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VOL. XLVII, NO. 6

Comment & Opinion

A Lost Art: When the AIA JOURNAL sought a sketch of Rockefeller Center to lead off the May issue, little wonder that we turned to John C. Wenrich. For he did practically all of its renderings, having spent four years on the job. And this architectural illustrator, whose colorful work has been used to depict many of the country's most important buildings and events, including two New York World's Fairs (1939 and 1965), has some strong convictions about present-day trends.

What Price Change?—"I strongly favor progress in any field of endeavor," Wenrich told us the other day. "In the case of architectural rendering, which I have watched for years, I had hoped that the standard of this art would be raised but, it has only changed!"

"Change is not always progress, and the change in this instance has become somewhat of a cliché. The ruling pen has become the principal instrument in rendering architecture with brash color, and poisonous green trees the rule. In only a few instances can one man's work be distinguished from another. Renderings too often become stereotyped, hard, without atmosphere and devoid of any feeling. Think of the powerful, dramatic renderings of Hugh Ferriss and Ted Kautzky or the beautiful poetic feeling in the works of Otto

Eggers, Schell Lewis, Birch Burdette Long and Chester Price.

"Let me say here," Wenrich continued, "and I speak from many years of experience, that the atmospheric, poetic and dramatic approach is still the best for selling an architectural or site-plan design. I find that even the most calloused, hard-bitten client, promoter or developer has a little romance in his soul."

Pen Still in Hand: Now semi-retired—"I do only the projects that interest me"—at the age of 73, Wenrich more recently has done renderings of the John F. Kennedy Center for the Performing Arts in Washington, D.C., and of a new

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Cover

Integrated system of high-intensity lighting, air distribution and sound treatment in SOM's award-winning American Republic Insurance Co. Building, Des Moines, Iowa

\$54 million campus for the Rochester Institute of Technology (see cut), which honored him with an Outstanding Alumnus Award in 1965.

Other important commissions of Wenrich, who was graduated in 1917 with an art degree, include the Century of Progress Exposition in Chicago in 1933, the Ford Research Laboratories, the Gen-



eral Electric Research Laboratories, the Standard Oil Research Laboratories and the University of Rochester Oak Hill campus. He also designed the 1964-65 New York World's Fair stamp.

Among his numerous citations are the Birch Burdette Long Awards for Architectural Renderings in 1933 (first) and 1944 (second) and the first place prize in the Devos & Reynolds National Poster Competition in 1939.

A Mechanical Age: Further commenting on today's state of affairs, the native Marylander who resides in Henrietta, N.Y., likes to quote from Minor L. Bishop, AIA, "because he has said some things I wanted to say but has said them better." In his introduction to *Architectural Renderings*, published by the Architectural League of New York, Bishop observes:

"Recent history of architectural education indicates many attempts in the schools at new rendering techniques, some mechanized to the point of linear drafted trees and superimposed 'Zip-a-Tone' papers from the art store. Expressions ranging from a pointillism of pencil swirls to fine line semi-abstractions have appeared in the architectural press. One cannot help but feel that the artistic effect and drafting prowess are more to delight the delineator than the unsophisticated public that has to view the work. It must always be borne in mind that the primary purpose of the presentation is to visualize for a layman untrained in reading blueprints a realistic image of the proposed building."

It is good to note that there are at least a few John Wenrichs left to uphold the old tradition.

ROBERT E. KOEHLER

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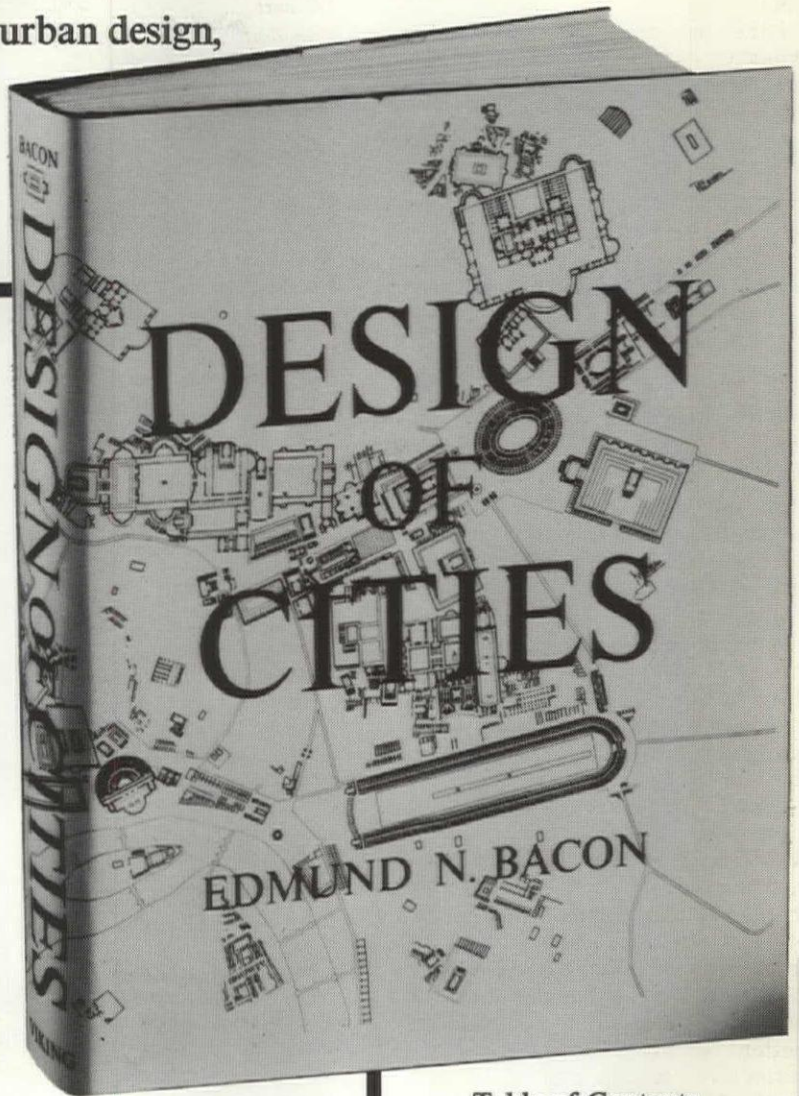
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From Athens to Brasilia, from Brunelleschi to Le Corbusier—
 a visual and critical history of urban design,
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 with photographs, paintings,
 engravings and diagrams.



In this splendid volume Edmund Bacon describes the historical development of the city, defining the general concepts fundamental to city design and revealing the relevance of past ideas to planning projects today. Roman, Greek, medieval, and Renaissance cities are illustrated with the drawings, paintings, and engravings of the great artists of the past. Handsome color and black-and-white photographs show the cities of later periods and of other cultures, including Peking, Brasilia, reconstructed Rotterdam, and the renewed Philadelphia where Bacon himself played the leading role. Numerous works by Paul Klee provide fascinating examples of the ways in which the artist can help one to understand the basic principles in city design.

Mr. Bacon's analysis of the way in which each city provided for the basic needs of its inhabitants and his predictions regarding the needs and solutions of the future furnish a rich background of ideas for new development and for the rehabilitation and renewal of old cities and town centers.

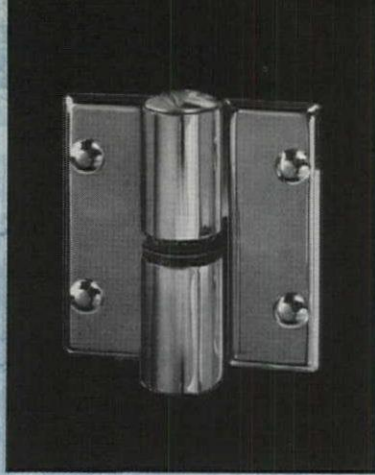
The superb illustrations used throughout make this an art book on the cities of the world as well as a guide to the changing forms of architecture and city planning as a whole. *33 color plates; over 300 photographs, engravings, maps and diagrams, many in two and three colors.* 296 pages. 8 1/8" x 11" \$15.00

DESIGN OF CITIES by **EDMUND N. BACON**
 Director of the Philadelphia City Planning Commission

THE VIKING PRESS 625 Madison Avenue, New York, N.Y. 10022

Table of Contents

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- The Nature of Design
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- Design Order of Ancient Rome
- Medieval Design
- Upsurge of the Renaissance
- Design Structure of Baroque Rome
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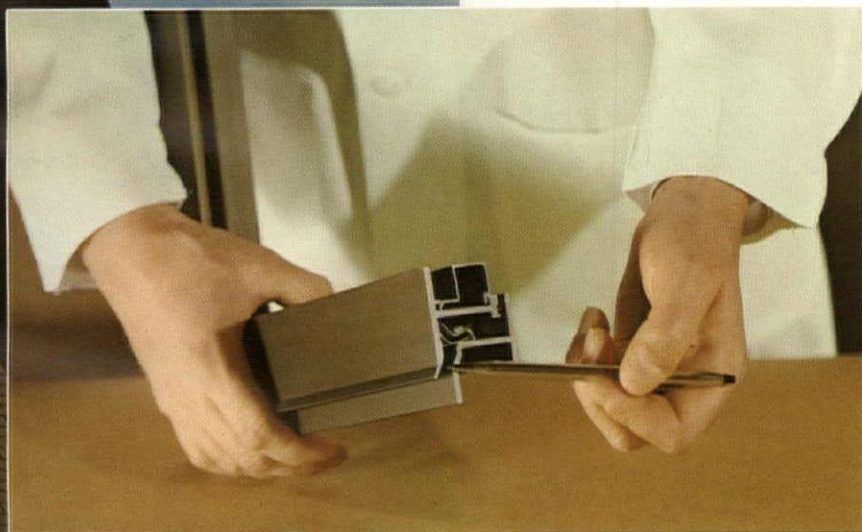
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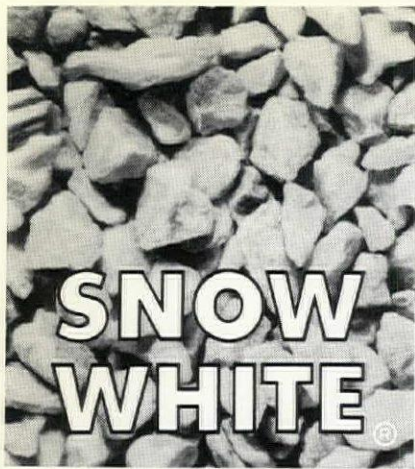
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sity of California; Hans Hollein of Vienna, Austria, winner of last year's award; William N. Morgan, AIA, of Atlantic Beach, Fla.; and William H. Kessler, AIA, of Grosse Pointe, Mich.

The Reynolds Memorial Award was established in 1957 as a memorial to the founder of Reynolds Metals Co. This year a companion award for community architecture—not involving any material—has been added. The winner will be announced next month.

The AIA administers both the materials and community architecture awards programs. Christ-Janer received the award check and sculpture last month from then-Institute President Charles M. Nes Jr., FAIA, and R. S. Reynolds Jr., chairman of the board of the sponsoring company.

Feeder Buses Need Help In Off-Peak Hours

A feeder bus service will attract customers, but it has to have a substantial number of riders during off-peak hours or be subsidized if it is to provide peak-hour shuttle service at reasonable fares.

This is the conclusion of a two-year, \$148,740 transit test in Rockland County, N. Y., which was assisted by the Department of Housing and Urban Development (HUD paid two-thirds of the cost).

The demonstration involved a residential area about 30 miles from New York City and provided short-haul service to the Tarrytown Station of the New York Central Railroad. It was to determine the effects of improved feeder service on journey-to-work and mid-day traffic in an outer ring of a metropolitan area.

According to the report, nearness to homes and coordination of the bus schedules with rail service helped to draw more than half the patrons away from the family auto.

Colorado Chapter Sets Up Shop in Larimer Square

The Colorado Chapter AIA is headquartered in Larimer Square, the old block of masonry buildings recently renovated and turned into a fashionable Denver shopping area.

John D. Anderson, chapter president, noted at the opening that the offices represent the first perma-

nent quarters in the chapter's 75-year history.

Denver Mayor Tom Currigan and urban renewal officials were honored guests at the opening, an occasion Anderson took, on behalf of



Office windows: three left of "L"

the chapter, to endorse Denver's Skyline Urban Renewal Project.

Mrs. Barbara L. Light, who became the chapter's first full-time executive secretary earlier this year, staffs the office. The Larimer Square project was described in the AIA JOURNAL (June '66).

Boycott Bill Up; Product Involvement Is Feared

The Institute in a letter to the chairman of the House Special Subcommittee on Labor has argued against the passage of legislation which would permit secondary boycotts at construction sites.

"The American Institute of Architects opposes H.R. 100 because we believe that permitting secondary boycotts... will materially interfere with the orderly construction process, to the great detriment of the public," Rep. Frank Thompson Jr. (D-N.J.) was told in the April letter signed by Charles M. Nes Jr., FAIA, then Institute president.

The proposed legislation, which would amend the Taft-Hartley Act to permit secondary boycotts, is also opposed by other national organizations including the Associated General Contractors, the National Association of Home Builders and the US Chamber of Commerce.

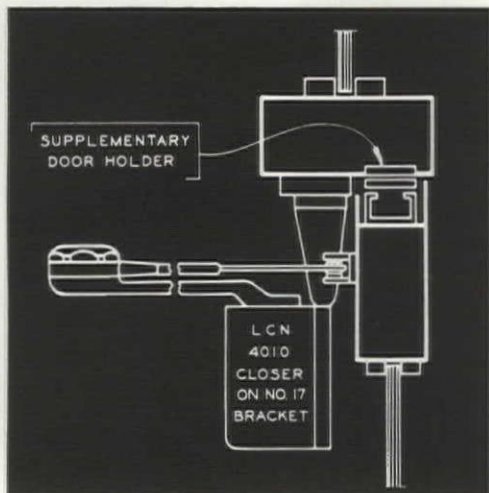
The measure, under subcommittee study for several months, was expected to go to the floor of the House by June 1.

Two 5-4 decisions of the Supreme Court, also in April, upheld a National Labor Relations Board ruling that contracts and boycotts aimed at "preserving the work"—and directed against preassembled com-

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ponents—should be exempt from secondary boycott prohibitions of existing legislation even though they result in product boycotts affecting interests beyond those of the primary employer.

This, in fact, is what the Nes letter warned of. "Despite assurance by proponents of H. R. 100 that product boycotts would not be sanctioned," Nes wrote, "the AIA believes that this would be an indirect effect of the legislation. If the bill became law, an architect would be well advised to select only those building materials (i.e., union made) which would not incite a labor union to 'refuse to perform services' at the building site. This would have the undesirable effect of tending to deprive an architect of his free choice in the selection of building materials. It would be exceedingly difficult for an architect to serve his client under such an onus."

Reporting on the Supreme Court's action, a publication of the National Association of Manufacturers commented editorially that "the decisions will doubtless be extremely costly to the American public until corrected by Congress."

Though opposed to H. R. 100, the AIA is seeking to achieve, at the minimum, the exclusion of product boycotts from the bill's coverage.

Marble Institute Program Bestows Initial Awards; SOM Wins Top Honors

Top honors in the first Marble Institute of America Awards program have gone to Skidmore, Owings & Merrill, New York, for the Beinecke Rare Book and Manuscript Library at Yale University.

Besides this award, four regional awards were made in the AIA-MIA program established to "encourage excellence in architectural design and to recognize excellence in the use of marble for building purposes." The regional winners were:

Northeastern—George Nemeny, FAIA, New York, for an addition to a residence in Mt. Kisco, N. Y.

Southern—Lyles, Bissett, Carlisle & Wolff, Columbia, S. C., for the Rutledge State Office Building in Columbia.

Midwestern — Smith, Hinchman & Grylls Associates, Detroit, for Detroit's First Federal Office Building.

Western—Wilson, Morris, Crain & Anderson, Houston, for the Kel-

Aspen Conference to Have Varied List of Speakers

"Order and Disorder" is the subject of the 17th annual International Design Conference in Aspen, June 18-23.

Among this year's speakers are Piet Hein, Danish poet, mathematician and scientist; Peter Ustinov, producer, playwright and actor; Dr. Jacob Bronowski, Salk Institute scientist; Stan VanDerBeek, artist and underground film maker; Moshe Safdie, Habitat 67 architect; Paul Heyer, architect, city planner and author of *Architects on Architecture*; Jerzy Soltan, architect and educator; Max Bill, Swiss architect, artist and author; Theo Crosby, city planner, architect and author, of London; and Christopher Alexander, educator, author and architect.

Eliot Noyes, FAIA, president of the International Design Conference in Aspen, termed the list of speakers "extraordinarily varied" and added that the conference will be enlivened by the showing of experimental films and the construction and flying of a "giant kite" by a designer of space frames.

Chairman of the 1967 program is Craig Ellwood. Additional information on the conference is available from the IDC in Aspen, Box 664, Aspen, Colo.

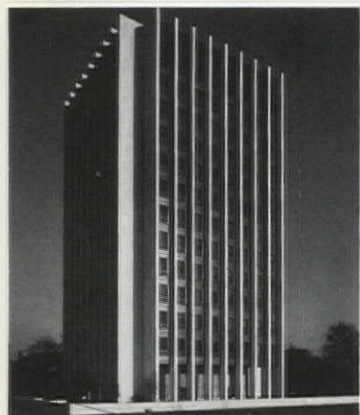
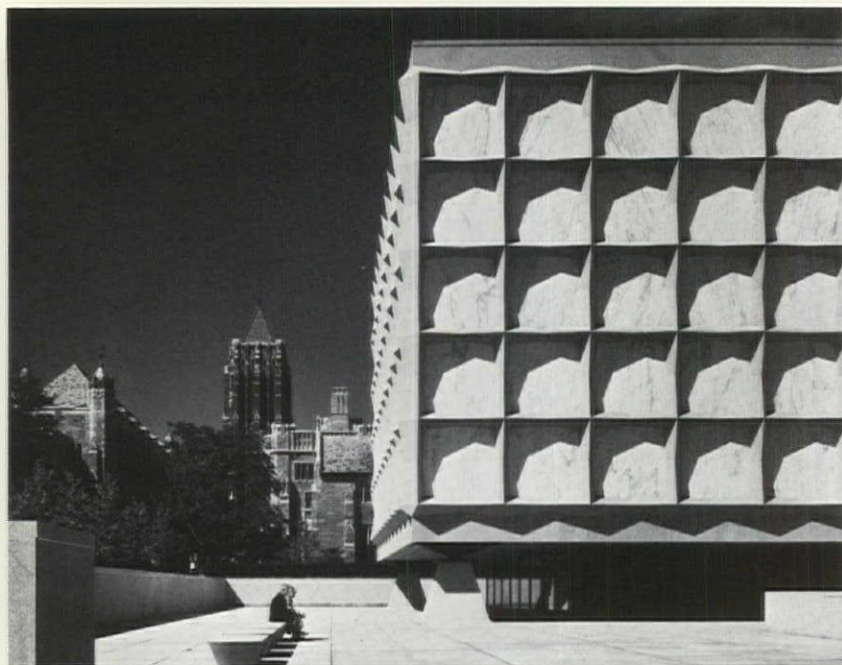
ASTM Committee Calls For Papers on Stainless

Papers are invited for a symposium on Stainless Steel in Architecture to be held next summer (June 24-25, tentative dates) in San Francisco under the auspices of a committee of the American Society for Testing and Materials.

"More widespread use of stainless curtain walls, mullions and spandrels is being considered in government buildings, office buildings and other high-rise structures, and the subject should prove to be timely and interesting to a broad group of architects and engineers," said R. B. Gunia, chairman of the symposium.

Papers dealing with the following are invited: the physical and mechanical properties of the various forms of stainless steel applicable in structures and buildings; methods of fabrication and construction of curtain walls, doors, door frames, windows, window frames and similar components; utilization of stainless in various

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sey, Leary, Seybold Clinic in Houston.

An outstanding feature of the Beinecke Library is its translucent marble window panels which hold back light from portions of the spectrum that could be harmful to the library's priceless possessions. Accepting the award for the firm were Gordon Bunshaft, FAIA, and David Hughes, AIA, who headed the design team.

All awards were in the form of scholarship funds with the winning architects selecting both the deserving student and the school of architecture. The top award is a

Counter-clockwise from top: Beinecke Library; Rutledge State Office Building; Kelsey, Leary, Seybold Clinic; the First Federal Office Building and addition to the Mt. Kisco house.

\$4,000 scholarship, and the four regional scholarships are \$1,000 each.

Jurors were Jules Gregory, AIA, Institute director from the New Jersey Region; Ray D. Crites, AIA, Cedar Rapids, Iowa; John Desmond, FAIA, Baton Rouge, La.; Prof. R. Gommel Roesner, AIA, of the University of Texas; and Lemuel McCory, AIA, Manson Marble & Granite, Inc., New Orleans.

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Town center, Columbia (model).

The Community Builders

Edward Eichler and Marshall Kaplan

This significant study describes in detail the development of new towns in America. It deals with their physical and financial dimensions, operating methods, and relationships with government entities as well as with planning concepts in general. Serious problems are posed for those concerned with public policy. The book's emphasis is on California, but includes detailed discussions of Reston and Columbia, two of the largest new communities located near Washington, D.C. This book will reward the attention of public officials and scholars in urban development, planning, and land economics.

\$5.50



Residential area, Reston.

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architectural art forms—sculpture, wall murals, mobiles, etc.; erection techniques for utilization of the various architectural components; observations on existing architectural uses of stainless (a subcommittee has been making regular inspections of stainless buildings in the US); and the care, maintenance and upkeep of stainless in buildings.

Those wishing to submit papers are asked to send three copies of abstracts (500 to 600 words) before Oct. 1 to Gunia, US Steel Corp., 525 William Penn Place, Pittsburgh, Pa. 15230.

Adirondack Strip Wins Scenic Road Award

A 23-mile stretch of New York's Adirondack Northway, Interstate Route 87, has won the Scenic Highway for 1966 Award of *Parade* magazine.

The award plaque goes to the New York Department of Public Works and a scroll to Frank J. Fuller, district engineer who supervised the design. The Warren County, N. Y., Council of Chambers of Commerce, which nominated the highway, receives a \$500 bond.

The winning stretch runs from Lake George to Potterville. The jury made special mention of four other highways — Interstate Route 91 in Connecticut, New Haven to Rocky Hill; Interstate Route 75 in Florida, State Route 578 to Hickory Hill Road, 30 miles north of Tampa; Interstate Route 81 in Virginia, Newburg to Christianburg; and Interstate Route 40 in Tennessee, near the Tennessee River crossing.

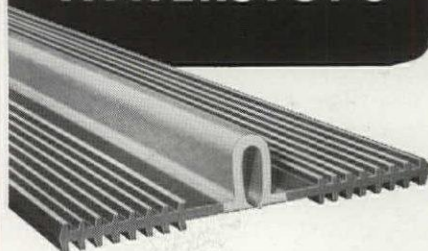
For the first time the panel of judges singled out an urban highway for special praise—MacArthur Freeway in Oakland, Calif. The jury lauded this road as an example for highways cutting through built-up neighborhoods and suburbs to follow.

Judges were John Gibbons of the Automotive Safety Foundation; Harland Bartholomew, representing Urban America; Stanley Abbott of the American Society of Landscape Architects; Charles N. Brady of the American Automobile Association; and Jack Ritter of *Engineering News-Record*.

The Northway runs from Albany to the Canadian border and many of the Expo 67-bound use it.

Continued on page 31

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Circle 262 on information card

Inigo Jones Exhibition On Tour in America

An extensive exhibition of the theatrical designs of Inigo Jones—including 119 master drawings, five stage set models and two costume reconstructions—is on tour in this country.

Jones' designs for the royal masques of the first half of the 17th century introduced the proscenium stage to the British theater and were responsible for the invention of complicated stage machinery.

Costume and scenery designs by Jones have long been of interest, not only for the images they evoke of the great Stuart masques but for their intrinsic quality as master drawings. The exhibition will be shown next in Los Angeles, July 17-Aug. 31.

Urbahn Heads Trade Board; 4 Others Assume Posts

Max O. Urbahn, FAIA, is among five architects who recently assumed positions of responsibility in organizations both within and outside the construction field.

Urbahn, who has just joined the AIA's Board of Directors as the New York Region's representative, has been elected president of the New York Board of Trade.

It was Urbahn who established within the Board of Trade an Architectural Advisory Council which furnishes the board with professional guidance on New York City environmental questions.

The council's chairman is another Institute Fellow, Lathrop Douglass, who, by the way, was elected to the Board of Trade's board of directors.

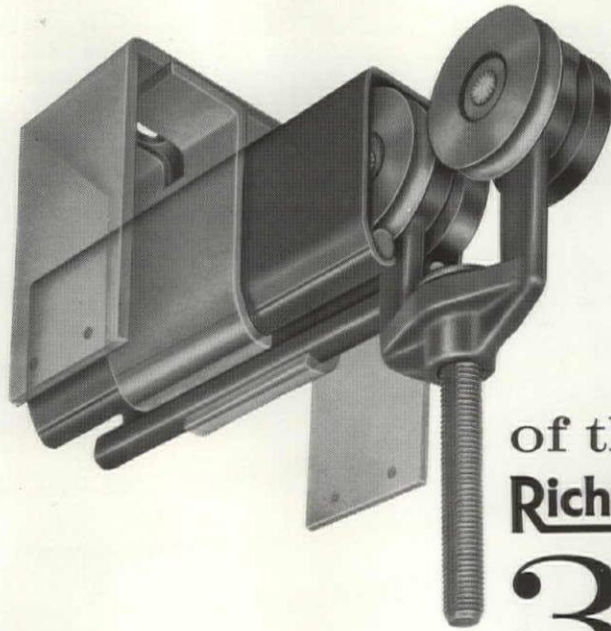
Charles Luckman, FAIA, member and former chairman of the Board of Trustees of the California State Colleges, has been named by Gov. Ronald Reagan to the Educational Commission of the States.

The commission is made up of some 40 states and territories and functions as "a partnership between educational and political forces" and as an information exchange, forum and research vehicle.

Thomas B. Battles, AIA, has been named executive director of the Chicago Chapter and the Illinois Council AIA. He has worked for several architectural firms in the Chicago area and more recent-

Continued on page 38

Hidden Secrets



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Operable Classroom Wall

The hanger and track above are vital parts of the Incomparable 380 that you never see, yet they are the principal reason why the 380 operates so easily that a 90-pound teacher can open or close it in less than 30 seconds.

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Beauty that endures

Ceiling of the Royal Palace, Corfu Island, Greece, 1819,
designed by General Sir George Whitmore

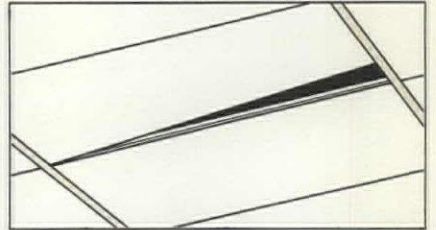


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In designing this domed ceiling set with plaques of wedgwood blue, General Sir George Whitmore blended English Regency style with a true respect for classic Greek architecture. The result — an exceptional combination of beauty and superb lighting.

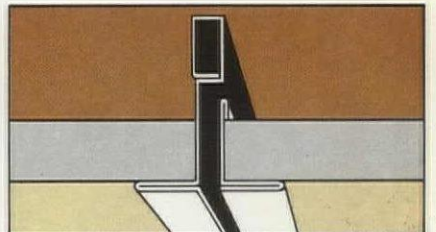
Today, you can achieve a blend of beauty and functional objectives — air distribution, lighting, sound control, fire protection — with the help of *Conwed* ceiling products.

For example, Ft. Lauderdale architect George Storrs, Jr. chose *Lo-Tone*® mineral slotted ventilating ceiling board for the Moonraker Restaurant, Ft. Lauderdale, Florida (shown above). These *Lo-Tone* panels, in the Fissura pattern, provide a distinctive combination of beauty, acoustical control and efficient air distribution.

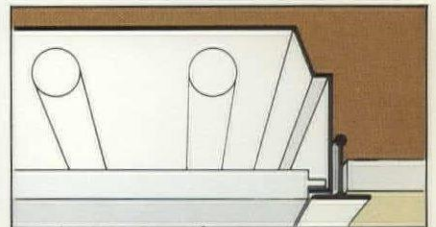


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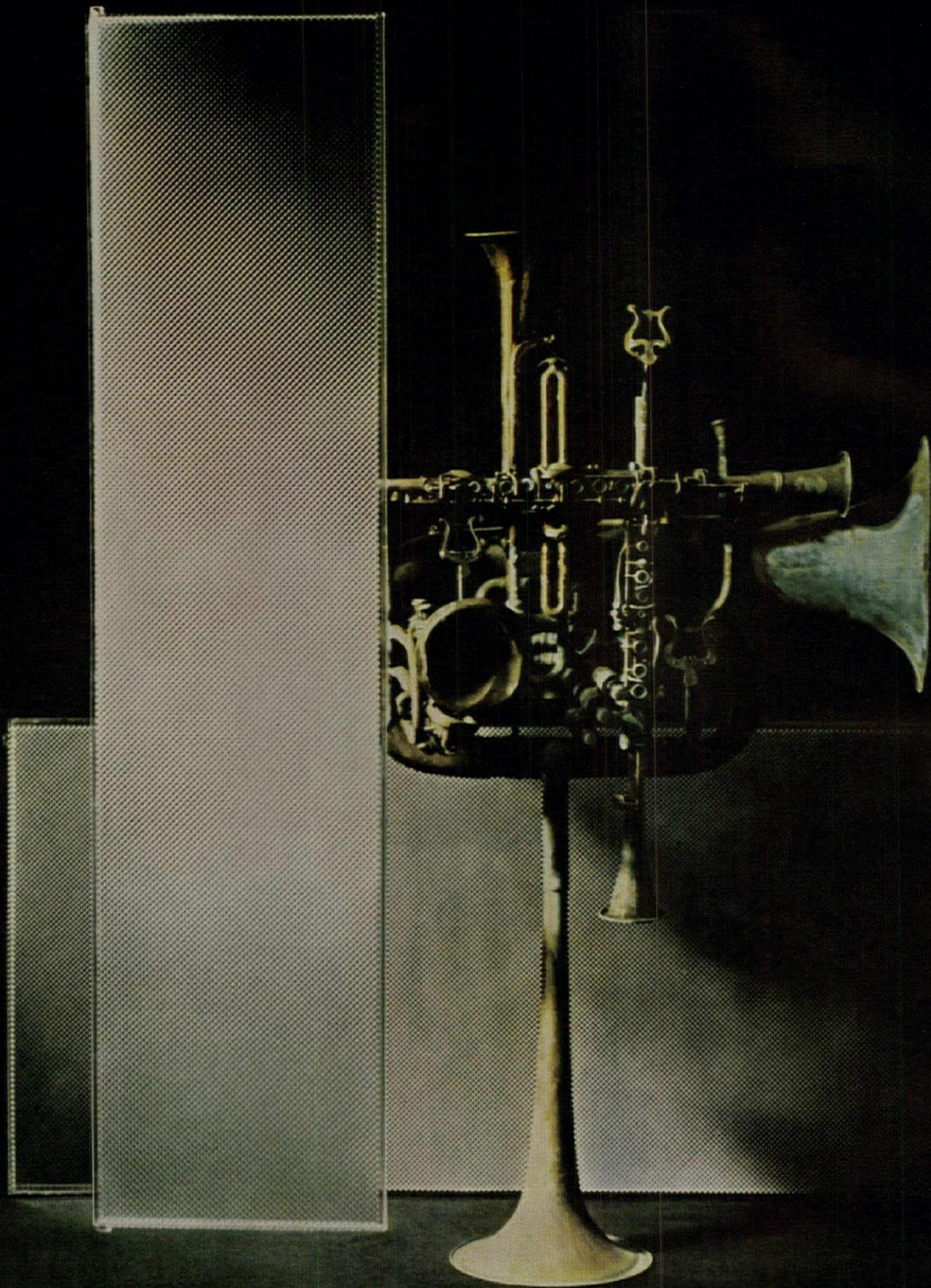
Fewer problems with air leakage *Conwed* Series 7000 recessed troffers will accept frameless lenses, fit right in exposed suspension grids. And these air tight troffers assure better installed ventilating ceiling systems.

Information please See our Sweet's file AIA 39-B. Complete product application information and samples are available from your *Lo-Tone* and *Conwed* products representative or acoustical contractor. To get your job started, just give us a call.



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BY WILLIAM H. SCHEICK, FAIA
Executive Director

The Future of the Creative Process

We have a number of things going for us that are entirely future-oriented. In the field of education, the major thrust of the Education Research Project is supplemented with related probes into licensing, continuing education for architects and technicians' training. In practice, we are completing the study of the cost of architectural services and continuing the examination of emerging techniques.

Recently we undertook an opinion survey to give us a sound base for better public relations programs. The survey reached decision makers at several levels of potential architectural clients — from big business and government to local chambers of commerce and school boards.

"What will the architect be in 1975? 1985?" This is the dominant question behind all this inquiry. Rather "What must he be?" since we believe he must respond to forces and trends developed by a changing society and its economy.

To supplement all other future-oriented projects and to study the whole problem, President Nes appointed last fall the Committee on the Future of the Profession.*

The charge to this committee is as broad as that given to the Committee on the Profession almost 10 years ago. It is to determine through an orderly process 1) what changes are taking place and where they are leading, 2) their effect upon architects and 3) what the profession must do to seize opportunities or avoid pitfalls in the process of change. No time limit was set for the committee's work except recognition of the speed with which changes are taking place.

In its first meetings last fall, the committee recognized that the breadth of subject matter could defuse its efforts. Changes are taking place in the economics of building, in technology, in the scope of projects which have grown to the scale of urban design. Change is caused by legislation and government programs. Society itself—and, more precisely, urban society—is chang-

ing in its needs and expectations, thereby causing all other changes to take place.

The committee sought for a place to start that might resemble the master loop in a fishline tangle. It considered the conference technique but wanted to avoid "symposia" on such broad subjects as "urban troubles," "new towns," "systems technology" or the like—so popular today, yet so generally inconclusive.

A decision was made that our key subject should be "the future of the creative process for man-made environment."

The creative process! What is it? We defined it as the series of actions that must take place to initiate, conceive, render feasible, finance and construct an environmental facility—from a house to a town. Unless all of these actions take place, no building project becomes a reality. The architect is—or should be—right in the middle of it.

Who is involved? Until not too long ago the parties to the process were the owner-user of the proposed project, his architect and a contractor. But look what has happened in a few years! An entrepreneur is often the prime initiator. The former financier for the owner may become the investor-owner or entrepreneur himself. Large corporations are "diversifying into building construction," claiming to be able to assemble all the necessary know-how in a large scale systems approach. Many aspects of the process are affected by the government's actions which spur or regulate housing and urban development.

The creative process has suddenly become crowded with active participants, some friendly to architects, some hinting that they are "obsolete." Here, in the actions and interactions of these parties, we saw the place to probe first for clues to the future of the profession.

Early this year, a timely article in *Fortune* (Jan. '67) led us to a group of social and physical scien-

tists more broadly interested in the future than we. Calling themselves "futurists," these people say that the physical scientists are showing the way not only to project the future but to manage the trends that are shaping it. To do so one must positively identify trends, evaluate probabilities and match the management of trends with achievement of desired goals. Dr. Olaf Helmer and T. J. Gordon of the Rand Corp., in their paper on social technology, proposed means to apply futures studies to the broad fields of socio-economics which envelop the man-made environment. The committee decided to include this kind of expertise in its study. The first stage of the committee's work was culminated in April with a two-day exploratory conference at the Airlie House Conference Center in Virginia. The conference was severely limited in size to insure an intimate dialog between the committee and several men of wide experience in certain fields of the creative process. These participants represented:

- a large corporation that builds as an owner-user for itself
- a large building owner that has diversified extensively into entrepreneurial building for others
- a real estate-building management consultant who is an adviser to owners on building projects
- a major banking institution which finances building projects
- a real estate research corporation
- a corporation specializing in the statistics of building economics
- the field of scientific futures studies.

When this page was written, the conference transcripts were yet to be edited and developed into a report. We plan to print the essence of the findings in the *JOURNAL*. We feel sure that some of the answers on the future of the profession are to be found in analyzing the creative process. □

* The Committee: L. W. Pitts, chairman; R. W. Cutler, vice chairman; L. de Moll; S. Hurst; G. McCue; D. McKinley; W. H. Scheick; C. M. Nes, ex officio; R. Durham, ex officio.



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- John Knox Presbyterian Church, Marietta, Ga.
- Museo de Arte de Ponce, Ponce, Puerto Rico
- Sea Ranch Condominium 1, Sea Ranch, Calif.
- Municipal Services Building, Philadelphia
- First Federal Office Building, Detroit
- Ridgeway Dormitories (WWSC), Bellingham, Wash.
- American Republic Insurance Co., Des Moines, Iowa
- Redwood National Bank, Napa, Calif.
- Boreal Ridge, Truckee, Calif.
- Vannevar Bush Center (MIT), Cambridge, Mass.
- Dormitory & Commons (Clark), Worcester, Mass.
- Jesse H. Jones Hall, Houston, Tex.
- Amphitheater & Plaza (Riis Houses), New York City
- Beinecke Rare Book Libr'y (Yale), New Haven, Conn.
- Mauna Kea Beach Hotel, Island of Hawaii
- St. Bede's Priory, Eau Claire, Wis.
- Learning Center (Eaglebrook), Deerfield, Mass.
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All kinds of technical data under one roof

Of 317 submissions reviewed, about 175 were eliminated from further consideration on the first day; and of these, less than a score could be categorized as "weak" or "poor" buildings. Thus the general level of competence seemed to us to be very high, indicating a mature professional performance.

The second day's judging reduced the entries to approximately 45, and these were thoroughly studied, debated and analyzed down to the final 20 winners—all with the single title "Honor Award."

The perennial problem of evaluating small, low-budget buildings against large, prestigious projects was a worrisome problem in this year's program, and much debate was concentrated in defense of the former.

There was a marked definition of architectural philosophies motivating buildings, and we found ourselves continually adjusting our individual thinking to the competitor's objective and, architecturally, what he wanted to do and why he wanted to do it.

The results of our efforts can only be, at best, opinions and impressions of five architects representing Hawaii, Texas, Illinois, Georgia and Colorado regarding submissions from 36 states and territories and seven foreign countries. It can only be hoped that we have, as intended, recognized each building's appropriateness to its function, its clarity of structure, its use of materials and detailing, and its suitability to time and place.

The 1967 Honor Awards

Report of the Jury

We were delighted that the needs of people were acknowledged in the majority of the projects, and we premiated one which made only a humble architectural statement but was so full of the spirit of gaiety, goodwill and wholesomeness that its recognition became mandatory.

We were asked by the Institute's Committee on Esthetics to study the desirability of having each local chapter appoint a committee to visit entries in its vicinity and report its findings so that the jury would not have to rely completely on photographs and be unduly influenced by the photographer's skills.

Three chapters were requested to make such reports as "guinea pig" runs, and additional data was provided to the jury on some submissions.

Since this data was available only in a few cases, the jury decided that in the interest of fairness it would not be considered in the judging process.

The jurors did, however, evaluate such a device as a possible

procedure and reported its consensus orally to the commissioner on design. The jury felt that the resulting data in its present form was of little or no assistance, making these specific observations:

1. Any supplemental material should be completely "factual" without any "scoring" by the local committee which might prejudice the jury's action. The nature of this material should be such that judgments by the local committee are not required.

2. All references as to "esthetic quality," etc., should be avoided, and only facts the jury cannot know from the submission should be provided.

3. Color slides of the building from all angles, including pertinent neighborhood features, are of real value.

4. Some system of elimination of the number of entries would be helpful. Regional programs with regional juries determining the entries which are good enough to be forwarded for national consideration would certainly be a rational approach.

5. If the program's objective is to single out and premiate "excellence," then the judging must be stern, the number of awards realistic and the competition meaningful. Programs by chapters too small to create such competition because of a field of entries should not be condoned.

James M. Hunter, FAIA, Chairman
R. Max Brooks, FAIA
Vladimir Ossipoff, FAIA
Joseph N. Smith, AIA
Philip Will Jr., FAIA



Skidmore, Owings & Merrill

Office Building and Residence
Banque Lambert
Brussels, Belgium

"The highly disciplined elegance and sophisticated detail," reflected the jury, "make this a truly great office building." It is visually divided into three main areas: a large glass-enclosed ground floor for entrance and banking halls; seven stories of office space arranged around a central core; and a residential penthouse. Two basements located below the podium level house bank vaults, employee facilities, parking and mechanical rooms. The building was kept relatively low to maintain a scale relationship with the others along the major boulevard. The jurors also commended the "fresh and accurate structural expression," designed on a small module to further enhance the overall scale. The cross-shaped column units, tapered vertically to reflect the larger bending movement at the floor slab, rest one above the other on polished stainless steel joints midway between floors. Loads are carried directly down the facade of the main office block to cantilevered beams which transfer these loads to columns set back 15 feet at the ground floor.

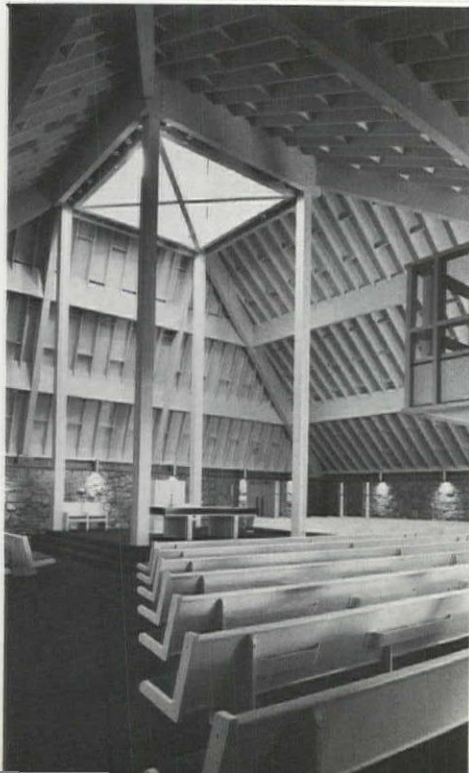
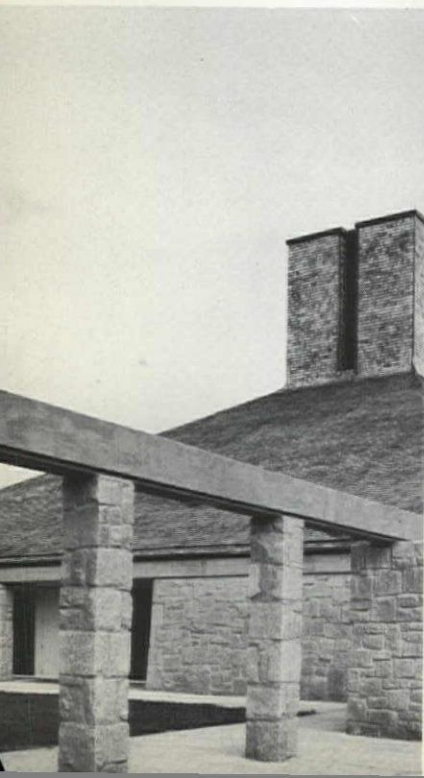
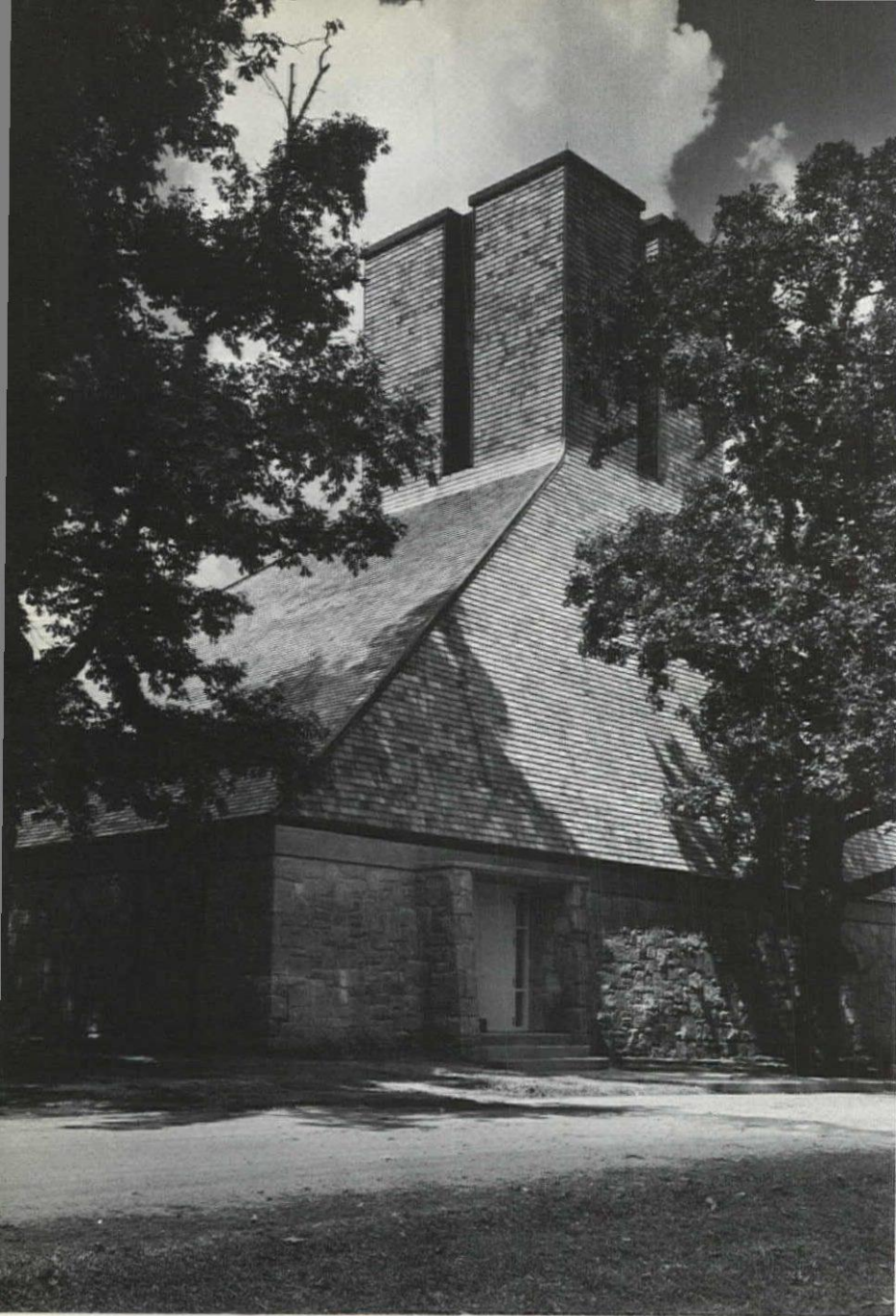


Structural Engineer: Paul Weidlinger; **Mechanical Engineers:** Syska & Hennessy, Inc.; **General Contractor:** Entreprises Blaton-Aubert.

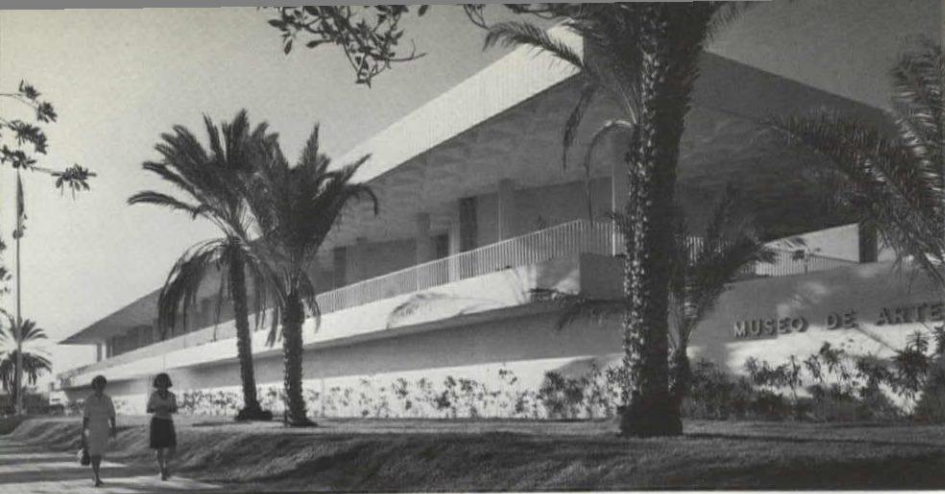
Toombs, Amisano & Wells

John Knox Presbyterian Church
Marietta, Georgia

As the first phase of new construction for a total religious plant including two existing buildings, the congregation requested a dignified and unpretentious design incorporating only that decoration which is a functional part of the worship service. The architects attempted to achieve an intimate atmosphere by establishing two "meeting rooms": an exterior court and the church itself, the former acting as a transition from the street and from the rest of the complex. The concept of the sanctuary area was based upon the emphasis of the service so that out of the communion table-pulpit area rises the structure as well as the visual alignment of the U-shaped seating arrangement. The result, in the eyes of the jury, "is a simple, forthright and unpretentious statement of the small parish church. Its thoughtful craftsmanship contributes significantly to its quality."



Structural Engineers: Chastain & Tindel; **Mechanical Engineers:** McLendon & Holbrook; **Electrical Engineers:** Bush-May & Williams; **General Contractor:** Wesley Moran & Company.



Edward Durell Stone

Museo de Arte de Ponce
Ponce, Puerto Rico

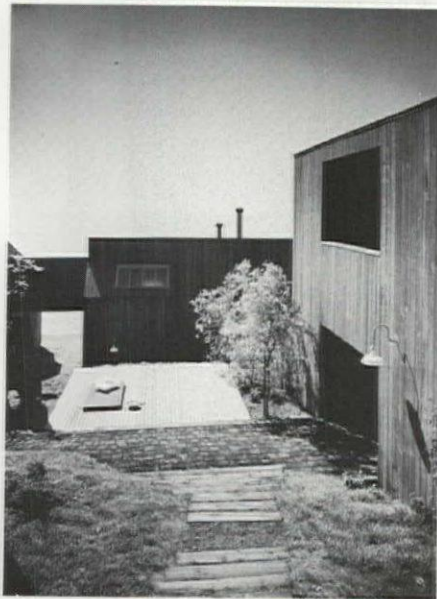
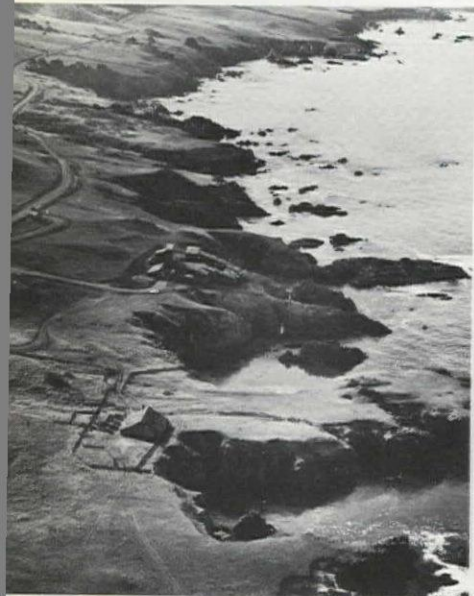
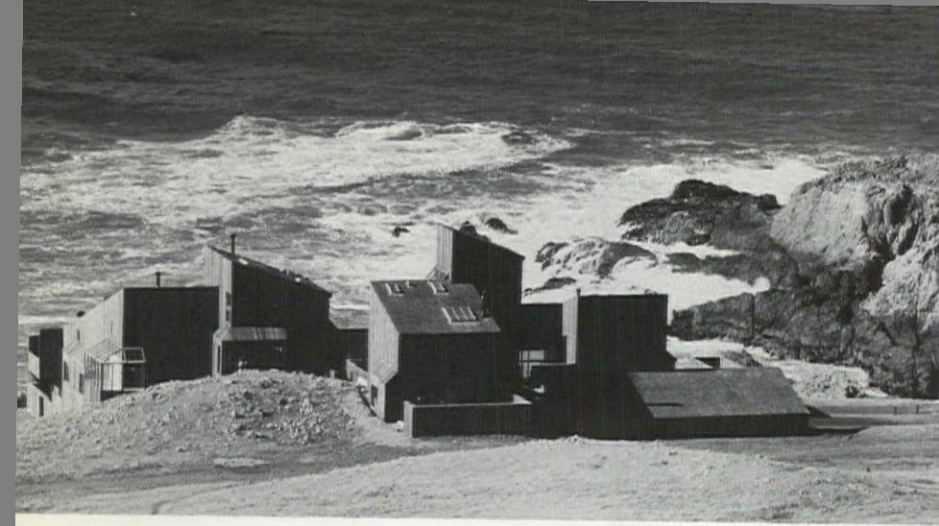
Built to house the collection of a distinguished industrialist and civic leader, the museum displays its world art on the second floor in a connected series of seven hexagonal galleries surrounded by a white terrazzo terrace. The architect selected this particular shape to permit the viewer to see many paintings in relation to one another and at the same time to enjoy a feeling of spaciousness. Eighteen-sided skylights over each of the galleries flood them with natural light. The first floor contains offices, an art reference library and galleries for the Puerto Rican collection and for traveling exhibits. Surrounding the museum on three sides is a wall enclosing the landscaped gardens and a small open-air theater. "Cool, white and tropical, the dignified and mannered statement of this building fits it well to the climate and cultural needs of its location," the jurors agreed.

Structural Engineer: Paul Weidlinger; **Mechanical and Electrical Engineers:** Consentini Associates; **Landscape Architect:** Edward Durell Stone Jr.; **Architect for Construction Supervision:** Carlos Sanz, AIA; **General Contractor:** Edward J. Gerrits de Puerto Rico, Inc.

Moore, Lyndon, Turnbull, Whitaker

Sea Ranch Condominium I
The Sea Ranch, California

The client, who purchased a 5,000-acre sheep ranch which stretches along 10 miles of California coast north of San Francisco, requested the architects to develop a particular site for vacation houses "without destroying the poetry of the place." They were given 35 rugged, bare acres between the road and the sea on which to design condominium units—at least four per acre—which would cluster together to leave most of the site open. The initial group of 10 serves as a model from which vacationers will order similar or modified units in subsequent clusters. Cars are parked in a walled compound, and the units are placed around a courtyard. Some have private gardens or greenhouses, and all face outward as well, toward the panorama along the coast or down into a pocket bay to the west. In the jury's opinion, the project is "good fun, fresh and wholesome—a place for congenial people intent on a few hours, or a day or two, of escape from the city and its problems."



Structural Engineers: Davis & Morreau, Associated; **Landscape Architects:** Lawrence Halprin & Associates; **Graphic Designer:** Barbara Stauffacher; **General Contractor:** Matthew D. Sylvia.



Vincent G. Kling & Associates

Municipal Services Building
Philadelphia, Pennsylvania

The architects were asked to create a building for 2,800 employees of 24 separate city departments and agencies on a block of parkland immediately northwest of the existing City Hall. Essential to the design concept is the site development plan which simplifies the complex traffic pattern and provides additional open space by creating one new plaza of appropriate scale and by expanding another. The building itself is composed of a great open concourse, occupying almost the entire block below street level, and a 16-story cross-shaped tower above. The public concourse lobby is ringed by service counters where as many as 2,000 persons at a time may apply for licenses, pay water bills, etc. An open landscaped court is on the east side of the block. "A forthright statement of its municipal function," stated the jury, also noting that the building "is sympathetic to its surroundings and is sensitively detailed with its traditional neighbors."



Structural Engineers: McCormick-Taylor Associates; **Mechanical and Electrical Engineers:** Charles S. Leopold, Inc.; **General Contractor:** John McShain, Inc.



**Smith, Hinchman
& Grylls
Associates, Inc.**

**First Federal Office Building
Detroit, Michigan**

The roughly triangular site is located at the intersection of two main thoroughfares in the heart of downtown, overlooking the direct approach to the Civic Center. By trading bits of land with the city, it was possible to relate the structure to that approach, the surrounding buildings and the plaza now under construction rather than to the difficult property shape. The building consists of three interconnected towers: one housing vertical transportation and service facilities, the other two having completely open floor areas to give the maximum usable space and number of corner offices. The banking room is on the first floor of the east tower, giving it the most prominent location. The plaza between the two office towers will be enriched by the work of a major sculptor at some later date. The jury found this to be "a highly disciplined and dignified expression of the tall office building" and "suited to a difficult site in downtown Detroit."



Landscape Architects: Johnson, Johnson & Roy, Inc.; **General Contractor:** George A. Fuller Company.



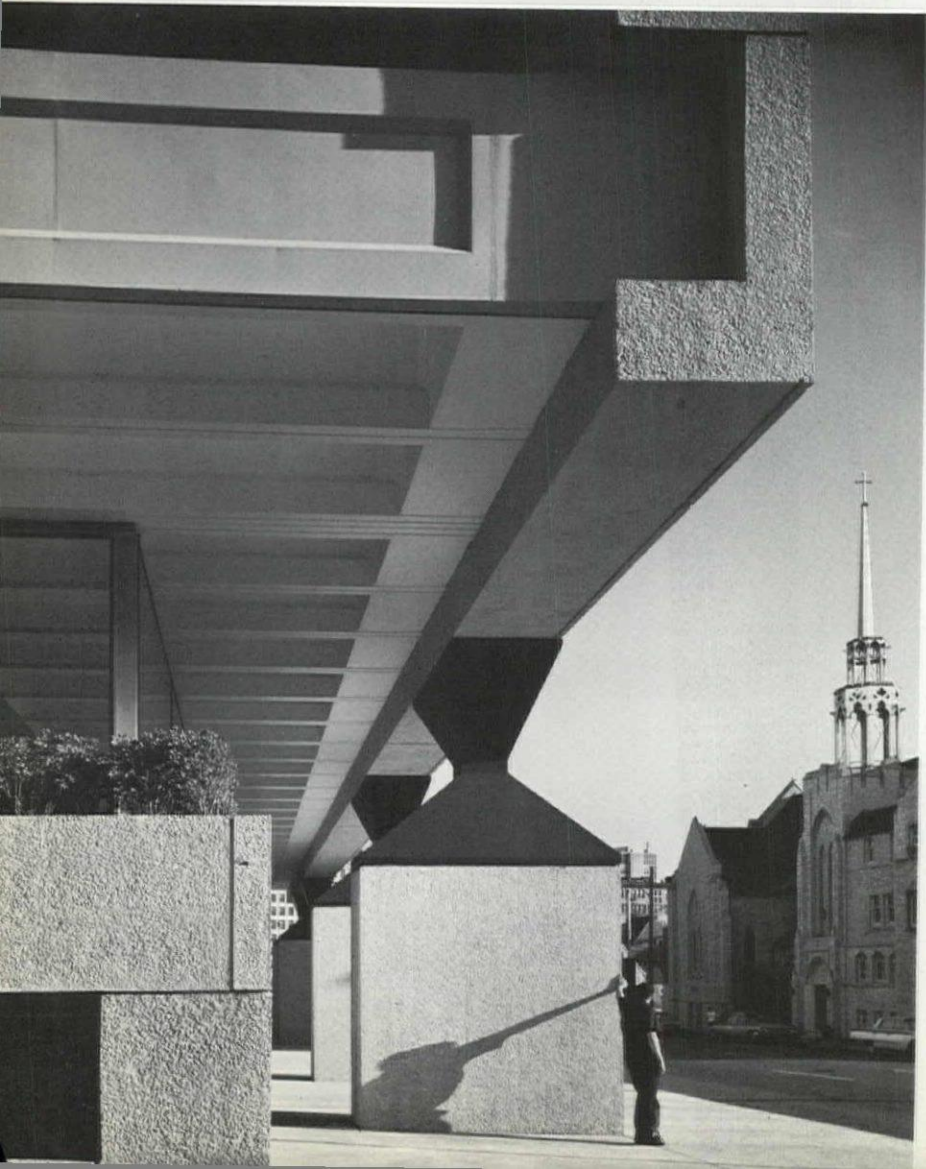
Fred Bassetti & Company

Ridgeway Men's Dormitories,
Phase 3 — Western Washington
State College
Bellingham, Washington

Housing for 450 students has been accomplished by creating a residential community of 26 separate suite-towers progressing down the steeply sloping and heavily wooded hillside, the entire complex nesting "easily and informally on the landscape," as the jury put it. Each tower accommodates about 32 students in two-man rooms connected on every level to form two- and four-room suites sharing a common bath. The towers are arranged in groups to define three separate dormitory units. Within each complex is a separate tower designed as a miniature "student union" providing all lounge, administrative and covered outdoor recreational facilities. Every room has its own private outdoor entrance via a stairway or a bridge. "In this atmosphere," the jurors pointed out, "the student becomes an individual and not a computer-card number."



Structural Engineers: Norman Jacobson & Associates; **Mechanical Engineer:** Richard M. Stern; **Electrical Engineers:** Beverly A. Travis & Associates; **Landscape Architects:** Richard Haag Associates; **Interior Designer:** Douglas Bennett; **General Contractor:** Cawdrey & Vemo, Inc.



Skidmore, Owings & Merrill

National Headquarters
American Republic
Insurance Company
Des Moines, Iowa

Beneath a massive six-story unit raised above the north two-thirds of the site is a free-standing ground floor containing the entrance court, reception and elevator lobby. To emphasize the suspended character of the upper mass, the one-story space between it and the ground floor is enclosed with continuous glass, serving also as a cafeteria and employee lounge and meeting area and opening to a terrace above the court. The building is entered through two relatively small square openings on the ground floor, leading to a marble-paved forecourt with a Calder sculpture. The jury called this feature "a delightful sequence of scale and space" and one that is "unique to this size building in an urban setting." Tubular air ducts in accoustical shells with fluorescent tubes mounted on them are suspended between the structural T-members to produce a system of high-intensity lighting, air distribution and sound treatment — "a powerful integration of utility, structure and mechanical systems," the jury said.

Structural Engineer: Paul Weidlinger; **Mechanical Engineers:** Syska & Hennessy, Inc.; **General Contractor:** Arthur H. Neumann & Bros., Inc.

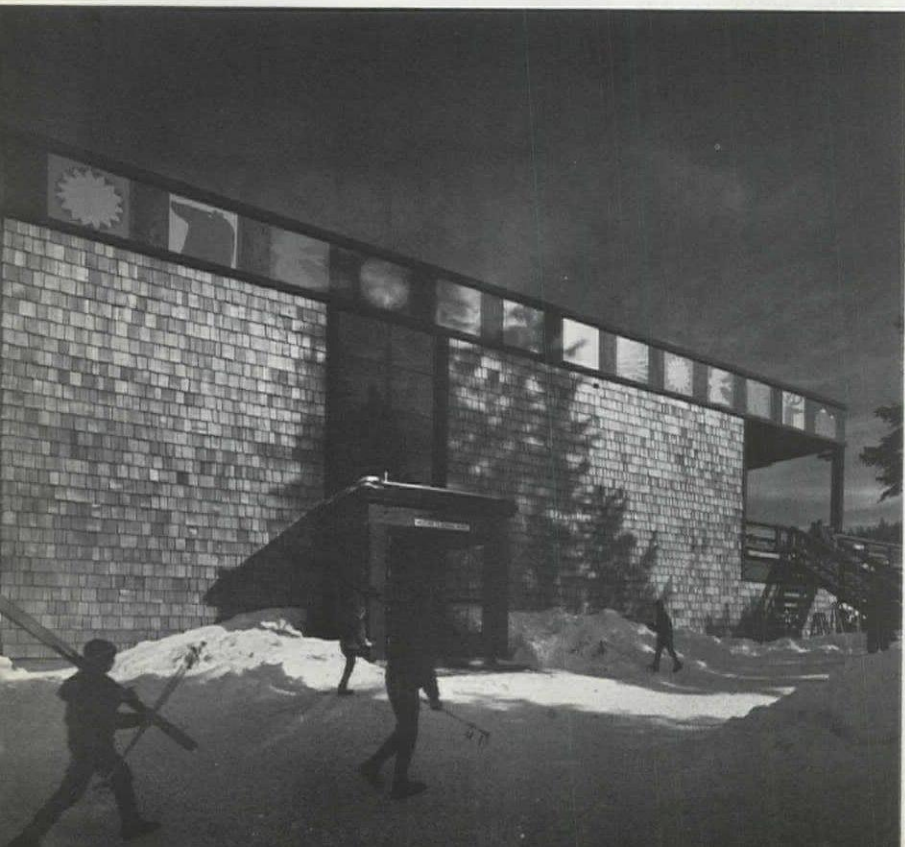
Neill Smith & Associates

Redwood National Bank
Napa, California

The client's requirement for an informal and welcoming branch bank in a rural northern California town led to the design of an open pavilion of redwood and glass—and the jury's accolade of "the Greene Brothers in a contemporary idiom." The forthright expression of all structural connections and members seemed appropriate for the image the directors wished to create. The oversized columns take the wind and earthquake forces as cantilevers from the ground. At the same time they recall both the bank's namesake tree and symbol and provide a feeling of enduring strength that was part of the program. The restricted site required the lunchroom and a boardroom to be located on a mezzanine. Applauding the "warm yet dignified interiors," the jurors also said of the project: "Competent wooden detailing gives it a sincerely regional flavor providing a happy relief from the sleek approach."



Structural Engineers: Gilbert, Forsberg, Diekmann & Schmidt; **Mechanical and Electrical Engineers:** O'Kelly & Schoenlank; **General Contractor:** D. M. Christensen Construction Co.



Ian Mackinlay & Associates

Boreal Ridge Recreational
Development
Truckee, California

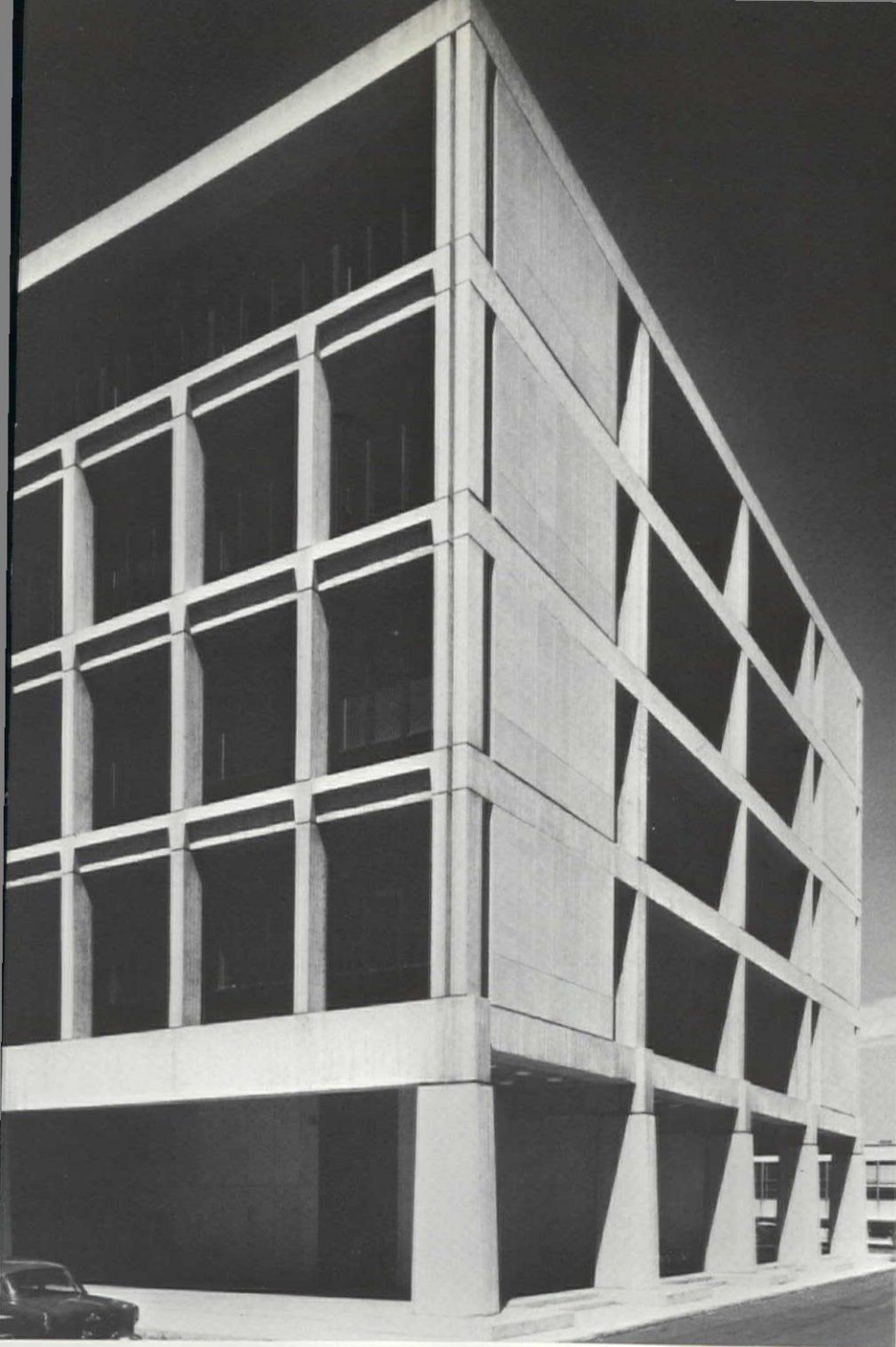
"A delightful statement of a ski lodge without resorting to the vernacular of the Swiss chalet," is the way the jury described the original structure in what is to be an expanded project if trends continue. "In its sturdy detailing and by the use of good graphic devices, it imports an appropriate aura of gaiety within the discipline of a direct and simple solution." Located at the summit of the Sierra Nevada Mountains, the day lodge is set on a slight rise above the parking area, easily seen from the new transcontinental freeway. The architects have used the warm colors of the lifts and the building itself against the snow and dark trees to create a feeling of excitement essential to a successful resort. The flat roof system, which greatly facilitates expansion, is designed to be turned into a future radiant-heated observation deck.

Structural Engineers: Pregnoff & Matheu; **Mechanical and Electrical Engineers:** William M. Brobeck & Associates; **Fascia Designer:** Michael Bull; **General Contractor:** Robert C. Gebhardt.

Skidmore, Owings & Merrill

Vannevar Bush Center for
Materials Science and Engineering
Massachusetts Institute of
Technology
Cambridge, Massachusetts

The structural characteristics are reflected in the design which provides a three-part facade—the pedestrian walkway, the four heavy laboratory floors and the lighter roof floor—to coincide with the character of the original main buildings. "An expression of modest architectural good manners in a classic setting," is the way the jury put it. A basic concept was developed to provide two double-loaded corridor elements of laboratories and offices, placing the former in the interior back to back. This permitted the development of central core services approximately 9 x 14 feet. The laboratory module was defined as the extent of these services and developed a network of three units in contrast with the structural network of two.

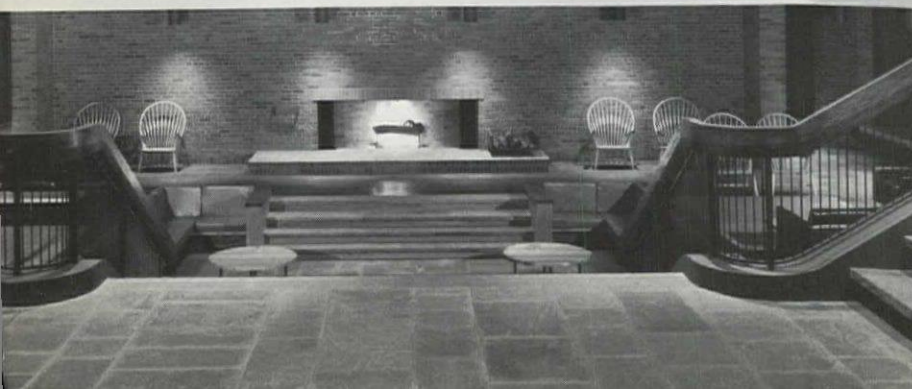


General Contractor: George A. Fuller Company.

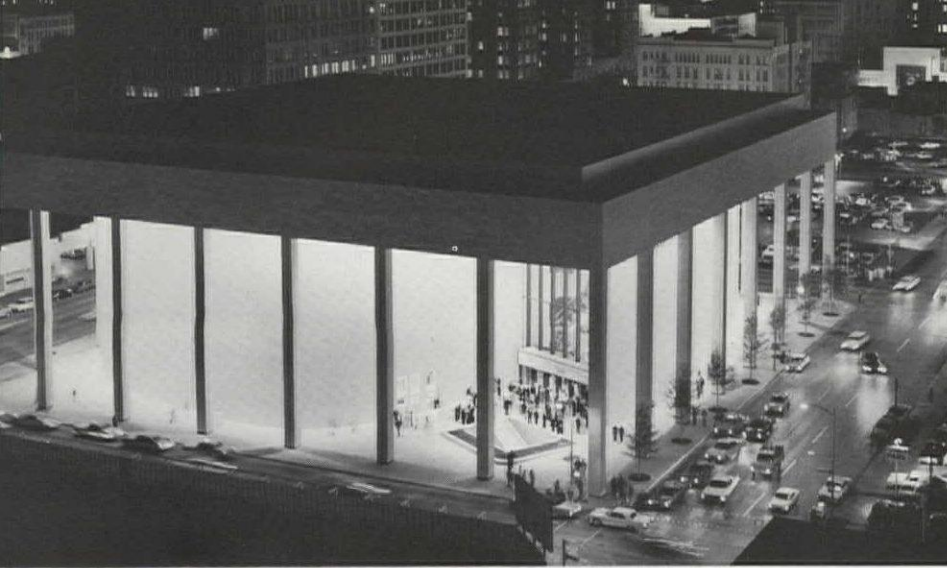
The Architects Collaborative, Inc.

Dormitory and Commons Building
Quadrangle, Clark University
Worcester, Massachusetts

Faced with the inevitable problem of expansion over the next decade, this small liberal arts institution asked the architects to create a master plan providing new facilities as well as renovating existing ones. The initial program called for a "priority" coeducational dormitory group for 400 students. The complex—two dormitories each housing 150 (a third will be added) and a commons building—was placed on descending levels with connecting walkways and steps along the perimeter to preserve the natural contour of the hill and existing trees. Three entry-lounge-stairway cores are provided for each dormitory. The jury said the project "is beautifully planned, thoughtfully and well executed."



Principal in Charge: Norman C. Fletcher, FAIA; **Structural Engineers:** Le Messurier Associates, Inc.; **Mechanical Engineers:** Fitzemeyer & Tocci; **Electrical Engineers:** Maguire Engineering; **General Contractor:** Granger Contracting Company, Inc.



Caudill Rowlett Scott

Jesse H. Jones Hall
for the Performing Arts
Houston, Texas

"Good theater, good architecture, good fun, it is black tie all the way. What more can be expected of a theater?" the jury asked. Upon investigating the kind of facilities to be built on a downtown block owned by the city, the architects recommended a multiform, multi-purpose concert hall that would accommodate opera, drama and musical recitals as well. It was to evoke a sense of enjoyment, not only of the performance but of seeing and being seen, to which the jurors responded: "The generous and imaginative design of the public spaces recognizes that the audience is part of the show." The colonnaded building defines the entire block as the environment of the hall. A series of curving walls encloses the public circulation and lobby rooms. The inner house, with continental orchestra seating and side entrances, is located to one side to create one large-scale public entry. Orchestral and recital enclosures establish the effect of a performance being played in one room. A full-stage proscenium arrangement serves the other performing arts, and the movable ceiling adapts to required acoustics and seating capacities.

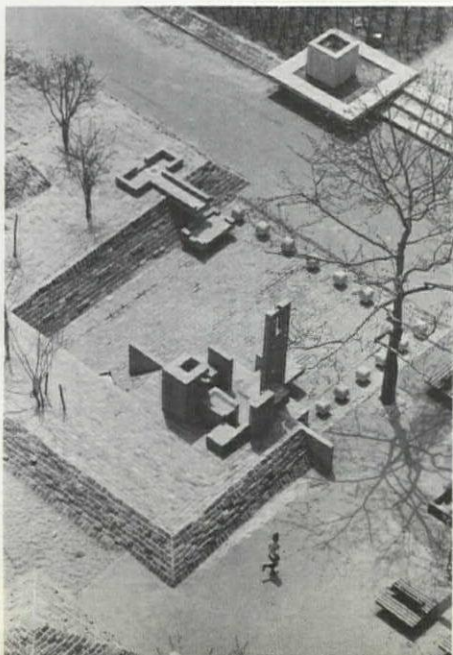
Design Partner: Charles E. Lawrence, AIA; **Technology Partner:** James B. Gatton, AIA; **Managing Partner:** Thomas A. Bullock, AIA; **Structural Engineer:** Walter P. Moore; **Mechanical and Electrical Engineers:** Bernard Johnson Engineers, Inc.; **Landscape Architects:** Robert H. Reed and Michael L. Ilse; **Acoustical Consultants:** Bolt, Beranek & Newman; **Theater Design Engineering Consultant:** George Izenour; **General Contractor:** George A. Fuller Company.



Pomerance & Breines

Amphitheater & Plaza
Jacob Riis Houses
New York, New York

"This humane, gay and exuberant effort makes no great architectural statement," the jurors declared in premiating an experiment in the revitalization of three acres of dead, urban space. "Its orientation is not toward its author but toward people of all ages. What this effort accomplishes in correcting the urban scars and meeting the living needs of its neighborhood cannot be easily measured." When this public housing project was opened in 1947, it was rightfully hailed as a great advance over the slum tenements it displaced. Buildings covered only 10 percent of the site and the remaining area was devoted to the traditional, formal landscaping of the time. A first step in reconstructing the space was to remove most of the grass; however, more trees and shrubs were added for greenery and shade. An amphitheater was included, with lighting, sound and dressing room facilities for plays, musicals, etc. A quiet area was provided for adults and an active playground for children, all complemented by fountains and flowing water.



Landscape Architects: M. Paul
Friedberg & Associates.



Skidmore, Owings & Merrill

Beinecke Rare Book
and Manuscript Library
Yale University
New Haven, Connecticut

"This is a significant effort of classic discipline, exquisite in concept and execution: a jewel box dramatizing the importance of its rare contents." So said the jury in premiating a project designed to provide the necessary storage facilities, protection and environment for the preservation of books and manuscripts, to create a research center for the use of the materials, and to emphasize the fact that the building contains great treasures. Translucent white marble was chosen for the exterior to allow passage of light and to filter the sun's ultraviolet rays, which are harmful to the books and manuscripts on display. The building has special temperature and humidity control in bookstack areas.



Structural Engineer: Paul Weidlinger; **Mechanical and Electrical Engineers:** Jaros, Baum & Bolles; **Lighting Consultant:** Edison Price; **Marble Court Sculptor:** Isamu Noguchi; **General Contractor:** George A. Fuller Company.



Skidmore, Owings & Merrill

Mauna Kea Beach Hotel
Kamuela, Island of Hawaii

A golf course, which acts as a protective greenbelt around the 150-room hotel, defines a site of about 15 acres bounded to the seaward by a symmetrical cove defined by lava rock outcroppings at the extremities with a 1,500-foot crescent of sand beach between. The rock rises as it leaves the sea and swings in a wide arc behind the beach, forming an escarpment and leaving a wide flat area between it and the water. The site was developed as a park with the building placed on the lava shelf immediately above the water at the north end, permitting views across the cove and down the coast from one side, and up the coast and across the shoulder of the mountain from the other. "The gracious interiors, the gardens and green spaces capture the flavor of a resort hotel," the jurors declared. "It is completely suitable for a subtropical climate with its restrained detailing and fine spatial sequences in a completely contemporary idiom."

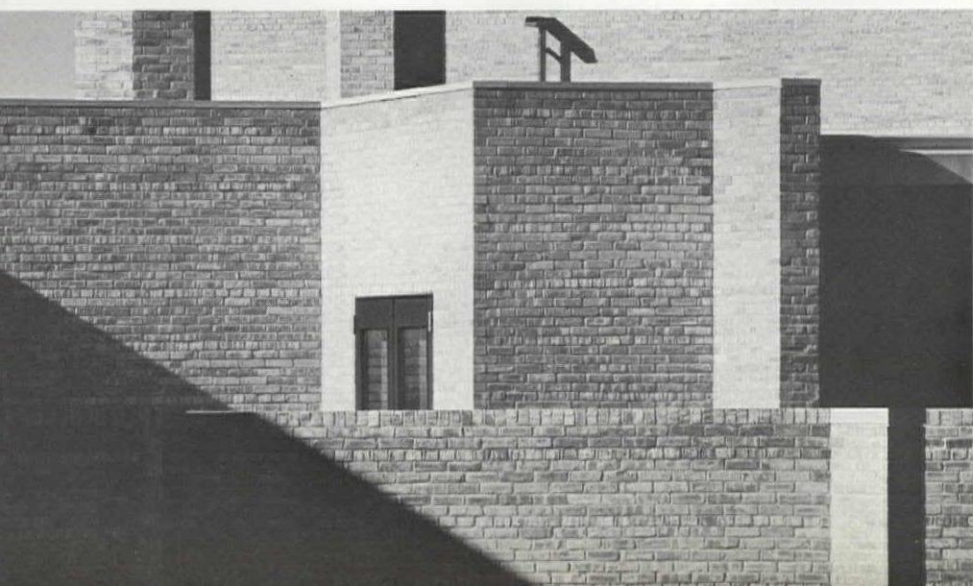
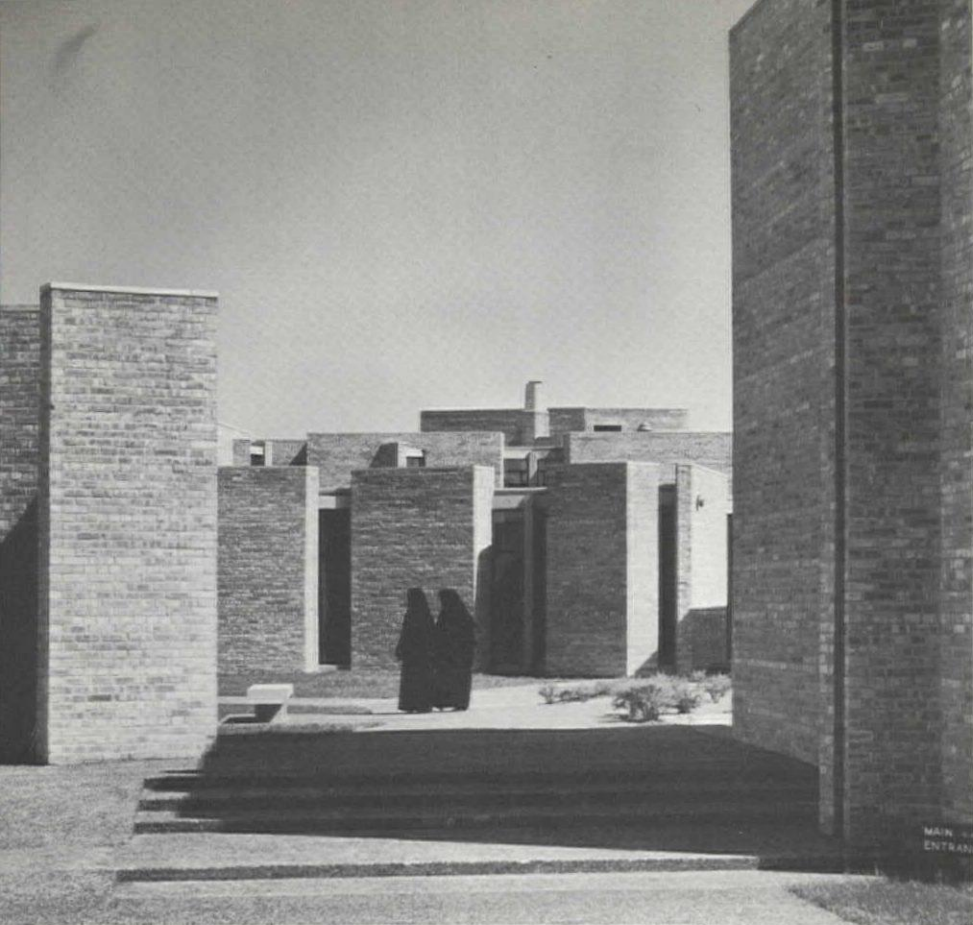


Civil Engineers: Belt, Collins & Associates, Ltd.; **andscape Architects:** Eckbo, Dean, Austin & Williams; **Golf Course Designer:** Robert Trent Jones; **Lighting Consultant:** Jean Rosenthal, Theatre Production Service; **Acoustical Consultants:** Bolt, Beranek & Newman; **General Contractor:** Haas & Haynie.

Hammel Green & Abrahamson, Inc.

St. Bede's Priory
Eau Claire, Wisconsin

In designing a Catholic motherhouse for 60 Benedictine sisters, including an academy for 150 girls and a student residence for 54, the architects attempted to achieve the scale of a small village or community. Thus they developed three building masses with a free play of undulating walls, stair towers, small courts and floor levels saddled on the highest point of the site: 75 acres of wooded, rolling hills and cleared meadows. "Well-scaled exterior spaces are gracefully shaped," declared the jurors, commenting, too, on the "informal plan, skillfully developed without being merely picturesque." The common-brick exterior and the exposed, natural interior finishes prompted them to say: "It is sincerely done in a contemporary vernacular with a modest and limited pallet of materials."

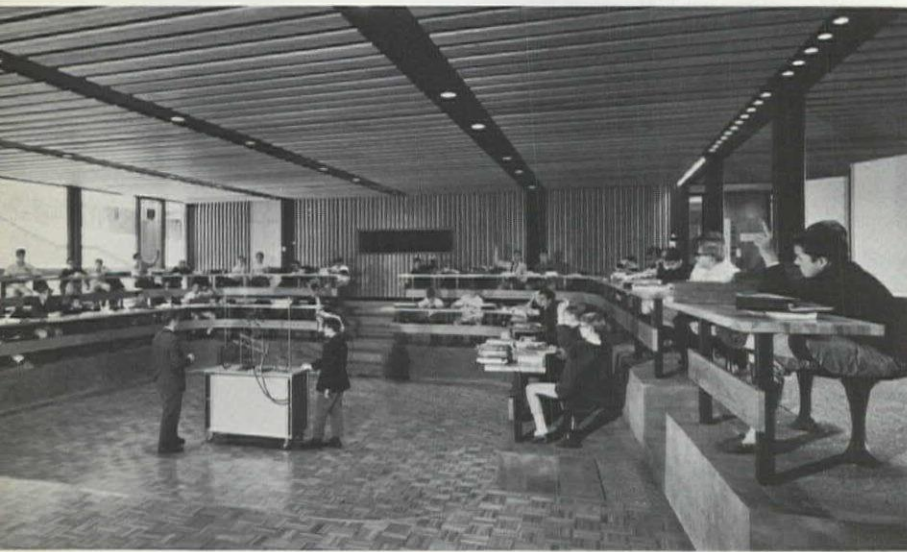


Structural Engineers: Johnston & Sahlman; **General Contractor:** L. G. Arnold Construction, Inc.

The Architects Collaborative, Inc. and Campbell, Aldrich & Nulty

C. Thurston Chase Learning Center
Eaglebrook School
Deerfield, Massachusetts

The three-unit complex includes a classroom building linked with an assembly hall-library building, which is the focal point both physically and educationally, and a separate science building placed together on a sharply sloping site. With less than 180 pupils and an extremely favorable faculty-student ratio (1:5), the school wished to retain the intimate character of the existing lodge and schoolhouse. Flexible teaching spaces also were required since instruction is given by both individuals and teams. The science building contains a planetarium, which is ordinarily used as a classroom; for a showing the dome is lowered by means of chains and pulleys to the required 7-foot height and the projector is rolled out of the closet. "Intimate, understated and gracious, thoroughly appropriate to the age group served," said the jurors about the project, adding that it is "sensitively detailed."



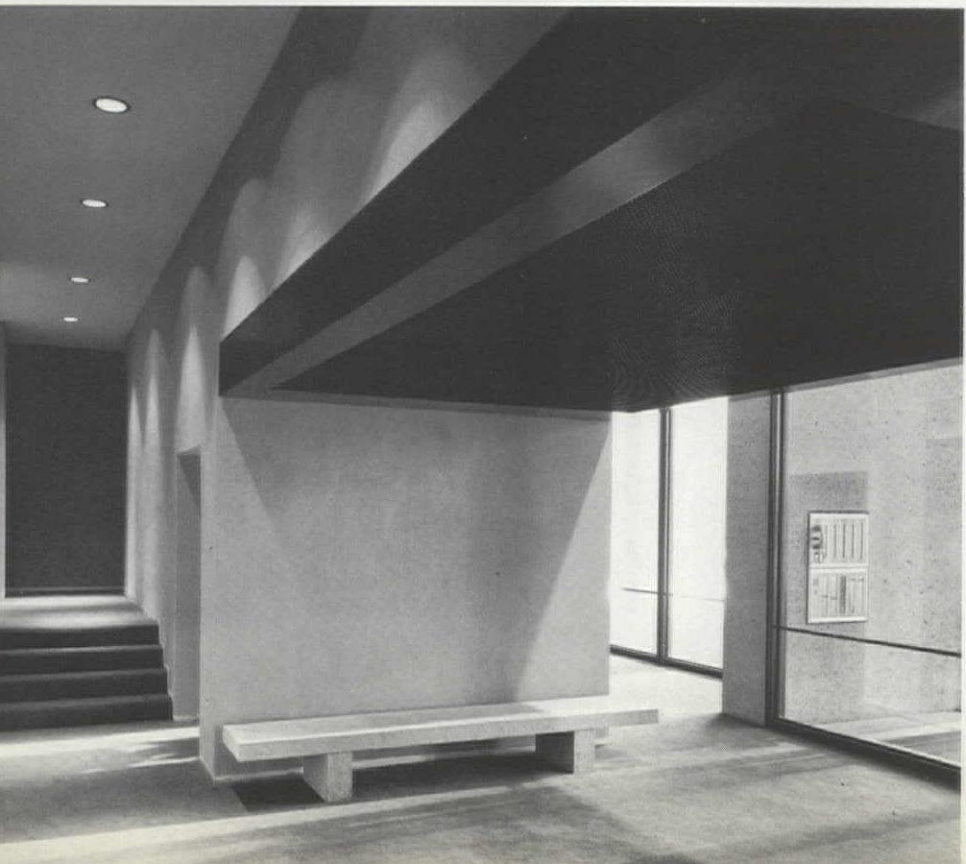
Principals in Charge: Sarah P. Harkness and Herbert K. Gallagher, AIA (TAC), and Walter Campbell, FAIA; **Structural Engineers:** Souza & True; **Mechanical and Electrical Engineers:** Jackson & Moreland; **Lighting Designer:** William M. C. Lam; **Educational Consultants:** Donald Mitchell and Robert Anderson; **General Contractor:** George B. H. Macomber Company.



I. M. Pei & Partners

University Plaza
New York University
New York, New York

The program called for 534 living units in an urban renewal area: one-third (middle-income, low-cost cooperatives) reserved for families relocated by the redevelopment and two-thirds for the sponsor's staff and faculty. It was clear that the public and university buildings, although independent of each other, had to form an architectural whole. Sheer size precluded continuity of the predominant scale. Three towers—one for the co-op, two for the university—are grouped around a central space. Commending the "thoroughly functional and handsomely proportioned curtain wall" buildings, the jury also said the complex was "nicely sited with its underground parking concealing its urban necessities."



Partner in Charge: James I. Freed, AIA; **Structural Engineers:** Farkas & Barron; **Mechanical and Electrical Engineers:** Caretsky & Associates; **General Contractor:** Tishman Construction Corporation.



Stickney & Hull

Los Gatos Civic Center
Los Gatos, California

The plaza devised by the architects as a town focus allows the three facilities—administration, police department and main public library—to maintain their separate identities in three pavilions while sharing common facilities and services with the council chambers on a lower level. The old established community, with a current population of 14,000, is located in the foothills adjacent to a rapidly expanding urban center. To take care of the anticipated growth, expansion of the center will be accomplished outward from the core by the addition of 25-foot-square structural bays in conformance with a master plan for the ultimate project. "This modest building nestles gracefully into a site of relaxed natural beauty," reported the jury, having in mind, no doubt, that a variety of fine trees were saved in the planning and construction. "The civic function lends importance and dignity without awesome overtones," it added.

Structural Engineers: McClure & Messinger; **Mechanical and Electrical Engineers:** Chamberlain & Painter; **Landscape Architects:** Sasaki Walker & Associates, Inc.; **General Contractor:** E. A. Hathaway & Co.

*"It 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."*

Rebirth of Chicago's Auditorium

BY BETTY J. RITTER, AIA

Two recent "challenge" offers totaling \$125,000 may make completion of Chicago's Auditorium Theater restoration a reality this year.

Few halls of comparable size throughout the world can equal the acoustic performance of the theater, designed by Adler & Sullivan and constructed from 1887-89. When opened, it was declared 50 years ahead of its time; 80 years later, it is still abreast of technological knowledge.

Today the restoration work is being carried out on a pay-as-you-go basis, and therefore has proceeded slowly. The Auditorium Theater Council, the group directing fund-raising and res-

The author: Miss Ritter, an architect turned freelance writer, formerly was editor of *Inland Architect* and publications director of the Prestressed Concrete Institute. She belongs to the Chicago Chapter AIA.

toration operations, has raised \$1.75 million thus far. It has offers of \$100,000 from the Chicago Community Trust and \$25,000 from the Woods Charitable Fund, Inc., provided it can produce an additional \$325,000 in either cash or firm pledges from other sources by June 30.

The \$450,000 will make it possible to complete the restoration and reopen the auditorium for full use this fall, according to Mrs. John V. Spachner, council chairman.

It is astounding that the auditorium has been neglected and ignored during nearly half its lifetime. The building was used enthusiastically during its first 40 years, but the 1929 relocation of

its principal tenant, the Chicago Opera Company, to new quarters and the depression of the '30s contributed to its closing in 1940.

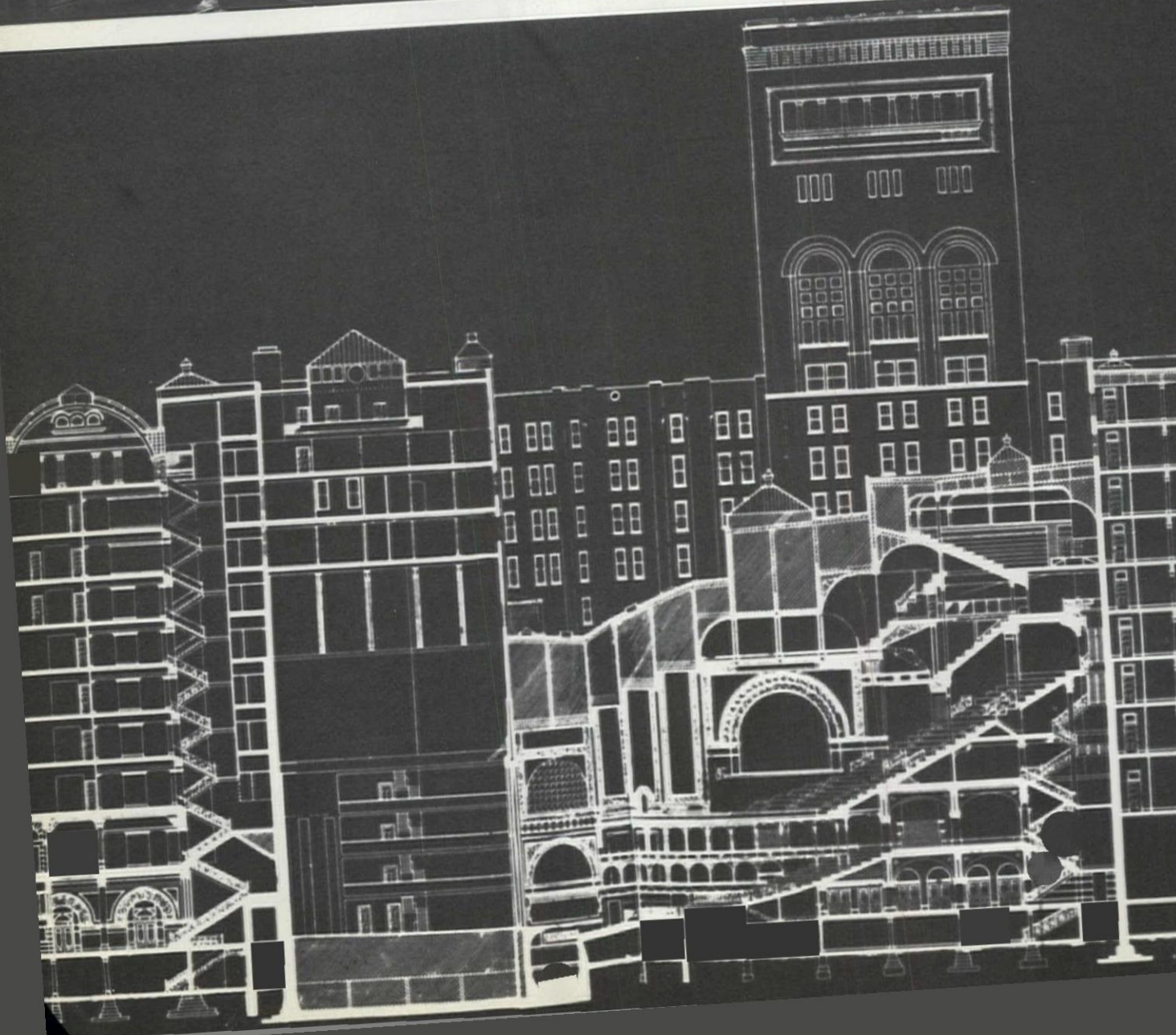
Unbelievably, the theater was converted into a bowling alley and recreation center for servicemen by the United Service Organization from 1942-45.

In 1946, Roosevelt University bought the entire auditorium property, including the theater and adjoining hotel. The hotel space was converted to a high-rise campus, but the theater remained unused.

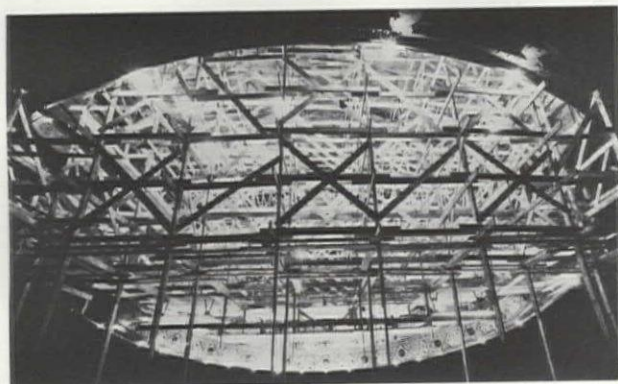
In 1960, Chicago's Commission on Architectural Landmarks officially designated the auditorium building an architectural landmark. Later that year, Roosevelt University passed a resolution authorizing the formation of the Auditorium Theater Council, a civic group independent of the university, to raise restoration funds, complete the work of bringing the auditorium back to life and direct its operation on a nonprofit basis.

Contributions dropped to a trickle when McCormick Place, Chicago's huge exposition hall, was completed in 1960; many felt the auditorium was no longer vitally needed. It was soon found, however, that the McCormick Place theater with its electronic amplification was no match for the auditorium acoustics. Since McCormick Place was destroyed by fire January 16, the auditorium restoration work has assumed a new urgency.

Until recently, the council planned to open the auditorium on a limited basis before the restoration was fully complete to stimulate public interest, hoping thereby to expedite the remainder of the fund-raising. The \$125,000 challenge offers,



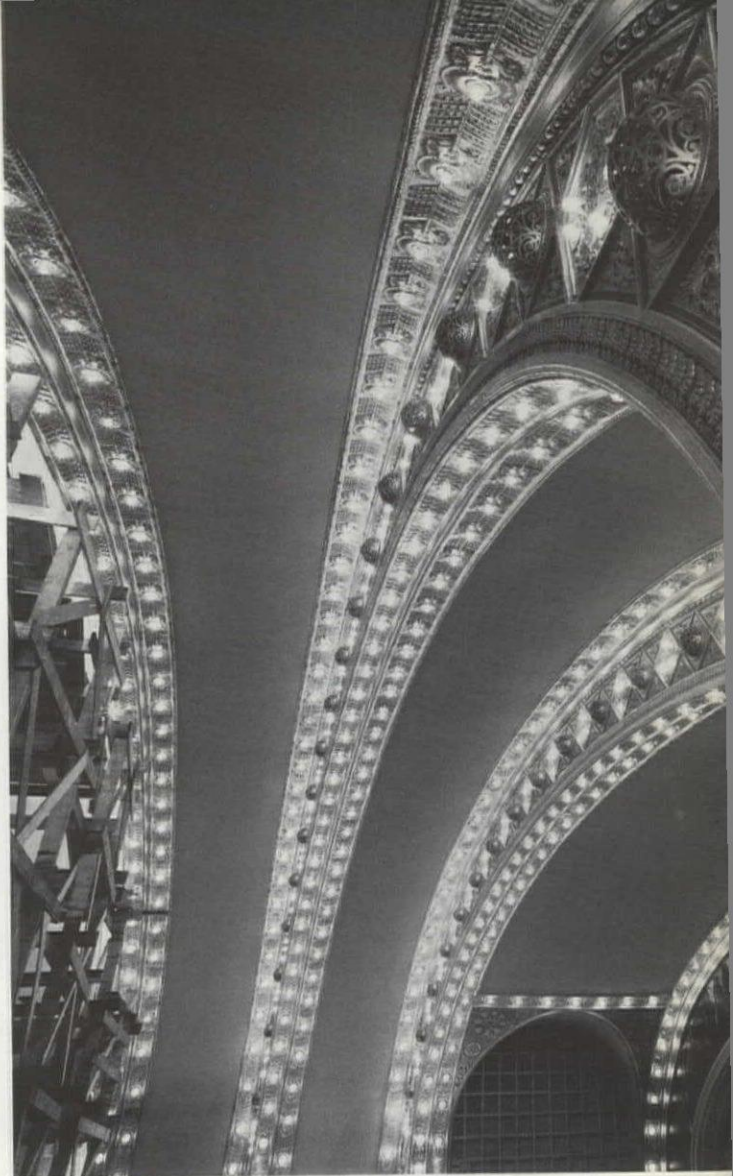
Early photographs (across page) of Chicago's Auditorium Theater in its heyday show the steep floor rise and the galleries closed off by hinged panels; the proscenium; and the boxes, possibly about 1900. The longitudinal section with its interior spaces is looking north (from *Inland Architect and News Record*, July 1888). Progress shots include details of Sullivan's ornamental work.



however, stipulate that total restoration is to be completed before the theater is opened to the public.

Harry Weese, FAIA, is chairman of the council's building committee. His leadership of the restoration work is guided by the architect's belief in the genius of Adler & Sullivan; his aim is to restore and use the original structure and materials wherever possible on the premise that substitution or addition of other than original materials or finishes could destroy the theater's acoustical purity.

Accordingly, to preserve the function of the wood floor decking as a huge sounding board, no carpeting will be installed in the theater itself except, as in the original design, in the aisles and foyers. Similarly, the restored theater will seat





The partially restored theater with temporary seats as it looked for the Adlai E. Stevenson Tribute in November 1966.

4,200, as did the original plan. Although a later remodeling expanded the box seating area, the present restoration will adhere to the original design by providing 40 boxes.

In preparation for his work on the auditorium acoustics solution, Adler is reported to have spent a month in Salt Lake City studying the Mormon Tabernacle. Briefly stated, Adler's design involves carefully calculated rising curves for the main and balcony floors which, in conjunction with a series of elliptical ceiling surfaces, produce the superb acoustic properties of the hall. Because the floor rise is dictated by acoustic principles rather than sight lines, the rise is steeper (17 ft.) than in a conventionally designed theater.

The acoustics are so perfect that a person on stage can speak in a normal tone of voice and be clearly heard in the highest gallery more than a block away.

Adler created an ingenious means of providing for smaller, more intimate audiences by designing hinged curved panels which can close off the first and second galleries without impairing the acoustic effectiveness of the theater. In either their closed or open positions, the panels contribute to the total acoustic scheme.

Such acoustic flexibility, combined with a wide variety of possible stage arrangements, makes it feasible to schedule many kinds of programs ranging from grand opera, ballet, symphony and

choral concerts to drama and lectures with complete assurance of proper acoustic performance.

Many artists including Van Cliburn, Richard Tucker, Isaac Stern, Cornelia Otis Skinner and the New York City Ballet have tried out the auditorium's acoustics and marveled at the excellence of the theater and stage design. In February 1967, RCA Victor used the auditorium as a sound studio to record Charles Ives' Second Symphony with the Chicago Symphony Orchestra.

The final phase of restoration will include installation of carpeting (in aisles, lounges and other appropriate areas), ventilation and air-conditioning, mechanical equipment, completion of dressing and orchestra rooms, and the myriad of minor refinements which will contribute to total restoration.

The auditorium cause stands out as more than a plea for preservation of architectural excellence. Masterpiece that it is, it is more. It 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.

The building's cornerstone was laid on Oct. 6, 1887; it would be a fitting tribute if next October would find the Auditorium Theater again functioning in its intended role as a magnificent and inspiring center for the performing arts in the Midwest. □

Selecting Incandescent Wall Washing

BY SEYMOUR EVANS

Continuing with the structural vocabulary of equipment (see No. 3 in April for incandescent downlighting), the fourth article in this series illustrates wall-washing fixtures.

One of the most satisfactory components of the lighting dialogue is the luminous response of the lighted surround. While the principle is not new, having been used for years as the lighted cyclorama in the theater discipline, its increase in architectural lighting has come about only in the past 15 years.

Its judicious use reveals the full richness and texture of expensive wall materials, changes the nature of space and silhouettes and ennobles people.

In general, specular surfaces should not be illuminated because of distracting reflections. In addition,

acute angle of incandescent illumination strongly reveals texture. Therefore, care must be taken to avoid revealing irregularities of certain drywall joints and irregularities in plaster surfaces. The technique of wall washing is most effective when the wall is at least twice as bright as the overall ambience of the space it encloses, and combines best with concealed-source downlights.

A low-ceiling room can give a promise of height if the total illumination is wall lighting and overly long spaces can be foreshortened by illuminating the furthest wall. Similarly, strongly illuminated elevator cores greatly help the inside-outside transition by creating an inviting welcome when viewed from the street.

Some of the equipment shown on the following pages is now beginning to be shown in manufacturers' catalogs as standard items.

All of it is available upon specification and has been used extensively in many important buildings.

It divides itself generally into:

1. Individual wall washing, surface and recessed.
2. Continuous wall washing, surface and recessed.
3. Acute angle of incidence equipment.
4. Wide angle of incidence equipment.

Since this description of material deals exclusively with incandescent, fluorescent wall-washing techniques are not included.

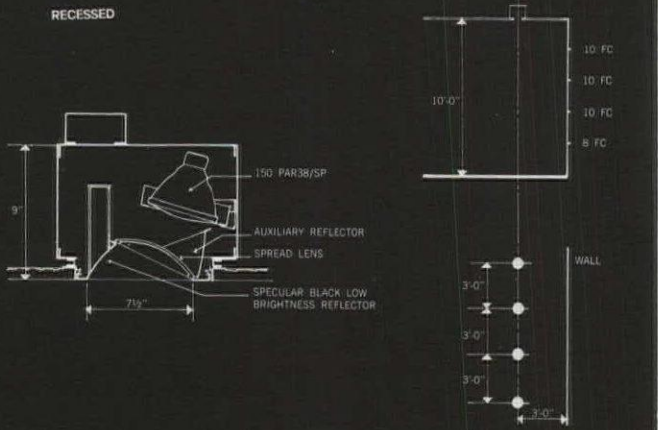
The drawings give both specification reference and light intensities produced on surfaces of average reflectants. Reference to manufacturers' literature will give exact brightness for the most commonly used materials.

It is hoped that the drawings which follow will become a standard reference.

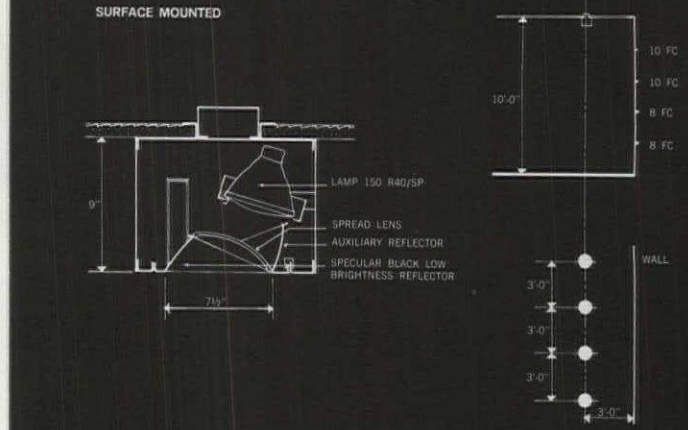
Oakwood Shopping Center, New Orleans: Curtis & Davis, architects; Seymour Evans & Associates, lighting consultants.



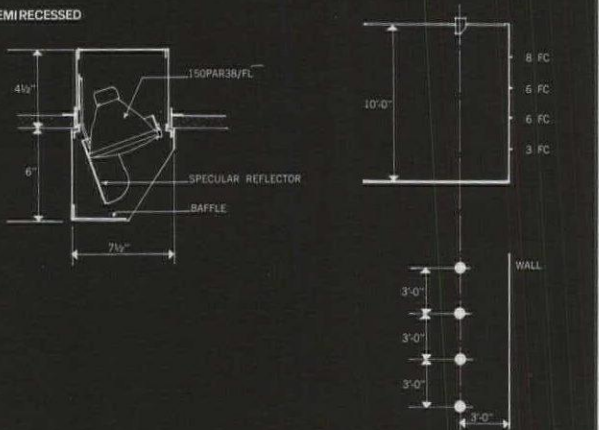
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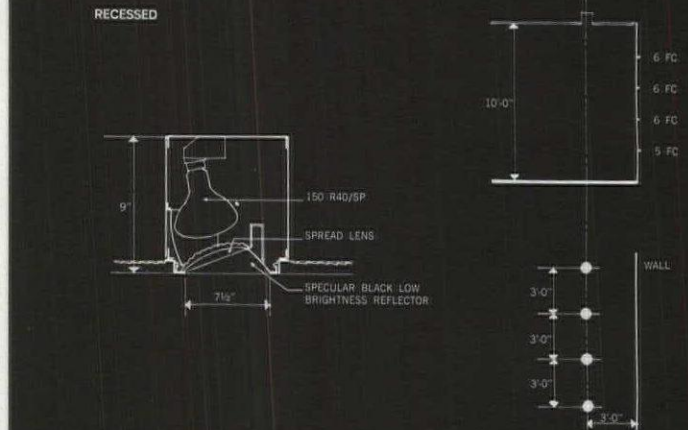
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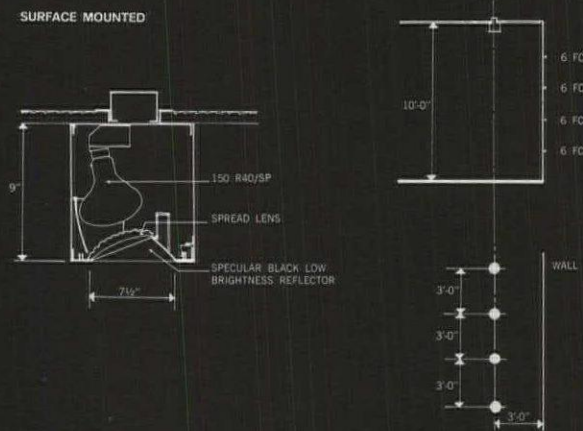
SEMI RECESSED



RECESSED



SURFACE MOUNTED



a cost-accounting method rigidly attached to a project network plan, this is not mandatory. The cost features of PERT can be used as a cost control device even where no network exists. The system is really built around a function-oriented work-breakdown structure (figure 2), and is designed to re-estimate periodically the cost of work underway and compare it with original budgeting.

The work-breakdown structure is the framework upon which the PERT cost system operates. At the lowest level of the structure, the cost of performing work in each particular specialty during a regular period of time is accumulated. Various summations and cost breakdowns are available both on periodic and cumulative bases.

It should be remembered that, once a certain amount of information is collected and entered into a system of computerized cost control, there are many easily performed operations which may yield valuable results. This is so even if existing "off-the-shelf" programs do not produce results in the precisely required form. Simple post processing routines can be developed to do the work cheaply and efficiently. Users often fail to realize this and spend considerable time and money in duplicating existing systems, simply because the output or input is not in an applicable or traditional format.

It would be unfair to expect the architect and engineer to know what computers and programs are of value to them and for what application. Increasingly, large companies appoint internal consultants or computer application specialists whose sole purpose is to investigate, research and evaluate areas where computer analysis may prove of value.

Smaller companies, architects and partnerships cannot justify such expenditure, and yet if they do not keep informed about the latest, fastest and most accurate methods of estimating and controlling costs, they risk being squeezed out by more efficient competition.

Where to Get Services

In order to keep in step without prohibitive costs, the small prospective user can now turn to a whole new breed of problem-solving or consulting organizations. Basically, there are five types of services available to anyone seeking to computerize his operation without actually installing a computer on his own premises. These are:

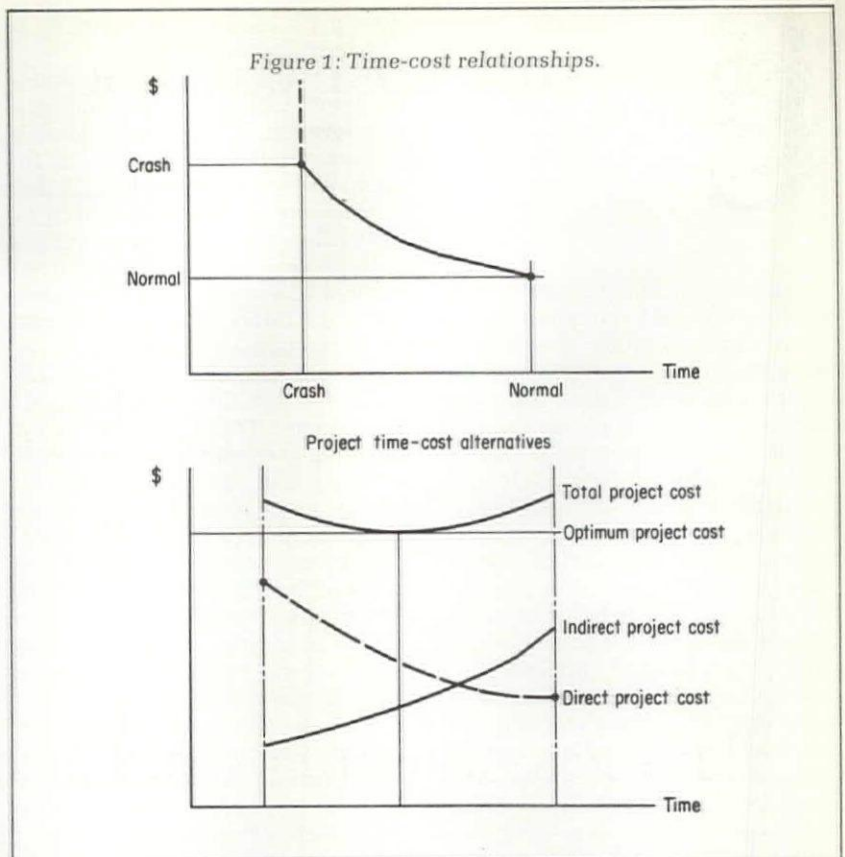
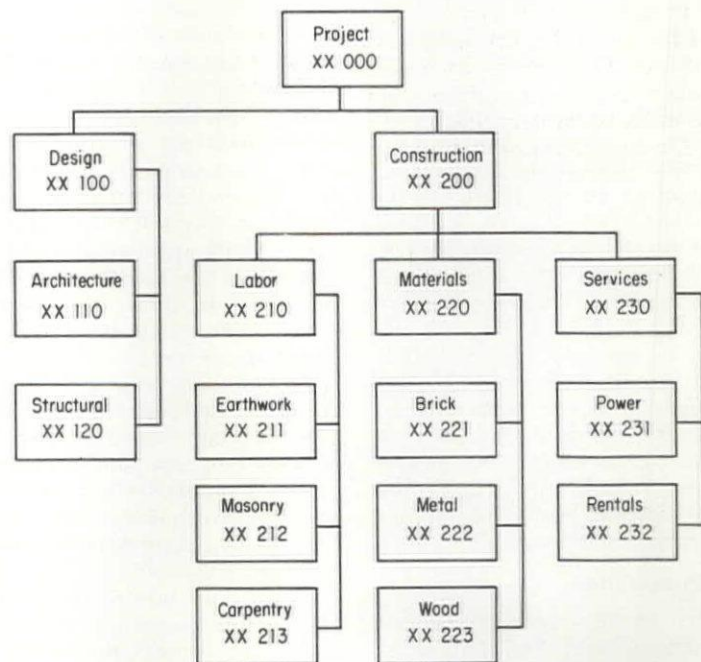


Figure 2: Work-breakdown structure.



- the service bureaus
- computer manufacturers' data processing centers
- management consultants
- certified public accounting firms
- banks.

Of the above, the independent

service bureau with an established clientele and reputation is probably the best choice for architects. However, the other possibilities should also be given consideration and may in certain instances prove advantageous.



In a service bureau, the service revolves around a computer installation which is either leased from the manufacturer or wholly owned by the operating firm. Computer time is available to all comers on a 24-hour basis, often seven days a week. Usually a service bureau maintains a library of ready-made programs and monitoring systems for a variety of applications. While some smaller service bureaus specialize in particular types of applications, the service is usually available for any kind of application.

Most service bureaus also maintain a staff of systems analysts and programmers to develop specialized software (programming systems) for clients or make modifications in existing programs to fit particular requirements. However, a service bureau is very advantageous to the user who has programming and system analysis capability of his own. He can develop his own program and use computers of one or more service bureaus as required.

If the cost of developing a program by a service bureau approaches that of hiring a good systems analyst to establish an in-house capability, it may be good business to follow the latter course. An in-house systems analyst has the advantage of knowing his firm more intimately, and can thus develop a better cost system faster. He may also find other possible applications and serve as an internal consultant on all matters involving computer processing. His advice may be invaluable in determining the feasibility of using a computer for a particular operation.

Other Possibilities

A firm using service bureau equipment should find out what backup facilities are available in case of machine malfunction or unavailability of machine time at short notice. It is usually advisable to go to a service bureau which has more than one computer of the same type, or can provide access to one in an emergency. All the above points, as well as responsibility for erroneous or incorrect processing, should be discussed and settled be-

fore any commitments are made by the computer-time user.

To an outsider, a data processing center may appear almost identical in operation to the service bureau. In fact, its identification with the computer manufacturer's brand names may make it seem more inviting than a lesser-known bureau.

However, while some of these centers will provide excellent service, their prime function is to support the sale and leasing of computer equipment and to demonstrate its capability to the prospective buyer. These centers are not really in competition with service bureaus and do not necessarily have to show a profit on their operation. A prospective user should beware of being lured by a low price or free system development, which may leave him with the choice of leasing or buying a computer which he did not want or need in the first place.

While a solution can be found by making arrangements with someone already using such a computer, such arrangements may prove inconvenient or costly, and certainly the user will seldom have priority or backup in an emergency. Therefore, unless one contemplates his own computer installation or simply seeks education in computers, the manufacturer's data processing center is not the most advantageous service.

Most management consultants today maintain a group on their staffs who can perform excellent systems analysis, programming and implementation of cost control systems. These groups provide services which are somewhat more expensive than those of service bureau professionals for comparable work. However, investigation will almost always turn up a talented group whose fees are acceptable.

Management consultants, whether large or small, seldom maintain a computer installation and usually make arrangements with service bureaus to obtain machine time as required.

There may be an advantage in retaining management consultants to do a job where considerable machine-time is involved, as such groups may have standing arrangements with service bureaus and obtain cheaper computer-time rates because of extensive use of machines. Such discounts may be indirectly passed on to the user. In dealing with consultants, however, make sure whether the cost of machine time is included in the fee or is an additional expense.

Most large, well-known certified public accounting firms today operate, within their organizations, management consulting groups. Their main purpose is to provide services to existing clients of the certified public accountants in the normal course of business. Often, however, the management consulting services are also available to others.

Cost control and accounting systems such as PERT cost or CPM are certainly in this category. Again, as in the case of pure management consulting groups, certified public accountants may have arrangements with service bureaus or banks for computer-time availability and may enjoy advantages not otherwise available to an architect.

While this is the latest type of computer service bureau to come into existence, it is growing fast and provides advantages to those who have their own systems analysis and programming capability. Banks were among the first large commercial institutions to recognize the value of the computer and to install their own machines.

Over a period of time, banks have improved their systems to the point where many now find excess machine-time available and are willing to sell it to those who need it. Primarily, this time is available to their clients, and most architectural firms would fall into this category.

Computer time at banks may be at rates considerably below those offered by service bureaus. This is understandable since the excess time costs the banks practically nothing. The disadvantages lie in limitations on types of machines and their availability. Also, the systems analysis and programming services of banks are rarely available to machine-time users.

Broker Enters the Scene

One other source of computer services is now emerging. This is the machine-time broker, who acts as a middleman for banks, insurance companies, airlines, oil companies and other enterprises which find themselves with excess computer time. The broker represents such companies and offers computer time on a variety of machines and in a variety of locations. One can obtain better terms by dealing directly with such companies; however, this may be offset by the burden of finding out who has machine time available and when. The broker is unlikely to provide help in systems analysis and programming.

Continued on page 90



Editor: Donlyn Lyndon, School of Architecture and Allied Arts, University of Oregon, Eugene. **Contents:** A preview of the 1967 Teacher's Seminar, which will be moved to Chicago, and a summary by Gordon Heck of the 1966 sessions, which drew participants from 53 schools of architecture to Cranbrook.

AIA-ACSA Teacher's Seminar

Media of study are being examined this month in the 12th annual AIA-ACSA Teacher's Seminar. Participants will explore the influences that choice of study media can have over the comprehension of problems and the forms that proposed solutions take.

These jointly sponsored seminars have been one of the principal sources of interchange between teachers from widely separated schools who come together with common interest in the proposed program: usually to discover curious and fruitful mixtures of congruence and disparity among their respective experiences and theories, as well as to become acquainted with current thinking on the problem at hand.

The seminar this year is being held in Chicago, in a downtown hotel and at the Illinois Institute of Technology, in a deliberate attempt to change the context (medium?) from that of previous conferences which have taken place in a milieu ordinarily considered at least mildly therapeutic, if not withdrawn. (Nantucket, Sagamore Lake and most recently Cranbrook have limited accommodations against which pressures for increased attendance have strained.)

The format, too, has been altered to a workshop session in order to engage more directly the very considerable assemblage of skills and experience embodied in the group of participants. The intention is to initiate studies that will continue as a growing source of information and observation that will lead teachers of architecture to understand better, as they restructure their problems, the role that media play in determining student response.

Excerpts from the workshop proposal distrib-

uted by the Program Committee appear here, and are followed in turn by a description and appraisal of last year's seminar accompanied by a selection of statements edited by Gordon Heck from the transcription of proceedings.

1967

STUDY MEDIA AND DESIGN PROBLEMS

Current work in several fields is presently being combined to bring new insight into the use and communication of information. However, application of this knowledge to education or to creative problem-solving situations has fallen considerably behind the theoretical work. In architecture, while the best teachers are keeping themselves informed of the new theories, no coordinated effort has been made to test these theories systematically against the design process.

The purpose of the 1967 workshop is to try to identify the most appropriate media for communicating certain classes of information and, conversely, to examine the degree to which the study media determine the class of solutions.

There is much evidence to suggest that architectural solutions are strongly influenced by the media used to understand, study and present the problems. Similarly, all available media are not being fully utilized for these processes, nor are the most appropriate media always the ones selected. The assertion would seem justifiable, therefore, that the class of study media used gives

rise to the class of solutions achieved, and that the media used may not represent the true nature of the problem.

There are at least two different ways a problem can be led astray in this manner. First, it has become almost a truism to architects and psychologists alike that a person's initial image of the problem and his attitudes, expectancies and preconceptions about it will affect significantly not only how he proceeds to define the problem but the nature of his solution as well, since even the most rational process is based upon data sought within the frame of what the solver believes the problem to be.

Second, the problem can be led astray if the solver does not fully understand the symbols necessary to describe it and their proper use. The concept of the nature of the problem evolves primarily from the cognition of images which have been transmitted in its definition. Such a comprehension includes understanding of the degree that each medium transmits certain kinds of data more efficiently than others. It is thus necessary to know not only which medium is the most appropriate for a given situation but also what type of distortion will result if another medium is used. Marshall McLuhan, in *Understanding Media*, claims that the method for symbolizing and/or transmitting information may dominate the content of the message to the extent that the medium becomes the message.

Some examples should help to illustrate how the above situation critically affects the design process. Most design instructors have experimented with different methods of introducing design problems to their students. Most have observed that when activities are listed under titles or by subgroupings, those categories (or, in fact, even their placement on the paper) frequently suggest physical groupings. Further, certain words used in the program will trigger images as

to the nature of the problem posed. It is difficult for the instructor to pose any problem without introducing preconceptions about both the problem and the solution.

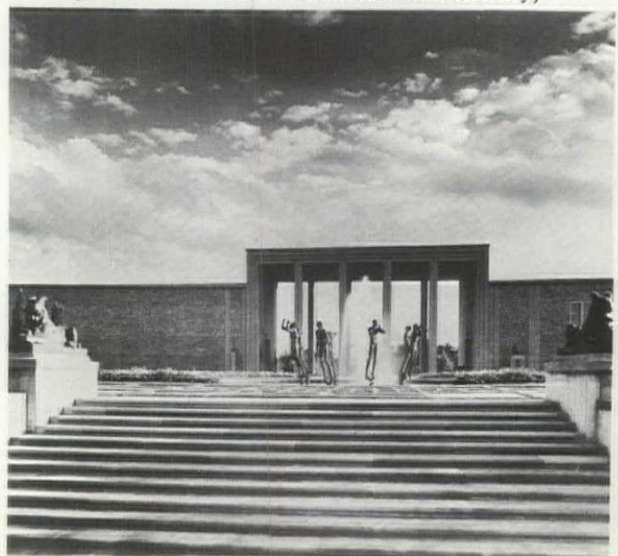
Similarly, an abundance of data in the program concerning one class of information (such as the physical characteristics of site, climate or materials) as opposed to another class (user behavior patterns) will imply a sense of priority which may not have been intended; or the immediate demand to satisfy current needs may obscure the less obvious, but perhaps more important, consideration of future needs.

Later, during design, the dependence upon the visual media to transmit the nature of the solution to the problem may frequently obscure relations to important criteria which cannot be transmitted through conventional symbols. Oversimplification of data such as three-dimensional information symbolized in two-dimensional form also leads to solutions which generate from the symbolism.

The current vogue for study and presentation of architectural solutions in model form has given rise to a new class of solutions which has a different but large class of inadequacies. The dominance of roof forms, the importance of overall form on large-scale projects, the suggestion that open space exists between high-rise units when it is actually covered with low buildings are all examples. There is no doubt that many buildings today reflect their heritage in the chipboard model medium, and that some architects are seeking the esthetic of the model in the finished solution.

The recounting of these problems may seem redundant, for each architectural teacher has struggled with the fact that design solutions would be different if studied at 1/10 full size as opposed to 1/10 or 1/100 inch equals 1 foot. How can the method transcend the lack of real scale?

Teachers move to ITT campus (Mies' Crown Hall) from Cranbrook (Eliel Saarinen's Art Galleries and Library).



1966

ARCHITECTS RESTRUCTURE PROBLEMS

BY GORDON HECK

The 11th annual AIA-ACSA Teacher's Seminar took place at Cranbrook Academy, June 5-11, 1966. From some 53 schools of architecture in the United States and Canada, teacher-participants came to the soft, suburban environment of Cranbrook to take part in discussing a topic both timely and vital.

Architects have begun to realize that the traditional, intuitive methods of structuring environmental problems, selecting viable solutions and then profiting from such experiences, are too often inadequate to the tasks assumed. A suspicion has grown that, even in providing solutions for the simplest design problems, we have been producing stereotypes, often unrelated to the peoples or places we claim to be serving. The question has emerged: How can the architect continue to deserve the image of "humanist" when his present method of structuring a problem and developing a design too often sacrifices the human being for "intuitive" whim and sculptural "whimsey"? It seems obvious that unless the architect begins to employ the new, sophisticated tools of mathematics and the physical and social sciences to develop a "method" equal to the task now assumed of designing the total human environment, he may become the "architect inhumanist"—the person most skilled at the inhuman use of human beings. *Sic Transit Gloria!*

To discuss this question and others, the teacher participants and the speakers gathered at Cranbrook. As stated by Dr. Charles W. Moore and his energetic and clear-minded Program Committee, the seminar was not intended to be a confrontation of the so-called "humanist" and the computer-based "scientist"; instead, it was to be an opportunity for participants to see and hear a variety of approaches to structuring the problems of environmental design and to realize that such tools as the computer will not usurp the creative domain but, rather, will provide a means toward a greater and more humanly meaningful creativity.

The seminar was organized as a series of case studies involving projects of special interest to be considered not so much as objects but as illustrations of the processes used by their designers for structuring the problem, developing the program, selecting the solution and evaluating the result. It was to be a "happening" concerned with process.

If it failed at times in its intent, it was not the fault of the concept of the seminar but, instead,

of the inability of some of the speakers and participants to distinguish between a description or analysis of a process and the criticism of, or fascination with, an object. Most participants, however, agreed that this year's seminar had been a great success, for they had been presented ideas which could be further explored upon return to their respective academic environments. There may have been some who came searching for "answers" or "manifestos," but such is not the purpose of these programs.

The seminar began with a lecture by Stanford Anderson, who questioned whether the computer was a tool or a medium in the contemporary creative process. In a brief review of the history of design method, he observed that as new machines had emerged they had usually been utilized in a traditional manner to solve traditional problems—until full realization of the new machines had been achieved. He noted that the contemporary architect who has now assumed the complex problem of the design of the total physical environment has utilized the computer to process known information to solve known problems. But, in doing this, he has discovered even more complex problems which can only be structured and solved by the computer.

Thus, according to Anderson, the computer has become more than a tool, for it has developed into a medium to be utilized in solving the incredibly complex problems now encountered by architects. These can no longer be solved by recourse to some "ideal picture" or by calling upon an "intuitive leap" by the architect.

Subsequent seminar presentations varied from Bruce Archer's clear and precise description of the objective methods used by his design group in England to the "Evening with Aldo Van Eyck." In sharp contrast to Archer's clarity, Van Eyck presented a marathon, five-hour performance, during which the participants were able to observe a brilliant and creative architect structuring significant ideas from seemingly isolated phenomena.

Between what some felt to be the Scylla and Charybdis of the seminar, others presented valuable descriptions of process: Bruce Graham, who described SOM's Chicago office organization and how it related to solving the problems of high office towers such as the Hancock Center; Robert Sommer and Sim Van Der Ryn, who described their work on the problem of student dormitory housing in California; John Andrews, who presented Scarborough College, which emerged as a solution intuitively determined by himself; Robert Anderson's description of the PERT schedule developed to guide the drawing and construction of Scarborough College; Joseph Esherick and Donlyn Lyndon's "Criticism and Evaluation" of Wurster Hall; Alfred Boeke's description of the

processes involved in establishing new towns such as Milalani and Hamilton; William Conklin's outline of the program development for such projects as the master plan for Lower Manhattan and the new towns of Reston and Columbia; Thomas Vreeland's talk on the need for systematic research and study of the use of form as sign and symbol.

These were some of the high points of last year's seminar. It had its low point, which most agreed to be the day at the General Motors Technical Center, to which the participants were led, and from which they returned none the wiser regarding the relationship of problem structuring to formal solutions.

The final session of the seminar featured a talk by Charles Nes, then president-elect of the AIA, who spoke of the need for expansion of the topic discussed at this seminar within the schools and the profession. ACSA President Walter Sanders responded, as did Walter Bogner. The participants also expressed their appreciation for having been extended the opportunity to see and hear the presentations of this seminar—to most it was not the end but a beginning.

OF NEEDS AND FORMS

Van Der Ryn: The research activity that most interests me involves the lag between societal needs and their reflection in architectural form. There is a built-in inertia in the organization of societal institutions which results in facilities being built for objectives which are often obsolete. . . . Architecture is often an instrument that inhibits necessary change in institutions because architecture is solution-oriented rather than to programs or to their consequences. Forms and images tend to be perpetuated long after the reasons that made them that way have changed.

Vreeland: I propose that investigations in methodology will become unbalanced if they do not also take into account the subvocal, gestured, subliminal communication of architecture. Precisely because of the growing emphasis on a methodical, objective, rational approach in all those areas of architecture which seem quantifiable, it is important to include the one area which seems alternatively either, to one group, the *sanctum sanctorum* which must remain inviolate or, to the other, incapable of quantification. Otherwise, increasingly in a world which admires more and more the scientifically demonstrable, we will be producing architects not communicating and inarticulate in the subliminal range.

The two existing areas of study which seem to hold the greatest promise for our being able eventually to establish a clear understanding of how

visual form operates in architecture . . . are perception and a theory of signs—information theory to a lesser extent, since it is primarily concerned with a most efficient way of transmitting messages and not at all with content.

Van Eyck: It is my conviction that past, present and future are active in the mind as a kind of continuum—and if they are not, they ought to be. If they're not, you see, the artifacts we make will be without that continuum too. The things we make, organize and space for ourselves and for others would be without real perspective and, of course, without real human content—hence, inaccessible, solid or void. We are experts in the creation of solids or voids, or solid voids, or void solids.

Now, I thought the job of architecture was to create interior, even outside. I think that architects should teach ourselves and those we work with to acknowledge the ultimate human validity (regardless of time and place) of diverse and often seemingly irreconcilable concepts of space, as well as all the thousands of meaningful incidental solutions that you can find—found by people during past ages in every corner of the world. The time has come to reconcile them; gather together not the exterior, not the exterior attributes, exterior forms, but the essential human meaning. The total sort of essential human meaning is divided among them; not one of them had it all.

SPEAKERS

Robert Anderson Architect Toronto	Joseph Leonte, AIA Vice President Tishman Research Corp. New York City
Stanford Anderson Assistant Professor of Architecture Massachusetts Institute of Technology	Donlyn Lyndon, AIA Head, Department of Architecture University of Oregon
John Andrews Architect Toronto	Don A. Masterson Head, Department of Product Design North Carolina State University
Bruce Archer Senior Design Fellow School of Industrial Design London	Gerald McCue, AIA Chairman, Department of Architecture University of California, Berkeley
Dr. William Beckell Dean, Scarborough College Scarborough, Ontario	Charles Nes, FAIA Fisher, Nes, Campbell & Partners Baltimore
Alfred Boeke, AIA Vice President Oceanic Properties Honolulu	Robert Sommer Associate Professor of Psychology University of California, Davis
Jacques Brownson, AIA Chairman, Department of Architecture University of Michigan	Sim Van der Ryn, AIA Assistant Professor of Architecture University of California, Berkeley
William Conklin, AIA Conklin & Rossant New York City	Aldo Van Eyck Architect The Netherlands
Joseph Esherick, FAIA Professor of Architecture University of California, Berkeley	Thomas Vreeland, AIA Chairman, Department of Architecture University of New Mexico
Bruce Graham, FAIA Partner, Head of Design Skidmore, Owings & Merrill Chicago	

Van Der Ryn: The rate of change that occurs in our institutions is a critical point. It is quite clear that the physical prototypes we build tend to lag behind the means we have. This quantitative crisis is not so deeply serious as the questions of whether we are building the right kind of spaces.

Archer: In the two kinds of buildings with which I am most familiar, the problem of growth and change is dominant in industrial and hospital buildings. There have been some studies which attempted to see if one could get a predictive pattern of the rate of change in such structures. You can find that change can possess a certain rate—a certain increment in a certain direction, but you can also get mutative change, which is not predictable. Change can be mutative and occur in a completely new direction, and what we are having trouble with so far as hospitals are concerned, in addition to the predictable rates of changes in population growth and mix, is that you get a new drug or a new treatment or something really startling which causes dramatic and unpredictable things to occur. The conclusions most people have come to is that a hospital must avoid unique spaces. We can only try for a loose fit between building and activity.

I am not advocating indeterminant architecture as a generalization; I'm just saying that if the rate of change of the activity housed is faster than the rate of design and erection, then you must make it a loose fit. If you're dealing with other kinds of activity, then this does not apply at all.

Van Eyck: That's the last thing I'd ever like to be myself, a prisoner of change. I don't think that's a sophistry. I think architects are always, nowadays especially, almost pathologically addicted to change. They attempt to regard it as something you either hinder or run after or can't keep up with. So this is, of course, why they always tend (architects specifically) to sever the past from the future. There comes a horrible sequence of instantaneous moments, no duration at all—just a tick-tock idea of time. But, I dislike the sentimental attitude to the past as much as I dislike the sentimental technocratic one toward the future. Both, of course, are founded on very static notions of time, and that's something that technocrats and antiquarians have in common, besides sentimentality.

Let me say this. I think it takes a long, long time before one is really able to discover the unchanging conditions of man in the light of change. I have no interest in change unless I have come face to face with the unchanging conditions of man by means of that change. . . . Change is brought about by people and architects.

Sommer: As an academician, I think the best reason for studying the environment is that we can't really have a theory of personality without a theory of environment. A person out of his environment is a different beast. He looks different, and he doesn't really make much sense if you take him out of his context. I don't see a theory of structures and buildings without people. There is a relationship between man and his environment—he not only adapts to it, he adapts his environment to his own needs.

Van Der Ryn: I want to say something about the operations research approach or ethic, which is perhaps another reason for carrying on evaluation—getting better human returns on our physical investments in environment . . . in terms of . . . the value question of what we are doing for people. The other pragmatic reason that I am involved in evaluating is that I feel it's the best way to get an operational basis for research . . . raising some actual questions.

Dean Beckell (on Scarborough College): The details that are wrong with the building bug me, but they don't bug me any more than the argument presented by everybody that I talked to who is content to say "These details aren't my responsibility."

I'm often asked how the building has been accepted generally. My rather scanty evidence to date suggests that the faculty either hate it with a passion or are ecstatic about it, but there's very seldom an in-between situation. Either way, however, they never fail to show it to their friends and colleagues, which is a good sign. The students generally don't like the building at first. Scarborough is drastically different to what they're used to, and thank God it is. With this structure we immediately say to them, "Look, you're in a new environment. This is the big time in education; things have opened up for you. Think new, work new, aim new." The building, in my opinion, sets a very appropriate stage for what we are trying to achieve.

Van Der Ryn: I selected building types to study which I suspect are really obsolete and which need to be looked at not so much to develop specifications or design directives on the basis of what's out there now but evidence to show that probably the whole building form is wrong. It is our job to work with persons in many fields in order to figure out where these changes have to be. I think one of the exciting things a school can do is to start a kind of Mau Mau attack on the whole institutional bureaucratic structure that has long since lost sight of its aims and flounders all over the place.

Van Der Ryn: The whole question of method brings in the question of scientific method and objectivity. I think there is a good deal of confusion about this, but as far as I am concerned, "objective" refers to the method used. It doesn't simply mean you are a mindless individual or that you don't have values of your own. Science is not objective at all; scientists are extremely subjective, simply in the things they choose to study.

Sommer: Let me speak of some different methods that we can use for assessing the effect of environment on people: A traditional method is the interview survey type (using structured or unstructured interviews); then there is the autobiographical method where people log their activities; there is the observational method which often gathers data quite different from that gained through interviews; and there is experimentation which observes people in environments where elements, singly or in combination, are changed and data collected from observed reactions; finally, there is simulation where an environment is simulated or re-created—here the idea is that once you've isolated a set of variables you re-create them to measure response.

Van Der Ryn: When all is said and done, the man who knows the problem is going to be more reliable than the man who knows his method, because method can grow out of a problem that you're trying to solve. There is something that bothers me here, and I may be the only one that feels this way, but I would like to point out that we are not talking about design methodology, because an "ology" is the study of something. We are talking about methods, not the study of methods. We are in the danger of being inundated by a lot of facts, knowing more and more about less and less. Every computer center in this country has a sign over the door which says "GIGO"—garbage in, garbage out; we must think twice about the kind of data we are collecting.

Andrews (on Scarborough College): I cannot pretend that it's any sort of sophisticated design methodology at all; it was mostly by the seat of our pants, as explained. They did have the good sense to involve a planner, a town planner, a landscape architect and an architect as a sort of a master plan team. Information provided by the climatologist was probably one of the strongest influences.

I am now convinced that there isn't any such thing as a sophisticated program; I guess the program finally results when the building is built. There are many things that happen along the way certainly the program is set up and is of fun-

damental importance in terms of value achieved; but certainly many of the things we did we didn't have any idea we were going to do when we started—they sort of happened in a sort of a way.

Vreeland: In his book *Notes on the Synthesis of Form*, Christopher Alexander does a perceptive and brilliant job of examining the human process of design and proposes a new, methodical and more penetrating approach with which to attack design problems. What he accomplishes is long overdue: a sharply critical look at our slipshod, mumbo-jumbo design methods, unbalanced and biased programming practices and cliché-ridden planning attempts. He has written a book about plan organization, organization of parts of buildings, accurate division of total building systems into smoothly functioning and interdependent subsystems, etc.

This leads us to a very serviceable and correctly articulated skeleton and maybe even musculature. It tells us nothing, however, about the complexion, hair coloring, the grace, the outlines of the features, etc.—in effect, the visible superficialia, nor does it propose to. Alexander leaves you right there with rather vague instructions to proceed directly to working drawings. The implication is that the bulk of the work has been done, and the rest is merely routine. And yet, for many of us, it is precisely at this point that architecture really enters in.

R. Anderson (on Scarborough College): Perhaps today there are two quite separate ways of building. There is the assembly method, the type of building which is perhaps limited, whose characteristics are predetermination of parts and details, and where the specialization of design team sections is admissible . . . it is a type of building which has an availability for repetition subject to minor changes and which is suitable for manufacture and prefabrication. I think this is the sort of building that emphasizes the corporate nature of man; it has universal applications; it is the type of building you can put in New York or Istanbul—this kind of thing.

Opposed to this is the building method which, to some extent, approaches the way in which perhaps a medieval cathedral was erected, producing a monumental one-off type of design. Here, I think, one has to be . . . at home with the building process. You don't have to hurry up and get the design finished; the design can go on . . . as long as something is happening with the building, and its characteristics are progressive determination of parts. This is quite important in this whole question of a design method in that by the spawning, the determination of some of the smaller parts after one has achieved certain of the larger structure . . . you have eliminated a great many of the useless variables. The procedure is one from the whole to parts right down to the small-

est things; and, as opposed to the other sort of building, it emphasizes the essential individuality of man and his uniqueness.

Archer: One of the deep misunderstandings held by the nonsystematic people of systematic people is that it is not a creative process. But even in the scientific method, even in the art of formulation of an hypothesis, the creative act is still there. The scientific method is a way of validating the hypotheses. Your computer is a glorified slide rule which saves you time, but it doesn't help you to get bright ideas or set goals. Value judgments have to be made by the individual, and I mean the whole field of values—ethical, esthetic, risk, comfort, etc. These must be made by people, and they can't be quantified.

Van Eyck: We don't talk about computers so much in Holland; we just manage to afford one or two, but here it's sort of a real thing. It seems to me it would be no problem at all. The computer is just another useful tool. All tools are good if you use them properly. I see no controversy between what the intuitive architect could do and what the computer can do. Personally, I think they are false alternatives. Now we've got hands, and as long as we have them we've got machines too—so we jolly well have to develop the potential of both for the benefit of all people.

Archer: We think that one can only study the method of design by getting on with design problems; we have to have laboratory animals in this work behaving so that we can observe their behavior. So we take on projects, and so far as the client is concerned, all he wants is an answer to his problem. Now, the man whose project it is has a three-fold responsibility—first, to satisfy the client and solve the problem; second, to keep a detailed record of his decision paths; and, third, to do the job as systematically as he can.

Validation/evaluation is very important to us. If we can find out where the weaknesses are, we can trace back through the records of decision paths and find out where the wrong decisions were, and whether they were reasonable decisions on bad evidence or bad decisions on good evidence. It's necessary to have rather small problems, for if they are big problems of too many parameters, we have no chance of being able to see what went on.

We don't distinguish in our methodological studies between architectural, industrial or engineering problems. These are all design problems, and we define design as the activity of preparing a prescription or specification for a proposed artifact. This is distinguished from . . . other creative activities where the act of conception and act of execution are not separated. When I talk of being systematic, I mean a technique or activity which is conducted in such a way that each set in the sequence of activities is calculated to be an

appropriate response to the information available from previous steps.

Design activity is essentially reconciling the noncontrollable factors with the controllable ones. We call the noncontrollable factors the constraints of a problem, i.e., things imposed by the problem, and we call the controllable factors decision variables. We accept that design is goal-directed—that there is a direction called good. There may be a number of directions called good in a problem, and the direction we ultimately go is a sort of vectoral resultant of all the totals in the province.

I regard architecture as a socially important activity. Second, architectural decision making is about problems of value and innovation; everything else is a waste of time. Third, setting objectives, getting bright ideas, making value judgments cannot be abdicated. Fourth, it is my belief that new tools, techniques and information about method will help architects to clarify the questions and help see what the alternatives are (and their consequences) and make more time available for the real decisions. My objectives are to let architects spend more time making judgments and less time doing things they often do incompetently in terms of routine chores which can be better done by others with sophisticated tools.

OF URBAN PROBLEMS

Boeke: The growth in the US that we will witness within our lifetime is a dynamic without equal. We are rushing headlong into massive urbanization while simultaneously floundering with renewal. We lack a program, we have inadequate tools at our disposal and we have not defined our goals. In our professional and citizens' committees we talk a great deal about landscape, beauty, enriched environment, order with diversity and all the rest. Understandably but regretfully, we talk far more than we've been able to perform. Lip service, loss of energy, dilution with marketing, incompetent consultants (if you'll excuse me), and undercapitalization have been the primary problems.

New community development is still a pioneering effort. The informed and effective motivators, designers, protagonists are a handful of dedicated professionals, a vocal but uninsistent group of government underwriters and a somewhat smaller scatteration of equally dedicated businessmen, planners, developers or whatever other dirty word you would like to use for us. Albert Mayer and others have said that the need cannot be met by private enterprise, for the scale is too large, the need too great, developers' profit requirements too rapid. I agree we should have many

serious, serious new towns in process now. California alone could use a score or two.

So, what is a new town? We could spend all morning defining it, but let's say it should be the congealing of suburban development into a coherent, visible, socially integrated and carefully detailed form. Unlike communities in the US it should have edges. It should have a sense of order and completeness at all stages of its growth. It has an economic base as its support, or it may borrow its reason for being from a nearby major metropolitan area. In its theoretical form it is surrounded by agricultural greenbelts or other open space.

In practice this academic theory can work; but if the breathing space is to be agriculturally productive, then we planners must deal with the pests, the dust, the insecticides, the land tax economics and the owner's desire for land appreciation implicit in the marriage of urban here and open space next door. It is conceivable that the new town can enhance the social fabric and the democratic activity of the suburbanite. May I say that those of you in private practice should beware of any new community plan which is not as busy with, and demanding in, relationship to the controls of cash-flow critical path schedules as with the design consultant's efforts. The computer is a sophisticated addition to the team, and the development cannot proceed without it.

A new town requires land that can be purchased for a price that allows substantial planning cost and interest on your money before development, yet it must be close enough to major metropolitan areas to be able to attract a market. There must be an existing or achievable employment base of major proportions. It should be controllable physically so that one can create an original environment and not suffer by the expanding slurbs of others. It appears that in the US the new town will tend to become an enclave for the medium income or wealthy. We have not developed the tools to include the low income policeman, fireman, trash collector, maintenance man, secretary or the lowly school teacher.

I want to mention that the new town vision can be hypnotic. We can become so enthusiastic that we overbelieve our own sales pitch. This is business as well as other things. We're stating then that the controller's function is an important part of the plan consultant team; that the daily reality of the source and allocation of funds is a discipline that is mandatory for success. Urban design continuity throughout the many years of development (and the police action that goes with that), and the conscious attraction of a valid social matrix is a design and development challenge that has seldom been met. In my mind, it is the most exciting professional opportunity that I can imagine. □

Of Cabbages and Kings

CRANBROOK 1966

First Annual Awards

The Inspired Intuition Awards
Howard Barnstone (first to leave)
Richard Bennett (last to leave)

Grand Inspired Intuition Award
Christopher Alexander
(who did not come)

*Award for the Greatest Restraint
in Encouraging Rational
Discussion*

(It was impossible to single out
any individual for this award since
there were so many contenders)

*Arturo Toscanini Award for the
Best Use of Baton During
Presentation*

Aldo Van Eyck

*Edward R. Murrow Award for the
Best Use of the Cigarette in Making
a Point*

William Conklin

Special Awards

*Masterton Award for the Best
Presentation*
Tom Yeager

*Yeager Award for the Best
Presentation*

Don Masterton

Most Unique Presentation

Bruce Archer
(for actually having mentioned
design methodology)

*Best Solution to the Wrong
Problem*
Reston

*Most Amount of Time Spent for
One Who Didn't Have to Spend
Any*

Glen Paulsen

*Most Appropriate Use of the English
Language*

John Andrews

*Greatest Effort in Proportion to
Achievement*
General Motors

*Greatest Influence on the Use of
Language*

Louis I. Kahn (in absentia)

*Richest Answers Regardless of the
Question*

Don Masterton

*Wilbur and Orville Wright Award
to the Man Who Came Closest to
Sustained Flight During a Presentation*

Walter Bogner

*The U. S. State Department
Awards for Euphemism*

First Award to Alfred Boeke (for
"an aesthetic experience that
holds water"—an earth-filled dam)

Second Award to Conklin (for
"urban sinews," i.e., apartments)

Awards Commission

Joseph Wehrer, Chairman
Joseph Esherick, Secretary

1966

Steering Committee

Walter Bogner, FAIA,
Chairman
Walter Sanders, FAIA
Walter Scholer Jr., AIA

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Gordon Heck, AIA
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1967

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James F. Lincoln Library, Lake Erie College, Painesville, Ohio; Architect: Victor Christ-Janer and Associates, New Canaan, Conn.; Designers and Builders: The Austin Company, Cleveland, Ohio

New Smith FoamWall* Panels give you design freedom

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ical comment among the professions.

The "truth-in-negotiations" law requires that cost or pricing data be submitted by an A-E contractor prior to the award of any negotiated military contract expected to exceed \$100,000. The contractor must certify that to the best of his knowledge and belief the data was "accurate, complete and current" at the time of contracting.

Later on, if the government finds that the price has increased because the contractor had furnished inaccurate, incomplete or non-current data, the fee can be adjusted downward. GAO has also recommended that "truth-in-negotiations" requirements be applied to all construction agencies, civilian as well as military.

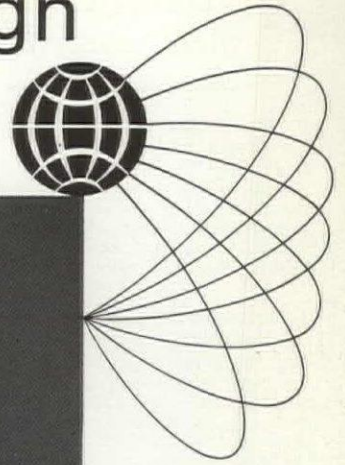
While the AIA and the other professional societies have agreed that the principle of "truth-in-negotiations" should be applied to all government contracts, including those for architectural and engineering services, they have noted that there are certain elements in the procurement of services which cannot be known at the time of contracting. Therefore, to require certification of the costs of unknowns would be an unreasonable burden.

The Institute has asked GAO to draw a distinction between those price components which can be known at the time of contracting and those which can only be generally estimated. For example, certain components of cost such as the number of hours and fees of outside experts can at best be only generally estimated.

Whether Congress will act to repeal the 6 percent fee limitation statutes and to clarify the competitive negotiations law, or whether a separate commission will be established to study the whole matter of government procurement including the procurement of architect-engineer services, remains a matter of conjecture at the moment.

What is clear, however, is that a number of problems have been brought into focus. Now it is up to the professional societies—who have just formed a Committee on Federal Procurement of A-E Services—working with federal construction agencies, which are, happily, on the same side, to convince Congress that the fee limitation statutes must be repealed and that applying price competition to A-E services is not in the interest of the government. □

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There is in Springfield, Va., a government building crammed with research and development reports, a number of which are of interest to architects.

Four recent reports prepared under an ongoing building technology research project, for example, deal with computer use in cost estimating, performance concepts, computer-aided checking of design documents for compliance with regulatory codes and an analysis of Canada's national building code.

The four documents on building technology make up the preliminary effort in a continuing research program of the Institute for Applied Technology, National Bureau of Standards.

IAT's Clearinghouse for Federal Scientific and Technical Information contains a half million reports with new titles added at a rate of nearly 1,000 weekly.

Flowing to the Springfield center are unclassified results of research of the Department of Defense, National Aeronautics & Space Administration, Atomic Energy Commission, the several scientific bureaus of the Department of Commerce, Department of Interior, Federal Aviation Agency, the new Department of Transportation and other agencies. Also included in the collection are translations of foreign materials.

Clearinghouse technologists over the past half year have gleaned and tagged some 60 reports of interest to the construction field. The availability of these were made known through the Clearinghouse's *Fast Announcement Service*. Under this service technologists select documents of the greatest industrial interest for brief description in daily announcements.

In getting out the word on available reports the Clearinghouse also publishes:

U. S. Government Research and Development Reports, a twice-monthly announcement journal which lists and describes new reports as they are released for public sale; *Government-Wide Index to Federal Research and Development Reports*, a semi-monthly companion index to the journal and single-source guide to new government-sponsored reports; and *Technical Translations*, a twice-monthly listing of translations available from the Clearinghouse and other sources.

To meet the demand for documents, the Clearinghouse in-house reproduction plant makes use of the latest technology in microphotography, electrostatic copying and offset printing. About 8,000 documents in paper copy or microfiche (a 4- by 6-inch sheet of microfilm containing up to 70 document pages) are shipped daily. Most are wrapped in plastic on special equipment for rapid handling and mailing.

Documents are priced, with few exceptions, at \$3 a paper copy and 65 cents for microfiche. Prepaid Clearinghouse coupons are available, each coupon having a face value of the purchase price of a document (\$3 paper, 65 cents microfiche). A coupon serves as a method of payment, order form, shipping label and customer's sales receipt.

In addition to the 60 reports gleaned as being of interest to the construction field, another 45 such documents are in processing.

The announced reports include information on such matters as the freezing temperatures of fresh concrete, hinging in reinforced concrete beams and a quick method of testing and evaluating the contents of cement.

The AIA JOURNAL will from time to time note significant reports in its Books Section. The four reports in the building technology research series that are currently available are:

• PB-174 095—**Computer-aided Checking of Design Documents for Compliance with Regulatory Codes**, Bolt Beranek and Newman, Inc., Cambridge, Mass., July 65, 55 pp.

• PB-174 096—**Performance Concepts for Building Technology**, F. J. Stephenson, Kansas Univ., Lawrence, Kan., Sept. 65, 76 pp.

• PB-174 097—**Analysis of the National Building Code of Canada**, C. A. Wojan, Polytechnic Inst. of Brooklyn, Brooklyn, N. Y., Mar. 66, 46 pp.

• PB-174 098—**Computer-aided Cost Estimating Techniques for Architects**, T. H. Myer et al., Mass Inst. of Technology, Cambridge, Mass., 1966, 109 pp.

More complete information on Clearinghouse services and publications can be obtained by writing to: Clearinghouse [410.40], U S Department of Commerce, Springfield, Va. 22151. □

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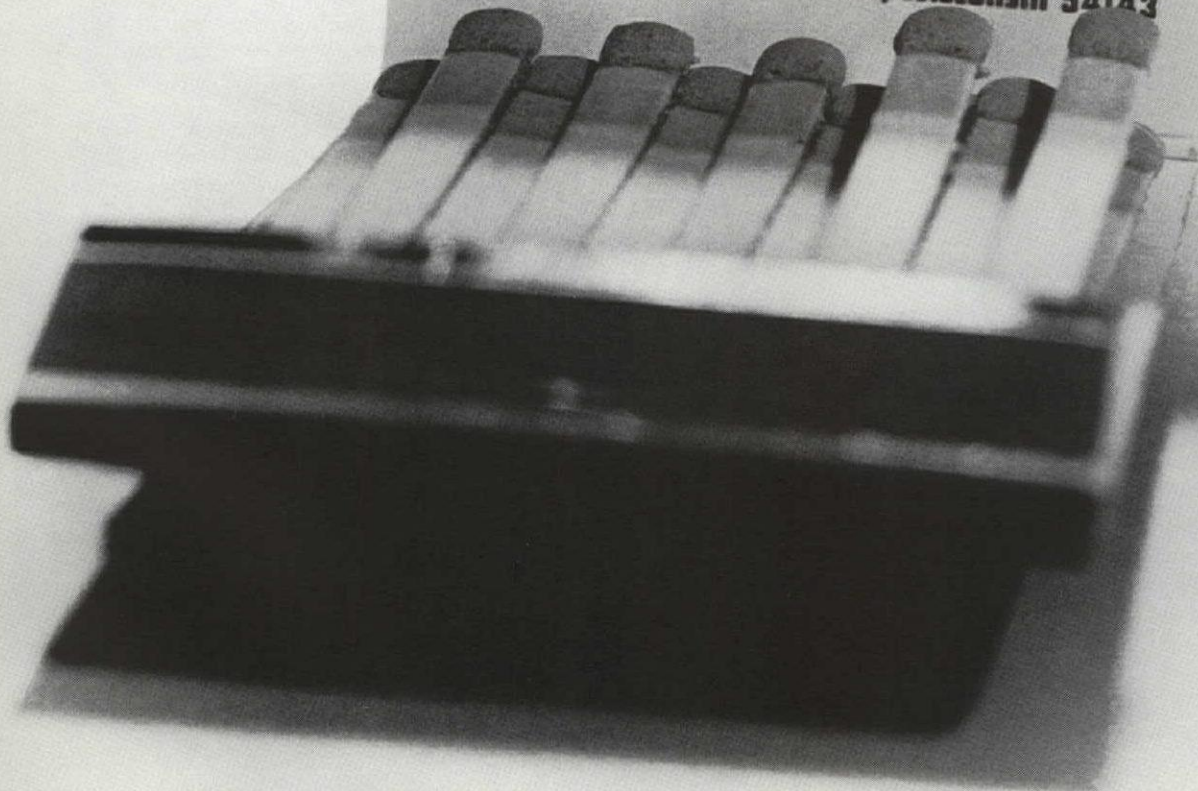
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Computer from page 74

Any organization considering the use of computers for the first time would do well to invest in a little self-education in general principles of computer use and operation. There are often valid reasons to go ahead with computerization, even if not immediately economically justified, when marketing considerations or long-term effects are scrutinized. But it is probably also true that the question "Do we really need computers?" is not asked often enough.

If a decision to use computers is made, various factors will contribute to the cost of system development and operation. As shown by the table below, the more the user undertakes to do himself, the more effective and cheaper his operation will become. True, some phases of any computerized system cannot be performed by the user, but many can, and should be, since leaving such tasks to consultants may result in retaining high-priced personnel to perform simple functions. The checklist following indicates functions likely to be necessary in system design and computer operation, and price ranges for use of equipment and personnel.

Function	Hourly Rates (range)
Consulting	
Problem definition	\$25 - 45
Systems analysis	
System design	17.50- 30
Programming	
Coding	
Computer operations	10 - 18.50
Card punching	
Card verifying	4 - 6.50
Use of EAM equipment— sorting, reproducing, interpreting, etc.	6 - 10
Small computers (IBM 1401-type)	50 - 75
Medium-size com- puters (GE 225, IBM 7070, CDC G-20)	150 -300
Large-scale com- puters (IBM 7094, CDC 3600, Univac)	300 -650

The above cost ranges are those of service bureau operations and probably the highest a prospective computer user is likely to encounter. There are also incidental expenses, often overlooked, which may add considerably to cost of computerization.

Access to computer centers can be time-consuming. Travel costs, messenger service, hotel expenditures, telephones and purchase or use of punched cards, magnetic tapes and specialized stationery must be considered.

Implementation of certain control systems, such as CPM or PERT cost, involves additional personnel time in planning, estimating, reviewing and updating an operating computerized system.

As an example, consider the use of CPM with cost features to evaluate and control the work flow and cost accumulation in construction of an office building. CPM is chosen here as an example because it is a simple and effective tool if properly used, and easy for a newcomer to undertake.

The first assumption is that the work to be performed is represented by a network of about 1,000 activities. This network need not have any particular relation to project size, since small networks may represent large projects and vice versa. The choice, within limits, is dictated by existing resources of the construction enterprise and the amount of control it wishes to exercise using such computerized methods.

Often such an application is a duplication of existing management and accounting controls and thus may not appear to save time or money. Assuming, however, that a task force exists to implement the system, and that this team has sufficient authority to ask questions and suggest courses of action, one can arrive at the cost of implementation as follows:

System Organization

Consultant (40 hrs. @ \$30)	\$1,200
Coding, computer input preparation	500
Keypunching, keyverifying (approx. 100 cards/hr.)	100
3 simulation runs	375
Output analysis, preparation	75
Total initial cost	\$2,260

At this point, an acceptable plan of work and cost assignments ex-

ists, and work may commence. Some effort must be made to monitor performance against the plan, but this is usually done by company personnel and does not represent a direct expenditure. Total cost of maintaining the computerized control will, however, increase with each updating of the plan and cost estimates, which may take place every month in an average operation. Each such review, assuming about 20 percent changes and re-estimates, will cost:

System Updating

Analysis, updating (10 hrs. @ \$20)	\$200
Coding, input prep (200 cards)	100
Keypunching, keyverifying	20
2 simulation runs	250
Total periodic cost	\$570

Therefore, if the project duration is anticipated as around one year, it is reasonable to expect about 10 updating and re-estimating cycles. Total cost of computerization will then become:

Initial cost	\$2,260
10 periodic updates	5,700
	\$7,960

The above figures can be reduced fairly substantially if some of the operations are undertaken by staff personnel. However, any organization considering use of computer analysis for the first time should consider the costs as presented above.

It is therefore possible to project, from the cost of data processing alone, an approximate total cost of a computerized control system. The figures presented are not, of course, rigid in all systems work, but the pattern appears to be of that order in systems requiring continuous man-machine collaboration.

With improvements in computer hardware, particularly input and output devices and remote time-sharing access stations, data processing costs will be less as service bureaus become more and more like information-processing utilities and use of computers becomes even more extensive. But such systems are more complex than those in use at present, and education gained today by a user in a batch-process operation may prove invaluable to operating economically and staying ahead tomorrow. □

Books

Complexity and Contradiction in Architecture. Robert Venturi. New York: Museum of Modern Art (distributed by Doubleday). 1967. 156 pp. \$2.95.

This book is the first in a series called *The Museum of Modern Art Papers on Architecture*. Unlike other Museum publications in architecture and design, the new series "will be independent of the museum's exhibition program," states Arthur Drexler, director of the department of architecture and design. "It will explore ideas too complex for presentation in exhibition form, and the authors will represent no single professional group."

Architect Robert Venturi is the lead-off man. His book is introduced by Vincent Scully who believes that "the future will value it among the few basic texts of our time." Venturi's thesis is that architecture is both complex and contradictory, and it must be an architecture of accommodation in a technologically changing society. He both accepts and respects what exists;

he accepts "architecture's inherent limitations."

As Scully points out, this book shifts the perspective from the Champs-Élysées to Main Street. Venturi develops his argument logically and progressively and concludes with some 29 pages of examples of his own work in which his views are made clear. He sums it up very well in his manifesto for what he calls "nonstraightforward architecture": "I like complexity and contradiction in architecture. I do not like the incoherence or arbitrariness of incompetent architecture nor the precious intricacies of picturesqueness or expressionism. Instead, I speak of a complex and contradictory architecture based on the richness and ambiguity of modern experience, including that experience which is inherent in art. . . . By embracing contradiction as well as complexity, I aim for vitality as well as validity."

Row Houses and Cluster Houses: An International Survey. Hubert Hoffmann. New York: Praeger, 1967. 175 pp. \$18.50.

The blurb for this book states that Hoffmann examines "the pros and cons of low-rise housing." In

the long run he may say that the ideal is a blending of multistory, medium-rise and low-rise housing in small-town planning units, but his heart clearly belongs to low-rise housing, and it is hard to find very many "cons" in this book.

A high-rise dweller will feel as though he's missing the better things in life up in his eerie. It is Hoffmann's opinion that among the possibilities in residential housing "good living standards can be most readily achieved" in low-rise housing. After his initial arguments, he presents an array of extremely attractive examples of patio and terrace houses to bolster his points. The illustrative material includes more than 200 photographs and 300 plans from six countries.

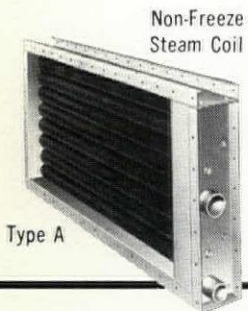
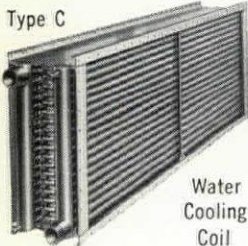
Hoffmann is currently professor of city planning and urban architecture at the Technical University, Graz, Austria.

Simplified Engineering for Architects and Builders. 4th ed. Harry Parker. New York: John Wiley & Sons, 1967. 361 pp. \$7.50.

This edition of Parker's work has been extensively revised to agree with contemporary materials and specifications.

Continued on page 96

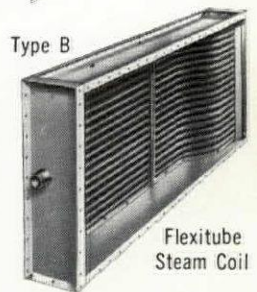
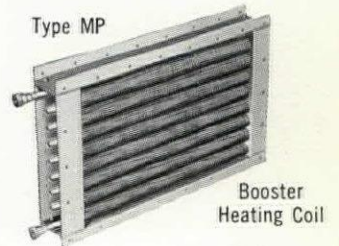
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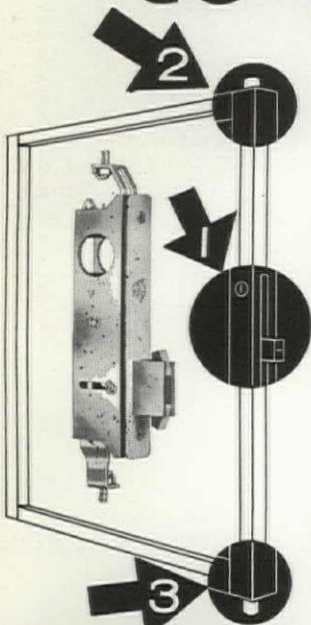
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Books from page 94

Architectural Research on Structural Potential of Foam Plastics for Housing in Underdeveloped Areas. Architectural Research Laboratory, Department of Architecture, University of Michigan, Ann Arbor, 1966. 322 pp. \$5.

This report, which was prepared under the direction of Prof. Stephen C. A. Paraskevopoulos, describes a research program aimed at exploring the structural potential of foam plastics for housing in the underdeveloped areas of the world. The program has been sponsored by the Agency for International Development of the US State Department.

The technological problems are well assessed against a background of socio-economic analysis. A special plea is made that underdeveloped countries should "create a new type of building industry that would change the concept of housing from a consumer product into a national capital investment contributing to the country's industrial and economic growth."

Aside from this thoughtful analysis of the means with which the US Government and private industry could be helpful in developing foam plastics production in the developing countries, the main value for the domestic architectural reader must be seen in the survey and presentation of the application of foam plastics. The analysis of structural systems, including the investigation of some full-scale demonstration structures, covers shell structures, spiral generation systems, spray polyurethane systems, folded plate structures and sandwich panel systems. Computation, testing and construction methods are described in much detail.

The project staff, which is outlining the need for testing of specific prototype dwellings, advocates that US industry would help develop appropriate plastics industries and introduction of plastics technologies for housing use in the developing countries. Although, as it is stated, attempts to penetrate the housing field in this country have been frustrated thus far because of local building code restrictions and the opposition of established interests in the conventional way of building, architects will be much interested in this helpful report in order to give further thought of how we ourselves could also profit from these momentous technological developments. H. H. WAECHTER, AIA

Hospital Planning and Administration. R. Llewlyn-Davies and H. M. C. Macaulay. Geneva: World Health Organization, 1966 (available through Columbia University Press, International Documents Service). 215 pp. \$5.25.

This book's purpose is to provide basic information regarding the principles and problems of hospital planning and administration in order to assist those authorities in all parts of the world who are responsible for hospital development. It does not aim to be a comprehensive guide for detailed planning since local conditions vary so much, but the authors hope "to point out some of the pitfalls that lie in the path of a hospital planning authority, to draw attention to mistakes that have actually been made . . . and to indicate, in so far as possible, the general principles that should govern the subject and the kind of expert advice that should be sought before planning a hospital."

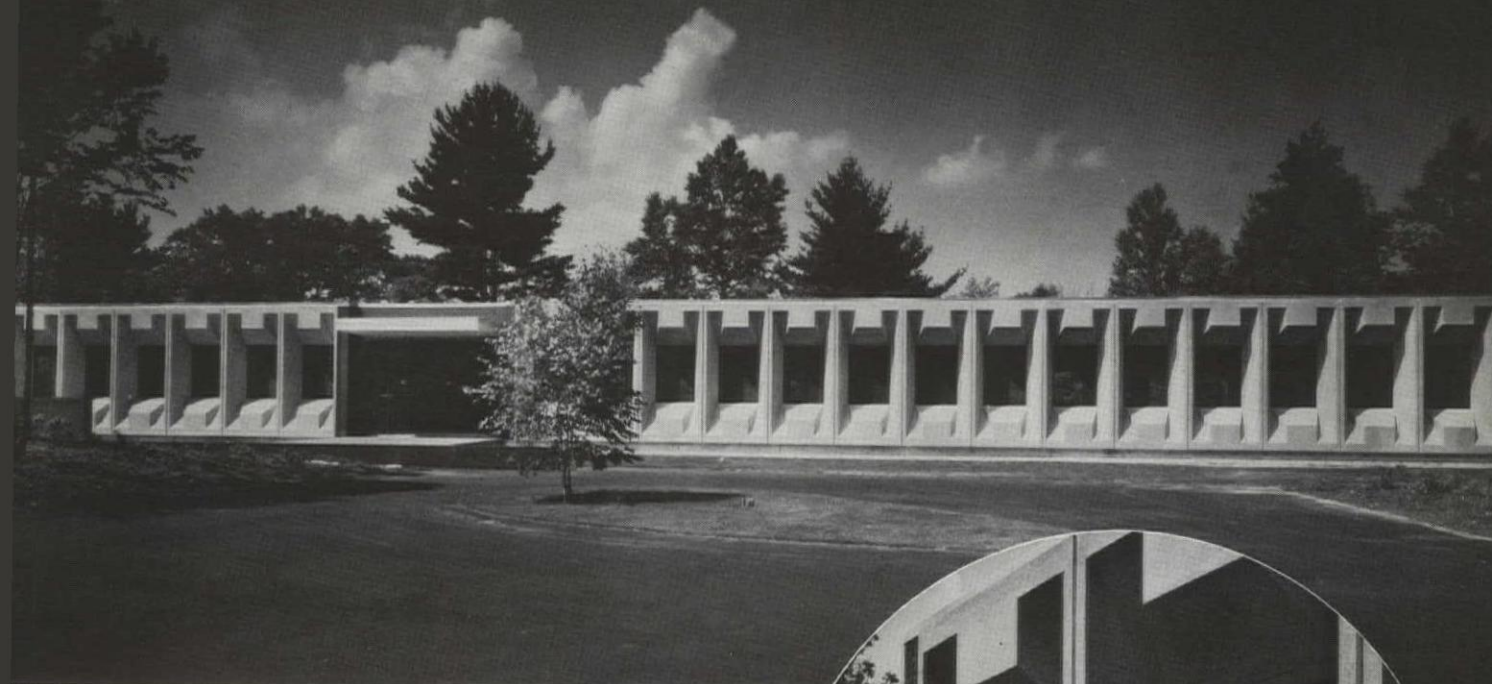
There are three parts to the book and an annotated bibliography. □

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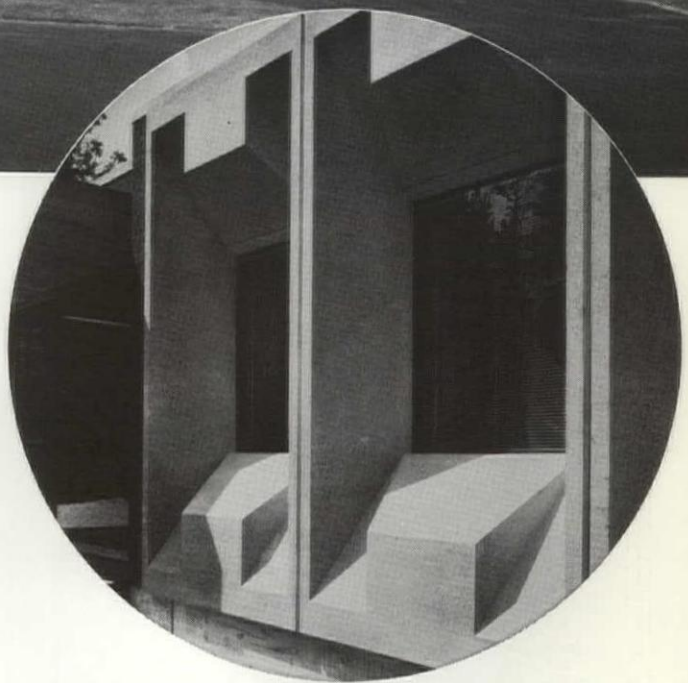
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Calendar

National

July 5-8: National Society of Professional Engineers Annual Meeting, Statler Hilton Hotel, Hartford, Conn.

Oct. 8-12: Prestressed Concrete Institute Convention, Queen Elizabeth Hotel, Montreal

Oct. 18-20: Architectural Woodwork Institute Annual Convention, Drake Hotel, Chicago

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

Oct. 5-8: California Council, Vacation Village, San Diego

Oct. 12-14: Ohio Region, Nationwide Inn, Columbus

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

June 15-16: Research for Architecture

June 16-17: Executive Committee

June 16-24: AIA-ACSA Teachers Seminar Committee, Chicago

June 19-20: Cranbrook Teachers Seminar, Chicago

June 26: Professional Consultants

June 27: A/E Liaison

Sept. 15-16: Building Regulations

Sept. 27-29: Board of Directors, Chatham, Cape Cod, Mass.

Oct. 19: Institute Honors

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. 4: 1967 International Ecumenical Congress on Religion, Architecture and the Visual Arts, Hilton Hotel, New York, and at the Royal Victoria College, McGill University (Sept. 2-4) in Montreal

Sept. 25-28: International Council for Building Research Symposium on Weathertight Joints for Walls, Oslo

Competition

• Amsterdam new Town Hall. Open to all architects. Information available from Mr. Nielson, the Town Hall, Amsterdam. Registration closes July 3.

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.

• Architecture & Gardens Tour of Japan, Oct. 7-31, with special optional extension to Hong Kong, Oct. 31-Nov. 3. Directed by Kenneth M. Nishimoto, AIA, 263 S. Los Robles Ave., Pasadena, Calif. 91106



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Letters

Comments on Cities

EDITOR:

As an architect long since turned urban renewal director, I was most pleased with the April article "Cities: What's the Matter?"

My 10 years' direct dealings with HUD and its predecessors and city planners in general have convinced me that the architectural approach to urban design is as valid as anyone's, and the cities' rebuilding era ahead could well profit by the involvement of architects.

CLARENCE E. MORAN, AIA
Urban Renewal Authority
Charleston, W. Va.

EDITOR:

Congratulations on the splendid April issue. It is encouraging to hear that architects are considering urban problems and their solutions in the larger context of meeting man's need for a congenial and stimulating environment. I am also pleased to observe the beginnings of a multisense structuring of space rather than simply depending on the visual dimension of architecture.

EDWARD T. HALL
Professor of Anthropology
Illinois Institute of Technology
Chicago, Ill.

EDITOR:

Although I did enjoy the report on cities, the one flaw I find is the lack of representation by anyone in the school field. All through the text schools enter in for their share of criticism and suggestions for solving many of the problems presented.

Quite obviously I am prejudiced on this subject, but I feel it is extremely important to have all disciplines represented when a problem of this importance is being discussed.

BEN GRAVES
Project Director, Research
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Lighting Series in Classroom

EDITOR:

After having received reprints of articles Nos. 1 and 2 in the Design of the Luminous Environment series for use in the classroom, I would like to make my enthusiastic bid in regard to the reprinting of the whole series.

The first three articles contain information very seldom printed in textbooks, although they are of great interest to architects and students. We are not interested in obtaining footcandle computations, etc., but rather in an explanation of lighting concepts and what it means to achieve them. From this standpoint, the articles begin to introduce the material to our group in language easily understood.

CHARLES A. AHLSTROM
Assistant Professor of Architecture
Rhode Island School of Design
Providence, R.I.

In Defense of a Book

EDITOR:

Intentions in Architecture by Christian Norberg-Schulz is a scholarly effort that presents, among other things, a cogent argument concerning the importance of symbolism in architecture. It should be read by all serious students of architecture, notwithstanding Peter Collins' unfortunate diatribe in the ACSA section of the March issue.

ROBERT G. HERSHBERGER, AIA
University of Pennsylvania
Philadelphia, Pa.

Planning the Planetarium

EDITOR:

There will soon be 500 planetaria in the United States, more than 400 of them, unfortunately, built without proper architectural advice. Of the other 100, most will have been the first and last planetarium that the particular architect will ever design.

Is there some way we can get more architects to visit their nearest planetarium and see it in operation? Even then, many will see a 1936 model being operated in a traditional way. What to do?

JOEL MARTIN
Consultant, Planetarium Planning
Fort Lauderdale, Fla.

ED. NOTE: The C. Thurston Chase Learning Center, a 1967 Honor Award winner, includes a planetarium.

A Plea from Mr. Humphrey

EDITOR:

This summer, nearly 13 million youngsters in the 16- to 21-year-age group will be in the work force—400,000 more than at the same time last year.

Unless we unite now to make more jobs available, 2 million of these young people are destined to have their hopes for the future dashed. At the very time in their lives when they most need en-

couragement, they will face failure—a discouraging failure which may well set a pattern for future reverses.

Many of these boys and girls desperately need jobs in order to stay in school; many of them lack funds for carfare, school supplies and even shoes and clothing. Others are trying to save toward their college expenses, which even families of moderate income find difficult to meet these days. Some—from the poorest families—must help to fill the family larder and perhaps even outfit their younger brothers and sisters for the fall school term.

Last summer, thanks to the wholehearted cooperation of private employers, more than a million extra jobs were found for our youth. This year, we need to redouble our efforts to help the 2 million who most need assistance.

Moreover, we need to make a concerted effort to allocate these openings fairly. All young people did not share equally in the opportunities provided last summer. When all the jobs had been filled, 23 percent of the nonwhite youth remained unemployed compared to 9 percent of the white boys and girls.

There is no valid reason for this situation. According to a survey conducted by the Research Institute for Business Economics, employers who hired Negroes from the Watts section of Los Angeles have reported encouraging results. Two-thirds of those hired between September 1965 and April 1966 still work for the same employer. The majority have had promotions and raises. Further, half of those who have left their jobs have done so for better offers. This is convincing evidence that the nonwhite worker needs only a chance to prove himself.

As chairman of the President's Council on Youth Opportunity, I appeal to the employers of America to search their organizations for meaningful jobs that our youth can perform. If every businessman produces just one job, we will have gone far toward meeting our goal of 2 million additional jobs for summer 1967.

To your readers, I say: "America's young people need your help." Please give them a lift along the road to success. "Help them help themselves."

HUBERT H. HUMPHREY
Chairman, the President's
Council on Youth Opportunity
Washington, D.C.

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Next Month

A First: Coverage of the R. S. Reynolds Memorial Award for Community Architecture—the first such award—includes a thorough report of the jury, a report rife with lessons and guideposts for the direction our time's requirements have given to architectural practice.

Under the award program, jurors are empowered to make a survey of urban architecture that is worldwide in scope, to nominate examples, to narrow these to a few and then to make personal inspections of the surviving nominees. One result of the process appears to be a thoughtful, heartfelt jury report.

Educational Requirements: A school building is only as good as the communication between the educator and the architect who collaborate in its planning. The next School Plant Study suggests ways of bridging the communication gap.

AIA on the Hill: The language of the Ribicoff hearings (Senate Subcommittee on Executive Reorganization of the Government) on Capitol Hill one day in April had a most professional ring—and rightly so. For the testimony had been prepared by AIA's Committee on Urban Design.

In his introductory remarks, the Institute's spokesman, Archibald C. Rogers, FAIA, told the subcommittee that the architects had come "with serious recommendations for improving the quality of our urban life." A summary of those recommendations, which include broad proposals for new strategies as well as specific suggestions for the fuller implementation of existing public programs, provides thoughtful reading for those practitioners who "recognize that our influence has been relatively insignificant in scale," as Rogers put it. □

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