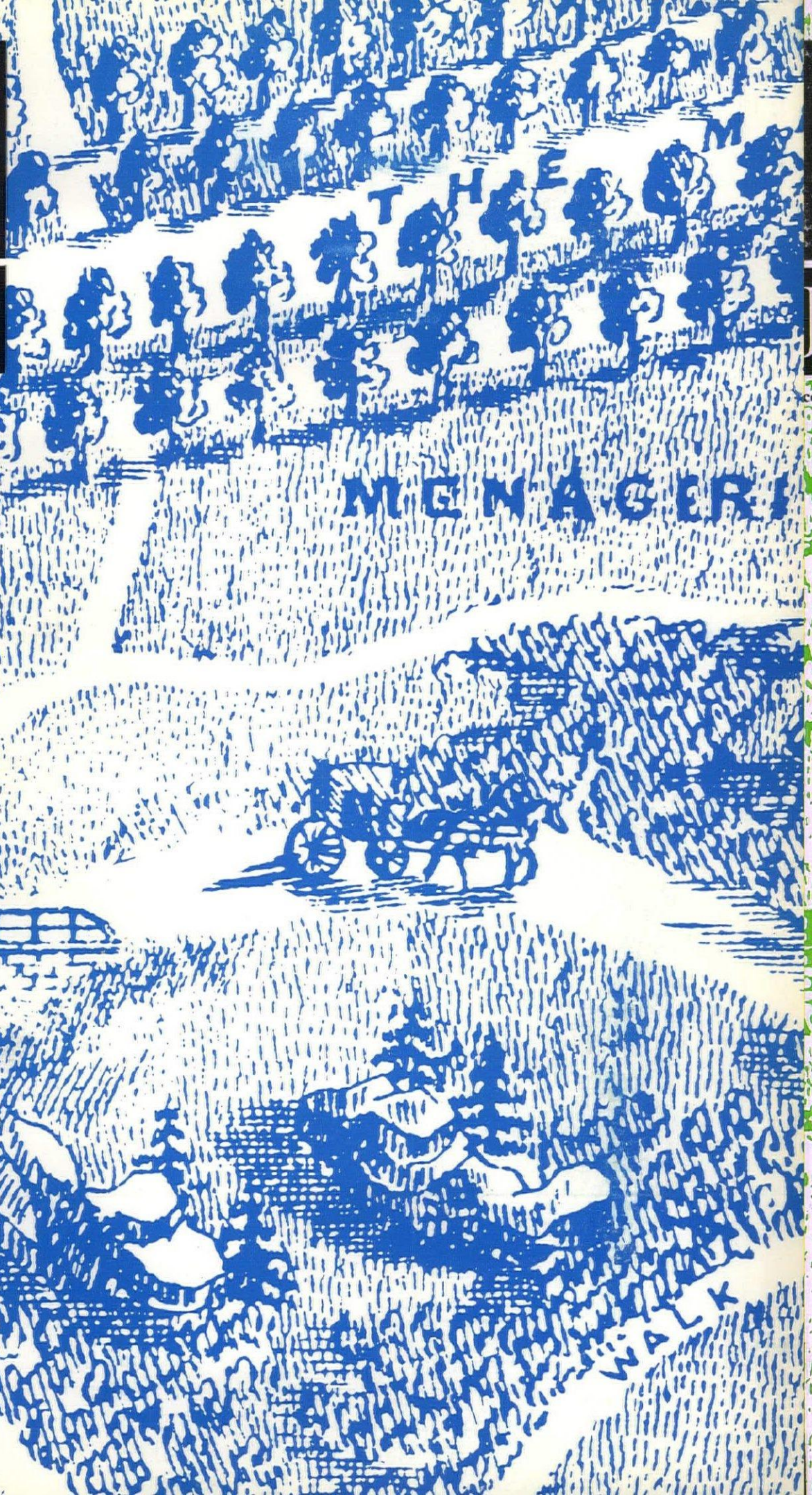




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Journal

September 1965



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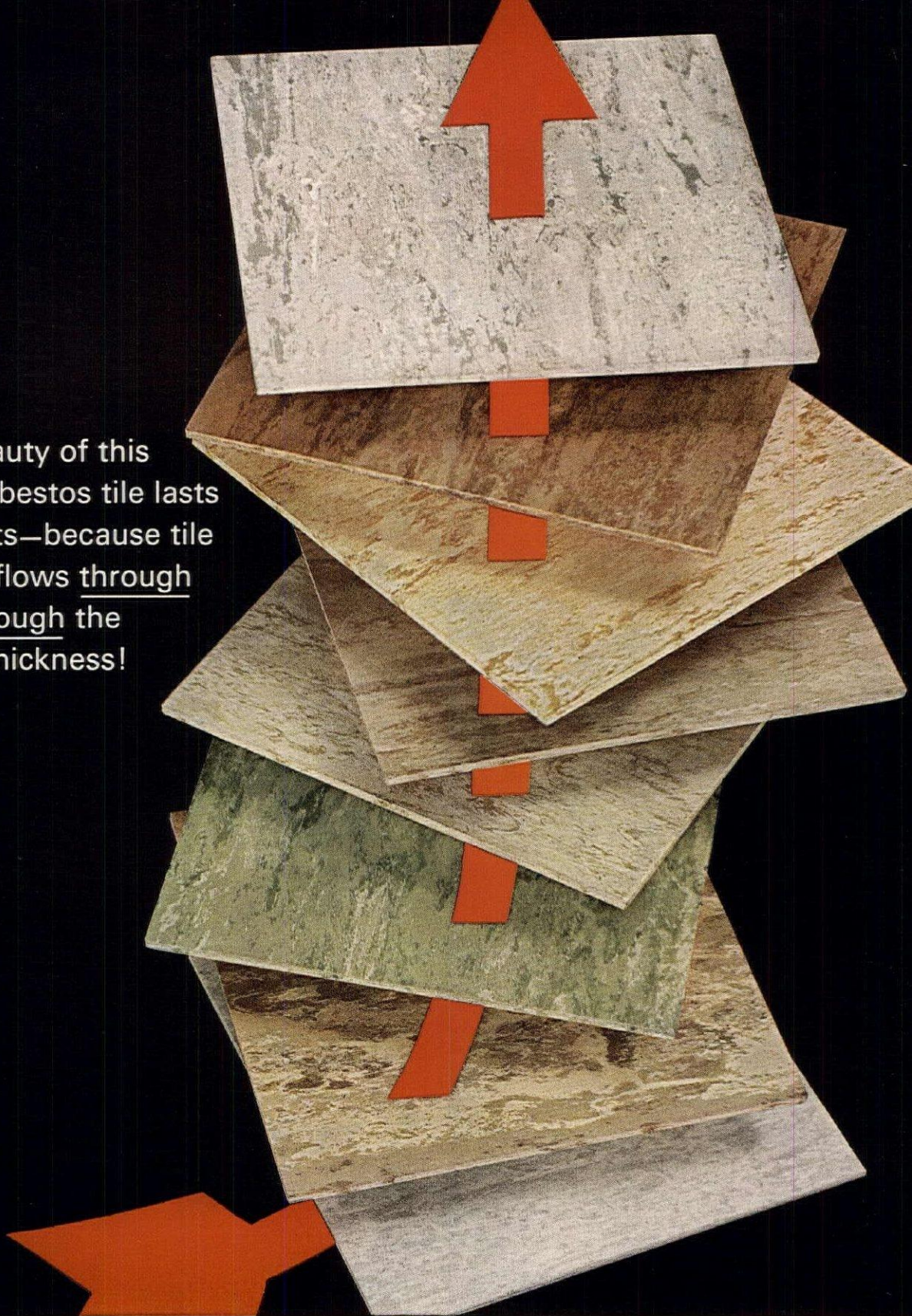
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Cover: A section of New York's Central Park from a drawing by pioneer landscape architect Frederick Law Olmsted (p. 31)

LOOKING AHEAD TO JANUARY

Case Study of an Interdisciplinary Approach to a Design Problem

What happens when a group of professionals attempts to operate as a creative unit with one overall aim: to formulate social science principles that will yield design principles? A team consisting of an architect, a designer, a psychologist, a sociologist and a computer systems analyst tried that approach in studying an urban renewal project prior to the beginning of the architectural design in a national competition. The resultant scheme will not be built, but the edited transcript of the four meetings reveals what the group hoped to accomplish, how it functioned and what it did in fact achieve, illustrated by some of the project sketches.

SCSD: A Report from the Field

One of the first schools erected with the components produced for the School Construction Systems Development project, the Barrington (Ill.) Middle School opened in September with an enrollment of 900. Marilyn E. Ludwig reports on Barrington, its unusual educational philosophy, and the experiences of its administration and its architect in working with SCSD.

What All-Electric Heating Means to the Architect

The widespread growth of electric heating is now being accelerated by the "heat from light" concept—and by studies that show it to be in a competitive position with other systems. A detailed cost analysis of an all-electric building is followed by a roundup of full-scale installations, including a remodeling project, which light and heat primarily with electric lamps.

PHOTO AND ART CREDITS: Victor Amato—p. 10; Barry Sweet—p. 31, 34; Julian Eugene Kulski AIA—p. 36-38; Paul Spreiregen AIA—p. 50-53; Gordon Sommers—p. 74 (Urbana); Tidyman Studios—p. 74 (Fresno); Zintgraff (San Antonio); Aero-Pic—p. 74 (Jacksonville); D. C. Redevelopment Agency—p. 76 (Washington); Louis Schwartz—p. 76 (Charleston); Joseph W. Molitor—p. 76 (Hartford); Capitol Photo Service, Inc.—p. 77 (top).

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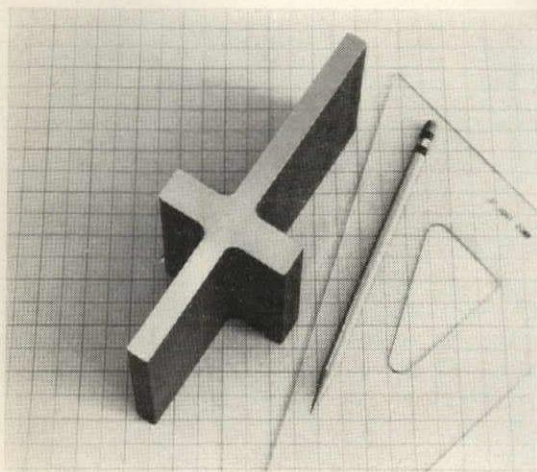
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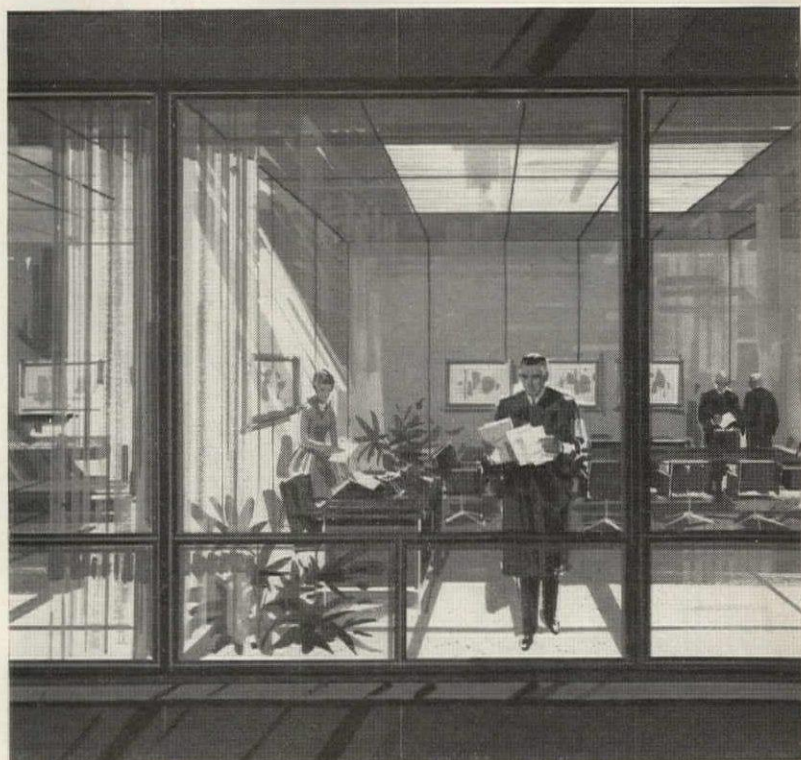
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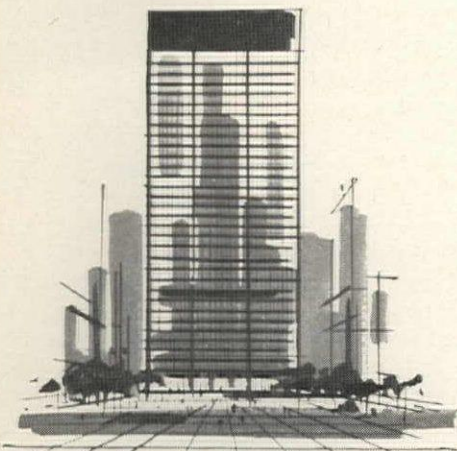
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A Humane Look at the Environment

THIRTY-FIVE distinguished spokesmen from many diverse disciplines gathered in Washington last month to talk about the urban environment and wound up being chided for not talking with one another.

It was a child-in-the-temple scene, the temple being the National Housing Center and the child a Yale senior named William D. Waddell.

Waddell allowed as how "I feel I know more about the environment than anyone." The trouble with the experts is that they are not communicating, he said.

"Hysterical giggles," as a matter of fact, greeted one suggestion that sociologists and ecologists communicate with city designers, Waddell reported.

And so, people of "incredible relevance" to urban solutions remain snugly ensconced in their insular ways as Waddell, philosophy major and New Orleans resident, asked:

"Who's going to make it [the city] a home for me and my kids?"

That question was not answered, but the experts assembled for the second Interdisciplinary Conference on Environmental Design, held by the National Association of Home Builders, did reach a consensus on another matter: that a need exists for more in-town housing for lower middle-class and middle-class families, to provide a realistic means for previously impoverished families to "move up."

At the head of effort to have the consensus statement approved (unanimously as it turned out) was Dr. Lawrence Z. Freedman, professor of research psychiatry at the University of Chicago.

"My rationale was simple," Dr. Freedman explained. "The great present emphasis is on affording the underprivileged, the poor, of whom a high proportion is Negro, with appropriate shelter.

"If, as we all hope and expect, the results of the various political, economic and educational measures

now underway or planned are successful, the Negro community will no longer be made up of such a large fraction of the impoverished but will be represented in numbers roughly approximating the rest of the US population in that socioeconomic level described as middle class."

Attending the conference—along with architects, planners and builders—were, in addition to the Yale senior and the research psychiatrist, a sociologist, an anthropologist, an ecologist, a human rights commissioner, an interior designer, psychologists, a county judge, journalists and others.

The 1964 conference, which drew 31 experts, was discursive in nature, with its objective the identification of problems.

This year's session was aimed toward at least preliminary solutions. The notable result was the collective view of the specialists that Negroes on the move be given an aspiration-nourishing chance for decent middle-range housing.

Cities have become, to an alarming extent, places for either the very rich or the very poor, it was noted. Middle-class facilities would provide greater social, political and economic stability.

The conference ended with the possibility sounded that a committee of experts representing various disciplines may be formed to assist the NAHB's environmental design committee.

The latter was established by the association in response to the home-building industry's status as one of the major contributors to the shape of the environment. The committee was charged with the responsibility of bringing together the experience and knowledge of the many cultural and social professions.

Emil Hanslin, committee chairman and conference moderator—and builder of the Robert Damora AIA tract house at Cape Cod, a 1965 AIA Award of Merit winner—said

in a statement opening the session:

"One thing is sure: if we are ever going to enlarge upon the quality of our environment, this must be done through the collective efforts of men and women such as yourselves. If we learned anything last year it was that no single man, no single discipline, has the capacity to order a better environment. This was the conclusion of every expert present a year ago."

That conclusion appeared undiminished as this year's session ended, rendering all the more salient Yaleman Waddell's plea for greater communication.


The lack of communication, he emphasized, "struck me as a total negation of this conference." Someone suggested that Waddell would cool off with the years, which moved the Rev. Frank S. White of the First Presbyterian Church of Fort Wayne, Ind., to declare: "For the sake of God and the future, let's not tell our children they'll get over being radicals."

Dr. Joan F. de Pena, St. Louis anthropologist, said she and other conferees drew up a list of specialists that could help the builder build better. The list included: an ecologist, a social psychologist, an organization theory specialist, an educationist, a social anthropologist, a theologian, a manager-businessman and a local politician "to form a nucleus for advice on the best environment."

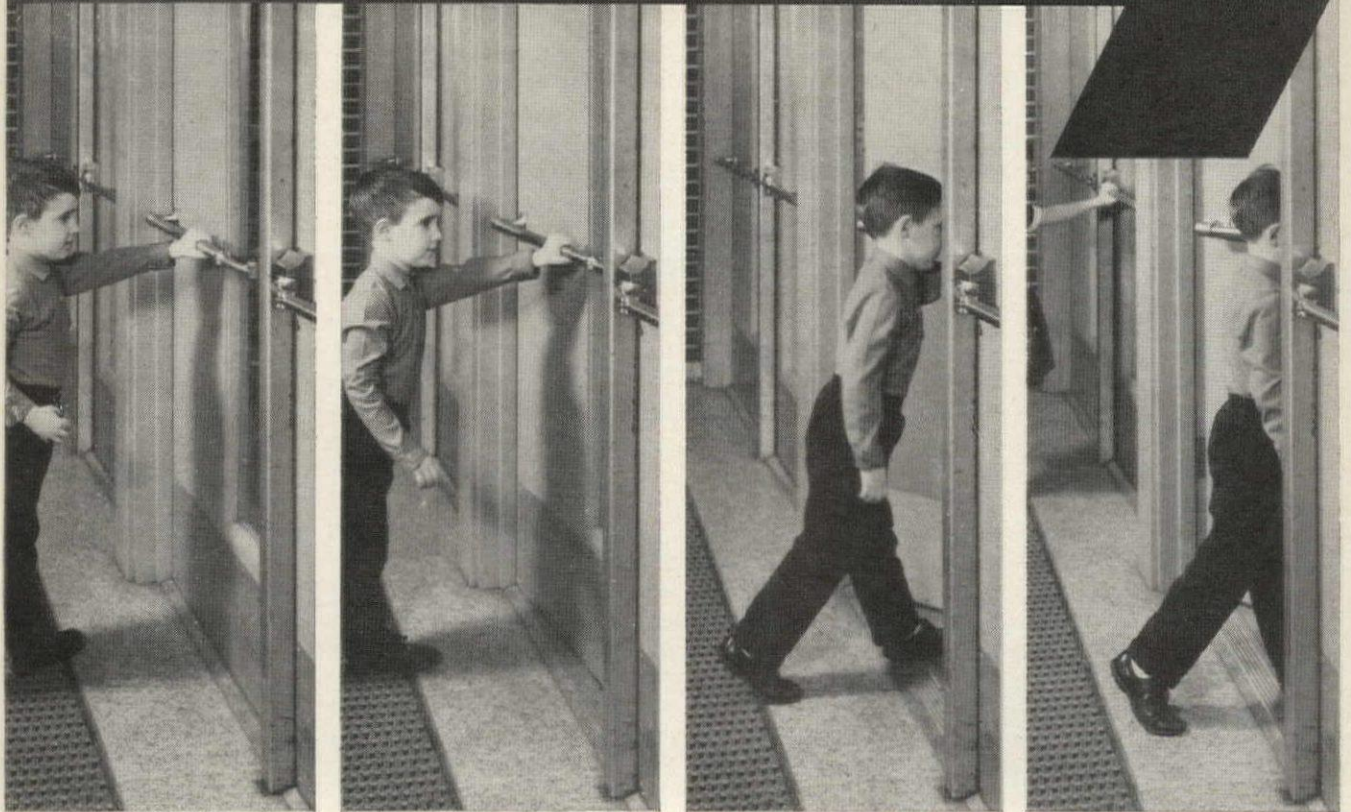
George Nelson FAIA suggested that limited lands for further development may be a blessing, for this may subvert the notion that the American home is a castle "ruled by a castlelike guy."

Dr. Martin Meyerson, dean of the University of California College of Environmental Design, decried the lack of research in the environmental field. "There is no field such as ours which has so much money expended and no feedback," he said.

NEIL E. GALLAGHER
Assistant Editor



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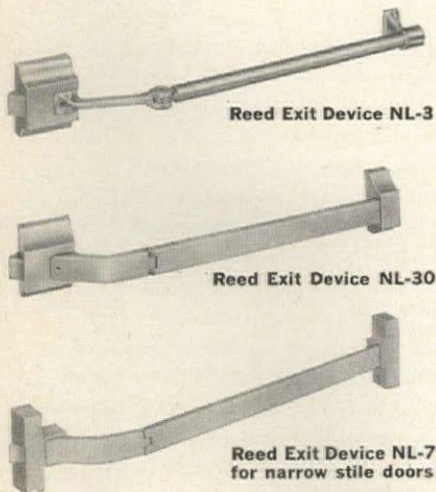
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HUD: A Department Makes Its Debut

ANOTHER NAME has been stirred into Washington's alphabet soup. It is HUD, abbreviation for the new Department of Housing and Urban Development.

HUD becomes the 11th cabinet-level department and the first to appear since 1953 when HEW, the Department of Health, Education and Welfare, was established during President Eisenhower's first year in office.

HUD was approved and signed into law by President Johnson at a September 9 White House Rose Garden ceremony. Institute President Morris Ketchum Jr. FAIA witnessed the ceremony and received one of the pens used in the rite. The new Department is the product of the busy first session of the 89th Congress. Its concept was supported by the AIA since its 1957 Centennial Convention.

Since the President has not named the Secretary for HUD, this report will concentrate on the provisions of the act itself. The structure and organization of the new Department will replace the Housing and Home Finance Agency (HHFA) which until now has operated as an independent agency. It will further replace the constituent agencies of HHFA; i.e., the Community Facilities Administration (CFA), the Federal Housing Administration (FHA), the Public Housing Administration (PHA) and the Urban Renewal Administration (URA). The act also transfers to the new Department the Federal National Mortgage Association (FNMA) and the urban transportation programs.

Section 1 of the act provides the title as cited: "Department of Housing and Urban Development." Section 2 states the purpose of the act. Congress declares that "the general welfare and security of the nation and the health and living standards of our people require, as a matter of national purpose, sound development of the nation's communities

and metropolitan areas in which the vast majority of its people live and work."

To carry out the purpose, Congress finds the establishment of an executive department is desirable to 1) achieve the best administration of the principal programs of the Federal government which provide assistance for housing and for the development of the nation's communities; 2) assist the President in achieving maximum coordination of Federal activities which have a major effect upon urban, community, suburban or metropolitan development; 3) encourage the solution of problems of housing, urban development and mass transportation through state, county, town, village, or other local and private action; 4) encourage the maximum contributions that may be made by private homebuilders and mortgage lenders to housing, urban development, and the national economy; and 5) provide for full consideration of the needs and interests of the nation's communities and their people.

Section 3 establishes 1) that the Department will be headed by a Secretary who is appointed by the President with Senate confirmation. The Department will be administered under the supervision and direction of the Secretary, and 2) that the Secretary advise the President with respect to Federal programs relating to housing and urban development; develop and recommend policies for the orderly growth and development of urban areas; exercise leadership in coordinating Federal activities in this area; provide a clearinghouse of technical assistance and information to state and local governments in this field; encourage comprehensive planning by state and local governments and coordinate such Federal, state and local efforts; encourage private enterprise to serve as large a part of the nation's housing and urban de-

velopment needs as it can; and conduct continuing studies of housing and urban problems.

Section 4 provides that there shall be in the Department an Under Secretary, four Assistant Secretaries and a General Counsel, all to be appointed by the President and confirmed by the Senate. One of the Assistant Secretaries will be a Federal Housing Commissioner. This section also calls for an Assistant Secretary for Administration and a Director of Urban Program Coordination. The latter will assist the Secretary in the coordination of various government programs having a major impact on community development.

Section 5 transfers to the Department functions, powers and duties of HHFA, FHA, PHA, URA, CFA, FNMA, etc.

Section 6 contains technical provisions including the placement of the Secretary of HEW and the Secretary of HUD in the line of succession to the office of the President.

Section 7 contains administrative provisions regarding personnel, property, records, funds, functions and consultants.

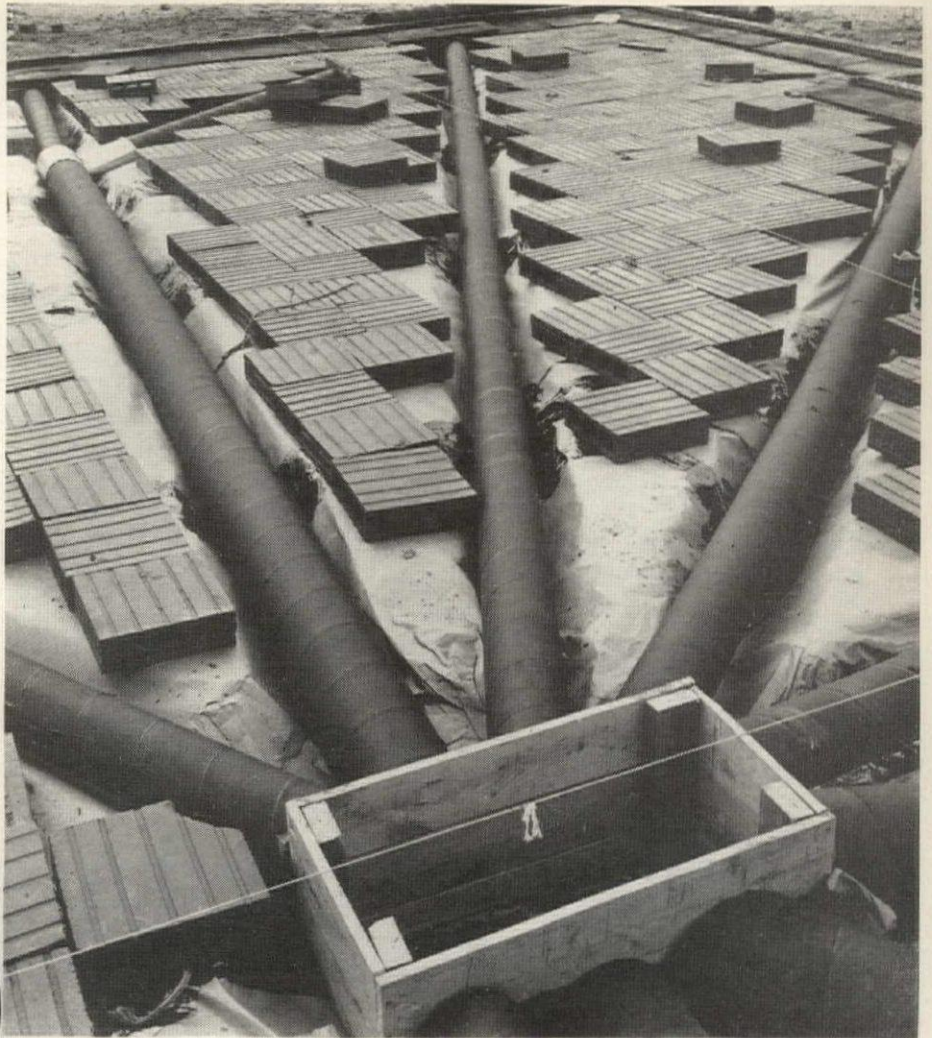
Section 8 requires that the Secretary make an annual report to the President for submission to the Congress.

Section 9 contains "saving provisions" involving legal provisions such as suits, actions, cause of action, etc.

Section 10 provides a standard separability clause which says that if any provision of the act is found to be invalid by any court, such judgment will not invalidate the remainder of the act.

Section 11 outlines the effective date of the act as 60 calendar days following signing by the President and describes interim appointments as previously outlined in this report.

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THE OCTAGON/Institute Studies Feasibility of Site Expansion

A move to expand the site for the Institute's new headquarters building loomed as a possibility as the Board of Directors met in final session for 1965.

Any such decision would be in the form of a recommendation to the membership for action at the national convention in Denver June 26-July 1.

Mitchell / Giurgola, Associates presented feasibility and schematic studies to the Board.

The studies were based on the possibility of adding to the site that was programmed in the national

than the present site will allow," said Executive Director William H. Scheick FAIA, adding that the Mitchell/Giurgola studies are addressed to the long-range needs of the AIA.

Acquisition of the Lemon property would increase AIA land holdings by about 40 percent, bringing the total area containing the Octagon House, gardens and new headquarters site to nearly a full acre.

The purchase would also permit construction of a new building even less obtrusive to the historic Octagon House and gardens, it was explained.

The proposal would come up in Denver since the purchase of property exceeding \$20,000 must be approved by a full convention.

Mitchell/Giurgola won the nationwide competition over 220 other entrants with a design for a five-story, brick structure distinguished

Expansion Proposal: Headquarters site would be enlarged by purchasing adjoining property. Administration building (barely visible in the photo below) is flanked by the Octagon House (left) and the higher Lemon Building (right).

alike who participate in decision affecting the design of cities.

The book, (McGraw-Hill) is the result of five years of work by the AIA Committee on Urban Design and staff. It was written and illustrated by Paul D. Spreiregen AIA, director of the Institute's Urban Design Programs.

The material, which originally appeared as a 12-part series in the AIA JOURNAL, has been revised and brought up to date for the book which presently constitutes the AIA's overall statement on the role that urban design plays today.

In a message to state and chapter presidents, Vice President Robert L. Durham FAIA, coordinator of the War on Community Ugliness, termed the work "a layman's guide to urban design" as well as "a means to professional continuing education."

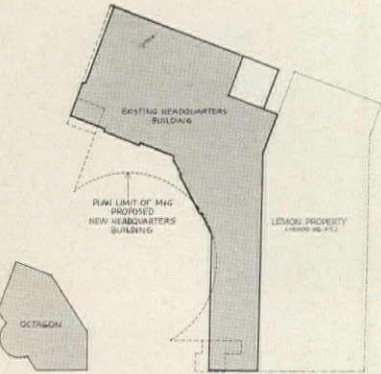
The officers and directors of the Institute have set this goal: that every architect, governor, mayor, educational leader, head of community action group and, in short, anyone who influences his community, be supplied with a copy.

Each AIA member has been asked to buy two copies, one for himself and the other for presentation by his chapter to an important layman. Likewise, component organizations have been asked to hold seminars, dinners or other ceremonies at which the books can be presented, events similar in spirit to the premiere showings for the AIA movie, "No Time for Ugliness."

AIA members are being offered a special discount one-third below the bookstore price of \$12.50 if they order the book through their chapters. The reduced price is \$8.33 plus postage.

The publisher is offering this discount for bulk purchases only, just as it does for bookstores. Chapter orders of any size are considered bulk purchases so long as the chapter itself is to receive the books and be billed rather than individuals. Members ordering directly from either the Octagon or McGraw-Hill will be billed the retail price of \$12.50 plus postage.

Continued on page 13



design competition won by the Philadelphia firm late last year.

Under consideration was the prospect of buying the adjacent Lemon Building at 1729 New York Ave. N. W.

"Three years ago some of our forward-looking members suggested that membership services 40 years hence might require more space

by a semicircular glazed wall embracing the gardens and forming a backdrop for the Octagon House.

BOOK DISTRIBUTION: "Urban Design: The Architecture of Towns and Cities" started rolling off the press last month as efforts were exerted by the AIA to get copies into the hands of architects and laymen

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Octagon Observer from page 10

GOVERNMENT/GSA Names Commissioner of Public Buildings

Casper F. Hegner AIA has been named commissioner of public buildings in the General Services Administration.

Hegner, 56, joins GSA after three years as manager of operations in the construction office of the Veterans Administration where he supervised the design and construction of hospitals.

His appointment was praised by the Institute. "We applauded the recent advisory panel of architects by GSA," Executive Director William H. Scheick FAIA said, "and we believe that as chairman of that panel Commissioner Hegner will be equipped to work for the most effective administration of the public building program."

Hegner was a partner in the architectural firm of Smith & Hegner in Denver from its organization in 1946 until joining the VA in 1962. He is a past president of the Colorado Chapter AIA.

He will direct a Public Buildings Service that has wide responsibilities in construction and building management. He will also serve as a member of the National Capital Planning Commission.

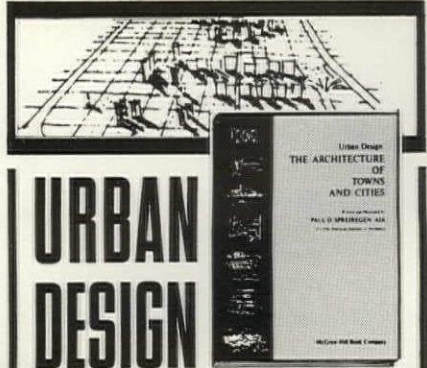
PEOPLE/AIA Journal Appoints Kleiner as Business Manager

Henry E. Kleiner has been named business manager of the AIA JOURNAL. He joined the magazine as production manager in 1964.

In making the appointment, Executive Director William H. Scheick FAIA said that Kleiner will be responsible for three phases of the publication: advertising, circulation and production. "In other words," Scheick explained, "he will be in charge of the business side of the magazine in the same way that the editor is in charge of editorial, with both men reporting to Publisher Wm. Dudley Hunt Jr. AIA."

A native of Kentucky, Kleiner attended the University of Louisville. He has been associated with the publishing and printing field in the Washington, D.C., area since 1952. Before coming to the JOURNAL, he served as business manager of Business Publishers.

Continued on page 20



URBAN DESIGN

THE ARCHITECTURE OF TOWNS
AND CITIES. Written and Illustrated for
The American Institute of Architects
by PAUL D. SPREIREGEN, AIA.

Amid the welter of words, emotions, and cross-purposes now being devoted to urban development and redevelopment, here is a welcome, thoroughly professional discussion of the actual design of cities, towns, and populous regions.

Seasoned in the realities by his own experience, the author takes a view of urban design that is forward-looking, optimistic, and practical. He shows what can be done and how; and he shows why the immediate future holds exciting, thoroughly realizable opportunities for great American urban design. He calls on the designer to bring to these opportunities his own creative talent, skill in the use of today's fast-expanding urban technology, understanding of the rich history of city design, and deep appreciation of nature in and around the city.

Mr. Spreiregen bases his book on substantial experience in urban design in the U.S. and abroad. A graduate of the M.I.T. School of Architecture, he was a Fulbright scholar in Italy, and a member of the Federal Commission of the Reconstruction and Redevelopment of Alaska. He is now director of Urban Programs for the AIA and has lectured throughout the United States.

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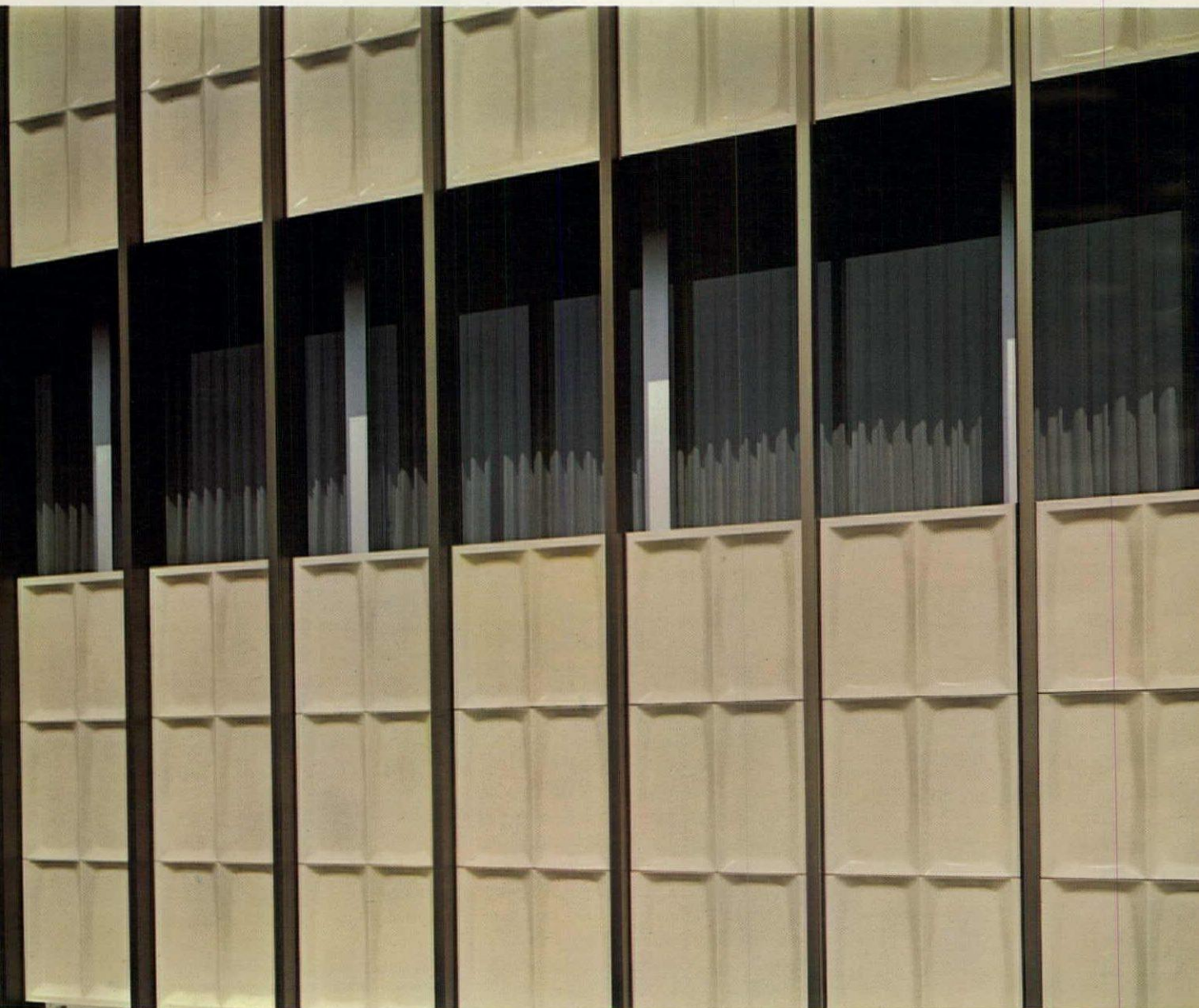
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Sunshields in architectural porcelain

Sunshields in porcelain on Armco Enameling Iron provide an important design element of office tower of the Fifth Avenue Financial Centre, San Diego.





First four floors of Fifth Avenue Financial Centre, San Diego, occupy a full city block, provide street level shopping space and parking. Above this is the eight-story office tower.

Owners and Developers:

International Leasing Corporation, a subsidiary of the Alessio Corporation

Engineers and Architects:

Freeland & Bird

Porcelain Shields by:

Ferro Enameling Company

General Contractor:

M. H. Golden Construction Co., and Kenneth H. Golden Co., a joint venture

make an effective design element

"Our first design consideration was to preserve the exquisite land and marine panoramas that a 12-story building would reveal on such a prominent location," said Architect James W. Bird, speaking of the Fifth Avenue Financial Centre that occupies a city block in midtown San Diego.

"We also had to consider the implication that a building on this site would create a landmark that must endure for decades," he added. "Then came such practical measures as shielding the office tower from both heat and sunlight. Since sunshields were sure to dominate the facade of the tower, we decided to make them an important design element of the building.

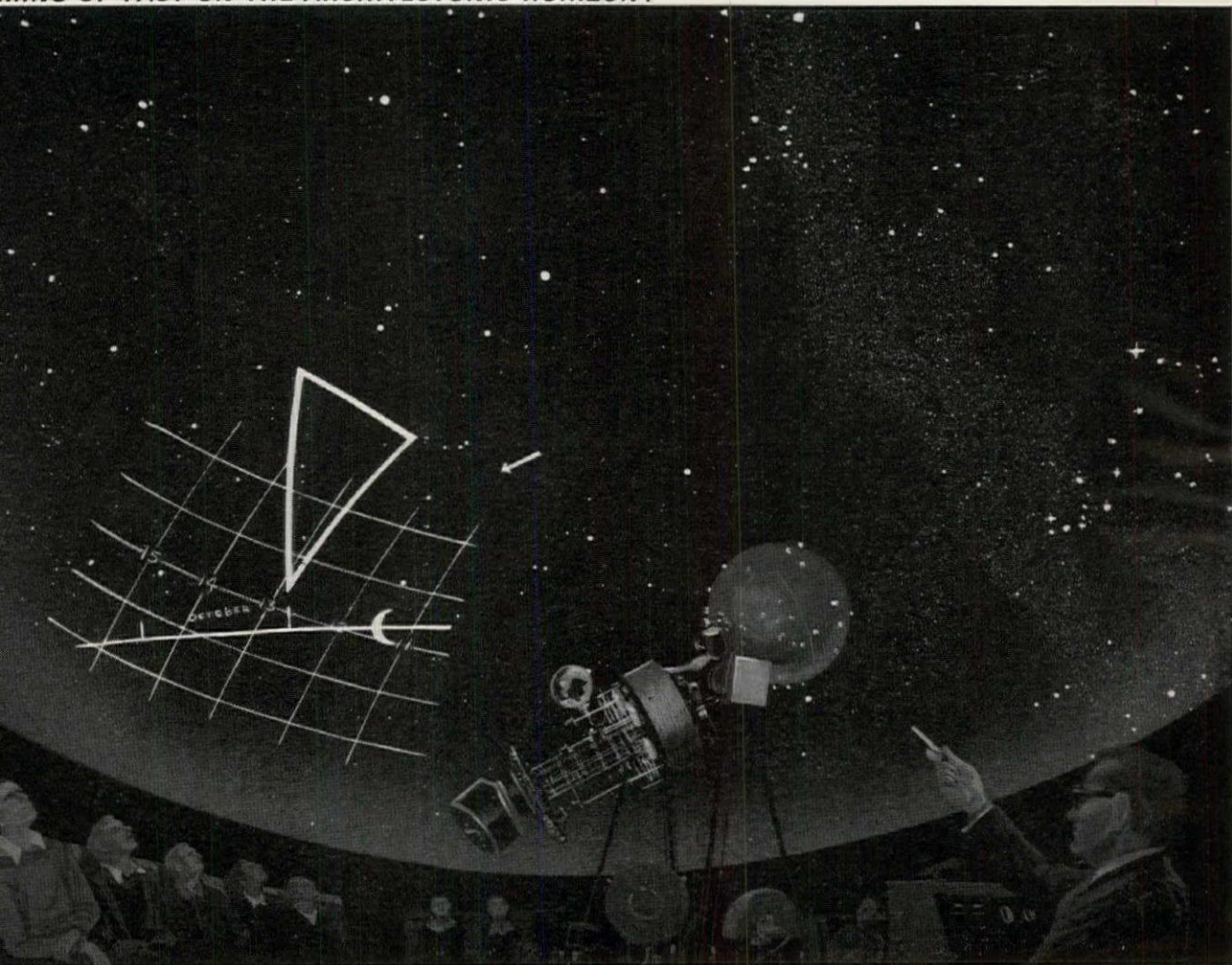
"Several potential materials for the shields were carefully studied. Durability, color fastness, light weight, suitability for forming a three-dimensional pattern, and relative cost were all evaluated. In our opinion, porcelain enamel on steel best suited this combination of requirements."

The sunshields were die-stamped in twin pan-shaped units from Armco Enameling Iron, then porcelain enameled. Their light beige or birch color contrasts sharply with dark vertical bands created by column covers and with horizontal bands of tinted glass windows. Dedicated last July, the Fifth Avenue Financial Centre has injected a monumentally new dimension into the San Diego skyline.

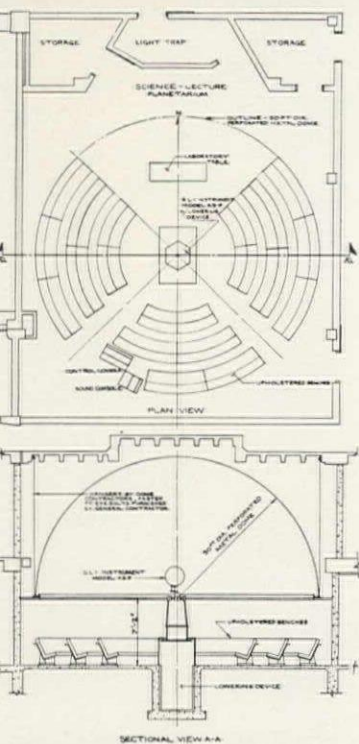
Next time you need a solution to an exterior design problem, look into the advantages of porcelain on Armco Enameling Iron. For complete information on the material or names of architectural porcelain enamellers, write Armco Steel Corporation, Dept. E-4115, P. O. Box 600, Middletown, Ohio 45042.

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Typical Plan and Elevation Based on plans for the John Glenn High School, Wayne, Michigan. Jahr-Anderson, A.I.A., Dearborn, Michigan

The SLI A3P physical sciences classroom provides school districts, educational complexes, individual high schools and junior colleges a maximum efficiency facility for achieving desired levels of comprehension of the geocentric and astro-nomic physical sciences in minimum time and at minimum cost per pupil. It also provides unique potentials for dramatic demonstrations of inter-relationships between these sciences and physics, spherical geometry, trigonometry, chemistry, biology. Even history, literature and current events can be included. In imparting the basic concepts of the space sciences to lower grades, the A3P is unequaled as a teaching aid.

Elements of Facility

The SLI facility consists of: The A3P electro-mechanical-optical planetarium and selected auxiliary projectors, together with electronic controls housed in a separate operator's console; a perforated aluminum projection dome (simulated sky); complete seating; stereophonic sound system; cove lighting; and auxiliary demonstration and teaching equipment required by the pre-planned educational program. Standard units are 24, 30, and 40 feet in diameter, designed for installation in square or rectangular chambers two stories in height. In the larger domes, seating capacity permits use of chamber as a large-group instruction area in related subjects. The SLI Architects Manual provides complete planning factors, includes 11 preliminary drawings, specifications, chamber floor plans, other details of typical facility and enclosing chambers. Write for copy.

Cost Cost of a SLI A3P classroom is comparable to the cost of an equipped physics, chemistry or home economics classroom. Installations have been made in almost 200 school systems and educational institutions throughout the U.S. Many of these installations have qualified for NSF or NDEA supporting funds. Ask for details.



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CALENDAR

Dec. 5-9: NAHB Annual Convention and Exposition, McCormick Place, Chicago

Dec. 8-10: "The Troubled Environment: Business Examines Social and Economic Barriers to Improving Our Cities," a symposium of ACTION Council for Better Cities, Shoreham Hotel, Washington, D.C.

Jan. 5-8: National Society of Professional Engineers Winter Meeting, American Hotel, Bal Harbour, Fla.

Jan. 19-22: Second Annual Redevelopment Roundtable, ACTION Council for Better Cities, Hawaiian Village Hotel, Honolulu

Feb. 2-6: Cellular Concrete Association Annual Meeting, Alffer Hotel, Mexico City

April 23-30: Historic Garden Week in Virginia

April 26-28: National Conference on Religious Architecture, San Francisco

May 8-12: ASLA Annual Meeting, Yosemite National Park, Calif.

May 15-21: Mid-Pacific Conference on Landscape Architecture, Hawaiian Islands

June 26-July 1: AIA Annual Convention, Denver Hilton Hotel, Denver

AIA Committee and Related Meetings
(At the Octagon unless otherwise noted)

Jan. 7-9: Documents Review

Jan. 10: Committee on Committees

Jan. 11-12: Committee Chairmen

Jan. 13-14: "Grassroots" Meeting

Jan. 19-20: Reynolds Student Prize Jury

Jan. 24: Education

Feb. 11: AIA-AGC Liaison Commission

Feb. 14: Architects-Engineers Liaison Commission, NSPE Headquarters

March 3-5: Honor Awards Jury

Tours

Dec. 18, Jan. 22 and March 26: Architects' Trek to the Treasures of Egypt and the Middle East. December—16 days, led by Dean Bruno Leon AIA, School of Architecture, University of Detroit; January—22 days, led by William W. Eshbach FAIA; March—22 days, leader to be announced. Contact: United States Travel Agency, Inc., 807 15th St. N.W., Washington, D.C. 20005.

Feb. 13 and Oct. 9: Mexican Architecture and Interior Design Seminar-Tours. Two weeks each. Contact: T. H. Hewitt, Apartado Postal 5-251, Mexico City, D.F.

Competition

Dec. 31 (registration): Design of an industrially fabricated dwelling. Two stage, international. Contact: European Coal and Steel Community, High Authority, Luxembourg.

Awards Program

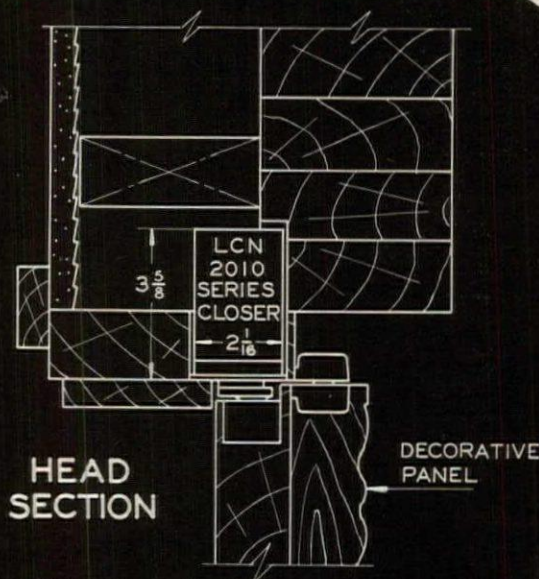
Jan. 21 (nomination form): R. S. Reynolds Memorial Award. International. Contact: AIA, 1735 New York Ave. N.W., Washington, D.C. 20006. ■

Construction Details

for LCN overhead concealed door closer installation shown on opposite page

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RESEARCH PROJECTS

Massachusetts Institute of Technology

"Prefabricated Structural System for School House Construction": Imaginative application of prefabrication techniques to uses of classroom space. Marvin E. Goody, Joseph Schieff, Albert Dietz. Sponsor, Educational Facilities Laboratories. Budget, \$100,000. Begun, 1960; anticipated completion, 1965. (A full-scale model of a classroom has been built at MIT.)

University of Michigan

"Use of Foam Plastics for Low-cost Housing in the Underdeveloped Areas of the World": Study of economic and technical feasibility of using foam plastics, followed by experimental exploration of structural systems to make full structural use of selected plastics. (Work performed in collaboration with producers of materials. Next stage will be development of prototype dwelling units.) Stephen C. A. Paraskevopoulos, C. Theodore Larson, Harold Borkin, Sterling Crandall, James Haecker, Robert Darvas, Willard A. Oberdick, Irving Einhorn. Sponsor, Agency for International Development, US Department of State. Budget, first and second stages, \$119,400; third stage, \$146,000. Begun, 1962; anticipated completion, 1965. Reports, Feasibility Study, "The Potential Use of Foam Plastics for Housing in Underdeveloped Areas," published by Architectural Research Laboratory and AID, February 1963; Statement, "Home-Building Techniques and Materials: The Need for Research," by Professors Paraskevopoulos and Larson, for Senate Subcommittee on Housing, January 1963.

North Carolina State

"Space Filling Transformations" and "A New Method for Cylindrical Perspective": The first is an outgrowth of the author's previous work in geometric design; the second is a basic method for expanding techniques for spatial design methodologies. Duncan R. Stuart, David Teachout, Joseph Cos, William Baron. Sponsor, School of Design. Budget, \$1500. Begun, 1963. Reports, (film) "Polyhedra; The Orderly Subdivision of Space," student publication.

Ohio State University

"Photogrammetric Recordings of Historic American Architecture": A photogrammetric recording of Worthington (Ohio) Female Seminary, the General Grant National Memorial, New York City, and the Provident Trust Bank Building, Philadelphia. Perry E. Borchers, D. H. Harder, A. R. McDonald, M. A. Melragon and R. L. DeSilets. Sponsor, Worthington Historical Society, National Park Service, US Department of the Interior. Project in progress—Professor Borchers on National Science Foundation leave 1963-64. ■

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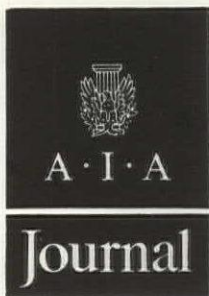


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Frederick Law Olmsted

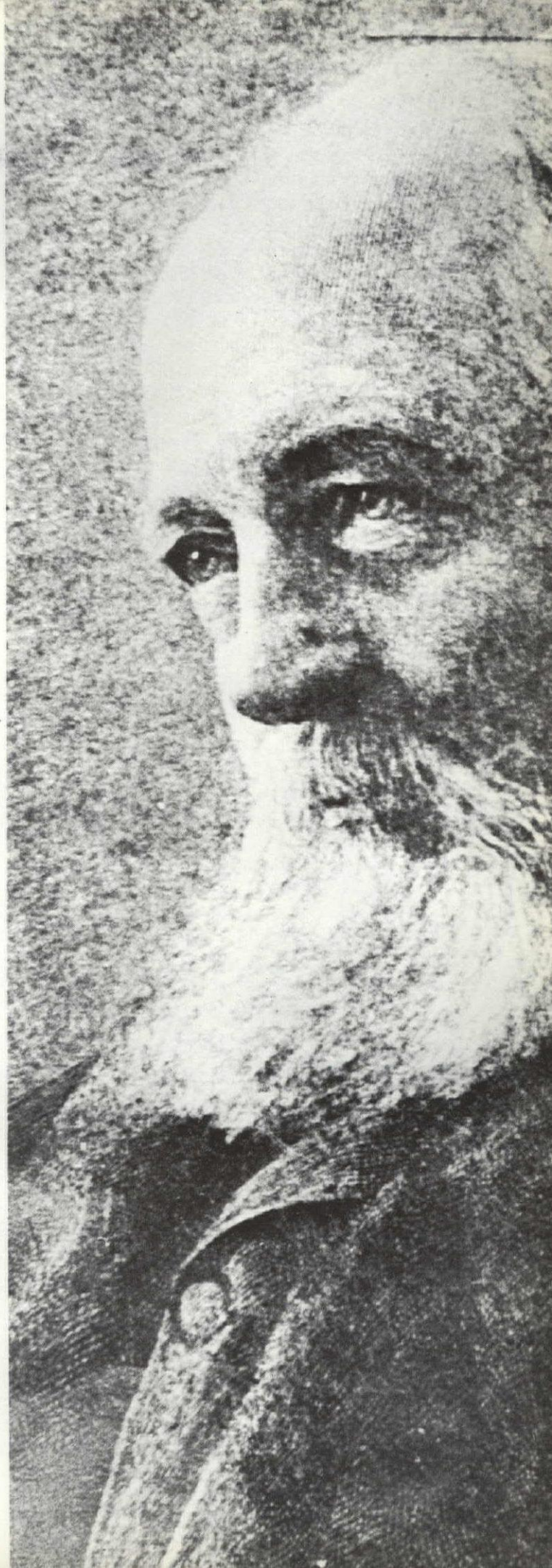
Prophet of Environmental Design

BY WILLIAM H. TISHLER

America's first professional landscape architect wore many hats—that of journalist and humanitarian among others—as discovered by the author, assistant professor in the Department of Landscape Architecture at the University of Wisconsin, while doing research for an exhibit at Harvard University. The Olmsted show is being circulated by the Graduate School of Design and the Boston Museum of Fine Arts.

THE DEMAND for a comprehensive approach to the design of our environment is one of the primary challenges of our complex age. Recently, the architectural profession has attempted to answer this challenge by expressing concern for the *total* surroundings of man. This concern is a significant continuation of an environmental design philosophy pioneered in America, over one hundred years ago, by Frederick Law Olmsted, founder of the profession of landscape architecture. The work

December 1965



and ideas of this visionary designer, author and humanitarian offer many important lessons to those who are concerned with designing our natural and man-made surroundings.

Born in Hartford in 1822, Olmsted's early years were strongly influenced by nature and the landscape. He was forced to abandon his formal education due to an eyesight weakness, but he continued to gain an insight into his environment from a wide range of travel, combined with shrewd observation, intelligent reading and a successful try at farming. All would later contribute to his perceptive powers as "master builder of the landscape."

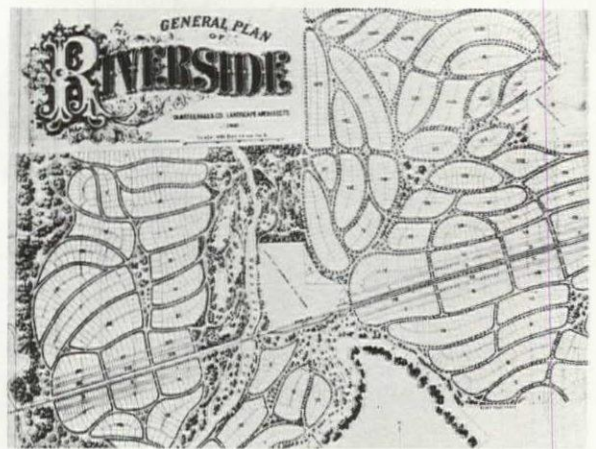
At the age of 28 he sailed for Europe. In England he examined the Western world's first planned industrial city, Birkenhead, with its large civic park—the first example of public open space provided and paid for with public funds.

Impressed with this revolutionary planning and social achievement, Olmsted wrote of it in letters to the *New York Times* and urged that similar parks be created in New York and other American cities. His published observations on the scenery and social conditions in Europe so impressed the *Times'* editors that they commissioned him to make three long journeys on horseback into the South. Olmsted's firsthand accounts of those trips are among the most valuable historical documents on this area prior to the Civil War.

In 1853, officials of the State of New York succumbed to the public pressure being exerted by Olmsted and others. They authorized that land be acquired in mid-Manhattan to be developed as

Central Park—the first public park of its kind in America. A commission was established to manage its development, and Olmsted in turn was named superintendent.

This event marked the turning point of Frederick's career. The young journalist from Hartford

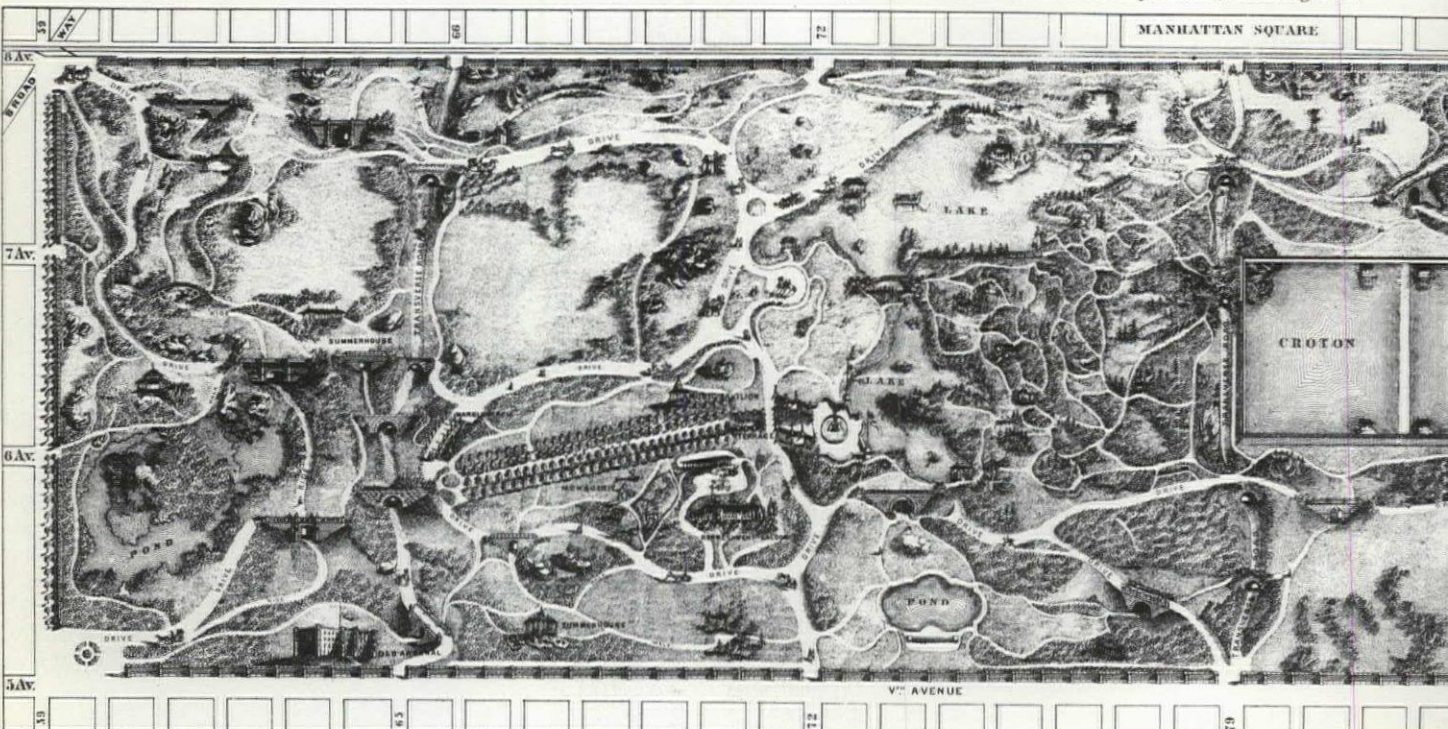


Monotonous gridiron averted in unique plan for Riverside.

went on to establish a new profession, landscape architecture, and almost single-handedly laid what Lewis Mumford, writing in "The Brown Decades," called "the foundation for a better order in city building."

Olmsted's fame as a writer on the parks of England and as an ingenious and inventive farmer brought him to the attention of Calvert Vaux. This young English architect saw great potential in the man. After the Park Board announced a competition for the design of Central Park, Vaux wrote Olmsted asking him to collaborate in the prepara-

Etching of Central Park plan Olmsted developed with Vaux and implemented as construction supervisor, creating . . .



tion of a plan. Olmsted obtained the permission of his superiors and entered the competition, submitting with Vaux, a plan under the anonymous signature "Greensword."

Of the 35 designs considered, the "Greensword" plan was awarded first prize. The popularity of the plan was truly justified, for it proved to be revolutionary in these major aspects: its provision for overpasses that separated footpaths from the roadways, thus avoiding pedestrian-vehicular conflict; its respect for existing topographic features; and, most important of all, its appeal to all citizens, regardless of class, race or ethnic background.

Olmsted's cognizance of this latter fact is obvious, for a short time later he wrote: "It is of great importance as the first real park made in this country—a democratic development of the highest significance and on the success of which, in my opinion, much of the progress of art and esthetic culture in this country is dependent."

Olmsted proceeded to carry out his plan, supervising construction of the park's 843 acres. His dedication to this task and his devotion to public service, while battling the corruption and destructive influence of New York's Tweed Ring politicians, stand as a model for those who are today engaged in public service.

It was during this period that he predicted an expansion of New York City that would exceed that of metropolitan London. In his park reports, he clearly outlined a park system "widely dispersed throughout the metropolitan area and linked together by a system of connecting parkways."¹

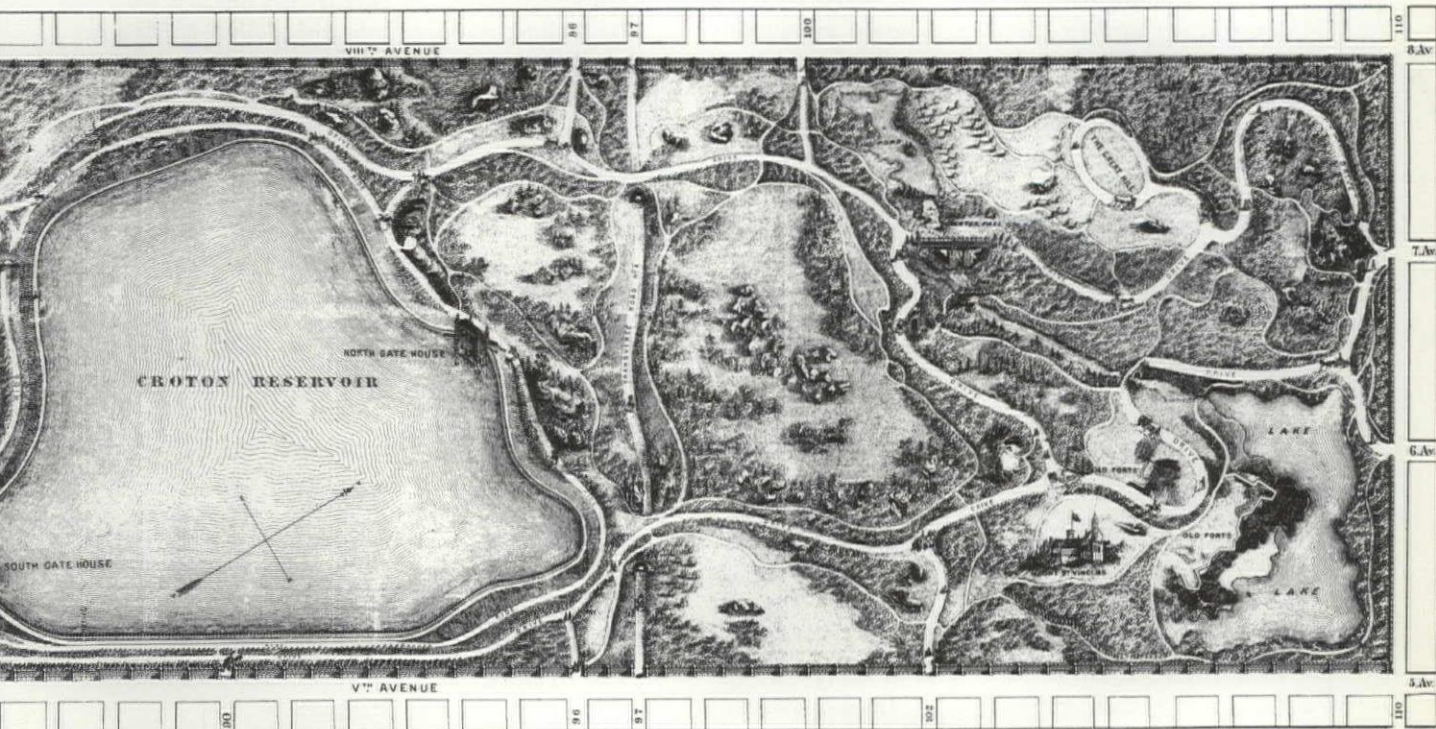
Central Park proved to be a broad and far-

reaching urban design concept, and public parks soon became an accepted and necessary feature of American cities. By 1868 there was scarcely a city of magnitude in the country that had not taken measures to provide public open space for its citizens. Landscape architecture came to be the name used to describe both the nature of this larger scale of work and the profession which dealt with it. "It was the firm of Olmsted & Vaux—later the two men independently and their subsequent partners—which gave the name and official status to a field which the construction of Central Park proved to be neither architecture nor engineering nor gardening."²

The Civil War interrupted work on the Park. Olmsted was granted a leave of absence, and went to Washington to become Secretary of the US Sanitary Commission (now the Red Cross), an organization which he played a major role in organizing. He returned to continue the construction of Central Park but resigned shortly thereafter and moved to California, where he spent the summer of 1864 camping in Yosemite Valley. He was intrigued by the splendor of this great natural space, and became an active leader in the campaign for its preservation, helping draft national legislation to preserve it and the Mariposa Redwood Grove as public parks. At the same time, he carried on an active private practice designing master plans for the University of California at Berkeley and San Francisco's Golden Gate Park.

Because of a mounting work load in the East, Olmsted returned to New York City. There, with his former partner, Vaux, he designed the second

... an open space revolutionary in several aspects but significant most of all for "its appeal to all citizens."



of his great urban parks, Prospect Park in Brooklyn.

Meanwhile, the Riverside Improvement Company of Chicago, hearing of the land planning skills of the Olmsted & Vaux office, sought its services to design a new and revolutionary suburban community on a 1600 acre site west of Chicago.

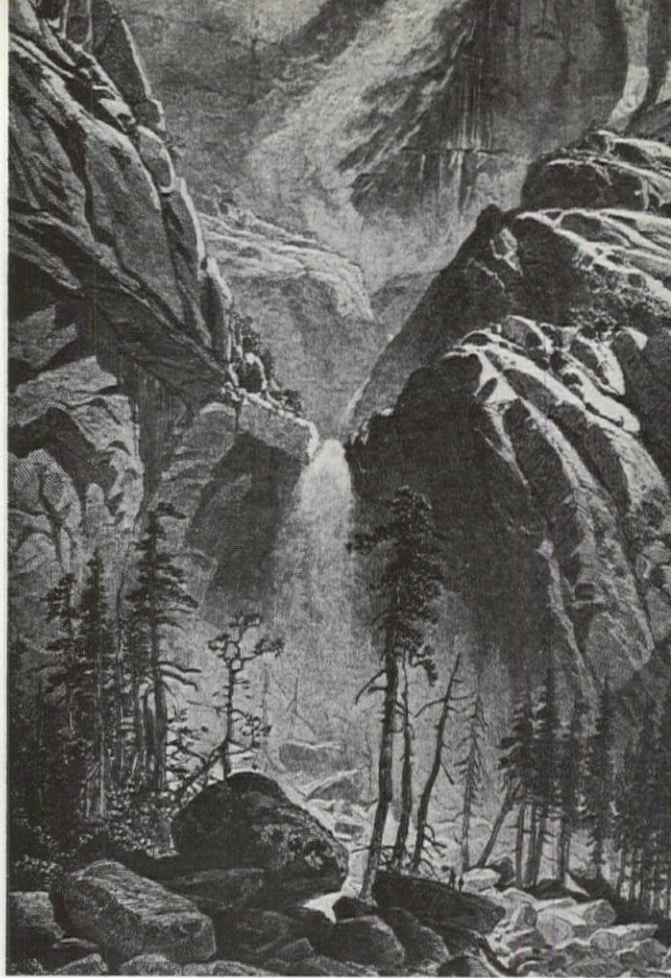
Long disgusted with the monotonous gridiron layouts in previous urban developments, Olmsted introduced a number of fresh and original design concepts which would make Riverside a source of inspiration for community plans throughout the land. First, he insisted upon a total design which would satisfy the social as well as individual needs of the community's citizens. Second, he preserved and enhanced such natural land features as river banks, topography and vegetation. Third, he deliberately depressed and curved the streets to fit the topography and to create a pleasant community environment.

Olmsted proposed connecting Riverside to Chicago by a six-mile parkway, the first of its kind in America, but due to the depression of 1873, this feature was never adopted.

Riverside today is an oasis in a sea of urban sprawl. It remains one of America's most successful community developments—a tribute to the genius of its designer.

Olmsted's fame as a landscape architect spread, and his vast scope of work continued to shape the ideals and define the standards of his new profession. He was called in to design site plans for college campuses, parkways, land subdivisions, zoos, cemeteries, town plans and parks all across the country, including the Chicago South Parks and the Boston Park System.

His plan for Boston—a brilliant example of regional planning—transformed an unsightly swamp into a linear park strip running through the city. By separating this park from traffic and



Olmsted's efforts to preserve Yosemite Valley were a major contribution to the national park movement.

using it as a connector between Franklin Park and the Arnold Arboretum, he established America's first scenic corridor, tying Boston with its newly annexed outlying areas. Charles Eliot, Olmsted's pupil, expanded this concept of regional design by planning a park system for the entire metropolitan area, still another US first.

A lifelong pioneer in conserving America's scenic beauty, Olmsted as early as 1879 helped begin a successful appeal to preserve Niagara Falls from the mounting pressures of ill-conceived commercial exploitation. (He later designed an international plan which preserved the beauty of this upstate New York area.)

Olmsted's grasp of the regional basis for design, which "made his work preeminent in his own generation and makes it significant to ours,"³ is fully evident in his plan for Stanford University (1886). Warning University officials against the preconception of emulating the styles of New England's Ivy League colleges, he recommended that the relationship of function, climate, landscape and soils be considered as the major guidelines for a plan appropriate to the specific conditions found in that part of California. The solution called for one-story buildings—to permit greater flexibility of interior space—grouped to provide small, well-shaded open spaces that would keep out the hot winds of this warm arid region.

In 1893, during the closing years of a long and active career, Olmsted completed his final crowning achievement: the site selection and planning of the Chicago World's Fair. His work on this epoch-making exposition gave the profession of landscape architecture an equal status in the arts along with architecture, painting and sculpture.

Although the eclecticism of the Fair's architectural motif has long been sharply criticized, the Exposition's site plan stands as a brilliant work of civic design. It exemplified Olmsted's philosophy that a livable city can be created only when its open space is planned in an orderly fashion. His arrangement of the exposition's buildings and his artful design of the spaces they formed created an urban design composition which reawakened America to the need for beauty and order in city development.

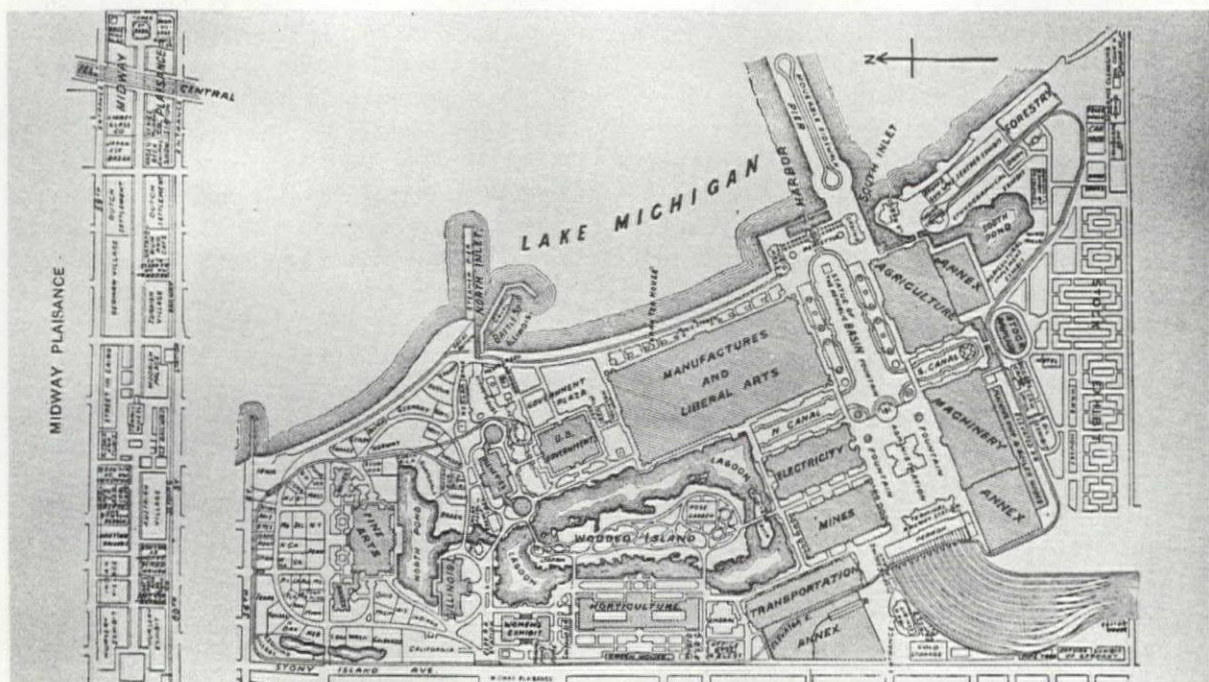
Although he called himself a landscape architect, Frederick Law Olmsted was, in the broadest sense of the term, a "prophet" of environmental design. In his remarkably productive career, spanning more than 50 years, he pioneered in relating the use of land to the physical as well as social needs of growing, industrial America. He introduced the concept of using the landscape creatively, and effectively demonstrated this idea in a vast scope of projects located the length and breadth of our country. His work and philosophy offer a message of hope and inspiration to all who play a role in creating our future environment. ■

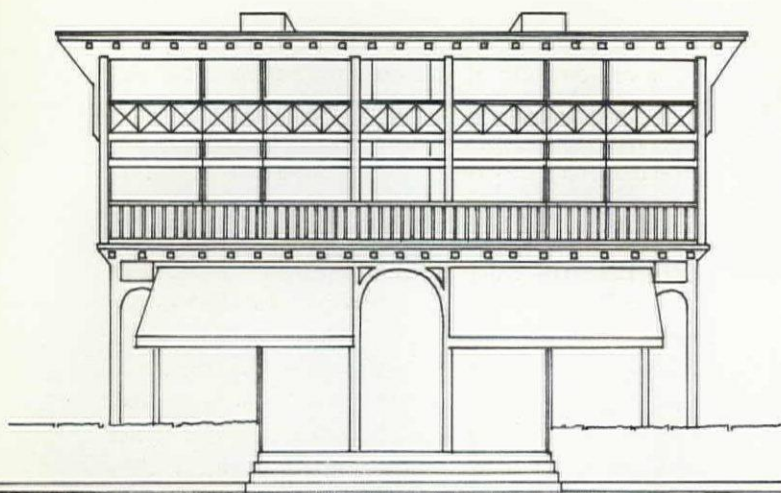
¹ Frederick Law Olmsted Jr. and Theodora Kimball, "Forty Years of Landscape Architecture—Central Park," New York: G. P. Putnam's Sons, 1928, p. 189.

² *Ibid.*, p. 177.

³ Lewis Mumford, "Roots of Contemporary American Architecture," New York: Grove Press, 1959, p. 116.

Completed in 1893, Olmsted site plan for Chicago World's Fair is considered a landmark in American urban design.





The Virile Roots

American Experimentation of the Nineteenth Century in Structure and Space

BY JULIAN EUGENE KULSKI, AIA

THE SIGNIFICANT contributions of today's American architects in the explorations of the plasticity and continuity of space have their roots deep in the 19th century. The work of Louis Kahn, Paul Rudolph and many others continues the great tradition of the innovators of the last part of the last century, giving it new dimensions and opening up new and ever more expressive avenues of architectural space. As new forms and fresh approaches to the sculpturing of these spaces are being evolved, it is easy to lose sight of the great movement of which they are a part and which by now has caught the imagination and the interest of the whole professional world.

The new models which these architects are encouraging, with new forms and expression, using contemporary mediums, have radically changed not only the face of our design world but its very skeleton. As once again history becomes recognized as the basic foundation of our innovations, our American heritage of the past century deserves a fresh and penetrating look.

The earliest of the mid-19th century contributions was an expression of wood as the structural skeleton of the American house. In the simple wooden frame were discovered unknown, poetic potentialities of expression. Behind the clapboard skin was a new and rich architectural language. This interest in the potentialities of the wood frame led to many new creative techniques, including the revolutionary "balloon frame" construction.

The sense of the skeleton of thin, delicate basketry of structural members in space, with their verticality and continuity, pointed to the wide possibilities in surface treatment. The structural members could provide the overall order and discipline

within which there could be found an infinite symphony of articulated and related surfaces.

This preoccupation with the expression of the structural framing can be elegantly illustrated by the Hamilton Hoppin House of Middletown, Rhode Island, built in 1856 by Richard Upjohn. The horizontal and vertical wood members are indicative of the posts, plates and braces of the structural frame and divide the wall into a series of panels. The rhythm of these panels, their proportions and articulation are organic—each part related to all the others. This is a highly sophisticated integration of elements. However, there can be no question as to which design objective plays the decisive role: The skeletal basketry breaks up the continuity of wall surface, thus placing main emphasis upon the expression of structure rather than that of space. The latter in this case is used to articulate the surface and thus show it off.

A very different relationship between space and the frame appears in the Jacob Cram House, also situated in Middletown and built in 1871 by Dudley Newton. Here the space flows in under the large overhanging roofs, penetrates through the delicate latticework and around the elegant vertical posts. The wall seems nonexistent. The basketry of the frame stands free in space, which is here omnipresent, thus giving the structure the expression of a pavilion. This kind of relationship brings life, movement and vitality to architecture when compared with elegant but rather static Hamilton Hoppin House.

The expression of wood as the structural skeleton of the American house and its development into a new and rich medium of design had a profound influence upon the future of American architecture. When, in the latter part of the 19th century, the social and economic changes called

for completely new types of buildings, the American architect was able to reap the fruits from the seeds planted in the organic development of the wooden skeleton. This design sensibility was now applied to a completely new project—the large office building—with a completely different material—iron. The thread of organic development was picked up and carried on into the 20th century.

In contrast to the wood frame, the steel frame possesses an inherent spatial quality of lightness, delicacy of line, purity of form and integration of spatial and structural expression. Like the “balloon frame,” it possesses immense poetic potentialities of expression. However, it is only a language and a tool of that expression and far from being the end in itself. This is important, as many who were fascinated and enthralled by its inherent qualities mistook them to be true in themselves. The belief that by the simple fact of exposing the veins of the structure one mechanically achieved a moving expression grew into a structural determinism, which until this day finds a ready place in the minds of many designers.

This principle was based upon the grounds that if this is true in the universe, as it undoubtedly is, it must be also true of buildings. The fatal error and omission in this theory is that the works of nature clearly show in themselves the hand of their creator. It is this highly sensitive and individual mark that gives them the poetic and artistic qualities we so admire. The creation of man must equally convey to us the touch that transforms an inorganic material into a work of art.

Louis Sullivan was the architect who understood fully the absolute necessity of this transformation on the part of the creative designer. In his own words, “stone and mortar here, spring into life, and are no more material and sordid things but, as it were, become the very diapason of a mind rich-stored with harmony.” The structure of a building untouched by man is to him that material thing which, when given “the breath of life,” becomes as good or as poor as the man who gave birth to it.

Looking at a building which to him in its vitality and strength portrays that of the designer (the Marshall Field Warehouse by H. H. Richardson), Sullivan described it in the following terms: “Here is a man for you to look at. A man that walks on two legs instead of four, has active muscles, heart, lungs and other viscera; a man that lives and breathes, that has red blood; a real man, a manly man; a virile force—broad, vigorous and with a whelm of energy—an entire male.” It is only in this profound and deeply human philosophy that we can view his mastery in using the “skeleton” as the framework for his poetic expressions.

The Guaranty Building in Buffalo of 1895 is the embodiment of Sullivan’s philosophy. It is also as much Sullivan as the Walker Warehouse is Richardson. The inherent basic quality of the skeleton construction—that of a lightweight pavilion in space—is here preserved on a grand scale.

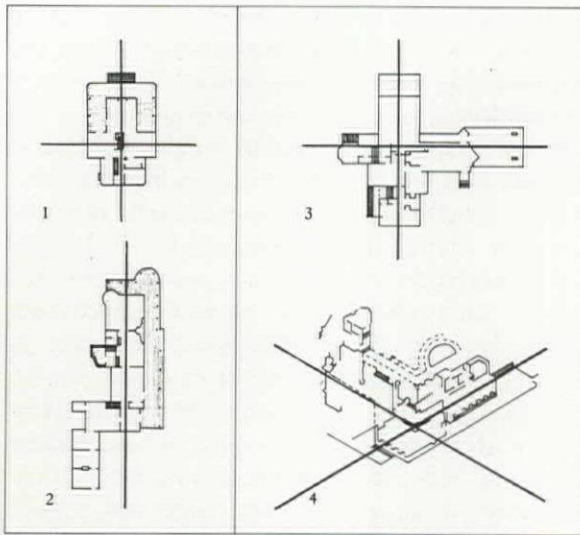
The base to this steel tower consists of round columns with a large expanse of glass in front of them. The sheets of glass barely touch the exterior of the round columns, thus letting the space move freely between them. This gives the tower its flowing, poetic expression, which on a smaller scale was achieved in the houses of the late sixties by the thin wooden posts supporting the floating roof masses above. The verticality of this building, achieved by the sharply articulated and pushed-back spandrel beams, expresses one of a number of design possibilities inherent in skeleton construction. The significant rhythm of the bays, proportion of base to tower and its magnificently scaled cornice, the use of ornament to achieve textural surface as a contrasting medium are only a few of the “sparks of life” which make this an organic monument.

A very different expression from that found in the Guaranty Building is exhibited by another Sullivan masterpiece—the Carson, Pirie, Scott Building of 1904 in Chicago. As opposed to the verticality of the Guaranty Tower, the desire for horizontal expression is very strong here. The skeleton is expressed as a honeycomb. The horizontal movement is achieved by the sharp articulation of the first two stories, full of rich surface ornament from the smooth planes above, as by the rhythmical spacing of bays and the thin overhang-



The Hamilton Hoppin House (across page) and the Jacob Cram House (above), both in Middletown, Rhode Island, represent movement from skeletal basketry to omnipresent space, with a variety of surface treatments.

ing sill and cornice. The masculine and organically integrated tower acts as the intense pivot point of the whole design. The eye is made to see elements in space as they were intended by the designer, and surface treatment and articulation are exaggerated for the sole purpose of making the statement. Matthew Nowicki expressed the idea: “Art tends not only to discover the truth but to exaggerate and



Spatial expressions—(1) Kent House in New York. (2) Ashurst House in Pennsylvania. (3) Ward Willitts House in Illinois and (4) the Paul R. Hanna House in California.

finally to distort it. And, maybe, in this distortion lies the essence of art.”

Even more revolutionary than the innovations and inventions within the basketry of the skeleton was the sudden freeing in the mid-20th century of the concept of space. This development was concerned almost wholly with the interior volume as a continuous, plastic medium and its hidden potentialities and expression on the exterior as well as the interior. In this relationship the elements of the structure, skeletal or otherwise, are at the service of space and are important only as such. This is the exact opposite of that encountered in the Hamilton Hoppin House.

The expression of structural members is now found disturbing from the interior volume’s prime objective. The members disappear and their place is taken by a thin skin of continuous wood-shingle covering, highly expressive of the space within. This sensibility could more correctly be compared to a balloon of tight and tense skin with air inside than the open basketry in space of the stud-frame construction.

This surface continuity with the interior volume is equally true on the interior of the structure. The basic compartmentation of interior space gives way to a more open, integrated and organic relationship. The wall, which for so long had been the chief killer of space, is finally put in its rightful and subservient state. It is used now to define, articulate, suggest, refine and complement the element it was often used to destroy. The structure itself is also an organic part of this philosophy.

This inventive movement in space developed into an order of high degree by 1885. The Kent House, in Tuxedo Park, New York, by Bruce Price, achieved highly disciplined spaces arranged around the central fireplace and stair mass. The

interpenetration of volumes of space on a cross-axis creates a very rich interweaving within an overall order. The “breath of life” is applied here to the plan to give it the vitality and movement which was before inserted upon the structural skeleton. The basic discipline is generated here from within rather than from without.

Another spatial expression is illustrated by the Ashurst House of Overbrook, Pennsylvania, built in 1884 by Wilson Eyre. The continuity in spatial organization is here strongly horizontal and arranged along one axis, and the space is articulated and vitalized by a few diagonals. The interior and exterior volumes of space interweave along the way across the open porch that extends full length of this movement.

The experiments in the inventive and spatial open planning in these houses had a tremendous influence upon the future of modern architecture as a whole and American in particular. The architect in whom this spatial development finds further orchestration and who carries it as far as possible into the 20th century is Frank Lloyd Wright.

Wright perhaps more than any other architect carries the exaggeration of design elements to their uppermost extremes. His order and control are total, his mastery over space and structure implacable. It is because of this insistence upon the necessities of absolute mastery over these elements and the great stress given to one of these in particular—the element of space—that Wright achieves expression on a scale new in architectural design. Space—the most intricate, intangible and evasive of all elements—he harnesses and makes his chief tool. Structure becomes his servant and is completely integrated in space. In the opinion of Henry Russell Hitchcock, “This differentiates Wright as much from Sullivan as from the later ‘international’ functionalists—there is no dichotomy between architecture and ornament, between structure and design, between the whole and its parts.”

The spatial sensitivity and invention of the houses of the eighties find their triumph very early in Wright’s work, particularly in the domestic field. The Ward Willitts House, Highland Park, Illinois, built right after the turn of the century, carries the interweaving of spatial volumes to a new victory, as it is extended to the whole of the design. The effect of the interior volume of space on the exterior of the house, which mattered little to the architect of the eighties, now finds full expression. The hovering roof plane above and the intensely articulated base of the house form two planes of horizontal organization. All other plastic elements can then be arranged between them in a moving, continuous manner, organically interwoven and welded with space. This invention of

horizontal planes as a means of achieving the maximum freedom in spatial integration and organization of elements has become one of the most highly successful expressions of contemporary architecture.

The story of Wright's growth and development is the story of his never-ceasing experiments in the further and further vitalization and enrichment of spatial expression.

The Larkin Administration Building of 1904 in Buffalo, New York, can be considered a synthesis of Wright's spatial development. The interior volume, huge and homogeneous, is articulated into interweaving horizontal and vertical spaces. The crossing of horizontal spaces in the Willitts House now becomes all-directional and universal. Yet this expression is far from tumultuous; although movement is here omnipresent, it is calm, noble and soothing.

Wright was a genius of organization and variety. The variety is a spectrum of ability to create different moods and tones of expressions. It is comparable to the ability of a great composer to subdue and enthrall.

Architecture is the mirror of the human race. In its best and exaggerated form it portrays through the few the spirit of the times. American architecture of the 19th century did not "just happen" to be inventive, experimental and full of vitality. In all these qualities it mirrored the inherent qualities of the full-grown American democracy. Its ideals found just expression in the epic architecture of Wright and Sullivan.

The difference between American architecture of the 19th and 20th centuries is that of the gulf that separates the self-conscious man of today from his robust ancestor. At its worst, 20th century architecture, in its lack of masculinity and guttiness, is symbolized by the genderless office building, devoid of body, soul and heart. In its most positive and forceful qualities, our architecture represents the organic continuation of 19th century revolutionary experiments in space. This tradition has been altered and influenced by the contemporaneous developments in Europe, particularly responsible for the order, discipline, clarity, geometry and abstraction in architectural design.

All of these elements, however, are conceptual—intellectual, rational and sophisticated—and as such lack life. The American architect's greatest contribution is the freeing of design from academic sterility and reducing it to its basic principles. The insistence upon freedom as the necessary condition for any continuity and the need for human passions and emotions as the basic stimulus for expression comprise the philosophy which provides our architecture with the spur of life.

American 20th century architecture exhibits a multitude of expressions and contrasting philosophies. The strong, cementing element which helped lift the quality of our contemporary work into its pre-eminence lies in the 19th century American development. This tradition is the driving, creative and unifying force in our otherwise confused and self-conscious age.

The revolutionary experiments in the inventive and spatial planning expressed in houses like Price's Kent House and Wright's Willitts House are one of the *two basic* creative driving forces of 20th century American architecture. The 19th century development of the expression of wood as the skeleton of the American house provides another strong tradition which is responsible for many 20th century expressions. The drive toward the total integration of the structural skeleton and the exploitation of all its hidden potentialities has become by now an integral part of the design philosophy of the American architect.

One of the architects who has carried this investigation into full architectural potentialities is Harwell Hamilton Harris. The dawn of the structural preoccupation exhibited by the Hamilton Hoppin House of 1856 is carried, in the works of designers like Harris, into its full poetic expression. The sensitivity that is common to music and poetry—the rhythmic organization of accents—is now applied as the total discipline for the arrangement and expression of structure. As in the Hoppin House, the structure and not the space is dominant. According to Harris, "In our art, a rhythm is a space-and-accent figure. The unit is the space; and the unit line, or division between spaces, is the accent. Insofar as the rhythmic pattern is concerned, the accent is the dominant element in our consciousness, the space being only an interval between the accents or beats."

Sullivan's philosophy of the rhythmical law of proportions, statodynamic such as nature's, is used by Harris to create symphonies which are capable of achieving moods that compare with Wright's masterful spatial orchestrations. The instruments differ widely. The linear strong quality of the harp has none of the voluminous sound which is the inherent quality of the organ. The ability to create widely contrasting moods is the property of the composer, and the degree of perfection achieved lies in his skill and his mastery over the instrument. This is also true of the instruments of architecture—space and structure.

The degree of integration between these two elements and the effect of one upon the other is the story of 20th century architecture. ■

The author, who this fall joined the George Washington University as professor of urban planning and architecture, continues his design consulting practice as an architect in Washington, D.C.

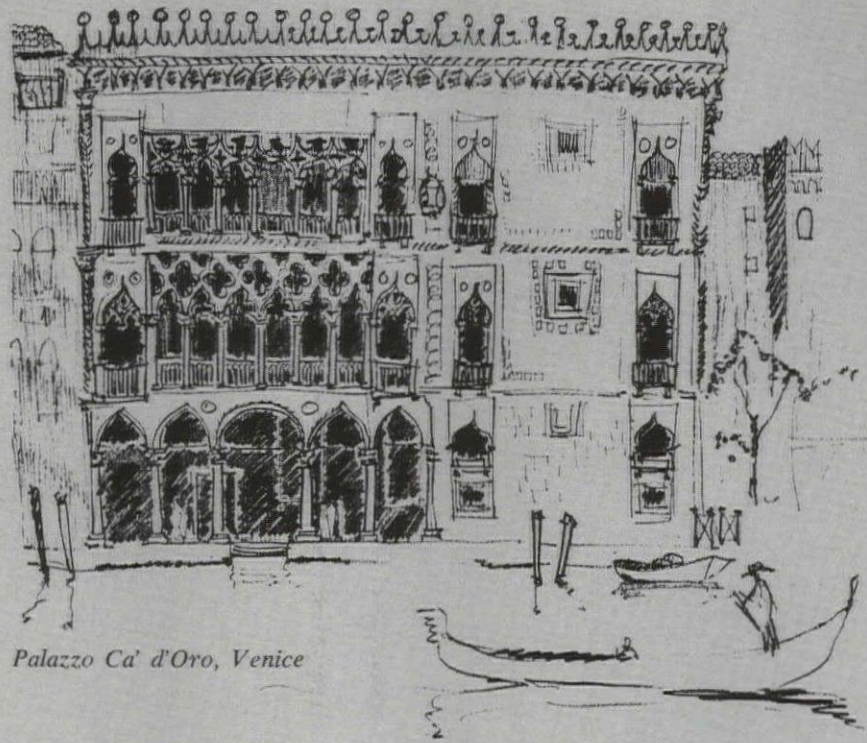
European Sketches

Like quite a number of architectural students, Don Brandenburger toured Europe following his graduation from Washington University several years ago—only he substituted a 2B pencil for a camera.

He returned to the St. Louis campus to earn a Master of Architecture and Urban Design degree and is now employed by a San Francisco architectural firm, where his sketches have come to light.



Pazzi Chapel, Florence



Palazzo Ca' d'Oro, Venice



Spanish Steps

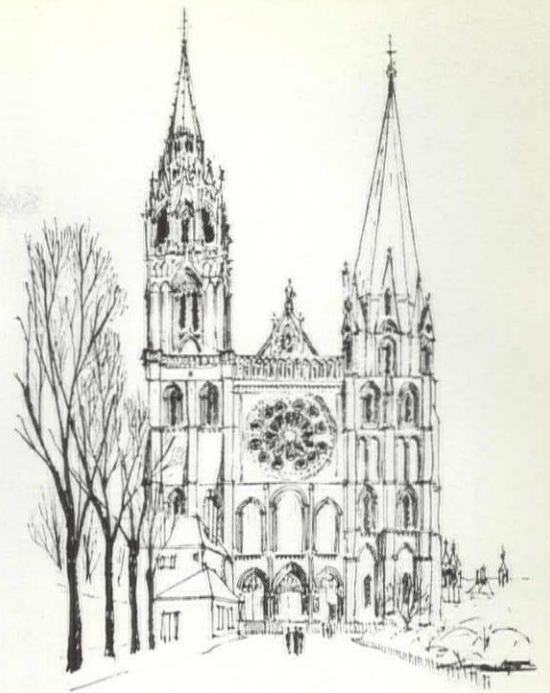
A PORTFOLIO BY DON BRANDENBURGER, AIA



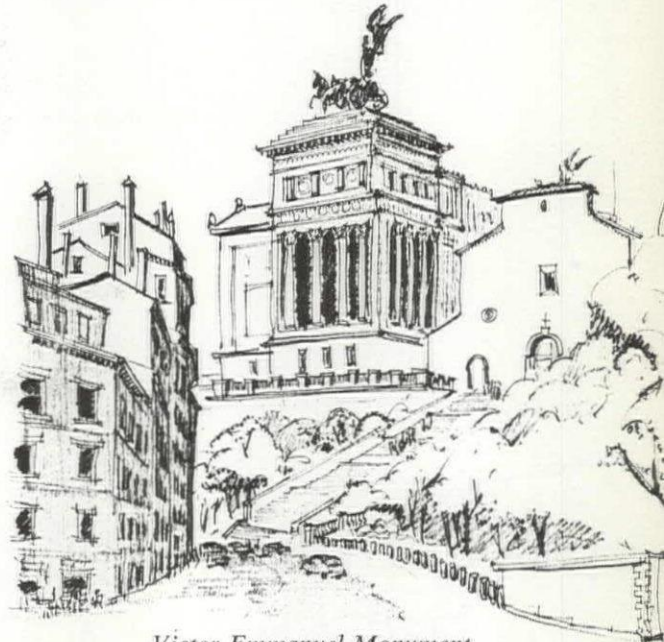
Piazza del Popolo, Rome



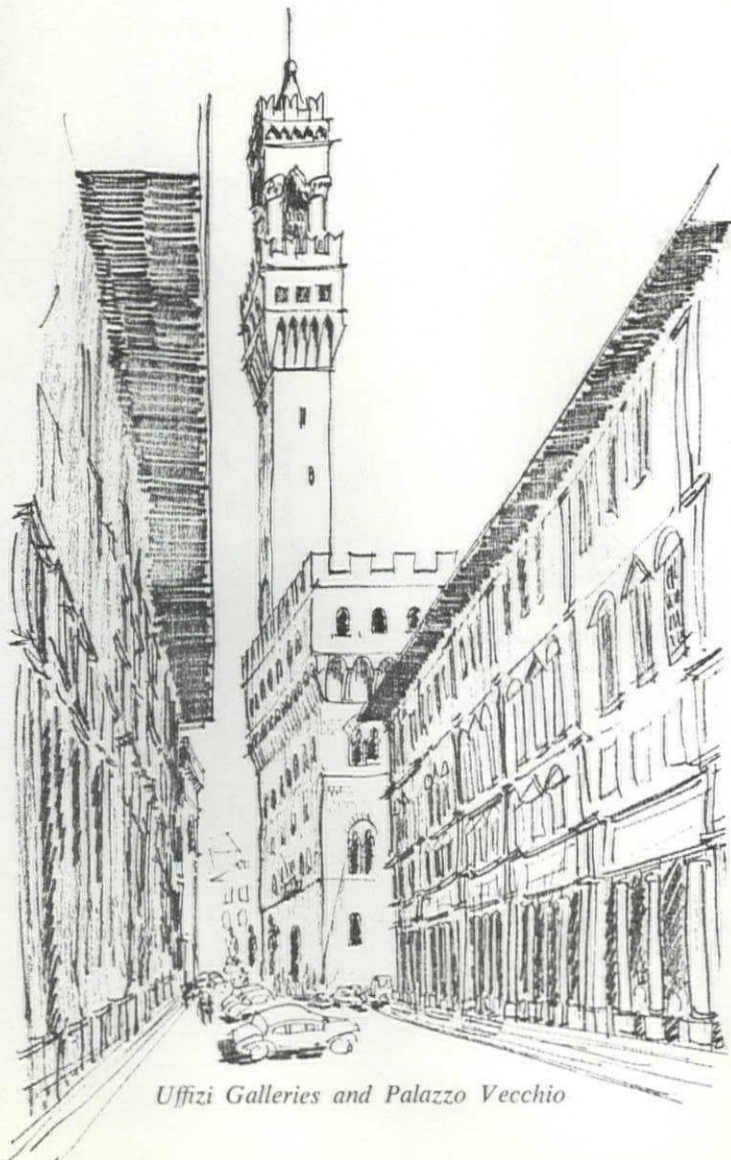
Zug, Switzerland



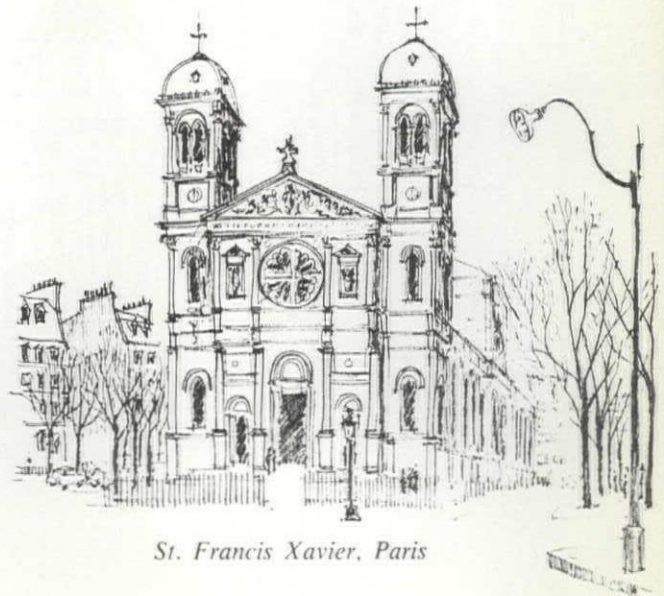
Chartres



Victor Emmanuel Monument



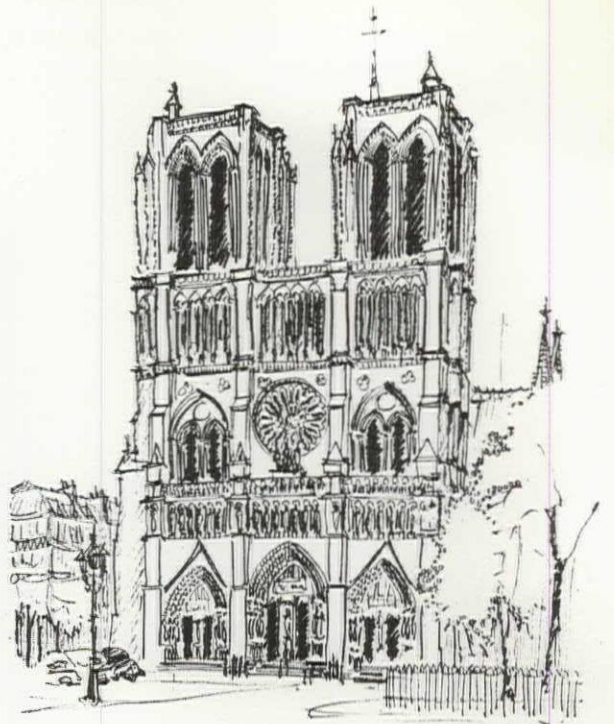
Uffizi Galleries and Palazzo Vecchio



St. Francis Xavier, Paris



Mr. Bennett's Street, Bath



Notre Dame



St. Peter's

How Architects Fare in Corporate Building

BY GEORGE T. HEERY, AIA

This and the article that follows—the latter to be mailed to 25,000 corporate executives—discuss trends in industrial construction re the question: Independent architect or package dealer? The mailing will be the third in a series financed by supplementary dues and aimed at informing corporate management on the role and advantages of architectural services. The article beginning on this page suggests to the profession some of the approaches to certain nontraditional but increasingly demanded services. It is part of a series by the Committee on Industrial Architecture, Louis deMoll AIA, chairman; Commission on Public Affairs, Llewellyn W. Pitts FAIA, chairman.



A THREE-YEAR study of industrial building programs by the AIA Committee on Industrial Architecture has found that:

- A clear and encouraging shift from "package dealers" to independent architects is taking place.
- Many large companies would like architects to perform a broader range of services.
- Package dealers could be severely hampered if architects, in keeping with the AIA's Mandatory Standards, declined to work for them.

The first two of these three findings emerged from a Committee survey of the 400 largest corporations; the third from a Committee analysis of dozens of reports and histories of the package deal.

By cross-tabulation of survey results, much revealing data was obtained. Clearly there is evidence of a shift from package deals to independent architectural services.

Of the companies that said they used a single design-and-build organization for a significant part of their building program during the past five years, 39 percent reported they would use an architect for their next project with construction by a separate contractor. On the other hand, of the companies which had used independent or staff architects with construction by separate contractors for a significant number of their facilities in the past, only 6.4 percent said they would use a single design-and-build organization for their next construction program.

It was also significant that 71 percent of the companies reporting said they might ask an architectural firm to perform one or more of such comprehensive services as site selection, process engineering, space programming, materials handling studies, feasibility studies, assistance in financing and leasing, construction management, market studies and master planning.

By cross-tabulating these answers, it was found that companies employing staff architects and engineers might be most interested in having independent architects for construction management (39%), space programming (23%) and site selection (21%).

Among companies using independent architects, the order of preference is exactly the same. It is also interesting to note that the companies using design and construction by a single organization also are most interested in obtaining professional services from an independent architect for construction management, space programming and site selection.

When asked to select factors they considered most important in choosing an architect respond-

ents cited "functional quality of design" as the top item of consideration. Next in order were "experience in building type similar to yours" and "control of cost."

"Experience with government procedures" ranked last, just after "proximity to the client" and "proximity to project." "Esthetic capability" ranked sixth in the 10 factors.

In part, the survey yielded information either already established as fact or believed to be true. But the Committee regards the results as useful as well as interesting. The way the surveying was conducted and presented to the industrial building owner was further indication of the profession's interest in industry's problems and attitudes, and thus contained a measure of public relations value. The Committee has plans under consideration to make the survey annually, with resultant reports explaining to top-ranking management the role of architectural services and suggesting approaches to the profession.

Three items seem clear to the Committee after investigating package deal reports from Institute members:

1) The profession's biggest problem in this area continues to be public education.

2) Industry's interest in the package deal most frequently occurs after a bad experience with an architect—almost invariably involving money, time or both.

3) Many architects do not understand what is meant by a package deal.

With regard to the need for public education, it is interesting to note the position that the facilities department holds in the typical corporate structure. Rarely are the best efforts of a company given over to this area. The reason is obvious. This is not the company's major activity; it is neither marketing nor manufacturing. It is a relatively small item in day-to-day fiscal policies.

Facilities departments are frequently staffed with people who either have an exclusively engineering approach or who come from such fields as insurance, the comptroller's office, distribution and even from real estate or purchasing. This makes the public education task more difficult, perhaps, but all the more important.

There are many exceptions to this rule. Quite a number of big corporations maintain large and specialized staffs for facility acquisitions. But even they frequently become corporate "bureaucracies," and all too often the corporations are unaware of the advantages a truly capable architectural organization can offer. This is the story that must be gotten across to the facilities man as well as the large facilities department in the US corporation.

The fact that industry has frequently received poor service from architects has, of course, been

the most frustrating and embarrassing aspect of the Committee's investigations into package deals. The picture that has come through clearly is of an architect undertaking a commission while inadequately staffed or inexperienced in the building type. He failed to meet deadlines and accept cost responsibilities, and sometimes he did not really understand the primary purpose of the building.

The profession's misunderstanding about the package deal extends to a lack of understanding of, or concern for, the Mandatory Standards. Found all too often was the package dealer with a captive architect who was also a member of the AIA. Unquestionably, an extensive and important policing job is to be done by the AIA chapters. The activities of most package dealers would undoubtedly be curtailed or seriously damaged without the services of AIA architects.

Apparently many practitioners either disagree with the pertinent section of the Mandatory Standards or do not understand the meaning of the term "package deal." Webster may not have a definition for us, but the term as used by the Committee on Industrial Architecture (the national group charged by the AIA Board with responsibilities in this matter) is as follows: A package deal is an identity-of-interest between a building contractor and the design entity, thereby depriving the building owner of impartial professional services.

A leaseback, in itself, is *not* a package deal. It is unquestionably in compliance with the Mandatory Standards for an architect to represent either the owner or the lessee of a building. The owner most certainly could be a builder who offers a company a complete facility on a lease basis.

It should be noted, however, that the Committee has advised industry it would generally fare better when leasing by retaining an independent architect. This advice was given in the pamphlet, "A Guide to Better Industrial Building Leasing."

It is quite feasible, and in accord with the Mandatory Standards, for an architect and a contractor to make a joint proposal to an owner, so long as the architect maintains his professional status, including a direct relationship with his client. A negotiated construction contract does not, of itself, indicate a package deal.

The package dealer is a fierce competitor who requires the best efforts of the architectural profession if it is to compete with him successfully.

But there is an inherent flaw in his identity-of-interest proposition, and the well-staffed and experienced architect able to meet budgets and schedules *can* compete with him successfully. Nonetheless, it would appear that responsible architects trying to compete on an ethical basis deserve the aid of an Institute-sponsored program tailored to this mission. ■

How Large Firms Construct Facilities

BY THE COMMITTEE
ON INDUSTRIAL ARCHITECTURE

FACED WITH construction of new plant or office facilities, US industrial firms may choose any one of a number of ways of obtaining design and construction services. They may retain staff architects and engineers on a continuing basis as a part of their permanent payroll. They may contract with independent architectural firms for design work and with independent building contractors, awarding construction contracts either on the basis of competitive bidding or of negotiation. They may

elect to use the services of a "design-and-build" firm; that is, a single contractor which agrees to provide both design and construction services. They may select a combination of two or more methods. Or they may choose to vary the methods used from project to project, depending on complexity of the job and on previous experiences.

Many firms remain loyal to a specific method because they are convinced that it offers the greatest advantages in their particular circumstances. Others remain wedded to one arrangement merely because they lack experience with others. Some handle their construction in a way which may look good in a report to management, but which is in fact expensive and does not result in the best possible facility.

Which method or combination of methods is best? Which are used most consistently by companies which have tried them all? Is one gaining favor over the others? Last year, the Committee on Industrial Architecture of The American Institute of Architects undertook to explore some of these questions, by means of a survey and selective interviews, and thus to build a realistic profile of corporate construction procedures.

The Committee polled top executives concerning their building programs and procedures. In addition to the survey, several conferences were held with corporations which conduct extensive construction programs. Building programs of those companies were explored in depth.

Names of firms used in the survey were taken from *Fortune* magazine's listing of the 500 largest US corporations. Four hundred of these were selected to be polled, on the basis of volume and frequency of facilities construction. (Three-fourths of the reporting companies have more than 20 facilities—plants, warehouses, offices, research, etc.) A multiple-choice questionnaire was then developed, and respondents were given the option of identifying their organizations as they saw fit.

Of the 400 firms, 176 responded by completing the questionnaire form in a manner which could be meaningfully tabulated. This represents an unusually high percentage (44%) of firms polled. Results were tabulated and analyzed by Walter Gerson & Associates, Inc., an independent marketing research organization.

As noted earlier, an enormous number of varia-

SURVEY QUESTIONS

1. What is your principal type of business?
2. At approximately how many sites does your company have facilities of some type (plants, warehouses, offices, research)?
3. If your company has built any facilities in the past five years, what method did you use for design and construction? (If more than one method was used, please estimate percentage of times used.)
 - A. Designed by staff architect or engineer and constructed by your own company.
 - B. Designed by staff architect or engineer and constructed by independent contractor.
 - C. Designed by independent architect and constructed by contractor engaged through competitive bidding.
 - D. Designed by independent architect and constructed by contractor through negotiation.
 - E. Designed and built by a single organization.
 - F. Engineering firm designed—building based on competitive bids.
4. In your next building program which of the above methods would you probably use?
5. Which of the following has led to that decision?
 - A. Low-cost construction
 - B. On-time project completion
 - C. Construction within budget
 - D. Quality design
 - E. Sound construction
 - F. Good engineering
 - G. Lowest cost through competitive bids on completed drawings
 - H. Adherence to your company's policy
 - I. Performance or cost guarantees
6. When you select an architect, what factors would receive your highest consideration?*
7. In addition to conventional architectural and engineering services, what services might you ask an architect to perform for you?*

* Questions 6 and 7 were included primarily for the benefit of the architectural profession; since they were not considered germane to the topic of this article, the questions are shown here in an abbreviated form and tabulation of results is not included.

tions of methods of obtaining design and construction services is possible. Therefore, one of the most important tasks in structuring the questionnaire was to categorize the various methods. In the interest of simplification, the categories were limited to six, as shown in Question 3 of the survey. Category F—Engineering firm designed—was subsequently discarded since the incidence of its use was so rare as to be without significance.

The five major categories, then, were as follows:

A. *Designed by staff architect or engineer and constructed by own company:* Many large corporations maintain their own architectural and engineering staffs, and a few even handle their own construction. Often a company with an in-house capability for design and construction will use this method for alterations, additions and relatively small and simple projects, but will go "outside"—that is, to independent architects or to a "design-and-build" firm for major, more complex projects.

B. *Designed by staff architect and engineer and constructed by independent contractor.*

C. *Designed by independent architect and constructed by contractor engaged through competitive bidding:* The term "independent architect" was used to refer to the architect not on the corporation's staff but engaged directly by the corporation to provide professional architectural and engineering design services. Included in this category are architects who might be engaged for less than full services; e.g., a situation in which the industrial client uses its own staff for preliminary layouts and management and possibly for supervision of construction.

D. *Designed by independent architect and constructed by building contractor engaged through negotiation.*

E. *Designed and built by a single organization:* This is a firm which contracts with the industrial owner to provide design services as well as construction. Although some of these firms have architects and engineers on their own staffs, many do not and, instead, "sub-contract" for these design services in order to offer the "package." In such cases, the architect does not work independently for the industrial client but becomes a "captive" architect serving primarily the contractor.

Using these categories, Question 3 asked: *If your company has built any facilities in the past five years, what method did you use for design and construction? (If more than one method was used, please estimate percentage of times used.)*

Answers to this question revealed that the methods used for design and construction were extremely varied. However, nearly 8 out of 10 used design by an independent architect and construction by a contractor through competitive bidding, for all or part of their construction.

About one-third of the companies reporting

used only *one* approach to procurement of design and construction services. Of those using only one method, 62 percent used the independent architect, approximately 30 percent used staff architects and 8 percent used the "design-and-build" organization exclusively.

When design and construction methods used during the past five years were compared with those planned for future use, there appeared to be a high degree of satisfaction with practices used in the past.

Those who had used a staff architect, for example, by and large intend to continue this method in their next building program.

Those who use independent architects also plan to continue that practice. *But*—of those companies (about one-third of the total reporting) which had at some time used the services of a "design-and-build" firm, *almost 40 percent indicated that they would not use this method on their next project!* This was the highest rate of dissatisfaction with any one method. Three-fourths of this group who indicated a change away from the single organization will use independent architects on their next project; the remainder reported that they plan to use a staff architect.

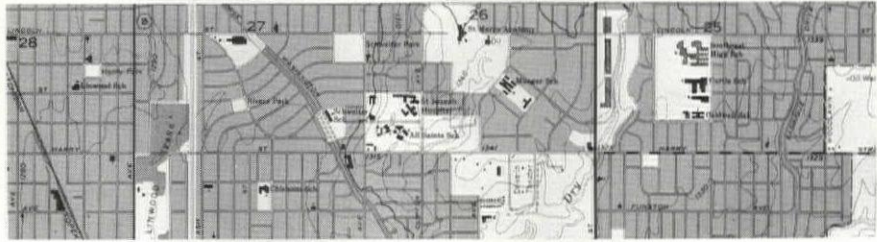
Survey respondents were asked to give their reasons for selecting a particular method, in order of importance. Those who favored the use of independent architects ranked "quality of design" highest, with "sound construction" a close second. Other factors mentioned were "lowest cost through competitive bidding (on construction)" and "good engineering."

The small percentage of firms favoring use of a single "design-and-build" organization frequently gave as their reasons "construction within budget" and "on-time completion." It was obvious that guarantees of meeting timetables and budget restrictions appealed to these firms. However, since these requirements are important to every industrial client, it can be assumed that the large majority of companies, in using the independent architect, are satisfied that they are obtaining good results in the areas of construction within budget and on-time completion.

What conclusions can be drawn from such a survey? The answers can of course be interpreted in many ways; with sufficient statistics, it is possible to draw almost any number of inferences and thereby "prove" almost any thesis one would like to advance.

For this reason, no attempt has been made to draw direct conclusions; this report is presented rather as an aid to all who may be involved in facilities construction. Feeling that this kind of study is helpful to industry and architects alike, the Committee on Industrial Architecture intends to follow up this report with further research. ■

URBAN DESIGN WORKSHEET 4



PREPARED BY PAUL D. SPREIREGEN, AIA, FOR THE COMMITTEE ON URBAN DESIGN

Open Spaces in Urban Growth

BY S. B. ZISMAN, AIA

This examination of open space establishes its importance as a prime element in the urban form and, when properly treated, as one of the most useful tools in the shaping of cities. The author uses his own town of San Antonio for illustration.

THE PRINCIPAL urban issue is not where to build but where not to build.

The decades ahead will see a vast, accelerated construction activity. Cities will expand and rebuild, and new towns will rise. Wider and longer highways will ribbon the country and push remorselessly through neighborhood and nature. Metropolises will continue their consumption of the countryside.

Past building reflected the feeling of the old frontier. To escape crowding, we simply built farther out. By and large, the concern has always been where to build, space being almost always unlimited—the wide open space of a “continent so huge in its resources of land and forests, so unbounded that though men chopped away at them with only their own interests in mind, the great bulk of things remained unspoiled.”¹ We built everywhere, sometimes wisely, but far more often indiscriminately.

The emphasis in planning was on land use, reflected in planning maps by colored patches to show where residential, commercial or industrial development was or could go, and by bits of color for schools or parks. Open spaces were generally left as vacant white patches, presumably unused

space to be colored in if and when the urbanized area would exceed sober predictions.

The urban scene was regarded as a fairly comprehensible cityscape of finite shape and size, in which buildings, pavements and other man-made forms so predominated that the matter of open spaces hardly reached the realm of consciousness.

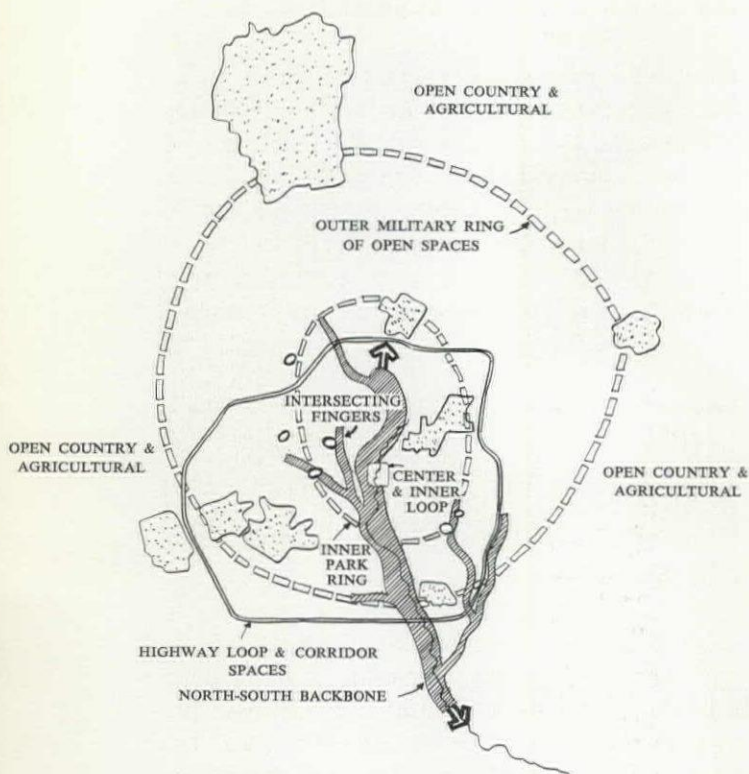
New Views of the Urban Scene

The urban problem is so dominant in our time and the changes in the urban environment so pervasive that a wealth of attention surrounds issues of growth, space and form.

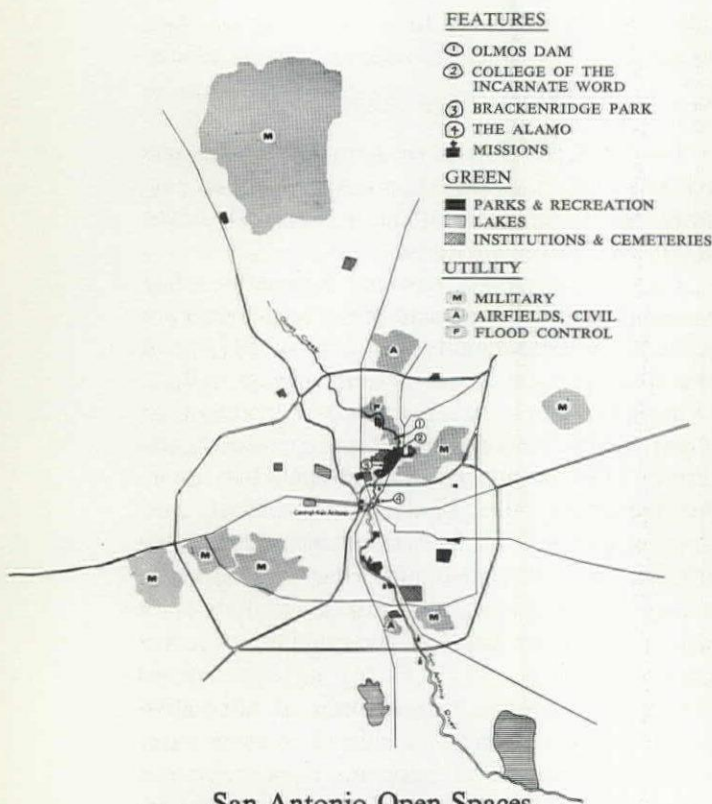
There is the view of extreme dispersion: “The spatial patterns of American urban settlements are going to be considerably more dispersed, varied and space consuming.”² Another concept is that: “The future use of urban space will tend toward a more dense, more nucleated, more clustered pattern than we are now building in our urban areas. Accompanying the tighter development and stronger centers will be less private open space (that is, we will have smaller lots) and, at every scale of development, substantial continuous open space, commonly enjoyed and publicly or commonly owned.”³

Or it is suggested that a series of alternative patterns may need to be considered: present-trend projection; general dispersion; a concentrated supercity; or a constellation of relatively diversified and integrated cities.⁴

The future view has been projected further by the Greek planner Doxiades to “Ecumenopolis—



San Antonio Open Space Structure



San Antonio Open Spaces

the Universal City," involving huge regional, even continental, areas with populations in the hundreds of millions.

Throughout all these projections arise questions involving not merely the *quantity* of open space but its *location, deployment* and *use* as essential factors of spatial organization.

Open Space in Urban Development

In "Cities and Space," a series of essays on the future use of urban land, editor Lowden Wingo⁵ notes: "The open land problem . . . presents us with a major issue"; law professor Charles Haar⁶ says, "Today, the most disputed subject is open space, whether park, playground, recreation or simply undeveloped land"; and planner Stanley Tankel observes: "Open space has become the subject of a remarkable new interest. The words are echoing even in the halls of Congress and state legislatures. . . . This is no faddist movement. It is a tense expression of concern about the present and future use of urban space."⁷

Functions of Open Space

The nature and functions of open space in urban terms are now being stated, defined and classified. Tankel⁷ directs attention to Charles Eliot's distinction between open space for *service* and open space for *structure*, and to Tunnard-Pushkarev's four functions of open space—*productive, protective, ornamental* and *recreational*.

Tankel offers his own interpretation as to the kinds of open space of which people are personally aware: "It is *used*—for the wide range of active and passive recreation activities, for circulation; it is *viewed*—from the home, the road or other vantage points, and it is *felt*—it gives privacy, insulation or sense of spaciousness and scale"; and the open space of which people may be unaware but which nevertheless affects their daily lives: "Open space which *does urban work*—protects water supply and prevents floods by soaking up runoff, acts as a safety zone in the path of aircraft takeoff and landings; and open space which *helps shape the development pattern*—as space between buildings or communities, as space which channels development, as a land reserve for the future."

Marion Clawson⁸ catalogs major open areas as being for 1) surrounding public buildings, 2) recreation, 3) ecological protection or the preservation of certain desirable natural characteristics, 4) urban structural and esthetic purposes, 5) as provision for future urban growth.

These statements underscore the significance of free areas as an urban element with a positive function to perform. Open space is becoming a major competitor for the use of urban land. It may be a key determinant of city growth and form.

Types of Open Space

All urban space has utility in the urban context. It is neither leftover rural land nor sentimental remnants of the countryside. It may be seen as of three major functional types:

1) *Utility spaces*—these are the surface areas needed for water supply, drainage and flood control; the air spaces for aircraft movement; and the space for production.

2) *Green spaces*—the lands and areas used for parks and recreation, greenbelts and greenways, building entourage and for natural and scenic protection.

3) *Corridor spaces*—for rights-of-way for movement, transportation and passage.

Within these broad categories is a multitude of open area forms and uses ranging from large land reserves, regional parks, water reservoirs, natural life preserves, wetlands, riverways and creekways, local parks, playgrounds, plazas and expressway routes to the very street itself.

In the broader aspects, even such areas as campuses, cemeteries, zoos and airfields take on some of the free space characteristics in an open space system.

The catalog of open spaces and the analysis of types and uses can help toward a fuller understanding of the role each can play in urban spatial design and clarify planning issues such as those raised in the classic case of the North Expressway in San Antonio.

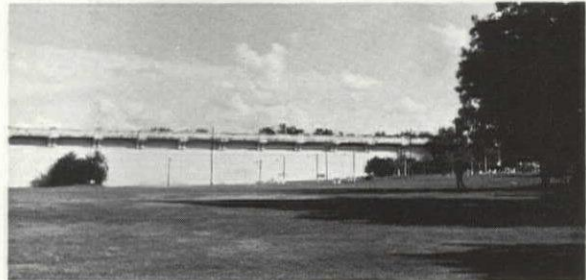


A bitter controversy of more than five years has attended the proposed location of an expressway through San Antonio's famed Brackenridge Park and related open spaces.

This park is part of a system of open spaces reaching from the northern parts of the city to its very center by way of the San Antonio River. It includes not only undeveloped land, a major flood control facility and parkland but recreational and sports areas, picnic grounds, a zoo, a college campus, a renowned sunken garden, an outdoor theater, a city school stadium, a municipal golf

course and stretches of the natural water course that is the beginning of the river.

The proposed expressway curves and winds through this open space system, crossing an Audubon bird sanctuary and Olmos Creek, a tributary in its natural state; it moves along a picnic ground and recreation area obliterating a Girl Scout camp and nature trail; it stretches across the Olmos Flood Basin and rises to enormous height to go



over the Olmos Dam; it severs the campus of the College of the Incarnate Word; it cuts through the lands of the San Antonio Zoo; it blocks off the half-built public school gymnasium; it slides along the rim of the sunken garden; it hovers over the edge of the outdoor theater, squeezing itself between the latter and the school stadium and blocking a major entrance; and it slashes through residential areas, along the golf course and across a wooded portion of the San Antonio River's natural water course.

How many irreplaceable trees of magnificent size, how much spoilage of adjacent area and how much space to be given interchanges and other highway structures?—the answers are yet to be fully calculated.

It has been observed that in many similar cases of expressway controversies the fight has been centered on the despoliation of a park or the disruption of a neighborhood or the severing of a campus or the loss of trees and landmarks or the bisecting of a zoo or some other single problem. But in the case of the North Expressway, practically all of these points of concern are involved.

Two bond issues, the second powerhoused through after the defeat of the first; a divided community in which deep scars and enmities remain; legislative challenges and legal action still pending—all this has resulted from a lack of understanding of the nature and function of urban open space.

The Brackenridge Park complex serves specific needs both as a utility and a green, open area. Not only a major greenway leading into the central city, it is also, in the Olmos Basin, a major flood protection. It accommodates a host of space needs of a great part of the urban population and San Antonio's many thousands of visitors—in recreation and sports. It serves as setting for institutional development and cultural activities.

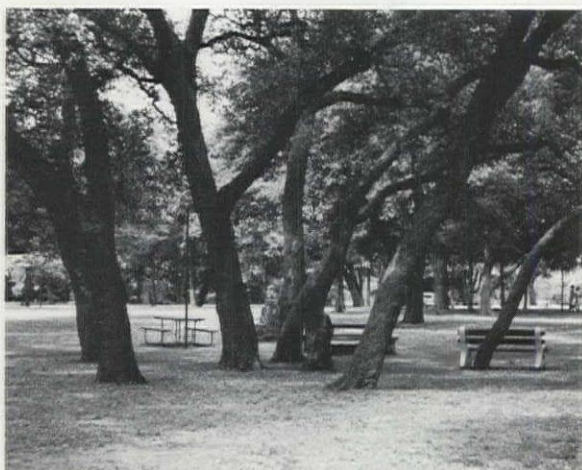
The park system also is a great urban gathering

place. Easter Sunday yields the great spectacle of tens of thousands of people who come to this green space for observance and holiday. Almost every square inch is taken up with family gatherings, picnicking, meeting and play, many people coming the day or evening before to claim a spot for the holy day.

All through the years, this has been the great play area for the military—from recruit to general—of San Antonio's numerous military bases.

An expressway route is a corridor space, not for stopping or gathering but for moving. It was argued that the expressway would give easier access to the park areas, but this is belied in the highway proposal itself. In fact, at least two key access streets would be closed off and the proposed interchanges would not only diminish access but would be likely to create additional nonpark traffic loads. In one instance, a proposed interchange at the doorstep of the college would, besides causing congestion and greater difficulty of access, create but a major safety problem.

The Brackenridge system is not corridor space. The very route of the proposed expressway, twisting and turning and roller-coastering over a high dam, reveals dramatically how inappropriate its imposition on the land. It reveals how much distortion develops in converting one series of open space functions to another unintended and ill-suited set.



Why was the North Expressway proposed? It was assumed that all open space is "free," not cost alone (although the loss of just the trees is estimated in the millions) but more so in functions; that any open green space can and should be used for corridor purposes. It so happens that there is a corridor space, long used to meet the problem of transportation, running along the railroad from the north into the city and linking with the highway system.

The dramatic failure of highway engineers, from the local district office to the Bureau of Public Roads, and of interested promoters and local plan-

ners to understand the nature of urban open space and to know how to deal with it to meet all urban needs is etched in the case of the North Expressway. It highlights a basic issue in city growth and raises questions of the highest order in relating major transportation needs to open space needs everywhere.

The Open Space System

The classic case of the North Expressway points up other open space problems, particularly those of multiple functions. Open areas can serve green space, utility and corridor functions, if so planned and developed, and they may change in function.

What is essential is not the separation of function but the creation of a system of open spaces. This related or planned arrangement not only provides the open spaces to meet urban needs but the structural framework for urban development.

It is at this point that the design of the urban area—community, metropolitan or regional—must find a new approach not by highlighting areas for building but areas *not for building*.

It is interesting to note that where nature has provided an open space system, there is a universal response to it. San Francisco, beloved by resident and visitor alike, is in great part defined by a magnificent open space system—the surrounding ocean and bay. No matter what mistakes may be made in building, the city itself is a magnificent urban form.

The New York metropolitan area has in its own way another open space system—over 30 percent of the regional area is taken up by river, sound, harbor and ocean—to provide a framework for whatever building and rebuilding time, money and men may produce. Many urban situations have basic natural features on which open space systems—grand or small—can be based.

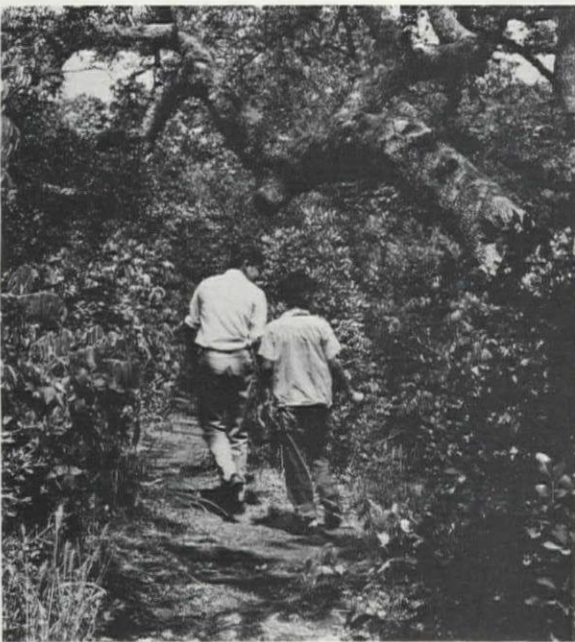
The essential point is that an open space framework, once articulated, organized, developed and kept, yields a great range of opportunities for urban design. Given such a framework, the urban builder can develop as his ingenuity and means permit.

In the long perspective, the test will not be whether man can build anywhere, or whether the market controls, or whether mistakes in building occur, for building is man-made and can be man-changed. But open space cannot be replaced. It is, in the design and planning sense, the "fixed" element; the building areas are the "free." Heretofore the general notion was that the building areas were the fixed elements of urban growth while the open spaces—the leftover spaces—were left free for building or whatever use.

The shift in viewpoint continues. Nationally we are in hot pursuit to hold or recapture critical

areas such as the seashore and other water sites. It is a pursuit not without roots in our national history. Just over 100 years ago the great urban park reservation came into being with Central Park in New York, followed 50 years later by such other historic examples as the Cook County Forest Preserve, the Cleveland Park System, the Westchester Park System, the Ohio Conservancy District and the Boston Metropolitan Park System.

One of the great examples is the system laid out for Boston by Frederick Law Olmsted in the plan which ties the Arnold Arboretum, Franklin Park, Jamaica Way and Jamaica Pond, the Fenway, Commonwealth Avenue and the Charles River. Whatever building changes have happened in Boston, this glorious concept remains. Its lessons can be applied today.



San Antonio offers an example: By incorporating the threatened Brackenridge Park system, large metropolitan or regional reserves to the north could be linked with the Olmos Flood Basin, the park complex and the space along the river, running into and through the heart of the city and to the south along a proposed Mission Parkway which follows the river and includes the historic missions, in themselves another form of open space, and on to other major water and open spaces. The tributary creeks and the different kinds of open spaces provided by encircling military bases and airfields, all forming a grand open space system together with the great north-south backbone of free areas, could in turn link with such spaces at the heart of the city.

The central area of San Antonio is characterized physically by the downtown riverloop and a series of parks and plazas: Main Plaza, Military Plaza, Alamo Plaza, Travis Park, Milam Square, Romana Plaza, Maverick, Columbus and Madison Parks.

Together with streets and highways, this series of spaces can be considered as a great structural framework of open space for San Antonio's growth, development and renewal.

The Downtown River Loop, one of San Antonio's great physical features, is in itself an important lesson of the role of open space. In the 1920's, it was proposed to cover the river, converting it into a storm sewer. Among the chief arguments was that this would help traffic and parking and thus represent "progress."

Public opinion held otherwise, and with the organization of the San Antonio Conservation Society arousing the city, the river as open space was saved. During the late 1930's it was landscaped and developed as a river greenway. Today the value of the river is being seen anew and there is a new surge of development taking place along the river—old shops done over, new buildings designed. Whatever hope there is for the rebuilding of San Antonio's central area must inevitably relate to the river.

The Hierarchy of Open Spaces

The example of San Antonio illustrates not only the nature of an open space system but also the hierarchy of open spaces—from the large-scale metropolitan or regional space to the small, intimate place, from the great public park to the family yard or patio, from the great regional trunkline and express routes through major arteries, boulevards, parkways and feeder streets to the residential street.

Within the hierarchy of *scale* lies a hierarchy of *use*. Open areas do not mean sterilized land, although an open space system should provide for wilderness and untroubled land even at small scale and at close-in locations. The range of use includes multiple uses as well as campus areas and other man-made facilities.

The essential point is that *open space needs to be identified as open and not building space, and*



when building use is involved, it is not as encroachment but as support of the primary open space. A recreational building does not of itself disaffect a recreational area, nor do properly handled park roads change the primary use of the park.

The treatment of open space is not for the purpose of destroying it. As in the treatment of building areas, it calls for judgment, intelligence and the skills and arts of those who understand landscape and the land.

Policies and Programs

Up to now, open space has been largely a negative concept—simply the areas for nonbuilding. It is now coming to be recognized as a positive element for urban growth.

In the decades ahead, open space as a system can become the means of control in development. If it is to achieve this role, a new text of planning policies and programs must be written and put into practice. The issues are not for planners alone; they will be fought in the political arena, and out of a public consensus may come new tools and new means, both public and private.

Existing legislative and regulatory tools are inadequate. The oldest tool of all is acquisition of lands for open space purposes. While the trend may be toward public, governmental action—as in the current Federal open space program and such state programs as those in New York or New Jersey, or in metropolitan or city programs throughout the country—there is still room for private action. And there is much precedent in history for this.

Zoning seems to be a weak tool. William H. Whyte⁹ cites the example of Santa Clara County in California where, to preserve rich farm and orchard land, an exclusive agricultural zone was established, only to find that highway engineers were planning to put a new highway—right through its middle.

Special conservancy districts, open space dedication, open space easements, development rights compensation,¹⁰ compensable regulations,¹¹ reservation in advance of acquisition, tax concessions, the guaranteed value scheme, the official map principle¹²—all these in various terms have been suggested and are the subject of increasing attention and in some cases of legislative action.¹³

Lawrence Levine¹⁴ points out that “the very breadth and diversity of open space objectives pose difficult problems in developing a soundly conceived open space program.” And, it can be added, in finding the legal and political means to bring it into being.

President Johnson has said: “Open land is vanishing and old landmarks are violated. Worst of all, expansion is eroding the precious and time-honored values of community with neighbors and communion with nature. . . . We have always prided ourselves on being not only America the strong and America the free but America the beautiful.

“Today that beauty is in danger. The water we drink, the food we eat, the very air we breathe are threatened with pollution. Our parks are overcrowded and our seashore overburdened. Green fields and dense forests are disappearing. A few years ago we were concerned about the Ugly American; today we must act to prevent the Ugly America. For once our natural splendor is destroyed, it can never be recaptured. Once man can no longer walk with beauty or wonder at nature, his spirit will wither and his sustenance be wasted.”

If understanding can be reached of the role and function of open space in all its multiple uses and objectives—from the living space of home and street to the far reaches of the region—and if political skill can be brought to bear, we may be able to take a major step in fashioning a new urban environment with sense and sensitivity.

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Adapted from an address before the Institute on Planning and Zoning of the Southwestern Legal Foundation.



Editor: Marcus Whiffen, *College of Architecture, Arizona State University, Tempe.* **Contents:** *Schools and the Profession* by Henry L. Kamphoefner; *New Program in Baghdad* by Robert Mather; *With the Peace Corps in Malaysia* by Jay R. Carow; *Perspective Today* by George M. Beal; *Book Reviews.*

The Schools and the Profession

BY HENRY L. KAMPHOEFNER
Past President, ACSA

The AIA convention in June marked the first time an ACSA president—Dean Kamphoefner had actually completed his term of office only four days previously—had been asked to address the national assemblage. The new AIA-ACSA Liaison Committee, established a few weeks later with a membership to include the presidents of both organizations or their appointees, should do much to diminish, and may conceivably put an end to, the kind of misunderstanding discussed by Dean Kamphoefner—at one level. It does not diminish the appositeness of his remarks, for such misunderstanding exists at every level at which the schools and the profession come into contact: at the regional, the local and the individual at least as much as at the national level.

THE CONFLICT between town and gown, between the architect and the teacher, between the practitioner and the theorist, has not yet been resolved, even though it is long past the time for the elimination of the tensions and differences between us.

When I began my own academic studies in architecture, nearly 40 years ago, my teachers were not architects; they were ivory-towered theorists, or sometimes just clever delineators who projected an image of architecture to the students as a substitute for the search for reality and fundamental problem-solving. It may be true that their kind of pedagogical activity was called problem-solving even then; but if it were so, it was problem-solving through formulas, with all the inhibitions of misunderstood traditions.

One cause of misunderstanding and tension between practitioner and teacher today is the con-

temporary practitioner's ignorance of the radical change in the kind of people who form the faculties of the schools of architecture. Although there were a few isolated and individual exceptions, the architect-teacher or the teacher-architect as a faculty member was a rarity in schools of architecture until Joseph Hudnut brought Walter Gropius and other distinguished architect-teachers to Harvard in 1937.

Today the architect-teacher, in contrast to the teacher-theorist of 1930, is the accepted and expected kind of person in schools of architecture in America. The perceptive observer of the contemporary scene in architectural education will notice that there is a positive relationship between quality in a school of architecture and the quality of the creative and productive ability of the teacher in practice, scholarship or research. The respectable modern school of architecture, in other words, expects to see the results of distinguished practice by its faculty, much as the traditional great university has been saying through the years, "Publish or perish."

The need for the faculty member to practice architecture, if his teaching is to continue as a dynamic educational force, was not easily accepted by the practitioner in the communities of many of the schools of architecture. Until recently, resentment formed around the schools if brilliant faculty members were sometimes offered commissions thought to be the due of local practitioners. The loss of an occasional commission soon became the profession's price for a distinguished school, and the thoughtful practitioner has become more willing to pay that price.

Now that modern America is participating in one of the greatest building booms ever, enough work surely is available for both practitioners and

architect-teachers; and the teachers, partially subsidized by increasingly attractive teaching salaries, can contribute to better design, better fees and better architecture. The result, as the architect with average vision can see, is beneficial to all architecture and all architects.

My friends have told me that at a recent meeting of the AIA Board, there was a proposal to make the president of the ACSA a member. This was a simple, sound and politic idea; it would have drawn the teachers of architecture and the practitioners of architecture into a closer relationship and a better understanding. However, the proposal has not been adopted by the Board, whose majority still appears to view the teacher of architecture with some apprehension. It should have been adopted. It would have been a first sign of a more effective relationship between the schools and the profession.

So far as I know, this is the first time a president of the Association of Collegiate Schools of Architecture has been asked to speak to a national AIA convention. I am here because Mr. Odell [Institute president at that time] not only is friendly to the schools but understands their mission in relation to the profession; he understands that the schools and the profession need each other. The practitioner and the architect-teacher must come to understand that each is equal to the other. The practitioner should put away that disrespect for the teacher which comes from a thoughtless belief in some legend of power and authority in an ability to meet a payroll. The teacher should forget his disdain for the architect who chooses to make a living as well as an art out of his professional activity; he must also rid himself of the notion that it is sinful to make money from architecture, if *good* architecture can be produced while doing so.

The need for communication and consultation between the Institute and the schools was never demonstrated more spectacularly than it was last year in St. Louis, when the ACSA was suddenly presented with the so-called "four thrusts" proposals. Fortunately for our community welfare, those abortive proposals were so abruptly dropped that I was reminded of the sensation one has when, in an otherwise quiet airport, the four engines of a jet airplane are instantaneously stopped.

That experience should surely have been enough to demonstrate to the Institute Board that communications and consultations are needed when matters of mutual concern are being examined. Yet during the ACSA party in the Institute garden, I was handed a policy statement which read: "The Institute urges all schools and colleges of architecture to adopt titles using only the term 'Architecture' and to omit supplementary titles such as 'Urban Design,' 'Landscape Architecture,' 'Plan-

ning,' 'Fine Arts,' which are unnecessary and tend to dilute the meaning of the term architecture."

Here again, a matter of what we feel to be a mutual concern was examined unilaterally; the policy statement which followed this unilateral examination indicates at best a singular lack of awareness of the departmental structuring of modern universities. I think that we all would agree that architectural design is only a part of architecture as it is practiced today; but as design is practiced today, it must be all-pervasive, comprehensive and universal. Architecture cannot, except for a few very great geniuses, include *all* design.

While we would like to believe that an architect today must be a planner to be an architect, we should not delude ourselves. It seems unlikely to me, from my observation, that a majority of practicing architects have adequate planning capabilities to fulfill the needs of man's total physical environment. Certainly, very few architects are landscape architects. We lack the technical discipline in horticulture and botany to qualify; and only a few of us have sufficient coordinating capability to work with the mechanical engineer as industrial designers. Therefore, the schools of design, or (if you like) the schools of environmental design, are needed; and in the five years most accredited schools now require to make a graduate architect, few architects will qualify as a "total designer." Before that policy statement was drawn up, there should have been consultation with a few knowledgeable people from education. That there was not, should be a lesson to us in the need for some constant and continuing apparatus of consultation between AIA and ACSA.

Accordingly, in response to the AIA policy statement, the ACSA Board proposes that the Institute appoint the ACSA president or his designated representative to become a regularly appointed ex-officio member of the AIA Committee on Education to serve as liaison between AIA and ACSA. And, as a further expression of our trust in the merits of communication between us, our new ACSA president will appoint an equal number of architect-teachers and practitioners to our ACSA Committee on the Advancement of Architectural Education.

Already AIA and ACSA have collaborated effectively in several projects. One of the most successful has been the Teacher Seminar conducted annually for some 50 teachers of architecture. The program was originated by ACSA and held in various attractive summer locations for a number of years; apparently, it has now settled down at the Cranbrook Academy in Bloomfield Hills. When AIA offered several years ago to contribute a substantial financial subsidy, the first collaborative seminar opened with some wide areas of mutual



suspicion and mistrust. We have found in the intervening years, however, that there are enough men of good will in both AIA and ACSA to work out a mutually satisfactory and effective seminar. The last few have been brilliantly conceived, organized and conducted, making a magnificent contribution to the general capabilities of the teachers of architecture.

AIA and ACSA have also collaborated closely in the study committees to advise several university administrations on the establishment of new schools of architecture, in particular at the Universities of Maryland and Tennessee and Ball State University in Indiana. In one instance the committee found a lack of communication and contact between the university administration and the local professionals; this was called to the attention of both groups, and a broader-based professional concept was established. These joint committees should help toward the formation of some first-rate new schools of architecture.

In the Foreign Student Exchange Program, administered by our Committee on International Relations, ACSA has established another important project in the education of architects, the practice of architecture and international relations. This is the third year we have exchanged a group of American students to work in offices in England and the Scandinavian countries for a group of

British students to work in American offices and travel briefly in the United States. This year 26 top students, during the summer between their fourth and fifth years in the schools of architecture, will go to England and Scandinavia to work for 11 weeks and to travel for three more. Twenty-six top British students will come to the United States for the same purpose.

Although it is in its third year, this program cannot be continued without the assistance of American offices, particularly those in the metropolitan centers, who will agree to take in a British student. This, in turn, assures an outstanding American student the contact of work and travel in a cosmopolitan environment. So any architect whose office is called upon to cooperate in this project should not consider it a contribution to foreign aid but an investment in the youth for the architecture of our own country. Over the next 10 years, if we can sustain the program, 300 American students will have their lives and professional careers enriched by the advantages of the program.

I want to do no more than call to the attention of the profession of architecture our need for total support in education by the practicing architects. What we need is not so much your financial support but your moral support and your critical, constructive and friendly appraisal. ■

A New Program at Baghdad

BY ROBERT MATHER

University of Texas

The International Style may be a thing of the past, but architectural education is becoming increasingly international; more and more teachers of architecture find themselves teaching far from home for a period in their careers. Accounts of their experience bring out the differences, of which it is good to be aware. They also—and surely this is even more important—show that certain problems confront teachers and schools everywhere and must therefore be regarded, and faced up to, as the fundamental, human problems in architectural education. The author of this article spent 2½ years at the University of Baghdad.

THE DEPARTMENT OF ARCHITECTURE of Baghdad University opened its doors for the academic year 1959-60 with a curriculum modeled after that of the University of Texas School of Architecture. The staff includes American- and British-trained Iraqi architects in about equal numbers

and a changing contingent of foreigners from such diverse places as Argentina, Britain, Czechoslovakia, Poland and the United States.

The department, now in its seventh year of operation and having produced only two graduating classes, has evolved rather rapidly. Its compressed history is reflected in conversational reference by the staff to "the old way" and "the new way"; and with the inauguration of the six-year program, which is the subject of this article, distinction is required between "the old way," "the old new way" and "the new new way." Buckminster Fuller, at the second Delos Symposium, said that original question-asking and hence original solutions are the result of interference; and this "new new way" is probably an example of the phenomenon as it is not derivative from a foreign model.

The developing world tends to telescope the evolutionary sequence of steps followed by the developed world. In many ways existential as contrasted with evolutionary models are superior in interpreting the developing world in which tribal,

feudal and space-age capabilities rub shoulders. Events permutate in unpredictable ways, constantly frustrating straight-line evolutionary habits of thought. Bizarre as these events seem, many things can be accomplished simply by the act of doing them since there is less overhead of capability to phase out. In the developing world the ground rules of decision-making are considerably altered. The normal evolutionary good sense formula, "First achieve the capability to do it properly, then attempt improvements," when applied in a developing context is likely to prove ineffectual, because the conditions that exist in the reference context can't be reproduced, no matter how many good people exhaust themselves in the attempt. On the other hand, an apparently extreme approach may be effective if it produces a focus of latent capabilities.

Going to Six Years

Baghdad University's Department of Architecture is scheduled to begin the year-by-year phasing in of a much revised six-year curriculum and the phasing out of the existing five-year curriculum. This process will begin with the academic year 1966-67 entering class and will be completed when this class emerges in June of 1972 as the first graduates of the new program. By this time two other major changes will have occurred: the present department (within the College of Engineering) will itself become a college (of architecture and planning); and the program will be physically housed in a building designed by members of the teaching staff. The opportunity is therefore presented to tailor the administrative structure and the physical environment to a teaching program. For the past year the staff has been working out the curriculum and teaching program for this new college. This curriculum has been structured in such a way as to eliminate permanently the additive pressure of proliferation which so plagues US architectural curricula. In the United States, architectural education seems to be in a state of permanent emergency. Anyone with anything to him (student and teacher alike) is demanding more of something—more technology, more art, more specialization, more generalization, more humanities, more planning, more depth, more breadth. This pressure has a cumulative effect, so that the progressives push for six-year programs, and the prophets speak of seven. The trouble is that the fundamental realignment required to deliver the new material in an effective way in good balance could only come at the cost of jettisoning too many tried and true courses.

The Baghdad staff has, by the simple device of implementing a clean decision with an appropriate structure, elected a compression-integration route

as contrasted to the proliferation-addition route. As a result of this, the course list to be published for academic year 1966-67 will look pretty ordinary. But that same list published, say, 10 years hence (if the program can still be expressed in discrete courses) will be greatly transformed as a result of internal rearrangement and adjustment to accommodate the growing capability of the college and the intrusion of new material into the architect's area of competence.

The New Curriculum

The structure of the new curriculum is described in the following six paragraphs, here slightly modified from the draft submitted to Baghdad University in 1964.

- The six years are divided into three two-year phases termed A, B, C. Semesters are designated A1, 2, 3 & 4; B1, 2, 3 & 4; C1, 2, 3 & 4.

- Certain matters necessary to the production of good architects are emphasized during the A phase, certain others in the B phase, still others in the C phase. These phases have been carefully designed to provide a natural sequence for the students and each phase ends with a semester specially designed to "bridge" to the next.

- Phase A will equip the students with skill in reading, writing, speaking, drawing, photography, the construction and use of physical analogues, and in the principles of problem-solving. The focus will be on gaining command of the tools an architect uses for communicating with himself (thinking) and for communicating with others (information transfer).

- Phase B will equip the students with skill in the qualitative and quantitative design of architectural projects. The focus will be on gaining command of architectural elements and procedures.

- Phase C will equip the students with skill in designing architectural projects to meet social, economic and cultural criteria. The focus will be on achieving a sensitivity to and an understanding of the social, cultural and humane issues and values involved in architecture. Phase C thus provides a synthesis of the skills learned in A and B and equips students to meet the wider responsibilities of a professional architect.

- During phase C a student may elect to work under the direction of faculty members who are pursuing research in cultural, technical, social or esthetic problems of architecture. Thus those students so inclined will be grounded in the principles of research and the college will build up a fund of original knowledge which will be available for general use and application.

The intention is to establish with the three phases a kind of internal guidance system to the curriculum which will insure that students acquire



all three components of an architect's intellectual equipment. Beginning with the methodology of that peculiarly open-ended thinking process we call design, the program proceeds to the technical content of design. Finally it merges with the objectives, purposes and values implicit in design projected as the art and craft of decision-making.

This structure holds the objectives of the program continuously in view and gives its message a certain completeness. No matter how shaky the projection of these objectives and this message, a base has been established, and henceforward the most probable way to go is up. This structure, then, is a response at one place to the international proliferation puzzle in architectural education. The process which is contemplated reflects the particularities of Baghdad, and the following discussion makes no attempt to differentiate features which may have general relevance from those representing an empirical resolution of local factors. In fact the program is very largely an empirical construction—an attempted walkout of an existential jungle.

The Path to Integration

S. M. Warr's "Do the best you can in terms of where you are" ("Computers," *Scientific American*, Sept. 1964) has been enunciated as a decision-making formula subtle enough to meet modern conditions. Its disarming simplicity rests in its failure to point out (though it certainly doesn't conceal) that you have to know where you want to go. The Baghdad program has applied this formula with success, in avoiding the pitfalls of overthinking and overplanning. Starting with the existing course structure and proceeding on a path to integration, the program will shuck off its course components only when, as and if they become obstructions. The device for doing this is very simple. The credit-hour value of that time sink conventionally called "design" has been pooled with the credit-hour value of the technical courses which normally support design.

This credit-hour pool is established at seven in the first year (A1, 2), rises to 10 the second year (A3, 4) holds at 12 for the third, fourth, fifth and one-half of the sixth year (B1, 2, 3, 4, C1, 2, 3), to reach a maximum of 14 in the thesis semester (C4). There is enough room for all the tried and true construction and materials, statics and strength, structural and mechanical, specifications and practice courses, though the fit (by intention) is a bit snug. Integration starts the day someone proposes that a new slug of subject matter needs introduction into the curriculum. What started as a snug fit now pinches, and the new material must be admitted via the route of internal realignment of existing material. Someone will

propose that design time (normally out of bounds to subject matter) be raided and the designers will fight back. In the end, certain puzzles will be built into a design problem here and there to be supported by point-of-use lectures and given teeth in the "final presentation requirements."

In modern educational practice, the integration device par excellence is team teaching, in which the teachers project their subject specialties within the context of a jointly developed problem carried to the students in an input-output dialogue of assignment and response. Integration is carried to the extent of abandoning the hour-by-hour schedule of classes and of providing the staff with space equipped for the preparation of their materials and a considerable amount of clerical and other technical support in preparing these materials. Such an extreme degree of integration is a difficult step to contemplate, and the program does not depend on its adoption. However, as time and the developing capability of the college force various makeshift integration steps, the team-teaching concept will probably assert itself as an increasingly rational answer.

The combination of comprehensive objectives and an integration route places the program under a certain built-in stress. It is hoped (and intended) that the way out will be up; but it could also be sideways; that is, it can stagnate or actually fail as a significant effort. A number of devices which have been fashioned to prevent this failure can now be described.

"You gotta have a boss"; "someone to call the shots"; "someone to coordinate"; "someone to take the responsibility." Whether the model for this personality is the now fashionable "team captain" or the time-honored sheikh, he is a necessary feature in the efforts of most human beings to coordinate themselves.

The process of leadership is polarized somewhere between team-type focusing of capabilities and sheikh-type exercise of raw authority, and when the title "Director of Studies" was invented to designate the professor in charge of each of the three phases of the curriculum, it stuck probably for its happy implication of status and competence, of authority and goodwill. The responsibility of each director of studies is to insure that the band of material outlined for each phase in the curriculum syllabus is actually delivered. The syllabus is a key component of the program.

Syllabi are endlessly drafted by committees and endlessly ignored because the committee process makes them a catchall of favorite ideas and the result is difficult to schedule into a single educational sequence, especially in view of the private reservations of the individual instructor. The good syllabi are those that fall out of teaching experi-

ence. The trick is to get them to fall out, rather than back into the instructor's lecture notes. For the director of studies, the problem will be to get "his boys" to externalize what they are teaching so that he can evaluate how it fits.

For this purpose a record-keeping device has been devised for each course whether conducted by an individual or team. It is a form (inevitably) which folds down to file size and opens out to wall size, so that it can be scanned field-fashion. The instructor will use it to catch, balance and polish the delivery of course materials; while the director will refer to it to keep track of what is going on in his domain. The 30 by 40-inch form is divided into four counter-clockwise related quadrants identified by overscaled background lettering like an old-fashioned bank note:

INPUT	SYLLABUS
OUTPUT	FEEDBACK

The input quadrant is a calendar set up for scheduling lectures, exercises, sketch problems, due dates, juries, tests and other details of class routine. The output quadrant is also a calendar, this one set up for keeping records and notes on individual student performance, including attendance and grades. A time-dimensioned visual record of what was intended and what happened is thus instantly available. The feedback quadrant is a net for catching observations and interpretations in the form of notes concerning the way the material hit, missed or became transformed in the delivery process. The syllabus quadrant is where the conclusions from all this are provisionally "canned" in the form of subjects earmarked for delivery next time. Thus "any number can play" and "you can start anywhere"—if necessary with nothing more than a course title and an instructor. A syllabus will drop out during the first time round, and syllabus polishing becomes a continuous process.

This device, which imposes a formidable objectivity on the normally mystical routine of teaching architecture, will be used team-fashion or sheikh-fashion (it doesn't matter) by instructors on students, by the directors on instructors and by the dean on the directors. If a course drops out as a discrete element in the curriculum its syllabus content can be scrambled and embedded in appropriate contexts elsewhere.

The Resources at Baghdad

A current inventory of emergent resources at Baghdad would list:

a) The clear and comprehensive structure of educational goals implicit in the three-phase program;

b) the clear and potentially subtle hierarchy of responsibility implicit in the dean-director of studies—instructor staff structure;

c) the continuous monitoring and polishing implicit in the input-output of record keeping.

Although the three together present a promising picture, the hoped-for progress may be frustrated by other factors. The most important of these are the staff and the physical facilities, for the program puts serious demands on both.

Areas may be underdeveloped, but people are not (least of all the people running a university). These people possess a competence quite discontinuous with their milieu. They consequently live between two pressures—that of the frustrations inherent in their situation and that of the attractive alternate career possibilities which exist in an age when knowledge is recruited internationally. The drain of brains out of the university and ultimately out of the country is the monster that sleeps below the surface. The problem is rooted in factors bigger than a university department or college, but this department-cum-college is making a calculated response that lies within its capability. It is working out a schedule of foreign study and research leaves for the dual purposes of supporting the curriculum and qualifying the permanent staff for academic advancement. At the same time, a recruitment effort is being mounted with the objective of attracting highly qualified foreigners to Baghdad to build up certain specific subject areas within certain limited periods of time.

Authority or Independence?

A profession demands ability and imposes responsibility. Architecture as a profession involves the focusing of relevant knowledge through a lens of value to structure a screen of human activity; and any architect with enough stuff to keep his eyes out of the journals must become capable of plotting his design decisions alone. The imparting of this difficult ability is one of the responsibilities laid on architectural education. It happens that the students who enter Baghdad University come equipped with a young lifetime of discipline in the reciprocal processes of sponging up and wringing out knowledge. Since the ability to do this has, apparently, been cultivated as the primary index of learning, they are very good at it. A design studio criticism usually begins with the question "Have I done this right?" which barely conceals the real question "Is this what you want?" and the foreign design critic who senses raw authority as some kind of shadow standing at the other elbow of the student eventually realizes that this authority is thought to reside in himself.

The teacher looks at the problem; but if the student looks at the teacher, the program fails.



The confrontation must be realigned so that both student and teacher look at the problem. However, the tradition of looking at the teacher and not the problem is very deep and rooted in cultural factors beyond the understanding of a foreigner. Whatever the values of this tradition may be, the effect is incompatible with the open-ended, optimizing, synthesizing discipline of architecture. As things now stand, both students and teachers are locked in a cage of authority and mutual dependence, and there is no way out. The student's "Tell me what you want and I will deliver" is exactly mirrored by the teacher's "Return to me what I gave and I will pass you."

No amount of talk or analysis or institutional soul-searching will eliminate this deadlock because on a deeper level both sides prefer it. Time will slowly erode it, but to achieve practical results, this erosion must be helped along. In a closed system, a fundamental change can only be introduced from the outside. Foreign professors don't and can't introduce such changes; they only step into the system and raise a lot of dust and smoke and then go home. The problem is to find

a change that can be actuated by those locked inside the system. Such a potential exists in the physical environment of the college. It happens that this is more than just a theoretical possibility because the college must evacuate its present quarters and the college staff is expected to provide the professional design and supervisory services for this project.

If in the college routine students were constantly exposed to the work of other students at other phases of the curriculum, and if the staff had ample opportunity for contact among themselves, and if student-staff contacts could be easily made without jettisoning the social independence that both groups desire, then a tangible community of thought and action would emerge. ■

ED. NOTE: Qualified teachers are needed in several areas of the program. The United States Cultural Attaché in Baghdad is aware of this and will be able to assist as a point of contact between interested persons, the officials at Baghdad University and the State Department. The US Government plans to offer supplementary Fulbright grants to a limited number of American professors in Baghdad under a new arrangement which (at the time of going to press) is in process of being worked out. A request for information to the Cultural Attaché should be accompanied by a letter to Dr. M. S. Makiya, Principal of the Department of Architecture, College of Engineering, Baghdad University, indicating the area or areas of the writer's interest and containing the usual *curriculum vitae*. The author of this article will be happy to answer questions about life in Baghdad and the architectural program here discussed.

With the Peace Corps in Malaysia

BY JAY R. CAROW

The author of this second article on teaching architecture abroad served with the Peace Corps in Malaysia from September 1962 until July 1964. Trained at the Illinois Institute of Technology and with a master's degree from the Massachusetts Institute of Technology, he is at present with C. F. Murphy Associates in Chicago.

STEPPING FROM the airconditioned interior of the airplane into the wilting heat that covers Malaysia throughout the year has come to symbolize for me my transition from the ease of American life into the struggles of a developing Asian country. Within the next two years as a teacher I encountered the broad spectrum of experiences inherent in a new climate and a new way of life.

Language, traditions and culture of the Malaysian peoples constituted the basis of our Peace Corps training. For three months our group of volunteers had been immersed in the study of the land that was to be our home. With our arrival in Malaysia, a sense of excitement and anticipation stirred the group—we were now to begin our tasks. Enthusiasm went with us.

My assignment was to the Technical College located in a suburban area of the burgeoning

capital city of Malaya (now Malaysia), Kuala Lumpur. The architecture of the college exposed me for the first time to that nondescript style that I would soon recognize as late British colonial. This style, commonly used in government buildings, merges the modern British with the old colonial. All the amenities of the latter are forgotten: no roof overhangs to shield from the sun and rain, no plantings to shelter the porches and no large openings to admit the cooling breezes.

Within the ovenlike masonry walls of this college with the ceiling fans churning the hot air down, a group of students representing three different cultures met with one perspiring, novice lecturer. This was my initiation to teaching.

The three groups of students represented the three ethnic divisions of Malaysia: the Malays, the indigenous people of the land; the Chinese, the merchants of the cities; and the Indians, the rubber tappers and roadbuilders. Each student's racial origin partially determined his character. There has been little mixing of the races; each was distinct and aloof from the others. To understand these students, therefore, I had to try to understand their backgrounds.

The Malays as a people migrated from areas of Indonesia. They demonstrated a sensitive touch and a good sense of color in their woodcarving,

metalworking, and batik-making. These craft skills, unfortunately, along with traditional puppet shows, dances and music, were rapidly becoming extinct. Although these art forms survived in the more remote parts of the country, the government was attempting their revival through marketing of rural handicrafts and presentation of cultural shows in the urban areas.

The Chinese students brought to the classroom their ancient culture, but that culture had not come with the migration of their ancestors. The average adult Chinese was uneducated, and he had achieved his rewards through hard work as a pushcart hawker, a restaurant operator or a tinmine laborer. These men had little time for classical Chinese learning and values. Through a series of fine urban schools a class of highly educated Chinese, sensitive to their heritage, was rapidly developed. After a hundred years the overseas Chinese had regained a level of culture equal to that of their ancient homeland.

The Indians, about 10 percent of the Federation of Malaysia's population as well as the class enrollment, looked back to their former homeland for their culture. They are mostly Hindu and are very much in tune to the baroque expression of that religion in southern India: their colors are as bright and garish as their forms are complex and overmolded.

The Students

Working with the students in the classroom, I found that their free expression and esthetic intuition were blocked by their earlier education. The primary and secondary schools of Malaysia were modeled after the British system, and subject matter had been stressed to the exclusion of creative thinking. The student's idea of learning was to swallow innumerable facts and then to spew them forth for the examination. The average student was incapable of trusting anything as intangible as his intuition.

Understanding the background of the Malays, I had anticipated that they would be instilled with a feeling for wood and metal, an ability to work with their hands, and a sensitivity to color and form. But their educational background blocked them more than the other students. Since the Malays were mainly rural people their schools were of a poorer quality. Teachers for elementary schools were recruited from secondary school graduates. College-trained teachers were reluctant to leave the relative luxuries of the cities to take a rural post. By the time a Malay student reached the College, he had had little or no chance for artistic experimentation nor had he had an opportunity to obtain a sound, basic education. For years he had struggled to learn basic facts while

teachers qualified to expose him to the merits of his heritage had been missing.

The Chinese student had the fewest problems to overcome. The habit of hard work, instilled so early in his childhood, served him well in his educational development. He had been exposed to Chinese art and calligraphy. He tackled problems with a drive and cunning that could not help but win him success. The Indian students had an educational background similar to the Chinese but without their drive and determination.

So, as the ceiling fans churned the hot air and rustled the sheets of paper below, we began our work as class and lecturer.

Teaching at the college and university level in Malaya was in English. Immediate problems arose in pronunciation, spelling and enunciation, but these were overcome by quickly adopting a British accent and buying an Oxford dictionary.

Third-Year Design

The third-year design class was my first concern and it also proved to be my greatest challenge. This class was small—14 students. They had been previously handicapped by a shortage of staff, and I found them far behind in their development. To compensate for their inadequate background they had found a crutch in the library. All books on Mies van der Rohe were checked out as soon as they learned of my work under Mies at IIT. Their first projects featured flat roofs and large glass areas, while their earlier work had shown pitched roofs and small openings similar in design to the college buildings. Without my having exerted any influence, they had become disciples of Mies.

The third-year design course was directed at meeting the requirements of the Malaysian people and climate. Typical design projects besides housing were community buildings such as meeting halls, medical centers, schools and mosques. Exposure to the traditional way of meeting those problems was necessary for lecturer and student alike. Of all the examples of architecture available, the Malay house stood as a monument to good design. The house was of timber, the material found in greatest abundance. The building was raised off the ground on wooden columns, thus freeing the wooden base from the damp soil, exposing the house to breezes under the floor, and providing space for animals and stored materials under the house. The roof was steeply pitched and overhung the walls to shed the monsoon rains. The walls were composed of a wooden modular column system with infilled panels and pierced with large window openings to allow the breezes to cool the interior. The whole was a united composition that testified to the builders' skills.



The houses of Malaysian cities, however, influenced the students in their designs. These houses of masonry construction were similar to those of England. Only the chimneys were discarded. Nevertheless, at the time of my arrival, students at the college could still detail chimneys, as well as double-hung windows.

The Ghost of the Technical College

With this third-year design class, I encountered my first ghost. When the students began falling behind on their designs, I suggested that they work nights in the studio. At first they were aghast, and then they poured out the story of the ghostly member of our class. Students working late at night observed stools floating about the studio, heavy doors slamming shut and the lights dimming on and off. Next, a decapitated form would appear to any students foolish enough to be left in the room. This was the ghost of a prisoner of the Japanese who had been killed on the college site when it was used as a prison camp. So I told the students to work in their rooms and that anyone who failed to finish his work overnight would be doomed to haunt the drafting room for another year. The issue subsided. Privately pursuing the matter further, I found that the night watchman admitted to seeing the headless spirit and that villagers a hundred miles distant would inquire into the health of the ghost of the Technical College.

The brightest feature of the class was the female section. Attired in their traditional costume of the sarong, sari or mandarin dress, the girls made an attractive addition to it. Most of them were quite shy, and care had to be taken in criticism of their work. The boys mistook this for favoritism and would even the score with a girl who did too well by making her carry the transit in surveying class. The girls numbered about a third of the class, and soon after finishing the college course, they were married.

The end of the third year marked the end of the college course. The better students were able to continue their studies in Australia or the United Kingdom. The less capable students became draftsmen for the government or private architectural firms.

A series of examinations marked the end of the year. Eighty percent of the design mark was determined by an examination. The pressures on the students during this exam led to breakdowns and failures due to nervousness. In my two years at the College, we were able to revise this system so that the year's work determined the mark.

During my last year at the College, I led the first-year design class through a series of visual training projects. These projects included paper cutting and mounting, inking and then stamping

of common objects on paper (sections of banana plant stalks and onions were good innovations on a Malaysian theme), and creating patterns from the common wooden matches of Malaya. Projects exploiting the use of the hands such as wood-carving and building of small models were developed. Most of the students had never worked with their hands before; the handcraft heritage found throughout Southeast Asia had not been passed on to them.

One exercise called for the development of a black form on white paper. When the various solutions were hung on the walls an Oriental flavor was immediately noticeable. The forms of slender, sweeping curves resembled simplified Chinese characters or strokes from the Arabic alphabet. The black-on-white presentation appeared to have been created by hands quick and confident with a brush.

The most difficult project dealt with arranging a number of blocks of colors on a sheet. The student was free to select colored papers of materials and mount them in a complementary fashion. Within moments, the brightest of hues surrounded me. My eyes danced over the colors of the tiger, the jungle, the sun-drenched rice fields, the orchids, as the pastel walls of the studio yielded to a cacophony played on the chromatic scale. My memories are still haunted by this tropical display and in particular by one perspective of a room where the ceiling was Chinese red and the floor maroon.

Lectures and Holidays

My other duties besides design courses included lecturing in History of Architecture and Theory of Design. To sustain audience attention during a slide showing in a darkened room is difficult enough, but when it is a tropical afternoon with the breezes blocked by the curtains, the problem becomes enormous. In such a stifling atmosphere, the energetic lecturer is soon reduced to a sodden mass. After an hour of striving to maintain enthusiasm, I would emerge enervated to receive my reward of a cup of tepid tea with milk and sugar.

The lecture courses went smoothly except for interruptions caused by holidays. One course did not meet for five weeks in a row because of official college days-off. The three cultures demanded equal-time holidays. Thus the Malays have a week to celebrate their New Year, the Chinese a week, and the Indians one day (since they comprise only 10 percent of the population). Naturally the New Year's Days fall at different times of the year. Religious holidays included the birthdays of Mohammed, Buddha and Christ. Hindus were allowed time off for a festival of the bull. State holidays

were taken on the king's birthday, the regional sultan's birthday and Independence Day.

But the greatest stretch of free time came during the six-week long fasting period of Puasa or Ramadan. During this penitential season for the Muslims the entire nation stopped work every day at noon. The college timetable converted from an 8 to 4:30 workday to a 7 to 12 day. Lecturers worked for five hours without a break. Instead of leisurely breaks between classes at the tea counter, the lecturer had to survive with one cup brought to his room by a bearer. The Malays, who were all Muslims, were obliged by law to fast completely during the daylight hours. Their attention in class was distracted by their rumbling stomachs and parched throats.

The Chinese students, all non-Muslims, devoured quantities of food and washed it down with cooling drinks at the slightest opportunity. The Puasa afternoons were passed in long naps for the Malays and heavy lunches and strenuous games for the Chinese. As dusk fell over the campus and the call to prayer from a distant minaret announced the end of the day, the Malay students noisily charged the dining hall. Food and drink were consumed by the ravenous students. This scene was repeated once more at 4 in the morning before the first light, while Radio Malaysia proclaimed the beginning of another day's fast.

Field Trip to Thailand

During vacations, I pursued a variety of activities. On one, I supervised construction of some classroom buildings at the University of Malaya; on another, I escorted a group of students on a field trip to Thailand.

The trip to Thailand proved to be a true test of survival under unusual conditions. The train trip to Bangkok involved 42 sleepless hours jammed on a wooden bench of an overcrowded second-class coach. Outside, a monsoon threatened to sink our wood-burning engine as it chugged along flooded tracks. All meals consisted of fried rice and Seven-Up. Upon arrival in Bangkok my students were able to find bargain accommodations at a Chinese-operated hotel—80 cents a night for a room to sleep four persons. Each morning the majority of us enjoyed a hearty breakfast of rice-noodle soup for 10 cents a bowl. Some had seconds, but I daydreamed of ham and eggs.

On my birthday I decided to treat the students to a solid, American-style dinner. Somehow or other we found ourselves in a Chinese restaurant, and the feast the students had ordered was laid before us—plates of steaming pig intestines, rubbery octopus and pungent eel. All these were delicacies worthy of any Oriental's birthday.

We did see the major works of Thai architec-

ture. We visited the ancient city of Ayudhya with its soaring monuments in a state of ruin, as well as Bangkok's golden temples and pagodas that gleam gloriously in the bright sun. We stood in amazement in the Compound of the Emerald Buddha with its gilt blinding us. The students visited Thai schools of architecture, listened to their lecturers and observed the work of Thai students. Our two weeks passed quickly, and 42 hours after leaving Bangkok, we were back at the Kuala Lumpur Technical College. Our jaunt to the north had cost \$60 per person.

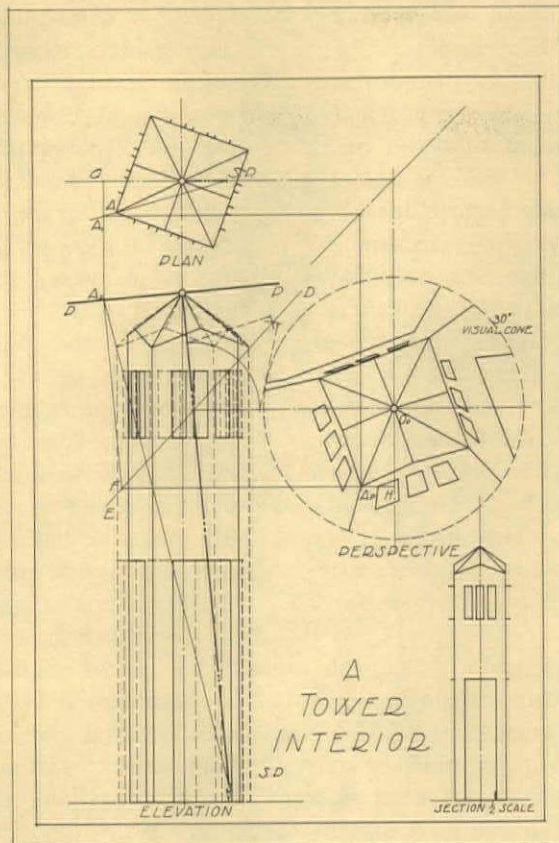
The two years at the college passed nearly as quickly, or so it seems in retrospect, as the visit to Thailand. I look back on warm memories such as bicycling to the college under a tropical sun, being careful to avoid collision with students as they raced in their cars to beat me to the studio, watching the department of architecture grow from three to five staff members and from 45 to 60 students, and receiving a box of English cookies as a get-well present from the students.

I shall never regret any moment of my stay in Malaysia. The quality of my teaching may have been handicapped by my inexperience and unfamiliarity with tropical requirements, but I knew that there would be no one to teach my classes if I were not there. To know that I did something to help fill a young nation's critical need for skilled people is a rich reward. To realize that the students I worked with have advanced to further education and positions of importance is likewise rewarding. But the greatest sense of personal enrichment lies in the daily experience of living in a new way, of seeing life as it is lived by the Asians, of learning the values of a society so different from ours. ■

ACSA PUBLICATIONS COMMITTEE

The following have accepted appointment by the president of ACSA to serve on the Committee for Publications and Public Relations in 1965-66:

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Perspective Today

BY GEORGE M. BEAL
University of Kansas

It is 5½ centuries since Brunelleschi added perspective drawing to the architect's box of tricks or tools. As a trick, it no longer astonishes; is it still useful as a tool? The overwhelming majority of American schools of architecture or, to be precise, 63 out of 68 member schools of ACSA, who replied to a questionnaire sent them by Mr. Beal, evidently believe that it is. At any rate, they require it of their students one way or another—65 percent in conjunction with architectural design, 18 percent as part of a graphics course, 17 percent as a separate course. The time devoted to it and the store set by it vary widely from school to school—in clock hours, where it is taught in conjunction with other subjects, from a few to over 300 (with the mean about 48), and in semester credit hours, where it is taught separately, from 1 to 3. Here the author discusses the implications of these and other statistics, relating to the methods used in making descriptive drawings, obtained by his questionnaire.

PERSPECTIVE DRAWING is either taught as a basic discipline or called for in design problems in all American schools of architecture. The credit as-

signed, where it is employed as a discipline, is a small fraction of the total credit hours and ranges from 1 to 2 percent. Technical concern for the subject is usually limited to one or two people on the staff, while others exhibit limited interest. Practicing architects have little or no need for perspective drawing and consequently are not specially interested.

Students in schools of architecture do spend considerable time with this subject, mostly in connection with the presentation of a design problem, because many written programs require a perspective to give a more comprehensive view of the three-dimensional aspects of the design. A high degree of accuracy is not required to satisfy the program; consequently, the student looks for short cuts, uses inaccurate perspective charts or manages one way or another to produce the delineated perspective without concern for a precise expression with known limits of accuracy in the control of distortion.

When the student first meets this subject in a formal class in perspective drawing more thought is put into the science and care with which descriptive drawings are made. This is as it should be, but even here over one-third of the schools teach the subject using only a vertical picture-plane which limits acceptable accuracy, provided the visual

cone is controlled, to a horizontal view. Ten percent more introduce, though only occasionally, a vertical picture-plane that is other than vertical.

The one change which has taken place in the past 35 years is that whereas all schools used to teach with a vertical picture plane, now there are more than 54 percent regularly teaching their students at least some of the advantages in the use of other than a vertical plane for the picture. How many of these schools apply a universal method with controlled limits of accuracy, establish a center of interest as well as a station point and expect the student to know and apply appropriate visual cone sizes for various angular views was not brought out by the questionnaire. Neither did it review the specific methods or check the vocabulary employed in perspective drawing. The term "horizon line," for instance, has been restrictive and misleading for many, many years; it should be discarded.

At least one school makes use of a "no point perspective and one point," while others employ a cylindrical picture plane. Another has worked out scales for the rapid application of dimetric and trimetric drawings for a wide range of angles. These supplement and expand the more usually

applied isometric drawings and make practical a choice of many more valuable views. The accompanying drawing suggests how a method based upon universal principles and control of the visual cone gives flexibility and can be used to record valuable views in unusual directions.

The answers to the questionnaire showed a wide range of thinking and suggested that a number of different methods and degrees of accuracy are employed by the professional schools in the teaching of perspective. Most schools make use of it, not so much as a positive discipline in three-dimensional thought and precise delineation but as a means of gaining a very limited suggestion of how a design might appear in the round. Since a precise discipline is not desired from the subject, the teaching of basic principles gives way to the mechanics of performing a task of limited value.

In these circumstances, one of two courses of action would seem appropriate. Either the schools of architecture should agree among themselves that perspective is not of sufficient value to absorb professional training time and designate it a high school subject; or they should recognize it as a valuable educational discipline and take steps to capture its full force and value for students. ■

BOOKS

The Teaching of Architecture. Edited by Marcus Whiffen with an introduction by Harold Bush-Brown. Washington: The American Institute of Architects, 1964. \$2

Eight papers delivered at the 1963 Cranbrook Seminar are published in this paperbound book. Of the eight contributors only one, Philip Will Jr., is an architect. Six papers were delivered by psychologists and one by a city planner. Since architecture is predicated on serving the needs of people, one might think that we're very late in exposing architects to the facts which the behavioral sciences have been able to substantiate in the last half century. And one cannot help but wonder whether, had Donald W. MacKinnon delivered a more definitive paper on the personality characteristics of the architect at the beginning, the conference wouldn't have broken up in spite of the social structure provided.

Specific details aside, all papers delivered by the psychologists are as elementary as balloon frame construction to anyone who has looked at the literature, and I think a vote of thanks should be given these noble souls for venturing to speak at a conference of architects and educators without, in fact, breaking into gales of laughter. At least, there is no indication that they did so in

these papers, which present in a very straightforward fashion the rudiments of data found in lecture vs. discussion groups, passive vs. active learning, feedback, the Hawthorne effect and numerous other truisms as old and as obvious to any man educated in the 20th century as pasteurized milk or the internal combustion engine.

But, given the personality characteristics of architects and teachers of architecture, is it possible for these people to assimilate and apply the fundamental knowledge presented in these papers? For the psychologists to say "specify your goals, make sure that your teaching contributes to those goals," is all very well until one realizes that the goals of education in architecture have never been established, and every attempt to establish such goals is met with prolonged argument only to end finally in abandonment.

The first paper is Will's "The Future of the Architectural Profession—For This We Teach." He speculates about the future of the world in which architects will be expected to perform and about the skills they must possess in order to maintain the profession. He comments that architectural education must aim at the preparation of men for practice in the 21st century and that the present is meaningless except for what it can teach



us about the trends 40 years in the future. Observing that "the only real value of true education lies in that which remains after one has forgotten all that one once knew," he roundly condemns the "trade school" type of education as producing technicians whose knowledge is obsolete on the day of graduation. Later on he says that architectural schools need not feel responsible for producing a "standard architect" and that wide variety of skills is needed. Perhaps I misunderstood, but did I not gather that he thought that those who couldn't reach the heights could always be educated as specialists—along trade school lines?

Then, Will believes that through team work, groups of structural architects, environmental engineering architects, etc., could get together to defeat those builders or "New Entrepreneurs" who, hand in hand with the Federal government, are covering the landscape with vast projects without benefit of clergy—or architects, depending on your viewpoint. (MacKinnon, by contrast, seems to feel that "team action" is entirely antithetical to the personalities of creative people. In his paper, he writes: "All that is known about the functioning of the human mind and about group process and problem solving suggests that architecture practiced by teams of narrow specialists will not exhibit the level of creativeness which can be achieved by broadly trained generalists or by teams of generalists or by generalists working together with specialists.")

"Psychology and College Teaching," by W. J. McKeachie, is based upon the author's chapter in "Handbook of Research in Teaching," edited by N. L. Gage. In it, he surveys recent experimental studies in teaching techniques and attempts to draw from these studies some implications for the teaching of architecture. McKeachie's study is very thorough and should prove beneficial to teachers of architecture, provided they can identify not only short-range but also long-range objectives. The author very wisely refuses to provide a little green pill for the reader and insists that the most effective teaching method depends upon the type of student to be taught, the type of faculty who will do the teaching, the kind of material to be taught and, last but not least, the long-range objectives of the teaching. Under the last heading, he points out that the lecture method may be the most effective device for getting across masses of information, but isn't noted for developing critical thinking on the part of the students; and the ability to think critically would seem to be of paramount importance to a future architect.

The title of Edward L. Walker's paper is "Matching Means and Ends in Teaching Architecture." The ends to which he refers are the development of the ideal architect who is "simulta-

neously a humanist, an engineer and a scientist." He further identifies two levels of education. "Level 1" permits intelligent interaction with an expert, and "level 2" amounts to becoming an expert.

Walker goes on to list what he assumes to be the goals of education in architecture and various tools which can be brought to bear in achieving those goals. He gives considerable attention to the lecture method of teaching, emphasizing that a good lecture is one in which the lecturer has chosen to present no more than seven pieces of information, one in which repetition is avoided but redundancy is not, and in which analogous thinking is liberally employed. He discusses devices such as the reading log, teaching machines, programmed learning and examinations as teaching tools. He closes by repeating the thesis which has appeared in the other papers: "Examine closely the set of goals or objectives that you have for your curriculum or for your course. . . . Examine each of the tools available for meeting these goals. Then break tradition if you must, but work to achieve the best match possible between the ends and means of architectural education."

"How to Win Friends and Influence Students: A Guide for Teachers of Architecture" is by Richard Myrick. This paper describes in broad terms two different approaches to teaching. The first approach is the traditional one of the student as student and the teacher as teacher. The second approach is that of the participative teacher to whom education is a process of discovery shared by the student and the teacher, who would believe that his most valuable asset is the desire of the student to do a good job. The traditional teacher provides extrinsic rewards while the participative teacher provides intrinsic rewards. Myrick obviously favors the participative type of teaching as good model formation for architects in dealing with clients. He assumes that the architect must understand completely the physical, psychological and environmental requirements of the client, and that these requirements can best be met by working closely *with* the client rather than *for* or *around* him. In other words, the architect must work with people in a participative fashion in order to be effective.

MacKinnon's paper on "The Characteristics of Creative Architects and Further Reflections on Their Implications for Architectural Education" is a restatement, for the most part, of the well-established concepts emanating from the Institute of Personality Assessment. There is no need to go into this again here—except to suggest that some of the personality characteristics listed by MacKinnon would seem to militate against the ideal set up by Myrick. One would think that a

"firm belief in the foregone certainty of the work and validity of [the architect's] creative efforts" would not necessarily go hand in hand with Myrick's insistence on the need to work *with* the client and with experts, including psychologists, in problem identification and solution.

In "Media for Teaching and Learning," Walter J. Ambinder makes an additional case for teaching machines and various aspects of programmed learning, establishing that for certain purposes these new media can be extremely effective—that they can, in fact, reproduce the tutorial process in an economically feasible manner. There is a redundancy of information to support this view, and although the threat they pose to live instructors in universities remains as real as it ever was, teaching machines and programmed learning will doubtless have to be pressed into service if any semblance of universal education is to be achieved.

The paper entitled "Design Processes and Decision Theory" by Barclay G. Jones deals with the systematizing of the decisions which go into the creative process and which ultimately manifest themselves in a building solution or design. Although there is some question as to whether Jones' thesis does fall within the current definition of design theory because of its determinate variables, the fact is that he has produced a variation of the classic system which Gantt developed during the first World War as a military logistic device and which was later applied to engineering processes (e.g., in the automatic screw machine). One can only wonder why architects and engineers, as well as planners, have not liberally used these rather fundamental planning decision concepts when they are so obviously useful. Jones shares some of the views offered by other contributors; in particular, he believes that architectural educators today are facing the fundamental task of defining the design process so that objective goals may be established.

In the final paper, "Suggestions on the Preparation of Research Proposals," David R. Krathwohl discusses the meaning of experimentation and research. He points out what is fairly evident to anyone who has been educated in the research process, namely, that one must establish a hypothesis and criteria from which results might be evaluated. He pays some attention to the nature of measure in relation to a given hypothesis and to the chain of reasoning that is inherent in it, suggesting that problems should be limited, and that the objectives which we hope to achieve should be put in a very concrete form; and he points out that the most frequent error made in writing objectives is to make up a set of vague generalities rather than clear-cut criteria, against which the rest of the project might be judged.

It is this reviewer's opinion that while every-

thing that Krathwohl says about research is true and pertinent, there is no substitute for direct experience of the process—experience that is going to have to be gained first hand by the participants in architectural education. If, in fact, the need to establish criteria, objectives and goals for the education of architectural students is going to become a reality, schools are going to have to allow time for interested instructors to gain this experience. It will not be easy, either for the schools or for their staff, who generally do not have the academic training that qualifies or equips them for research. But the rewards will be worth the effort.

DON A. MASTERTON
University of Illinois, Chicago

Collected Papers on Acoustics. By W. C. Sabine. New York: Dover Publications, 1965. \$2

How wonderful to have Sabine's "Collected Papers" available again! An added feature of the new edition is a most perceptive introduction by Professor Frederick V. Hunt of Harvard University, himself a considerable contributor to the field of acoustics.

The original edition was published in 1922, but much of the material had been written as early as 1900 and had been published in such journals as the *American Architect*, the *Brick Builder*, the *Engineering Record*, etc. Sabine realized the need for enlightening the people primarily responsible for the design of buildings and directed most of his writings to them rather than to his fellow scientists.

In these papers he describes very clearly the basic principles that govern the behavior of sound in rooms and the transfer of sound from one place to another. Although we understand them perhaps more completely today, Sabine was one of the first to make quantitative measurements, and he laid the foundations for the modern science of architectural acoustics. That his very pertinent observations should have gone unnoticed all these years by so large a segment of the architectural profession is incredible. Even today, many buildings are erected without benefit of even the most casual consideration of acoustics.

Sabine develops carefully and logically an understanding of the behavior of sound in rooms, and he derives his now classical formula for determining the reverberation time of a space. He shows us why stretched wires can't possibly have any effect on the acoustics of a room and why the distribution of sound in a room is not influenced by air currents used for ventilation, even though this belief has been held by a number of well-known architects and engineers.

Sabine, like many others who work in acoustics, was plagued from time to time with the question

of whether an acoustical result can be predicted in advance. One of his papers on this matter is a rather amusing one on whispering galleries. He ventures that, of the six most famous whispering galleries in the world, all are accidents; could have been predetermined without difficulty; and, like most accidents, could have been improved upon.

In particular, he tells the story of the Hall of Statues in the US Capitol. This has always been famous as a whispering gallery and an attraction for tourists. As originally built, this room had a ceiling that was a portion of an exact sphere with its center very near head level. The ceiling was perfectly smooth, made of wood, papered and painted to simulate coffers. In Sturgis' "Dictionary of Architecture," there is an article on whispering galleries (written about 1899) in which the writer made the observation about the Hall of Statues that "The ceiling, painted so it appears deeply paneled, is smooth. Had the ceiling been paneled, the reflection would have been irregular and the effect very much reduced."

In 1901 a fire in the Capitol led to some general overhauling of the building, and the wood ceiling in the Hall was replaced by a plaster construction. The radius of the original dome was preserved, but instead of painted coffers on a smooth ceiling, actual coffers with recessed panels, moldings and ribs in relief were made in plaster. As a result the whispering gallery lost a large part of its unique quality because these coffers now diffused the reflected sound and the dome no longer had its original focusing effect.

This was cited by critics as another of the mysteries of architectural acoustics and a disproof of the possibility of predicting such phenomena in advance. After all, they said, the new ceiling was made "to conform within a fraction of an inch" to the dimensions of the old ceiling—but only in gross dimension! The change from smooth to coffered surface was overlooked. This was hardly a disproof of the possibility of predicting an acoustical effect but was a convincing demonstration of the conditions that make for excellence in the phenomenon of focusing sound and also the conditions that destroy it, as had already been predicted in the "Dictionary of Architecture."

This book should be read by every student of architecture, not only for its historical interest but because, even today, it has a very pertinent message. There has been great progress in building acoustics since Sabine's day, and much of it has been based on his excellent work. We can hope that now since the book is available again it will have a much wider readership and that its readers will heed the still-to-be-respected advice.

ROBERT B. NEWMAN

Massachusetts Institute of Technology

Chicago's Famous Buildings. Edited by Arthur Siegel. Chicago: The University of Chicago Press, 1965. \$1

A Guide to the Architecture of Washington, D. C. Edited by Hugh Newell Jacobsen. New York: Frederick A. Praeger for the Washington-Metropolitan Chapter, The American Institute of Architects, 1965. \$5.95; paperback, \$2.95

The nearly simultaneous publication of architectural guides to Washington and Chicago invites comparison of the subjects as well as of the books. In most ways two American cities could hardly be more different. Yet one thing they do have in common: Each has, or has had, what can fairly be called an architectural tradition—Washington's neo-classical and governmental, Chicago's functional and commercial. By one of those neat strokes of chronology, the year 1871 was important to both; it was the year of the fire which cleared the way for the great developments of the next three decades in Chicago, and it was the year in which Arthur B. Mullet broke with the neo-classical tradition of Washington's governmental architecture in the design of the State, War and Navy Building.

The editor of the Washington guide tells us in his preface that he "believes that this book is the first compilation of significant Washington structures created for the architectural profession and for those interested in the history of the city as told by its architecture." This is surprising, seeing that the very same Washington-Metropolitan Chapter prepared for the 1957 convention a very useful guide to Washington architecture, which some of us have been in the habit of slipping into our pockets on visits to that city ever since. However, the new guide is without question even more useful; it lists, illustrates and (in most cases) comments upon more than 300 buildings, contains plenty of legible street plans and, thanks to its tall narrow format, can be slipped into the pocket at least as easily as its predecessor. And one can ensure for one's copy the durability that only hard covers can give a book.

"Chicago's Famous Buildings" is as inexpensive as only paper covers and financial subsidy, in this case provided by the Graham Foundation and the City of Chicago, can make a book. It must be the bargain of the decade in books on architecture. After introductory essays by Hugh Dalziel Duncan and Carl W. Condit, Carson Webster discusses 93 buildings and complexes individually. All these are shown in photographs, and no less than 35 of them are further illustrated—believe it or not—with plans. The plans were prepared by architectural students from IIT under the direction of George Danforth, so that this is a book partly by architectural students as well as being a book for

them, suited to their pockets both literally and metaphorically. But the field trips for which it is such an excellent accessory must not be delayed. When I had the opportunity of using it in the field, within a month of its publication, the remarkable Yondorf Building of 1892 (No. 35, with a photograph but no plan) was already coming down.

MARCUS WHIFFEN
Arizona State University

Hannes Meyer: Buildings, Projects and Writings.
By Claude Schnaidt. New York: Architectural Book Publishing Co., 1965. 182 pp. \$16.50

Walter Gropius, in the July 1963 issue of the *Architectural Review*, wrote: "Hannes Meyer was a treacherous character, which I did not recognize early enough. I believe that Hannes Meyer's inner downfall was his denying art as such. It narrows the field, if the rational point of view is made the only factor."

Gropius, of course, recommended Meyer to succeed him as director of the Bauhaus in Dessau. In the passage quoted above he confounds two issues, the personal integrity of Meyer and the latter's attitude toward art, but his remarks direct attention to the reasons why Hannes (as we called him at the Bauhaus) has become so controversial a figure today. Gropius goes too far when he calls Hannes "a treacherous character." It would probably be more accurate to say, with some who knew him well, that Hannes was an immature person. But he was an outgoing individual who associated informally with the students in a way that a reserved man like Mies van der Rohe was never able to do. Hannes treated me well during the two years (1928-30) I studied at the Bauhaus under his directorship. He was proud of the fact that his school attracted students from many countries and I, as an American, was a kind of exhibition piece.

I got along personally with Hannes Meyer; yet, having been schooled at Columbia University to think of architecture as an art, I gradually became uneasy under Hannes' professed functionalism. I say "professed" because though Hannes constantly preached this desiccated dogma he was, in fact, as much an artist-architect as anybody. He scrupulously avoided any reference to esthetics and applied the word "psychological" to the nonfunctional adjustments he made in his architectural designs. In any event, I was not unhappy when

Hannes left the Bauhaus and Mies became head of the school. There was never any doubt about Mies' intentions. Though he had been a friend of Karl Liebknecht, he concentrated on the art of architecture, an amoral and unsocial objective to a person of Hannes' turn of mind.

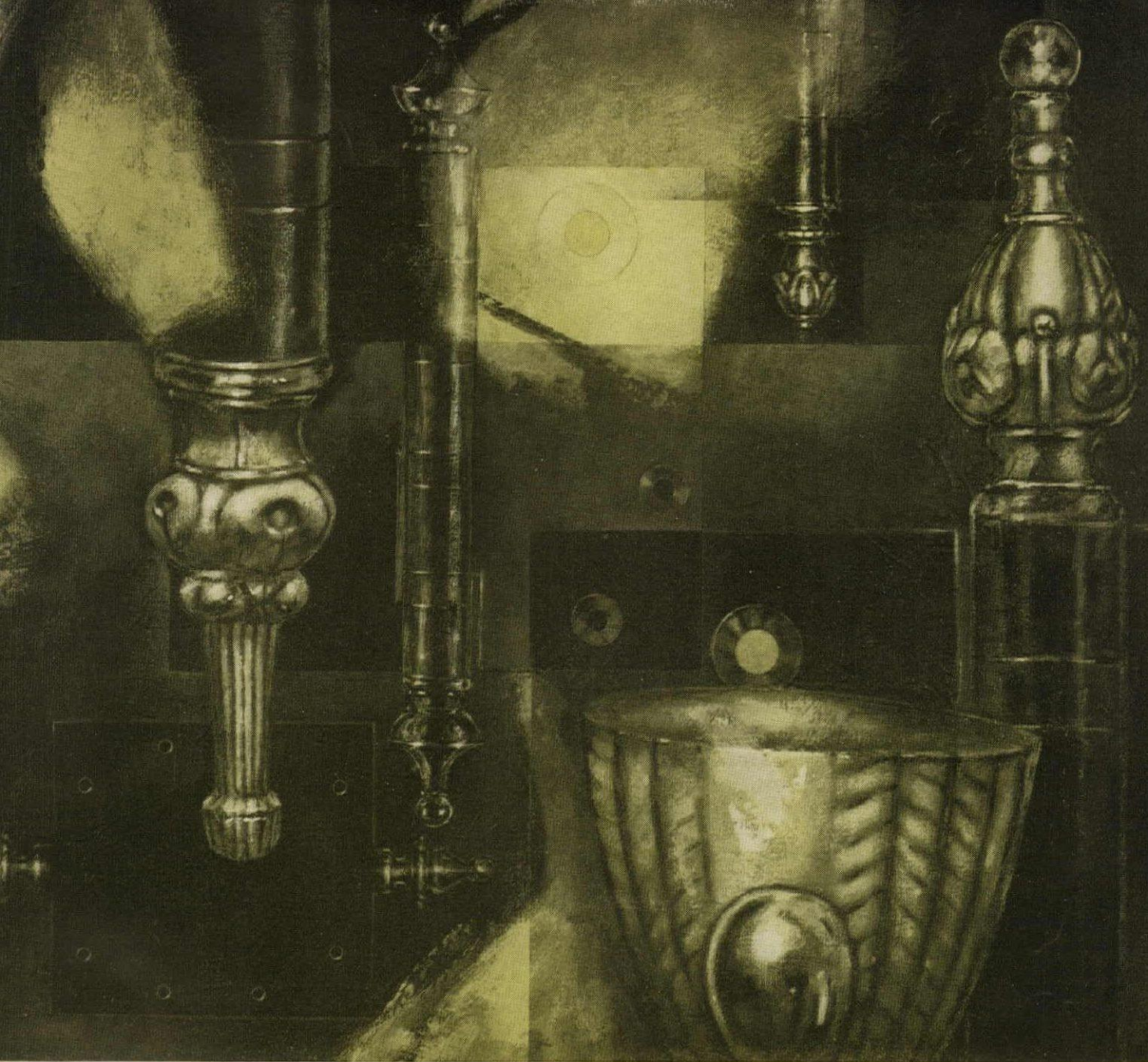
This brief personal view of Hannes has some bearing upon the main points in Schnaidt's book. There has recently been a revival of the cult of Hannes Meyer and functionalism, thanks to the efforts of Tomas Maldonado and Schnaidt at the Hochschule für Gestaltung in Ulm. Hannes is their great god, just as Gropius is for many and Mies is for me. Those who love Hannes and his viewpoint will doubtless not find Schnaidt's iteration and reiteration of his dogmas tiresome, as I did. They do not, in my opinion, deserve so extended a treatment, although some kind of book was due Hannes. But the Bauhaus was where he established his reputation; one can learn more about his accomplishments there from Hans Maria Wingler's book "Das Bauhaus" than from the present volume.

Schnaidt makes certain mistakes in his book, such as saying (p.37)* that Henry van de Velde "appointed" Gropius as his successor as head of the Arts and Crafts School in Weimar and (p. 39) that Albers' criteria "were economic rather than esthetic." (That's for the birds!) Such mistakes occur when an author knows little about his subject except "what he reads in the newspapers." In the preface, too, Maldonado makes some dubious statements. Among other things he says: "The fact that neither the author of this monograph nor the writer of these lines was personally acquainted with Meyer should not be construed as a drawback. On the contrary, bearing in mind what has been said above, it might even be an advantage. Indeed it might be regarded as a guarantee if not of an absolute . . . then of a relative impartiality."

That's also for the birds. If Schnaidt had known Hannes Meyer, he might not have felt it worth his while to write the book.

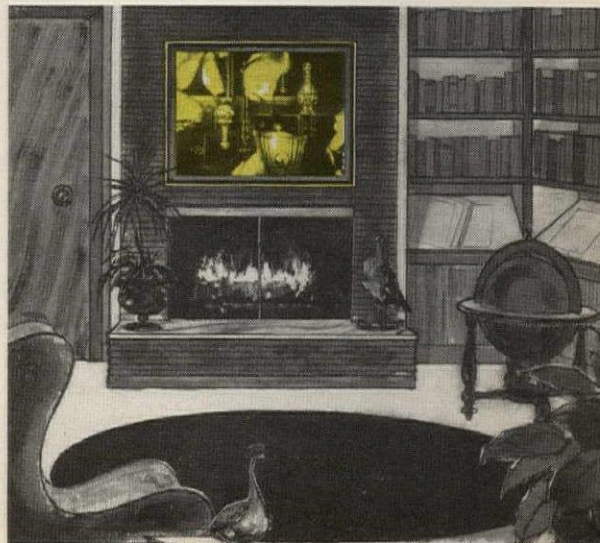
HOWARD DEARSTYNE
Illinois Institute of Technology

* This and the page referred to below are found in the first part of the book, which contains a lengthy "introduction" by Schnaidt and runs to 59 pages. The page numbers are Arabic. In the body of the book, entitled "Buildings and Projects," the Arabic pagination starts all over again so that in giving a page number one has to indicate which part of the book is referred to. This, of course, is a complete nuisance.



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Fresno's six-block downtown mall.

grounds. Project of the City of Fresno, the Downtown Association and the Redevelopment Agency; Victor Gruen Associates, architects.

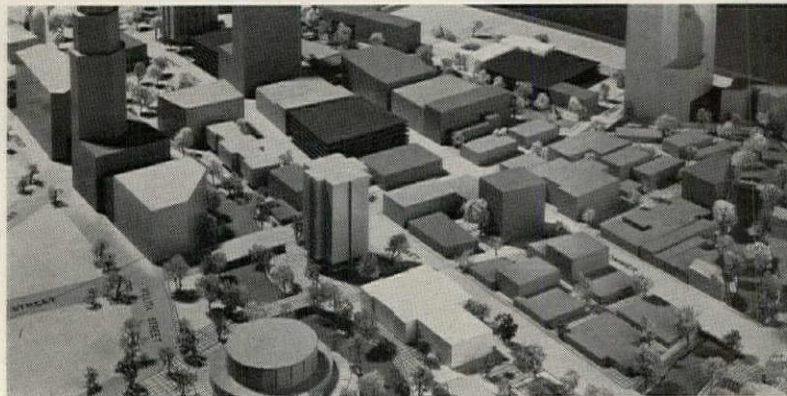
Urbana, Ill.—The downtown redevelopment accomplishment has airconditioned pedestrian walkways,



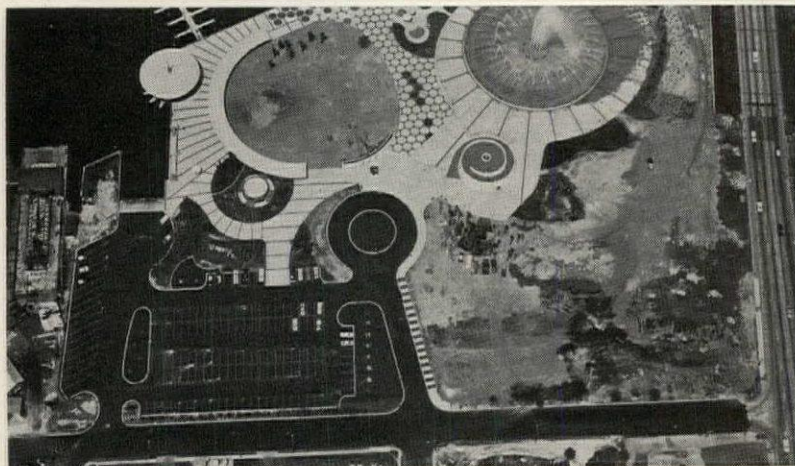
Urbana's commercial center.

courts and arcades serving a nine-block area. The amenity-rich project represents, the citation noted, a beautiful commercial and recreational center. The result of the cooperative efforts of the Urbana Economic Development Committee, the Urbana Association of Commerce and the City Council; Carson, Pirie, Scott & Co., developer; Victor Gruen Associates, architects.

San Antonio—Paseo del Rio is a striking example of what can be done to make rivers positive places of enjoyment. Now the city, following the voters' approval of a \$30 million bond issue, is proceeding with the conversion of the river



San Antonio's along-the-river project with shops and restaurants.

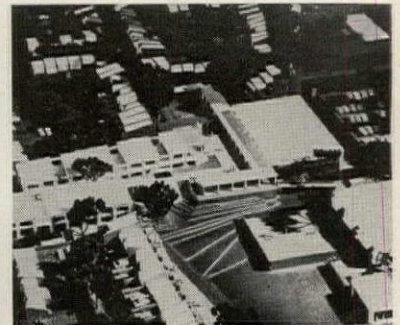


Jacksonville's park between the bridges on the banks of St. John's River.

area to a delightful neighborhood of shops, restaurants and an open-air theater. Project of the City Council, the River Walk Commission and the Chamber of Commerce; San Antonio Chapter AIA, master planner.

Jacksonville — Here the city fathers over a 15-year period succeeded in shifting the downtown center of gravity to the banks of the St. John's River. The magnitude of the job also required a wide range of business leadership and civic conscience. Now government buildings stand among commercial structures, a park and a marina to compose an urban center of growing distinction. Previously forlorn river banks possess a trim beauty.

Louisville—Thirty-four acres in the west downtown were to be redeveloped and the Urban Renewal and Community Develop-



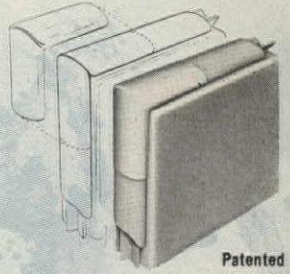
Louisville's urban renewal village.

ment Agency decided on a national design competition. The winner was Louisville's own McCulloch & Bickel. The firm's "Village West" plan held the "greatest promise of providing qualities of good living within a coordinated neighborhood development," the jury said. Among features are a rich mixture of housing types and the separation of pedestrian and vehicular traffic.

Washington, D.C.—The large (560 acres), close-in urban renewal project that was cited grows increasingly elegant. Started in 1951, the Southwest Redevelopment Project is primarily a residential matter with a redevelopment plan providing for 6000 dwelling units. But government buildings, legitimate theater, church, shopping and other facilities either have been installed or are planned. Project execution lies with the D.C. Redevelopment Land Agency. Capi-

Continued on page 76

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tol Park Apartments (architects: Chloethiel Woodard Smith & Associates), completed in 1959, was the first addition to a former slum.



Washington's close-in renewal.

Philadelphia—This city's Society Hill program has been called the answer to the question: How can a downtown area compete with its own suburbs? It is the result of a City Planning Commission scheme for a series of small parks and footpaths to link historic structures scattered through a venerable but blighted neighborhood. The solution of I. M. Pei FAIA for the Webb & Knapp submission in a Redevelopment Authority competition placed three-story town houses op-



Philadelphia's old-new Society Hill.

posite and adjacent to a historic church and the 18th century houses in the area, concentrating three simple apartment towers well removed from the historic structures. This plan, employing the greenway system as a positive force in the design, was immediately adopted. A business leaders group called Old Philadelphia Corp. played a key role in fostering the greenway plan.

Charleston, S.C.—The program restores and preserves historical

architecture that encompasses the entire city and dates back to 1923. Colonial and early American structures give a charm to the city that attracts visitors from throughout the world. These structures are occupied, a landmarks-in-use concept termed a practical approach to preservation. Charleston city and county governments, a number of historic organizations, members of South Carolina Chapter AIA, the



Charleston's preservation program.

Charleston Council of Architects and Albert Simons FAIA and other architects serving on public agencies are very much involved in the continuing program.

Minneapolis — The Gateway Center provides a new, up-to-date city core as the result of a long and successful campaign to bring housing, office buildings, cultural facilities and green acres into a once blighted site. Recreated was a symbolic entrance to the city. Sweeping changes were made so unobtrusively that many residents have forgotten what the area looked like seven years ago. Cited were the City Council, the Civic Center Development Association, the Chamber of Commerce and the Downtown Council.

Hartford—Constitution Plaza is perhaps the nation's outstanding example of what the "platform cities" of the future will be like. A huge, landscaped pedestrian plaza forms the platform and holds business buildings, while underneath are unburied and thus accessible utility lines as well as a large parking garage. A project that proves beauty is good business since it produces \$1,456,000 per year in tax revenue from a site that used to yield \$90,000. Urban renewal project sponsored by the Travelers Insurance Co., with master plan by Charles DuBose FAIA.



Minneapolis' symbolic entrance to the city center.



Hartford's landscaped "platform city" with utilities underneath.

AIA on Broadway

THE NEW YORK premiere of "No Time for Ugliness" was a victim of the power failure that struck the Northeast. The Guggenheim Museum showing was scheduled for Nov. 9, night of the colossal blackout.

The national premiere in Washington, D.C., went off without a hitch, however, and early bookings across the nation have been encouraging in their number.

And in New York the grand showing, to which more than 450 government, cultural and press leaders were invited, was rescheduled for this month, the date at presstime remaining to be set.

The movie won a silver medal in the city and urban construction development category at the Fifth International Film and TV Festival in New York.

Moreover, despite the short circuit, it had a five-day run in Broad-

First-Run Showings: A Washington-premiere foursome—AIA President Morris Ketchum Jr. FAIA; New York Congressman James H. Scheuer; Mrs. James E. Webb, wife of the NASA administrator; and First Vice President Charles M. Nes Jr. FAIA—review the brochure that accompanies the film, which ran for five days on Broadway (see marquee).



way's Trans-Lux Theater in late October. The theater shows documentary films.

The Washington premiere was held Oct. 18 at the Corcoran Gallery of Art Theater, followed by a reception at the Octagon House.

The film was made available to the public in late October, and by mid November more than 200 bookings were reported by Sterling Movies USA, the distribution agency.

Schools and universities, art, garden, civic and fraternal organizations, industries and chambers of commerce, the National Park Service and a trailer park, of all things, were among early users of the film.

AIA chapters are also making key use of the movie in notable instances. The Southern Oregon Chapter, for example, arranged to have it shown over two television stations in Medford and a third in Klamath Falls.

The Philadelphia Chapter and WCAU-TV presented the film to residents in that area. AIA components in Boston and Denver also set up big showings, Denver's for some 700 persons from throughout Colorado. In Illinois a showing of the movie was arranged through AIA efforts there for this month's Governor's Conference on Natural Beauty.

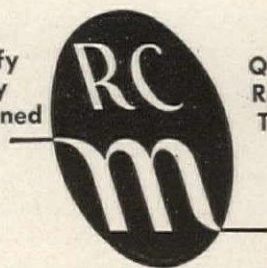
Price of the movie to chapters and components is \$35 for the first copy and \$70 for each additional copy. Two hundred copies of the film's accompanying leaflet entitled "No Time for Delay" are being sent with each film order. They are distributed to the viewing audience.

The cost of the film to individuals, including AIA members, and to non-AIA groups is \$100 per copy, with no reduction in the price for the first copy.

For bookings, requests are to be sent direct (a minimum of 10 days in advance of need) to Sterling Movies USA, Booking Exchange, 43 E. 61st St., New York, N.Y. 10023. Sterling has forwarded to all chapter-components its standardized forms to facilitate the handling of such requests. ■

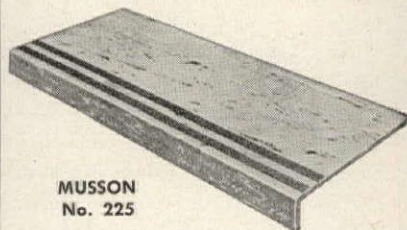
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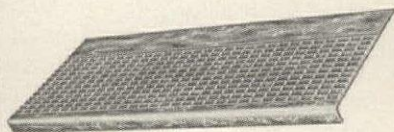


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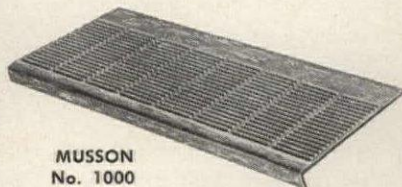


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Codes Go to the Fair

Jeffrey Ellis Aronin AIA pays a tribute to the operation of the World's Fair Building Department and cites the lessons to be learned. A member of the Institute's Committee on Building Regulations, he was co-architect of the Philippine Pavilion and architect of the Salvation Army and Pearl of the Orient projects at the Fair.

FIFTY MILLION times in 1964 and 1965 paid admissions clicked through turnstiles at the New York World's Fair. They also clicked on countless other occasions for holders of free passes and employee cards. What a responsibility was implicit in this for architects, exhibitors and the Fair corporation!

With that many people traipsing through unconventional building types, the greatest of safety precautions had to be observed. This was the responsibility of the World's Fair Construction Permit Office (Building Department) whose operations under William Douglas and William J. Kelly are indeed to be commended and considered for application in communities throughout the country. For as the Fair closed:

(1) There was not one instance of injury resulting from a building violation.

(2) Plans were processed with a speed unheard of in New York City, large building approvals being obtained in three weeks instead of the more usual six to eight months.

(3) The World's Fair Building Code in many respects was identical to the very restrictive New York City Building Code, yet a flexible interpretation, administration, system of appeals and professional approach allowed reasonable variances and permitted jobs to proceed on schedule.

All three items are significant because they reinforce the AIA Committee on Building Regulations' belief that the interpretation and administration of building codes is as important as the codes themselves, and that such interpretation and administration should be handled by competent persons.

Credit for the New York World's Fair Building Department goes to engineer Douglas, now an officer of Tishman Realty & Construction Co., Inc.

In 1959 Douglas was asked by Fair President Robert Moses to organize a crash program that would develop a code related to the needs of architects and engineers at the Fair. He did this not by copying a specific code but by referring instead to generally accepted standards—except for the electrical portion. For political reasons, union insistence forced the acceptance of the City Electrical Code even though this resulted in such unnecessary and costly requirements as the encasement of all-steel conduit in concrete.

Douglas emphasized safety but gave little attention to such items as waterproofing or flashing because of the short life of the buildings. The result, although actually a *specification code* now often thought outmoded, was *interpreted* by Douglas and his staff as a performance code.

Whom did he get for his staff? Given about \$35,000 for salaries, Douglas, instead of hiring six inexperienced inspectors at \$5000, employed three competent ones at an average of \$12,000. Each staffer was responsible for his professional engineering license.

Douglas also hired consulting firms—Purdy & Henderson or Eipel Engineering for architectural and structural problems, and Syska & Hennessey or Krey & Hunt for mechanical and electrical matters—to review plans and make recommendations. He was empowered to authorize variances and never hesitated when one was justified, despite the fact that he, not the Fair, would be personally accountable should trouble develop.

He looked upon the Fair's Building Department as a service organization. Although application fees were three times the rate of New York City's, the service was worth the price. Speedy attention was given by competent personnel. Owners, architects and builders

were not kept waiting nor paying the bill indirectly.

Douglas finds it hard to comprehend why communities do not streamline their own building departments and get plans processed expeditiously so that the projects can be built rapidly and put on the tax rolls. Building department bureaucracy in New York City alone costs the people millions annually: large corporations hesitate to build within city limits—there are too many problems. And the trouble is multiplied again in smaller suburban communities where building departments are only equipped to handle house construction.

The solution chosen by the World's Fair Construction Permit Office may be applicable elsewhere, in villages, towns or rural areas (in fact, everywhere except the big city) where the authority of local building officials can be supplemented by a central office adequately staffed by well-paid, highly competent design professionals who could direct their attention to building throughout a wide region. In other words, let the local authorities administer the building departments, but send the project drawings for examination to county, state or region-wide consultants—just as the World's Fair in essence did with its plans, and just as may be done now by communities using the code of the International Conference of Building Officials.

A new breed of professionals is needed; perhaps, if adequately paid, they can be drawn from the present supply of architects and engineers. A central consolidation of building codes specialists, rather than a multiplicity of poorly staffed departments throughout an area, would permit proper salaries and minimize or eliminate the graft so often reported in some parts of the country.

There will be arguments pro and con for years about the architecture at the New York World's Fair, about its administration and its financial setup. But one thing architects can rightly commend is the Fair's Building Department. ■

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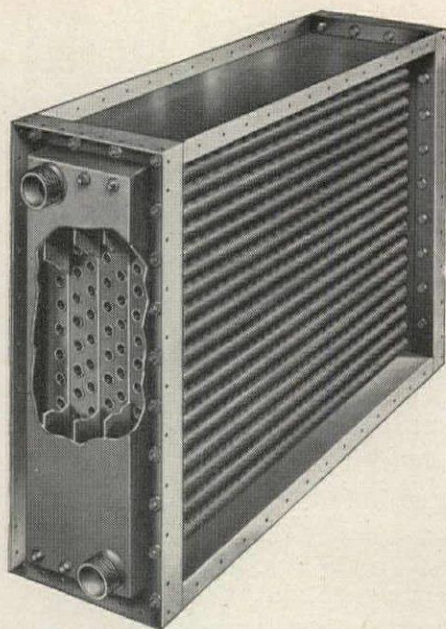
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January-December 1965

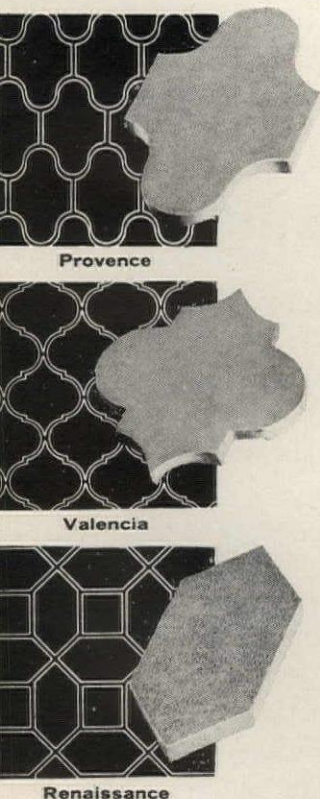
Volumes XLIII-XLIV

This year's Index, which will *not* be bound in a regular issue, will feature subject, author and title classifications.

In addition to the center-of-the-book general articles, the Index will include the Association of Collegiate Schools of Architecture section (three installments) and such departments as Octagon Observer, Comment & Opinion, Unfinished Business and Books.

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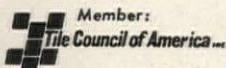


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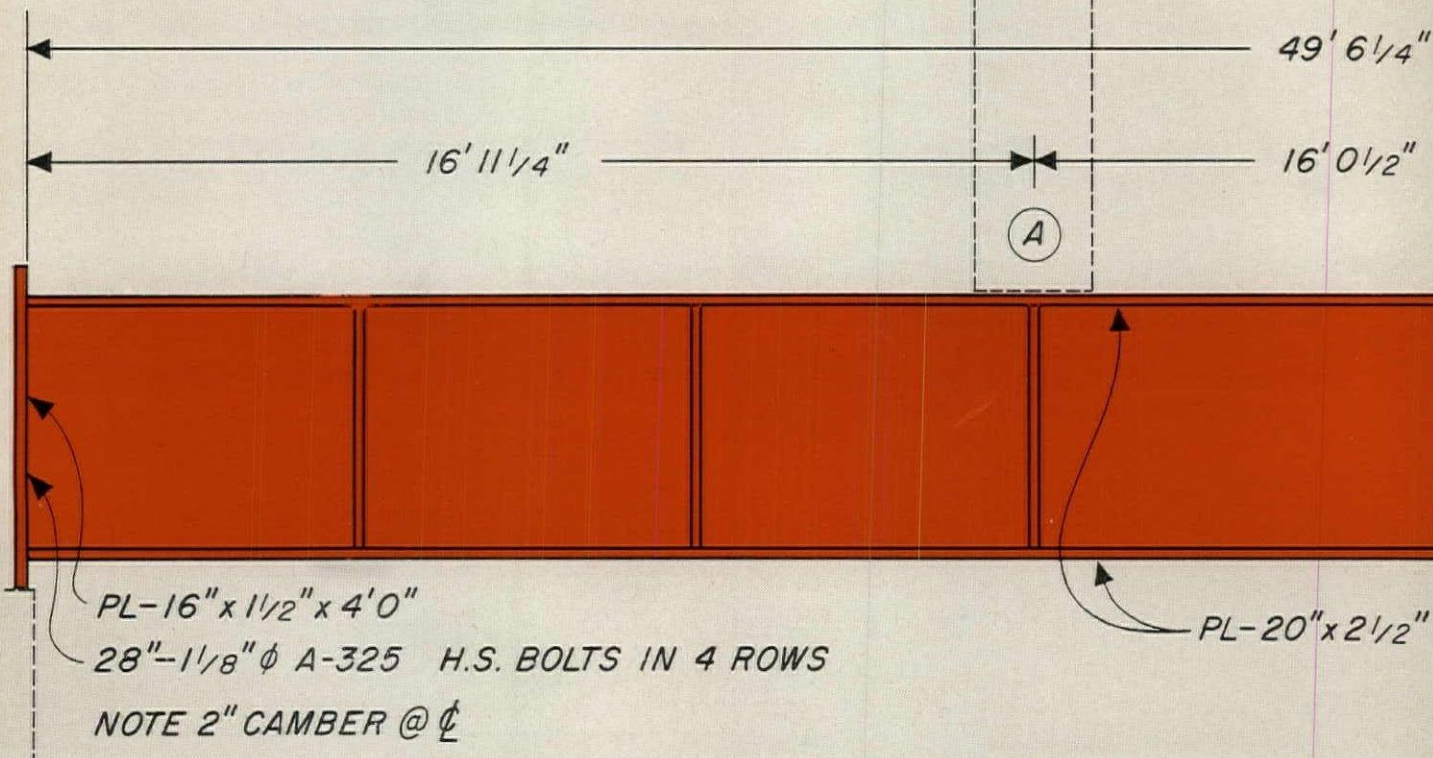
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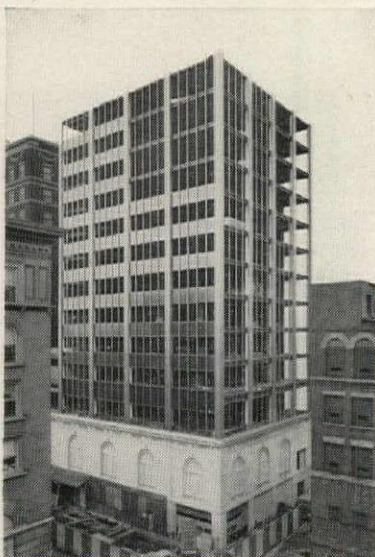
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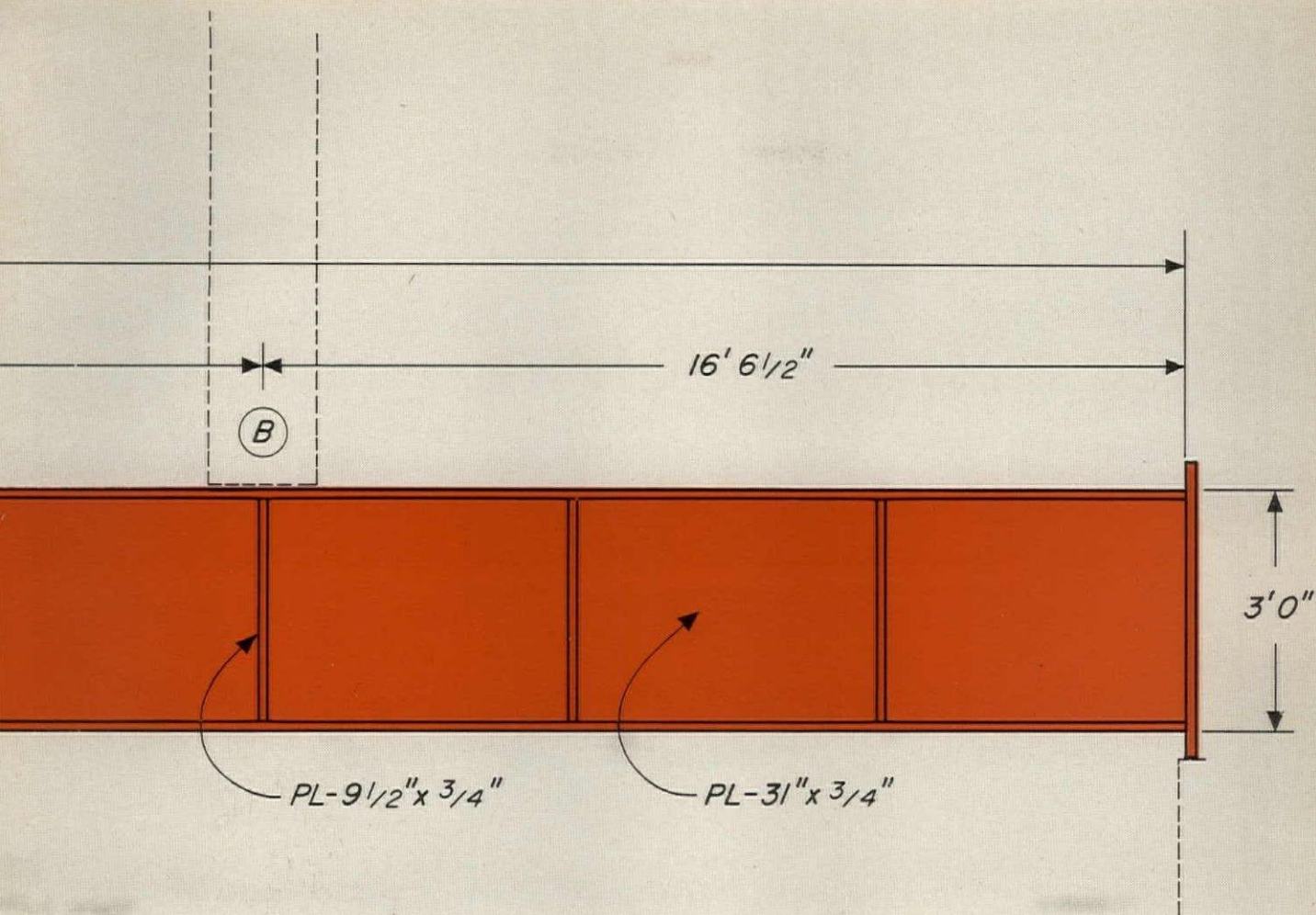
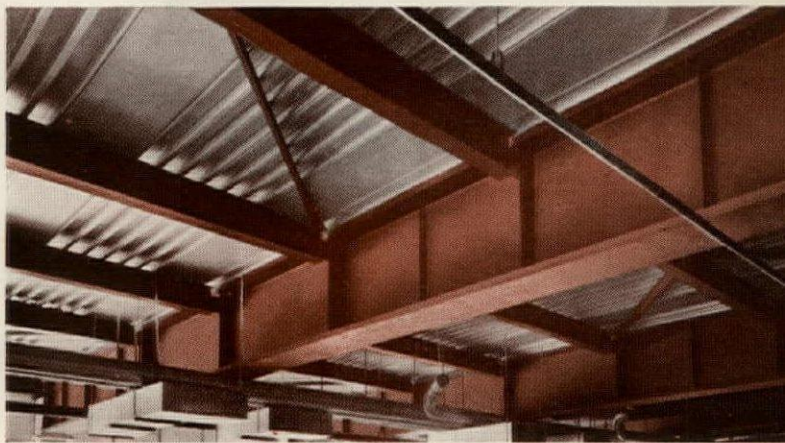


Diagram of girder construction. Columns are placed at points A and B to support the 10 floors above.

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