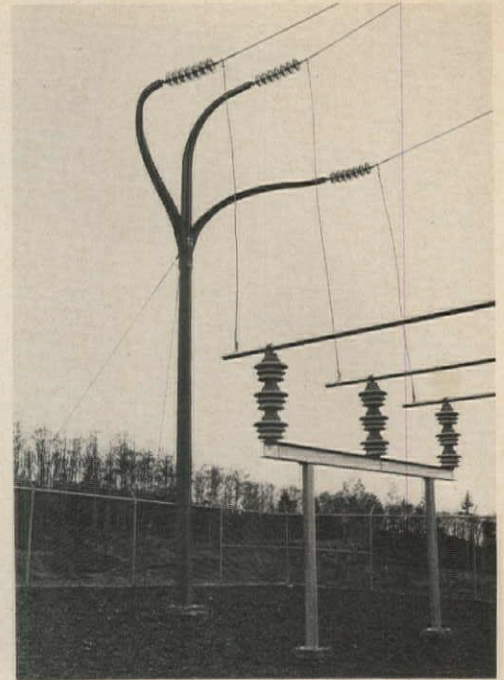
Jury Comment: "This is getting an award for the concept of putting the major part of the structure underground. It is a building that does not intrude into the park setting on one side and the street on the other. It does as little damage to the golf course and essential parking facilities as possible."



Honorable Mention

Hopkins Substation, Palo Alto, California. **Utility:** Palo Alto, California, Department of Light and Power. **Architects:** Edward Durell Stone, Inc. **Landscape Architect:** Jack C. Stafford. **Planner:** L. J. Fourerroy. **Civil Engineer:** H. M. Witbeck. **Electrical Engineer:** J. J. Bosza.

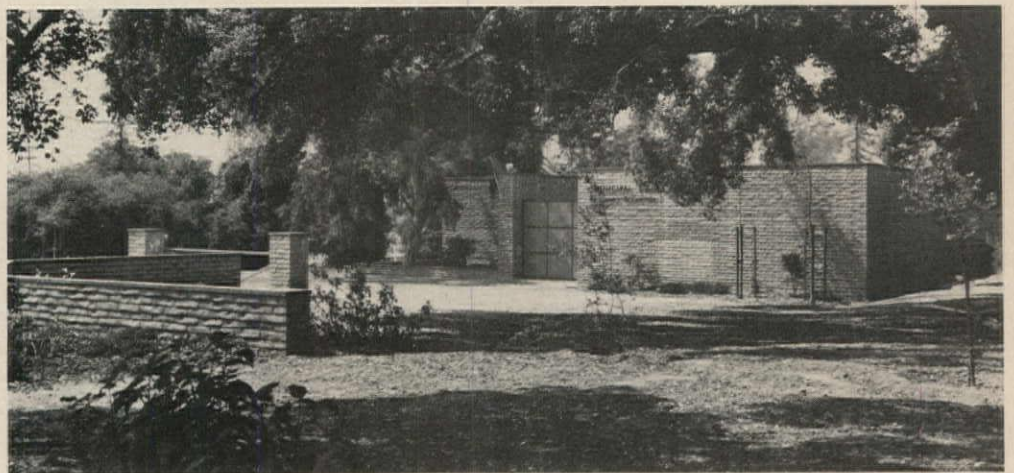
Jury Comment: "This project represents a utility structure as an element in a much larger community recreational concept. The substation complements the park setting and does not intrude into the general attractiveness of the community park."



Honorable Mention

Substation Dead-End Structure, Snohomish County, Washington. **Utility:** Public Utility District No. 1, Snohomish County, Washington. **Mechanical Engineers:** Diversified Design, Inc. **Electrical Engineer:** Leroy Burleson.

Jury Comment: "This is an innovative and creative solution: a light and graceful design of a functional unit, expressive of the stresses it carries. It suggests the potential of giving structural quality through honest structural design."



Cuban Architects in the United States

**A study of practitioners and
their absorption into the professional life
of this country indicates that they have, by and large,
adapted to their new homeland, have stayed
in the profession and now earn as much
as their American counterparts.**

by RAUL MONCARZ

"Some historian some day writing a sociological history of the United States might well analyze what happened to the Cuban people in the essentially Anglo-Saxon society that we have. A remarkable story," Deputy Assistant Secretary of State for Inter-American Affairs Robert Hurtwich has commented.

How have those educated and trained as architects fared? What barriers to absorption have they encountered? A few case histories are typical.

A 43-year old Cuban architect now residing in Miami used to be a professor at the University of Havana. In 1961, when he first came to the US, he worked as a dishwasher in a resort hotel, making \$50 per week. After three months, he got a job as a draftsman and in 1968 he became a partner in the architectural firm that hired him. With a license to practice in Florida, he believes the greatest problem in adapting professionally is a lack of proficiency in the English language.

A 45-year old woman architect now living in Louisiana once worked for the Cuban government and had her own office. She has lived in the US since 1960 and believes that professional adaptation is mainly a matter of attitude. With a master's degree in landscape architecture, she is now an associate professor of landscape architecture and has adapted professionally.

In 1960, a young 31-year old architect who now lives in Syracuse, New York, came to this country. At first, he found it difficult to practice architecture due to the fact that there was no way to obtain the correct credits for his Cuban education and thereby be allowed to take the licensing examination. For five years he waited and then passed the examination on the basis of "practical experience." Starting to work here as a draftsman at a salary of \$100 a week, he opened his own office in 1968.

The final case is that of a 40-year old man in Cincinnati, who has been in the US for 10 years. He had a private practice in Cuba. Like most Cuban architects, he could not speak English when he first arrived. He worked as a draftsman for firms in Florida and Ohio until 1966 when he opened his own office. He has successfully passed state boards.

Here I should like to report on a study I made which was supported by a grant from the Office of Manpower Policy, Evaluation and Research of the US Department of Labor. I am indebted to the Cuban architects who supplied me with information and especially to José M. Bens, secretary, Association of Cuban Architects in Exile in Miami.

I wanted to analyze the extent of utilization or underutilization of the education and training brought by the Cuban archi-

tects, describing the adaptation process and indicating how much of their competencies were transferrable under conditions existing in the US in January 1959. Basic to the study is an analysis of the readaptation of the human capital involved in the skills brought by the Cuban architects. My objective was to discover 1) the types of individuals in terms of occupational or personal characteristics who adjusted better to the new environment and 2) the barriers to absorption encountered by those who tried to remain in their profession.

A survey was carried out to determine which were the crucial variables in the professional adaptation of Cuban architects. Variables were examined in a simple linear regression model; the ones that proved to be significant were that the architects stayed in the same field and were licensed to practice in the US.

One hundred questionnaires were sent to randomly selected Cuban architects. A return percentage of at least 30 percent was deemed necessary to insure a sufficient number of responses for each characteristic, such as age, licensing, language and related traits. A second questionnaire was sent two weeks later to non-respondents; direct contact was made wherever possible with all those who had not replied within a reasonable period of time. Personal interviews were conducted also in New York, Chicago, Los Angeles and Miami to gain further insights into the adaptation process. A random sample was obtained by giving each person a serial number and then selecting the persons for study from a table of numbers.

There are currently in the US and Puerto Rico over 400 Cuban architects. Most of the Cubans first arriving in the US did not think of themselves as refugees but rather as temporary exiles from a homeland only 90 miles from the Florida coast. As a result, the majority decided to remain in Miami at first.

The Bay of Pigs fiasco in April 1961 and the missile crisis in October 1962 dramatically changed their hopes for an early return. Many Cubans realized that resettlement in other parts of this country was the only way to solve their economic problems.

Several important factors which may have hindered the resettlement and adaptation process were the lack of proficiency in the English language; legal restrictions; unfamiliarity with their new locations; failure to know where to seek job information and guidance; psychological disorientation due to resettlement; and last, but by no means least in importance, age.

Unless the Cuban architect had professional acquaintances in the US, it was difficult to obtain the first job. Very few of them had any knowledge concerning professional opportunities in this

TABLE 1

CUBAN ARCHITECTS: RESULTS OF SURVEY (N=60)

Variable	No. of Respondents	Percentage
Sex		
Male	58	96
Female	2	3
Legal status in the US, 1969		
Refugee	1	1
Resident	41	68
Citizen	18	30
Education in the US since 1959		
School or university	19	31
No school or university	41	68
Age		
25-34	7	11
35-44	29	48
45-54	15	25
55-64	4	6
Over 65	2	3
Refugee upon arrival	33	55
Resident or citizen upon arrival	27	45
Resettlement		
Cuban Refugee Center	7	11
Other way	3	5
Own	27	45
Stayed in Florida	23	38
Obstacles to adapting		
Language	17	28
Age	2	3
Health	2	3
Other	4	6
No difficulty in adapting	13	21
Professional restrictions	22	36
License or higher degree in US	26	43
No license or higher degree	34	56
Stayed in same field	55	91
Did not stay in same field	5	8
Self-employed in US	23	38
Not self-employed in US	37	61
Self-employed in Cuba	39	65

TABLE 2

AGE AND INCOME OF CUBAN ARCHITECTS, 1968 (N=60)

Age	No. in sample	Less than \$6,000	\$6,000-6,999	\$7,000-9,999	\$10,000-14,999	\$15,000 and over
25-34	7	0	0	3	2	2
35-44	29	0	1	11	13	4
45-54	15	0	0	3	8	4
55-64	4	1	0	2	1	0
Over 65	2	1	0	0	0	1
No response	3	0	0	2	1	0

TABLE 3

MEAN EARNINGS OF CUBAN AND US ARCHITECTS, 25-64 YEARS OF AGE, EQUAL YEARS OF UNIVERSITY EDUCATION, 1968

Sample size of Cubans	Standard Error	US Earnings	Cuban Earnings
52	544	\$11,586	\$11,469

country. There was no immediate way for a local firm to judge the ability and experience of a Cuban architect, and therefore some of these men were given jobs as junior draftsmen. This at least gave them the opportunity to prove their ability and solved the immediate need to earn a living. Others had to perform jobs completely unrelated to the architectural profession either because of supply and demand conditions in the US in the early '60s and/or lack of knowledge of the Cubans' training.

The Cuban architect had to adapt to a great variety of building codes in existence in the US—somewhat different from the ones used in Cuba. For example, here wood is used in walls

Dr. Moncarz, assistant professor of economics and finance at Louisiana State University in New Orleans and currently a Fulbright professor of economics in El Salvador, has carried out extensive research on the professional adaptation of exiled Cubans to the American way of life.

and ceilings, but in Cuba concrete blocks and reinforced concrete are preferred.

As indicated in Table 1, 31 percent of the Cuban architects have attended universities or taken courses in their fields of specialization in the US. Five percent of the respondents who had architectural training in Cuba have finished their degrees in this country.

"Professional restrictions" was the most frequent obstacle cited in adaptation, with 37 percent of the respondents agreeing on this point. Although 65 percent of the architects were self-employed in Cuba, they were unable to acquire the same status here because of state restrictions (state boards), lack of financial resources and citizenship requirements.

Only 10 percent of the architects studied were above the age of 55; therefore, age was cited as the greatest obstacle in adapting by only 3 percent of the respondents. Of those 55 years of age and older, 33 percent indicated age to be an obstacle. Table 2 shows earnings by age for the Cuban architects.

Out of the 22 percent who indicated that they had relatively little difficulty in adapting to the US, 69 percent were in the 25-44 age bracket and 23 percent had previous relations with US firms and institutions.

Of the 60 respondents, 50 are working today as architects; the other 10 hold draftsmen jobs. Most of the architects started as draftsmen. Through time and demonstration of their ability and knowledge, they are now practicing their profession.

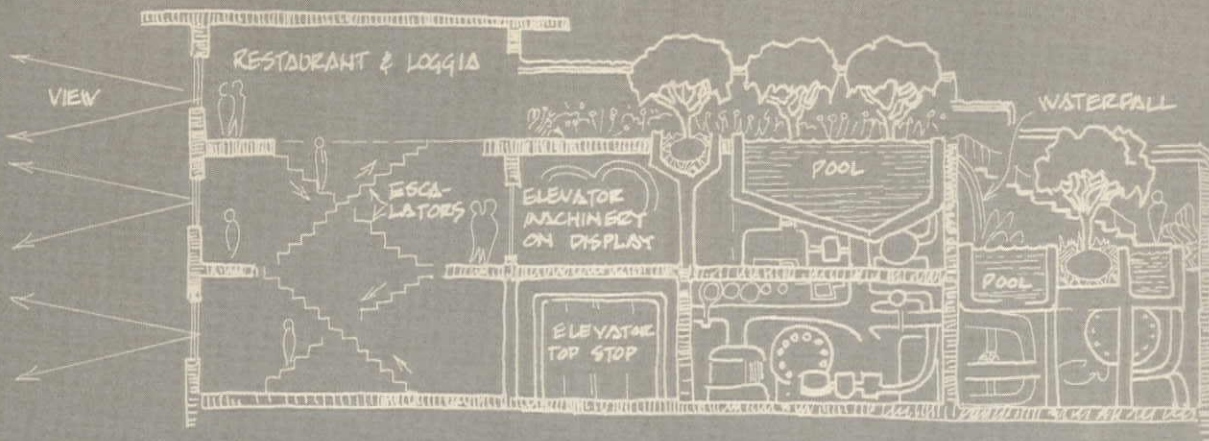
Several reasons explain the high number working as architects: the demand for architectural personnel; the "recognition" effect—firms and employers have learned of the abilities of the Cuban architects after one has been employed; and perhaps most important of all, the existence of a large number of prospective employers in the field. Equally significant are the great number and variety of channels of entry to jobs in architectural and engineering offices and the absence of licensing and accreditation provisions.

While in Cuba, 65 percent of the respondents were self-employed; in the US only 38 percent are in this category. Included in the latter group are seven architects who were not independent in Cuba but are so here. This downward change in professional status, assuming that self-employment is more desirable professionally, is attributable to lack of professional contacts, lack of financial resources, lack of desire to start all over again, and age.

A comparison of earnings between the Cuban sample population in architecture with their US counterparts of the same age and education (six years of university study) is shown in Table 3. The mean income data for US architects was calculated from the 1960 census special report entitled "Earnings by Occupation according to Education and Age," PC (2)-7B, Table 1. To bring the data to 1968 levels for comparison with Cuban earnings, the 1960 figures are inflated by 31 percent, the percentage given by the *National Survey of Professional, Administrative, Technical and Clerical Pay, 1968* (Washington, D.C.: US Government Printing Office, 1969). Thus an approximation is made to obtain 1968 earnings for all architects. It is a gross measure but a necessary one if meaningful comparisons are to be made.

As Table 3 shows, Cuban architects' earnings are not significantly different from their US counterparts.

Adaptation has been complete for the Cuban architects. More than 90 percent of the respondents have remained in their professional field, and there is no significant difference in earnings between Cuban and US architects where there have been no restrictions on licensing and accreditation provisions. □



Variations on roof deck themes are limitless. Two levels may exploit the drop between with a waterfall. All components—outward appearance, layout and function of the roof deck with its appurtenances and machinery beneath—must be approached simultaneously and in detail. There are few opportunities for afterthoughts.

TOO GOOD FOR TAR AND GRAVEL

by LYNN M. F. HARRISS

The utilization of roof areas for something besides shedding water is nothing new. Thousands of years ago, man had better ideas. If the best use is to be made of rooftops today, there are many considerations to take into account, the first being the possible union of the roof deck with the story beneath which could house the mechanical equipment. Spiraling land costs, congestion, air pollution and the increasing use of mechanical equipment in building warrant a closer look at the roof deck and its possibilities early in the design process.

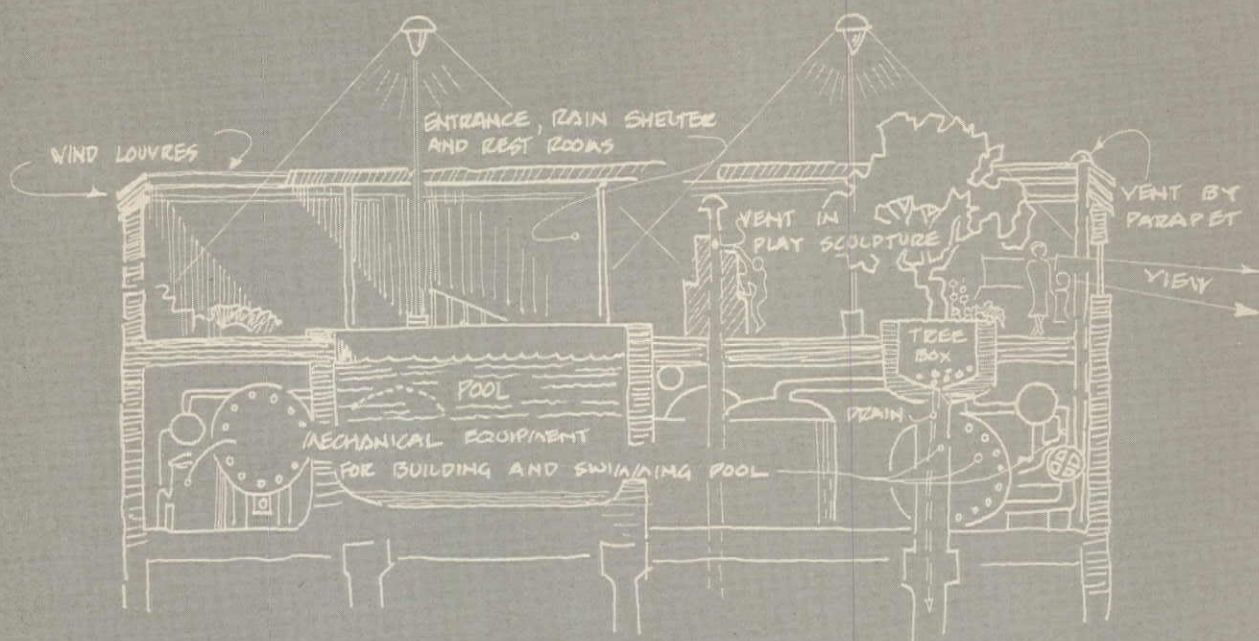
From early recorded history we know that rooftops were once used for sleeping, offering a cool escape from trapped-in heat of the day; they also provided high places for standing guard in time of danger. Today's metropolitan milieu invites intensive utilization of rooftops for somewhat different reasons: the almost exponential increase in the cost of urban land and the resultant squeeze on open outdoor spaces; a rapidly growing population and the concomitant trend toward higher and higher densities; and the increasing need for recreational space due to shorter work weeks and more leisure time.

Only when a building is designed with a "pointy" top does it become impractical to use the roof for outdoor open space. Given enough inventive attention early in the design process, the roofs of flat-topped buildings, as well as those with varying top levels, may be developed into valuable and attractive adjuncts to what, if any, open space may have been set aside at the street level. The uses are multitudinous.

The advantages are obvious:

- At current downtown prices for open space land, the open space provided by rooftops is simply too valuable to waste by nonuse.
- Rooftops are easier to patrol and control than street-level areas, an important consideration today.
- Rooftops provide more sunshine and fresh air than street-level areas, in proportion to the height of the building and of adjacent structures.
- Rooftops are often more readily accessible than street-level areas to residents and office workers in the upper floors.
- Rooftops can be designed to offer the valuable factors of privacy and seclusion.
- Multiuse devices can pay big dividends. For example, fountains and other water features may perform double duty as cooling elements in the airconditioning system. The reservoir of water in the swimming pool and other water features may serve as an emergency, gravity-fed source of fire-fighting water should the primary system fail. In cool climates, they could be used as skating rinks in winter.

Why, then, the seeming reluctance on the part of some designers and owners to develop rooftops for recreational open space use? The replies might go like this: Rooftop gardens are too expensive. Rooftop pools might leak into areas below. People might throw things off the roof. People might throw themselves off the roof. People might throw each other off the roof. Rooftops and access to them are impractical to guard and police.



Mechanical equipment and things that aid roof deck functions, such as pools and planters, may share top story space. Piers support tree boxes and necessary drains; vents may follow parapets or be concealed in play sculptures, electrolier standards, etc. The parapet wall may be a background for sculptures and plants.

Hoisting trees and large play sculptures to the roof deck is impractical after the building is completed.

Each of these objections can be effectively precluded with timely and resourceful design. The word "timely" is the pivot point. In the past, dissatisfactions with rooftops have stemmed from one fact: *They were afterthoughts*. Planning for rooftop areas should begin in the conceptual stage of design; it should be included in the original building program. If the developer is unaware of the rooftop potential, the architect should suggest it.

The esthetic, structural and mechanical aspects of the entire building will be affected by the design of the roof deck and vice versa. Therefore, it is vital to start at the beginning with an interprofessional approach to the roof and, as we suggest, to the floor beneath it.

Let us begin with a hypothetical example and a few simple assumptions. Say that our building is to be 10 or 15 stories high and have a flat top. The mechanical equipment will occupy most of one floor, and we tentatively assign the top floor—just below the roof deck—for this use. The roof itself is to be developed for general parklike utilization with trees, lawns, walks, pools, shelters, benches and perhaps such recreational features as play sculptures for the youngsters and shuffleboard and card tables for their seniors.

The first design objective is the marriage of the roof deck with the story beneath it, which is to house the mechanical equipment. This equipment occupies part of the floor area and part of the volume between this floor and the roof deck above. Conversely, the roof deck's pools and the planting pockets of its trees

extend down into the same general air space occupying parts of the ceiling and some of the spaces underneath.

The elements from both floors which are to share this intervening air space must be logically and simultaneously disposed for maximum effectiveness. A rooftop swimming pool, for example, might be deep enough to pre-empt almost all of the space underneath it, with filtration and heaters located under the shallow end. If fountains are to be part of the airconditioning system, the air compressors might be located efficiently on the floor directly below.

Tree boxes, extending only part way down into the space, nevertheless support rather heavy elements and require drainage, which might call for a pier containing an integral drain conduit under each one. Their exact location, then, would call for a three-way collaboration: location of the tree by the landscape architect; selection of the type of support by the structural engineer; and disposition of the mechanical elements to avoid conflicts by the mechanical engineer. At the same time, the architect must worry about how to get people up to the roof deck without the elevator, how to keep them from jumping or falling off the edge, how to light the area at night without damage to the architectonic effect during the daytime and so on.

There are specific considerations which must be taken into account during the design phase of rooftop spaces:

1. Location of the major pool or water feature. After tentatively spotting the mechanical elements, locate the largest pool or water feature, making the decision as to whether or not it is to provide cooling for airconditioning or is to be used as an auxiliary source of fire-fighting water, or both. The structural engineer will have to provide support for the considerable weight of the pool when full; this aspect may have a material limitation in the selection of location. The architect and landscape architect will have to

Mr. Harriss, a landscape architect with the Department of Housing and Urban Development, was formerly executive director of the American Society of Landscape Architects.

give a little and take a little—as is usually the case. Above all, the pool must be designed to avoid leakages and the top floor must be equipped with drains to take care of whatever leaks may occur in spite of all precautions.

2. The high parapet. To keep users of the roof deck from falling off, the parapet wall should be decisively higher than the human beings it protects. To compromise with this dimension would be to create the unpleasant situation of a person's wanting to see over and being unable to do so. Seven feet is a good minimum. The top of the wall should be sloping in order to discourage would-be acrobats. An inward sloping fence could be added, but this feature should generally not be required.

The additional wall height from 3 feet or so will affect the appearance of the building in elevation; this is another reason for joint planning from the conceptual stage. "But how will one see the view?" is asked. An answer could be in the form of another question: "Is it really necessary to see from the roof the same view that is clearly visible from the several top floors?" Why not just ignore the view and use the parapet as a background for ornamental plantings, thereby keeping the innocent user still farther from the wall and removing an urge he might otherwise have to cast himself headlong over the side?

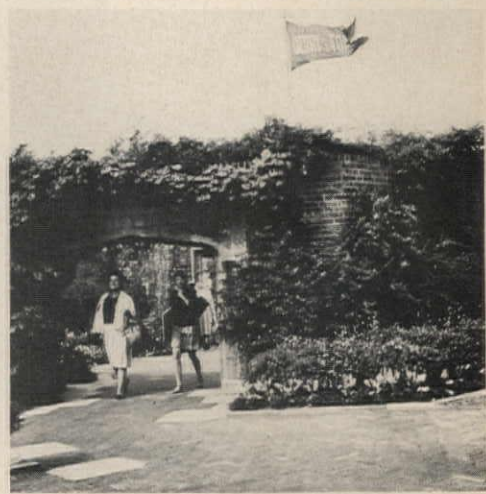
This philosophy has been used successfully by Derry & Toms department store in the Kensington district of London to enclose its four-acre roof garden. Walking through the garden, one sees the clouds and the sky and flowers and tends to forget any other view. If the view is exceptional, it is possible to insert windows in the walls. If this course is followed, the windows should be angled slightly so that the top overhangs the bottom. The windows should be set back into the wall so that rain and

slab (as in afterthought jobs), the guying necessary to support against the wind will be reduced to a minimum.

3. The tree pattern. After the principal water features are tentatively established, the trees should be located. Each tree involves some weight which may be expected to increase with the passage of time; it should be located at a point well able to support the weight. Typically, a tree is set over a pier. We want to have the tree planted flush with the finished grade of the deck, however, and a planting box may be combined with a supporting pier and have a provision for gravity drainage as well. As a refinement, each top corner of the planting box could have a cast-in-place rustproof eye for making fast the guys which the young tree will need.

4. Surface drainage. If not planned for in advance, surface drainage can be a vexing problem. One method is to tilt the entire slab at about 1 percent and run a strip drain along the lower edge. The entire deck is then waterproofed with a permanent membrane and covered with a minimum of 4 inches of clean gravel. Over this goes a fiberglass mat to keep the topsoil from sluicing into the gravel. Any surface receptors needed can simply cut through this mat in order to empty directly through to the gravel. In unusual cases, where higher volumes are expected, the gravel can be deepened and tile or other conduit used.

5. Multilevels. Where the architectural character of the building calls for the roof to be in several levels, great interest can be added with the rooftop treatment. Water features may be conducted over the edge from a higher to a lower level by means of attractive cascades. Sitting areas along the edge of higher levels may be arranged as balconies, belvederes or gazebos, overlooking the areas below. An observation tower placed centrally in



An enclosing parapet cuts off any competing views and provides safety on Derry and Toms' four-acre roof deck atop the London store.

drip on the shatterproof glass or the surface will be minimized. They should be pivoted horizontally so that they can be cleaned easily from within the rooftop area.

Another way of seeing the view has been used by the Prudential Insurance Company at its Chicago "Top of the Rock." A viewing walk encircles the building at a slightly lower elevation, and the viewer is protected by a breast-high parapet.

One final argument in favor of the high parapet wall is that it breaks the force of the wind. At the elevations of many building tops, winds can be considerably stronger than at the relatively protected street level. With low parapets, these winds can be uncomfortable and damaging to both plant and animal life. The higher walls tend to protect the plants, helping them to grow more rapidly and uniformly and to hold their flowers longer. With trees set flush in planting pockets rather than on top of the

the highest area may be used as an ornamental support for the necessary aircraft warning beacon.

6. Irrigation. The irrigation of lawns and ground cover areas may be well taken care of by electrically operated automatic sprinkler systems. Not only does this arrangement save labor costs in climates which have periods of heat and drought, but it can also be programmed to operate during the night when interference from the visiting public is not a problem and wasteful evaporation is at a minimum. For maximum economy, automatic sprinkling should be performed at hours when winds are normally at their lowest levels.

7. Illumination. Illumination may be provided by a continuous cove at the top of the high parapet wall. Besides furnishing some general illumination, this method also will accent the ornamental plantings arranged beneath the lighting and will have the wall

as a background. Other typically garden-type lighting may be used to supplement this, such as uplighting for trees, hooded lights to outline walks and the like. High electroliers may not be desirable because of their effect upon the building's external appearance, unless designed with this in mind.

8. Access to the roof deck. Presumably, elevator equipment will terminate at the floor below so that access to the roof proper will be limited to escalators and/or stairs. By whatever means, the access to the roof proper should be characterized by openness, good visibility and high illumination. Narrow, dark stairways detract greatly from an otherwise excellent development and invite clutter and nuisance. Elevator machinery may actually be placed on display nearby, behind glass, for those who like to see the wheels go 'round.

9. Roof deck facilities. The typical roof deck will require at least one superstructure, combining several functions: a covered entrance and exit platform; a shelter from inclement weather; a location for information and control; restrooms; a place for gardening equipment, irrigation controls, supplies. In appropriate situations, it may be desirable to have a restaurant on the roof. In this case, all facilities may be combined into the same structure. If included, the restaurant should take advantage of the best view as dramatically as possible.

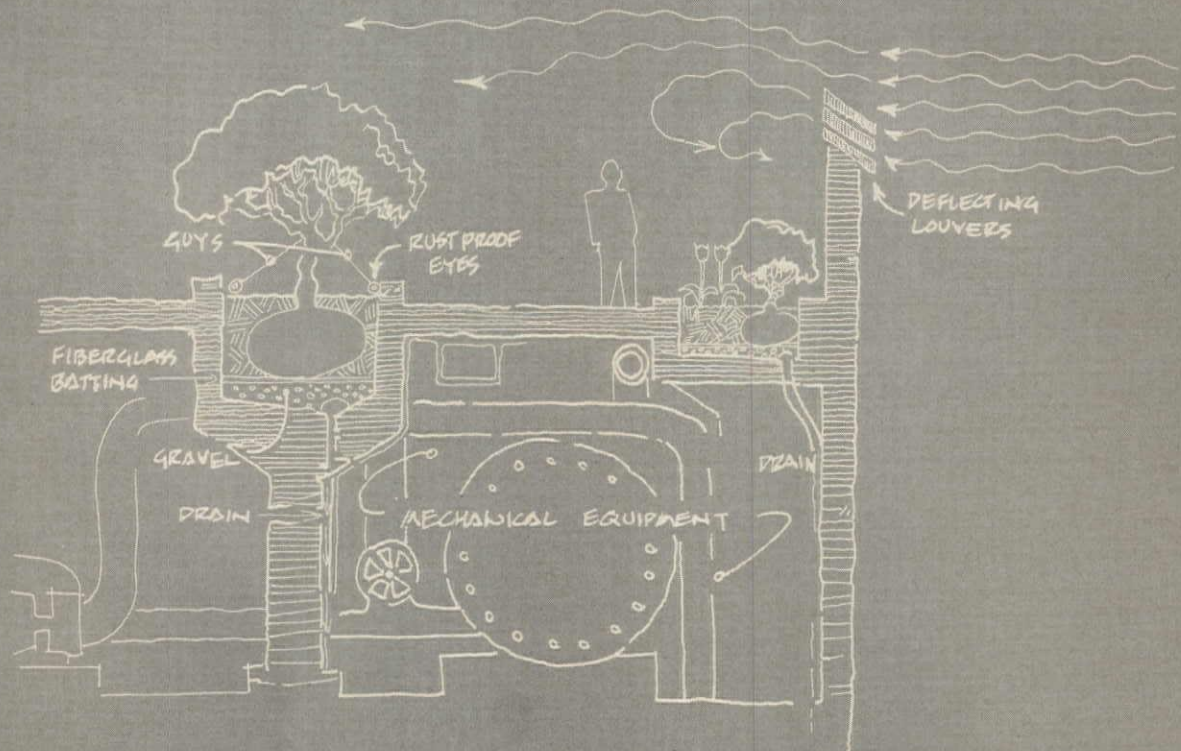
10. Vents and ducts. The inescapable vents may be designed to run up through and be partially concealed by trees, sculptures, fountains, play apparatus or parapet walls. Codes permitting, it may be possible to turn some of the vents outward at the periph-

ery of the mechanical floor below, obviating the necessity of coming up through the roof deck at all. It may be desirable for some larger roof areas to break up the space into smaller "walk-through" gardens rather than treating the entire area as one. If the areas are so divided, the separating walls may house some of the vents.

11. Hoisting heavy loads. Trees and sculptures may be heavy and hoisting them to the roof deck may be expensive and troublesome if not anticipated and planned for in advance. If integral cranes are used for the construction of the building, they should remain in place until the heavier objects are lifted from the street to the roof deck. In some cases, service by helicopter may be required to place heavy objects.

The instinctive objection to rooftop utilization is the cost factor. Cost need not be considered an "extra," however, if the use of the rooftop fulfills part of the building's overall objectives and goals.

A justification for the use of rooftops for something besides tar and gravel lies in the relative cost of land. Properly designed rooftops can be an extension of open land space for recreational and other purposes, especially in the central city where land prices are likely to be astronomical. Without question, roofscaping will add to the cost of any planned structure. If properly designed for the dual role mentioned, the roofscape can add value to the building and to the enjoyment of the human beings for whom it was intended. This worth in usefulness is far and beyond the dollar outlay involved. □



A high parapet can temper the winds. It not only removes the visual temptation to jump over but also makes the roof deck a more comfortable place for plants and human beings. With the afforded protection, plus some shade, a much wider variety of shrubs, small trees and flowers may be used to landscape the roof deck.



In the Tokyo Metropolitan Festival Hall, or Tokyo Bunka Kaikan, Kunio Mayekawa & Associates combine Western techniques with Japanese tradition.

100 Years of Japanese Architecture: From Imitation to Originality

by PIERRE RAMBACH

Cultural influence is rarely a one-way process. In fact, Kipling's "Ne'er the twain shall meet" is perhaps nowhere more disproved than in the field of modern architecture. Here East and West—or at least Japan and the West—have met, and each has drawn strength from the other. Now, however, a new generation of Japanese architects is emerging who do not need to look to the West but blend old design traditions with new techniques.

When the long period of Japanese isolation ended in 1868, everything Western was seized on without great discernment in the first flush of enthusiasm. As far as architecture was concerned, this happened at a highly inopportune moment of history: European architecture was at its lowest ebb.

Victorian-style buildings mushroomed in Tokyo, the new capital, and even imperial palaces were built in slavish imitation

of Buckingham Palace and Versailles. Then followed a period of reflection and in all fields, but especially in architecture, the Japanese became more selective and critical in their adoption of Western ideas.

When Frank Lloyd Wright paid his first visit to Japan in 1906, it marked a turning point in the importation of Western architectural ideas. He came to Japan as an admirer of traditional Japanese architecture and art, in which he recognized profound affinities with the principles of "organic architecture."

In a classic Japanese residence, the house and the garden are one: They are conceived as one unit and merge into one another so that it is impossible to say where the one ends and the other begins. For instance, the Japanese house usually has a sort of verandah covered by projecting eaves. These can be either inside or outside the house, according to whether removable panels are

put up or not. Another common feature is an interior patio, often with a rock garden. This is a far cry from the concepts of indoors, outdoors, front and back so dear to the Westerner, yet it corresponded exactly with Wright's ideas on domestic architecture.

Wright also visited the old imperial residences. Built of wood and baked clay with shingled roofs, these simple structures brought home to him the beauty and nobility of inexpensive materials generally looked down on in the West. The Imperial Hotel, with its facade of rough limestone and bare brick, was the first successful attempt to fuse Japanese and Western ideas on architecture (see AIA JOURNAL, Dec. '68).

Among other leading Western architects who have contributed to the two-way exchange of ideas and stylistic devices between Japan and the West were Mies van der Rohe and Richard Neutra. Mies was impressed by the Japanese use of prefabrication and

visible structural elements. The pure lines of his buildings, the huge black-painted metal beams, the expanses of glass, the interplay of squares and rectangles, the perfection of the proportions—all are reminiscent of the austere geometry of traditional Japanese architecture. Neutra returned from Japan with a refreshed conception of habitat which enriched his designs ever since his visit in 1952.

Other distinguished Westerners to visit Japan have included Walter Gropius, who was given an enthusiastic reception by Japanese architects in 1954, and Le Corbusier, who has had perhaps more influence on postwar Japanese architecture than any other European or American. Although he was less influenced by Japan than Wright, Neutra or Mies, his first contact with the country affected him deeply. On visiting the old part of Kyoto he exclaimed: "They have been doing for centuries what I have spent my life trying to do!"

The reasons for Corbusier's popularity and influence among Japanese architects can be understood best by examining the impact of the new materials—concrete, metal and glass—on Japanese building. Instead of shaking the foundations of the classical conceptions of architecture as they did in the West, they simply led to the abrupt disappearance of masonry building, which had remained an unassimilated foreign body, and to a return to the ancient tradition of structural architecture. Japanese architects who went to Europe and America in the 1920s to study the new techniques returned home and simply translated into the new language of concrete and metal the best achievements of their traditional buildings of the past. The new buildings harmonized very well with the old, and the transition from wood to reinforced concrete was a smooth one since what resulted was not really a new form of architecture: The concrete beams and pillars used by the new architects had more or less the same proportions as the old wooden beams and posts.

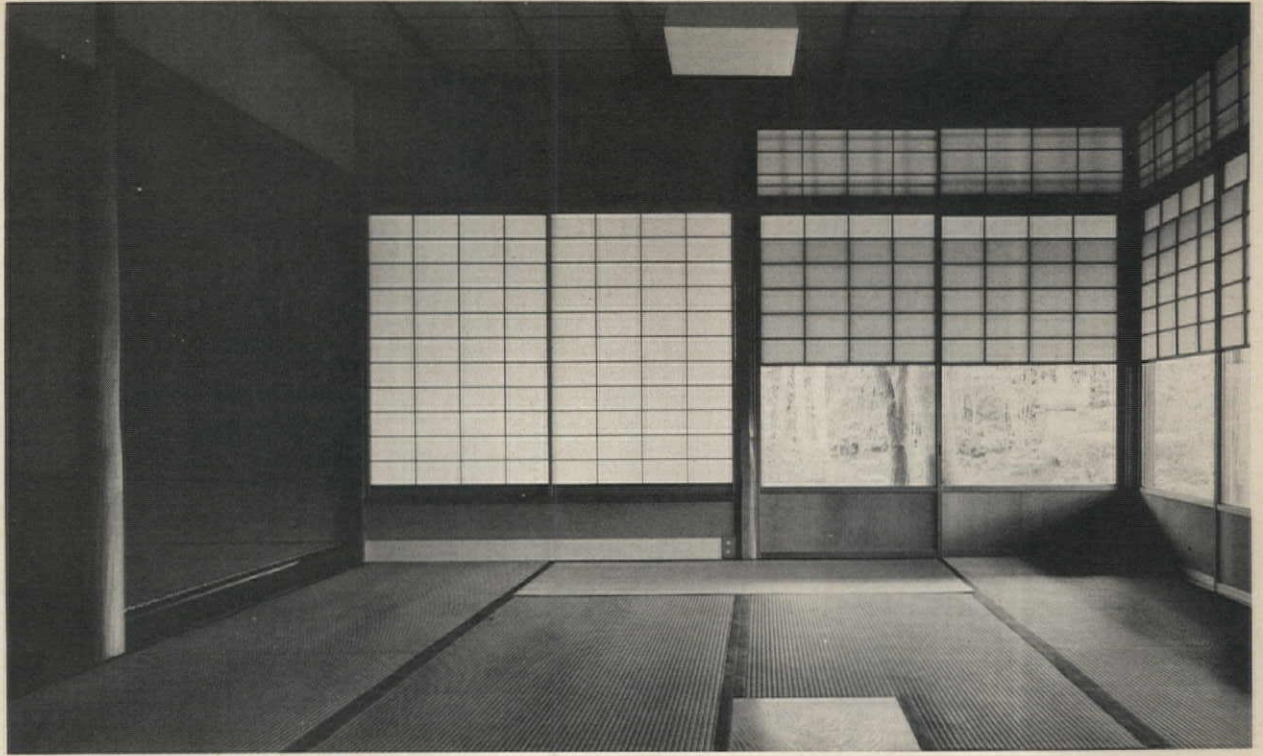
In Europe, another attitude prevailed: Metal and reinforced



The heavy sweep of the roof of Tokyo's Festival Hall (right) is reminiscent of the Buddhist temples at Nara and Kyoto. The Hall of Daibutsu, Todaiji Temple at Nara (above) dates from 1708 and is thought to be the largest wooden structure in the world, measuring 166 x 187 feet and 160 feet in height.



Traditional Japanese interior following 3 x 6 foot rice-straw mats (*tatami*), a modular system which has been popular in Japan since the 15th century. House and garden are one; the sliding partitions and storm shutters are substituted during the summer months for bamboo screens. The interior is never permanently fixed but can easily be altered with partitions.



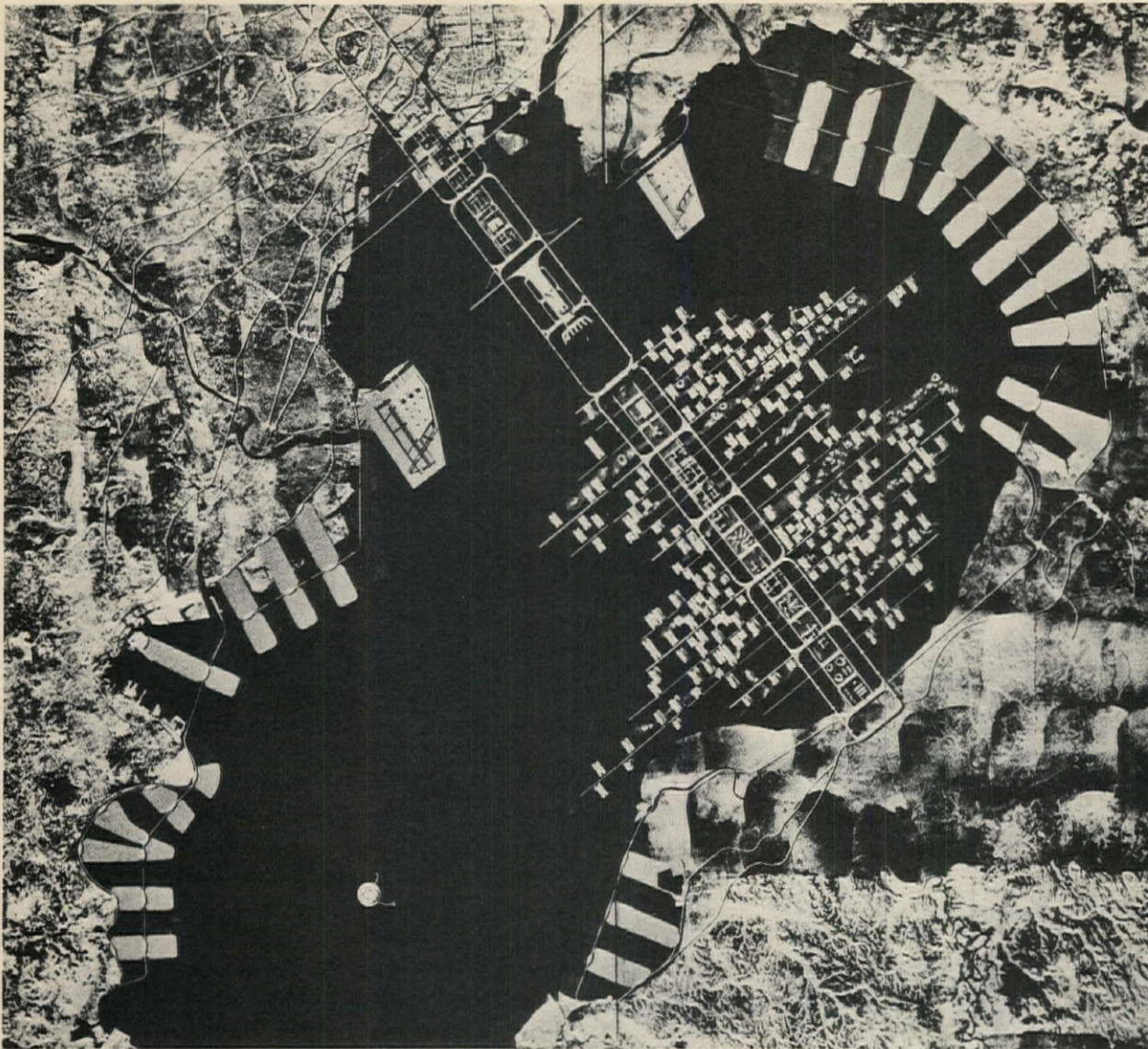
Foyer of Tokyo's Festival Hall is obviously designed according to the traditional modular system and to the indoor/outdoor concept—but with materials that show influence from the West.

concrete were used widely, but for reasons of economy and usually with a sense of shame. Apart from a number of famous exceptions, Western architects failed to appreciate the true potential of the new materials, always being careful to conceal them under marble or brick overlays. In short, the tradition of "noble materials," alien to the Japanese, persisted and persists even today. Even the French architect Auguste Perret, one of the pioneers in the use of reinforced concrete, veneered the facade of his Théâtre des Champs Elysées (1912) in marble. And today in France the snob appeal of stone is still such that promoters of new apartment blocks always insist that the building be faced in freestone, although usually this is no more than a thin layer hiding the true structural materials.

The Japanese, on the other hand, have always had a predilection for simple materials left in their natural state. Striking illustra-

tions of this are the famous Shinto shrines at Ise and Izumo, which are little more than cabins with massive timber beams of stark simplicity and thickly thatched roofs. So, they have never been in the least ashamed of concrete. They seized with enthusiasm on Corbusier's idea of making use of the patterns left in the cast concrete by the timber shuttering. In no other country has concrete been handled more sensitively than in Japan, and nowhere has the influence of wood been more evident.

One of the results of the Japanese admiration for Corbusier was the commission he was given to design the National Museum of Western Art in Tokyo. Opposite this stands today the Tokyo Bunka Kaikan, or the Tokyo Metropolitan Festival Hall, a huge complex of concrete halls designed by Kunio Mayekawa who studied under Corbusier in Paris before World War II. A comparison of the two buildings reveals the self-confidence of modern



A plan for Tokyo — a linear extension of the city over Tokyo Bay — by Kenzo Tange & Urtec, a bold proposal which shows how Japanese architects strike out on their own.

Japanese architects which has enabled them to learn from the West without losing touch with their traditional sources. The curves of the concrete cornices on the Bunka Kaikan, though inspired no doubt by Corbusier's designs for Chandigarh, are also reminiscent of the heavy sweep of the roofs of the Buddhist temples at Nara and Kyoto.

But Mayekawa is already looked upon as something of a classic. A new generation of architects is emerging who have no need to look to the West for their new techniques. Indeed, it is in Japan that many of the most revolutionary technical developments are taking place. In fact today, just a century after the opening of the Meiji Era, Western architects are turning to Japan to learn the latest techniques, particularly since some original answers to the problems of prefabrication and standardization, now of burning topicality in the West, have been known in Japan since the 15th century.

Ever since that time, traditional Japanese houses have been built according to a standard modular plan, the basic element of which is the *tatami*, a rice-straw mat measuring approximately 3x6 feet. The *tatami* is an excellent basic unit for human habitation, since it corresponds to the space required by a sleeping man. Prefabrication and standardization are surprisingly widespread: From one end of the country to the other, doors, windows, parti-

tions and sliding shutters are all of the same type and proportions and have been so manufactured by generations of craftsmen.

Today in the West, the rapid development of new techniques and the exigencies of planning have led architects to find ways of altering the layout of the interior areas of offices, workshops, schools, etc. But this same flexibility has existed in Japan for centuries. In Japanese houses, the interior spaces are never fixed once and for all; they are altered as required by putting up or taking down movable partitions. In a restaurant or hotel, for example, a room of 24 *tatami* (approximately 430 square feet) can easily be converted into three areas of eight *tatami* each.

But all these architectural problems pale in significance beside those created by the rapid growth of the world population and increasing urban concentration. While European countries cling to their traditions and still hesitate to adopt revolutionary solutions, the Japanese have no choice: Already they have a population of 100 million crowded onto a mountainous territory smaller than California and only 16 percent of which is cultivable; their cities cannot be extended very far outside their present limits without seriously affecting the balance between agglomerations and arable land. But the irrepressible energy of the Japanese, combined with their advanced building technology and their lack of inhibitions when it comes to embarking on new ventures, seems likely to lead to the creation of city complexes of an entirely new kind. Plans for such developments—among them Kenzo Tange's highly original linear extension of Tokyo over Tokyo Bay—are already far advanced. □

Mr. Rambach, who studied architecture under Auguste Perret, is the author of several books, the latest one of which is *Le génie du Japon*. The present article is reprinted through the courtesy of Unesco Features.

TITLE VII: *a spur to the building of new communities*

by GEORGIA K. DAVIS

An act which marks the advent of a substantial commitment on the part of the federal government to new town development declares that the national welfare requires the encouragement of well-planned, diversified, economically sound new communities. It also includes major additions to existing cities as one of the essential elements in a program for bettering patterns of development and renewal. These could be the first of a series of steps that will form and reshape the quality of urban life.

Major new legislation which marks the beginning in the evolution of a national growth policy was passed by Congress late last year. A new federal emphasis on the quality of planning for future communities promises to be of substantial import to architects, planners and other design professionals concerned with the shaping of the physical environment.

Known as Title VII of the Housing and Urban Development Act of 1970, the legislation authorizes up to \$50 million in new and expanded assistance to individual public and private new community developers as it seeks to encourage the rationalization of rural/urban change through the building of socially and economically sound new communities. Leading business journals, as well as advocates of a national new town strategy, are predicting the start of a genuine American new communities movement.

Under the conditions of the act, the President will report to Congress every other year on the facts and circumstances of national growth. Beginning in February 1972, the report will assist in the development of an urban growth policy intended to "encourage the rational, orderly, efficient and economic growth, development and redevelopment of our states, metropolitan areas, cities, counties, towns and communities in predominantly rural areas."

Support for new communities, a principal component in the urban growth policies of other Western countries, is provided through the expansion of Title IV, the Housing and Urban Development Act of 1968. Title IV sought to encourage private developers to build well-planned, balanced communities by backing approved projects with federal guarantees of funds up to \$50 million and supplemental grants for costs incurred in land acquisition and development. Title VII succeeds Title IV and extends incentives to public developers, such as a state land development agency or a regional or metropolitan planning unit empowered to build new communities.

In addition to federal guarantees of a developer's borrowings, other incentives include direct loans for payment of interest on funds borrowed to finance land acquisition and land development; interest grants to public developers to encourage the use of nontax-exempt bonds; and planning assistance grants to stimulate innovative planning of a social and technological nature. An important additional provision in the legislation provides for public service grants to local governments to meet public service needs generated by new communities in the early years, such as police and fire protection and educational programming. State and regional planning agencies are encouraged by grants to plan for the growth of areas around new communities and to determine the location of appropriate sites.

Fourteen government programs are identified in the Title VII legislation as new community assistance projects, thus opening the way to additional supplementary grants which may include up to 80 percent of costs of mass transit systems, schools, libraries and other essential public facilities. The act also provides guarantees for new central city projects. Land now held in "functionally obsolete" uses can be cleared and redeveloped for new-towns-in-town projects as the result of some basic changes in renewal administration. Title VII, Section D, may help existing cities to share in the benefits of a large-scale balanced mix of new city activities within their own jurisdiction.

The act also provides for a demonstration program which permits the federal government to develop a new community as a prototype. The idea is frequently advanced that the government might elect to build the kind of new community that is generally regarded as most difficult and challenging, namely, the freestanding new community which is independent of support from any adjacent metropolitan area.

A Community Development Corporation has been set up within the Department of Housing and Urban Development to provide policy guidance and direction for the new program. By statute, the Secretary of the department is chairman of a five-member board of directors. The corporation is headed by a general manager to be appointed by the President with the advice and consent of the Senate.

Four possible types of new communities have been identified in the current program: satellite communities within metropolitan areas; existing towns and cities identified as potential growth centers; new-towns-in-town within central cities; and freestanding communities distant from urban areas. To date, all of the communities for which federal backing has been guaranteed or committed are essentially satellite communities, as are Columbia, Maryland, and Reston, Virginia.

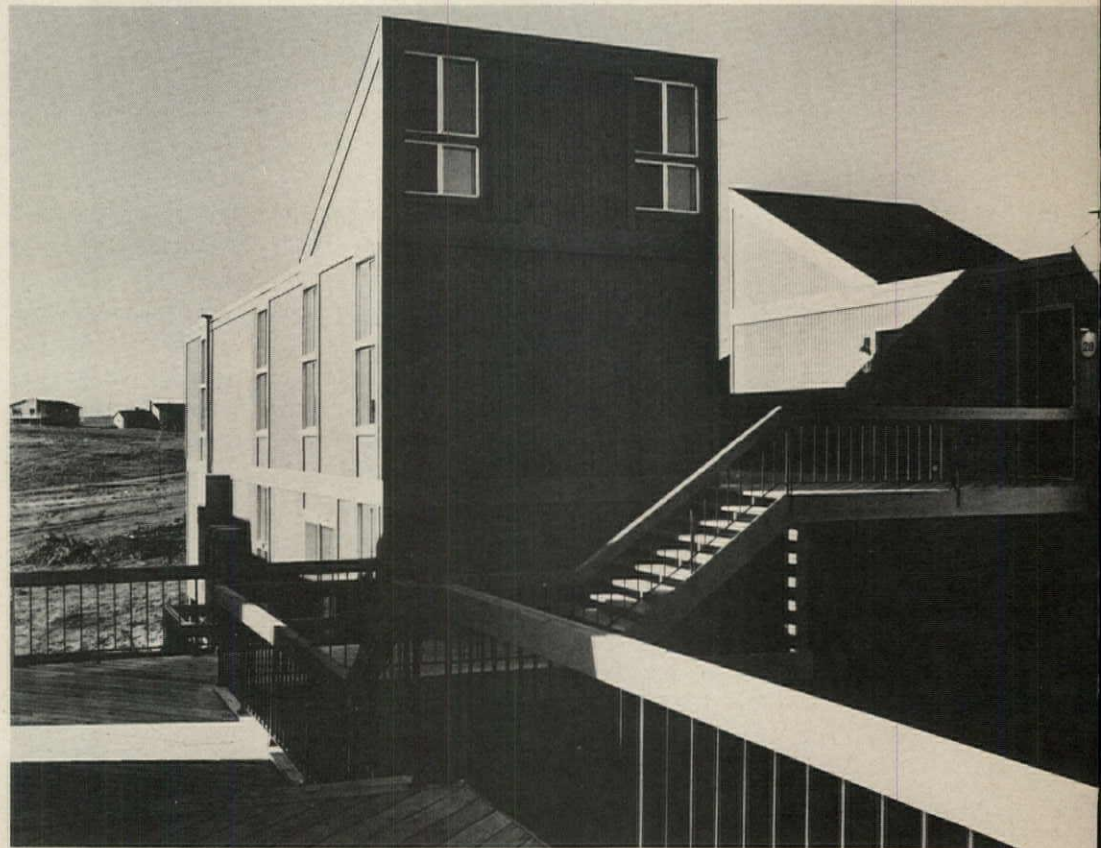
The aim of the government is to assist the developer in using his resources productively in exchange for which he agrees to meet social and environmental objectives. According to the director of the Office of New Communities William Nicoson, feasible program objectives for the development of federally assisted new communities are:

- Conservation of the land
- Reduction of time in journey to work
- Elimination of a piecemeal approach to urban development
- Obvious economies of scale
- Possibilities of substantial environmental and economic savings
- Opportunity to demonstrate advanced technologies, social concepts and new environmental protection measures.

The eligibility of a new community project is not circumscribed by size or specific area requirements. Review centers on the mix of uses and activities, the employment base, the commercial facilities, the range of housing types and the inclusion of housing for low and moderate income families. Other key factors are location and access and the existence of links to other urban areas. The plan must emphasize environmental quality and must meet criteria related to such factors as the adequacy of public facilities, acceptable noise levels and open space requirements.



Inhabitants of Jonathan, Minnesota, the first new town to receive federal backing under the New Communities Act of 1968, can choose among a wide variety of housing types. The Weyerhaeuser Red Cedar Idea House (top right) is the design of Ralph Rapson, FAIA. Ben H. Cunningham, AIA, is the architect of the stack unit prototype (top) in the Industrial Center and of the "Treeloft One" apartment complex (right). Cunningham is also the planner of Jonathan, which is sited on rolling farmland.



Officials indicate that a high quality of planning and urban design will be looked for in new community proposals.

A feature of the legislation is the possibility of financing public facilities including schools, parks and recreation areas from the proceeds of the developer's borrowings. Developers must be willing to assist in the coordination of educational facilities and services with residential planning and to donate school sites. All facilities or spaces which are publicly owned, or will be in the future, can be included as part of the total cost of land development. It is possible that this financing capability may result in the development of some types of joint use facilities which will serve both public and private needs in the new environment. Designs for new types of joint use or multiuse centers which combine commercial, residential and community uses are being studied.

One important condition of Title VII is that the developer

demonstrate that he has necessary local government approvals for zoning changes. Presentations must be made to local officials and considerable preliminary planning undertaken by a new communities team prior to receiving federal commitment. There must be continual reassuring that the proposed new community will be beneficial and will be able to pay its way in terms of the costs of additional facilities and services. Supplementary and public service grants are deemed critical in making it possible for the local government to adapt, in a positive way, to conditions of rapid change. A major, and still evolving, role for the federal government appears to be that of easing the impact of the new community on the surrounding area. Planning for social development, as well as adherence to sound physical planning principles, is being deliberately made part of the ongoing community development process by a number of organizations concerned with the planning of the new communities.

The first new town to receive a commitment under the 1968 law was Jonathan, Minnesota, a community on an 8,000-acre site, 24 miles southwest of Minneapolis. Rolling farmland, wood-

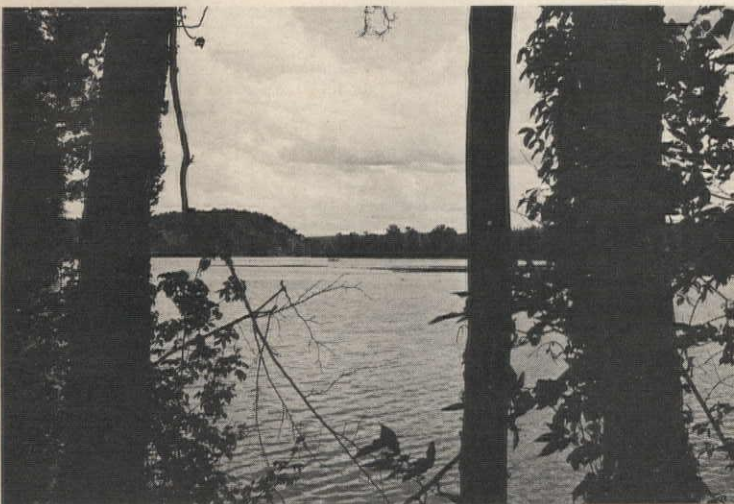
Mrs. Davis is senior research and information analyst for the American City Corporation, Columbia, Maryland.

ed ravines, four lakes, a greenbelt on its northern boundary—all are important physical characteristics. Five villages of between 5,000 to 7,000 inhabitants are grouped about a multistory enclosed town center that bridges the main railroad and highway. A variety of housing types abounds. Experimental housing is being built by a number of different companies. One of the projects features modular units that may be added or deleted as family requirements change. A 20-year development plan calls for a population of 50,000 by 1990 and anticipates 18,000 residents in 10 years. HUD guarantees up to \$21 million.

St. Charles Communities, Maryland, has been awarded a \$24 million new town development commitment from HUD. Located 25 miles southeast of Washington, D.C., in an area currently suffering economic depression, St. Charles will be a series of several communities for moderate and low income families, with 80 percent of the housing priced under \$25,000. A population of 75,000 is planned. St. Charles is based on a neighborhood/village hierarchy linked by a pedestrian path system. Village centers will contain schools, stores and recreation and health service centers.

Park Forest South, Illinois, was the third community to receive HUD commitment. The new community, south of Chicago, extends over 8,000 acres and is expected to attain a population of 100,000 in 15 years. Conceptually, the town center is linear, with development occurring along a three-mile rapid transit spine. An internal transportation system is proposed to serve a new state university for 10,000 students, a hospital, offices and commercial facilities. Housing will be predominantly multifamily.

In December 1970, HUD announced guarantee commitments for two additional new towns in Texas and Arkansas.



Development of the 5,400-acre tract set aside for Maumelle New Town, 12 miles from Little Rock, will cost approximately \$500 million.

Flower Mound New Town, between Dallas and Fort Worth, received an \$18 million guarantee. It will be built within the existing community of Flower Mound on a 6,156-acre tract. Development will take 20 years and will house 60,000 people. Fourteen neighborhoods will be grouped into four villages around the town center; about 689 acres will be reserved for industrial use.

Maumelle, a new community for 45,000 people located 12 miles from Little Rock, Arkansas, has received a \$7.5 million commitment. The town site has 3.5 miles of river frontage on a recently completed waterway and flood control project on the Arkansas River. Industrial uses will cover 1,071 acres and have rail and barge access.

Investors' response to new communities debentures has been

favorable. Jonathan's bonds sold in mid-October at 8½ percent, St. Charles at 7¾ percent in December and Park Forest South at 7 percent in March of 1971.

The new communities movement gained added support from the private sector in February when David Rockefeller, chairman of the Chase Manhattan Bank in New York City, proposed the creation of two new institutions, or some change in existing institutions, that would cause a national urban growth policy to come into being and provide for the establishment of a national urban bank, roughly structured along the lines of the Federal Reserve System. Such a bank would provide a mechanism for financing urban development that would be sensitive to the special needs of both developers and investors and address the problems of revitalization of cities and the development of new communities in specific ways. The new bank could attract investments from commercial banks, insurance companies, industry and other sources through the sale of debentures. Such bonds would assume public interest on the part of investors and have a reasonable, if modest, rate of return.

Many experts think that the states have a critical role, yet the movement of states toward a community development strategy has been slow. Several of them have created new communities legislation in the past few years, however, and others have legislation in the developmental stage.

Meanwhile, new community proposals are being announced in many areas of the country. New York State alone has five serious public new town proposals and at least three private ones in early planning. The Tennessee Valley Authority is proposing to guide development of a new community in conjunction with the construction of the Tellico Dam and Reservoir, scheduled for completion in 1975.

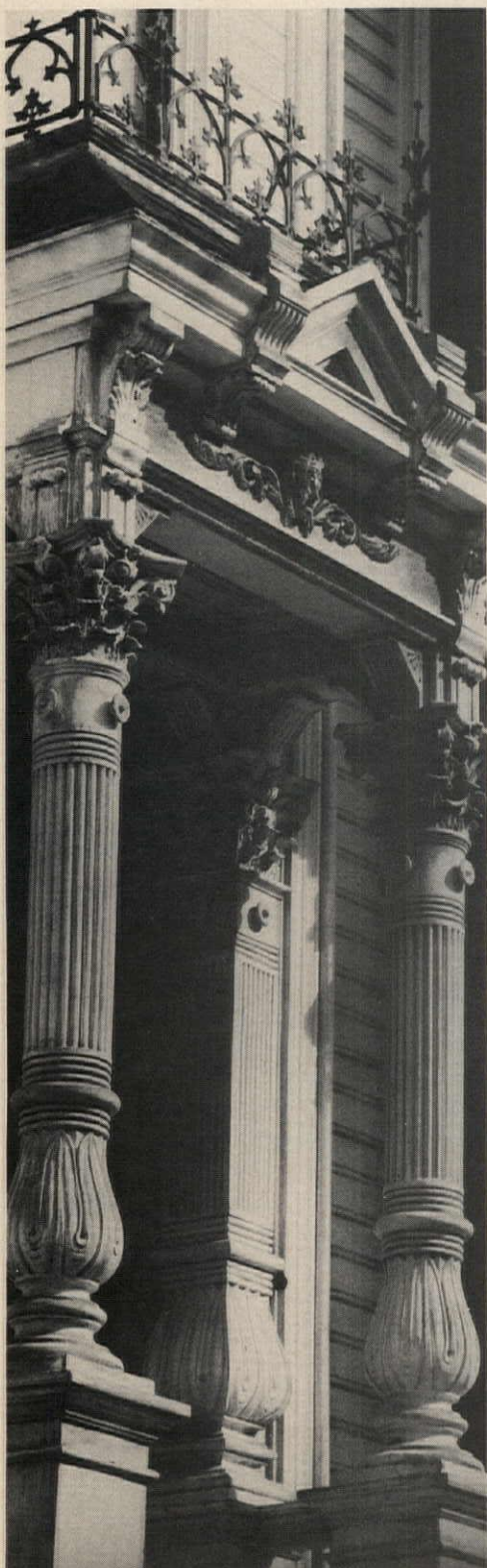
Utah, Missouri and Ohio all have new towns underway with Title VII applications pending. A group of organizations headed by the National Association for the Advancement of Colored People has announced plans to develop a community for 80,000 people in DuPage County, Illinois. Detroit's nonprofit Metropolitan Fund, Inc., has published some imaginative proposals for paired new towns for the Detroit area (see AIA JOURNAL, June, pp. 43-44). The Minnesota Legislature is considering a bill to create a Minnesota Experimental City Authority, thus launching an effort, three years in study, to build a city far from any existing metropolitan centers in which social and technological invention will be emphasized.

In June, HUD had 20 proposals in various stages of intensive review and many others in the inquiry stage. New community proposals, estimated to represent a cost of approximately \$25,000 in the preapplication stage and from \$250,000 to \$600,000 to completion, are being put together by teams of developers, planners, architects and engineers, social planners, urban economists, ecologists, specialists in market research, lawyers and experts in government and finance.

Depending upon one's definition of a "new community," the total number that has been announced with both public and private funding ranges between 50 and 150. Despite evidences of widespread incipient interest in a new communities program for the country, the measure of the effort ahead is still uncertain. To bring about substantial change in future land use patterns and to provide the necessary degree of choice in lifestyles for the citizens of the United States will require a new sense of urgency and commitment from the White House with respect to action by the appropriate federal agencies, increased budget requests, actual Congressional appropriations and an informed and dedicated new communities constituency. □

A Bay Area Delight

by PHIL PALMER



Detail, Western Addition

Drive around in San Francisco's Bay area on a late, sunny afternoon and you'll be struck by the facades of the old row houses with their astonishing conglomeration of scrolls, arabesques and carved wooden columns glistening in the golden twilight. That's what happened to the author. They so fascinated him that he recorded the sights with his camera and later on arranged his photographs into an exhibit, "Carpenter Gothic." It will be on display at the Octagon House from August 3 through September 15.

"Carpenter Gothic" is what some San Franciscans call the style of their city's old wooden row houses from before the turn of the century. Others refer to it as Victorian. Whatever the term, these highly ornamented buildings are among the delights and distinctive characteristics of San Francisco.

These row houses are not included on the Gray Line tours. They are rarely mentioned in tourist brochures. In fact, they are frowned upon by some contemporary architects.

But to most San Franciscans these unique homes, flats and shops are charming assets of their city. Along with the clanking, jerky old cable cars, the Carpenter Gothic structures enhance its character.

I first saw these incredible buildings several years ago when driving out California Street. The sight of them prompted me to explore, as many others have, the various sections of the city which they grace, such as Western Addition, portions of Pacific Heights, the Dolores

area and the Fillmore district. They were erected, for the most part, in the two decades or so after about 1860. Those which have survived owe their existence to the fact that they were not in parts of San Francisco affected by the great 1906 earthquake and fire or have escaped aggressive building programs.

Persons who have studied the architecture of the Carpenter Gothic buildings have classified them into several distinct but sometimes overlapping styles. These include the Italianate, stick and stick, eastlake, Queen Anne, mansard and Romanesque. Examples are in the outlying areas and the city itself.

In addition to luxurious mansions, a great number of modest Carpenter Gothic homes were constructed, including the remarkable row houses on Laguna and California Streets and in other places.

Mr. Palmer is a photographer based in Petaluma, California.



The 1800 block of Laguna Street



Homes on California Street

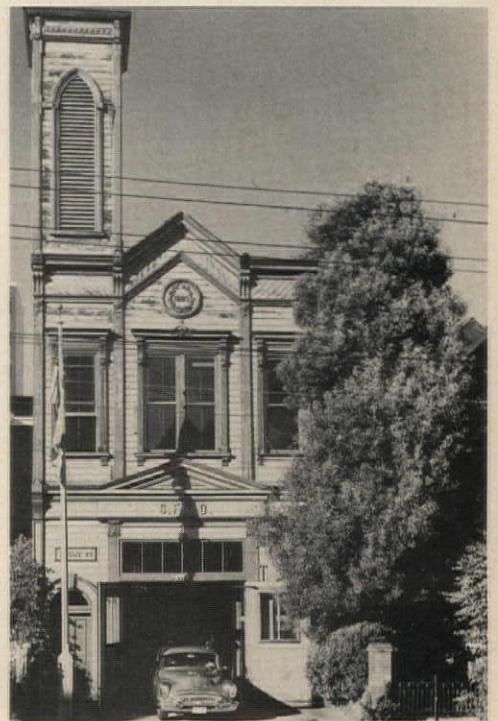
Mills in California produced tremendous quantities of the moldings, scrolls and such to adorn the facades of these homes. The material used was primarily redwood. Many of the jigs used to shape the ornamental woodwork still exist; it's a wonder that some enterprising builder has not taken advantage of them.

In spite of "progress," hundreds of the old buildings still stand. A block-by-block survey of the Fillmore and Western Addition areas, for example, reveals an astonishing number of them. Many, obviously, need refurbishing, if nothing more than a coat of paint, replacement of a sagging sill, a new roof or window. However, city building inspectors say that the interior of many of them are in dreadful shape with defective wiring, inadequate plumbing, rotted wood, etc.

But fortunately, many San Franciscans who have succumbed to the charm of these old homes have preserved them; in many cases their interiors have been remodeled to meet modern standards of comfort and building codes. And the Department of Housing and Urban Development has granted money through its Open Space Land Program, which, together with funds from local private and public agencies, have made it possible to designate some of them as landmarks. □



Facade, Western Addition



Preserved firehouse on Washington Street

THE CONTROL OF BUILDING AIR QUALITY

by H. C. WOHLERS

Man's prodigal meddling with his environment is obvious to all who live and work in urban areas throughout the world. In this age of affluence, man should not be the captive of his technology but rather its master; it is in his power to insure an atmosphere that will permit him to live life to the fullest.

Architects and engineers can directly control air quality within a building and thus also improve the quality of discharge air. To assist the A/E in this respect, for the present and up to 2000 AD, we will:

- delineate the pollutants of concern
- present the quality of external air (make-up air)
- recommend design parameters for building supply air
- discuss the ramifications of the overall problem.

The guiding control principle, when one is in doubt as to present or future air pollution parameters either within or outside a building, is defined by the slogan "Better than the best now available." This is a justified position based on growing pollution in urban air already causing death and illness, and statements of experts in the field who predict that cities like Philadelphia (third worst in the nation) and New York will not be habitable in 10 years if the present rate of air pollution continues.

Pollutants of Concern

There are at present seven major pollutants of concern: carbon monoxide, nitric oxide, nitrogen dioxide, sulfur dioxide, total hydrocarbons, total oxidant and suspended particulates. No attempt will be made to evaluate and project the concentration of radioactivity in the atmosphere.

There are two basic types of community air pollution in the US: the East Coast or

London type and the West Coast or Los Angeles type. The former is characterized by smoke, soot or dirt, augmented by the presence of sulfur oxides; the latter consists of a "sunburned" reaction of nitrogen oxides and hydrocarbons.

Chemically, a major difference between the two types of air pollution mixtures is that the East Coast type is a reducing medium while the West Coast type is an oxidizing medium. Coal and petroleum products are used primarily on the East Coast while natural gas is the primary fuel on the West Coast. The East Coast air pollution mixture occurs most frequently in the colder months of the year when home heating is at a maximum; the most severe West Coast smog occurs during the warm summer months and in early fall.

What's in the Air? What Will Be in 2000?

Figure 1 presents frequency distribution of air pollutant levels for various cities in the US for 1962-64. The data is part of the federal effort to quantify air concentrations and

Dr. Wohlers is professor of environmental science, Center for the Study of the Environment at Drexel Institute of Technology, Philadelphia. This article, which is adapted from an address presented at the "Leadership Ideas for Environment Forum" in Dowingtown, Pennsylvania, was prepared originally by Wohlers; P. W. Purdom, head, Environmental Engineering and Science; and W. E. Jackson and R. J. Schoenberger, research associates, all of Drexel.

are updated on a yearly basis.¹ The 50 percent distribution may be used as the yearly pollutant concentration. For present indoor air design parameters, the yearly average may be used as the "normal" level.

In almost each case, the data is based on the results of a single station located at or near the center of the city. Hence, although the cities listed are representative of urban areas throughout the country, the actual concentration of any pollutant in a city may vary around the values listed. The indoor air design concentration for a particular building will depend on its location in relation to the specific sampling station.

Pollution effect on air over cities differs from that over rural areas. Landsberg's data, shown in Table 1, are additional design considerations for buildings in urban areas.²

The air pollutant concentration in urban areas in 2000 will be a function of the expected increase in population and productivity and the pollution control action which will be implemented.

It has been estimated that population and products will increase by 100 to 600 percent by 2000 AD, as shown in Table 2.³ One may expect air pollution to increase by about 300 percent before 2000 if additional control measures are not enforced.

A report by Rohrman, Steigerwald and Ludwig—see Figure 2—is used to support and augment the view that the pollution levels in 2000 will approximate those in 1965.⁴ If the control effort for sulfur dioxide is at a maximum rate of development from now to 2000, it was postulated that the emissions of sulfur dioxide would approximate those in 1965. If one assumes that air concentrations are directly proportional to emissions—a reasonable but not necessarily valid assumption—then one could compare 1965 and 2000 pollution levels.

By the same line of reasoning, air pollutant levels in 2000 would be almost twice as high as those in 1965 if only good air pollution control progress was followed and about three times as high if we continue the air pollution control at today's pace.

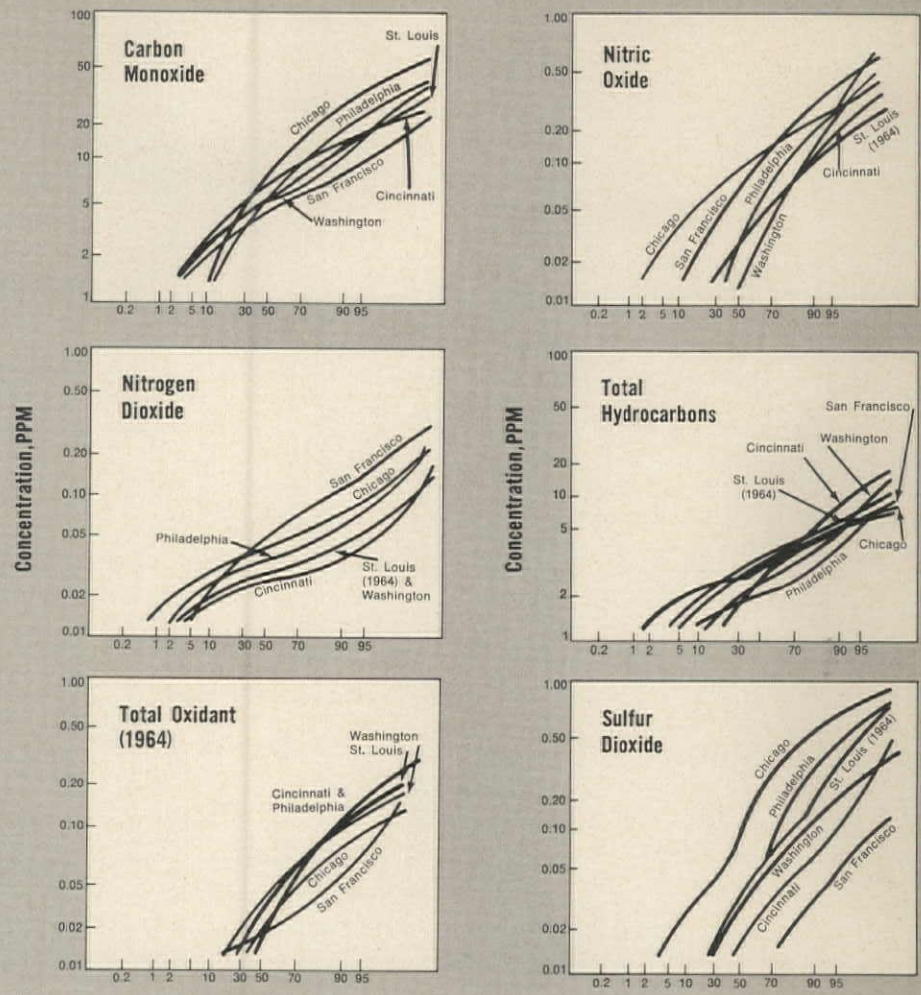
What Air Quality Goals Are Needed?

The public wants what it considers "clean air"—air which does not go beyond the threshold of sensory irritation of taste or odor or has possible health effects. Within

Figure 1

FREQUENCY DISTRIBUTIONS OF GASEOUS POLLUTANT DATA 1962-1964
(Continuous Air Monitoring Program)

Percent of measurements equal to or less than stated



limits people are content to leave the specific definition of clean air to the technician or specialist, but are more apt to believe pollution agencies than industrial organizations as to tolerable levels of pollution. Governmental agencies are charged with the responsibility of protecting the health and welfare of the public; this is not the responsibility of industrial organizations.

In addition to protecting the health and welfare of the occupants, building owners are concerned with soiling and corrosion of fabrics, metals, sensitive electronic systems, etc. The cost and installation for clean air must be balanced against the net benefits derived.

In the attempt to establish interior air quality goals, we have leaned heavily on proposed ambient air quality criteria of the federal government.^{5, 6} The suggested air quality goals for interior of buildings are given in Table 3. For each pollutant, a design parameter and a maximum value are listed.

The design parameter approximates the yearly average now being considered as air quality criteria for the ambient atmosphere. A maximum value is given to account for those days when the pollutant values in the open atmosphere are at a maximum because of poor weather conditions. Ideally, the pollutant levels within the building should not exceed the design parameter.

Although research in the air pollution field will extend the state of the art for the future, it is anticipated that the values presented in Table 3 will be valid to 2000. Hardware improvement will reduce the cost of obtaining clean air; presented levels are obtainable now with today's equipment.

Overall Ramifications

To design an air handling system to provide interior clean air, it is necessary to know the outside pollutant concentration as well as the desired level of control within the building. To the authors' knowledge this information is not available for the present nor for 2000.

Existing frequency distribution levels of seven pollutants for cities throughout the US were presented in Figure 1. Projected values to 2000 were based on maximum possible development and application of air pollution control technology; modified pollutant levels for 2000 were offered if one does not

Table 1

CLIMATIC CHANGES PRODUCED BY CITIES

Element	Comparison with Rural Environs		
Contaminants:		Precipitation:	
Dust Particles	10 times more	Amounts	50 to 10% more
Sulfur Dioxide	5 times more	Days with 0.2 in	10% more
Carbon Dioxide	10 times more	Temperature:	
Carbon Monoxide	25 times more	Annual Mean	1 to 1.5° F more
Radiation:		Winter Minima	2 to 3° more
Total on Horizontal Surface	15 to 10% less	Relative Humidity:	
Ultraviolet, Winter	30% less	Annual Mean	6% less
Ultraviolet, Summer	5% less	Winter	2% less
Cloudiness:		Summer	8% less
Clouds	5 to 10% more	Wind Speed:	
Fog, Winter	100% more	Annual Mean	20 to 30% less
Fog, Summer	30% more	Extreme Gusts	10 to 20% less
		Calms	5 to 20% more

Table 2

ESTIMATED EXPANSION OF PEOPLE AND PRODUCTS TO 2000 AD

	Percent Expansion (estimated)
Population	100
Urban Dwellers	200
Electricity	600
Automobiles	400
Gasoline	400
Refuse	100
Iron and Steel	200
Chemicals	500
Petroleum (except gasoline)	200
Paper and Paperboard	200

Figure 2

POTENTIAL SULFUR DIOXIDE EMISSIONS IN THE UNITED STATES

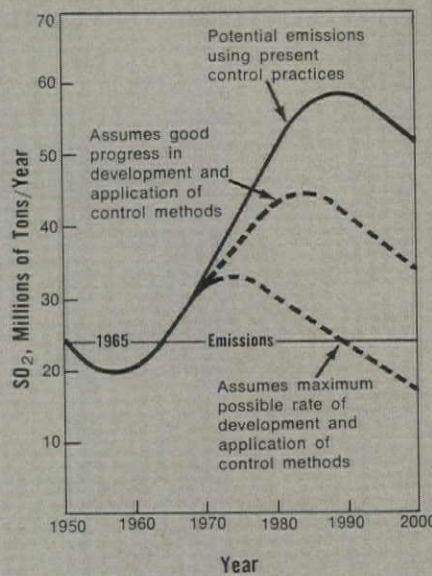


Table 3

SUGGESTED AIR QUALITY GOALS FOR INTERIOR OF BUILDINGS 1965 - 2000 AD

Pollutant	Part Per Million by Volume	
	Design Parameter	Maximum Value **
Carbon Monoxide	1 - 2	5
Nitrogen Oxides (NO + NO ₂)	0.02 - 0.04	0.08
Sulfur Oxides	0.01 - 0.02	0.04
Total Hydrocarbons	1 - 2	3
Total Oxidants	0.01	0.02
Suspended Particulate	25 - 50*	75*

* Micrograms per cubic meter

** Inside building air should not exceed this value except for short-time periods

concur in the best possible speed of the control effect.

Design parameters for pollutant levels within buildings both for the present and future were envisioned in Table 3. Facts with which to design a treatment system for building air have thus been presented.

But the story is not complete—the implications are far-reaching. New buildings must be designed with their own air treatment plants to clean the dirty outside air before it is drawn into the buildings' air circulation systems. Building air pollutant concentrations must be reduced far below the maximum allowable concentrations or threshold limiting values to be acceptable.

Philadelphia may be used as an example to illustrate the degree of purification re-

quired. Ambient air, having an average concentration of carbon monoxide, sulfur dioxide, total oxidants and particulates, will require the removal of more than 70 percent of these substances to meet the recommended design parameters for building air. And it must be restated that this percent reduction is based upon maximum possible development and application of air pollution control technology. Although we are constructively optimistic concerning this figure emphasis on control activity, past spoilage of our natural resources tells us to be extremely cautious in this regard.

In buildings with natural ventilation, the concentration of pollutants inside would be expected to follow the levels of the air outside; however, adsorption, absorption and

sedimentation tend to reduce air pollutant levels within the building. The National Air Pollution Control Administration plans to initiate modest research in this area. The differences between inside and outside air pollutant concentrations must be resolved before an adequate air treatment system is devised.

Mechanical ventilation is the technical factor responsible for giving man the ability to endure smoke-filled conference rooms and pizza parlors. The advantages of present air-conditioning systems become questionable when dilution air contains pollutant concentrations—carbon monoxide, for example—which greatly exceed the recommended design parameters. Again, little is known regarding the applicability, efficiency and economy of air purification systems as they relate to building air for the design parameters listed in Table 3. The recent introduction of small-scale electrostatic precipitators into the domestic and commercial market is viewed as a major step in controlling suspended dust within buildings. Additional necessary research and development can be stimulated by an informed and concerned group of professionals such as architects.

We admit that we are not positive of our projections. We have been unbiased in that the values selected as design parameters for building air have been generally accepted as objective levels for yearly averages of air pollutants in the ambient atmosphere. Further, the selected design parameters are obtainable with today's technology. The guiding slogan, "Better than the best now available," is again emphasized for those who differ in opinion. Design the air treatment system with equipment which is better than the best available! □

¹ Air Quality Data from the National Air Sampling Networks and Contributing State and Local Networks, 1964-65. Cincinnati: US Department of Health, Education and Welfare, Public Health Service, Division of Air Pollution, 1966.

² City Air—Better or Worse. H. E. Landsberg. Air over Cities Symposium, Robert A. Taft Sanitary Engineering Center, Cincinnati, November 6-7, 1961.

³ "Today and Tomorrow in Air Pollution." Public Health Service Publication No. 1555. Washington, D.C.: US Government Printing Office, 1966.

⁴ "SO₂ Pollution: The Next 30 Years." F. A. Rohrman, B. J. Steigerwald and J. H. Ludwig. *Power*, May 1967.

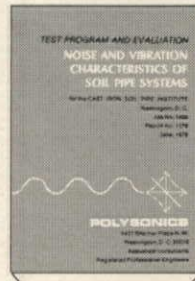
⁵ Interstate Air Pollution Study, Phase II Project Report. VI Effects of Air Pollution. Cincinnati: National Center for Air Pollution Control, 1966.

⁶ "Determining Reduced-Emission Goals Needed to Achieve Air Quality Goals—A Hypothetical Case." R. I. Larsen. *Air Pollution Control Association Journal*, No. 17, pp. 823-829, 1967.


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more actively involved in public awareness programs; support of minority group professional education; and in influencing the quality of federal building programs," comments Lacy, formerly vice president of Omniplan, Inc., of Dallas and earlier dean of architecture at the University of Tennessee.

The Endowment has made over 400 grants totaling nearly \$2 million in architecture, planning and design programs since 1966, according to Nancy Hanks, chairman of the National Endowment for the Arts.

In announcing Lacy's appointment, she added: "At a time when the entire nation has been made aware of the need for environmental improvement, architecture is increasingly vital as an art which touches the lives of all citizens. The physical settings in which we live and work surely contribute to the quality of life as do such essentials as clean air and pure water."

The House of Representatives has approved \$30 million for fiscal 1972, or double that of last year, but the Senate had not yet acted on the measure at presstime. If it goes through, it will mark a triumph for the Nixon Administration which has strongly endorsed "full funding" for the arts and humanities (see Comment and Opinion for July).

Sert Wins Virginia's Thomas Jefferson Award, Addresses University Audience

José Luis Sert, FAIA, was the first architect to address the University of Virginia's Founder's Day audience. Celebrating the 228th birthday of university founder Thomas Jefferson on April 13, the ceremonies included the presentation of the annual Thomas Jefferson Award to Sert. The award carries a \$5,000 prize and was established in 1966 to recognize persons who have distinguished themselves in architecture.

Sert's architectural projects have ranged from his native Spain's pavilion at the 1937 World's Fair in Paris to the United States Embassy in Baghdad to schools of law and education at Boston University. He has done extensive work in town planning and housing projects around the world, including some dozen master plans for new cities and the renewal of old ones in Latin America.

'Lab of the Year' Is Won by Cincinnati Firm for Design of College Facility

Designed for changing research needs, the winner of the Laboratory of the Year competition sponsored by the magazine *Industrial Research* is the Graduate Engineering Research Facility of the University of Cincinnati. Located about two miles from downtown Cincinnati on a 200-acre campus, the building met the requirements of "architectural distinction, design and functionality." The seven-story, reinforced concrete frame structure is the design of the Cincinnati based architectural firm of Baxter, Hodell, Donnelly & Preston.

Honorable mention goes to US Steel Corporation's Chemicals Building in Monroeville, Pa., designed by Walter Kidde Constructors, Inc., and to the Houston Techni-



Elevator tower at the left will become part of laboratory's future research unit.

cal Services Center of the Gulf Research & Development Co., which is the work of Paul & Paul of Houston.

Innovator and Leader in Contemporary Theater Design Here and Abroad

Back in 1934, Ben Schlanger, AIA, predicted the demise of the grandiose motion picture palace. He and his collaborator Abraham W. Geller, AIA, were honored by the Municipal Society of New York City for the design of the more intimate Cinema I and Cinema II in one building on Manhattan's Third Avenue.

Before his death on May 3 at the age of 66, the New York architect won acclaim for the design of major auditoriums here and abroad. He was involved in the design of the United Nations General Assembly Building and the Lincoln Center for the Performing Arts in New York City; the Salle Pelletier Place des Arts in Montreal; the John F. Kennedy Center for the Performing Arts in Washington, D.C.; the twin-theater for Colonial Williamsburg, Va.; and many other projects in which his innovative talents were employed.

Author of *Eight Ideal Theaters*, Schlanger received many awards during his career. He was vice president of the Institute of Theater Technology, chairman of the AIA Committee on Auditorium and Theater Architecture.

Newslines

▪ **Urban affairs journalists** between the ages of 23 and 35 are eligible to apply for the 1972 Urban Journalism Fellowships administered by the University of Chicago Center for Policy Study. Deadline for application is August 30. Contact: Paul Gapp, University of Chicago, 5801 S. Ellis Ave., Chicago, Ill. 60637.

▪ **A new publication, *Cement and Concrete Research, An International Journal***, is sent out bimonthly by Pergamon Press.

▪ **Theo Brandow, AIA**, of Philadelphia, is author of the novel *Closer to Saturday* recently published by Whitmore Publishing Co. It is a story of minority America in the personage of a young Jewish boy living in a Philadelphia slum.

▪ **Schools should be comfortable** is the point of view taken in a recent publication by the

Educational Facilities Laboratories, *Airconditioning for Schools*. It is free from E.F.L., 477 Madison Ave., New York, N.Y. 10022.

▪ **Edmund W. Dreyfuss, AIA**, head of Edmund W. Dreyfuss & Associates in Washington, D.C., has been nominated by President Nixon to a seat on the National Capital Planning Commission. Mr. Nixon also nominated Charles C. Johnson Jr., associate executive director of the American Public Health Association, and named as chairman Benjamin Reifel, a retired five-term Republican congressman from South Dakota. NCPA is a semi-independent agency acting for both the city and the federal government in District of Columbia planning, reviewing all major construction projects.

▪ **A new directory, *Sources of Supply***, has been published by the National Woodwork Manufacturers Association. It lists major manufacturers of wood windows, doors, frames and related products and is available without charge from NWMA, 400 W. Madison, Chicago, Ill. 60606.

▪ **William L. Pereira, FAIA**, of Los Angeles, has accepted the invitation of the American Academy in Rome to serve as Architect in Residence for summer 1971.

▪ **Step-by-step guidelines** are given in a recent publication of the National Ready Mixed Concrete Association called *In-Place Concrete Strength Evaluation: A Recommended Practice*. It is available for \$1 from NRMCA, 900 Spring St., Silver Spring, Md. 20910.

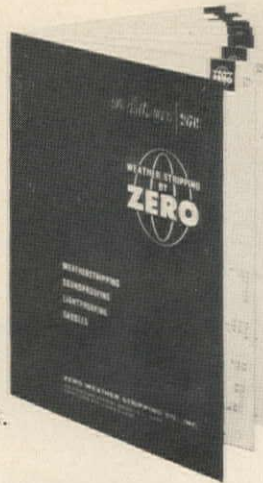
Deaths

- GEORGE F. AXT
Englewood, N.J.
- LOWELL VERNON CASEY
Seattle
- JAMES S. CHEYNE JR.
Fort Smith, Ark.
- EMERY A. GUNNIN
Pendleton, S.C.
- WALTER MOULTON
Winooski, Vt.
- LEON RANSOM
Columbus, Ohio
- EDMOND T. RICHARDSON
Norfolk, Va.
- JUDSON SCHNALL
Brooklyn, N.Y.

Members Emeriti

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Pittsburgh
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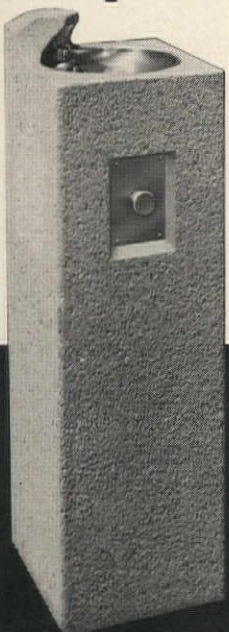


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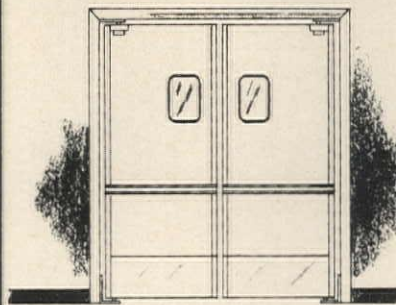
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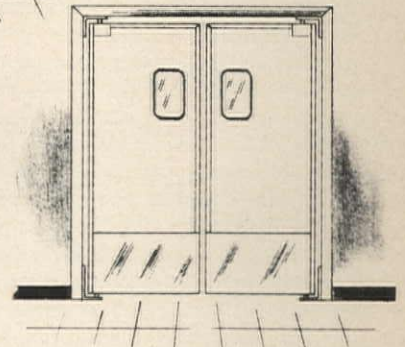
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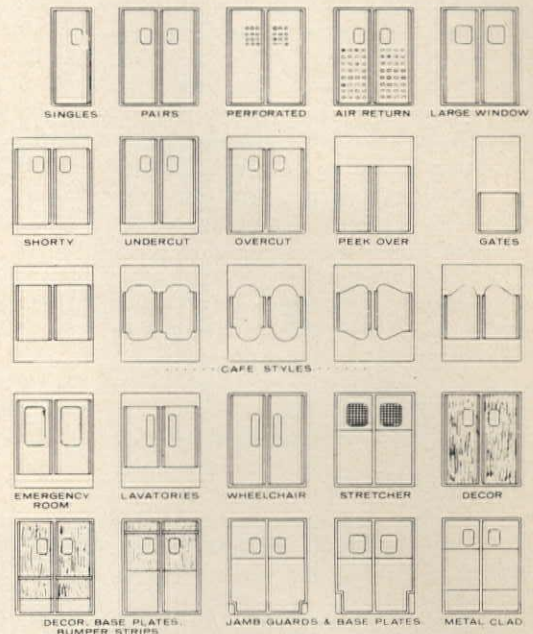
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Continuity and Change: Preservation in City Planning. Alexander Papageorgiou. New York: Praeger, 1971. 185 pp. \$29.

This scholarly book concerns a subject of exceptional importance in a time when the cities of America, having changed radically in composition and density as well as in use and form of their buildings, are on the verge of complete reconstruction.

For centuries, the growth and transformation of urban communities occurred at a slow pace, permitting new buildings to be inserted into the existing texture and relating them one by one, as volumes, to the scale of the existing spaces and communities. The examples of the past are sometimes successful, sometimes open to criticism. They can always be considered part of the city, however, which existed before the new projects were built. Even tremendous undertakings like St. Peter's in Rome could be seen as the focus of an existing community rather than as a complete new item superimposed on the previous texture. Large as it is, the basilica meets the scale of Adrian's Mausoleum.

After an excellent preface in which an effort is made to list the methods by which preservation societies operate today in European cities and in the United States, this book examines a large number of historic urban centers, their character and transformation through the years. It judges the results in terms of the observations of a dedicated and learned scholar who is mainly concerned with visual problems. An attempt is made to classify the centers and concepts through which work in them was executed with the hope that guidelines and recommendations for future experiments can be reached. The search for tabulations and systematic listings makes apparent how unique every urban composition is and how different the human and social environment which produces it.

If the uniqueness of each problem is kept in mind, the book appears an exceptional guide, and it gives pleasure to its readers. The collection of examples is fascinating; the results shown and the manner in which they are presented are exceptional. As a lesson for our own country and problems, however, the teachings are no more and no less than a great philosophical lesson. Their understanding demands historical knowledge and some judgment of the social and economic experiences of the inhabitants of the locations who produced the environments and the changes illustrated.

Papageorgiou analyzes a large number of examples of preserved old buildings and groupings of buildings in many European cities: famous ones as well as some whose fame has faded. Transformation of the original design concept occurred through many years in some cases; yet all past designs of many different styles are now grouped by us

in the single definition of "historic past," becoming items for preservation. The conditions which provoke the preservation, or force it, range from the desire for tourists to the maintenance of a business center already established through centuries.

In a further sense, the book is completely European because it takes for granted that the problems created by modern life in historic centers are mostly of traffic and movement of occupants. It ignores the enormous real estate pressure which threatens and almost crushes the American historic centers. There is no analysis of the fact that the desirability of some location created by the very existence of an historic building in an urban setting causes the high land values which suggest demolition and replacement by a larger structure.

The book ignores also the different but just as damaging greed that produces changes of the ecological system as, for example, in the case of Venice. Changes which are severely threatening and almost crushing this example of preservation and continuity that has lasted through sympathetic transformations for 10 centuries. Venice is presented only as a visual experience with exceptionally attractive building arrangements, obtained by generations of gifted designers.

With this shortcoming and with the goal of an almost impossible search for categorization and classification, the book leaves one with awe for the enormous amount of knowledge it contains. It intrigues the reader with its collection of diversified examples of preservation jobs of various quality that have been executed throughout a thousand years of European history. It teaches one much, but each of us with great care will have to relate the lessons learned to the needs of his own problems.

Altogether, the book is a magnificent anthology of good and not so good things on a subject which deserves the attention of everybody interested in the visual environment.

GIORGIO CAVAGLIERI, FAIA



The Heritage of New York: Historic Landmark Plaques of the New York Community Trust. Preface by Whitney North Seymour. New York: Fordham University Press, 1970. 402 pp. \$15.

Those who love the old architectural glories of New York will be glad to have this handsome book. Reproduced here are the plaques placed on each building regarded by the Municipal Art Society as a landmark. The texts on the plaques, prepared by architectural and historical experts, are a model for other cities to follow. There are also photographs of the structures.

Provided separately is a walking guide which contains all the maps in the large volume, the borough maps being followed by their respective detail maps which pinpoint the Heritage locations.

Architecture for the Educational Theatre. Horace W. Robinson. Eugene: University of Oregon Books, 1971. 147 pp. \$7.50.

"Multiuse space is multiuseless space," says the author. He believes a high school theater should be a teaching facility, not a civic auditorium.

Although addressed to the theater in the secondary school, the book is filled with information applicable to college theater design and to theatrical design in general. Robinson, who has been involved in theatrical design for 40 years, brings to his work here a great deal of solid experience. He warns against skimping on basic areas and against chopping off space without regard to the overall plan.

Consideration is given to auditorium and stage; public service areas; backstage work areas; equipment; the theater as a teaching station; alternate theater forms; acoustics; personnel. Everything from lighting to scene storage to curtains to ticket office seems to be covered with conscientious detail. Almost a fourth of the book consists of full-page illustrations.

Marcel Breuer: New Buildings and Projects. Tician Papachristou. New York: Praeger, 1970. 240 pp. \$22.50.

There is no question about *liking* this book; indeed, there is no way to avoid it. It was printed in Germany on paper that is a pleasure to touch. The buildings and plans are superbly photographed, drawn and reproduced. The text is rendered in an elegant, refined typeface. It is exquisite.

It is exquisite like Dom Pérignon '64 or Beluga caviar. The book is offered to anyone who wants to buy it, but really there is an exclusiveness about it all. Designed by Breuer himself, along with Gerd Hatje, the book was written by a member of Breuer's firm.

The same *Gestalt* is revealed in the buildings: houses in New Canaan, suburban and rural office buildings, resorts in secluded places—pristine buildings in halcyon settings. The *Sachlichkeit*—the obsession for the building itself—is revealed by a statistic noted in passing: of 263 photographs of projects only 24 have people in them, including those with silhouettes, gardeners, etc. DAVID CLARKE

The reviewer is executive secretary of the ACSA.

The Life of Brunelleschi. Antonio di Tuccio Manetti. Introduction, notes and critical text edition by Howard Saalman. University Park: Pennsylvania State University Press, 1970. 176 pp. \$12.50.

Brunelleschi, of incomparable fame, has buildings still standing in Florence which grace that beautiful city, including the great dome of the cathedral, the Pazzi Chapel, the Church of San Lorenzo and the Foundling Hospital. Written in the 1480s, Manetti's account of the architect gives firsthand information on the state of the buildings at the end of Brunelleschi's life and thereafter. The Italian text is reprinted with an English translation on the opposite page.

Charles F. A. Voysey, Architect: An Exhibition Organized by David Gebhard. Santa Barbara: Art Galleries, University of California, 1970. 75 pp. \$5.80.

Scholars are again in debt to the Art Galleries of the University of California at Santa Barbara for another significant contribution to architectural history.

This exhibition catalog contains examples of designs for buildings and furnishings by "one of the most able and accomplished architects ever to practice in Britain." Between 1895 and 1905, Voysey's designs were the height of fashion, but the Wren Revival brought about a reaction and his practice diminished. Although acclaimed by a number of critics, little is known by the layman about his work or the man himself. This exhibition helped correct this situation.

Early Christian and Byzantine Art. John Beckwith. Harmondsworth, Eng.: Penguin Books, 1970. 211 pp. \$25.

This distinguished addition to the Pelican History of Art series concerns the different styles and modes of each Byzantine age. There are comments on the artist's role in society and a description of the setting in which the art was meant to be seen. Byzantine art is viewed as kaleidoscopic and far-reaching and, above all, "an expression of the divine."

We will never see Byzantine art as it was originally meant to be seen—as a total esthetic experience, says Beckwith. "The Augusti, the court, the imperial and patriarchal processions, the hymns and chants, the great diadems and robes, the high cosmetics and the heavy scents, the multiplicity of races, the great dromons breathing Greek fire, the imperial barges glittering with purple and gold, the eunuchs, the secretaries, generals, admirals in the different costumes of their ranks are no more than a dream on a summer's day." But Beckwith helps us to imagine it all.

Haymarket. Wendy Synder. Cambridge: MIT Press, 1970. Unpaged. \$12.50 hardbound, \$3.95 paperbound.

One of the institutions fast disappearing from the scene is the open-air food market, being replaced by more sterile supermarkets. Haymarket in Boston is still in existence, we are glad to say, and a photographer has put it on record in this book of some 60 views of the district. Interspersed is the vernacular talk of the merchants as they remark about

the price of produce, their customers, their lives and their hopes. As one summarizes it, "Well, to me it's like a burlesque, this market. Always somethin' doin', day and night."

Victorian Architecture: Four Studies in Evaluation. John Summerson. New York: Columbia University Press, 1970. 131 pp. \$7.50.

The Bampton Lectures for 1968 in one volume. The themes center on an evaluation of Victorian architecture; two Victorian railway stations; two London churches; and the Royal Competition for the Royal Courts of Justice.

Plan of Chicago. Daniel H. Burnham and Edward H. Bennett. Edited by Charles Moore. New York: Da Capo Press, 1970. 164 pp. \$37.50.

First published in 1909, this book is still one of the major documents of American city planning. The present edition, with a new introduction supplied by Wilbert R. Hasbrouck, AIA, is a handsome one. Prepared originally under Burnham's supervision, the text is complemented by perspectives in color by Jules Guérin and black and white illustrations by Jules Janin, as well as by many maps and diagrams. The blurb on the jacket is correct: The facsimile edition is "every bit as magnificent as the original."

Interior Design in Greece. Publisher-Editor: Orestis B. Doumanis. Athens, 1970. 234 pp. \$13.

This annual review aims at encouraging the collaboration of visual and applied arts and

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architecture. With an emphasis upon the organization and layout of interior space in the Greek home, it also covers the design and construction of the house.

Urban Development in Britain: Standards, Costs and Resources, 1964-2004. Vol. 1, Population Trends and Housing. P. A. Stone. Cambridge, Eng.: Cambridge University Press, 1970. 409 pp. \$10.

Although its scope is limited to Great Britain, this study provides a model for others to follow who are concerned with long term prospects in housing. It estimates the demand for dwellings in each major region of England up to the end of the century, deriving a range of possible costs which reflect alternatives for the rate of growth and the changing distribution of the population.

Housing with Shelter: Dual-Purpose Residential Fallout Protection. Department of Housing and Urban Development. Washington, D.C.: U.S. Government Printing Office, 1970. 33 pp. 65¢.

HUD, under Executive Order 11490, is responsible for encouraging the inclusion of protection from radioactive fallout in new and existing housing. This study, prepared in cooperation with the Department of Defense, shows economical ways in which such protection can be provided.

Patterns of Urban Living. Wolfgang Gerson. Toronto: University of Toronto Press, 1970. 113 pp. \$10.

Gerson is responsible for the graduate pro-

gram at the School of Architecture, University of British Columbia. Here he discusses three types of urban environment: the older part of the city in an area of small industrial developments which acts as a kind of reception center for immigrants; the downtown area, attractive to young, single people; and the family-oriented suburbs. Each plays a role in the structure of the city as a whole, having its own functions and relationships. Gerson believes that the healthy city should accept the differences and nurture each pattern. He makes practical suggestions as to how a city can be more responsive to the needs of all its inhabitants.

Management Information Systems: Concepts, Techniques and Applications. James J. O'Brien. New York: Van Nostrand Reinhold, 1970. 314 pp.

Over the past few years, a tremendous amount of attention has been paid to the application of computer technology to the business process. Early applications were aimed at automating the routine, time-consuming jobs.

There is another dimension in which computers can be helpful to the business process as a management tool. Managers are required to make decisions which are often based upon insufficient information. This book is aimed at the concept of a management information system which can be packaged so that the manager has an intelligent system to aid him in the decision-making process. It is not a cure-all, but it offers a new organizational approach to the manager's problems,

both routine and unusual. The book explains the techniques which must be combined in the successful design of a management information system.

Increasing complexity and increasing scale of the systems with which management deals demand a technology that will organize information in such a way that the decision-making process can be improved. This book will be helpful to all those managers who are confronted with making decisions for large scale operations.

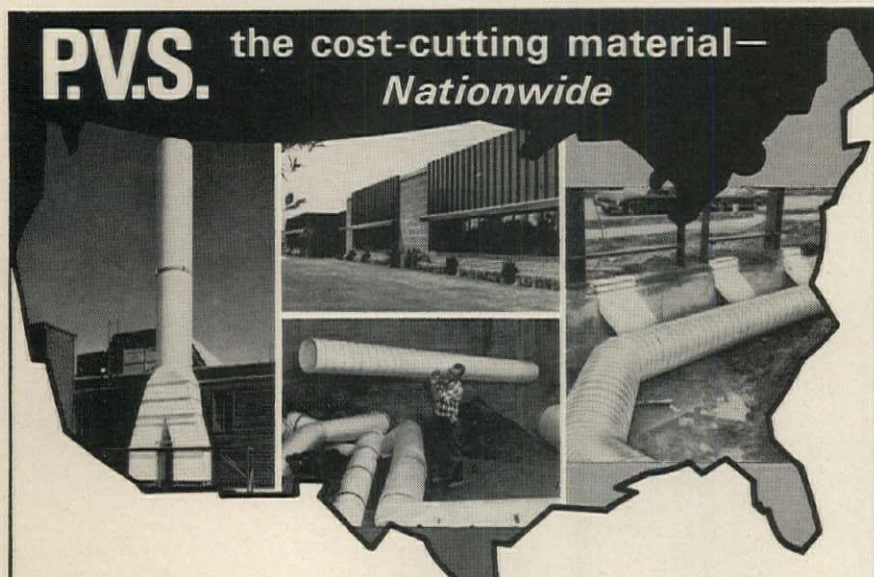
How to Build Mobile Home Parks: A Complete Encyclopedia for Remodeling or Building Mobile Home Parks. Fred Sparer. Beverly Hills, Calif.: Trail-R-Club of America, 1971. 800 pp. \$14.95.

The mobile home industry has mushroomed in a relatively short period of time. Here are practical suggestions for the design and construction of parks to house the mobile homes, written by a general contractor who has specialized in the development of such parks for the last 30 years.

Principles of Turfgrass Culture. John H. Madison. New York: Van Nostrand Reinhold, 1971. 421 pp. \$18.50.


A comprehensive book on the ecology of the turf which covers the varieties of grass and how to plant, grow and maintain them by mowing, aerifying, renovating, overseeding, rejuvenating, etc. The last four chapters deal with pest control. The author is associate professor of environmental horticulture at the University of California at Davis. □

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
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letters

Pleasure and Displeasure

I was delighted to read William A. Allen's report entitled "As Our British Cousins Do It" in the March issue.

I was delighted for two reasons: 1) because it was written in straightforward, comprehensible English; and 2) it revealed the remarkable success of the British architects who plan over 80 percent of the new building in England.

This contrasts, if my information is correct, with over 90 percent of all construction in this country *not* planned by architects. Why?

I think it is because as architects we have been obviously unsuccessful in convincing the American building industry that well planned structures can be more functional, more beautiful and more economical to boot. Apparently, the industry does not trust the architect and perhaps for good reason.

The case of Moshe Safdie's Habitat-Montreal and his subsequent popularity as demonstrated by several commissions to plan Habitats elsewhere, his appointment to professorship at the Yale University School of Arts and Architecture, his writings and his lectures at other centers of learning and the high praise he receives in the architectural media are among the reasons for the polarization between the architectural profession and the building industry. Why?

It is because Habitat does not function well, is not beautiful, is not well constructed, is enormously expensive (experimentation alibi notwithstanding) and does not blend well with the surrounding environment.

Safdie reminds me of the bemedaled French soldier standing under the Arch of Triumph in Paris who, when asked by Charles de Gaulle how he ever earned all the medals, replied, "Monsieur Maréchal, the one on the top left I received by mistake, and all the others because of that very one."

False gods and ballyhooed young geniuses will not sell architecture to the American building industry.

JOSHUA D. LOWENFISH, AIA
Bronxville, N.Y.

High Praise from Brazil

One of the best magazines in Brazil is *Manchette*. It reveals what is going on in this country in all fields of activity—despite politics, inflation and one of the highest cost of living indexes in the world.

At any rate, Brazil is looking forward and its progress is an undeniable fact, thanks to the help received from your noble and great country, so envied by others, and to the wish of our peaceful people to place Brazil on the same level as other great nations.

Brazil and the United States have much in common. Both are the greatest countries

of the Western Hemisphere and they should march together in understanding to avoid the action of the "red octopus" in the Americas. I have noted that your countrymen seem to be more at home here than in any other Latin American country.

I receive the AIA JOURNAL, which I consider the best of its kind in the world. I sincerely congratulate you.

CHRISTIANO S. DAS NEVES, HON. FAIA
São Paulo, Brazil

A Bruce Goff-Designed House for Sale

I am interested in a buyer for my house—someone who can appreciate it and use it appropriately. Following my husband's death, I find that I cannot continue to live in it and maintain it alone.

The house was designed by the noted architect Bruce Goff and completed in 1967. It is situated in Cobden, Illinois, a small town about 15 miles south of Carbondale and Southern Illinois University, on 116 acres of wooded hills and farmland. Sited in the Illinois Ozarks and the Shawnee Forest in a beautiful area of orchards and farms, the house enjoys clean air and quiet.



The house is built of native sandstone gathered from the surrounding creek beds; it has glass and wood beam construction. There are 11 rooms, a basement, a separate guest house and study. It is placed on the brow of one of the highest hills around, looking over the rolling countryside.

There are three lakes on the property for fishing and swimming; there are caves and rock outcroppings of unusual character.

Your readers will be interested in the fact that we imbedded in the walls of the house our rather extensive collection of artifacts gathered from old Sullivan, Wright and other Prairie School architects' buildings.

Goff's design is a most unusual one of three attached circles with two towers so that the entire effect is that the house appears to be growing out of the surrounding rock outcroppings, hills and woods. Its spacious plan would lend itself as a home for university people, artists or retired persons. It could be

used for institutional purposes for a retreat or a place for small meetings, etc. Yet the upkeep on the house is minimal.

Inquiries about the house may be sent to me through the editor of the AIA JOURNAL.
MRS. HUGH D. DUNCAN
Chicago

Informed Public Zeal

Comment and Opinion in the April issue injects a much needed note of reason and caution into today's environmental and ecological furor.

As representatives of an industry suffering greatly from the attacks of "instant ecologists," we are painfully aware that much of the news media is willing to give credence to the hysterical accusation and remain reluctant to follow through with the facts that are brought to its attention.

Hopefully, this will change, and editorials such as yours will have a part in bringing about this change. We are all for public zeal as opposed to public apathy—but, please, an informed public zeal. JAMES R. TRUMBULL
Executive Vice President
National Forest Products Association
Washington, D.C.

The timely remarks in Comment and Opinion in the April issue were recently brought to my attention.

I was pleased and honored to find that a portion of my remarks in the *Wisconsin Alumnus* could be used. The points captured in the editorial are sound. Responsible leaders must take note or the desired "quality environment" will become an orally overworked set of plans that never get to the blueprint stage—let alone to construction.

JAMES E. KERRIGAN
Assistant Director, University of
Wisconsin Water Resources Center
Madison

Upon Becoming an Architect

Nearing the end of my education, I have some thoughts on being an architect.

When people think of a lawyer, they think of trouble and expensive bills. When they think of a doctor, they think of pain and sickness. When they think of an architect, they think of men who built the pyramids and palaces of the ancient world and the glass skyscrapers of today.

The architect is a man who gets and deserves the respect of mankind, for he can improve or degrade man's way of life. May all architects have pride for theirs is a noble profession—one which I will be proud to enter.

VINCENT L. MENZA
Belleville, N.J.

Correction

Due to a typographical error, the first name of the author of "A View of a Nonarchitect" under the overall heading of "A Nation Probes the Lifestyles of the Elderly" in the July issue, page 36, was incorrectly given. He is Bernard E. Nash, executive director of the American Association of Retired Persons and the National Retired Teachers Association, both in Washington, D.C.

events

AIA State and Region

- Sept. 30-Oct. 2:** New Jersey Society of Architects Convention, Chalfonte-Haddon Hall, Atlantic City
- Sept. 30-Oct. 3:** California Council Annual Conference, Hotel Del Coronado, Coronado
- Oct. 6-9:** Northwest Regional Conference, Hanford House, Richland, Wash.
- Oct. 14-16:** Louisiana Architects Association Convention, Prince Murat Inn, Baton Rouge

National

- Sept. 19-23:** Prestressed Concrete Institute Convention, Los Angeles Hilton Hotel, Los Angeles
- Sept. 29-30:** Building Research Institute Annual Meeting and Fall Conferences, Shoreham Hotel, Washington, D.C.
- Sept. 30-Oct. 1:** Institute on Housing Design for the Elderly, University of Wisconsin, Madison
- Oct. 18-22:** Engineering Foundation Conference on Air Passenger Handling, Asilomar Conference Grounds, Pacific Grove, Calif.
- Oct. 27-29:** Automated Procedures for Engineering Consultants, Inc., Annual Meeting, Fontainebleau Hotel, Miami Beach
- Oct. 28-31:** Industrial Designers Society of America Annual Conference, Kentucky Dam Village State Park
- Oct. 30-Nov. 5:** American Concrete Institute Convention, Statler-Hilton Hotel, Buffalo
- Oct. 31-Nov. 4:** Industrialized Building Exposition & Congress, Kentucky Exposition Center, Louisville

International

- Sept. 8-10:** International Conference on Urban Transportation, Pittsburgh Hilton Hotel, Pittsburgh
- Sept. 22-26:** National Association of Home Builders International Apartment Conference, Chicago
- Sept. 28-Oct. 3:** Inter-Group Seminar on Housing, International Union of Architects, Bucharest, Romania
- Oct. 17-23:** International Association for Shell Structures Pacific Symposium, Tokyo and Kyoto

Awards Programs

- Sept. 4:** Entries due, Architectural Awards for Excellence Program. Contact: American Institute of Steel Construction, 101 Park Ave., New York, N.Y. 10017.
- Sept. 15:** Entries due, Annual Building Excellence through Innovation Award for National Association of Home Builders members. Contact: BETI Awards Committee, National Housing Center, 1626 L St. N.W., Washington, D.C. 20036.

Fellowships

- Dec. 31:** Submission of work due, Rome Prize Fellowships for 1972-73. Contact: American Academy in Rome, 101 Park Ave., New York, N.Y. 10017. □

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