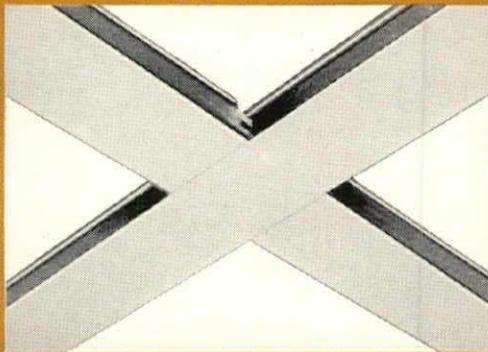




Official Convention Guide

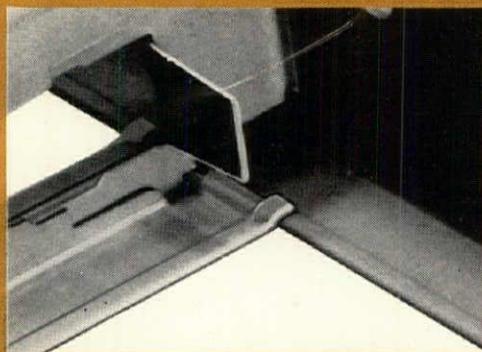
No butts about it!



Viewed from below, Firesafe's flanges meet perfectly. Actually, there's an over-riding lip. In case of fire, expansion is facilitated; structural integrity maintained. What goes up need not come down!*

Yet, members are locked in tension to resist torsional and lateral displacement. See Sweets 14c/Ea, or write for complete specs.

*A component of fire-resistive assemblies listed by U.L.



Tablock Firesafe



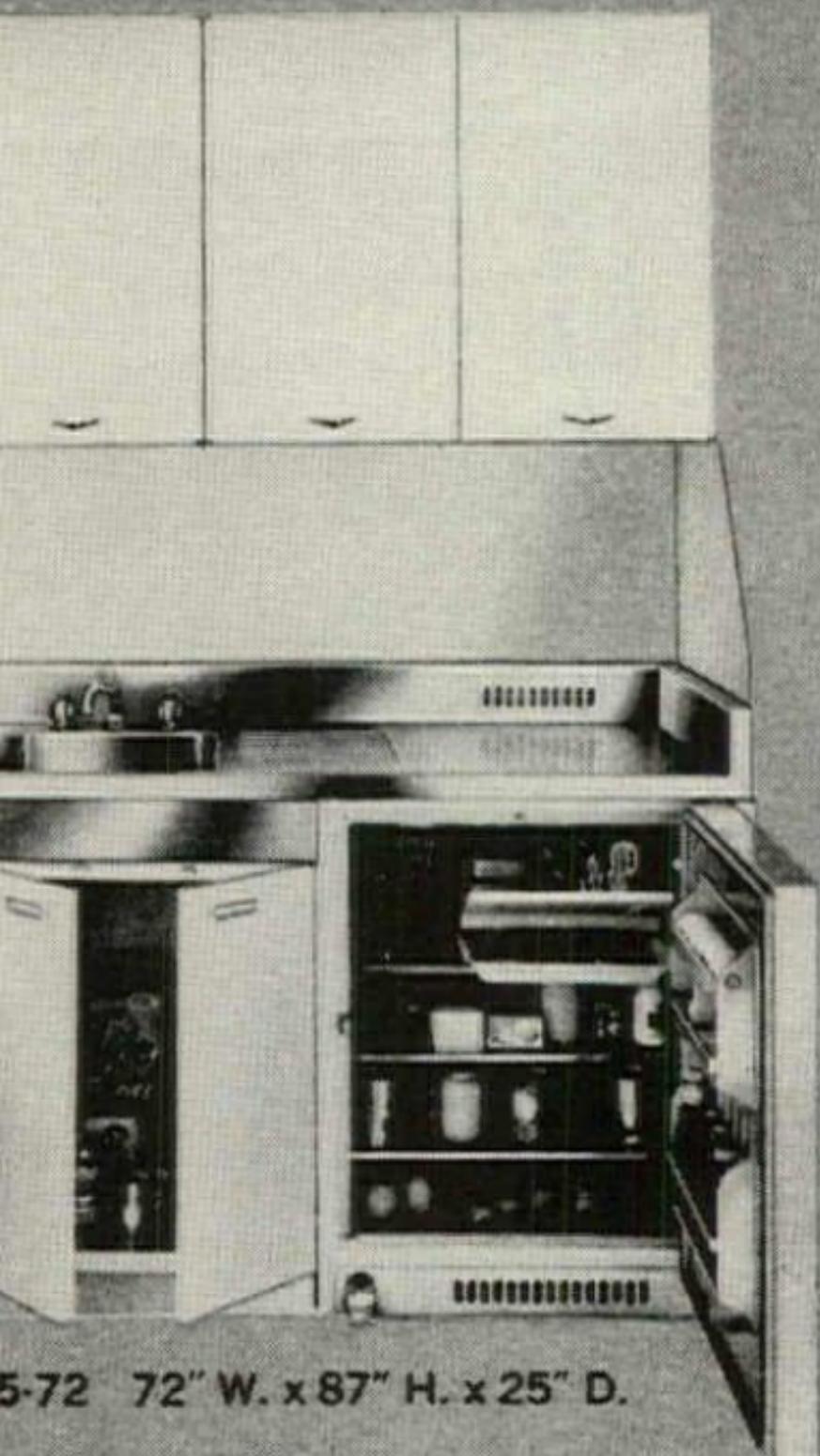
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ciates, Inc., Furniture and Textiles, 3



5-72 72" W. x 87" H. x 25" D.

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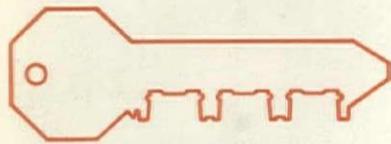
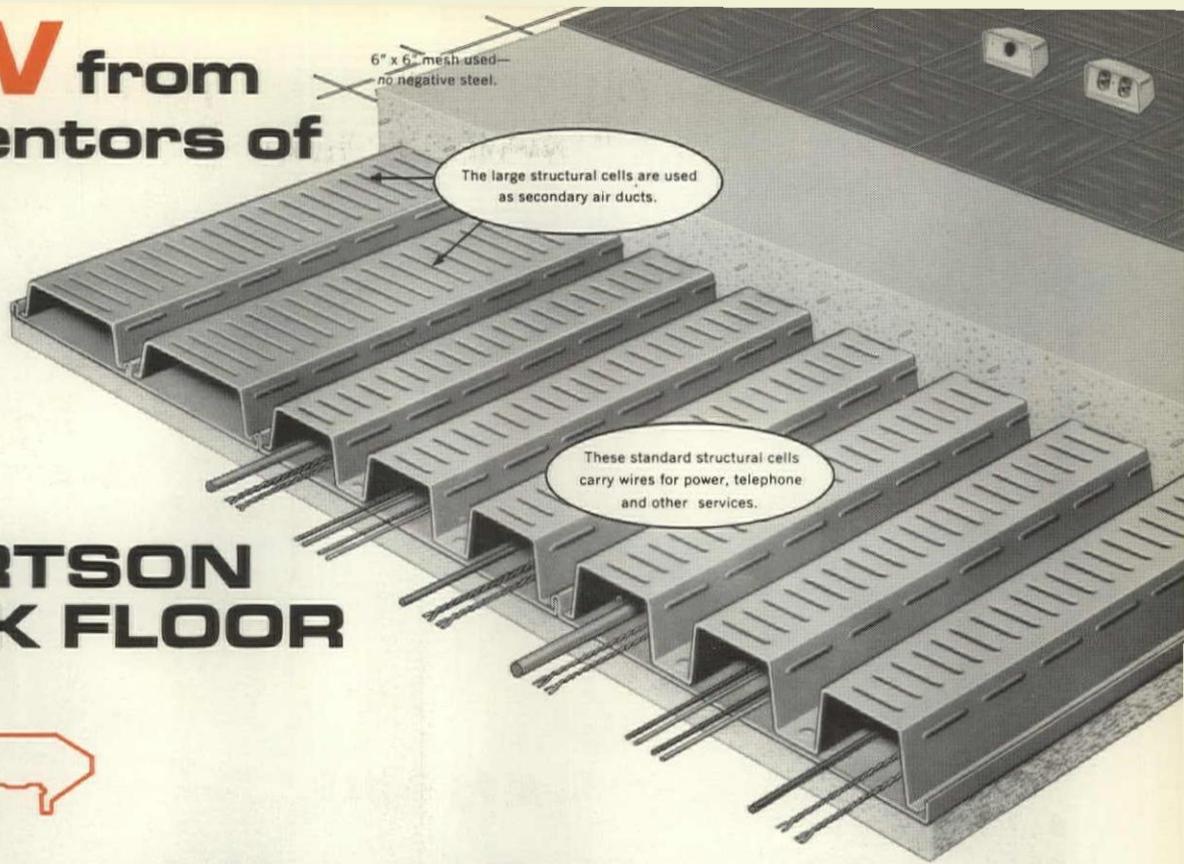
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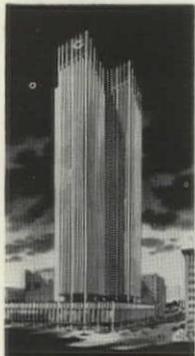
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RECENT Q-LOCK INSTALLATIONS



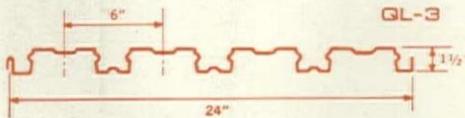
Crocker-Citizens National Bank, Los Angeles, Calif. William L. Pereira, Architect; Brandon & Johnson Assoc., structural engineers; William Simpson Construction Co. and Dinwiddie Construction Co., general contractors.



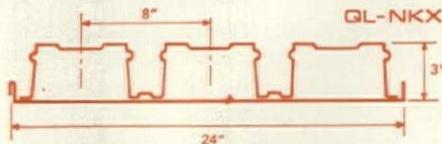
Atlanta Gas Light Tower, Atlanta, Ga. Edwards & Portman, Architects; J. A. Jones, Construction Co., general contractor.



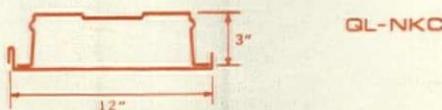
Vocational School, Springfield, Ohio. John L. Kline, architect and structural engineer; Fry, Inc., general contractor.



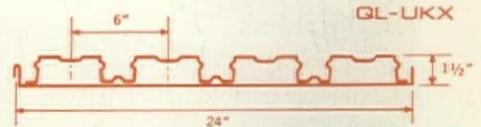
This is a highly economical deck where long spans are not necessary. Can be used with studs weldable through deck as a part of composite frame construction with further economies (often a reduction of 1 pound/sq. ft. in framing of structure of building).



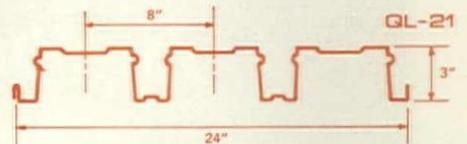
With the welded bottom plate this style provides electrical raceways.



This wide structural unit (used in pairs) also functions as a secondary duct for air conditioning.



This type is similar to QL-3 except that the flat bottom section gives it greater span capacity. It can be used electrically.



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VOL. XLVII, NO. 5

Comment & Opinion

Creating an Image: Continuing last month's discussion of building products and their uses, we turn to the concept of "The New Producer," geared to provide the materials and technology "The New Architect" will need in the challenging years ahead. It is essential today that the practitioner and the manufacturer work together as a team, that each comes to understand and appreciate the attitudes and problems of the other.

Displaying the Wares: A good start in this direction is the opportunity afforded both parties during the Building Products Exhibit (see pp. 226-27 for the complete 1967 listing), an annual feature of the Institute convention. Visiting hours are set up so as not to conflict with the professional sessions. Surely the AIA exhibits are far above the caliber of other trade shows and, generally speaking, improve from year to year in their usefulness to those who really take the time to pursue them.

For this is one segment of a long-range program on the part of manufacturers, and supported by Producers' Council, Inc., an AIA affiliate, to upgrade not only the quality of their products but their advertising and literature as well—a subject of major concern to the AIA JOURNAL itself.

Paying the Piper: Now we editors know only too well how some of our readers respond to this business of advertising and that there are those who say they would eliminate it entirely if they had

their druthers. But it is an unrealistic point of view.

The truth of the matter is that "a magazine cannot grow and prosper without advertising," as the JOURNAL publisher put it back in 1965. "Thus a magazine has a second group of customers: companies that believe the readers are important enough and numerous enough to warrant an attempt to inform and influence them through dollars spent through advertising in the magazine."

It may surprise a good many architects that readership surveys, in the main, will support the notion that the advertising messages receive as much attention as the editorial content, i.e., provided the former does its proper job of educating and/or stimulating.

Upgrading the Ads: That manufacturers are really trying to do better is evident by the success of the first

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Cover

Grand staircase in the new Metropolitan Opera House. Courtesy of Wool Carpets of America

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annual Conference on Advertising and Product Literature in the Construction Industry, for which the AIA was one of six sponsors, held in New York City last fall. It prompted the second, another two-day meeting, scheduled for Chicago Oct. 23-24. Again, it will permit the producers, their marketing executives and advertising agencies to exchange ideas with practicing architects.

Quoting the Professionals: At the New York conference, for instance, Milton Bischof Jr., AIA, of St. Louis, said: "In our office we have two types of files—one for technical information and the other for promotional or, as we call it, 'Design Possibilities' or just simply 'Uses.'"

Bischof further told the admen: "The services you offer an architect on behalf of the manufacturer or distributor and how to obtain them are often a prime consideration in deciding which product to use," and this, of course, can be a logical function of magazine advertising.

The importance of technical data was made clear by Harold J. Rosen, chief of the specifications department of the New York office of Skidmore, Owings & Merrill, when he declared:

"In many instances the manufacturer's literature will be the only source of information available to an architect or engineer for his consideration. His place of business may be far removed from territory covered by the manufacturer's representative or his sales engineer. If the architect decides to use the material or equipment, he will be limited in his detailing and describing the material to the extent that it is detailed or described in the product literature."

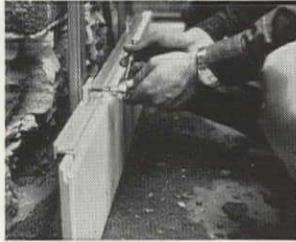
R. Lloyd Snedaker, FAIA, drawing on his own experience as a principal in Salt Lake City, offered the suggestion that "too little of our current technical literature includes information on shipping limitations and protection requirements." He cited the case of decorative stone, which involves the risks of quarrying or cutting a certain size slab, the means for fastening, etc., all having "an influence on the ultimate cost and therefore its logical place in the structure."

With such give and take on both sides of the fence, product advertising and literature can only improve in quality, taking its rightful place in the professional press and on the practitioner's shelves and in his files. ROBERT E. KOEHLER

There's a new way to dress old buildings in Marble



Vertical struts are anchored to existing facade.



Horizontal members fastened by special clamps.



Horizontal supports lock into grooves in edge of $\frac{7}{8}$ " marble.



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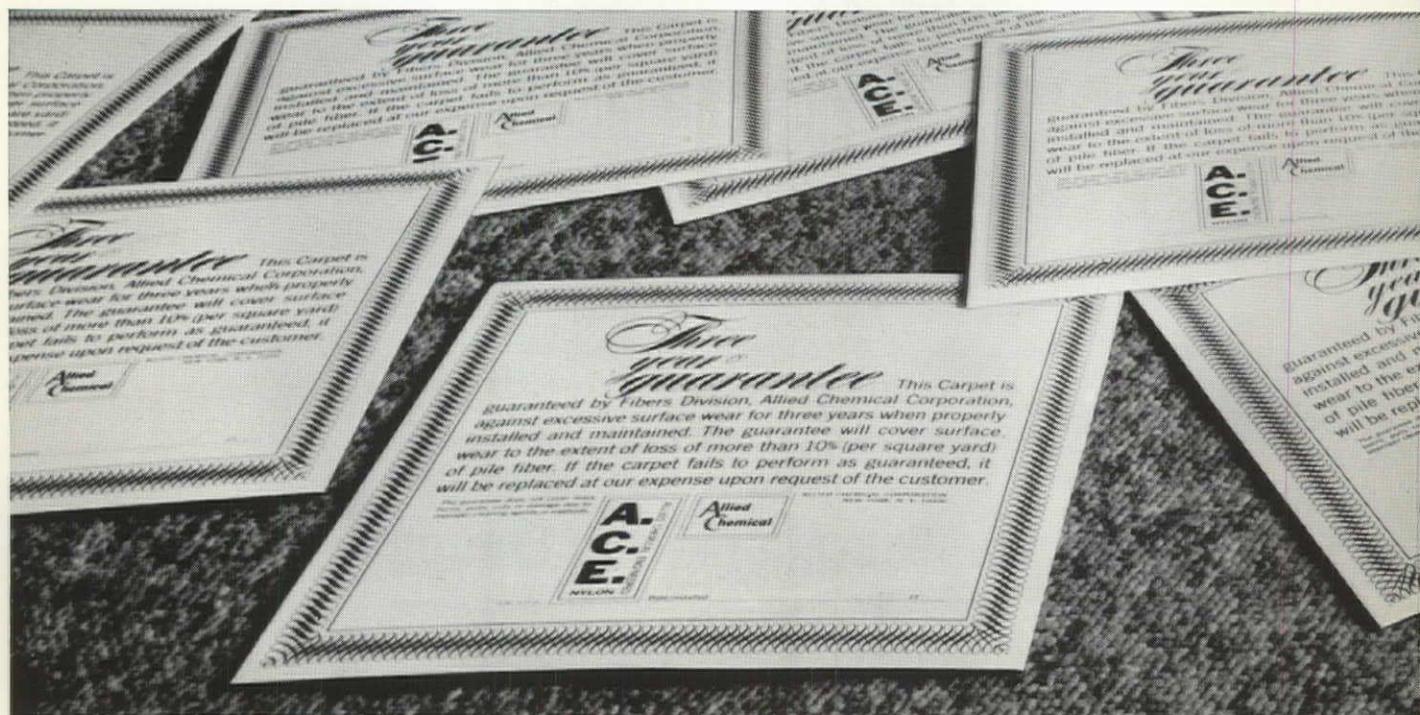
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Now everyone in the business—mill, distributor, specifier, even customer—can hand over to us, Allied Chemical, total responsibility for A.C.E.™ surface wear! Already there are more than 40 A.C.E.-labelled qualities in the market that have met the rigid performance standards required for this new selling concept.



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Please send information on mills carrying A.C.E. carpets.

Please have a representative call on me.



Newslines

Convention Is Readied— Nes Says New York Fits Theme of 'New Architect'

The 1967 convention of The American Institute of Architects has been given a form that suggests borrowing of a convention city utility's motto: "Dig we must!" Convention digging will seek to uncover a view of "The New Architect."

With this as the theme, Institute President Charles M. Nes Jr., FAIA, regards New York as "the perfect setting" for the May 14-18 national get-together which is expected to be the largest in the Institute's 110-year history.

Nes said the convention, like the convention city, will demonstrate "why the best of today may not be acceptable tomorrow, and why what we have deemed acceptable will almost certainly be judged intolerable by future generations." The convention, he added, "will point out some of the ways in which our profession may prepare itself to meet the future."

Program, business and social events have been readied for the session headquartered in the New York Hilton Hotel. So have Host Chapter events—the New York Chapter AIA will be celebrating its 100th birthday.

The business sessions will include a required second and final approval of the plan to transfer ownership of the Octagon House to the AIA Foundation. Proceeds from the sale, \$650,000, will supplement the Institute's equity in its expanded building program, made possible through the acquisition of the nextdoor Lemon Building property (for \$678,000).

A \$950,000 contributions campaign—the contributions going to the Foundation—has turned the corner and is heading into the home stretch. The difference between the campaign goal and the Octagon purchase price will be used to restore the 167-year-old Georgian house.

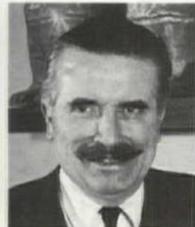
One Institute office was in contention at presstime: the first vice presidency. George E. Kassabaum, AIA, now one of the three AIA vice presidents, is in a race with George Vernon Russell, FAIA, of Los Angeles.

Russell is a former president of

the Southern California Chapter AIA and a former director of the California Council AIA. He has served on several national awards juries as well as the International Relations Committee and the 1966 Convention Committee.



Kassabaum



Russell

Kassabaum, of St. Louis, will be completing his second year as a vice president. He has served as chairman of national committees and is at present chairman of the Council of Commissioners. The council is made up of the chairmen of the five national commissions.

The three vice presidencies and the treasurer's job are also up for filling. Additionally, six new directors will be installed.

Nominated as Institute directors are Max O. Urbahn, FAIA, New York, New York Region; Joseph Tuchman, Akron, Ohio Region; Joseph H. Flad, Madison, Wis.,



Urbahn



Tuchman



Flad



Bourne



Little



Ryan

North Central States Region; Philip W. Bourne, FAIA, Boston, New England Region; Sidney W. Little, Tucson, Western Mountain Region; and A. Bailey Ryan, Louisville, East Central States Region.

Eighty-two members will be received into the College of Fellows (see listing on pp. 66-67) and Honorary Fellowships will be bestowed on Alfred Alvares of Hong Kong, Viscount Esher of England, Charles Fowler of Canada, Karl Schwanzer of Austria and Junzo Sakakura of Japan.

Of all the conventions honors, the most prized is the Gold Medal, which will go to New Yorker Wallace K. Harrison, FAIA.

Dr. Marshall McLuhan is the convention's inaugural speaker, delivering the third Purves Memorial Lecture. Speakers at subsequent theme sessions are Dr. Harold Taylor, Charles Luckman, FAIA, New York Mayor John V. Lindsay and Arthur C. Clarke. Workshop meetings will follow the theme events.

The Institute Board of Directors at its March meeting adopted several resolutions on the Octagon House. The Octagon Committee was authorized to develop a detailed program for the mansion's restoration, which will have all of the first floor and several of the basement spaces, including the kitchen and wine cellar, restored to their 1828 condition. They will also be furnished as they were that year, which marked the end of occupancy by the original owner, Col. John Tayloe.

The Institute will issue citations to the New York Chapter in commemoration of its 100th anniversary and to Dr. Frank Stanton, CBS president, for his demonstrated dedication in the sponsorship of good design.

Special Hospital Session To Precede Convention

A special conference will be held by the New York Chapter AIA in conjunction with the convention. The sessions will investigate the role computers and other information handling devices are beginning to play in the operation of hospitals and the effect this is likely to have on planning and design.

Continued on page 14

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The May 13-14 conference will be held at the Roosevelt Hotel—one block south of the convention's Hilton Hotel headquarters.

This annual conference of the host chapter's Hospitals and Health Committee will include morning and afternoon sessions Saturday, to be broken by a luncheon served at the hotel, and a final session Sunday afternoon, followed by a cocktail party. The program also includes a visit to one of the most advanced computerized hospitals.

The conference will stress active participation of registrants, a chapter spokesman said.

Restore the West Front, AIA Urges Following Special Task Force Study

The Institute in a report based on a special task force study recommends that the West Front of the Capitol be restored and that Congress establish a permanent policy against any future alterations to the building.

A debate over the Institute's position on the West Front was sparked at the AIA's 1966 convention in Denver. That position, founded on recommendations of the Committee on the National Capitol, urged restoration of the west wall over a proposed extension project.

Seeking an objective, professional opinion on the issue, Institute President Charles M. Nes Jr., FAIA, last fall named the task force to restudy the West Front's condition and the AIA's position.

Nes asked the task force to forget previous Institute positions. "I think we are big enough to change our position," he said.

That the AIA should take any position was questioned in Denver by some members. Nes, however, pointed out that a specially commended 1965 report of the National Committee on Esthetics, reflecting the opinion of many distinguished architects, asserted that architects collectively, i.e., serving on an arts commission, in a civic action group or through the Institute or any of its components, have a civic obligation to comment constructively on public issues.

"In our opinion, changes to the Capitol building fall in this category," Nes said. "To Americans and indeed to people all over the world, our Capitol is the symbol of our past, our present and our future."

The task force found no evidence suggesting it would be impracticable to restore the west wall in its present form.

In its recently issued report, the Institute noted that the Capitol is "our greatest American monument" and that despite its "scarred and craggy exterior and architectural imperfections" it is the "most vivid symbol of our democracy."

"To cover up the last remaining exterior portion of the original capitol would be a tragic mistake," the report says.

Task force members were Institute Vice President Samuel E. Homsey, FAIA, of Wilmington, Dela.; Francis D. Lethbridge, FAIA, of Washington, D. C.; John W. Stenhouse, AIA, also of Washington; Louis Rosetti, FAIA, of Detroit; and Norman C. Fletcher, FAIA, of Lexington, Mass.

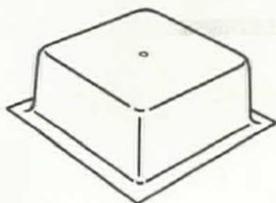
They studied engineering reports and met in Washington to hear the extension proposal explained by architects for the project. Throughout their review they were advised by a structural engineer.

Continued on page 16



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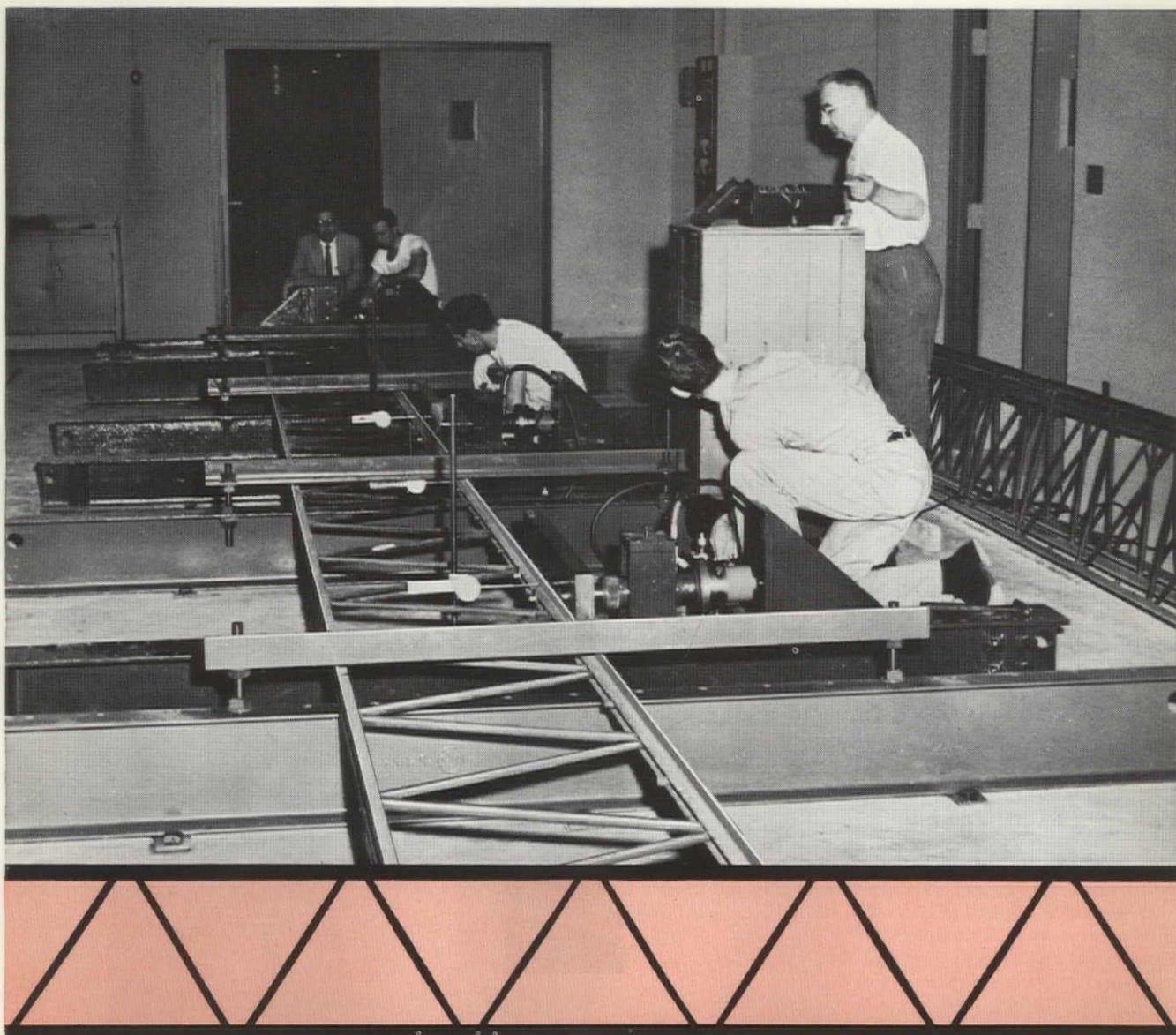
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The task force refrained from making any evaluation of the design for the extension, confining its study solely to the question of restoration.

The West Front was found in a state of disrepair, but none of the defects "appears to indicate that danger of collapse is imminent or that correction is impracticable," the report says.

Lateral thrust is "not presenting major structural problems," the report states and, therefore, it adds, "doubt is cast on the need for a buttress," one of the arguments made for the extensions.

The report quotes Congressmen's statements that no adequate survey has ever been made to predict Capitol space needs. Such a survey should be made and should include a determination of what functions might be moved elsewhere, it adds.

"There is obviously a limit to the amount of space which can be added to the Capitol if it is to retain any resemblance to its original form—or even to the present building," says the report. "Congress will presumably decide at some point not to make any more additions to the Capitol. We believe the Congress should make that decision now."

While it is admitted that skill and patience would be needed, the West Front can be restored and its structural weaknesses corrected, the report declares. And while it is conceded that restoration would be both costly and inconvenient, it is contended that "our building technology is certainly adequate to meet the challenge."

The report of the task force itself noted that restoration work in Europe has used a number of techniques, one of which is to drill diagonal holes, insert reinforcing rods and force in grout under pressure. It is one method, the task force said, that seems "very promising."

The Institute report regrets the crisis-to-crisis character of Capitol Hill construction efforts and advocates an orderly plan for the area's development. "The cost of creating an excellent plan would be far less than the amount which will be spent unnecessarily without one," it says.

It questions present procedures for approving alterations to the Capitol and suggests instead Congressional consideration of "a permanent body of experts whose

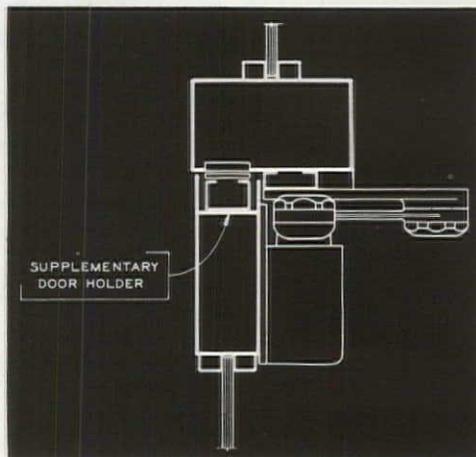
Continued on page 22

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blockhouse and wall erected in defense against the Indians.

The conference will be held in the Van Curler Hotel, named after Arendt Van Curler who founded the city in 1661.

Houston Council Orders Underground Mall Study

Houston, which used a dome to weatherproof its baseball stadium, may go underground to construct a \$2 million downtown mall. A



Cross-section view of proposed underground mall.

\$50,000 study was approved unanimously by the City Council following a request by owners of property

adjoining the block-long site of the proposed project.

"This is the most exciting thing I've seen," Mayor Louie Welch said. "More people will enter this mall than any public building."

The mall would act as a connecting link, sheltered from unpleasant weather and free of traffic conflicts, between a convention center now under construction and the central business district. Its underground location would not interfere with existing traffic.

Investment builder Gerald D. Hines, the property owners' spokesman, said the four affected owners have offered to underwrite the long-term debt needed for construction on the assumption costs can be kept within feasible limits.

It is expected that rental of space on the mall will cover most of the long-term financial requirement, with the property owners subsidizing the difference. The city would benefit through increased property values and thus through greater tax revenue.



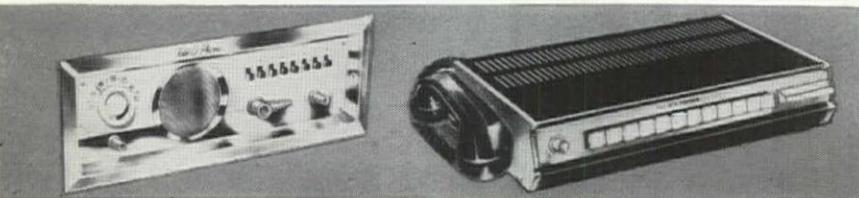
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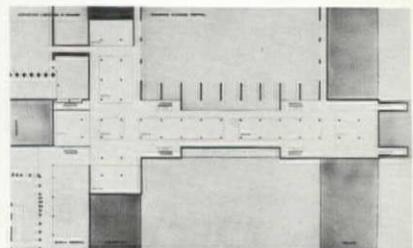
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Plan of the concourse level.

The cross-shaped mall would be accessible from the adjoining buildings and from sheltered escalator-and-stair combinations at its eight corners. It would also join with a present tunnel system serving the Bank of the Southwest, an office building and a garage structure.

Given the preliminary name of "Midtown Mall," the project would extend in an east-west direction under Walker, one of Houston's principal streets, from Louisiana to Milam on the next block with the shorter cross-mall stretching 240 feet northward along Louisiana.

Continued on page 34

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The length along Walker would be 450 feet, varying in width from 42 feet to 80 feet. The retail and service establishments would be concentrated in the center of the mall.

"I want to make it clear," Hines said, "that all we are asking at this time is a feasibility study by the city, just as they would study the feasibility of extending a major street."

The City Council envisages the Midtown Mall as the first phase of the "Blueprint for the Future" ad-

vanced by the Houston Chapter AIA and other supporting groups as a way of extending the viability of the downtown. The "blueprint" calls for similar malls on most transverse streets in downtown Houston, including the conversion of Main Street to a below-grade promenade. Eventually the malls would extend to all parts of the Civic Center, to Main Street and beyond.

The tentative design for the mall was prepared by the Houston architectural firm of Wilson, Morris, Crain & Anderson.

New Town Builder Rouse Heads Urban America

James W. Rouse, developer of the new town of Columbia between Baltimore and Washington, is the new president of Urban America, Inc.

Rouse's election to the top spot in the Washington-based organization fills a vacancy left by the death of Stephen R. Currier.

Mortgage banker Rouse is a former president of the ACTION Council for Better Cities which merged with Urban America in 1965.

GSA Architect Advisers Appointed at Two Levels

The General Services Administration has appointed a new Public Advisory Panel on Architectural Services. This one has two sections—a national panel and a group of regional panels.

Each of the 10 regional panels consists of three members. They will advise GSA's regional offices.

The new national panel, made up of 13 members, succeeds the first advisory panel, established in 1965 by the agency that directs the construction of many of the nation's federal buildings. Members will serve two-year terms and advise GSA at the national level.

Making up the national panel are: Lathrop Douglass, New York; Herbert Swinburne, Philadelphia; Robert M. Little, Miami; Harry Weese, Chicago; Sol King, Detroit; Harold T. Spitznagel, Sioux Falls, S. D.; Ralph Rapson, Minneapolis; William Caudill, Houston; Nathaniel Curtis Jr., New Orleans; Vernon DeMars, Berkeley, Calif.; and Carl Feiss of Washington, D. C.—all Fellows of the Institute—and Dr. Lev Zetlin, New York structural engineer; and Michael Pope, mechanical and electrical engineer, New York and Washington, D. C.

Serving on the regional panels are the following (Institute Fellows except when otherwise designated):

Region 1 (Boston): Hugh A. Stubbins Jr., Cambridge, Mass.; Norman C. Fletcher, Lexington, Mass.; and Thorne Sherwood, Stamford, Conn.

Region 2 (New York): Simon Brienens, New York; Roy F. Larson, Philadelphia; and Donald Faragher, Rochester, N. Y.

Region 3 (Washington, D. C.): David N. Yerkes, Washington;

Continued on page 38

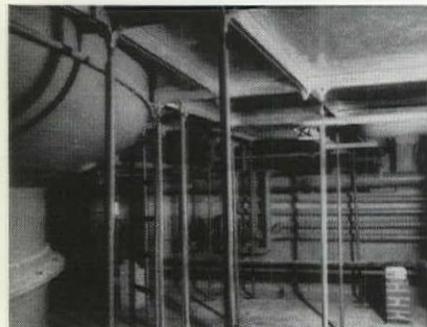
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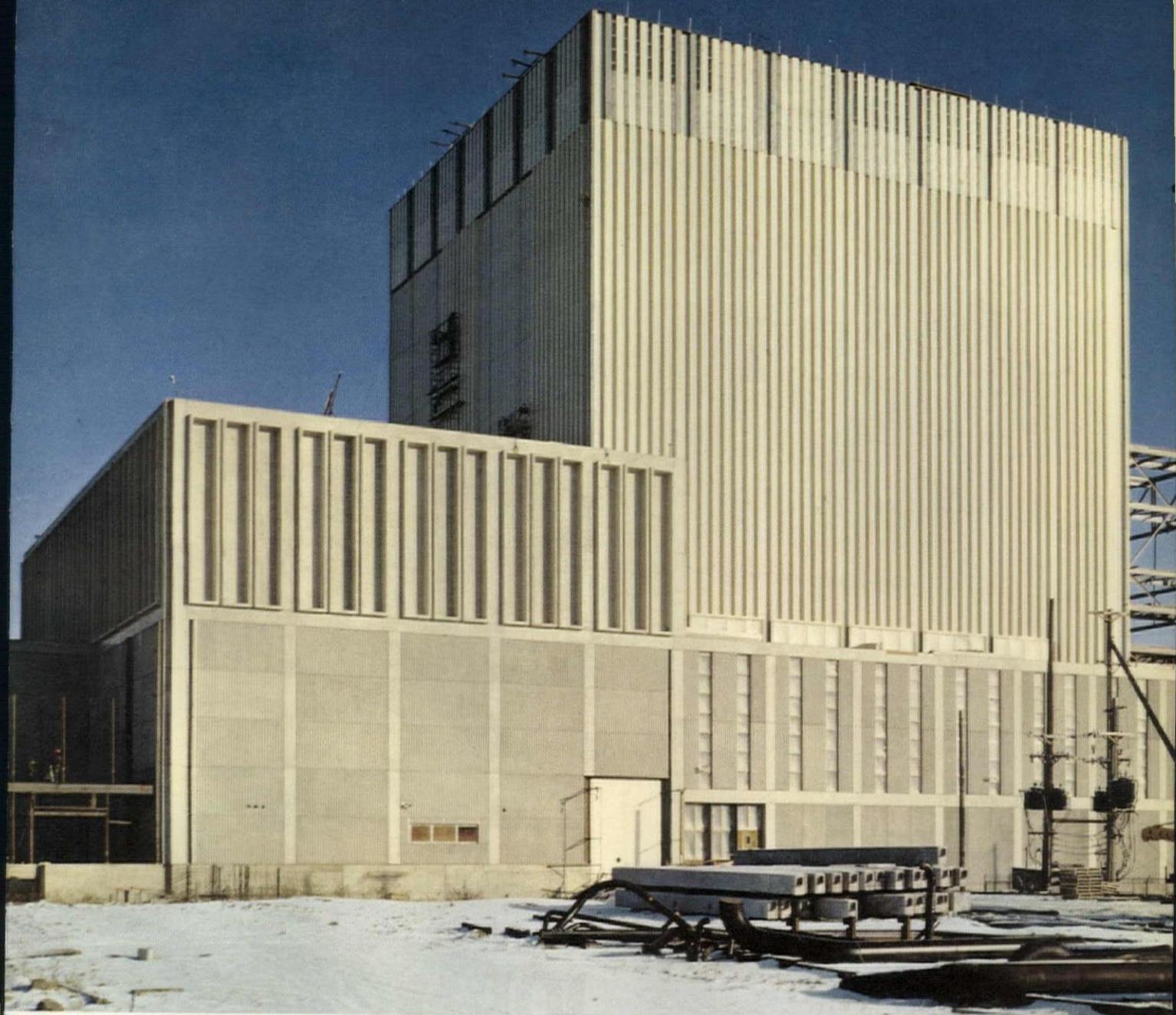
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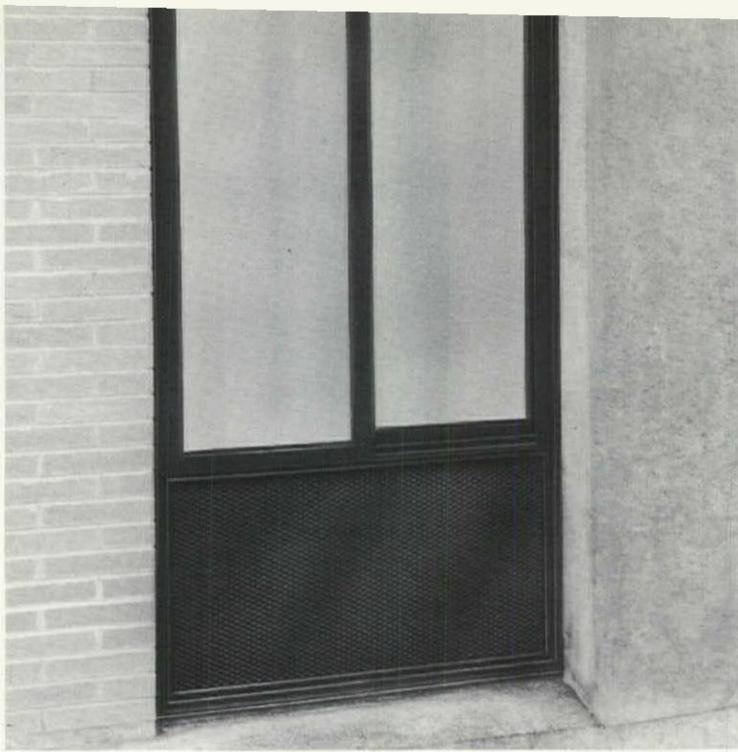
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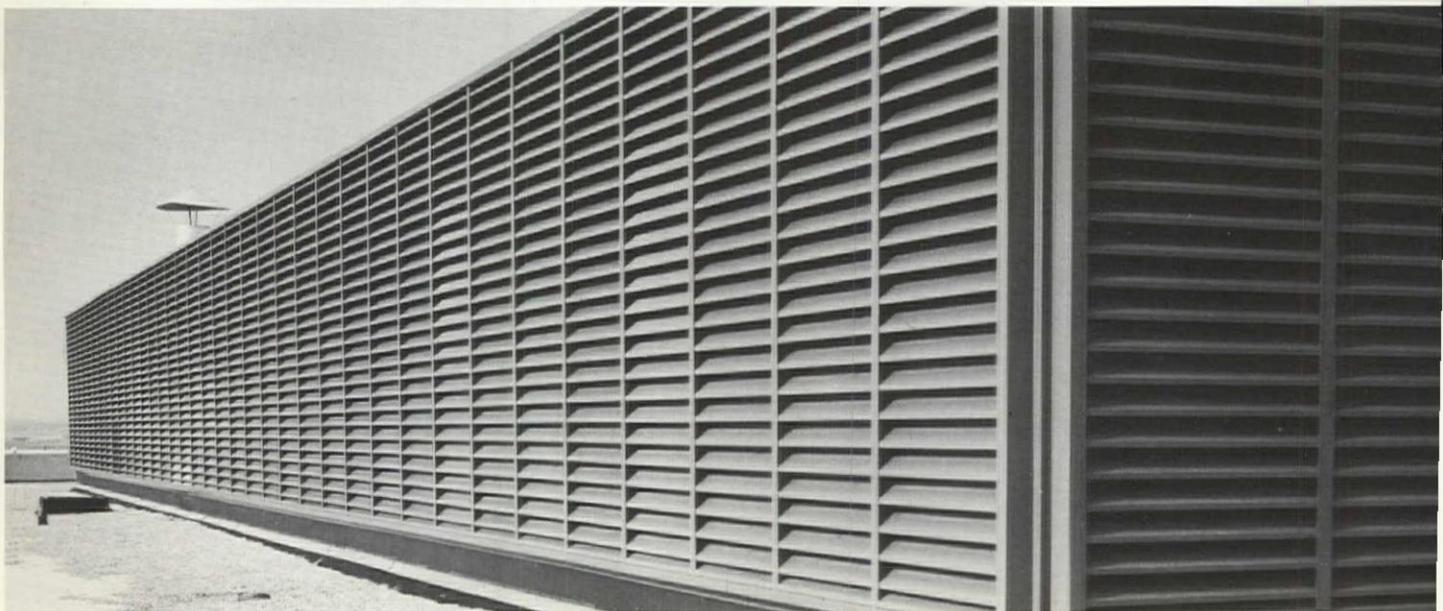
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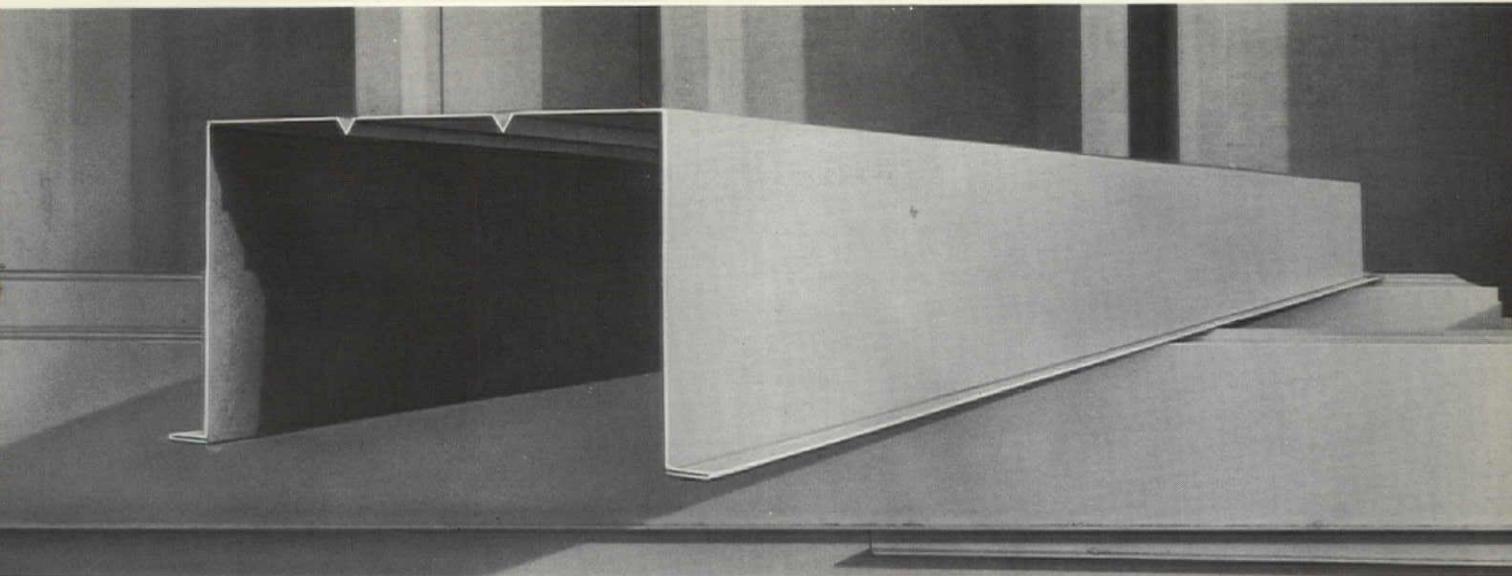
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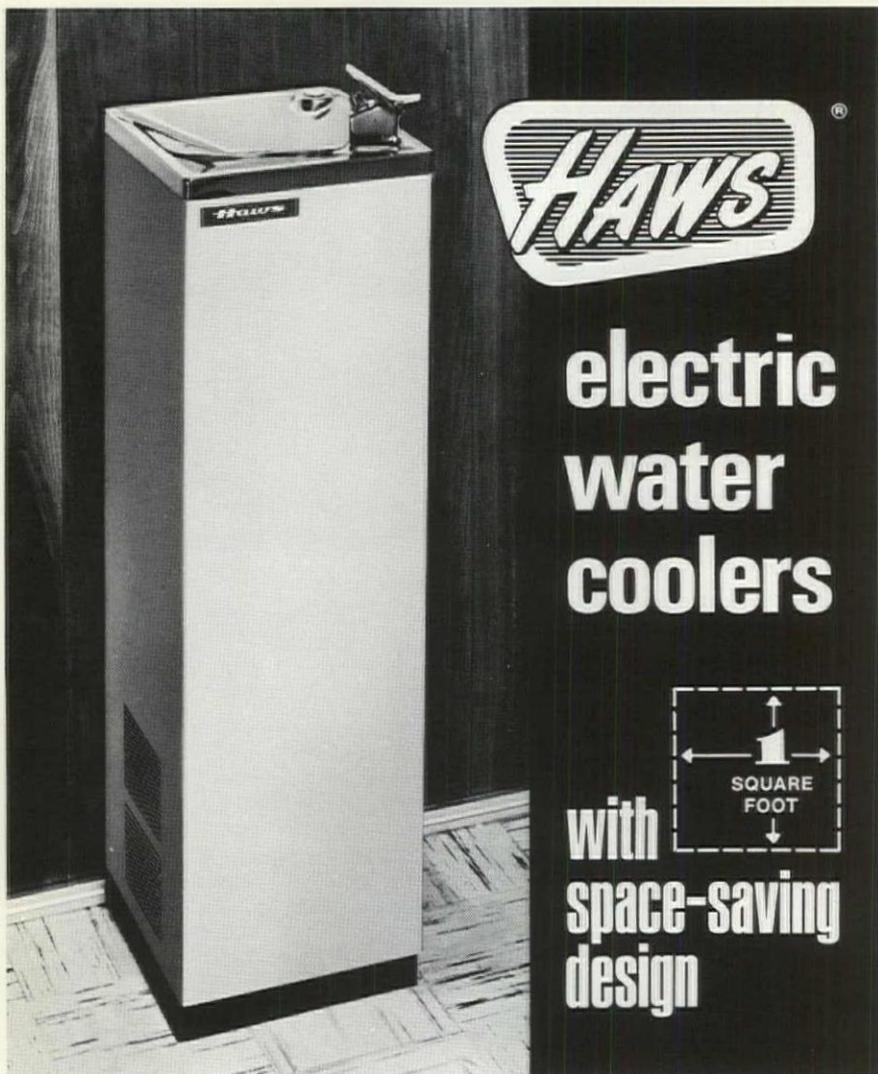
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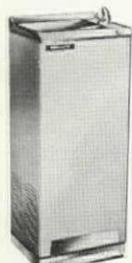
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Region 5 (Chicago): Bruce Graham, Chicago; Peter Tarapata, Bloomfield Hills, Mich.; and John Noble Richards, Toledo, Ohio.

Region 6 (Kansas City, Mo.): Robert Cerney, Minneapolis; Harris Armstrong, Kirkwood, Mo.; and Hari Van Hoefen, St. Louis.

Region 7 (Fort Worth, Tex.): John Desmond, AIA, Baton Rouge, La.; E. Davis Wilcox, AIA, Tyler, Tex.; and Alwyn Koehler, Houston mechanical engineer.

Region 8 (Denver): Victor Hornbein, Denver; Fred Markham, Provo, Utah; and Frederick H. Porter, Cheyenne, Wyo.

Region 9 (San Francisco): Welton Becket, Los Angeles; William Stephen Allen Jr., San Francisco; and Frank L. Hope Jr., AIA, San Diego.

Region 10 (Auburn, Wash.): Paul Kirk, Seattle; Perry P. Johanson, Seattle; and John R. Culler, AIA, Spokane.

Architects Win in Court Test of Planning Law

The New Jersey Supreme Court has handed down a decision that permits engineers, architects and land surveyors licensed in the state to obtain licenses as "planners" without examination.

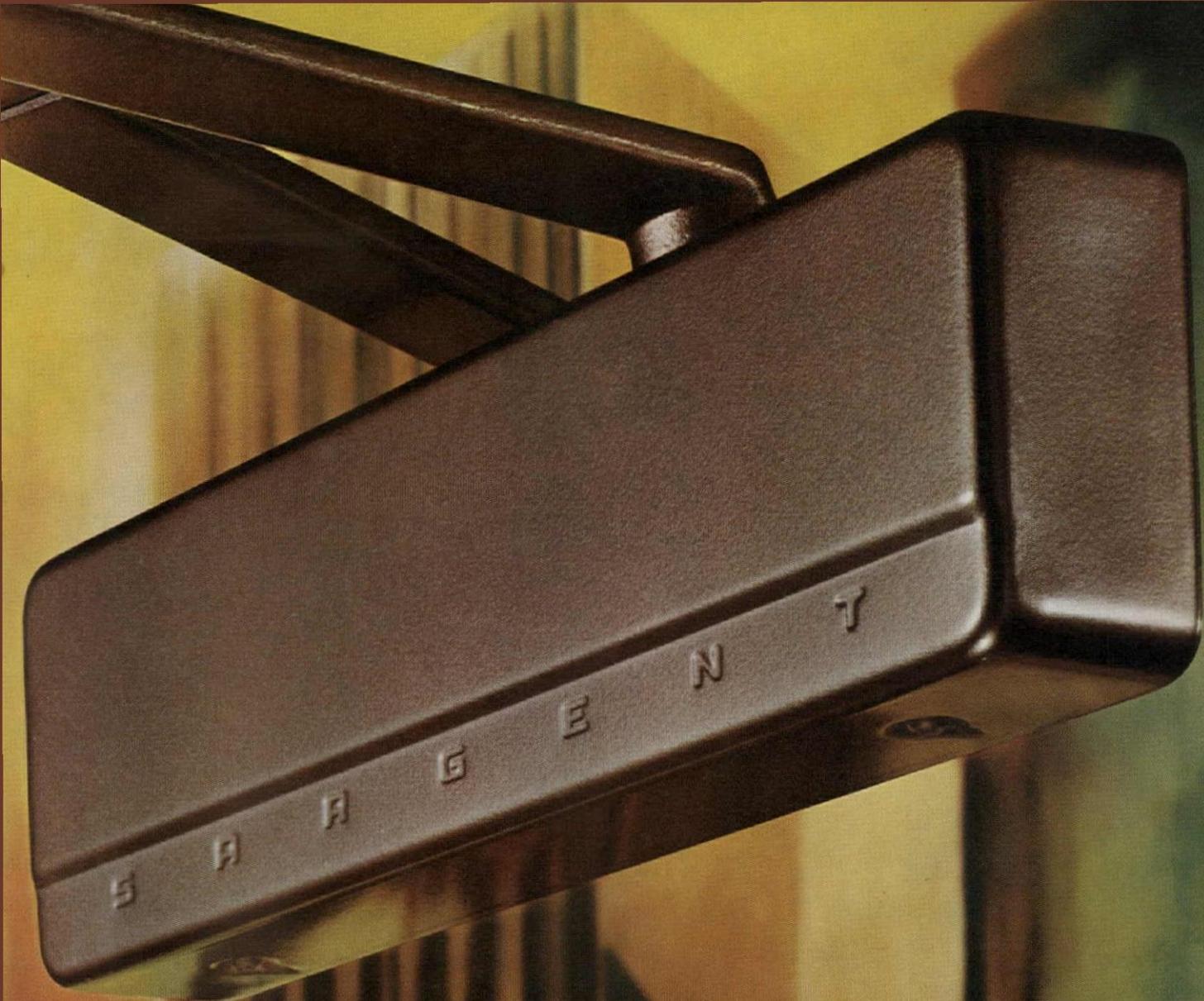
Automatic licensing of architects and the other professionals was suspended last year in a lower court decision.

The Supreme Court, however, held that provision for automatic licensing was not severable from the rest of the professional planner licensing act. The statute was adopted by compromise among the various professions, and the history of the bill indicates the state legislature would not have enacted the measure without the automatic licensing feature, held the court.

The court said the automatic licensing provision does not violate the equal protection clause of the New Jersey and federal constitutions. It decided that the four professions are substantially related and that the legislature could properly decline to grant monopoly rights to one of them.

The ruling was in response to appeals from the lower court deci-

Continued on page 41



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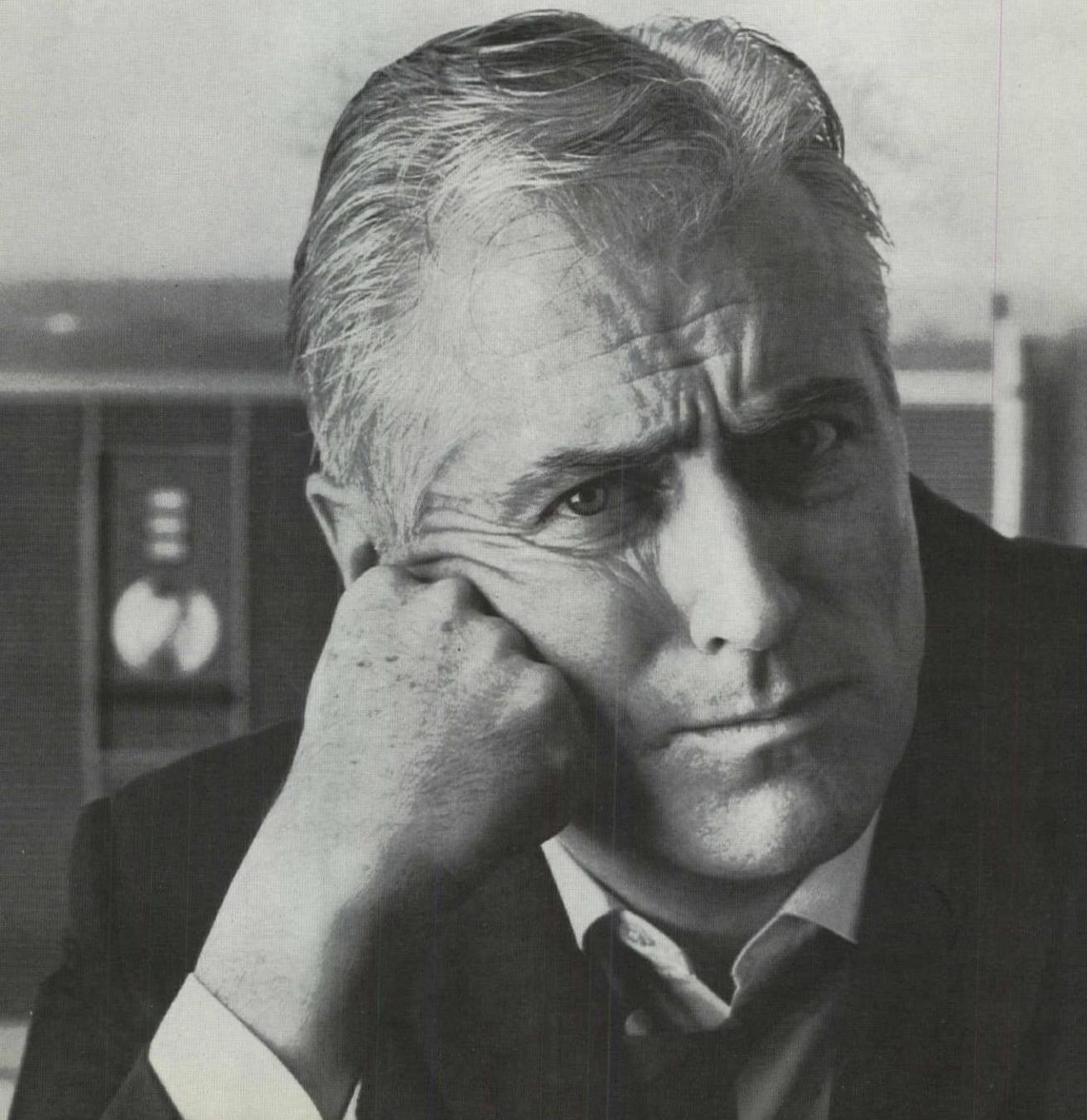


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sion which were taken by professional organizations. A legal representative of the New Jersey Society of Architects AIA appeared as a "friend of the court."

The action signaled the end of a long controversy watched for precedential implications. Michigan last year adopted a "professional community planners act" but it is said to be substantially nonexclusive. It has not yet been implemented.

Planners in New Jersey, following the interdisciplinary accord, decided that the exemption provision was too broad.

Their appeal to the Superior Court resulted in injunctions against implementing the registration of anyone as a planner.

The Superior Court had upheld the planners' contention that the provision was discriminatory in permitting registration of other professionals and that this section was severable from the act.

Kirkwood Competition Winners Made Known

Urban Beautification Inc., the president of which is landscape horticulturist Robert J. Stoffel, has won first place in the Kirkwood, Mo., Civic Plaza Competition.

The competition involving development of a 15-acre section in the downtown of the 30,000-population city drew 404 registrants from 43 states. Final submissions numbered 101.

The winning St. Louis firm won a cash prize of \$3,500. Second place was won by Chartier Newton, AIA, and landscape architect John J. Exley. Both are associate professors at Texas A&M College.

Second place was worth \$1,000. The third place prize of \$500 went to Paul E. Marti Jr. of the St. Louis suburb of Webster Groves.

The competition was open to architects, landscape architects and students preparing for either profession. It had the approval of the AIA and the American Society of Landscape Architects.

Jurors were Joseph D. Murphy, FAIA, of St. Louis; landscape architect Carl Johnson of Ann Arbor, Mich.; and Kirkwood Mayor Robert G. Reim.

According to the program, the competition was undertaken to "stimulate public interest in Kirkwood progress" and to lead to "fulfillment of an inspired plan for the open space at the city center."

Computer Group Charters Special Design Unit

The Association for Computing Machinery has chartered a Special Interest Committee on Civil Engineering, Architecture and Planning, membership in which is open to anyone whose professional activities demonstrate a significant interest in the application of computers to environmental design and control.

The committee publishes the *SICCAP Bulletin* giving information on the availability of programs, services, personnel, news of coming meetings and seminars, bibliographies and reviews.

It also plans sponsorship of sessions on computer applications in engineering, architecture and planning at national meetings of the Association for Computing Machinery and the American Federation of Information Processing Societies, according to Alan M. Hershendorfer.

Hershendorfer, an assistant professor of engineering in MIT's department of civil engineering, said further information can be obtained by writing SICCAP, Room 1-138, MIT, Cambridge, Mass. 02139.

AIA Sends 7 to Prague; Agency Offers Fare Cut

Nearly 3,000 participants are expected for the Ninth World Congress of the International Union of Architects in Prague July 3-8.

This is the forecast of Pierre Vago, UIA general secretary, who pointed out that the congress is "the sole possibility for architects all over the world to unite."

The AIA is sending a seven-member delegation which includes Institute President Charles M. Nes Jr., FAIA, and First Vice President Robert L. Durham, FAIA.

Additionally, the AIA has received more than a dozen queries from AIA members on the congress that is held by UIA every two years. For this event, Gilbert W. Paul of the United Travel Agency, 807 15th St., N. W., Washington, D. C., said a special group rate is offered for up to 15 or more congress attendees and their families traveling together in both directions across the Atlantic.

He said the individual round-trip economy jet fare between New York and Prague is \$611. Traveling together, he said, the per-person fare is \$409, or a saving of \$202.

Continued on page 48

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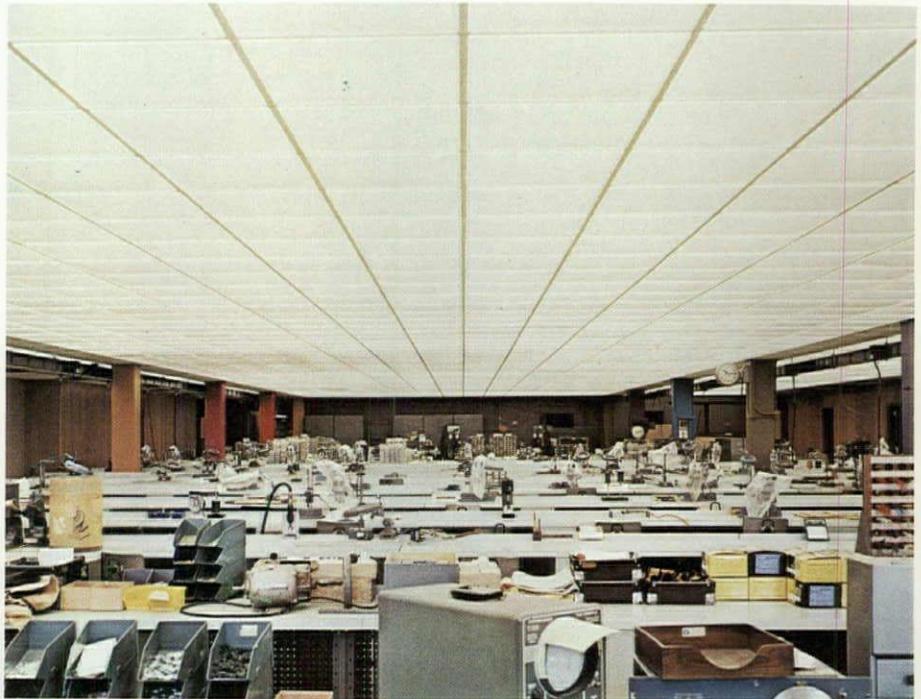


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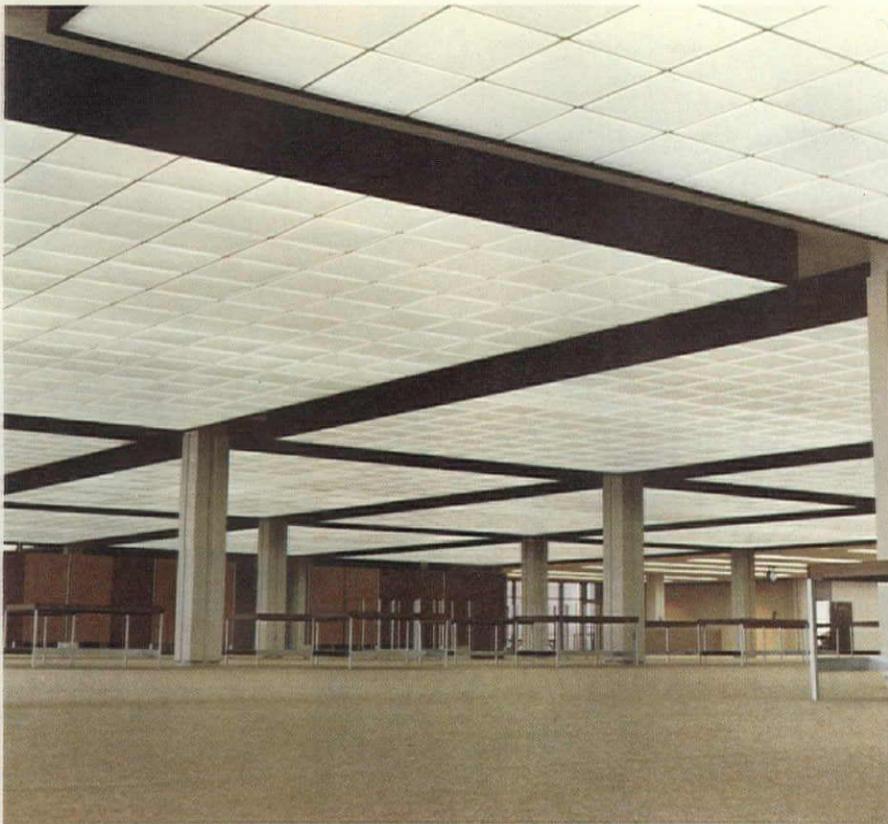
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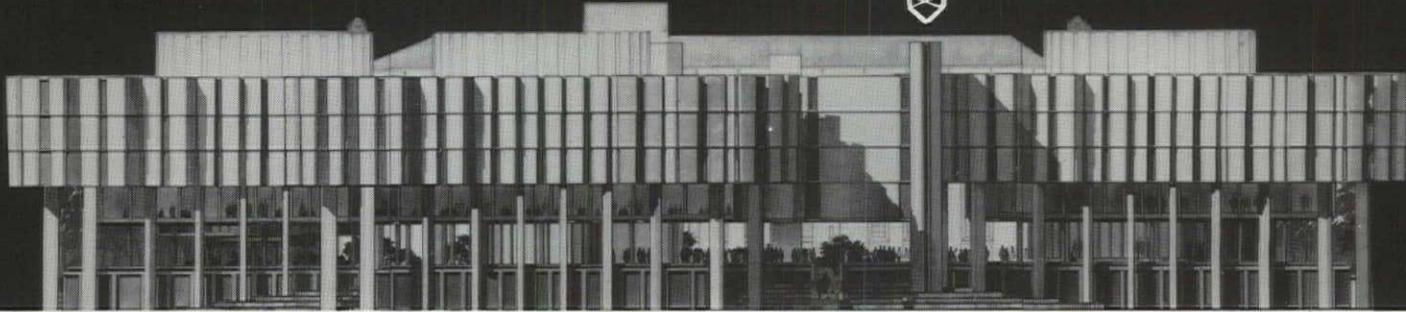
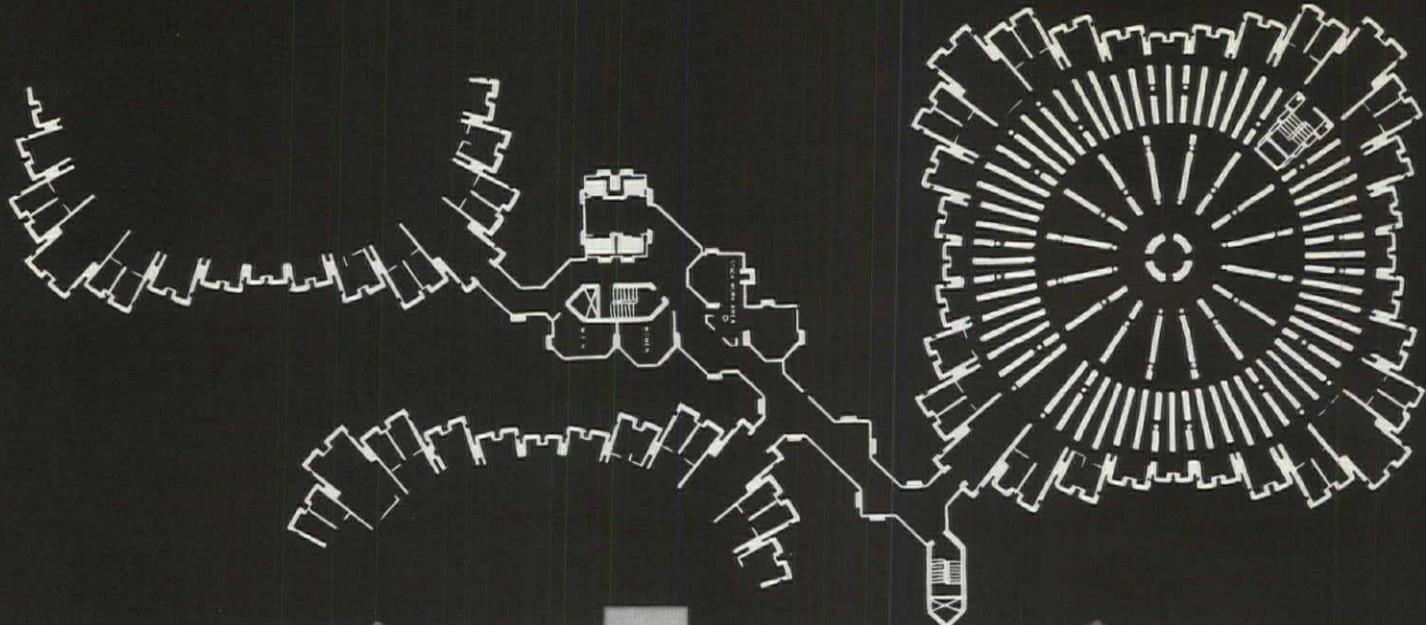
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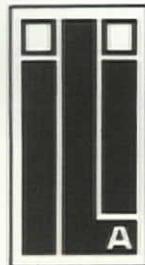
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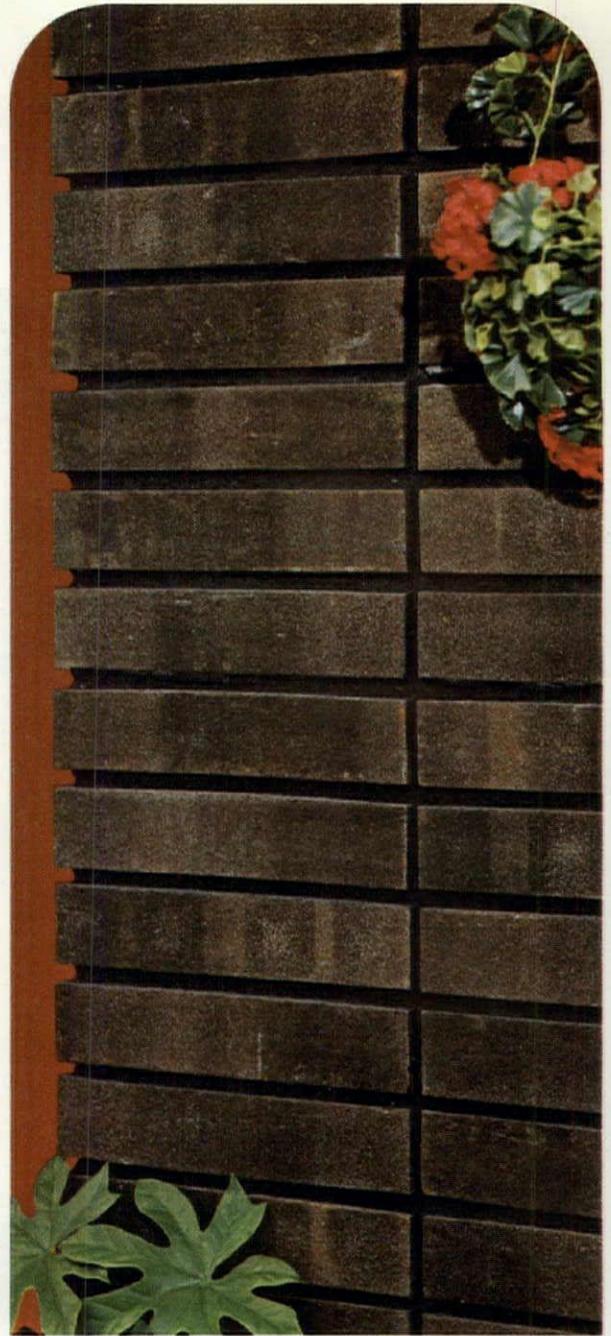
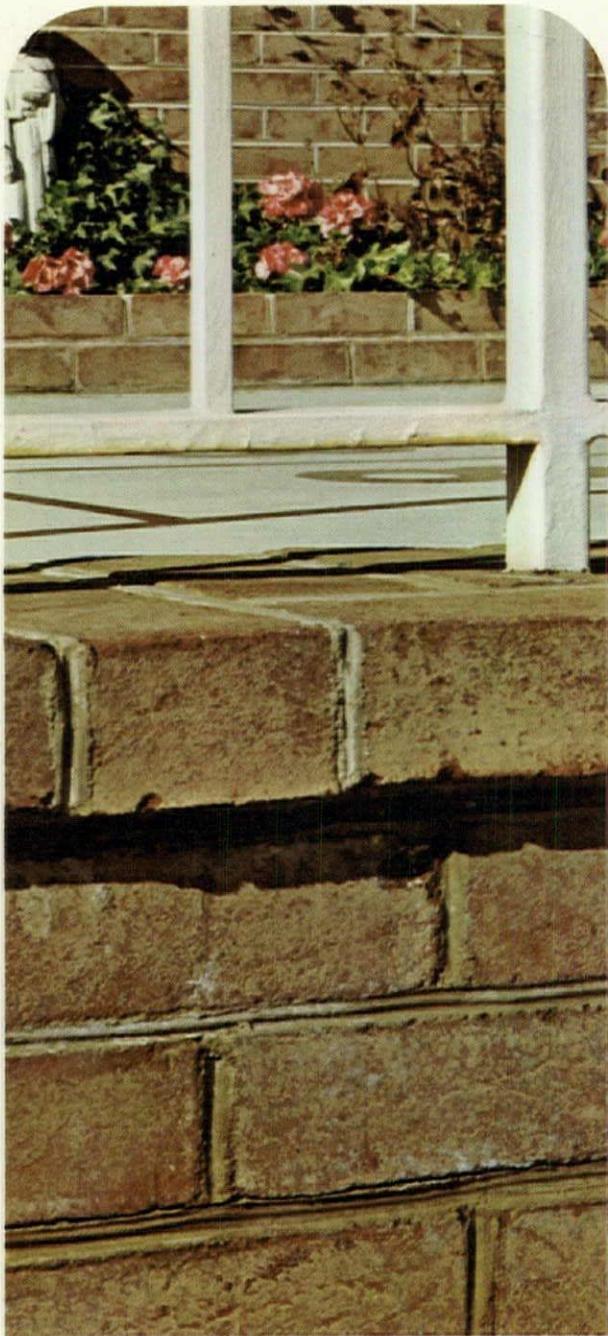


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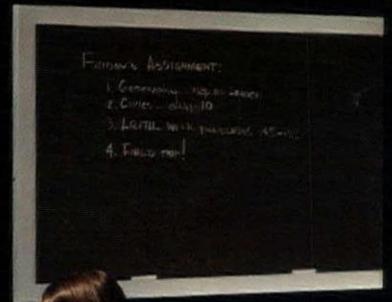
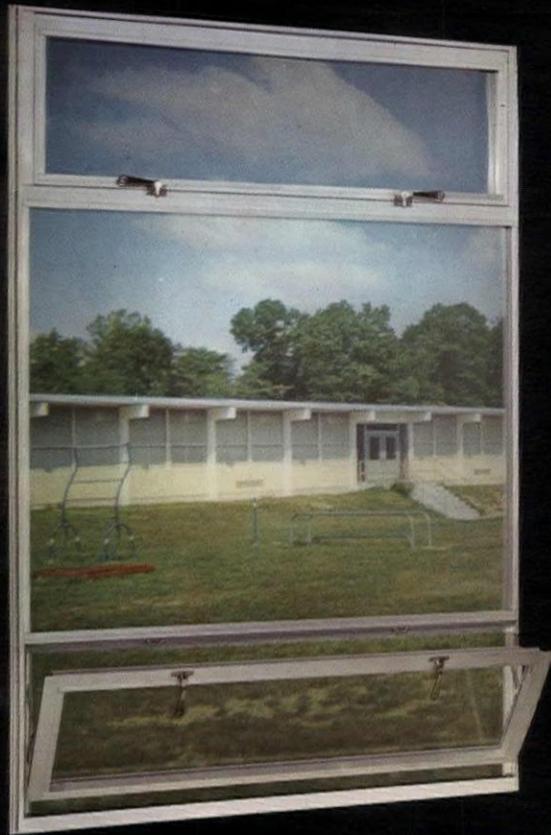
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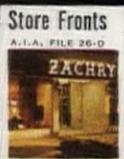
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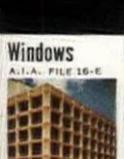
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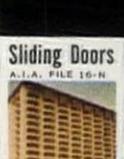
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accommodations to qualify for the reduced fare, he said. Accordingly, the agency's package, based on a twin-bed room in a "first class" hotel (\$33 per day) is brought to \$574. "Deluxe" hotel accommodations run from \$60 (twin-bed) to \$75 (one bed).

The agency has blocked off a number of seats for these flights:

Orly at 9:10 a.m. and arriving in Prague at 10:50 a.m. On return, Prague to Paris is left open. July 17, 1 p.m., is the scheduled time for leaving Orly for Kennedy, arriving at the latter at 3 p.m.

It is not necessary to return from Prague to Paris as a group, but delegates and other AIA members attending must fly as a group from Paris to New York, Paul said.

Prague meeting and on to Moscow, Leningrad, Stockholm, Copenhagen, Paris, returning from Par

EDUCATION

Harvard Plans New For Design and Plan

Harvard University is planning a \$6 million center for architecture, urban design and city and regional planning.

It will be named George Hall in honor of the Cleverly banker and industrialist long prominent in Harvard affairs. President M. Pusey said members of the Gund family pledged \$600,000 toward the project and that \$1.5 million has been granted by the G. Gund Foundation—the largest ever for professional training in architecture and design at Harvard.

A \$2 million grant from the Department of Health, Education and Welfare under the Higher Education Facilities Act and a gain of some \$500,000 from transfer of property within the university leaves about a \$1.5 million to be raised before construction begins.

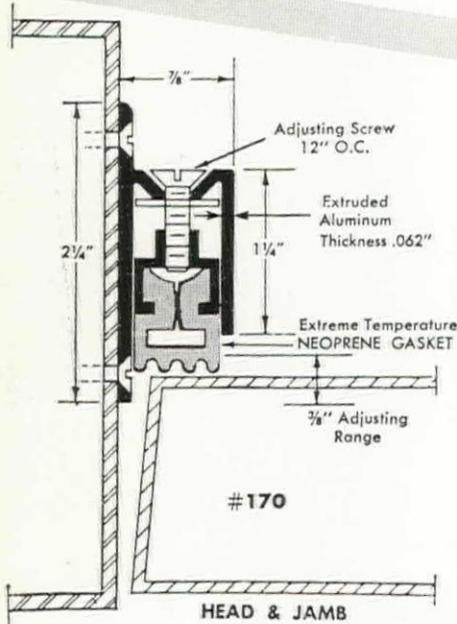
Progress toward construction of Gund Hall is the first major step in the Graduate School of Design's \$11.6 million campaign to unify and strengthen its programs of research and teaching in the design and planning disciplines. Until his death last fall, Gund was a member of the campaign's National Executive Committee.

Columbia University has created an Institute of Urban Environment in which teaching and research will be divided between domestic and foreign affairs—between urban problems of the United States and special problems of rapid urbanization in underdeveloped countries.

The Ford Foundation granted the Institute \$400,000 for its work in the developing nations. Charles Abrams, professor of urban planning and chairman of the Columbia School of Architecture's division of urban planning, is director of the institute.

Arthur F. Sidells, AIA, of Warren, Ohio, this month joins the National Architectural Accrediting Board. Appointed by Institute President Charles M. Nes Jr., FAIA, Sidells succeeds Frederick H. Hobbs Jr., AIA, as the representative of the National Council of Architectural Registration Boards.

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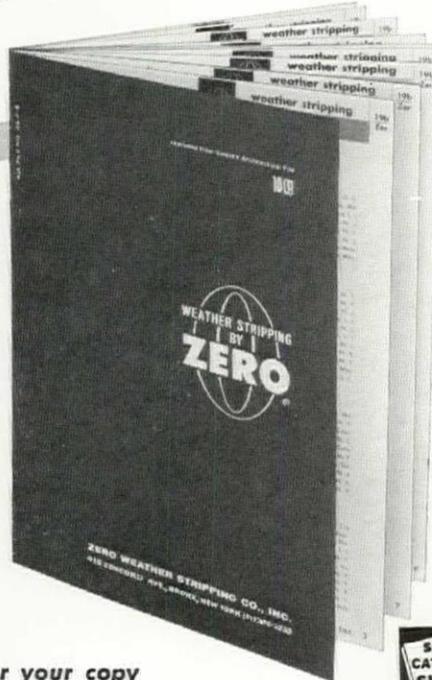
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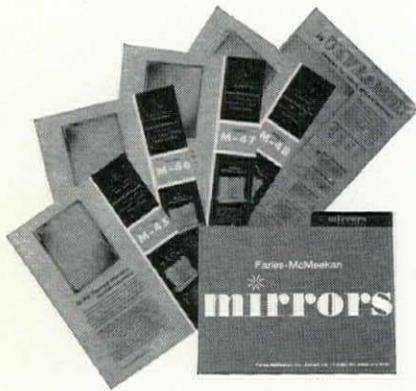
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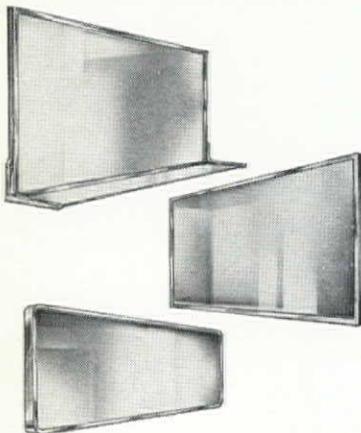
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Newslines from page 48

► Princeton University's School of Architecture has made major changes in its undergraduate curriculum.

The changes were made to provide the architectural student with a more liberal education. "The new plan," Dean Robert L. Geddes, AIA, said, "puts Princeton in the vanguard of architectural studies in its commitment to the humanities and social sciences."

The new curriculum has the premise that a program in architecture, at the undergraduate level, should be the basis for work in many fields relating to man's physical environment.

The program is divided into four two-year cycles. Cycle 1 offers an introduction to environment studies, urban studies, visual studies and architecture to all students. Cycle 2, for the departmental student, offers a broad, humanistic and scientific view of these fields and provides for joint studies with other disciplines. At the graduate level, Cycle 3 leads to a professional degree, while Cycle 4 is a period of professional and scholarly specialization.

► George Washington University is offering a graduate program in urban and regional planning that is strongly multidisciplinary.

The first year consists of instruction in the basics of urban and regional planning while the second year allows the student to develop his knowledge in a particular area—the lawyer might study problems of new legislation of benefit to cities while the engineer pursues studies in high-speed transit.

► On exhibit at Colgate University's Charles A. Dana Creative Arts Center is a collection of the works of the center's architect, Paul M. Rudolph, AIA. The exhibit represents 23 of his buildings.

► The department of landscape architecture and regional planning of the University of Pennsylvania's Graduate School of Fine Arts has revised its curriculum to accommodate students with a variety of academic and professional backgrounds, offering alternative courses of study toward a Master's Degree in Landscape Architecture.

Candidates holding degrees in architecture or landscape architecture may graduate in two years; holders of Bachelor of Science or Bachelor of Arts degrees are required to take an additional year.

► The University of Michigan is offering a course June 5-16 on Computer Graphics for Designers. The

fee is \$300 and further information is available from Engineering Summer Conferences, West Engineering Building, University of Michigan, Ann Arbor, Mich.

► Applications for 1967 Cintas Fellowships, available to architects, artists, musicians and authors of Cuban citizenship or lineage living outside Cuba, are being accepted until July 1.

Forms may be obtained from the Secretary, Cintas Fellowship Program, c/o Arts Division, Institute of International Education, 809 United Nations Plaza, New York, N. Y. 10017.

► Gibson A. Danes, dean of Yale University's School of Art and Architecture, has been appointed dean of visual arts at Westchester College.

In making the move, he will be leaving the deanship of the nation's oldest collegiate art school—Yale's was founded in 1866—to become head of the newest. The Westchester campus is to be built as a unit of the State University of New York and is to open in 1970.

Texas to Host Worldwide Meeting on Masonry

An International Conference on Masonry Structural Systems to be held in Austin, Texas, Nov. 30-Dec. 2, is expected to draw some 500 architects and engineers from more than a dozen countries, says C. T. Grimm, conference secretary.

Conducted by the University of Texas and sponsored by the National Science Foundation and the Clay Products Association of the Southwest, the conference will consider recent research and design practice for structural uses of masonry, including high-rise, load-bearing brick buildings.

Cooperating organizations include the AIA, the American Society of Civil Engineers and the Building Research Advisory Board, National Academy of Sciences.

Institute Makes Changes In Public Relations

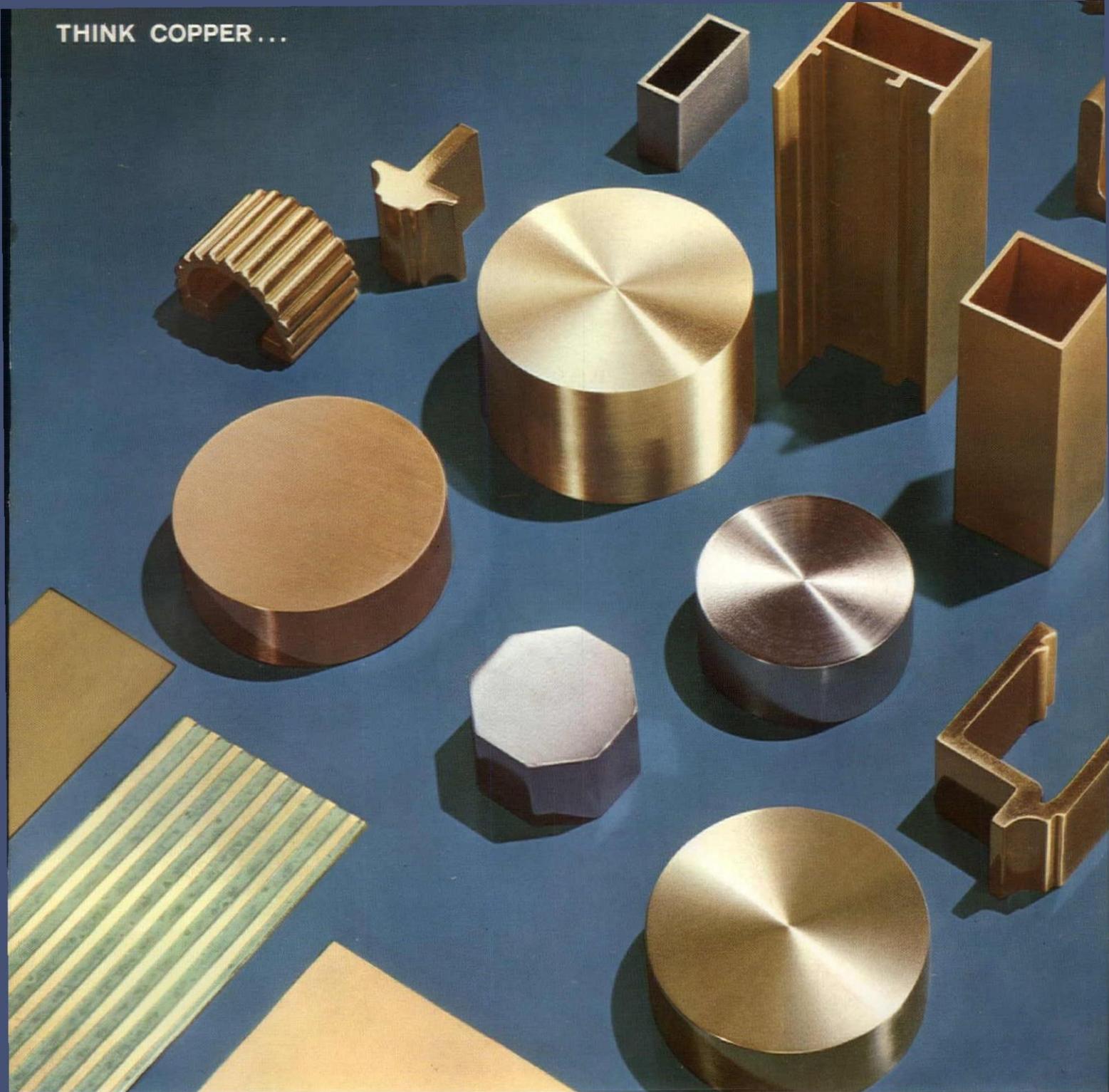
The Institute has taken steps to improve its public relations program and has established an architecture critic's medal and award for the communications media.

Purpose of the latter is to recognize achievement in increasing the public's awareness and concern for quality in environmental design. The medal will be awarded for

Continued on page 58

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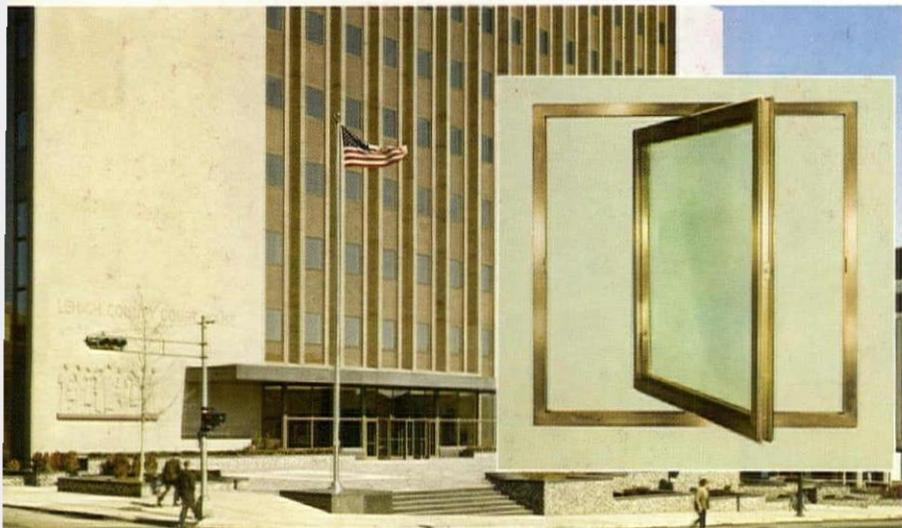
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*Bucks County Court House, Doylestown, Pa.
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such achievement over a period of time while the award certificate will be presented for a single significant contribution.

The awards program and the changes in the public relations program were approved at the AIA Board of Directors' March meeting.

The board adopted the changes as suggested in the public relations study report of Michigan Region Director Philip J. Meathe.

One of the report's recommendation resulted in a major change in the Institute organization. The chairman of the reconstituted public relations committee will attend Executive Committee and board meetings and be directly responsible to the board—instead of working through the committee—commission structure. Its responsibilities will extend across all five Institute commissions.

The Institute has a new director of public information. He is Carelton Jones, 43, of Baltimore. Jones succeeds Richard S. Stitt who resigned to establish a private public relations service. Most recently, Jones has been director of public relations for George T. Petsche Advertising in Washington, D. C.

Jones is one of two new staff members. Maurice Austin Payne Jr., AIA, of St. Louis, has become assistant director of government relations. Payne received a Master of Architecture degree from the University of Illinois in 1957 and most recently has been a private practitioner in St. Louis. He is 35.

Scientists Would Apply Space Tools to Cities

What is good problem-solving for outerspace is good for urban space. This is the gist of a 48-page booklet published by the Housing and Urban Development Department.

Modern scientific methods can solve many of the complex problems besetting today's cities, concludes the booklet which is based on discussions during the Summer Study on Science and Urban Development held at Woods Hole, Mass., last June.

The main tools needed in the urban field, as in outerspace, are data processing machines and the systems approach, the booklet contends.

It says HUD can do for cities what the National Aeronautics and

Continued on page 60

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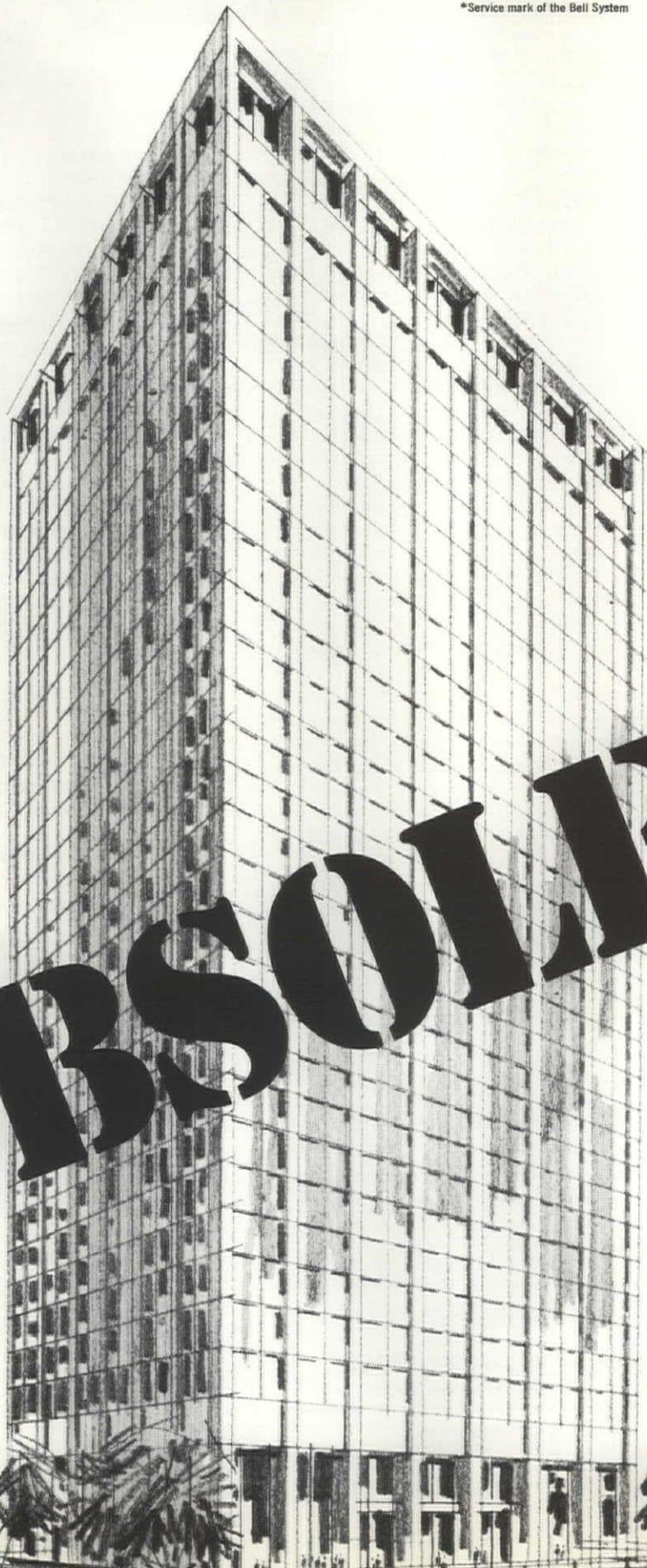
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Space Administration has done for space flight by putting these tools in the hands of trained scientists, such as those who developed space technology.

The Woods Hole conference was attended by about 50 nongovernment scientists and urban specialists along with staff members from several federal agencies. The study was sponsored by HUD and the Office of Science and Technology in the President's Executive Office.

"Creating a safe happy city is a greater challenge than a trip to the moon," the scientists at Woods Hole agreed, "because urban housing is more complex than a rocket and the city is subject to more perturbations than the moon. Its ever-changing problems, nevertheless, can be attacked in the same, logical way we have gone about exploring the universe."

Written by Volta Torrey of NASA, the booklet is on sale through the Superintendent of Documents, Government Printing Office, Washington, D. C., 20401, for 45 cents.

AISC Awards Program Open for Eighth Year

Entries in the eighth annual Architectural Awards of Excellence Program of the American Institute of Steel Construction are being received to June 1.

Buildings anywhere in the nation, framed in structural steel and completed since Jan. 1, 1966, are eligible.

Competition rules and entry forms are available from AISC, 101 Park Ave., New York, N. Y. 10017. Winners will be awarded stainless steel plaques on which their entries will be engraved. The jurors are Robert L. Durham, FAIA, Institute first vice president; David N. Yerkes, FAIA, Middle Atlantic director; Robert F. Hastings, FAIA, Detroit; Henry J. Degenkolb, San Francisco engineer; and Walter Sharp, director of the Tennessee Fine Arts Center.

Five Architectural Firms Win in AISI Program

Five architectural firms are among eight winners in the Design in Steel Award Program of the American Iron and Steel Institute.

The 1966-67 program received 325 construction entries. Awards

were offered for both design and engineering in four kinds of projects: residential, low-rise, high-rise and public works.

Campbell & Wong & Associates, San Francisco architects, won the design award in residential construction for a steel framed and supported house on a steeply sloping site. Richard G. Stein & Associates, New York architects, and structural engineers Fraioli, Blum & Yesselman took design honors in low-rise construction for their demountable stage for New York's Central Park.

Vincent G. Kling & Associates, Philadelphia, and the Norfolk, Va., firm of Oliver & Smith, associated architects, won design honors in the high-rise category for the Norfolk city hall. Ralph H. Burkhard, AIA, Seattle, and structural engineers Anderson, Birkeland, Anderson & Mast, Tacoma, shared best engineering honors in high-rise construction for their dormitories at Washington State College.

Best engineering in the low-rise category went to Navy engineers Leo G. Bellarts Jr. and Roy R. Patchen for their steel barracks for the Armed Forces in Vietnam.

An unmanned lighthouse designed by a US Coast Guard engineer, Howard C. Wickes, was selected for best design in public works construction. The same category's best engineering award went to consulting engineers Howard, Needles, Tammen & Bergendoff, Kansas City, Mo., for their approach lighting at Minneapolis-St. Paul International Airport.

A panel of eight architects, engineers and designers were jurors.

AIA Programming Study Stalks Problems, Criteria

The Institute is making an architectural programming study that involves the collection of information from selected architectural firms and other sources and is aimed at benefiting the entire profession.

Ben H. Evans, AIA, director of Research, said the study is part of a series on various practice areas delineated for improvement by last year's successful study "Emerging Techniques of Architectural Practice."

The programming study was undertaken with supplemental dues support and is being carried out by AIA staff and the Committee on Research for Architecture.

Continued on page 62



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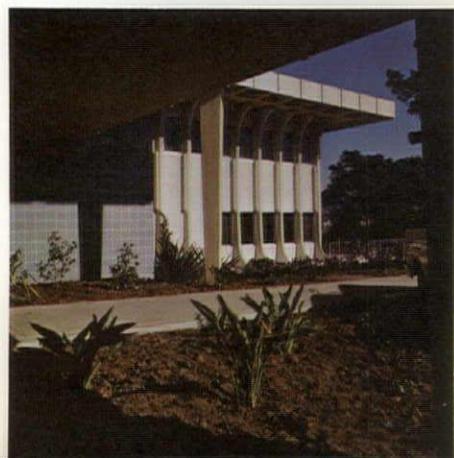
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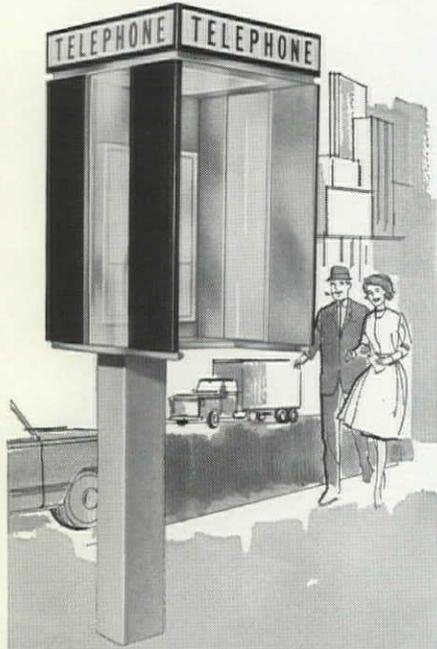
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Newslines from page 60

Among specific objectives of the study is a definition of the significant problems being encountered by architects in their relationships with clients and in the development of criteria for design, Evans said. (see general article on programming, this issue).

Another objective, he added, is to examine programming techniques of disciplines such as the aerospace industry. This effort will search for techniques that might be applied in architecture.

"The systems approaches used in developing some of the extremely complex, and beautiful, jet aircraft may have relevance to buildings and the general environment," Evans said.

He put aside the question of competence of "outside" groups engaged in architectural programming, saying, "It is difficult to believe that the participation of the architect in the programming of a project will not in the final analysis produce a greater awareness of his part of the problems to be faced and ultimately result in a better design solution."

"Nevertheless," he continued, "unless architecture takes a more positive role in promoting thorough programming by architects, these 'outside' disciplines will move in and effectively influence design for better or worse."

Evans said several projects such as the programming study are underway and that all attempt to glean information from forward-thinking architectural firms for the benefit of the entire profession.

"Some firms will contribute more than others and it will cost them in time and energy to do this. To these firms, which are performing in the truest professional sense, we owe a debt of gratitude," he concluded, "and perhaps we may owe even our eventual existence in the fiercely competitive business world."

HUD Contracts for Four Transit Research Studies

The Housing and Urban Development Department has contracted for four research projects to improve urban transportation.

One project will study the impact of new transportation technologies on the shape of the city as well as the effects on passenger movement. Carried on by the Stan-

ford Research Institute of Menlo Park, Calif., this one is to come up with recommendations in 5 to 15 years.

The other research projects have shorter time limits, however. Said HUD Secretary Robert C. Weaver in awarding the nearly \$1.5 million in contracts:

"Our congested cities, irritated passengers and locked-in slum dwellers cannot wait 15 or even five years for major improvements in urban mobility."

A second contract to conduct a study of existing systems and the orderly emergence of new ones— with solutions likely to become available in three to eight years— was awarded Westinghouse Air Brake Co., Pittsburgh, in association with Wilbur Smith Associates and the Institute for Public Administration.

For the earliest possible amelioration of air pollution, traffic congestion, transit failings and transit unavailability, a third contract to study methods to get improved results on existing transportation was contracted for with Day & Zimmerman, Inc., of Philadelphia, in association with the FMC Corp.

This contract calls for improvements that can be introduced within six months to three years of the completion of the study.

The fourth contract, to Defense Research Corp. of Santa Barbara, Calif., seeks, through the aid of computers, a refined yet practical systems analysis of problems and solutions, strengths and weaknesses, origins and destinations and points served and lands traversed in urban transportation.

"We must above all remember that people do not exist to be transported nor cities exist to be traversed—urban transportation should exist to enhance the human amenities and quality of urban living," Weaver cautioned.

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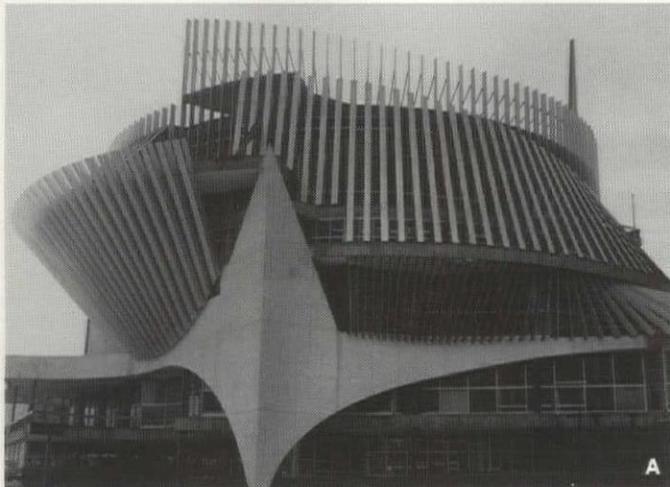
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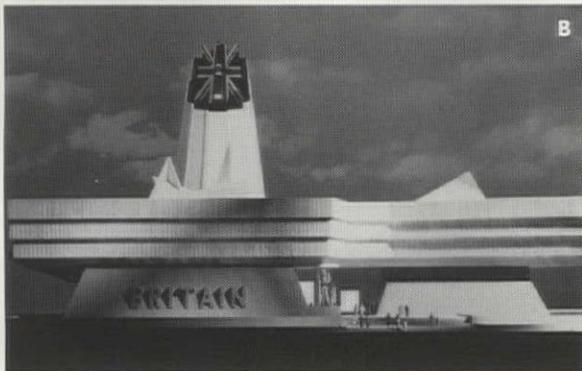
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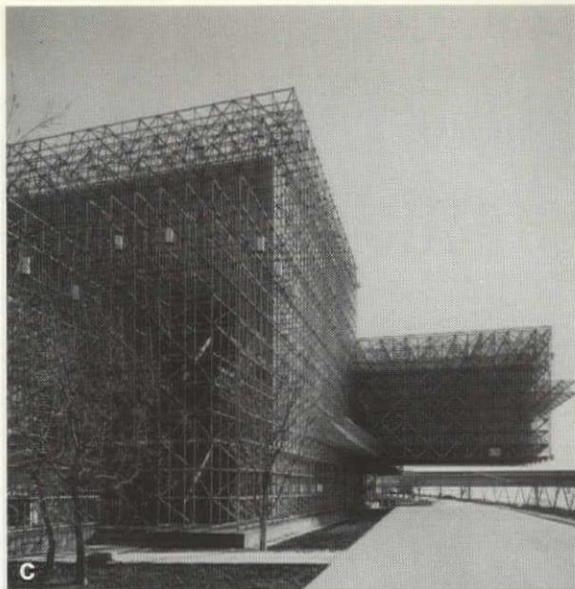
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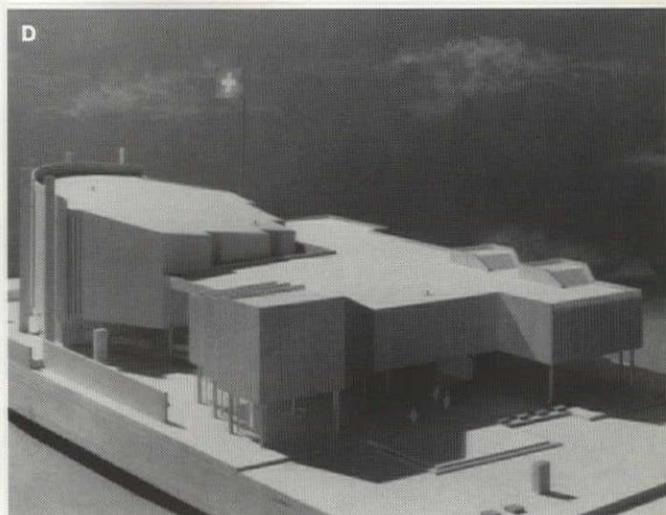
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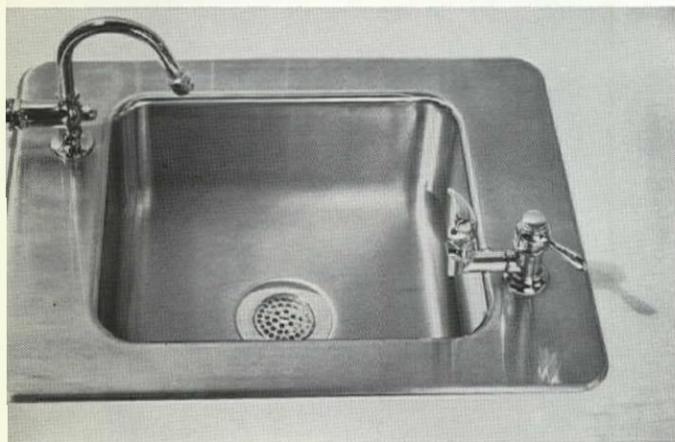
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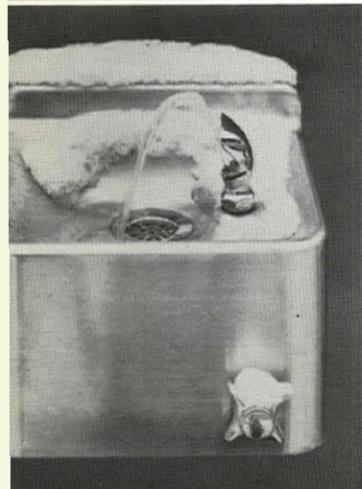
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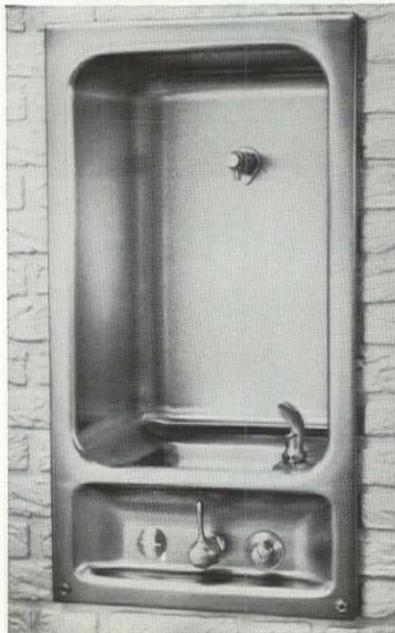
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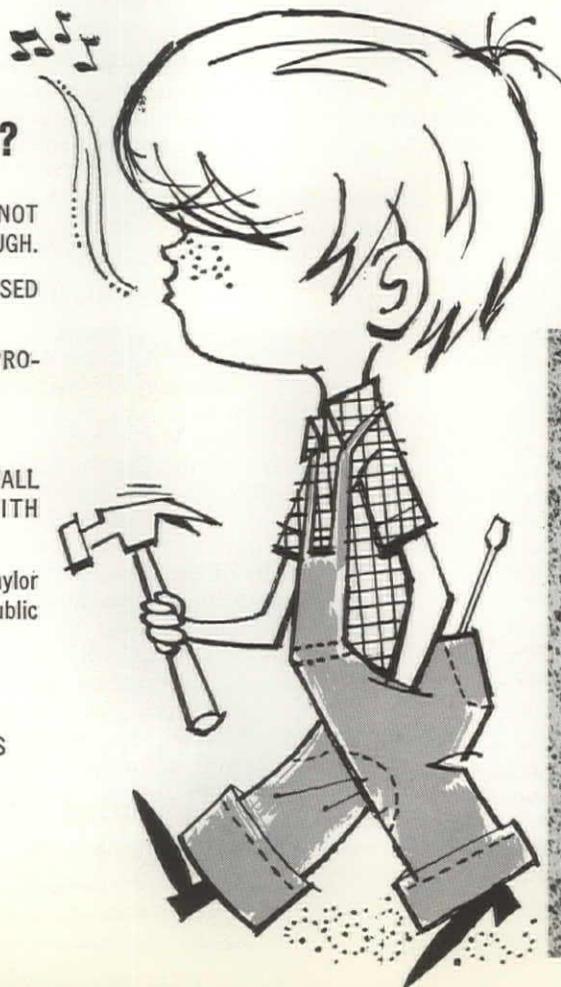
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UNFINISHED BUSINESS

BY MAX O. URBAHN, FAIA
President, New York Chapter AIA

Great City, Great Convention

Following the convention in Denver last year, there were some constructive suggestions made along the lines of enabling architects to reach a wider audience. Oftentimes at these affairs we seem to be talking to ourselves.

Since most of the architects who attend these meetings are leaders in their own communities, it was felt that the 1967 convention might offer more of the tools to assist them at the local level. Along such lines, this year's theme concerns "The New Architect." What will he be like during the next 25 years? What role will he fill in his community?

Toward a clearer definition, the 1967 convention will discuss the various aspects of this new-architect's role in the social and economic fabric of our future lives. It will last four days, from Monday through Thursday, May 15-18.

The first day's theme will be "The Education of the Architect." Setting the stage for a workshop-style discussion will be Dr. Harold Taylor, former president of Sarah Lawrence College and author of more than 300 books and articles on education including *Education and Freedom*. Following what is certain to be a challenging address, there will be a discussion concerning the AIA Education Research Project and related aspects of education which are of keen current interest to architects. Moderator will be Walter B. Sanders, FAIA.

The second day's theme will be "Architecture as a Profession." The keynote speaker will be Charles Luckman, whose career in business as well as in architecture suggests a point of view that is certain to be stimulating if not controversial. He will be followed by a team of equally worthy panelists who will discuss the most pertinent aspects of professional practice today and what we can expect in the near future. Emphasis will be on the entrepreneurial factors.

Wednesday's theme will deal with accomplishing good design

within local government, with the accent on urban recreation. We are particularly fortunate in having Mayor John V. Lindsay take part in this portion of our program. His concern and interest in problems of the metropolis are well known across the nation. Following his address, there will be a presentation of architectural and planning solutions to urban recreational problems. These solutions are adaptable to every community from New York to San Francisco and small towns anywhere between the two.

New York's Commissioner of Recreation and Cultural Affairs, August Heckscher, and Philip C. Johnson, FAIA, will participate in this dramatic and stimulating presentation of original material. Commissioner Heckscher, an Honorary Member of the Institute, brings to this discussion his background as director of the Twentieth Century Fund.

On Thursday, our attention will be concentrated on technology. We have been able to attract Arthur Clarke, world famous author dealing in the field we commonly call "science fiction," who has predicted many of the events now taking place in outerspace research. His keynote address will be followed by a panel discussion by prominent authorities, moderated by Stephen Kliment, AIA, editor of *Architectural & Engineering News*.

In conjunction with this year's convention, the New York Chapter will be observing its Centennial Year. We anticipate the highest attendance in AIA convention history and have put together a social program worthy of the occasion.

To help make all of this more meaningful, a copy of the *AIA Guide to New York City* will be given to each of you attending the convention. It will focus on the development of New York as a great metropolis and will be of special interest to both tourists and residents concerned with the city's historical architecture as well as to members of our profession.

A group of building product manufacturers representing a broad cross-section of the industry is sponsoring this guidebook, which will provide illustrated walking tours through various New York areas (accompanied by keyed maps) and will be the first comprehensive reference to the physical and architectural framework of the city.

Our social calendar will begin with a gala black-tie party hosted by the F. W. Dodge Corp. at the Whitney Museum on the night of your arrival, Sunday, May 14, at 7 p.m. The next five days are crammed with opportunities to tour New York's finest buildings, museums and other cultural points of interest. Here is a brief day-by-day summary:

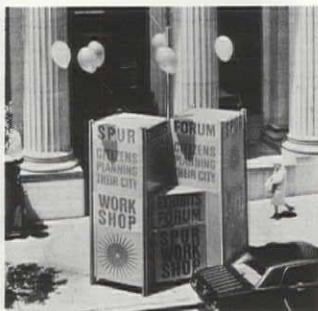
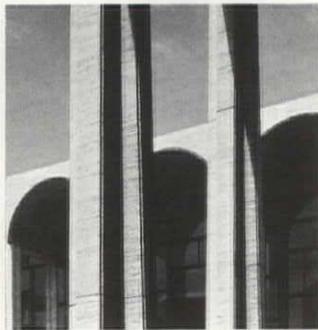
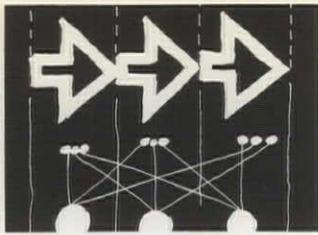
On Monday evening, May 15, the President's Reception will be held in the Great Hall of the Metropolitan Museum of Art.

On Tuesday, events include a tour of New York architects' homes and offices; and one of the great attractions that Manhattan has to offer, a boat trip around the island with music and refreshments from 8 to 11 p.m.

Highlight of the convention's social calendar will take place at Lincoln Center on Wednesday evening at 8:30 p.m. when Gold Medalist Wallace Harrison, FAIA, will be the host at his Metropolitan Opera House for a performance of the Royal Ballet. This will be followed by a champagne reception across the mall hosted by Mr. Johnson at his New York State Theater.

Thursday evening will be devoted to our traditional windup event, the Annual Dinner and Ball.

On Friday, those who wish to remain in New York are invited to join in any of several tours to visit public housing, office buildings or schools in New York City, or a side trip to New Haven, Conn. The choice is yours, the opportunities are many and we are confident that your visit with us in New York will be a rewarding and memorable experience. □



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John C. Wenrich's rendering of an early design of Rockefeller Center

Architecture's Future in Today's Terms

BY CHARLES M. NES JR., FAIA

The Institute's outgoing president reminds his fellow architects "that we can aspire to the solution of our present problems at the same time that we attempt to anticipate those that lie ahead of us."

Scientists and philosophers agree that we may have reached one of the decisive turning points in the history of humanity, comparable to the domestication of animals, the invention of tools, the establishment of cities and the conception of the universe.

This can only be dimly perceived, of course. Straining to look ahead another two decades, we think we see mammoth explosions of technology and population and an inevitable change—which in part, is already taking place—in the social and moral values of our people. We cannot say whether these values will be better or worse than ours, only that they will be different.

Predicting the future used to be the occupation of few except philosophers and fortune tellers. Now it has become the preoccupation of research and marketing specialists of great corporations, the central subject of governmental and intellectual task forces, and the livelihood of a new breed of businessmen. This is true simply because, as events move ever more rapidly, it becomes increasingly important to anticipate them. Otherwise products fail, investments flounder, markets go stagnant and whole armies of breadwinners abruptly find their education useless and their work skills obsolete.

Architects have had no immunity from the virus of change, though some may wish they did. This is natural enough. Like most mature people,

we are accustomed to thinking in straightline projections of the present. Our perception of past and present has developed out of an accumulated heritage of family ideas, a continuing sense of place and a relatively stable body of scientific, social and political information. There are no such links to the future.

Would you agree that the automobile has affected our lives, our residential patterns, our values? It has taken 50 years for the auto to reach its present schizophrenic state of eminence and notoriety. Television has created a new electronic culture in our nation in just 10 years. Leading psychologists and semanticists credit it, more than anything else, with responsibility for such divergent happenings as the explosive aspirations of minorities and the emergence of new art forms.

What will tomorrow's picture-phone, supposedly a short step from reality, do to American business and the basic purpose of our cities when the employer finds he can satisfactorily contact and deal with his colleagues, prospects and employees without leaving his home? Fantastic? Not very. It becomes even a little humdrum when you delve very far into the wild, woolly and apparently immediate future of environmental electronics.

Yet there is another side to this bewildering geometric form. Sometime before Secretary U Thant issued his last set of disapproving comments on our involvement in Vietnam, he said something very penetrating about the kind of world we live in today. He noted that the central, stupendous truth of our time is that relatively well-developed nations no longer have to gauge their efforts and aspirations by the extent of their resources. By harnessing and directing our new technology, we can tailor these resources to our aspirations.

John Rubel, a former Assistant Secretary of Defense, pointed out that we developed a space technology and collateral space hardware from scratch when it became a matter of national policy to do so.

Goals were established, market incentives were created and business swarmed to the scene to profit from the newly founded enterprises. Some of these new businesses—the aerospace industry being one—are already casting their eyes toward that venerable institution, the building industry, with, we suspect, the thought of displacing and replacing it. And what, we may prop-

erly inquire, is this likely to mean to us? It takes a little thought.

The customary way of creating environment in the past was for the client, who also was the owner and user, to hire the architect. The client brought to the creative process his land, financing and personal requirements. The architect brought to it his design skills, his accumulated experience in getting things done in the traditional way and his role as head of a team of specialists and consultants. After plans were agreed upon and the design refined and approved, the contractor was summoned to build the facility. The building product manufacturers and suppliers were, of course, interested in reaching all three members of the creative triumvirate.

But, in the past few years, this process has become less sharply defined. The owner today is often a group—a corporation, committee, syndicate, board, government agency, insurance company or entrepreneur—whose decision-making processes are complex and whose method of operation sometimes encourages a “turnkey” approach to building.

The owner's attitude toward the creative process has undergone changes for many reasons, among them the encouragement provided by the tax laws to build quickly and badly. Contrariwise, new values and demands have been established by planning legislation and a variety of governmental or governmentally assisted building and redevelopment programs. Financing and even land assembly are no longer brought to the creative process. They are often part of the feasibility study. Even suppliers have, in a growing number of instances, forsaken their traditional roles and become, to one degree or another, investors and owners.

At the same time, the input of information required for all but the simplest building projects has grown enormously. Because life itself has grown more complex, so have the nature and volume of information needed on human needs, attitudes, work performance, market behavior and land use, to name but a few considerations.

AIA committee and task forces have been working for a considerable time now to stay abreast of changes needed in office practice procedures, ethics and education, and to bring new experience and information on urban design and expanded services to practitioners. As our members know, the Institute has an ongoing educational research project of great importance which is being conducted by Dean Robert Geddes, AIA, of Princeton and will, in time, involve many other schools. The purpose of this study, for which the AIA has made a substantial grant, is to define the kind of education architectural students will need 10, 15 and 20 years from now.

But this is not an effort that can or should be

made on one front alone. In light of some of the trends that are beginning to take shape in design, building, land use, as well as the proliferation of “futurist” activities by corporations, government and educational groups of other kinds, we believe it may be possible to develop useful information on the probable building patterns of the immediate years ahead and arrive at an informed opinion on the role we may play in shaping them.

To this end, we have appointed a committee of some of our most thoughtful practitioners and educators to plan a series of conferences with prominent people in many diverse fields which, directly or indirectly, impinge upon the building process. Chairman of this special Committee on the Future of the Profession is Llewelyn Pitts, FAIA. The first of these meetings with a cross-section of America's leaders was conducted as a small pilot project at Airlie House in Virginia in late April.

Lest we be accused of excessive “global-think,” I will hasten to say that I do not believe that all of our problems lie in the future or that we cannot recognize what some of them are right now. It is extremely difficult, and I am fully aware of it, to produce buildings of which we can be proud. It is a challenging task to expand our services and skills sufficiently to help our clients make the right choices in the locations, sizes and even kinds of buildings they might most profitably build. It is increasingly difficult to staff our offices with skilled help, and it is becoming quite clear that the practicing architect must quickly learn to train others and use devices to take over that traditional part of his work which is essentially noncreative.

As citizens, we also have clear and present civic obligations which we must discharge, and not only for altruistic reasons. We can hardly boast of exercising our skills to restore physical order to the city or to create it, often for the first time, in the suburban areas around it when we are given only the leavings of other decision-makers to work with. The land speculator, highway planner and antiquated rules of our municipalities combine, far more often than not, to prevent the architect from doing anything but the most incidental kind of patchwork on the urban carcass. The remedies for this situation lie only in the architect's participation in the political, social and economic affairs of his community.

It is a tribute, I think, to the flexibility, resources and priceless optimism of our profession that we can aspire to the solution of our present problems at the same time that we attempt to anticipate those that lie ahead of us. The two are not unrelated. Picasso has said that art does not evolve; it marches.

We must join the march. □

Two for the Seesaw

BY WILLIAM W. CAUDILL, FAIA

About four years ago, I ceremoniously posted on my office door a big hand-lettered sign. It read:

CENTER FOR RURAL DESIGN

Was I off on a bucolic flight of fancy? No. I was just trying to keep things in balance a bit at Rice University. I was reacting to the disarmingly unnoticed revolution in architectural education—presently going full blast—which began so quietly about five years ago when the schools started responding to the challenges of the cities. My sign was in direct counterbalance to a trio of my young professors who found \$500 for books and an empty room to work in, and who had put up their sign:

CENTER FOR URBAN DESIGN

Am I against urban design? Of course not! Who would attack motherhood? Urban design is "in." It's architecture's answer to the pill and LSD. Almost every school offers courses in urban design; those that don't, simply don't count. Three years ago at the University of Washington there was only a mild interest in urban design. Today it has approximately 140 students specializing in that field.

The trend manifests itself at every school of architecture. Young professors and students are committed, as were members of no previous generation, to redeem the social and architectural imperfections of the cities. Altruistically motivated, they know that something has to be done to make the cities livable. They want to be a part of it. They are meeting the challenge. My sign-posting protest was not to negate urban de-

sign but simply to remind the faculty that there must be an equilibrium in architectural education. It seemed to me then—and even more so now—that the powerful urban design movement is vying with, and overtaking, the quest for excellence in building design.

The UD Bandwagon—Consider the following excerpt, taken from a news release from Princeton University: "The school is dedicated to the proposition that the traditional responsibility of the architect as the designer of isolated buildings has been replaced by a wider sense of responsibilities as the world becomes increasingly more urban and the life in our towns and cities more complex."

If I read correctly, it says that the Princeton faculty is much more interested in urban design and city planning than in individual buildings. Most faculties are. One of my friends from another well-known university ended a recent letter with this: "How goes it at Rice? When do you people get on the urban design master's program bandwagon?" The schools are making the big switch from building design to urban design. They are looking to tomorrow.

Most of the world's people will live in cities. We all know that urban problems will increase. What's new about an urbanized society? True, there were cities over 5,000 years ago. But it wasn't until the turn of this century that even one nation—Great Britain—could be classified as predominantly urbanized. The United States was nearly there. New York City wasn't exactly a cow pasture in 1900—certainly no place for my "Center for Rural Design." Chicago's urban areas expanded nearly six times in the 20 years between 1870 and 1890. The saving grace there was a good supply of men like Jenney, Roche, Holabird, Root, Burnham, Adler and Sullivan, who had the creativity to help solve physical problems created by urbanization. We need more of their kind—the brains-and-guts kind—not just for highly urbanized Chicago, New York and Boston but for Oklahoma City, Omaha, Albuquerque and Seattle, not to mention Mesquite, Texas, and Yakima, Washington.

The Search for Building Designers—And where are our Adlers and Sullivans? They're here. Maybe we have to look for them, just as we have to look for outstanding buildings. More

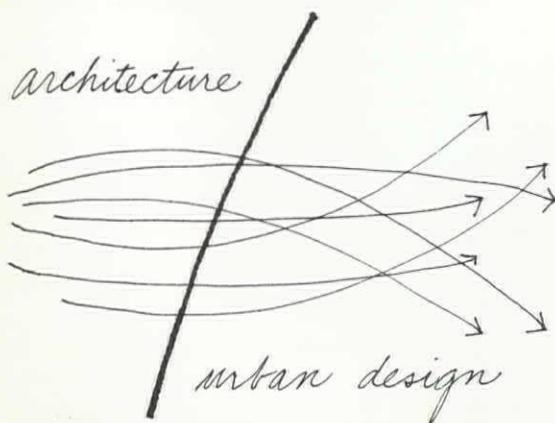
Urban design has a place in tomorrow's practice, sure—but will there be anybody to plan the buildings? Not unless current infatuation with urban design is balanced by a healthy respect for the architecture of individual structures.

leaders will be coming because educators now recognize the speed of man's recently begun social revolution toward establishing a metro-society. Practitioners, too, are protesting against the narrow individual-building view of architectural practice. This change has already produced urban-conscious architects, if not well-trained urban designers. More are coming.

The author: Mr. Caudill is both a practitioner and an educator, being a principal in the Houston firm of Caudill Rowlett Scott and director of the School of Architecture, Rice University. Sketches by Andrew Belschner.

But there is no one on the other end of the seesaw. Excellent building designers are not coming. One has only to look at the design problems submitted during state board examinations. During the last exam in Texas, only 39 percent passed. Two of my professors said that if they had had their way, less than one-quarter would have done so. The problem was a simple office structure. On the basis of single-building performance, this is an indictment of the schools.

The schools, including Rice, seem much more interested in turning out urban designers than project architects. Replacing building designers with urban designers is a bum trade. We need to add, not replace. We have to have both kinds of architects. There may be a time when architects will not have the chance to design single buildings, but this will not happen in the lifetime of my students. But mine are in for a change. Marshall McLuhan states in *Understanding Media* that we are entering the electronic age, with the accent on communication. More likely, we are entering the urban-life age, with an architectural accent. The big change will be in the physical environment. Unquestionably, future architects must have an urban design consciousness. But mass migration of architects to planning through urban design should be of great concern.



"Mass migration of architects to planning through urban design should be of great concern."

Students throughout the US are being given urban design problems in lieu of building problems. During the last jury week at Rice, the fourth-, fifth- and sixth-year students submitted solutions of urban design problems—problems conceived with little concern for the single building. The previous juries involved second- and third-year students in urban design—no concern for the single building. Very few young professors are dedicated to single buildings and want to raise the design of the same to a more sophisticated level. So the students get urban design problems. At least one young professor at Rice believes that building is a fundamental discipline, and urban design a fringe discipline. He came up with this unique thought: "Let's specialize in buildings. Let's be the only school in the country that turns out project architects—we can have a monopoly."

Others Do the Thinking—There are reasons why professors are more interested in urban design than in individual buildings. Who writes the new books? Very few are written by architects. First, architects haven't the time to research and write; they can barely find time to go to conventions to listen to nonarchitects tell them that architecture is dead. Second, architects, bound to their strict code of ethics, risk censure for criticizing the works of other architects, and therefore disqualify themselves as critics of the subject they know best. Our trouble is prosperity. But I am afraid it is a prosperity crisis with no time for thinking. Hence we let others do our thinking for us. For ethical and economic reasons, we allow new books to be written by sociologists, psychologists, economists, engineers, planners and almost everyone else but architects. These nonarchitect writers skirt the simple fact that good planning cannot exist without good building design and good construction.

The violent swing from building design to urban design solves one problem but creates a much greater one. Our concern at this time should be problem selection, instead of problem solving. What about the problem of individual buildings? Who will design the units of the megafarms we educators so dearly love? We cannot trade our microscopes for telescopes. We need both the microscopers and the telescopers in this profession. If we don't watch ourselves, we shall lose interest in details, and building design will become a lost art.

No Building Is an Island—Back to the seesaw: Let me continue this teeter-tottering from urban design to individual building design. Like man, a building cannot exist in solitary confinement. Like man, a building has the paradox of being an

individual and fitting with the group. We say that architecture is a social art that has to do with groups of people, as much or even more than it has to do with the individual. We also know that it is the individual that counts, yet "No man is an island." Nor is any building.

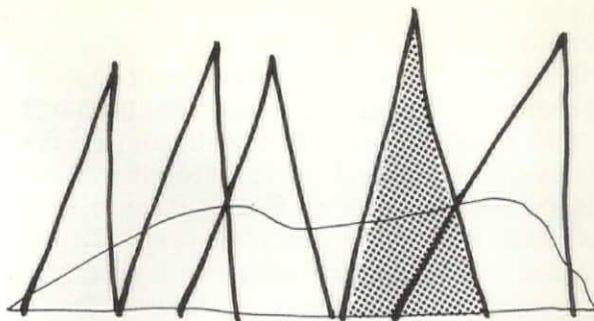
Which is the most important: the individual or society? Which is the most important: building design or urban design? Both are, in architecture. Architectural education needs balance, and there exists today an imbalanced situation. Building design is hurting. The schools are not turning out enough good designers who will qualify as highly competent project architects. I once warned the faculty that our school might have the dubious honor of being the first to produce architects who can't do buildings; I now warn other schools.

Nor am I the only educator concerned. The Committee on Advancement of Architectural Education, Association of Collegiate Schools of Architecture, included the following statement in its last annual report:

"The committee discussed at length the changing nature of the profession and present trends in architectural education. Some concern was expressed at a noticeable tendency for schools to become involved in large urban and regional planning problems at undergraduate level, often to the neglect of those subjects which form the basis of the architect's traditional and continuing responsibility, the design and construction of building to meet human needs."

In preparing to meet tomorrow's complete urbanization, we are running the risk of losing not only the art of building design but also our identity as architects. So we live dangerously. Does this spell doom? I see no "lost profession." The architect is an adaptable bird. Like his professional ancestors centuries ago, he will continue to thrive on change and, more than likely, will still be around for a few more centuries despite turmoil. Turmoil is necessary—in education and in practice. Turmoil is the wake of change, and change must be. The broad approach had to come. But I can't see architects trying to become better psychologists than psychologists, better sociologists than sociologists, better economists than economists or better scientists than scientists. I can only see architects becoming better architects, with the appreciation for, and the ability to work with, other disciplines.

Let's consider urban design for a moment. Urban designers work with everyone, from bankers to bakers. It is particularly important that this kind of architect have the broad base because the actual physical planning involves only about 4 to 6 percent of time, money and



"Soft curricula . . . must give way to hard curricula."

energy expended in developing urban designs. Tomorrow calls for more, better and many kinds of architects, not the soft kind who spread themselves too thin but the hard kind who achieve depth in something. The popular, spread-out, soft curricula with resulting superficialities must give way to hard curricula. A "little dab here and a little dab there" has to go. We need many specialists who dig deep.

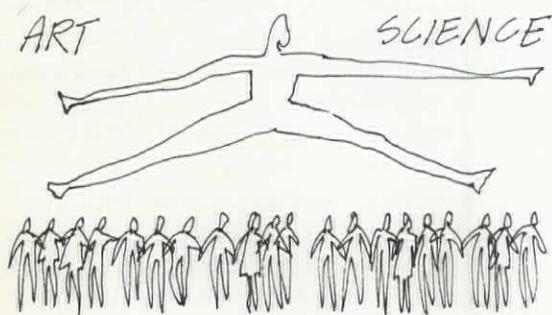
Firms Are Too Big or Too Small—But tomorrow we shall have particular need for highly talented specialists who excel in designing individual buildings and units of building groups. If not, product designers will take over churches, schools and shopping centers as the developers have taken over houses and apartments. But is it a matter of "taking over," or are we relinquishing the responsibility? Most of our firms are too big to do small houses. Curiously, most of our firms are too small to do big projects. During the last 15 years, the Caudill Rowlett Scott firm has associated with 93 different firms for the purpose of doing large projects. In a good number of cases, we were actually hired by the smaller firm.

Problems springing from urbanization are so difficult that we are having to bring in nonarchitects to help us. At Rice we have artists, engineers and lawyers on our faculty, as well as urban designers and architects. We need an economist, a psychologist and a sociologist to give greater breadth and depth to our architectural team. But we shall still have a team whose prime interest is producing a better architecture. The educator 10 years ago wouldn't have dreamed of doing this.

The outside specialists unquestionably are helping us, but there has been an interesting side effect. The new open-door policy of architectural education has given us false hopes of becoming great generalists, not narrow specialists—new kinds of renaissance men who have depth in science, engineering, fine arts, anthropology, sociology, psychology and even psychiatry. We have conventions with the theme of "Total Architecture," inferring that it must have a "Total

Architect"—Leonardo da Vinci with a computer, to my way of thinking.

I get hypnotized with this thought myself. Leonardo da Caudillo! How nice! The truth is, I bet the principals in my firm could not pass the state exam right now if we took it together. Passing the architect's exam doesn't make a total architect of me. I'm a direct, dig-deep, narrow-minded specialist. And believe me, I need programmers, urban designers, planners, design developers and a roomful of technologists and social planners. I'm no total architect! But I want to be on a total team doing total architecture, holding down my position with a high degree of competence. If the elimination of superficialities requires specialization, then I am willing to give up my Leonardo image.



"Architecture is so complex that it is impossible for one man to have complete mastery of the art."

Architects fear specialization. They want to be the broad, liberal-artsy type. Who's to say who is a generalist? The most narrow specialists I know are the so-called generalists. Not too long ago, I overheard a conversation between an English and a history professor. It went something like this: "I hear you are getting a new man on your faculty. What's his field?"

"He's 15th century."

"Why 15th century? I thought you were 15th century."

"Right, but he's 15th century Spanish literature—I'm 15th century English literature!"

Even the most specialized architects work from a broader base than that. Obviously a good specialist must be a generalist. A great number of my colleagues in education disagree with me, but I am committed to the premise that specialization should come *after* an undergraduate degree, and preferably after two or three years' experience in an office to explore interest and talent.

Total Architecture and the Team—Last October, Houston opened the Jesse H. Jones Hall for the Performing Arts. Messrs. Caudill, Rowlett and Scott took bows along with the other partners and associates of our firm. The press kept asking, "But who designed it? We need a picture

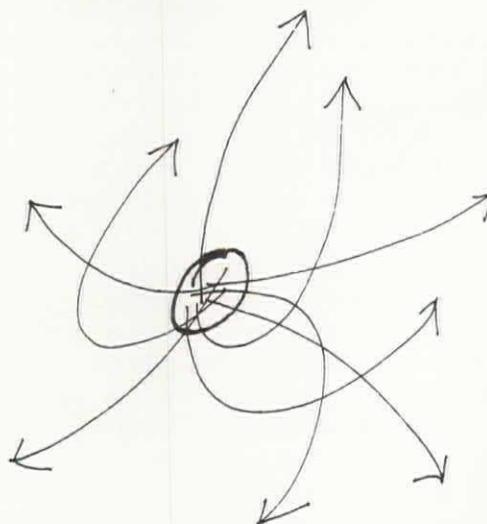
of him." We replied, "Not him, please. The CRS team." But the press wanted a star: the great man. Reporters argued, "You can't take a picture of a team. How silly can you get! The public would not believe such a story anyway." I am convinced that the public *does* have an interest in the fact that 61 specialized professionals designed Jones Hall and that it took 13.7 man years to design it. But, bless the press, it wanted Leonardo da Caudillo, or an equivalent.

Even the genius-generalist da Vinci would be hard-pressed to cope with all the demands of today's technology. If he were alive today, he probably would be specializing in heart surgery, leading teams of other specialists implanting mechanical hearts. Architecture, like medicine, is so complex that it is impossible for one man to have complete mastery of the art. Total architecture requires a team, composed of highly competent specialists who have achieved depth within some area of architecture. Today it is team action; tomorrow, more of it.

There is much talk today that tomorrow will require legally organized teams that design and build. If so, some of us architects will regret losing the pure form of the professional image. Then there will be others of us who will be perfectly willing to share the "glories of being an architect." This latter group sees the architect in the same light as did Prof. John F. A. Taylor, a philosopher, when he made this statement during a church dedication in May 1966:

"Architecture is without question the most dangerous of the professions. A medical doctor who kills his patient kills his critic. Architects, less prudent, supply to a critic the most powerful arguments for their own condemnation."

In any case, the contractor and the architect may have to team up tomorrow. The master builder will not be a single man.

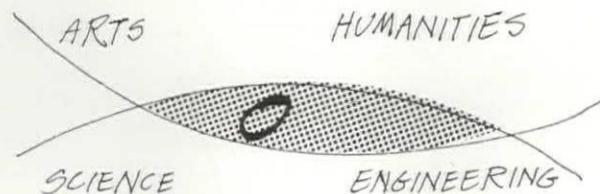


"The architect cannot just be a dabbler."

Total architecture is like total medicine. We have bone doctors: the structural engineers. We have internists: the mechanical engineers. We have eye doctors: the illuminating engineers. But in the future, the schools of architecture may have to produce these engineers, along with specialists in space psychology, computerized programming and systems approach. The registration boards may have to call them architects. The future will require architects of all kinds, and there will be need for all kinds of schools to help produce them, but we can't have *all* the schools specializing in urban design.

Needed: Diggers, Not Dabblers—Nevertheless, the architect, regardless of his specialty, cannot be just a dabbler. If anything, he must be a digger. Most important, he must be creative and know how to communicate with creative people of other professions. By training and experience, he will be in a position of leadership if he is capable of leading. What a wonderful opportunity to make a major contribution toward solving the problems of cities and new towns.

The architect's opportunity lies in his uniqueness. We architects are amphibians. We practice on the beach. Like the beach, where water over-



"We architects are amphibians."

laps land, architecture emerges where two worlds join—where science engineering overlaps the arts humanities. Two diverse worlds, to be sure. Which is the most important? Who is to say what makes the beach? Water? Land? Who is to say what makes architecture?

Obviously architects belong to both worlds. Ours is the unique profession, the most versatile. Architects by training are the greatest generalists. We must dig deep at times in diverse areas within science/engineering and arts/humanities to contribute to the orderly growth of our cities—but we must still retain our unique position on the beach. We must be architects responsible for architecture.

If you are over 40, you have been an eye-witness to changes that would have thrown architects of other times into a state of vertigo. You have not only survived the change; you contributed to it. Our fast-moving technological-sociological front will not slow down. The way things

are going, every one of us can be obsolete in five years if we don't keep up. But changes keep architects and architecture alive. We need change and we are getting it. We need to look ahead and we are doing so. But we need to do more than look and listen to others.

We need to do more than talk fashionable talk about urbanization. We need to come to conclusions. In talking about tomorrow, I define my tomorrow as, perhaps, merely next Tuesday—oh, maybe as far off as 1980, but not much beyond that. There will be plenty of architectural work to go around. By 1980, 50 percent of the population in the US will be age 25 or under, and these people will require a great many types of new buildings. We must design new spaces for new activities. What a challenge to the entering freshman. When they emerge as practicing architects, construction will have reached a high rate of acceleration. Within another decade, spaces will have to be doubled over what they are now. There is no other profession which offers such exciting opportunities.

A Love Affair with Buildings—We need professional renewal for our tomorrow. We need to dig, not dabble. We need to renew "the age-old love affair between man and buildings," as Doxiadis so aptly put it. This is no time for architecture to become a dabbling, divided and rattled profession. Not now. Urbanization is bringing on problems that can be solved only by architects—hard-nosed professionals who love buildings.

I have been forced to conclude that some architects just don't like to do buildings. Recently I took a trip for the purpose of evaluating our firm's work, simply to see how the buildings are holding up and how they are performing. I was appalled when I saw additions unequal in design quality to the original structure. Could it be that my partners and I have lost our zeal for individual buildings because of our interest in urban design?

But it's always easier to talk about other people's weaknesses, so let me proceed to do so. On this evaluation trip I saw bad design everywhere. Terrible. I actually got sick in my stomach. Now, when my wife feels bad, she buys a new pair of shoes: expensive aspirins. I get my old shoes shined to cheer me up. After one particularly bad day of viewing sorry buildings, I splurged. The quarter's worth of therapy couldn't have been better. It was a great thrill to see someone who knew what he was doing.

The shine was performed by a man who knew his job and did it exceedingly well. To my sore eyes, he was a much better man than the sorry architects who did those sorry buildings. His work was in the realm of excellence, and he took

pride in it. I wish I could have said the same thing for some of the architects, who apparently could not have cared less. The designers of those awful buildings should read John Gardner's *Excellence* in which he said, "An excellent plumber is infinitely more admirable than an incompetent philosopher."

We so often forget why we are architects. I say we are here to serve people. We must all be



"We are here to serve people."

"people architects." We must serve the housewife who spends hours each week at the market and the businessman who, during his drive from office to home, appreciates or detests buildings along his way. We must serve the travelers who spend more time in the air terminals than in the jets and the family who worship in the neighborhood church. We architects work for clients, but our work is for everyone. We must excel to serve.

Architecture has been, and will continue to be, a noble profession, but it will be a greatly changed one. Our responsibilities will increase because of accelerated urbanization. What a mess we can make of things if we relinquish our responsibilities to others and if we lose our identity in doing it. What a mess the cities would be if there were no architects!

Consider the problem of the new scale, created by speed. The ability that architects have to handle speed-scale may save our fast-growing cities; lack of the ability may wreck us. Look what happens when highways and runways are superimposed on our cities and suburbs. They now dominate everything. We must find ways to assimilate them into the suburban and urban landscape. The multiple lanes, elevated thoroughfares and the spaghetti-like intersections, by sheer size alone, dwarf not only fine small buildings but intrude even on the large ones. Sure, great megaform configurations may assume the scale of the automobile, but we are *people architects*, and people are not cars, yet.

A New Monotony—Urban designers talk of the monotony of suburbia and of the exciting new scale of the cities. If we are not careful when we invent a new scale, we will create a new monotony. As imaginatively conceived and

brilliantly executed as Brasilia is, something is lacking—a variety of scale, in my view. But getting unity with variety is difficult. Only the great skill of an architect can do it.

The architectural profession has not been asleep. We are getting ready for tomorrow. The profession is meeting the challenge of the urbanization. It is producing great numbers of urban designers, and not enough project architects. But perhaps the swing from building design to urban design has been too violent. If we are not careful, the schools with their soft curricula are going to be turning out little big-planners who spread themselves too thin, instead of producing hard professional specialists who delve deep. But this need not be.

Let's remember that for every grandiose plan there are hundreds of smaller plans which only the architect in his unique position on the beach—where science/engineering overlaps arts/humanities—can carry on with a high degree of professional proficiency.

Let's excel in something in architecture. Let's not lose our identity in the meshing process of the interdisciplinary approach to urbanization.

Let's continue to be architects—responsible for our architecture. □

"Look what happens when highways and runways are superimposed on our cities and suburbs."



Change Is the Challenge

BY HERBERT H. SWINBURNE, FAIA

One way to look at the future is to say simply that it will be fashioned as people want it. It will reflect the aspirations of our society; today's goals will shape the future. Our profession then will construct an environment that mirrors that society; our architecture will be a barometer of people and their times, just as it has in the past.

Another way of perceiving the future is to let fantasy conjure up an environment built of materials unknown today, with power from undreamed sources energizing a utopian world that solves all problems with which we contend today.

But there is still another way to consider the future: THE FUTURE IS NOW.

I agree with the fellow who said he was interested in the future because he expected to spend the rest of his life there. Let us find these forces that today are actually at work changing the future. Change is the alteration of form or quality, and the process of change we call mutation.

We can say that many forces are at work on the future of the architectural profession. The elements of mutation can be separated one by one and examined.

Some of these forces are being generated within the profession itself; they are in areas where we recognize our own shortcomings and are actively trying to change our future by doing something about it now.

- Professional Resources
- Education
- Contexture
- Comprehensive Services
- Architectural Programming
- Design

Other forces are being generated outside the profession. A few people in the profession are operating in these areas, but very few. Most all the energy for change comes from outside and upsets our status quo.

- Proliferation
- Professional Climate
- Behavioral Sciences
- Research and Development
- Systems Theory
- Computers
- Management
- Shifting Roles

Of course, this list is personal and so are my opinions about the elements of the mutation process. Each of us in the profession should have his own list; each must examine his own commitment to the future. The profession collectively should do the same.

FORCES GENERATED WITHIN THE PROFESSION

Professional Resources—A little more than a century ago the architect dealt with an architecture under his complete control. He was a generalist and had it made. His electro-mechanical problems were solved with the candle and fire-place. Energy was water, wind and steam. Public utilities had not yet been born, and the word acoustics wasn't in the language. Structure was limited to the simple technologies of masonry, wood and iron. Communication was verbal or by post. Transportation in the city was pedestrian or equestrian and horizontal only.

Over a hundred years ago in 1857, a dozen

professionals met in New York City and founded The American Institute of Architects; a few years later in 1868 the Massachusetts Institute of Technology opened the first school of architecture in the United States. The Reconstruction Period after the Civil War had begun, and so had architecture as a full-fledged profession in this country. The gross national product wasn't formalized then, but let's place it under \$5 billion.

This was the advent of exfoliation and extraordinary change: No other single century has witnessed such a sweep of physical develop-

The future is here right now, and if architects are serious about improving it, they must take a good hard look at the forces being generated within and outside of the profession.

ment—a development that moved from Otto's internal combustion engine to nuclear power; from the narrow-gauge railroad to interstellar exploration; from intimate architecture in small towns to impersonal architecture in random megalopolis.

Today the architect no longer dominates his architecture. He must depend on specialists in the engineering disciplines to help in the solution of his complex buildings. Sophisticated science and technology influence the very esthetics of architecture and account for more than half its cost. Construction is our No. 1 industry, and its annual volume is well over 10 percent of our gross national product. This volume must be constructed in the shortest possible time. Complexity, volume and speed are taxing our current professional resources to the limit.

In the early 1970s the GNP will pass the trillion-dollar level. We've all heard how our physical plant will expand in the next 40 years. If we assume our present GNP growth rate averages 3.5 percent, within the same period of years, its total will reach and surpass 65 trillion. Extrapolation at a conservative 10 percent then gives us a figure of \$6.5 trillion in construction costs over the next 40 years. How much of this will be handled by architects is conjecture. But this is sure: Today's reservoir of a few thousand architects, whose growth rate is a fraction of the GNP, cannot keep up with the country's demand for professional talent if we continue our present ways. With this growth ahead we must change our ways to meet the challenge. A new dynamic must replace the conventional wisdom.

Education—Although MIT began it all in 1868, we still have a long way to go before we reach a hundred schools accredited in architecture. Their annual crop of graduates feeds too few into the profession. The dropout rate and attrition to industry is too high.

The author: Mr. Swinburne is a principal in the firm of Nolen, Swinburne & Associates, Philadelphia. The article is based on material from a book which he is preparing for the McGraw-Hill Book Company.

The architects who will be most involved in the world of the next 40 years are in the universities now or soon will be. Their response to tomorrow's needs must be based on an education that anticipates a different world rather than an enlarged extension of the one we live in.

This requires change in the educational process. The schools and the profession itself realize this, and forces are at work seeking new directions. We can't define an unknown tomorrow,

but we can sense distinct ground swells. We used to feel quite secure within the isolation of our professional attitudes and opinions, but innovations in other fields now challenge our position. We are developing new perspectives as we are influenced by disciplines other than our own.

In the past we have had as many different kinds of schools of architecture as we have had strong, highly personalized deans to run them. Today the schools and the deans are talking to each other and re-examining basic fundamentals. They are not seeking conformity and consensus but are organizing change that will be meaningful for the future.

Tomorrow will require well-rounded architects trained as leaders of men and concerned about aggressively shaping their environment and society. We need men who know how to cope with the real world and who are not afraid of body contact required on the rough field of action where we construct our dreams.

The new architectural student will be far superior to the Depression-bred conservatives of another generation. He will have had a better elementary and high school education. He'll soak up knowledge like a sponge. He will be more mature and aware of the world about him. But our schools will initiate change and be ready for him. They will even make the pressing decision not to depend on the engineering professions for talent relating to building construction and will slowly take over the task of recruiting and educating, in sufficient numbers, all the disciplines needed in the design professions. It will soon be time to develop technicians as subprofessionals at the community college level. We're not quite ready yet; we'll have to research and develop a new curriculum geared to the needs of a changing architectural practice.

Contexture—Sometimes a building should speak softly; sometimes it should be permitted to shout. But loud or quiet, it should speak a consistent language—fluently and respectfully. Contexture is an interweaving, the arrangement and coherent union of all the parts.

Many architects, like many entrepreneurs, demand the right to act alone and ignore any frame of reference beyond the property line. Any constraint on building caused by abstract concepts of the common good or regional goals are often suspect. The old image of industry, belching smoke down by the railroad tracks, and fenced off from the rest of the world, ignores modern technology. Innovative concepts in zoning will be less concerned with geography and more with such things as transportation to industry and control of irritants or contaminants that now reach far beyond the railroad tracks.

The forces of responsibility are moving swiftly within the profession to fit all the architectural pieces into some greater whole. The contexture of appropriate patterns and interactions from small neighborhoods to a whole region considers not just physical environment but human reaction to this environment. Contexture generates scale of many kinds because it considers human ecology; it says scale must be intimate as well as monumental, but it adds that scale in speed must be pedestrian as well as vehicular.

Comprehensive Services—There seems to be some confusion about this term. Some say the architect must be qualified to offer more than design and construction capabilities, that he should be competent to offer a far wider range of service or form a joint venture with others so that an organized team can supply these diverse talents. Others say, "This is what architecture is all about anyway, we've been doing this all our lives and why this new label?" Still others say, "Not for us—we'll just stay with architecture."

It is a fact, however, that the new client is looking for professional service that goes far beyond the traditional. The label of comprehensive services has been pinned to this broader sweep that didn't exist a few years ago. There is tremendous force for change here, and the profession is adapting to the pressure.

A greater volume of work must be built in less time. Individual projects are getting larger. Governmental authorities at all levels, responsible for judicious investment of the taxpayer's dollars, are requesting studies in depth before authorizing design and construction. Many of their questions extend beyond those met in traditional practice. Commerce and industry have put together an array of talent and expertise to challenge the architects on their company's long-range development problems. We have to speak their language.

A recent architectural survey disclosed that 25 percent of all architectural firms have no employees; that almost 80 percent have a staff of four or less. We've all heard it said at one time or another: The big get bigger and the small get smaller. This isn't so and doesn't reflect current trends. Small offices are forming joint ventures with other firms and other talents to give comprehensive services and these combinations are executing projects of significance. Moreover, within a few years the computer utility linked to the architect's desk by telephone will soon supply the smallest firm with a wealth of data and process that now is available only to the large ones. This recalls the old adage about how the Lord made some people big and some people

small, but Mr. Colt made them all the same size. The computers will make all architectural firms the same size too, and David can slay Goliath any time David has a better mousetrap.

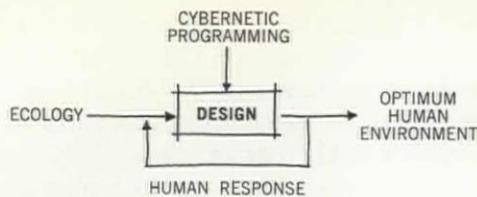
Architectural Programming—Many times brilliant solutions are found for the wrong problems. Designs are often scrapped or revised after examination and critical analysis. Design is becoming incredibly complex in some fields, and traditional listing of spaces in a building program together with informal dialogs about them with the client are totally inadequate. Interpretation of program often represents personal bias and limited experience.

Forces are underway in the profession to create specific programming systems that better describe the total concept of problems to be solved through design. The impatient tendency to leap intuitively to a basic solution before a problem has been defined and all relevant facts researched and absorbed is now suspect. The logic of program and the relationships involved go far beyond physical space and function. Human interactions must be programmed and the environment considered in terms of a behavioral setting that conditions human response. These complex interlocking conditions must be carefully considered and reduced to written statements. These, in turn, can lead to an essay known as a design directive, which is design through explicit language rather than implicit graphics. It is a broad communication device that points out the general direction of solution. Interior human environment long has been limited to physiological comfort: thermal, visual and sonic. Now interiors must also be involved with intellectual and emotional comfort, depending upon the characteristics of the type and condition of specific people within a given environment.

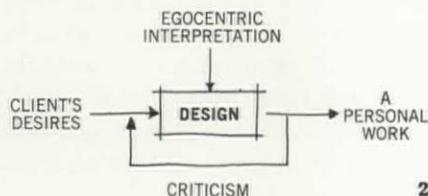
Some research is underway using sophisticated programming methodology, and great opportunity lies in this direction. Such development will have profound influence on design. The boundaries of physical and social systems, of subsystems and suprasystems, will begin with precise definition and delineation in program. The concept of systems must also be interlocked within the contexture of physical order and human behavior. The success or failure of any architectural work depends on this.

There is more to architecture than function and form and visual esthetics. How much more must be defined knowingly in the program. This is our next breakthrough.

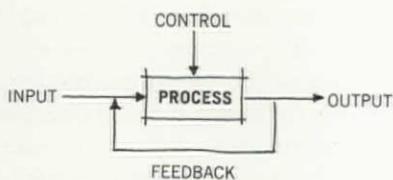
Design—Creativity itself is dynamic and subject to change, and its process is now under scrutiny. Architecture has three positive physical dimensions and extends through the years in the



1



2



3

fourth dimension of time. People and their activities, however, are the true reason for an architecture and generate its fifth and most important dimension. An esthetic without people is not architecture; it is mere sculpture. A complete architecture recognizes people and how they influence the creative act of design. People are not only the perceivers of an architecture; they contribute to it, they move through it, they are directly involved in it. The measures of firmness, commodity and delight are not enough. You will recall that elsewhere I have noted that systems theory describes the operation of any process as seen in diagram 1.

Using this theory, let's take a look at architectural design as a process that was adequate up to the present. Great architecture was rarely found except as the expression of a great intellect for an elite few—from Stonehenge to Sixtus, from Pharaoh to the Medici and Louis XIV. The intellect created magnificently, with a latitude that a discerning patron dispensed with power and appreciation. This was the individual intellect; it was self-centered and found personal expression as architect and artist. It was perfection, flawlessly extant, and visual esthetics was its measure, illustrated in diagram 2.

An architecture of the future will not accept this, even though we have many beating the drums for it today. Simple problems that used to be solved intuitively within the range of individual experience and sensitivity have now become a patterned array of problems. Man of the future will live in a different world, and his milieu and mores will be much more intricate than ours. He will constantly be accelerating and probing beyond his own place in the sun. A new architecture will be needed, and new ways of measuring its totality and performance will be found. The individual architect-designer-esthete will not be able to cope with this alone. His personal decisions will be too limiting in terms of man's deep reservoir of knowledge. The process of architectural design will change as shown in diagram 3.

Changes in the design process are seething and boiling below the surface today. That's why we have no recognizable mainstream. Architecture and creativity must sit down together, initiate a dialog and apply some leverage to these forces in our time.

FORCES GENERATED OUTSIDE THE PROFESSION

Proliferation—We have too many numbers. The number of anything and everything is increasing each day, and, more staggering, the rate of change is accelerating exponentially. These numbers are getting away from the architect, and whatever he does to catch up with them will change his life professionally.

Let's plot a graph in your mind's eye. Lay out a horizontal time line in thousand-year increments going back to 4000 B.C., then tick off 100 year increments at 1800 and 1900, and plot the present at some 30 years from the year A.D. 2000. Next lay out a vertical scale where each unit represents numbers of anything from zero to maximum. Now plot the quantity of anything you wish to measure such as world population from a few million to billions, total reservoir of

world supply of energy, human speed from a few miles an hour on horseback to escape velocity. All these curves have one thing in common: They start out as a blip just above the base line in ancient times and then plot a wiggly track with remarkably few variations down through history until about the 16th century. The trace begins to curve up slightly. At 1800 this near horizontal line swoops sharply upward until it reaches the near-vertical at 1970-2000.

Thirty years— $\frac{1}{2}$ of 1 percent of the 6,000 years we've just scanned. Within those three decades we will generate more scientific and technical knowledge than in all history before. Couple this proliferation with the increasing numbers of people and their urban clustering, and we'll have more social and cultural change

than we've experienced in the last 6,000 years. The architect will be caught up in the middle of all this; the flood is inevitable, it is on the way now and we have no control over inundation.

Professional Climate—The climate within which we work has never been under our direct, exclusive control. The clients we serve are the real weather-makers. They set the conditions for action.

There is a new client about now, and he is changing too. He thinks bigger, has large markets, commands tremendous dollar resources, sometimes has the power of eminent domain and has real opportunity to improve the world in his time.

The client's mission, as he sees it, requires a certain role. He has a responsibility to himself or his co-venturers, his stockholders or the taxpayer. His perspective and motivation set our climate. Four kinds of clients are worth noting here:

1. *The individual*, as client, is becoming increasingly rare. He still acts alone, but he also forms a consortium to spread the risks. Some will build whole cities. They all have personal climate control of some kind that effects the architect.

2. *The small group*, as client, is expanding its horizons. Formerly it sat as a board and talked about a school; now it thinks in terms of an entire district and statewide implications. The board used to add a building or two at the university, now it builds a whole new university under one contract. The building committee doesn't think in terms of a wing on a hospital any more, it thinks in terms of a center for the health sciences. All these groups set definite limitations on the professional.

3. *Industry*, as client, is a new experience. It is business-oriented, systems-oriented, economy-oriented, and hesitates to put its business in the hands of anyone not similarly motivated. When industrialists team up with architects, they've already done their homework about markets and feasibility, they have many constraints and trade-offs that will effect design. Industry builds whole cities too.

4. *Government*, as client, is getting more and more like industry. With its huge construction programs it is establishing uniform procedures and criteria of its own. It is rare that an architect can superimpose any standard that varies from those of government agencies at any level.

The climate for the profession is changing. The new client brings with him a whole team of his own: technical, legal or scientific. It is a team, and it comes with a book of regulations. The team is, for the most part, able, competent and opinionated. It's a new world and the profession

must stay flexible. Mutation is for the architect as well, and he must adjust accordingly.

Behavioral Sciences—A friend once said he pictures architecture as a discipline that stands on the middle ground between an ocean of unquantifiables in human behavior and aspirations on one hand, and the hard shores of quantifiable fact and reality on the other. The ebb and flow of knowledge across this beach is the territory of the architect as he deals with his projects.

The architect has always considered his profession more an art than a science, and many refuse to consider those behavioral sciences that deal with the unquantifiables of behavior: psychology, and anthropology and sociology.

Change here is inevitable. If we are concerned with shaping the physical environment, then we must better understand all the people who will use it, and that's what the behavioral sciences are all about. Response to environment can be individual or collective in groups of many sizes. For instance, have you ever thought of the individual this way? One is what one is, and his genetic link with his ancestors gives him a serial number that forever sets him apart. Add to this ethnic and family identity, his personal life and associations, his education and environment, his social experience and status, and you have a complicated individual who possesses a unique biography.

With this unique biography, he will also have a unique reaction to whatever environment you design for him.

We all know the $\frac{wl^2}{8}$ formula in structural de-

sign. But I say the S-I-R formula from psychology is far more important to design than any bending moment. One's knowledge about the chain of Stimulation - Integration - Response should be tested in every state board examination. We know intimately the characteristics of materials, their subtle variations and colorings, we know how to work with them. But do we know the characteristics of people, their basic drives and motivations; do we know how to work with them? We all understand the dynamics of a hyperbolic paraboloid but do we know group dynamics and how people interact? The industrial process is our servant, we can design and assemble anything, anywhere. The communication process is almost unknown to us, here we design and construct towers of Babel. The structure of our buildings are studied and refined until they give meaningful expression. The structure of our society, its mores and institutions, if better understood, could exert an even greater influence on architectural expression.

Development of the physical sciences led to an

industrial revolution that profoundly changed architecture. Development of the behavioral sciences will help induce a social evolution that will witness even greater change.

Research and Development—A student walks into any medical school in the country and before the ink is dry on his registration card he learns the word “research.” He never forgets it, he can’t escape it. Research is the life blood of his profession.

A student walks into an architectural school. In most of them he’ll graduate without hearing the word research; some will tell him something about it but not to bother, it’s for others; a few are seriously involved. That is about the distribution of attitude throughout the profession as well. Sometimes the climate for research gets better, sometimes it wanes; it seems to have a three- or four-year cycle.

In the past when industry filled positions of leadership in management or the board of directors, it selected men with a background in sales or production. This is still true, except a third category has been added—men with a background in research. This illustrates the critical importance of research. It gives it a position of leadership where its voice can be heard. Our profession desperately needs research. We need to research all our activities in the office and in

the field. We need to become research-oriented. We need to catch up with other disciplines, with industry, and learn what they already know: without research—stagnation and obsolescence.

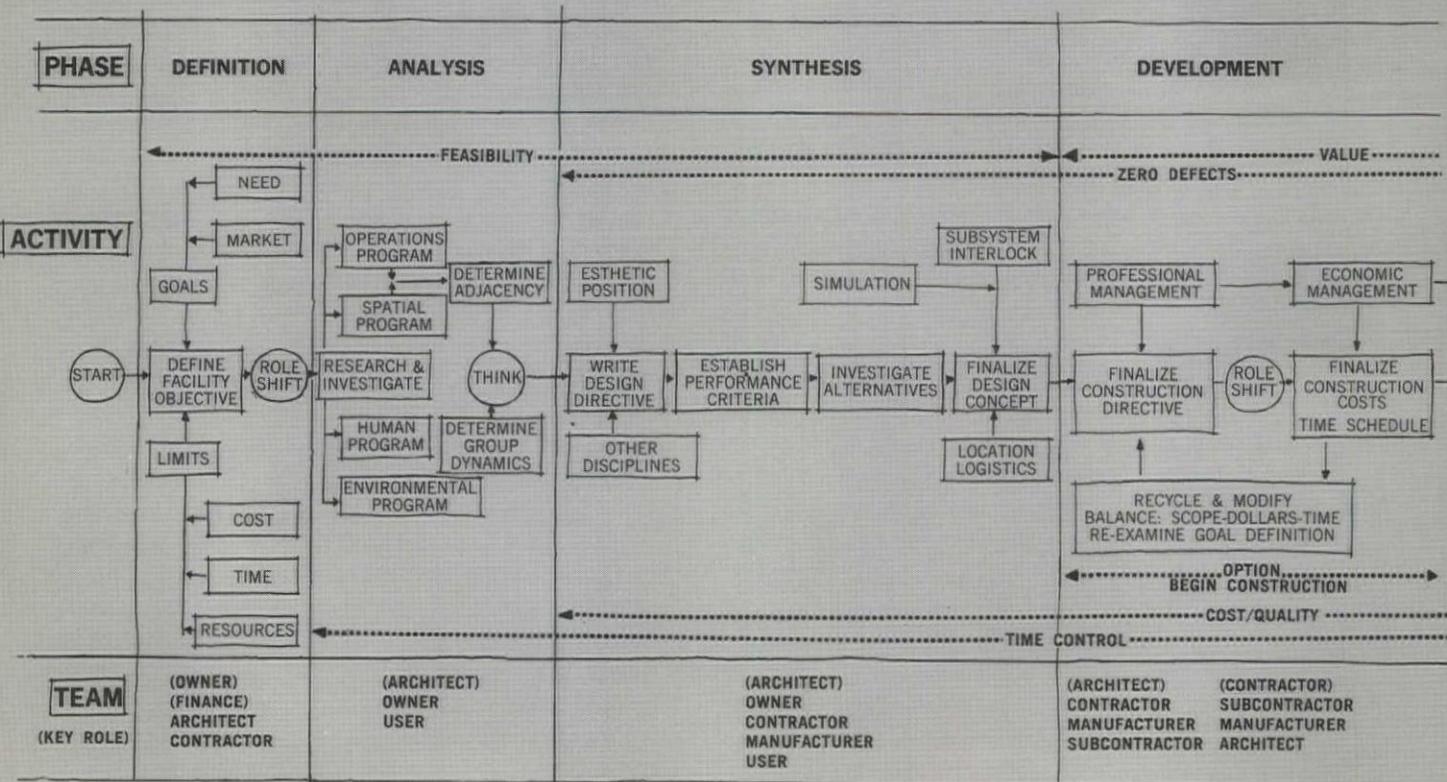
Systems Theory—Systems is one of those bright and shining glamour words. It’s popular to drop it knowingly into conversation. But after everyone has taken the usual facetious cracks at it, we ought to get down and listen to what it really is and can do. Systems theory is nothing more than formalized common sense. It brings order to the way we explore solutions to large, involved problems. Of all the forces producing change, this one will have the most effect.

Let’s simplify and say there are two kinds of systems: physical and nonphysical. The architect will have to be concerned with both.

The concept of physical systems will reshape the way we design our buildings. The building itself is considered a system. It is composed of a network of subsystems that each operates within clearly defined boundaries and yet interlocks with all other physical subsystems without conflict. This whole building system interlocks in turn with other buildings and other systems such as transportation and communications, and together they form an urban suprasystem.

The concept of nonphysical systems will reshape the way we organize our thought and

THEORETICAL MODEL OF THE ARCHITECTURAL PROCESS:



work, or the architectural process, if you will. Through systems analysis, we fracture large problems into smaller ones, formally research and examine them, and put them back together in the form of an architectural program. Through systems synthesis, this data is formally organized in ways that permit alternative investigations leading to design solution, final development and construction. The process is not complete until the end results have been tested and the performance evaluated.

Negative response to this thinking is expressed in two ways. First, there isn't anything new here: any responsible architect does about the same thing as he designs and builds buildings. Second, you've got systems this and systems that—you're systems-happy. All you want to do now is hook on to a computer, take the heart out of architecture.

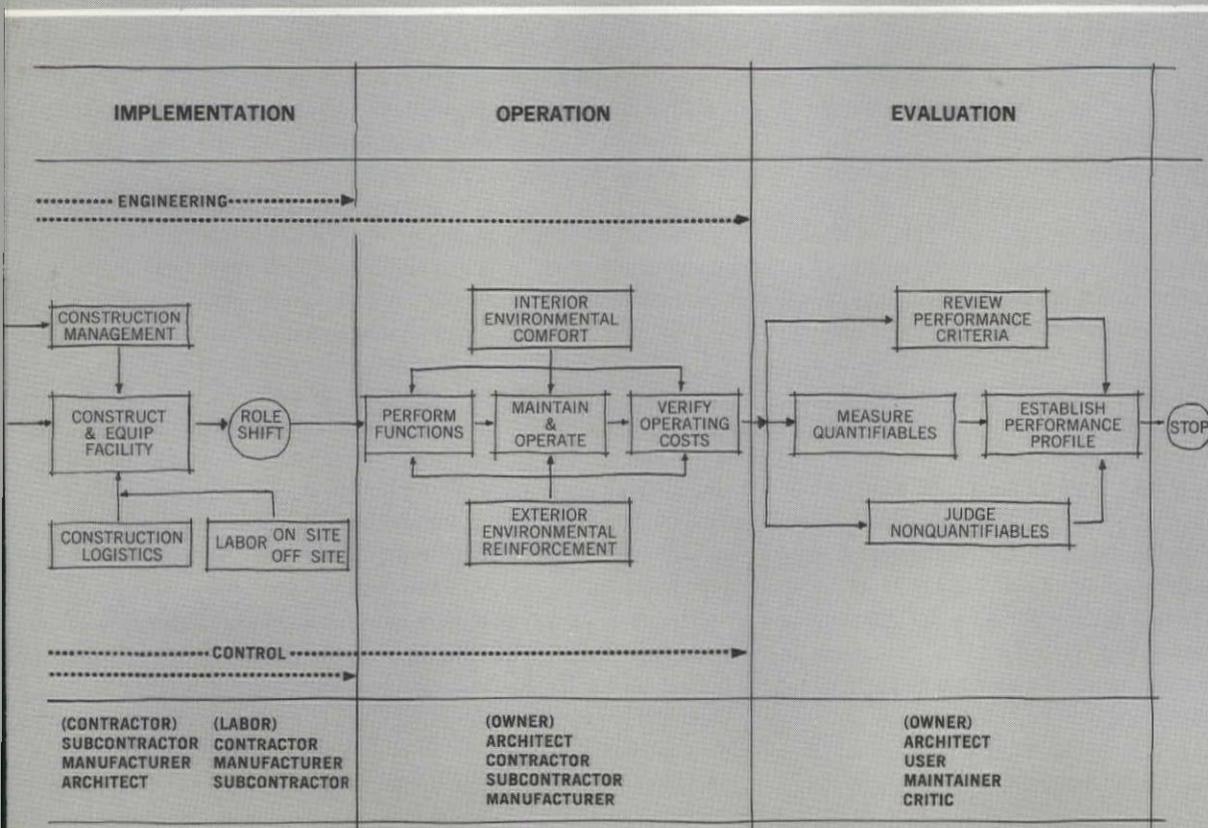
The answers are in sequence—not a whole lot that's new, no; we said the whole idea was formalized common sense. But the architect is a victim of information overload and liability exposure. Nobody knows any better than we do that we must do better than in the past. The architectural process is out of date and we need to appraise any method that will help us do a better job. As far as being systems-happy and generating conformity, let's say this: Through systems

analysis and synthesis, both tied to a computer, we will free ourselves from conformity and have truly individual solutions. These methods permit investigation of many solutions in a very short time. Architecture will have greater individuality, higher reliability, finer performance and better cost control.

Computers—Man has done a simple, understandable thing. He has hitched speed and memory to the abacus and slide rule and called the result computers—digital and analogue; one counts and the other measures. You turn on the ignition key, and, like an automobile, the thing runs. All you really have to do is steer it properly. The automobile and the computer have much in common: Nobody cares what's under the hood as long as they both go where one wants it to, and neither can without the driver's instructions. Today's youngsters understand this. By the time they have their driver's license and are almost through high school, they can handle both kinds of equipment except for the real hot jobs in science or the Grand Prix.

These computers deal only with things that can be counted or measured; they understand only the quantifiables. They have a carburetor inside somewhere that mixes things together just as it is told to do, and out come the answers. But people won't leave simple things alone. They use

RESEARCH · DESIGN · CONSTRUCTION · USE · OF ANY FACILITY



The facts of today must be the springboard of the future. In order to see this as a whole picture, the author has constructed a theoretical model of the architectural process. It builds on our present way of doing things and yet permits us to insert the future we've been talking about and makes today relevant to tomorrow. The model itself will evolve and change with time and experience. It is shown as a seven-phased process of numerous activities and suggests that no one person can play a dominant role. A complete team of people is involved, and, depending on the activity, the key leadership role shifts. The future will see changes in the present listing. Overlapping many phases of the model are various control systems that monitor the entire process. They are given fancy names here; and the nomenclature will change. But they are omnipresent: controls over time, cost, quality and performance.

esoteric jargon to explain these simple machines, and some let their fancy wander and compare it with a Frankenstein. We hear of Cobol, Fortran, Cogo and Stress. We hear of printed circuits, logic elements and random access time.

The architect is afraid of this new-speak. It is sinister and mysterious. The architect half wonders, as he condemns it, if the sorcerers can really work their magic. It goes against his grain to think that electronic gadgetry can contribute anything to architecture. There is no room in his human heart for these inhuman IBM cards, tapes and memory systems. Since the architect doesn't really want it, the computer is entering the profession through the back door, through engineering and accounting.

This is setback—fragmentation again. The architect claims to be the coordinator; the common denominator; the bringer of unity, discipline and order to his tasks. Well, he won't be if his consultants all use computers, each speaking a different language. The architect must insist on a computer language common to all; he must develop programs and software that cut across all discipline and examine the conflicting interfaces between his structural and electro-mechanical systems, for example, and automatically adjust either or both while still meeting optimal criteria. The architect must also be ready to accept the full impact of all that computer-graphics will bring by the mid-1970s.

This is not the place to parade a list of today's and tomorrow's and itemize how the computer will accelerate change in each. This is the place, however, to emphasize that the architect must assume responsibility to say where the computer is needed and what type of problems they should be asked to solve. In short, he should open wide that front door and invite the computer in. Then he will be able to search knowingly for the unquantifiables of creativity as he directs the machine to process the quantifiables of certainty.

Management—We have often heard it said that architects should spend more of their time developing design sensitivity and less time on a concern for the competitive skills required in the marketplace. Architecture must remain an art; it must never become a business.

Why do we have to make a choice? Vitruvius said in the first century B.C. that theory and its implementation were twins; that concern for construction costs walked hand in hand with beauty; that a true architect had to master business simultaneously with design.

The new client and his demanding ways are forcing us to examine critically our ways of management. This client is wise in the methods of business; he uses them in his own world and is

no longer willing to have someone handle his project and his money without equal expertise.

Shifting Roles—This last look at change lifts an inquisitive eyebrow and wonders aloud. From where I sit, it appears some moves will be made on the chess board of the construction industry. Some men will unexpectedly show up in the most unusual positions, some will be taken out of play altogether.

Standards Man. This man is asking new questions and trying to find the right answers. He used to inquire about materials. Now he is asked to set performance criteria for building components, and this leads him to inquire what is meant by building performance. This man is tough. He leaves process up to others. All he wants to do is establish standards for input and output. This new and penetrating activity is creating a lot of flak, and I wonder what the answer will be.

Producer. He's being asked to design now, to meet certain performance criteria. It might be that he will be asked to do more and more of this for larger and larger components. Two questions: 1) Is he a producer or a designer, or both? 2) Since performance criteria demand in-place performance, will he be satisfied to let someone else put it in place; is he a producer or a contractor, or both?

Labor. The new-speak that thinks, fabricates and builds in systems is on collision course with craft unionism. The systems approach is concerned with the interface between physical systems, and it is at this face where most failures occur in building performance. Craft unionism defines the boundary of work, militates against composite work and the interaction of systems. What course is available now to avert collision; have we any options?

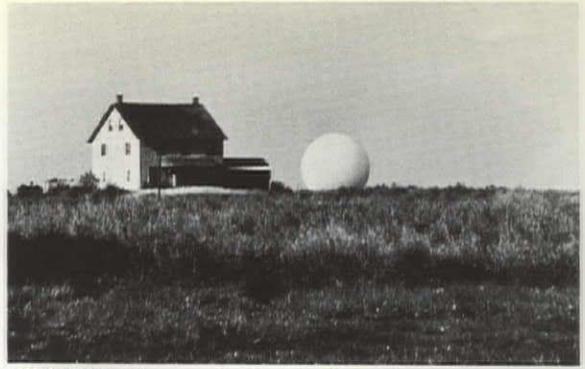
Builder. The builder has constructed less and less of the building package as the package got jam-packed with specialties. Some builders began to call themselves contractors and generated a whole new world of subcontractors. What will be their name and role tomorrow?

Lender. It used to be uncomplicated. You had the money to build your building, or if you didn't, you went to the bank and borrowed it. If your credit wasn't good you didn't build. Today the sources for funds are legion and complicated. You can put up a building on land you'll never own with money that's not yours and make a profit when you sell it to someone who only intends to lease it to others. This man will show up on the chess board with a building credit card.

Design Professional. What will be his role? How will it shift? Why, that's what this article has been all about. □

Some Forces at Work
as Seen Through
Herbert Swinburne's
Sensitive Eye

Professional Resources

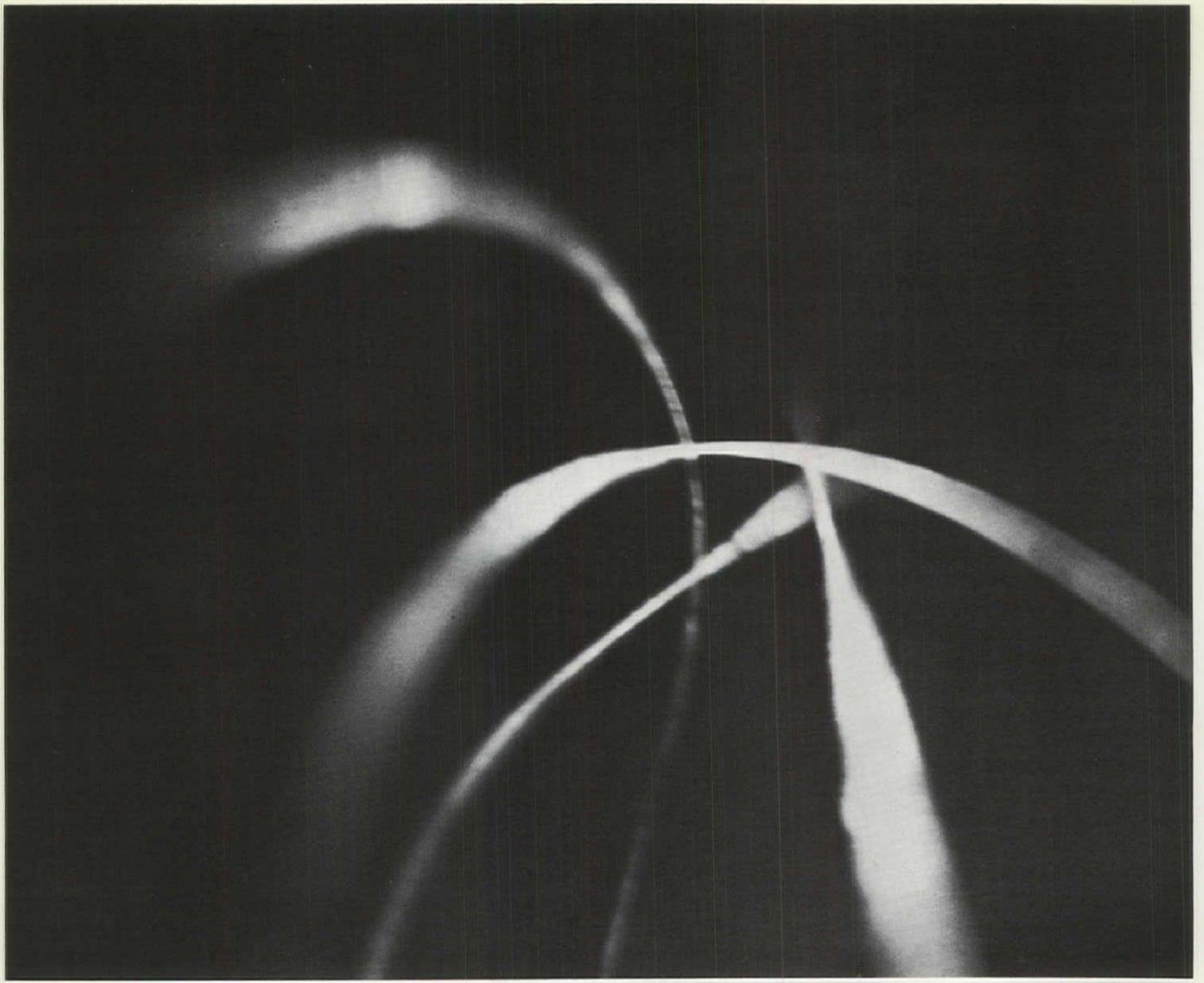


CHANGE—the result of such elements as ...



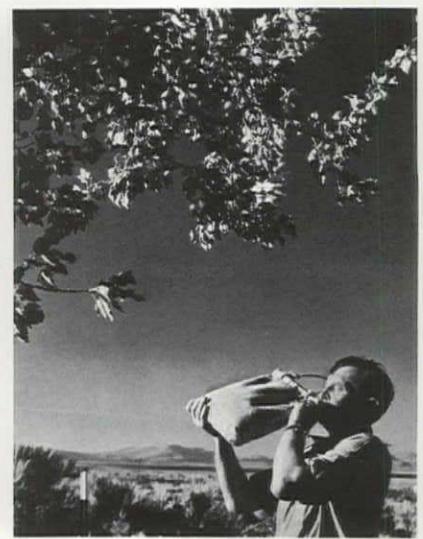
Contexture





Design

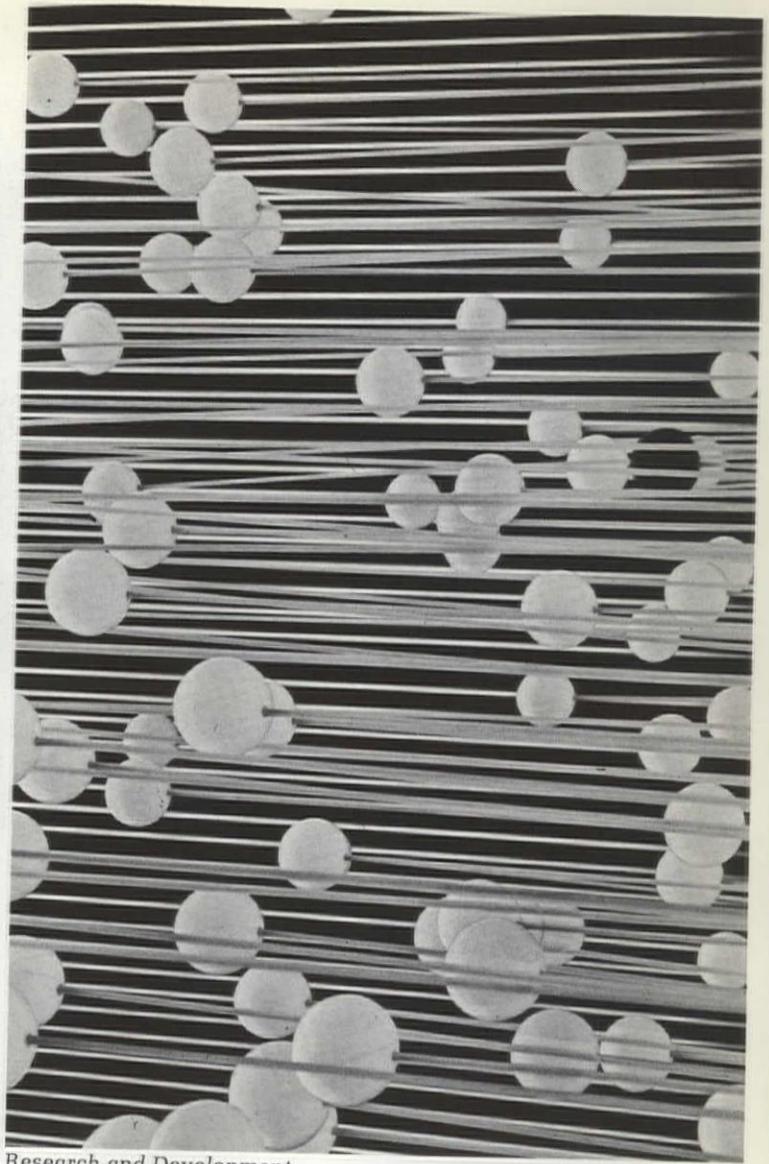
Proliferation



Professional Climate (individual and collective clients)

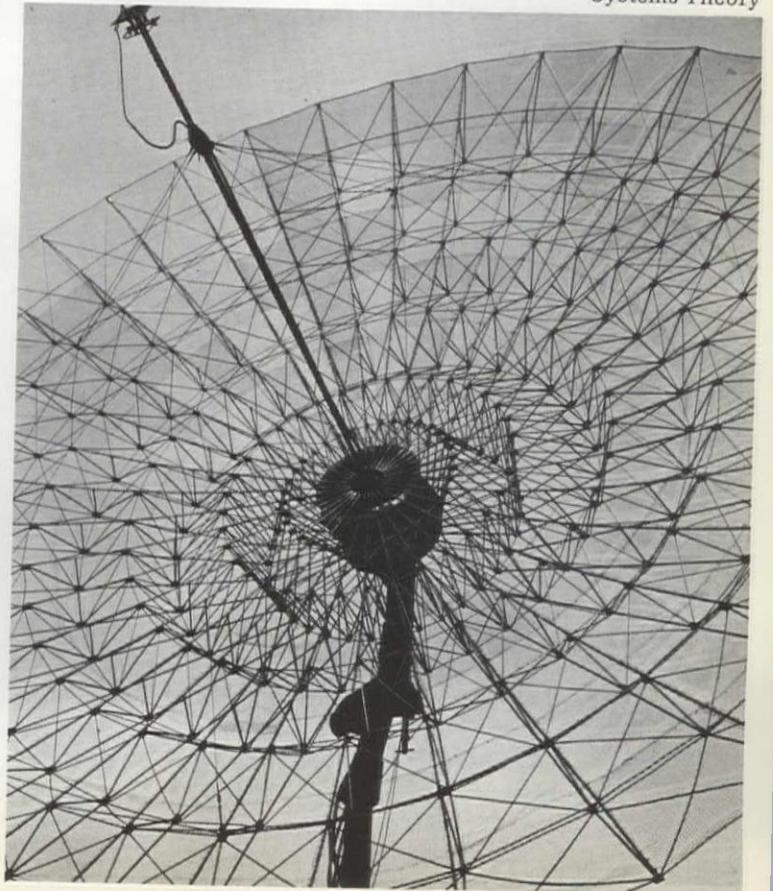


Behavioral Sciences (human response and interaction)



Research and Development

Systems Theory



The Program's the Thing

BY HAROLD HOROWITZ, AIA

The behavioral sciences hold great significance for the architecture of the future. They promise improvements in our ability to describe architecture, our understanding of the kinds of responses that occur in architecturally controlled environments, and in our ability to predict the consequences of design changes and to evolve direct solutions for specific program requirements.

Much that is associated with the preparation of the architect's program is of keen interest to behavioral scientists. They have made extensive investigation of such problems as the communication of ideas across the lines of different disciplines and subcultures, the ordering of values of the various components of a project, and the role relationships between the persons cooperating in the preparation of a program.

But if programming is to stand to benefit from the behavioral sciences, it must first stand on a firm consensus within our profession.

While it is agreed that the successful design solution is one that translates the needs of the building's user, as expressed in the program, into a significant physical form, we find beyond this point of accord broad areas of confusion and disagreement on three counts: 1) responsibility for the program, 2) degree of program detail and 3) program format.

Program instruments vary considerably in both content and format. I have found through my work with the National Science Foundation that for one building type, the science building, programs are often of poor quality or are absent all together.

There is, moreover, a difference of opinion

over whose responsibility it is to prepare the program instrument. Some architects believe that the development of the program is the responsibility of the client, that the most they should do is assist with the technical aspects of preparation.

One thing is certain, however: If the architect does not prepare the program, his act of accepting it is in itself a most serious responsibility which should be undertaken with adequate time for objective questioning and analysis of each of the stated needs of the client. No architect can gain much satisfaction from devoting a great deal of effort to the careful design of a building with an inaccurate program. He knows in such cases that chance plays too great a part in the successful use of his solution. When an architect receives a program, it is important that he find it complete, sufficiently explicit and that he regard the requirements as reasonable. When the program seems unsatisfactory, it is his responsibility to resolve its deficiencies with his client.

The major classes of information that should be found in most well-organized and thoroughly detailed architect's program instruments number 11, and each requires brief explanation before discussion of the potential contribution of the behavioral sciences to the programming process. The classes are:

1. Objectives of the Master Plan—The existence of a master plan will control many of the broader aspects of the design for a specific building. It will almost always control its location and size. It may also influence the relative proportions of length, height, width, exterior architectural treatment, quality and cost of construction, orientation, direction of principal access and many other important design factors. The program should indicate the way in which the master plan relates to the proposed building in such terms that there is no question regarding criteria that must be followed with little deviation and, also, the matters where the architect has a fair degree of design freedom.

A master plan is valuable, but it often creates issues for controversy. The architects commissioned to design a specific building may not be sympathetic with the assumptions and recom-

Buildings are the physical manifestation of programs. Only with programs full in scope and fine in detail are we assured chances of design solutions that accommodate and delight. To achieve fullness and fineness, future practitioners are likely to draw profitably from the behavioral sciences. Indeed, profit is now available.

mendations of the general plan and, in fact, the plan may need improvement. Attempts to second guess future revisions to permit the design of a specific building to proceed will introduce problems between the architect and his client, or between the several responsible groups within the client organization.

2. Special Restrictions and Limitations on Design—There may be special restrictions and limitations related to the building under consideration which should be described in the architect's program so that they are understood at the beginning of the design studies. For example, the donor of funds for a building may have stipulated that a certain material or design feature must be used. Much more troublesome are the problems connected with buildings on adjacent sites, such as a need for privacy or low noise level, a need to ensure that existing greenhouses will not be shaded, etc. To the extent possible, such restrictions and limitations should not be left for chance discovery by the architect but should be carefully investigated, evaluated for significance and described in the building program. The collection of such data will usually be beyond the ability of a user group or academic department concerned with a single new building within a complex institution, such as a university, and becomes a responsibility for the central administration. Through the exercise of authority to ensure that a new building is not a nuisance to other facilities, the central administration may find it necessary to overrule some of the desires of the users of the proposed building. The architect may find himself caught between group conflicts if they are not resolved before he receives his program.

3. Characteristics of the Site—The need for as much information as is known about the physical properties of the site is fairly obvious. The program should indicate the architect's responsibility for obtaining additional site information and in arranging for the design and construction of auxiliary services and centralized facilities that are essential to the functioning building and the long-range plan for use of both the site of the proposed building and adjacent land. The architect should not be in the position of making judgments regarding future capabilities and limitations of the site without the client's recognition and consent.

4. Site Development Requirements — Roads, walks, parking, grading and landscaping require close coordination with similar work on adjacent building sites and all must be related to patterns of pedestrian and vehicular traffic, including building occupants, visitors, service and delivery during and after the period of construc-

tion. The program must describe the criteria for the work to be done and should also relate this work to circulation and land use patterns of the entire campus or community.

5. Functional Requirements for the Facility—The architect's program should state the official view of the building user on what functions the new facility will accomplish in terms of the product to be produced. It will treat the functional requirements for the proposed building as a whole and also consider each of the principal areas in some detail. These descriptions should not present technical data on equipment and services.

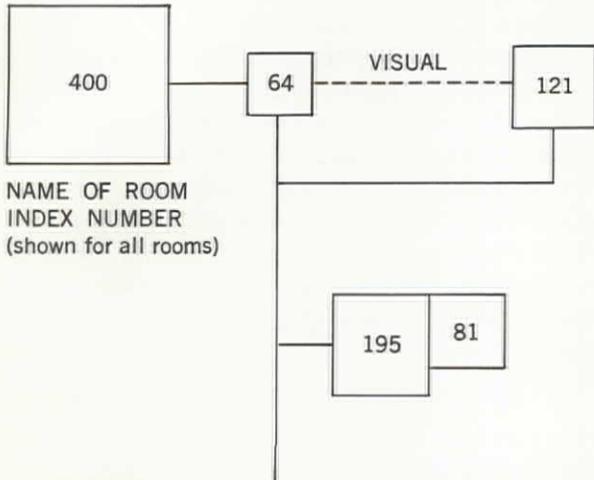
The author: Mr. Horowitz, as head of the Architectural Services Staff, National Science Foundation, devotes substantial time to problems involved in the programming of research laboratories for which the NSF makes grants to colleges and universities.

6. Characteristics of the Occupants—It is easy to overlook the fact that buildings are for people, especially when dealing with buildings such as research facilities involving complex mechanical installations. The building program must indicate numbers and kinds of people who will use the various parts of the proposed building. This information is essential for sizing of rooms, corridors, exits, and for determining the quantities of services to be provided. Information on the age, sex and even cultural and educational background may often provide valuable guidance in the development of the design. Most programs tend to be grossly deficient in this information.

7. Specific Facility Requirements—One of the most important functions of the building program is to bring together, in writing, a consolidated listing of all the specific facility requirements believed necessary. In general, four classes of information are presented: a) the number of spaces of each type required and their sizes, b) the number and characteristics of the occupants, c) relative location and interrelationship of spaces, d) essential architectural features, equipment and utility services.

Most programs use one of two formats to organize these four general types of information. The first format consolidates all of the specific data on a room-by-room basis and may devote a page or more to each room. The second format establishes a standardized concept for each of the basic types of spaces, such as teaching laboratories, research laboratories, offices, etc., and then describes a general specification for the standard types. The discussion of the criteria for the standard types is supplemented by further

PROXIMITY/ACCESS CHART



NAME OF ROOM
INDEX NUMBER
(shown for all rooms)

Shown are square footage of rooms, access (lines), desired proximity (length of lines) and visual/auditory connections. Index number leads to description of room's requirements.

discussion of equipment and services that are to be employed. For complex research laboratories, the supplementary detailed criteria may include as many as 40 to 50 specific items covering such matters as special floor loading, temperature controls, humidity controls, ventilation requirements, electrical services, gamma radiation shielding, grounding, vibration level, etc.

A complete description of a specific feature should always include capacity, duration of peak requirements and the quality of service. The data is organized in a format useful as a checklist to ensure that each room is properly equipped. The format also tries to consolidate and classify the information to help the designer determine overall capacities and to form a conception for the building as a whole so that equipment, services and functional uses of the space will be efficiently related. The preparation of a detailed description of specific facility requirements is the best way for the building user to avoid overlooking many important details and to ensure against failure to reach an understanding with the architect on some of the essential features of the building.

8. Relative Location and Interrelationship of Spaces—Programs should clearly indicate which spaces need special consideration with respect to location and interrelationship. This data is often presented as part of the detailed discussion of the facility requirements. But its importance is so great that I have listed it separately. Practices in the description of the relative location and interrelation of spaces in building programs are the most varied in terms of format. Many programs provide no information about

this important factor—leading to the assumption by the architect that his own arrangement of the various spaces is satisfactory unless there is an objection prior to approval of schematic designs. This absence of data provides little or no guidance at the outset of design studies and may contribute to a faulty conception and the selection of an incorrect structural module.

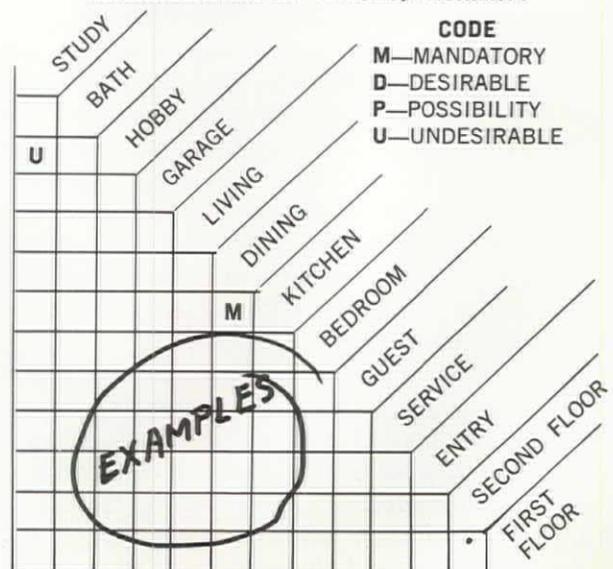
A second common procedure consists of the client confronting the architect with sketches of floor plans indicating an arrangement of the various spaces in the proposed building. Among other shortcomings, this kind of presentation may tend to fix a conception of the proposed facility in the client's mind before a skilled designer has had an opportunity to find his own solution to the program. Such a presentation by a nonprofessional may fail to provide a satisfactory criterion of the relative importance and relationship between the various spaces for the designer to compare with a variety of schemes.

Three formats for presenting data on the relative location and interrelationship of spaces without introducing a schematic conception of building form are:

- A verbal discussion included as part of the detailed description of the facility requirements where a special relationship is desired between two or more spaces, or when it is particularly desirable that a space be in a certain location, or when it is desirable that certain spaces be kept separated.
- A diagram similar to an organization chart in which each of the required spaces is drawn as a box and then connected with each other through a network of lines. Relative degrees of

The "mileage chart"—another format that attempts an alternative to the client's presentation of a floor plan.

INTERRELATION OF SPACES/PROXIMITY



desired proximity or separation are indicated by the length of lines between the boxes and the way in which they are connected through the network. By establishing a code, a variety of relationships can be indicated, such as using a dashed line to indicate visual and auditory access from one room to another without direct entrance.

• A third method is to use a diagram similar to the mileage charts on road maps, where the rows and columns correspond to all of the spaces in the proposed facility. The position at the intersection of each row and column provides a place where a code notation can be written, indicating the relative degree of desirable proximity of distance between the two spaces.

9. Budget—The budget is a part of every building program. Its importance and the conflicts it can generate are well understood. There is less need for discussion of this part of the program.

10. Flexibility for Future Growth and Changes in Function—Flexibility, besides being important, has become identified with goodness. Architects' programs are much too vague about flexibility. No building can be completely flexible and the provision of space and features for uncertain future needs can prove wasteful. The building program should describe in detail the probable trends in the occupancy and functional uses of the facility and provide considered judgments on the types of flexibility of space and service systems likely to be most valuable. Decisions regarding flexibility for future growth can become the most controversial aspect of the program agreements to be reached between administrative groups and user groups within an institution. A common cause of conflict is the interest of the administrative group in the "sec-

ond user" problem, while the immediate user group tends to be concerned only with its own future needs.

The program should include sufficient information to permit an architect or engineer to set up an economic cost model for all of the architectural and mechanical features and capacities being considered. The value of provisions for future needs is often overestimated. Sometimes money in the bank provides greater flexibility for future needs than does construction based on poor guesses of long-term requirements.

11. Priority of Need Among the Various Requirements—The cost of providing all of the desired features in a new building may exceed the available funds; therefore, programs must describe the relative importance of the elements of the building program in such a way that the architect can achieve a well-balanced solution between the functional requirements and the available funds. Most building programs have not provided guidance on this problem. The few that have tend to treat the matter in a casual way through statements such as "Airconditioning would be desirable, if possible."

It is more useful for each of the specific facility requirements to be given a priority rating that indicates the relative order of preference or desirability for improvement beyond the essential level of capacity and quality of service. Arriving at the value judgments that must be made becomes extremely difficult in complex projects, and especially so when the roles of the participants in the decision-making process substantially differ.

With the last thought we are at an appropriate place to begin to discuss the potential contribution of the behavioral sciences.

THE CONTRIBUTION OF THE BEHAVIORAL SCIENCES TO ARCHITECTS' PROGRAMS

The areas in which the behavioral sciences offer particular promise for the improvement of programming procedures are in the techniques of collecting and organizing information for decision making and the understanding of role relationships between architects and clients and within each group. The first of these broad areas may be subdivided into three topics of special importance:

1. Objective Interviewing—One of the neglected areas of training in architecture is in the use of objective techniques. Much that has been learned about interviewing in studies by psychologists and sociologists can be used to im-

prove communications between the architect and his client. The technical procedures currently used by architects for interviews are haphazard. Rarely do they provide for a systematic exploration of the requirements for the design solution. This is one of the few areas where existing knowledge in the behavioral sciences is sufficient for immediate application, although further study would be helpful.

An interviewing technique that has been developed in the field of psychology which appears to have special value for programming is known as the "critical incident technique." It involves the collection of direct observations of human

behavior in such a way as to facilitate their potential use in solving practical problems. It works by planning observations and interviews so carefully that the meaning of human actions are understood within the environmental context. The technique brings about clearly understood relationships between a) the purposes of an observable human act (incident), b) a trained observer's reported view of the act, c) the direct consequences, d) the effect on the purposes.

The technique also incorporates a number of steps to reveal any possible biases, the degree of credibility and the value of the final results. The large number of specific applications of the technique that have been reported in the literature reveal that it has much flexibility and can be applied to many different kinds of problems.

The significance of the critical incident technique is that it obtains a record of specific behaviors by means of a pre-established plan carried out by qualified observers; it dislodges a random collection of opinions.

2. Improvement of Planning Criteria Through Better Sampling and Information-Gathering Techniques—A great many techniques have been developed by psychologists and sociologists for providing a better understanding of preferences, requirements and needs through sampling of representative groups of people. Such techniques can provide planning criteria superior to those currently employed in architectural design because the impressions of a few individuals representing the client, or of an individual architect, may be far different from the typical impressions of a large group of people who will use the building. Thus far in architecture, very limited use has been made of good sampling techniques.

An illustration of the type of study which holds considerable promise is the investigation of student reactions to study facilities. Conducted by a committee of representatives from five New England colleges under the auspices of the Committee for New College, the study collected samples of student behavior and opinions from Amherst, Mount Holyoke and Smith Colleges and the University of Massachusetts. Participating sophomores, juniors and seniors were selected from a variety of dormitories and fraternity and sorority housing and represented each of the major divisions of academic specialization. Three separate sets of information were collected to permit cross-checking of an individual student's answers and to establish the validity of the data. The sources of the three sets of data were student diaries, special comment sheets and a questionnaire. The information obtained through the questionnaire was

graded in seven degrees of preferences from extremely desirable to extremely undesirable or from always to never.

The study results confirm the importance of large and carefully selected samples because many atypical individuals were found during the analysis of student reactions. However, very strong preferences were also found, i.e., there is a strong preference for studying in small places where a student may study alone or only with one or two others; the large library reading room is disliked by most students even though it may be used out of lack of better facilities. A few of the design criteria emanating from this study are: The larger the study hall the more it should be broken up with other functions and facilities which may reduce traffic and noise without interfering with study; rooms large enough for 20 to 40 students should not be planned for more than 15 to 20 percent of the students provided there are a sufficient number of smaller and individual study stations; and a variety of kinds of study spaces are needed to provide satisfactory study spaces for all of the students.

3. Improvement of Techniques for Organizing Information for Optimal Use in Decision Making—One of the most difficult questions in the improvement of the architect's program deals with finding satisfactory techniques for organizing, into an appropriate system, many different kinds of data and the inputs of all the different groups represented within the organizational structures of both client and architect. Our greatest technical problem in programming to date has been that the more data collected about a proposed building, the more impossible the task of preparing a well-ordered program. The desire to include all of the relevant information within a program must be balanced with the practicability of handling the information and resolving it into a coherent set of directions to a satisfactory design concept.

A most promising technique from the behavioral sciences is called the "contextual map." This technique was developed by a psychologist, a political scientist, an economist and an anthropologist who were confronted with the need to develop a 10-year program for rapid cultural and technical development in an underdeveloped region of Peru. Study participants were able to draw upon data collected in five years of field operations and the quantity of available information created one of the characteristic difficulties in program planning: the need to organize and unify a very large number of interacting variables. The contextual map was developed to keep track of the evolving plan and act as a group memory. The map was made up of brief

	HEAD NURSE	SECRETARY	STAFF NURSE	STUDENT NURSE	PRACTICAL NURSE	NURSES' AIDE	NURSING TECHNICIAN	ORDERLY	VOLUNTEER
TOTAL NURSING ADMINISTRATION	■								
UNIT SUPERVISION	■	■	■	■	■	■	■	■	■
TEAM SUPERVISION									
UNIT ASSIGNMENT	■	■	■	■	■	■	■	■	■
WORK DISPERSAL	■	■	■	■	■	■	■	■	■
MEDICAL ROUNDS	■		■						
NURSING ROUNDS	■		■						
MEDICAL CONFERENCE									
NURSING CONFERENCE	■	■	■	■	■	■	■	■	■
TEACHING (med.) CONFERENCE									

	HEAD NURSE	SECRETARY	STAFF NURSE	STUDENT NURSE	PRACTICAL NURSE	NURSES' AIDE	NURSING TECHNICIAN	ORDERLY	VOLUNTEER
TOTAL NURSING ADMINISTRATION	■								
UNIT SUPERVISION	■	■	■	■	■	■	■	■	■
TEAM SUPERVISION	■	■	■	■	■	■	■	■	■
UNIT ASSIGNMENT	■	■	■	■	■	■	■	■	■
WORK DISPERSAL	■	■	■	■	■	■	■	■	■
MEDICAL ROUNDS	■		■						
NURSING ROUNDS	■		■						
MEDICAL CONFERENCE									
NURSING CONFERENCE	■	■	■	■	■	■	■	■	■
TEACHING (med.) CONFERENCE	■								

COMPLETE INVOLVEMENT
 PARTIAL INVOLVEMENT
 PERIPHERAL INVOLVEMENT
 NO INVOLVEMENT

Specimen corners of working print recording data from wall matrix that employs colored discs hung on nails, showing existing pattern of pediatric unit at left and proposed changes at right. Like contextual map, it is a visual display in two dimensions. Vertical columns list persons or pieces of equipment while horizontal rows show the activities. (From a study with US Public Health Service grant: Dr. Marshall Kreidberg and Herman H. Field, AIA, principal investigators, with Donald A. Kennedy, Delbert Highlands and Elliot P. Rothman.)

items of information by using small index cards to serve as the modular components of the map matrix. All information and ideas included in the map had to be condensed or subdivided to a size that could be written on a module.

Once prepared, an information module was always displayed and served as a superior memory for the participants as they sought the most meaningful groupings. The modular size of the cards let them serve as idea or data units and permitted freedom in shifting them about to link ideas within the map as the developing concepts of the program dictated. The map as a whole, displayed the total context of the planning situation continually.

The construction of the map extended backward into time for five years using the accumulated field data and provided for systematic comparisons between the status of variables, as predicted during field work, and actual events, thus making possible the improvement of prediction methods employed to plan ahead. The significant success of the program was reported at the 1964 meeting of the American Association for the Advancement of Science.

Since then, the contextual map has been put to use in two new program studies. One is for the organization of a federal agency with widely dispersed field activities, and the other is for a

large new medical center in which several universities and medical institutions are active.

The exploration of new techniques such as the contextual map should be encouraged by the architectural profession because they may lead to procedures which permit full consideration of all the interacting data and the special insights of each of the participants in the programming process for a complex building. The contextual map has the ability to include all relevant data in its matrix, with flexibility for ordering and reordering of concept values while retaining unity of the context. This is a step toward architect programs that accurately reflect client needs.

Understanding of Role Relationships in Programming Activities—When we examine the organization of responsibility for the preparation of programs in complex institutions, such as universities, it is clear that the patterns of responsibility and the roles of the persons with whom the architect may have direct contact differ substantially from project to project. Four of the more common patterns of responsibility for the client are: 1) The administration collects and unifies requirements of the user group for the proposed building, incorporates them with the administration's own requirements, and then transmits the resulting program to the architect.

2) The second pattern is the reverse of the first in that the user group serves as the contact with the architect and combines requirements sent down by the administration with its own. 3) Another pattern is one where the administration and the user both deal directly with the architects, each presenting his own requirements independently. In this case, the architect serves as the coordinator and must resolve any conflicts or overlapping needs. 4) In the fourth pattern, the client assigns responsibility for collection of information and the resolution of any conflicts between the administration and the user group to a specially designated coordinator who is a member of the client's organization. The coordinator may be a building committee or a planning officer. The planning officer may be a staff architect, engineer or an administrator.

The assignment of responsibility in the architect's staff may also follow a number of different patterns. We may find that a principal of the firm maintains the only active liaison with the institution and transmits data he obtains to his job captain, designer, specification writer, etc. Or we may find the principal in contact with the client's administration while a job captain maintains contact with the user group and the specification writer with the operators of the physical plant. In this case, some additional assignment of responsibilities within the architect's office will be needed for coordination.

In short, many different kinds and combinations of organizational patterns (with both client and architect) exist with respect to the roles of the persons representing the client in contact with the persons representing the architect.

Studies of role relationships in complex organizations have received extended consideration by sociologists and a large body of literature exists. These studies have taught us that each of the professional groups within an institution tends to see the structure of the institution in terms of its own profession or specialization. The background provided by these studies makes clear that we can expect important differences in the ordering of values for the many elements of programs depending upon the role of the person representing the client and the roles of those persons within the architect's organization responsible for client liaison.

There have been few studies of role relationships in which architects are mentioned. I believe it would profit the architectural profession to encourage this type of self-examination.

Studies of the roles of the planner in urban development provide several interesting suggestions of what role relationship studies of architects might reveal. The major roles of the planner

have been found to include his administration of his own organization, his role in relation to the planning profession, his role in political innovation and his role as an educator of public awareness to his planning objectives. The differences in these roles are significant and cause conflicts and pressures on the planner. For example, political innovation has been found to be his most important role for success in carrying out improvements to the plan of his community. On the other hand, his self-esteem in his role as a professional planner depends greatly upon his performance of tasks which are highly esteemed by his planner peers.

Likely to be found were the architectural profession studied in this manner would be roles similar to the planners' professional and administrative roles. Such a study also would be likely to disclose roles related to the architect's ability to influence and persuade clients and to promote public acceptance of his architectural ideas. The ego ideals associated with the architect's professional role include concern over such matters as publication in journals, honor awards, design prizes and recognition through appointment to committees and to honorary fellowships of professional organizations. It seems probable that the dissatisfactions found among planners because of the conflicting demands of their role as political innovators and their professional role would also be found among architects.

Better insights into role relationships can lead to improvement in the architect's understanding of his place within his profession and the community. They can be an important aid to him in the problem of obtaining a satisfactory program with respect to the client's needs without needless tensions due to his aspirations in his professional role. The solution to clients' demonstrated needs should not be distorted to achieve a design that will secure approval of professional peers. Although architects might protest that their professional role is rooted in ideals of public service, sociologists' studies made of the professions in general suggest that there are important differences in judgment on such matters.

The significance of role relationships is further illustrated by the variation in judgments on designs within the architectural profession. Hassid's recent studies of critical comments made about the same buildings showed characteristic differences in the subject matter and the kinds of critical comments made by individuals representing several subdivisions of our profession.

The study of role relationships is of fundamental importance to the architect's program and may—after the further work that is necessary—result in highly significant applications. □

A Curriculum Geared to the Times

BY CHARLES BURCHARD, AIA

Prevalent curricula in architecture lack the dynamicism demanded by a fast-changing technological society. The unprecedented growth in knowledge and in complex subject matters necessary to valid environmental design has long exceeded the coordinating and input capability of the studio master in design classes. The lecture curriculum of many separate and unrelated additive subject matter courses has further degenerated education for design through out-of-step information inputs that encumber rather than aid the logical development of valid design attitudes.

It would hardly appear that the addition of further courses in the humanities, the arts and in advanced scientific-technological subject areas, avidly recommended by architectural educators today—and as desirable and necessary as these additions must be considered—would produce the sought for viable curriculum for the preparation of better prepared environmental designers, if they are to be introduced into the prevalent curriculum structure. It is to be suspected rather that this would reinforce the dichotomy which now divides design education and the subject matter curriculum, and would further inhibit the development of design processes and attitudes with which designers must meet the conditions of the historic present.

The College of Architecture at Virginia Polytechnic Institute has therefore initiated a significantly novel curriculum aimed at overcoming this dichotomy and has restructured it in a way that is intended to accommodate more meaningfully the growing range of information felt to be necessary to the purposes of architecture. "De-

sign" and "subject matters" are treated as interacting aspects of a total system in which the students' search for and control of the design process proceeds experimentally (not by authority); and the lecture curriculum is replaced by, or supplemented with, an integrated series of preceptor group discussions and learning-situation seminar presentations—in several divisions of instruction—by the entire college faculty as an interdisciplinary resource team.

Design is no longer considered a subject-matter studio course, in which 15 to 20 students rely upon a master for instruction but becomes a free exploratory laboratory experience of integration in which the student must assume a growing responsibility for the identification of informational resource persons from the faculty team.

A First Division of Studies, of two years, is now implemented and is under the direction of Prof. Olivio Ferrari. It aims at coupling a comprehensive environmental overview with an experimental attitude toward control of the language and processes of design. In the laboratory, students and faculty teams, as a peer group, explore the nature and the problems with which architecture is concerned, over the entire range of scales of human settlements and attempt to gain command of the process of translation from identification of need to visual-conceptual form.

In these laboratories, search is stressed rather than solution or the need to find an answer. There are no project grades—only an evaluation at the end of a semester. Drawing board criticism, as a tool of instruction in the customary one-to-one design studio basis of authority, is deliberately abandoned. Rather, the student is guaranteed a decent minimum of exposure with a professor who comes to know him and his work and can help to guide his personal progress. The student-architect is then exposed to a variety of learning situations where, in preceptor group discussion, in seminars and in formal lecture courses, he is afforded access, during the First Division of Studies, to the community of faculty from the College of Architecture and beyond, who present their subject matters to him.

The Student's Independent Role—Given access to the faculty as a resource team in a variety of learning situations would not in itself be effective in achieving the information trans-

The "design concept" laboratory at VPI, in the eyes of its architectural dean, is one approach to educate a new generation of professionals dedicated to total social involvement.

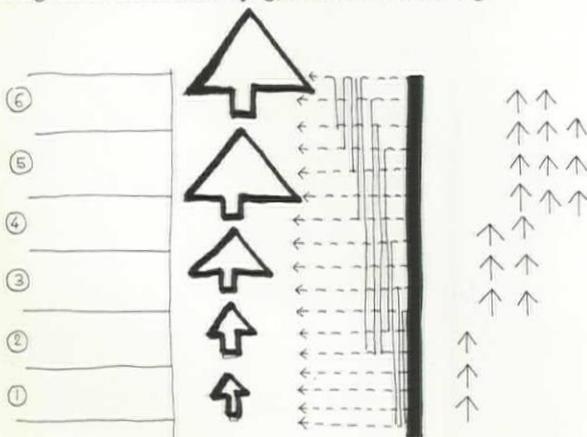
fer processes which are desired. Therefore, and most importantly, responsibility is increasingly placed upon the student-architect to identify the resource persons of the faculty team necessary to his development as a designer, to his identification and programming of environmental needs, and to his command of the design-decision processes for selection and organization of elements into systems and conceptual models.

The author: Dean Burchard, who is in his third year at VPI, came to the Blacksburg campus from Cincinnati, where he was a partner in A. M. Kinney Associates. Sketches are by Professor Ferrari.

The student-architect, in this new and independent role, finds for himself a whole range of opportunities to collect data, to check theory against observation, to question, to identify a need or to establish a new goal, to translate information into three-dimensional conceptual form and to expand continuously his own experiences—in a candid thrust toward a sense of participating in the work of the world.

By completion of the First Division of Studies and in preparation for the control and the in-depth clarification of measurement and application toward which the Second Division of Studies of two years is aimed, he is expected to have achieved the capability to identify, formulate and evaluate contemporary environmental needs and purposes—determine the relationship of his capabilities to their resolutions and assess the contributions necessary from other disciplines—predict and select systems for the conceptualization of purposeful contemporary environments to effect design definition across a broad range of environmental scales.

The conventional curriculum is linear, characterized by a dichotomy which separates design from subject matter inputs, invariably out of step. Design instruction devolves upon a studio master whose input capacity has long been exceeded by growth in knowledge.



This new curriculum departs from the present linear structure and is conceived as a series of successive two-year divisions—two at the undergraduate level, two at the graduate level—each intended to comprise a total involvement in which the orbit, the range of scales, complexity of involvement and the interaction with other disciplines is maintained as a constant but progressively intensified and increased in sophistication by division.

The new Second Division of Studies, our revised third and fourth years, is to be introduced at the start of the next academic year and its programs are now in preparation.

They are shaping up this way. One-half of the studies in the division will focus upon in-depth professional development in the design laboratory and will include the introduction of a new discipline: environmental system studies. These studies, being developed by Prof. Day Ding, director of the environmental systems studies and laboratory, will consist of an interrelated series of lectures and laboratory work, combining as one the many separate environmental sciences and technologies, now taught to architects as many separate courses and in rather watered-down versions of the sorts which engineers must take.

Unessential material is being eliminated. The covering-the-field attitude and the packaging of simplifications into the "introduction-to" variety of courses is being replaced with an emphasis upon depth and upon the deep conceptual grounds which reveal the range and interrelatedness of the methods of a discipline.

The entire other half of the curriculum, for the two years of the Second Division of Studies, will be elective. The student-architect will be expected to continue his role of responsibility established in the First Division and make his own selection for in-depth exploration of supportive subject matter courses from the humanities, the arts and the sciences. These elective study opportunities appear at a time when the student is expected to have developed a sense of the contributory relationships of disciplines necessary to the ordering of contemporary environments, and where in-depth study in areas suited to his own aims and emergent sets of abilities would be meaningful to him.

The student-architect thus participates in curriculum planning with his interests and motivation determining his program. He is expected, by this time, to have formed a capacity for self-motivation, self-direction and independent discovery and will be given the opportunity to participate in patterning his own search for relevance. From what has been observed of the

progress of the students in the First Division of Studies, there is no longer doubt that this capacity is emerging (an evaluative process is established with the department of psychology) which rates progress in five areas of achievement.

The elective system of the Second Division also suggests that perhaps the faculty of the College of Architecture should not structure a curriculum which is too inflexible, patterned after its own concepts of what an architect might have to be a decade or two from now, but should involve the observed tendencies of its students in such a determination. During the First Division of Studies, three tendencies are clearly emerging: one toward design as the application of systems to achieve form; one toward measurement and the assessment of the systems and subsystems with which we construct environments; and one toward the conceptualization of strategies, relating the broad spectrum of socio-economic and human factors to the ordering of environments.

New Look at the Lab — Design laboratory work in the Second Division will depart still further from the conventional studies system assignments, in which the answer is often implied in the assignment and the latter judged accordingly. The third year of design (the first of the Second Division), for example, is now being programmed to include a year-long experimental sequence involving intensive concentration upon programming, upon the collection of information concerning an identified problem (its preparation, verification and organization) and upon the conceptualization of these data and the selection of systems for the construction of visual/structural models (matching the spatial and functional requirements determined by the students) and following procedures of translation developed during the exploratory laboratory experiences of the previous division.

The student-architect will then be expected to develop in detail the systems which he had imagined for his conceptual model and, in the environmental systems laboratory, to detail, develop, assess and measure these systems as to their support of his concept.

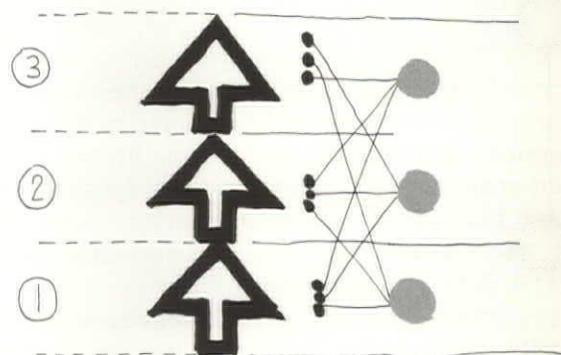
He will be expected to reformulate his conceptual model of the program into a design model, based upon the findings of the detailed systems study, and then to prepare an accurate and complete design presentation.

The student-architect in this effort will be expected to continue the habits of activity developed in the First Division of Studies and to seek out the faculty resource person necessary to his endeavors. He will need access therefore not only to architectural design and complementary

faculty but to environmental systems designers and engineers and to environmental physicists and psychologists as well.

The environmental systems studies, as they are now being programmed, are considered to transgress the boundaries of the physical and behavioral sciences; indeed, they are considered to be a confluence of the human and physical determinants for built environment, i.e., environmental psychology, environmental physics, psychophysics, environmental technologies and structures.

The operational characteristics of these complex subsystems and their interactions in particular now demand a degree of integration and clarification not before achieved, and it is felt



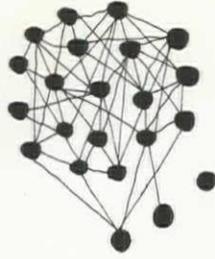
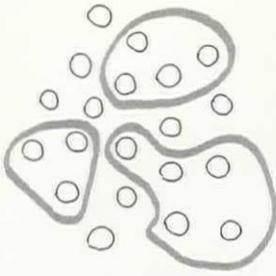
The divisional system of design education treats "design" and "subject matter" as interacting aspects of a unified educational approach in which, at each division, the student is afforded access in the experimental, ungraded design laboratories to the entire faculty as a resource team.

that they can no longer be seriously considered separately.

These studies, irrespective of level (First or Second Division), will utilize the environmental systems laboratory as a resource center together with a variety of instructional aids and a data bank of information collected from university sources and beyond and stored for retrieval.

We are beginning to find as we experimentally explore this new area of study that we will not only cover presently offered material far more effectively but do so in about one-half the time now required. This will permit, within the four years of the first two undergraduate divisions, the extension of environmental systems studies into those highly sophisticated environmental sciences and technologies, which architects must come to command and to manage.

After satisfactory completion of the First and Second Divisions of Study in the College of Architecture at VPI, the student-architect may elect the option of a terminal fifth year of independent study, field investigation and research, leading to the degree of Bachelor of Architec-



Numerous curriculum subject matters which cover the field are a trap to be avoided. They hinder a grasp of the deep conceptual grounds which reveal the range and interrelatedness of the methods of a discipline. They created an academic framework in which integration is almost insurmountable and which is not adaptable to changing conditions. On the other hand, grouped study interrelationships, based on free and functional selection by the student, appear to assist the capacity to integrate information into conceptual systems and to develop self-motivation.

ture or, if qualified, enter one of a series of two-year graduate concentrations offered in a Third Division of of Studies. This is the first of two (two-year) divisions of graduate study, and the Third Division is now implemented. A timetable for introduction of the succeeding division is yet to be established.

In the belief that advanced studies in comprehensive environmental planning, environmental systems or environmental design are no longer amenable to serious development as separate and self-contained disciplines, the division of studies is organized as an accommodation for a community of scholars, representing 15 related disciplines, which have been identified as having as a primary interest in the city, the region and its technology. These faculty positions, funded from several grants, come from the programs within our college, are shared with other areas of the university or come from our Washington Program for Urban Studies. They are brought together to conduct integrated, interdisciplinary investigations of human environments. In order to achieve structure to these efforts, the academic programs and research investigations are categorized according to three topics: design systems (application of systems to environmental concerns), environmental systems (development and measurement of systems with which we construct environments) and comprehensive planning, with options in both resource development planning and urban and regional planning.

The students at this level of activity will be engaged in project work or research activities utilizing the contemporary environment as an operational laboratory, much as medical interns utilize the hospital and will work within the interdisciplinary context which we feel to be necessary to the determination of valid data and to

equip the emerging environmental planner or designer with the perception and attitude of mind, with which to meet the challenging problems of the historic present.

A Center of Urban and Regional Studies, aggressively led by Dr. Harland Westermann, is the research and project development facility through which the faculty and students of the Third Division of Studies reach the community. The center is now actively engaged in community development programs through the extension service of the university and is preparing environmental design continuing-education programs for extension agents to provide them with the sorts of information necessary to identify the resource faculty of the center who might help assist with their field problems. Similar educational programs are in preparation for the community leadership of the hinterland towns and cities of the Commonwealth to assist this leadership with the pressing environmental decision-making brought about by Virginia's current and rapid urbanization. The center is also involved in the development of information data systems and master plans for numerous communities and through the environmental systems laboratory is increasingly becoming involved with the research program of this land-grant university.

An evaluative review after two years suggests that the anticipated compatibility of design education with the supportive subject areas of the lecture curriculum is achieved in the divisional curriculum structure—where experimental design involvement is coupled with concurrent information transfer—imputed in each division at an appropriate rate and level by the faculty as an interdisciplinary resource team.

Improved Motivation—Providing the student with access to the entire faculty as a resource team, in each of his division of studies, and placing the responsibility upon him for involvement in resource identification (information and interdisciplinary resource persons) has proven to develop an awareness of the contributory interrelationships which are becoming increasingly important to structuring and restructuring of contemporary environments.

The teaching methods of the new curriculum appear to answer powerfully the students' own search for relevance and the need for him to recognize his own place in the work of the world. It appears that it will counter the professor's flight into mechanical classroom and studio routine with opportunities for a kind of teaching, searching and researching closely related to the world's activities.

Released from the mindless routine of graded

solutions, from a proliferation of unrelated, additive subject matter courses, the student appears to more readily find an awareness of his responsibilities as a designer to meet the conditions of his own time, to question, to self-motivate, to conceptualize and to command the processes with which he identifies and may help to resolve contemporary environmental need.

To continue such habits of work and such an attitude of mind into the world is no simple task. For modern society is characterized by an explosively growing range of intellectual and physical resources which the environmental designer is going to have to grasp and to manage if he is to perform among the growing range of problems which are also appearing. But perform he must!

For it is now evident that a national concern has developed regarding the state of the physical, cultural and socio-economic environments in which we live. This concern is not of a transitory nature; it is no longer simply a philosophic dialog about the inhospitable conditions in which we live versus the good life we might enjoy.

Rather, it is a tectonic force which will modify the face of this nation. Hopefully, the changes that must be realized within the next several decades will find us worthy of the future.

Strengthening Weak Links—Design, as we view it in our college, is an important activity of man. Environmental designers and architects presently have only weak links to the processes of environment forming. Because of these weak links their imagination and their capabilities exceed the limits of their power to help bring order, form and vitality to human settlements. We are a profession of *underachievers* in a nation in desperate need of our sets of abilities and our dedication.

Our capacity to perform is not only limited by an incomplete understanding of the operational characteristics of environment as a design system (which is after all not surprising at this state of the art) but perhaps more importantly by the limited role as problem-solvers which we accept. For the most part we wait for the client to select us, to tell us what to do, where to put something—and we ask only modest questions.

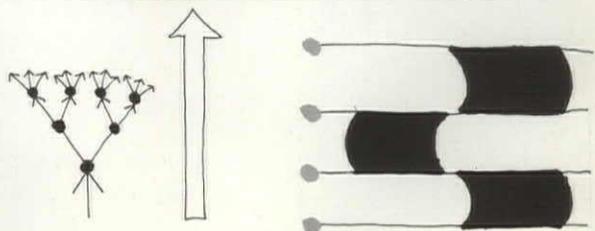
There is no doubt that this role has importance, that in the very recent past it has contributed handsome and distinguished buildings to the American scene and for a variety of purposes. But it does not appear to be enough if we are to survive the future. The leadership in our professions is now clearly aware of the inadequacy of this situation (as evidenced for example by The American Institute of Architects), and a new commitment is being generated for a

more effective involvement by architects and designers in the structuring of our settlements.

What is to be done? For one thing re-education will have to be complete throughout the profession and it will have to be diverse. We will need designers who can operate at various levels of skill, in many different places and involve themselves in the differing scales of environment building. We will need designers who can help to conceptualize strategies on the fundamental decision-making levels at which environments are ordered and re-ordered. We will need designers of systems who can develop, assess and measure (as a confluence of the physical and behavioral sciences) the systems with which we construct environments; we will need the architect in the conventional sense who can sit down with his client, help him identify his needs, translate these into requirements and conceptualize and structure them as form.

Most of all we need a new generation of professionals who come to understand the importance of concept as a general intellectual activity of social involvement, not just in the sense of the design of a good house or a handsome office building. To prepare this generation, we are going to have to provide them with learning situations in which they may discover the importance of their particular sets of abilities to the resolution of the problem of contemporary settlements; in which they may establish their contributory interrelationship with other disciplines as we try to learn more about man, how he interacts with environments, how we should structure environments fitted to his needs; in which they may find an awareness not only of the parts of environment but of the interrelatedness of the pieces that make up the entity; and most importantly to help them to dedicate themselves to a new magnitude of design involvement on the many levels and across the range of scales of the environments we inhabit. □

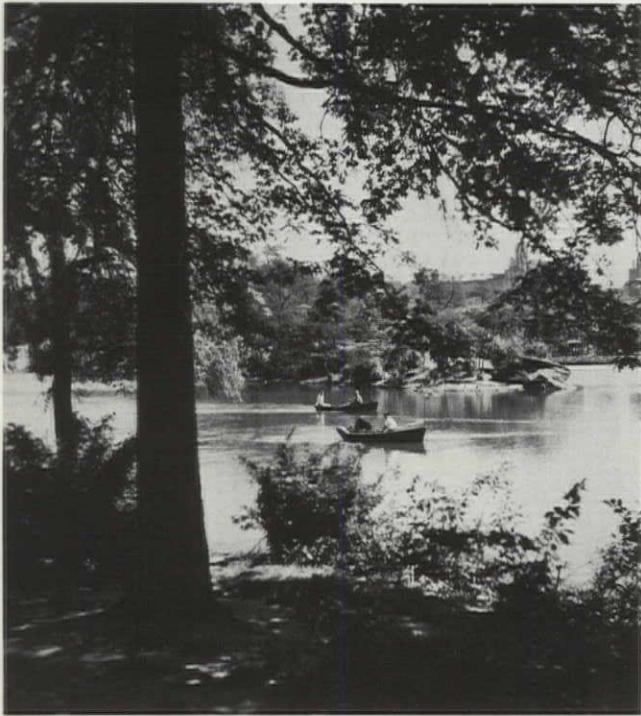
The present linear design instruction method starts with simple assignments and grows in complexity by year. It distorts design conceptualization right from the start through packaged simplifications and, as assignment complexity increases, succeeds in befuddling the designer who has no real grasp of process. Design in the divisional curriculum provides a learning situation in which a correct grasp of the design process of translation can be developed which assists a growing capacity to conceptualize information into valid form.







SCHUSZLER'S NEW YORK

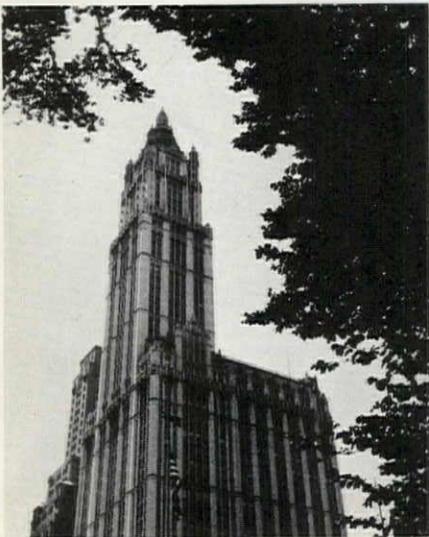
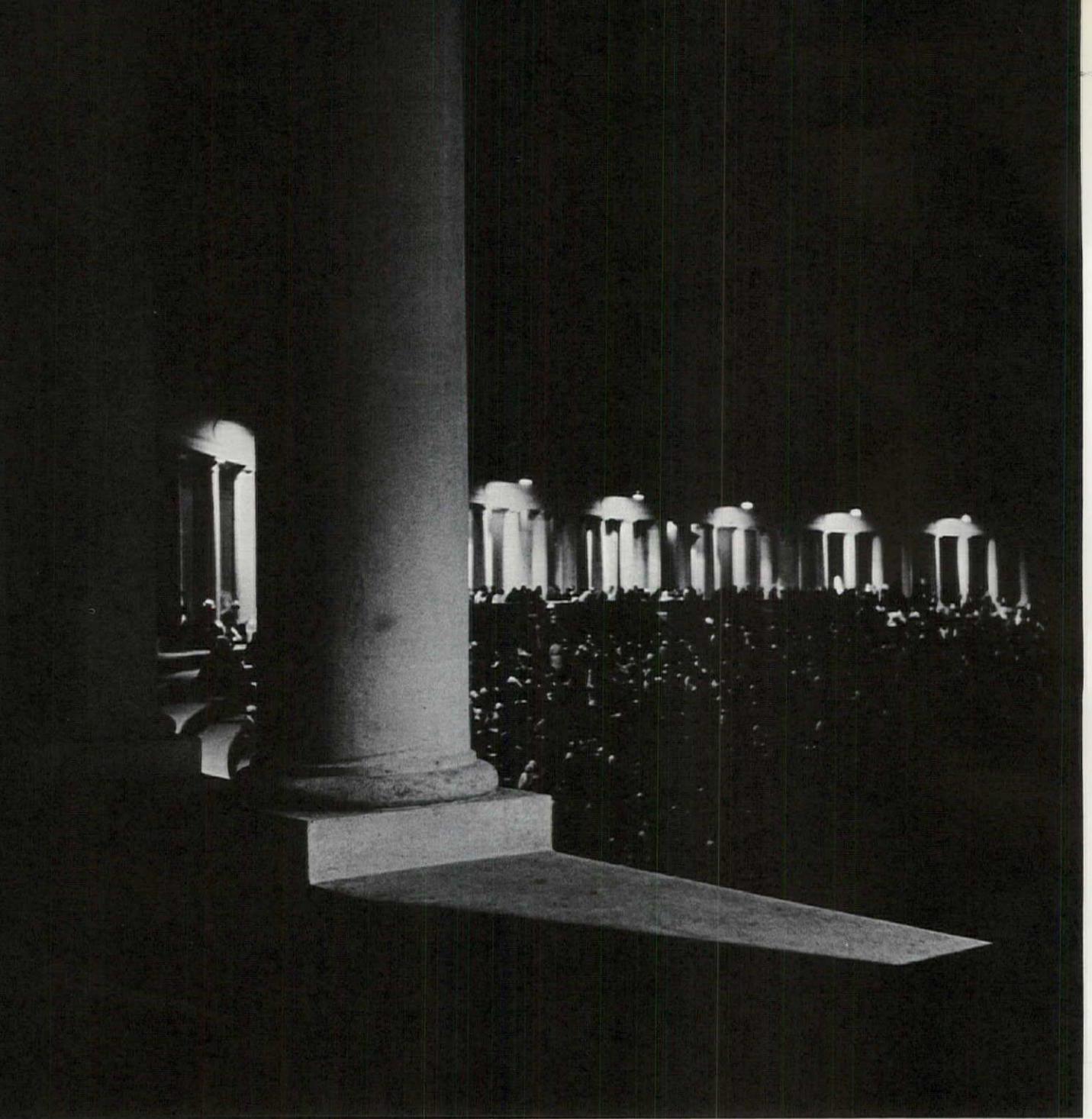


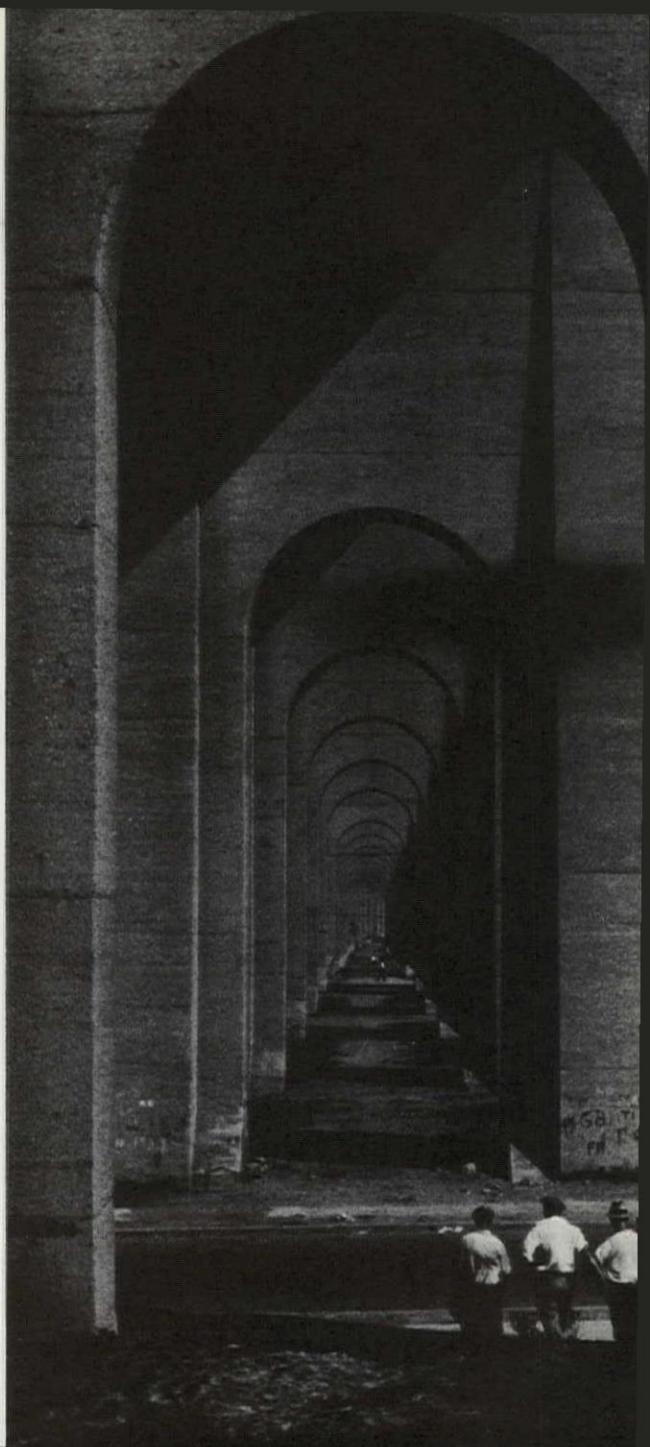


“Libertad! I do not know whether
others behold what I behold,
In the procession along with the
nobles of Niphon, the errand-
bearers,

Bringing up the rear, hovering
above, around, or in the ranks
marching,

But I will sing you a song of
what I behold Libertad.”



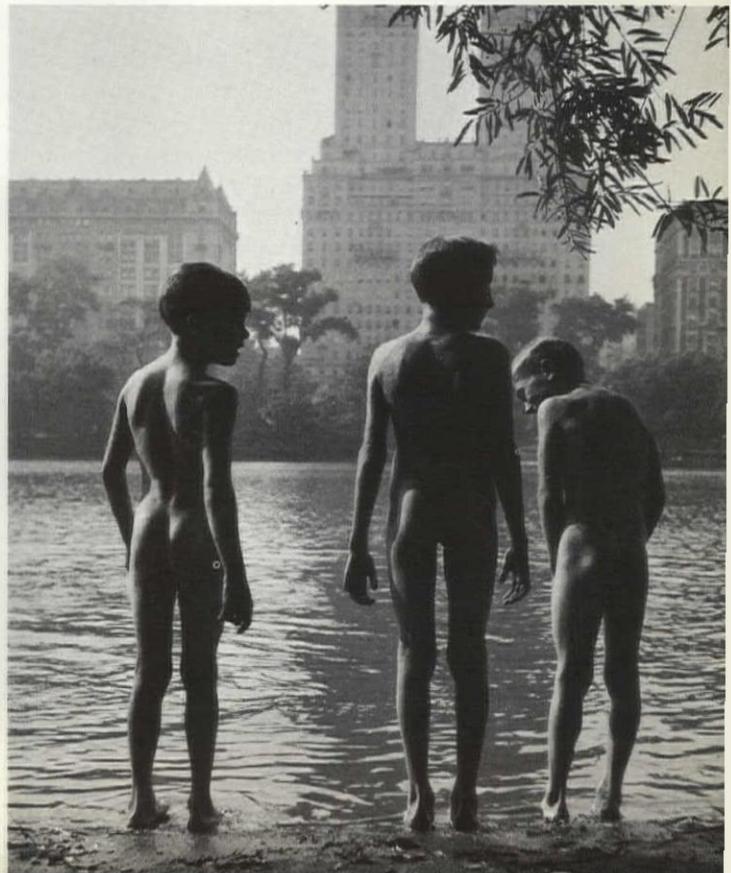


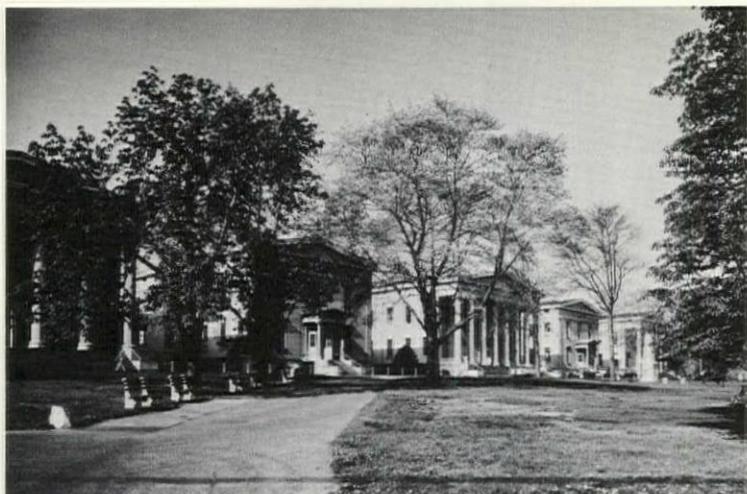
“When the facades of the houses are alive with people, when
eyes gaze riveted tens of thousands at a time,
When the guests from the islands advance, when the pageant
moves forward visible,
When the summons is made, when the answer that waited
thousands of years answers,
I too arising, answering, descend to the pavements, merge
with the crowd and gaze with them.”



“See my cantabile! These and more are flashing to us from
the procession,
As it moves changing, a kaleidoscope divine it moves chang-
ing before us.”

The late Aloysius Schuszler, AIA, was a professional who wore a second hat, and over the years he sent his photographs to the AIA JOURNAL for whatever use its editors could make of them. His camera was particularly at home in New York City and environs, where he attended drafting classes and practiced architecture, both as an individual in Brooklyn from 1923-38 and later as a principal in the Manhattan firm of Harry Kirshbaum & Aloysius Schuszler. Born in Hungary in 1894, he passed away in June 1966 in Cleveland Heights, Ohio, having been active until his death as chief of specifications for the H. F. Ferguson Co. But it was with New York that he carried on a real love affair, to which these photographs attest, and the quotations from Walt Whitman's "A Broadway Pageant" seem to complement that spirit.





New Yorkers seem to thrive on demolition, but a landmarks commission, despite serious limitations, is making itself felt on the cityscape.

BY ROBERT C. WEINBERG, AIA

PRESERVATION, AT LONG LAST

The New York Landmarks Preservation Commission may seem to many observers a bit on the timid side. But this unpaid group of architects and laymen and a small, dedicated staff are doing a remarkable job—spade work in a sense—in a city where consideration for historic and architecturally distinguished buildings has never been pronounced and where, moreover, demolition of the uneconomic old for replacement is customary and taken for granted.

The author: Mr. Weinberg, a New York practitioner, authored the article "Pitfalls and Plausibilities of Landmarks Preservation" which appeared in the AIA JOURNAL for July 1965.

The concern for preservation by certain individuals resulted in two years' study by a special commission set up by former Mayor Robert F. Wagner in 1963 and the subsequent adoption by the New York City Council of a local law "in relation to the establishment and regulation of landmarks, landmark sites and historic districts."

Signed by Mayor Wagner on April 19, 1965, a Landmarks Preservation Commission consisting of 11 members was appointed that June and held in fall its first hearing on a number of structures and historic sites which had already been under study. Until recently, hearings had been conducted twice a month or more.

The officially appointed commission is limited by the city both in staff and in budget allotment. It has carried over many members of the earlier special commission and consists presently of three architects—all members of the AIA, including chairman Geoffrey Platt—as well as a planner, two realtors, two journalists and three other laymen. The first executive director was James Grote

Van Derpool, AIA, architectural historian. He retired a year later, to be succeeded by Alan Burnham, AIA.

One of the law's peculiarities, resulting from the stiff opposition by real estate interests to any legislation whatsoever, is that the commission may announce hearings on the designation of landmarks and historic sites only during the first 18 months of its existence, a period which expired at the end of 1966. Thereafter, it may announce no hearings on new designations for three full years; at that time it may resume hearings for six months only, with the three-year-off and six-month-on cycle repeated ad infinitum.

Within the commission's jurisdiction, two distinct types of designations may be made: 1) landmarks, i.e., individual buildings of special historic or esthetic value for whose protection the commission is given certain powers which still must stand the test of practice; and 2) historic districts, i.e., areas or distinct sections of the city which have a special character and therefore deserve protection of a different sort even though most of the included buildings may not qualify individually as landmarks. Here the commission has powers which enable it to control the appearance of alterations or replacements of nonlandmark buildings in historic districts so that they may be in harmony with and thus enhance the general character of the area.

As a result of the objections raised by various groups when the law was debated in the city council, the measure, though finally passed, suffers from three distinct limitations.

First, the commission, in determining a building's qualifications for designation and in protecting it against inappropriate changes, may consider only its exterior even though the interior may be of greater distinction or historic value.

(Had this restriction not been imposed, for example, the old Metropolitan Opera House, whose interior was its chief claim to distinction, might conceivably have been designated a landmark.)

The second limitation is a total absence of provisions with respect to sites, outdoor spaces or landscaped areas so that no protection whatever is afforded under the present law for private grounds or parks of distinction, large or small, or for any other notable examples of landscape art.

The third and most curious limitation is that the powers of protection which the new commission may, at least, try to enforce with respect to private buildings is not applicable, except to a minor extent, to those on public property. (It was thought that such power might be an undue infringement on the functions of one city agency by another.)

Even with the almost crippling limitations of the time cycle and the three restrictions mentioned, the commission has encountered continuous opposition during its first 18 months of hearings. While it has designated and heard publicly debated—sometimes two or three times—the merits of more than 700 individual landmarks and 40 or more historic districts, it has, up to the time of this writing, officially designated only some 150 landmarks, i.e., individual buildings or groups of buildings and five historic districts.

Its remaining recommendations, although legally announced and publicly heard within the prescribed first 18 months, still hang fire due to hesitancy and reluctance on the part of the commission to push their luck too far in view of continual opposition to the concept of preservation itself and to the widespread misunderstanding of the working and applicability of the law. The commission seems to be trying to avoid the courts' challenge to the merits of its designations one hand, its right to designate on the other.

Opposition is often expressed not so much by property owners as their representative attorneys who fail to appreciate the esthetic/historic merit of the building in question and who argue that regardless of its merit as a landmark, the city has no right to interfere with the owner's right to do whatever he wants with his property.

This attitude is even more marked in connec-

tion with historic districts, notably the ones proposed for Greenwich Village and for the posh, residential blocks of the upper East Side where sizable areas containing fine residences have been proposed for review under the historic district category in order to maintain property values.

Their lawyers apparently have even advised tax-exempt institutional and religious groups to oppose landmark designation on the ground that it would impair the profitable sale of their properties in the future. In the case of Trinity Church and several others, this opposition was soon overcome by reasonable persuasion. But the Lutheran Church, owner of the former J. P. Morgan house, and the Sailors' Snug Harbor, an ancient, charitable old-seamen's home which owns a group of remarkable Greek revival buildings (across page: 1831; Martin E. Thompson, architect) on Staten Island, have both gone to court to try to overthrow the entire landmarks law.

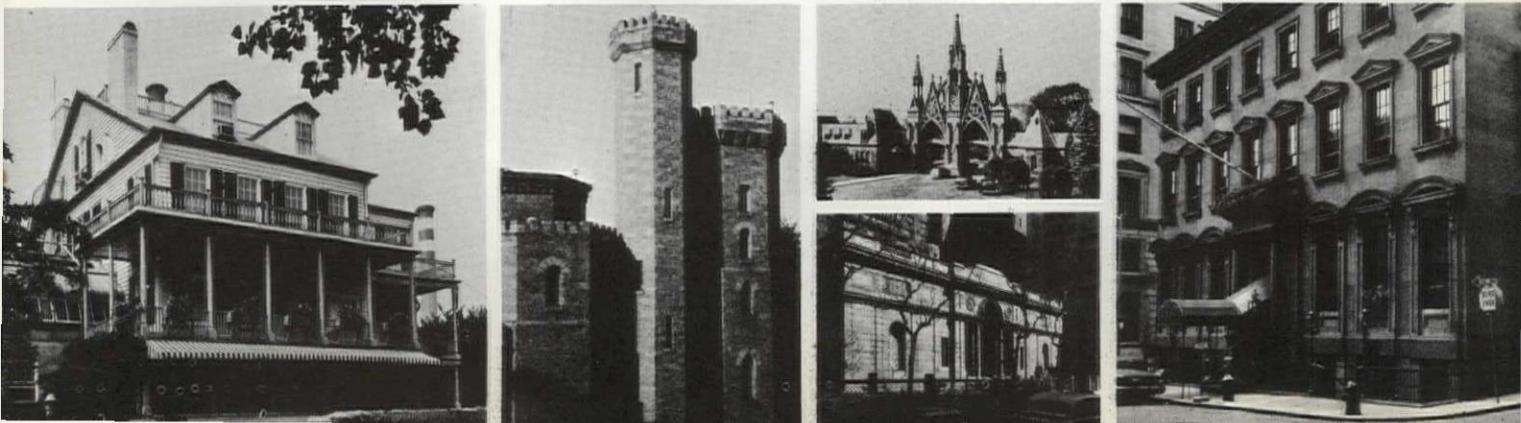
In the case of the Jerome Mansion in Madison Square, longtime home of the Manhattan Club, the commercial investor who now owns it is also contesting designation in order to sell the site for an office building. The commission, however, is encouraging negotiations for its purchase by an institutional buyer who could use the handsome old Victorian house without objectionably changing its exterior.

The commission has already been successful as a mediator and locator of new owners in other cases such as the former Astor Library which was rescued from demolition and is now being converted to the home of a Shakespeare company.

The landmarks already designated and those still hanging fire include a wide range of buildings—not only the familiar antiques but also many later structures and areas of distinction dating from the 18th century to the World War I period. These include commercial buildings, public monuments and most of the city's well-designed religious and educational structures as well as a few reconstructions or "synthetic antiques" such as the Fraunces Tavern, built in 1907.

A great many of the landmarks and historic districts are among the buildings and localities described in the just-published *AIA Guide to New York City*. A few of them are illustrated here. □

A quintet of landmarks saved—Navy Yard Commandant's House (1805): attributed to Bullfinch; "Fonthill" (1850s): architect unknown; Greenwood Cemetery Gates (1861): R. Upjohn; Morgan Library (1905): McKim, Mead & White; India House (1837): Herbert Wheeler, architect for 1951 restoration of two structures joined together as a club.



Adventures in the Pursuit of Excellence

The Bard Awards Program, when first held, yielded unexpected and

BY LEON BRAND, AIA

There it was, in 1962, the imperial city of the West and just two years shy of its 300th birthday. But it could boast of neither Forum nor Acropolis. Indeed, with few exceptions, New York's government places were empty of excellence or inspiration. Its singularly graceful civic jewel, the City Hall, had to be credited to time a century and a half earlier.

For many and good reasons, the stellar firms in the great firmament of New York architects were not significantly involved in the several-hundred-million-dollar annual production of the city's public buildings. And the similarly uninvolved young and new offices were doing an impatient burn while the city fathers fiddled.

The author: Mr. Brand, partner in the New York firm of Brand & Moore, is chairman of the Bard Awards.

In the view of the Committee on Planning and Housing of the City Club of New York, such was the low level of achievement that prevailed when it met six years ago to consider a program to promote change and improvement. The City Club is New York's oldest, continuously active and probably most influential nonpartisan civic reform group. The Committee on Planning and Housing at that time included an assortment of lawyers, realtors, a doctor, hotel manager, stock broker, architect, city planner and others.

Over several months the committee discussed a number of possible programs. It finally focused on the vehicle of an architectural awards program as the one that would most effectively reach burghers, bureaucrats and architects. The premise was that the public needed a greater familiarity with excellence. In publicizing the selections, and the selection reasoning of a distinguished panel of architects, the awards program would spotlight outstanding achievement, its ingredients and the achievers. It would inform the public about the "which, why and who" and in so doing encourage

the architect and his public client to higher standards of design.

The committee's proposal for an architectural awards program was approved by the Board of Trustees of the City Club largely through the efforts of its president, I. D. Robbins, a builder-developer who was later to become a candidate for mayor. The program was given the name the Bard Awards in honor of Albert S. Bard, a City Club trustee, in recognition of his efforts over 60 years to improve the quality of civic design. Mr. Bard was 95 at the time; he died within a few months of the birth of the program.

The first jury for the Bard Awards included Gordon Bunshaft, FAIA, partner in Skidmore, Owings & Merrill; Charles Colbert, FAIA, then dean of the School of Architecture at Columbia University; Jan Rowan, AIA, editor of *Progressive Architecture*, and Richard S. Childs, a former president of the City Club, chairman of the Executive Committee of the National Municipal League and originator of the city-manager concept.

The unexpected results of this jury's deliberations developed into one of the most extensively reported and controversial architectural design stories in the recent, if not entire, history of New York. Having reviewed submissions invited from all members of the five borough chapters of the AIA, the jury informed the City Club:

"Although some submissions were better than others, we do not think that honoring projects which were above average, when that average is low, would be consistent with the purpose of this awards program, which was instituted to encourage and promote excellence in civic architecture in New York City.

"We therefore regretfully do not recommend any of the submitted projects for the First Honor Award nor for Award of Merit."

A dissenting opinion was submitted by Dean Colbert, who said in part:

"While I agree with the other members of the jury that the quality of the work submitted was depressing and of a regrettably low order, I do not

reverberating results. Excellence, said the jury, was not to be found.

believe that a complete and equal rejection of all is justified."

The no-awards decision of the jury made it necessary for the City Club to cancel reservations and other arrangements for an awards luncheon and exhibition. More importantly, the club was confronted with the problem of how to use the decision to serve most effectively the purpose of the awards program.

The trustees promptly decided to publish a pamphlet describing the jury's conclusion and including its full report. It would also include the critical comments and recommendations of the City Club for an action program to improve public building design in New York.

A draft of this pamphlet was presented and discussed at City Hall with the mayor's press representative. The purpose was to inform the mayor of the jury's decision and to afford his administration an opportunity, in advance of the pamphlet's publication and distribution, to adopt and announce some of its recommendations. City Hall chose to remain mute.

The pamphlet titled "The Bard Awards 1963, a Fruitless Search for Excellence in Civic Architecture in New York," suggested six points:

1. A statement of policy by the mayor, to be followed by a directive, calling for the highest standards in the design of public buildings.
2. Appointment by the mayor of a panel of distinguished architects to consider and select, with his approval, architectural firms for public building projects. This panel would also assist in the evaluation of project design.
3. Modification of the panel selection process at intervals by city sponsorship of architectural competitions for appropriate projects.
4. Appointment of highly competent architects to responsible, policy-making and policy-influencing positions in public agencies involved in municipal construction so that the expenditure of capital funds could be guided by a greater concern for superior architectural results.
5. Improvement of the fee structure and simpli-

fication of bureaucratic review procedures in order to attract the best qualified and most creative firms to accept commissions for public buildings in New York.

6. Publication by the city's newspapers of more news and regular critical comment and reviews of architecture and city planning in the same manner, and for the same purpose, as current criticism of the theater, the cinema, musical offerings and gallery openings.

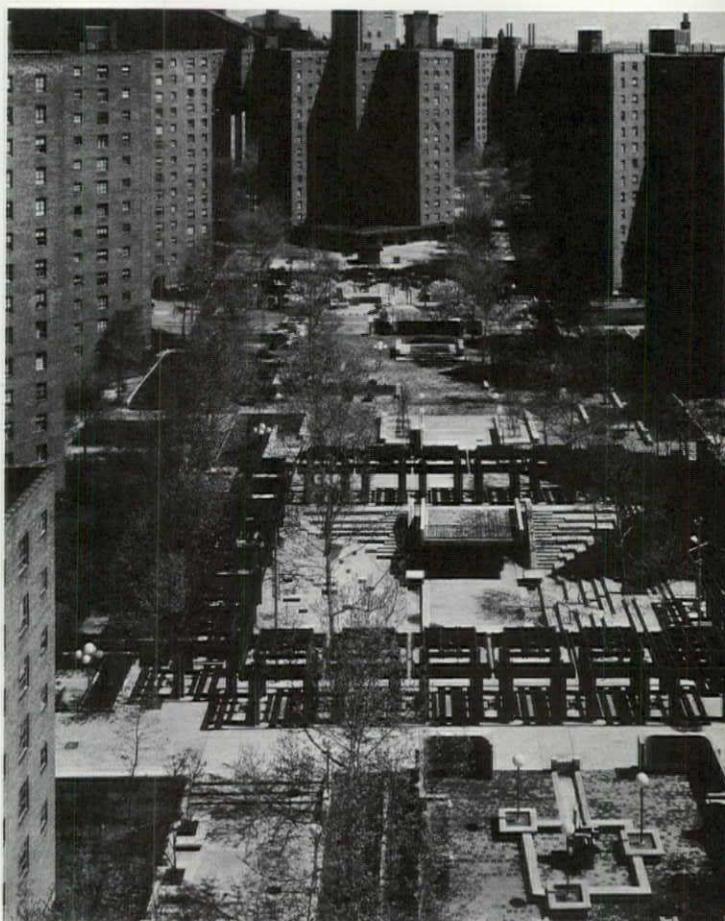
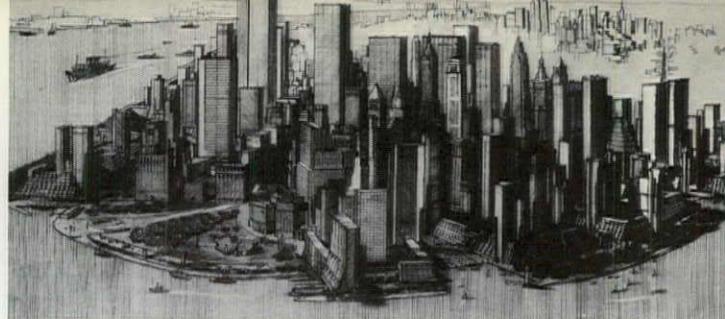
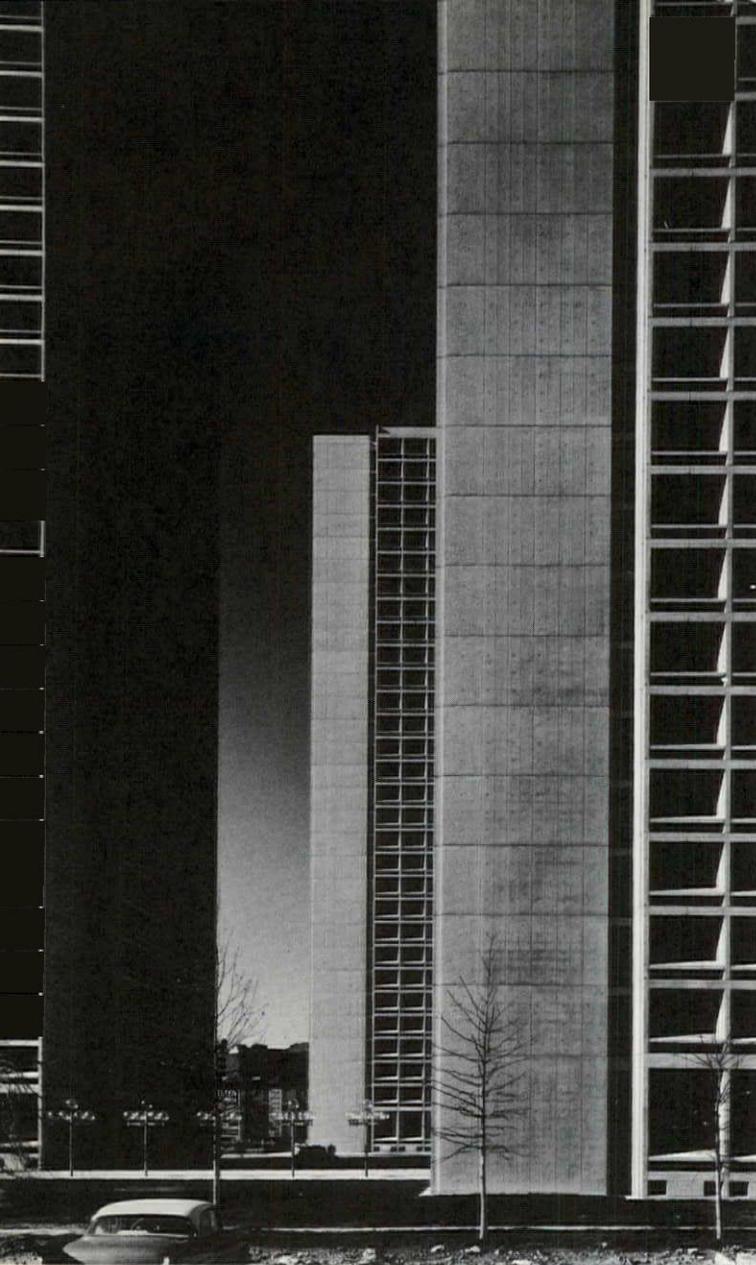
Several weeks later, at a news conference including representatives of almost every major metropolitan newspaper and several radio and television networks, the City Club announced the outcome of the first Bard Awards program. It was a "man bites dog" story and within my memory, at least, never have the mass media in New York devoted so much time and space to a discussion of architectural excellence—or its absence. The story went national in the May 24 edition of *Time* magazine. And a City Club member reported he saw coverage in a newspaper in Africa where he was traveling on business.

In an editorial, the *New York Times* said:

"This report could have surprised nobody in the architectural world, where the low state of New York's civic design has long been known, deplored and discussed just about as hopelessly as the weather. There are so many factors that make it bad. The process of architectural selection; the poor fees paid by the city; the red-tape-ridden, bureaucratic methods of design review; the lack of first-rate architectural advice and consideration at policy-making levels; the peculiar affinity of mediocrity and bureaucracy, which produces the same kind of bad building all over the world."

The *Herald Tribune's* editorial titled "Architectural Mediocrity by Habit" noted in part:

"The City Club has performed an overdue service in denouncing complacency. It is correct in calling on Mayor Wagner for leadership. Certainly he should bring distinguished architects into the picture for guidance. And they should be en-



Pursuant to the program's practice of giving Bard Awards in odd-numbered years to government-owned, -financed or -sponsored projects, the 1967 jury has selected the following four:

First Honor Awards—University Plaza apartment towers (above) at New York University, designed by I. M. Pei & Associates, architects; Chatham Towers (right), by Kelly & Gruzen; Lower Manhattan Plan (top right), by Wallace, McHarg, Roberts & Todd and Whittlesey, Conklin & Rossant, architects-planners, and Alan M. Voorhees & Associates, Inc., transportation and planning consultants. **Award of Merit**—Riis Amphitheater and Plaza, by Pomerance & Breines, architects, and Paul M. Friedberg & Associates, landscape architects. **A Special Citation for Landmarks Preservation** has gone to Secretary of the Interior Stewart L. Udall for his efforts in the designation of Brooklyn Heights as a National Landmark.



couraged to seek city work. Let us at last get some new ideas in public buildings.

"But the obligation shouldn't rest solely on the mayor. It is the architects who understand about architecture. If inertia and bureaucracy have caused the mediocrity, then the architects themselves have contributed.

"They ought to rise on their hind legs and propose new ways of progress. This is their obligation as citizens. Who could speak better for a rebirth of excellence?"

Sad to relate, the first official voice from the architectural community was not heard in behalf of a rebirth of excellence. Instead, at a meeting of New York's Architectural League, a spokesman for the Executive Committee of the New York Chapter AIA attacked the City Club for conducting what was called a "misleading and irresponsible" competition for civic architecture. A lengthy indictment of the techniques, results and conclusions of the Bard Awards was released to the press and was published.

The public aspect of the controversy climaxed when 42 members of the chapter gave the *Times* a statement detailing their dissent from the official position of the Executive Committee. As reported in the *Times*, this statement said in part:

"These views do not represent the views of the chapter at large but only those of its Executive Committee and a segment of the membership committed to the status quo. Many serious architects, including many of those who have worked for the city, feel the City Club report to be pertinent and accurate."

The intraprofessional controversy appears to have concluded with an August 1963 editorial by Rowan (member of the Bard jury), who said of the dispute in *Progressive Architecture*:

"I think this is all for the good. Public apathy is the worst enemy of good architecture. The interest that was stirred up by these events can do no harm except to those who thrive in a climate of turpitudenous indifference."

Undaunted by the 1963 no-award decision and encouraged by the public discussion generated, the trustees of the City Club determined to continue the Bard Awards. It was also decided to vary the format somewhat by alternating eligibility each year between public and private projects. And by virtue of the changing focus of successive juries, the program is now known as the Bard Awards for Excellence in Architecture and Urban Design. Three years ago a special category was created to recognize outstanding achievement in the preservation of architectural landmarks.

Fortunately, the results of the 1964 program did not again require the cancellation of arrangements for an awards luncheon. Five hundred club members, guests, architects and representatives of the press were present to witness the presen-

tation to Marcel Breuer, FAIA, Whittlesey & Conklin and Abraham Geller, AIA, of First Honor Awards.

The 1964 jury included Edward L. Barnes, FAIA, Peter Blake, AIA, and I. M. Pei, FAIA. A feature of the presentation was a special film prepared for the occasion by WABC-TV and the City Club. Kenzo Tange, Hon. FAIA, Richard Neutra, FAIA, and Paul M. Rudolph, AIA, participated in the film, which was subsequently rebroadcast twice on the ABC-TV network.

In 1964 the Club was joined in the sponsorship of the Bard Awards by the J. M. Kaplan Fund, Inc. This is a private philanthropy established by Jacob M. Kaplan, a City Club member who has had a lifelong interest in urban design and who over the years devoted considerable resources to a better New York environment.

The 1965 and 1966 award programs were also fruitful. The 1965 jury included Breuer, Olindo Grossi, FAIA, dean of the School of Architecture at Pratt Institute; William J. Conklin, AIA, and Walter McQuade, AIA, architectural editor of *Fortune*. The 1965 First Honor Awards, once again devoted to publicly owned or financially assisted projects, were given to Pei for Kips Bay Plaza, and to Warner, Burns, Toan, Lunde for Warren Weaver Hall at New York University. Edward Logue, development administrator of the Boston Redevelopment Authority, spoke at the 1965 awards luncheon—his first important public appearance in New York—predating by almost a year an invitation to him to head up the housing and planning functions in the city.

The 1966 awards luncheon featured Mayor John V. Lindsay, who gave his first major post-election talk on the architectural and planning goals of his administration. The 1966 jury included Ulrich Franzen, AIA, John Johansen, AIA, Albert Mayer, FAIA, and Rudolph. It gave First Honor Awards to Philip C. Johnson, FAIA, for the Henry L. Moses Institute at Montefiore Hospital and, in collaboration with Zion & Breen, for the Museum of Modern Art Sculpture Garden. A design team headed by Harrison & Abramovitz, and including the architects for the several components of Lincoln Center for the Performing Arts, was given a First Honor Award for Lincoln Center Plaza North. Thus two of the three principal awards in 1966 were for urban spaces rather than buildings.

This year's jury was again illustrious. It included Johnson, Kevin Roche, AIA, Robert Zion and David Crane. Bard juries have continually enjoyed the generous support of architects particularly distinguished for creative achievement. This has contributed immeasurably to the authority of the awards, which are widely coveted.

The Bard Awards reached a youthful milestone this year—its fifth anniversary. It is a good vantage point from which to look back and assess

what value, what effect, the program has created. Certainly the first Bard Awards generated a formidable amount of heat. Did it cast any usable light? Have subsequent award events continued to make a useful contribution?

The architectural nirvana has by no means arrived in New York. Too much that is disappointing, that is not equal to the opportunity at hand or to the resources committed, happens here with painful regularity. Some important changes have taken place, however, and the Bard Awards can properly claim some influence in this regard.

All of the six recommendations made by the City Club in its 1963 pamphlet have been effected at least in modified form. The exact contribution made by the Bard Awards in each is obviously impossible to measure. Other forces were, of course, involved. A new mayor, Lindsay, belongs to the City Club and is, happily for the city, sensitive and apparently committed to the human and community values inherent in quality architectural design and planning. With invigorated new leadership, the New York Chapter AIA has labored mightily and sometimes successfully to improve the architectural climate in the city. Other civic groups have also made their contribution. It was, however, the spark of the 1963 Bard Awards jury decision that created both the heat and the light necessary for an environment receptive to change and improvement.

To return briefly to the 1963 pamphlet and its "fruitless search for excellence," the scorecard to date looks like this:

- Mayor Lindsay, during his campaign and since his election, has emphatically committed himself and his administration to high standards of design in civic architecture (see Recommendation 1).
- Although not done directly by the mayor, both the New York City Housing Authority and the Board of Education have appointed architectural advisory groups to assist them in the selection of architectural firms for projects within their jurisdictions (Recommendation 2).
- The city government has sponsored architectural competitions within the past several years for the design of an urban redevelopment project, park buildings and, most recently, for a public school rehabilitation (Recommendation 3).
- Within the past few years architects have been appointed to the following important public offices: chairman of the City Planning Commission, member of the Housing and Redevelopment Board, and deputy administrator in the Recreation and Cultural Affairs Administration (Recommendation 4).
- Principally through the determined efforts of the executive director of the Office of School Buildings, Eugene Hult, the Board of Education has involved a number of the city's and the nation's leading architectural firms in the design of

public schools. The results are beginning to become apparent in some interesting and thoughtful educational buildings. Improvements in the output of the Housing and Redevelopment Board and particularly the Department of Public Works are somewhat less visible.

- The architectural fees offered by these city agencies have been improved only slightly during the past several years despite vigorous efforts by the New York Chapter. Nor have review procedures been substantially simplified. The Lindsay administration has indicated its intention to make progress in this area, but final judgment must await the results of efforts now underway (Recommendation 5).

- Not long after the inclusion of this recommendation in "a fruitless search," the *Times* appointed Ada Louise Huxtable as staff architectural writer and critic. Mrs. Huxtable's comments on planning and building in and around New York have become increasingly incisive and pungent and thereby increasingly interesting and useful to New Yorkers. One occasional column of architectural criticism, good though it may be, is hardly adequate in the face of the quantity of building and urban rearrangement that goes on continuously in New York (Recommendation 6).

Perhaps a more interesting, if less analytical gauge of the influence and continuing effect of the Bard Awards are the frequent calls received each year from owners and architects asking when the next program will be announced. When these persons have achieved a building of which they are proud they want the community—and the world if possible—to know about it. A Bard Award is thought of as a prestigious way to do that.

The City Club has received a number of requests for information about the program from civic groups in other cities. Because New York's architectural maladies are not unique, whatever we attempt in the way of therapy is of interest to other communities with similar afflictions. The particular local symptoms will determine if a Bard-type awards program is a suitable prescription, and whether it has a lesser or greater chance to be effective.

Anyone considering a transplant might usefully take note of one characteristic in particular of the Bard Awards that may have contributed materially to such effectiveness as it has achieved. Unlike most architectural awards programs, it is not sponsored by a professional group, trade association, materials manufacturer or chamber of commerce. It is not promoting any product or group, even indirectly as a subrosa purpose. It is an effort by a civic reform organization and a public-spirited philanthropic foundation to identify, publicize and promote excellence in architecture and urban design in their own community—and that is an adventure. □

The 1967 Gold Medalist is cited for "his demonstrated ability to lead a team in producing significant architectural works of high quality over a period of more than 30 years" and for "the highest order of architectural statesmanship."

Professional Spokesman for a Complex Society

BY CHARLES THOMSEN, AIA

The house is a jewel set at the water's edge, cupped by the thick canopy of slender tall trees and the dense foliage of wild undergrowth. Except for the thin mullions, the long gentle arc of the glass front is lost in the glimmer of the pond which it faces and the reflection of the sweeping curve of the shallow concrete roof vault poised in frozen flight.

In the intimate contact with water and woods, this refuge for a private client is a series of contrasts which juxtapose the dynamic against the static, the sensuous curve and stark angularity, transparency against mass, in the simple structural statement of the smooth white vault cantilevered from the trapezoidal walls of rough native stone enclosing the service center of the house and its utilities. These contrasts of forms, the play of textures, colors, materials—ever so refined that one can grasp their individual significance, and ever so logical that one without the other would be the poorer—bear the unmistakable imprint of Wallace Kirkman Harrison, FAIA.

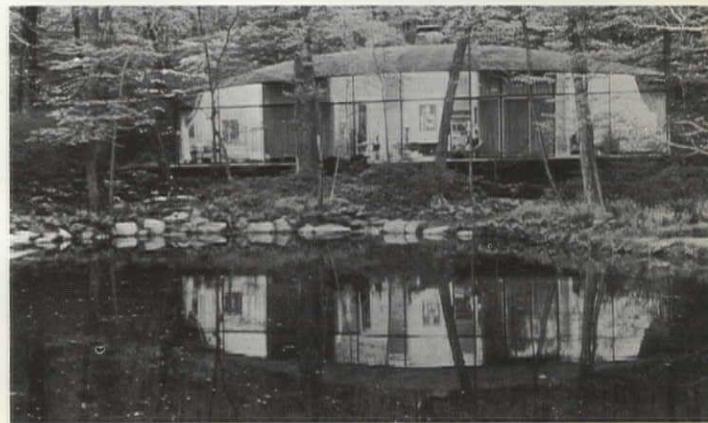
They are the *leitmotifs* which pervade Harrison's architecture, endowing it with a consistency and continuity, whether in the execution of a corporate center in upstate New York or in his undisguised relish for the more intimate problem of a country house in Maine, or in the form of a church in Stamford, Connecticut. There prevails throughout his work a purposeful, deliberately methodical progression of an individual theme which avoids the single mindedness of Mies van

der Rohe on the one hand, the impetuous departures of Le Corbusier, or the frank explorations of Eero Saarinen on the other.

The house by the pond is but one of the many variations of that theme expressed at the New York World's Fair of 1939, in the angular trylon and its neighboring perisphere. It is in the low curved silhouette of the roof and walls of the General Assembly Building and the soaring rectangular prism of the Secretariat at the United Nations headquarters in New York. It is found in the multistory foyers of the General Assembly and at the Metropolitan Opera, *salles des pas perdus* where the verticals of the entrance are immediately in tension with the soft flowing lines of the stairs and the swooping horizontal bands of the tiered promenades on the opposite side.

Complementing these broad contrasts is a

Forty years of architecture in the microcosm of an intimate refuge in the woods and at the water's edge.





A recurrence of the instrumentation which characterizes Harrison's architecture: strong verticals in the tension with curving horizontals, ceilings revealing their sculptural entrails as in the Metropolitan Opera House foyer (left), the United Nations General Assembly foyer (top right) and the Time-Life Building exhibition area.

whole variety of plays within the play: the immense expanse of the glass front of the UN Secretariat against the incurving opaqueness of the side walls of the General Assembly; a dark recessed ceiling baring the complexity of its mechanism against sleek polished light tones of adjoining

The author: Mr. Thomsen, former associate editor of the AIA JOURNAL and executive director of the New York Chapter, AIA, most recently has headed New York City's small parks program. He has prepared an in-depth study of Harrison's work for publication in the August Convention Report issue.

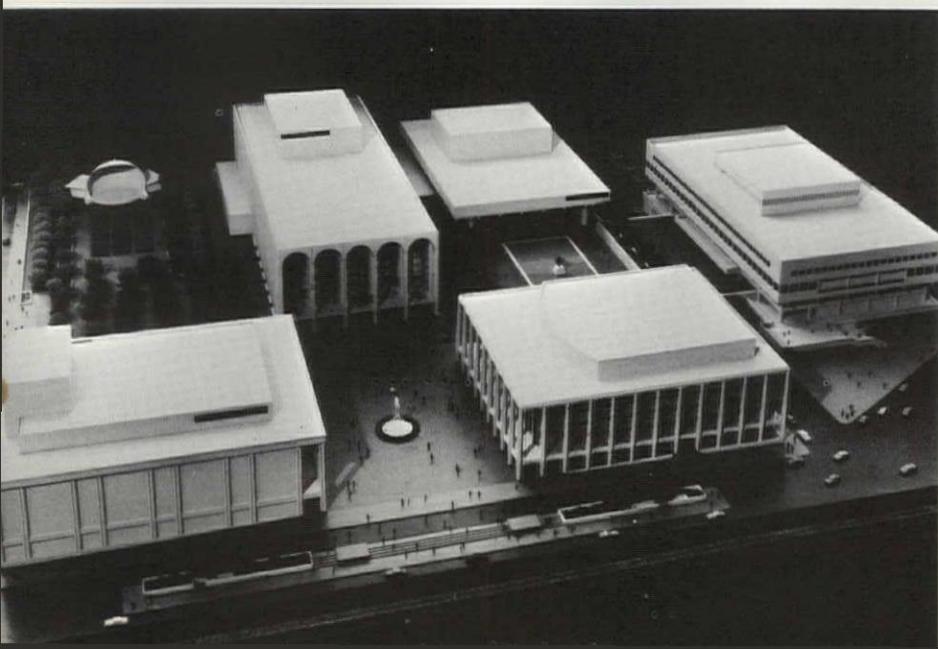
walls; the grave rhythm of the Metropolitan Opera arcade complemented by the staccato of the adjoining brise-soleils; deep vivid reds on light travertine. This dialectical approach to design is the architectural instrumentation of Wallace Harrison. It is difficult to predict which form his architecture will take next, but once con-

structed it is indeed the logical hyphen between what was and what is to be.

Yet Harrison's influence on modern architecture does not rest on his structural flair or on the adventurous spirit of his design. Nor is his pre-eminence restricted to the esthetic refinements and technological innovations that he has brought to the evolution of the skyscraper. Harrison's stature transcends the professional boundaries of architecture as does the impressive and complex scope of the projects he has been associated with during the past 40 years. The realization of Rockefeller Center, the UN headquarters, the approaching completion of the Lincoln Center for the Performing Arts have established new spheres of architectural endeavors.

In a utopian statement of things to come, Sigfried Giedion wrote in 1938: "In the great city of our age there will be a civic center, a public place which, like the agora of Athens, the Roman forum and the medieval cathedral square, will be the

The strength of the facades, the rhythm of the colonnades, the traditional richness of red and gold, the soft tone of travertine: elements giving the architectural concept of Lincoln Center a remarkable unity reinforced by the classical symmetry of the composition. Coordinated by Harrison, the design conception is dominated by the new Metropolitan Opera House facing the main plaza, flanked by the New York State Theater (left, Philip Johnson & Associates) and Philharmonic Hall (right, Max Abramovitz, FAIA). The latter together with the Vivian Beaumont Repertory Theater (Eero Saarinen & Associates) and the Library-Museum (Skidmore, Owings & Merrill) housed in one building define the north plaza, which bridges across 65th Street to the Julliard School of Music complex (Pietro Belluschi, FAIA, with Catalano & Westerman).

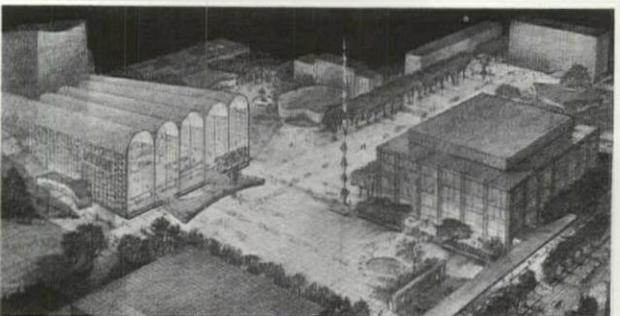
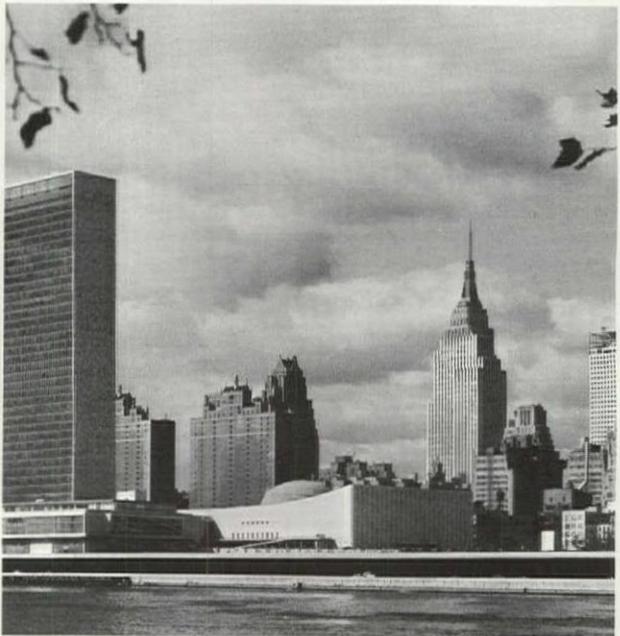




A consistent development of a theme juxtaposing rectangular slabs and swooping curvilinear shapes: UN headquarters and Corning (N.Y.) Glass Center.

community focus and common concourse . . . It is not often our privilege to be able to discuss the new conceptions of our period in terms of actual construction. They have seldom achieved expression beyond schemes drawn on paper, because those in control of building seem usually to lack the vision necessary to provide what our period demands."

Harrison's achievement has been in the management of these vast and complex operations, in the ability to mobilize and channel the large pools of architectural talents and resources necessary for the translation of these visions and concepts into concrete realities. In so doing, he has made "those in control of buildings" not only share the visions but become themselves committed to their realization. The new dimensions he has brought to the scope of architecture have tended to overshadow the independence of his work or his individuality as an architect; just as in the statesman, they cross the confines of his political affiliations. But they have also established Harrison in the forefront of the architectural world and the accolade of the AIA Gold Medal. □



The creation of an urban focus carrying with it the attributes of a new monumentality: Rockefeller Center, UN headquarters and Lincoln Center.

AIA GUIDE TO NEW YORK CITY

The first comprehensive architectural guide to all parts of the city since the consolidation of the five boroughs in 1898 is being published by the New York Chapter AIA to commemorate its 100th birthday.

The *AIA Guide to New York City*, according to authors Norval White, AIA, and Elliot Willensky, AIA, treats individual buildings as well as the city as a whole in the context of its history and its culture. The format closely resembles that of the Michelin Green Guides, so familiar to European travelers.

Vest-pocket in size and soft covered, with graphics by Herb Lubalin, this one should become a handy reference to better acquaint both architects and laymen, visitors and residents, with the gigantic metropolis that is New York. Initial distribution will be made to participants in the AIA convention, to be followed by a mailing to all Institute members. Plans are underway to make it available in a second printing to the public.

The guide includes more than 15 maps pinpointing the buildings, streets and spaces (about 1,500 individual entries) discussed in the text and suggests a number of walking tours. Each borough is considered as a whole and then broken into a number of "precincts," which further investigate the pertinent architectural, historical and social factors. It is illustrated with photographs and archive materials.

The crash program of assembling the guide, began late in 1966, has been under the direction of White and Willensky, augmented by a small, dedicated staff of writers, researchers and photographers. A hint of the contents follows:

MANHATTAN

Greenwich Village

1. US Federal Building, 641 Washington St. Washington to Greenwich Sts., Barrow to Christopher Sts. 1892-1899. W. J. Edbrooke.

This 10-story government building was originally a US appraiser's

warehouse, sited to face the local docks, the naively anticipated center of the city's port facilities. The building remains an isolated and splendid example of the robust tradition of early Chicago School architecture. It now houses a post office and is the record center of the National Archives in the east.

This interloper has a scale that is entirely different from the nearby 19th century Federal houses. It is scorned by some villagers, many of whom have been acclimatized to equate a livable environment with nothing above four-story residence.

Lafayette Street

2. Colonnade Row/also know as LaGrange Terrace, 428-323 Lafayette St. between E. Fourth St. and Astor Place. 1833. Attributed to Alexander Jackson Davis (proposed as a landmark by the Landmarks Preservation Commission).

Four of nine houses built speculatively by Seth Geer in 1831. (Five at the south end were demolished for the still-existing Wanamaker warehouse.) An elegant urban arrangement creating private structures subordinated to a larger architectural idea by means of an imposing Corinthian colonnade (compare the Rue de Rivoli in Paris). Delanos, Astors and Vanderbilts lived here until their game of "social" musical chairs sent them uptown to the precincts of 30th Street, then to the 40s, 50s and higher in the park's east flank.

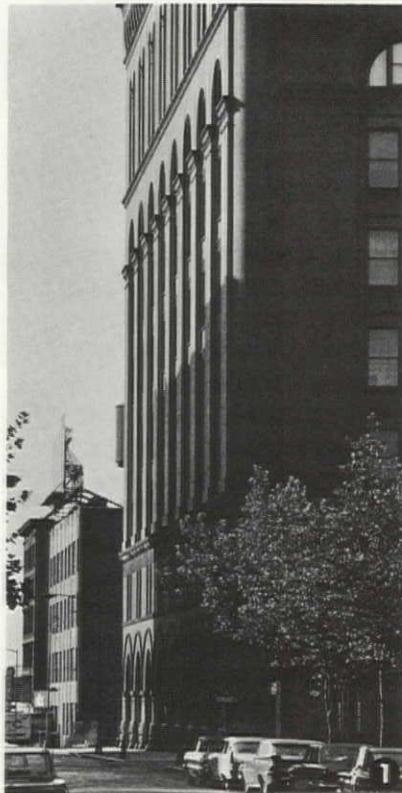
Clelsea

3. Painting Industry Welfare Building, 45 W. 14th St. between Sixth and Fifth Aves. North side. 1960. Mayer, Whittlesey & Glass; William J. Conklin, associate partner in charge.

Let us hope this witty and elegant refacing of a tired facade will inspire its neighbors to follow.

Midtown

4. CBS Building, 51 W. 52nd St. Northeast corner Sixth Ave. 1965.



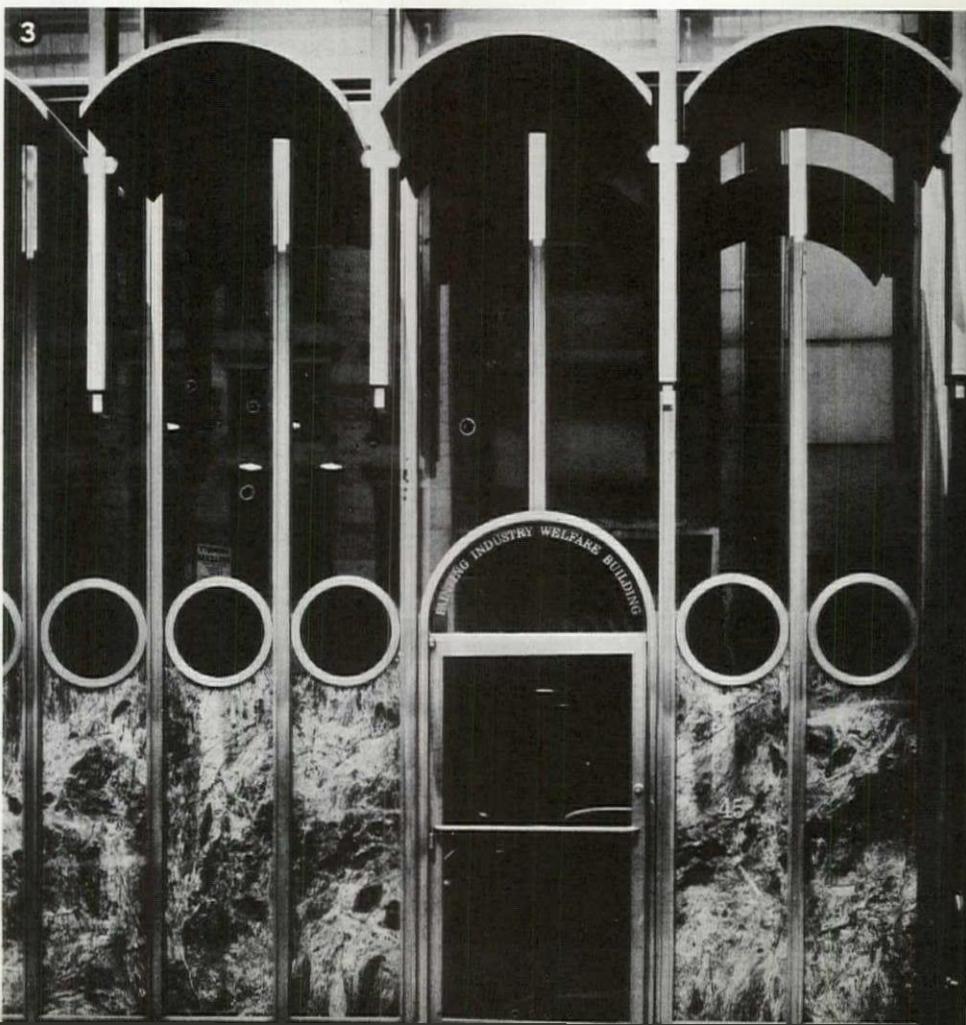
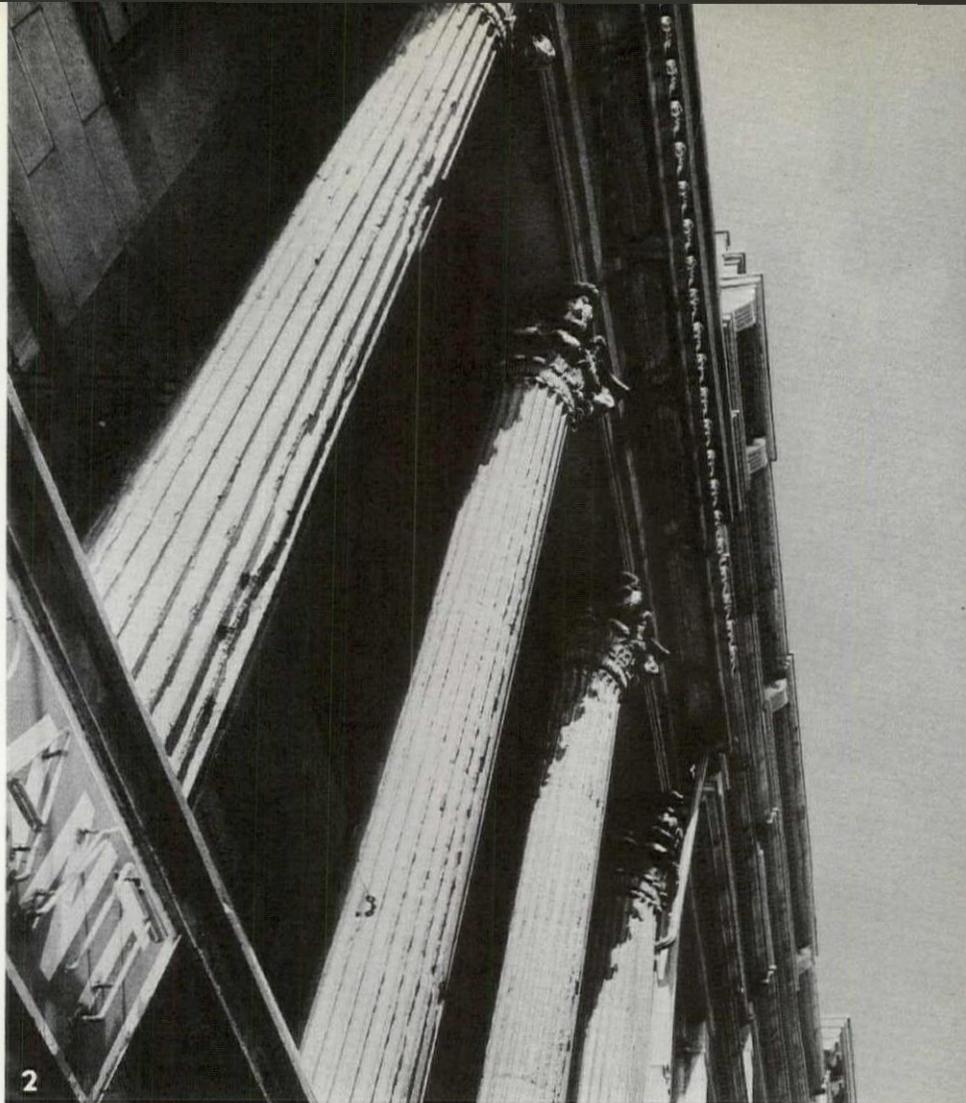
Eero Saarinen & Associates. Interior architects, office floors: Carson, Lundin & Shaw. Interior designers, office floors: Knoll Planning Unit.

Saarinen's only high-rise building is a shear, free-standing 38-story shaft. The unavoidable service building (on 52nd Street) is connected only underground. The building's five-foot-wide triangular columns, with five-foot spaces between, make it look like a solid, dark-gray granite tower from some points of view. This is one of several buildings of its time to depart from established column-and-beam framing, supporting its floors instead on a central service core and a dense grid—in effect, a bearing wall—at the exterior. But it is the only one to carry the closely spaced members down to the ground, instead of transferring structural loads to widely spaced piers at the base.

The tower's exterior frame is composed of V-shaped concrete structural columns tied together with concrete spandrel beams. As they rise, the thickness (not the width) of the concrete V gradually decreases, and the expanding void behind it is ingeniously used to house an air-distribution system running down from the roof.

The granite wall-cladding extends across the dry moat around the tower, over the broad parapet (which allows for sitting on the outer side only) and out to the street. Entrances only on the north and south reflect a preference for the atmosphere of the side streets, and also leave two uninterrupted areas on the ground floor for a bank and a restaurant. On the ground floor, the columns take the form of squares set on the diagonal although, above that, they have flat interior faces. The dark granite surfaces stop abruptly at the elevator core where floors, walls—even baffles on the luminous ceiling—are of white travertine, introducing the whiteness (spiked with vivid colors) of the upper floors.

The Ground Floor, an elegant restaurant whose name gently spoofs the many top-floor counterparts, was designed down to the table settings by the Saarinen office. Its high, black-leather banquettes and brass candlesticks sit well with the tall somber columns. Red carpet, an exposed grill and wine racks, and suspended lighting fixtures of polished bronze, mahogany and clear glass, with bare-filament bulbs, give it the richness of a traditional men's club. Limited space led to an un-





sual arrangement of the ladies' and men's rooms: at the top and bottom respectively of a handsome granite spiral stair (PLaza 1-5152).

Upper East Side

5. Pepsi-Cola Building, 500 Park Ave. Southwest corner. 59th St. 1960. Skidmore, Owings & Merrill.

A jewel box, if such hackneyed phrases can still have literal meaning. This small, exquisitely detailed building is one of a handsome series by SOM. The ground floor leads from a miniature plaza into an exhibition gallery featuring imaginative displays related to the arts.

THE BRONX

University Heights

6. New York University, Bronx Campus: Technology Building and Begrisch Lecture Hall, west of Memorial Flagpole. 1964. Marcel Breuer; Hamilton Smith, associate. (Albert S. Bard Award). Julius Silver Residence Center, west of Technology Building. 1964. Marcel Breuer; Robert F. Gatje, associate.

This handsome, contemporary technology-lecture hall complex used buff brick and reinforced concrete to match the brick and limestone trim of the Hall of Fame group. A second Technology Building, also by Breuer, is underway.

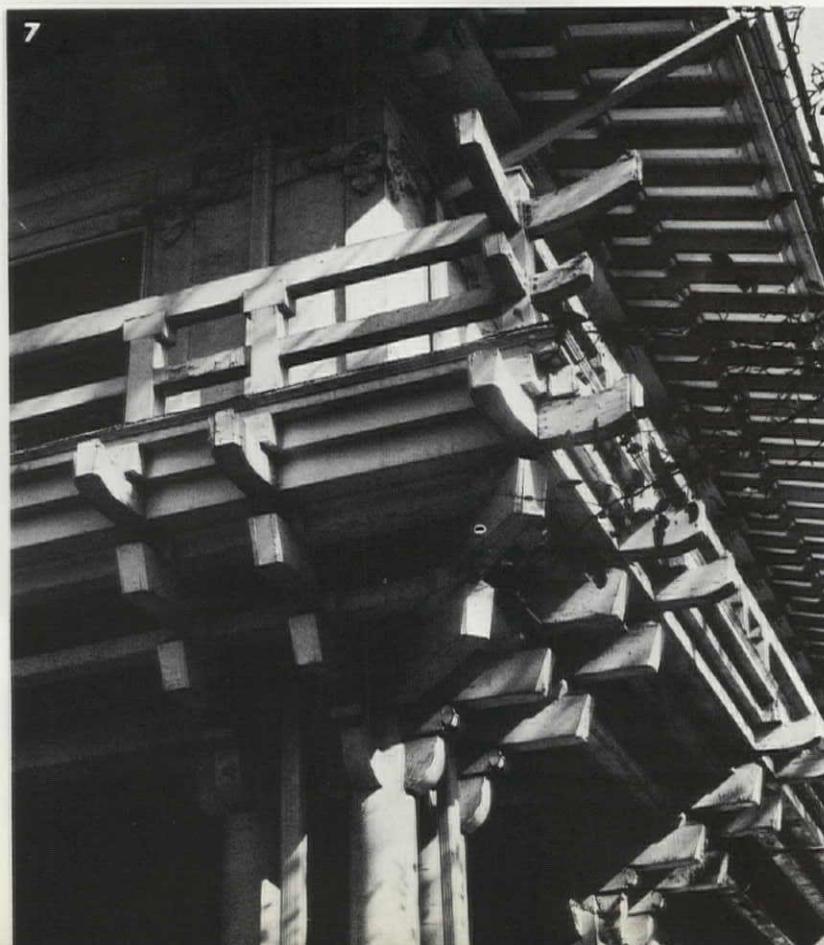
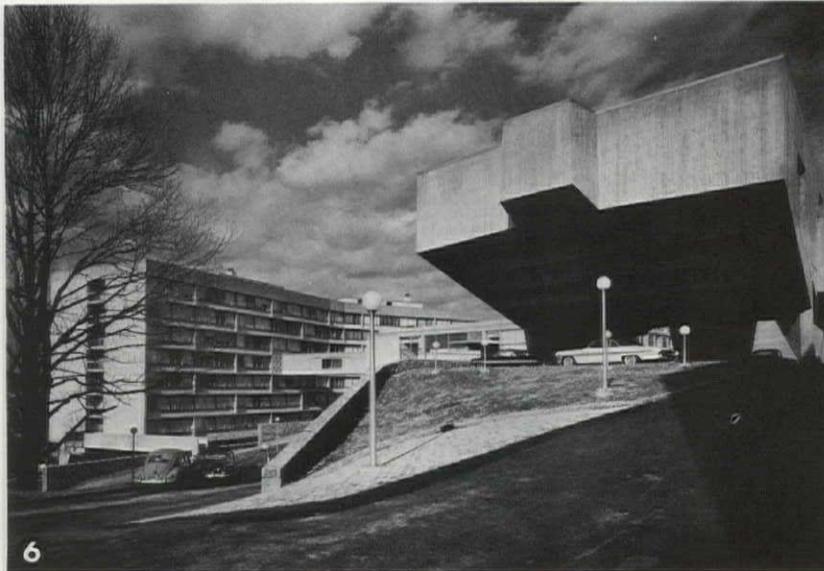
In order to take good advantage of a difficult site, access to the dormitories from the dining hall and social rooms is through a pair of ramps that enter the building at its fourth story.

BROOKLYN

Flatbush

7. Dr. F. S. Kolle Residence, 131 Buckingham Road between Church Ave. and Albemarle Road. East side. Prospect Park South. ca. 1905.

Known at the time as "the Japanese House." In contrast to the later exoticism of Oriental Moderne in other parts of Brooklyn, the restraint of this carefully adapted Japanese temple detailing is a welcome note. The form of the residence is that of a standard, boxy, two-story-plus-attic dwelling. The handling of details—porch, balcony and eave lines—gives the Japanese effect. The house is located in the Prospect Park South section of Flatbush, an area once characterized as *Rus in Urbe*, an expression not inappropriate even today. The community is a monument to the vision of Dean Alvord, its developer, who conceived it as a rural park within the confines of the street grid. The entire area is well worth a visit. □



BEAT AND OFFBEAT IN NEW YORK CITY

New York is more like a multicut jewel than a monolith; it glitters variably depending on the angle of view. It is at once as diverse as its many communities and as unified as its aura of activity.

Manhattan could be called the star in the sapphire: It is the center of New York in all respects—geographically, culturally, financially, recreationally, visually. Each of its components reveals different attributes, from the bizarre, swarming Village streets to the sophistication of the upper East 70s. Manhattan is more than such a dichotomy, however; many more polarities exist and whole galaxies of atmosphere lie between them.

At the bottom of Manhattan, for example, is the Wall Street financial district, where for 40 hours a week, one can find the city's "high seriousness" and get the feeling of a clock's intricate precision. A few more stops uptown on the BMT and one can be in the East Village's Bowery where flophouses abound and vagrancy soars.

Further uptown is the renowned Broadway entertainment district, running parallel on the west side to elite Fifth Avenue, the main shopping area, on the east. Central Park, which begins at 59th Street, causes still another split in atmosphere. Surrounding the park and eastward up into the 90s is one of the most exclusive areas in New York. Besides boasting many luxury residences, several museums—the Metropolitan Museum of Art on 82nd and Fifth, the Guggenheim on 89th and Fifth, the Museum of Modern Art on West 59th, the Whitney on West 54th—the art and antique galleries and unique shops thrive in the area.



Over several blocks to the west of the park the atmosphere is not as clearly delineated. Several of the neighborhoods are organized ethnically and for low- to middle-class families, many of whom still have their own small businesses.

Uptown into the 100s is that great expanse of Harlem, perhaps in its own way one of the most vital parts of the city. It is not just a ghetto, as some may think: Harlem is alive with forces, constructive and destructive alike. In its mist is Columbia University, also a world in itself.

Even these generalizations cannot be mutually exclusive because New York is an amalgamation of elements, as William Atkin has revealed in a closer examination of one controversial area—Greenwich Village.

The visitor can observe very simply for himself by taking, for one thing, a ride downtown one morning on the IRT. In his subway car he will probably find a few impeccable stock brokers, some haggard New York University students, a couple of Puerto Rican mothers and their children, a drunk or an addict or two, the impoverished, the searching, the comfortable, the weary. With nearly 9 million people, New York has to be various. That's the excitement of this city—both its bewilderment and vibrance. N. LEAH BABCOCK

Bill Atkin in the Village

Visitors traditionally associate Greenwich Village with the beat, bearded and bathless—poets, artists, Bohemians of all persuasions.

Unwashed they may or may not be; long-haired they undeniably are—but today's beats inhabit what is certainly one of the liveliest parts

of the city. Two of its liveliest, actually; purists insist that East Village is a separate entity, with its own ambience, its own mystique.

It is not always easy to learn about the night life—or day life, either—of the Village. Consult the *Village Voice*, available on nearly all newsstands, and the *East Village Other*, which you can get on the large stands on West 42nd, at either end of Bryant Park. Between them, the two list most of the shows, underground movies, jazz, art showings, happenings, etc.

About geography: From where you are* one of the simplest ways of getting to the Village is to take a Fifth Avenue bus downtown and get off at 12th Street. Notice the First Presbyterian Church, between 11th and 12th. The central portion was designed by Joseph C. Wells and completed in 1844. In 1893, it was enlarged toward 11th by McKim, Mead & White; in 1920, Grosvenor Atterbury II added the chancel; in 1958, Edgar Tafel added the church school, which faces 12th.

While you're in the mood for churches, stroll on across 11th. The Gothic revival between 11th and 10th is the Church of the Ascension, designed by Richard Upjohn 20 years before the Civil War and redecorated by Stanford White in 1888. Inside there is an altar mural by John LaFarge and a brand-new Holtkamp organ.

Washington Arch is now dead ahead of you. If you turn right (west) into Eighth Street, you'll find a variety of galleries, eating places, bars, jewelry stores, etc. The Eighth Street Bookshop is here and carries a substantial inventory of off-beat books and periodicals. Across the street on the corner of MacDougal is the Jumble Shop, a good place for lunch or tea (the kind you drink).

Washington Square is through the arch. On a warm May evening, the chess and checker players will be out, and so will the students, young matrons with baby carriages, and—oh, all right!—the beats, a drunk, a couple of soapbox orators and maybe a junkie or two.

Just north of the square, Washington Mews is to your left off Fifth. One of the former stables on the Mews was once home to the heroine of Henry James's novel *Washington Square*. More recently, No. 62 sheltered Thomas Creighton, former editor of *P/A*, and oldtimers

who have attended previous AIA conventions in New York may heave a nostalgic sigh for the fabulous parties Tom used to toss there.

Now cross over to the southwest corner of the park and head south down MacDougal Street. The color, variety and action are fascinating. You'll see kids wearing the kind of clothes and hair styles that are banned in every high school from Maine to California.

Our Authors About Town: Miss Babcock lived in New York for four years between terms at college prior to joining the AIA JOURNAL staff last November. Mr. Atkin has been associated with book publishing (Reinhold, Whitney) since 1950 and founded Silvermine Publishers, Inc., in Norwalk, Conn., in 1964. The sketches are by Elaine Haskett.

Push on down past Third Street all the way to Bleecker. On the way, you will pass the Minetta Tavern (113 MacDougal) and the San Remo (93 MacDougal); diagonally across is Figaro, a good coffeehouse.

Continue down MacDougal and you come upon a row of houses called the Sullivan MacDougal Gardens. Built in 1815, these have been largely remodeled and their original backyards turned into an interior garden. Turn left off MacDougal onto Houston; walk one block to Sullivan and turn left again (north). You'll see the other side of the gardens and will come out once more on Bleecker near the Village Gate, several off-Broadway theaters and a couple of art galleries.

If your feet are still holding out, continue east on Bleecker to the New York University buildings, designed by I. M. Pei & Associates, between Mercer and West Broadway. If you've had enough, drop into a neighborhood bar or coffeehouse before you head back uptown to the Hilton.

Until a few years ago, Greenwich Village proper was Mecca for the nonconformists. Many neo-Bohemians still live there, although it has gotten expensive. But the action has moved to East Village, which runs eastward from Cooper Union and centers around Tompkins Square.

East Village is visually interesting, even though it has no great architecture to speak of. The peculiar stamp of the artist is apparent here; East Village seems to produce interesting design ideas without spending any, or much, money.

With Tompkins Square as its hub, East Village covers the area from, roughly, the Avenue B boundary of the square to Third Avenue, with St. Marks Place as its east-west axis. Stanley's, a bar with atmosphere, is on the corner of 13th Street and Avenue B; a short walk down the other side (163 Avenue B) is the Annex, a popular hangout.

On St. Marks Place, you can find a variety of shops offering new and used clothing (you too can look like Barbra Streisand!), unusual antiques, books, etc. Underground Uplift Unlimited (28 St. Marks Place) stocks a supply of buttons with slogans like "Legalize Pot" and "God Is Alive and Well in Mexico City," as well as others too gamy for publication here or anywhere else.

While you're down there, look in



* I'm assuming you're at the Hilton. If elsewhere, modify these instructions accordingly.

at the Dom (23 St. Marks Place). The third floor of this former Polish-American club has been turned into a teenage discotheque where color slides project amoeba-like patterns on the dancers, and a fast-flicking spot makes the whole scene twitch like a 1920s movie. The Balloon Room is on the second floor; on the first, the youngsters can check their parents into the Bar, a playpen for adults.

From St. Marks, head uptown on Third Avenue a block to East Ninth Street. There you can window-shop "semiramis," the bikini specialists, or buy a pair of "tripster" specs at the Head Shop (for the timid soul who wants the trip without the acid). Slug's, at 242 E. Third, is a famous jazz spot; the Five Spot, at St. Marks and Third, is older. The Old Reliable (231 E. Third) is called

"the poor man's Slug's." And don't miss McSorley's Old Alehouse, on Seventh Street off Third Avenue.

Underground movies—some art, some experiment, some pornography—abound in the Village. One of Andy Warhol's, "The Chelsea Girls," recently got considerable publicity from New York's regular film critics. Many of the experimental films are shown in lofts; you have to be willing to sit on an old orange crate, and unless you know somebody connected with the production, you can't get in at all. More and more, though, these movies are being shown in regular motion-picture houses.

One step removed from the underground film is the "happening." For those unfamiliar with the art form—is there anybody?—one example ought to be enough. The au-

dience is confronted with what looks like a large oilskin covering the stage. For long minutes, nothing happens; gradually the oilskin begins to pulsate and expand. At first slowly, then more rapidly, it grows until it fills the stage and begins, like a balloon, to bulge out into the audience. First the occupants of the front row are displaced; then those in the middle; finally, the Thing succeeds in nudging the entire audience out onto the street. THE END.

Enough said, except perhaps for the warning that happenings, like many other Village events, are ephemeral and often impromptu and not too well publicized in the conventional media. Check the *Village Voice* and the *East Village Other*, and may God have mercy on your soul. □

Dining Out with Atkin

Guides to fine dining in New York are plentiful so this one concentrates on some eating places which are less likely to be standardized. The following restaurants—some large, some miniscule—either offer some reasonably priced meals (which is rare in New York) or have a certain unique quality. Like any selective list, it does not pretend to be complete but instead is based on personal and favorable experience.

American

Cortile, 37 W. 43rd St.
 Danny's Hideaway, 151 E. 45th St.
 Museum of Modern Art, 11 W. 53rd St.
 Metropolitan Museum of Art, Central Park
 Ye Waverly Inn, 16 Bank St.
 Top of the Sixes, 666 Fifth Ave.
 Penguin Restaurant, 21 W. Ninth St.

Seafood

Paddy's Clam House, 215 W. 34th St.
 Sea Fare, 44 W. Eighth St.
 Troll Smorebrod, 64 W. 38th St.
 Queen of the Sea, 411 Eighth Ave.

Steaks & Chops

Al & Dick's Steak House, 151 W. 54th St.
 Black Angus, 148 E. 50th St.
 Manny Wolf's Chop House, 201 E. 49th St.
 Palm Restaurant, 837 Second Ave.
 Peter's Backyard, 64 W. 10th St.

Continental

Laurent, 111 E. 56th St.
 Cafe Nicholson, 146 E. 57th St.
 Seventeen Barrow, 17 Barrow St.
 Rainbow Room, 30 Rockefeller Plaza

Dutch

Holland House, 10 Rockefeller Plaza

English

Charlie Brown's Ale & Chop House, Pan Am Building lobby

French

Au Canari D'Or, 134 E. 61st St.
 Au Pomme Steak Frites, 22 W. 56th St.
 Cafe des Artistes, 1 W. 67th St.
 Cafe Français, Rockefeller Center, lower level
 Charles á la Pomme Soufflée, 157 E. 55th St.
 Au Petite Paris, 116 Lexington Ave.
 Le Petite Maison, 108 E. 60th St.
 Larre's French Restaurant, 50 W. 56th St.
 Le Bistro, 827 Third Ave.
 Le Moal, 942 Third Ave.
 Paris Brest Restaurant, 738 Ninth Ave.
 Maria, 141 E. 52nd St.

German & Viennese

Blue Ribbon, 145 W. 44th St.
 Luchow's, 11 E. 14th St.
 Gay Vienna, 1611 Second Ave.

Italian

Adano, 115 W. 48th St.
 Barbetta, 321 W. 46th St.
 Mother Bertolotti, 147 W. Fourth St.
 Joe's, 1017 Third Ave.
 Aurora, 144 W. Fourth St.
 Capri, 233 W. 52nd St.
 Fellin, 216 Thompson St.
 Giovanni, 66 W. 55th St.
 Red Devil, 111 W. 48th St.
 Ronato, 21 Van Dam St.
 Del Pezzo, 33 W. 47th St.
 Trattoria, Pan Am Building lobby

Near East

Golden Horn, 122 W. 49th St.
 Izmir, 121 Lexington Ave.
 Sayat Nova, 91 Charles St.
 Cedars of Lebanon, 39 E. 30th St.

Oriental

Miyako, 20 W. 56th St.
 Canton, 265 W. 45th St.
 Shun Lee, 119 E. 23rd St.

Russian

Two Guitars, 244 E. 14th St.

Scandinavian

Red Brick Restaurant, 212 E. 53rd St.
 Three Crowns, 12 E. 54th St.
 Copenhagen, 68 E. 58th St.

Spanish

Forno's, 236 W. 52nd St.
 Gay Chico, 914 Third Ave.

Swiss

Chalet Suisse, 45 W. 52nd St.
 Swiss Pavilion, 38 E. 50th St.

order and disorder

June 18-23

International Design Conference in Aspen

Max Bill, Swiss architect, artist, author and educator
Dr. Jacob Bronowski, Salk Institute scientist
Theo Crosby, London architect, author and city planner
Piet Hein, Danish poet, mathematician and scientist
Moshe Safdie, the architect who created Habitat 67
Jerzy Soltan, Polish architect and educator
Peter Ustinov, producer, playwright and actor
will meet in Aspen to discuss Order and Disorder

Attendance at the IDCA conference is open to individuals interested in design and management. Registration closes May 31, 1967. Registration fee is \$85; \$10 for wives and students. Additional information on the conference, accommodations, and registration forms may be obtained from the International Design Conference in Aspen, P. O. Box 664, Aspen, Colorado.



Legal Aspects of Building Costs

BY JUSTIN SWEET

An attorney and professor of law at the University of California, Berkeley, provides a basic analysis of existing problems and suggests ways in which architects can avoid them in the future. This article is adapted from "Creative Control of Building Costs," the forthcoming McGraw-Hill book.

Architects often must resort to litigation to collect for their services when projects are abandoned because of a great variation between low construction bids and amount clients expected to pay. Architects should have a basic understanding of the legal doctrines which govern their rights and duties if this situation arises. This legal analysis will focus upon those aspects of the problem that have caused the greatest difficulty. Spot-lighting these problems, coupled with techniques for avoiding them, can materially reduce the likelihood of future difficulties.

First, some general observations on the legal analysis. Despite frequent use of standard forms, architects and clients still make varying types of contractual arrangements. This dilutes the precedent value of court decisions. Slight differences in the wording of contracts often change the legal result.

Legal rules and their application vary from state to state. Even within a state the results will vary, depending upon the judge, the jury and the particular facts in the case. An attorney can be invaluable, both in preventing difficulties and in rendering legal advice if disputes do arise.

Not every conclusion drawn in the analysis is supported by a precise precedent. Many of the points discussed have not been decided by the courts. My conclusions on these questions are based upon general principles of contract law, the reasonable expectations of the

architect and client and the realities of architectural practice.

Promises and Conditions

If the lowest construction bid substantially exceeds the amount the client expected to pay, architect and client sometimes disagree over their respective rights and duties. Difficulties can develop over the following questions:

1. If the project is given up, does the client have to pay for architectural services provided before abandonment?
2. Has the architect fulfilled his contractual obligations to the client?

The answers to these questions involve a comparison of promises and conditions.

A *promise* is an assurance given by the promisor to the promisee that a certain performance will be rendered or that a certain event will occur. Usually the failure of the performance to be made, or the event to occur, will mean the promisor has breached and may be liable for damages. In the context of architect-client contracts, an architect may promise the client that the contractor's bids will be within a cost figure set by the client. If this event—the bids being within the figure—does not occur, the architect may be liable for any damages suffered by the client because of delay or rising costs during redesign.

A *condition* is an event, which can include a promised performance, which must occur or be excused before another performance or event becomes due. As an example, to obtain a commission, the architect might agree to risk his fee on the accuracy of his cost estimates. If so, a condition has been established concerning the client's obligation to pay. First the contractor's bids must be received, showing the accuracy of the architect's estimates. Only then, under the agreement as stated above, would

the clients have a duty to pay architect's fee.

Cost problems usually involve a determination of the exact nature of the architect's promise with regard to costs and of the exact nature of the event which must occur, or be excused, before the client is obligated to pay a fee.

The exact nature of the architect's promise first depends on what assurance he has given the client, orally or in writing. Next, it will depend on the nature of the promises that are implied, rather than expressed. Implied promises depend upon the surrounding circumstances, custom and the law. The architect might be held to have promised:

1. To use due care
2. To be accurate
3. That the project cost would not exceed a particular amount.

If the architect, unwisely, has promised to be accurate, normally the reason for inaccuracy is not relevant. In effect, he has guaranteed the accuracy of his estimate. If he is not correct, he has breached and is liable for any resulting damages suffered by the client.

The exact nature of the event that *conditions* the client's obligation to pay the fee depends upon the agreement, surrounding facts and circumstances and the application of the legal doctrine of conditions. The event might be:

1. Use of due care in preparing architectural cost estimates
2. The project cost not exceeding a specified amount or the final cost estimate
3. The client being satisfied with the bids (or bidders)
4. The availability of adequate funds
5. The project being built.

Failure of these events to occur or be excused would mean the client need not pay the fee.

A promise can be, and often is, a condition. The architect could be

held to have promised to use due care, and the exercise of due care could also condition the client's obligation to pay the fee. The architect might, unwisely, promise to be accurate, as well as condition his right to a fee upon the accuracy of his cost estimate. In such a case, the architect would not be entitled to collect his fee and could be held for damages for breach of contract.

The promise and the condition need not be identical. The architect might promise only to use due care, and yet, by agreement, his fee could be conditioned upon accuracy of his estimate, the bids being acceptable, or the project being built. In the case of accuracy, if he used due care but was inaccurate, he could not recover his fee but would not be liable for damages for breach of contract.

Definitions

The term *cost condition*, as used in this chapter, will mean an arrangement under which the parties agree that the client's obligation to pay a fee is conditioned upon the project being possible of accomplishment within a specified cost amount, without regard to whether or not the architect exercised due care. Since, in the normal case, the architect has given a cost estimate which is within the specified amount, for all practical purposes this condition is synonymous with accurate cost predictions. Failure of the condition to occur or be excused will relieve the client from having to pay a fee and might result in the client's recovery of interim fee payments.

Architects use a number of related, but somewhat differing, terms in discussing costs. One of the reasons for disputes over cost stems from the failure of architects to use terms which have a consistent meaning within the profession and which give the client a clear understanding of the agreement concerning the effect of inaccurate cost predictions.

A *cost budget* is a figure supplied by the client and concurred in by the architect at the commencement of the architect-client relationship or at various other times during the existence of the relationship. This budget represents the approximate amount which the client wishes to spend for the project. Use of a budget usually means that quantity and quality are more important to the client than costs, although there are always limits to budget size.

Cost estimates are made by the architect at periodic intervals dur-

ing his performance. The estimates represent the architect's best considered judgment of what the project will ultimately cost. The estimates should become progressively more accurate as details of the project are worked out. Prior to 1961, the AIA standard contract specified that cost estimates would be supplied by the architect if requested by the owner. Since 1961, the AIA contract has required the architect to give "statements of probable project construction costs" at each phase of the architect's performance.

A *fixed cost limitation* is a sum specified by the client and concurred in by the architect, intended to fix a maximum limit on construction costs. If the project cannot be accomplished within this amount, the client retains the right to abandon the project. In public contracts, frequently this figure is the amount of money appropriated for the project. Fixed cost limitations are more rigid than cost budgets. Use of a fixed cost limitation means the client is more concerned with costs than with quantity or quality, although there are obvious limits to quantity and quality flexibility. If the architect agrees to a fixed cost limitation, he should be most conscious of costs during his performance. The creation of a fixed-cost limitation should mean that the client will cede decisions on certain minor quality and quantity details to the architect.

Cost ceiling and cost range are sometimes used. A *cost ceiling* has the same meaning as a fixed cost limitation. A *cost range* means a cost budget with a high and low figure rather than a single amount.

The creation of a fixed cost limitation does not necessarily mean that a cost condition has been created. It is possible for the client to set a firm limit on costs without conditioning his obligation to pay a fee upon the project being brought in within that amount. This is the objective of the present standard-form AIA contract.

Creation of a Cost Condition

In the typical dispute over excessive costs, client and architect usually agree that costs were discussed both before and during the architect's performance. Usually both parties agree upon the amount of the projected cost. They may even agree that the cost figure was "firm," or that a fixed cost limitation was created. The focus of disputes concerns the architect's right

to be paid when the project is given up because the objectives of the client could not be attained within the specified cost figure. The client states that he had been assured that if the project could not be brought in within the specified amount, he would not be obligated to pay the architect's fees. The architect usually denies any agreement to that effect and points to the absence of such a provision from the writing, or even to a written disclaimer which he claims negates any such understanding. The two principal legal issues relevant to the resolution of the question of whether a cost condition has been created are:

1. Does the execution of a written agreement not containing a cost condition preclude the client from testifying about the asserted agreement?
2. What factors are relevant in the determination of whether such an agreement took place?

One preliminary question sometimes raised by architects will not be discussed in detail in this chapter. This relates to the professional propriety of making a contract under which the architect stakes his fee upon the accuracy of his cost estimates. Such agreements are made, and are often even required, in public contracts. Courts have enforced such agreements, denying the architect recovery of his fee when they have found that such agreements have been made. This has been done despite the traditional reluctance of the courts to permit a forfeiture.

A *forfeiture* results when a person renders services or furnishes goods and is denied payment by the law. If the court determines that clear evidence supports the conclusion that this risk was assumed by one of the parties to the contract, it will enforce the forfeiture. Whatever relief the party can obtain must come from application of the legal concept known as *quasi contract*. This concept is not based upon contract, but upon the principle of unjust enrichment. Quasi-contractual recovery requires a benefit conferred upon the client. If the plans are not used generally no benefit has been conferred upon the client. For this reason, quasi contract has been of little value to the architect.

Most of the cost-condition cases have involved the issue of whether the client will be permitted to testify about the asserted oral agreement relieving the client from obligation to pay if the project could



not be brought within a specified cost-condition figure. The court's resolution of this issue has involved the *parol evidence rule*.

The parol evidence rule is complex in background and confused in application. Stated briefly, the law has had great difficulty in deciding whether to admit evidence of alleged antecedent or contemporaneous oral agreements which are not contained in a *subsequently* executed writing. The parol evidence rule does not apply to bar evidence of oral agreements made after the execution of a written agreement.

Historically, the rationale for the rule has been stated to a reflection of the court's doubts as to whether a particular oral agreement took place and a reluctance to submit this question to lay juries. Creation of the parol evidence rule permitted the judges to exclude evidence of such prior, oral agreements, avoiding consideration of the difficult question of credibility, and removing the issue of credibility from the jury. Later, some courts justified retention of the rule by stating that the desired stability in commercial transactions could come only by denying enforcement of asserted prior oral agreements. Other courts believed that denial of enforcement of prior oral agreements would induce parties to put their entire agreement in writing.

Today, some courts phrase the rule as one which rejects evidence of prior oral agreements because such evidence would "vary, add to or contradict" a subsequent written agreement. Other courts articulate the rule as one which deals with the presumptive completeness of writings. Still other courts speak of the necessity of using all available evidence to determine whether the parties intended to in one final and complete writing. These variant approaches have caused confusion and have made the application of the rule most uncertain.

It should be noted that the parol evidence rule deals only with the question of whether the party will be *permitted* to testify about the alleged agreement. Even if the client is permitted to testify, the architect will be given the opportu-

nity of telling his side of the story. If admitted, the ultimate determination of the existence of such an oral agreement and its effect will be made by the judge or the jury. Attorneys for architects vigorously contest the admissibility question, evidently feeling that if the evidence is admitted, it will be believed by the factfinder.

Prediction concerning the admissibility of testimony about an alleged prior or contemporaneous oral agreement on costs is hazardous because of the differing attitudes towards the rule from state to state and even within a given state. Nevertheless, certain generalizations can be extrapolated from a reading of the many decisions which have involved architect-client contracts.

If the agreement is silent on the question of costs or fixed cost limitations, it is likely that the client will be permitted to testify on the alleged agreement. There have been a few cases to the contrary, usually where the contract has mentioned cost estimates in some way. However, most courts assume that costs are discussed in every case. If no mention is made of any understanding on costs, these courts assume that the writing is not complete.

Prediction on admissibility of evidence of prior oral agreements relating to costs is more difficult if there is language in the writing which deals in one way or another with this question. Prior to 1961, the standard AIA contract merely stated that the architect did not guarantee estimates. A number of cases have interpreted this clause, and the results illustrate the difficulty of predicting the success of this disclaimer, as well as disclaimers generally.

Some Court Decisions

A case before the Wisconsin Supreme Court in 1944 involved a written contract executed *after* the completion and approval of preliminaries. The court held that the trial court had committed error when it permitted the client to testify about an understanding on excessive costs. The court stressed that when the contract was signed, a good deal of the detail had been worked out. The court held the written contract to be completed.

An Illinois decision in 1954 involved the identical clause. This case is distinguished from the Wisconsin case on the basis of when the contract was executed. In the Illinois case, the contract was

signed *before* there had been any agreement on details and before the architect had started his work. The court also emphasized that the client had not read the agreement and that it had been pulled from the architect's drawer with a casual remark by the architect that the agreement merely precluded the client from changing architects.

In a later case, the Texas Court of Civil Appeals attempted to reconcile the two earlier decisions. The court held that a writing executed *after* preliminaries are approved is complete since the client can no longer make major changes. Since the writing was complete, evidence of an alleged, oral agreement would not be received by the court.

The AIA Contract

From the standpoint of the architect, a synthesis of these cases is not very encouraging. The architect normally wants, and is encouraged, to obtain a written agreement with the client as soon as possible. If this is done, the pre-1961 disclaimer will not be of much use in avoiding testimony by the client about an alleged prior oral agreement on costs.

The 1961 AIA contract (and later editions of it) is a vast improvement. It recognizes the possibility of a fixed cost limitation, sets up a method for hiring cost estimators if a limitation is created, provides for the handling of situations where the bids are too high, substitutes "statements of probable project construction costs" for estimates and, although somewhat indirectly, deals with the question of fee through the abandonment clause. It is reasonably well drafted and will certainly do better in the courts than did its predecessor, even though subjected to a test of completeness based upon when it is executed.

Nevertheless, there is always a risk that, when the client's expectations differ from the contract, the courts will interpret the clause narrowly. Even well-drawn clauses can be attacked by assertion of fraud or mistake, by a request that the writing be *reformed* because it did not correctly express the true understanding of the parties, or by a claim that the agreement was made after formation of the contract and thus not affected by the parol evidence rule. The client could convince the judge that he is using the oral agreement only to interpret the writing, if the contract does not *explicitly* state that the

client need not pay if the costs are too high. No contractual provision, however well drawn, will ensure that the client will not be able to bring his contention before the judge and jury. No clause, however well-drafted, can displace the need for a thorough exploration with the client over the cost question, along with a clear, comprehensive provision which expresses the common understanding of the parties on the effect of excessive costs on the client's obligation to pay the architect his fee.

The courts have looked at factors other than the written or asserted oral agreement in resolving the question of the creation of the cost condition. Even if the client's testimony is received into evidence, the question of determining whether the agreement did take place as alleged must be resolved by the court or jury.

Courts have admitted evidence of custom in the profession. Architects have been permitted to introduce evidence that customarily architects do not assume the risk of the accuracy of their cost predictions. Also, courts have been more favorably disposed toward holding for the architect if the project in question has involved remodeling rather than new construction, since estimating costs in remodeling is extremely difficult. The same result should follow if the type of construction involves experimental techniques or materials.

Decisions by the courts sometimes turn on the amount of detail given to the architect by the client in advance. Generally, the greater the detail, the easier it should be for the architect to predict accurately. However, it is much more difficult for the architect to achieve the desires of the client within a specified cost figure if the client retains a great deal of control over details, especially if these controls are exercised throughout the architect's performance. For this reason, some courts have held that a cost condition is not created where the architect is not given much flexibility in designs or materials.

Stage of Cost Condition

Some courts have looked at the stage of the architect's performance in which the cost condition was created. If it is created at an early stage, it is more difficult for the architect to be accurate in his cost predictions. If it is imposed later, creation—or, more realistically, imposition—may be an unfair attempt by the client to deprive

the architect of his fee. Generally, the earlier the cost limit is imposed, the less likely it is to be a cost condition.

Occasionally the courts have applied the rule that an ambiguous contract should be interpreted against the person who drew it up and thus created the ambiguity. If the client is a private party, the contract is usually drafted or supplied by the architect.

Courts have looked at the building and business experience of the client. If the client is experienced, he should be more aware of the difficulty of making accurate cost estimates. If he has building experience, the client is more likely to be aware of the custom that architects usually do not risk their fee upon the accuracy of their estimates.

Courts have sometimes cited provisions for interim payments as an indication that the architect is not assuming the risk of the accuracy of his most estimates. However, standard printed clauses buried in a contract are not always an accurate reflection of the understanding of the party not familiar with the customs or the forms. If payments have been made during the architect's performance, this is a clearer indication that the client is not laboring under the belief that he will not have to pay any fee if the low bid substantially exceeds the final cost estimate.

A few cases have looked for good faith on the part of the client. For example, if the client has offered some payment to the architect for his services, this may impress a court as a show of fairness and good faith.

Courts and Clients

On the whole, architects have not fared well in court. Courts often assume that a fixed cost limitation means a cost condition. Such decisions do not draw a line between permission for the client to terminate the arrangement if costs are too high and agreements under which the architect would go uncompensated for services which may prove to have little or no value to the client.

Courts have failed to recognize the professional nature of the architect-client relationship. The architect renders professional services and gives professional advice. He is not an entrepreneur, seeking maximum profits and risking financial loss when things do not go right. Courts sometimes use reasoning which is more appropriate to an arm's-length sale of goods,

rather than that for a professional relationship where joint participation is directed toward the common objective of finding a professional solution for the client's problem.

Finally, some courts, and many clients, believe that cost estimating is a science and that an architect should be able to crank out reliable estimates routinely.

Avoiding Misunderstanding

As has been emphasized, a conscious effort must be made to arrive at a mutually acceptable understanding on the cost question, and this must be followed by a careful expression of the understanding in the written contract. If, as is usually the case, the architect does not want to create a cost condition, he should show a well-drafted disclaimer clause, such as the present AIA clause, to the client. He should explain the clause, its language and its rationale. He should stress the difficulty of making accurate cost estimates, especially at early stages of the design. He should explain the process under which costs are predicted, compare his methods with that of the contractor and should articulate the reasons for the extreme variations in construction bids. He should stress the client's control over details and the frequent need for changes in the solution. If necessary, the architect should offer to redesign if the bids are more than a specified percentage over the cost estimate, while explaining that redesign is very costly to him.

If the client is persuaded by the explanation, cost figures should be designated as a cost estimate, budget or statement of probable construction costs, whichever is appropriate. If a fixed cost limitation is being created without intent to affect the architect's right to the fee, this must be spelled out in the contract. The architect should prepare and retain memos of all conversations with clients over costs. Copies of the memos should be sent to the client for his concurrence as soon as possible.

Some architects may believe that all this cautionary advice is too cumbersome, too legalistic and, most important, will lose clients. If a reasonable explanation is made in advance, including a promise to redesign, such an explanation should satisfy most clients. A recent empirical study of cost problems showed that 50 percent of the disputes with clients over excessive costs were disposed of by an explanation which satisfied the cli-



ent. If this percentage can be satisfied *after* a problem develops, an even higher percentage of disputes can be avoided by a sensible explanation in advance of possible misunderstandings.

If the explanation does not convince the client of the fairness of the architect's position, in some cases the architect is well rid of the client. In other cases, an adjustment in the fee may satisfy both parties. There is nothing immoral or unprofessional in using compromise to resolve an honest impasse. It is unprofessional not to raise and adjust a problem which so frequently causes disputes and leads to litigation.

Unless the problem is discussed in advance and disposed of to the mutual satisfaction of the parties, the probability of misunderstanding and dispute is high, often resulting in a lost or reduced fee for the architect.

Interpretation

If it is established that a cost condition has been created, the next issue is that of interpretation. What is necessary to satisfy the cost condition?

The architect is permitted some margin of error. Courts have adopted a test which employs a type of substantial performance. Many architects suggest, and many public contracts permit, a deviation of 10 percent.

The cost figure which determines the occurrence of the condition is usually the construction bid submitted by the contractor. Normally cost of acquiring the land, consultants' fees and fees of the architect are not considered costs for this purpose.

Sometimes *ultimate* costs exceed the low bid because of extra work or because unforeseen circumstances develop in performance which lead to the contractor being given an increase in the contract price. The cost of extra work should not bear upon the cost condition, unless the extra work is needed to compensate for design errors of the architect. An illustration of unforeseen circumstances would be the discovery of unexpected subsoil conditions, which could lead to a price increase. This

should have no bearing upon the cost condition.

To sum up, in the normal situation, the condition has occurred if a low, enforceable bid is received which is reasonably close to the cost-condition figure.

Implication of Terms—Redesign

In addition to determining what the parties have expressly agreed to, courts are often called upon to fill in contractual gaps which either were not considered by the parties or were terms which they believed to be so obvious that contractual expression was unnecessary. This filling of contractual gaps by the courts is called *implication of terms*. As a rule, courts are reluctant to imply terms. They will do so if firmly convinced that:

1. Had the question been called to the attention of the parties at the time the contract was made, the parties would have agreed to this interpretation;
2. Or, without implication, the object of one or both of the contracting parties would be drastically frustrated;
3. Or, implication is needed to make a binding contract when the parties intended to be bound;
4. Or, in extreme cases, an implication of terms is demanded by basic notions of equity and good sense.

Implication of terms is important for this chapter in relation to the problems of redesign by the architect and cooperation by the client in reducing costs.

If all the bids are too high, does the architect have a right to redesign in order to meet the cost condition? The first consideration must be that of the contract terms. However, even if there is no contractual provision providing for a right to redesign, the architect should be given this opportunity. The arrangement between architect and client is a professional relationship, where both parties should do their utmost to accomplish the goals of both the client and the architect. Frequently, redesign can avoid forfeiture of the architect's fee.

Cooperation by the client should also be required. The client should not be expected to agree to a material change of the design solution agreed to earlier by architect and client. The client should not have to go farther than agreeing to cheapening of the work. The basic design should continue, but the changes should relate to reducing the cost without affecting the utility and purpose of the project.

The 1961 AIA contract (and later versions) gives the architect a right to redesign, requires the client to cooperate and, in addition, requires the client to increase his cost limit. This is going rather far. It is most unlikely that a court would imply this, in addition to the right to redesign and cooperation.

There are limits to the right to redesign. If the delay inherent in redesign would work a material hardship on the client, the architect should not be given the opportunity to redesign. Also, if the variance between the low bid and the cost condition is so extreme that it appears unlikely that redesign will be successful, then the architect should not have the right to redesign.

Should the law imply a promise by the architect that he will redesign if the client so wishes? If a cost condition is created, and the architect does not want to redesign, he should not be required to do so. He has already lost his fee, and it would be unfair to require him to try to bring the project within the cost condition if he does not think it feasible. The implication of such a promise would be a type of compulsion hardly suitable to architect-client professional relations.

Even if there is no cost condition, it is unlikely that the law would or should require redesign. Usually, the architect does not *promise* to bring the project in at a specified cost.

Condition Excused

The duty to perform a promise does not arise until events which condition performance either occur or are excused. *Excuse* can be divided into a number of related, but analytically different, concepts. These are prevention, hindrance, lack of cooperation, estoppel, waiver and impossibility.

Courts often use waiver to include almost any type of situation which excuses the condition. However, definition of these concepts should facilitate a better understanding of the basic concept of excuse of conditions.

Prevention, Hindrance, Etc.

If the client unjustifiably prevents the cost condition from occurring, hinders the occurrence of the condition or fails to take reasonable, positive action which would cause the condition to occur, the condition is excused and the promise matures. The client should not be permitted to set up the failure of the condition to occur

Continued on page 185

The Threatened City

They called New York "The Threatened City." That's the name they gave their 50-page report in which they pleaded that "New York is not just a place where money is made but where lifetimes are spent."

"They" are the members of Mayor John V. Lindsay's Task Force on Urban Design. The 12-member task force was named by Lindsay nearly a year ago to study New York's urban design and to make recommendations.

Headed by William S. Paley, chairman of the Columbia Broadcasting System, and including two architects, an architectural editor, a designer and an architectural lecturer, the task force came up with a dozen recommendations. Its report, filed earlier this year, was comprehensive and far-reaching.

The report's title of "The Threatened City" reflected the group's conclusion that the manifold changes New York has experienced over recent decades *more often than not* diminished the city as a place to live and work.

But New Yorkers, the task force found, are ready to do something about it: "We believe many of them have finally had enough of the environmental mediocrity that has been depressing the city and tightening its tensions in the past 20 years. Their apathy or despair toward the physical city is turning into anger. . . . We render this report to you with the conviction that a flood of concern is ready to be

released by the mayor, who recognizes the environmental ills, prescribes the design cures and rouses the patient."

The report said design should not be considered narrowly, as merely a matter of esthetics—"a frail word."

It describes New York as the task force saw it. Found were "offenses to the eye such as depressingly blank architecture, arid street scenes and baleful housing conditions which frustrate conventional law enforcement and may even be compounded by conventional engineering solutions."

Among examples seen as particularly bad was the subway system which was branded "the most squalid public environment of the United States."

The report forecast a need for 200 million more square feet of office space in the metropolitan area during the next three decades. It proposes that new business centers rise in the 125th Street area and in other boroughs. Housing sites, it suggests, could be created on platforms over nearly 10,000 acres of land occupied by railroad and subway yards. The opportunities for sites along the city's 578 miles of waterfront were described as "virtually incredible," especially in the Harlem River Valley.

The report criticizes the city's "real estate technology whose formula produces tall, expressionless buildings, almost totally empty of

character." It says New York's urban renewal buildings "begin bland in design but end brutal in effect."

Four reasons are given on why design is an unwieldy thing for city administrations. The report cites complicated procedures (the ordinary city project requires no fewer than 49 approvals), a lack of design competence, conflicting controls and a drift of authority.

It concludes that New York's problem is to convert the negative effect of its zoning regulations to a positive force for creating quality environment. "The need here, again," it stresses, "is not just for excellent buildings, or lampposts, or traffic ways, or plantings, but for the creation of places within the city to increase such qualities as livability, efficiency, diversity, coherence, grandeur and privacy."

The "places" the group proposes are the new Grand Centrals and Rockefeller Centers to be provided through private enterprise and encouraged by "determined, skillful and economically persuasive efforts by the city. . . ."

Serving with Paley were James M. Clark Jr., investment banker; Mrs. Joan K. Davidson, vice president of the J. M. Kaplan Fund, Inc.; Eli Jacobs, investment banker; Philip C. Johnson, FAIA; George Nelson Lindsay, lawyer; Mrs. Albert A. List, president of the Albert A. List Foundation; Walter Mc-

Continued on page 148

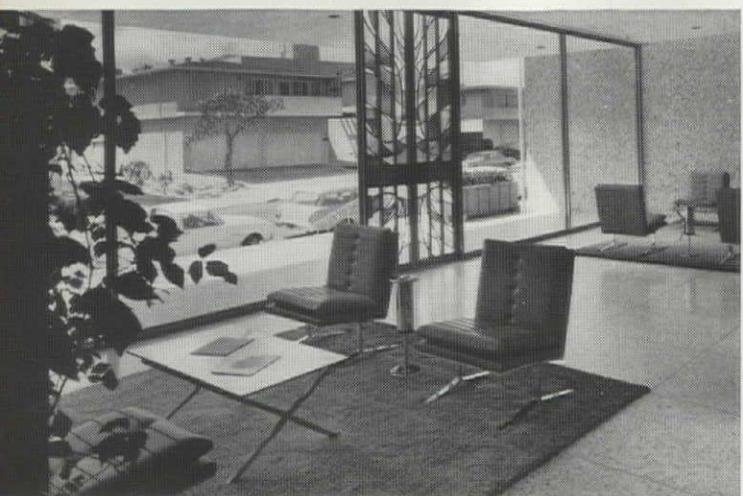
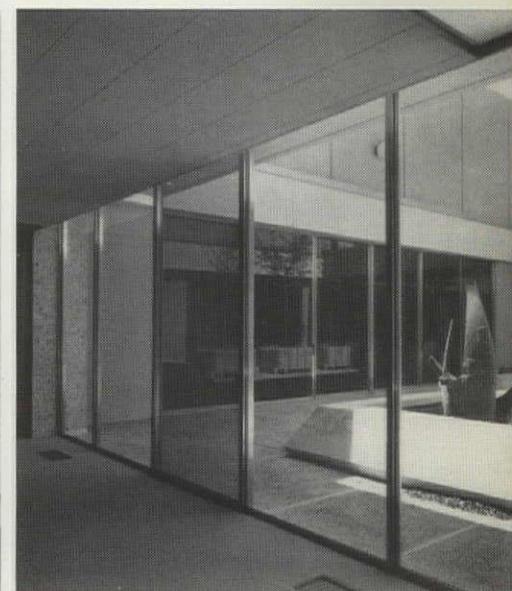
The subway system was described in such terms as "dank, dingily lit, fetid, raucous with screeching clatter."





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Two new buildings in California—a bank^o and an office building—designed by Shigenori Iyama, A.I.A., architect. Entrance doors by The Alumilene Corporation, Providence, R.I./Sliding doors by Carmel Steel Products, Downey, Calif.

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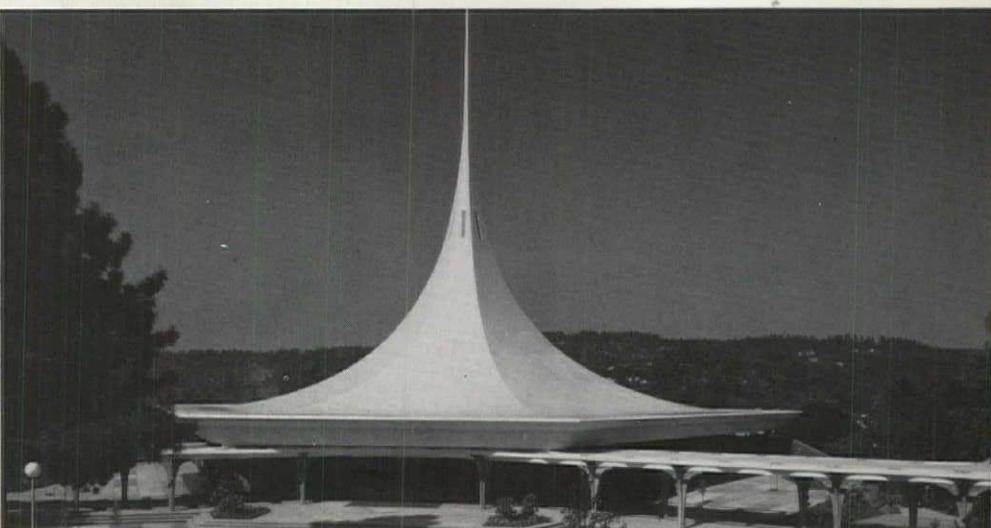
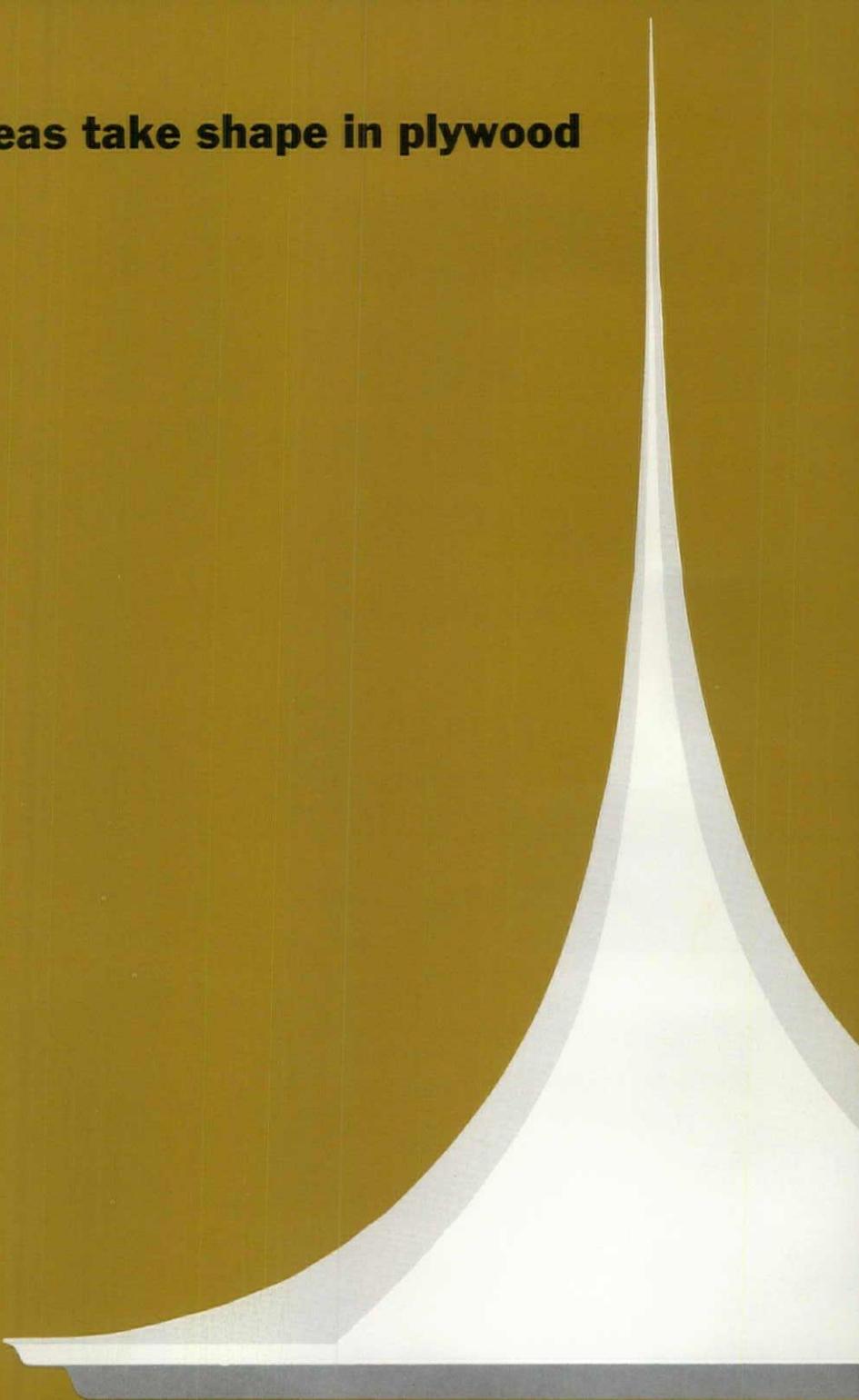
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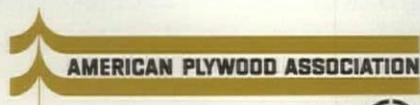
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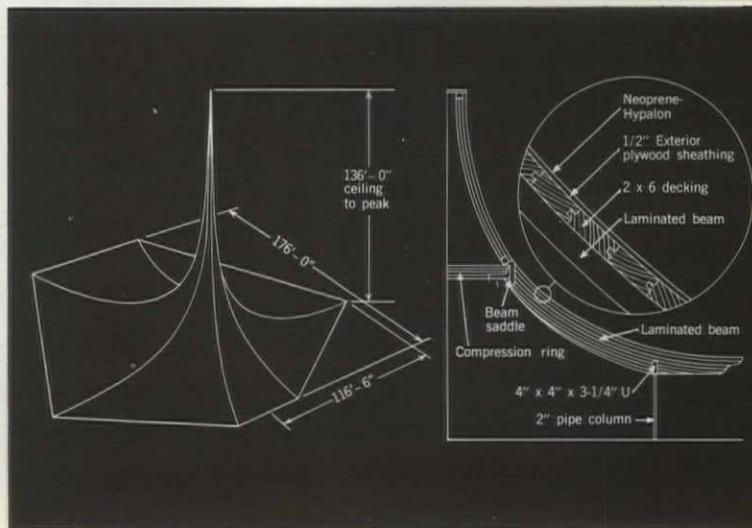


St. John the Baptist Catholic Church, Milwaukie, Oregon/Stearns, Mention & Morris, A.I.A., Eugene, Architects

This soaring roof could have been executed in concrete, steel or plywood. All were considered. Plywood was the architects' choice, on the basis of cost and design flexibility. It acts as a structural diaphragm over lumber decking and laminated timbers, and serves as base for Neoprene-Hypalon roofing. The final structure not only cost less than any alternative—it is just as strong, and was easier to build. For more information about plywood roof systems, write us at Dept. AJ, Tacoma, Washington 98401. (USA only.)



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Quade, AIA, member of the board of editors of *Fortune* and architectural writer; I. M. Pei, FAIA; Jaquelin T. Robertson, lecturer in architecture at Columbia University; Robert A. M. Stern, designer; and Walter Nelson Thayer, president of the Whitney Communications Corp. and the W.C.C. Publishing Co. and former president of the *New York Herald Tribune*.

Recommendations of the task force in summary urge:

1. That the mayor enlist public support in an effort to persuade private builders to elevate their standards of design.
2. A corollary to the first: That the mayor direct his staff and all city agencies to give the same attention to excellence in design that he hopes to see in the private building industry.
3. That the mayor appoint a Council on Urban Design to serve him without pay as monitors, evaluators and provocateurs for design excellence and environmental improvement.
4. That the City Planning Commission complete the master plan for the city—a working "grand design" subject to periodic revision which

would provide the board framework into which more detailed planning could be fitted.

5. That a new office within the Department of City Planning be created which would develop (or commission from private designers) concept designs for rebuilding special-use sections of New York—the conceiving of neighborhoods, the locating of promising areas for commercial buildings and the preparing of plans for broad area development. The office might provide a training ground for city planners as the district attorney's office offers rich experience to young lawyers.
6. That responsibility for administering zoning laws be transferred to the Department of City Planning.
7. That zoning laws be revised to permit greater flexibility and variety in construction methods.
8. That responsibilities now exercised by the Site Selection Board and the topographic bureaus be transferred to the Department of City Planning and the City Planning Commission.
9. That responsibility for the construction of buildings should rest with the builders, each of whom is answerable to the mayor for the quality of the end product, and that

paper work be simplified. Suggested was:

- A single construction contract be negotiated from prequalified bidders for each project instead of the four separate contracts required at present.
 - The process of initiating a capital project be simplified.
 - Use of the mayor's panel of architects be discontinued and that the architect selected supervise the project from design to final construction.
10. That community planning boards be established and directly involved in all design decisions affecting their areas.
 11. That an interdepartmental coordinating group be set up. It would meet with the mayor on a regular basis to assure that maximum use is made of design opportunities open to the city and to deal with interdepartmental problems bound to arise.
 12. That the mayor consult with representatives of the private organizations and associations concerned with the city's physical appearance, design and environment to consider how they can better coordinate and make more effective their individual efforts on behalf of the city. □

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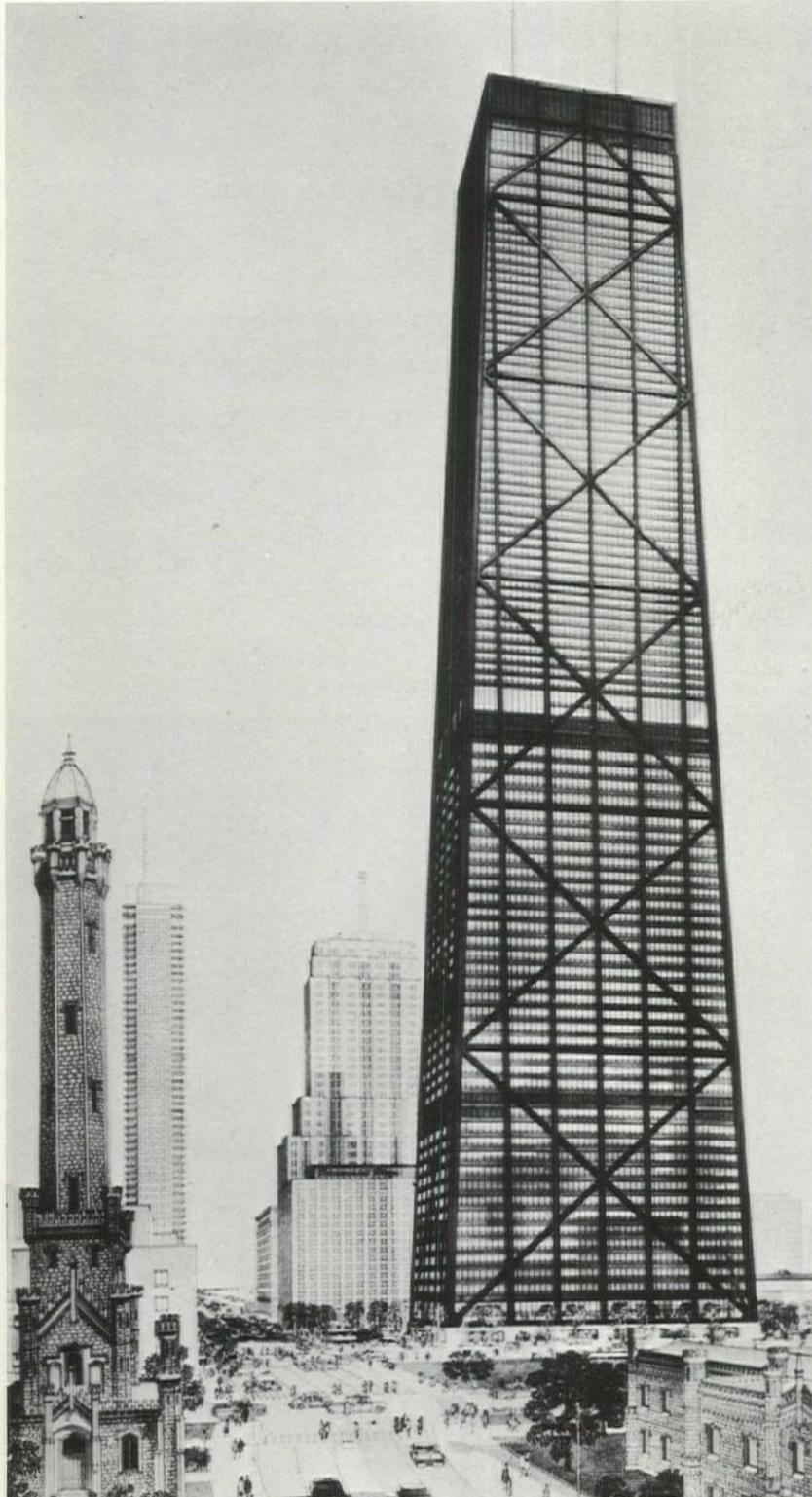
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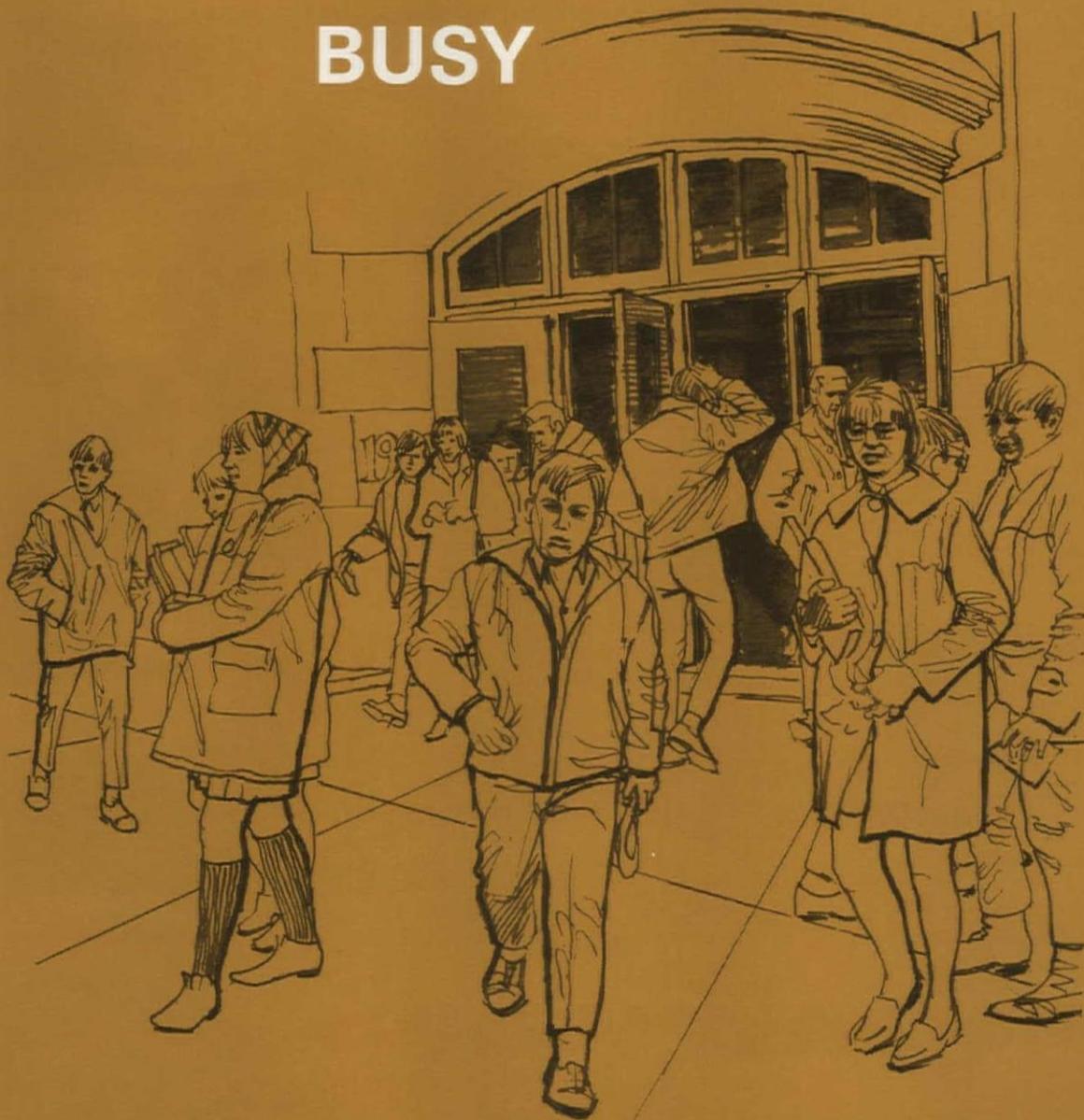
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When AIA Fellows Get Together

In a trio of get-togethers across the land, members search for a more meaningful role in the Institute.

What ways can be found to utilize the reservoir of abilities and experience found in the College of Fellows, regionally and nationally? This is a question for which members in at least three cities—Chicago, Seattle and Philadelphia—in past months have attempted to find an answer.

In Chicago last December, 22 of the Fellows assigned to that area assembled in Richard E. Schmidt's Madelener residence, an architectural landmark which now serves as the Graham Foundation headquarters.

"The gathering had no other specific purpose than to bring the Fellows together in pleasant surroundings for a relaxed evening of good food, good refreshment and good company and amiable common-purpose talk," in the words of Chancellor Norman J. Schlossman.

"It was inevitable that the past and the future were recalled and predicted," Schlossman continued. "One of the grand old men, Mies, answered questions about his earliest works, revealing that from the very beginning monuments demanded stubbornness.

"It was evident that much of what was once the essence of architecture is in the process of be-

ing forgotten by the problems right now, and those that lie ahead are all so new and demand new answers. Perhaps when they are solved, it will be time for another kind of Renaissance."

When the evening was over, there had been no shattering decisions or manifestos, but the Fellows agreed that it should become an annual affair at least.

In Seattle, also in December, 12 Fellows met at the Rainier Club, where Paul Thiry, chancellor in 1964, led a general discussion. The members concluded that:

- A yearly bulletin or letter be issued regarding college news.
- Monographs of work of outstanding architects be an activity.
- Dues be raised to \$35, with \$5 being allotted to mailing, etc., and the balance to apply on the \$100,000 capital fund.
- Meetings be held in each region on an annual basis, with a dinner in formal dress.

In Philadelphia at the Rittenhouse Club early this year, 15 area Fellows were joined by another colleague, Institute President Charles M. Nes Jr., who had just flown in from a meeting on the West Coast.

A general discussion, introduced by former Chancellor G. Holmes Perkins, considered the part the members should play in furthering AIA programs and to what special projects their funds should go. □



William Bachmann, Richard Bennett.



Dean Hilfinger, Ambrose Richardson and John Fugard exchange greetings.



John Entenza explains nose wound to Samuel Lichtman, Charles Dornbush.

Philip Will Jr. puffs reflectively over a comment by Bruce J. Graham.



Charles Murphy, Norman Schlossman.



Mies arrives, Fellows stand; with Bertram Weber and Harry Weese; with Jerrold Loeb and Earl Reed; and Fellowship.





Above:

Union Tank Car Building, Chicago, Illinois

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Right:

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The Not So Silent Partner

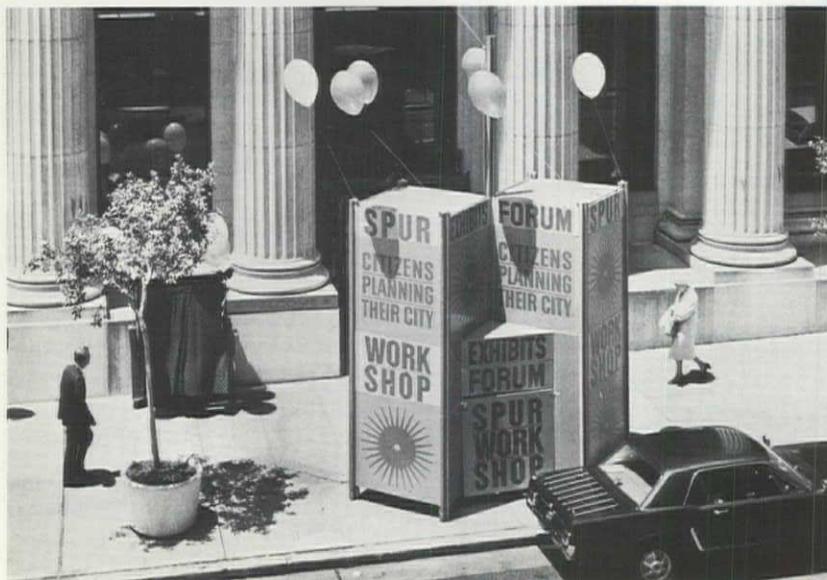
John E. Hirton, executive director of SPUR, describes the live-wire group that is getting things done by the Golden Gate.

There's a whole lot of spurrin' going on in San Francisco. Nearly 1,000 San Franciscans are joined in booting along a greater awareness of environmental opportunities.

SPUR is the acronym they work under. It stands for the San Francisco Planning and Urban Renewal Association.

SPUR attempts to represent the concerned and enlightened citizen, to keep constant vigilance over the precious but threatened Bay area environment—particularly over that keystone, San Francisco. It is made up of architects, attorneys, housewives, neighborhood leaders and businessmen.

The press turns out to cover San Francisco Week activities in Union Square; below, an official voting machine (to rear of potted tree) at SPUR workshop enables residents to give their opinions on a series of questions.



The organization is in a kind of partnership with city planners and other public officials as well as with the city builder, be he private or public. It is a silent partner in some cases, a not so silent one in others.

It is a private, nonprofit, nonpartisan group financed by tax-deductible contributions from persons, corporations and foundations.

SPUR members share a common concern for the development opportunities that are continually being lost to their great area. SPUR committees relentlessly ask: "Is it good for San Francisco?"

Active committees are the heart of SPUR. They provide residents with the chance to meet with public officials and ask questions. SPUR's opinions and recommendations to the city are based on reports from these working committees.

SPUR has continually prodded community leaders and city officials to take a more aggressive and imaginative attitude toward San Francisco planning and development programs.

It has complained that, for whatever reason, public housing has not been attractive enough; Market Street subway stations should be superior in design; comprehensive efforts are needed to solve transportation problems; redevelopment programs must have some meaningful relation to larger and more inclusive planning objectives; and that the location of schools, community and health centers and waterfront development are matters essentially under the jurisdiction of the planners.

SPUR has had results. Examples:

- It is responsible for the establishment of a development coordinator's position in the mayor's office.
- It proposed the method and assisted in the organization of the first city task force to develop maximum benefit from the Market Street BART line.
- It demanded and got changes in Housing Authority and Planning Department personnel.
- It gave technical and financial assistance to the Inner Richmond neighborhood improvement association to plan and build Arguello Park, the city's first privately constructed "vest-pocket" park.
- It conceived and conducted the first meeting leading to the ultimate creation of the Bay Area Transportation Study Commission, and it initiated the concept and provided administrative support leading to the creation of the State Commission on Bay Conservation and Development.
- It was the first advocate of the use of the South-of-Market area for a University of California campus.

These are some of SPUR's achievements. It also carries on many activities beyond basic committee work. It holds planning conferences, commissions special studies and encourages neighborhood planning activities.

Last year it held a special SPUR workshop which was designed to intensify the investigation of civic issues and bring public attention to them. The ground floor of a vacant bank building was obtained free and converted to an exhibition and

Continued on page 157

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meeting space. More than 135 meetings were held during the first six months with topics ranging from an explanation of the poverty program to debates on Market Street subway station and street design. This ended with a special event in September called San Francisco Week.

It was an event-packed, entertaining week, about a serious matter—and it was a great success.

One of the most effective devices was the SPUR Bright Spots program. Forty-eight places of excellence—parks, plazas, etc., from Ghirardelli Square to little known McCondray Lane, were cited for tribute.

SPUR sees the challenge of improving our urban environment as



Special activities such as this hovercraft demonstration lace San Francisco Week with variety, excitement.



Over 135 meetings, most of them held during the noon hour, give residents chance to hear proposals of experts.

the need to efficiently utilize all community resources. The recent SPUR workshop, San Francisco Week and the SPUR conference were deliberate efforts to aggravate community concern and understanding of some key questions.

The central purpose of SPUR's work is to establish the need for a permanent commitment to imaginative, efficient and effective planning and development programs, along with the talent and resources to implement them. □

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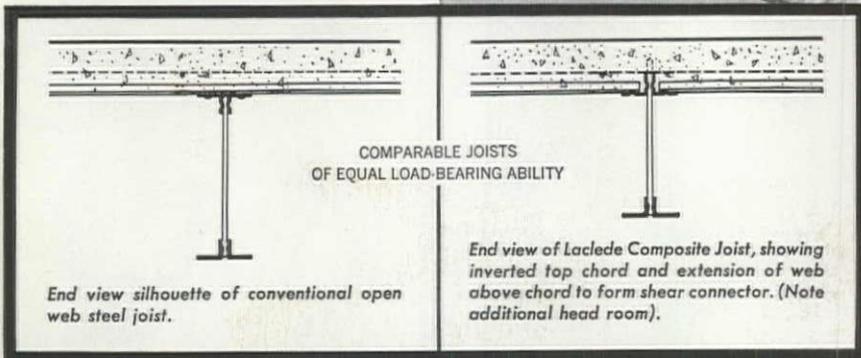
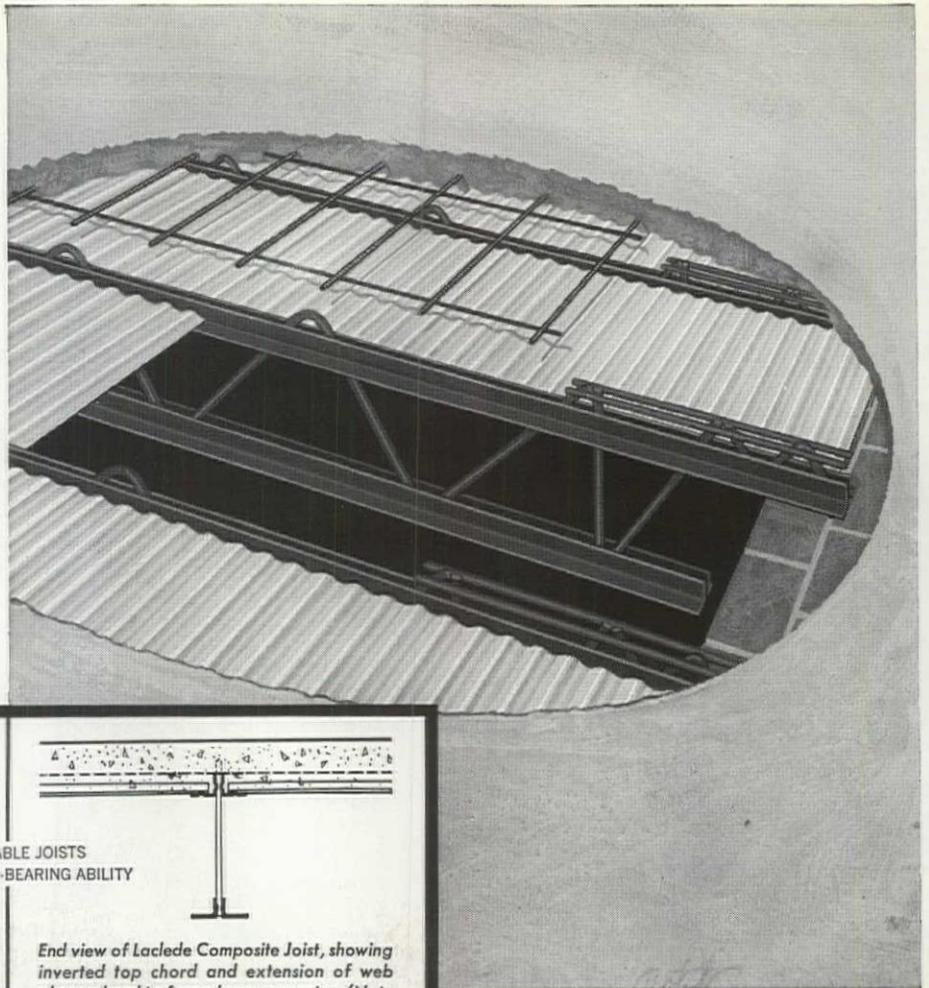
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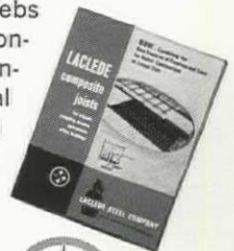
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The Profession, the Public

How one chapter turns its Architects Week into real community involvement is evident in this photo essay indicating a scope of activities that embraces many levels.

Architects "Week" in Philadelphia should really be called Architects Fortnight since it covers a 13-day period (Nov. 21-Dec. 2 last year).

The Philadelphia Chapter AIA began this project two years ago in an attempt to focus attention on professional activities developed

on behalf of the general public and to make architecture understandable to the man on the street. Numerous events are concentrated into this period: some for the profession, some for the public and public officials, and many for school children of a wide range of ages.

As a result, a variety of public service announcements, television spots, interviews, etc., is heard and seen throughout the days preceding and during Architects Week. And

the local newspapers take the opportunity to comment editorially on the efforts of the profession and to arouse the public to the need for a better environment.

William B. Chapman, the chapter's executive secretary, puts it this way: "We think this activity is a very successful venture which stimulates members as well as the general public. Each year it gets bigger and, I hope, a little better."

The photographs that follow seem to bear that out.



City Hall Ceremony—Chapter President T. Norman Mansell receives the proclamation of Architects Week from City Representative Abe S. Rosen.



Annual Exhibition—Louis Sauer, AIA (center), describes his Reston project to two visitors at the Philadelphia Civic Center Museum.



Classroom Presentations—Ralph Reynolds, AIA, gives one of the many programs presented to fifth and sixth graders by the Elementary Education Committee.



Awards Luncheon—The partnership of the evolving city and the profession is Mayor James H. J. Tate's topic before 300 architects and civic leaders.



Special Tours—Chapter member Abbott Thompson leads one of some 40 guided tours conducted for children during the exhibition.



First Award—The chapter's Gold Medal is presented to Ray Larson, FAIA (right), of Harbeson, Hough, Livingston & Larson, by Mayor Tate and Mansell. Winning project: Independence Mall State Park-North Block (background). The Silver Medal goes to Stonorov & Haws for Casa Fermi, home for the aged.



Art Teachers Seminar—The chapter has developed an extremely broad program for the introduction of architecture into the public school curriculum. Here Alan Levy, AIA, one of the plan's principal authors, describes its workings at a meeting of art teachers.



Assembly Programs—Herman Hassinger, AIA, supervises construction of a styrofoam City Hall Tower. ("We don't have Bill Penn on top, but it's bearing-wall just like the original.") Hassinger gives a half-hour assembly presentation to junior and senior high school students twice during Architects Week and 14 other times in 1966. Other chapter speakers bring the

total number of yearly appearances to 30-plus and the total audience to over 15,000 potential clients for the profession.



Vocational Tours—Groups from 17 area high schools meet separately with architects from the same number of local firms. Each gets an orientation, an hour observing office functions, an hour at an in-process project (above, Charles Ward, AIA, leads a group at the new University of Pennsylvania Social Sciences Center), a tour through the annual exhibition and joint question-and-answer session.



Contest Winner—Joseph Schad (left) shows his premiated model to Brenton Wallace, a local president of the Associated General Contractors, Louis deMoll, FAIA (who has succeeded Mansell as AIA president), in the annual contest for high school students. The program brings prizes up to \$500 for the winning entry.



Architectural Students Seminar—Internship—what it's all about—is discussed by a panel at a beer-and-cold-cuts reception thrown by the chapter for students from the Uni-

versity of Pennsylvania, Temple University and Drexel Institute of Technology. The panelists: Joe Jordan, AIA; professional associate Frank Scottoline; recent graduate Hugh Zimmers; Frank Schlesinger, AIA; and recent graduate Joyce Winans.



Document Seminar — Attorney John Clark, Daniel Schwartzman, FAIA, and William Eshbach, FAIA, review the presentation they are about to give on the extensive 1966 revisions to the AIA documents before professionals from nearly half the offices in Philadelphia.



Press Seminar—A series of half-day meetings between chapter members and key newsmen provides a forum for the free exchange of views and useful contacts. During this Architects Week seminar, Donald Barnhouse of WCAU-TV listens as Vincent G. Kling, FAIA, declares: "How do you expect people to demand beauty if you never show them any? We're in this business of a better environment together and neither of us is pulling our weight!"



Chapter Office Reception—Opened with a cocktail party, the new space in the Architects Building is filled with members exploring their headquarters.



Service Awards—Among nonprofessionals honored at the chapter open house is Dorothy Schell Montgomery, former managing director of the Philadelphia Housing Authority, who receives a citation from President Mansell for being "instrumental in setting high standards and increasing the concern for good architecture in this field."

The others:

- William B. Dickinson, managing editor, *Philadelphia Evening Bulletin*, for "reporting with great accuracy . . . , for editorial analysis . . . , for architectural criticism . . . , for responsible concern with all matters relating to the proper development of our man-made environment."

- Thomas C. Hruskinski of the Dobbins Technical High School "in recognition of his untiring and highly successful efforts in the teaching of the fundamentals of architectural drawing."

- Stanhope S. Browne and Frank Weise of the Committee to Preserve the Nation's Birthplace for their "alert and vigorous action" protesting the design of the Delaware Expressway, which led to the development of an alternate proposal depressing the expressway.

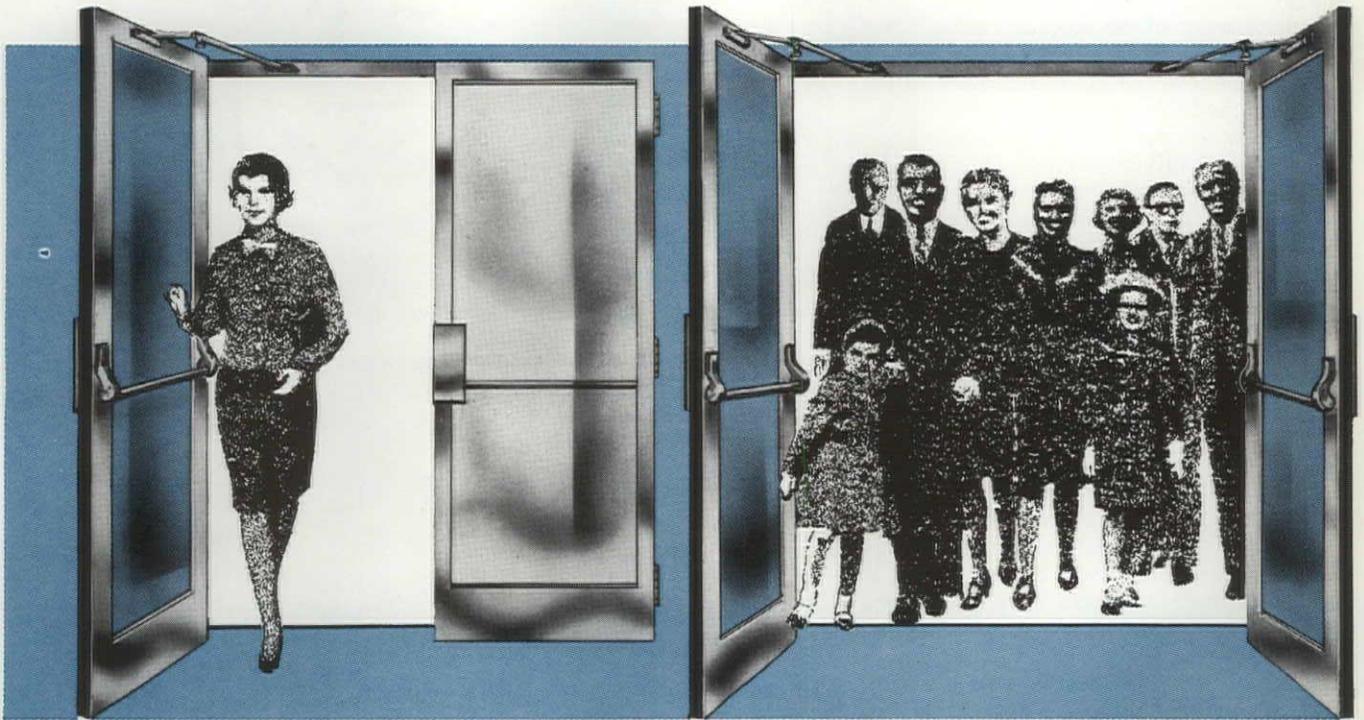


Philadelphia Printmakers—An invitational exhibition of the work of 21 prominent local artists shown in the new chapter headquarters draws this comment from the *Sunday Bulletin's* reviewer: "An important step toward renewing the collaboration of art and architecture that marked the rise of the Renaissance." □

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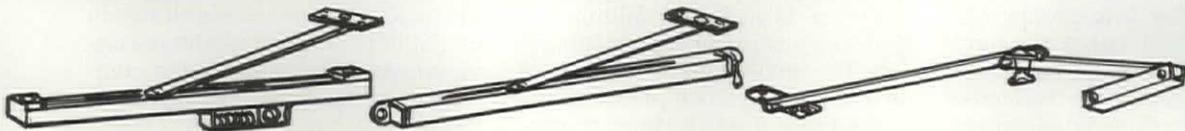


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Memorials: FDR and Others

It would be hard to imagine a family in dispute for a dozen years over what kind of memorial to erect to an exalted forebearer. Yet this is the case within the family of Americans on the Franklin Delano Roosevelt Memorial.

The issue, filled with the stones and darts of outrageous fortune, has been shifted to Congress by the FDR Memorial Commission.

Congress long ago set up the commission. The commission held a national competition and 574 memorial designs were submitted. A design featuring eight tablets was selected. It was approved by Washington's Fine Arts Commission after the scale of the "stonehenge" tablets was reduced. But Congress rejected the modified design.

Starting anew, the FDR Commission searched for someone to produce a new concept. Marcel Breuer, FAIA, was finally chosen.

Breuer's granite dart design won the approval of the FDR Commission and the Roosevelt family. But the Fine Arts group turned it down. The latter came to the "reluctant conclusion" that the design fell short of the "highest standards of artistic achievement and significance."

Sen. Eugene J. McCarthy (D-Minn.), new chairman of the FDR Commission, was less than thrilled by the Fine Arts group's economy of words.

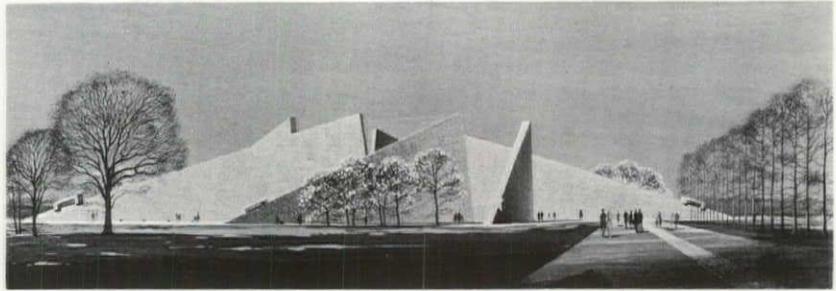
"The commission owes us more than the simple statement of rejection; it owes us an explanation," said McCarthy.

"This is a time," he added, "when the Fine Arts Commission and its advice should be disregarded. My recommendation is that the FDR Commission proceed with necessary Congressional action to construct the memorial."

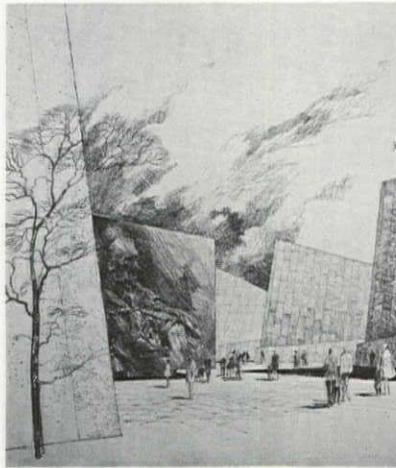
Acting days later, the FDR Commission voted unanimously to bypass the Fine Arts group and ask Congress to approve Breuer's design.

It was not a case of pitting the artistic judgment of the FDR group against the Fine Arts people, McCarthy said, "but rather the judgment, skill and reputation of Marcel Breuer . . . against the collective judgment of the Fine Arts Commission."

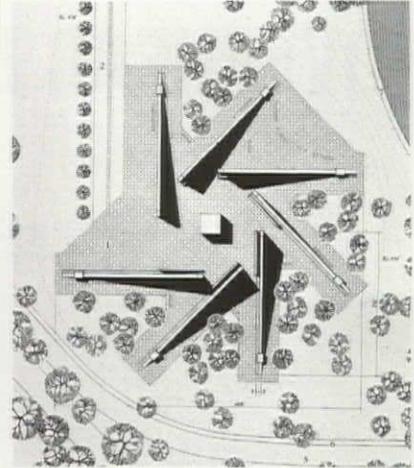
The Breuer design has aspects of the rejected slab design: It too



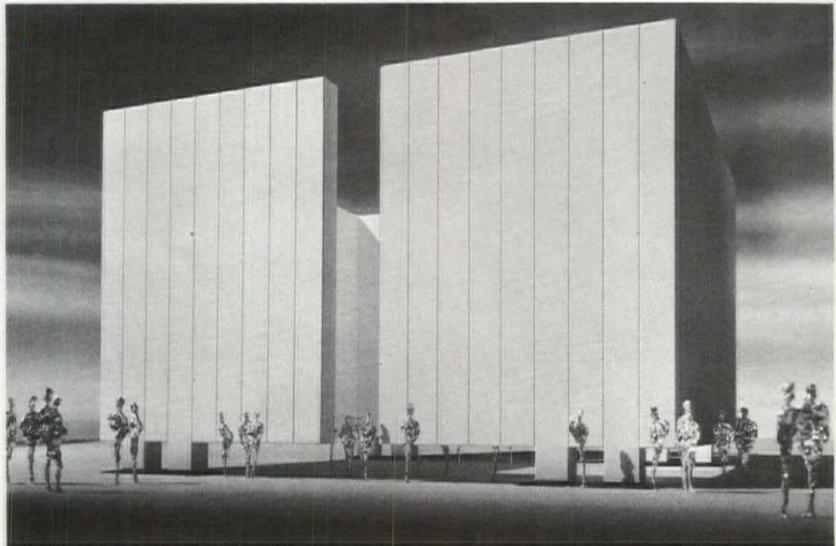
"Stone dart" arrangement, in eye-level approach, generates involvement.



Centerpiece image of the President.



A suggestion of "turbo" power.



Kennedy Memorial—stark and empty place for a rich, full experience.

is dramatic and it too can be experienced—people can walk around and among the pinwheeling darts—and it too is modern. Additionally, it presents an image of Mr. Roosevelt. The image is to be made up of dots of varying sizes, as in a photoengraving, cut into a block of granite that is the design's centerpiece.

While the FDR Memorial attempt was once again bogged down, mon-

umental tributes to John F. Kennedy varied in pace. In Dallas another place for experiencing, the square Kennedy Memorial designed by Philip C. Johnson, FAIA, awaited construction. But nearly complete was the Kennedy Gravesite, by John Carl Warnecke & Associates. And plans for the John F. Kennedy Center for the Performing

Continued on page 168



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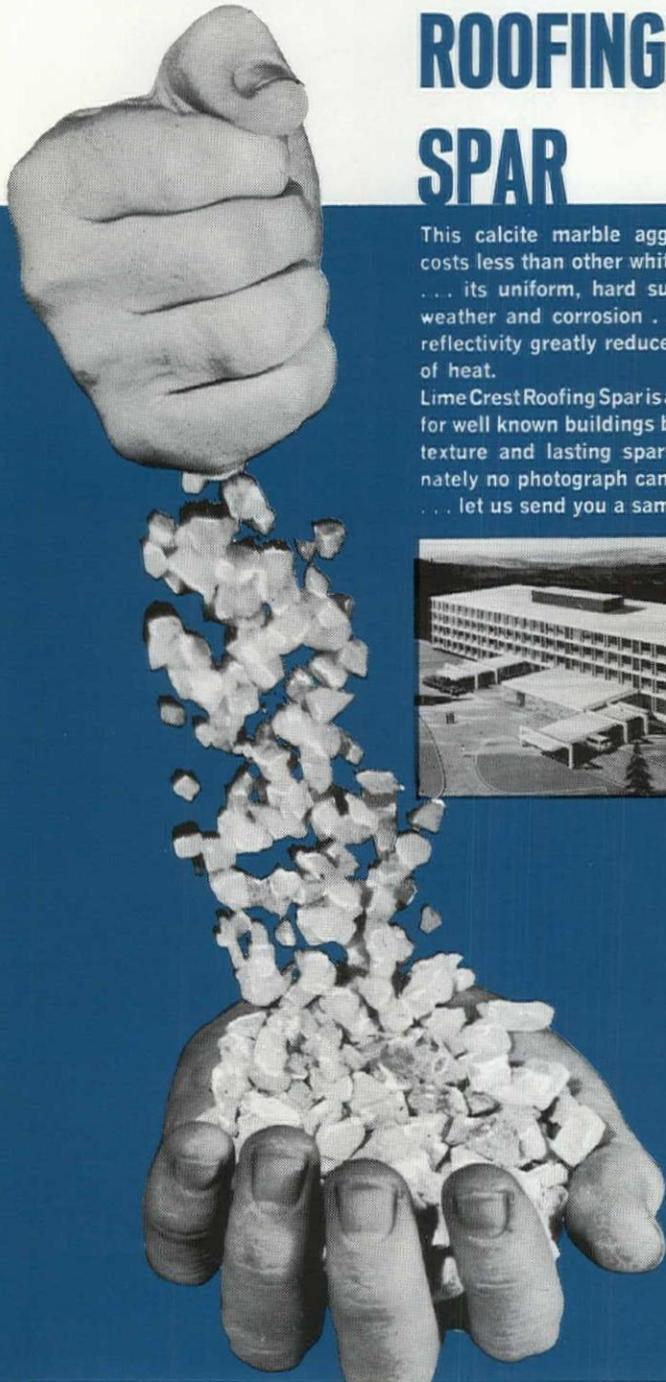
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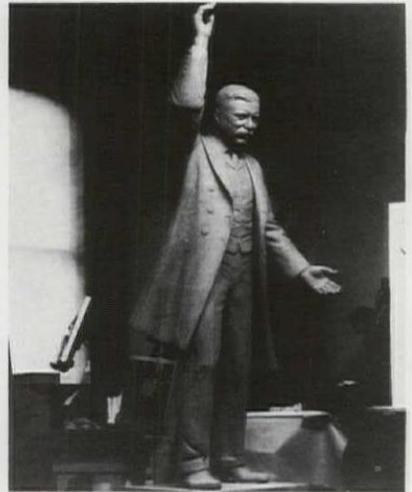
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Memorials from page 166

Arts in Washington, by Edward Durrell Stone, FAIA, were completed.

Also approaching completion was the Theodore Roosevelt Memorial on Roosevelt Island in the Potomac. Like the Dallas memorial, it too suggests a look toward the heavens. But instead of being surrounded by concrete the visitor is confined by trees, the memorial standing in a small opening in a woods. The main feature of this design by Eric Gugler, FAIA, is a 17-foot bronze statue by Paulanship atop a pedestal of granite.

Though the FDR Memorial has long been delayed in its realization, an event in history with which Mr. Roosevelt is closely identified has for half a decade lured some 150,000 persons annually.



The thrice life-sized President.



Wooded spot for Teddy Roosevelt.



The Arizona, Pearl Harbor memorial.

This is the USS Arizona Memorial honoring all American fighting men who were killed in Pearl Harbor on fateful Dec. 7, 1941. The 184-foot-long memorial, spanning the hull of the battleship transversely, was designed by Alfred Preis, FAIA.

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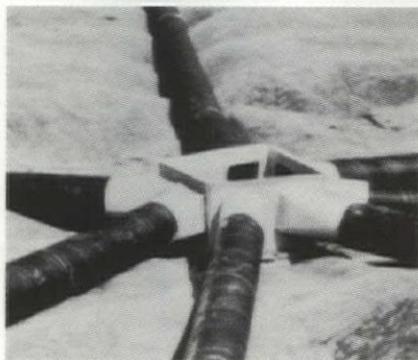
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SO 106

The 'New Preservation'

Excerpts from an address given by George B. Hartzog Jr., director of the National Park Service, before a joint meeting of the Society of Architectural Historians and the College Art Association.

Two generations ago Congress enacted the Antiquities Act of 1906, the first general national legislation for historic and prehistoric preservation. The numerous historical and archeological monuments established pursuant to this act eventually were all brought together into the National Park System in the 1933 reorganization of the Executive Department.

Today the National Park Service administers nearly 150 areas established for historical or archeological value to the nation. These areas contain more than 700 historic structures and several thousand prehistoric structures.

Widespread public sentiment for strengthening our historic preservation laws has crystallized with remarkable swiftness.

The President's message [Feb. 8, 1965, and Feb. 23, 1966] and the

Rains Committee Report stimulated significant legislative proposals and strong bipartisan support in the Congress. The interest and support displayed by the membership of your own and similar professional groups across the nation helped enormously in the bills' passage.

Let me dwell briefly on some of the concepts from which the legislation sprang. They represent an adaptation of the best of European practice, tested by long experience, to the conditions and needs of modern America. In sum, they add up to what has been called the "new preservation."

The difference between the old and the new preservation is the difference between a few shrines of transcendent significance to the nation and thousands of local landmarks of historical, esthetic, or even sentimental importance to the state or community. We must continue to recognize historical and cultural values, but we must also give much greater emphasis to architecture, design and environmental esthetics.

The difference between the old

and new preservation is the difference between a scattering of historic house museums and whole architectural communities or historic environments blending old and new in modern functional uses. We must concern ourselves not only with the individual landmark but also with areas and districts of historical and architectural value that hold a special meaning for the community. And we must devote them to compatible up-to-date uses. As the First Lady has observed: "In its best sense preservation does not mean merely setting aside thousands of buildings as museum pieces. It means retaining the culturally valuable structures as useful objects: a home in which human beings live, a building in the service of some commercial or community purpose."

The new preservation is also a difference of approach. This is not to say that our earlier practices produced no accomplishment. They did. Under authority of the Historic Sites Acts of 1935, the federal government concerned itself with places of national significance. Through Congressional action, many became units of the National Park System. Many more were recognized as National Historic Landmarks without changing their ownership. State and local governments, patriotic and professional organizations and private citizens, often guided by the outstanding experience of the National Trust for Historic Preservation, also accomplished a great deal.

But the forces of change in the modern world have gained such overpowering momentum as to blunt the effectiveness of these diffuse, uncoordinated and underfinanced efforts. The new preservation demands that federal, state and local authorities, professional organizations, preservation groups and private citizens everywhere pool their efforts and their resources in a coordinated attack on the problem. Collaboration of public bodies and private organizations at all levels is our tradition. We in the federal government want to approach our new responsibilities in the spirit of the American partnership. The new body of legislation enacted by the 89th Congress is a mandate to us all for this kind of "creative federalism." □

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All Out for All-Weather

Thomas F. Murphy, president of the Bricklayers, Masons & Plasterers' International Union, pleads with architects to take the lead.

America's largest industry is now presenting its annual spring pageant—a primitive rite that follows the same pattern year after year. Having slumbered through the winter, the multibillion-dollar construction giant has come awake.

Literally millions of people—architects, engineers, contractors, subcontractors, suppliers, craftsmen and laborers—are dashing wildly about, attempting to make up for at least some of the three or four months they have just squandered. The spectacle is expensive, chaotic, only mildly entertaining and largely unnecessary.

No other large industries except agriculture and education go through a seasonal cycle the way construction does. Farmers can plead the absolute necessity of sunshine and warm soil; teachers can plead the overpowering need of annual withdrawal from younger generations. Construction's plea, in the light of a technology that makes it possible and, yes, practical to continue operations the year around, has to be tradition.

It is so wasteful a tradition that the cost in material and human resources is difficult to measure. How much would architects and engineers benefit if they operated their offices on a 12-month rather than an eight- or nine-month basis?

What economies could manufacturers and suppliers effect through more efficient production, inventory and shipping operations? What would be the savings to contractors if, by working the year around, they would stabilize their overhead and manpower requirements? How much would owners gain through the completion of many projects several months earlier?

We don't know the full answers to these questions, though we are beginning to learn more and to hope that soon the complete and dismal picture can be painted. But there is no question that the costs of "seasonality" are enormous. A study by the Department of Commerce found that the annual loss to the construction industry due to weather is a minimum of \$3 billion and possibly as much as \$10 billion.

A clear idea of the human cost can be gained from a look at the construction worker's situation. A recent survey by the Bricklayers, Masons & Plasterers' International Union showed that bricklayers work an average of 1400 hours a year, or 35 40-hour weeks. If we take the national norm of full employment to be 2000 hours, or 50 40-hour weeks, then the skilled, trained craftsmen of my union are employed for only 70 percent of the work year.

For 15 weeks of the year, bricklayers have no opportunity to use skills acquired at considerable cost to themselves and the nation, and much the same is true of other construction craftsmen. This is an enormous waste, and it creates personal hardships and anxieties. Our industry's skilled workers accept a pattern of employment that most Americans would find intolerable.

Seasonal fluctuations in construction employment affect not just the workers: They are a burden on the national economy. The Department of Labor says that the traditional pattern is for unemployed construction workers to receive about one-fourth of all unemployment benefits paid in the months of January, February and March. In the summer months, these workers account for only one-tenth or one-eleventh of the benefits.

Total state unemployment benefits of \$273 million were paid in March of 1965. Since construction workers draw higher than average benefits, they received at least \$70 million of the total. In September of that year, total benefits amounted to \$138 million—and construction workers received an estimated \$15 million. Much of the \$55 million difference between the amounts paid unemployed construction workers in the two seasons must be viewed as waste.

Another way of looking at the cost of seasonality is to consider the economic loss of manhours. When we fail to make efficient use of the skilled labor we do have, we mock statistical reports and forecasts of labor "shortages."

If the 160,000 journeymen in the BM&PIU worked an average of 45 instead of 35 weeks a year, the economy would gain an additional 64 million skilled manhours. This

Continued on page 176



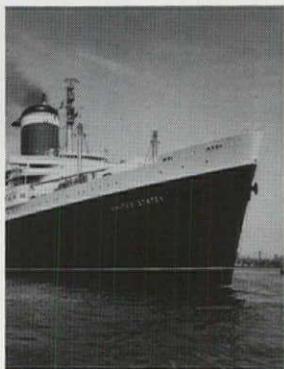
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is the equivalent of another 35,000 trained bricklayers producing over a 45-week work year. Multiply this effect many times in order to appreciate what this could mean to the entire industry, for nearly all construction trades are in the same seasonal boat.

If seasonality could be eliminated, a substantial reservoir of skilled bricklayers, carpenters, metal workers and other trades would be added to the national work force virtually overnight.

How can it be done? Unlike many of today's solutions, the answer here does not depend on untried technology. It depends on the application of several tried and true principles which make it entirely possible to continue construction work in all kinds of weather. "All-weather" construction is not theory: It has been proved over and over again.

In the United States there have been enough separate instances in which it was successfully tried for us to consider the present technology as adequate. Indeed, the planning and the tools necessary for all-weather construction are well known to many general contractors, mason contractors, other specialty contractors and to architects and engineers.

The Mason Contractors Association of America has held numerous seminars on the subject for its members. The Associated General Contractors of America has promoted the technology of all-weather construction to its members. Technical magazines that are widely read by contractors, architects and engineers have called attention to the "ways and means" of construction in adverse weather.

The two technical keys to all-weather construction are cheap and easy enclosure and mechanical heating. A variety of enclosure materials and methods has been used with success. Most often the material is lightweight, transparent plastic which frequently can be reused. Heating can be provided by readily available gas, oil or electric space airconditioners.

Some contractors have built large buildings in winter by enclosing the entire structure. At Brampton, Ontario, a 22,000-square-foot, single-story structure was built this way in eight weeks. In Winnipeg a contractor completely enclosed a six-story building with polyethylene and wood fiberboard. In a third

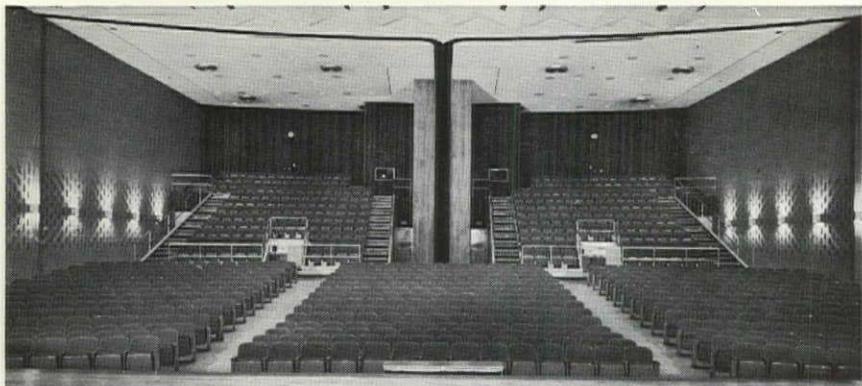
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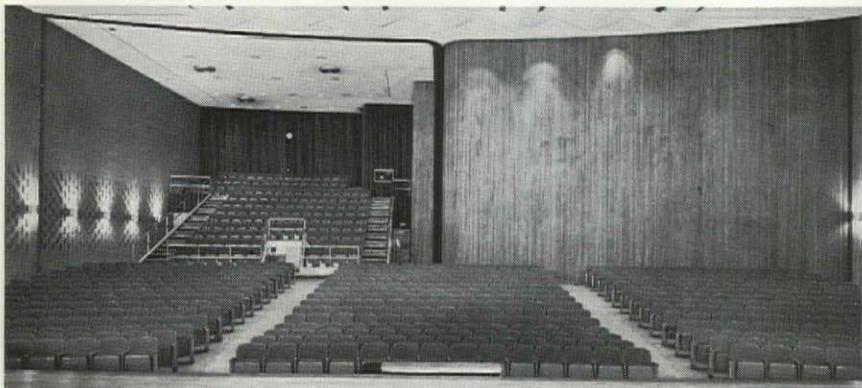
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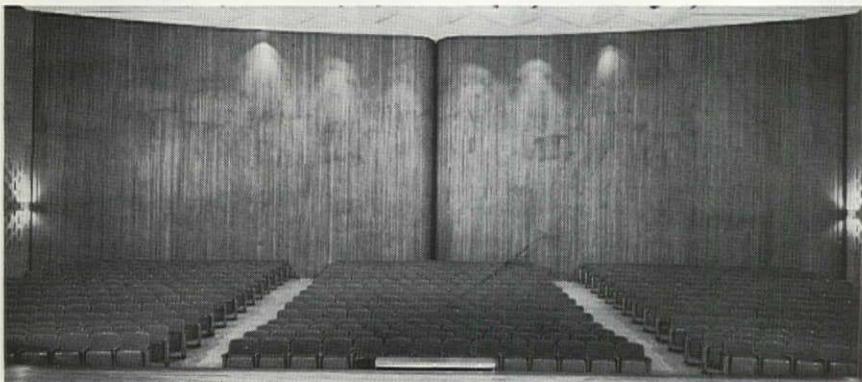
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All-Weather from page 176

Canadian city, Calgary, a builder used bowstring timber trusses to support a plastic roof over a 10-story structure.

Other techniques short of enclosing the entire structure have also worked well. An eight-story building was constructed during the winter in Winnipeg after a contractor developed an enclosed swing scaffold which was hung on cables from roof outriggers. The platform was enclosed with plastic and heated—and the masonry work and glazing continued.

The Fine Arts Building at Northern Michigan University testifies to the practicality of all-weather construction. Here the contractor erected scaffolding and placed a plastic covering over it in two weeks. Steam heaters were used to bring the three-story building to 50 degrees above zero even when outside temperatures were 35 degrees below. The contractor estimated his heating costs at \$30 a day.

No longer requiring proof, given proper planning and scheduling, is the relative simplicity of using any of several available materials to enclose all or part of the structure, of using available space heaters to warm the enclosed space and of thus continuing work in cold or wet weather. Nor is it necessary to prove that materials used in brick and concrete work can be handled satisfactorily in cold weather. We are, in fact, at the point where the enclosing and cooling of construction sites in hot weather is being given serious consideration.

The evident reluctance of the construction industry to go all out for all-weather construction must be ascribed to some factor other than practicality—perhaps to a belief that all-weather construction is costly, that it lowers quality or that it is not worth the trouble. But Canada's experience should dispel such beliefs.

The Canadians with their colder climate have long been interested in all-weather construction. They have made a concerted drive for more than a decade to raise the volume of winter building. And they have succeeded to a marked degree. They developed many of the all-weather construction techniques now being used on a limited basis in this country. They found that the keys were advance planning and cheap enclosure.

They discovered that their win-

Continued on page 180



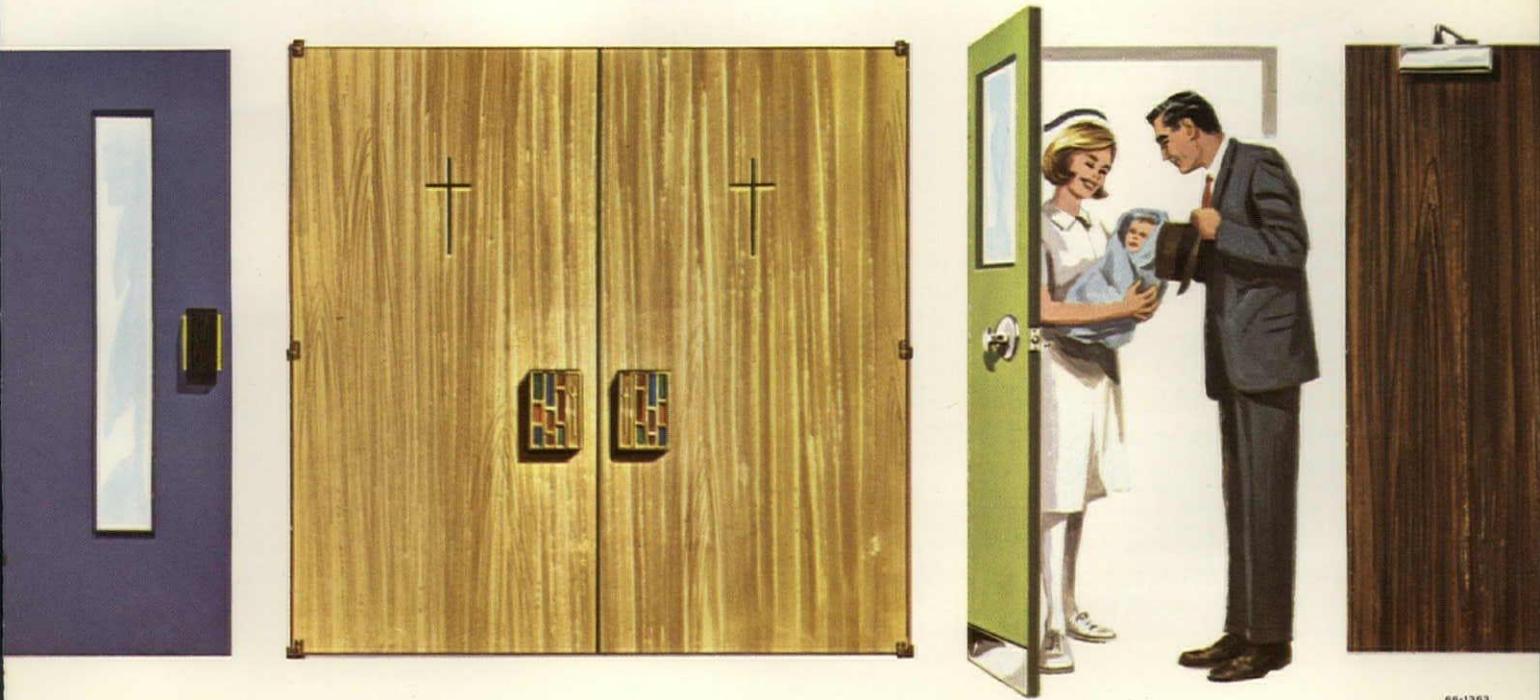
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All-Weather from page 178

ter was no bar to the construction of buildings large and small, to the building of long bridges, tall dams or to large-scale earthmoving operations. With proper planning, they found, even large construction sites can be completely enclosed with plastic.

Moreover, Canadians proved that the quality of winter construction is as good as that of any other season, and that the cost of advance planning and site enclosure is negligible. The Canadian Contractors Association surveyed more than 100 contractors and found that the average additional cost of winter construction ranged from approximately three-quarters of 1 percent to 1.5 percent of the contract price. This small cost was more than offset by the economic advantages of early completion.

Recognizing benefits to the public in winter construction, the Canadian government took steps to encourage the industry in this direction. One of these is the Municipal Winter Works Incentive Program which provides for rebates to localities that construct public works in the winter months. Another is a "bonus" system in which the government pays \$500 to the purchasers of dwellings "substantially completed during the winter months."

The important point for us is not that these are government-sponsored incentive programs but that the Canadians decided to spur their winter construction activity by rewarding the industry's clients.

If Canada, with its longer and harder winters, can build the year around, the US, obviously, can do the same. If Canada has found that the economic benefits of all-weather construction outweigh its difficulties and cost, we in the US, where difficulties would be fewer and costs lower, ought to reach the same conclusion.

We must learn a lesson from the Canadians and see that all-weather construction is "sold" to our clients. To do this the industry must ask for leadership from architects—from the professionals who stand closest to, and indeed represent, the owners.

The rest of us in construction have much to do to completely ready ourselves for all-weather construction. We must become more broadly familiar with its techniques. Contractors, suppliers and craftsmen must join to make it as efficient and economical as possible.

To do this, I propose that the construction industry launch through some appropriate organization a general fact-finding program, with conferences to be held at the national level to gather and disseminate needed information. If an industrywide group is needed to contribute to this campaign, I am confident that it would be supported by all construction organizations. In the masonry industry, the Allied Masonry Council (composed of the Structural Clay Products Institute, the Mason Contractors Association and the BM&PIU) has provided a means to unite contractors, manufacturers and labor in the promotion of all-weather construction.

But in the final analysis we must depend largely on architects to give us the opportunity to practice all-weather construction. I know many architects are already interested in doing this, but a broader, better organized effort is called for.

Two specific actions would be most helpful. One is for architects to convince their clients of the multiple advantages of all-weather construction, including most importantly the advantages of early completion. They should attempt to dispel any fears owners may have about the cost and quality of all-weather construction. The second action is for architects to require all-weather construction as a bid item so that bidders may include the minor costs in their bids without fear of hurting their competitive ability.

I am convinced that contractors will readily bid on all-weather projects and that skilled workers and materials will be available. In fact, they will have fewer manpower and material problems.

All-weather construction will help put our industry's house in order for the bigger challenges lying ahead. An industry that is accustomed to labor shortages at one time of the year and high unemployment at another, to delays in the delivery of materials at one season and swollen inventories at another, to having too few bidders for work in spring and too little work for bidders in winter, is hardly in a position to meet greater demands for its services.

This appeal that architects exercise leadership in promoting all-weather construction is, I believe, both logical and reasonable. The profession's role in building enables it to undertake the task, and its interest in a more efficient construction process demands it. □



Legal Aspects from page 136

cur as a defense under these circumstances. This doctrine is based on fairness.

A refusal by the client to discuss the project or to furnish necessary information would excuse the cost condition. This would be a clear case of lack of cooperation. The client refused to discuss the solution or the plans.

Excessive changes ordered by the client during design phases would be prevention, since the architect normally must comply with client-directed changes. However, if the changes were necessary to compensate for design errors or omissions, or if the architect did not inform the client of the effect the changes would have on costs (and the client was not aware of the effect of increased costs due to changes, from some other source of information), then the changes should not excuse the condition.

Prevention can arise during the bidding phase. If the client refuses to submit invitations to any bidders or negotiate a contract, the condition would be excused.

The client could prove to be so difficult to deal with during the prebid period, or during the bid negotiations, that he would be unable to find a contractor willing to enter into a contract with him. Some client irascibility may be expected when the architect agrees to work with a particular client, but if the irascibility is motivated solely to avoid a fee, the cost condition should be excused.

What if the client refuses to use a representative group of bidders? What if the client refuses to permit a particular contractor to bid, or refuses to negotiate with a reputable contractor who is willing to do the work within the cost condition amount? Clearly the condition should be excused in those cases where the client's principal motive is to avoid paying the architect his fee. Even if the client has an honest reason for his refusal, the condition should be excused. The architect should not have to take the risk that only a bid by a contractor satisfactory to the client will satisfy the condition, unless the contract so specifies. The client cannot be compelled to enter a contract

with a builder against his will, but his failure to do so may constitute lack of cooperation and excuse the cost condition.

A low bid may be received within the cost-condition amount, but the bidder may ask to be released from his bid because of an alleged computation error or because of the omission of a key cost item from his bid computation. There is a current trend towards granting relief in such cases. A judicial determination relieving the contractor from his bid would mean that the condition has not occurred. Occurrence of the condition requires a judicially enforceable bid within the cost figure. The condition should not be excused if the release is based upon the honest belief of the client, or on a legal opinion of his attorney, that the bidder would be able to obtain judicial relief. The client should not be compelled to go to court to avoid excusing the cost condition.

What if the client releases the bidder, not because of belief or advice that the bidder could obtain judicial relief but because of the client's honest belief that it would be inequitable to compel the bidder to stick to his bid or a belief that a dissatisfied bidder will not do a good job? Conceding the honesty and soundness of the client's judgment, the condition should be excused in such a case. The client may release the bidder, but the cost condition has been excused, and the architect is entitled to his fee.

Even if there is prevention, hindrance or lack of cooperation, the condition is not excused unless the architect can show, with reasonable certainty that the cost condition would have occurred had it not been prevented or hindered or had there been cooperation. When courts want to overlook this requirement, they often use waiver. This, as will be seen, does not require a showing that the condition would have occurred. In any case, judicial inquiry into probability of occurrence is likely to be perfunctory if the conduct, or failure to act, by the client seems motivated by bad faith.

Estoppel

Estoppel is a legal concept based upon reliance or change of position. When one party has indicated he does not intend to enforce a provision in his favor and the other party relies upon this and fails to take steps that would make the condition occur, the condition cannot later be asserted as a defense.

Estoppel does not require malice or bad faith, but merely justifiable reliance.

In the architect-client context, estoppel would result if the client, either by words or acts, led the architect to believe the cost condition would not be enforced by the client, and the architect failed to take steps which he could have taken to bring the costs within the amount established by the cost condition.

An easy illustration would be the client telling the architect that he was so pleased by the design that he did not care about costs. If the architect then proceeded with the design, when he could have changed the design and caused the condition to occur, the client would be estopped from asserting the condition, and the condition would be excused.

Approval of the preliminaries or construction documents may cause the architect not to make design changes which would have brought the costs within the cost-condition amount. However, estoppel would arise only if the approval were given with knowledge that the cost would exceed the cost-condition figures. Normally, this knowledge would come from a revised cost estimate given by the architect, although the client could become aware of the effect on costs in some other way. Reliance by the architect, without such knowledge on the part of the client, would not be reasonable. If so, there would be no estoppel to prevent the client from asserting the cost condition as a defense to an action by the architect to collect his fee.

No Time for Redesign?

What if approval of the plans were accompanied by a statement by the client that he still wanted to stand upon the cost condition, but that he could not take the time to wait for the architect to redesign? If the time pressure is the result of unexcused delays of the architect, the condition should not be excused. If the client proceeds to use the plans, he will have to pay for their use. In such a case, the architect's right to payment would not be based on the contract since the cost condition has neither occurred nor been excused. Recovery would be based upon the doctrine of quasi contract, which is predicated upon unjust enrichment. (Quasi contract will be covered more fully when the use of plans is discussed.) If the time pressure is not the fault of the architect, and he could have satisfied the condi-

tion by redesign, there is detrimental reliance. The cost condition is excused, and the promise to pay the architect's fee is enforced.

What if the client is informed of the excessive cost estimate but decides to submit the plans to bid because he believes the architect is too conservative? If the bids are too high, the architect should be given a right to redesign. In addition, any additional costs due to the delay in redesign should be charged to the client. If redesign is no longer feasible, the condition should be excused if redesign earlier could have caused the condition to occur.

Sometimes estoppel is based upon interim fee payments made by the client despite his awareness that the cost would be likely to exceed the cost-condition figure. This knowledge may come from higher cost estimates given by the architect or from other sources of information. In such a case, the architect may reasonably be led to believe that the client no longer intends to enforce the original cost condition. If the architect has relied on this as reason for not redesigning, the condition will be excused.

Estoppel could also arise if the client used the plans, despite knowledge of the excessive cost. Here, the client's knowledge is usually easy to estimate since the use usually occurs after the bids are in. If the client let the contract rather than permitting the architect to redesign, and if this was due to inadequate time for redesign, the question of estoppel would depend upon the reason for the time pressure. If the fault was that of the architect, it is probable that he has no right to redesign, and the cost condition would not be excused. Recovery in such a case would have to be based on quasi contract or unjust enrichment.

Since *quasi contract* is based upon unjust enrichment, the measure of recovery will be the benefit conferred on the client by the use of the plans. This might be measured by the reasonable value of the architect's services, a measure not too different from that of the contract remedies available to the architect had there been no cost condition. If the architect did not estimate very accurately, he would be likely to find that a court would hold that the benefit conferred was of a lesser value than what the architect would have received under the contract. Because quasi contract is not a well-developed legal doctrine, courts sometimes use estoppel or waiver loosely in

what are essentially quasi-contract cases.

Note that estoppel is not based upon an actual intention on the part of the client to dispense with the cost condition. It is based upon words or acts which lead the architect so to believe, followed by detrimental reliance.

Waiver

Waiver is related to estoppel, but there is an analytical distinction not always drawn by courts. Estoppel is based upon detrimental reliance, upon the concept that, but for the act constituting the estoppel, the architect would have caused the cost condition to occur. To create a waiver, there need be no showing of reliance or that the condition would have occurred. All that is required is evidence that the client has communicated an intention to pay the fee, despite the failure of the cost condition to occur. The condition was for his benefit. If he manifested an intention to give up this benefit, he should be held to his communicated intention, and the cost condition shall be excused. Because of its simplicity, most of the cases have used waiver to excuse the condition. This avoids the need for going into the true elements of estoppel, which, in many cases, would be difficult for the architect to show.

Waiver is relatively easy if the intention is clearly expressed by oral or written communication. For example, if the client states that he is so pleased with the design that he does not care about costs, the condition will be waived without any need to show reliance by the architect. Even if the architect could never have met the cost condition, the waiver is likely to be held to excuse the condition.

Actions Against the Architect

Most of the reported appellate cases have involved actions by architects to recover their fees. In some instances, clients have asserted causes of action against the architect on incorrect cost estimates. Sometimes these actions are asserted independently against the architect, but more often they are the basis for counterclaim by the client when sued by the architect for fees. In such actions the material issues are:

1. Has the architect promised that the project could be built for a specified amount and that he will be accurate or merely to use due care?

2. What effect should be given to contract disclaimers?

3. Has the promise been performed?

4. What is the measure of the client's recovery?

In order not to lose a client, architects may, reluctantly, and perhaps unwisely, risk their fee on the accuracy of their cost estimates. However, they usually do not intend to go farther by promising that the project can be built for a specified amount nor that they will be accurate.

Normally, both architect and client assume that the architect will use due care in the performance of his work. Whether the architect has used due care depends upon the customary methods of measuring professional competence. He is held to the standard of care of others of his profession with his experience, judged by the standards of the community in which he practices.

Whatever effect disclaimers have upon the architect's right to collect his fee, disclaimers should certainly preclude any action against the architect for inaccuracy. However, disclaimer clauses should have no effect where he is negligent.

If the architect has breached and the project is abandoned, the architect will not be able to collect for his services since performance of his promise also conditions the client's promise to pay. Also, the client can recover any interim fee payments that have been made, as well as any reasonably foreseeable reliance expenses made valueless or less valuable due to abandonment of the project.

If the client proceeds with the project as designed, complications develop. Presumably, the client has not been damaged since he has a project which is worth what it cost him. A court might use the diminished economic value of the project as a measure for the client's recovery, if this can be established.

If the project is completed by the client, a problem arises under the rule of *avoidable consequences*. Normally, damages which could have been reasonably avoided by the nonbreaching party (here the client) are not recoverable. Proceeding with the project should not constitute enhancing damages unless the principal motive was to enlarge the architect's liability. Use of the plans by the client, by itself, should not constitute waiver of any cause of action the client may have for damages.

While use of the plans should

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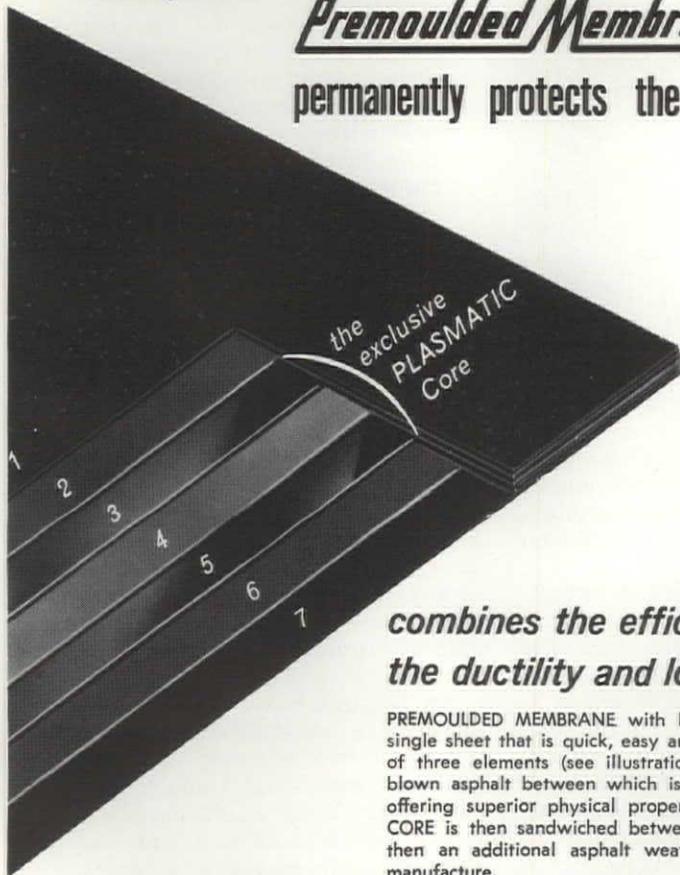


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not waive the client's right to recover for damages, use does affect the architect's right to be paid for his work. If the use of the plans is accompanied by evidence manifesting a waiver of the cost condition, the architect would be entitled to be paid under the contract. The measure of the architect's recovery in such a case would be the rate of commission times the cost of the project. If the use is not held to constitute waiver of the condition, the architect's measure of recovery would be based on quasi contract or benefit conferred. The architect's breach is likely to cause the court to place a low value on the benefit conferred on the client by the use of the plans.

Any recovery for the use of the plans, whether based on contract or quasi contract, will be diminished or canceled out by any damages recoverable because of a breach by the architect. This discussion assumes a breach which has not been waived and for which damages are recoverable by the client.

Actions by the client for breach have been rare, and as a rule, unsuccessful. It should be recognized, however, that there is an unmistakable increase in the number of lawsuits against professional persons. Potentially, liability does exist for negligent cost estimates. This liability is often not covered by professional liability insurance, and cannot be insulated against by contract disclaimers.

Generally, the courts have not been sympathetic to architects. If architects want to avoid misunderstanding with clients over excessive costs and to heighten their chances of recovery if litigation proves necessary, they should:

1. Make a conscientious and determined effort to come to a clear understanding with the client over his respective rights and duties with regard to costs of the project.
2. Express the understanding fully and clearly in the contract.
3. Keep the client informed about current cost estimates, with special reference to the effect changes are having on costs.
4. Keep detailed records of conversations and agreements with the client over costs.

The most difficult aspect of this seemingly simple formula for excusing conditions is in determining what acts manifest waiver other than express statements. Often, waiver is predicated upon acts that have been discussed—approval of plans, excessive changes, payments or use of plans. Acts such as these can often have ambiguous meanings. Do they manifest an intention on the part of the client to dispense with the condition? An important element in deciding on the legal effect of these acts is awareness by the client, when the acts are performed, that costs are likely to exceed the amount of the cost condition. The architect can hardly assume that these acts manifest the requisite intent of waiver on the part of the client if the client is not aware of the likelihood of excessive costs. For this reason as well as others, the architect must keep the client constantly informed on current cost estimates—especially after changes made by the client. If he does not, a court is less likely to hold that these acts by the client waive the condition.

If acts such as payment, changes, approval of plans or use of plans occur, but the client makes it quite clear that he is not giving up the condition, there is no waiver. Estoppel will be difficult to find because the statement of the client's intention to stand on the condition should make any reliance by not redesigning unjustifiable. In such a case, the condition is still in effect. If the client has used the plans, the recovery should be predicated upon quasi contract.

Impossibility

Architects sometimes assert that performance of the cost condition became impossible because of circumstances over which they have no control.

A condition of a minor or technical nature may be excused if its occurrence became impossible and if the risk of impossibility has not been assumed by the promisee (in this case, the architect). Without going into the difficult question of whether a cost condition is minor or technical, the creation of a cost condition means the architect assumes the risk of most prediction factors. This includes a steep rise in wage and material costs or volatility of the construction market, factors which help to make cost prediction difficult. This is one of the primary reasons for avoiding the creation of a cost condition by a clear understanding with the cli-

ent and by use of an appropriate disclaimer clause in the contract.

A cataclysmic event, such as a war or great natural catastrophe, might cause a different result. If costs become excessive for these reasons, normally use of the plans will constitute a waiver, and the cost condition will be excused. If the plans are not used, the architect will recover if the contract provided that he would be paid if the project was abandoned for any reason. Even without such an "abandonment" clause, the condition should be excused. The architect created the design requested by the client but, because of extraordinary reasons beyond his control, not at the price limit set.

The doctrine of excuse by impossibility has not been of much assistance to the architect. Where the question of creation of the condition is close, the decision should be resolved for the architect if the reason for the excess cost is related to unforeseeable and catastrophic circumstances.

Measure of Recovery

If the court finds that no cost condition was created or that if one was created, it was excused, what is the measure of the architect's recovery? This discussion assumes that the client does not permit the project to be continued.

Under normal contract principles, the architect should be put in the position he would have been in had the contract been fully performed. This would be a protection of his expectancy interest. Under this test he would be entitled to his entire fee, based on full performance (determined by the contract rate times the estimated cost), less interim fee payments received and less the expense saved by him in not having to perform further. In addition, he would be entitled to any additional damages caused by the breach which was foreseeable at the time the contract was made.

An illustration would be commissions he might have been able to obtain had he completed the project. Perhaps he could show that other clients would have retained him, had he been able to show them the completed project, and that these clients were lost when the project was abandoned. Such evidence would not be relevant if, as in the AIA contract, the architect is given the privilege of abandoning the project.

Other possible recoverable items

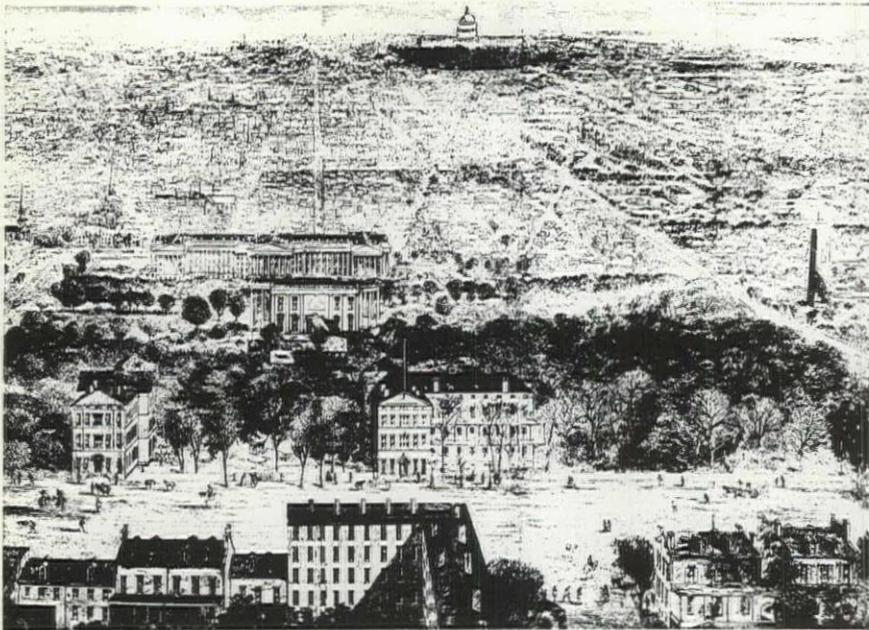
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Legal Aspects from page 188

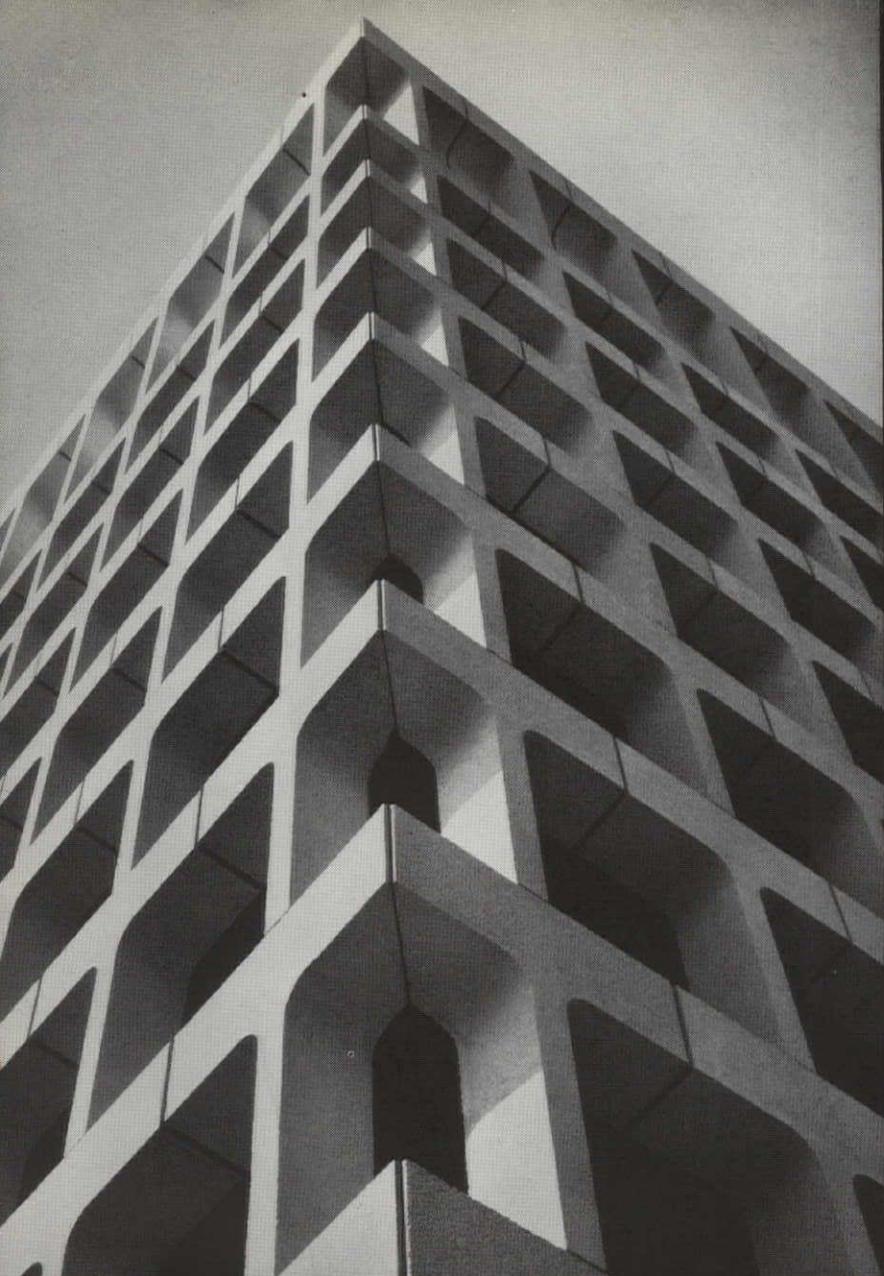
would be losses incurred due to the need for a sudden reduction in the architect's staff or the diminished productivity of personnel especially hired for the project who could not be immediately released. The architect would have to show causation and foreseeability to recover for these losses, however, and both are usually difficult to prove.

As an alternative to expectancy, the architect might be able to recover his reliance, or out-of-pocket expenses. This would normally be the reasonable value of the architectural services performed, with-out regard to future services.

A provision of the current AIA contract permits the architect to recover the reasonable value for his services performed to date of discharge plus "terminal expenses" if the project is abandoned. This clause might be held to preclude his right to recover expectancy damages, if it was found that the contractual measure of recovery was exclusive. No cases have discussed this question. If the architect wishes to preserve his right to expectancy damages, this clause, if used, should be amended to state that it is not the exclusive remedy.

There may be a long-run advantage to using reliance as the exclusive remedy. Such a remedy emphasizes the professional nature of the architect-client relationship. Emphasis upon this might convince the court that a cost condition was not created, since the limited remedy and professional relationship are incompatible with the creation of a cost condition. This factor could be influential in close cases.

Interim fee payments raise the problem of divisibility. These payments, like progress payments to contractors, are not based upon precise value measurements nor upon agreed valuations of the architect's services at the various stages of his performance. The payments are rough approximations, intended to give the architect operating funds during his often lengthy performance. When the architect sues to recover the reasonable value of his services prior to discharge, the interim fee payments received are deducted from the amount of his claim. If the reasonable value of the architect's services to the time of discharge is less than the amount of interim fee payments he has received, the client is entitled to a refund. □



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nological list of publications from 1700 to 1800, included to demonstrate the way in which new ideas were disseminated by publication. Another list is of some of the persons who visited Italy in the 18th century, pointing up Italy's perennial magnetism for architects, artists and writers. Ten people are named as "notable absentees," among them Durand and Ledoux. The lengthy bibliography extends for eight pages.

MARY E. OSMAN

City Planning According to Artistic Principles. Camillo Sitte. Translated by George and Christiane Collins. New York: Random House, 1965. 205 pp. \$4.95.

Camillo Sitte and the Birth of Modern City Planning. George and Christiane Collins. New York: Random House, 1965. 205 pp. \$4.95.

Camillo Sitte (1843-1903) was an Austrian architect, historian, artist and writer who, in upsetting prevailing theories, laid some of the foundations of modern planning.

His book was translated into many languages and sometimes incorrectly edited. The only English edition of his work was a translation made during World War II from an erroneous French edition. There was, however, a fairly good summation of his book in *Civic Art* by Hegemann and Peets, published in 1922. But not too many people of our generation knew of it.

Sitte's work is important on two counts: It is highly relevant for us today and it is an important step in the development of planning theory, particularly urban design. It is also fine reading.

The second book, a commentary by the translators of Sitte's original work, is both an important piece of scholarship and an enlightening view of a critical period in planning history. Mr. and Mrs. Collins deserve our gratitude for both books.

PAUL SPREIREGEN, AIA

Building Physics: Acoustics. H. J. Purkis. Oxford: Pergamon Press, Ltd, 1966. 129 pp. \$2.95.

Since the days of Athanasius Kircher there have been excellent books written on the theory and application of sound. Helmholtz, Miller, Culver are a few of those who have treated the musical aspects of the subject, and research laboratories such as those of the Bell Telephone have done much to advance our knowledge of the functions of the ear and the speaking apparatus of the human body.

The advent of the talking motion

picture and television has done a vast amount in acoustical engineering. But, after all, people for the most part live within walls, between floors and ceilings, and are subjected to a complexity of sound waves, mainly interference in type, during their waking hours. Some of this energy has its source within the room; some of it comes in from outside.

The father of American acoustics was Sabine, whose researches at Harvard yielded the basic relationship that the reverberation period is hyperbolically a function of the absorption. From then on, buildings could be constructed so as to exhibit a desirable amount of reverberation within any given room or assembly hall and, in addition, prevent an "undesirable" amount of sound energy to enter this region through solid structures or through the air itself.

Thus began *architectural acoustics*. Knudson, Watson and others have already given us much valuable material on sound transmission and absorption. The field is rapidly expanding, and the research instruments now employed in acoustical studies are becoming more and more sophisticated.

Purkis, who is the principal scientific officer, Building Research Station, Ministry of Technology, has performed an extensive task very well, both as to inclusiveness and applicability to practical modern problems in sound. The multitudinous flats, high rises and studios mushrooming over the world have demanded relief from the annoyance of unwanted sounds.

The present book supplies the material that would have filled a final volume to the late Mr. Gesson's set on building science. It is a highly desirable body of knowledge for the architect and designer and should be a required reference in courses in architectural physics. In eight chapters, the author discusses the behavior of sound and acoustical characteristics such as reverberation, insulation and absorption and then goes on to distinguish between airborne and structure-borne sound waves, the mass law, critical frequency and radiation of sound from various sources.

To the physicist who is a "general practitioner" in his teaching field and who knows the subject with fair uniformity throughout its varied areas, the special features that must be emphasized in one of the latter when concentration is re-

quired can only be appreciated by a work such as this.

Just as the general principles of thermodynamics cannot be made to apply to the peculiar problems that arise in critical atmospheric conditions when rain is just about to form, so in the subject of the construction of a brick wall to reduce sound annoyance by deflection and reflection, it is necessary to know how the width and height of the wall depend upon the frequencies of the incident sound waves. The usual physics textbook has nothing to say about the absorptive efficiency of a brick wall, i.e., that this characteristic is at optimum value at mid- and high frequencies when the wave lengths are short compared with the size of the wall. The author does not attempt to present even an empirical formula, but he shows that a problem exists which demands on-the-spot experimentation.

The book serves as an outline of the many problems that must be faced by the designer before the building is started and also by the architect who may be consulted later as to why satisfactory conditions of acoustics have not been attained. In many cases a remedial treatment can be affected.

C. HARRISON DWIGHT

International History of City Development—Vol. II: Urban Development in the Alpine and Scandinavian Countries. New York: Free Press of Glencoe, 1964. 500 pp. \$19.50.

Dr. Gutkind is one of the foremost scholars and philosophers of urbanism. It is to our great good fortune that he has embarked upon the monumental task of publishing his eight-volume series on the history of cities. (*Vol. I: Urban Development in Central Europe* was reviewed in the AIA JOURNAL, Jan. '65, p. 74.)

Previously, the most authoritative work was that of the French scholar, Pierre Lavedan, whose three- (now four-) volume *Histoire d'Urbanism* stood alone as far as availability to the general public. John Reys' *The Making of Urban America* was a recent exception to that, but Dr. Gutkind's work will undoubtedly rank first in comprehensiveness and detailed treatment. Not the least of his achievements is a demonstration of the uniqueness of cities, even when common forces shape them. We would do well to keep that in mind today as we develop new understandings and theories.

A good foreword to Dr. Gutkind's volumes are the first chapter of his earlier book *The Twilight of Cities* and a look at *Our World From the Air*, also his work.

Architects on Architecture: New Directions in America. Paul Heyer. New York: Walker & Co., 1966. 415 pp. \$17.50.

If you are looking for quotable quotes on architecture, look no further but consult this book. Here are personal statements by 40 American architects in which they express their ideas and convictions. The work was made possible by extended tape-recorded interviews between Heyer and each architect. To the personal statements, carefully selected and arranged, Heyer adds his own perceptive comments.

The studies begin with Mies van der Rohe and conclude with Louis Kahn. The architects were selected "not to represent a preconceived point of view, but because their buildings, their statements and their concerns seem generally to represent the most positive and influential directions in American architecture today."

Heyer is successful, and the book does reflect in general the spirit of architecture in the United States today. It is certain the statements will be quoted for years to come. One cannot imagine an architectural school library without this book to give added inspiration to aspiring would-be architects.

The book is profusely illustrated with photographs, plans, drawings and elevations. There is a bibliography and a building index by location, as well as a general index.

Shaker Architecture. William Lawrence Lassiter. New York: Vantage Press, 1967. 127 pp. \$10.

One of the tenets laid down by Mother Ann Lee, leader of the Shakers in the 1700s, was this: "Every force evolves a form." The structural integrity and beautiful simplicity of Shaker architecture would seem to illustrate that her followers adhered to her precepts.

The drawings and photographs of buildings in Mount Lebanon and Watervliet, New York, and West Pittsfield, Massachusetts, presented in this book are introduced with a brief history of the Shakers, an appropriate inclusion since all craftsmanship was subordinate to established religious beliefs.

Thus throughout the 18 prosperous communities that the Shakers developed in New England, New York, Kentucky and Ohio, there was a similarity in the design and

a distinctive style of buildings and artifacts. The beauty of Shaker craftsmanship, whether in a utility box or a barn, was created by making the object functional. To design a beautiful object deliberately was forbidden since in the Shaker belief "beauty was a snare of the devil."

To anyone interested in folk art at its best or in the fascinating byways of American social history or in American architectural history, this book will prove singularly readable and worthy of study. The author is an eminent authority on Shaker history and presently is the senior curator of history and art at the New York State Museum, Albany. He informs us that even today when the Shaker buildings "are occupied by groups alien to the Shaker belief, there is a great spiritual feeling of peace that pervades an entire Shaker village."

An Historical Outline of Architectural Science. Henry J. Cowan. Amsterdam, New York: Elsevier Publishing, 1966. 175 pp. \$5.75.

Cowan, who is professor of Architectural Science at the University of Sydney, delivered a series of lectures at the Massachusetts Institute of Technology in 1961 and at Cornell University in 1962. The material dealt with in these lectures has been expanded into this present form. The book, intended primarily as a text for students, will interest anyone who is intrigued with the history of building science.

Cowan deals with those aspects of science and engineering which have influenced contemporary architecture. He considers one-dimensional structures and the invention of steel and reinforced concrete; two dimensional structures and the development of the rigid frame theory; three-dimensional structures and the mechanization of structural design.

One of the more provocative chapters concerns the replacement of structure by environmental design as the principal problem of architectural science today. High-rise buildings could not be operated without piped sewage, elevators, artificial light and mechanical ventilation.

Finally, Cowan examines new building materials and the industrialization of building. He provides the book with a glossary, a carefully selected bibliography and supplementary illustrations. His concluding statement is: "We can study the gradual evolution of architectural science over a period

of several centuries. While we may turn out to be no wiser than past generations, we can at least learn from their mistakes."

Building with Large Fabrication. Bohdan Lewicki. New York: Elsevier, 1966. 460 pp. \$25.

Lewicki of Warsaw's Institute of Building Research and chairman of the Polish Standards Committee in industrialized building, has devoted the past 15 years to the problems of industrialized building

and has traveled abroad extensively in order to study precast building construction.

This revised and updated English translation of a work published previously in Polish is a technical one in which Lewicki gives detailed information regarding prefabricated building design. He deals with structural requirements and the design of floors, stairs, roofs and walls. There is a concluding chapter on the problems of thermal and acoustic insulation

and of fire protection. The book contains many diagrams and examples of numerical calculations.

Planning Guide for Radiological Installations. Wendell G. Scott, editor. 2nd ed. Baltimore: Williams & Wilkins, 1966. 297 pp. \$9.50.

Thirteen years ago the first edition of this work appeared. During the intervening years, there has been an extraordinary increase in the use of radiology and a simultaneous increase in the complexity of radiologic procedures, as well as a corresponding demand for new equipment housed in new facilities. The aim of this revised edition is to help the architect, among others, to plan new departments of radiology or to renovate already existing ones. The chapter on "Architects in Planning of Radiologic Department or Office" was prepared by Slocum Kingsbury, AIA (deceased).

Mechanical and Electrical Design for Architects and Engineers. Frederick S. Merritt, editor. New York: McGraw-Hill, 1966. Various paging. \$4.95.

This is what the publisher calls a "handbook sampler." What has been done is to extract those chapters from the *Building Construction Handbook* which deal with heating and airconditioning, plumbing and sprinkler systems, electric power and lighting and vertical transportation. There is not even any change in pagination from the "parent" book.

The Architectural Heritage of Early Western Pennsylvania; A Record of Building Before 1860. Charles Morse Stotz. [Pittsburgh] Univ. of Pittsburgh Press, 1966. 293 pp. \$17.50.

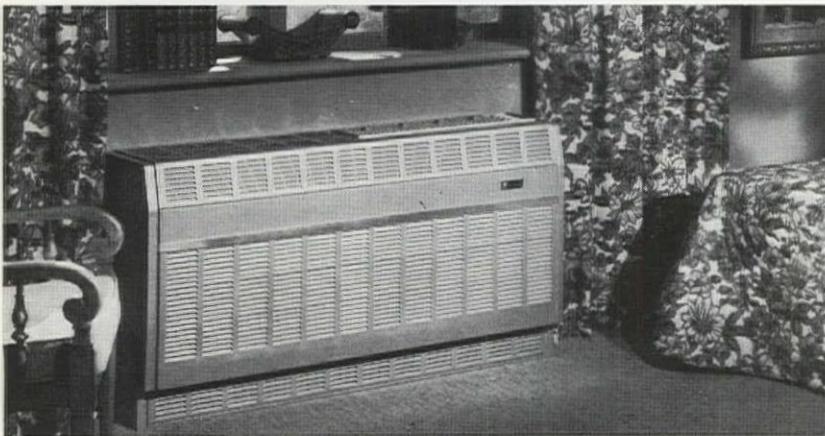
Originally published under the title *The Early Architecture of Western Pennsylvania* this volume, long out of print, had early demonstrated its value as a record of the architecture of an area otherwise little documented. Now reproduced with all the original illustrations, it contains a new introduction by the author noting some of the losses since 1936, as well as some of those structures which have been preserved or restored.

A list of the buildings of the area before 1860 included in the *Historic American Buildings Survey* is also given to make the record more complete.



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The World Cities. Peter Hall. New York, McGraw-Hill, 1966. 256 pp. \$4.95 hardbound, \$2.45 paperbound.

"World cities" is a term first used by Patrick Geddes in 1915. World cities are the great ones where the predominant amount of the world's business is conducted. They are the centers of political, economic and industrial power, where information is collected and disseminated, where the amenities of life are sought after assiduously and where people are naturally attracted for a variety of reasons.

The world cities count their populations in the millions, and tens of millions, and still they are growing. This book examines the growth of the greatest of the world cities, considers in detail the problems and pressures that accompany the growth and tells of some of the efforts being made to solve the problems. The great urban regions studies are London, Paris, Moscow, New York and Tokyo and the city complexes of Holland and the Rhine-Ruhr. Analytical rather than descriptive, the book is extremely interesting, well written and worth your while.

Planning for a Nation of Cities. Sam Bass Warner, editor. Cambridge: MIT Press, 1966. 310 pp. \$8.75.

The essays here published were prepared for a conference at Washington University on the occasion of the 1964 bicentennial of the city of St. Louis. Such well known urbanists as John Dyckman, Wilbur Thompson and Jean Gottmann give consideration in depth to the problems connected with urban planning and public policy in an effort to create a humane environment for urban America.

Historic American Buildings Survey: Chicago and Nearby Illinois Areas. J. William Rudd, compiler. Park Forest, Ill.: Prairie School Press, 1966. 52 pp. \$1.50.

With the increasing recognition of the importance of historic buildings, there is a need of knowing what buildings are important. The present pamphlet lists those structures in the Chicago area which have been recorded by the Historic American Buildings Survey and the HABS Inventory.

It is distressing to learn that of some 307 buildings recorded, 57 are already demolished, or nearly 20 percent. Although not all structures of interest can be preserved, this emphasizes the need of prompt

and effective action to insure that at least a representative number of buildings are saved.

From the Classicists to the Impressionists: A Documentary History of Art and Architecture in the 19th Century. Selected and edited by Elizabeth G. Holt. New York: New York University Press, 1966. 552 pp. \$10. Also available paperbound, Doubleday Anchor Books, \$1.95.

The 19th century is a story of transition. In this selection of basic documents characteristic of the artistic expression of the time, Mrs. Holt has chosen those materials which seemed to her most particular to the era. Like every century, the 19th was dominated by a few geniuses. Included here are selections from their writings to which are added less well-known works. These documents together with the editor's helpful biographical sketches give a background toward a better understanding of the esthetics of our own time.

The New Schoolhouse. Alfred Roth. New York, Washington: Praeger, 1966. 304 pp. \$15.

First published in 1958, Roth's book on schoolhouses now appears in its fourth edition, expanded to include illustrations, plans and drawings of 15 new schools. In addition to the studies of individual schools represented by buildings in Denmark, England, the United States and other countries, Roth discusses the broader philosophical and technical aspects of schoolhouse design. It is his contention that the school should become more and more a community center where old and young together seek a democratic relationship in order "to counteract the dehumanizing influences of today's society." The text is in English, French and German.

Dynamic Symmetry: A Primer. Christine Herter. New York: W. W. Norton, 1966. 236 pp. \$10.

Since 1917 Christine Herter, herself an artist, has been enthralled by the subject of dynamic symmetry. It was then that she heard a lecture by Jay Hambidge and found "a door had been opened upon a shining new world." Drawing upon Hambidge's work she has developed a primer to be used as an instrument of design.

Dynamic symmetry, explains Miss Herter, is a presentation of a natural law which manifests itself in rectangles of a particular shape and content. The law which deter-

mines the shape of the root rectangles also determines their divisions and subdivisions in related proportion to their overall shape. The law "makes these proportions knowable for what they are and gives the shapes so divided a dynamic, living quality." This principle of design is here carefully presented by descriptive text and illustrations.

Precise instructions are given so that one may progress from the basic form to a variety of related shapes. Miss Herter's aim is not to review the history of dynamic symmetry; rather her purpose is to "present as simply and directly as possible those things that are fundamental to it in its capacity of design instrument."

The Literature of Architecture. Don Gifford, Editor. New York: Dutton, 1966. 640 pp. \$3.75.

This anthology includes nearly 20 authors whose writings reflect the development of architectural theory and practice in 19th century America. Such diverse writers as Thomas Jefferson, Ralph Waldo Emerson, A. J. Downing and Louis Sullivan reveal the complexity and variety of that remarkable century. Gifford, professor of English at Williams College, provides an introduction to each of the five main divisions of the book, background information on the contributors and a bibliography.

The Glideway System: A High-Speed Ground Transportation System in the Northeastern Corridor of the United States. Massachusetts Institute of Technology. Cambridge: MIT Press, 1966. 414 pp. \$10.

This report is of an interdepartmental student project in systems engineering conducted at MIT in 1965. The project dealt with sociological, economic, political and technological factors relating to the design of a high-speed ground transportation system using air-supported vehicles operating at 350 mph.

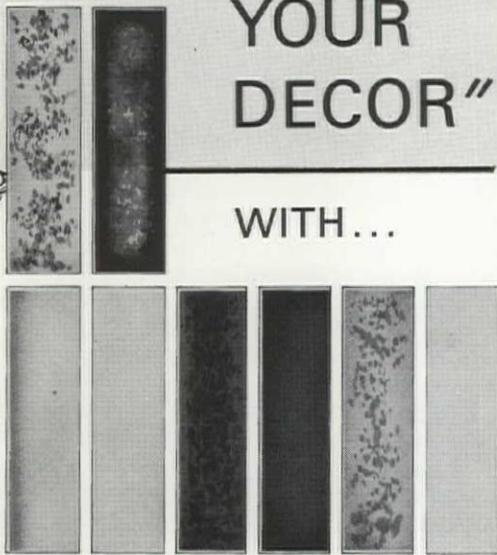
Project Metran: An Integrated, Evolutionary Transportation System for Urban Areas. Massachusetts Institute of Technology, Interdepartmental Student Project in Systems Engineering. Cambridge: MIT Press, 1966. 262 pp. No price given.

Here is a plan to apply automation to the transportation problem. It is the report of a group of students who participated in an inter-

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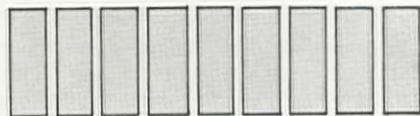
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departmental course in systems engineering at MIT during the spring semester, 1966.

The problem given the students was to design an integrated evolutionary urban transportation system. With Project Metran, urban transportation would become automatic with computer-controlled guideways providing safer, more efficient, faster and cheaper travel for all. The whole plan of how the system would work is laid out here. Furthermore, the students have projected the social, financial and political implications if such an evolutionary concept was realized.

As the students wisely conclude: "At a time when we can fly at speeds of 4,000-5,000 miles per hour and achieve the pinpoint landing of a satellite on the moon's surface, the man in the street must surely wonder why he still has to share the street with vehicles which, though powered by 400 horses, he can outwalk at 5 p.m."

Architecture: A Profession and a Business. Morris Lapidus. New York: Reinhold, 1967. 207 pp. \$12.25.

Although there have been quite a number of English books dealing with the subject of office practice, those published in this country seem to be few and far between. This new book will be welcomed as an addition to the meager literature on the subject.

Even more it offers a most refreshing approach to what is usually a dull subject, for it is written in a personal vein, and Mr. Lapidus has enlivened it with many pertinent stories and anecdotes. Although the examples are naturally drawn from his own practice and experience, he has included materials from other offices.

From establishing a practice, with consideration of the type of organization—partnership or other, through questions of public relations, drafting room efficiency, fees, controls, accounting, legal problems, the client, to a concluding chapter on "esthetics versus finance" the author ranges widely. The subheading "How to cope with the ubiquitous coffee break" may serve to give the flavor of the book.

One wishes that the publisher's staff had exercised its proofreading responsibilities more diligently, and that he had provided an index, for even with the somewhat informal presentation there is much practical advice here, to which one may wish to refer.

Sculpture in the Netherlands, Germany, France, and Spain: 1400 to 1500. Theodor Müller. Baltimore: Penguin Books, 1966. 262 pp. \$20.

Again we are indebted to the Pelican History of Art series—this time for a comprehensive survey in which Müller demonstrates the interrelations among various European countries as he discusses their tremendous contributions to the art of sculpture. Happily, he does not neglect the large, colorful altar pieces, those beautiful adornments of architecture wherein sculpture and painting are so dramatically united.

Sculpture in Italy: 1400 to 1500. Charles Seymour. Baltimore: Penguin Books, 1966. 295 pp. \$20.

Sculpture of the Italian Quattrocento is tremendously significant in the history of art, it scarcely needs to be said. Much has been written on the fantastic men who worked during the period: Ghiberti, Donatello, Verrocchio, Quercia, the young Michelangelo and others. The focus of Seymour's attention is not on individual artists, however, but on the larger movements and trends that affected the entire peninsula of Italy. Seymour, professor of the history of art at Yale, has maintained the standards of scholarship set by other contributors to the Pelican History of Art series, of which this is a volume.

Monastery and Cathedral in France. Whitney S. Stoddard. Middletown, Conn.: Wesleyan University Press, 1966. 412 pp. \$22.50.

Stoddard, professor of the history of art at Williams College, deals here with five centuries of French art, from the 11th to the 16th century. His approach is to unify architecture, sculpture, painting, stained glass, manuscripts and liturgical objects so that all these arts of medieval France are viewed as a whole and marvelously interrelated. Each of the monuments analyzed is illustrated in detail, the majority of the photographs having been made expressly for this book by the author.

Dutch Art and Architecture, 1600 to 1800. Jakob Rosenberg, Seymour Slive and E. H. ter Kuile. Baltimore: Penguin, 1966. 329 pp. \$20.

The major emphasis of this book is on painting, and there is included a rather provocative chapter on architectural painting with a discussion of the work of Pieter Jansz. Saenredam who specialized in a realistic portrayal of specific build-

ings and is called the "first portraitist of architecture."

Two major portions of the work are concerned with painting; the other two deal more briefly with architecture and sculpture. This addition to the Pelican History of Art series continues the scholarly standards of preceding volumes. More than 300 photographs and a lengthy bibliography add to the usefulness and value of the book.

The Making of Classical Edinburgh, 1750-1840. A. J. Youngson. Edinburgh: University Press (Chicago: Aldine), 1967. 338 pp. \$10.

Edinburgh's Georgian "New Town" was designed and built from 1766 to 1840. This is the dramatic story of how "a small, crowded, almost medieval town, the capital of a comparatively poor country, expanded in a short space of time, without foreign advice or foreign assistance, so as to become one of the enduringly beautiful cities of western Europe." Youngson colorfully describes the debates that took place, the schemes for raising money, the administrative and legislative machinations and all the other intricacies that are experienced in such a complex human endeavor.

Reproductions of engravings; of drawings by James Craig, Robert Adam, William Playfair and other architects of the period; town plans and maps; and full-page photographs of the city by Edwin Smith contribute to the significance of the book. The account of the making of classical Edinburgh is a splendid chapter in the history of urban design, and this documentation by a scholar who manifests great love for his subject should be a helpful source of inspiration for today's urban designers.

Christ and Architecture: Building Presbyterian/Reformed Churches. Donald J. Bruggink and Carl H. Droppers. Grand Rapids, Mich.: Eerdmans, 1965. 108 pp. \$20.

An architect and theologian combined their varying backgrounds to bring this book into being. They contend that Presbyterian/Reformed churches in the United States, for the most part, have failed to consider the relationship of architecture to theology. This, they believe, is caused by theologians who have taken little interest in the theology of architecture and have left architects, lacking in theological training and from diverse religious backgrounds, to concentrate on style.

As one "knowledgeable European Architect" is quoted as saying, "The result is that while American architects frequently offer brilliant solutions to structural problems, the general architectural impression is, from a theological viewpoint, one of chaos."

In Part 1, Bruggink explores the theological aspects of architecture; in Part 2 Droppers concentrates upon how theological elements can be transmitted successfully into contemporary architecture. The book is profusely illustrated with photographs of churches which the authors believe best express the Reformed and Presbyterian movement. There are diagrams and plans as well.

The use of this work is not confined to those concerned only with Presbyterian/Reformed church architecture; there is much in this practical, thorough and careful considered book to commend it to any church architect. Certainly, if the architect is designing Presbyterian/Reformed churches, it is a must.

The Tenement Landlord. George Sternlieb. New Brunswick, N. J.: Rutgers University, Urban Studies Center, 1966. 269 pp. No price given.

This book, made possible by an Urban Renewal Demonstration Grant from HUD's Urban Renewal Administration, is a study of slum ownership and the impact of tax policy on such ownership and on rehabilitation.

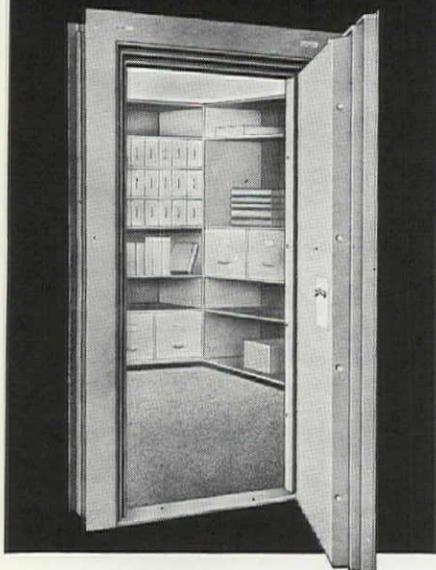
The essential aim of this probing inquiry is that future legislation regarding blight will be more effective if there is a comprehension of the real estate market and the character of the human beings who own slum property. The book is of interest to the architect because it concerns the grave problem of housing for the urban poor. Newark, as representative of older American cities, was selected as the scene of the inquiry.

Some of the conclusions reached are not surprising. For example, taxes are the largest single operating expense of the slum tenement. Other findings are sobering, indeed, such as the fact that nonwhites pay significantly higher rents than whites located in the same area.

In brief, the general conclusion reached is that there is no single remedy which will improve slum tenements or persuade landlords to rehabilitate their properties, be it code enforcement, financing or tax relief. But certainly any policymaker will be aided because of this

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study in establishing new guidelines in the direction of dealing more effectively with urban blight.

Victorian Architecture in Hamilton.

Hamilton: Architectural Conservancy of Ontario, 1967. 28 pp. \$1.50.

Hamilton is graced by many well-preserved Victorian buildings which add to the city's architectural variety and general charm. They are presented here in an attractive booklet whose publication is the result of cooperation by a number of people. There are numerous drawings, captions and an interesting descriptive text by Alexander G. McKay of the department of classics at McMaster University. He was aided by an architectural adviser, Arthur W. Wallace, a Hamilton architect and member of the Royal Architectural Institute of Canada's Committee on Historical Preservation.

Landscape and Human Life: The Impact of Landscape Architecture upon Human Activity.

Clifford R. V. Tandy, ed. Amsterdam: Djambatan, 1966. 132 pp. Hf, 52,50.

The International Federation of Landscape Architects held its ninth Congress in Japan in 1964, and its papers are assembled here. As a medium of landscape design, the country of Japan was used as a case study by the Congress. Every consideration of the main theme of landscape and human life was followed by a study of the interaction of humanity and landscape there. The main chapters of the book deal with landscape as related to agriculture, forestry, recreation, new towns, roads, industry, modern life and, finally, the influence of the Japanese garden.

The Park and the Town: Public Landscape in the 19th and 20th Centuries.

George F. Chadwick. New York: Praeger, 1966. 388 pp. \$16.50.

The public park is essentially a 19th century contribution to urban amenities. This interesting book is a story of the evolving function of the park. Parks, as Chadwick describes them, are fascinating, not only for their esthetic qualities but also because of their social significance.

The concluding chapter is on the park of tomorrow. Chadwick sees the future park as a place of many functions. It may include play space for children, space for open-air sports, exhibitions, libraries, concerts and plays. It may be "green ribbon" running through

the city where the pedestrian as well as the motorist is considered and allowed to enjoy green oases. There may be nursery schools, dance halls, cafes, museums in the park, and a withdrawn and secluded place for courtship "which is totally ignored by the modern town in general and by the design of its public spaces in particular."

Still other uses of the park are envisioned by Chadwick in which the new demands of urban life are taken into consideration. What he calls "positive design" of the future public park will prevent its misuse. In conclusion the author foresees "a policy for multiple use, of balanced conservation and exploitation of recreational as of other resources within a planned regional context."

Urban Housing. Edited by William L. C. Wheaton, Grace Milgram, Margy E. Meyerson. New York: Free Press, 1966. 523 pp. No price given.

This is a selection of readings dealing with various aspects of housing in the United States. The main sections of the book are devoted to background; housing in the neighborhood; the housing market; requirements of special groups (single and aged persons, low-income and ill-housed, minority groups); the housing industry; housing finance; housing standards and controls; and residential renewal.

The contributors are recognized authorities and include Charles Abrams, Burnham Kelly, Martin Meyerson, Robert C. Weaver and many others. The lengthy bibliography was prepared by William O. Grigsby. This anthology introduces a "Reader Series on Urban Planning and Developing," the intent of which is to present an "overview of subjects which are too frequently dealt with in a piecemeal or partial manner."

Urban Design for Downtown. Georgia Urban Design Committee. Atlanta, 1966. 137 pp. No price given.

This manual is intended for those who are concerned with planning downtown areas. While it is directed primarily toward the problems of small and medium-sized cities, the principles presented are universal enough to make the manual helpful for larger cities as well.

The user of the manual is told how to make a land and building survey, a "visual" survey and an economic analysis of the central business district. This section of

the manual is followed by the lengthiest part of the book aimed at a design plan for the downtown. A number of factors are considered, among them downtown living quarters, the urban landscape, traffic and parking, service stations and street furniture and signs. Part 3 briefly sets forth some steps to be followed in implementing the principles of design. The fourth and final section contains excerpts from publications and statements from the White House Conference on Natural Beauty.

This is a commendable contribution to the literature of urban design. Many organizations had a part in its preparation including the Urban Design Committee of the North Georgia Chapter AIA. This group is among those who make up the Georgia Urban Design Committee, organized in 1965 to study and advance the art of urban planning in Georgia. The North Georgia Chapter has participated in the preparation of other publications of a similar nature, including the useful report *Improving the Mess We Live In*, published in 1963.

Viljo Revell: Works and Projects. New York: Praeger, 1966. 118 pp. \$10.

Viljo Revell gained an international reputation when he won the competition held in 1958 for the Toronto City Hall and Square. He went on to achieve further fame through his work on other projects and structures. His period of creation as an architect was painfully short, a little more than a decade and a half before his untimely death in 1964 at the age of 54.

Before his death Revell worked on this book, selecting the buildings and projects he wanted included. Except for an introduction by Kyosti Alander, in which he assesses the contributions made by the architect, the primary contribution of the book lies in its photographs. They cannot do justice to his work, of course, but the book does manage to convey Revell's bold striving for a pure and harmonious form.

Building Canada: An Architectural History of Canadian Life. Alan Gowans. Toronto: Oxford University Press, 1966. 412 pp. \$15.95.

The first edition of this book was published in 1958 with the title *Looking at Architecture in Canada*. The present volume has been considerably revised and enlarged and should prove even more useful than its worthy predecessor. Gow-

ans, chairman of the division of art and art history at the University of Victoria in British Columbia, is well known for his scholarship. It is the reader's good fortune that he writes with wit and sensitivity. The illustrations, with unusually lengthy captions, comprise more than half of the book and contribute a great deal to its value.

Walls Have Ears: Including the Stockade Story and Samuel Fuller, Master Builder of the Mohawk. Giles Yates van der Bogert. Schenectady, N. Y.: Stockade Association, 1966. 113 pp. No price given.

"Forward-looking architect, backward-looking historian," is the way Giles Yates van der Bogert [AIA, deceased November 5, 1965] is characterized by his friends. Here assembled in one neat little volume are pieces prepared by him and published for the most part in the Stockade Association's paper *The Stockade Spy*.

The Stockade is a district in Schenectady, some four blocks long, where the citizens have worked together to preserve its historic and architectural integrity. The lead-off article "The Stockade Story," in which van der Bogert wrote with feeling about how the citizens worked together to protect this gem, was published originally in the AIA JOURNAL for October 1963.

There follow other essays, all of which reveal a man who had a keen sense of humor and a love of the Stockade district in his hometown of Schenectady. The line drawings are by Werner Feibes, architectural associate in the firm of van der Bogert, Feibes & Schmitt.

The History, Theory and Criticism of Architecture. Marcus Whiffen, ed. Cambridge: Massachusetts Institute of Technology, 1966. 105 pp. \$3.95.

Assembled here are the papers from the 1964 AIA-ACSA Teacher Seminar, with authors Peter Collins, Bruno Zevi, Serge Chermayeff, Sibyl Moholy-Nagy, Stephen W. Jacobs, Stanford Anderson and Reyner Banham. In his foreword Buford L. Pickens recommends a careful review of these papers to the faculties of each school of architecture and to the program planners of each AIA chapter.

The Arts in America: The Colonial Period. Louis B. Wright, George B. Tatum, John W. McCoubrey and Robert C. Smith. New York: Scribner, 1966. 368 pp. \$15.

This handsome book, profusely illustrated, is a carefully developed study of the advent of art forms into America and the manner in which they were modified by the complex and diverse influences peculiar to the American experience. The book is divided into three major sections, with the section on architecture written by George B. Tatum of the University of Pennsylvania. As he concludes, American architecture in the 17th and 18th centuries is a story of many styles, "for the numerous kindreds and tongues that played a part in the settlement of the New World left their mark upon the architecture of the colonies no less than upon political and social institutions."

NYSHA Selective Reference Guide to Historic Preservation. Frederick L. Rath Jr., general editor; Merrilyn Rogers, compiler. Cooperstown, N. Y.: New York State Historical Association, 1966. 133 pp. \$3.50.

This is a bibliographical guide to literature in the field of historic preservation in a broad sense. It includes material on historical museums, sites and restoration villages; museum collections; architecture and archaeology; administration research; and interpretation. Within the stated limitations, it should prove most useful and an excellent base on which to build the proposed future definitive guide.

New Architecture in New Haven. Don Metz. Cambridge: MIT Press, 1966. 80 pp. \$2.95.

New Haven has become justly celebrated for its successful renewal and building programs. Anyone wanting to go see such architectural accomplishments as the Beinecke Rare Books Library (Gordon Bunshaft of SOM, architect), the Yale Married Student Housing (Paul Rudolph) or the Yale Kline Geology Laboratory (Philip Johnson) will be greatly assisted by this guidebook. The important new structures are described briefly, and there is a city map to aid one in finding them. The photographs are by Yuji Noga.

Texas Homes of the Nineteenth Century. Drury Blakeley Alexander. Austin & London: University of Texas Press, for the Amon Carter Museum, 1966. 276 pp. \$15.

The residential architecture of 19th century Texas is primarily anonymous since few Texans were trained in architecture before that

time. The earliest examples given in this book reflect the diverse cultural backgrounds from whence came the builders and owners of this frontier land.

There are the dog-run cabins of the Anglo-American settlers; the half-timber townhouses of the German colonists; and the houses with hipped roofs, dormers and floor-length casement windows showing the French influence brought in by Louisiana planters. After the frontier-settlement architecture, the second major architectural development in 19th century Texas was the Greek Revival, which appeared in the 1840s and remained until the 1870s. The rich era of Victorian architecture came next, appearing first in Texas in houses where the center-hall plan was kept with the Greek Revival detail replaced by more elaborate ornamentation. Certainly the Victorian style served admirably to convey to the beholder some idea of the owner's wealth and position.

The book is vivid testimony to the richness of the architectural heritage enjoyed by Texas. The stunning photographs by Todd Webb are as important as the very readable text. This is the first publication from the Texas Architectural Survey, sponsored jointly by the Amon Carter Museum in Fort Worth and the School of Architecture, University of Texas. The first effort is most commendable, and the reader will look forward to the proposed second volume in the series which will concern itself with the public buildings of Texas.

America's Cities: Current Trends and Problems. Washington: Chamber of Commerce of the United States, 1966. 98 pp. \$1; special price on multiple copies.

The US Chamber of Commerce sponsors a Task Force on Economic Growth and Opportunity. It was organized so that business leaders could bring their special talents toward the solution of social and economic problems.

First, the task force turned its attention toward poverty in the United States. Now it pinpoints its attention on the complex problems facing urban America in a study in depth called "The Potential of America's Cities." This present booklet is intended to serve as an introduction to the study.

At the invitation of the task force, 14 urbanists met in Washington on September 9, 1965, to discuss those trends and problems considered most significant for

America's social, economic and political institutions. This is a transcript of the symposium intended as an aid in setting forth a design for further research. Some of the problems and trends discussed include taxation, housing, transportation, education and esthetics and planning.

Los Angeles, the Ultimate City. Christopher Rand. New York: Oxford University Press, 1967. 205 pp. \$5.

This study of Los Angeles appeared first in a briefer form in the *New Yorker*. Rand's prose is extremely readable, and he succeeds here in giving a vivid portrait of a dynamic city. His sketches include the physical, mechanical, occupational, racial, cultural and political facets of life in Los Angeles. Rand frankly admits that no one should believe all any writer has to say about the city, for Los Angeles is a riddle. He would seem to agree with the late Aldous Huxley who is quoted as saying that Los Angeles had the greatest potential of all the places he knew—but whether the potential was for horrors or fulfillment he could not tell.

Master Plan for Reykjavik, 1962-83. City of Reykjavik, 1966. 265 pp. No price given.

After four years of intensive work and the expenditure of a considerable amount of money, Reykjavik has published an elaborately illustrated comprehensive plan for Iceland's capital. The book, in English and Icelandic, is the result of the cooperative endeavor on the part of many persons and agencies.

The city engaged architects, engineers and planners to carry forward the work of formulating a plan for the next 20 years that would "shape the city" for present and future inhabitants. City and state institutions, neighboring municipalities and private organizations joined forces to contribute to the planning work which was undertaken in the office of Peter Bredsdorff in Copenhagen and in the office of the City of Reykjavik Planning Department under the management of Adalsteinn Richter, director of planning.

It is understood that the problems of planning are not solved all at once for all time, but Reykjavik hopes that the master plan will give the government, the inhabitants and interested foreigners a general prospect for the next 20 years. The Lord Mayor notes in his

introduction that there are few published books on Icelandic planning and in that respect this book should be, what he calls, "an acquisition." The book is an acquisition in other respects as well. It represents the manner in which one city has assessed itself for its future development and devised methods to handle various aspects of critical decision-making—all with the expectation of making Reykjavik, Iceland's only large city, a good place to live and work.

Castles of the Crusaders. Wolfgang Muller-Wiener. New York: McGraw-Hill, 1966. 111 pp. \$13.95.

The castles of the Crusaders remind us of a strange period in history, provocative and intriguing. In this volume Muller-Wiener explains how the castles were needed to safeguard the Crusaders in a strange land against the inhabitants they had dispossessed. Such castles were scattered from the Red Sea to the Euphrates and encompass four centuries of medieval architecture. The author describes more than 50 and includes details regarding the construction of each one. There are many beautiful photographs by A. F. Kersting and specially drawn ground plans.

Qualitative Studies of Buildings. R. B. White. London, H. M. S. O., 1966. 59 pp. \$5.50.

This is a supplement to the National Building Studies Special Report 33 on "A Qualitative Study of Some Buildings in the London Area," published in 1964 (*AIA JOURNAL*, Jan. '65, p. 25). In the former work 13 buildings in London were studied in an effort to appraise their long-term durability and functional performance.

Now White painstakingly reports on the performance of the De La Warr Pavilion at Bexhill-on-Sea and on the Gilbey Building in London. The buildings have at least one thing in common in that Serge Chermayeff was architect for both; in the former he worked with Eric Mendelsohn. White studies every detail—foundations, external walls, staircases, chimney stacks, roofs, floor coverings, heating and ventilation—and apparently nothing is overlooked in making his appraisals.

The British have devoted much more effort to such in-depth studies of the performance of buildings than we have, and they point the way to needed documentation in this country. White gives two

Continued on page 204

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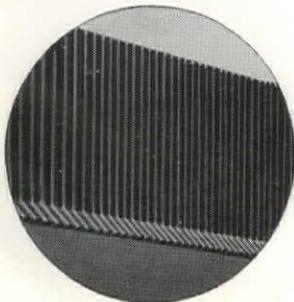
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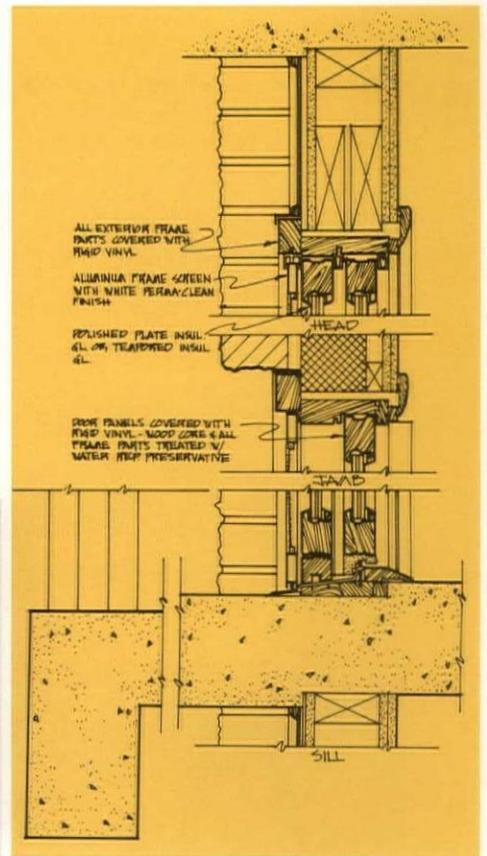
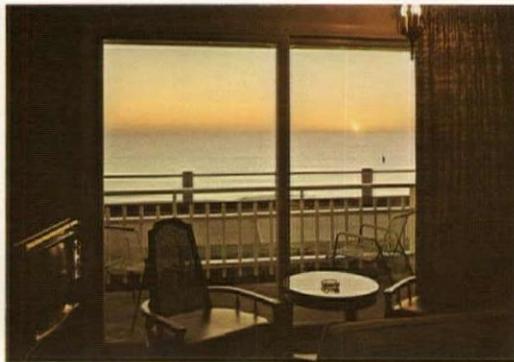
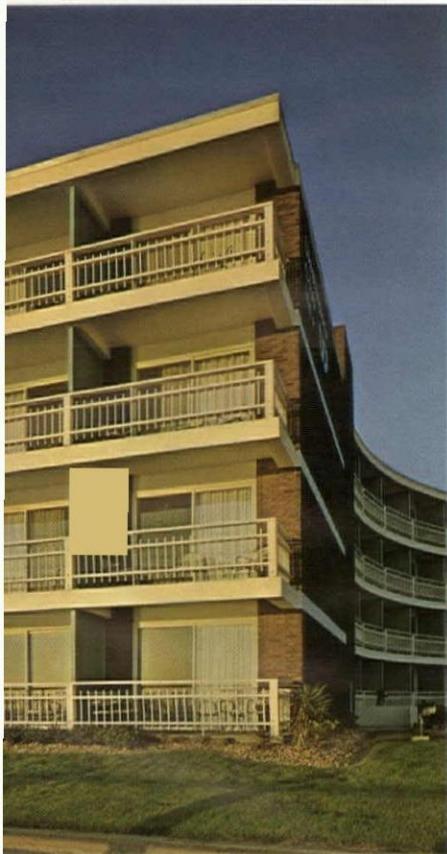
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warnings to architects: Don't expect any building to stay exactly as it was designed for many years and don't introduce in designs features that arise from the premature discussion of seemingly well-informed writings based on inconclusive research.

IES Lighting Handbook. 4th ed. Edited by John E. Kaufman. New York: Illuminating Engineering Society, 1966. Various paging. \$12.

The fourth edition of this standard lighting guide is a greatly revised version of the previous one published in 1959. It covers new subjects, new nomenclature and new materials. This book, of course, is a must for the architect seeking information on lighting.

Towards Industrialised Building. Edited by the International Council for Building Research, Studies and Documentation, CIB. Amsterdam, New York: Elsevier Publishing Co., 1966. 493 pp. \$41.

The third CIB Congress, held in Copenhagen in 1965, had as its theme "Toward Industrialised

Building." This volume contains the proceedings. The sessions dealt with 10 main topics: the changing structure, integration of design and production, planning of operations, regulations, modular standardization, production methods, materials development, functional requirements, developing areas and communicating the knowledge.

For each of these aspects a number of experts were invited, through the national research institutes which form the membership of CIB, to give short papers, the wish being to report on new trends and developments rather than to present lengthy descriptions of systems in use. The 10 sets of papers were discussed within 10 groups, and an evaluation and summary of these discussions precedes the papers of each group. In addition to the 170 papers and the 10 final reports, the volume includes addresses by Gunnar Myrdal of the Institute for International Economic Studies, Sweden, and by Philip Arctander, president of CIB, 1962-1965.

In the preface, signed by J. de Geus, secretary-general, it is pointed out that the reader will find here a diversity of information

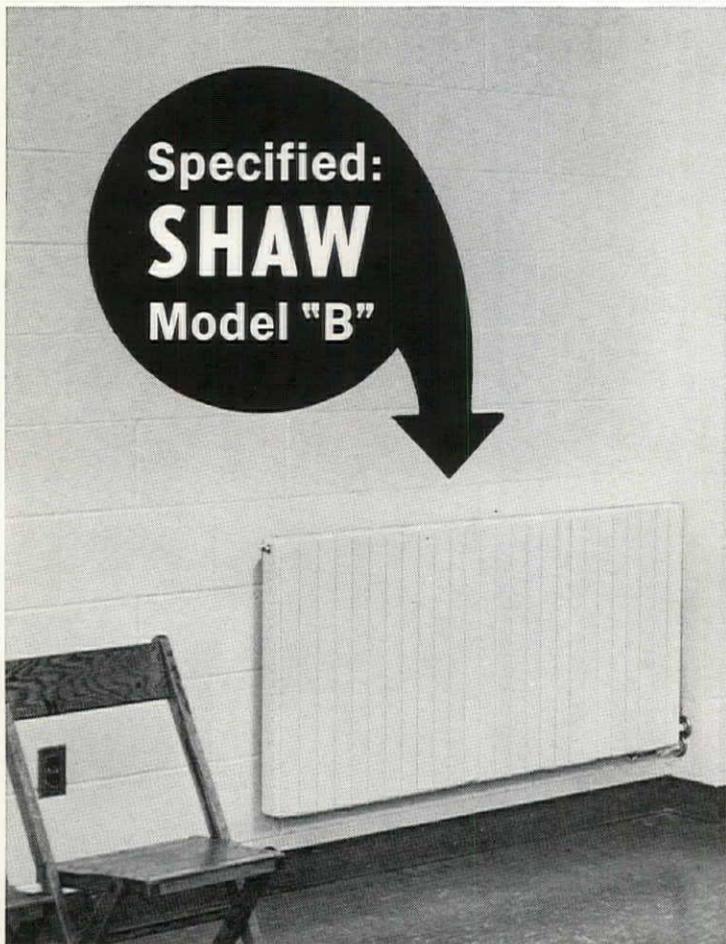
about the increase of an industrial approach to buildings and some indications as to how industrialization tends to take place. De Geus concedes that one should not hope to encounter comprehensive answers to building problems throughout the world in this work.

Indeed, the papers do not reflect agreement among the experts about the answers to such problems. The congress was significant, rather, because it disclosed a responsible effort on the part of those with specialized knowledge to place this knowledge at the service of every country, whether wealthy and industrialized or poor and undeveloped, "in the conviction that only in this way can a satisfactory habitation be provided."

The Art and Architecture of India: Buddhist, Hindu, Jain. Benjamin Rowland. Baltimore: Penguin Books, 1967. 314 pp. \$20.

This is another volume in the Pelican History of Art series, a third edition of a work published first in 1953. Many chapters have had to be revised meanwhile, Rowland informs us, because of significant discoveries made within re-

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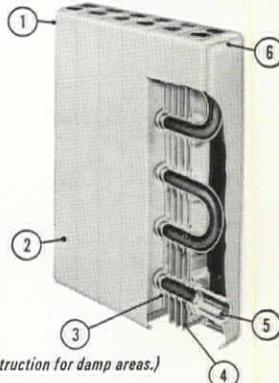


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cent years in almost every period of Indian art. The principal changes are in the decorative arts sections.

Thermal Design of Buildings. Tyler S. Rogers. New York: Wiley, 1964. 196 pp. No price given.

With the ever-increasing sophistication of airconditioning and heating systems, the architect in practice must lean more and more heavily upon mechanical engineers

for the technical sufficiency of these environmental controls. He must, of course, understand the capabilities of these systems to create the type of indoor climate appropriate to the occupancy characteristics of his buildings; but in general he is not in a position to have a competent technical opinion on how the various "black boxes" achieve their results.

Notwithstanding this, however, his is the responsibility for the overall effectiveness of the enviro-

mental control systems, and consequently he must continually be aware of those several design decisions made in the preliminary stages of a project that have significant effects on the thermal characteristics of the building.

In this book the author has produced a volume that presents the design parameters relating to comfort, economy and technological sufficiency in language that is particularly well adapted to the architect's requirements. Diagrams, sketches, comparative graphs and exceptionally well-selected photographs help to underscore the salient concepts discussed. The chapter on condensation problems in buildings is an exceedingly lucid presentation of this always important topic. That the illustrative examples are so clear and logical is due to the author's perceptive interpretation of material from the *ASHRAE Guide and Data Book*.

Thermal Design of Buildings, however, is a self-contained treatment, distinguished by its clarity of statement in both qualitative and quantitative aspects of the subject. It should be of particular interest to architects in practice who wish to refresh their grasp of the relationships between thermal environmental factors and the design of the building fabric itself.

HAROLD D. HAUF, AIA

Selected Designs: Inpatient Care Units of General Hospitals. Chicago: American Hospital Association, 1967. 26 pp. \$1.50.

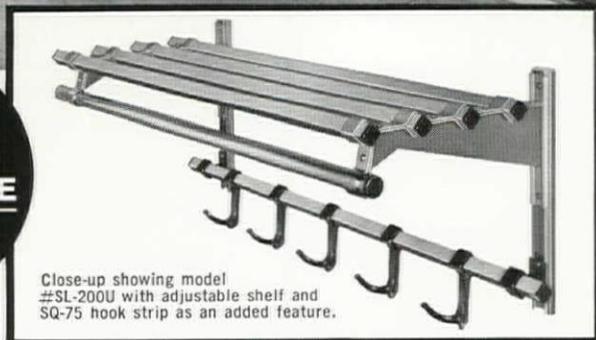
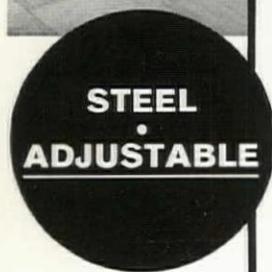
This brochure contains selections from the Architectural Exhibition assembled for the 1965 annual meeting of the American Hospital Association. The inpatient care units of general hospitals featured either had been constructed after January 1, 1962, or were in process of planning or construction in 1965. "Their selection for this brochure, by an advisory group," states the foreword, "was based primarily on their suitability for reproduction and was not necessarily related to their architectural merits."

Plastics in Building. Edited by Irving Skeist. New York: Reinhold, 1966. 466 pp. \$18.

The architect and the chemist have more and more in common; the future of plastics in building looks ever brighter. Since World War II the use of plastics in construction has zoomed, with new materials gaining favor.

In his introductory discussion of

Continued on page 208



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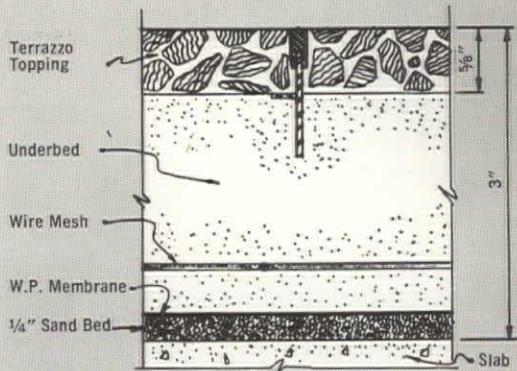


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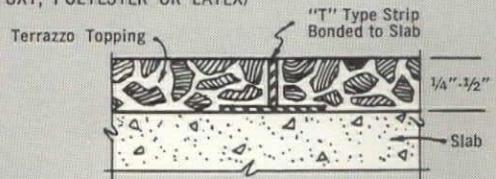
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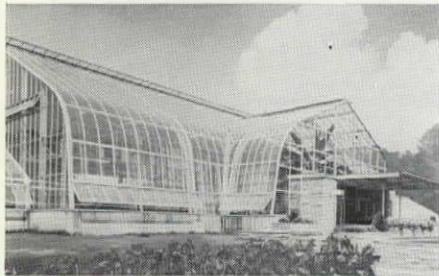


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Books from page 206

the role of plastics in building. Skeist points out that at present plastics comprise less than 1 percent of the total tonnage of construction materials in the United States. The situation is changing. Not only are plastics supplanting older materials but they are "stimulating the architect and designer to innovate new types of structures and structural components."

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Various disadvantages to this building material are being overcome. For example, self-extinguishing and nonburning plastics are now available; sandwich construction has overcome the objection to plastics as a less strong material than some others. As Skeist points out, the quality of plastics and their resistance to decay are increasing; prices and building code restrictions are decreasing.

This is a complete handbook on plastics to which 23 experts have contributed. Subjects covered include the design of reinforced plastic shell structures; plastics for walls, roofs and doors; adhesives in building; plastics in lighting; resilient flooring and carpeting; the use of plastics in utilities. There is a chapter on building codes and regulations and an interesting account of the way the NAHB and other demonstration houses have led to a better understanding of the production, installation and performance of plastics.

Also included is a brief survey of the way in which other countries have used plastics in building. Many interesting and unusual functional uses of plastics are described. Each contributor provides a list of references to other publications if a chapter should pique your interest to delve more deeply into any of the topics covered.

Handbook of Mechanical Specifications for Buildings and Plans: A Checklist for Engineers and Architects. New York: McGraw-Hill, 1966. 482 pp. \$12.50.

By following the guidance of this book, it is claimed that a specification writer dealing with unfamiliar equipment will be able to prepare

an effective specification. The material is arranged so that he will include important items of mechanical equipment, omitting no critical detail. Included among the areas covered are nuclear power plants, commercial refrigeration and steam distribution systems.

Construction Scheduling and Control. George E. Deatherage. New York: McGraw-Hill, 1965. 316 pp. \$15.

Deatherage has previously written three other books on construction management, and in them he has endeavored to present management functions progressively. In this volume he covers in his usual thorough manner the final functions of construction scheduling, purchasing, expediting materials delivery, tools and equipment, safety and management controls. Emphasis is placed upon critical path scheduling.

Proceedings, Permafrost International Conference. Building Research Advisory Board. Washington: National Academy of Sciences-National Research Council, 1966. 563 pp. \$35.

Under BRAD's auspices the first International Conference on Permafrost was held at Purdue University in November 1963. Some 300 people assembled for the consideration of scholarly papers prepared by 147 engineers and scientists from Argentina, Canada, Germany, Japan, Norway, Poland, Russia, Sweden and the United States. The published proceedings of the conference constitute an encyclopedic compilation of present knowledge about the properties and behavior of permafrost, and correlate important scientific and engineering knowledge on the problems of building in permanently frozen ground.

Cobblestone Masonry. Carl F. Schmidt. Scottsville, N. Y., 1966. 326 pp. \$8.50.

This is a greatly enlarged version of the authors' earlier "Cobblestone Architecture." With a listing of well over 500 examples, it is a basic source on this intriguing and essentially very localized type of architecture. Although Schmidt records examples from five other states and Canada, the vast majority of the structures noted are in western New York State, within a radius of 60 miles of Rochester. The illustrations show various patterns that were used as well as details of doors and windows. □

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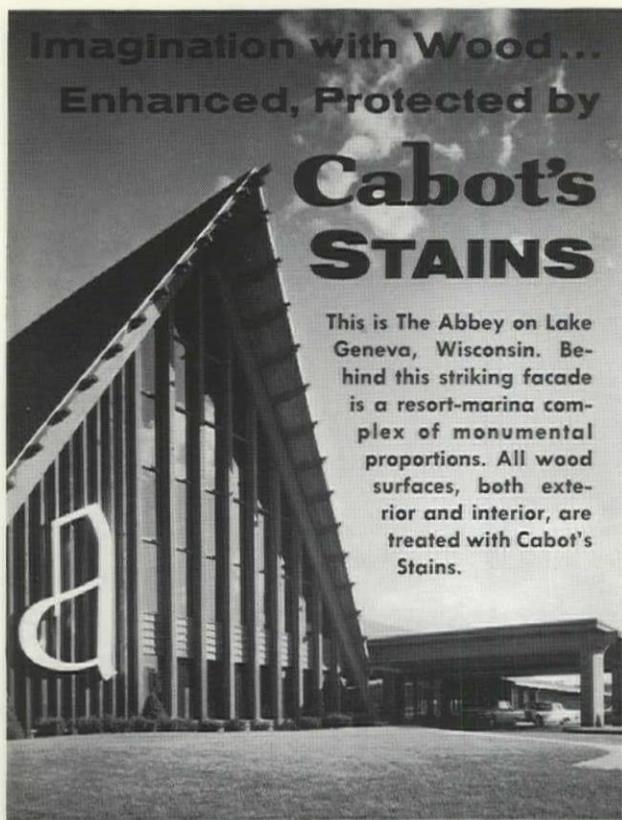
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Calendar

National

- May 7-10:** National Association of Architectural Metal Manufacturers Annual Convention, Bismark Hotel, Chicago
- May 12-13:** NCARB Annual Meeting, Barbizon-Plaza Hotel, New York
- May 12-14:** ACSA Annual Meeting, Barbizon-Plaza Hotel, New York
- May 14-16:** Illuminating Engineering Society Annual Theater, Television and Film Lighting Symposium, Hollywood Roosevelt Hotel, Hollywood, Calif.
- May 14-18:** AIA Annual Convention, New York Hilton Hotel, New York
- May 29-31:** Construction Specifications Institute Annual Convention, Hotel Fontainebleau, Miami Beach
- July 5-8:** National Society of Professional Engineers Annual Meeting, Statler Hilton Hotel, Hartford, Conn.

AIA Regional and State Conventions

- Sept. 13-15:** New Jersey Society of Architects, Berkeley Carteret Hotel, Asbury Park
- Oct. 3-7:** Florida Association of Architects, Diplomat Hotel, Hollywood-by-the-Sea

AIA Committees and Related Meetings

(At the Octagon unless otherwise noted)

- May 12-13:** Preconvention Board Meeting, New York Hilton, New York
- June 5:** Office Procedures
- June 15-16:** Research for Architecture
- June 16-17:** Executive Committee
- June 26:** Professional Consultants

International

- June 18-23:** International Design Conference, Aspen, Colo.
- June 19-28:** International Commission on Illumination Session, Shoreham Hotel, Washington, D.C. (attendance by application only, to US National Committee of CIE, Secretary, L. E. Barbrow, c/o National Bureau of Standards, Washington, D.C.)
- July 3-8:** UIA Congress, Prague
- Aug. 28-Sept. 2:** 1967 International Ecumenical Congress on Religion, Architecture and the Visual Arts, Hilton Hotel, New York

Tours

- Northwest Study Tour of European Design, June 22-July 16. Directed by Richard D. Roselle, White Henry Stuart Bldg., Seattle, Wash. 98101.
- Mexican Architecture and Interior Design Seminar-Tour, meeting Mexico City, Sept. 30, 14 days. Reservations accepted in order received with deposit of \$50 per person toward cost of \$358, airmailed to T. H. Hewitt, Apartado Postal 5-251, Mexico 5, D.F.
- Architectural Treks to the Treasures of Egypt, the middle East and Baghdad, four of 22 days each, departing New York Oct. 20, Dec. 22, Feb. 9 and March 22. United States Travel Agency, Inc., 807 15th St. N. W., Washington, D. C.
- Architecture and Gardens Tour of Japan, leaving Los Angeles, Oct. 7, 24 days. Optional four-day visit to Hong Kong. Limited to 25 participants. Directed by Kenneth M. Nishimoto, AIA, 263 S. Los Robles Ave., Pasadena, Calif. 91106. □

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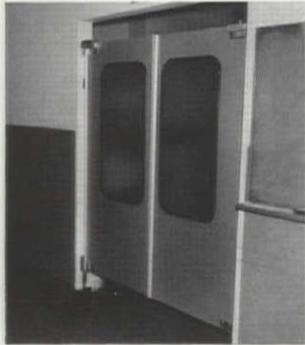
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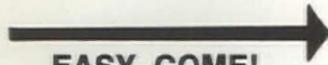
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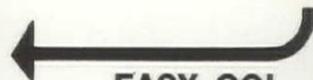
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Letters

Hurrah for the Housing Issue

EDITOR:

It has always been my feeling that the AIA JOURNAL is the finest publication in the architectural field, and this fact has once again been illustrated to me with your January issue on housing. You and your entire staff should be highly commended on the coverage of an area of practice that has long been neglected.

Mass-produced housing remains the greatest single challenge for the architects' influence in environmental improvement. For the architects who are truly interested in contributing to the great need for better housing in this country, the opportunities are endless. It is common knowledge that by the turn of the century our population and the number of families will double. This means that in some 40 years we will have to create housing for a new United States greater than the nation of today. Considering that the housing industry represents some \$30-40 billion spent in one production year, the remunerative potentials are obvious.

I would like to commend especially John N. Highland, AIA, of Buffalo on his "on-target" editorial directed at the architect-relations. At no other time have developers been more receptive to professional guidance, and for the architect who is willing to face the issues at hand and take the program to task, the harvest may be rich indeed.

Again, my congratulations on this fine issue and the new format.

DONALD BLAIR, AIA
Resident Architect
Brown & Kauffmann, Inc.
Palo Alto, Calif.

"Please, Mr. Architect..."

EDITOR:

Like many other institutions we are and will be constructing millions of dollars worth of educational buildings hoping to employ modern technological devices within their walls. We know you are very busy, Mr. Architect, but could we ask a few favors of you to help make the use of this equipment more enjoyable for the persons working in your environment?

First, we would like to ask you to place power receptacles every 12 feet when putting conduit in the

rooms. This will save our looking for a 15- to 30-foot extension cord when we use our communications media in these classrooms.

Second, since we find it a necessity in this technological age to project many of the difficult concepts on a screen in the front of each room, would it be possible for you to include one in all rooms in order to avoid the frustration of trying to find a screen minutes before a class begins? And please, don't give us a postage stamp when we need a bed sheet. Over the years the cost for a 6x6-foot screen is only pennies more than the 40-inch one which is almost useless for many of our purposes. Maybe some day we can splurge and get an 8x8-footer, but state finances are important. We don't want to be greedy.

Third, and closely related to screens, we need to darken our rooms for efficient viewing by all students. Could we ask, therefore, for the rooms to have darkening facilities initially installed?

We thank you, Mr. Architect, for are planning to install many newer technological devices shortly. Would you please leave enough open conduit in these new buildings so we may pull electrical wire through this conduit to serve these devices?

We thank you, Mr. Architect, for the wonderful construction techniques that have solved many of the problems we formerly had: your soundproofing materials, your smooth, silent flooring and your creative wall materials that allow teachers to use their classroom walls for study display boards and your color combinations which soothe the savage beast. All of these have helped tremendously in facilitating communication within our classrooms. What we ask for seems so little when one thinks of the plated fixtures, the recessed lighting, the garden plots and flying buttresses which we know you are asked to provide.

DR. FRED MUNDT
Audiovisual Director
TERRY HESS

Audiovisual Director
Wisconsin State University
Oshkosh, Wis.

The Redwoods and Ecology

EDITOR:

Every once in a while a copy of the JOURNAL is bound to fall into the hands of an outsider, someone not in touch with today's AIA, someone like me. Today your magazine is slick and sleek, bristling

with ads and articles; that Expo 67 cover was one of the most powerful pieces of graphics I've seen in years. The JOURNAL is still too stuffy, however.

Maybe publications about architecture have to be.

All you can do is show pictures of buildings or discuss things like cost control of spec writing. Stay out here in the middle of the road where most of us fat-cat American architects are driving. Maybe cosmetics are all we should expect of you. But I really don't believe that. We want you to dive into some of the real problems. We'd like a reminder now and then that we're right up there with Detroit and the blacktop boys when it comes to land destruction.

What got me started on this long harangue was a little *Newslines* item in your February issue, something about an architect who'd spent a year out in redwood country studying the situation. His conclusion, if I read it correctly: Play up new uses of redwood. This will mean more profits with less logging.

Hell! Did he really see those two- and three-thousand-year lives snuffed out and come back suggesting new uses for redwood? (Or was that architect a very, very smart guy looking for a way to end the more massive uses of the stuff? I hope so.)

What did the JOURNAL have to say about it all? Nothing, when even the mildest show of editorial indignation over our continuing redwood use could have saved at least a few acres of those beautiful giants.

How many of us, having once seen the logged-out parts of those dwindling groves, would ever specify redwood again? It hasn't anything to do with the frightening statistics involved. It comes from the heart. And the idea that this kind of attitude could ruin an entire industry is not only highly improbable, it's irrelevant. It's like not stopping the war because that would throw soldiers out of work.

And how much of the AIA's budget goes for land-saving causes? I couldn't find any. Not any! According to my reading of that "Your Dues at Work" article, you're still pushing things like *urban design* and new specification worksheets. Why not *urban ecology* and how to specify materials whose removal won't destroy the land?

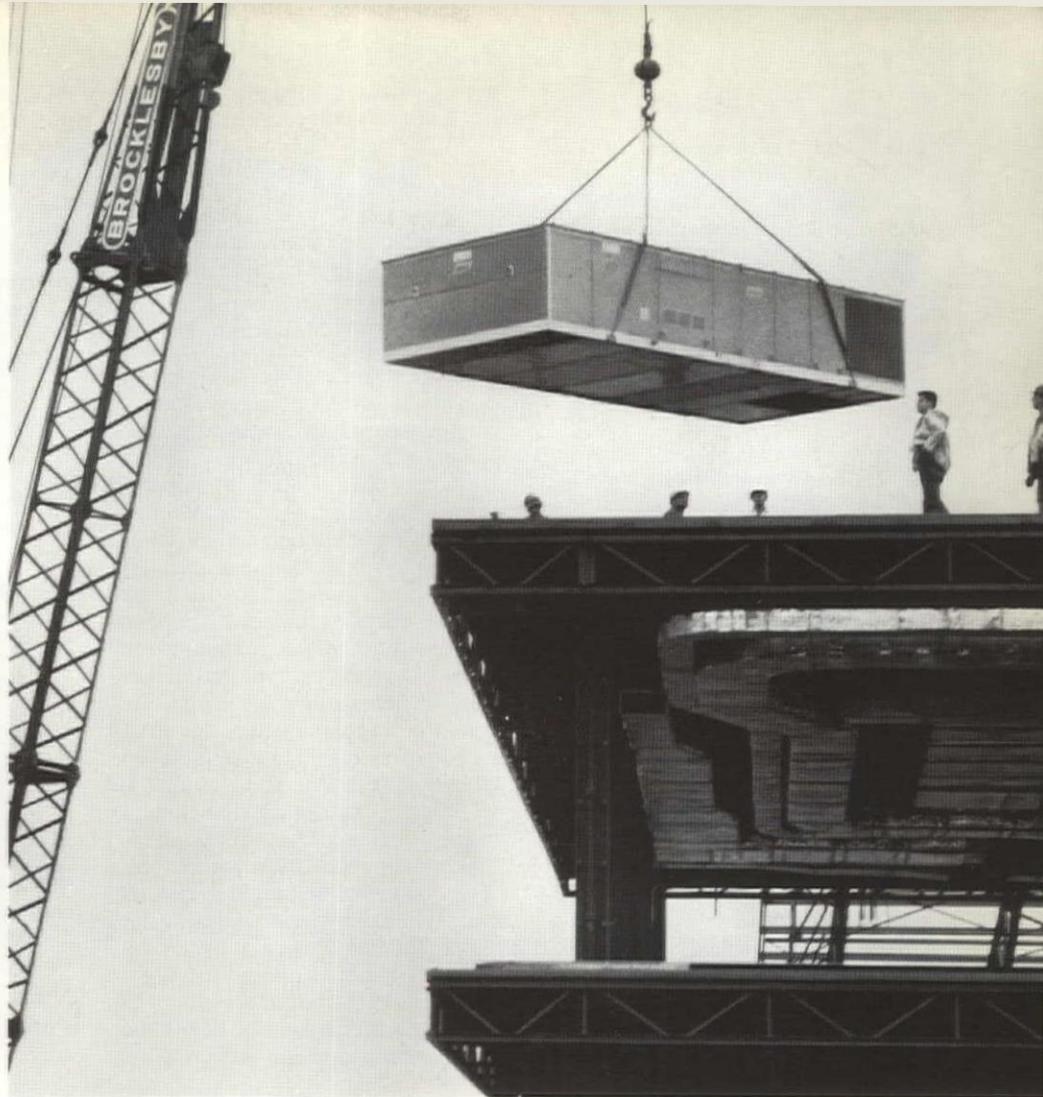
Come on, AIA, jump in! We're going to get a real panning by fu-

Continued on page 214

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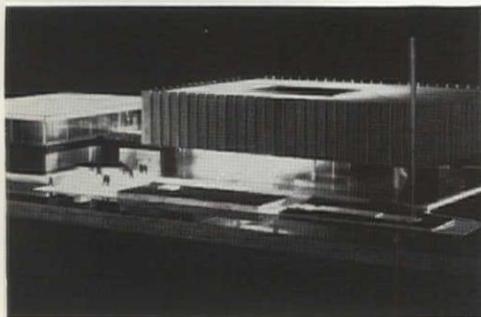
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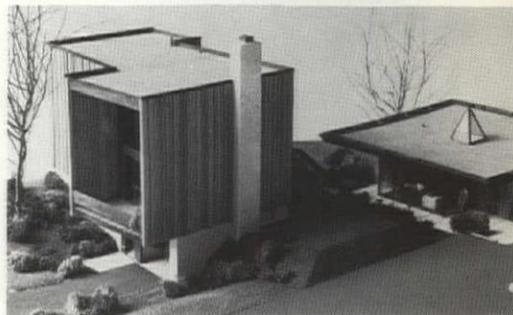
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ture historians if we keep on doing what we're doing.

Look at the panning the buffalo hunters are taking. We're next. We've just got to turn architecture into a constructive force—no pun; I mean constructive in the noblest sense—before those doubled numbers of us arrive in 1999.

MALCOLM B. WELLS
Architect
Cherry Hill, N. J.

ED. NOTE: Occasional reader Wells' last interpretation of the redwood story—indicating judicious instead of massive uses of redwood—was the way we understood it. As for urban ecology, we would refer the writer to such article as "Smokestacks on the Dunes" (Dec. '84) which dealt with AIA involvement in the Indiana controversy. The Institute's current participation in the Ribicoff hearings is another indication of concern in this area. So hang on to your hat, Mr. Wells—we really are trying.

Greetings from Expo

EDITOR:

Congratulations on an excellent February issue featuring Expo 67. We are looking forward to assisting many AIA members to enjoy our exposition to the fullest.

FRED W. PRICE
Executive Director
Royal Architectural Institute
of Canada
Ottawa, Canada

A Tribute to a Colleague

EDITOR:

The death of Andrew J. Thomas, FAIA, in July 1965, which seems to have gone unnoticed by American architects, brought to me a feeling that a period in American architecture has left us.

I first met Andy Thomas when he was about 84 years old. We were associated on a state housing job. Working with Andy, a gentleman of the old school, was an experience and an education. He was one who knew his mind and openly expressed his feeling of architecture. Even at his advanced age he would constantly make sketch studies and spend hours examining plans and details. He was never fully satisfied that he had the best solution.

Buildings to him were an expression of what he considered fine. When a sketch reached a point of satisfaction, his eyes would light up and, with a wave of the hand, he would go into a long discourse as to why his solution was good. He was a delight to work with, a great conversationalist and a colorful storyteller. He possessed an admiration for fine workmanship: Good design, construction and intelligent landscaping were conditions he always sought. He expressed his feelings for buildings not in formal ac-

ademic terms but as one who has lived with them for many years.

Andy Thomas' later years were lonely. He lived in a small apartment on East 64th Street in New York, in a building which he had renovated some years before. His apartment was full of interesting curios, paintings, drawings and pictures of the handsome estate he had once owned in Montauk Point, Long Island.

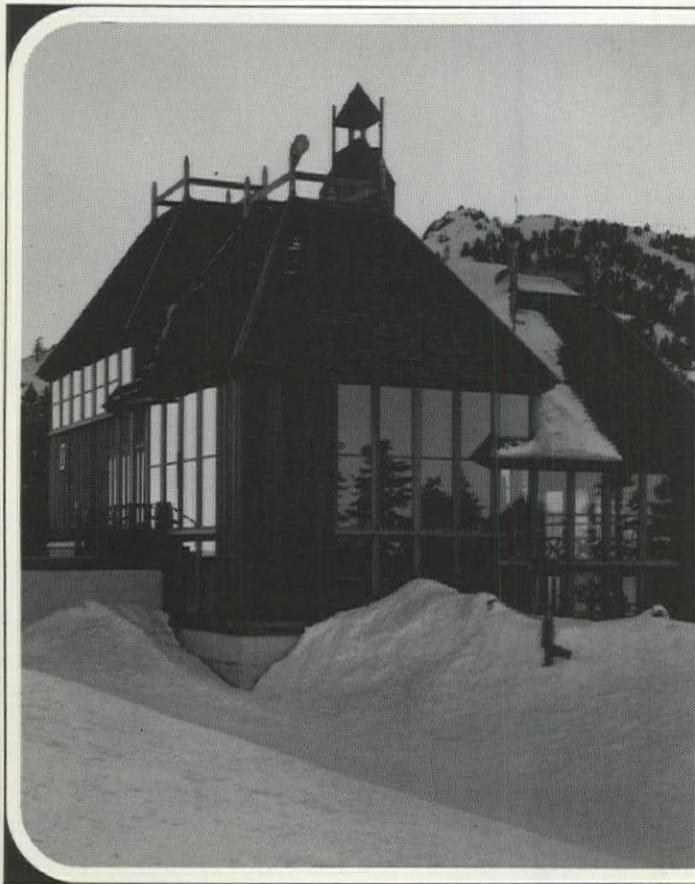
His last years were colorful and active. I recall having him as my guest at a testimonial luncheon for Harris H. Murdock, FAIA, then chairman of the Board of Standards and Appeals. With Andy at my table, it appeared that we bridged the past and the present.

The profession misses men like Andy Thomas. He loved buildings and was sensitive to all of the things that comprised a good one. He was not the slick, public relations-oriented architect; he was a simple individual who had very strong convictions about building, landscaping and environmental effect on people.

Andrew J. Thomas left a heritage of good planning, rational design and a love for his profession.

ALBERT MELNIKER, AIA
Staten Island, N.Y.

Continued on page 216



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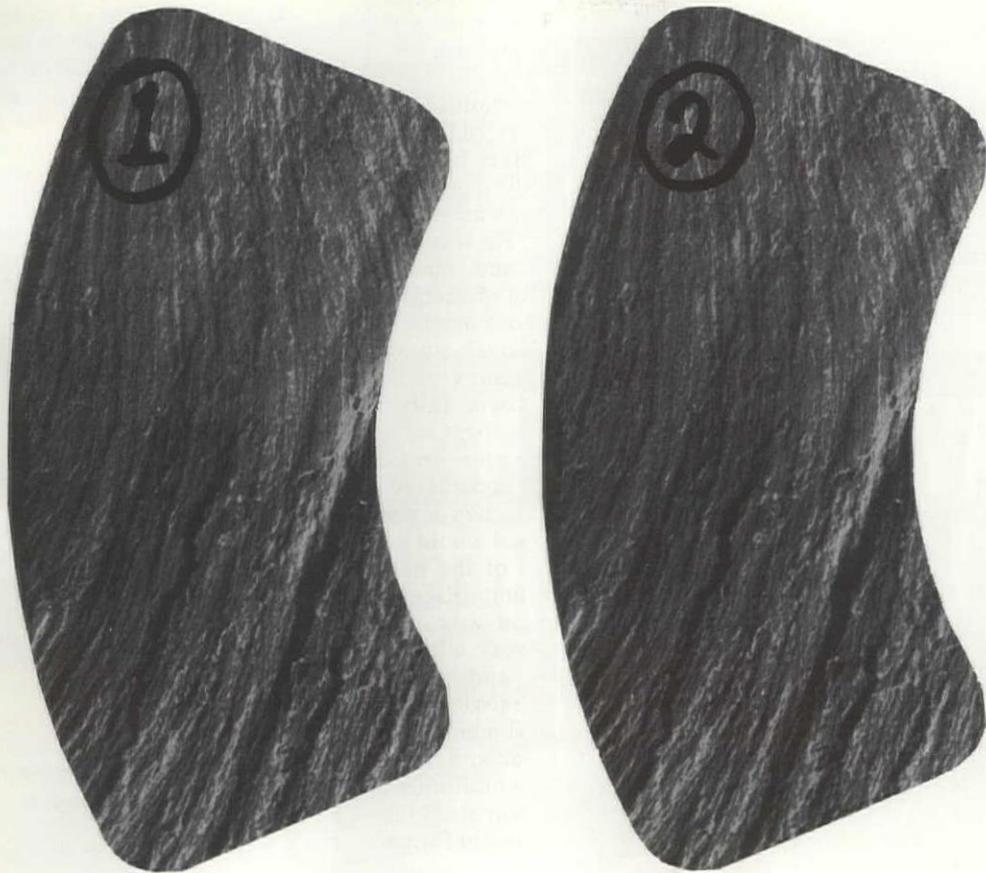
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Thou Shalt Not!

EDITOR:

An architect can't operate on a cash-on-the-barrelhead basis, and after 22 years of running a small business I have come up with my own formula—"The Ten Commandments of Architecture"—which I shall pass along for what it is worth.

1. Thou shalt not do business with unstable or unsound people and people of questionable repute or credit. Learn how to check up

gracefully on people without insulting them. No matter how smart you are, if you sleep with dogs you'll wake up with fleas.

2. Thou shalt not work for cut rates. Better to sell the client on a superior service at a regular price than a regular service at a cut price.

3. Thou shalt not do free sketches. Better to be free with words than with lead, and don't fall for the old line that goes (*Enter a starry-eyed promoter with a limber lip*): "I've got a gorgeous piece of land (at least an option on it) and have a guy with a million who's just dying

to finance something. You are just the man we need, and all you have to do is sketch up something big that will fit the site. We'll pay you when the job goes ahead and we'll all make a barrel of money."

If you really want to gamble and speculate, you would do better getting your own option and doing your own project; otherwise let him pay for your services without the strings or look elsewhere for a sucker.

4. Thou shalt use a good lawyer and a CPA regularly. Have a good working relationship with them. Do them some favors like showing them how to fix up their houses so they don't send a bill every time you call them.

5. Thou shalt keep accurate records of your costs on every job, broken down to show your true overhead and profit.

6. Thou shalt use the AIA contract and other documents wherever possible and never do work without written agreement of some sort.
7. Thou shalt engage in public service—at least your share. Serve your commissions, committees, boards, etc., when the opportunity presents itself. You will make a lot of good contacts and it improves the image of the architect as well as your own stature.

8. Thou shalt work for the good of the profession. This is usually most effectively done through the AIA. What is good for the profession is good for you.

9. Thou shalt get active in an organization where you will meet socially some of the people you would like to do business with, such as a service club, church or country club. You don't have to be a joiner unless you are particularly good at that, but it does help to meet the people socially.

10. Lastly, thou shalt have fun. You might as well because you'll never get rich at architecture, anyway. It's just not in the cards. Big offices don't make much more than little offices after overhead and taxes are out. You have to make your money through your investments, but if all goes well you will make a good living in architecture—the most exciting profession in the world.

EARL B. BAILEY, AIA
Fairfax, Va.

For Better Parks & Playgrounds

EDITOR:

Our organization is currently gathering photographic material on park and playground design. It will

Continued on page 218

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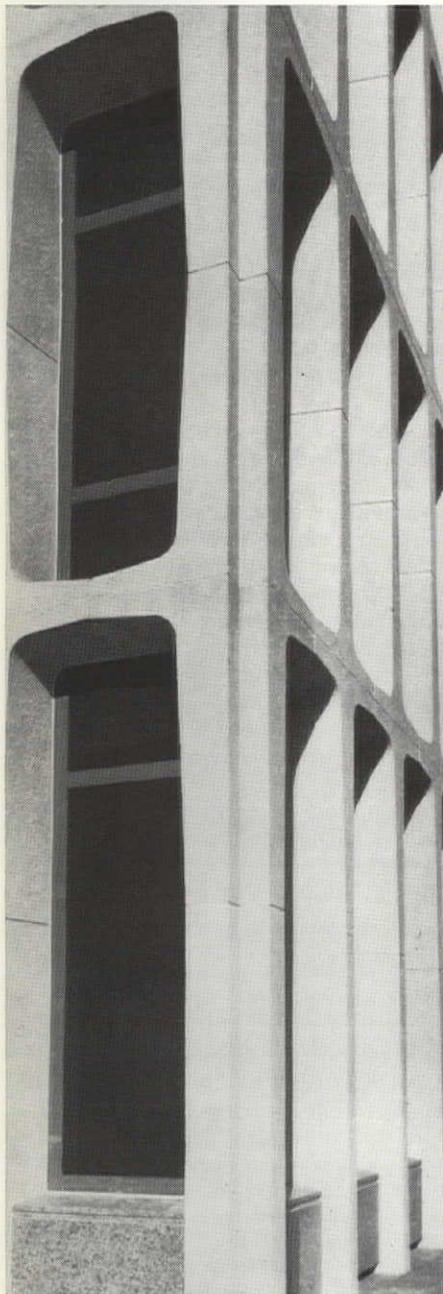


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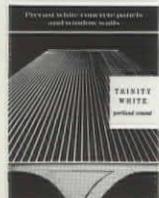
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If any readers have photographs or slides relating to this subject in the United States or abroad, we would appreciate their sending them to us.

MRS. L. BUTTONWIESER
President, Council for Parks
and Playgrounds, Inc.
New York, N. Y.

Webster & Architecture

EDITOR:

The concept of architecture as established by Webster's New Collegiate Dictionary may be of interest. Note the following definitions:

Fine Arts—Painting, drawing, architecture and sculpture; and sometimes poetry, music, dancing and dramatic art.

Fine Art—Art which is concerned with the creation of objects of imagination and taste for their own sake and without relation to the utility of the object produced.

Utility—Quality or state of being useful; usefulness.

Webster's concept of architecture, being listed as one of the fine arts, can be determined by substi-

tuting the words appropriate to architecture in the definition of fine arts, as follows:

1. Substitute the word "architecture" for the word "art."
2. Assuming that buildings are the objects created in architecture, substitute the word "buildings" for the word "objects."
3. Substitute the word "usefulness" for the word "utility."

Thus architecture is concerned with the creation of buildings of imagination and taste for their own sake and without relationship to the usefulness of the buildings produced. No wonder the public has such a wide misconception as to the meaning and purpose of architecture when it becomes evident that the "scholars" do not have a proper conception.

GARY D. RINER

Corpus Christi, Tex.

An Architect Looks at His City

EDITOR:

Every architect from time to time should take a good hard look at his home town. I was presented the opportunity for such an exercise when I addressed Urban America's Board of Directors in New Orleans.

In terms of environmental issues,

we are an almost totally uninformed community. The people at large have no notion of the degree of our relative insolvency here because nobody will tell them — neither their representatives nor the press, and those few who will have no voice for the dissemination of their views.

Only the efforts of a private Citizen's Housing Council and the Catholic weekly, the *Clarion Herald*, seem to have forged an official concern for housing blight which has few, if any, equals for a community this size in the United States. It is our scandal and our shame.

Should it be necessary to remind that after six years or more the Greater New Orleans Expressway has not had one tree planted on its course, only endless ranges of chain link fence.

The entrances to our city are a disgrace—something to despoil the spirit and cause one to die a little every time they are traversed. The traveler by plane knows that no civilization in history has ever created anything so ugly as the drive from the New Orleans airport to the central business district. That man could wreak such vulgarity upon

Continued on page 220

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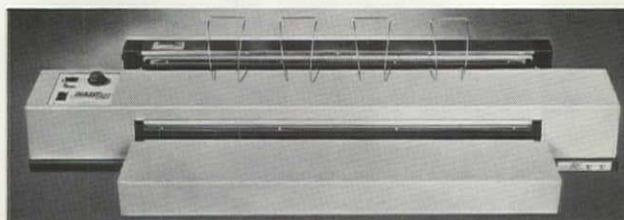
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Letters from page 218

his neighbors with the full support of law is both shocking and prophetic of decline.

Furthermore, Louisiana is the only state that prohibits urban renewal by legislative act. Yet it will and must come to this city as surely as darkness will follow the sun's decline. Many in authority know this, still the voice is yet to arise which seeks to delineate this necessity to the community.

In the collision between the 20th century and the 19th, New Orleans has been faring badly. The Vieux Carré is beleaguered as never before. Armed with sophisticated legislation since 1957, the Quarter nonetheless is succumbing to predatory influences that will be its undoing—a kind of hit and run assault—which shrewdly recognizes that outer appearances of the remaining authentic will hold up at least until the new ersatz is amortized.

The simple fact that an undistinguished building that belongs in the Quarter and helped make it what it is, is infinitely superior to a phony in "official" style, seems to go totally undetected. Far better would it be on the most grave occasions of necessity to build ex-

cellent contemporary buildings. At least this would be consistent with the vigorous tradition of the Quarter. The caricatures do not preserve, nor can they be called architecture or archaeology.

But the mood of the city is such that this nonsense is condoned, even applauded. The charm of authentic background building—the tout ensemble—is being eroded away by an arrogant proliferation of Hollywood foreground structures. One could hardly imagine that the Vieux Carré legislation was enacted to "preserve the quaint and distinctive historic and architectural character" of the area.

And another related matter: The proposed expressway through the Quarter—a 35-foot-high wall of noise and visual disharmony is to form the south side of Jackson Square.

If the quest for excellence as a replacement for mediocrity in environmental matters is to become a reality, an indispensable cooperator must be the press. Only it can help phrase goals in a way which can become comprehensible to all citizens. New Orleans has no responsible press organism for environmental criticism.

A metropolitan area of over a

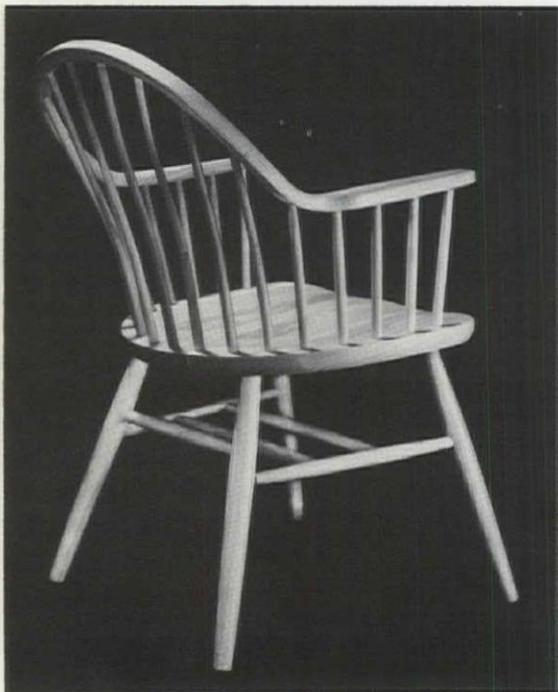
million people served by one newspaper in two editions needs and deserves more than a weekly running of syndicated canned house plans by mediocre architects designing for northern climates. We deserve more than the exaltation of chintz and department store antiques in our rotogravure section.

We should see pictures of what expressways will look like from various vantage points within the city, and if there are no pictures, the press should demand them until they appear. We need competent review of new suburban communities. And most of all, we need informed discussion of issues.

JOHN W. LAWRENCE, FAIA
Dean, School of Architecture
Tulane University
New Orleans, La.

Back to the Powder Room

ED. NOTE: Denise Scott Brown ended her article on "Planning the Powder Room" in the April JOURNAL by saying: "And I leave you to my puzzle: When those signs separate out, which is which?" We did not intend to puzzle our readers even more by omitting the sign—although we assume all of our readers can visualize "a triangle in a circle." ☺



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Next Month

The Top Twenty: One of the highlights of the AIA annual convention is the Honor Awards Luncheon at which the current winners are publicly announced for the first time.

In the 19th program, which was open to buildings completed since January 1, 1962, 20 projects will be cited; and because every one deemed worthy of premiation at the national level deserves full recognition, the several categories of previous years have been replaced with the single title "Honor Award."

The June coverage will include photographs of all 20 winners, along with the jury comments and architects' statements.

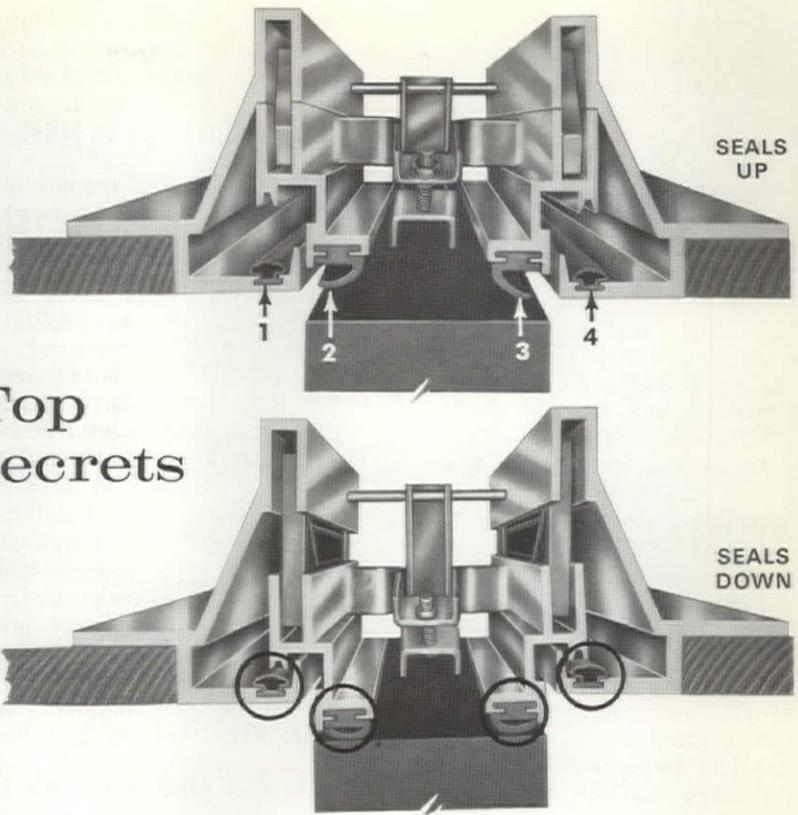
Restoring an Acoustical Gem: Chicago's Auditorium Theater, "world-renowned for its acoustical perfection," could be reopened this fall if two recent "challenge" offers totaling \$125,000 are met by June 30.

The Adler & Sullivan masterpiece, as the author points out, "has meaning for even the most pragmatic American because acoustically and spatially it works, and works better than most theater designs we have yet been able to devise."

Luminous Environment (Cont'd):

As a follow-up to the third article—"Selecting Incandescent Downlighting"—which appeared in April, No. 4 will consider wall-washing equipment, employing the same format of drawings. It, too, should prove helpful as a standard reference for the selection of this particular kind of lighting. □

PHOTO CREDITS: De Longe, George M. Cushing Jr., Walton Jones, Tambling's Peck Studio—p. 10 (for, respectively, Flad, Bourne, Ryan and Tuchman); Albie Tabackman—p. 118 (upper left); David Hirsch—p. 118 (lower right); Bob Serating—p. 123 (lower left); Joseph W. Molitor—p. 123 (upper right); United Nations—p. 52 (uppermost left and middle right); Thomas Airviews—p. 124 (uppermost right); Ann Douglass—p. 125; Norval C. White—p. 126 (upper); Ben Schnau—p. 127 (middle); Elliot Willensky—p. 127 (bottom); Vano-Wells-Faglano—pp. 154, 157; Marcel Breuer and Herbert Beckhard, architects—p. 166 (upper three); Louis Checkman—p. 166 (bottom); Abbie Rowe, National Park Service—p. 170 (upper); Richard Nickel—p. 172.



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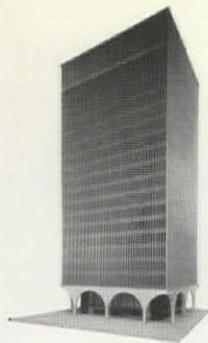
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AIA JOURNAL/MAY 1967 221



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Architects: Naramore, Bain, Brady & Johanson; Minoru Yamasaki & Associates.

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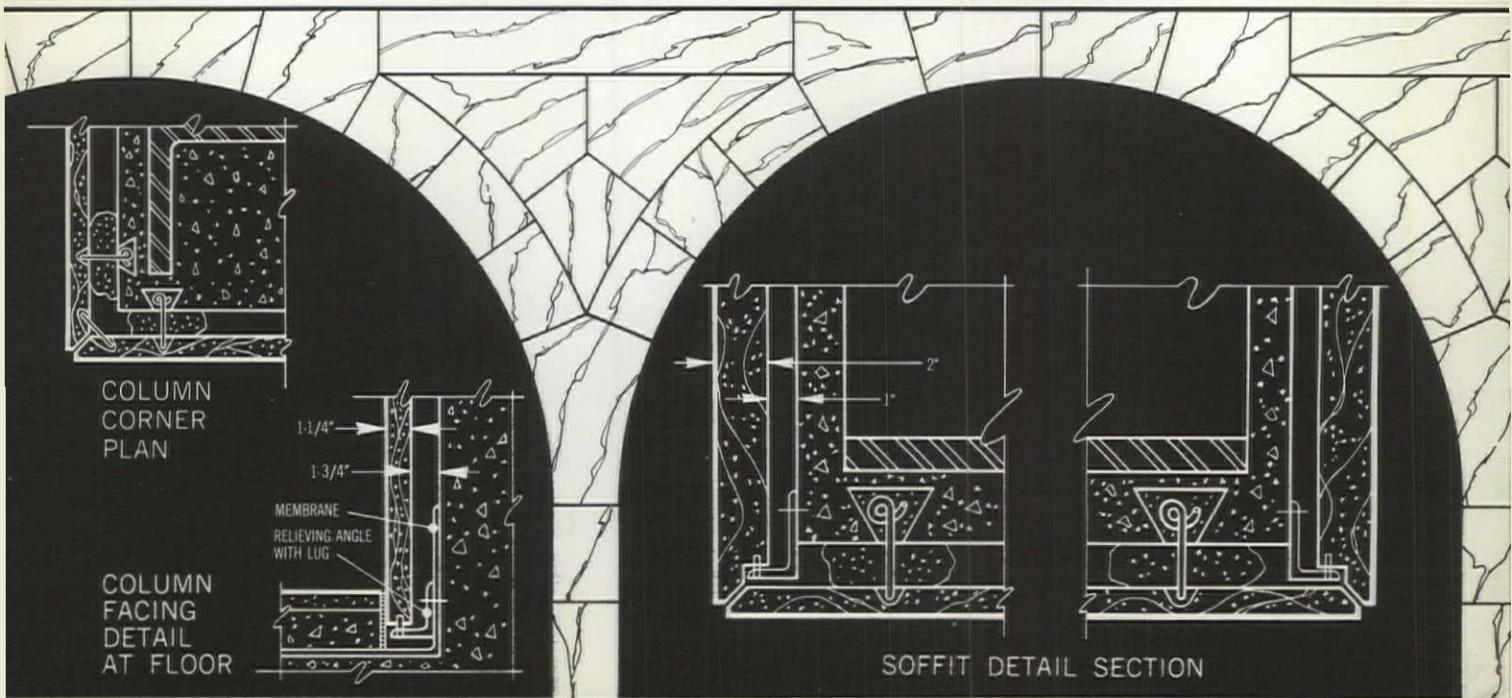
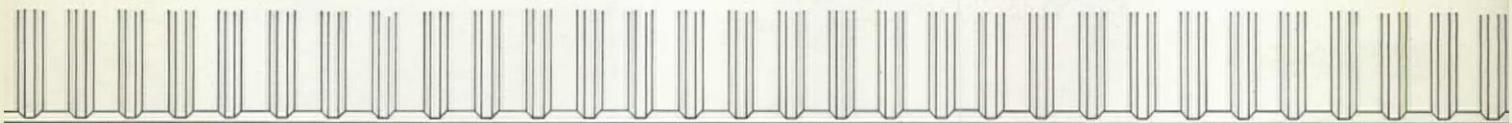
graceful arches and the interior stairs and walls; rugged Montclair Danby covers the lobby floor.

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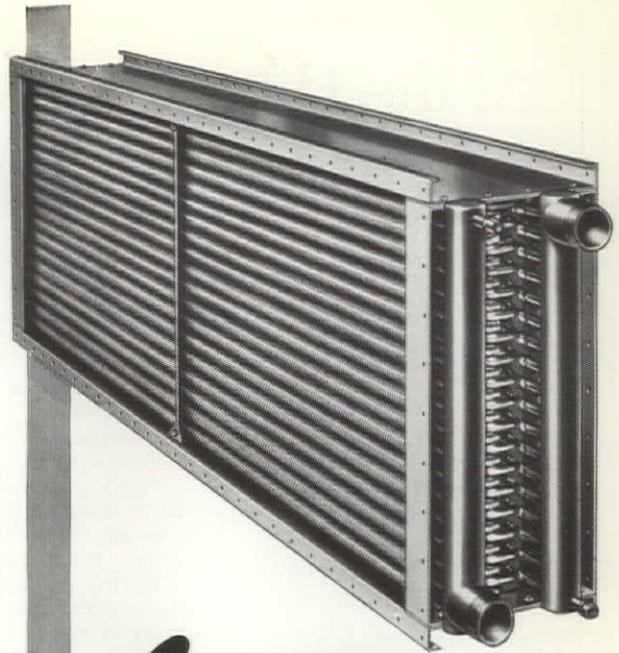
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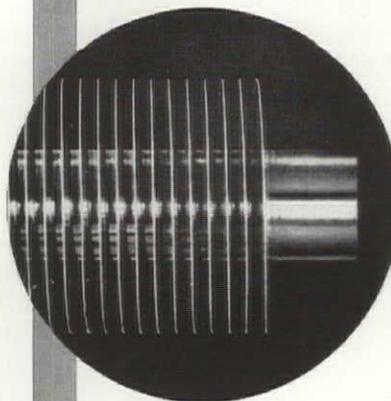
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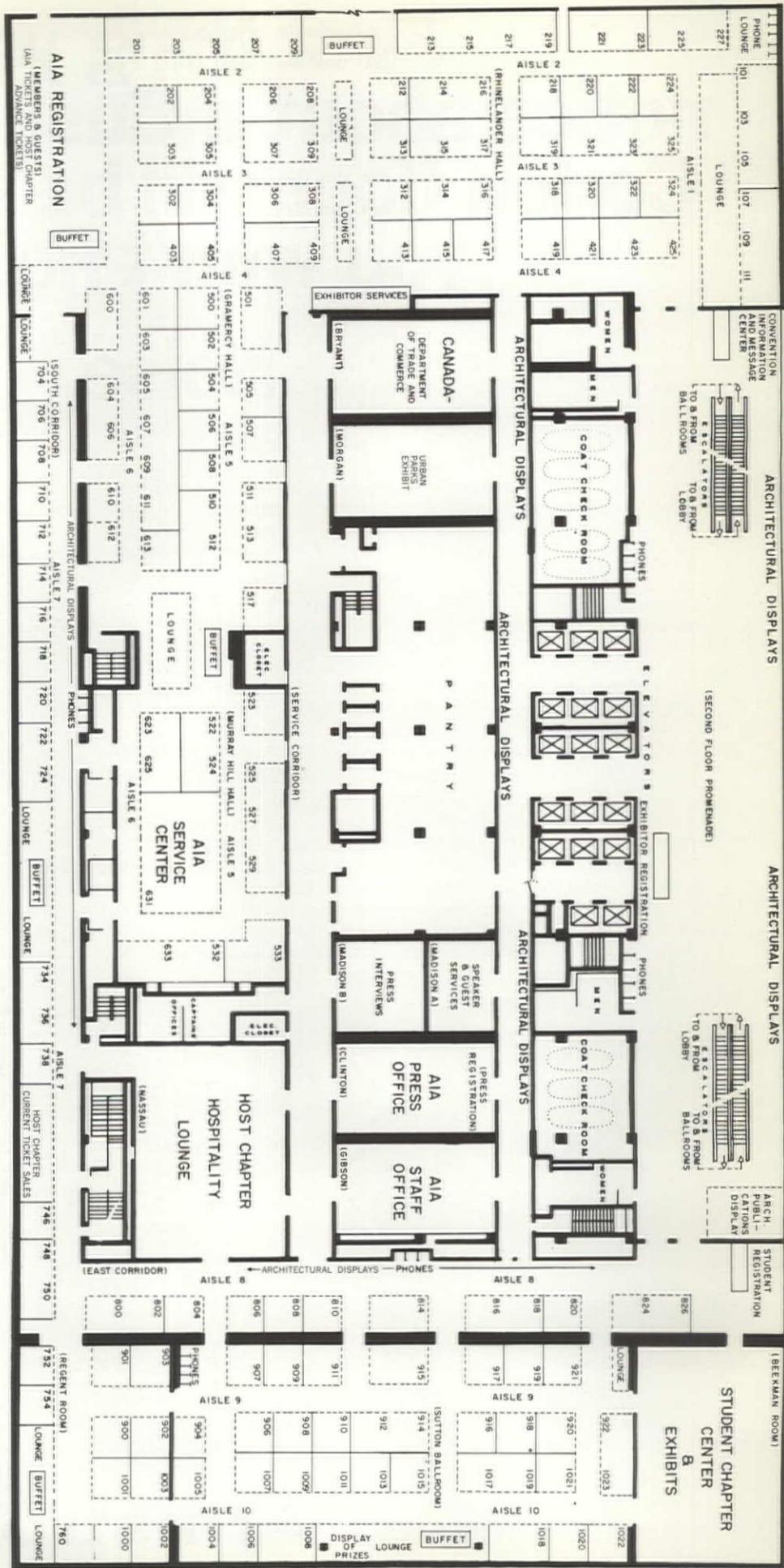
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